LETTING DATE: 11/17/2026



PLANS OF PROPOSED IMPROVEMENTS FOR
URBAN ROAD SYSTEM
CITY OF HIAWATHA
LINN COUNTY, IOWA
HIAWATHA BOYSON RD

IOWA DOT PROJECT NUMBER: STP-U-3432(613)--70-57

IN THE CITY OF HIAWATHA, ON BOYSON ROAD BETWEEN HAWKEYE DRIVE AND ROBINS ROAD. WORK INCLUDES PCC PAVEMENT GRADE AND REPLACE

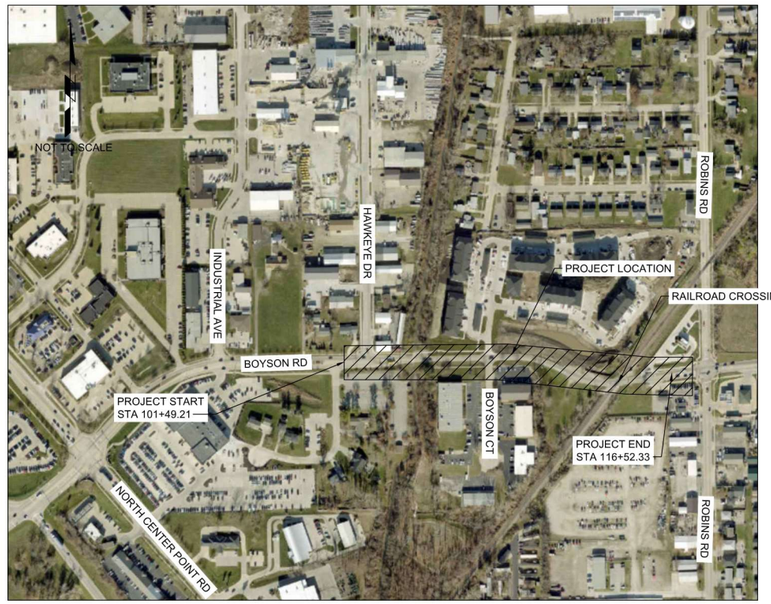
This project is covered by Iowa Department of Natural Resources NPDES General Permit No. 2. The Contractor shall carry out the terms and conditions of General Permit No. 2 and the storm water pollution prevention plan which is part of these contract documents. Refer to Section 2602 of the Standard Specifications for additional information.

REFER TO THE PROPOSAL FORM FOR LIST OF APPLICABLE SPECIFICATIONS

REFER TO SHEET C.01 FOR A LISTING OF APPLICABLE STANDARD ROAD PLANS

DESIGN DATA BOYSON ROAD	1O1-5 04-30-02
POSTED SPEED	30 MPH
DESIGN SPEED	30 MPH
ADT	----

PROJECT LOCATION MAP



MILEAGE SUMMARY	1O5-1 09-27-94	
LOCATION	LIN. FT.	MILES
BOYSON ROAD STA 101+49.21 TO STA 116+50.00	1500.79	0.284
TOTALS	1500.79	0.284

TOTAL SHEETS: 73

SHEET INDEX

SHEET NO.	SHEET TITLE
A.01	COVER SHEET
A.02	UTILITY CONTACTS AND LEGEND
B.01 - B.02	TYPICAL SECTIONS
C.01 - C.13	ESTIMATED QUANTITIES
D.01 - D.06	PLAN AND PROFILE
F.01 - F.02	GRADING AND EROSION CONTROL PLAN
F.03 - F.04	SWPPP NOTES
G.01 - G.02	GEOMETRIC CONTROL
H.01 - H.02	R.O.W SHEETS
J.01 - J.08	TRAFFIC CONTROL PLAN
K.01 - K.03	INTERSECTION GEOMETRY
L.01 - L.02	JOINTING PLAN
M.01 - M.05	STORM SEWER PLAN AND PROFILE
MS.01	SANITARY SEWER PLAN AND PROFILE
MW.01 - MW.03	WATER MAIN PLAN AND PROFILE
MX.01 - MX.03	UTILITY COORDINATION PLAN
N.01 - N.03	PAVEMENT MARKING AND SIGNAGE PLAN
R.01 - R.03	REMOVAL PLAN
S.01 - S.05	SIDEWALK PLAN
W.01 - W.06	CROSS SECTIONS

Mayor And City Council
Steve Dodson (Mayor)

Bill Bennett	CJ Flynn
Ben Fiedler	Rob Archibald
Jeff Cater	Jill Weigel

HIAWATHA PUBLIC WORKS DEPARTMENT
THIS ENGINEERING DOCUMENT IS RECOMMENDED FOR FILING WITH THE CITY CLERK

CITY ENGINEER — DATE: 08.10.2026

CIVIL ENGINEER

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Justin Campbell — SIGNATURE — 8/10/26 DATE

PRINTED OR TYPED NAME: Justin H. Campbell

LICENSE NUMBER: 19546

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026

PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL: ALL SHEETS

LICENSED PROFESSIONAL ENGINEER — JUSTIN H CAMPBELL 19546 — IOWA

IOWA ONE CALL™ 1-800-292-8989

The Utilities as shown on this drawing were developed from the information available. This is not implied nor intended to be the complete inventory of utilities in this area. It is the clients/contractors responsibility to verify the location of all utilities (whether shown or not) and protect said utilities from any damage.

Hiawatha!™

City of Hiawatha			
EMERGENCY CONTACTS			
City of Hiawatha Fire	**Business 319-393-4180, Emergency 911**		
City of Hiawatha Police	**Business 319-393-1212, Emergency 911**		
City of Hiawatha Public Works	**319-393-6601**		
UTILITY CONTACTS			
Utility	**Service Type**	**Contact**	**Phone**
ITC Midwest	Electrical Transmission	Chad Levi	319-297-6765
Alliant Energy	Electric	Mick Bennett	319-786-2005
Aureon	Internet	Matt Weiser	515-830-0497
Enseva Networks	Internet	Chris Sevey	319-450-0550
City of Hiawatha Water Department	Water	Marty Recker	319-393-5556
IMON	Internet/Cable/VOIP	Eric Bieber	319-533-2691
Lumen	Phone/Fiber	Matt Holub	319-431-4170
Mediacom	Internet/Cable/VOIP	Mark Birchard	319-431-8772
MidAmerican Energy	Natural Gas	Greg Wildebour	319-298-5162
SEGRA	Fiber	Joe Ernster	319-252-7463
Windstream	Internet/Servers (business customers only)	Steve Kness	319-790-7678
U.S. Cellular/T-Mobile		Cole Allar	
Wisconsin Independent Network		Mike Ferm	515-493-6014

LEGEND

EXISTING GENERAL SITE

PLAN MARK	DESCRIPTION
	EXISTING STRUCTURE
	BOLLARD
	SHRUB
	DECIDUOUS TREE
	CONIFEROUS TREE
	SINGLE POLE SIGN
	DOUBLE POLE SIGN
	TRAFFIC SIGNAL WITH ARM
	TREE LINE
621	MINOR CONTOUR
620	MAJOR CONTOUR

LEGEND

RIGHT-OF-WAY

PLAN MARK	DESCRIPTION
ROW	PROPOSED RIGHT-OF-WAY
ROW	EXISTING RIGHT-OF-WAY
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	TEMPORARY EASEMENT
	PROPOSED EASEMENT

LEGEND

GENERAL SITE GRADING / EROSION CONTROL

PLAN MARK	DESCRIPTION
2%	SLOPE ARROW
	FLOW ARROW
	SILT FENCE
	INLET PROTECTION
	COMPOST SOCK
	GRADING LIMITS

LEGEND

UTILITY LINES

EXISTING LINE TYPE	DESCRIPTION	PROPOSED LINE TYPE
OE	ELECTRIC - OVERHEAD	OE
E	ELECTRIC - UNDERGROUND	E
G	GAS MAIN	G
W	WATER MAIN	W
	SANITARY SEWER	
	STORM SEWER	
T	TELEPHONE - UNDERGROUND	T
FO	FIBER OPTICS	FO

LEGEND

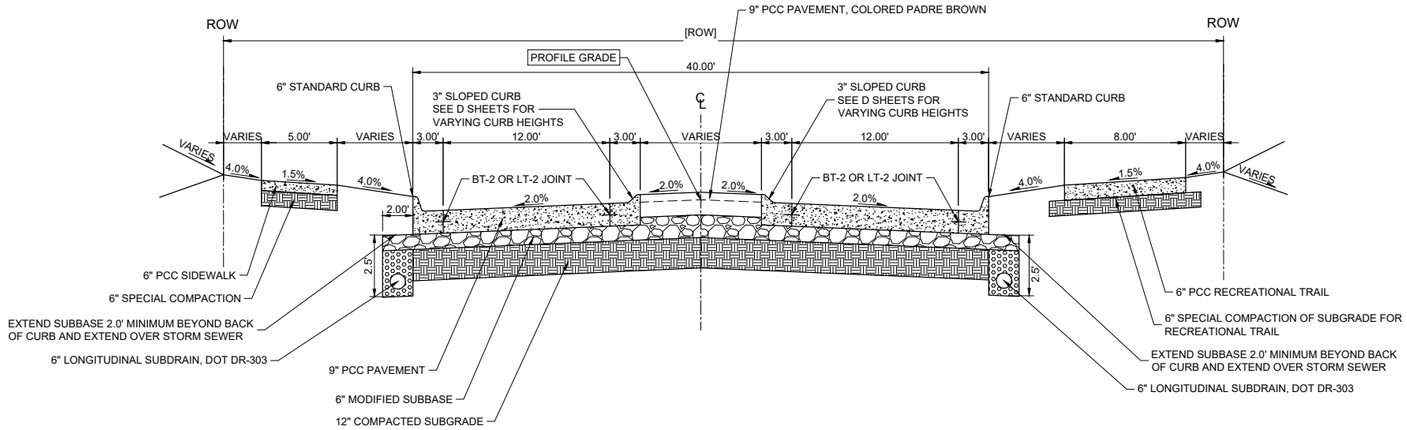
SURVEY

PLAN MARK	DESCRIPTION
BM	BENCH MARK
	BOUND
	IRON ROD - FOUND
	IRON ROD - SET
	MONUMENT FOUND
	MONUMENT SET
	X CUT FOUND
	X CUT SET
	RIGHT OF WAY MARKER
	DRILL HOLE
	STATION MARKER
	SOIL BORING
	PROPERTY CORNER
738.45 TOP	SURVEY POINT ELEVATION

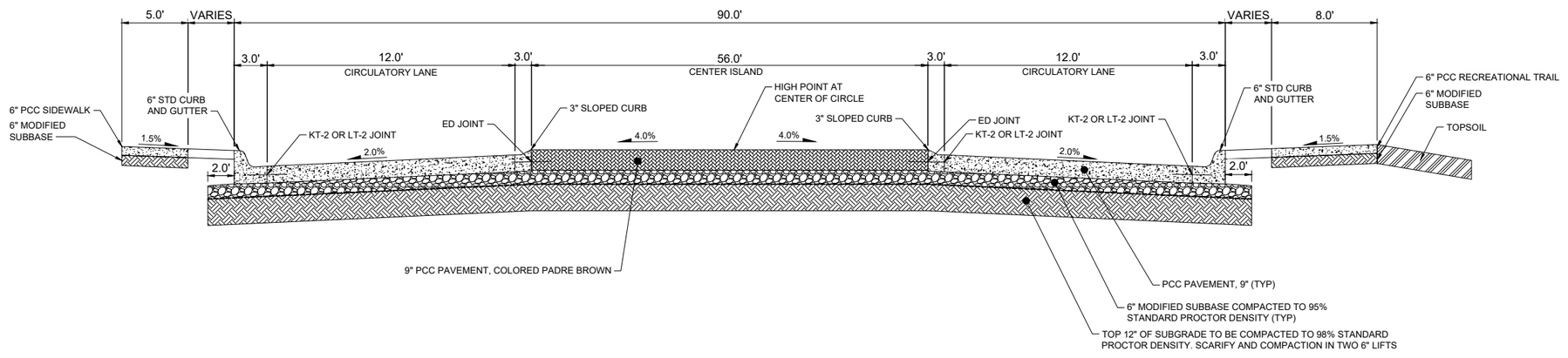
LEGEND

UTILITIES

PLAN MARK	DESCRIPTION
W	WATER IRRIGATION VALVE
	UTILITY POLE W/TRANSFORMER
	WATER SHUTOFF VALVE
	GUY ANCHOR
	FIRE HYDRANT
	FLARED END SECTION
	VALVE
C	CABLE TV PEDESTAL
	CLEANOUT
J	JUNCTION BOX
MH	MANHOLE
	STORM MANHOLE
E	ELECTRICAL MANHOLE
S	SANITARY MANHOLE
T	TELEPHONE MANHOLE
T	TELEPHONE PEDESTAL
V	VAULT BOX
HH	HANDHOLE
S	SIGNAL BOX
G	GAS METER
E	ELECTRIC METER
W	WATER METER
	CURB INLET
	INTAKE - CIRCLE
	INTAKE - RECTANGLE
	INTAKE - SQUARE

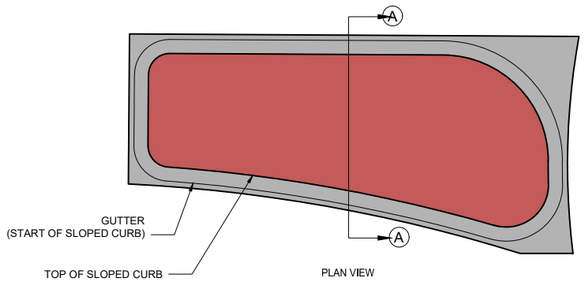


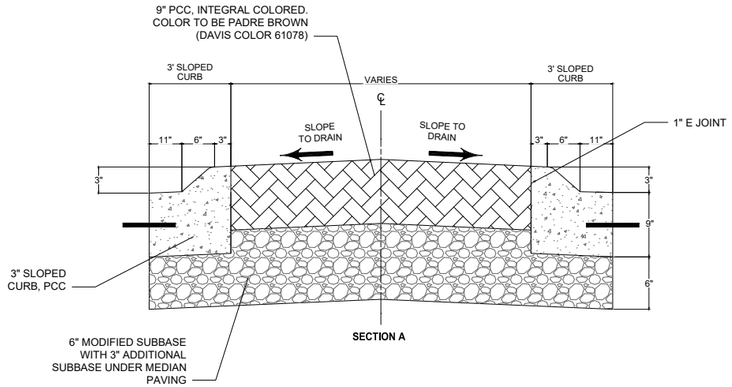
A URBAN SECTION WITH SIDEWALKS FROM STA 102+95.82 TO STA 105+89.55 AND STA 108+62.00 TO STA 114+74.50
BOYSON ROAD

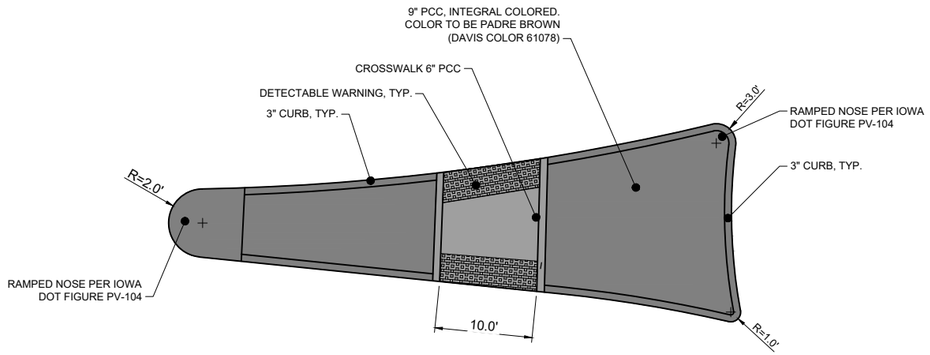


B CIRCULAR CENTER ISLAND TYPICAL SECTION FROM STA 105+89.55 TO 108+62.00
BOYSON ROAD

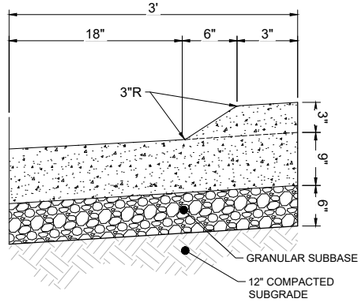
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	TYPICAL SECTIONS	SHEET NUMBER B.01



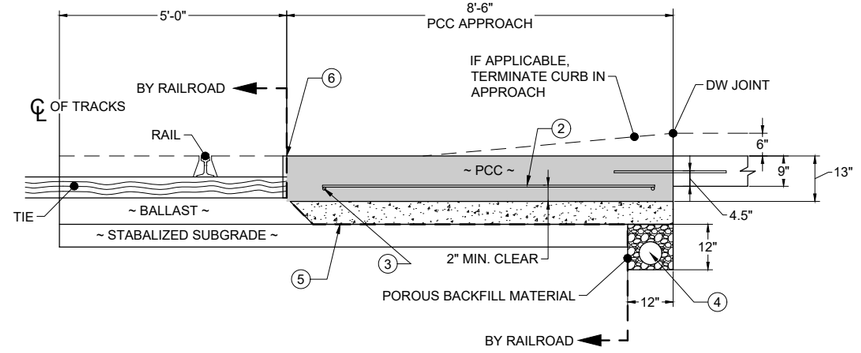




C 3" SPLITTER ISLAND WITH 2' SLOPED CURB
NOT TO SCALE



D 3" SLOPED PCC CURB AND GUTTER
NOT TO SCALE



E PCC RAILROAD CROSSING APPROACH
NOT TO SCALE

1. Tie reinforcing bars with wire at all intersections with other bars. Lap reinforcing bars a minimum of 12 inches when necessary and tie securely.
2. 8 foot 2 inch (typ.) #5 bar or pavement length minus 4 inches, at 12 inches on center.
3. #5 bars X (approach width minus 4 inches).
4. Install 6 inch perforated CMP subdrain, if specified. Include rodent guard per Iowa DOT Materials I.M. 443.01.
5. Granular subbase, modified subbase, or ballast meeting railroad specifications.
6. For new crossings, construct pavement 1/2 inch to 1 inch below top of rail. For existing crossings, construct pavement level to 1/2 inch below top of rail.

105_04
10/21/25

STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
DR-201	10-17-23	Concrete Aprons
DR-213	10-18-22	Pipe Apron Guard
DR-303	10-17-17	Subdrains (Longitudinal)
EC-103	04-21-15	Wood Excelsior Mat for Slope Protection
EC-104	04-17-18	Turf Reinforced Mat (TRM)
EC-105	04-17-18	Transition Mat
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-301	10-18-22	Rock Erosion Control (REC)
EC-302	10-18-22	Rock Check Dam
EC-303	10-19-21	Stabilized Construction Entrance
EC-602	10-15-24	Open-Throat Curb Intake Sediment Filter
EC-603	10-17-23	Erosion Control for Intake or Manhole Well
EC-604	10-17-23	Grate Intake Sediment Filter Bag
EW-105	04-21-15	Reshaping Slopes and Ditches
EW-403	04-18-17	Temporary Erosion Control Measures
LI-101	10-21-14	Light Pole Location
LI-103	10-21-25	Conduit and Precast Handholes
LI-141	10-21-14	Electrical Installation (Roadway Ducts)
LI-142	04-21-15	Electrical Installation (Bases)
LI-201	04-18-17	Light Pole Foundation
LI-211	10-20-15	Slip-Base for Light Poles
MI-210	10-21-25	PCC Driveways and Alleys
MI-220	04-15-25	Detectable Warnings and Pedestrian Ramp
PM-110	10-15-24	Line Types
PM-111	04-21-20	Symbols and Legends
PM-115	10-20-26	Grooving for Line Types
PM-116	04-16-24	Grooving for Symbols and Legends
PM-120	10-15-24	Stop Lines and Islands
PM-210	10-15-24	Separation in Two-Lane Roadway
PM-522	10-15-24	Two-Lane Roadway with Left Turn Lanes
PV-20	10-21-14	Paved Islands
PV-101	10-20-26	Joints
PV-102	10-21-25	PCC Curb Details
PV-103	10-21-25	Manhole Boxouts in PCC Pavement
PV-104	10-21-25	Ramped Median Nose
PV-301	04-15-25	Superelevation Details Two Lane Roadway
SI-101	04-19-16	Locations - Type 'A' Signs
SI-121	10-16-18	Fabrication - Sign Legend Components
SI-131	10-18-16	Installation - Type 'A' Signs
SI-133	10-17-17	Installation - Type 'A' Sign Shim
SI-171	04-18-17	Reference Location Sign Posts
SW-102	10-21-25	Rigid Gravity Pipe Trench Bedding
SW-103	10-21-25	Flexible Gravity Pipe Trench Bedding
SW-211	10-21-25	Storm Sewer Pipe Connections
SW-301	10-21-25	Circular Sanitary Sewer Manhole
SW-307	10-21-25	Drop Connection for Sanitary Sewer
SW-401	10-21-25	Circular Storm Sewer Manhole
SW-501	10-21-25	Single Grate Intake
SW-505	10-21-25	Double Grate Intake
SW-507	10-21-25	Single Open-Throat Intake, Small Box
SW-508	10-21-25	Single Open-Throat Intake, Large Box
SW-509	10-21-25	Double Open-Throat Curb Intake, Small Box
SW-510	10-21-25	Double Open-Throat Curb Intake, Large Box
SW-512	10-21-25	Circular Area Intake

105_04
10/21/25

STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
SW-514	10-21-25	Boxouts for Grate Intakes
SW-541	10-21-25	Open-Throat Curb Intake under Pavement
SW-542	10-21-25	Extension Unit for Open-Throat Curb Intake under Pavement
SW-601	10-21-25	Castings for Sanitary Sewer Manholes
SW-602	10-21-25	Castings for Storm Sewer Manholes
SW-603	10-21-25	Castings for Grate Intakes
SW-604	10-21-25	Castings for Area Intakes
TC-251	04-18-23	Temporary Road Closure
TC-252	10-20-26	Routes Closed to Traffic
TC-282	10-15-19	Uneven Lanes
TC-284	10-15-19	No Centerline Markings on Non-Primary Roadways
TC-601	10-15-19	Pedestrian Detour
TC-602	10-15-19	Sidewalk Diversion

111_25
4/30/25

INDEX OF TABULATIONS

Line No.	Tabulation	Tabulation Title	Sheet No.
1.0	100_01A	ESTIMATED PROJECT QUANTITIES	
2.0	100_04A	ESTIMATE REFERENCE INFORMATION	
3.0	100_19	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	
4.0	100_24	PCC PAVEMENT	
5.0	100_36	OPEN-THROAT CURB INTAKE SEDIMENT FILTER	
6.0	100_37	GRATE INTAKE SEDIMENT FILTER BAG	
7.0	104_05B	STORM SEWER	
8.0	104_09A	LONGITUDINAL SUBDRAIN SHOULDER	
9.0	104_10	ADJUSTMENT OF FIXTURES	
10.0	105_04	STANDARD ROAD PLANS	
11.0	108_22	PAVEMENT MARKING LINE TYPES	
12.0	108_29	PAVEMENT MARKING SYMBOLS AND LEGENDS	
13.0	110_01	REMOVAL OF PAVEMENT	
14.0	110_05	SIDEWALK REMOVAL	
15.0	110_14	SANITARY OR STORM SEWER ABANDONMENT OR REMOVAL	
16.0	110_15	REMOVAL OF INTAKES AND UTILITY ACCESSES	
17.0	110_17	CLEARING AND GRUBBING	
18.0	111_25	INDEX OF TABULATIONS	
19.0	112_03	RAILROAD APPROACH SECTIONS	
20.0	112_05	CONCRETE MEDIANS	
21.0	113_01A	SIDEWALKS	
22.0	113_10	SIDEWALK COMPLIANCE	
23.0	190_51	MATERIALS FOR TYPE A SIGNS	
24.0	190_61	EXISTING SIGNS TO BE REINSTALLED	
25.0	190_62	EXISTING SIGNS TO BE REMOVED	
26.0	190_66	SUMMARY OF TYPE A SIGNS	

ESTIMATED PROJECT QUANTITIES

(UP TO A 5 DIVISION PROJECT)

DIVISION 1: STBG
DIVISION 2: TSIP/STBG
DIVISION 3: NON-PARTICIPATING

Line No.	Item No.	Item Code	Item	Unit	Division 1	Division 2	Division 3	Division 4	Division 5	Total	As Built Division 1	As Built Division 2	As Built Division 3	As Built Division 4	As Built Division 5
1.0	1	2101-0850002	CLEARING AND GRUBBING	UNIT		145.20				145.20					
2.0	2	2102-2625000	EMBANKMENT-IN-PLACE	CY	7600.00					7600.00					
3.0	3	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY		10361.00				10361.00					
4.0	4	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY		1466.00				1466.00					
5.0	5	2109-8225100	SPECIAL COMPACTION OF SUBGRADE	STA	15.00					15.00					
6.0	6	2115-0100000	MODIFIED SUBBASE	CY		1218.00				1218.00					
7.0	7	2301-1033090	STD/S-F PCC PAV'T, CL C CL 3, 9 IN	SY		5379.00				5379.00					
8.0	8	2301-1033090	STD/S-F PCC PAV'T, CL C CL 3, 9 IN, COLORED	SY		185.00				185.00					
9.0	9	2301-4875009	MEDIAN, P.C. CONCRETE, 9 IN., COLORED	SY	1089.00					1089.00					
10.0	10	2301-6911722	PORTLAND CEMENT CONCRETE PAVEMENT SAMPLES	LS	1.00					1.00					
11.0	11	2304-0101000	TEMPORARY PAVEMENT	SY	275.00					275.00					
12.0	12	2401-6750001	REMOVALS, AS PER PLAN	LS	1.00					1.00					
13.0	13	2416-0100015	APRONS, CONCRETE, 15 IN. DIA.	EACH	1.00					1.00					
14.0	14	2416-0100042	APRONS, CONCRETE, 42 IN. DIA.	EACH	1.00					1.00					
15.0	15	2435-0130148	MANHOLE, SANITARY SEWER, SW-301, 48 IN.	EACH	1.00					1.00					
16.0	16	2435-0140172	MANHOLE, STORM SWR, SW-401, 72 IN	EACH	1.00					1.00					
17.0	17	2435-0140184	MANHOLE, STORM SWR, SW-401, 84 IN	EACH	1.00					1.00					
18.0	18	2435-0140196	MANHOLE, STORM SWR, SW-401, 96 IN	EACH	1.00					1.00					
19.0	19	2435-0250500	INTAKE, SW-505	EACH	7.00					7.00					
20.0	20	2435-0250700	INTAKE, SW-507	EACH	2.00					2.00					
21.0	21	2435-0250900	INTAKE, SW-509	EACH	1.00					1.00					
22.0	22	2435-0251000	INTAKE, SW-510	EACH	1.00					1.00					
23.0	23	2435-0254100	INTAKE, SW-541	EACH	1.00					1.00					
24.0	24	2435-0254200	INTAKE EXTENSION UNIT, SW-542	EACH	1.00					1.00					
25.0	25	2435-0600010	MANHOLE ADJUSTMENT, MINOR	EACH	2.00					2.00					
26.0	26	2435-0600020	MANHOLE ADJUSTMENT, MAJOR	EACH	1.00					1.00					
27.0	27	2435-0700010	CONNECTION TO EXISTING MANHOLE	EACH	1.00					1.00					
28.0	28	2502-6745952	REMOVAL OF SUBDRAIN	LF	2800.00					2800.00					
29.0	29	2502-8212206	SUBDRAIN, PERFORATED PLASTIC PIPE, 6 IN	LF	2109.00					2109.00					
30.0	30	2502-8221303	SUBDRAIN OUTLET, DR-303	EACH	16.00					16.00					
31.0	31	2503-0114215	STORM SWR G-MAIN,TRENCHED, RCP 2000D,15 IN	LF	650.00					650.00					
32.0	32	2503-0114218	STORM SWR G-MAIN,TRENCHED, RCP 2000D,18 IN	LF	289.00					289.00					
33.0	33	2503-0114242	STORM SWR G-MAIN,TRENCHED, RCP 2000D,42 IN	LF	247.00					247.00					
34.0	34	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	LF	75.00					75.00					
35.0	35	2503-0200136	REMOVE STORM SEWER PIPE GREATER THAN 36 IN.	LF	138.00					138.00					
36.0	36	2504-0114010	SAN SWR G-MAIN, TRENCHED, PVC, 10 IN	LF			374.00			374.00					
37.0	37	2504-0240235	SANITARY SEWER ABANDONMENT, PLUG	EACH			2.00			2.00					
38.0	38	2507-8600020	FORESLOPE EROSION COUNTERMEASURE, MAJOR (DETAIL 570-22)	SY	52.00					52.00					
39.0	39	2510-6745850	REMOVAL OF PAVEMENT	SY	4975.00					4975.00					
40.0	40	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	EACH	8.00					8.00					
41.0	41	2511-0300000	REMOVAL OF RECREATIONAL TRAIL	SY	49.00					49.00					
42.0	42	2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.	SY	1204.00					1204.00					
43.0	43	2511-0310100	SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL	STA	13.00					13.00					
44.0	44	2511-6745900	REMOVAL OF SIDEWALK	SY	449.00					449.00					
45.0	45	2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.	SY	659.00					659.00					
46.0	46	2511-7528101	DETECTABLE WARNINGS	SF	232.00					232.00					
47.0	47	2512-1725306	CURB AND GUTTER, P.C. CONCRETE, 3.0 FT.	LF	189.00					189.00					
48.0	48	2515-2475006	DRIVEWAY, P.C. CONCRETE, 6 IN.	SY	308.00					308.00					
49.0	49	2515-6745600	REMOVAL OF PAVED DRIVEWAY	SY		131.00				131.00					
50.0	50	2517-4225210	RAILROAD APPROACH SECTION, P.C.C.	SY	175.00					175.00					
51.0	51	2524-6765010	REMOVE AND REINSTALL SIGN AS PER PLAN	EACH		6.00				6.00					
52.0	52	2524-6765110	REMOVAL OF TYPE A SIGN	EACH		5.00				5.00					
53.0	53	2524-9276010	PERFORATED SQUARE STEEL TUBE POSTS	LF		252.00				252.00					
54.0	54	2524-9276021	PSSTP ANCHOR, BRK-AWAY SOIL INSTALLATION	EACH		17.00				17.00					
55.0	55	2524-9276024	PSSTP ANCHOR, BRK-AWAY CONC INSTALLATION	EACH		4.00				4.00					

ESTIMATED PROJECT QUANTITIES

(UP TO A 5 DIVISION PROJECT)

DIVISION 1: STBG
DIVISION 2: TSIP/STBG
DIVISION 3: NON-PARTICIPATING

Line No.	Item No.	Item Code	Item	Unit	Division 1	Division 2	Division 3	Division 4	Division 5	Total	As Built Division 1	As Built Division 2	As Built Division 3	As Built Division 4	As Built Division 5
56.0	56	2524-9325001	TYPE A SIGNS, SHEET ALUMINUM	SF		172.00				172.00					
57.0	57	**2526-8285010**	CONSTRUCTION SURVEY, MONUMENT PRESERVATION	LS	1.00					1.00					
58.0	58	**2526-8285020**	CONSTRUCTION SURVEY, CONTROL POINT SURVEY	LS	1.00					1.00					
59.0	59	**2526-8285030**	CONSTRUCTION SURVEY, RIGHT OF WAY	LS	1.00					1.00					
60.0	60	**2526-8285040**	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	1.00					1.00					
61.0	61	2527-9263143	PAINTED SYMBOLS AND LEGENDS, DURABLE	EACH		6.00				6.00					
62.0	62	2527-9263181	PAVEMENT MARKINGS REMOVED	STA		2.80				2.80					
63.0	63	2527-9263190	SYMBOLS AND LEGENDS REMOVED	EACH		2.00				2.00					
64.0	64	2527-9263217	PAINTED PAVEMENT MARKINGS, DURABLE	STA		30.62				30.62					
65.0	65	2527-9270112	GROOVES CUT FOR PAVEMENT MARKINGS	STA		30.62				30.62					
66.0	66	2527-9270120	GROOVES CUT FOR SYMBOLS AND LEGENDS	EACH		6.00				6.00					
67.0	67	2528-2518000	SAFETY CLOSURE	EACH		3.00				3.00					
68.0	68	2528-8445110	TRAFFIC CONTROL	LS		1.00				1.00					
69.0	69	2533-4980005	MOBILIZATION	LS		1.00				1.00					
70.0	70	2552-0000140	ROCK EXCAVATION	CY	300.00					300.00					
71.0	71	2552-0000300	TRENCH COMPACTION TESTING	LS	1.00					1.00					
72.0	72	2554-0114008	WATER MAIN, TRENCHED, POLYVINYL CHLORIDE PIPE (PVC), 8 IN.	LF	1130.00					1130.00					
73.0	73	2554-0203000	FITTINGS BY WEIGHT, DUCTILE IRON	LB	775.00					775.00					
74.0	74	2554-0204220	WATER SERVICE STUB, PVC, 2 IN.	EACH	2.00					2.00					
75.0	75	2554-0207008	VALVE, GATE, DIP, 8 IN.	EACH	5.00					5.00					
76.0	76	2554-0209008	VALVE REMOVAL, 8 IN.	EACH	1.00					1.00					
77.0	77	2554-0210201	FIRE HYDRANT ASSEMBLY, WM-201	EACH	3.00					3.00					
78.0	78	2554-0210205	FIRE HYDRANT ASSEMBLY REMOVAL	EACH	1.00					1.00					
79.0	79	2554-0212040	VALVE BOX ADJUSTMENT, MINOR	EACH	6.00					6.00					
80.0	80	2595-0005120	RAILROAD PROTECTIVE LIABILITY INSURANCE FOR CHICAGO, CENTRAL AND PACIFIC RAILROAD / CEDAR RIVER RAILROAD COMPANY	LS			1.00			1.00					
81.0	81	2599-9999010	('LUMP SUM' ITEM) TRAIL FLASHING BEACON SIGN AND PUSH BUTTON RELOCATIONS	LS	1.00					1.00					
82.0	82	2599-9999018	('SQUARE YARDS' ITEM) LANDSCAPING ROCK MULCH	SY	177.00					177.00					
83.0	83	2601-2636044	SEEDING AND FERTILIZING (URBAN)	ACRE	0.55					0.55					
84.0	84	2601-2639010	SODDING	SQ	395.00					395.00					
85.0	85	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION	MGAL	50.00					50.00					
86.0	86	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	2689.00					2689.00					
87.0	87	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF	2689.00					2689.00					
88.0	88	2602-0000500	OPEN-THROAT CURB INTAKE SEDIMENT FILTER, EC-602	LF	96.00					96.00					
89.0	89	2602-0000510	MAINTENANCE OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER	EACH	7.00					7.00					
90.0	90	2602-0000520	REMOVAL OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER	EACH	7.00					7.00					
91.0	91	2602-0000530	GRATE INTAKE SEDIMENT FILTER BAG	EACH	7.00					7.00					
92.0	92	2602-0000540	MAINTENANCE OF GRATE INTAKE SEDIMENT FILTER BAG	EACH	7.00					7.00					
93.0	93	2602-0000550	REMOVAL OF GRATE INTAKE SEDIMENT FILTER BAG	EACH	7.00					7.00					
94.0	94	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	3.00					3.00					

ESTIMATE REFERENCE INFORMATION

Line No.	Item No.	Item Code	Description
1.0	1	2101-0850002	CLEARING AND GRUBBING
2.0			All material generated as a result of clearing and grubbing shall become the property of the Contractor and
3.0			must be disposed of offsite. All wood material must be disposed of according to Iowa Department of
4.0			Agriculture and Land Stewardship Emerald Ash Borer Quarantine Order. For more information see
5.0			www.iowatreepests.com. Refer to R sheets and D sheets for locations of clearing and grubbing and tree
6.0			removals.
7.0			
8.0	2	2102-2625000	EMBANKMENT-IN-PLACE
9.0			Shrinkage is not included in bid quantity. Item shall be provided by Contractor.
10.0			
11.0	3	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW
12.0			Item is included for Class 10 material to be excavated, transported, and placed at the project site. Overhaul
13.0			is incidental to roadway excavation on this project and will not be paid for separately.
14.0			Geotech report available upon request.
15.0			Raw Cut Volume = 370 CY. Raw Fill Volume = 7,970 CY. Adjusted Fill Volume = 10,361 CY (30% shrinkage factor).
16.0			Estimated Borrow = 9991 CY. No subdrain trench volumes included in adjustments.
17.0			
18.0	4	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD
19.0			Refer to Tab. 103-10 in the C sheets and the F sheets for locations and details. Quantities assume 8 in
20.0			stripping depth and 6 in spread thickness. Estimating 25% shrinkage factor. All topsoil shall remain on the
21.0			project site. Geotech report available upon request.
22.0			
23.0	5	2109-8225100	SPECIAL COMPACTION OF SUBGRADE
24.0			Special compaction of subgrade shall be constructed in two 6 in layers.
25.0			Refer to Tab. 100-24 in the C sheets and typical sections on the B sheets for locations and details.
26.0			
27.0	6	2115-0100000	MODIFIED SUBBASE
28.0			Refer to Tab. 100-24 and 100-25 in the C sheets and to typicals in the B sheets for locations and details.
29.0			Modified subbase for the base of the 6 in median item is included with median item.
30.0			
31.0	7	2301-1033090	STD/S-F PCC PAV'T, CL C CL 3, 9 IN
32.0			Refer to Tab. 100-24 in the C sheets and to typicals in the B sheets for locations and details. Refer to L
33.0			sheets for geometric staking and jointing details. Includes integral curb.
34.0			Incidental to this item is providing a temporary washout that meets EPA minimum BMP measures. Certified plant
35.0			inspection shall be provided by the Contractor.
36.0			
37.0	8	2301-1033090	STD/S-F PCC PAV'T, CL C CL 3, 9 IN, COLORED
38.0			Refer to Tab. 112-4 in the C sheets for locations and details. Includes truck aprons and color crosswalk
39.0			pavement. All curb adjacent to truck apron pavement shall be 3 in sloped curb.
40.0			Certified plant inspection shall be provided by the Contractor. Color selection
41.0			shall be Red 1117 for crosswalks and Padre Brown 61078 for truck aprons and medians. Color selection
42.0			to be submitted to the Engineer for approval prior to construction.
43.0			
44.0	9	2301-4875009	MEDIAN, P.C. CONCRETE, 9 IN., COLORED
45.0			Refer to Tab. 112-4 in the C sheets and figure 6135 in B sheets for locations and details. Includes modified
46.0			subbase backfill. Certified plant inspection shall be provided by the Contractor.
47.0			Color selection shall be Padre Brown 61078 for truck aprons and medians. Color selection
48.0			to be submitted to the Engineer for approval prior to construction.
49.0			
50.0	10	2301-6911722	PORTLAND CEMENT CONCRETE PAVEMENT SAMPLES
51.0			-
52.0			
53.0	11	2304-0101000	TEMPORARY PAVEMENT
54.0			See J Sheets for locations and notes.
55.0			Item will be measured in square yards to the nearest yard.
56.0			Payment of item will be per square yard for the area of temporary pavement properly installed.
57.0			

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ESTIMATE REFERENCE INFORMATION

Line No.	Item No.	Item Code	Description
58.0	12	2401-6750001	REMOVALS, AS PER PLAN
59.0			Includes removal of landscaping rock at 935 Boyson Ct and near railroad as called out on R sheets.
60.0			Method of measurement will be lump sum. Basis of Payment shall be the contract price for the lump sum item.
61.0			
62.0	13	2416-0100015	APRONS, CONCRETE, 15 IN. DIA.
63.0	14	2416-0100042	APRONS, CONCRETE, 42 IN. DIA.
64.0			Refer to Tabulation 104_05B in the M sheets and to M sheet plan and profiles for locations and details. Apron
65.0			guards are required and are incidental to aprons.
66.0			
67.0	15	2435-0130148	MANHOLE, SANITARY SEWER, SW-301, 48 IN.
68.0			Refer to tabulation in the C sheets and the MSA sheets for locations and details. Use SW-601 Type B castings
69.0			for sanitary sewer manholes in pavement areas. Use SW-601 Type A castings for sanitary sewer
70.0			manholes outside of pavement areas.
71.0			
72.0	16	2435-0140172	MANHOLE, STORM SWR, SW-401, 72 in
73.0	17	2435-0140172	MANHOLE, STORM SWR, SW-401, 84 in
74.0	18	2435-0140196	MANHOLE, STORM SWR, SW-401, 96 in
75.0			Refer to Tabulation 104_05B in the M sheets and to M sheet plan and profiles for locations and details. Use
76.0			SW-602 Type F castings for storm sewer manholes in pavement areas. Use SW-602 Type G castings for storm
77.0			sewer manholes outside of pavement areas.
78.0			
79.0	19	2435-0250500	INTAKE, SW-505
80.0	20	2435-0250700	INTAKE, SW-507
81.0	21	2435-0250900	INTAKE, SW-509
82.0	22	2435-0251000	INTAKE, SW-510
83.0	23	2435-0254100	INTAKE, SW-541
84.0	24	2435-0254200	INTAKE EXTENSION UNIT, SW-542
85.0			Refer to Tabulation 104_05B in the M sheets and to M sheet plan and profiles for locations and details.
86.0			
87.0	25	2435-0600010	MANHOLE ADJUSTMENT, MINOR
88.0	26	2435-0600020	MANHOLE ADJUSTMENT, MAJOR
89.0			Refer to Tabulation 104_10 in the C sheets for locations and details. Provide new castings for manhole
90.0			adjustments. Use SW-602 Type F castings for storm sewer manholes in pavement areas. Use SW-602 Type G
91.0			castings for storm sewer manholes outside of pavement areas. Use SW-601 Type B castings for sanitary sewer
92.0			manholes in pavement areas. Use SW-601 Type A castings for sanitary sewer manholes outside of pavement
93.0			areas.
94.0			
95.0	27	2435-0700010	CONNECTION TO EXISTING MANHOLE
96.0			Refer to tabulation in the C sheets for locations and details.
97.0			
98.0	28	2502-6745952	REMOVAL OF SUBDRAIN
99.0			This item shall be utilized for removal of existing subdrain encountered. An estimated quantity has been
100.0			included. Payment will only be made for measured subdrain identified and removed during construction.
101.0			Method of Measurement is linear feet. Basis of Payment is at the contract price per 'Linear Foot' of
102.0			subdrain removed.
103.0			
104.0	29	2502-8212206	SUBDRAIN, PERFORATED PLASTIC PIPE, 6 IN
105.0			Refer to tabulation in the C sheets and to typical sections in the B sheets for locations and details.
106.0			Provide subdrain cleanouts at locations shown on the plans. Furnishing and installation of cleanouts
107.0			shall be incidental to this item. Type A-1 cleanouts shall be installed.
108.0			
109.0	30	2502-8221303	SUBDRAIN OUTLET, DR-303
110.0			Refer to Tabulation 104_09A in the C sheets for locations and details.
111.0			
112.0	31	2503-0114215	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 15 IN.
113.0	32	2503-0114218	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 18 IN.
114.0	33	2503-0114242	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 42 IN.

