LETTING DATE
10/20/2026

PCC PAVEMENT - GRADE AND REPLACE
STP-006-7(098)--2C-52

JOHNSON COUNTY

IOWA DOT

REVISIONS

TOTAL	243
PROJECT IDENTIFICATION NUMBER	24-52-006-040
PROJECT NUMBER	STP-006-7(098)--2C-52
R.O.W. PROJECT NUMBER	STPN-006-7(100)--2J-5

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM
JOHNSON COUNTY
PCC PAVEMENT - GRADE AND REPLACE

US HIGHWAY 6
IN TIFFIN, ROBERTS FERRY RD TO PARK RD

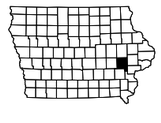
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.

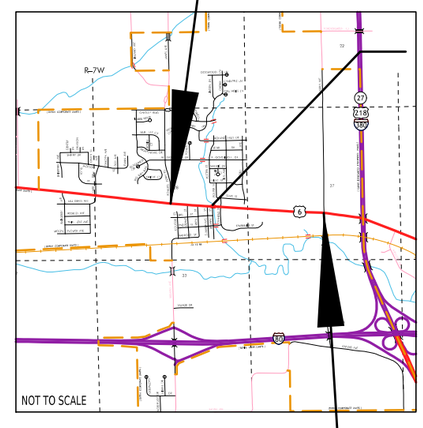
INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	**Title Sheets**
* A.1	Title Sheet
* A.2	Location Map Sheet
* A.3	Project Overview
* A.4 - 5	Project Quantity Breakdown
B Sheets	**Typical Cross Sections and Details**
* B.1 - 2	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.1 - 13	Estimated Project Quantities & Estimate Reference Information
C.14	Project Description
C.15	Standard Road Plans
C.16	Index of Tabulations
C.17 - 18	Standard Notes
C.19	Utilities
C.20 - 62	Tabulations
CS Sheets	**Soils Tabulations**
CS.1 - 3	Soils Tabulations
D Sheets	**Mainline Plan and Profile Sheets**
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 7	USH 6
G Sheets	**Survey Sheets**
G.1	Alignment Coordinates
G.2	Curve Data
* G.3	Survey Information
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
J.2	Staging Notes
J.3	Coordinated Operations
* J.4	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.5	Traffic Control and Staging Typical Cross Sections
* J.6 - 7	Traffic Control and Staging Sheets Stage 1
* J.8 - 9	Traffic Control and Staging Sheets Stage 2A
* J.10	Traffic Control and Staging Sheets Stages 2B and 2C
* J.11	Traffic Control and Staging Sheets Stage 3A
* J.12	Traffic Control and Staging Sheets Stage 3B
* J.13	Detour Plan
L Sheets	**Geometric, Staking and Jointing Sheets**
* L.1 - 4	Geometric USH 6
* L.5 - 8	Staking USH 6
* L.9 - 12	Jointing USH 6
M Sheets	**Storm Sewer Sheets**
M.1 - 2	Storm Sewer Tabulations
* M.3	Storm Sewer Legend & Symbol Information Sheet
* M.4 - 20	Storm Sewer Plan and Profile Sheets USH 6
MWM Sheets	**Water Main Sheets**
* MWM.1 - 6	Water Main Plan and Profile Sheets USH 6
N Sheets	**Traffic Signal and Signing Sheets**
* N.1 - 6	Traffic Signal Sheets USH 6
* N.7 - 10	Signing Sheets USH 6
P Sheets	**Lighting Layout Sheets**
* P.1 - 6	Lighting Layout Sheets USH 6
R Sheets	**Erosion Control Sheets**
RC.1 - 2	Pollution Prevention Plan
* RR.1	Erosion Control Legend and Symbol Information Sheet
* RR.2 - 6	Erosion Control Device Maps
	* Color Plan Sheets



STA 162+10.73
BEGIN CONSTRUCTION

FHWA
NO. 900790



STA 215+88.27
END CONSTRUCTION

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

INDEX OF SHEETS

No.	DESCRIPTION
S Sheets	**Sidewalk Sheets**
* S.1	Sidewalk Legend & Symbol Information Sheet
* S.2 - 24	Sidewalk Plan Sheets and Tabulations
SPS Sheets	**Culvert Plan Soils Sheets**
SPS.1 - 2	Culvert Plan Soils Sheets
T Sheets	**Earthwork Quantity Sheets**
T.1 - 5	Earthwork Quantity Sheets
U Sheets	**500 Series, Mod.Stds. and Detail Sheets**
* U.1 - 3	Removals Plan
* U.4 - 6	Pavement Marking Plan
* U.7	Subdrain Cleanouts Detail
* U.8 - 9	Modified Standard - Combined Retaining Wall-Sidewalk
V Sheets	**Bridge and Culvert Situation Plans**
* V.1 - 13	Bridge and Culvert Situation Plans
W Sheets	**Mainline Cross Sections**
* W.1 - 33	Mainline Cross Sections
	* Color Plan Sheets

US 6
DESIGN DATA URBAN

2025	AADT	11,600	V.P.D.
2045	AADT	16,800	V.P.D.
20 --	DHV	–	V.P.H.
TRUCKS		7	%
Total Design ESALs		–	

INDEX OF SEALS

SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	James Watters	Primary Signature Block	X
P.1	Scott Chilson	Lighting Design	X
SPS.1	Mark Dell	Geotechnical Design	
V.1	Julia Zehner	Structural Design	X
V.3	Marie Amundson	Hydraulic Design	

Roadway Design

LICENSED PROFESSIONAL ENGINEER
JAMES A. WATTERS
P24847
IOWA

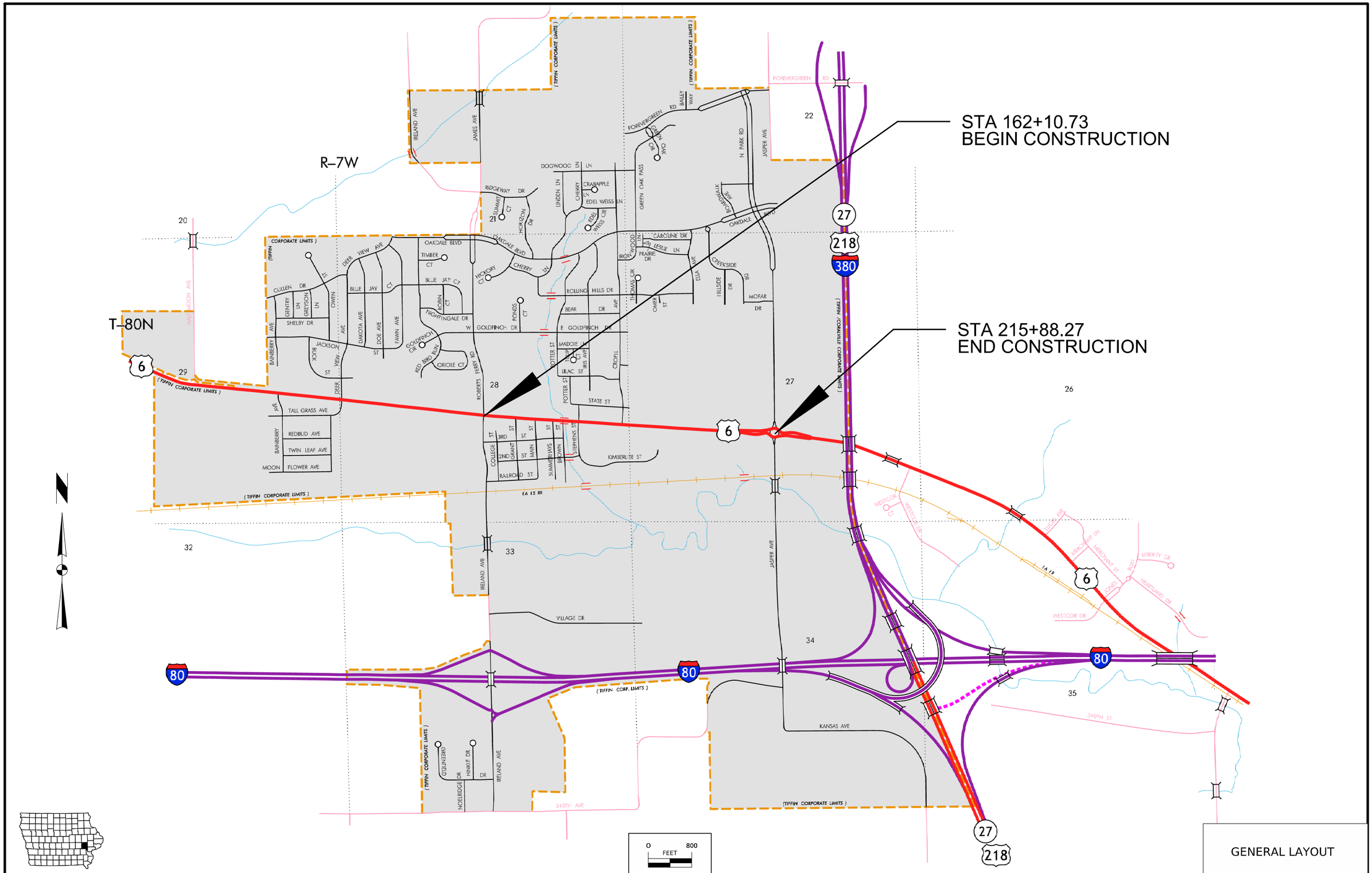
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: James A. Watters — Date: 8-5-2026

Printed or Typed Name: James A. Watters

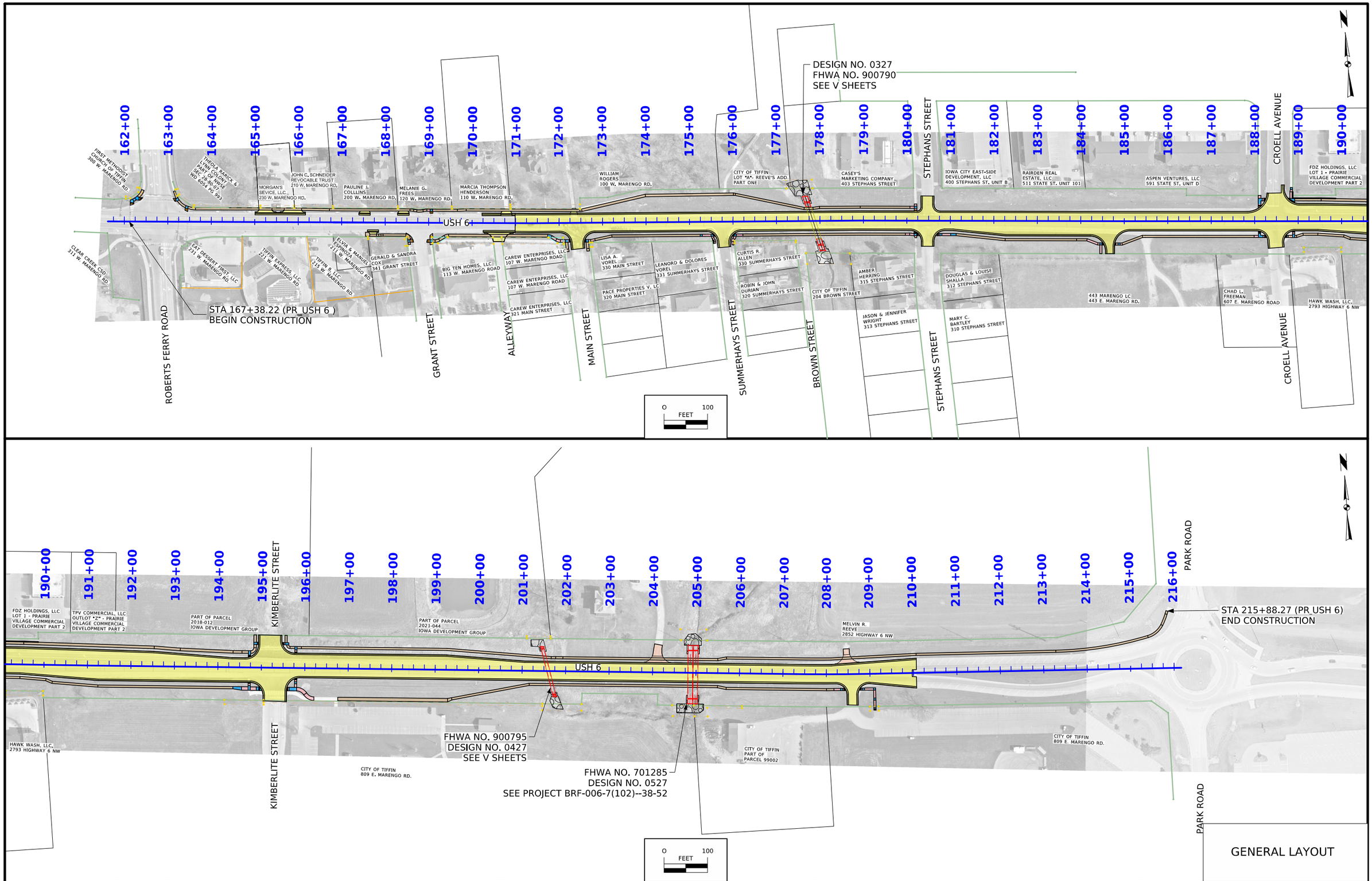
My license renewal date is December 31, 2027

Pages or sheets covered by this seal: A.1-5,B.1-2,C.1-62,CS.1-3,D.1-7,G.1-3, J.1-13,L.1-12,M.1-20,MWM.1-6,N.1-10,RC.1-2,RR.1-6,S.1-24,T.1-5,U.1-U.9,W.1-33



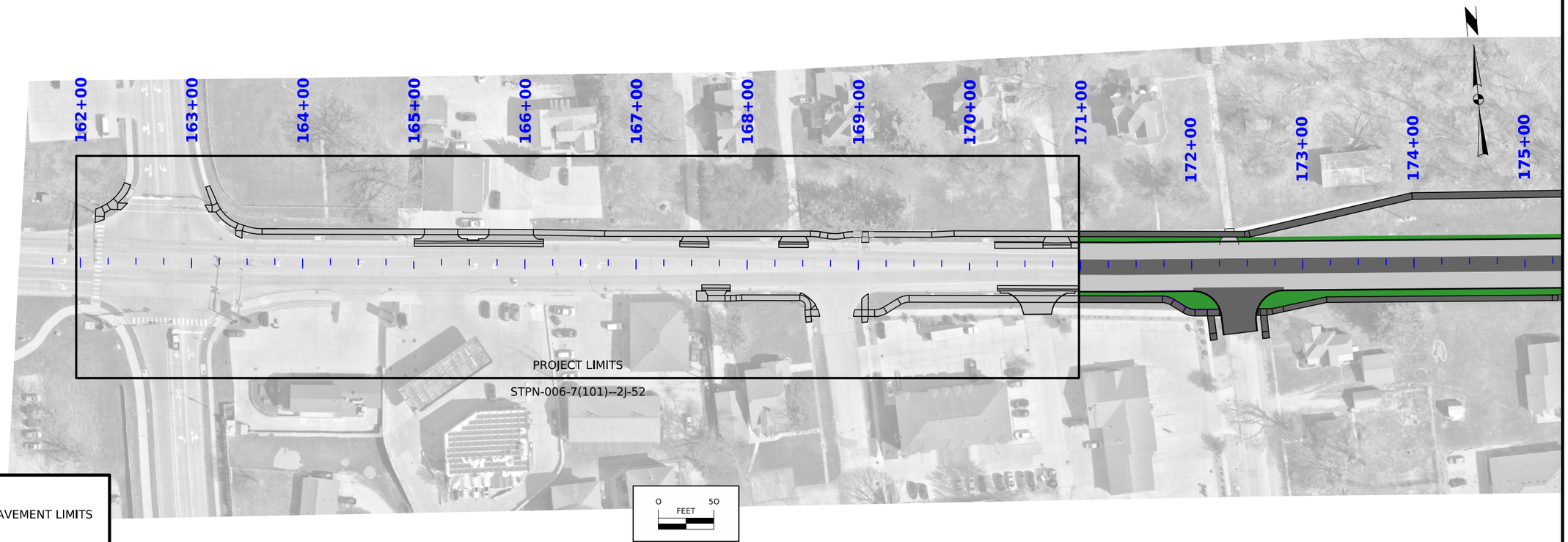
FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER A.2

9:19:47 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_A01.dgn



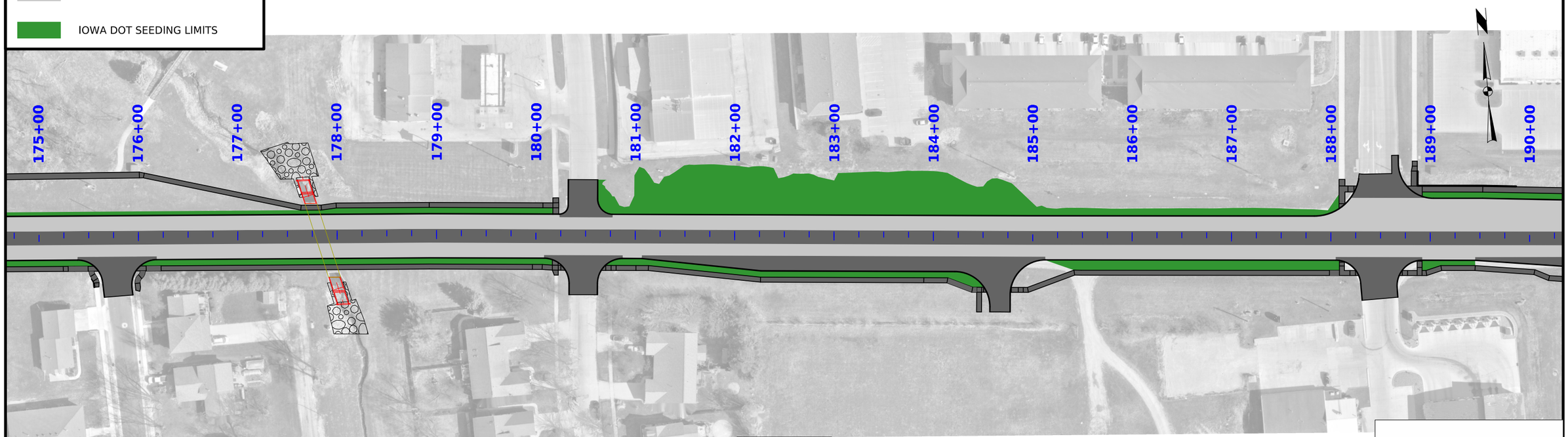
FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER A.3

12:00:17 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_A03.dgn



LEGEND

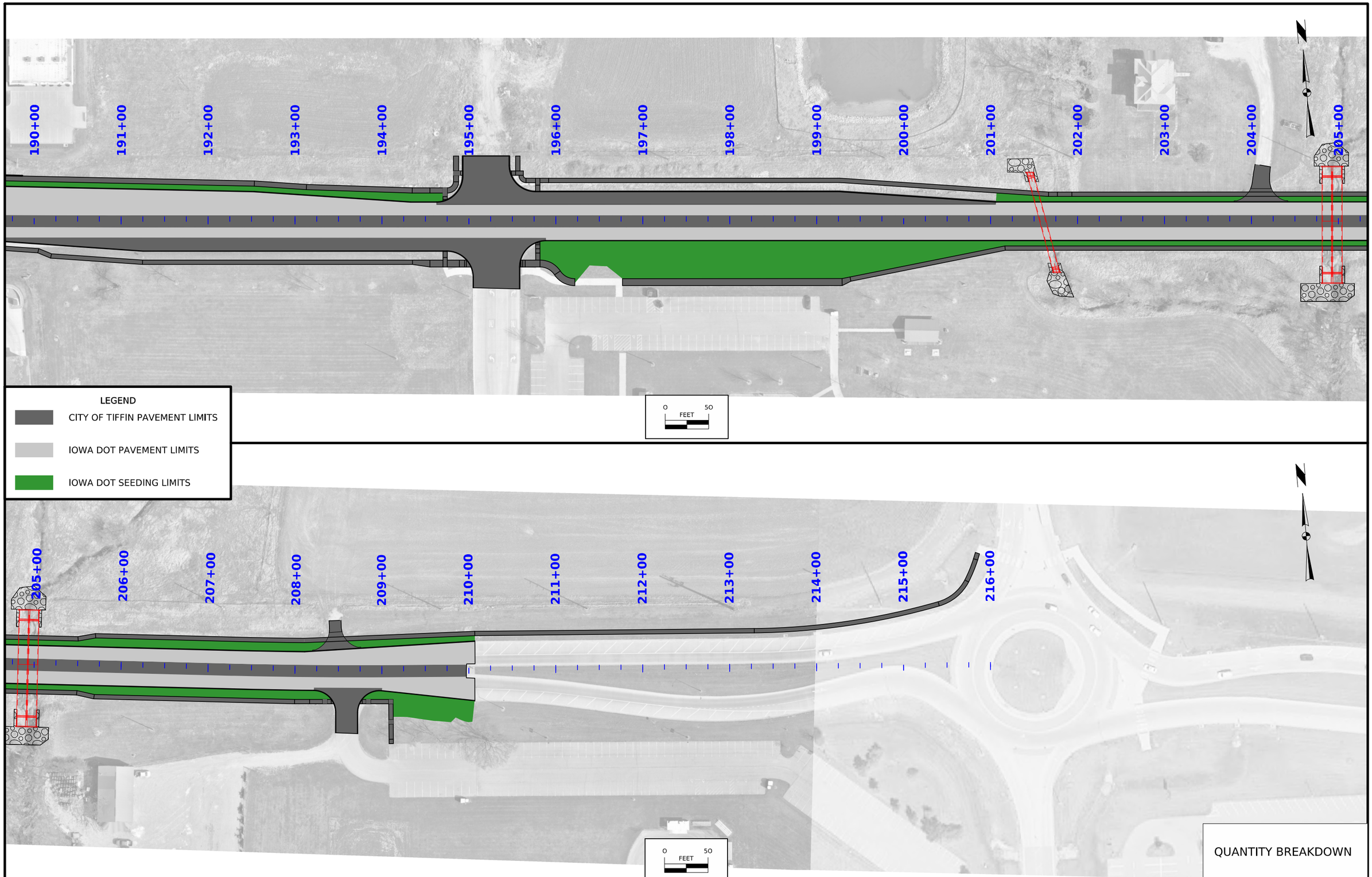
- CITY OF TIFFIN PAVEMENT LIMITS
- IOWA DOT PAVEMENT LIMITS
- IOWA DOT SEEDING LIMITS



QUANTITY BREAKDOWN

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER A.4

9:21:59 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_A04.dgn



QUANTITY BREAKDOWN

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER A.5

9:22:06 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_A04.dgn

Curbed Shoulder with Sidewalk

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
170+99	172+75	3.5	6" STAND.
177+50	178+70	3.5	6" STAND.
179+90	180+20	3.5	6" STAND.
201+50	202+05	3.5	6" STAND.