ESTIMATE REFERENCE INFORMATION

Line No.	Item No.	Item Code	Description
115.0			Refer to Tab. 104_05B in the M sheets and to M sheet plan and profiles for locations and details.
116.0			Install flexible O-ring gasket joints at water main crossings where water main is below storm sewer or within
117.0			18 inches or within 10 feet horizontally as noted on M sheets. Use bedding class R-2 as shown in Standard
118.0			Road Plan SW-102. Storm sewer running parallel along back of curb shall be backfilled with granular to the
119.0			top of the modified subbase. DR-141 bends and SW-211 connections are incidental to these items. Incidental
120.0			to this item is the installation of sewer pipe support over existing utility line. Refer to B sheets for
121.0			details.
122.0	34	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.
123.0	35	2503-0200136	REMOVE STORM SEWER PIPE GREATER THAN 36 IN.
124.0			Refer to Tab. 110-14 in the C sheets for locations and details.
125.0			
126.0	36	2504-0114010	SANITARY SEWER GRAVITY MAIN, TRENCHED, POLYVINYL CHLORIDE PIPE (PVC), 10 IN.
127.0			Refer to tabulation in the MSA sheets for locations and details. Use bedding class F-3 as shown in
128.0			Standard Road Plan SW-103. Install flexible sleeve at pipe connections with manhole.
129.0			
130.0	37	2504-0240235	SANITARY SEWER ABANDONMENT, PLUG
131.0			Refer to Tabulation 110_14 in the C sheets for locations and details.
132.0			Includes capping of abandoned pipe opening at manhole EXSAN MH02.
133.0			
134.0	38	2507-8600020	FORESLOPE EROSION COUNTERMEASURE, MAJOR (DETAIL 570-22)
135.0			Refer to Tab. 100-23 in the C sheets and M sheets for locations and details.
136.0			Item includes material, placement, excavation, and shaping.
137.0			Item will be measured in square yards to the nearest yard.
138.0			Payment of item will be per square yard for the area of erosion countermeasure properly installed.
139.0			
140.0	39	2510-6745850	REMOVAL OF PAVEMENT
141.0			Refer to Tab. 110-1 in the C sheets for locations and details. Refer to Tab. 102-5 for existing pavement
142.0			details. No additional payment will be made for variances in pavement depth.
143.0			Full depth sawcutting is incidental and required prior to removal of pavement adjacent to existing pavement.
144.0			
145.0	40	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES
146.0			Refer to Tab. 110-15 in the C sheets for locations and details.
147.0			
148.0	41	2511-0300000	REMOVAL OF RECREATIONAL TRAIL
149.0			Refer to Tab. 110-5 in the C sheets for locations and details. Includes full depth saw cut. Existing sidewalk
150.0			is assumed to be 6 in thick. No additional payment will be made for variances in sidewalk pavement depth.
151.0			
152.0	42	2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.
153.0			Refer to Tab. 113-1A in the C sheets and to typicals in the B sheets for locations and details.
154.0			Certified plant inspection shall be provided by the Contractor. Minor grading to reach finished subgrade is
155.0			incidental to this item.
156.0			
157.0	43	2511-0310100	SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL
158.0			Refer to typical sections on B Sheets. Subgrade width shall be 2' outside edge of PCC trail.
159.0			
160.0	44	2511-6745900	REMOVAL OF SIDEWALK
161.0			Refer to Tab. 110-5 in the C sheets for locations and details. Includes full depth saw cut. Existing sidewalk
162.0			is assumed to be 4 in thick. No additional payment will be made for variances in sidewalk pavement depth.
163.0			
164.0	45	2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.
165.0			Refer to Tab. 113-1A in the C sheets and to typicals in the B sheets for locations and details.
166.0			Certified plant inspection shall be provided by the Contractor. Minor grading to reach finished subgrade is
167.0			incidental to this item.
168.0			
169.0	46	2511-7528101	DETECTABLE WARNINGS
170.0			Refer to Tab. 113-1A in the C sheets and to typicals in the B sheets for locations and details. Warning pads
171.0			shall be cast iron and color shall be brick red.

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ESTIMATE REFERENCE INFORMATION

Line No.	Item No.	Item Code	Description
172.0			
173.0	47	2512-1725306	CURB AND GUTTER, P.C. CONCRETE, 3.0 FT.
174.0			Item is included for curb and gutter adjacent to HMA parking lot, and curb replacement area.
175.0			Curb and gutter unit adjacent to full depth PCC pavement is considered integral and is included in PCC
176.0			pavement bid quantities. Refer to D sheets for locations and details. Certified Plant Inspection shall
177.0			be provided by the Contractor.
178.0			
179.0	48	2515-2475006	DRIVEWAY, P.C. CONCRETE, 6 IN.
180.0			Refer to Tab. 102-3 in the C sheets for locations and details. Quantities include sidewalk/trail through
181.0			driveways and parking lot paving associated with driveways. Certified plant inspection shall be provided by
182.0			the Contractor. Refer to L sheets for details.
183.0			
184.0	49	2515-6745600	REMOVAL OF PAVED DRIVEWAY
185.0			Refer to tabulation in the C sheets for locations and details. Price includes full depth saw cut.
186.0			Existing driveway is assumed to be 4 in thick. No additional payment will be made for variances in driveway
187.0			pavement depth.
188.0			
189.0	50	2517-4225210	RAILROAD APPROACH SECTION, P.C.C.
190.0			Refer to B Sheets and D Sheets for locations and details.
191.0			
192.0	51	2524-6765010	REMOVE AND REINSTALL SIGN AS PER PLAN
193.0			Refer to Tab. 190-62 in the C sheets and D and E sheets for locations and details. Method of Measurement for
194.0			removal and reinstallation of signs will be by count of each satisfactorily removed and reinstalled. Basis of
195.0			Payment for removal and reinstallation of signs is full compensation for furnishing all material, equipment,
196.0			and labor; for performance of all work necessary for removal and reinstallation of the sign, including
197.0			protection, removal, stockpiling, and reconstruction of the signs, support structures, and foundations;
198.0			and placement of any backfill material made necessary by these operations.
199.0			
200.0	52	2524-6765110	REMOVAL OF TYPE A SIGN
201.0			Refer to C sheets and R sheets for locations. Method of Measurement for removal of signs
202.0			will be by count of each satisfactorily removed. Basis of Payment for removal of sign is full compensation
203.0			for all equipment, and labor; for performance of all work necessary for removal of the sign, support
204.0			structures, and foundations; and placement of any backfill material made necessary by these operations.
205.0			Salvage removed signs to City of Hiawatha at their request.
206.0			
207.0	53	2524-9276010	PERFORATED SQUARE STEEL TUBE POSTS
208.0	54	2524-9276021	PERFORATED SQUARE STEEL TUBE POST ANCHOR, BREAK-AWAY SOIL INSTALLATION
209.0	55	2524-9276024	PERFORATED SQUARE STEEL TUBE POST ANCHOR, BREAK-AWAY CONCRETE INSTALLATION
210.0			Refer to Tab. 190-51 in the C sheets for locations and details.
211.0			
212.0	56	2524-9325001	TYPE A SIGNS, SHEET ALUMINUM
213.0			Refer to C sheets and N sheets for locations and details. D3-1 sign size included in 190-66
214.0			for bidding purposes. Contractor shall provide shop drawings of D3-1 signs for review prior to furnishing and
215.0			installing signs.
216.0			
217.0	57	2526-8285010	CONSTRUCTION SURVEY, MONUMENT PRESERVATION
218.0			To be completed by a surveyor licensed in the State of Iowa.
219.0			
220.0	58	2526-8285020	CONSTRUCTION SURVEY, CONTROL POINT SURVEY
221.0			To be completed by a surveyor licensed in the State of Iowa.
222.0			
223.0	59	2526-8285030	CONSTRUCTION SURVEY, RIGHT OF WAY
224.0			To be completed by a surveyor licensed in the State of Iowa.
225.0			
226.0	60	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY
227.0			To be completed by a surveyor licensed in the State of Iowa.
228.0			

ESTIMATE REFERENCE INFORMATION

Line No.	Item No.	Item Code	Description
229.0	61	2527-9263143	PAINTED SYMBOLS AND LEGENDS, DURABLE
230.0			Refer to Tab. 108-29 in the C sheets for locations and details.
231.0			
232.0	62	2527-9263181	PAVEMENT MARKINGS REMOVED
233.0			Refer to Tab. 108-22 in the C sheets for locations and details.
234.0			Contractor shall only use high pressure water blasting to remove existing pavement markings and symbols. Item
235.0			includes traffic control for removal operations.
236.0			
237.0	63	2527-9263190	SYMBOLS AND LEGENDS REMOVED
238.0			Refer to Tab. 108-29 in the C sheets for locations and details.
239.0			Contractor shall only use high pressure water blasting to remove existing pavement markings and symbols. Item
240.0			includes traffic control for removal operations.
241.0			
242.0	64	2527-9263217	PAINTED PAVEMENT MARKINGS, DURABLE
243.0			Refer to Tab. 108-22 in the C sheets for locations and details.
244.0			
245.0	65	2527-9270112	GROOVES CUT FOR PAVEMENT MARKINGS
246.0	66	2527-9270120	GROOVES CUT FOR SYMBOLS AND LEGENDS
247.0			-
248.0			
249.0	67	2528-2518000	SAFETY CLOSURE
250.0			Refer to J-Sheets for safety closure placement. Payment is for full compensation for
251.0			furnishing material, labor and equipment necessary to erect, maintain and remove Safety Closure. Safety
252.0			Closures shall be maintained until the Phase/Stage is complete and can be reopened to traffic. Signs shall
253.0			be reused for other closures. Relocation of signs for other Phases/Stages shall be considered incidental to
254.0			this bid item.
255.0			
256.0	68	2528-8445110	TRAFFIC CONTROL
257.0			Refer to J-Sheets for detours, temporary traffic control plan, and staging notes. Item includes providing,
258.0			placing, shifting, maintaining, replacing and removing all traffic control signage and devices throughout
259.0			the duration of this project. Item also incudes temporary sign installations to maintain regulatory signs and
260.0			road identification signs at intersections during construction.
261.0			
262.0	69	2533-4980005	MOBILIZATION
263.0			Item includes mobilization for entire project.
264.0			
265.0	70	2552-0000140	ROCK EXCAVATION
266.0			Contingency item is included for potential rock encountered during trench excavation for storm sewer and
267.0			sanitary sewer installation. Rock encountered shall be removed to a depth of 8 in below the bottom of pipe to
268.0			allow for placement and compaction of bedding material. Trench width shall be paid for according to the
269.0			applicable Iowa DOT Standard Road Plans SW-101, SW-102, & SW-103. Construction representative must
270.0			be notified when rock excavation is encountered.
271.0			
272.0	71	2552-0000300	TRENCH COMPACTION TESTING
273.0			Contractor to provide material density and moisture testing.
274.0			
275.0	72	2554-0114008	WATER MAIN, TRENCHED, POLYVINYL CHLORIDE PIPE (PVC), 8 IN.
276.0			Refer to Tab in the C sheets and to MW sheet plan and profiles for locations and details.
277.0			
278.0	73	2554-0203000	FITTINGS BY WEIGHT, DUCTILE IRON
279.0			Refer to Tab in the C sheets and to MW sheet plan and profiles for locations and details.
280.0			
281.0	74	2554-0204220	WATER SERVICE STUB, PVC, 2 IN.
282.0			Reconnection to existing water service. Incidental to this item are bends and thrust blocks necessary to connect
283.0			to water main.
284.0			
285.0	75	2554-0207008	VALVE, GATE, DIP, 8 IN.

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ESTIMATE REFERENCE INFORMATION

Line No.	Item No.	Item Code	Description
286.0			Refer to Tab in the C sheets and to MW sheet plan and profiles for locations and details.
287.0			
288.0	76	2554-0209008	VALVE REMOVAL, 8 IN.
289.0			Refer to Tab in the C sheets and to R sheet plan for locations and details.
290.0			
291.0	77	2554-0210201	FIRE HYDRANT ASSEMBLY, WM-201
292.0			Refer to Tab in the C sheets and to MW sheet plan and profiles for locations and details.
293.0			
294.0	78	2554-0210205	FIRE HYDRANT ASSEMBLY REMOVAL
295.0			Refer to Tab in the C sheets and to R sheet plan for locations and details.
296.0			
297.0	79	2554-0212040	VALVE BOX ADJUSTMENT, MINOR
298.0			See D and R sheets for locations and details.
299.0			
300.0	80	2595-0005120	RAILROAD PROTECTIVE LIABILITY INSURANCE FOR CHICAGO, CENTRAL AND PACIFIC RAILROAD / CEDAR RIVER RAILROAD COMPANY
301.0			Contractor to obtain Railroad Protective Liability Insurance through Canadian National/Chicago, Central and
302.0			Pacific Railroads. Refer to Construction or maintenance work on railroad right-of-way
303.0			(Chicago, Central & Pacific Railroad Company and Cedar River Railroad Company) in the Iowa DOT Development
304.0			Specifications for details.
305.0	81	2599-9999010	('LUMP SUM' ITEM) TRAIL FLASHING BEACON SIGN AND PUSH BUTTON RELOCATIONS
306.0			Refer to N sheets for locations of signs to be relocated. Method of Measurement is lump sum. Basis of Payment
307.0			shall be the contract price for the lump sum item. Payment is full compensation for the removal and
308.0			reinstallation/construction of the signs and pedestrian push button including foundations, electrical components
309.0			and connections (including any necessary new components), and all labor, materials, and equipment needed
310.0			to perform the work. Contractor shall provide shop drawings for the relocation to the City for review prior to
311.0			completing relocation. Unsalvageable or broken items shall be replaced at no cost.
312.0			Item includes the relocation of two push buttons and two Rectangular Rapid Flashing Beacons.
313.0			
314.0	82	2599-9999018	('SQUARE YARDS' ITEM) LANDSCAPING ROCK MULCH
315.0			Refer to D sheets for location of landscaping rock. Depth of rock layer shall be 4. Method of Measurement is
316.0			square yards. Basis of Payment shall be the contract price for all material, equipment, and labor necessary to
317.0			install the landscaping rock. Includes placement of landscaping fabric under landscaping rock.
318.0			
319.0	83	2601-2636044	SEEDING AND FERTILIZING (URBAN)
320.0			Item includes urban seeding and fertilizing at the locations identified on the F sheets.
321.0			
322.0	84	2601-2639010	SODDING
323.0			Item includes sodding at the locations identified on the F sheets.
324.0			
325.0	85	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION
326.0			Item includes watering for urban seed application, to restore all anticipated disturbed areas. Estimated
327.0			quantity is based on a maximum application of 50 gallons per square for a count of 6 waterings. Initial
328.0			watering to be completed no later than one day after seeding application, with follow-up waterings
329.0			completed in intervals of 2-3 days until 6 waterings have been completed. Watering plan shall be
330.0			coordinated with owner.
331.0			
332.0	86	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.
333.0	87	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE
334.0			Refer to F sheets for locations and details. Verify the specific locations with the Engineer prior to
335.0			beginning placement. Use perimeter and slope sediment control devices fabricated using wood excelsior.
336.0			
337.0	88	2602-0000500	OPEN-THROAT CURB INTAKE SEDIMENT FILTER, EC-602
338.0	89	2602-0000510	MAINTENANCE OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER
339.0	90	2602-0000520	REMOVAL OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER
340.0			Refer to Tab. 100-36 in the C sheets for locations and details.
341.0			
342.0	91	2602-0000530	GRATE INTAKE SEDIMENT FILTER BAG

ESTIMATE REFERENCE INFORMATION

Line No.	Item No.	Item Code	Description
343.0	92	2602-0000540	MAINTENANCE OF GRATE INTAKE SEDIMENT FILTER BAG
344.0	93	2602-0000550	REMOVAL OF GRATE INTAKE SEDIMENT FILTER BAG
345.0			Refer to Tab. 100-37 in the RC sheets for locations and details.
346.0			Method of Measurement is the count of each grate intake sediment filter bag installed, maintained, and
347.0			removed. Basis of Payment is for each grate intake sediment filter bag occurance. Payment is full
348.0			compensation for furnishing equipment, labor, and materials required to install, maintain, and removed
349.0			the grate intake sediment filter bag.
350.0			
351.0	94	2602-0010010	MOBILIZATIONS, EROSION CONTROL
352.0			Only one mobilization will be paid for each stage of work (pre-construction, post-construction, and seeding).
353.0			The contractor shall mobilize with sufficient labor, equipment, and materials to perform the erosion/sediment
354.0			control installation as identified on the drawings. Additional mobilizations must be approved by the engineer.

100_19
10/15/24

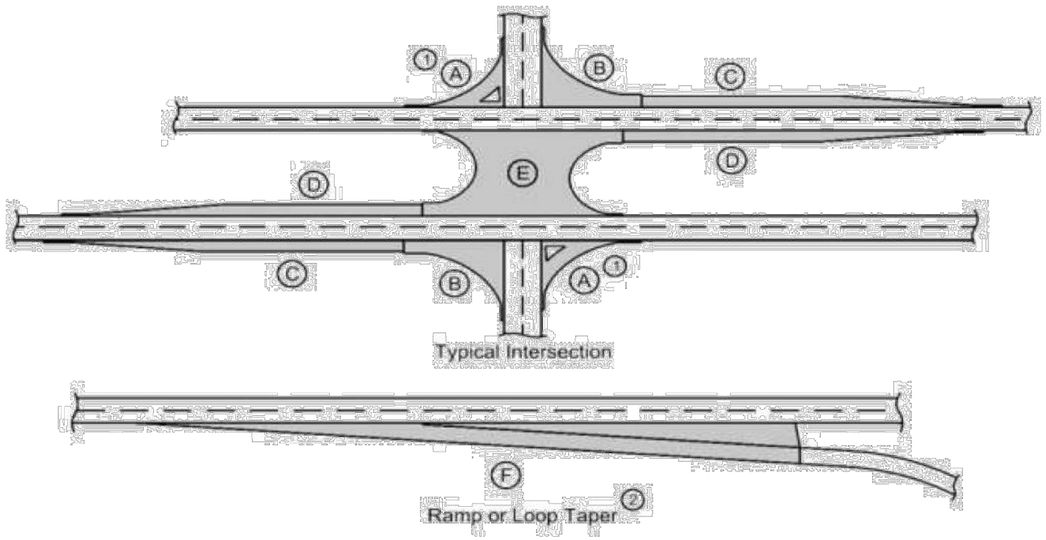
PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

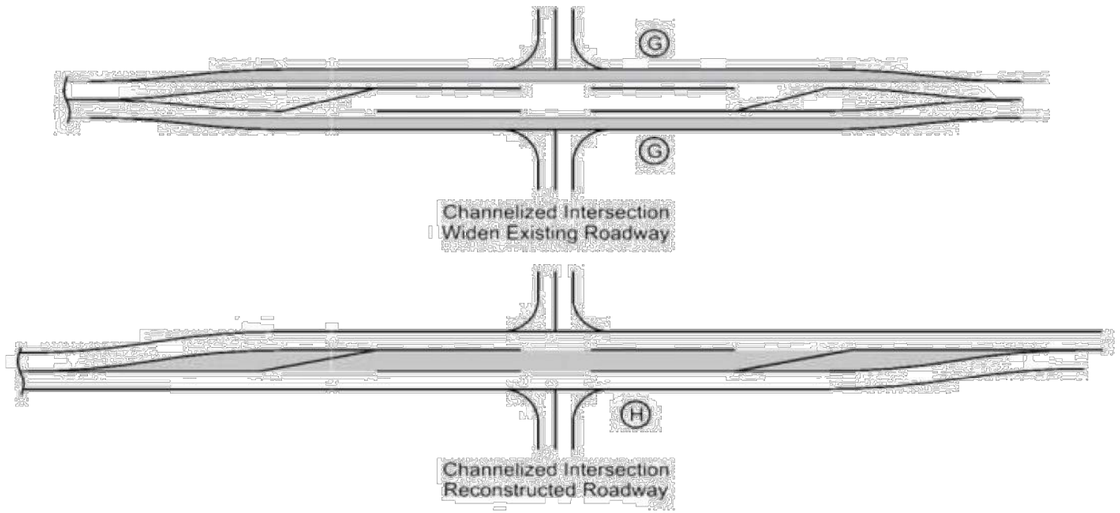
Possible Standards: EC-204

Line No.	Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
1.0	101+59.10	107+76.84		Perimeter and Slope	12 inch	667.00	
2.0	103+05.80	107+39.62		Perimeter and Slope	12 inch	461.00	
3.0	108+40.33	114+57.17		Perimeter and Slope	12 inch	581.00	
4.0	107+96.58	115+27.33		Perimeter and Slope	12 inch	708.00	
5.0	109+76.46	112+35.10		Perimeter and Slope	12 inch	274.00	

100_24
10/15/24

PCC PAVEMENT





(1) Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
(2) Refer to PV-410, PV-411, PV-412, and PV-414.
(3) Quantity includes Pavement Header.

Line No.	Road Identification	Direction of Travel	Station From	Station To	Width (FT)	Length (FT)	Area (SY)	Area A(1) (SY)(3)	Area B (SY)(3)	Area C (SY)(3)	Area D (SY)(3)	Area E (SY)(3)	Area F(2) (SY)(3)	Area G (SY)(3)	Area H (SY)(3)	Area by Thickness - Thickness(IN)	Area by Thickness - Area (SY)	Polymer Grid (SY)	Special Backfill (TON)	Modified Subbase (CY)	Granular Subbase (SY)	Remarks
1.0	Boyson Road		102+57.15	113+07.42	42.0	1050.27	4684.00													1031.00	6185.00	
2.0	Boyson Road		113+60.31	115+23.40	42.0	163.09	695.00													141.00	844.00	
3.0	Boyson Road		104+54.62	104+64.74	42.0	10.00	47.00															crosswalk
4.0	Boyson Road		106+92.48	107+02.48	42.0	10.00	40.00															crosswalk
5.0	Boyson Road		107+55.49	107+96.27	34.0	10.00	26.00															crosswalk
6.0	Boyson Road		108+32.38	108+42.41	42.0	10.00	40.00															crosswalk
7.0	Boyson Road		107+48.91	107+81.70	34.0	10.00	32.00															crosswalk

102_05
9/29/23

EXISTING PAVEMENT

Line No.	County	Route	Direction of Travel	Begin Ref. Location Sign	End Ref. Location Sign	Year	Type	Project Number	Surface Type	Surface Depth (IN)	Base Type	Base Depth (IN)	Subbase Type	Subbase Depth (IN)	Removal Type	Removal Depth (IN)	Coarse Aggregate Source	Coarse Aggregate Type	Course Aggregate Durability Class	Reinforcement Type	Remarks
1.0		BOYSON RD							PCC	8.0	LC, GRVL	42.0			PCC	8.0					SECTIONS VARY. DEPTHS APPROXIMATE
2.0		BOYSON CT							PCC	8.0	LC, GRVL	42.0			PCC	8.0					SECTIONS VARY. DEPTHS APPROXIMATE

100_36
8/15/22

OPEN-THROAT CURB INTAKE SEDIMENT FILTER

Possible Standard: EC-602

Line No.	Station	Side	Installation (LF)	Maintenance (Each)	Removal (Each)	Remarks
1.0	107+57.93		12.0	1	1.0	
2.0	107+95.75		14.0	1	1.0	
3.0	109+37.35		12.0	1	1.0	
4.0	109+37.42		12.0	1	1.0	
5.0	115+31.81		12.0	1	1.0	
6.0	115+31.91		12.0	1	1.0	
7.0	109+64.23		12.0	1	1.0	
8.0	109+56.61		12.0	1	1.0	

100_37
4/16/24

GRATE INTAKE SEDIMENT FILTER BAG

Possible Standard Road Plan : EC-604

Line No.	Location Station	Side	Installation (Each)	Maintenance (Each)	Removal (Each)	Remarks
1.0	104+39.86		2.0	2	2.0	
2.0	104+39.82		2.0	2	2.0	
3.0	106+49.66		2.0	2	2.0	
4.0	106+50.40		2.0	2	2.0	
5.0	108+95.73		2.0	2	2.0	
6.0	110+50.00		2.0	2	2.0	
7.0	110+50.04		2.0	2	2.0	

104_09A
5/6/24

LONGITUDINAL SUBDRAIN SHOULDER

* Not a bid item.

Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
1.0	Boyson Road	104+40.01	106+48.03		36.0	6.0	209.0	106+48.03	DR-303	19.4	
2.0	Boyson Road	104+40.55	106+48.10		36.0	6.0	209.0	106+48.10	DR-303	19.4	
3.0	Boyson Road	106+51.60	107+11.66		36.0	6.0	61.0	107+11.66	DR-303	5.6	
4.0	Boyson Road	106+52.00	107+51.67		36.0	6.0	124.0	107+51.67	DR-303	11.5	
5.0	Boyson Road	107+16.34	107+51.42		36.0	6.0	56.0	107+51.42	DR-303	5.2	
6.0	Boyson Road	107+78.85	107+96.18		36.0	6.0	86.0	107+96.18	DR-303	8.0	
7.0	Boyson Road	107+98.34	109+32.54		36.0	6.0	129.0	109+32.54	DR-303	11.9	
8.0	Boyson Road	107+98.74	109+33.23		36.0	6.0	171.0	109+33.23	DR-303	15.8	
9.0	Boyson Road	109+41.60	110+48.04		36.0	6.0	110.0	110+48.04	DR-303	10.2	
10.0	Boyson Road	110+50.00	115+27.55		36.0	6.0	489.0	115+27.55	DR-303	45.3	
11.0	Boyson Road	110+51.47	115+27.33		36.0	6.0	465.0	115+27.33	DR-303	43.1	

104_05B
3/6/25

STORM SEWER

(1) Diameter or equivalent diameter
* Bid Item
** For SW-545
Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 2 ft length is added to each end of the Design Length to account for estimated length to center of structures.

No.	Location Station	Offset	Type or Standard Road Plan*	Form Grade Elev.	Bottom Well Elev.	Extension Length**	Notes	Line Number	Intake / Utility Access No. From	Intake / Utility Access No. To	Class 'D'	Pipe Size (1) (IN)	Bid Length* (FT)	Design Length (FT)	Slope %	Connected Pipe Joint (DR-121)	Flow Line Inlet Elev.	Flow Line Outlet Elev.	Flow Line Other Elev.	Pipe Profile Sheet No.	Notes
FES-1.0	109+99.59	44.0	42 RCP FES	842.38				ST-1.1	STINT-1.1	FES-1.0		42.0	20	18.0	1.1		838.74	838.50			
STMH-1.1	109+88.88	25.6	SW-401, 84 IN	845.71			PRECAST LID WITH OFFSET CASTING	ST-1.1A	STMH-1.1A	STMH-1.1		42.0	70	66.0	0.6		839.24	838.84			
STINT-1.2	109+37.37	18.8	SW-510	845.08				ST-1.1B	STMH-1.1B	STMH-1.1A		42.0	78	74.0	0.6		839.78	839.34			GASKETS REQUIRED
STINT-1.2A	109+37.42	-22.6	SW-509	845.12				ST-1.1C		STMH-1.1B		15.0	19	17.0	8.4		841.72	840.33			CONNECT TO EX. PIPE
STINT-1.2B	108+95.31	-20.6	SW-505	845.96				ST-1.1D		STMH-1.1B		42.0	79	77.0	1.0		841.16	840.39			CONNECT TO EX. PIPE
STINT-1.3	107+95.72	38.8	SW-541	847.52			WITH SW-542 EXTENSION UNIT	ST-1.2	STINT-1.2	STINT-1.1		18.0	45	41.0	1.0		840.31	839.87			
STINT-1.3A	107+54.21	71.3	SW-509	847.49				ST-1.2A	STINT-1.2A	STINT-1.2		15.0	45	41.0	1.0		841.51	841.09			
STINT-1.4	107+14.91	-30.1	SW-507	848.25				ST-1.2B	STINT-1.2B	STINT-1.2A		15.0	42	38.0	1.0		841.35	840.97			GASKETS REQUIRED
STINT-1.5	106+50.00	-23.1	SW-505	849.29				ST-1.3	STINT-1.3	STINT-1.2		18.0	133	129.0	1.0		841.90	840.61			
STINT-1.5A	106+50.00	17.4	SW-505	849.61				ST-1.3A	STINT-1.3A	STINT-1.3		15.0	59	55.0	1.0		843.32	842.77			
STINT-1.6	104+40.00	-21.0	SW-505	853.86				ST-1.4	STINT-1.4	STINT-1.3		18.0	108	104.0	1.0		843.23	842.19			
STINT-1.6A	104+40.52	21.0	SW-505	853.86				ST-1.5	STINT-1.5	STINT-1.4		15.0	64	60.0	1.0		843.93	843.33			
STINT-2.1	110+50.00	21.0	SW-505	847.16				ST-1.5A	STINT-1.5A	STINT-1.5		15.0	41	37.0	1.0		844.82	844.45			
STINT-2.1A	110+50.00	-21.0	SW-505	847.16				ST-1.6	STINT-1.6	STINT-1.5		15.0	208	204.0	2.5		849.20	844.10			
STMH-1.1A	109+56.82	-39.5	SW-401 96IN	845.16			OPEN GRATE / BEEHIVE	ST-1.6A	STINT-1.6A	STINT-1.6A		15.0	42	38.0	1.0		849.68	849.30			
STMH-1.1B	108+84.93	-39.9	SW-401 72IN	846.53				ST-2.1	STINT-2.1	STINT-1.1		15.0	59	55.0	1.0		842.57	841.99			
FES-3.0	109+67.49	41.7	15 RCP FES	840.31				ST-2.1A	STINT-2.1A	STINT-2.1		15.0	42	38.0	1.0		843.05	842.67			
STINT-3.1	109+94.68	59.3	SW-507	844.77				ST-3.1	STINT-3.1	FES-3.0		15.0	29	27.0	2.0		840.85	840.31			

104_10
4/16/24

ADJUSTMENT OF FIXTURES

Line No.	Item No.	Location Station	Side	Distance	Type of Fixture	Adjustment
1.0		102+80.09			Water Valve	Minor
2.0		105+95.39			Water Valve	Minor
3.0		106+81.79			Sanitary Manhole	Minor
4.0		107+95.49			Water Valve	Minor
5.0		108+14.38			Water Valve	Minor
6.0		111+70.74			Water Valve	Minor
7.0		114+47.96			Water Valve	Minor
8.0		114+78.02			Sanitary Manhole	Minor

110_01
4/5/24

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5.

* Not a bid item.

Line No.	Station From	Station To	Side	Pavement Type	Area (SY)	Saw Cut* (LF)	Remarks
1.0	102+57.15	113+11.21		PCC	3755.7		
2.0	113+51.96	115+23.40		PCC	582.6		
3.0	104+39.63	104+68.25		HMA	49.1		Shared use path
4.0	112+95.89	113+67.93		HMA	119.8		Railroad approach
5.0	107+81.78	107+92.76		PCC	37.6		Driveway
6.0	107+83.23	109+65.24		HMA	196.5		Parking Lot
7.0	114+14.35	114+52.03		PCC	25.9		Driveway
8.0	114+74.21	115+10.58		PCC	20.3		Driveway
9.0	114+56.62	115+22.84		PCC	47.1		Driveway
10.0	108+09.74	108+78.24		HMA	23.8		Shoulder
11.0	111+39.54	112+64.39		HMA	28.1		Shoulder
12.0	108+18.38	111+95.51		HMA	88.3		Shoulder

110_05
8/15/22

SIDEWALK REMOVAL

* Not a bid item

Line No.	Station From	Station To	Area (SY)	Saw Cut* (LF)	Remarks
1.0	103+11.24	107+60.72	272.8		
2.0	105+45.94	107+60.99	94.3		
3.0	107+86.24	109+66.11	85.8		

110_14
7/11/24

SANITARY OR STORM SEWER ABANDONMENT OR REMOVAL

* Not a bid item

Line No.	Location Description	Sewer and Work Type	≤ 36 inch Diameter (LF)	> 36 inch Diameter (LF)	Plug Quantity (EA)	* Flowable Mortar or CLSM (CY)	Remarks
1.0	STA 109+86.30 to STA 112+46.43				2		
2.0	STA 111+57.46 to STA 112+46.43				2		
3.0	STA 112-46.43				1		Remove top of manhole, fill and abandon in place.

110_15
8/15/22

REMOVAL OF INTAKES AND UTILITY ACCESSES

Line No.	Item No.	Location Description	Type	Remarks
1.0		10986.3	Utilities	
2.0		11246.43	Utilities	Abandon in place
3.0		10727.21	Intakes	
4.0		10823.11	Intakes	
5.0		10889.42	Intakes	
6.0		10908.38	Intakes	
7.0		10979.82	Intakes	

110_17
1/27/25

CLEARING AND GRUBBING

Line No.	Station From	Station To	Direction of Traffic	Work and Material Type	>3"-6"	>6"-9"	>9"-12"	>12"-15"	>15"-18"	>18"-24"	>24"-30"	>30"-36"	>36"-42"	>42"-48"	>48"-60"	>60"-72"	>72"	Other Materials Length (FT)	Other Materials Width (FT)	Estimated Units	Estimated Area (Acres)	Estimated Herbicide Application (EA)	Remarks
1.0	101+95.89	104+12.89	EB	Trees - Clearing and Grubbing			2											220.0	15.0	13.4	0.080		
2.0	104+89.61	105+22.91	EB	Brush - Clearing														33.0	10.0	2.6	0.010		
3.0	107+52.27		SB	Trees - Clearing and Grubbing				1												9.4			
4.0	108+28.68	108+97.07	EB	Trees - Clearing and Grubbing			4													26.8			
5.0	112+32.72	112+85.68	EB	Brush - Clearing														58.0	28.0	13.0	0.040		
6.0	114+39.59		EB	Trees - Clearing and Grubbing									1							80.0			

112_03
8/15/22

RAILROAD APPROACH SECTIONS

Line No.	Station	Angle	Pavement Type	Pavement Area (SY)	Remarks
1.0			PCC	175.0	

112_05
8/15/22

CONCRETE MEDIANS

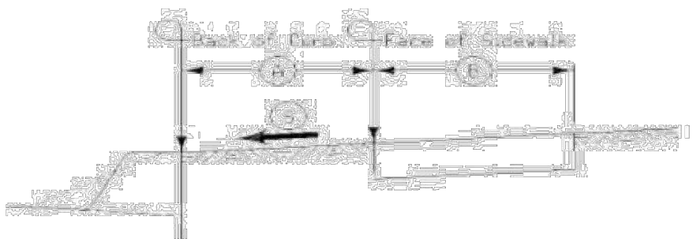
* Bid item

Line No.	Station From	Station To	Type	Area* (SY)	Modified Subbase (CY)	Special Backfill (CY)	Remarks
1.0	102+95.82	104+53.58		154.0			
2.0	104+65.78	107+22.46		159.0			
3.0	107+03.35	108+30.55		338.0			
4.0	107+67.44	107+80.88		11.0			
5.0	107+68.86	107+73.53		12.0			
6.0	108+12.49	113+15.35		319.0			
7.0	113+50.17	114+74.50		72.0			

113_01A
11/19/24

SIDEWALKS

See MI-220 and S Sheets



Line No.	Road Identification	Station From	Station To	Side	A (FT)	B (FT)	S %	Sidewalk Thickness (IN)	Sidewalk Length (FT)	Sidewalk Width (FT)	Sidewalk Area (SF)	4" PCC Sidewalk (SY)	6" PCC Sidewalk (SY)	8" PCC Sidewalk (SY)	10" PCC Sidewalk (SY)	Detectable Warnings (SF)	Remarks
1.0	Boyson Road	103+11.30	107+56.94					6	445.6	5.0	2556.0		284.0			48.0	
2.0	Boyson Road	107+95.16	114+30.20					6	635.0	5.0	3324.0		369.0			48.0	
3.0	Boyson Road	101+51.39	107+52.57					6	601.2	8.0	5167.0		574.0			68.0	
4.0	Boyson Road	107+81.70	114+55.07					6	673.4	8.0	5502.0		611.0			64.0	

190_51
2/10/23

MATERIALS FOR TYPE 'A' SIGNS

Refer to SI-101, SI-111, SI-119 and N Sheets.

Line No.	Type A Signing Typicals	Sign Number	Dir. of Travel	Sign Location Station	Wood Posts (No.)	4 x 6 Leg 1 (FT)	4 x 6 Leg 2 (FT)	Perf. Sq. Steel Leg 1 (FT)	Perf. Sq. Steel Leg 2 (FT)	Perf. Sq. Steel Leg 3 (FT)	Perf. Sq. Anchor Type	Anchor Quantity (EA)	Steel Rect. Tube (No)	Steel Rect. Tube (FT)	Rect. Tube Anchors (EA)	Type A Bracket One Post	Type A Bracket Two Post	Type A Bracket Auxiliary	Type A Bracket (H)	Type A Bracket (F)	Type A Bracket (F1)	Install. Type	Install. Dim X (FT)	Install. Signing Notes	Remarks
1.0		R4-7, OM1-2	EB	103+02.03				12.0			Concrete	1													
2.0		W13-1, W2-6	EB	103+21.35				12.0			Soil	1													
3.0		W11-2, W16-7P	EB	106+89.17				12.0			Soil	1													
4.0		W11-2, W16-7P	WB	107+07.52				12.0			Soil	1													
5.0		R1-2, W13-1, W2-6	EB	107+19.93				12.0			Soil	1													
6.0		W11-2, W16-7P	SB	107+39.27				12.0			Soil	1													
7.0		R1-2, W13-1, W2-6	SB	107+46.29				12.0			Soil	1													
8.0		W11-2, W16-7P	SB	107+52.77				12.0			Soil	1													
9.0		W11-2, W16-7P	NB	107+85.40				12.0			Soil	1													
10.0		R1-2, W13-1, W2-6	NB	107+87.38				12.0			Concrete	1													
11.0		W11-2, W16-7P	NB	108+00.36				12.0			Soil	1													
12.0		W11-2, W16-7P	EB	108+17.78				12.0			Concrete	1													
13.0		R1-2, W13-1, W2-6	WB	108+24.04				12.0			Soil	1													
14.0		W11-2, W16-7P	WB	108+57.27				12.0			Soil	1													
15.0		W13-1, W2-6	WB	109+91.11				12.0			Soil	1													
16.0		W10-1	EB	112+42.86				12.0			Soil	1													
17.0		W10-1	WB	112+80.75				12.0			Soil	1													
18.0		W10-1	WB	113+26.40				12.0			Soil	1													
19.0		W10-1	EB	113+46.24				12.0			Soil	1													
20.0		W10-1	EB	113+85.82				12.0			Soil	1													
21.0		R4-7, OM1-2	WB	114+71.29				12.0			Concrete	1													

190_61
2/10/23

EXISTING SIGNS TO BE REINSTALLED

Line No.	Sign Description	Direction of Travel	Location Station	Number of Posts	Square Tube Steel Posts	Wood Posts 4"x4" (LF)	Wood Posts 4"x6" (LF)	Installation Type	Installation Dim 'X'	See Signing Notes
1.0	R1-5	EB	104+02.17	1						
2.0	R1-5	WB	105+19.92	1						
3.0	R8-8	EB	112+76.64	1						
4.0	R1-1	WB	114+25.27	1						
5.0	R5-1	WB	114+51.89	1						
6.0	W10-1	WB	114+70.84	1						

190_62
2/13/23

EXISTING SIGNS TO BE REMOVED

Line No.	Sign Number or Description	Location Station	Direction of Travel	Type 'A' Sign Assembly (RA) (EA)	Type 'B' Sign Assembly (RB) (EA)	Type 'A' Remove and Reinstall (RR) (EA)	Type 'B' Remove and Reinstall (RR) (EA)	Concrete Foundation (RF) (EA)	Support Structure & Foundation (RS) (EA)	Applicable Signing Notes	Remarks
1.0		103+34.75	WB	1							
2.0		104+02.17	EB			1					
3.0		104+08.80	WB	1							
4.0		105+19.92	WB			1					
5.0		106+91.18	WB	1							
6.0		107+90.36	EB	1							
7.0		109+48.09	WB	1							
8.0		112+76.64	EB			1					
9.0		114+25.27	WB			1					
10.0		114+51.89	WB			1					
11.0		114+70.84	WB			1					

190_66
9/29/23

SUMMARY OF TYPE 'A' SIGNS

Line No.	Sign Number	Non-Standard Sign Number or Name	Quantity (EA)	Size (IN)	Total Sign Area (SF)
1.0		OM1-2	1	18x18	2.3
2.0	R1-2	R1-2	4	36x36x36	18.0
3.0	R4-7	R4-7	1	24x30	5.0
4.0	W10-1	W10-1	4	24	12.6
5.0	W10-1	W10-1	1	36	7.1
6.0		W11-2	8	30x30	50.0
7.0	W13-1	W13-1	6	24x24	24.0
8.0		W16-7P	8	24x12	16.0
9.0		W2-6	6	30x30	37.5

SANITARY SEWER MAIN								
LINE NO.	PIPE MATERIAL	DIAMETER (IN)	LENGTH (FT)	SLOPE (%)	FLOW LINES		STRUCTURE NO.	
					UPSTREAM	DOWNSTREAM	UPSTREAM	DOWNSTREAM
SAN01	HDPE	10	374	1.96%	834.50'	827.10'	SAN MH01	EXSAN MH02

SANITARY SEWER STRUCTURES								
NO.	TYPE	STATION	OFFSET		RIM ELEVATION	FLOW LINE(S) IN	FLOW LINE OUT	REMARKS
SAN MH01	SW-301	109+78.60	24.23'	LT	845.85'	834.6	834.5	

Water Main											
NO.	MATERIAL	SIZE (IN)	LENGTH (LF)	BEGIN STATION	END STATION	BEGIN OFFSET		END OFFSET		NOTES
Boyson Road										
1	PVC	8	577	102+79.83	108+22.17	23.60'	RT	31.29'	LT	
2	PVC	8	492	108+21.45	113+02.84	26.34'	LT	13.70'	LT	
3	PVC	8	61	107+89.26	108+14.19	70.39'	RT	23.90'	RT	
		TOTAL	1130							

Water Main Fittings					
NO.	STATION	OFFSET		TYPE	WEIGHT (LB.)
1	102+79.83	23.6	RT	8"X8" TEE	87
2	102+84.83	23.73	RT	8" 45° BEND	49
3	102+92.29	31.56	RT	8" 45° BEND	49
4	105+78.28	35.25	RT	8" 45° BEND	49
5	106+57.97	44.43	LT	8" 45° BEND	49
6	108+22.17	31.29	LT	8"X8" TEE	87
7	108+21.45	26.34	LT	8"X8" TEE	87
8	107+89.45	68.71	RT	8" 22.5° BEND	44
9	108+14.19	23.9	RT	8" 22.5° BEND	44
10	109+24.94	29.18	LT	8" 11.25° BEND	40
11	109+72.52	31.83	LT	8" 11.25° BEND	40
12	111+76.60	26.29	LT	8" 11.25° BEND	40
13	112+92.94	25.98	LT	8" 45° BEND	49
14	113+02.84	13.7	LT	8" 90° BEND	61
				TOTAL	775