Curbed Shoulder

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
172+75	177+50	3.5	6" STAND.
180+80	180+95	3.5	6" STAND.
184+80	187+85	3.5	6" STAND.

Curbed Shoulder with Sidewalk and Ditch

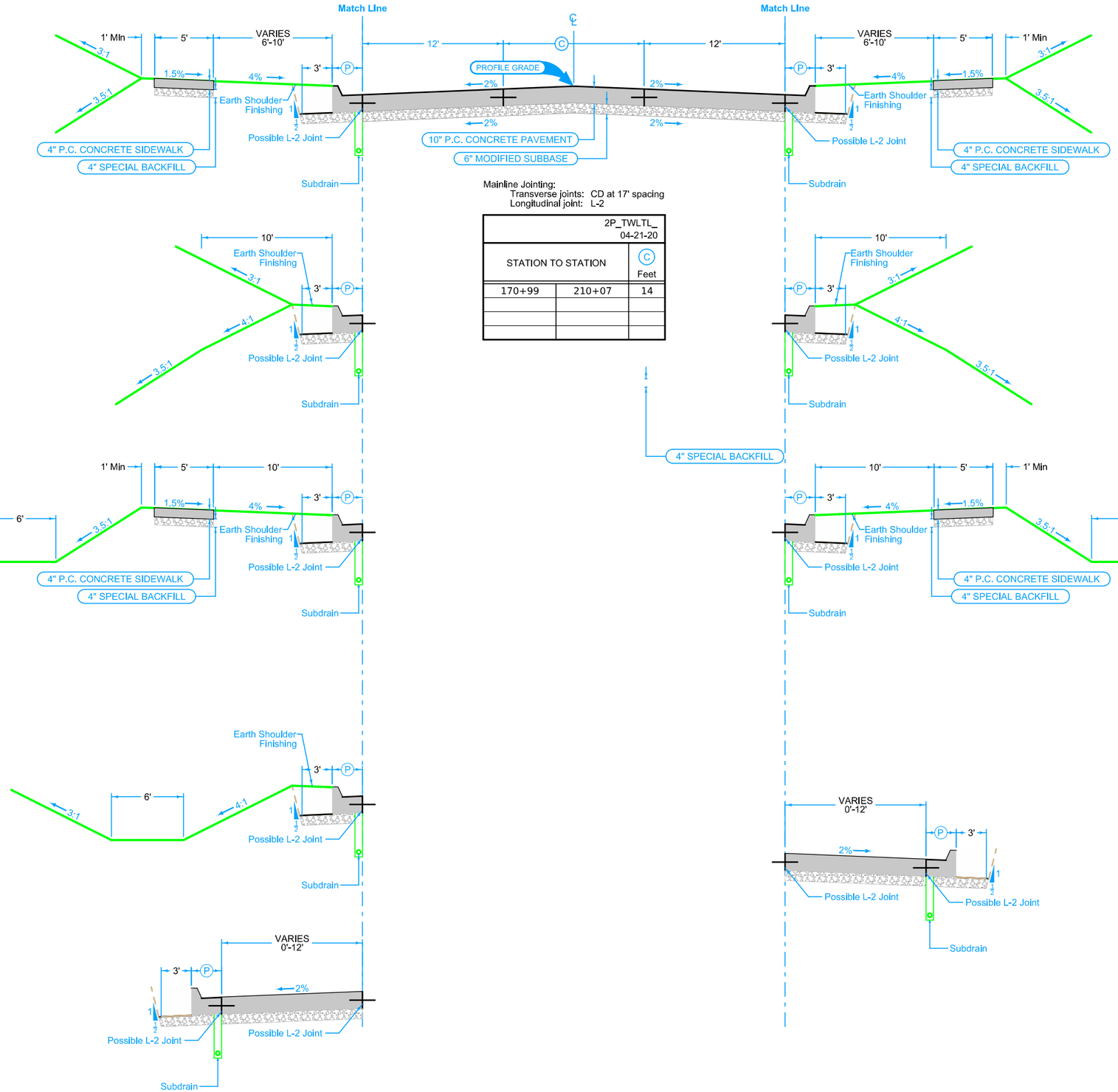
STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
178+70	179+90	3.5	6" STAND.
195+80	201+50	3.5	6" STAND.
202+05	203+75	3.5	6" STAND.
204+45	208+20	3.5	6" STAND.
208+75	210+07	3.5	6" STAND.

Curbed Shoulder with Ditch

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
180+95	184+80	3.5	6" STAND.

Curbed Shoulder at Turn Lanes and Pavement Widening Sections

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
189+05	194+35	3.5	6" STAND.
195+75	201+05	3.5	6" STAND.
208+10	210+07	3.5	6" STAND.



Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

STATION TO STATION		(C) Feet
		2P_TWLTL_ 04-21-20
170+99	210+07	14

Curbed Shoulder with Sidewalk

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
172+85	175+40	3.5	6" STAND.
176+20	180+10	3.5	6" STAND.
180+90	184+20	3.5	6" STAND.
185+15	187+15	3.5	6" STAND.
188+90	190+10	3.5	6" STAND.
201+15	205+05	3.5	6" STAND.

Curbed Shoulder

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
209+00	210+07	3.5	6" STAND.

Curbed Shoulder with Sidewalk and Ditch

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
187+15	188+05	3.5	6" STAND.
190+10	194+35	3.5	6" STAND.
205+05	208+20	3.5	6" STAND.

Curbed Shoulder at Turn Lanes and Pavement Widening Sections

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
181+05	184+20	3.5	6" STAND.
189+45	194+75	3.5	6" STAND.
209+00	210+07	3.5	6" STAND.

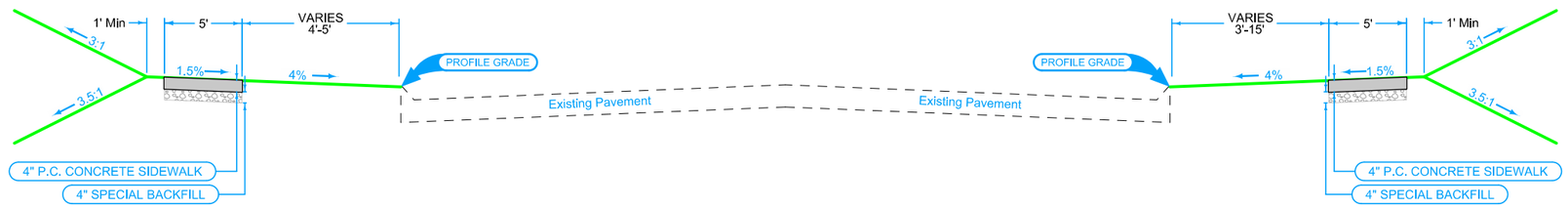
See Tab 100-24 for pavement quantities.
See Tab 112-9 for shoulder quantities.

US HIGHWAY 6

FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER B.1

Curbed Shoulder

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
162+11	170+99	3.5	6" STAND.

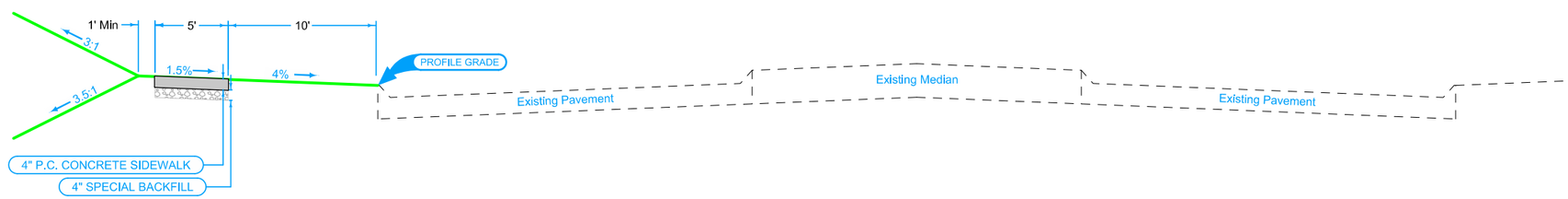


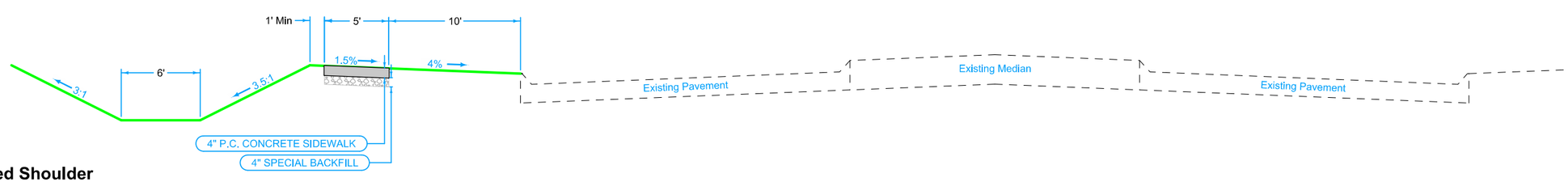
Curbed Shoulder

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
167+55	168+55	3.5	6" STAND.

Curbed Shoulder

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
215+35	215+88	3.5	6" STAND.





Curbed Shoulder

STATION TO STATION		(P) Feet	Curb Type See PV-102
			2_Curb_ 04-21-20
210+07	215+35	3.5	6" STAND.

See Tab 100-24 for pavement quantities.
See Tab 112-9 for shoulder quantities.

US HIGHWAY 6

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Division 1 : DOT
Division 2 : City Items
Division 3 : Storm Items (94% DOT, 6% City)
Division 4 : STPN-006-7(101)--2J-52 Sidewalk (100% DOT)

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
1	2101-0850001	CLEARING AND GRUBBING	ACRE	0.01	0.1			0.11	Refer to Tab 110-17 and RR Sheets for locations. All material generated as a result of clearing and grubbing shall become the property of the Contractor and must be disposed off site. Cutting of trees needs to be cleared by March 31, 2027 to protect threatened/endangered bats.
2	2101-0850002	CLEARING AND GRUBBING	UNIT		1.6			1.6	
3	2102-0425071	SPECIAL BACKFILL	CY	4	472		80	556	Refer to Typical Sections in the B Sheets and J Sheets. Refer to Typical Sections in the B Sheets and J Sheets.
4	2102-2625001	EMBANKMENT-IN-PLACE, CONTRACTOR FURNISHED	CY	6,962	4,642			11,604	Refer to T Sheets. Provide borrow material according to Section 2102 of the Standard Specifications. Material shall be provided by the Contractor.
5	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	521	4,690			5,211	Refer to T Sheets.
6	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY		326			326	Includes excavation involved in channel to shape berms and placement of revetment from proposed grading surface to bottom of revetment. All waste must be removed from the project site.
7	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	1,646	5,109			6,755	Refer to T Sheets. Strip and salvage 8 inches of topsoil within the grading limits. After constructing earthwork up to the subgrade elevations, spread the stockpiled topsoil to a 8 inch depth across the entire grading area. Refer to Sheet T.1. Topsoil determined to be unsuitable, including live vegetation, shall be removed from the site and properly disposed of, and is incidental to this item. Quantity includes 6755 CY of stripping 8 inches and 6765 CY of placement which includes a 40% shrink factor. Excess topsoil to be placed on the foreslopes and backslopes within the project limits, as approved by the Engineer.
8	2107-0425020	COMPACTING BACKFILL ADJACENT TO BRIDGES, CULVERTS OR STRUCTURES	CY	44	50			94	For effort to compact in fill areas around the box culverts. Used 36 inches deep by 24 inches wide on either side of culvert at STA 177+84.40 for a length of 41'-5" feet in the trench condition resulting in 20 CY of compaction. Used 24 inches deep by 24 inches wide on either side of culvert at STA 201+60.18 for a length of 97 feet in the trench condition resulting in 30 CY of compaction. Used 36 inches deep by 24 inches wide on either side of culvert at STA 204+92.77 for a length of 95 feet in the trench condition resulting in 42 CY of compaction. Use Type A compaction.
9	2115-0100000	MODIFIED SUBBASE	CY	2,551	1,951		54	4,556	Refer to Typical Sections on B Sheets and Tabs 100-5, 100-24, and 102-3.
10	2123-7450020	SHOULDER FINISHING, EARTH	STA	55.87	23.45			79.32	Refer to Typical Sections on B Sheets and Tab 112-09. Includes 79.32 stations of nominal 3 ft. wide shoulder. Material for earth shoulders is included in the template quantities.

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
11	2301-1033100	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 10 IN.	SY	13,719	10,551			24,270	Refer to Tab 100-24 and B Sheets for locations. Integral curb is included in this item. The development of a maturity curve is required and incidental to this item.
12	2301-7000110	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT THICKNESS (BY SCHEDULE)	EACH	16,051	12,345			28,396	
13	2304-0101000	TEMPORARY PAVEMENT	SY	24.4				24.4	Refer to J Sheets for locations. Includes temporary HMA pavement at a depth of 6 inches pavement required for staged construction. 6"" Special Backfill shall be placed under the temporary pavement and will be paid for separately. Temporary pavement shall be placed to maintain a minimum lane width of 12 feet. Method of Measurement: The area of the completed work will be measured in square yards. Measurement will be based on the actual area of the pavement placed as shown in the plans. Refer to Tab 100-25, B Sheets, and J Sheets for details and locations. Basis of Payment: Payment will be made at the contract unit price per square yard. This payment will be full compensation for furnishing all materials, labor, equipment, and incidentals necessary to complete the work as specified, including but not limited to surface preparation, placement, and finishing of the pavement.
14	2315-8275030	SURFACING, DRIVEWAY, CLASS C GRAVEL	TON	24.5				24.5	Refer to Tab 102-03.
15	2317-7000110	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH	10,289	7,913			18,202	
16	2402-0425040	FLOODED BACKFILL	CY	131.4	119.6			251	Quantity includes backfill for entrance culverts and box culverts. Quantity for entrance culverts calculated as 35 CY. Quantity for box culvert at STA 177+84.40 calculated as 20.0 CY. Quantity for box culvert at STA 201+60.18 calculated as 99.6CY. Quantity for box culvert at STA 204+92.77 calculated as 96.4 CY. Refer to V sheets, Tied Project No. BRF-006-7(102)--38-52, and DR-111.
17	2416-0100015	APRONS, CONCRETE, 15 IN. DIA.	EACH			3		3	Refer to D Sheets for locations.
18	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.	EACH			4		4	Refer to Tab 102-03 and D Sheets for locations.
19	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH			5		5	Refer to Tab. 104-05B and M sheets for locations.
20	2416-1160015	CULVERT, CONCRETE ENTRANCE PIPE, 15 IN. DIA.	LF			92		92	Refer to D Sheets for location. Culvert is to be installed underneath proposed sidewalk with a bury depth of approximately 2.8 feet. Pipe shall be Class III (2000D) RCP. Bedding and backfill shall be placed in accordance with Standard Specification Section 2415.03.D.2.d.
21	2416-1160018	CULVERT, CONCRETE ENTRANCE PIPE, 18 IN. DIA.	LF			137		137	Refer to Tab 102-03 and D Sheets for locations. Pipe shall be Class III (2000D) RCP. Bedding for the culverts shall be Class B and will be incidental to this item. Quantity includes approximately 35 CY of Flooded Backfill and 10 CY of Flowable Mortar.

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
22	2418-0000010	TEMPORARY STREAM DIVERSION	EACH	1	2			3	Stream diversions shall be in accordance with Nationwide Permit #14 and the seven Iowa Regional Conditions for Nationwide Permits and Nationwide Permit General Conditions. Quantities were assumed to be one diversion for the construction of Culvert Design No. 0327 at Station 177+84.40 , one diversion for the construction of Culvert Design No. 0427 at Station 201+60.18, and one diversion for the construction of Culvert Design No. 0527 at Station 204+92.77.
23	2435-0140160	MANHOLE, STORM SEWER, SW-401, 60 IN.	EACH			1		1	Refer to Tab 104-05B and M Sheets for locations.
24	2435-0140172	MANHOLE, STORM SEWER, SW-401, 72 IN.	EACH			1		1	
25	2435-0250100	INTAKE, SW-501	EACH			1		1	Refer to Tab 104-05B and M Sheets for locations. For intakes requiring insulation, refer to M Sheets. Insulation shall be 4" of polystyrene board insulation and will be incidental to this bid item.
26	2435-0250248	INTAKE, SW-502, 48 IN.	EACH			1		1	
27	2435-0250260	INTAKE, SW-502, 60 IN.	EACH			3		3	
28	2435-0250700	INTAKE, SW-507	EACH			19		19	
29	2435-0250900	INTAKE, SW-509	EACH			6		6	Refer to Tab 104-05B and M Sheets for locations. Connections to existing storm sewer pipe shall be incidental to this item as required.
30	2435-0251300	INTAKE, SW-513	EACH			5		5	Refer to Tab 104-05B and M Sheets for locations.
31	2435-0254500	INTAKE, SW-545	EACH			3		3	Refer to Tab 104-05B and M Sheets for locations. Connections to existing storm sewer pipe shall be incidental to this item as required.
32	2435-0600010	MANHOLE ADJUSTMENT, MINOR	EACH	1				1	Refer to Tab 104-10 and D Sheets.
33	2435-0600020	MANHOLE ADJUSTMENT, MAJOR	EACH	1				1	
34	2435-0700020	CONNECTION TO EXISTING INTAKE	EACH		1			1	Refer to Tab 104-05B and M Sheets for locations.
35	2502-6745952	REMOVAL OF SUBDRAIN	LF	3,311				3,311	Refer to Tab 110-19. The quantity of subdrain removed will be measured in linear feet from end to end of the subdrain removed in conjunction with pavement removal. Payment is full compensation for removal, disposal, backfilling, and capping of the subdrain, if required. Method of Measurement: The quantity of subdrain removed will be measured in linear feet from end to end of the subdrain removed in conjunction with pavement removal. Basis of Payment: Payment will be made at the contract unit price per linear foot for Removal of Subdrain.
36	2502-8212036	SUBDRAIN, LONGITUDINAL, (SHOULDER) 6 IN. DIA.	LF	8,028				8,028	Refer to Tab 104-09A and Typical Sections on B Sheets. All fittings and connections are incidental.
37	2502-8221303	SUBDRAIN OUTLET, DR-303	EACH	64				64	
38	2503-0114215	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 15 IN.	LF			1,271		1,271	Refer to Tab 104-05B and M Sheets for locations. In necessary locations, RCP storm sewer shall be installed with O-ring profile gasketed joints meeting the requirements of Section 4149.03 in the Specifications.

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
39	2503-0114218	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 18 IN.	LF			1,296		1,296	
40	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 24 IN.	LF			1,578		1,578	
41	2503-0114415	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 3000D (CLASS IV), 15 IN.	LF			111		111	
42	2503-0114424	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 3000D (CLASS IV), 24 IN.	LF			47		47	
43	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	LF			944		944	Refer to Tab 110-14 for locations. Item includes disposal of material offsite. Removal of flared end sections is incidental to this item.
44	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	446				446	Refer to Tab 110-07A for locations. Item includes removal of crash cushion barrels. Coordinate with the Iowa Department of Transportation for recovery/salvage of materials.
45	2506-4984000	FLOWABLE MORTAR	CY			40		40	Refer to Tab 104-05B. This item is included for backfill over shallow storm sewer pipes P-4 and P-45 and for entrance culverts. Flowable mortar shall be placed as final trench backfill in a six-inch layer beneath the bottom of the pavement subbase for the entire width of the trench.
46	2507-3250005	ENGINEERING FABRIC	SY		491			491	Refer to Tab 100-23. Verify the specific locations with the Engineer prior to beginning placement. Use material specified for embankment erosion control according to Article 4196.01, B, 3. Material will be measured in SY of the actual area covered. The tabulation includes estimated locations for placement of "Engineering Fabric" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 30% additional quantity for other locations of erosion. Engineering fabric shall be material as specified for embankment erosion control in accordance with Article 4196.01,B,3, of the Standard Specifications. Material shall be measured in sq. yard of actual area covered. Refer to details on RR Sheets.
47	2507-6800061	REVETMENT, CLASS E	TON		485			485	Refer to Tab. 100-23. The tabulation includes estimated locations for placement of "Revetment, Class E" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 30% additional quantity for other locations of erosion. Estimated at 1.5 ton/cu yd. Class E revetment shall meet requirements of Article 4130.
48	2510-6745850	REMOVAL OF PAVEMENT	SY	12,663	7,925		98	20,686	Refer to Tab 110-01. Existing pavement thickness is assumed to be 16 inches or less and is assumed to be PCC overlaid with HMA. The Contractor is responsible for replacing any damaged pavement beyond the removal limits at no cost to the Owner.

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
49	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	EACH	10				10	Refer to Tab 110-15 for locations.
50	2511-6745900	REMOVAL OF SIDEWALK	SY		505		631	1,136	Refer to Tab 110-15 for locations. Includes 140.7 lin. ft. of full depth saw cut.
51	2511-7526004	SIDEWALK, P.C. CONCRETE, 4 IN.	SY		4,028		642	4,670	Refer to Tabs 113-01A and 113-10, Typicals on B Sheets, and S Sheets. Certified plant inspection is required and is incidental to this item.
52	2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.	SY		216		81	297	Refer to Tabs 113-01A and 113-10, Typicals on B Sheets, and S Sheets. Certified plant inspection is required and is incidental to this item.
53	2511-7528101	DETECTABLE WARNINGS	SF		339		100	439	Refer to Tab 113-01A for locations.
54	2512-1725356	CURB AND GUTTER, P.C. CONCRETE, 3.5 FT.	LF	19			79.7	98.7	Refer to Tab 100-05 and Typicals on B Sheets for locations.
55	2515-2475006	DRIVEWAY, P.C. CONCRETE, 6 IN.	SY	95.9			223.7	319.6	Refer to Tab 102-03. Match existing driveway thickness.
56	2515-6745600	REMOVAL OF PAVED DRIVEWAY	SY	8.7			376.5	385.2	Refer to Tab. 110-8 and U Sheets. Requires 8 linear foot of full depth saw cut. Driveway thicknesses are unknown unless noted otherwise.
57	2516-8625000	COMBINED CONCRETE SIDEWALK AND RETAINING WALL	CY		18			18	Refer to D Sheets for locations. Refer to Sheets U.8-U.9 for modified standard road plan. Item is for combined sidewalk and retaining walls at Summerhays St and Croell Ave. Existing retaining wall at Summerhays St shall be removed within limits of sidewalk construction, and a new end section shall be installed of aproximately 1.5 CY. Retaining wall with sidewalk shall be installed at Croell Ave. as shown on the D Sheets and is 16.5 CY.
58	2520-3350015	FIELD OFFICE	EACH	1				1	
59	2524-6765010	REMOVE AND REINSTALL SIGN AS PER PLAN	EACH	21				21	Refer to Tabs 190-61, 190-62, and N Sheets. The contractor shall remove each sign and the hardware used to secure the sign to another sign, posts, or sign support structure. For signs mounted directly to posts, removal of the sign shall include removal of the posts. Posts may be either wood posts or steel breakaway sign posts. The existing sign and post shall be removed and stored. The Contractor shall transport the sign back to the job site when ready for reinstallation. The Contractor shall furnish all necessary hardware to install the signs. When the new installation is similar to the original installation, unless otherwise noted, the existing hardware and posts may be used to reinstall the sign. Signs damaged by the Contractor's activities shall be replaced at the Contractor's expense. Replacement materials shall be new. Method of Measurement: The Engineer will count each sign removed and reinstalled. Basis of Payment: For each sign removed and reinstalled, the Contractor shall be paid the contract unit price.

Item no.	Item Code	Item	Unit	Quantities Estimated Division 1	Division 2	Division 3	Division 4	Total	Estimate Reference Notes
60	2524-6765016	REMOVE AND REINSTALL REFERENCE LOCATION SIGN	EACH	1				1	Refer to Tabs 190-61, 190-62, and N Sheets. The contractor shall remove each sign and the hardware used to secure the sign to another sign, posts, or sign support structure. For signs mounted directly to posts, removal of the sign shall include removal of the posts. Posts may be either wood posts or steel breakaway sign posts. The existing sign and post shall be removed and stored. The Contractor shall transport the sign back to the job site when ready for reinstallation. The Contractor shall furnish all necessary hardware to install the signs. When the new installation is similar to the original installation, unless otherwise noted, the existing hardware and posts may be used to reinstall the sign. Signs damaged by the Contractor's activities shall be replaced at the Contractor's expnse. Replacement materials shall be new. Method of Measurement: The Engineer will count each sign removed and reinstalled. Basis of Payment: For each sign removed and reinstalled, the Contractor shall be paid the contract unit price.
61	2524-6765210	REMOVAL OF TYPE A SIGN ASSEMBLY	EACH	13				13	Refer to Tab 190-62 for locations and details. This item is for the removal of Type A Sign Assemblies, including the sign panels, sign brackets, supporting structures, and hardware. Contractor shall carefully dismantle each sign. Sign posts, brackets, and hardware shall become property of the Contractor. All holes resulting from removal of posts shall be filled level with the adjacent grade with backfill material conforming to the Standard Specifications. Method of Measurement: The Engineer will count the number of sign assemblies removed. Basis of Payment: The Contractor will be paid the contract unit price for each sign assembly removed.
62	2524-9276010	PERFORATED SQUARE STEEL TUBE POSTS	LF	104				104	Refer to Tab 190-51 for locations and details.
63	2524-9276021	PERFORATED SQUARE STEEL TUBE POST ANCHOR, BREAK-AWAY SOIL INSTALLATION	EACH	12				12	
64	2524-9325001	TYPE A SIGNS, SHEET ALUMINUM	SF	192.7				192.7	Refer to Tab 190-51 and 190-66 for locations and details.
65	2525-0000100	TRAFFIC SIGNALIZATION	LS		1			1	Refer to N Sheets. All traffic signal materials and construction shall comply with the Iowa DOT Standard Specifications, current Iowa DOT Traffic and Safety Manual, and the Manual on Uniform Traffic Control Devices (MUTCD). Traffic signal poles and mast arm assemblies shall be designed in accordance with the AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, latest edition with current interim revisions. Design shall include all applied loads, including but not limited to signal heads, backplates, signs, conduits, detection equipment, and future attachments where shown in the contract documents. Fatigue, wind, and ice loading shall be considered per AASHTO requirements.
66	2526-8285010	CONSTRUCTION SURVEY, MONUMENT PRESERVATION	LS	0.34	0.33		0.33	1	
67	2526-8285020	CONSTRUCTION SURVEY, CONTROL POINT SURVEY	LS	0.34	0.33		0.33	1	

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
68	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	0.34	0.33		0.33	1	
69	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH	49				49	Refer to Tab 108-29 and U Sheets.
70	2527-9263181	PAVEMENT MARKINGS REMOVED	STA	23.04				23.04	Refer to Tab 108-22 and U Sheets.
71	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA	170.97				170.97	
72	2527-9263231	REMOVABLE TAPE MARKINGS, WET RETROREFLECTIVE	STA	3.44				3.44	Refer to Tab 108-22 and J Sheets.
73	2528-2518000	SAFETY CLOSURE	EACH	9	9			18	Refer to Tab 108-13A and J Sheets.
74	2528-5160000	NO EXCUSE ROAD OPENING BONUS, U.S. 6 STAGES 1 AND 2 ON OR BEFORE NOVEMBER 19, 2027	LS	1				1	The Contractor will be paid the predetermined lump sum amount shown in the proposal schedule of prices for the bid item 'No Excuse Road Opening Bonus, U.S. 6 Stages 1 and 2 On or Before November 19, 2027' for completing construction so that U.S. 6 is open on or before the calendar date shown. Compliance requires that the contractor must have U.S. 6 fully open within the project limits with modified traffic patterns at tie-in points to the existing roadway. All work from Stages 1 and 2 must be complete, including but not limited to roadway paving, sidewalk, driveways, storm sewer, and culverts. Final seeding may occur after Nomber 19, 2027 and will not be considered part of the No Excuse Road Opening Bonus, provided the operations do not affect traffic. Any other delays due to weather, change orders, overruns of quantities, utility delays, or any other delays will not be considered as justification to modify the calendar date.
75	2528-8445110	TRAFFIC CONTROL	LS	0.49	0.49		0.02	1	Refer to Tab 108-23A and J Sheets.
76	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	CDAY	0	0			0	See Proposal.
77	2529-5070110	PATCHES, FULL-DEPTH FINISH, BY AREA	SY				35	35	Refer to Tab 102-6C and D Sheets. Item is for patching of the curb and gutter section at driveway replacements.
78	2529-5070111	PATCHES, FULL-DEPTH FINISH, BY AREA (50 FEET OR GREATER IN LENGTH)	SY				63	63	
79	2529-5070120	PATCHES, FULL-DEPTH FINISH, BY COUNT	EACH				6	6	
80	2533-4980005	MOBILIZATION	LS	0.49	0.49		0.02	1	Includes all costs associated with mobilization for the entire project. Any diversion necessary in the stream for the construction of Culvert Design No. 0427 at 201+60.18 shall be incidental to this item. Diversions shall be in accordance with Nationwide Permit #14 and the seven Iowa Regional Conditions for Nationwide Permits and Nationwide Permit General Conditions.
81	2552-0000300	TRENCH COMPACTION TESTING	LS	0.5	0.5			1	Contractor is responsible for trench compaction testing performed by an independent testing laboratory hired by the Contractor. Use for all storm sewer and water main installation.
82	2554-0124008	WATER MAIN, TRENCHLESS, POLYVINYL CHLORIDE PIPE (PVC), 8 IN.	LF		2,343			2,343	Refer to MSA Tabulation 2 and MWM Sheets.

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
83	2554-0134008	WATER MAIN WITH CASING PIPE, TRENCHED, POLYVINYL CHLORIDE PIPE (PVC), 8 IN.	LF		123			123	Refer to MSA Tabulation 2 and MWM Sheets.
84	2554-0203000	FITTINGS BY WEIGHT, DUCTILE IRON	LB		424			424	Refer to MSA Tabulation 1 and MWM Sheets.
85	2554-0204220	WATER SERVICE STUB, PVC, 2 IN.	EACH		2			2	Refer to MWM Sheets.
86	2554-0207006	VALVE, GATE, DIP, 6 IN.	EACH	3				3	Refer to MSA Tabulation 1 and D Sheets. This item is for relocation and replacement of valves removed on the existing water main.
87	2554-0207008	VALVE, GATE, DIP, 8 IN.	EACH		9			9	Refer to MSA Tabulation 1 and MWM Sheets.
88	2554-0209006	VALVE REMOVAL, 6 IN.	EACH	3				3	Refer to Tab 110-15 and U Sheets. Valves are to be removed from the existing water main. Removal of the valve box shall be included in this item.
89	2554-0210201	FIRE HYDRANT ASSEMBLY, WM-201	EACH		6			6	Refer to MSA Tabulation 1 and MWM Sheets.
90	2554-0211008	FLUSHING DEVICE (BLOWOFF), 8 IN.	EACH		1			1	
91	2554-0212040	VALVE BOX ADJUSTMENT, MINOR	EACH	4				4	Refer to Tab 104-10 and D Sheets.
92	2554-0214000	FIRE HYDRANT ADJUSTMENT	EACH	2				2	
93	2555-0000010	DELIVER AND STOCKPILE SALVAGED MATERIALS	LS		1			1	Refer to Tab 110-13.
94	2599-9999005	('EACH' ITEM) CONNECTION TO EXISTING WATER MAIN	EACH		2			2	Refer to MWM Sheets for locations. Materials and construction shall be per Specification 2554. This item shall include all materials and work necessary to cut and remove existing pipe or fitting, pumping water from trench excavation, furnish and install sleeves, clean existing main, and connect to existing water main, including removing caps if necessary. Contractor shall be responsible for verifying all existing water main elevations and locations at tie in points prior to installation of proposed water mains. The Contractor is to communicate with City staff to coordinate water main connections and property owner notification. Method of Measurement: The Engineer will count the number of connections to existing water main to be made. Basis of Payment: The Contractor will be paid the contract unit price for each connection to existing water main made.

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
95	2599-9999005	('EACH' ITEM) SUBDRAIN CLEANOUT, TYPE B	EACH	4				4	Refer to M Sheets and Tab 104-09 for locations. Refer to Type B cleanouts on Sheet U.7. Use 24 inch diameter Class III RCP riser. Use a light duty cast iron or ductile iron casting. Payment is full compensation for furnishing all material, equipment, and labor to construct the Type B cleanout according to the contract documents. Method of Measurement: The Engineer will count the number of connections to existing water main to be made. Basis of Payment: The Contractor will be paid the contract unit price for each subdrain cleanout installed.
96	2599-9999005	('EACH' ITEM) YARD HYDRANT	EACH		1			1	Refer to MWM Sheets for locations. Item shall be measured and paid according to Article 2554.04, B, 3 and Article 2554.05, B, 3 of the Standard Specifications. Hydrant must have specifications of 1 in. x 3/4 in. NPT x MPT, 1 in. Stainless Steel Pipe, 5 ft. bury depth, freezeless, from brands Woodford, PRIER, Merrill Manufacturing, or an approved equal. Payment is full compensation for all excavation, backfilling, compaction, connection to the main, couplings, dewatering, and all hardware not specifically identified to install a complete water service.
97	2599-9999010	('LUMP SUM' ITEM) ROADWAY LIGHTING SYSTEM	LS		1			1	This item is for the street lighting along the roadway. Refer to P Sheets for lighting details and locations. Materials, equipment, and construction shall be in accordance with Section 2523 in the Standard Specifications. Item will be measured and paid for by lump sum for all labor and materials associated with street lighting installation. Payment is full compensation for furnishing all material and for the construction of all street lighting as described in the P Sheets.
98	2601-2634105	MULCHING, BONDED FIBER MATRIX	ACRE	1.7	5.3			7	Item includes an additional 30% of the total seeding area for use on disturbed areas as directed by the Engineer. Apply Bonded Fiber Matrix as the mulch for all areas designated as "Seeding and Fertilizing (Urban)". Apply seed and fertilizer for the area to be covered before applying Bonded Fiber Matrix Mulch. Apply Bonded Fiber Matrix Mulch at a rate of a minimum of 3000 pounds per acre.
99	2601-2636044	SEEDING AND FERTILIZING (URBAN)	ACRE	1.2	3.8			5	Refer to RR Sheets. For all areas designated by the Engineer. Prepare seedbed, fertilize, and seed according to Article 2601.03, C, 4, of the Standard Specifications. Refer to RR Sheets. For all areas designated by the Engineer. Prepare seedbed, fertilize, and seed according to Article 2601.03, C, 4, of the Standard Specifications.

Item no.	Item Code	Item	Unit	Quantities Estimated Division 1	Division 2	Division 3	Division 4	Total	Estimate Reference Notes
100	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	SQ		192			192	Refer to Tab 100-22 and RR Sheets for locations. Refer to Standard Road Plan EC-103. Install Wood Excelsior Mat according to Article 2601.03, H, 5, of the Standard Specifications. Seed according to Article 2601.03, H, 5, of the Standard Specifications. Refer to Table 2601.03-4 for seed mixture. Includes approximately 0.44 acres of Seeding and Fertilizing (Urban).
101	2601-2639010	SODDING	SQ	81.8	253.8		83.2	418.8	Refer to RR Sheets for locations.
102	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT	SQ		27.4			27.4	Refer to Tab 100-22 and RR Sheets for locations. Refer to Standard Road Plan EC-103. Install Wood Excelsior Mat according to Article 2601.03, H, 2, of the Standard Specifications. Seed according to Article 2601.03, H, 2, of the Standard Specifications. Refer to Table 2601.03-4 for seed mixture. Includes approximately 0.06 acres of Seeding and Fertilizing (Urban).
103	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URBAN)	ACRE	0.5	1.5			2	Item is included for disturbed areas as directed by the Engineer, estimated as approximately 30% of the final seeding quantity. Seed and fertilize all urban disturbed areas according to Article 2601.03, C, 2, of the Standard Specifications.
104	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION	MGAL	49.08	196.16		49.92	295.16	Estimate for watering Special Ditch Control, Slope Protection Areas, Turf Reinforcement Mat, or Transition Mat is based on a total of four waterings at a rate of 50 gallons per square. Estimate for watering Sod is based on a total of six waterings at a rate of 100 gallons per square.
105	2601-2643300	MOBILIZATION FOR WATERING	EACH	5	8		10	23	
106	2602-0000020	SILT FENCE	LF	30	1,570			1,600	Refer to Tab 100-17 and RR Sheets. The tabulation includes estimated locations for placement of "Silt Fence" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements. See Standard Road Plan EC-201. The engineer may adjust silt fence locations to fit field conditions.
107	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	810	120			930	Refer to Tab 100-18 and RR Sheets. The tabulation includes estimated locations for placement of "Silt Fence for Ditch Checks" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 50% additional quantity for field adjustments and replacements.
108	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	420	850			1,270	This item is included for Silt Fence and Silt Fence for Ditch Check removal required for staging reasons, removal to allow for replacement (replacement to be paid separately), or for areas that have achieved 70% permanent growth. Remove silt fence and posts after mulching or vegetation is established and approved by the engineer.
109	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	84	169			253	This item is included for clean-out and repair of Silt Fence and Silt Fence for Ditch Checks during the project.
110	2602-0000150	STABILIZED CONSTRUCTION ENTRANCE, EC-303	LF	850	850			1,700	
111	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	5,710	5,660		750	12,120	Refer to RR Sheets and Tab 100-19. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 12 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements. Use Perimeter and Slope Sediment Control Devices fabricated using wood excelsior.