Water Valves					
NO.	STATION	OFFSET		FINISH GRADE	NOTES
Boyson Road					
1	105+38.02	35.25'	RT	852.26'	
2	107+89.26	70.39'	RT	847.57'	
3	108+19.64	31.65'	LT	848.31'	
4	108+24.43	26.08'	LT	847.95'	
5	110+97.43	28.83'	LT	848.90'	
TOTAL	5				

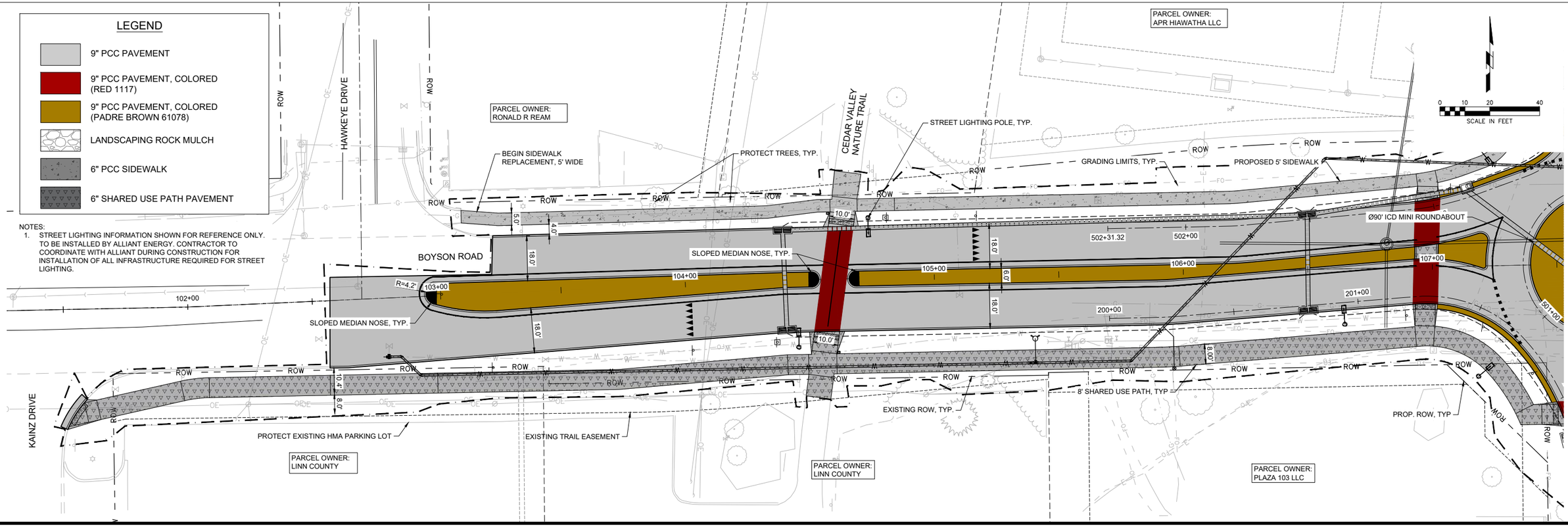
Fire Hydrant Assembly					
NO.	STATION	OFFSET		FINISH GRADE	NOTES
Boyson Road					
1	105+40.00	25.50'	RT	851.96'	
2	108+35.00	30.15'	LT	847.65'	
3	111+00.00	23.78'	LT	848.84'	
TOTAL	3				

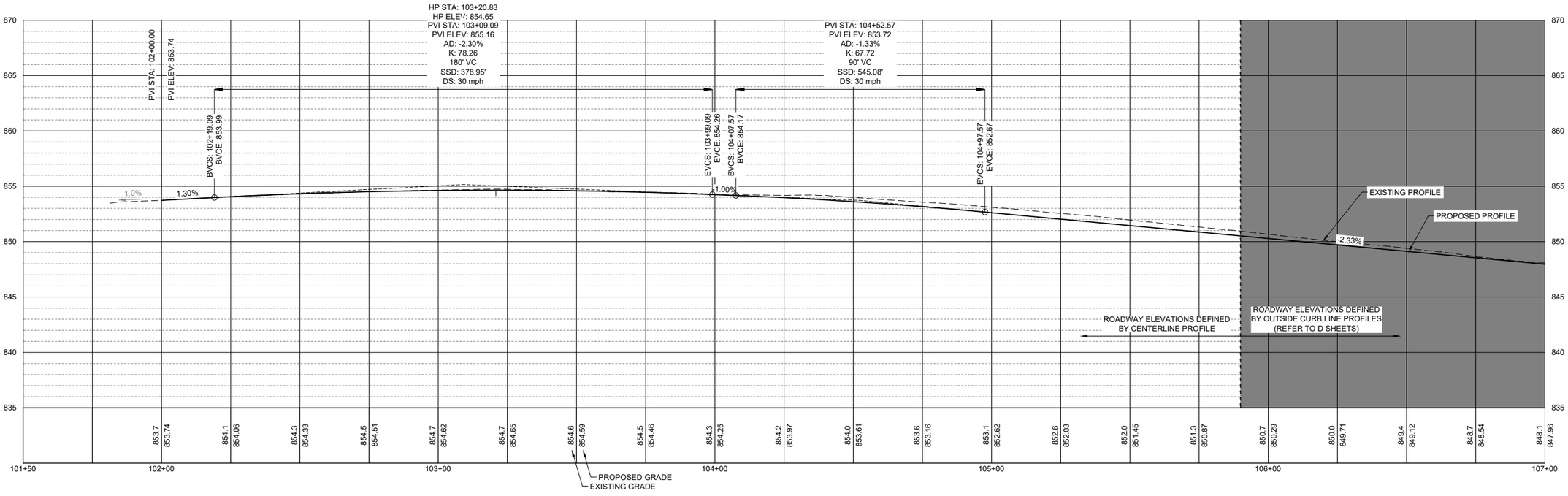
PAVEMENT MARKING LINE TYPES & SYMBOLS

See Detail on Sheet N.01

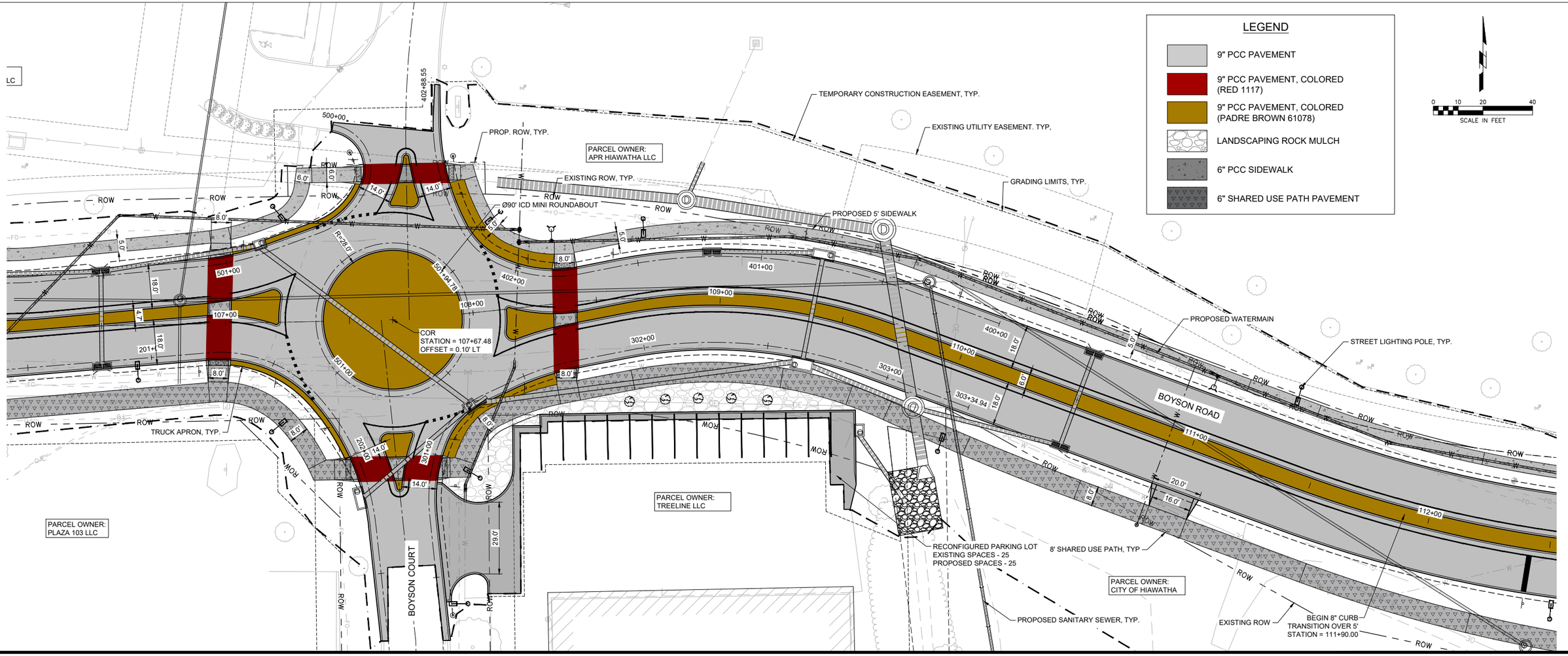
ELY6: Edge Line Left (Yellow) @ 1.00	ELW6: Edge Line Right (White) @ 1.00	MNY6: Median Nose (Yellow) @ 1.00	ONLW: Only Word Marking (White)
DCY6: Double Centerline (Yellow) @ 2.00	SLW2: Stop Line (White) @ 4.00	NPY6: No Passing Zone (Yellow) @ 1.25	RRCW: Railroad Crossing Symbol (White)
CBW6: Crosswalk Bar (White) @ 10.00	DLW18: Dotted Line, 18" (White) @ 1.00	YLW2: Yield Line (White) @ 1.15	LTAW: Left Turn Arrow (White)

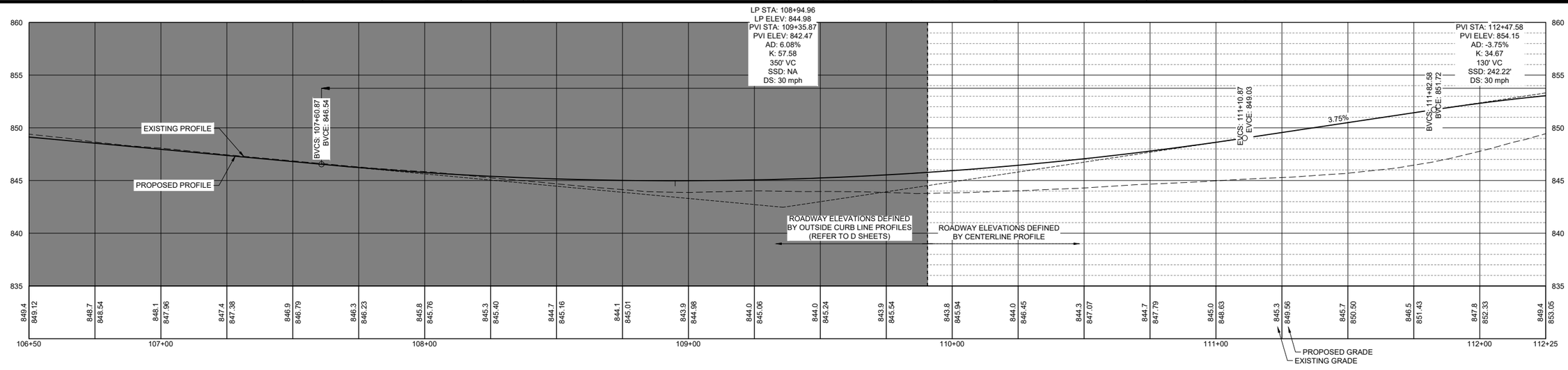
Location								Length by Line Type (Unfactored)											
Road ID	Station to Station		Length (STA)	Dir. of Travel	Side			ELY6	DCY6	CBW6	ELW6	SLW2	DLW18	MNY6***	NPY6	YLW2	RRCW	LTAW	ONLW	Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	EACH	EACH	
Boyson Road	102+93.2	104+55.5	3.31			X		3.31												
Boyson Road	102+95.9		0.07			X								0.07						
Boyson Road	104+02.1		0.13				X									0.13				
Boyson Road	104+50.0		0.05			X								0.05						
Boyson Road	104+65.6	106+93.9	4.58			X		4.58												
Boyson Road	104+68.8		0.05			X								0.05						
Boyson Road	105+15.9		0.13		X											0.13				
Boyson Road	107+02.4	107+25.1	0.45			X		0.45												
Boyson Road	107+21.7	107+28.8	0.33			X					0.33									
Boyson Road	107+24.5	108+10.6	0.95			X							0.95							
Boyson Road	107+54.8	107+76.3	0.33				X				0.33									
Boyson Road	107+56.5	107+74.5	0.44				X	0.44												
Boyson Road	107+61.6	107+88.3	0.31		X						0.31									
Boyson Road	107+63.4	107+87.2	0.43		X			0.43												
Boyson Road	108+06.4	108+13.4	0.31			X					0.31									
Boyson Road	108+13.4	108+33.3	0.44			X		0.44												
Boyson Road	108+41.3	113+18.0	9.61			X		9.61												
Boyson Road	112+42.4						X										1.00			
Boyson Road	113+12.4		0.05			X								0.05						
Boyson Road	113+53.2		0.05			X								0.05						
Boyson Road	113+47.5	114+72.8	2.06			X		2.06												
Boyson Road	113+74.5				X												1.00			
Boyson Road	114+21.8	115+23.4	1.02				X								1.02					
Boyson Road	114+72.8	115+23.4	0.51		X										0.51					
Boyson Road	114+87.0					X												1.00		
Boyson Road	115+09.3					X												1.00		
Boyson Road	115+25.5	116+53.2	1.29		X				1.29											
Boyson Road	115+62.1	116+52.1	0.90				X				0.90									
Boyson Road	115+91.0					X													1.00	
Boyson Road	116+20.8					X												1.00		
Boyson Road	116+51.0	116+53.2	0.28			X						0.28								
LENGTH OR SYMBOL SUBTOTAL								21.32	1.29	0.00	2.18	0.28	0.95	0.27	1.53	0.26	2.00	3.00	1.00	
QUANTITY FACTORS								1.00	2.00	10.00	1.00	4.00	1.00	1.00	1.25	1.15	1.00	1.00	1.00	
TOTAL								21.32	2.58	0.00	2.18	1.12	0.95	0.27	1.91	0.30	2.00	3.00	1.00	
TOTAL (STA)								30.62												
SYMBOL TOTAL								6.00												



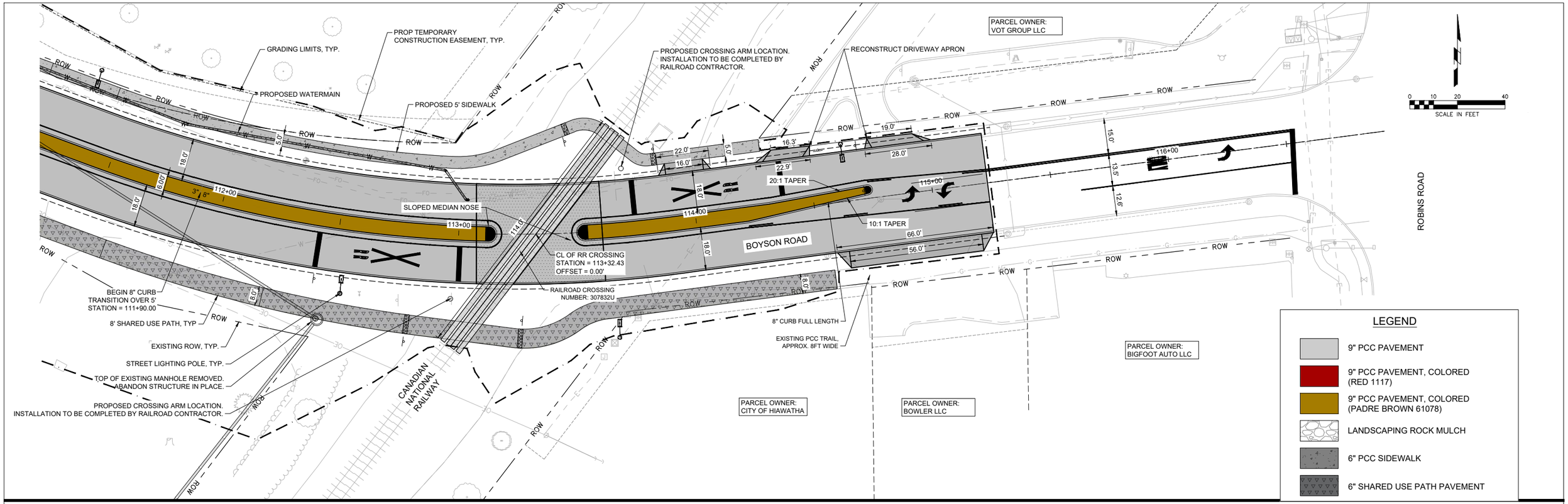


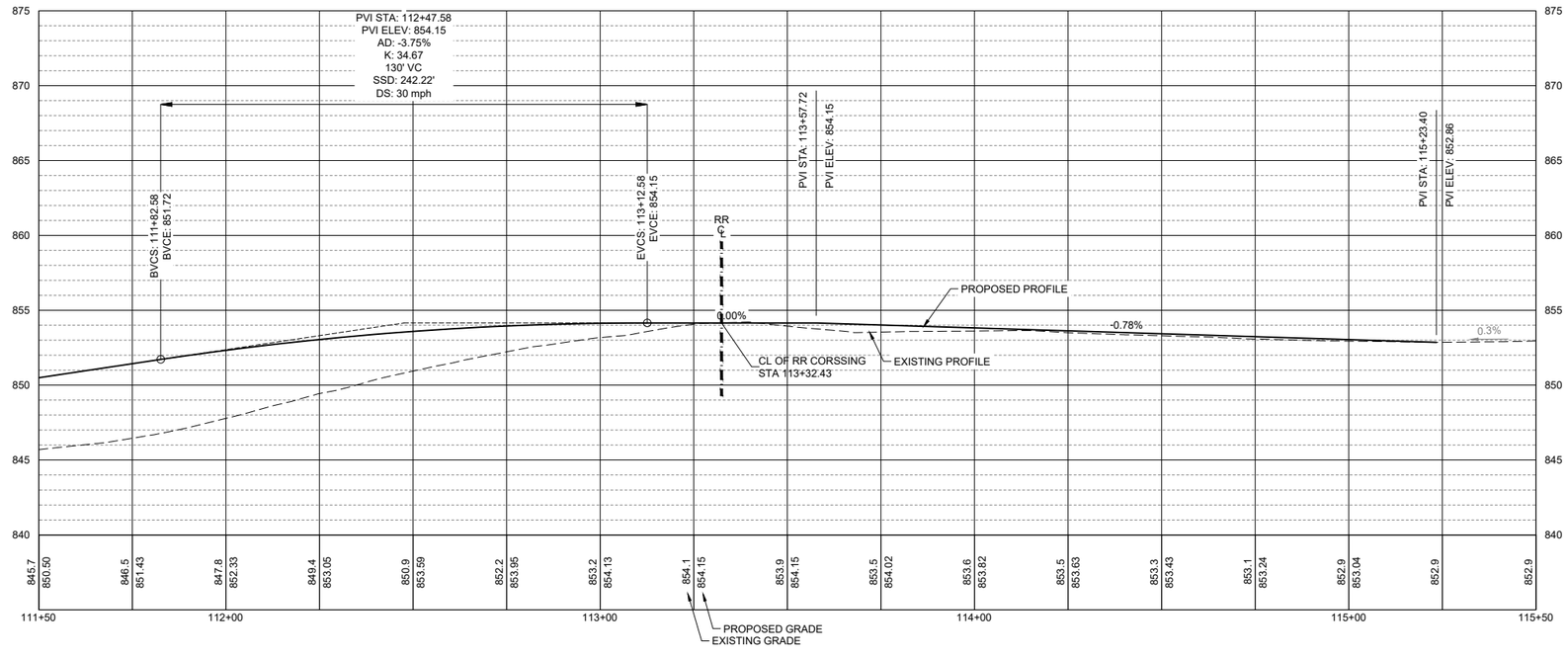
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PLAN AND PROFILE	SHEET NUMBER D.01



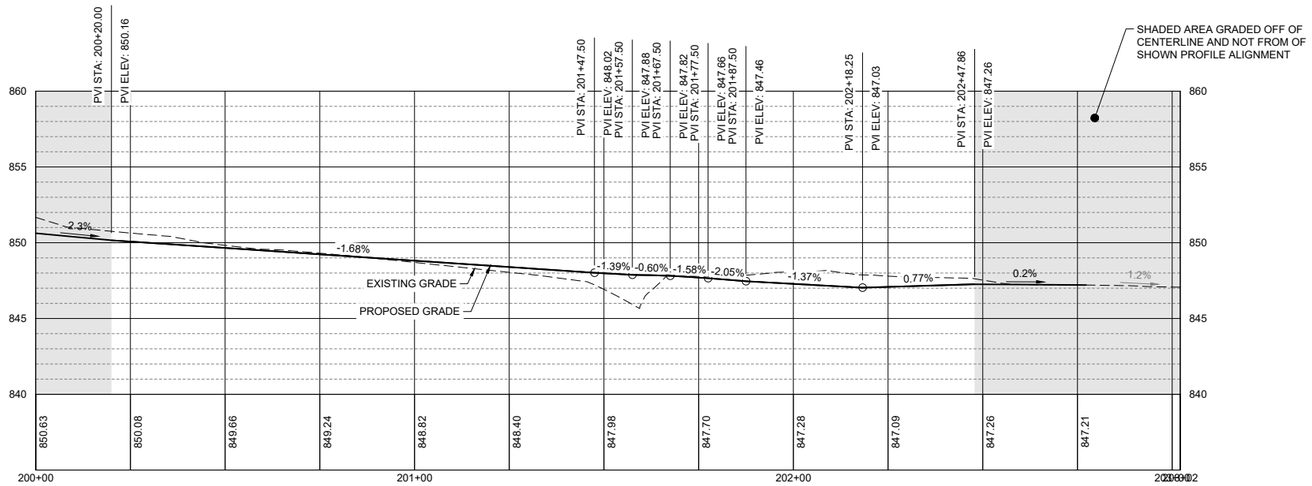


S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PLAN AND PROFILE	SHEET NUMBER D.02



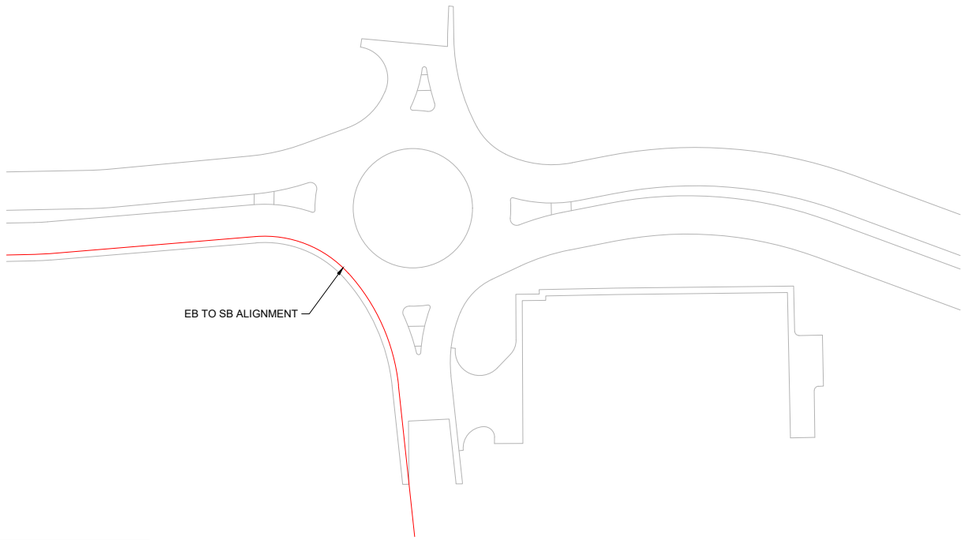


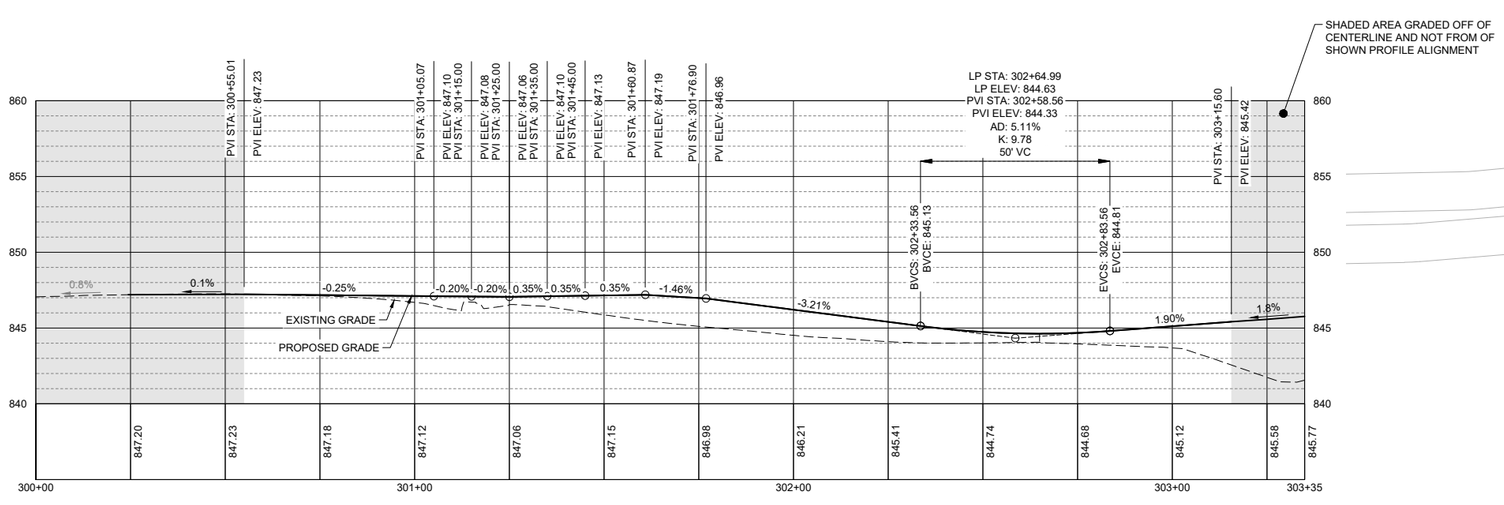
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PLAN AND PROFILE	SHEET NUMBER D.03



ROUNDABOUT - EAST TO SOUTH CURB PROFILE

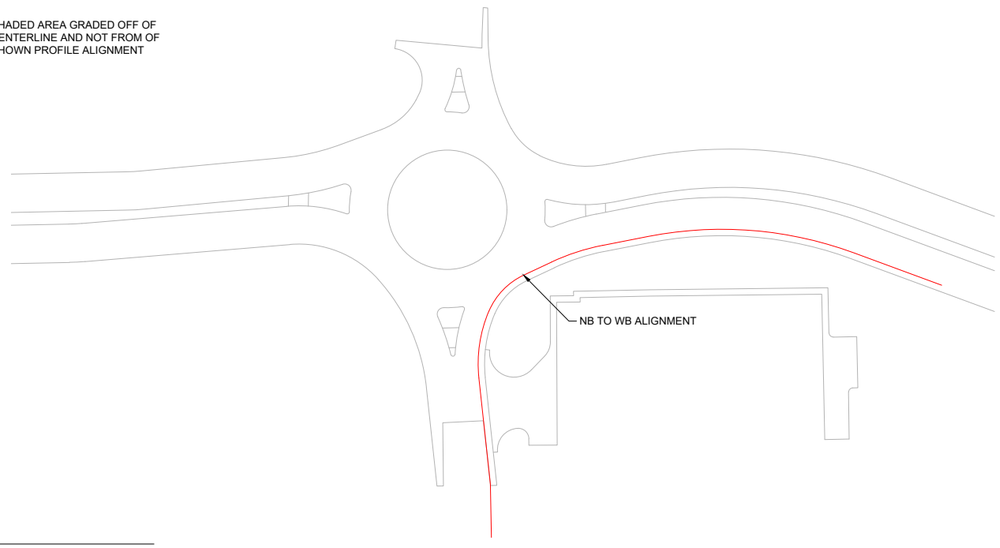
1" = 20'

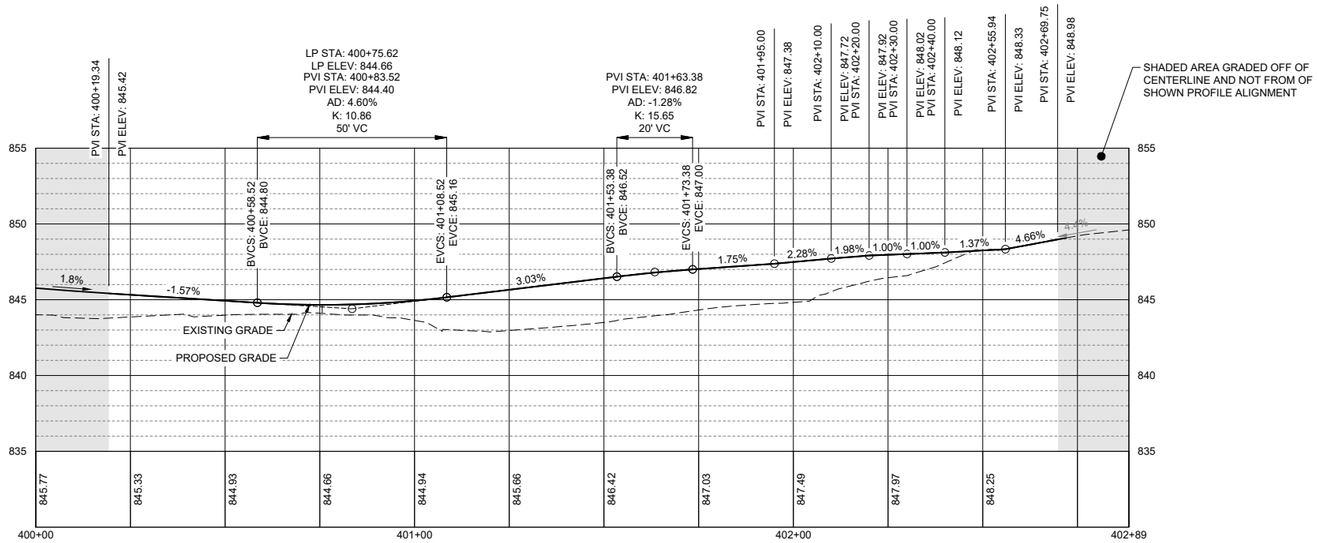




ROUNDABOUT - NORTH TO EAST CURB PROFILE

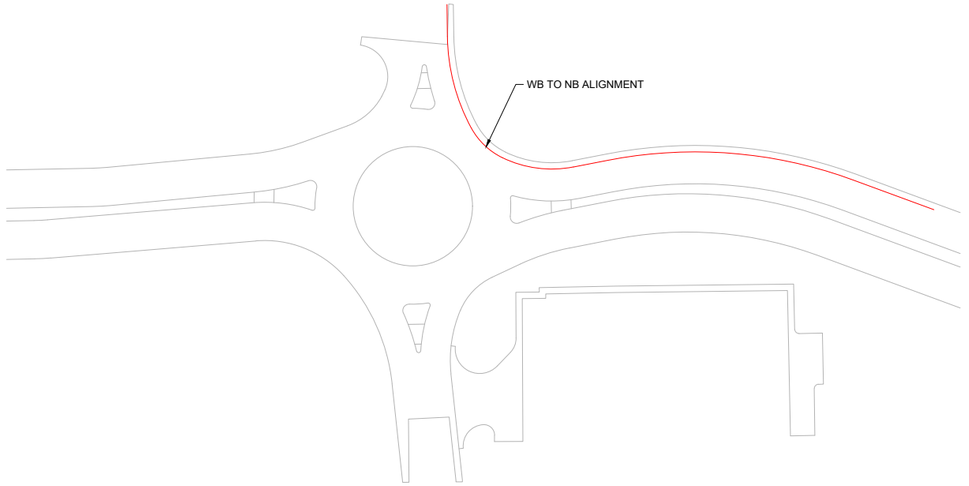
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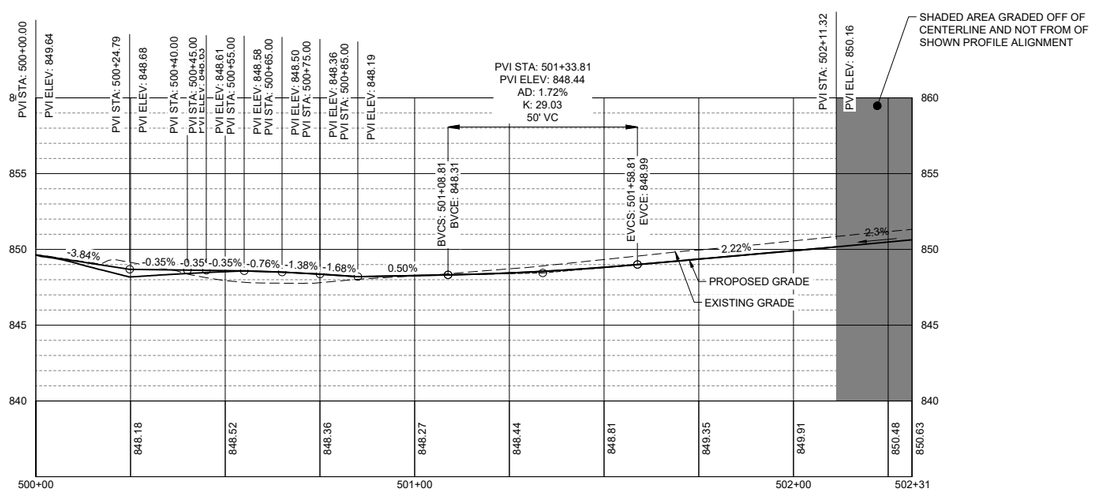




ROUNDABOUT - WEST TO NORTH CURB PROFILE

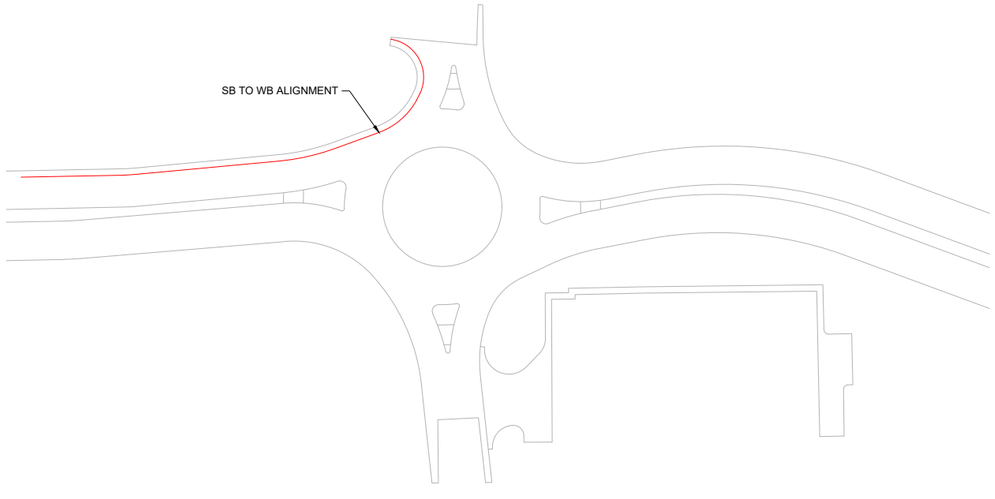
1" = 20'



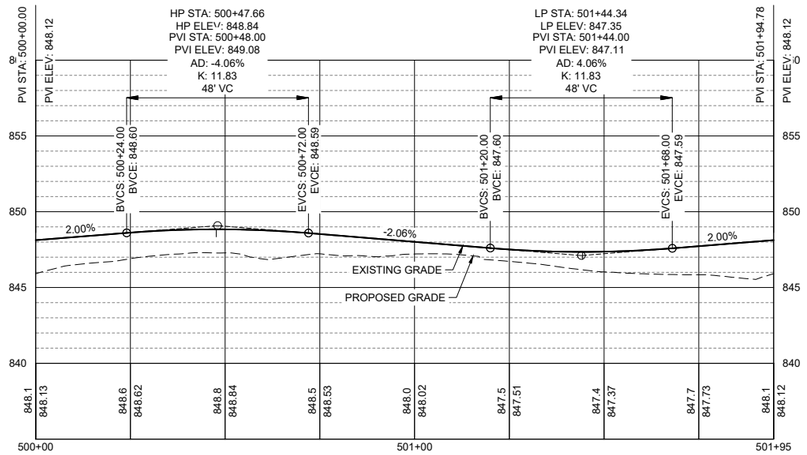


ROUNDABOUT - SOUTH TO WEST CURB PROFILE

1" = 20'

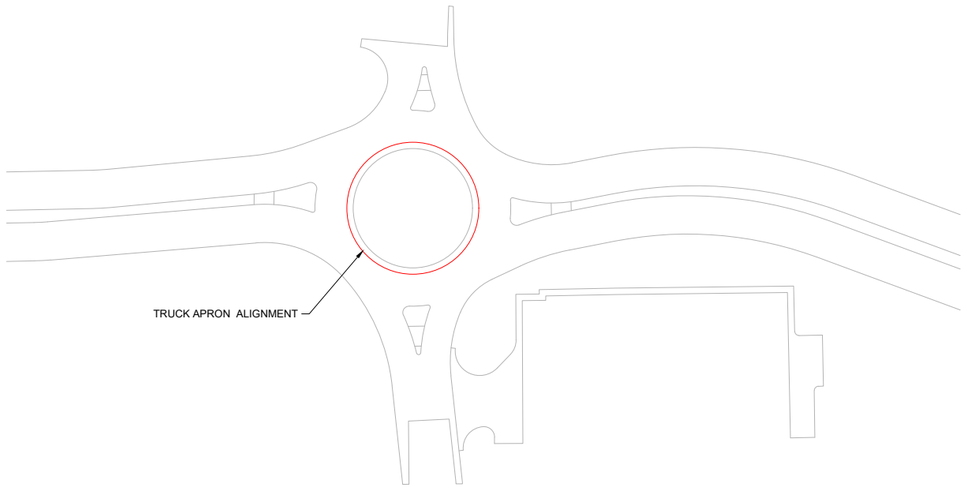


S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PROFILES	SHEET NUMBER D.05



ROUNDABOUT - TRUCK APRON CURB PROFILE

1" = 20'



S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PROFILES	SHEET NUMBER D.06

LEGEND

- DISTURBED AREA/ PROJECT SITE
- INTAKE PROTECTION DEVICE - SURFACE APPLIED
- 12" FILTER SOCK
- SOD
- SEEDING

HAWKEYE DRIVE

BOYSON ROAD

BOYSON COURT

STATION = 103+11.30
OFFSET = 33.76' LT
ELEV = 854.69

STATION = 103+26.26
OFFSET = 32.00' LT
ELEV = 854.80

STATION = 103+11.22
OFFSET = 28.76' LT
ELEV = 854.59

STATION = 103+25.92
OFFSET = 27.01' LT
ELEV = 854.73

STATION = 104+34.17
OFFSET = 30.11' LT
ELEV = 854.18

STATION = 104+34.32
OFFSET = 25.11' LT
ELEV = 854.10

STATION = 104+53.44
OFFSET = 32.00' LT
ELEV = 853.51

STATION = 104+53.69
OFFSET = 27.00' LT
ELEV = 853.44

STATION = 104+84.56
OFFSET = 32.00' LT
ELEV = 853.37

STATION = 104+84.56
OFFSET = 27.00' LT
ELEV = 853.30

STATION = 106+16.98
OFFSET = 32.00' LT
ELEV = 850.32

STATION = 106+23.47
OFFSET = 32.24' LT
ELEV = 850.16

STATION = 106+16.98
OFFSET = 27.00' LT
ELEV = 850.24

STATION = 106+23.84
OFFSET = 27.25' LT
ELEV = 850.09

STATION = 10
OFFSET = 3
ELEV =

0 10 20 40
SCALE IN FEET

STATION = 101+96.46
OFFSET = 29.68' RT
ELEV = 853.79

STATION = 102+07.31
OFFSET = 28.71' RT
ELEV = 853.89

STATION = 102+55.89
OFFSET = 29.89' RT
ELEV = 854.38

STATION = 102+99.04
OFFSET = 31.00' RT
ELEV = 854.81

STATION = 103+70.11
OFFSET = 32.78' RT
ELEV = 854.91

STATION = 103+73.43
OFFSET = 32.75' RT
ELEV = 854.89

STATION = 104+39.62
OFFSET = 30.00' RT
ELEV = 853.77

STATION = 105+89.55
OFFSET = 30.01' RT
ELEV = 850.98

STATION = 105+97.52
OFFSET = 29.76' RT
ELEV = 851.15

STATION = 101+98.06
OFFSET = 37.52' RT
ELEV = 853.91

STATION = 102+07.11
OFFSET = 36.71' RT
ELEV = 854.01

STATION = 102+55.69
OFFSET = 37.92' RT
ELEV = 854.50

STATION = 102+98.84
OFFSET = 39.00' RT
ELEV = 854.92
EXISTING TRAIL EASEMENT

STATION = 103+69.91
OFFSET = 40.78' RT
ELEV = 855.03

STATION = 103+73.77
OFFSET = 40.74' RT
ELEV = 855.01

STATION = 104+40.63
OFFSET = 38.00' RT
ELEV = 853.89

STATION = 105+89.55
OFFSET = 38.01' RT
ELEV = 851.10

STATION = 105+98.02
OFFSET = 37.74' RT
ELEV = 851.27

GRADING LIMITS, TYP.