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
112	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF		250			250	Refer to RR Sheets and Tab 100-19. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 20 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements. Use Perimeter and Slope Sediment Control Devices fabricated using wood excelsior.
113	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF	5,840	6,310		1,010	13,160	Refer to RR Sheets and Tab 100-19. Bid item includes 25% additional quantity for field adjustments and replacements. Remove Perimeter and Slope Sediment Control Devices and Ditch Check Devices after mulching or vegetation is established and approved by the engineer.
114	2602-0000370	DITCH CHECK SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	130	400			530	Refer to RR Sheets and Tab 100-19. The tabulation includes estimated locations for placement of "Ditch Check Sediment Control Device, 12 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements, Use Ditch Check Sediment Control Devices fabricated using wood excelsior.
115	2602-0000500	OPEN-THROAT CURB INTAKE SEDIMENT FILTER, EC-602	LF	179	99		72	350	Refer to Tab 100-36 and RR Sheets.
116	2602-0000510	MAINTENANCE OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER	EACH	27	15		8	50	
117	2602-0000520	REMOVAL OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER	EACH	27	15		8	50	
118	2602-0000530	GRATE INTAKE SEDIMENT FILTER BAG, EC-604	EACH	5	1		1	7	Refer to Tab 100-37 and RR Sheets. Method of Measurement: Measurement will be made for each filter bag installed. Basis of Payment: Payment will be made at the contract unit price for each filter bag installed.
119	2602-0000540	MAINTENANCE OF GRATE INTAKE SEDIMENT FILTER BAG	EACH	5	1		1	7	Refer to Tab 100-37 and RR Sheets. Sediment filter bags shall be maintained throughout the length of the project to prevent debris and sediment from entering the intake. Clean out and dispose of material when capacity reaches 50%. Method of Measurement: Measurement will be made for each filter bag cleaned out or otherwise repaired. Basis of Payment: Payment will be made at the contract unit price for each filter bag cleaned out or otherwise repaired.
120	2602-0000550	REMOVAL OF GRATE INTAKE SEDIMENT FILTER BAG	EACH	5	1		1	7	Refer to Tab 100-37 and RR sheets. Method of Measurement: Measurement will be made per each filter bag removed. Basis of Payment: Payment will be made at the contract unit price for each filter bag removed.
121	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	0.5	0.5		1	2	

Item no.	Item Code	Item	Unit	Quantities					Estimate Reference Notes
				Estimated					
				Division 1	Division 2	Division 3	Division 4	Total	
122	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	0.5	0.5		1	2	
123	2612-0000520	ROADSIDE SPRAY FOR WEED CONTROL	ACRE	1.2	3.8			5	Furnish and spot spray clopyralid to patch infestations of thistle and teasel species, and if directed by the Engineer, to other weed species. The Engineer will notify the Contractor to begin each spraying. The Contractor will be charged working days, beginning with the 3rd working day after notification to start spraying until each spraying is complete. Timing of herbicide application shall be made at the weed's recommended growth stage according to manufacturer's label directions for Canada thistle. This is from full leaf expansion to early bud stage, unless otherwise listed in label directions. LOCATION: Identify thistle and teasel infestation within the seeding areas. APPLICATION: Apply in September of 2027, and June and September of 2028. The rate shall be clopyralid herbicide 4.3 oz./acre active ingredient (e.g. for 40.9% active ingredient products apply at 10.5 oz./acre). According to label directions: use a surfactant, a drift control agent, and re-add the agent to the herbicide to maintain drift control throughout the application period. Use hand equipment for spot spraying of all thistle by close-up comprehensive drive through the seeding areas. Method of Measurement: The quantity of Roadside Spray For Weed Control for which payment is made will be the acres displaying complete visual herbicide control response. Basis of Payment: For the number of acres of Roadside Spray For Weed Control designated by the Engineer, the Contractor will be paid contract unit price based on the measured area displaying a complete visual herbicide control response. This payment will be full compensation for all labor, equipment, and materials for this item.

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Design No. 0327 - Johnson :
Design No. 0427 - Johnson :

Item no.	Item Code	Item	Unit	Quantities			Estimate Reference Notes
				Estimated			
				Design No. 0327 - Johnson	Design No. 0427 - Johnson	Total	
1	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS		1	1	Refer to Tab 110-02 and V Sheets. Includes all work for removal and off-site disposal of the existing culvert. Removal of scheduled items shall be in accordance with Section 2401, of the Standard Specifications. Any damage to material not to be removed shall be the responsibility of the Contractor and repaired at no extra cost to the state.
2	2401-6750001	REMOVALS, AS PER PLAN	LS	1		1	Refer to V Sheets. Includes all work for removal and off-site disposal of the existing culvert and the setting of the dowel reinforcing bars into existing concrete. Removal of scheduled items shall be in accordance with Section 2401, of the Standard Specifications. Any damage to material not to be removed shall be the responsibility of the Contractor and repaired at no extra cost to the state.
3	2402-2720000	EXCAVATION, CLASS 20	CY	215	312	527	Includes filling and compacting low areas around proposed culverts. Includes 90 CY of excavation to place 1'-0" Granular Material for Blanket.
4	2402-3825025	GRANULAR MATERIAL FOR BLANKET	CY	43	47	90	1'-0" granular material shall be in accordance with Section 4118 of the Standard Specifications. Includes 90 CY for a working blanket. The working blanket may be deleted if determined to be unnecessary at the time of construction.
5	2403-0100020	STRUCTURAL CONCRETE (RCB CULVERT)	CY	84.8	78	162.8	See V Sheets for details. Includes all resilient joint filler required. The contractor is responsible for certified plant inspection.
6	2404-7775000	REINFORCING STEEL	LB	13,066	9,369	22,435	See V Sheets for details.
7	2414-6444100	STEEL PIPE PEDESTRIAN HAND RAILING	LF	99.8	52.6	152.4	Includes furnishing all material, including anchor bolts and shims, and all of the equipment and labor required to erect the rail. Measurement is in linear feet from end to end of the railing measured along the top of the rail, including slopes.

100_01D
8/15/22

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF US HIGHWAY 6 (USH 6, ALSO KNOWN AS MARENGO ROAD) FROM AN HMA TWO-LANE HIGHWAY TO A PCC TWO-LANE WITH TWO-WAY LEFT TURN LANE ROADWAY IN THE CITY OF TIFFIN, IOWA IN JOHNSON COUNTY.

THE PROJECT BEGINS AT THE INTERSECTION OF USH 6 AND ROBERTS FERRY ROAD AND ENDS AT THE APPROACHES OF THE ROUNDABOUT INTERSECTION OF USH 6 AND NORTH PARK ROAD.

STORM SEWER WILL BE INSTALLED UNDER THE RECONSTRUCTED PAVEMENT, CONNECTING TO ADJACENT EXISTING STORM SEWER. A 10'x6' REINFORCED CONCRETE BOX (RCB) CULVERT WILL BE EXTENDED ON BOTH ENDS. A 10'x6' RCB CULVERT WILL REPLACE AN EXISTING BOX CULVERT AND A TWIN 10'x6' WILL REPLACE TWO EXISTING PIPE CULVERTS AND AN EXISTING BOX CULVERT. WATER MAIN WILL BE INSTALLED WITHIN THE PROJECT LIMITS.

ANCILLARY WORK INCLUDES SIGNING, DITCH GRADING, SIDEWALK, TRAFFIC SIGNAL AT KIMBERLITE, PAVEMENT MARKINGS, TURF ESTABLISHMENT, AND EROSION CONTROL DEVICES.

STANDARDS

The following Standards apply to construction work on this project.

DR-101	04-18-17	Pipe Culvert (Bedding and Backfill)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-104	04-19-16	Depth of Cover Tables for Concrete and Corrugated Pipe
DR-111	04-17-18	Box Culvert (Backfill)
DR-121	04-18-23	Connected Pipe Joints
DR-201	10-17-23	Concrete Aprons
DR-303	10-17-17	Subdrains (Longitudinal)
DR-601	04-18-17	Reinforced Concrete Pipe Culvert
EC-101	04-19-16	Wood Excelsior Mat for Ditch Protection
EC-102	04-21-15	Sod for Ditch Protection
EC-103	04-21-15	Wood Excelsior Mat for Slope Protection
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-303	10-19-21	Stabilized Construction Entrance
EC-602	10-15-24	Open-Throat Curb Intake Sediment Filter
EC-604	10-17-23	Grate Intake Sediment Filter Bag
EW-101	10-17-17	Embankment and Rebuilding Embankments
EW-102	10-20-15	Allowable Placement of Unsuitable Soil in Embankments
EW-401	10-20-15	Temporary Stream Crossing, Causeway, or Equipment Pad
EW-402	04-18-17	Temporary Stream Diversion
EW-403	04-18-17	Temporary Erosion Control Measures
EW-501	10-17-23	Rural Entrance
EW-503	10-20-15	Side Road Grading
LI-101	10-21-14	Light Pole Location
LI-103	10-21-25	Conduit and Precast Handholes
LI-142	04-21-15	Electrical Installation (Bases)
LI-152	10-21-14	Control Cabinet (Pad-Mounted)
LI-201	04-21-26	Light Pole Foundation
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-521	10-20-26	Two-Lane Roadway with Right Turn Lanes
PM-550	10-15-24	Two-Lane Roadway with Two-Way Left Turn Lane
PR-103	10-21-25	Full Depth PCC Patch with Dowels
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
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
SI-172	04-19-16	Delineators
SI-173	04-19-16	Object Markers
SI-881	10-20-26	Special Signs for Workzones
SW-101	10-21-25	Trench Bedding and Backfill Zones
SW-211	10-21-25	Storm Sewer Pipe Connections
SW-401	10-21-25	Circular Storm Sewer Manhole
SW-501	10-21-25	Single Grate Intake
SW-502	10-21-25	Circular Single Grate Intake
SW-507	10-21-25	Single Open-Throat Intake, Small Box
SW-509	10-21-25	Double Open-Throat Curb Intake, Small Box

105_04
10/20/26

STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
SW-513	10-21-25	Open-Sided Area Intake
SW-514	10-21-25	Boxouts for Grate Intakes
SW-545	10-21-25	Single Open-Throat Curb Intake with Extended Opening
SW-602	10-21-25	Castings for Storm Sewer Manholes
SW-603	10-21-25	Castings for Grate Intakes
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	04-18-23	Work Within 15 ft of Traveled Way
TC-228	04-18-23	Lane Closure Involving TWLTL
TC-252	10-20-26	Routes Closed to Traffic
TC-601	10-15-19	Pedestrian Detour
TC-602	10-15-19	Sidewalk Diversion
TS-102	10-21-25	Traffic Signal Pole Foundation
WM-101	10-20-26	Thrust Blocks
WM-102	10-21-25	Tracer System
WM-201	10-21-25	Fire Hydrant Assembly

Refer to V Sheets for list of Box Culvert Standards.

111_25
MODIFIED

INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
100_01D	PROJECT DESCRIPTION	C.14
100_05	CURB AND GUTTER	C.31
100_17	TABULATION OF SILT FENCES	C.52
100_18	SILT FENCES FOR DITCH CHECKS	C.53
100_19	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	C.54
100_22	ROLLED EROSION CONTROL	C.56
100_24	PCC PAVEMENT	C.32
100_25	HMA PAVEMENT	C.33
100_27	PROPOSED POSTED SPEED LIMIT	C.21
100_36	OPEN-THROAT CURB INTAKE SEDIMENT FILTER	C.57
100_37	GRATE INTAKE SEDIMENT FILTER BAG	C.58
101_16	ALIGNMENT COORDINATES	G.1
101_17	SPIRAL OR CIRCULAR CURVE DATA	G.2
102_03	ACCESS POINTS AND SAFETY RAMPS	C.34
102_06C	FULL-DEPTH PATCHES	C.35
103_10	TOPSOIL STRIPPING AND PLACEMENT	CS.2
104_04	ROADWAY ITEMS FOR DRAINAGE STRUCTURES INSTALLED BY CULVERT CONTRACTOR	C.30
104_05B	STORM SEWER	M.1
104_09A	LONGITUDINAL SUBDRAIN SHOULDER	CS.3
104_10	ADJUSTMENT OF FIXTURES	C.60
105_04	STANDARDS	C.15
108_01	LIGHTING INSTALLATIONS	C.49
108_02	ELECTRICAL DUCTS	C.50
108_02A	LISTING OF LIGHTING AND SIGNAL WORK	C.51
108_13A	SAFETY CLOSURES	C.39
108_22	PAVEMENT MARKING LINE TYPES	C.40
108_23A	TRAFFIC CONTROL PLAN	J.1
108_26A	STAGING NOTES	J.2
108_29	PAVEMENT MARKING SYMBOLS AND LEGENDS	C.43
110_01	REMOVAL OF PAVEMENT	C.22
110_02	REMOVAL OF EXISTING STRUCTURES	C.23
110_05	SIDEWALK REMOVAL	C.24
110_07A	REMOVAL OF STEEL BEAM GUARDRAIL	C.25
110_08	REMOVAL OF CONCRETE DRIVES	C.26
110_12	POLLUTION PREVENTION PLAN	RC.1
110_13	DELIVERY AND STOCKPILING	C.20
110_14	SANITARY OR STORM SEWER ABANDONMENT OR REMOVAL	C.27
110_15	REMOVAL OF INTAKES AND UTILITY ACCESSES	C.28

111_25
MODIFIED

INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
110_17	CLEARING AND GRUBBING	C.59
110_19	REMOVAL OF EXISTING LONGITUDINAL SUBDRAINS WHEN EXISTING PAVEMENT IS REMOVED	C.29
111_01	COORDINATED OPERATIONS	J.3
111_25	INDEX OF TABULATIONS	C.16
111_26	UTILITIES	C.19
112_09	SHOULDERS	C.36
113_01A	SIDEWALKS	C.37
113_10	SIDEWALK COMPLIANCE	S.1
113_10A	SIDEWALK COMPLIANCE VALUES	S.1
190_25	REFERENCE LOCATION SIGNS AND DELINEATORS	C.44
190_51	MATERIALS FOR TYPE 'A' SIGNS	C.45
190_61	EXISTING SIGNS TO BE REINSTALLED	C.46
190_62	EXISTING SIGNS TO BE REMOVED	C.47
190_66	SUMMARY OF TYPE 'A' SIGNS	C.48
231_02	HERBICIDE	C.17
259_01	SIGNING NOTES	C.17
262_06	UTILITIES (NOT A POINT 25 PROJECT)	C.18
281_01	SECTION 404 PERMIT AND CONDITIONS	C.18
282_03	TEMPORARY STREAM CROSSING, CAUSEWAY, OR EQUIPMENT PAD	C.18
MSA Tabulation 1	WATER MAIN FITTINGS AND APPURTENANCES	C.61
MSA Tabulation 2	WATER MAIN	C.62

231_02
3/14/24

HERBICIDE

For all herbicide applications, the following provisions shall apply.

1. Follow all laws, rules and regulations related to the handling of pesticides, including but not limited to:
   a. Follow all herbicide label directions, restrictions, and precautions.
   b. The company responsible for the herbicide applicator must be licensed with Iowa Department of Agriculture and Land Stewardship (IDALS) as a commercial pesticide applicator company.
   c. The person applying the herbicide must be certified through IDALS as a pesticide applicator in Category 6, Right-of-Way. For herbicide applications that require an aquatic certification, the applicator must also be certified as a pesticide applicator in Category 5, Aquatics.
   d. Use herbicide and adjuvant products labeled for the application site:
      i. For applications on the primary highway right-of-way, use only products labeled for use on highway rights-of-way or roadsides.

      ii. For applications to or over water, use only products labeled for corresponding use in aquatic sites, unless intermittent pockets of standing water, such as tire ruts, and the product is labeled for such use.
      iii. For applications to areas in the water conveyance portion of the ditch that do not contain water at the time of application, use only products labeled for non-irrigation ditch banks or aquatic sites.

   e. Do not apply any herbicide to or over standing or flowing water unless required coverage is obtained under a National Pollutant Discharge and Elimination System (NPDES) Pesticide Discharge Permit through Iowa DNR. If standing or flowing water is encountered in areas when they need to be sprayed, notify Iowa DOT (Roadside Development) to determine required coverage.

2. Schedule work according to weather conditions and take measures to avoid off-target damage, such as runoff, leaching, drift and volatilization.
   a. Do not spray herbicide 24 hours prior to forecast precipitation that is expected to cause significant runoff conditions.
   b. For areas with saturated soil, such as ditch bottoms, do not spray herbicide 24 hours prior to forecast precipitation, unless using products labeled for aquatic sites.
   c. For conventional applications, avoid applications when wind speed exceeds 10 mph. For invert applications, avoid applications when wind speed exceeds 15 mph.
   d. For conventional foliar applications, use a drift retardant and maintain drift control throughout the application period by adding more to the tank as it breaks down from agitation.
   e. Avoid spraying volatile products when temperatures are forecast to exceed 85° F within 3 days.
   f. Check the IDALS Sensitive Crops Directory and do not spray adjacent to a listed operation when wind is blowing towards it.

3. Respond to allegations of any off-target damage attributed to handling and spraying of herbicide.

4. Provide the following documents to the Engineer for approval not less than 2 weeks prior to the application.
   a. A copy of the herbicide and adjuvant labels, including any applicable supplemental labels.
   b. A copy of the herbicide and adjuvant Material Safety Data Sheets (MSDS.)

5. Have copies of the herbicide and adjuvant labels and MSDSs on-hand and at locations of storage, transport, and application.

6. Schedule work to maximize efficiency of the herbicide application in relation to weather conditions and plant growth stage. Follow any label recommendations given as “for best results.”
   a. For weed applications:
      i. To determine if weeds are “actively growing,” use as

231_02
3/14/24

HERBICIDE

a guideline that there needs to have been at least 1 hour of temperature above 65° F and 1 hour of sun in the day prior to, of, or forecast before a rain the day after the application.
      ii. For spring applications to thistles, apply after basal leaves of Canada thistles are fully extended, and after rosettes of musk thistle are at least 8 inches diameter, but before flower stage.

      iii. For fall applications to thistles, apply prior to the second hard freeze of 28° F, unless otherwise listed in the label directions.

   b. For tree and brush applications:
      i. For foliar applications and cut stump/surface applications with water-soluble products, apply after leaves are fully opened in the spring and prior to leaf discoloration in the fall.
      ii. For cut stump applications with oil soluble products, do not apply during periods of heavy sap flow. Use as a guideline that heavy sap flow occurs in late winter to early spring when nighttime temperatures below 32° F are followed by daytime temperatures above 32° F with sunny conditions.
      iii. For cut stump and basal bark applications, add sufficient dye so that treated areas are visible to inspection 7 days after application.

7. Notify the Engineer prior to calibrating, mixing and applying herbicides, including incidental items.

8. Provide copies of daily spray logs to the RCE at the end of each week of spraying (form provided by Iowa DOT).

9. If Contractor does not complete spray item on schedule, the Engineer may adjust the schedule.

259_01
10/15/25

SIGNING NOTES

The following tolerances will be allowed on all signs:

  Accumulation error of not greater than +/-0.50" per line of copy, not greater than +/-0.50" for spacing between lines of copy, and the margin between lines of copy and the inside edge of the sign border.

The following tolerances will be allowed on each letter or numeral:

nominal height	variation in height	variation in width
4" thru 12"	-1/8" to +3/8"	-1/4" to +1/4"
over 12"	-1/8" to +3/8"	-3/8" to +3/8"

Type B signs can be separated into two categories:
- Major Guide Signs.
- Minor Guide Signs.

Major Guide Signs include the advance and exit direction guide signs for an interchange or intersection.

Minor Guide Signs include all other guide signs such as NEXT EXIT signs, supplemental guide signs, logo signs, exit gore signs, post-interchange mileage signs, ramp destination signs, and ramp logo signs for an interchange, as well as destination signs along sideroads.

Type A signs are not separated into categories, but special consideration should be given to regulatory signs.

Do not remove Type B signs until replacement signs

259_01
10/15/25

SIGNING NOTES

have been installed. If construction activities require the removal of a sign, the existing sign may be relocated to temporary posts, or a temporary plywood sign may be installed to replace the existing sign.

Existing non-regulatory Type A signs are NOT required to remain in place until installation of replacement signs. Existing regulatory Type A signs, particularly Stop signs, should not be removed until replacement signs are installed. Where a staged traffic control plan is contrary to this guidance, follow the direction of the traffic control plan.

Apply the following during the replacement or modification of signs:
- No more than one of the major guide signs for each direction of travel at an interchange out of service at any one time.
- No major guide sign out of service for more than 8 hours.
- No minor guide out of service for more than 24 hours.

Remove existing signs and posts within 24 hours following the installation of a new replacement sign.

In any case where the plans call for a new sign and posts to be installed at the same station location and offset as an existing sign, install the new posts at a minimum of either 5 ft ahead or behind the existing sign installation. Signs shall not be installed more than 25 ft ahead or behind the existing sign installation. Whenever posts for a replacement sign are erected directly in front of an existing sign, install the new replacement sign and remove the existing sign installation within 24 hours of the time that the new posts are erected.

Where signs are located behind guardrail, locate the near edge of the sign a minimum of 3 ft behind the guardrail posts.

Unless noted otherwise, leave auxiliary panels, such as exit number panels, in place or reattach to the sign using the existing mounting hardware. Also, when replacing an existing logo sign with a new logo sign, remove the business logo panel(s) from the existing sign and attach to the new sign as directed by the Engineer. Do not damage the auxiliary or logo panels when removing and reattaching them. This work is incidental to other work and no separate payment will be made.

The following notes apply to the corresponding sign installations shown on the plan sheets and listed in the tabulations.

IB INSTALL NEW TYPE B SIGN
IA INSTALL NEW TYPE A SIGN

Install new signs at the location identified in the plans.

For installation of new signs on an existing sign support structure, refer to note (L).

For installation of new signs on existing posts:

- if the new sign is taller than the existing sign, furnish the necessary hardware to extend the sign above the posts. Refer to Standard Road Plan SI-132.

- if the new sign is shorter than the existing sign:

- for wood posts and perforated square tube posts, install the sign at the proper height and cut off the excess post length.

259_01
10/15/25

SIGNING NOTES

- for MASSH-400 and steel breakaway posts, install the sign at the top of the posts.

For plywood signs, no vertical splices are allowed in signs less than or equal to 10 ft wide. No horizontal splices are allowed in signs less than or equal to 4 ft tall.

Each new sign installed shall have a sticker applied to the back of the sign that shows the date the sign was installed. The Contractor shall supply the sticker for all contractor suppled signs. The DOT will supply date stickers on any signs supplied by the department.

Payment for installing Type A signs or Type B signs includes furnishing hardware for mounting, extending signs above existing posts, and cutting posts to length.

MS MODIFICATION OF EXISTING SIGNS

For removal and/or installation of logo panels, and other sign modifications. Refer to the project plans and typical details for additional information.

SC SIGN COVER

For the installation or removal of temporary sign covers for the purposes of temporary traffic control. Sign covers shall completely cover the existing Sign. Care should be taken so that covers, fasteners, and installation practices do not damage the existing sign. Tape of any type shall not be applied to the sheeted face of the existing sign under any circumstances. Repair of damage to the existing sign caused by sign covers will be the responsibility of the Contractor.

SO OVERLAY TYPE B GUIDE SIGNS
MB INSTALL SPECIAL MOUNTING BRACKET

Install special mounting brackets at the locations identified in the plans. Refer to Tabulations 190-51 and/or 190-65.

PB INSTALL NEW BREAKAWAY STEEL POSTS AND FOOTING
PP INSTALL NEW PERFORATED SQUARE TUBE POSTS AND ANCHORS
PM INSTALL NEW MASSH-400 POSTS AND ANCHORS

Install new breakaway steel posts and footings, perforated square tube posts and anchors, or MASSH-400 posts and anchors at the locations identified in the plans. Refer to the Standard Road Plans, Typicals, and Tabulations 190-51 and 190-50 for post size and footing information.

New posts shall be installed in undisturbed soil. The new posts shall not be placed in the hole of removed posts.

Remove excess soil from footing hole. Do not spread soil on adjacent seeded or vegetated areas.

If note (RR) accompanies (PB), (PP), or (PM), install an existing sign on the new posts.

RR REMOVE AND REINSTALL SIGN AS PER PLAN

Do not remove existing major Type B guide signs on posts until the new posts are installed. Promptly remove sign and install at the new location.

Existing major Type B guide signs on overhead support structures, minor Type B guide signs, plywood signs, and Type A signs may be removed and stored. Transport the signs to a DOT storage area as

259_01
10/15/25

SIGNING NOTES

designated by the Engineer. Transport the signs back to the job site when ready for installation at the new location.

Signs to be reinstalled shall not be stored for any length of time with the sheeted face in contact with the ground.

Replace signs damaged by the Contractor's activities at no additional cost to the Contracting Authority.

Payment for Remove and Reinstall Sign includes sign removal, delivery to and from the DOT storage area (if applicable), and reinstallation, including any hardware required for reinstallation. When noted in the plans, payment for delivery and stockpile of existing signs will be separate from the payment for Remove and Reinstall Sign.

RA REMOVAL OF TYPE A SIGN ASSEMBLY
RB REMOVAL OF TYPE B SIGN ASSEMBLY

Type A Sign Assembly consists of one or more signs installed on one or more posts, either directly mounted to the post or mounted to the post with special sign mounting brackets.

Type B Sign Assembly consists of the main sign, all auxiliary signs and brackets, and posts.

Unless stated otherwise in the plans, remove all posts with the signs and brackets.

Remove each sign assembly identified in the plans. Sign posts removed become the property of the Contractor. All other materials removed remain the property of the DOT.

For each sign assembly removed, disassemble each assembly before delivering to the DOT.

* For Type A sign assemblies, unbolt all signs, special mounting brackets, and posts from each other.

* For Type B assemblies, unbolt all extruded aluminum panels, brackets, and posts from each other. Do not damage the disassembled materials.

When the plans call for the removal of posts, the entire existing post shall be removed. The post shall not be broken off or cut off at the ground line. Place backfill in holes remaining from the removal of posts and restore to the surrounding conditions.

Deliver the removed signs, special sign mounting brackets, and extruded aluminum panels to a DOT storage area, as designated by the Engineer.

The concrete footings for steel posts are not considered part of the sign assembly. Refer to note RF for concrete footing removal.

Payment for Removal of Type A Sign Assembly or Removal of Type B Sign Assembly includes sign assembly removal and disassembly, post removal (if applicable), delivery to the DOT storage area, placing backfill in holes, and restoration of the surrounding conditions.

RF REMOVE EXISTING CONCRETE FOOTING FOR STEEL POST

Remove existing concrete footings to a depth of at least 1 ft below the natural groundline. Place backfill in holes remaining from removal and

259_01
10/15/25

SIGNING NOTES

restore to the normal surrounding conditions. This work is incidental to other work and no separate payment will be made.

RS REMOVE EXISTING TYPE B SIGN SUPPORT STRUCTURE

The following are considered Type B Sign Support Structures:
- Overhead sign trusses and foundations
- Cantilever sign trusses and foundations
- Bridge-mounted brackets

Unless stated otherwise in the plans, existing overhead trusses, cantilever trusses, and bridge brackets which are removed become the property of the Contractor. If stated in the plans, deliver overhead trusses, cantilever trusses, and bridge brackets to a DOT storage area, as designated by the Engineer.

Payment for Removal of Sign Support Structure and Foundation includes sign support structure removal, delivery to the DOT storage area (if applicable), and restoration of the surrounding conditions. Removal of the foundation includes removal of the stem to a minimum of 1 ft below the natural groundline.

L MODIFY SIGN SUPPORT ANGLES NEEDED TO INSTALL SIGNS ON EXISTING SIGN SUPPORT STRUCTURES

Refer to the sign support structure details for information on the required angle brackets.

Provided all specifications are met, the existing sign support angles may be reused. Install existing sign support angles to be reused only on the sign support structure from which they were removed.

Sign support angles removed and not reused become the property of the Contractor.

When reusing the existing sign support angles with a shorter replacement sign, the sign support angles may need to be trimmed. Refer to the sign support details to determine if and where to trim the sign support angles.

Do not use existing fasteners. Use new U-Bolts, stainless steel bolts and nuts to install the existing or new sign support angles to the sign support structure.

Removal of existing sign support angles is incidental to removal of the sign.

Reinstalling and/or modifying existing sign support angles; furnishing and installing new sign support angles (if required); and furnishing and installing new fasteners is incidental to work associated with Type B signs.

SIGN INSTALLATION QUALITY CONTROL NOTES

Post lengths have been derived from the proposed grading cross sections. Verify post lengths in the field prior to ordering or fabrication.

Slight differences between the design template and the actual conditions should be expected. These variations should be resolved by doing some localized shaping and grading. Obtain material needed to meet the site requirements of SI-112 from the excavation and/or the area immediately adjacent to the work. Ensure reshaping work does not substantially change foreslopes or the drainage in the vicinity of the sign.

Significant differences between the plan design and the

259_01
10/15/25

SIGNING NOTES

actual field conditions shall be resolved in this manner:

Survey the location and draw the actual template on the cross section. Recalculate each post length and compare to the maximum allowable leg length. If all of the maximum leg lengths are less than or equal to the maximum allowable leg length, then the proposed post design will be sufficient. If any leg is greater than the maximum allowable leg length, then submit the cross section with the actual template drawn (including offsets and elevation from the survey shown) to the Engineer. The Engineer may forward this information to the Engineer of Record in order to complete a new post design.

Install the footings, stub posts, and posts according to the tolerances shown on the applicable SI Series Standard Road Plans.

Footing construction is the controlling activity that substantially affects the quality of the site installation. Verify the elevation difference between the stubs is exactly the same as the elevation difference between the post lengths. If the Engineer requests, submit documentation detailing the site cross section in order to verify site installation.

262_06
9/28/22

UTILITIES (NOT A POINT 25 PROJECT)

This is NOT a POINT 25 project and is not subject to the provisions of IAC 761-115.25.

281_01
9/28/22

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers Nationwide, Permit No. 14. A copy of this permit is available from the Iowa DOT website (http://www.envpermits.iowadot.gov/). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

282_03
9/28/22

TEMPORARY STREAM CROSSING, CAUSEWAY, OR EQUIPMENT PAD

Standard Road Plan EW-401 is listed in Tabulation 105-4; however, it is included for information purposes only since it is an option. No quantities associated with constructing EW-401 are included in any bid items.

UTILITIES

Line No.	Company	Contact	Phone	Email
1.0	Alliant Energy	Dean Colony	319-786-1905	DeanColony@alliantenergy.com
2.0	International Transmission	Chad Levi	319-297-6765	clevi@Itctransco.com
3.0	Mediacom	Donald Bergthold	319-351-0408	dbergthold@mediacomcc.com
4.0	MidAmerican Gas-Distribution	Joseph Retek	319-341-4457	joseph.retek@midamerican.com
5.0	MidAmerican Gas-Transmission	William Barry	319-298-5146	william.barry@midamerican.com
6.0	Segra (formerly UPN)	James Keegan	319-304-5597	James.Keegan@segrafiber.com
7.0	South Slope Telephone	Randy Cline	319-665-5316	randy@southslope.com
8.0	Uniti - CLEC (formerly Windstream Enterprise)	Stephen Kness	319-538-1985	Stephen.Kness@uniti.com
9.0	Uniti - ILEC (formerly Windstream Communications)	Trae Bodensteiner	614-840-5500	trae.bodensteiner@uniti.com

110_13
8/15/22

DELIVERY AND STOCKPILING

Line No.	Item Description	Quantity	Quantity Units	Delivery Location	Contact Name	Contact Number	Remarks
1.0	Existing Signs Removed						Contractor to coordinate with DOT and City.

PROPOSED POSTED SPEED LIMIT

Line No.	Roadway Identification	Station From	Station To	Proposed Posted Speed	Remarks
1.0	USH 6	177+80.35	201+08.86	35 or less	Speed limit reduced from 45 mph to 35 mph.

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	180+87.82	188+52.82	Both	HMA and PCC	4202.7	217.6	Stage 1: USH 6, Croell Ave
2.0	188+52.82	210+07.02	Both	HMA and PCC	11378.3	339.0	Stage 2A: USH 6, Croell Ave, Kimberlite St
3.0	188+37.82	188+52.82	Right	HMA and PCC	59.7	110.9	Stage 2B: Croell Ave exsiting pavement
4.0	170+25.26	180+87.82	Both	HMA and PCC	5044.9	300.9	Stage 3A: USH 6, Main, Summerhays, Stephans St
Total:					**20685.6**	**968.4**	

REMOVAL OF EXISTING STRUCTURES

Line No.	Location	Description	Remarks
1.0	STA 177+80	10'x6' RCB End Sections	USH 6
2.0	STA 201+67	6'x3'x55'-0" RCB	USH 6
3.0	STA 204+84	60" RCP	USH 6
4.0	STA 204+93	8'x5'x51' RCB	USH 6
5.0	STA 205+01	60" RCP	USH 6

SIDEWALK REMOVAL

* Not a bid item

Line No.	Station From	Station To	Area (SY)	Saw Cut* (LF)	Remarks
1.0	188+81.87	188+86.87	3.1	5.0	Stage 2A
2.0	194+69.54	195+04.60	40.9	15.0	Stage 2A
3.0	195+58.90	196+21.74	73.8	22.4	Stage 2A
4.0	167+54.47	168+64.91	75.7	36.4	Stage 3A
5.0	168+96.60	170+49.23	112.6	29.7	Stage 3A
6.0	170+73.88	172+26.16	115.2	18.7	Stage 3A
7.0	172+57.12	172+69.50	21.9	14.4	Stage 3A
8.0	175+54.54	175+63.82	7.9	12.1	Stage 3A
9.0	175+92.40	176+01.38	8.5	11.5	Stage 3A
10.0	180+17.19	180+23.57	7.5	10.3	Stage 3A
11.0	180+16.09	180+24.60	6.9	14.4	Stage 3A
12.0	162+12.07	162+44.96	37.3	27.6	Stage 3B
13.0	163+12.64	175+81.63	624.7	99.1	Stage 3B
Total:			**1136**	**316.6**	

110_07A
8/15/22

REMOVAL OF STEEL BEAM GUARDRAIL

(1) Lane(s) to which the installation is adjacent.
(2) Includes length of End Terminals and End Anchors.

Line No.	No.	Direction of Traffic (1)	Station From	Station To	Side	Removal of Guardrail (2) (LF)
1.0		EB	203+27.13	204+76.18	Right	149.0
2.0		WB	205+09.97	206+58.83	Left	149.0
3.0		EB	205+10.80	206+58.37	Right	148.0
Total:						**446**

110_08
8/15/22

REMOVAL OF CONCRETE DRIVES

* Not a Bid Item.

Line No.	Station	Side	Area (SY)	Saw Cut* (LF)	Remarks
1.0	165+53.43	Left	151.0	141.1	Stage 3B: Shared Drive, 210 and 230 W Marengo Rd
2.0	167+52.37	Left	27.3	37.4	Stage 3B: Residential Drive, 200 W Marengo Rd
3.0	167+72.04	Right	25.1	36.9	Stage 3A: Residential Drive, 341 Grant St
4.0	168+41.67	Left	28.4	37.9	Stage 3B: Residential Drive, 120 W Marengo Rd
5.0	170+61.43	Right	116.5	22.8	Stage 3A: Alleyway
6.0	170+78.88	Left	28.2	49.9	Stage 3B: Residential Drive, 110 W Marengo Rd
7.0	172+34.94	Left	8.7	12.0	Stage 3B: Residential Drive 100 W Marengo Rd
Total:			**385.2**	**338**	

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 170+21 to 172+48, LT	Storm Sewer - Removal	228.0				18 in. RCP
2.0	STA 175+52 to 175+95, RT	Storm Sewer - Removal	44.0				12 in. RCP
3.0	STA 180+00 to 180+31, LT	Storm Sewer - Removal	32.0				18 in. RCP
4.0	STA 180+33 to 180+62, LT	Storm Sewer - Removal	30.0				18 in. RCP
5.0	STA 180+64 to 181+00, LT	Storm Sewer - Removal	38.0				18 in. RCP
6.0	STA 188+73 to 188+82, LT	Storm Sewer - Removal	15.0				30 in. RCP
7.0	STA 188+82 to 189+19, LT	Storm Sewer - Removal	37.0				30 in. RCP
8.0	STA 194+54 to 196+06, RT	Storm Sewer - Removal	152.0				24 in. RCP
9.0	STA 194+64 to 198+32, LT	Storm Sewer - Removal	368.0				30 in. RCP
Total:			**944**				

110_15
8/15/22

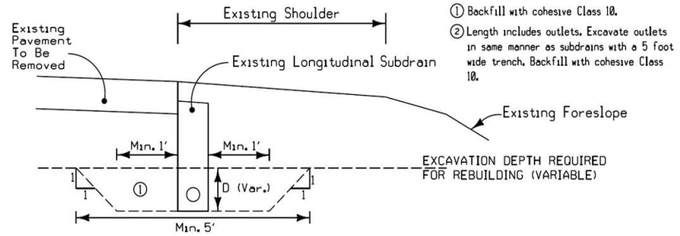
REMOVAL OF INTAKES AND UTILITY ACCESSES

Line No.	Item No.	Location Description	Type	Remarks
1.0	1	STA 172+13.06, 28.2' RT	Intakes	Subdrain Cleanout Type B
2.0	2	STA 172+57.23, 32.7' RT	Utilities	Water Main Valve
3.0	3	STA 172+60.22, 36.0' RT	Utilities	Water Main Valve
4.0	4	STA 172+65.42, 26.4' RT	Intakes	Subdrain Cleanout Type B
5.0	5	STA 175+52.06, 24.6' RT	Intakes	Area Intake
6.0	6	STA 175+93.67, 28.3' RT	Intakes	Area Intake
7.0	7	STA 180+31.33, 38.2' LT	Intakes	Curb Intake
8.0	8	STA 180+64.19, 46.3' LT	Intakes	Curb Intake
9.0	9	STA 184+02.02, 31.6' RT	Utilities	Water Main Valve
10.0	10	STA 188+69.78, 69.22' RT	Intakes	Curb Intake
11.0	11	STA 188+81.95, 58.5' LT	Intakes	Storm Manhole
12.0	12	STA 194+54.47, 48.4' RT	Intakes	Area Intake
13.0	13	STA 194+61.5, 42.5' LT	Intakes	Area Intake

Totals:
Removal of Intakes and Utility Accesses = 10 EACH
Valve Removal, 6 in. = 3 EACH

REMOVAL OF EXISTING LONGITUDINAL SUBDRAINS WHEN EXISTING PAVEMENT IS REMOVED

See Tab 104-9 for tabulation of longitudinal subdrains



① Backfill with cohesive Class 10.

② Length includes outlets. Excavate outlets in same manner as subdrains with a 5 foot wide trench. Backfill with cohesive Class 10.

* Not a bid item.

Line No.	Roadway Identification	Station From	Station To	Side	Length (2) (LF)	Depth (D) (FT)	Excavation Quantity* (CY)	Remarks
1.0	USH 6	172+01.19	172+31.46	Right	58.7	1.3	10.46	Subdrain at intersection with Main St
2.0	USH 6	172+55.24	172+82.71	Right	56.0	1.3	9.98	Subdrain at intersection with Main St
3.0	USH 6	175+38.61	175+68.65	Right	56.9	1.3	10.14	Subdrain at intersection with Summerhays St
4.0	USH 6	175+90.86	176+18.37	Right	55.2	1.3	9.83	Subdrain at intersection with Summerhays St
5.0	USH 6	1+85.00	188+14.50	Right	315.1	1.5	61.27	Subdrain under shoulder
6.0	USH 6	187+83.37	188+31.77	Left	73.1	1.3	13.02	Subdrian at intersection with Croell Ave
7.0	USH 6	188+64.92	189+03.16	Left	56.0	1.3	9.98	Subdrian at intersection with Croell Ave
8.0	USH 6	188+86.83	194+68.87	Right	582.8	1.5	113.32	Subdrain under shoulder
9.0	USH 6	194+62.70	194+96.22	Left	74.1	1.3	13.20	Subdrain at intersection with Kimberlite St
10.0	USH 6	194+74.67	195+08.17	Right	64.6	1.3	11.51	Subdrain at intersection with Kimberlite St
11.0	USH 6	195+43.22	195+76.71	Left	62.0	1.3	11.05	Subdrain at intersection with Kimberlite St
12.0	USH 6	195+55.17	195+88.67	Right	77.7	1.3	13.84	Subdrain at intersection with Kimberlite St
13.0	USH 6	195+88.93	204+73.44	Right	884.9	1.5	172.06	Subdrain under shoulder
14.0	USH 6	205+12.65	210+06.83	Right	496.2	1.5	96.48	Subdrain under shoulder
15.0	USH 6	206+09.62	210+07.21	Left	397.5	1.5	77.29	Subdrain under shoulder
Total:					**3310.8**		**633.43**	

ROADWAY ITEMS FOR DRAINAGE STRUCTURES INSTALLED BY CULVERT CONTRACTOR

* Not a Bid Item
(1) Backfill according to DR-111

Location	Design No.	Size	Kind	Dike Lt.	Dike Rt.	Dike Station	Dike Top Elevation	Dike Type	Compacting Backfill Adjacent (CY)	Compaction w/ Moisture Control (CY)	Compaction w/ Moisture and Density (CY)	Floodable Backfill* (A) (CY)	Porous Backfill* (B) (CY)	Flooded Backfill (1) (A+B) (CY)	Excavation Type	Excavation Quantity (CY)	Revetment Type	Revetment Quantity (TONS)	Engineering Fabric (SY)	Remarks
177+84.40	327	S 10'X6' Ext.	RCB						20.0			18.3	1.7	20.0	Class 10 Channel	227.0	Class E	338.000	342.0	See Sheet V.3.
201+60.18	427	S 6'X3'X 97'	RCB						30.0			96.7	2.9	99.6	Class 10 Channel	99.0	Class E	147.000	149.0	See Sheet V.10.
204+92.77	527	T 10'X6'X 95'	RCB						44.0			93.3	3.1	96.4						Refer to Tied Project No. BRF-006-7(102)--38-52.
Total:									**94**					**216**		**326**		**485**	**491**	