STATION = 106+90.69
OFFSET = 37.15' LT
ELEV = 848.72

STATION = 106+23.47
OFFSET = 32.24' LT
ELEV = 850.16

STATION = 106+91.05
OFFSET = 32.17' LT
ELEV = 848.64

STATION = 106+23.84
OFFSET = 27.25' LT
ELEV = 850.09

STATION = 108+57.72
OFFSET = 26.94' LT
ELEV = 847.36

STATION = 108+58.41
OFFSET = 22.00' LT
ELEV = 847.29

STATION = 109+71.63
OFFSET = 32.60' LT
ELEV = 845.97

STATION = 109+71.37
OFFSET = 27.61' LT
ELEV = 845.90

STATION = 108+63.16
OFFSET = 28.89' RT
ELEV = 846.86

STATION = 108+64.63
OFFSET = 36.78' RT
ELEV = 846.98

STATION = 109+78.09
OFFSET = 34.34' RT
ELEV = 845.30

STATION = 109+79.14
OFFSET = 26.40' RT
ELEV = 845.42

STATION = 110+14.67
OFFSET = 28.85' RT
ELEV = 845.93

STATION = 110+62.64
OFFSET = 30.00' RT
ELEV = 847.07

STATION = 110+92.00
OFFSET = 30.00' RT
ELEV = 848.09

STATION = 110+14.28
OFFSET = 36.84' RT
ELEV = 845.81

STATION = 110+62.64
OFFSET = 38.00' RT
ELEV = 846.95

STATION = 110+92.00
OFFSET = 38.00' RT
ELEV = 847.97

STATION = 111+08.00
OFFSET = 38.00' RT
ELEV = 848.53

REVETMENT, TYP.

CONSTRUCTION EASEMENT, TYP

STATION = 111+43.13
OFFSET = 32.00' LT
ELEV = 849.91

START OF 8" CURB
STATION = 111+50.00

STATION = 111+13.13
OFFSET = 32.00' LT
ELEV = 849.48

STATION = 111+13.13
OFFSET = 27.00' LT
ELEV = 849.42

STATION = 111+43.13
OFFSET = 27.00' LT
ELEV = 849.99

STATION = 111+08.00
OFFSET = 30.00' RT
ELEV = 848.65

STATION = 111+58.66
OFFSET = 30.25' RT
ELEV = 850.45

STATION = 111+58.43
OFFSET = 38.25' RT
ELEV = 850.33

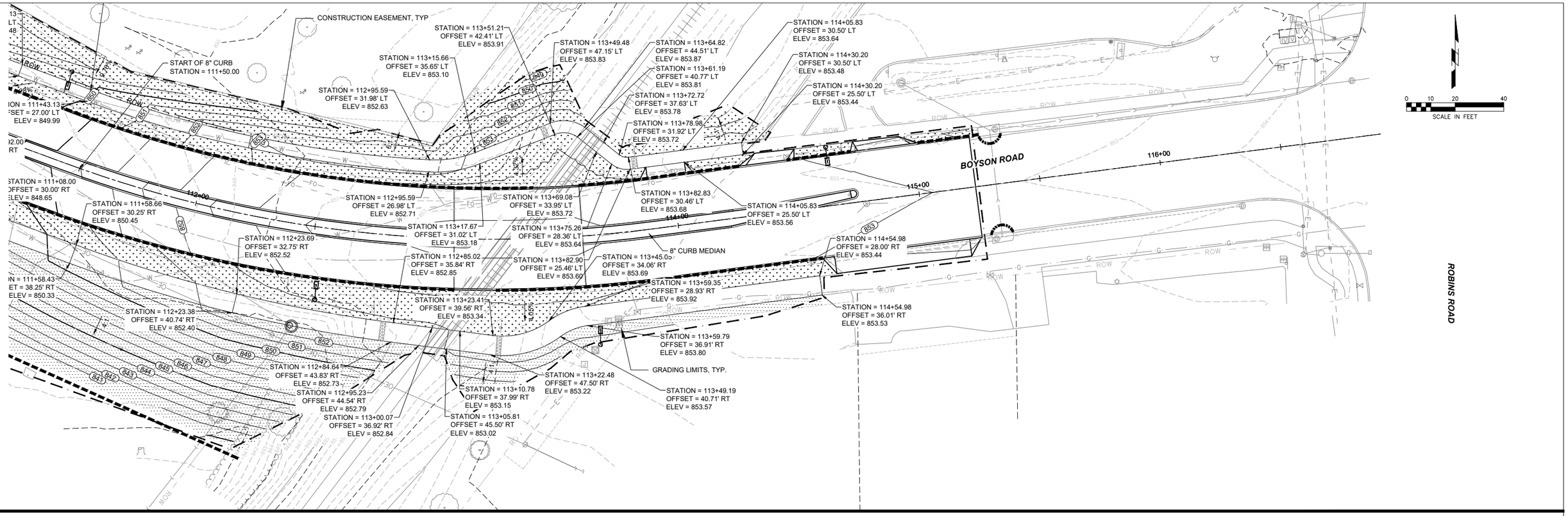
STATION = 112+23.69
OFFSET = 32.75' RT
ELEV = 852.52

STATION = 112+23.38
OFFSET = 40.74' RT
ELEV = 852.40

0 10 20 40
SCALE IN FEET

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S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	GRADING AND EROSION CONTROL PLAN	SHEET NUMBER F.01



LEGEND

- DISTURBED AREA/ PROJECT SITE
- INTAKE PROTECTION DEVICE - SURFACE APPLIED
- 12" FILTER SOCK
- SOD
- SEEDING

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S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	GRADING AND EROSION CONTROL PLAN	SHEET NUMBER F.02

POLLUTION PREVENTION PLAN

This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).

This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

I. ROLES AND RESPONSIBILITES

A. Designer:
1. Prepares Base PPP included in the project plan.
2. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
3. Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.

B. Contractor:
1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.
3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.
4. Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).
5. Supervises and implements good housekeeping practices according to Paragraph III, C, 2.
6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.
7. Complies with training and certification requirements of Section 2602 of the Standard Specifications.
8. Submits amended PPP site map according to Section 2602 of the Standard Specifications.

C. Subcontractors:
1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or performing work that is a source of potential pollution as defined in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Implement good housekeeping practices according to Paragraph III, C, 2.

D. RCE/Project Engineer:
1. Is Project Storm Water Manager.
2. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.
3. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.
4. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
5. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.
6. Is familiar with the Project PPP and storm water site map.
7. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
8. Is signature authority on Notice of Discontinuation.
9. Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).
10. Makes information to determine permit compliance available to the DNR upon their request.

E. Inspector:
1. Updates PPP through fieldbook entries and storm water site inspection reports if there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project.
2. Makes information to determine permit compliance available to the DNR upon their request.
3. Conducts joint required inspections of the site with the contractor/subcontractor.
4. Completes an inspection report after each inspection.
5. Is signature authority on storm water inspection reports.

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POLLUTION PREVENTION PLAN

II. PROJECT SITE DESCRIPTION

A. This Pollution Prevention Plan (PPP) is for the construction of Boyson Road Reconstruction.

B. This PPP covers approximately 3.00 acres with an estimated 2.50 acres being disturbed. The portion of the PPP covered by this contract has 2.50 acres disturbed.

C. The PPP is located in an area of 4 soil associations (Sparta loamy sand, Clyde silty clay loam, Dickinson fine sandy loam, and Franklin silt loam). The estimated weighted average runoff coefficient number for this PPP after completion will be 98.

D. Storm Water Site Map - Multiple sources of information comprise the base storm water site map including:
1. Drainage Patterns – Plan and Profile sheets and Situation plans.
2. Proposed Slopes – Cross Sections.
3. Areas of Soil Disturbance – Construction limits shown on Plan and Profile sheets.
4. Location of Structural Controls – Tabulations in C sheets.
5. Locations of Non-structural Controls – Tabulations in C sheets.
6. Locations of Stabilization Practices – Generally within construction limits shown on Plan and Profile sheets.
7. Surface Waters (including wetlands) – Project Location Map and Plan and Profile sheets.
8. Locations where Storm Water is Discharged – Plan and Profile sheets.

E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.

F. Runoff from this work will flow into Dry Creek.

III. CONTROLS

A. The Contractor's ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented.

B. Preserve vegetation in areas not needed for construction.

C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications.

1. EROSION AND SEDIMENT CONTROLS

a. Stabilization Practices

1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.

2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:

a) Permanently ceased on any portion of the site, or

b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.

3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.

4) Permanent and Temporary Stabilization practices to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C sheets.

5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.

6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets. Additional information may be found in Tabulations in the C or T sheets or is referenced in Section 2105 of Standard Specifications.

b. Structural Practices

1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water

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POLLUTION PREVENTION PLAN

from surface when discharging basins, and controls to direct storm water to vegetated areas.

2) Structural practices to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found in the B sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C sheets.

c. Storm Water Management

Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C sheets. The installation of these devices may be subject to Section 404 of the Clean Water Act.

2. OTHER CONTROLS

Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive applicable laws, rules or regulations shall apply.

a. Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.

b. Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.

c. Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.

d. Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.

e. Spill Prevention and Control - Implement chemical spill and leak prevention and response procedures to contain and clean up spills and prevent material discharges to the storm drain system and waters of the state.

f. Concrete Residuals and Washout Wastes - Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events.

g. Concrete Grooving/Grinding Slurry – Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project.

h. Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.

i. Litter Management - Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.

j. Dewatering – Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site. Measures are also to be taken to prevent scour erosion at dewatering discharge point.

3. APPROVED STATE OR LOCAL PLANS

During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

IV. MAINTENANCE PROCEDURES

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

V. INSPECTION REQUIREMENTS

A. Inspections shall be made jointly by the Contractor and the Contracting Authority's inspector at least once every seven calendar days. Storm water site inspections will include:

1. Date of the inspection.
2. Summary of the scope of the inspection.
3. Name and qualifications of the personnel making the inspection.
5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
6. Major observations related to the implementation of the PPP.
7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.

B. Include storm water site inspection reports in the amended PPP. Incorporate any additional erosion and sediment control

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POLLUTION PREVENTION PLAN

measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

VI. NON-STORM WATER DISCHARGES

This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, Class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION

Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

VIII. DEFINITIONS

A. Base PPP - Initial Pollution Prevention Plan.

B. Amended PPP - Base PPP amended during construcion. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon request.

C. Fieldbook Entries – This contains the inspector’s daily diary and bid item postings.

D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).

E. Signature Authority - Representative authorized to sign various storm water documents.

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Jon Fitch

Digitally signed by Jon Fitch
DN: C=US, E=JFitch@Hiawatha-Iowa.com, O=City of Hiawatha, CN=Jon Fitch
Reason: I have reviewed this document
Date: 2026.07.29 07:87:33-05'00'

_____ Signature

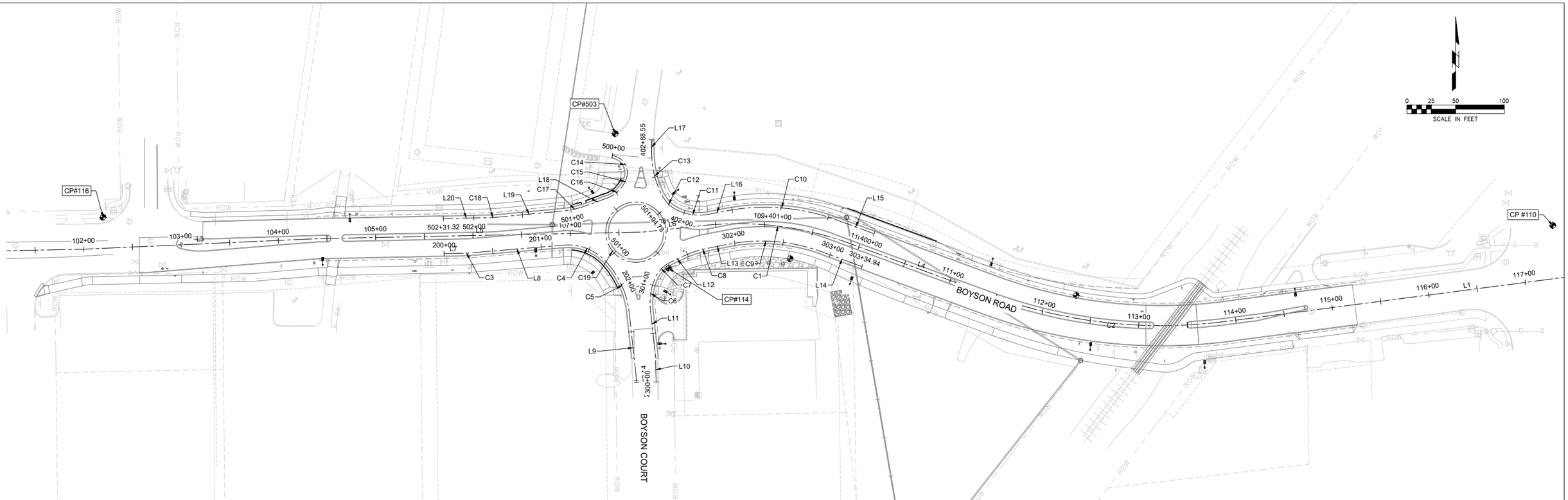
Jon Fitch, PE / City Engineer
Printed or Typed Name

_____ Signature

_____ Printed or Typed Name

THE CITY OF HIAWATHA IS THE APPLICANT FOR THE NPDES GENERAL PERMIT NO. 2. THE CONTRACTOR AND ALL SUB-CONTRACTORS ARE REQUIRED TO SIGN ON AS CO-PERMITTEE WITH THE CITY. IN ADDITION TO THE NPDES PERMIT, THE CONTRACTOR IS REQUIRED TO OBTAIN A CITY OF HIAWATHA MAJOR EROSION CONTROL PERMIT. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING, OBTAINING AND MAINTAINING THIS PERMIT (THE PERMIT FEES WILL BE WAIVED FOR THIS PROJECT). ALL RECORDS SHALL BE SUBMITTED TO THE ENGINEER AS THEY ARE PRODUCED. REFER TO THE DRAWINGS FOR CONTRACT FULFILLMENT REQUIREMENTS.

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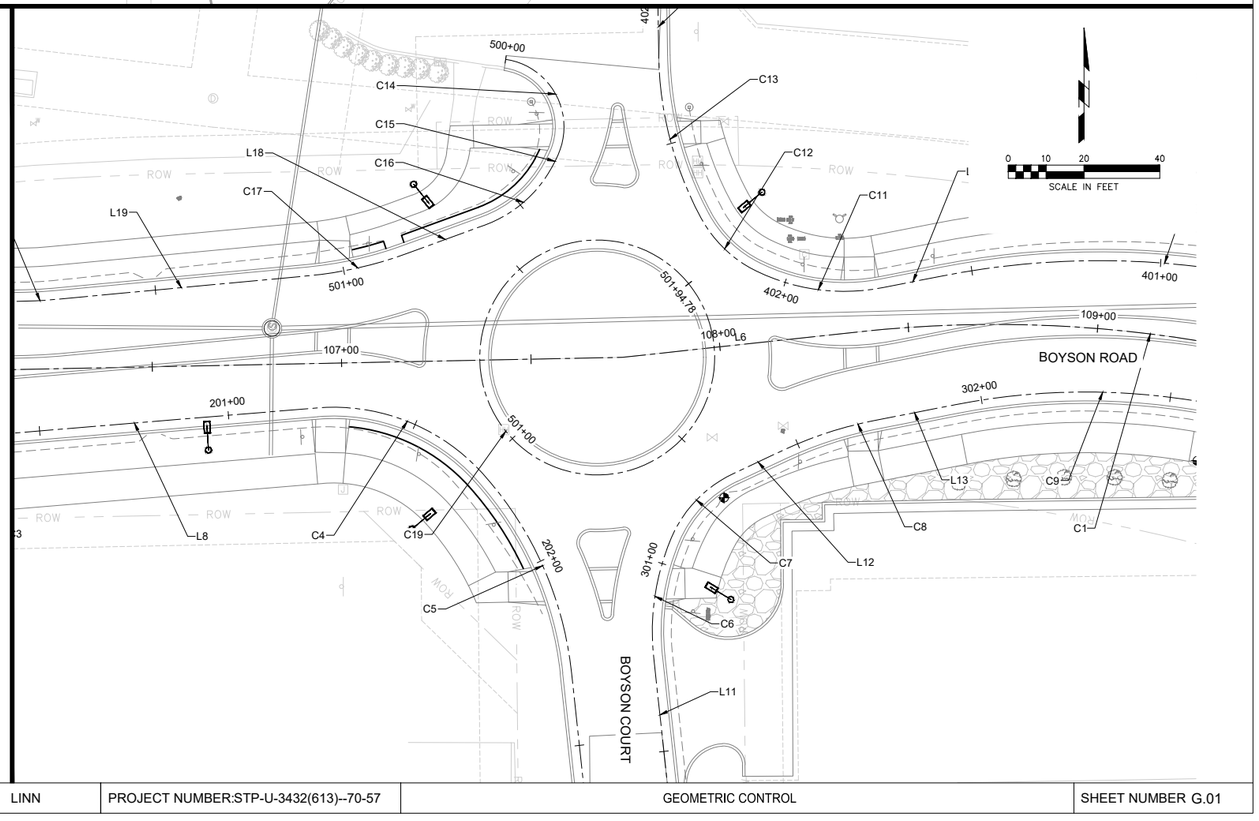
BOYSON ROAD - ALIGNMENT SEGMENT TABLE								
SEGMENT #	LENGTH	RADIUS	LINE/CHORD DIRECTION	DELTA (Δ)	START STATION	START POINT	END STATION	END POINT
L2	200.00'		N88° 50' 45.19"E		100+00.00	N = 3485788.04 E = 5415791.35	102+00.00	N = 3485792.07 E = 5415991.31
L3	240.04'		N87° 24' 48.80"E		102+00.00	N = 3485792.07 E = 5415991.31	104+40.04	N = 3485802.90 E = 5416231.10
L5	334.10'		N88° 50' 45.19"E		104+40.04	N = 3485802.90 E = 5416231.10	107+74.14	N = 3485809.63 E = 5416565.14
L6	63.17'		N83° 50' 45.19"E		107+74.14	N = 3485809.63 E = 5416565.14	108+37.31	N = 3485816.41 E = 5416627.95
C1	153.36'	333.00'	S82° 57' 39.64"E	26° 23' 10.33"	108+37.31	N = 3485816.41 E = 5416627.95	109+90.66	N = 3485797.78 E = 5416778.80
L4	152.47'		S69° 46' 04.48"E		109+90.66	N = 3485797.78 E = 5416778.80	111+43.13	N = 3485745.05 E = 5416921.86
C2	246.12'	510.00'	S83° 35' 35.60"E	27° 39' 02.26"	111+43.13	N = 3485745.05 E = 5416921.86	113+89.25	N = 3485717.85 E = 5417164.08
L1	501.25'		N82° 34' 53.27"E		113+89.25	N = 3485717.85 E = 5417164.08	118+90.51	N = 3485782.57 E = 5417661.14

CP 110
N: 3485816.44'
E: 5417500.37'
Elevation: 855.63'
Description: Cut 'X' in PCC at the Northeast corner of the intersection of Boyson Road and Robins Road. 3.15' East of back of curb of Robins Road, 1' West of PCC edge, and 15.1' Northwest of Traffic signal pole.

CP 503
N: 3485910.67'
E: 5416537.17'
Elevation: 850.16'
Description: Cut 'X' in PCC North of Boyson Road and East of the drive to the apartment complex across from Boyson Court. 1.9' South of Back of Curb, 19.5' Southeast of Southeast garage corner, and 30' Northeast of Intake.

CP 116
N: 3485824.90'
E: 5416011.01'
Elevation: 854.23'
Description: Cut 'X' in PCC at the Northwest corner of the intersection of Boyson Road and Hawkeye Drive. 9' Southeast of light pole, 12.6' Southwest of handhole, 26' Northwest of Storm Manhole.

CP 114
N: 3485772.58'
E: 5416591.95'
Elevation: 846.67'
Description: Cut 'X' in PCC at the Southeast corner of the intersection of Boyson Road and Boyson Court. 0.5' North of PPC sidewalk, 2.7' Northwest of CATV box, and 10.8' Northeast of Storm Manhole.



S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	GEOMETRIC CONTROL	SHEET NUMBER G.01

EB TO SB CURBLINE - ALIGNMENT SEGMENT TABLE								
SEGMENT #	LENGTH	RADIUS	LINE/CHORD DIRECTION	DELTA (Δ)	START STATION	START POINT	END STATION	END POINT
L7	19.56'		N88° 50' 54.45"E		200+00.00	N = 3485787.52 E = 5416361.40	200+19.56	N = 3485787.91 E = 5416380.95
C3	7.22'	115.00'	N87° 03' 00.32"E	3° 35' 48.26"	200+19.56	N = 3485787.91 E = 5416380.95	200+26.77	N = 3485788.28 E = 5416388.16
L8	96.65'		N85° 15' 06.19"E		200+26.77	N = 3485788.28 E = 5416388.16	201+23.43	N = 3485796.29 E = 5416484.49
C4	48.66'	53.00'	S68° 26' 48.43"E	52° 36' 10.76"	201+23.43	N = 3485796.29 E = 5416484.49	201+72.09	N = 3485779.03 E = 5416528.17
C5	58.44'	93.00'	S24° 08' 34.01"E	36° 00' 18.08"	201+72.09	N = 3485779.03 E = 5416528.17	202+30.53	N = 3485726.57 E = 5416551.68
L9	71.61'		S06° 08' 24.97"E		202+30.53	N = 3485726.57 E = 5416551.68	203+02.14	N = 3485655.37 E = 5416559.34

NB TO EB CURBLINE - ALIGNMENT SEGMENT TABLE								
SEGMENT #	LENGTH	RADIUS	LINE/CHORD DIRECTION	DELTA (Δ)	START STATION	START POINT	END STATION	END POINT
L10	25.00'		N01° 09' 14.81"W		300+00.00	N = 3485655.77 E = 5416579.24	300+25.00	N = 3485680.77 E = 5416578.74
L11	50.10'		N06° 08' 24.97"W		300+25.00	N = 3485680.77 E = 5416578.74	300+75.10	N = 3485730.58 E = 5416573.38
C6	32.11'	63.00'	N08° 27' 41.69"E	29° 12' 13.32"	300+75.10	N = 3485730.58 E = 5416573.38	301+07.21	N = 3485762.00 E = 5416578.05
C7	24.08'	33.00'	N43° 58' 03.04"E	41° 48' 29.37"	301+07.21	N = 3485762.00 E = 5416578.05	301+31.29	N = 3485778.95 E = 5416594.40
L12	14.43'		N64° 52' 17.72"E		301+31.29	N = 3485778.95 E = 5416594.40	301+45.72	N = 3485785.08 E = 5416607.47
C8	25.25'	103.00'	N71° 53' 35.36"E	14° 02' 35.28"	301+45.72	N = 3485785.08 E = 5416607.47	301+70.97	N = 3485792.90 E = 5416631.40
L13	22.06'		N78° 54' 53.00"E		301+70.97	N = 3485792.90 E = 5416631.40	301+93.03	N = 3485797.15 E = 5416653.05
C9	97.84'	179.00'	S85° 25' 35.74"E	31° 19' 02.52"	301+93.03	N = 3485797.15 E = 5416653.05	302+90.87	N = 3485789.44 E = 5416749.37
L14	44.07'		S69° 46' 04.48"E		302+90.87	N = 3485789.44 E = 5416749.37	303+34.94	N = 3485774.20 E = 5416790.72

WB TO NB CURBLINE - ALIGNMENT SEGMENT TABLE								
SEGMENT #	LENGTH	RADIUS	LINE/CHORD DIRECTION	DELTA (Δ)	START STATION	START POINT	END STATION	END POINT
L15	40.22'		N69° 46' 04.48"W		400+00.00	N = 3485807.98 E = 5416803.17	400+40.22	N = 3485821.89 E = 5416765.43
C10	117.52'	215.00'	N85° 25' 35.74"W	31° 19' 02.52"	400+40.22	N = 3485821.89 E = 5416765.43	401+57.74	N = 3485831.14 E = 5416649.74
L16	16.17'		S78° 54' 53.00"W		401+57.74	N = 3485831.14 E = 5416649.74	401+73.90	N = 3485828.04 E = 5416633.88
C11	34.27'	53.00'	N82° 33' 46.77"W	37° 02' 40.46"	401+73.90	N = 3485828.04 E = 5416633.88	402+08.17	N = 3485832.40 E = 5416600.49
C12	20.51'	33.00'	N46° 14' 15.74"W	35° 36' 21.60"	402+08.17	N = 3485832.40 E = 5416600.49	402+28.68	N = 3485846.35 E = 5416585.91
C13	44.86'	93.00'	N14° 36' 55.70"W	27° 38' 18.46"	402+28.68	N = 3485846.35 E = 5416585.91	402+73.54	N = 3485889.34 E = 5416574.70
L17	15.01'		N00° 47' 46.47"W		402+73.54	N = 3485889.34 E = 5416574.70	402+88.55	N = 3485904.35 E = 5416574.50

SB TO WB CURBLINE - ALIGNMENT SEGMENT TABLE								
SEGMENT #	LENGTH	RADIUS	LINE/CHORD DIRECTION	DELTA (Δ)	START STATION	START POINT	END STATION	END POINT
C14	33.28'	18.00'	S28° 45' 31.71"E	105° 55' 04.25"	500+00.00	N = 3485888.27 E = 5416534.31	500+33.28	N = 3485863.07 E = 5416548.13
C15	3.75'	48.00'	S26° 26' 08.98"W	4° 28' 17.14"	500+33.28	N = 3485863.07 E = 5416548.13	500+37.02	N = 3485859.72 E = 5416546.47
C16	23.78'	33.00'	S49° 19' 06.51"W	41° 17' 37.91"	500+37.02	N = 3485859.72 E = 5416546.47	500+60.80	N = 3485844.55 E = 5416528.82
L18	22.20'		S69° 57' 55.46"W		500+60.80	N = 3485844.55 E = 5416528.82	500+83.00	N = 3485836.95 E = 5416507.96
C17	26.42'	103.00'	S77° 18' 50.28"W	14° 41' 49.63"	500+83.00	N = 3485836.95 E = 5416507.96	501+09.42	N = 3485831.16 E = 5416482.26
L19	67.39'		S84° 39' 45.09"W		501+09.42	N = 3485831.16 E = 5416482.26	501+76.82	N = 3485824.89 E = 5416415.16
C18	7.52'	103.00'	S86° 45' 15.14"W	4° 11' 00.10"	501+76.82	N = 3485824.89 E = 5416415.16	501+84.34	N = 3485824.46 E = 5416407.65
L20	46.98'		S88° 50' 45.19"W		501+84.34	N = 3485824.46 E = 5416407.65	502+31.32	N = 3485823.52 E = 5416360.68

TRUCK APRON CURBLINE - ALIGNMENT SEGMENT TABLE								
SEGMENT #	LENGTH	RADIUS	LINE/CHORD DIRECTION	DELTA (Δ)	START STATION	START POINT	END STATION	END POINT
C19	194.78'	31.00'	S38° 53' 12.62"E	359° 59' 45.99"	500+00.00	N = 3485829.06 E = 5416582.61	501+94.78	N = 3485829.06 E = 5416582.61

LEGEND

- EXISTING ROW
- PROPOSED ROW
- PROPERTY LINE
- ROW ACQUISITION CORNER
- ROW ACQUISITION
- TEMPORARY EASEMENT
- TEMPORARY EASEMENT CORNER

N

0 15 30 60

SCALE IN FEET

PARCEL OWNER:
GREGORY J REININGA

PARCEL OWNER:
GREGORY J REININGA

PARCEL OWNER:
BAD LLC

PARCEL OWNER:
BAD LLC

PARCEL OWNER:
HURTT INVESTMENTS INC

PARCEL OWNER:
JANET L & RIAN R SCHMITT

PARCEL OWNER:
RONALD R REAM

PARCEL OWNER:
LINN COUNTY

PARCEL OWNER:
LINN COUNTY

PARCEL OWNER:
NEXT LEVEL 22 PROPERTIES LLC

PARCEL OWNER:
APR HIAWATHA LLC

PARCEL OWNER:
PLAZA 103 LLC

PARCEL OWNER:
TREELINE LLC

PARCEL OWNER:
QUANTUM DIRECT SERVICES LLC

EXISTING 15' STORM SEWER EASEMENT

EXISTING 20' STORM SEWER AND DRAINAGE EASEMENT

EXISTING 20' SANITARY SEWER EASEMENT

EXISTING 15' STORM SEWER AND DRAINAGE EASEMENT

EXISTING 10' UTILITY EASEMENT

EXISTING 15' STORM SEWER EASEMENT

ROW 79.60'

101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00 109+00

60.00' 21.68' 12.32' 10.00' 103.07' 35.00' 12.82' 5.00' 85.2

40.00' 20.98' 36.15' 109.08' 11.30' 168.01' 8.00' 14.07' 40.00' 15.00' 25.00' 69.74' 121.99' 20.00' 50.00' 14.00'

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	R.O.W SHEETS	SHEET NUMBER H.01

LEGEND

- EXISTING ROW
- PROPOSED ROW
- PROPERTY LINE
- ROW ACQUISITION CORNER
- ROW ACQUISITION
- TEMPORARY EASEMENT
- TEMPORARY EASEMENT CORNER

N

0 15 30 60
SCALE IN FEET

EXISTING 20' SANITARY SEWER EASEMENT

PARCEL OWNER:
APR HIAWATHA LLC

EXISTING 15' STORM SEWER EASEMENT

EXISTING 10' UTILITY EASEMENT

EXISTING STORM SEWER AND DRAINAGE EASEMENT

EXISTING 15' U.S. WEST RIGHT OF WAY EASEMENT

EXISTING 10' UTILITY EASEMENT

EXISTING UTILITY EASEMENT

PARCEL OWNER:
PLAZA 103 LLC

PARCEL OWNER:
TREELINE LLC

PARCEL OWNER:
CITY OF HIAWATHA

PARCEL OWNER:
VOT GROUP LLC

PARCEL OWNER:
BIGFOOT AUTO LLC

PARCEL OWNER:
CITY OF HIAWATHA

PARCEL OWNER:
BOWLER LLC

PARCEL OWNER:
QUANTUM DIRECT SERVICES LLC

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	R.O.W. SHEETS	SHEET NUMBER H.02

TRAFFIC CONTROL - GENERAL NOTES

1. ONLY MAJOR STAGES OF CONSTRUCTION ARE SHOWN IN THE STAGING AND TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL SUBMIT A WORK SCHEDULE AT THE PRE-CONSTRUCTION MEETING CONTAINING TARGET DATES FOR CRITICAL ITEMS AND ESTIMATED DATES FOR THE VARIOUS TRAFFIC CONTROL STAGING. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DETAILED TRAFFIC CONTROL PLANS FOR ANY OTHER STAGES THAT MAY BE REQUIRED. CHANGES TO STAGING PLAN MUST BE APPROVED BY ENGINEER.

2. CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL AND WORK SITE SAFETY. TRAFFIC CONTROL ON THIS PROJECT SHALL BE IN ACCORDANCE WITH SPECIFIC LAYOUTS SHOWN ON THESE PLANS, OR THE IOWA DOT STANDARD ROAD PLANS TC SERIES DETAILS REFERENCED FOR OTHER MINOR OR INCIDENTAL WORK THAT DOES NOT SPECIFICALLY FALL WITHIN THE TRAFFIC CONTROL STAGING DETAIL PROVIDED . TRAFFIC CONTROL DEVICES, PROCEDURES, AND LAYOUTS SHALL BE PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AS ADOPTED BY THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC), CHAPTER 130.

3. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR. REMOVAL OF TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INCIDENTAL TO THE TRAFFIC CONTROL PAY ITEM. EXISTING ROADWAY SIGNS WHOSE MESSAGE CONFLICTS WITH PROJECT SIGNING SHALL BE COVERED FOR THE DURATION OF THE CONFLICT (INCIDENTAL TO TRAFFIC CONTROL).

4. ALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY SYMBOLS SHALL BE REMOVABLE MARKING TAPE. ALL PERMANENT SIGNING AND STRIPING SHALL BE PLACED BEFORE ROADWAYS ARE OPEN TO TRAFFIC, UNLESS OTHERWISE NOTED.

5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES DURING CONSTRUCTION.

6. CONTRACTOR SHALL ADD "ROAD WORK AHEAD" SIGNS ON ALL ROADS THAT INTERSECT THE PROJECT. PLACEMENT SHALL CONFORM TO IOWA DOT STANDARD ROAD PLANS TC SERIES.

7. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING PAVEMENT MARKINGS IF SUCH MARKINGS ARE TO ULTIMATELY BE REMOVED, AND THE TIMING IS SUCH THAT THOSE MARKINGS ARE NO LONGER NEEDED FOR SAFE TRAFFIC OPERATION DURING SUBSEQUENT PHASES.

8. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CITY OF HIAWATHA AT LEAST 1 WEEK IN ADVANCE OF INITIATING TRAFFIC CONTROL STAGING AND SUBSEQUENT TRANSITIONS BETWEEN STAGES. THE CITY WILL ISSUE PUBLIC NOTICES REGARDING THE CHANGES IN TRAFFIC CONTROL.

9. ROADWAY STATIONING REFERRED TO IN THE STAGING NOTES IS APPROXIMATE.

10. THE SPACING OF ALL SIGNS AND THE DISTANCE BETWEEN SIGNS SHOWN IN THIS PLAN SHALL MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AS ADOPTED BY THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC), CHAPTER 130 AND THE IOWA DOT STANDARD ROAD PLANS TC SERIES. IF THE MINIMUM SPACING BETWEEN SIGNS CANNOT BE MAINTAINED, THE SIGN LOCATIONS SHALL BE ADJUSTED TO PROVIDE THE LARGEST SPACING AVAILABLE.

11. THE CONTRACTOR MAY BE REQUIRED OR DIRECTED BY THE ENGINEER OR THE CITY TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY. THIS WILL BE INCIDENTAL TO THE TRAFFIC CONTROL BID ITEM.

12. THE LOCATION FOR STORAGE OF EQUIPMENT BY THE CONTRACTOR DURING NON-WORKING HOURS SHALL BE AS APPROVED BY THE ENGINEER.

IT IS NOT THE INTENT TO CONFINE THE CONTRACTOR'S ACTIVITIES TO THE AREAS OF SUGGESTED STAGES ALONE. IT IS UNDERSTOOD THAT SOME OF THE VARIOUS STEPS, THOUGH POSSIBLY LISTED IN NUMERICAL ORDER, MAY OCCUR SIMULTANEOUSLY. THE CONTRACTOR MAY CONDUCT SEVERAL OPERATIONS CONCURRENTLY, PROVIDED THAT TRAFFIC IS MAINTAINED AND APPROVAL HAS BEEN GIVEN BY THE PROJECT ENGINEER.

TRAFFIC CONTROL - STAGING NOTES

1. THE CITY OF HIAWATHA STREETS DEPARTMENT WILL ADJUST EXISTING VIDEO DETECTION DEVICES AT ROBINS ROAD INTERSECTION AS NEEDED TO ACCOMMODATE ADJUSTMENTS TO TRAFFIC PATTERNS DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE AT LEAST 48-HOURS IN ADVANCE ANY CHANGES TO TRAFFIC CONTROL THAT WILL IMPACT TRAFFIC AT THESE INTERSECTIONS. ADJUSTMENT OF THE VIDEO DETECTION DEVICES IS REQUIRED TO MAINTAIN FUNCTIONALITY OF THE TRAFFIC SIGNAL SYSTEM.

2. DROP-OFFS ADJACENT TO TRAFFIC GREATER THAN A NOMINAL 4 INCHES ARE NOT ALLOWED DURING NON-WORKING HOURS. A GRANULAR SHOULDER FILLET SHALL BE PLACED AT A WIDTH OF SIX TIMES THE THICKNESS OF THE DROP-OFF. FURNISHING, PLACING, MAINTAINING AND REMOVING TEMPORARY FILLETS TO ADDRESS DROP-OFFS IS INCIDENTAL.

3. MATERIAL FOR TEMPORARY GRANULAR SURFACING SHALL BE AT A DEPTH OF 6-INCHES, COMPACTED TO 95% STANDARD PROCTOR DENSITY.

TRAFFIC CONTROL - PHASE 1

1. THE CONTRACTOR SHALL MAINTAIN MINIMUM ONE LANE OF ACCESS TO BOYSON CT FROM THE WEST.

2. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE WHEN CLOSING AND REOPENING THE THRU LANE IN ORDER TO COORDINATE THE ADJUSTMENT OF THE VIDEO DETECTION DEVICES. THE CITY OF HIAWATHA STREETS DEPARTMENT WILL ADJUST EXISTING VIDEO DETECTION DEVICES.

3. CONTRACTOR TO CONSTRUCT EAST HALF OF ROUNDABOUT, WHILE NOT COMPLETING MEDIANS, CURBS, OR SIDEWALKS TO ALLOW FOR THE NECESSARY TEMPORARY PAVEMENT TO ALWAYS ALLOW ACCESS TO BOYSON COURT. REMOVAL OF TEMPORARY PAVEMENT AND SIDEWALK INSTALLATION TO BE COMPLETED IN PHASE 4.

TRAFFIC CONTROL - PHASE 2

1. THE CONTRACTOR MUST PROVIDE NOTIFICATION TO THE RAIL COMPANY IN ADVANCE OF CLOSING THIS SECTION.

2. THE CONTRACTOR SHALL MAINTAIN MINIMUM ONE LANE OF ACCESS TO BOYSON CT FROM THE WEST.

TRAFFIC CONTROL - PHASE 3

1. THE CONTRACTOR SHALL MAINTAIN MINIMUM ONE LANE OF ACCESS TO BOYSON CT FROM THE EAST.

2. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE WHEN CLOSING AND REOPENING THE THRU LANE IN ORDER TO COORDINATE THE ADJUSTMENT OF THE VIDEO DETECTION DEVICES. THE CITY OF HIAWATHA STREETS DEPARTMENT WILL ADJUST EXISTING VIDEO DETECTION DEVICES.

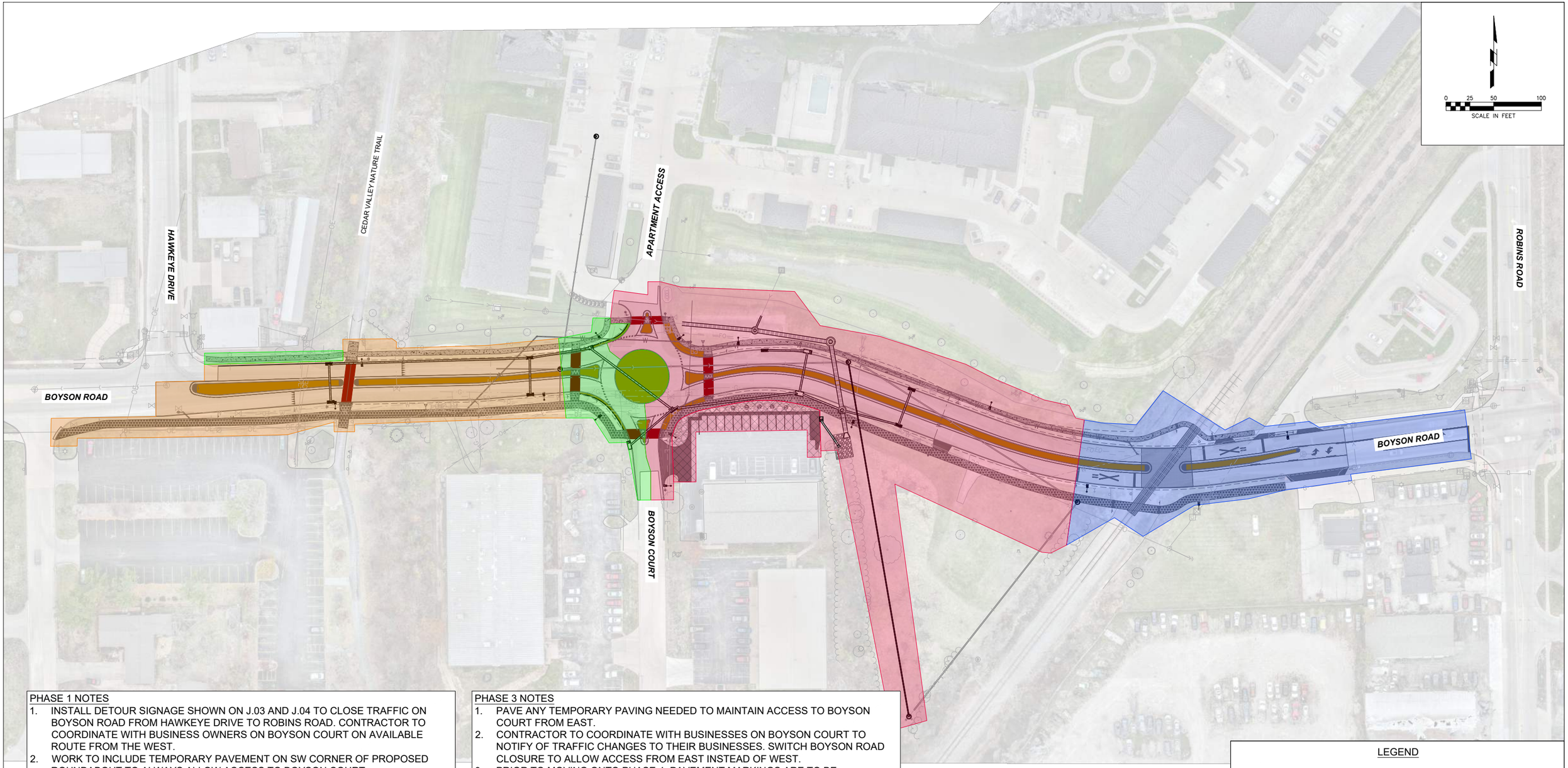
3. CONTRACTOR TO CONSTRUCT WEST HALF OF ROUNDABOUT, WHILE NOT COMPLETING MEDIANS, CURBS, OR SIDEWALKS TO ALLOW FOR THE NECESSARY TEMPORARY PAVEMENT TO ALWAYS ALLOW ACCESS TO BOYSON COURT. REMOVAL OF TEMPORARY PAVEMENT AND SIDEWALK INSTALLATION TO BE COMPLETED IN PHASE 4.

TRAFFIC CONTROL - PHASE 4

1. APPROPRIATE TRAFFIC CONTROL DEVICES MUST BE IN PLACE TO REDIRECT USERS OF THE CEDAR VALLEY NATURE TRAIL.

2. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE WHEN CLOSING AND REOPENING THE THRU LANE IN ORDER TO COORDINATE THE ADJUSTMENT OF THE VIDEO DETECTION DEVICES. THE CITY OF HIAWATHA STREETS DEPARTMENT WILL ADJUST EXISTING VIDEO DETECTION DEVICES.

3. THE CONTRACTOR SHALL MAINTAIN MINIMUM ONE LANE OF ACCESS TO BOYSON CT FROM THE EAST.



PHASE 1 NOTES

1. INSTALL DETOUR SIGNAGE SHOWN ON J.03 AND J.04 TO CLOSE TRAFFIC ON BOYSON ROAD FROM HAWKEYE DRIVE TO ROBINS ROAD. CONTRACTOR TO COORDINATE WITH BUSINESS OWNERS ON BOYSON COURT ON AVAILABLE ROUTE FROM THE WEST.
2. WORK TO INCLUDE TEMPORARY PAVEMENT ON SW CORNER OF PROPOSED ROUNDABOUT TO ALWAYS ALLOW ACCESS TO BOYSON COURT.
3. OTHER MAJOR ACTIVITIES INCLUDE PAVEMENT REMOVAL, SIDEWALK PAVING, ROADWAY PAVING, STORM SEWER STARTING WITH THE OUTFALL, SANITARY SEWER, AND WATER MAIN.