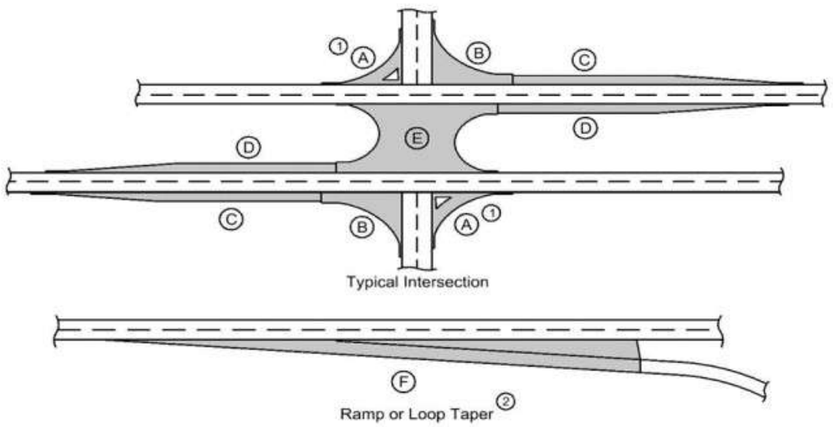
CURB AND GUTTER

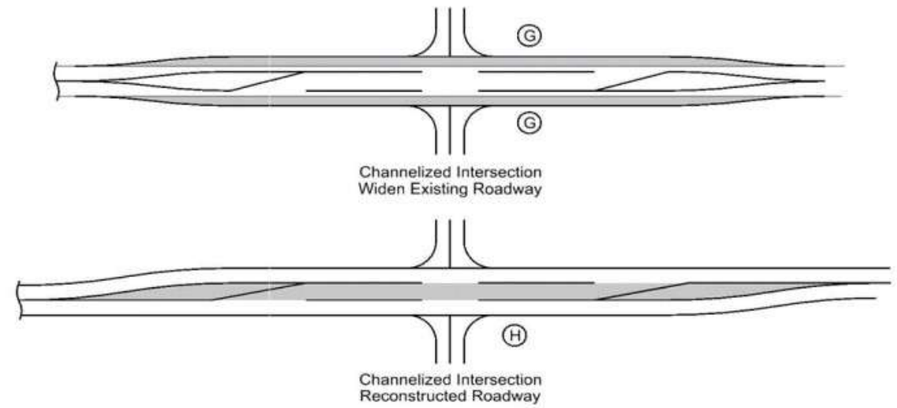
Refer to PV-102

Line No.	Station From	Station To	Side	Length (LF)	Width (LF)	Width 1.5 (LF)	Width 2.0 (LF)	Width 2.5 (LF)	Width 3.0 (LF)	Width 3.5 (LF)	Width 4.0 (LF)	Width 4.5 (LF)	Width 5.0 (LF)	Width 5.5 (LF)	Modified Subbase (CY)	Special Backfill (TON)	Remarks
1.0	188+61.02	188+69.72		18.50	3.5					18.50							Stage 2A
2.0	165+48.42	165+58.45		10.03	3.5					10.03							Stage 3B
3.0	170+22.74	170+66.15		43.41	3.5					43.41							Stage 3B
4.0	170+91.43	170+98.86		7.70	3.5					7.70							Stage 3B
Total:										**79.64**							

Includes 12.9 CY of Modified Subbase.
3.5 CY in Stage 2A
9.4 CY in Stage 3B

PCC PAVEMENT

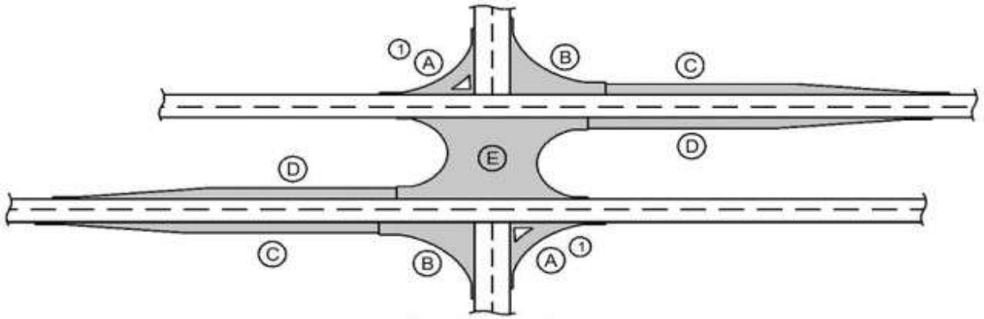




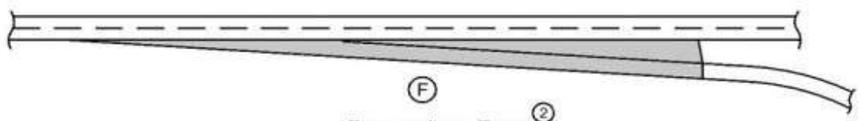
(1) Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
(2) Refer to PV-410, PV-411, PV-412, and PV-414.
(3) Quantity includes Pavement Header.

Line No.	Road Identification	Direction of Travel	Station From	Station To	Width (FT)	Length (FT)	Area (SY)	Area by Thickness - Thickness(IN)	Area by Thickness - Area (SY)	Polymer Grid (SY)	Special Backfill (TON)	Modified Subbase (CY)	Granular Subbase (SY)	Remarks
1.0	Stage 1	Both	180+87.82	188+52.82		765.00	4614.50	10.0				856.19		
2.0	Satge 2A	Both	188+52.82	210+07.17		2154.35	14072.18	10.0				2588.62		
3.0	Stage 2B	EB	188+37.83	188+55.15		17.32	59.05	10.0				9.95		
4.0	Stage 3A	Both	170+98.86	180+87.82		988.96	5524.62	10.0				1034.83		
Total:							**24270.35**					**4489.59**		

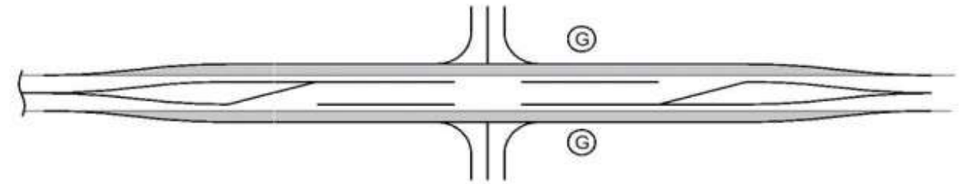
HMA PAVEMENT



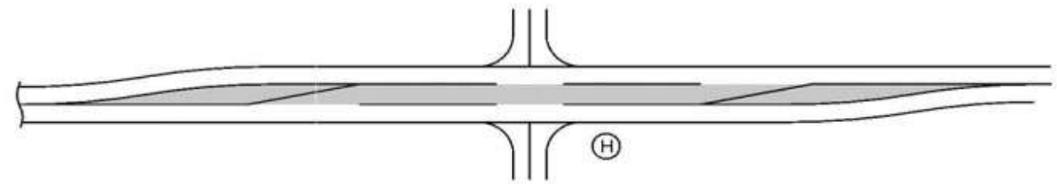
Typical Intersection



Ramp or Loop Taper (2)



Channelized Intersection
Widen Existing Roadway



Channelized Intersection
Reconstructed Roadway

(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.

Road Identification	Direction of Travel	Station From	Station To	Width (FT)	Length (FT)	Area (SY)	HMA Pavement Surface (TONS)	HMA Pavement Surface (SY)	HMA Pavement Intermediate (TONS)	HMA Pavement Intermediate (SY)	HMA Pavement Base (TONS)	HMA Pavement Base (SY)	Binder Surface (TONS)	Binder Intermediate (TONS)	Binder Base (TONS)	Polymer Grid (SY)	Special Backfill (TONS)	Modified Subbase (CY)	Granular Subbase (SY)	Remarks
TEMPORARY HMA PAVEMENT																				
USH 6	EB	188+67.73	188+78.15		10.42	19.48		19.48		19.48		19.48					6.140			Stage 1: Place over 6 in. of special backfill.
USH 6	EB	180+76.61	180+87.82		11.21	4.96		4.96		4.96		4.96					1.560			Stage 2C: Place over 6 of special backfill.
Total:						**24.44**														

Calculations assume a surface course unit weight (lbs/cf) of 155, an intermediate course unit weight (lbs/cf) of 150, a base course unit weight (lbs/cf) of 150, and a special backfill unit weight (lbs/cf) of 140.

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe.
(1) Refer to MI-210.
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.
*Predetermined for access point not constructed with this project.

Line No.	Station	Side	Access Type	Descriptor	Case	Curb Type	Curb Length (1) (LF)	Width (FT)	PR (1) (2) (FT)	SR (2) (FT)	Pipe Culvert (H) (3) (FT)	Pipe Culvert Size (3) (IN)	Culvert Length (3) (LF)	Pipe Culvert Lt. (3) (LF)	Pipe Culvert Rt. (3) (LF)	Driveway Surface Type	Driveway Surface Area (SY)	Driveway Surfacing Material (TON)	Remarks
1.0	165+23.00	Left	C		1	1.5 inch Dropped	47.9	30.0	10.0							PCC	34.2		230 W. Marengo Rd. Match existing thickness.
2.0	165+88.00	Left	C		1	1.5 inch Dropped	58.1	40.0	10.0							PCC	42.6		210/230 W. Marengo Rd. Match existing thickness.
3.0	167+53.00	Left	C		2	1.5 inch Dropped	26.2	21.0								PCC	17.5		200 W. Marengo Rd. Match existing thickness.
4.0	167+72.00	Right	C		2	1.5 inch Dropped	25.5	15.1								PCC	15.1		341 Grant St. Match existing thickness.
5.0	168+42.00	Left	C		2	1.5 inch Dropped	26.6	21.0								PCC	18.6		120 W. Marengo Rd. Match existing thickness.
6.0	170+61.00	Right		Alley	1	1.5 inch Dropped	73.6	24.8	20.0							PCC	76.0		Alley. Match existing thickness.
7.0	170+78.00	Left	C		2	1.5 inch Dropped	25.3	20.1								PCC	19.7		110 W. Marengo Rd. Match existing thickness.
8.0	172+35.00	Left	C		2	1.5 inch Dropped	17.0	11.9								PCC	8.3		100W Marengo Rd. Match existing thickness.
9.0	204+11.00	Left	C		1	1.5 inch Dropped	69.8	28.3	25.0		2.0	18.0	73.0	36.50	36.50	Other	38.7	18.100	PCC and Granular. 2852 US-6. 6 in. thickness.
10.0	208+46.00	Left	C		1	1.5 inch Dropped	63.7	18.0	25.0		1.0	18.0	64.0	32.00	32.00	Other	48.9	6.400	PCC and Granular. Field access. 6 in. thickness.
Total:																	**319.6**	**24.5**	

See U Sheets and Tab 110-08 for removal limits.
Includes 53.3 CY Modified Subbase. Subbase thickness shall be 6 inches.

Totals:
Modified Subbase = 53.3 CY
Surfacing, Driveway, Class C Gravel = 24.5 TON
Driveway, P.C. Concrete, 6 in. = 319.6 SY

FULL-DEPTH PATCHES

Line No.	Count	Station	Reference Location Sign	Direction of Travel	Side	Length (FT)	Width (FT)	Patch Thicknes s (IN)	Patch Repair or Finish	PCC Patch Type	PCC Patch Quantity (SY)	HMA Patches (SY)	Composite HMA (TON)	Subbase Patches (PR-140) (SY)	Subbase Patch with 'EF' Joint (PR-101) (SY)	Patch Subdrain PR-101 or PR-140 (No.)	'CD' Joints (No.)	'CT' Joints (No.)	'EF' Joints PR-101 (No.)	Anchor Lugs Removal (No.)	Remarks
1.0	1	165+54.00		2-Lane	Left	116.0	3.0	10.0	Finish	PCC With Dowels (PR-103)	38.7										For driveway replacement curb and gutter sections.
2.0	1	167+52.00		2-Lane	Left	26.2	3.0	10.0	Finish	PCC With Dowels (PR-103)	8.8										For driveway replacement curb and gutter sections.
3.0	1	167+72.00		2-Lane	Right	25.5	3.0	10.0	Finish	PCC With Dowels (PR-103)	8.5										For driveway replacement curb and gutter sections.
4.0	1	168+42.00		2-Lane	Left	26.6	3.0	10.0	Finish	PCC With Dowels (PR-103)	8.9										For driveway replacement curb and gutter sections.
5.0	1	170+62.00		2-Lane	Right	73.6	3.0	10.0	Finish	PCC With Dowels (PR-103)	24.5										For driveway replacement curb and gutter sections.
6.0	1	170+79.00		2-Lane	Left	25.3	3.0	10.0	Finish	PCC With Dowels (PR-103)	8.4										For driveway replacement curb and gutter sections.
Total:	**6**										**97.8**										

Totals:
Patches, Full-Depth Finish, by Area = 34.6 SY
Patches, Full-Depth Finish, by Area (50 Feet or Greater in Length) = 63.2 SY
Patches, Full-Depth Finish, by Count = 6 EACH

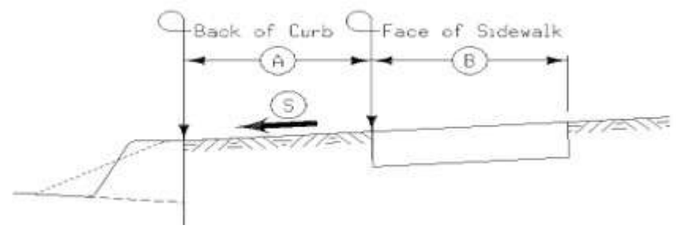
SHOULDERS

(1) Lane(s) to which the shoulder is adjacent.
(2) See Typ. 7156, 7157, or 7158.
(3) Bid Item.
(4) Applies only for Paved Shoulders constructed on project with existing granular shoulders.
(5) Bid Item. Typ. 7156, 7157, or 7158.
(6) Does not include shrink.
(7) Paved shoulder thickness specified in Remarks.
(8) Subbase type specified in Remarks.

Roadway Identification	Direction of Travel (1)	Station From	Station To	Side	Class 13 Excavation (CY)(3)(4)	Granular Shoulder (3) (TON)	Granular Shoulder (TON/STA)	Shoulder Const. Alt (3) (STA)	Shoulder Const. Alt HMA (6) (CY)	Shoulder Const. Alt PCC (6) (CY)	Remarks
USH 6	EB	171+00.00	172+28.08					1.56			
USH 6	EB	172+58.71	175+65.16					3.58			
USH 6	EB	175+94.36	180+33.27					4.90			
USH 6	EB	180+62.42	184+56.80					4.46			
USH 6	EB	184+77.80	188+31.26					4.19			
USH 6	EB	188+67.73	195+04.67					6.93			
USH 6	EB	195+58.67	208+46.93					13.68			
USH 6	EB	208+72.39	210+06.85					1.74			
USH 6	WB	171+00.00	180+32.18					9.64			
USH 6	WB	180+62.31	188+28.26					8.17			
USH 6	WB	188+68.44	194+92.72					6.79			
USH 6	WB	195+46.72	201+76.83					6.57			
USH 6	WB	201+93.49	203+92.32					1.99			
USH 6	WB	204+29.58	208+35.37					3.65			
USH 6	WB	208+59.20	210+07.21					1.47			
Total:								**79.32**			

SIDEWALKS

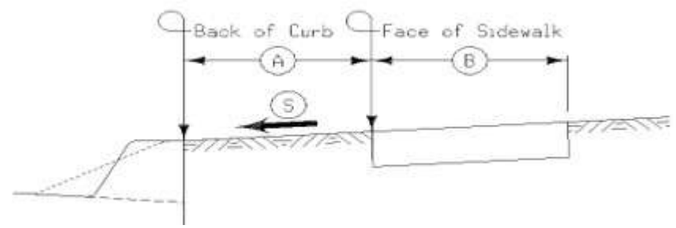
See MI-220 and S Sheets



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	USH 6	162+13.13	162+41.39	Left		8.0		6			225.6		25.1			33.0	Ramp at Roberts Ferry St
2.0	USH 6	162+29.72	162+44.96	Left		6.0		4			110.6	12.3					Match existing sidewalk at Roberts Ferry St
3.0	USH 6	163+12.95	163+25.97	Left		6.0		6			70.1		7.8			12.0	Ramp at Roberts Ferry St
4.0	USH 6	163+12.60	163+23.05	Left		5.0		4			77.6	8.6					Match existing sidewalk at Roberts Ferry St
5.0	USH 6	163+21.83	163+41.65	Left		5.0		4			110.2	12.2					
6.0	USH 6	163+39.74	163+46.99	Left		6.0		6			67.5		7.5			12.0	Ramp at Roberts Ferry St
7.0	USH 6	163+45.61	169+03.17	Left		5.0		4			2787.7	309.7					
8.0	USH 6	169+03.17	169+09.17	Left		6.0		6			57.8		6.4			12.0	Ramp at Grant St
9.0	USH 6	169+09.17	172+47.96	Left		5.0		4			1691.0	187.9					
10.0	USH 6	172+47.96	172+52.85	Left		5.0		4			23.4	2.6					Transition from 5' to 6' width.
11.0	USH 6	172+51.55	176+01.30	Left		6.0		4			2056.1	228.5					
12.0	USH 6	176+01.30	176+05.35	Left		6.0		4			24.8	2.8					Transition from 6' to 5' width.
13.0	USH 6	176+05.35	180+17.05	Left		5.0		4			2075.6	230.6					
14.0	USH 6	180+17.05	180+22.99	Left		6.0		6			65.9		7.3			12.0	Ramp at Stephans St
15.0	USH 6	180+16.92	180+22.95	Left		6.0		4			29.4	3.3					
16.0	USH 6	188+08.18	188+14.15	Left		6.0		4			85.6	9.5				12.0	Ramp at Croell Ave
17.0	USH 6	188+08.18	188+25.75	Left		6.0		6			98.2		10.9			12.0	Ramp at Croell Ave
18.0	USH 6	188+08.18	188+14.15	Left		6.0		4			39.7	4.4					
19.0	USH 6	188+76.75	188+91.89	Left		6.0		6			91.4		10.2			33.0	Ramp at Croell Ave
20.0	USH 6	188+80.86	188+86.86	Left		6.0		4			117.3	13.0					
21.0	USH 6	188+91.89	194+70.09	Left		6.0		4			2785.8	309.5					
22.0	USH 6	194+70.09	194+75.10	Left		5.0		6			71.5		7.9			10.0	Ramp at Kimberlite St
23.0	USH 6	194+75.10	194+88.20	Left		6.0		4			142.9	15.9					
24.0	USH 6	194+82.20	194+92.71	Left		5.0		6			52.5		5.8			10.0	Ramp at Kimberlite St
25.0	USH 6	194+82.23	194+88.23	Left		6.0		4			101.9	11.3					
26.0	USH 6	195+47.43	195+57.71	Left		5.0		6			47.8		5.3			10.0	Ramp at Kimberlite St
27.0	USH 6	195+53.71	195+58.71	Left		6.0		4			85.2	9.5					
28.0	USH 6	195+57.70	195+76.71	Left		5.0		4			125.3	13.9					
29.0	USH 6	195+76.71	195+81.71	Left		5.0		6			75.0		8.3			10.0	Ramp at Kimberlite St
30.0	USH 6	195+81.71	215+88.27	Left		5.0		4			10068.4	1118.7					
31.0	USH 6	167+54.44	168+57.17	Right		5.0		4			613.3	68.1					
32.0	USH 6	168+57.17	168+64.72	Right		6.0		6			44.1		4.9			12.0	Ramp at Grant St
33.0	USH 6	168+52.03	168+58.15	Right		5.0		4			55.2	6.1					Match existing sidewalk at Grant St
34.0	USH 6	169+03.42	169+09.14	Right		6.0		4			29.2	3.2					Match existing sidewalk at Grant St
35.0	USH 6	168+96.57	169+09.14	Right		6.0		6			77.1		8.6			12.0	Ramp at Grant St
36.0	USH 6	169+03.14	169+09.14	Right		6.0		6			61.6		6.8			12.0	Ramp at Grant St
37.0	USH 6	169+09.14	172+13.77	Right		6.0		4			1863.3	207.0					
38.0	USH 6	172+13.77	172+25.95	Right		6.0		6			69.7		7.7			12.0	Ramp at Main St
39.0	USH 6	172+13.77	172+22.46	Right		6.0		4			131.6	14.6					Match existing sidewalk at Main St
40.0	USH 6	172+57.81	172+67.41	Right		6.0		6			53.4		5.9			12.0	Ramp at Main St
41.0	USH 6	172+61.38	172+69.50	Right		6.0		4			124.0	13.8					Match existing sidewalk at Main St
42.0	USH 6	172+67.41	172+72.80	Right		6.0		4			26.9	3.0					Transition from 6' to 5' width.
43.0	USH 6	172+71.80	175+50.18	Right		5.0		4			1221.8	135.8					
44.0	USH 6	175+50.18	175+59.32	Right		5.0		6			35.4		3.9			13.3	Ramp at Summerhays St
45.0	USH 6	175+50.18	175+60.15	Right		5.0		4			84.3	9.4					Match existing sidewalk at Summerhays St

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
46.0	USH 6	175+96.35	176+06.65	Right		5.0		4			106.2	11.8					Match existing sidewalk at Summerhays St
47.0	USH 6	175+97.65	176+06.65	Right		5.0		6			34.7		3.9			13.3	Ramp at Summerhays St
48.0	USH 6	176+06.65	180+16.59	Right		5.0		4			1525.2	169.5					
49.0	USH 6	180+16.59	180+22.61	Right		6.0		6			53.4		5.9			12.0	Ramp at Stephans St
50.0	USH 6	180+22.61	180+29.45	Right		5.0		6			24.8		2.8			10.0	Ramp at Stephans St
51.0	USH 6	180+16.59	180+22.59	Right		6.0		4			24.3	2.7					Match existing sidewalk at Stephans St
52.0	USH 6	180+66.25	180+80.77	Right		5.0		6			63.1		7.0			10.0	Ramp at Stephans St
53.0	USH 6	180+80.77	184+43.80	Right		5.0		4			1819.9	202.2					
54.0	USH 6	184+43.80	184+53.61	Right		5.0		6			42.5		4.7			10.0	Ramp at unnamed street
55.0	USH 6	184+43.80	184+48.80	Right		5.0		4			99.0	11.0					
56.0	USH 6	184+77.89	184+90.62	Right		5.0		6			62.0		6.9			10.0	Ramp at unnamed street
57.0	USH 6	184+90.62	188+08.68	Right		5.0		4			1606.6	178.5					
58.0	USH 6	188+08.68	188+13.68	Right		5.0		6			70.7		7.9			10.0	Ramp at Croell Ave
59.0	USH 6	188+13.68	188+27.74	Right		5.0		6			63.7		7.1			10.0	Ramp at Croell Ave
60.0	USH 6	188+69.09	188+86.89	Right		5.0		6			82.2		8.9			10.0	Ramp at Croell Ave
61.0	USH 6	188+86.89	188+91.89	Right		5.0		6			74.1		8.2			10.0	Ramp at Croell Ave
62.0	USH 6	188+91.89	194+35.10	Right		5.0		4			2727.3	303.0					
63.0	USH 6	194+35.10	194+55.10	Right		5.0		4			130.0	14.4					Transition from 5' to 8' width.
64.0	USH 6	194+55.10	194+70.10	Right		8.0		4			119.9	13.3					
65.0	USH 6	194+70.10	194+75.11	Right		5.0		6			90.2		10.0			10.0	Ramp at Kimberlite St. Match existing sidewalk.
66.0	USH 6	194+75.11	195+02.17	Right		8.0		6			198.3		22.0			16.0	Ramp at Kimberlite St
67.0	USH 6	195+58.67	195+81.73	Right		8.0		6			181.6		20.2			16.0	Ramp at Kimberlite St
68.0	USH 6	195+76.73	195+81.73	Right		5.0		6			102.1		11.4			10.0	Ramp at Kimberlite St
69.0	USH 6	195+81.73	196+21.74	Right		8.0		4			378.3	42.0					Match existing sidewalk at Kimberlite St
70.0	USH 6	196+76.69	199+29.21	Right		8.0		4			2020.3	224.5					Match existing sidewalk at Kimberlite St
71.0	USH 6	199+29.21	199+39.35	Right		8.0		4			63.2	7.0					Transition from 8' to 5' width.
72.0	USH 6	199+39.35	208+32.19	Right		5.0		4			4489.9	498.9					
73.0	USH 6	208+32.19	208+44.75	Right		5.0		6			56.5		6.3			10.0	Ramp at park entrance
74.0	USH 6	208+74.49	209+12.62	Right		5.0		6			184.8		20.5			10.0	Ramp at park entrance
75.0	USH 6	209+07.66	209+12.74	Right		5.0		4			230.7	25.6					
76.0	USH 6	209+07.81	209+12.76	Right		5.0		6			25.1		2.8			10.0	Ramp at parking lot
Total:												**4669.6**	**296.8**			**438.6**	

Includes 552 CY of Special Backfill. Backfill thickness shall be 4 inches beneath the sidewalk.

108_13A
3/27/25

SAFETY CLOSURES

Refer to Section 2528 of the Standard Specifications

Station	Road Closure Qty.	Hazard Closure Qty.	Remarks
180+78.00	1		Stage 1: USH 6 east of Stephans St
188+37.00	1		Stage 1: Croell Ave south of USH 6
188+38.00	1		Stage 1: Croell Ave north of USH 6
188+57.00	1		Stage 1: USH 6 at Croell Ave
188+51.00	1		Stage 2A: USH 6 at Croell Ave
188+62.00	1		Stage 2A: Croell Ave north of USH 6
188+62.00	1		Stage 2A: Croell Ave south of USH 6
195+23.00	1		Stage 2A: Kimberlite St north of USH 6
195+32.00	1		Stage 2A: Kimberlite St south of USH 6
208+60.00	1		Stage 2A: Entrance 809 E Morengo Rd south of USH 6
215+55.00	1		Stage 2A: NW corner of N Park Rd and USH 6
170+61.00	1		Stage 3A: Alleyway south of USH 6
170+92.00	1		Stage 3A: USH 6 east of Alleyway
172+43.00	1		Stage 3A: Main St south of USH 6
175+80.00	1		Stage 3A: Summerhays St south of USH 6
180+47.00	1		Stage 3A: Stephans St north of USH 6
180+48.00	1		Stage 3A: Stephans St south of USH 6
180+93.00	1		Stage 3A: USH 6 east of Stephans St
Total:	**18**		

PAVEMENT MARKING LINE TYPES

Line factors based on 6-inch wide continuous line.
*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - Estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY6 - Factor of 1.00 includes number of 6-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.17
BCY6: Broken Centerline (Yellow) @ 0.25
BLC6: Broken Line Contrast (White/Black) @ 0.50
BLW4: Broken Lane Line (White) @ 0.17
BLW6: Broken Lane Line (White) @ 0.25
CBW6: Crosswalk Bar (White) @ 10.00
CHW8: Channelizing Line (White) @ 1.33
CHW10: Channelizing Line (White) @ 1.67
CHY8: Channelizing Line (Yellow) @ 1.33
CHY10: Channelizing Line (Yellow) @ 1.67
CLW6: Crosswalk Line (White) @ 2.00
DCY4: Double Centerline (Yellow) @ 1.34
DCY6: Double Centerline (Yellow) @ 2.00
DDY4: Double Dotted Line (Yellow) @ 0.44
DDY6: Double Dotted Line (Yellow) @ 0.67
DLW4: Dotted Line (White) @ 0.22
DLW6: Dotted Line (White) @ 0.33
DLY4: Dotted Line (Yellow) @ 0.22
DLY6: Dotted Line (Yellow) @ 0.33
ELW4: Edge Line Right (White) @ 0.67
ELW6: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 0.67
ELY6: Edge Line Left (Yellow) @ 1.00
LDW8: Lane Drop (White) @ 0.33
LDW10: Lane Drop (White) @ 0.42
MNY6: Median Nose (Yellow) @ 1.00
NPY4: No Passing Zone Line (Yellow) @ 0.84
NPY6: No Passing Zone Line (Yellow) @ 1.25
RLW4: Ramp Edge Line Right (White) @ 0.67
RLW6: Ramp Edge Line Right (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 0.67
RLY6: Ramp Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 4.00
SLW4: Solid Lane Line (White) @ 0.67
SLW6: Solid Lane Line (White) @ 1.00
SPW4: Sloped Curb 4" (White) @ 2.16
SPW6: Sloped Curb 6" (White) @ 2.28
SPY4: Sloped Curb 4" (Yellow) @ 2.16
SPY6: Sloped Curb 6" (Yellow) @ 2.28
STW6: Standard Curb 6" (Yellow) @ 2.03
STY6: Standard Curb 6" (Yellow) @ 2.03
YLW2: Yield Line (White) @ 1.15

Line No.	Road ID	Station From	Station To	Line Length (STA)	Lane	Marking Type	Left	Center	Right	Groove Marking Needed?	CBW6 (STA)	CBW6 Factored (STA)	CHY10 (STA)	CHY10 Factored (STA)	CLW6 (STA)	CLW6 Factored (STA)	DCY6 (STA)	DCY6 Factored (STA)	ELW6 (STA)	ELW6 Factored (STA)	NPY6** (STA)	NPY6** Factored (STA)	SLW2 (STA)	SLW2 Factored (STA)	SLW6 (STA)	SLW6 Factored (STA)	Remarks
1.0	USH 6	166+95.33	168+46.93	4.43		Removal of Paint		X					4.43	7.40													
4.0	USH 6	167+66.28	170+98.84	3.33		Removal of Paint	X												3.33	3.33							
5.0	USH 6	167+84.71	168+50.84	0.66		Removal of Paint			X										0.66	0.66							
10.0	USH 6	169+09.15	170+98.86	1.90		Removal of Paint		X									1.90	3.80									
11.0	USH 6	169+11.35	170+45.15	1.34		Removal of Paint			X										1.34	1.34							
80.0	USH 6	188+83.36	192+73.85	3.90		Removal of Paint		X		No			3.90	6.51													
														13.91				3.8		5.33							
Marking Type Removal of Paint:																											
84.0	**USH 6**	**188+03.84**		**0.14**		Removal of Removable Tape			X	No													0.14	0.56			
85.0	USH 6	188+04.06		0.12		Removal of Removable Tape		X		No													0.12	0.48			
86.0	USH 6	188+45.78		0.12		Removal of Removable Tape			X	No													0.12	0.48			
																								1.52			
Marking Type Removal of Removable Tape:																											
2.0	**USH 6**	**166+95.33**	**168+39.34**	**1.44**		Waterborne/Solvent Paint	X			No											1.44	1.80					
3.0	USH 6	166+95.33	168+39.34	1.44		Waterborne/Solvent Paint			X	No											1.44	1.80					
6.0	USH 6	168+63.99	168+97.05	0.33		Waterborne/Solvent Paint			X	No					0.33	0.66											
7.0	USH 6	168+65.38	168+95.74	0.30		Waterborne/Solvent Paint			X	No					0.30	0.60											
8.0	USH 6	168+80.56	168+95.74	0.15		Waterborne/Solvent Paint			X	No													0.15	0.60			
9.0	USH 6	169+06.15		0.42		Waterborne/Solvent Paint	X	X	X	No	0.42	2.52															
12.0	USH 6	169+21.30	172+06.57	2.85		Waterborne/Solvent Paint	X			No											2.85	3.56					
13.0	USH 6	169+21.30	172+06.57	2.85		Waterborne/Solvent Paint			X	No											2.85	3.56					
14.0	USH 6	172+25.19	172+58.71	0.34		Waterborne/Solvent Paint			X	No					0.34	0.68											
15.0	USH 6	172+26.64	172+57.26	0.31		Waterborne/Solvent Paint			X	No					0.31	0.62											
16.0	USH 6	172+41.95	172+57.17	0.15		Waterborne/Solvent Paint			X	No													0.15	0.60			
17.0	USH 6	172+77.78	175+46.40	2.69		Waterborne/Solvent Paint	X			No											2.69	3.36					
18.0	USH 6	172+77.78	175+46.40	2.69		Waterborne/Solvent Paint			X	No											2.69	3.36					
19.0	USH 6	175+55.80	176+01.17	0.45		Waterborne/Solvent Paint			X	No					0.45	0.90											
20.0	USH 6	175+60.07	175+96.90	0.37		Waterborne/Solvent Paint			X	No					0.37	0.74											
21.0	USH 6	175+78.49	175+94.37	0.16		Waterborne/Solvent Paint			X	No													0.16	0.64			
22.0	USH 6	176+17.39	180+08.90	3.92		Waterborne/Solvent Paint	X			No											3.92	4.90					
23.0	USH 6	176+17.39	180+08.90	3.92		Waterborne/Solvent Paint			X	No											3.92	4.90					
24.0	USH 6	180+19.86	180+19.98	0.42		Waterborne/Solvent Paint	X	X	X	No	0.42	2.52															
25.0	USH 6	180+26.22	180+69.47	0.43		Waterborne/Solvent Paint			X	No					0.43	0.86											
26.0	USH 6	180+30.18	180+65.51	0.35		Waterborne/Solvent Paint			X	No					0.35	0.70											
27.0	USH 6	180+47.85	180+63.17	0.15		Waterborne/Solvent Paint			X	No													0.15	0.60			
28.0	USH 6	180+32.68	180+47.23	0.15		Waterborne/Solvent Paint	X			No													0.15	0.60			
29.0	USH 6	180+86.80	186+55.40	5.69		Waterborne/Solvent Paint	X			No											5.69	7.11					
30.0	USH 6	180+86.80	186+55.40	5.69		Waterborne/Solvent Paint			X	No											5.69	7.11					
31.0	USH 6	182+26.80	184+21.80	1.95		Waterborne/Solvent Paint			X	No															1.95	1.95	
32.0	USH 6	184+51.21	184+78.49	0.26		Waterborne/Solvent Paint			X	No					0.26	0.52											

PAVEMENT MARKING LINE TYPES

Line factors based on 6-inch wide continuous line.
*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - Estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY6 - Factor of 1.00 includes number of 6-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.17
BCY6: Broken Centerline (Yellow) @ 0.25
BLC6: Broken Line Contrast (White/Black) @ 0.50
BLW4: Broken Lane Line (White) @ 0.17
BLW6: Broken Lane Line (White) @ 0.25
CBW6: Crosswalk Bar (White) @ 10.00
CHW8: Channelizing Line (White) @ 1.33
CHW10: Channelizing Line (White) @ 1.67
CHY8: Channelizing Line (Yellow) @ 1.33
CHY10: Channelizing Line (Yellow) @ 1.67
CLW6: Crosswalk Line (White) @ 2.00
DCY4: Double Centerline (Yellow) @ 1.34
DCY6: Double Centerline (Yellow) @ 2.00
DDY4: Double Dotted Line (Yellow) @ 0.44
DDY6: Double Dotted Line (Yellow) @ 0.67
DLW4: Dotted Line (White) @ 0.22
DLW6: Dotted Line (White) @ 0.33
DLY4: Dotted Line (Yellow) @ 0.22
DLY6: Dotted Line (Yellow) @ 0.33
ELW4: Edge Line Right (White) @ 0.67
ELW6: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 0.67
ELY6: Edge Line Left (Yellow) @ 1.00
LDW8: Lane Drop (White) @ 0.33
LDW10: Lane Drop (White) @ 0.42
MNY6: Median Nose (Yellow) @ 1.00
NPY4: No Passing Zone Line (Yellow) @ 0.84
NPY6: No Passing Zone Line (Yellow) @ 1.25
RLW4: Ramp Edge Line Right (White) @ 0.67
RLW6: Ramp Edge Line Right (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 0.67
RLY6: Ramp Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 4.00
SLW4: Solid Lane Line (White) @ 0.67
SLW6: Solid Lane Line (White) @ 1.00
SPW4: Sloped Curb 4" (White) @ 2.16
SPW6: Sloped Curb 6" (White) @ 2.28
SPY4: Sloped Curb 4" (Yellow) @ 2.16
SPY6: Sloped Curb 6" (Yellow) @ 2.28
STW6: Standard Curb 6" (Yellow) @ 2.03
STY6: Standard Curb 6" (Yellow) @ 2.03
YLW2: Yield Line (White) @ 1.15

Line No.	Road ID	Station From	Station To	Line Length (STA)	Lane	Marking Type	Left	Center	Right	Groove Marking Needed?	CBW6 (STA)	CBW6 Factored (STA)	CHY10 (STA)	CHY10 Factored (STA)	CLW6 (STA)	CLW6 Factored (STA)	DCY6 (STA)	DCY6 Factored (STA)	ELW6 (STA)	ELW6 Factored (STA)	NPY6** (STA)	NPY6** Factored (STA)	SLW2 (STA)	SLW2 Factored (STA)	SLW6 (STA)	SLW6 Factored (STA)	Remarks
33.0	USH 6	184+53.89	184+77.85	0.23		Waterborne/Solvent Paint			X	No					0.23	0.46											
34.0	USH 6	184+65.57	184+77.26	0.11		Waterborne/Solvent Paint			X	No													0.11	0.44			
35.0	USH 6	186+55.40	188+04.41	1.49		Waterborne/Solvent Paint	X			No							1.49	2.98									
36.0	USH 6	187+30.68	188+04.41	0.74		Waterborne/Solvent Paint			X	No															0.74	0.74	
37.0	USH 6	188+11.18		0.50		Waterborne/Solvent Paint	X	X	X	No	0.50	3.00															
38.0	USH 6	188+23.83	188+82.46	0.59		Waterborne/Solvent Paint	X			No					0.59	1.18											
39.0	USH 6	188+26.41	188+75.93	0.50		Waterborne/Solvent Paint	X			No					0.50	1.00											
40.0	USH 6	188+27.90	188+55.78	0.28		Waterborne/Solvent Paint	X			No													0.28	1.12			
41.0	USH 6	188+25.61	188+71.25	0.46		Waterborne/Solvent Paint			X	No					0.46	0.92											
42.0	USH 6	188+28.42	188+68.43	0.40		Waterborne/Solvent Paint			X	No					0.40	0.80											
43.0	USH 6	188+47.57	188+66.89	0.19		Waterborne/Solvent Paint			X	No													0.19	0.76			
44.0	USH 6	188+88.90		0.58		Waterborne/Solvent Paint	X	X	X	No	0.58	3.48															
45.0	USH 6	188+95.70	190+41.32	1.49		Waterborne/Solvent Paint			X	No							1.49	2.98									
46.0	USH 6	188+95.70	189+66.31	0.75		Waterborne/Solvent Paint	X			No															0.75	0.75	
47.0	USH 6	189+03.14	192+52.76	3.50		Waterborne/Solvent Paint	X			No															3.50	3.50	
48.0	USH 6	189+03.14	192+52.76	3.50		Waterborne/Solvent Paint	X			No															3.50	3.50	
49.0	USH 6	190+41.32	193+20.08	2.79		Waterborne/Solvent Paint			X	No											2.79	3.49					
50.0	USH 6	190+41.32	193+20.08	2.79		Waterborne/Solvent Paint	X			No											2.79	3.49					
51.0	USH 6	191+25.21	194+63.80	3.39		Waterborne/Solvent Paint			X	No															3.39	3.39	
52.0	USH 6	193+20.08	194+65.80	1.46		Waterborne/Solvent Paint	X			No							1.46	2.92									
53.0	USH 6	193+95.36	194+63.80	0.70		Waterborne/Solvent Paint			X	No															0.70	0.70	
54.0	USH 6	194+72.32	194+72.59	0.54		Waterborne/Solvent Paint	X	X	X	No	0.54	3.24															
55.0	USH 6	194+93.33	195+48.34	0.55		Waterborne/Solvent Paint	X			No					0.55	1.10											
56.0	USH 6	194+93.33	195+46.79	0.53		Waterborne/Solvent Paint	X			No					0.53	1.06											
57.0	USH 6	194+93.33	195+32.80	0.39		Waterborne/Solvent Paint	X			No													0.39	1.56			
58.0	USH 6	195+07.97		0.11		Waterborne/Solvent Paint	X			No					0.11	0.22											
59.0	USH 6	195+19.71		0.11		Waterborne/Solvent Paint	X			No					0.11	0.22											
60.0	USH 6	195+31.69		0.11		Waterborne/Solvent Paint	X			No							0.11	0.22									
61.0	USH 6	195+03.24	195+57.24	0.54		Waterborne/Solvent Paint			X	No	0.54	4.32															
62.0	USH 6	195+19.06	195+58.04	0.39		Waterborne/Solvent Paint			X	No													0.39	1.56			
63.0	USH 6	195+19.89		0.18		Waterborne/Solvent Paint			X	No							0.18	0.36									
64.0	USH 6	195+31.96		0.19		Waterborne/Solvent Paint			X	No																	
65.0	USH 6	195+43.98		0.19		Waterborne/Solvent Paint			X	No																	
66.0	USH 6	195+79.22	195+79.38	0.54		Waterborne/Solvent Paint	X	X	X	No	0.54	3.24															
67.0	USH 6	195+85.97	197+38.04	1.52		Waterborne/Solvent Paint			X	No							1.52	3.04									
68.0	USH 6	195+87.97	196+63.04	0.77		Waterborne/Solvent Paint	X			No															0.77	0.77	
69.0	USH 6	195+87.97	199+26.04	3.40		Waterborne/Solvent Paint	X			No															3.40	3.40	
70.0	USH 6	197+38.04	209+97.44	12.59		Waterborne/Solvent Paint	X			No											12.59	15.74					
71.0	USH 6	197+38.04	209+96.97	12.59		Waterborne/Solvent Paint			X	No											12.59	15.74					
72.0	USH 6	208+42.64	208+76.66	0.34		Waterborne/Solvent Paint			X	No					0.34	0.68											
73.0	USH 6	208+45.42	208+73.81	0.28		Waterborne/Solvent Paint			X	No					0.28	0.56											
74.0	USH 6	208+10.96	210+07.14	1.96		Waterborne/Solvent Paint	X			No									1.96	1.96							