PHASE 2 NOTES

1. MAINTAIN PHASE 1 TRAFFIC CONTROL FOR WORK DURING PHASE 2. PHASE 2 MAY COMMENCE ONCE RAILROAD RIGHT OF ENTRY IS ACQUIRED.
2. CONSTRUCTION ACTIVITIES INCLUDE PAVEMENT REMOVAL, RAILROAD CROSSING, SIDEWALK AND ROADWAY PAVING, STORM SEWER AND WATER MAIN.
3. PRIOR TO OPENING LOCAL TRAFFIC AND MOVING ONTO PHASE 3, PAVEMENT MARKINGS AND SITE RESTORATION ARE TO BE COMPLETED.

PHASE 3 NOTES

1. PAVE ANY TEMPORARY PAVING NEEDED TO MAINTAIN ACCESS TO BOYSON COURT FROM EAST.
2. CONTRACTOR TO COORDINATE WITH BUSINESSES ON BOYSON COURT TO NOTIFY OF TRAFFIC CHANGES TO THEIR BUSINESSES. SWITCH BOYSON ROAD CLOSURE TO ALLOW ACCESS FROM EAST INSTEAD OF WEST.
3. PRIOR TO MOVING ONTO PHASE 4, PAVEMENT MARKINGS ARE TO BE COMPLETED.

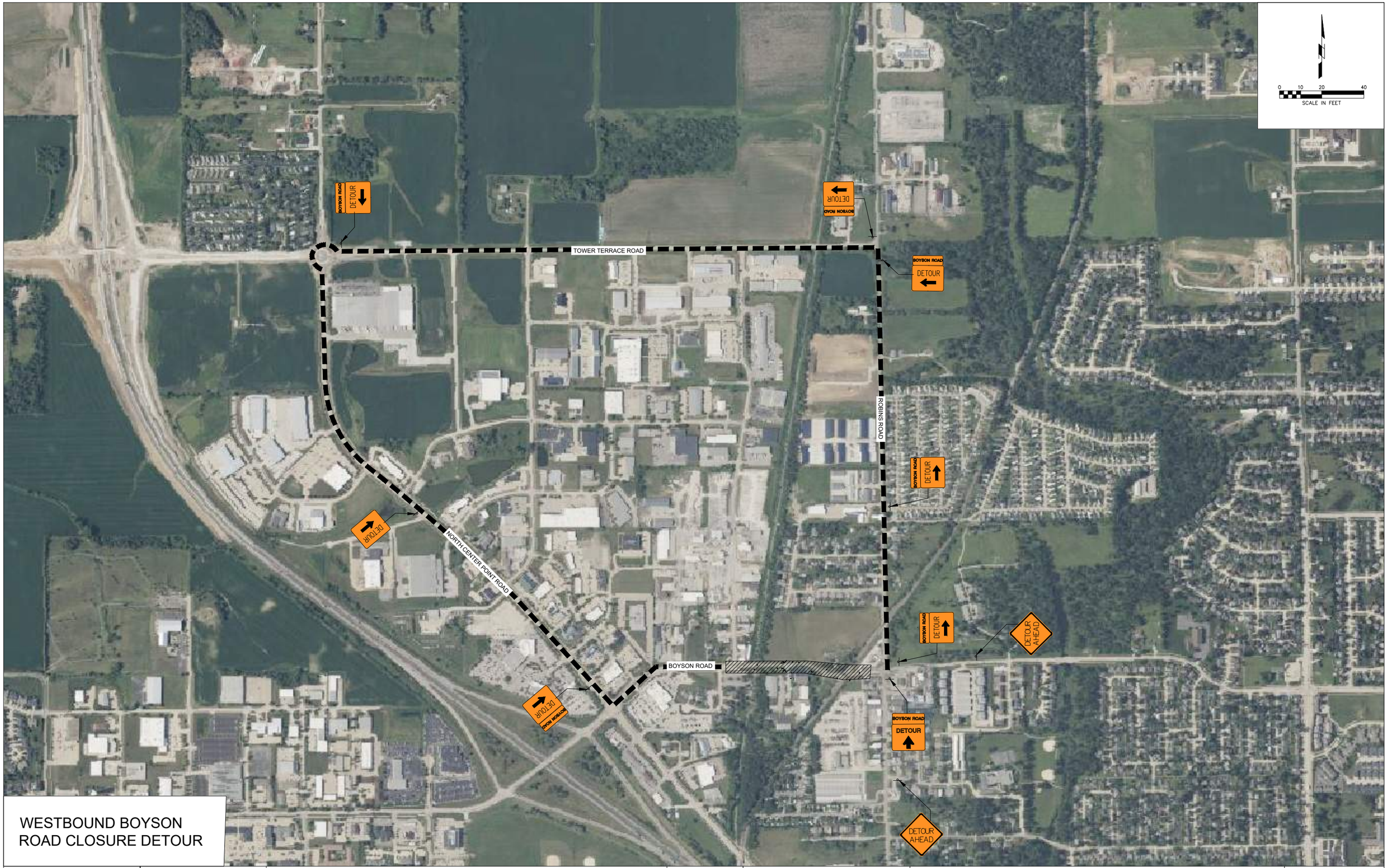
PHASE 4 NOTES

1. CONTRACTOR TO COORDINATE WITH BUSINESSES ON BOYSON COURT TO NOTIFY OF TRAFFIC CHANGES TO THEIR BUSINESS. ALL ACCESS WILL BE FROM ROBINS ROAD. MAINTAIN BOYSON ROAD CLOSURE AND OVERALL DETOUR SIGNAGE FROM PHASE 1.
2. INSTALL TRAFFIC CONTROL TO REROUTE USERS OF THE CEDAR VALLEY NATURE TRAIL. CONTRACTOR HAS FLEXIBILITY BUT MUST MAINTAIN A CROSSING ROUTE AT ALL TIMES.
3. REMOVE TEMPORARY PAVEMENT AND COMPLETE ANY SIDEWALK OR CURB IN TEMPORARY PAVEMENT AREAS FROM PREVIOUS PHASES.
4. CONSTRUCTION ACTIVITIES INCLUDE PAVEMENT REMOVAL, TRAIL CROSSING, SIDEWALK AND ROADWAY PAVING, STORM SEWER AND WATER MAIN.
5. PRIOR TO REMOVING DETOUR SIGNAGE AND OPENING TO TRAFFIC, PAVEMENT MARKINGS AND SITE RESTORATION IS TO BE COMPLETED.

LEGEND

- PHASE 1 WORK AREA
- PHASE 2 WORK AREA
- PHASE 3 WORK AREA
- PHASE 4 WORK AREA

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PHASING PLAN	SHEET NUMBER J.02



WESTBOUND BOYSON ROAD CLOSURE DETOUR

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	DETOUR PLAN	SHEET NUMBER J.03



S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	DETOUR PLAN	SHEET NUMBER J.04

NOTES
1. CONTRACTOR TO MEET WITH CITY AND TREELINE LLC PROPERTY OWNER 30 DAYS AHEAD OF THE IMPROVEMENTS ON THE PROPERTY.
2. PARKING LOT CURBLINE TO BE CONSTRUCTED HALF AT A TIME TO ALLOW FOR OTHER PARKING STALLS TO REMAIN ACCESSIBLE.
3. DRIVEWAY TO BE CONSTRUCTED HALF AT A TIME AND GRAVEL TEMPORARY ACCESS PAVEMENT TO BE UTILIZED TO ALWAYS MAINTAIN A MINIMUM 12' WIDE ACCESS TO PARKING LOT.
4. TWO WAY TRAFFIC TO BE MAINTAINED FROM BOYSON RD TO BOYSON CT.

0 15 30 60
SCALE IN FEET

PLACE CONES TO MAINTAIN SAFE TRAVEL NEAR WORK ZONE

APARTMENT ACCESS

YIELD
R1-2
36" x 36"x 36"
TO ONCOMMING TRAFFIC
R1-2AP
24" x 12"

ONE LANE ROAD AHEAD
W20-4
48" x 48"

BOYSON ROAD

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" x 30"

PLACE SIGN AT THE INTERSECTION OF BOYSON ROAD & INDUSTRIAL AVENUE

ROAD CLOSED AHEAD
W20-3
48" x 48"

PLACE SIGN AT THE INTERSECTION OF BOYSON ROAD & HAWKEYE DRIVE

ROAD CLOSED
R11-2
48" x 30"

SIDEWALK CLOSED
R9-9
24" x 12"

AT BOYSON ROAD AND HAWKEYE DRIVE INTERSECTION ALSO INCLUDE ORANGE SIGN WITH DIRECTIONAL ARROW AND TEXT "ACCESS TO BOYSON COURT OPEN AHEAD, ALL BUSINESSES OPEN"

RELOCATE SIGN FOR OPPOSITE CLOSURE PHASE TO ROBINS RD AND BOYSON ROAD INTERSECTION.

REMOVE SIDEWALK AS NECESSARY FOR TEMPORARY PAVEMENT

PAVED TEMPORARY ACCESS TO BOYSON COURT, APPROX 207 SY MAINTAIN 2 WAY TRAFFIC

BOYSON COURT

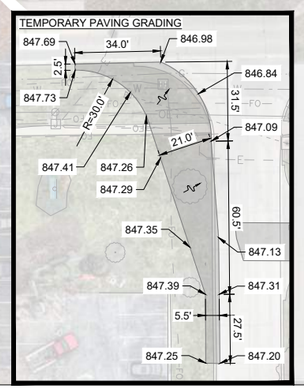
15.0'

INSTALLATION OF LANDSCAPING ROCK. PLANTS INSTALLED BY CITY

PARKING LOT AND DRIVEWAY SEEN IN CHECKERED AREA SHALL BE CONSTRUCTED SEPARATELY TO MINIMIZE DISTURBANCE TO LOCAL BUSINESS. CONTRACTOR TO DETERMINE TIMING OF PHASE WITH CITY OF HIAWATHA.

MODIFIED SUBBASE TEMPORARY ACCESS, APPROX 46 SY CONSTRUCT DRIVEWAY HALF AT A TIME TO MAINTAIN ACCESS TO PARKING LOT AT ALL TIMES. EXACT LOCATION OF TEMPORARY DRIVE TO BE COORDINATED IN THE FIELD.

TEMPORARY PAVING GRADING



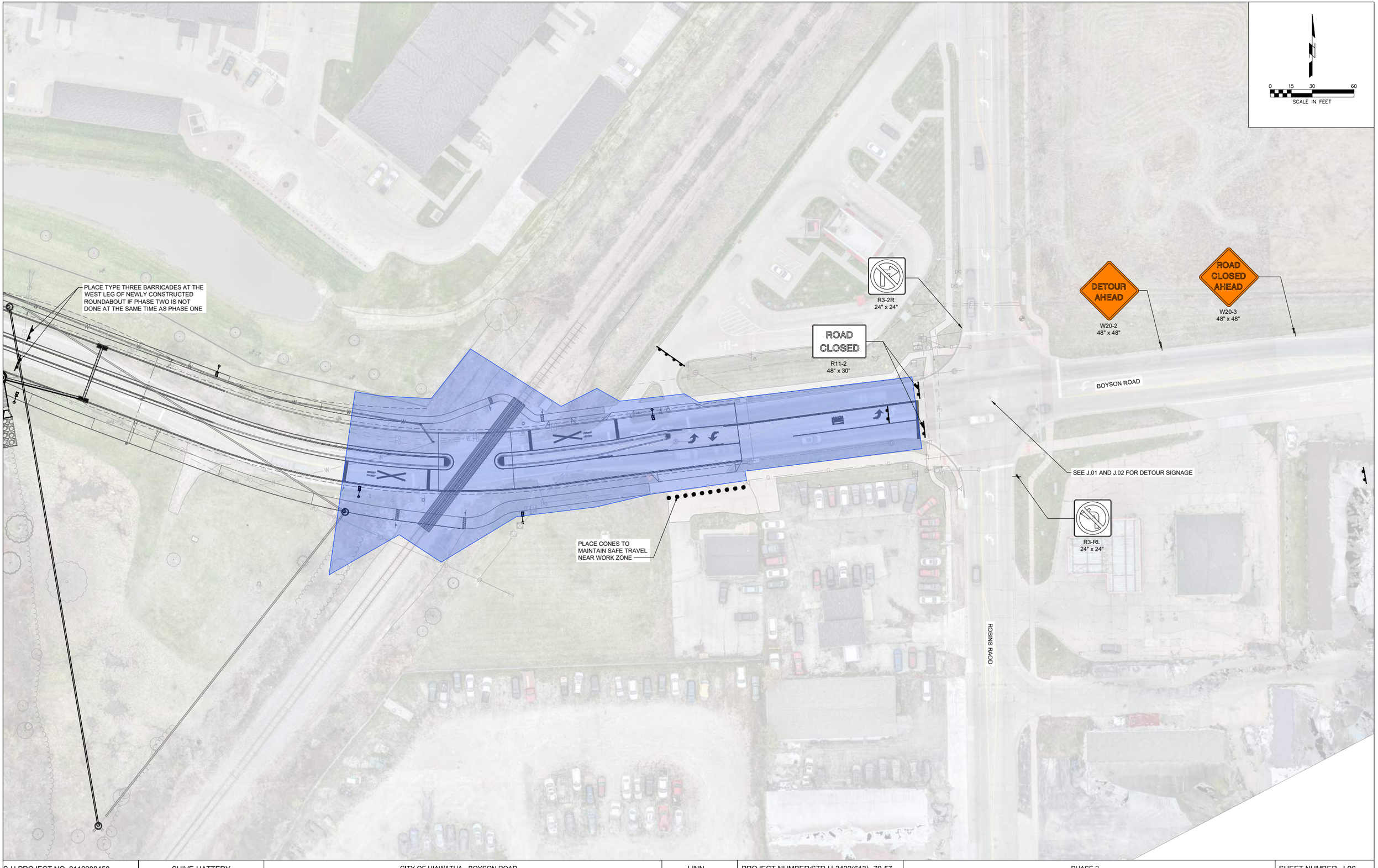
PLACE SIGN AT THE INTERSECTION OF BOYSON ROAD & ROBINS ROAD

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" x 30"

ROAD CLOSED AHEAD
W20-3
48" x 48"

ROAD CLOSED
R11-2
48" x 30"

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PHASE 1	SHEET NUMBER J.05



S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PHASE 2	SHEET NUMBER J.06

0 15 30 60
SCALE IN FEET

HAWKEYE DRIVE

CEDAR VALLEY NATURE TRAIL

APARTMENT ACCESS

BOYSON ROAD

BOYSON COURT

ROAD CLOSED
R11-2
48" x 30"

SIDEWALK CLOSED
R9-9
24" x 12"

ROAD CLOSED
R11-2
48" x 30"

ROAD CLOSED AHEAD
W20-3
48" x 48"

PLACE SIGN AT THE INTERSECTION OF BOYSON ROAD & ROBINS ROAD

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" x 30"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" x 30"

PLACE SIGN AT THE INTERSECTION OF BOYSON ROAD & INDUSTRIAL AVENUE

ROAD CLOSED AHEAD
W20-3
48" x 48"

PLACE SIGN AT THE INTERSECTION OF BOYSON ROAD & HAWKEYE DRIVE

12.0'

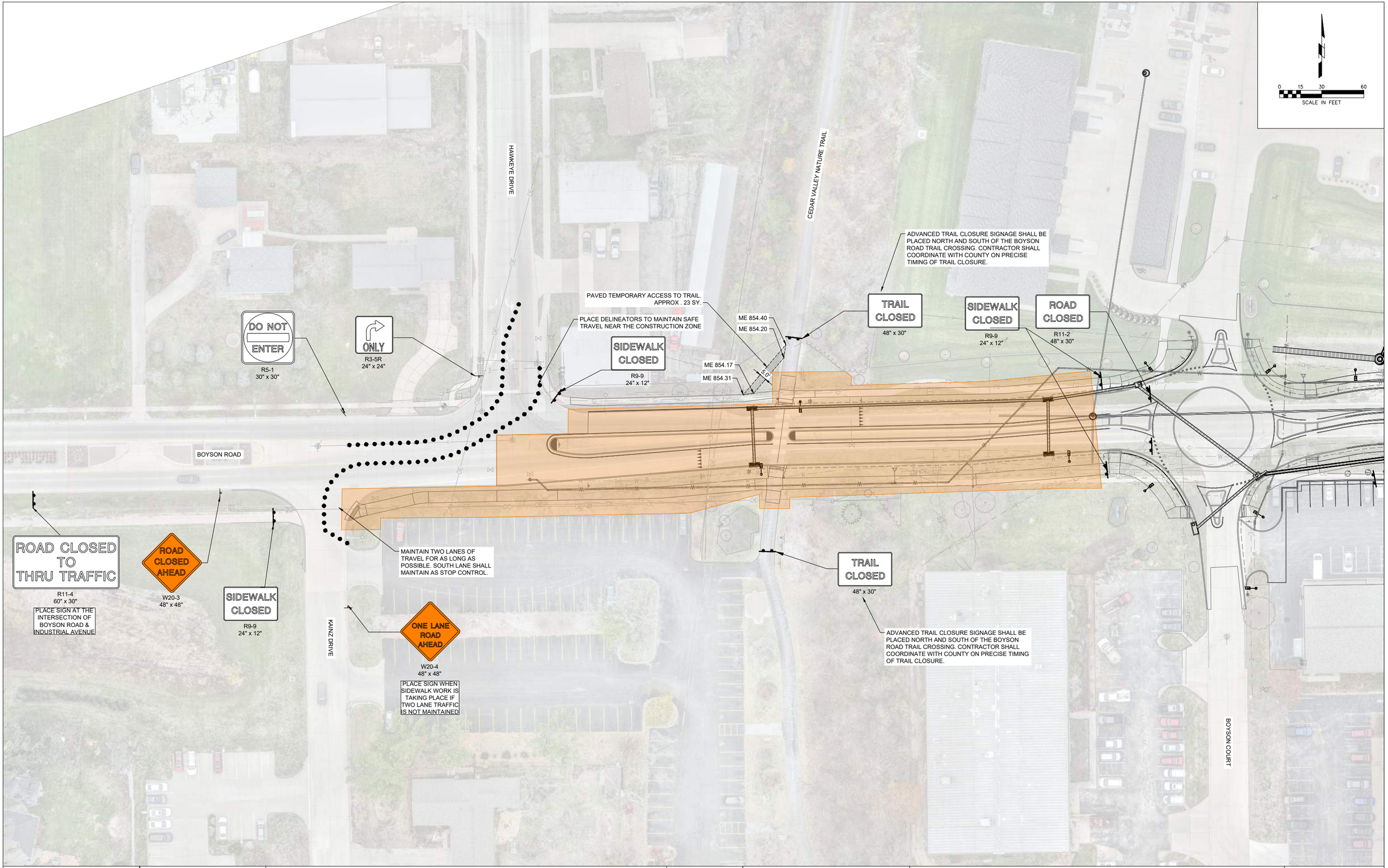
YIELD
R1-2
36" x 36" x 36"

DO NOT ENTER
R5-1
30" x 30"
NORTHBOUND TRAFFIC FACING

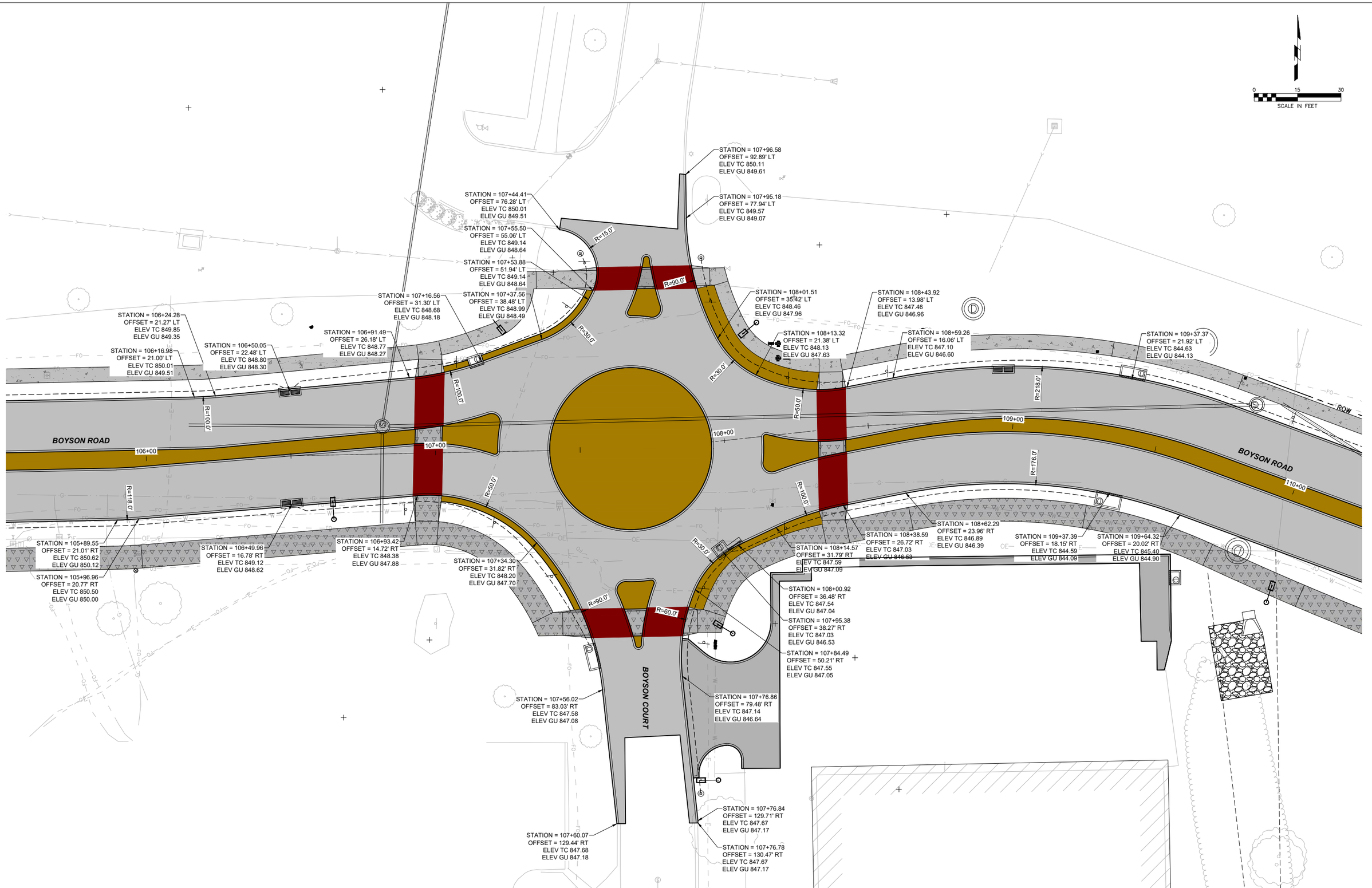
TO ONCOMMING TRAFFIC
R1-2AP
24" x 12"
SOUTHBOUND TRAFFIC FACING

ONLY
R3-5R
24" x 24"

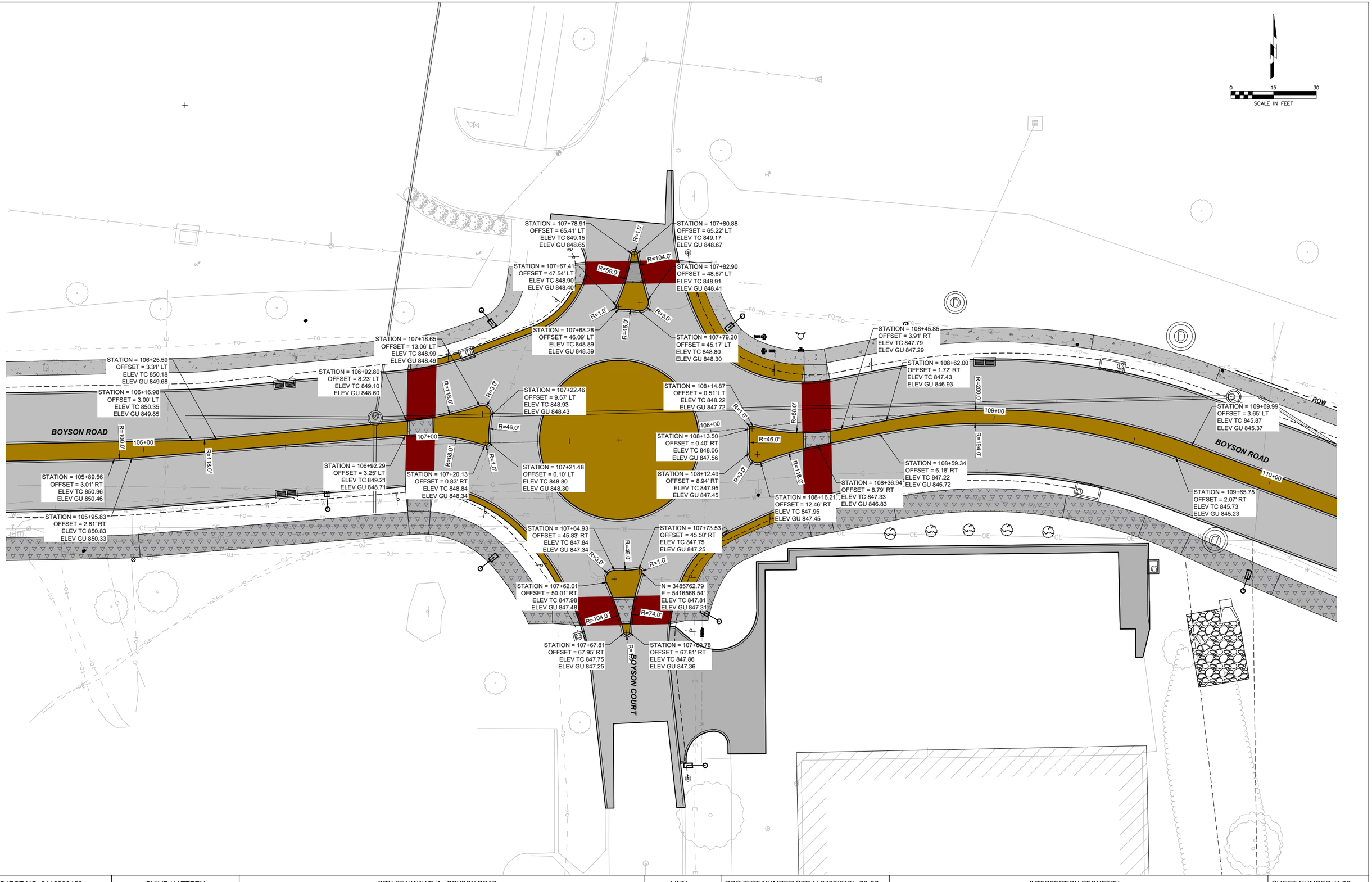
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PHASE 3	SHEET NUMBER J.07



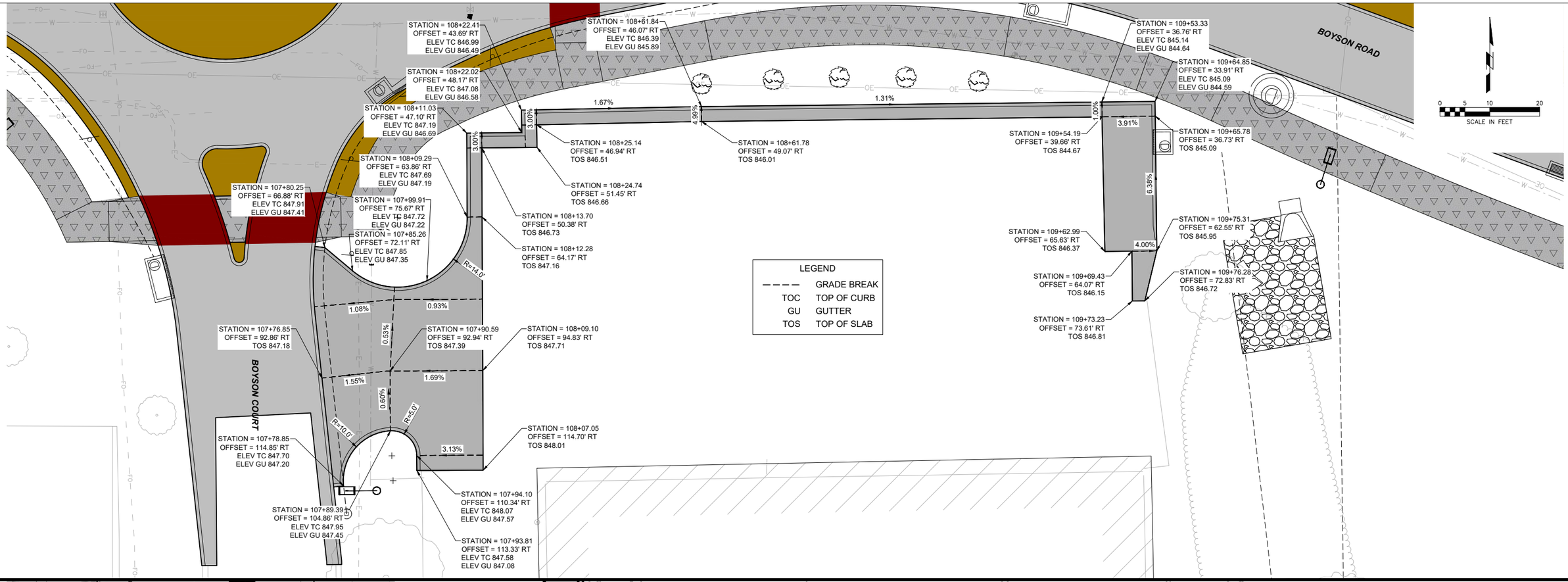
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PHASE 4	SHEET NUMBER J.08

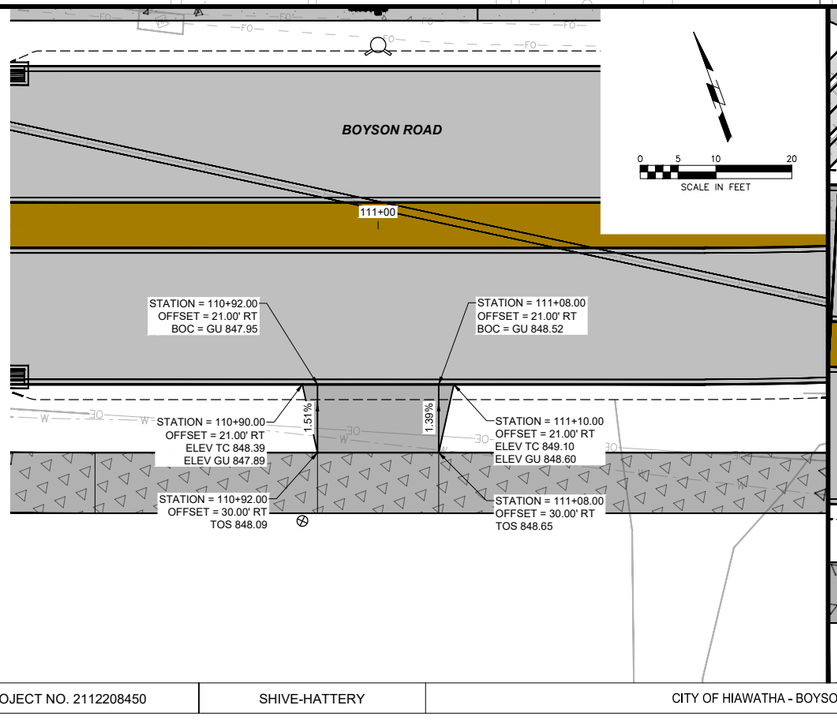


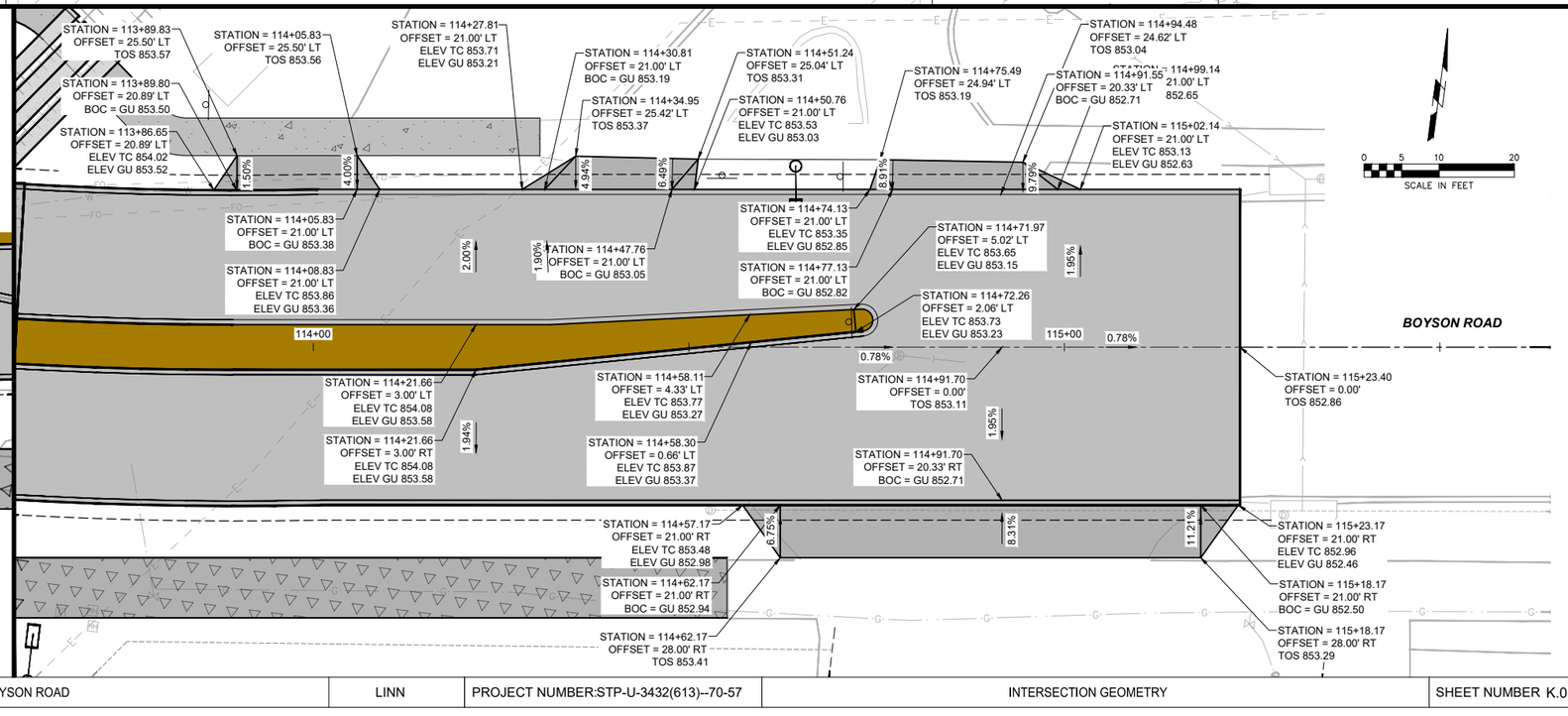
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	INTERSECTION GEOMETRY	SHEET NUMBER K.01



S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	INTERSECTION GEOMETRY	SHEET NUMBER K.02



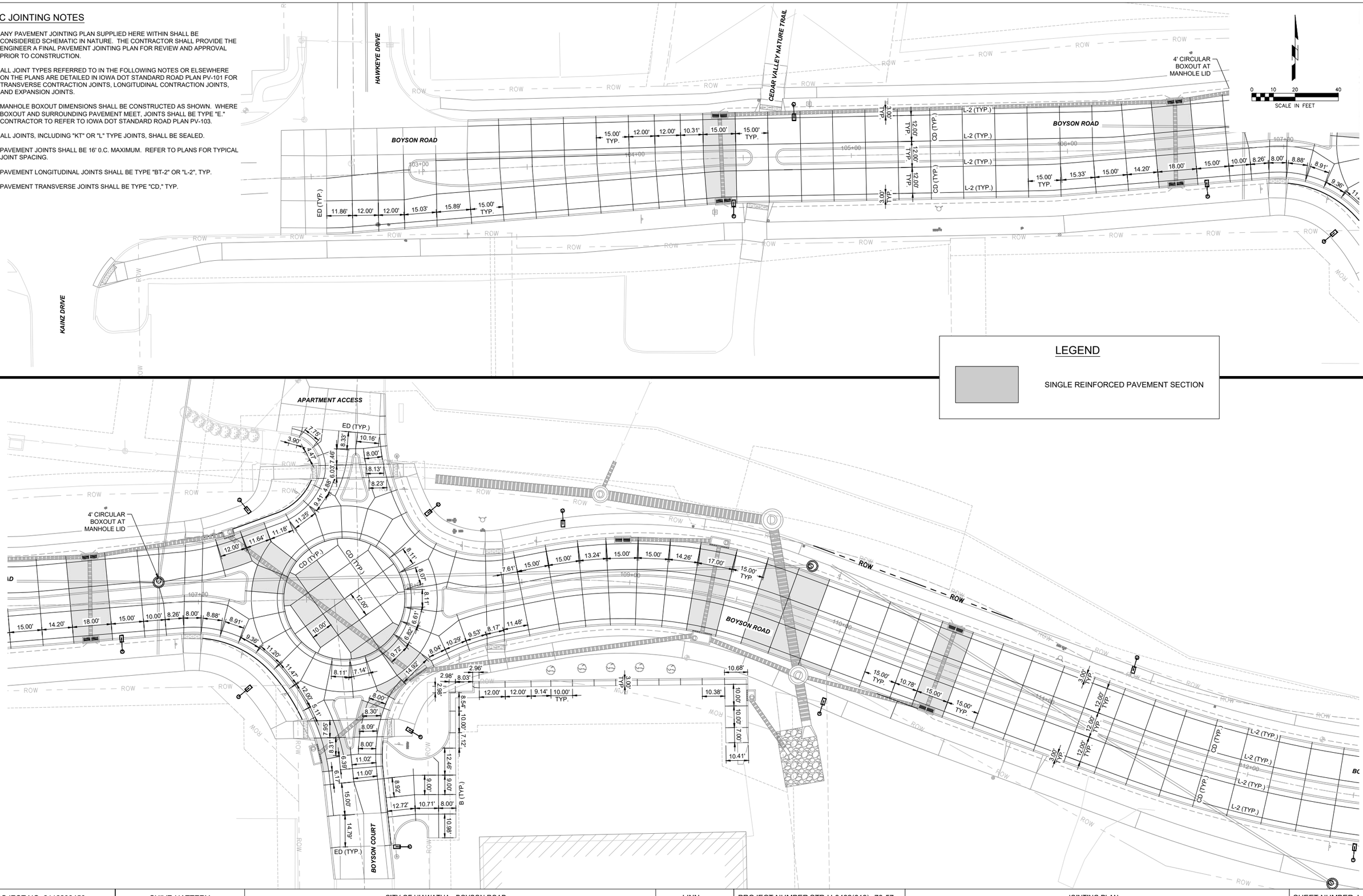




S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	INTERSECTION GEOMETRY	SHEET NUMBER K.03

PCC JOINTING NOTES

1. ANY PAVEMENT JOINTING PLAN SUPPLIED HERE WITHIN SHALL BE CONSIDERED SCHEMATIC IN NATURE. THE CONTRACTOR SHALL PROVIDE THE ENGINEER A FINAL PAVEMENT JOINTING PLAN FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. ALL JOINT TYPES REFERRED TO IN THE FOLLOWING NOTES OR ELSEWHERE ON THE PLANS ARE DETAILED IN IOWA DOT STANDARD ROAD PLAN PV-101 FOR TRANSVERSE CONTRACTION JOINTS, LONGITUDINAL CONTRACTION JOINTS, AND EXPANSION JOINTS.
3. MANHOLE BOXOUT DIMENSIONS SHALL BE CONSTRUCTED AS SHOWN. WHERE BOXOUT AND SURROUNDING PAVEMENT MEET, JOINTS SHALL BE TYPE "E." CONTRACTOR TO REFER TO IOWA DOT STANDARD ROAD PLAN PV-103.
4. ALL JOINTS, INCLUDING "KT" OR "L" TYPE JOINTS, SHALL BE SEALED.
5. PAVEMENT JOINTS SHALL BE 16' 0.C. MAXIMUM. REFER TO PLANS FOR TYPICAL JOINT SPACING.
6. PAVEMENT LONGITUDINAL JOINTS SHALL BE TYPE "BT-2" OR "L-2", TYP.
7. PAVEMENT TRANSVERSE JOINTS SHALL BE TYPE "CD," TYP.

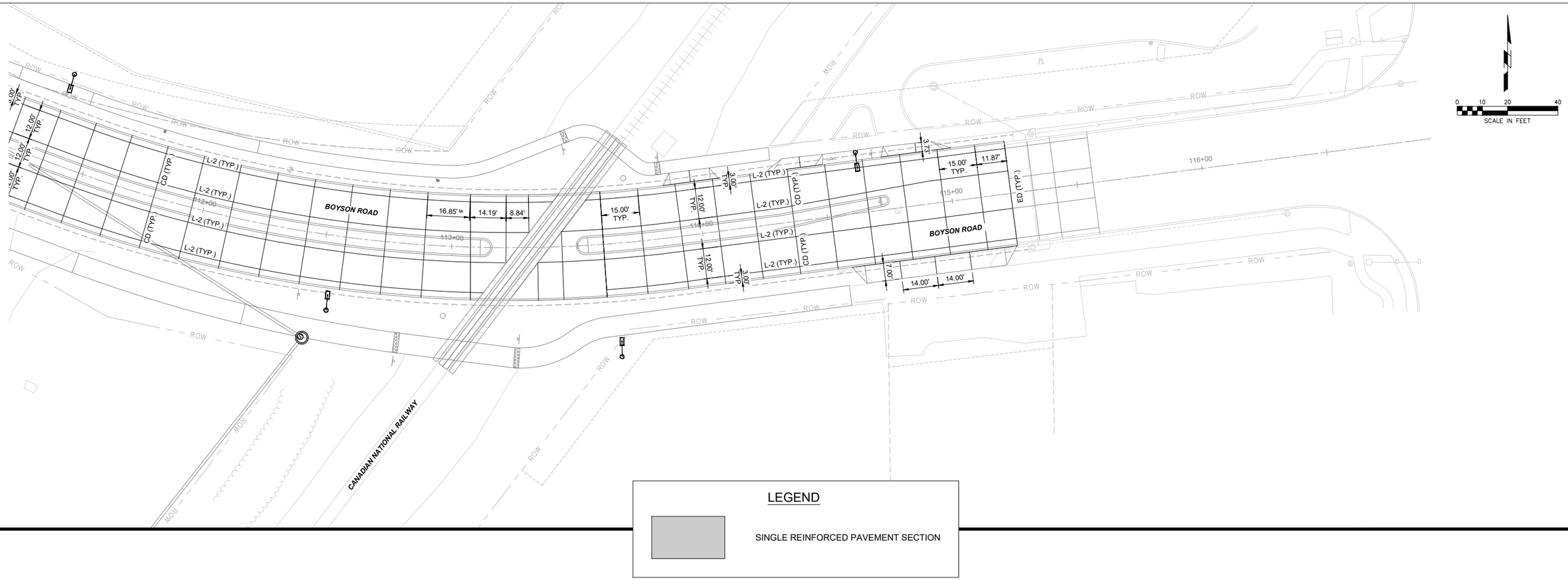


LEGEND

SINGLE REINFORCED PAVEMENT SECTION

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S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	JOINTING PLAN	SHEET NUMBER L.01

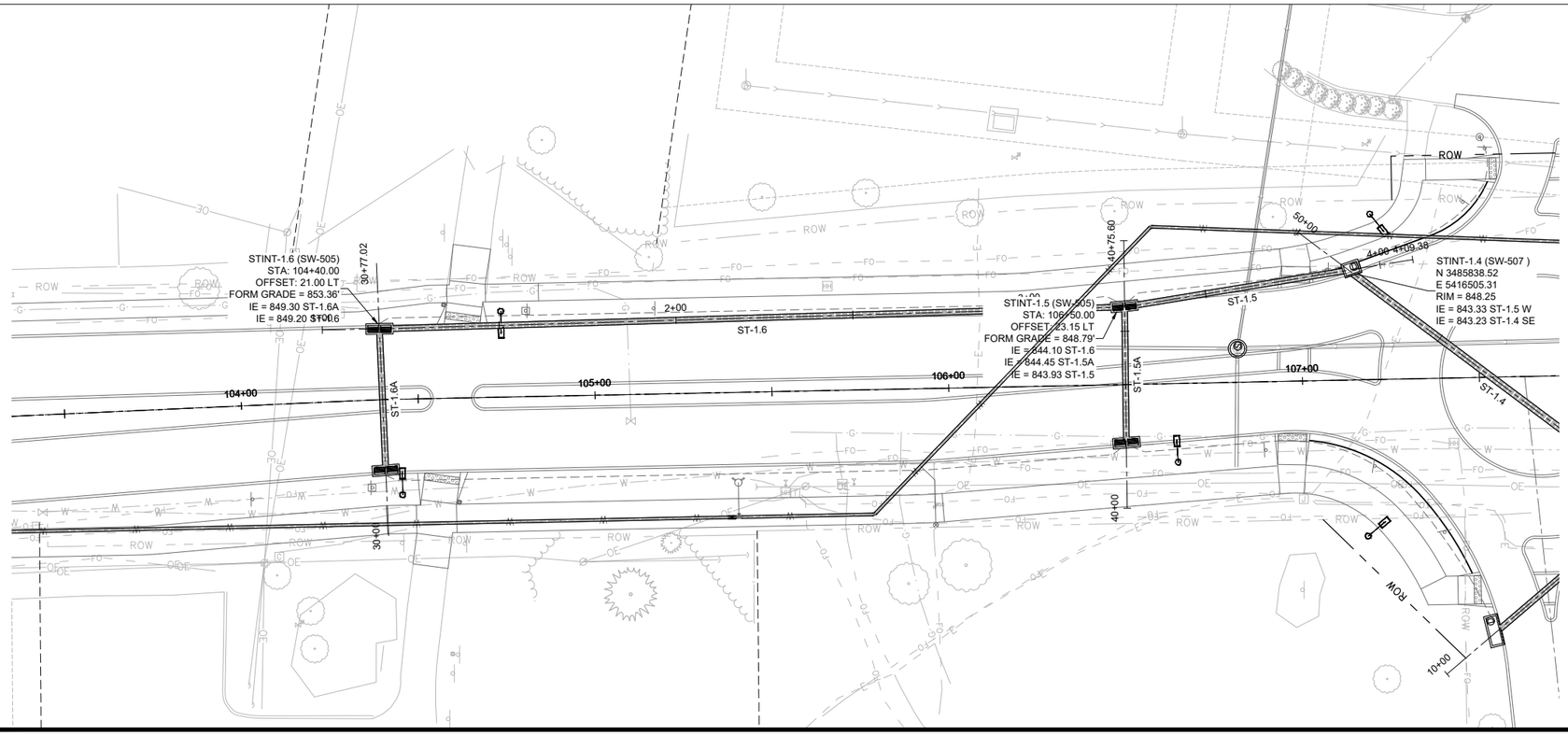


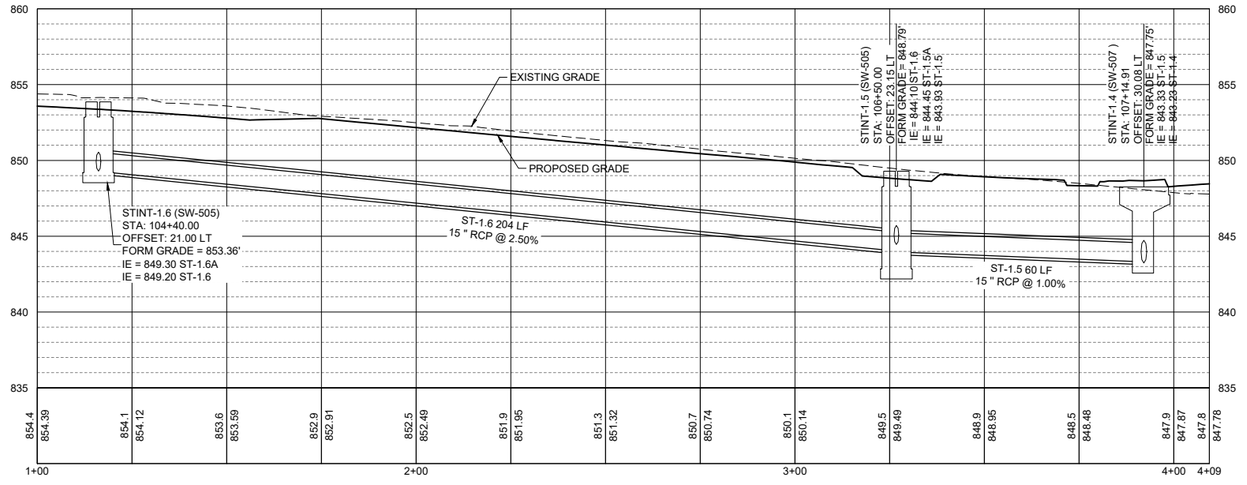
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SINGLE REINFORCED PAVEMENT SECTION

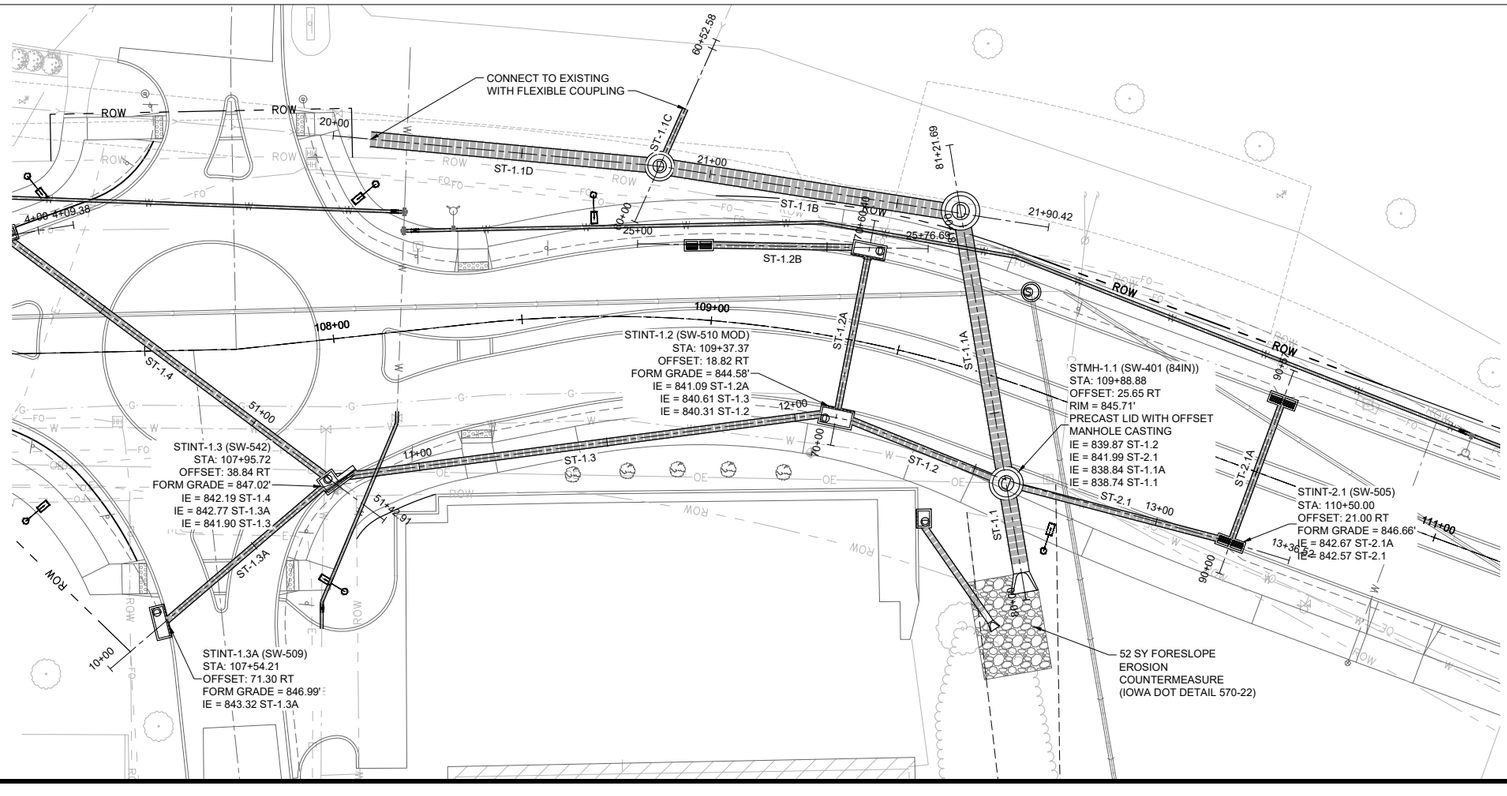
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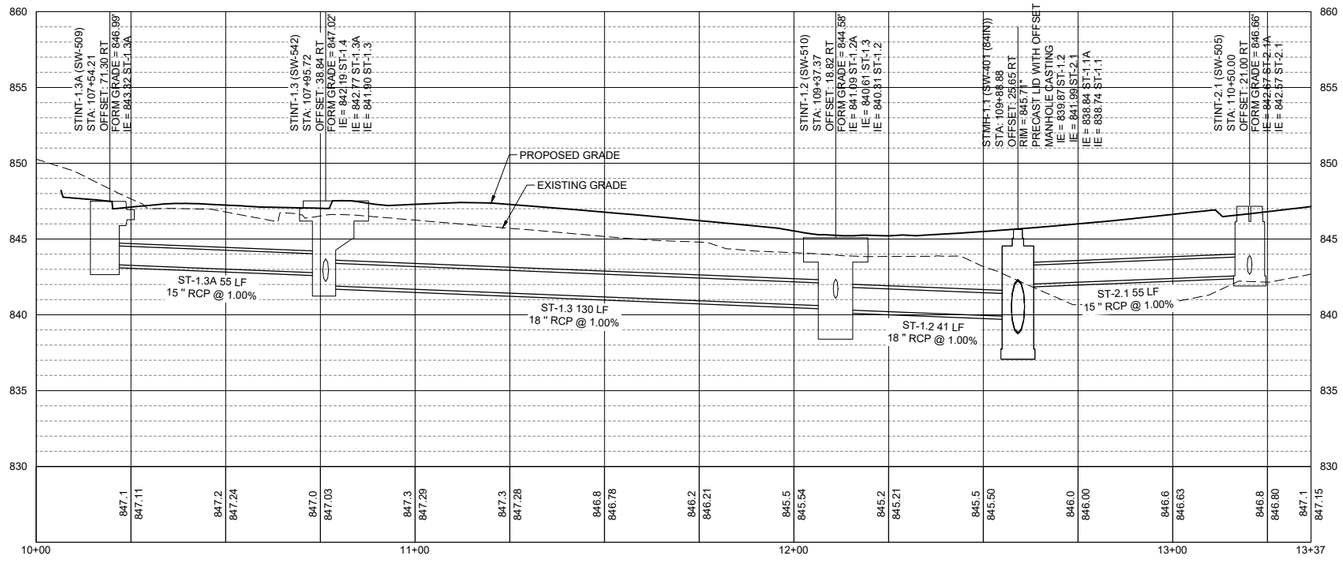
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	JOINTING PLAN	SHEET NUMBER L.02



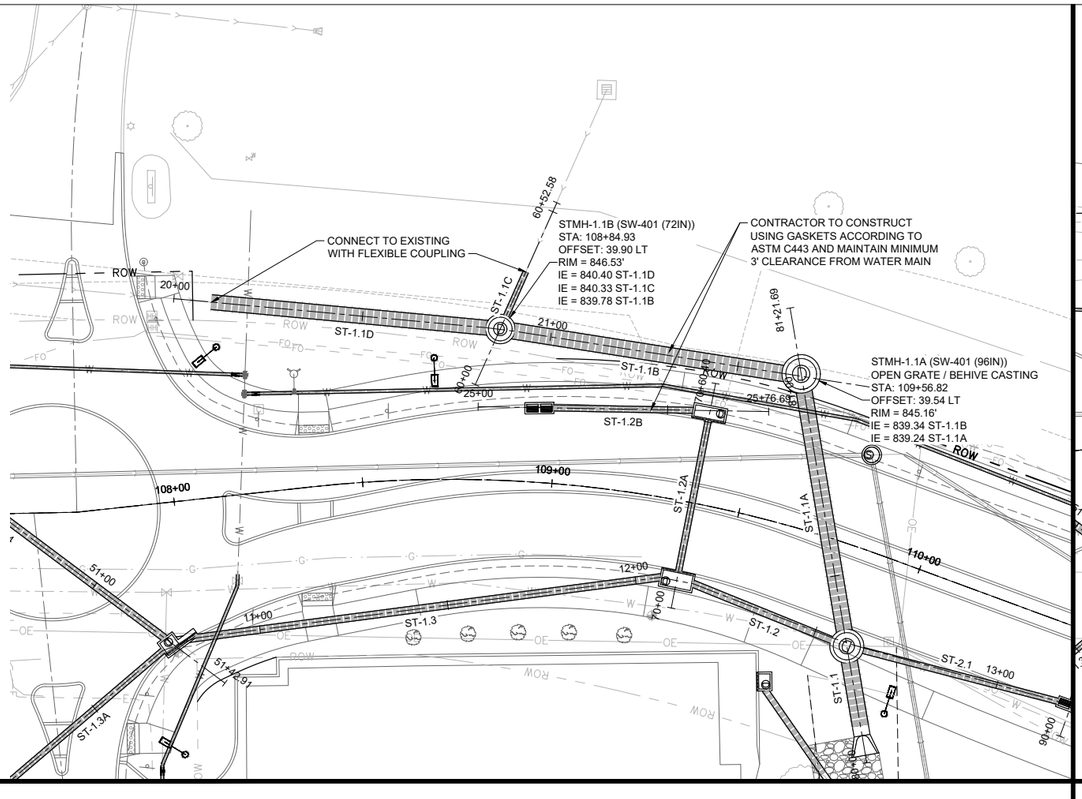


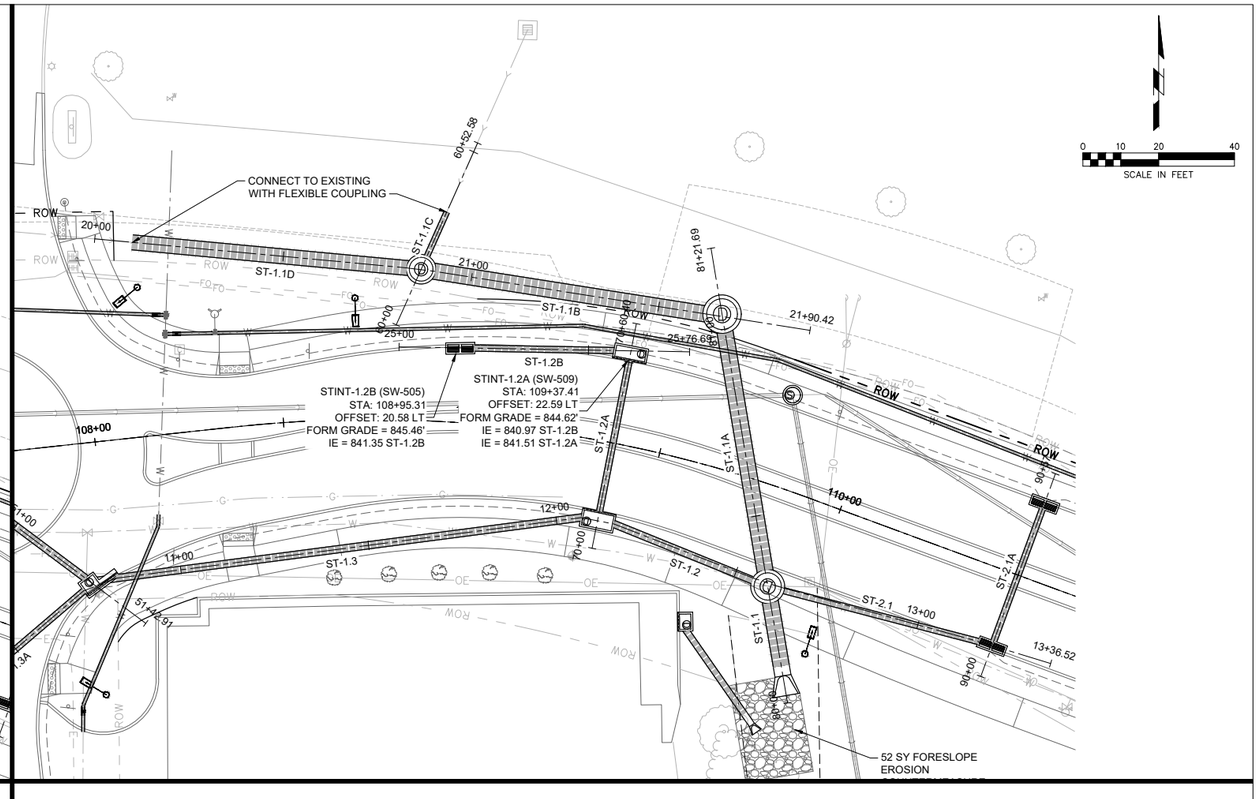
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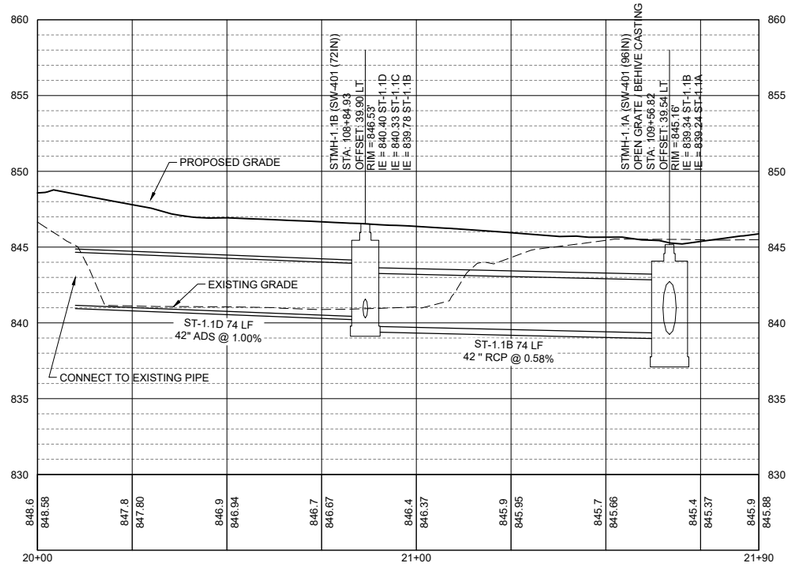


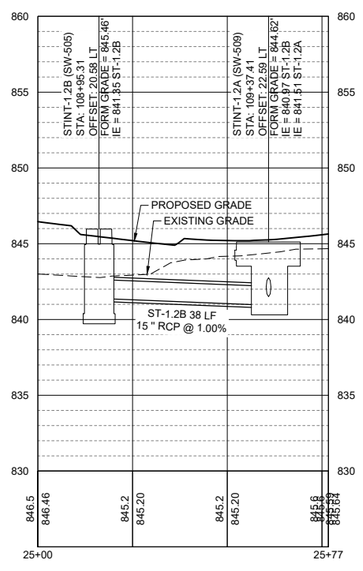


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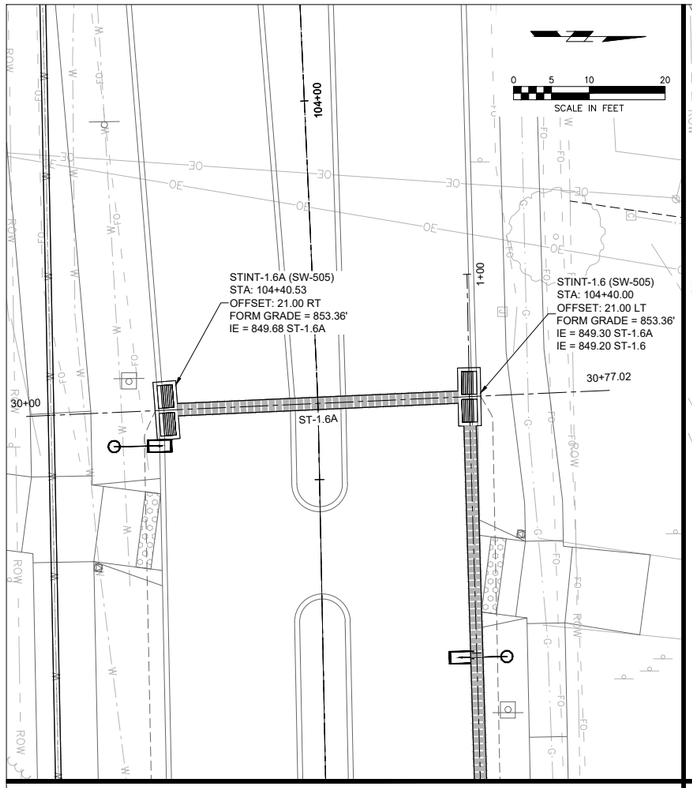


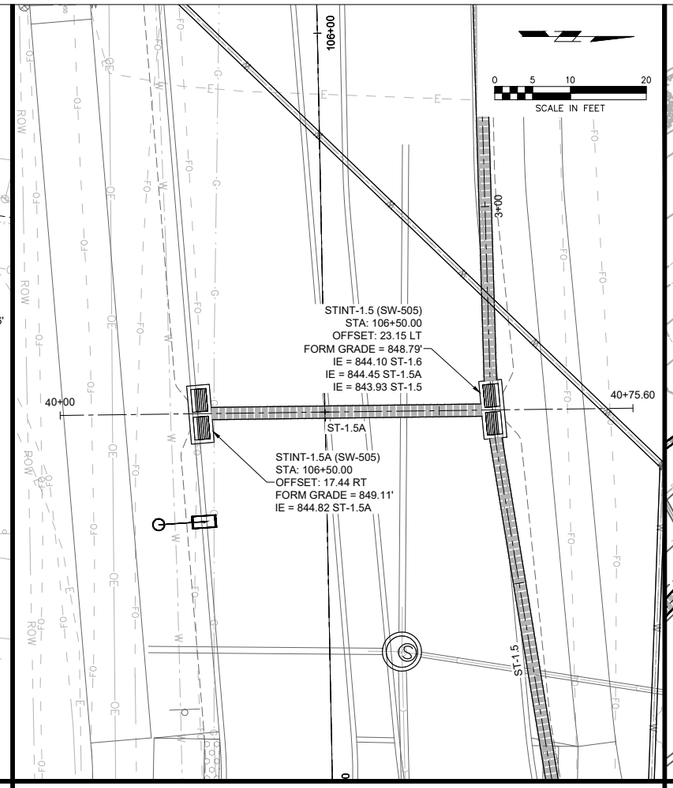


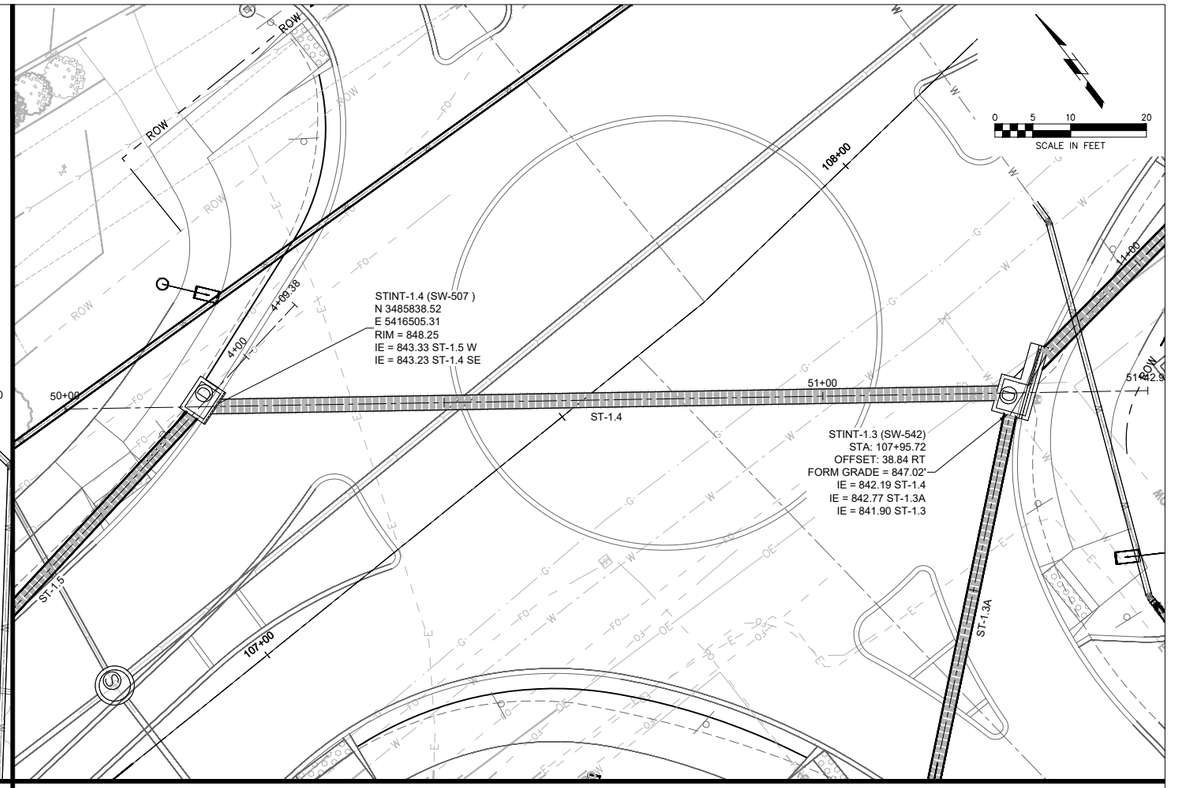


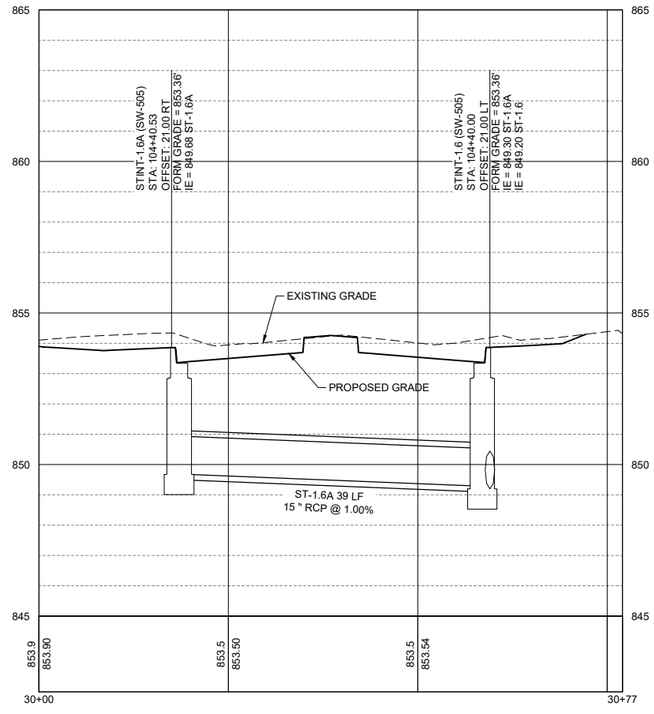


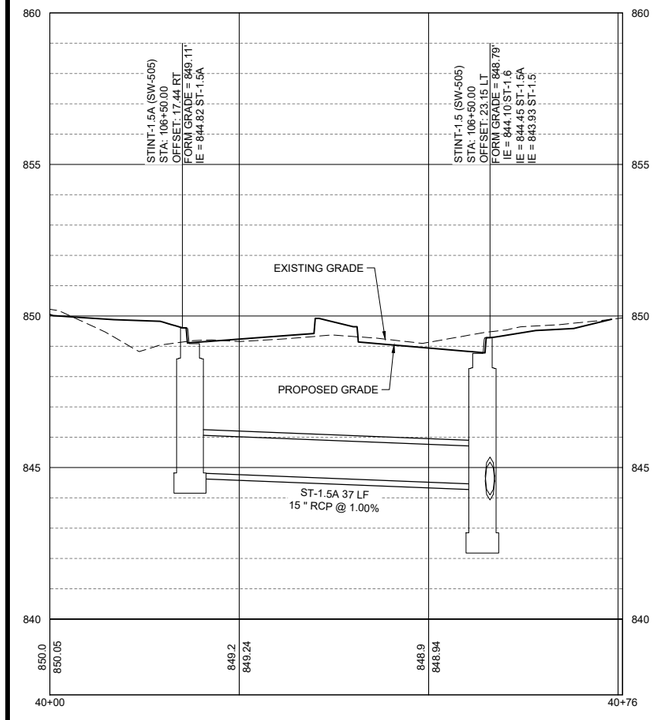
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	STORM SEWER PLAN AND PROFILE	SHEET NUMBER M.03

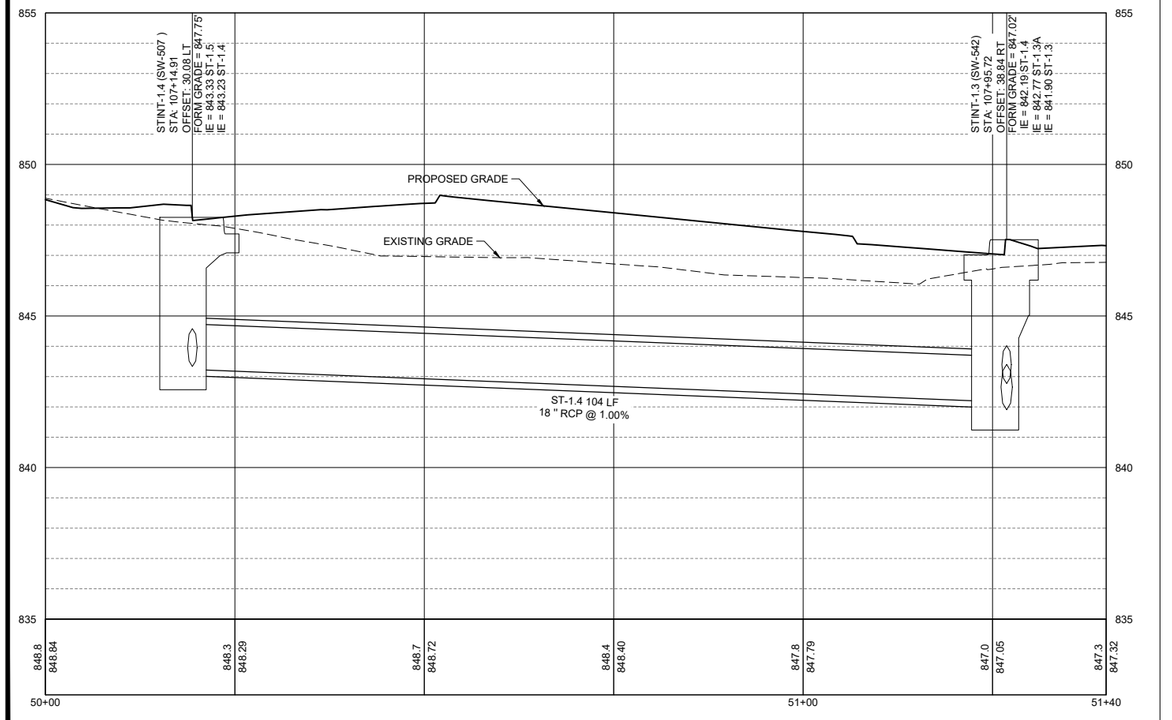




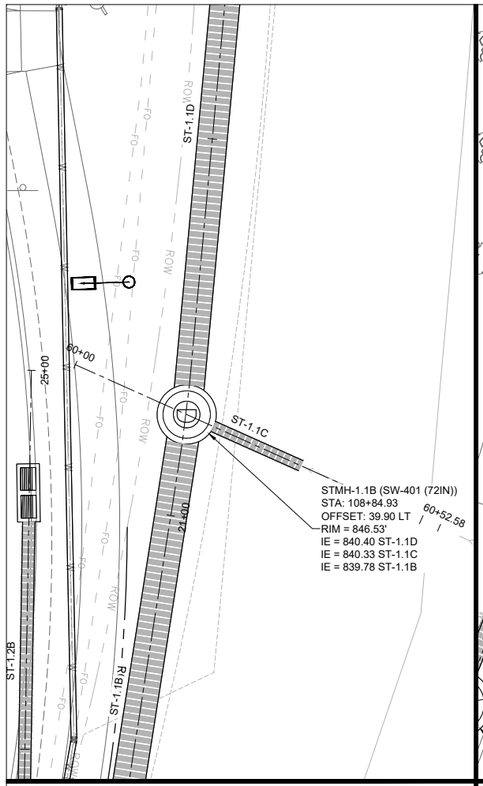


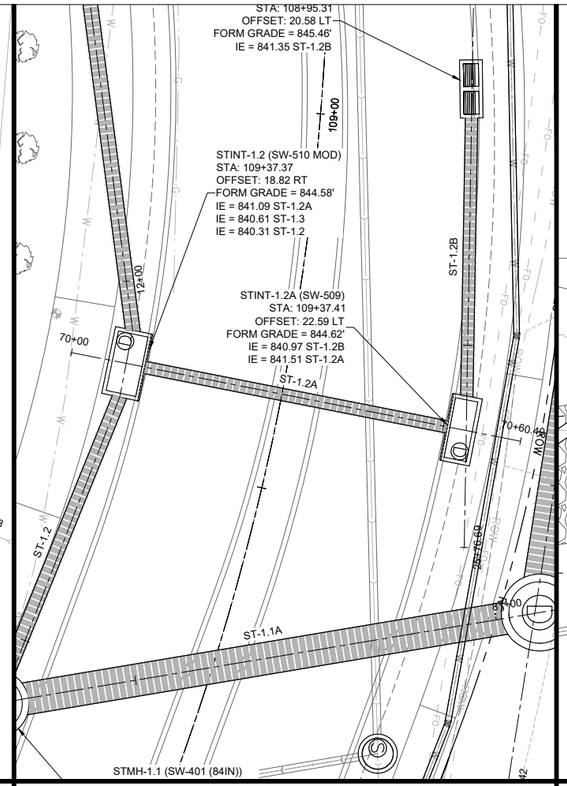


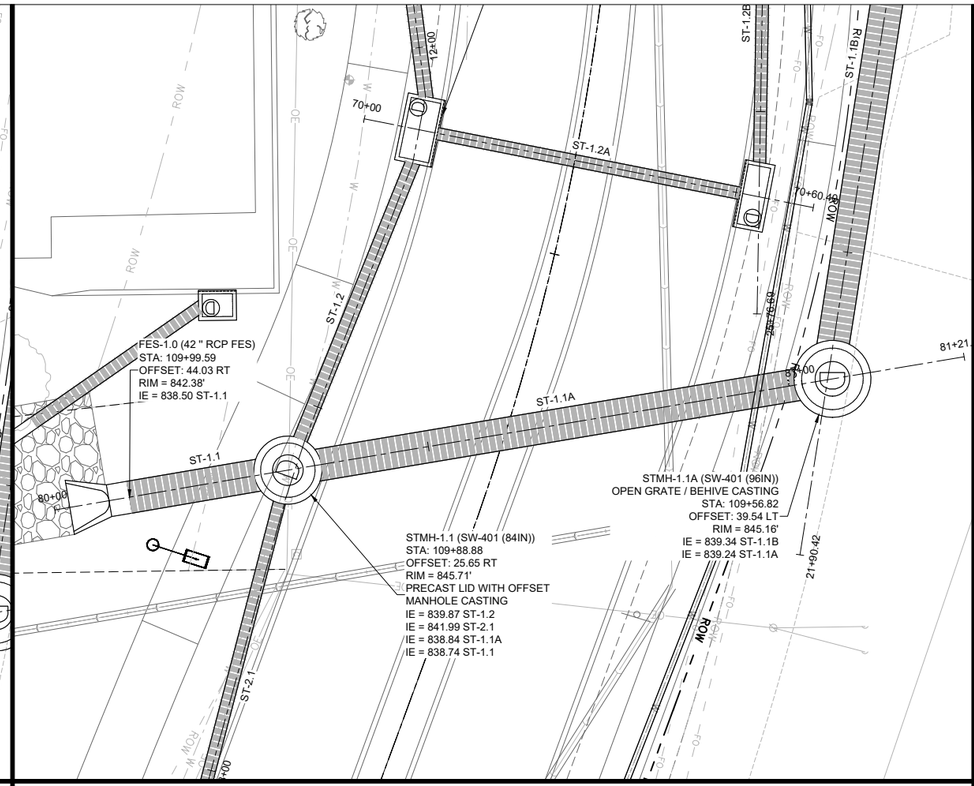


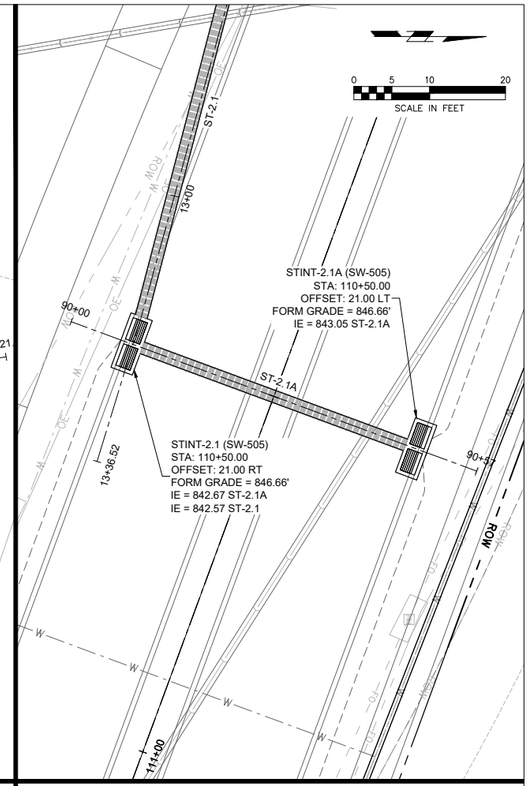


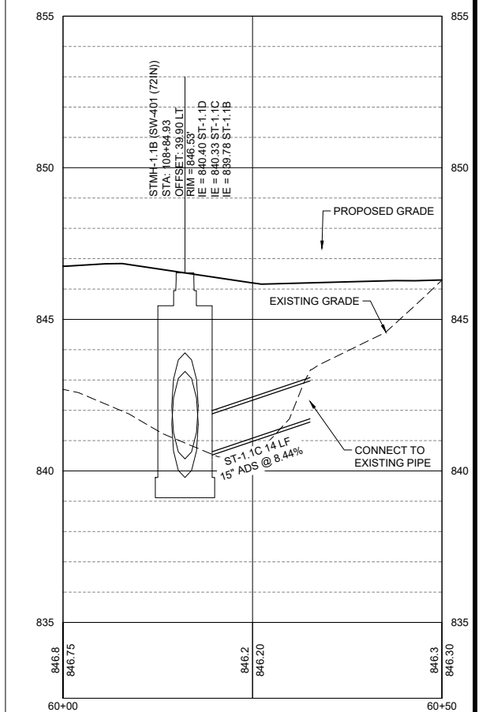
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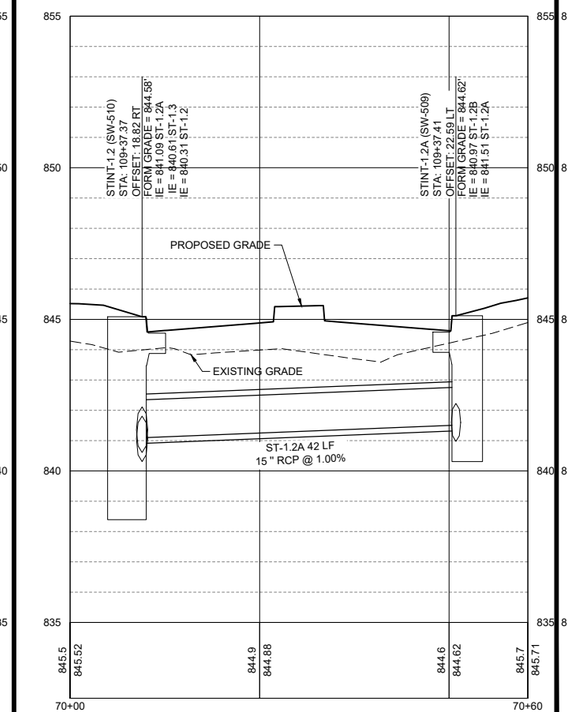


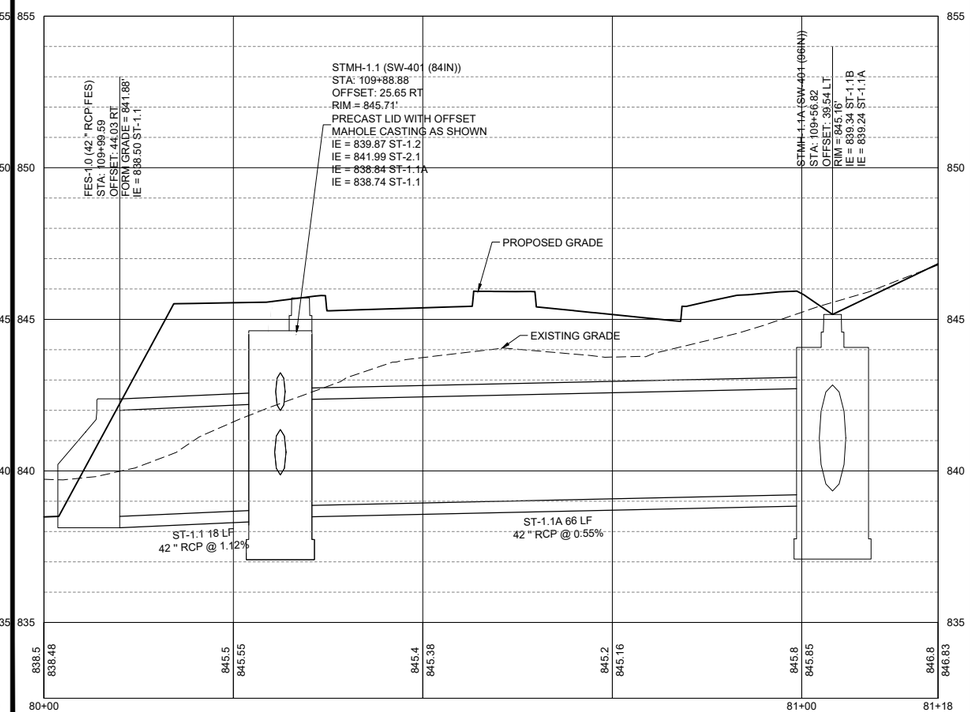


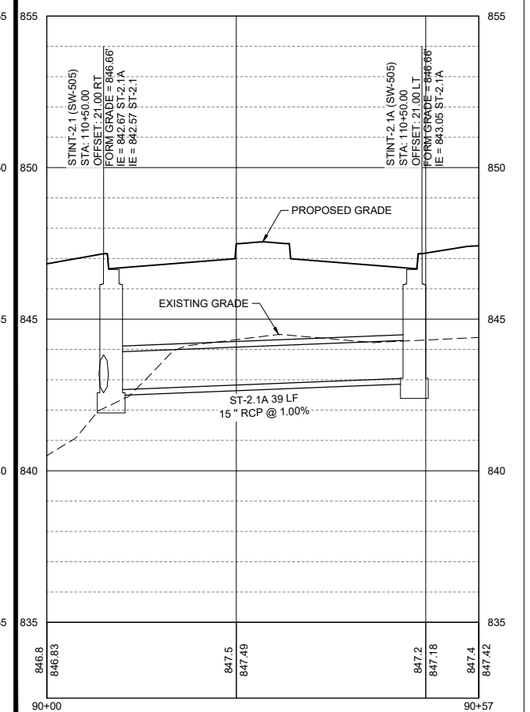




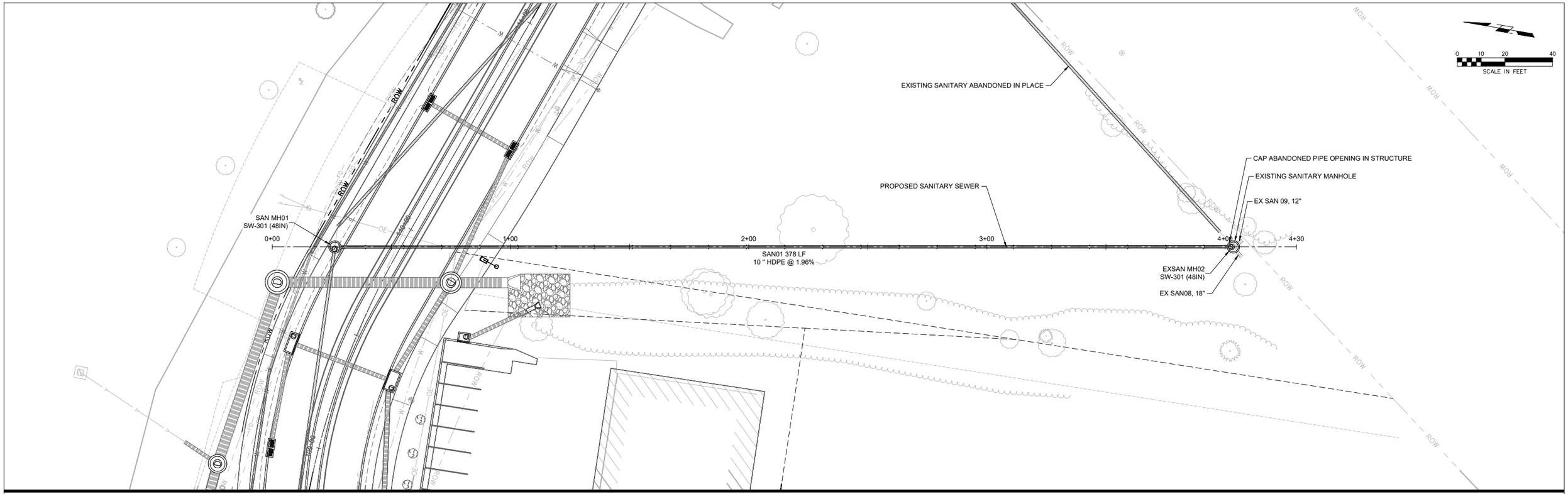




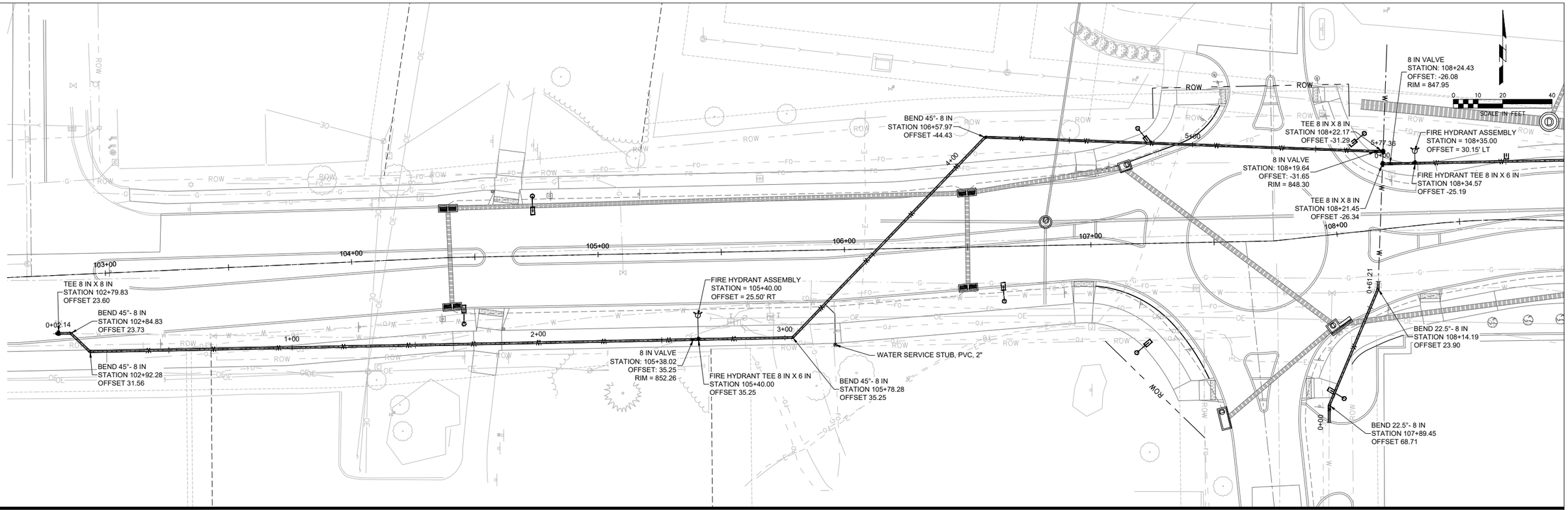


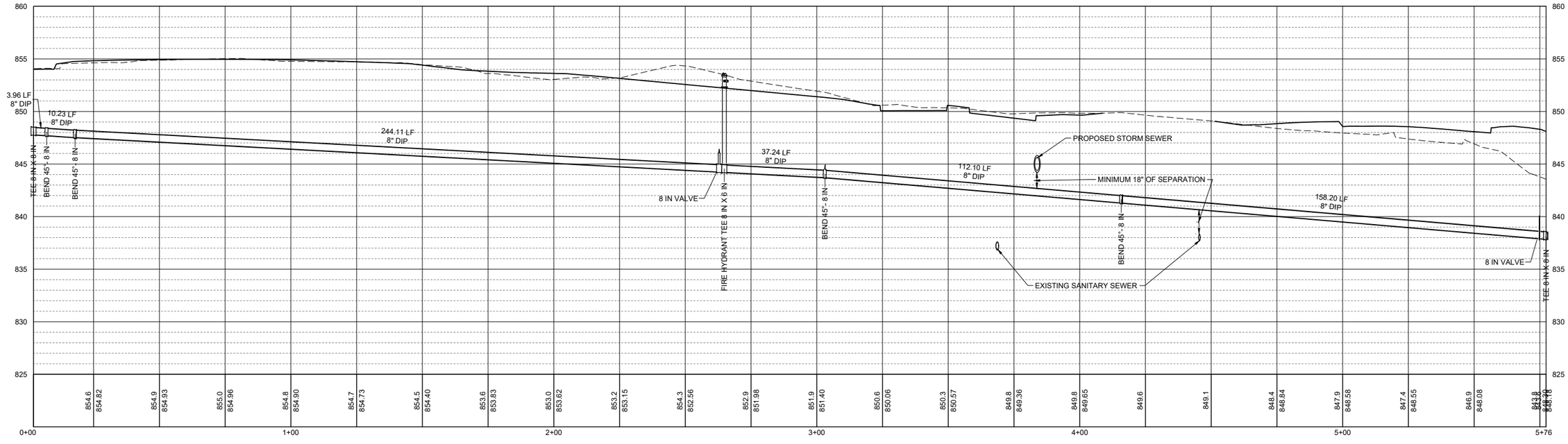


S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	STORM SEWER PLAN AND PROFILE	SHEET NUMBER M.05

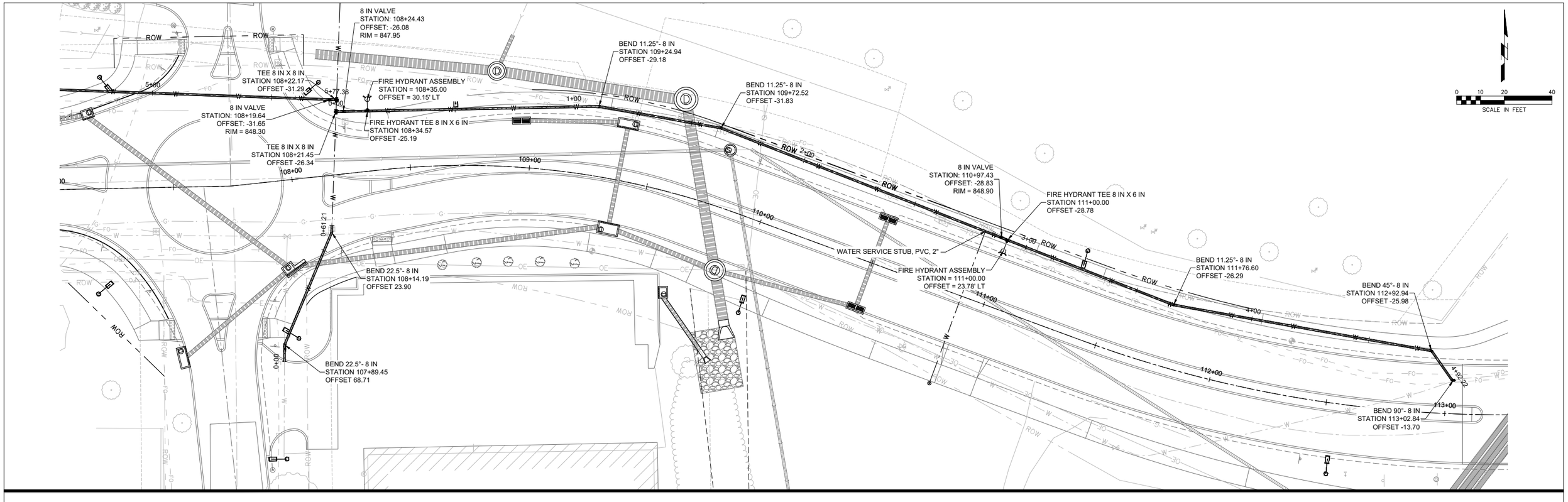


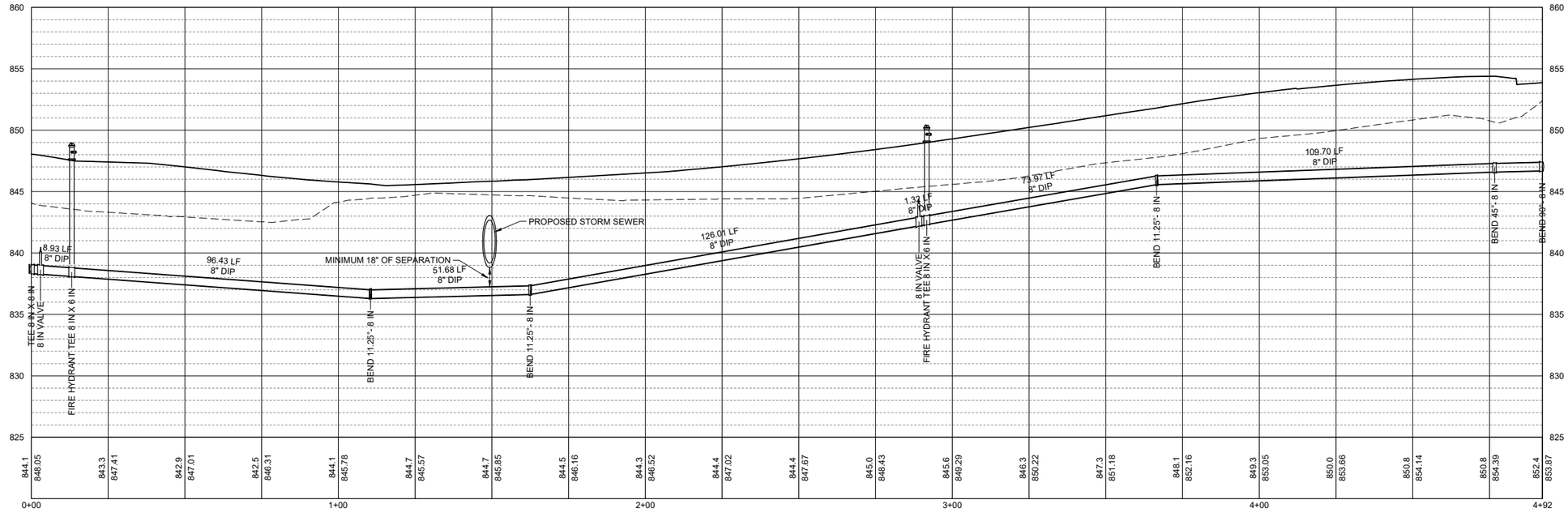
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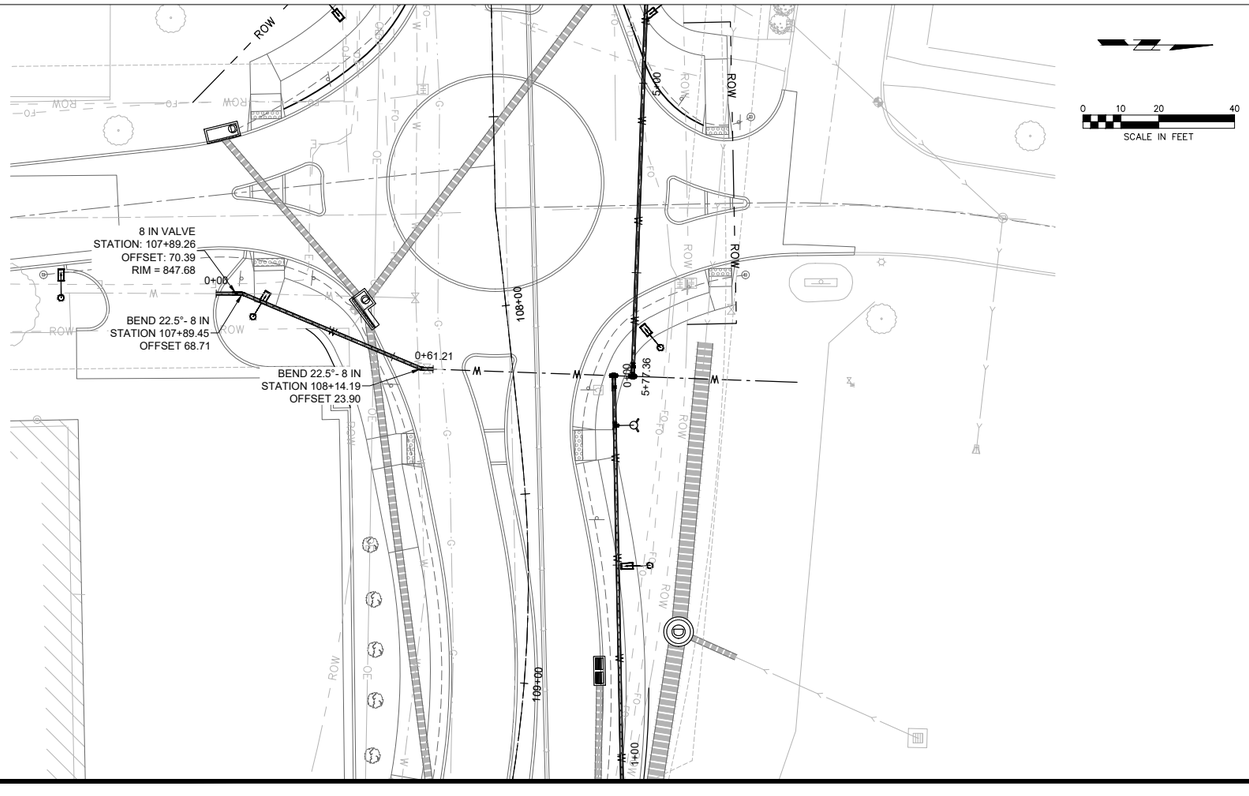


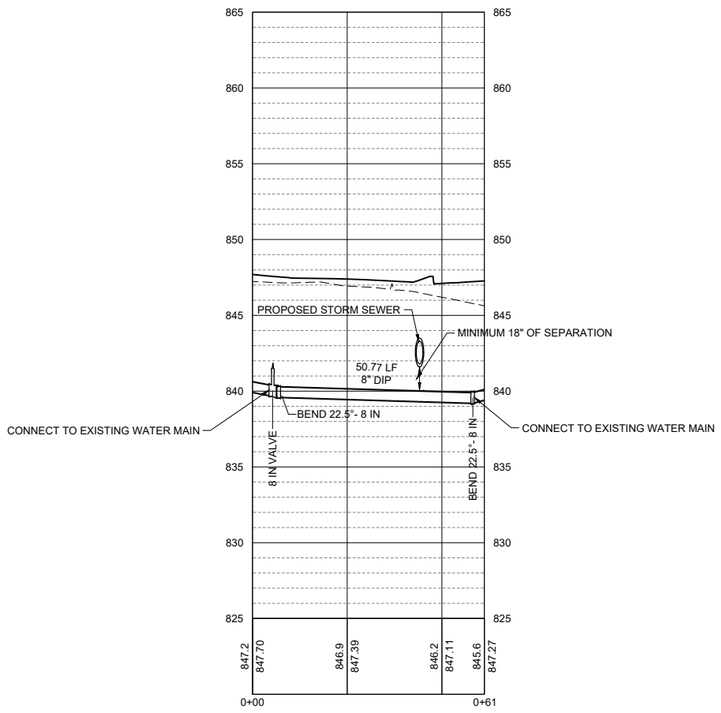
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S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	WATER MAIN PLAN AND PROFILE	SHEET NUMBER MW.02





S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	WATER MAIN PLAN AND PROFILE	SHEET NUMBER MW.03

LEGEND

- MIDAMERICAN GAS
- CITY OF HIAWATHA WATER
- CITY OF HIAWATHA WATER - PROPOSED
- SANITARY SEWER
- SANITARY SEWER - PROPOSED
- STORM SEWER
- ALLIANT OVERHEAD CABLE
- FIBER OPTIC CABLE

0 10 20 40
SCALE IN FEET

102+00
103+00
104+00
105+00
106+00
107+00

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	UTILITY COORDINATION PLAN	SHEET NUMBER MX.01

LEGEND

- G — MIDAMERICAN GAS
- W — CITY OF HIAWATHA WATER
- W — CITY OF HIAWATHA WATER - PROPOSED
- SANITARY SEWER
- SANITARY SEWER - PROPOSED
- STORM SEWER
- OE — ALLIANT OVERHEAD CABLE
- FO — FIBER OPTIC CABLE

0 10 20 40
SCALE IN FEET

PROPOSED STORM SEWER

PROPOSED WATER MAIN

SANITARY SEWER TO BE ABANDONED IN PLACE

PROPOSED SANITARY SEWER

107+00
108+00
109+00
110+00
111+00
112+00
113+00

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	UTILITY COORDINATION PLAN	SHEET NUMBER MX.02

LEGEND

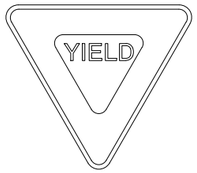
- MIDAMERICAN GAS
- CITY OF HIAWATHA WATER
- CITY OF HIAWATHA WATER - PROPOSED
- SANITARY SEWER
- SANITARY SEWER - PROPOSED
- STORM SEWER
- ALLIANT OVERHEAD CABLE
- FIBER OPTIC CABLE

N

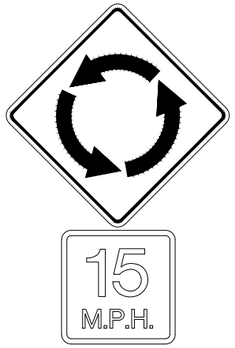
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SCALE IN FEET

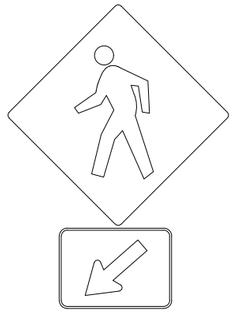
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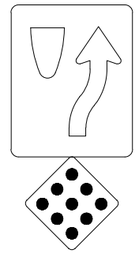
1 R1-2
36"x36"x36"



2 W13-1
24"x24"
W2-6
30"x30"



3 W11-2
30"x30"
W16-7P
24"x12"

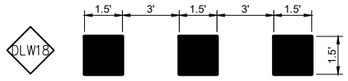


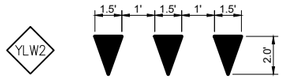
4 R4-7
24"x30"
OM1-2
18"x18"



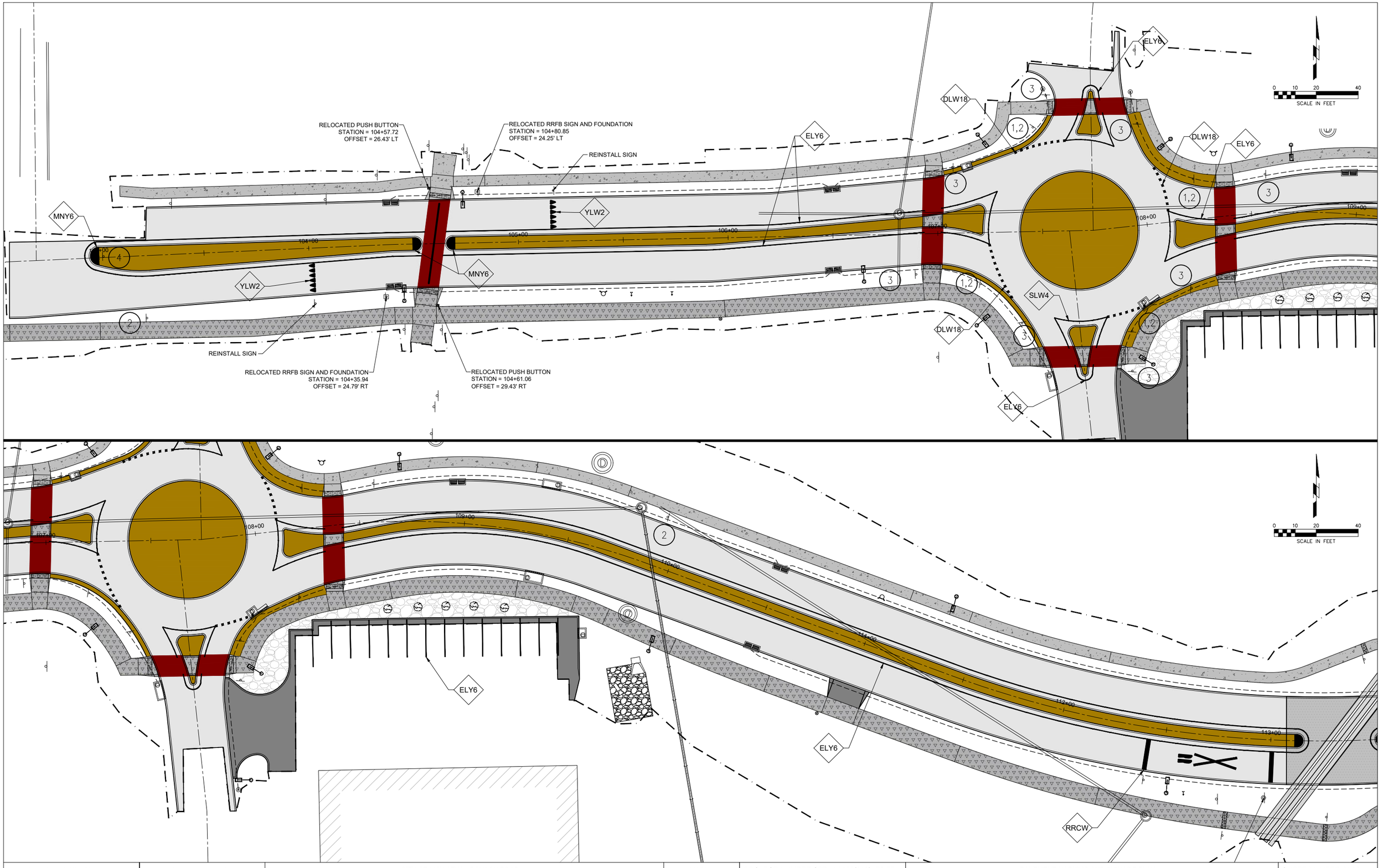
5 W10-1
36" ON ROADWAYS
24" ON TRAILS

PAVEMENT MARKINGS LEGEND		PAVEMENT SYMBOLS LEGEND	
ELY6	EDGE LINE LEFT (Yellow)	LTAW	LEFT TURN ARROW (White)
DLW18	DOTTED LINE, 18" (White)	RRCW	RAILROAD CROSSING SYMBOL (White)
DCY6	DOUBLE CENTERLINE (Yellow)	ONLW	ONLY WORD MARKING (White)
CBW6	CROSSWALK BAR (White)		
MNY6	MEDIAN NOSE (Yellow)		
ELW4	EDGE LINE RIGHT (White)		
SLW2	STOP LINE (White)		
NPY6	NO PASSING ZONE LINE (Yellow)		
YLW2	YIELD LINE (White)		

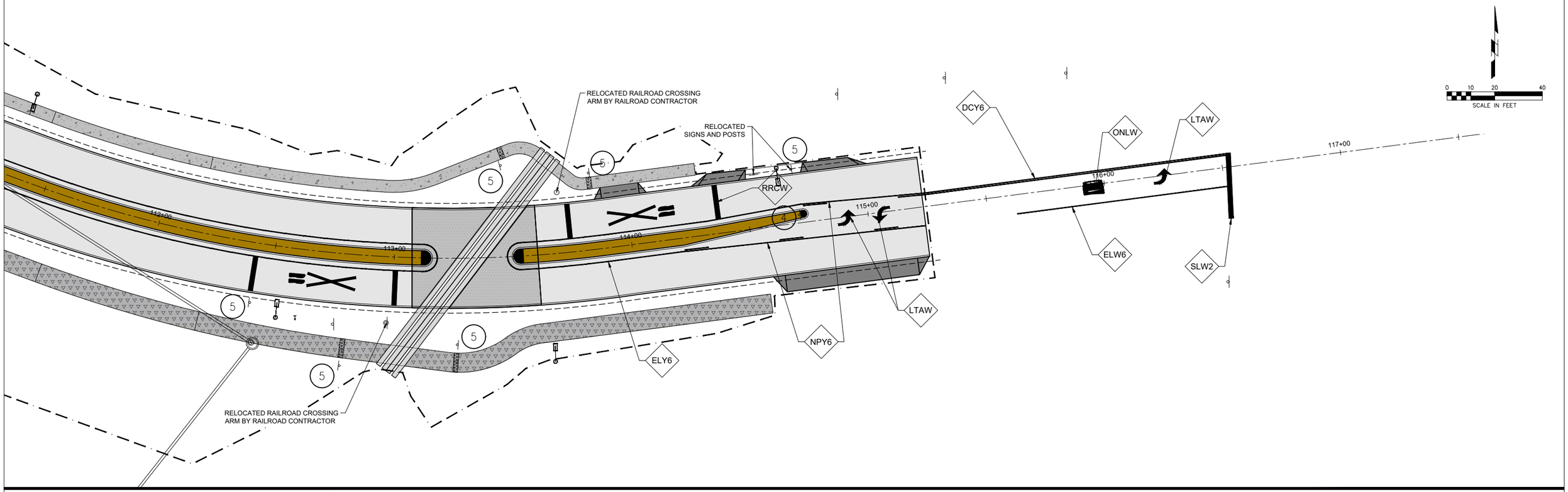




S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PAVEMENT MARKING AND SIGNAGE PLAN	SHEET NUMBER N.01



S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PAVEMENT MARKING AND SIGNAGE PLAN	SHEET NUMBER N.02



S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	PAVEMENT MARKING AND SIGNAGE PLAN	SHEET NUMBER N.03

0 10 20 40
SCALE IN FEET

HAWKEYE DRIVE

CEDAR VALLEY NATURE TRAIL

BOYSON ROAD

BOYSON COURT

APARTMENT ACCESS

PROTECT TREES, TYP.

REMOVE AND REINSTALL PEDESTRIAN PUSH BUTTON

REMOVE SIDEWALK

REMOVE SIGNS

GRADING LIMIT LINE, TYP.

REMOVE AND REINSTALL SIGN

REMOVE AND REINSTALL RRFB AND FOUNDATION

REMOVE SIGN

REMOVE AND REINSTALL PEDESTRIAN PUSH BUTTON

RELOCATE UTILITY POLE BY ALLIANT

REMOVE AND REINSTALL RRFB AND FOUNDATION

REMOVE AND REINSTALL SIGN

PROTECT SIGN

PROTECT SIGN

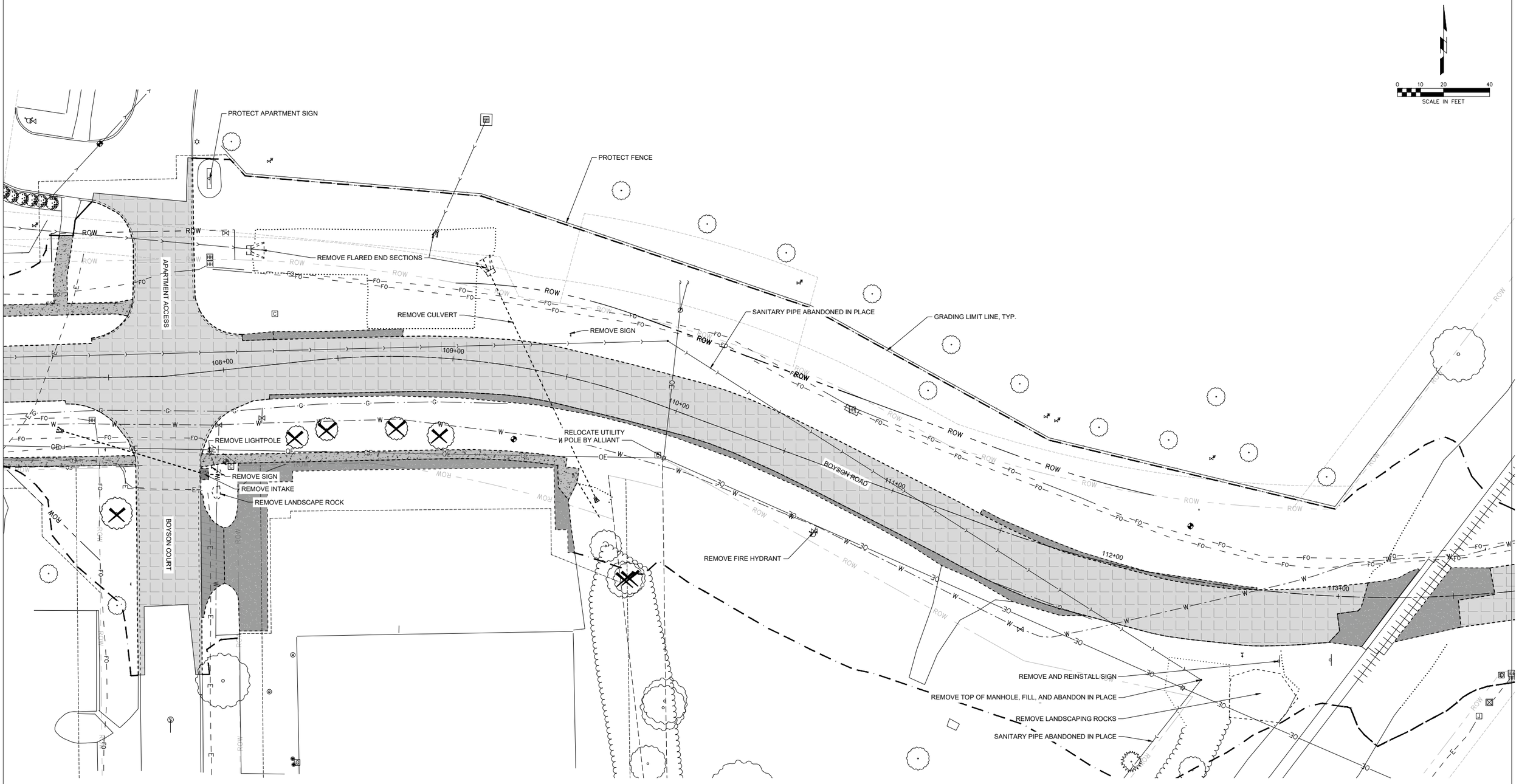
REMOVE TREES AND LANDSCAPING

102+00 103+00 104+00 105+00 106+00 107+00

LEGEND

- PCC PAVEMENT REMOVAL
- PCC DRIVEWAY REMOVAL
- HMA PAVEMENT REMOVAL
- SIDEWALK REMOVAL
- TREE/SHRUB REMOVAL

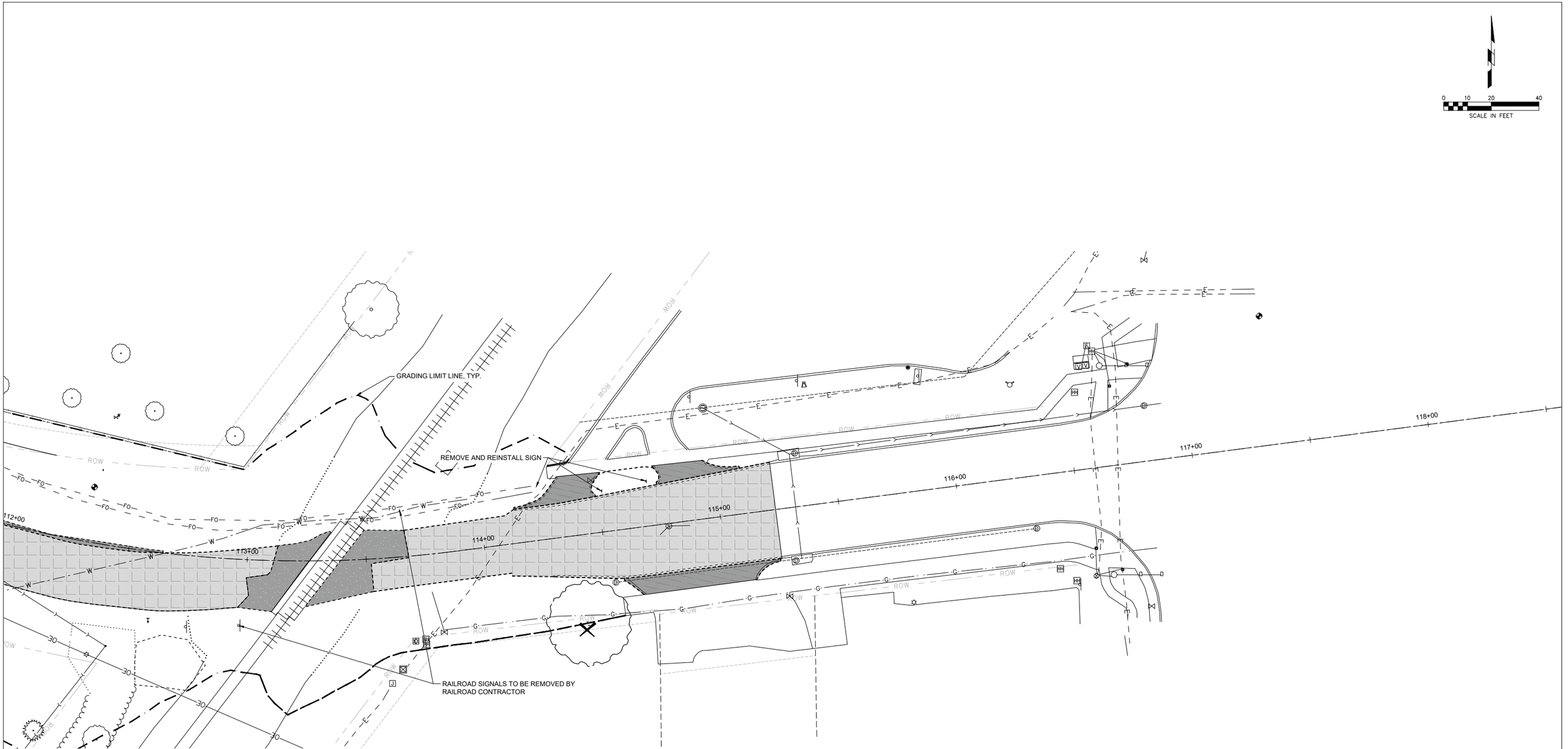
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	REMOVAL PLAN	SHEET NUMBER R.01



LEGEND

- PCC PAVEMENT REMOVAL
- PCC DRIVEWAY REMOVAL
- HMA PAVEMENT REMOVAL
- SIDEWALK REMOVAL
- TREE/SHRUB REMOVAL

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	REMOVAL PLAN	SHEET NUMBER R.02



S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	REMOVAL PLAN	SHEET NUMBER R.03

LEGEND

	CURB RAMP	8.3% MAX LONG. SLOPE 2.0% MAX CROSS SLOPE
	TURNING SPACE	2.0% MAX CROSS SLOPE
	PCC SIDEWALK	5.0% MAX LONG. SLOPE 2.0% MAX CROSS SLOPE
	RAMP TAPER	
	NON TRAVERSABLE SIDEWALK	NOT PART OF THE ADA COMPLIANT PATH
	DETECTABLE WARNINGS	2' X 6' TYPICAL - CAST IRON
	8" PCC DRIVEWAY	
	8" PCC SIDEWALK / SHARED USE PATH	
	6" PCC SIDEWALK / SHARED USE PATH	

HAWKEYE DRIVE

KAINZ DRIVE

BOYSON ROAD

0 5 10 20
SCALE IN FEET

102+00

104+00

1101 1102 1103 1104 1105 1106 1107 1108 1109

PEDESTRIAN PUSH BUTTON.
SEE N-SHEETS FOR LOCATION.

INFILL AREA BETWEEN PUSH
BUTTON AND SIDEWALK.

2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113

104+00

105+00

106+00

2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213

PEDESTRIAN PUSH BUTTON.
SEE N-SHEETS FOR LOCATION.

INFILL AREA BETWEEN PUSH BUTTON AND SIDEWALK

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	SIDEWALK PLAN	SHEET NUMBER S.01

LEGEND

CURB RAMP	8.3% MAX LONG. SLOPE 2.0% MAX CROSS SLOPE
TURNING SPACE	2.0% MAX CROSS SLOPE
PCC SIDEWALK	5.0% MAX LONG. SLOPE 2.0% MAX CROSS SLOPE
RAMP TAPER	
NON TRAVERSABLE SIDEWALK	NOT PART OF THE ADA COMPLIANT PATH
DETECTABLE WARNINGS	2' X 6' TYPICAL - CAST IRON
8" PCC DRIVEWAY	
8" PCC SIDEWALK / SHARED USE PATH	
6" PCC SIDEWALK / SHARED USE PATH	

0 5 10 20
SCALE IN FEET

106+00 107+00 108+00 109+00

S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	SIDEWALK PLAN	SHEET NUMBER S.02

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb

Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.

Refer to tabulation 113-01 for bid quantities.

Point to Point		Sidewalk Designation	_" PCC Sidewalk	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant?	Measured Slope	Initials	Remarks		FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
													Point	Station	Offset	Elevation
				FT	FT	%	Pos. or Neg.		%							
1101	1102	Landing/Turning Space	4	5.00	0.03	0.60%	0.1% to 2.0%						1101	10157.774	37.51	852.165
1101	1108	Landing/Turning Space	4	8.04	-0.14	-1.70%	0.1% to 2.0%	Yes					1102	10162.682	36.55	852.196
1101	1109	Match Existing Cross Slope	4	11.45	-0.31	-2.70%	Match Existing						1103	10196.463	29.68	853.793
1102	1103	Ramp Running Slope	6	34.47	1.6	4.60%	0.5% to 8.3%						1104	10207.309	28.71	853.893
1102	1107	Landing/Turning Space	4	8.00	-0.12	-1.50%	0.1% to 2.0%						1105	10207.109	36.71	854.013
1103	1104	Landing/Turning Space	4	10.89	0.1	0.90%	0.1% to 2.0%						1106	10198.058	37.52	853.913
1103	1106	Landing/Turning Space	4	8.00	0.12	1.50%	0.1% to 2.0%						1107	10164.276	44.39	852.076
1104	1105	Landing/Turning Space	4	8.00	0.12	1.50%	0.1% to 2.0%						1108	10159.324	45.4	852.025
1105	1106	Landing/Turning Space	4	9.09	-0.1	-1.10%	0.1% to 2.0%						1109	10151.388	47.01	851.852
1106	1107	Ramp Running Slope	6	34.47	-1.84	-5.30%	0.5% to 8.3%									
1107	1108	Landing/Turning Space	4	5.05	-0.05	-1.00%	0.1% to 2.0%									
1108	1109	Sidewalk Running Slope	4	8.10	-0.17	-2.10%	0.5% to 5.0%									
2101	2102	Ramp Running Slope	6	1.51	0	0.10%	0.5% to 8.3%						2101	10457.788	21	853.086
2101	2113	Crosswalk Cross Slope - No Yield Condition	6	10.11	-0.18	-1.80%	0.0% to 5.0%						2102	10458.013	22.49	853.087
2102	2103	Ramp Running Slope	6	4.56	0.29	6.40%	0.5% to 8.3%						2103	10458.692	27	853.379
2102	2113	Ramp Cross Slope	6	10.00	-0.18	-1.90%	0.1% to 2.0%	Yes					2104	10458.692	32	853.442
2103	2104	Landing/Turning Space	4	5.00	0.06	1.30%	0.1% to 2.0%						2105	10459.446	32	853.433
2103	2112	Landing/Turning Space	4	10.00	-0.19	-1.80%	0.1% to 2.0%	Yes					2106	10459.586	33.18	853.445
2104	2105	Landing/Turning Space	4	0.75	-0.01	-1.20%	0.1% to 2.0%						2107	10460.801	43.43	854.003
2105	2106	Landing/Turning Space	4	1.19	0.01	1.00%	0.1% to 2.0%						2108	10471.335	41.85	853.96
2106	2107	Ramp Running Slope	6	10.32	0.56	5.40%	0.5% to 8.3%						2109	10469.559	32	853.26
2106	2109	Landing/Turning Space	4	10.04	-0.19	-1.80%	0.1% to 2.0%	Yes					2110	10469.559	27	853.213
2107	2108	Match Existing Cross Slope	4	10.65	-0.04	-0.40%	Match Existing						2111	10468.805	27	853.209
2108	2109	Ramp Running Slope	6	10.01	-0.7	-7.00%	0.5% to 8.3%						2112	10468.581	25.51	853.194
2109	2110	Landing/Turning Space	4	5.00	-0.05	-0.90%	0.1% to 2.0%						2113	10467.901	21	852.902
2110	2111	Landing/Turning Space	4	0.75	0	-0.50%	0.1% to 2.0%									
2111	2112	Landing/Turning Space	4	1.51	-0.01	-1.00%	0.1% to 2.0%									
2112	2113	Ramp Running Slope	6	4.56	-0.29	-6.40%	0.5% to 8.3%									
2201	2202	Ramp Running Slope	6	1.51	0.1	6.50%	0.5% to 8.3%						2201	10461.571	21	853.022
2201	2213	Crosswalk Cross Slope - No Yield Condition	6	10.11	0.17	1.70%	0.0% to 5.0%						2202	10461.346	22.49	853.12
2202	2203	Ramp Running Slope	6	7.59	0.27	3.50%	0.5% to 8.3%						2203	10460.214	30	853.386
2202	2213	Ramp Cross Slope	6	10.00	0.08	0.70%	0.1% to 2.0%						2204	10460.213	38	853.487
2203	2204	Landing/Turning Space	4	8.00	0.1	1.30%	0.1% to 2.0%						2205	10459.008	38	853.498
2203	2212	Landing/Turning Space	4	10.00	0.08	0.70%	0.1% to 2.0%						2206	10458.783	39.49	853.519
2204	2205	Landing/Turning Space	4	1.20	0.01	0.90%	0.1% to 2.0%						2207	10457.394	48.1	853.362
2205	2206	Landing/Turning Space	4	1.51	0.02	1.40%	0.1% to 2.0%						2208	10447.628	46.62	853.505
2206	2207	Sidewalk Running Slope	4	8.72	-0.16	-1.80%	0.5% to 5.0%						2209	10448.895	38	853.594
2206	2209	Landing/Turning Space	4	10.00	0.08	0.80%	0.1% to 2.0%						2210	10448.895	30	853.493
2207	2208	Match Existing Cross Slope	4	9.88	0.14	1.40%	Match Existing						2211	10450.101	30	853.482
2208	2209	Sidewalk Running Slope	4	8.71	0.09	1.00%	0.5% to 5.0%						2212	10450.325	28.51	853.461
2209	2210	Landing/Turning Space	4	8.00	-0.1	-1.30%	0.1% to 2.0%						2213	10451.457	21	853.195
2210	2211	Landing/Turning Space	4	1.21	-0.01	-0.90%	0.1% to 2.0%									
2211	2212	Landing/Turning Space	4	1.51	-0.02	-1.40%	0.1% to 2.0%									
2212	2213	Ramp Running Slope	6	7.59	-0.27	-3.50%	0.5% to 8.3%									

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb

Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.

Refer to tabulation 113-01 for bid quantities.

Point to Point		Sidewalk Designation	_" PCC Sidewalk	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant?	Measured Slope	Initials	Remarks		FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
													Point	Station	Offset	Elevation
				FT	FT	%	Pos. or Neg.		%							
3101	3102	Ramp Running Slope	6	1.49	0.08	5.20%	0.5% to 8.3%						3101	10694.541	26.45	848.254
3101	3122	Crosswalk Cross Slope - Yield Condition	6	8.14	-0.04	-0.50%	0.0% to 2.0%						3102	10694.601	27.94	848.332
3102	3103	Ramp Running Slope	6	4.50	0.23	5.00%	0.5% to 8.3%						3103	10694.782	32.44	848.557
3102	3122	Ramp Cross Slope	6	8.00	-0.12	-1.50%	0.1% to 2.0%						3104	10694.221	37.48	848.636
3103	3104	Landing/Turning Space	4	5.07	0.08	1.60%	0.1% to 2.0%	Yes					3105	10701.85	38.68	848.513
3103	3121	Landing/Turning Space	4	8.00	-0.12	-1.50%	0.1% to 2.0%						3106	10712.997	41.7	848.782
3104	3105	Landing/Turning Space	4	7.72	-0.12	-1.60%	0.1% to 2.0%	Yes					3107	10719.509	43.93	848.946
3105	3106	Sidewalk Running Slope	4	11.55	0.27	2.30%	0.5% to 5.0%						3108	10728.806	54.98	849.37
3105	3120	Landing/Turning Space	4	5.00	-0.08	-1.50%	0.1% to 2.0%						3109	10729.119	56.95	849.379
3106	3107	Sidewalk Running Slope	4	6.88	0.16	2.40%	0.5% to 5.0%						3110	10729.922	62.01	849.284
3106	3119	Sidewalk Cross Slope	4	5.00	-0.08	-1.50%	0.5% to 2.0%						3111	10735.997	62.01	849.254
3107	3108	Sidewalk Running Slope	4	14.44	0.42	2.90%	0.5% to 5.0%						3112	10755.916	62.01	848.731
3107	3118	Sidewalk Cross Slope	4	5.03	-0.08	-1.50%	0.5% to 2.0%						3113	10756.94	62	848.701
3108	3109	Sidewalk Running Slope	4	1.99	0.01	0.50%	0.5% to 5.0%						3114	10755.914	56.01	848.669
3108	3117	Sidewalk Cross Slope	4	6.11	-0.02	-0.40%	0.5% to 2.0%						3115	10735.995	56.01	849.362
3109	3110	Landing/Turning Space	4	5.12	-0.1	-1.90%	0.1% to 2.0%	Yes					3116	10735.044	56.01	849.367
3109	3116	Landing/Turning Space	4	6.00	-0.01	-0.20%	0.1% to 2.0%						3117	10734.909	55.16	849.348
3110	3111	Landing/Turning Space	4	6.07	-0.03	-0.50%	0.1% to 2.0%						3118	10721.628	39.37	848.87
3111	3112	Ramp Running Slope	6	19.92	-0.52	-2.60%	0.5% to 8.3%						3119	10714.615	36.97	848.707
3111	3115	Landing/Turning Space	4	6.00	0.11	1.80%	0.1% to 2.0%	Yes					3120	10702.842	33.78	848.438
3112	3113	Ramp Running Slope	6	1.02	-0.03	-2.90%	0.5% to 8.3%						3121	10702.778	32.19	848.441
3112	3114	Ramp Cross Slope	6	6.00	-0.06	-1.00%	0.1% to 2.0%						3122	10702.594	27.62	848.212
3113	3114	Crosswalk Cross Slope - Yield Condition	6	6.08	-0.03	-0.50%	0.0% to 2.0%									
3114	3115	Ramp Running Slope	6	19.92	0.69	3.50%	0.5% to 8.3%									
3115	3116	Landing/Turning Space	4	0.95	0	0.50%	0.1% to 2.0%									
3116	3117	Sidewalk Running Slope	4	0.86	-0.02	-2.20%	0.5% to 5.0%									
3117	3118	Sidewalk Running Slope	4	20.63	-0.48	-2.30%	0.5% to 5.0%									
3118	3119	Sidewalk Running Slope	4	7.41	-0.16	-2.20%	0.5% to 5.0%									
3119	3120	Sidewalk Running Slope	4	12.20	-0.27	-2.20%	0.5% to 5.0%									
3120	3121	Landing/Turning Space	4	1.59	0	0.20%	0.1% to 2.0%									
3121	3122	Ramp Running Slope	6	4.57	-0.23	-5.00%	0.5% to 8.3%									
3201	3202	Ramp Running Slope	6	1.37	0	0.20%	0.5% to 8.3%						3201	10795.255	60.38	848.28
3201	3220	Crosswalk Cross Slope - Yield Condition	6	6.15	-0.09	-1.40%	0.0% to 2.0%						3202	10796.615	60.26	848.283
3202	3220	Ramp Cross Slope	6	5.99	-0.09	-1.50%	0.1% to 2.0%						3203	10801.209	59.86	848.606
3203	3204	Landing/Turning Space	4	5.25	0.06	1.20%	0.1% to 2.0%						3204	10806.441	59.4	848.667
3203	3219	Landing/Turning Space	4	6.00	-0.08	-1.30%	0.1% to 2.0%						3205	10807.198	54.68	848.575
3204	3205	Landing/Turning Space	4	4.78	-0.09	-1.90%	0.1% to 2.0%	Yes					3206	10811.686	39.59	848.876
3205	3206	Sidewalk Running Slope	4	15.74	0.3	1.90%	0.5% to 5.0%						3207	10819.167	30.7	848.279
3205	3218	Landing/Turning Space	4	5.00	-0.05	-1.00%	0.1% to 2.0%						3208	10835.672	24.96	847.484
3206	3207	Sidewalk Running Slope	4	11.62	-0.6	-5.10%	0.5% to 6.1%						3209	10842.399	24.88	847.444
3206	3217	Sidewalk Cross Slope	4	5.00	-0.07	-1.50%	0.5% to 2.0%						3210	10842.82	19.9	847.369
3207	3208	Sidewalk Running Slope	4	17.47	-0.79	-4.50%	0.5% to 5.0%	Yes					3211	10842.782	19.34	847.369
3207	3216	Sidewalk Cross Slope	4	5.00	-0.08	-1.50%	0.5% to 2.0%						3212	10842.408	13.85	846.99
3208	3209	Landing/Turning Space	4	6.73	-0.04	-0.60%	0.1% to 2.0%						3213	10834.607	14.01	847.139
3208	3215	Landing/Turning Space	4	5.00	-0.08	-1.50%	0.1% to 2.0%						3214	10834.65	14.5	847.161
3209	3210	Landing/Turning Space	4	5.00	-0.07	-1.50%	0.1% to 2.0%						3215	10835.13	19.99	847.409
3210	3211	Landing/Turning Space	4	0.56	0	0.00%	0.1% to 2.0%						3216	10816.509	26.46	848.204
3211	3212	Ramp Running Slope	6	5.50	-0.38	-6.90%	0.5% to 8.3%						3217	10807.06	37.69	848.801
3211	3215	Landing/Turning Space	4	7.68	0.04	0.50%	0.1% to 2.0%						3218	10802.287	53.74	848.525
3212	3213	Crosswalk Cross Slope - Yield Condition	6	7.80	0.15	1.90%	0.0% to 2.0%						3219	10800.824	53.87	848.525
3212	3214	Ramp Cross Slope	6	7.79	0.17	2.20%	0.1% to 3.2%						3220	10796.09	54.29	848.193
3213	3214	Ramp Running Slope	6	0.49	0.02	4.50%	0.5% to 8.3%									
3214	3215	Ramp Running Slope	6	5.51	0.25	4.50%	0.5% to 8.3%									
3215	3216	Sidewalk Running Slope	4	19.71	0.79	4.00%	0.5% to 5.0%									
3216	3217	Sidewalk Running Slope	4	14.68	0.6	4.10%	0.5% to 5.0%	Yes								
3217	3218	Sidewalk Running Slope	4	16.74	-0.28	-1.60%	0.5% to 5.0%									
3218	3219	Landing/Turning Space	4	1.47	0	0.00%	0.1% to 2.0%									
3219	3220	Ramp Running Slope	6	4.75	-0.33	-7.00%	0.5% to 8.3%									

SIDEWALK COMPLIANCE

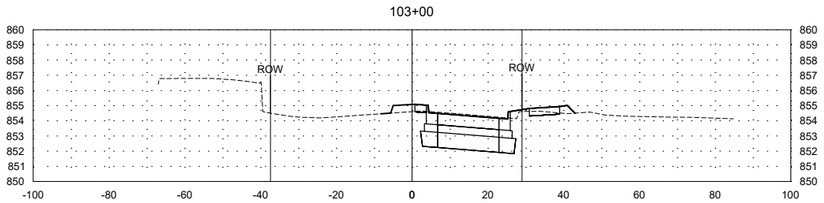
See S Sheets

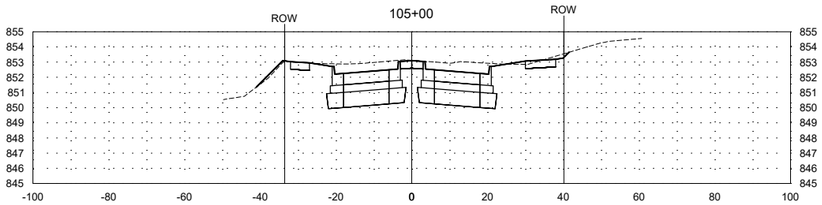
* Does not include curb

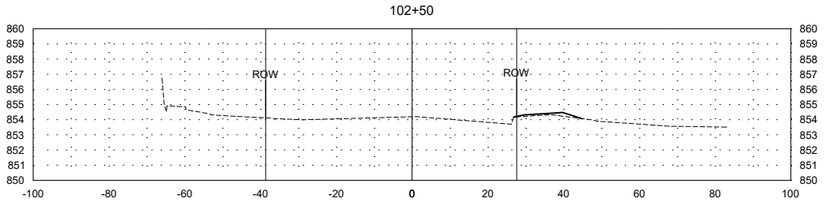
Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.

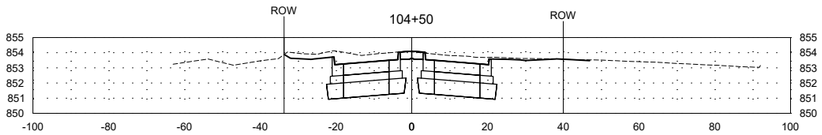
Refer to tabulation 113-01 for bid quantities.

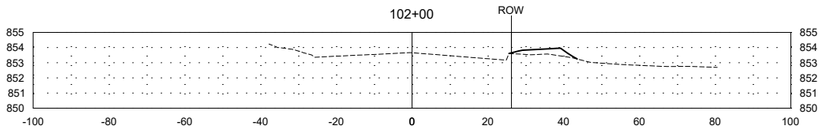
Point to Point		Sidewalk Designation	_" PCC Sidewalk	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant?	Measured Slope	Initials	Remarks		FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
													Point	Station	Offset	Elevation
				FT	FT	%	Pos. or Neg.		%							
3301	3302	Ramp Running Slope	6	3.19	0.25	7.70%	0.5% to 8.3%	Yes					3301	10781.294	56.85	847.072
3301	3319	Ramp Cross Slope	6	8.00	0.04	0.50%	0.1% to 2.0%						3302	10784.474	57.13	847.319
3301	3320	Crosswalk Cross Slope - Yield Condition	6	8.21	0.02	0.30%	0.0% to 2.0%						3303	10786.529	57.31	847.318
3302	3303	Landing/Turning Space	4	2.06	0	0.00%	0.1% to 2.0%						3304	10791.981	47.69	847.268
3302	3318	Landing/Turning Space	4	8.00	0.04	0.50%	0.1% to 2.0%						3305	10807.979	37.23	847.18
3303	3304	Sidewalk Running Slope	4	11.06	-0.05	-0.50%	0.5% to 5.0%						3306	10830.545	32.43	847.364
3303	3316	Landing/Turning Space	4	8.00	0.12	1.50%	0.1% to 2.0%						3307	10830.668	31.03	847.364
3304	3305	Sidewalk Running Slope	4	19.11	-0.09	-0.50%	0.5% to 5.0%						3308	10830.962	27.66	847.11
3304	3315	Sidewalk Cross Slope	4	8.00	0.12	1.50%	0.5% to 2.0%						3309	10839.233	26.67	847.037
3305	3306	Sidewalk Running Slope	4	23.07	0.18	0.80%	0.5% to 5.0%						3310	10839.083	28.36	847.07
3305	3314	Sidewalk Cross Slope	4	7.99	0.12	1.50%	0.5% to 2.0%						3311	10838.777	31.73	847.324
3306	3307	Landing/Turning Space	4	1.41	0	0.00%	0.1% to 2.0%						3312	10839.597	39.69	847.444
3307	3308	Ramp Running Slope	6	3.38	-0.25	-7.50%	0.5% to 8.3%	Yes					3313	10831.233	40.4	847.484
3307	3311	Landing/Turning Space	4	8.14	-0.04	-0.50%	0.1% to 2.0%						3314	10810.58	44.79	847.3
3308	3309	Crosswalk Cross Slope - Yield Condition	6	8.33	-0.07	-0.90%	0.0% to 2.0%						3315	10798.508	52.32	847.388
3308	3310	Ramp Cross Slope	6	8.15	-0.04	-0.50%	0.1% to 2.0%						3316	10793.849	60.54	847.438
3309	3310	Ramp Running Slope	6	1.70	0.03	1.90%	0.5% to 8.3%						3317	10791.892	65.81	847.466
3310	3311	Ramp Running Slope	6	3.38	0.25	7.50%	0.5% to 8.3%	Yes					3318	10783.774	65.1	847.359
3311	3312	Landing/Turning Space	4	8.00	0.12	1.50%	0.1% to 2.0%						3319	10780.595	64.82	847.112
3312	3313	Landing/Turning Space	4	8.39	0.04	0.50%	0.1% to 2.0%						3320	10778.721	64.65	847.094
3313	3314	Sidewalk Running Slope	4	21.11	-0.18	-0.90%	0.5% to 5.0%									
3314	3315	Sidewalk Running Slope	4	14.23	0.09	0.60%	0.5% to 5.0%									
3315	3316	Sidewalk Running Slope	4	9.45	0.05	0.50%	0.5% to 5.0%									
3316	3317	Landing/Turning Space	4	5.62	0.03	0.50%	0.1% to 2.0%									
3317	3318	Landing/Turning Space	4	8.15	-0.11	-1.30%	0.1% to 2.0%									
3318	3319	Ramp Running Slope	6	3.19	-0.25	-7.70%	0.5% to 8.3%	Yes								
3319	3320	Ramp Running Slope	6	1.88	-0.02	-1.00%	0.5% to 8.3%									
3401	3402	Ramp Running Slope	6	9.02	0.55	6.10%	0.5% to 8.3%						3401	10700.886	14.8	848.243
3401	3416	Crosswalk Cross Slope - Yield Condition	6	8.00	0.14	1.80%	0.0% to 2.0%						3402	10700.524	23.81	848.797
3402	3403	Sidewalk Running Slope	4	30.35	-0.15	-0.50%	0.5% to 5.0%						3403	10727.504	37.72	848.65
3402	3415	Landing/Turning Space	4	8.01	0.04	0.50%	0.1% to 2.0%						3404	10739.478	55.99	847.727
3403	3404	Sidewalk Running Slope	4	21.84	-0.92	-4.20%	0.5% to 5.0%	Yes					3405	10742.783	55.99	847.724
3403	3412	Sidewalk Cross Slope	4	8.00	0.12	1.50%	0.5% to 2.0%						3406	10749.339	56	847.216
3404	3405	Landing/Turning Space	4	3.31	0	-0.10%	0.1% to 2.0%						3407	10752.263	64	847.095
3404	3411	Landing/Turning Space	4	8.00	0.12	1.50%	0.1% to 2.0%						3408	10749.339	64	847.176
3405	3406	Ramp Running Slope	6	6.56	-0.51	-7.70%	0.5% to 8.3%	Yes					3409	10742.781	63.99	847.684
3405	3409	Landing/Turning Space	4	8.00	-0.04	-0.50%	0.1% to 2.0%						3410	10734.241	63.99	847.823
3406	3407	Crosswalk Cross Slope - Yield Condition	6	8.52	-0.12	-1.40%	0.0% to 2.0%						3411	10732.257	59.44	847.847
3406	3408	Ramp Cross Slope	6	8.00	-0.04	-0.50%	0.1% to 2.0%						3412	10721.465	42.97	848.77
3407	3408	Ramp Running Slope	6	2.92	0.08	2.80%	0.5% to 8.3%						3413	10699.75	31.77	848.917
3408	3409	Ramp Running Slope	6	6.56	0.51	7.70%	0.5% to 8.3%	Yes					3414	10693.02	31.77	848.958
3409	3410	Landing/Turning Space	4	8.54	0.14	1.60%	0.1% to 2.0%	Yes					3415	10692.518	23.79	848.838
3410	3411	Landing/Turning Space	4	4.96	0.02	0.50%	0.1% to 2.0%						3416	10692.882	14.75	848.385
3411	3412	Sidewalk Running Slope	4	19.69	0.92	4.70%	0.5% to 5.0%	Yes								
3412	3413	Sidewalk Running Slope	4	24.43	0.15	0.60%	0.5% to 5.0%									
3413	3414	Landing/Turning Space	4	6.73	0.04	0.60%	0.1% to 2.0%									
3414	3415	Landing/Turning Space	4	8.00	-0.12	-1.50%	0.1% to 2.0%									
3415	3416	Ramp Running Slope	6	9.05	-0.45	-5.00%	0.5% to 8.3%									

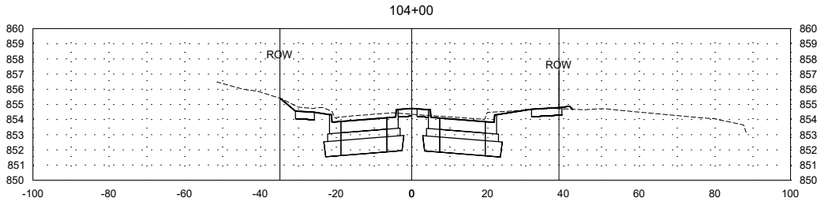


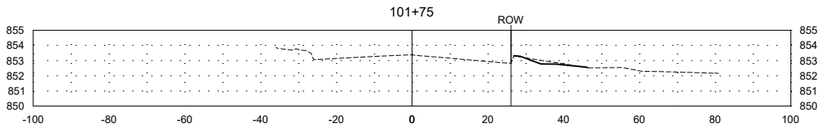


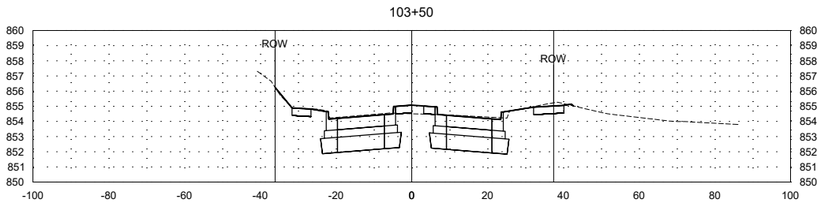






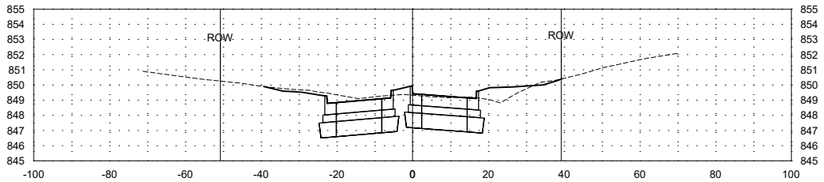




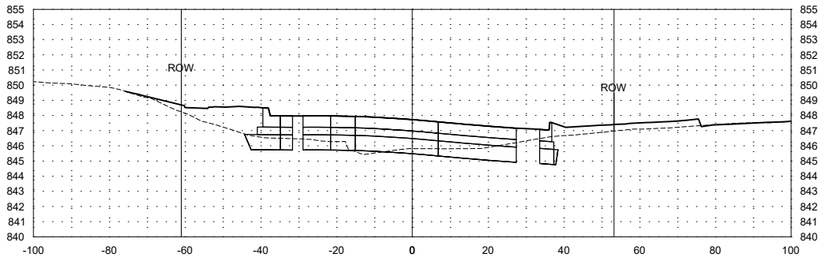


S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	CROSS SECTIONS	SHEET NUMBER W.01

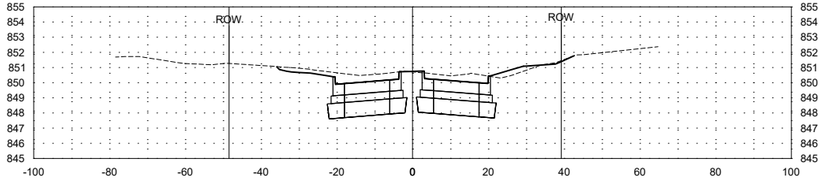
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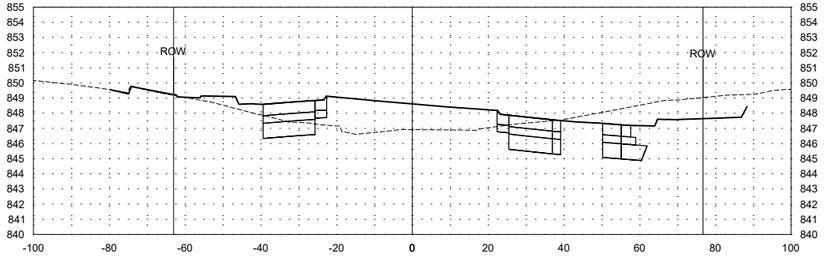
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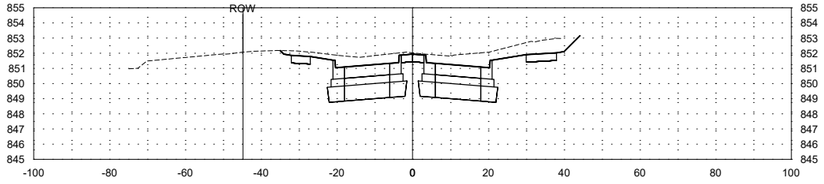
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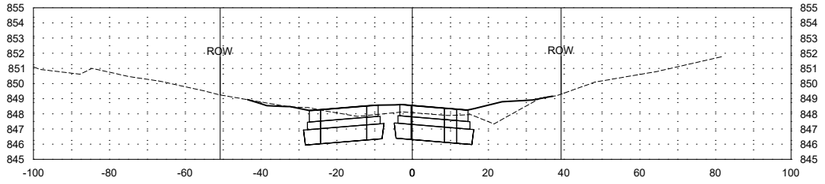
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105+50

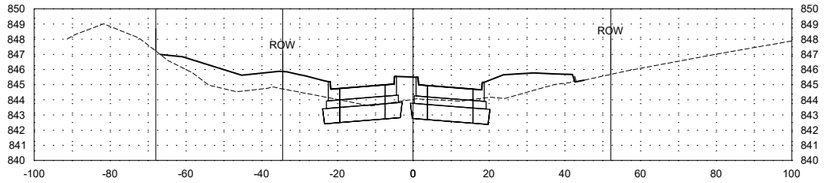


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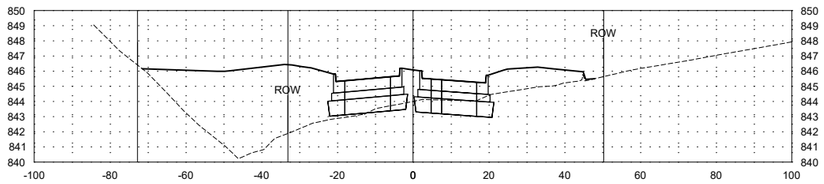


S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	CROSS SECTIONS	SHEET NUMBER W.02

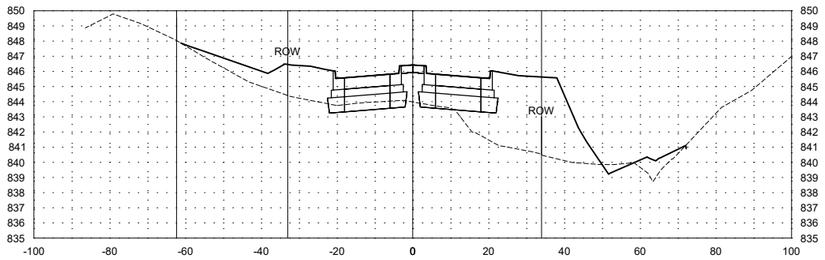
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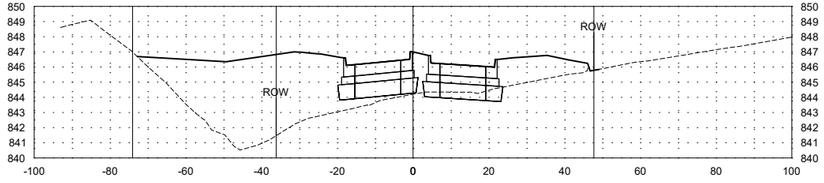
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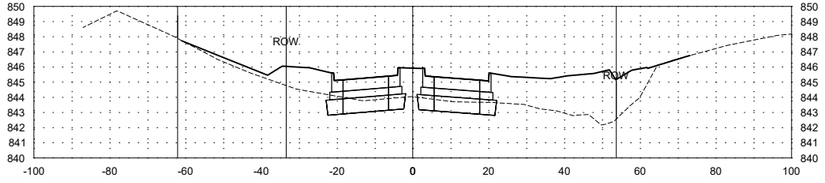
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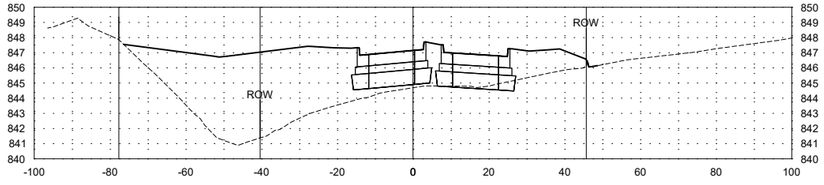
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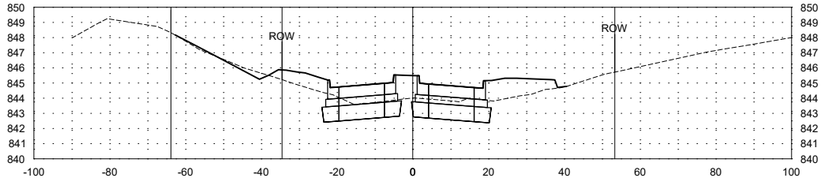
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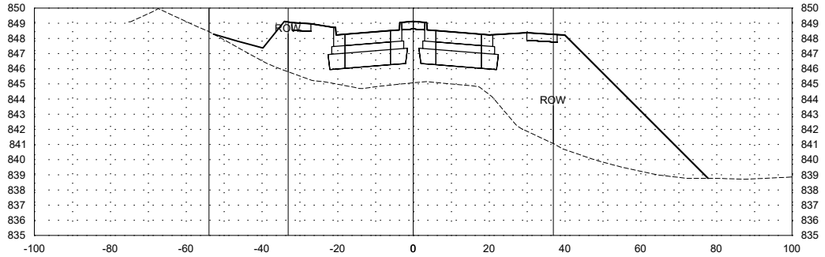


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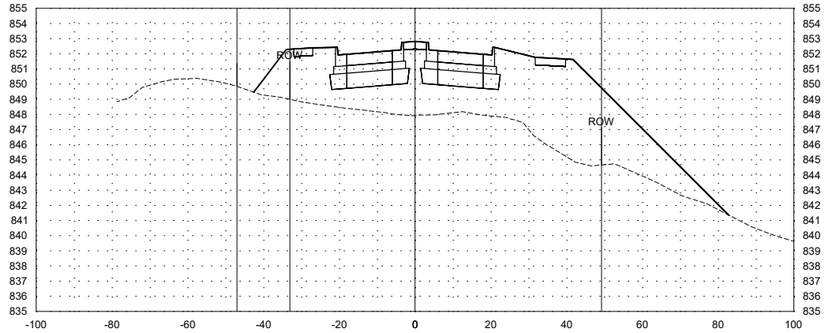


S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	CROSS SECTIONS	SHEET NUMBER W.03

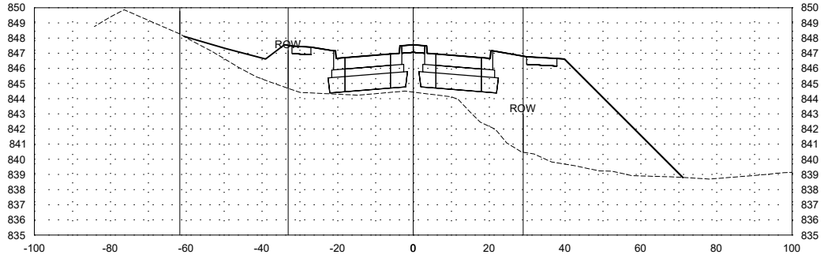
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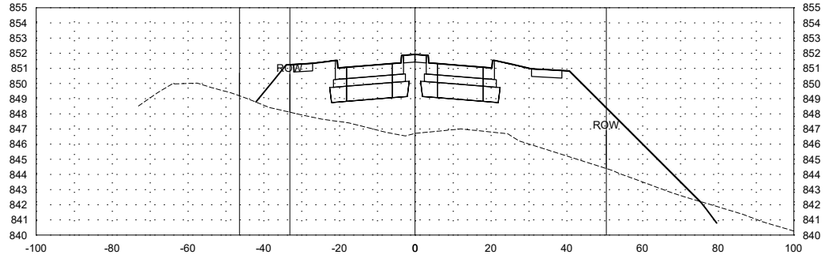
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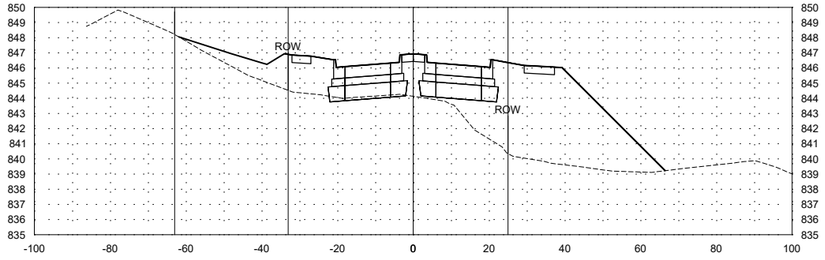
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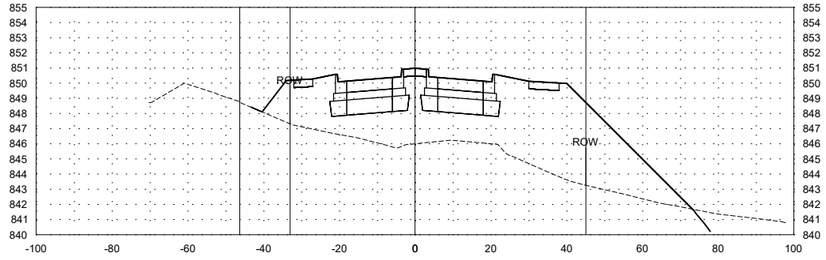
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110+25

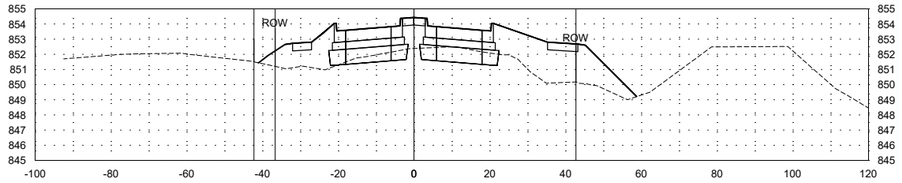


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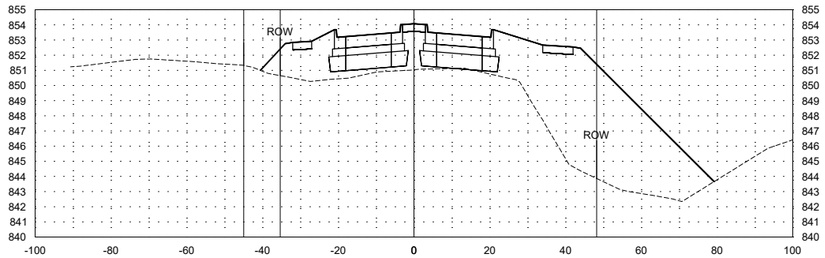


S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	CROSS SECTIONS	SHEET NUMBER W.04

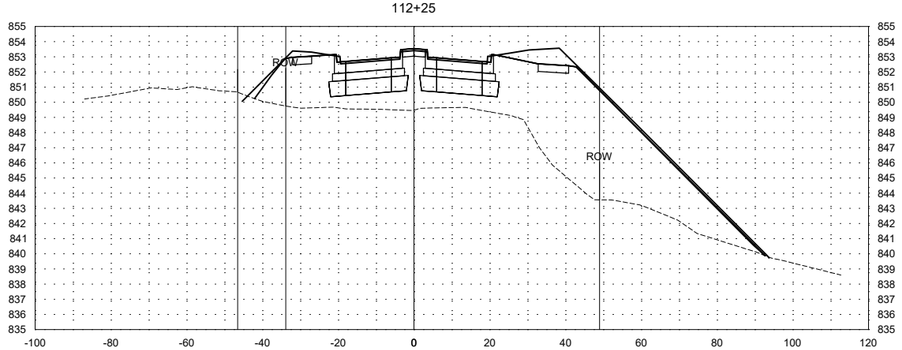
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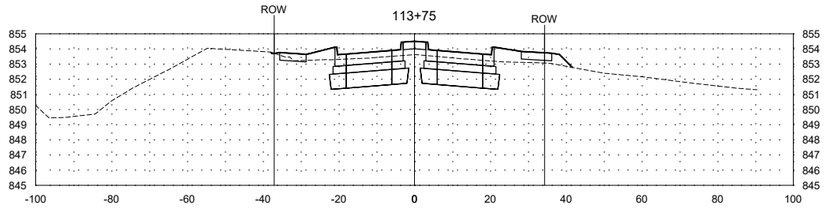
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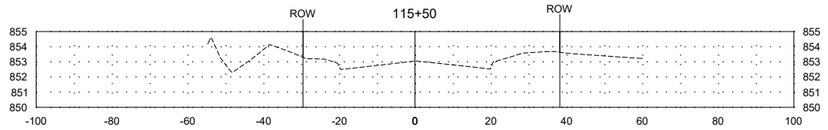


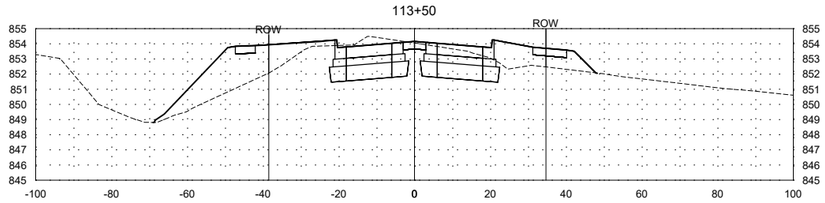
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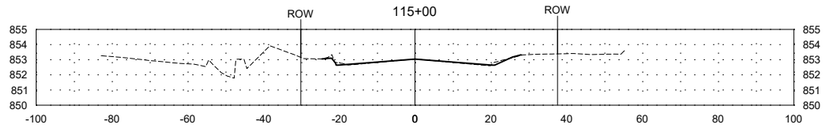


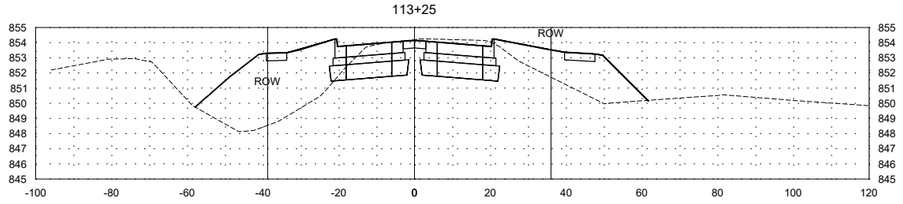
S-H PROJECT NO. 2112208450	SHIVE-HATTERY	CITY OF HIAWATHA - BOYSON ROAD	LINN	PROJECT NUMBER:STP-U-3432(613)--70-57	CROSS SECTIONS	SHEET NUMBER W.05

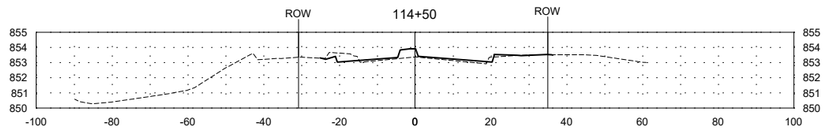

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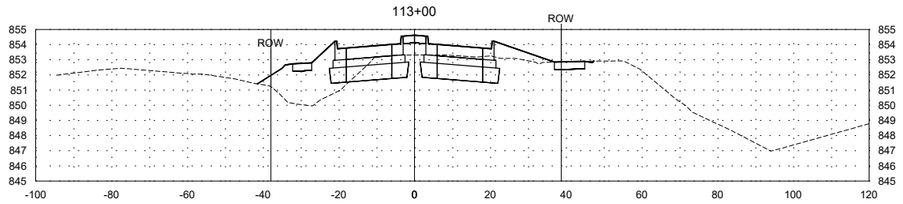

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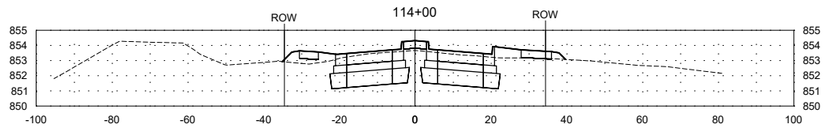

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115+00
ROW
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-100 -80 -60 -40 -20 0 20 40 60 80 100


113+25
ROW
ROW
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114+50
ROW
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113+00
ROW
ROW
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114+00
ROW
ROW
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