PAVEMENT MARKING LINE TYPES

Line factors based on 6-inch wide continuous line.
*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - Estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY6 - Factor of 1.00 includes number of 6-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.17
BCY6: Broken Centerline (Yellow) @ 0.25
BLC6: Broken Line Contrast (White/Black) @ 0.50
BLW4: Broken Lane Line (White) @ 0.17
BLW6: Broken Lane Line (White) @ 0.25
CBW6: Crosswalk Bar (White) @ 10.00
CHW8: Channelizing Line (White) @ 1.33
CHW10: Channelizing Line (White) @ 1.67
CHY8: Channelizing Line (Yellow) @ 1.33
CHY10: Channelizing Line (Yellow) @ 1.67
CLW6: Crosswalk Line (White) @ 2.00
DCY4: Double Centerline (Yellow) @ 1.34
DCY6: Double Centerline (Yellow) @ 2.00
DDY4: Double Dotted Line (Yellow) @ 0.44
DDY6: Double Dotted Line (Yellow) @ 0.67
DLW4: Dotted Line (White) @ 0.22
DLW6: Dotted Line (White) @ 0.33
DLY4: Dotted Line (Yellow) @ 0.22
DLY6: Dotted Line (Yellow) @ 0.33
ELW4: Edge Line Right (White) @ 0.67
ELW6: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 0.67
ELY6: Edge Line Left (Yellow) @ 1.00
LDW8: Lane Drop (White) @ 0.33
LDW10: Lane Drop (White) @ 0.42
MNY6: Median Nose (Yellow) @ 1.00
NPY4: No Passing Zone Line (Yellow) @ 0.84
NPY6: No Passing Zone Line (Yellow) @ 1.25
RLW4: Ramp Edge Line Right (White) @ 0.67
RLW6: Ramp Edge Line Right (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 0.67
RLY6: Ramp Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 4.00
SLW4: Solid Lane Line (White) @ 0.67
SLW6: Solid Lane Line (White) @ 1.00
SPW4: Sloped Curb 4" (White) @ 2.16
SPW6: Sloped Curb 6" (White) @ 2.28
SPY4: Sloped Curb 4" (Yellow) @ 2.16
SPY6: Sloped Curb 6" (Yellow) @ 2.28
STW6: Standard Curb 6" (Yellow) @ 2.03
STY6: Standard Curb 6" (Yellow) @ 2.03
YLW2: Yield Line (White) @ 1.15

Line No.	Road ID	Station From	Station To	Line Length (STA)	Lane	Marking Type	Left	Center	Right	Groove Marking Needed?	CBW6 (STA)	CBW6 Factored (STA)	CHY10 (STA)	CHY10 Factored (STA)	CLW6 (STA)	CLW6 Factored (STA)	DCY6 (STA)	DCY6 Factored (STA)	ELW6 (STA)	ELW6 Factored (STA)	NPY6** (STA)	NPY6** Factored (STA)	SLW2 (STA)	SLW2 Factored (STA)	SLW6 (STA)	SLW6 Factored (STA)	Remarks
75.0	USH 6	208+97.17	210+06.84	1.10		Waterborne/Solvent Paint			X	No									1.10	1.10							
87.0	USH 6	177+67.57	180+13.14	2.46		Waterborne/Solvent Paint			X	No									2.46	2.46							
88.0	USH 6	177+65.88	180+13.96	2.48		Waterborne/Solvent Paint	X			No									2.48	2.48							
89.0	USH 6	177+67.56	180+13.08	2.46		Waterborne/Solvent Paint		X		No			2.46	4.11													
90.0	USH 6	177+67.56	180+13.08	2.46		Waterborne/Solvent Paint		X		No								2.46									
												22.32		4.11		14.48		14.96		8		79.92		8.48		18.7	
Marking Type Waterborne/Solvent Paint:																											
76.0						Wet Retroreflective Removable Tape				No																	
77.0	USH 5	180+00.00		0.12		Wet Retroreflective Removable Tape			X	No													0.12	0.48			
77.0	USH 6	188+72.17		0.12		Wet Retroreflective Removable Tape			X	No													0.12	0.48			
78.0	USH 6	188+95.26		0.12		Wet Retroreflective Removable Tape	X			No													0.12	0.48			
79.0	USH 6	189+03.25		0.12		Wet Retroreflective Removable Tape	X			No													0.12	0.48			
81.0	USH 6	188+03.84		0.14		Wet Retroreflective Removable Tape			X	No													0.14	0.56			
82.0	USH 6	188+04.06		0.12		Wet Retroreflective Removable Tape		X		No													0.12	0.48			
83.0	USH 6	188+45.78		0.12		Wet Retroreflective Removable Tape			X	No													0.12	0.48			
																								3.44			
Marking Type Wet Retroreflective Removable Tape:																											
Total:												**22.32**		**18.02**		**14.48**		**18.76**		**13.33**		**79.92**		**13.44**		**18.7**	

Total:
Pavement Markings Removed = 23.04 STA
Painted Pavement Markings, Waterborne or Solvent-Based = 170.97 STA
Removable Tape Markings, Wet Retroreflective = 3.44 STA

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Line No.	Roadway Identification	Station	Side	Pavement Symbol	Quantity (EA)	Groove Marking Needed?	Remarks
1.0	USH 6	167+81.30		LTAW	1	No	Place on existing pavement.
2.0	USH 6	167+98.94		LTAW	1	No	Place on existing pavement.
3.0	USH 6	169+56.41		LTAW	1	No	Place on existing pavement.
4.0	USH 6	169+74.00		LTAW	1	No	Place on existing pavement.
5.0	USH 6	171+53.32		LTAW	1	No	
6.0	USH 6	171+71.01		LTAW	1	No	
7.0	USH 6	173+13.01		LTAW	1	No	
8.0	USH 6	173+30.70		LTAW	1	No	
9.0	USH 6	174+94.24		LTAW	1	No	
10.0	USH 6	175+11.92		LTAW	1	No	
11.0	USH 6	176+52.56		LTAW	1	No	
12.0	USH 6	176+70.25		LTAW	1	No	
13.0	USH 6	179+53.60		LTAW	1	No	
14.0	USH 6	179+71.29		LTAW	1	No	
15.0	USH 6	181+24.44		LTAW	1	No	
16.0	USH 6	181+42.13		LTAW	1	No	
17.0	USH 6	182+50.86		RTAW	1	No	
18.0	USH 6	183+24.44		LTAW	1	No	
19.0	USH 6	183+42.13		LTAW	1	No	
20.0	USH 6	184+11.81		RTAW	1	No	
21.0	USH 6	185+31.10		LTAW	1	No	
22.0	USH 6	185+48.79		LTAW	1	No	
23.0	USH 6	186+79.09		LTAW	1	No	
24.0	USH 6	187+30.42		ONLW	1	No	
25.0	USH 6	187+92.61		LTAW	1	No	
26.0	USH 6	189+07.84		LTAW	1	No	
27.0	USH 6	189+24.80		RTAW	1	No	
28.0	USH 6	189+68.53		ONLW	1	No	
29.0	USH 6	189+69.94		ONLW	1	No	
30.0	USH 6	190+21.38		LTAW	1	No	
31.0	USH 6	191+71.89		LTAW	1	No	
32.0	USH 6	191+89.58		LTAW	1	No	
33.0	USH 6	192+16.95		RTAW	1	No	
34.0	USH 6	192+71.00		RTAW	1	No	
35.0	USH 6	193+43.73		LTAW	1	No	
36.0	USH 6	193+95.07		ONLW	1	No	
37.0	USH 6	194+53.17		LTAW	1	No	
38.0	USH 6	194+53.17		RTAW	1	No	
39.0	USH 6	196+00.84		RTAW	1	No	
40.0	USH 6	196+00.84		LTAW	1	No	
41.0	USH 6	196+63.03		ONLW	1	No	
42.0	USH 6	197+14.36		LTAW	1	No	
43.0	USH 6	197+83.03		RTAW	1	No	
44.0	USH 6	200+04.83		LTAW	1	No	
45.0	USH 6	200+22.52		LTAW	1	No	
46.0	USH 6	203+54.83		LTAW	1	No	
47.0	USH 6	203+72.52		LTAW	1	No	
48.0	USH 6	207+04.83		LTAW	1	No	
49.0	USH 6	207+22.52		LTAW	1	No	
Total:					**49**		

REFERENCE LOCATION SIGNS AND DELINEATORS

Refer to SI-171, SI-172 and SI-173.

Line No.	Station From	Station To	Location	Reference Location Sign Type	Quantity (EA)	Enhanced Reference Location Sign Type	Quantity (EA)	Intermediate Reference Location Sign Type	Quantity (EA)	Type I Delineator White (EA)	Type I Delineator Yellow (EA)	Type IA Delineator White (EA)	Type IA Delineator Yellow (EA)	Type II Delineator White (EA)	Type II Delineator Yellow (EA)	Type III Delineator White (EA)	Type III Delineator Yellow (EA)	Object Marker Type 1 (EA)	Object Marker Type 2 (EA)	Object Marker Type 3 (EA)	Installation Type	Installation Offset
1.0	188+18.20		US 6	D10-3	1																	
Total:																						

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		R10-3E		162+11.68																		3			
2.0		R10-3E		162+36.60																		3			
3.0		R10-3E		163+25.60																		3			
4.0		R10-3E		163+45.72																		3			
5.0		R1-1	NB	169+00.79																		3			Install on existing post.
6.0		S5-2	EB	169+71.80																		3			Install on existing post.
7.0		D3-1/D3-1		172+69.92																		3			
8.0		D3-1/D3-1		175+99.73																		3			Install on existing post.
9.0		R2-1	EB	177+80.34				10.0			Soil	1										3			Speed Limit 35. Install on existing post.
10.0		BEACON / W11-2 / W16-9P	EB	178+74.95				11.0			Soil	1										3			
11.0		R3-9B	WB	179+40.05				11.0			Soil	1										3			
12.0		W16-7PL	EB	180+07.31																		3			
13.0		W16-7PL	WB	180+27.58																		3			
14.0		M3-2P / M1-4	EB	181+38.26																		3			Install on existing post.
15.0		W11-2 / W16-9P	WB	183+52.72																		3			Install on existing post.
16.0		W11-2 / W16-7PL	EB	187+97.71				10.0			Soil	1										3			
17.0		W11-2 / W16-7PL	WB	188+16.39				10.0			Soil	1										3			
18.0		R1-1 / W4-4P	SB	188+22.52																		3			Install on existing post below stop sign.
19.0		R1-1 / W4-4P	NB	188+70.50				10.0			Soil	1										3			
20.0		W11-2 / W16-9P	EB	190+10.48				10.0			Soil	1										3			
21.0		BEACON / W2-1 / W16-2P	WB	201+06.21				11.0			Soil	1										3			
22.0		R2-1	WB	207+90.16				10.0			Soil	1										3			
23.0		R3-9B	WB	209+27.66				11.0			Soil	1										3			
Total:								**104**				**10**													

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	R3-5	WB	164+98.23	1				1		Reuse existing post.
2.0	R3-6R	WB	164+98.23	1				1		Reuse existing post.
3.0	Beacon / S4-3P / R2-1 / R4-4P	WB	166+60.00	1				1		Reuse existing post.
4.0	S5-2	EB	169+71.84	1				1		Reuse ex. post. Replace panel. See Tab. 190-51
5.0	S1-1 / W16-9P / S4-3P	WB	169+72.46	1				1		Reuse existing post.
6.0	**ADDRESS MARKER (100)	WB	172+43.54	1				1		Reuse existing post.
7.0	R1-1	NB	172+60.11	1				1		Reuse existing post.
8.0	W11-8	WB	174+30.97	1				1		Reuse existing post.
9.0	R1-1	NB	175+99.73	1				1		Reuse existing post.
10.0	W11-2 / W16-7PL	EB	180+07.27	1				1		Reuse existing post.
11.0	W11-2 / W16-7PL	WB	180+27.58	1				1		Reuse existing post.
12.0	R1-1	SB	180+28.22	1				1		Reuse existing post.
13.0	D3-1 / D3-1 / R1-1	NB	180+67.24	1	1			1		Replace post - 10 LF.
14.0	M3-2P / M1-4	EB	181+38.26	1				1		Reuse ex. post. Replace panels. See Tab. 190-51
15.0	D2-2	EB	183+51.30	1				1		Reuse existing post.
16.0	W11-2 / W16-9P	WB	183+52.72	1				1		Reuse ex. post. Replace panels. See Tab. 190-51
17.0	D3-1 / D3-1		188+22.52	1				1		Reuse existing post.
18.0	ADOPT A HIGHWAY / AVAILABLE FOR ADOPTION	EB	191+25.21	1	1			1		Replace post - 11 LF.
19.0	ADOPT A HIGHWAY / NORTH CORRIDOR ROTARY	WB	191+36.89	1				1		Reuse existing post.
20.0	W2-6	EB	210+09.37	1				1		Reuse existing post.
21.0	R4-7 / OM1-2	WB	210+11.05	1				1		Reuse existing post.
Total:					**2**					

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	W6-2	166+81.49	EB	1							
2.0	R3-9B	166+97.87	WB	1							
3.0	R2-1	168+11.43	EB	1							
4.0	Beacon / W11-2 / W16-9P	174+92.74	EB	1							
5.0	R2-1	177+80.31	EB	1							Remove panel only. Replace with R2-1 (Tab. 190-51)
6.0	R2-1	177+82.26	WB	1							
7.0	Beacon / W2-1 / W16-2P	185+25.43	WB	1							
8.0	CUSTOM SIGN	188+18.14	SB	1							Remove panel. RECHECK TRAFFIC FROM LEFT
9.0	R1-1	195+62.11	NB	1							
10.0	ADDRESS MARKER	195+71.96	EB	1							809
11.0	OM3-R	204+73.35	EB	1							
12.0	OM3-L	205+12.31	EB	1							
13.0	OM3-R	205+13.19	WB	1							
Total:				**13**							

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	D3-1		4	72 x 18	36.0
2.0	M1-4		1	24 x 24	4.0
3.0		M3-2P	1	24 x 12	2.0
4.0	R1-1		3	30 x 30	18.8
5.0	R2-1		2	24 x 30	10.0
6.0	R3-9B		2	24 x 36	12.0
7.0		R10-3E	4	9 x 15	3.8
8.0	S5-2		1	24 x 30	5.0
9.0		W4-4P	2	24 x 12	4.0
10.0	W2-1		1	30 x 30	6.3
11.0		W11-2	7	30 x 30	73.8
12.0		W16-2P	1	24 x 18	3.0
13.0	W16-7PL		4	24 x 12	8.0
14.0	W16-9P		3	24 x 12	6.0
Total:					**192.7**

108_01
8/15/22

LIGHTING INSTALLATIONS

Line No.	Location No.	Station	LI-101 Type	A	E (FT)	LI-201 Type	Remarks
1.0	LP1	187+99.12	4	4	6.0	A	
2.0	LP2	186+65.38	4	4	6.0	A	
3.0	LP3	185+44.07	4	4	6.0	A	
4.0	LP4	184+35.19	4	4	6.0	A	
5.0	LP5	183+12.87	4	4	6.0	A	
6.0	LP6	182+06.92	4	4	6.0	A	
7.0	LP7	180+93.80	4	4	6.0	A	
8.0	LP8	179+92.47	4	4	6.0	A	
9.0	LP9	178+79.16	4	4	6.0	A	
10.0	LP10	177+68.55	4	4	6.0	A	
11.0	LP11	176+57.97	4	4	6.0	A	
12.0	LP12	175+47.17	4	4	6.0	A	
13.0	LP13	174+34.53	4	4	6.0	A	
14.0	LP14	173+22.96	4	4	6.0	A	
15.0	LP15	172+16.45	4	4	6.0	A	
16.0	LP16	171+06.39	4	4	6.0	A	
17.0	LP17	188+96.75	4	4	6.0	A	
18.0	LP18	190+12.66	4	4	6.0	A	
19.0	LP19	191+24.38	4	4	6.0	A	
20.0	LP20	192+46.46	4	4	6.0	A	
21.0	LP21	193+58.52	4	4	6.0	A	
22.0	LP22	196+84.53	4	4	6.0	A	
23.0	LP23	198+05.93	4	4	6.0	A	
24.0	LP24	199+19.94	4	4	6.0	A	
25.0	LP25	200+26.77	4	4	6.0	A	
26.0	LP26	201+35.75	4	4	6.0	A	
27.0	LP27	202+52.26	4	4	6.0	A	
28.0	LP28	203+67.73	4	4	6.0	A	
29.0	LP29	204+76.35	4	4	6.0	A	
30.0	LP30	205+89.11	4	4	6.0	A	
31.0	LP31	207+03.40	4	4	6.0	A	
32.0	LP32	208+19.03	4	4	6.0	A	
33.0	LP33	209+30.94	4	4	6.0	A	

108_02
10/24/24

ELECTRICAL DUCTS

Line No.	Location	Conduit Type	Diameter (IN)	Length (FT)	Remarks
1.0	LC1 TO PAD	PVC	2.0	45.0	HP GAS CROSSING-SERVICE APPLICATION NEEDED
2.0	LC1 TO PB1	PVC	2.0	5.0	
3.0	LC1 TO PB1	PVC	2.0	5.0	
4.0	PB1 TO LP1	PVC	2.0	163.0	
5.0	LP1 TO LP2	PVC	2.0	134.0	
6.0	LP2 TO PB2	PVC	2.0	152.0	
7.0	PB2 TO LP3	PVC	2.0	60.0	
8.0	PB2 TO LP4	PVC	2.0	80.0	
9.0	LP3 TO LP5	PVC	2.0	232.0	
10.0	LP4 TO LP6	PVC	2.0	230.0	
11.0	LP5 TO LP7	PVC	2.0	220.0	
12.0	LP6 TO LP8	PVC	2.0	215.0	
13.0	LP7 TO PB3	PVC	2.0	100.0	
14.0	LP8 TO PB3	PVC	2.0	52.0	
15.0	PB3 TO LP9	PVC	2.0	115.0	
16.0	LP9 TO LP10	PVC	2.0	111.0	
17.0	LP10 TO LP11	PVC	2.0	111.0	
18.0	LP11 TO LP12	PVC	2.0	111.0	
19.0	LP12 TO LP13	PVC	2.0	113.0	
20.0	LP13 TO LP14	PVC	2.0	112.0	
21.0	LP14 TO LP15	PVC	2.0	108.0	
22.0	LP15 TO LP16	PVC	2.0	110.0	
23.0	PB1 TO PB4	PVC	2.0	78.0	
24.0	PB4 TO LP17	PVC	2.0	72.0	
25.0	PB4 TO LP18	PVC	2.0	43.0	
26.0	LP18 TO LP19	PVC	2.0	112.0	
27.0	LP19 TO LP20	PVC	2.0	123.0	
28.0	LP20 TO LP21	PVC	2.0	113.0	
29.0	LP21 TO PB5	PVC	2.0	213.0	
30.0	PB5 TO LP22	PVC	2.0	112.0	
31.0	LP22 TO LP23	PVC	2.0	122.0	
32.0	LP23 TO LP24	PVC	2.0	114.0	
33.0	LP24 TO LP25	PVC	2.0	107.0	
34.0	LP25 TO LP26	PVC	2.0	110.0	
35.0	LP26 TO LP27	PVC	2.0	117.0	
36.0	LP27 TO LP28	PVC	2.0	116.0	
37.0	LP28 TO LP29	PVC	2.0	109.0	
38.0	LP29 TO LP30	PVC	2.0	113.0	
39.0	LP30 TO LP31	PVC	2.0	115.0	
40.0	LP31 TO PB6	PVC	2.0	110.0	
41.0	PB6 TO LP32	PVC	2.0	55.0	
42.0	PB6 TO LP33	PVC	2.0	116.0	

108_02A
8/15/22

LISTING OF LIGHTING AND SIGNAL WORK

Line No.	Handhole No.	Handhole Station	Handhole Type	Conduit Line No.	Station From	Station To	Conduit Type	Diameter (IN)	Length (LF)	Remarks
1.0	PB1	189+61.76	TYPE II							
2.0	PB2	185+13.28	TYPE II							
3.0	PB3	179+93.80	TYPE II							
4.0	PB4	189+69.02	TYPE II							
5.0	PB5	195+71.74	TYPE II							
6.0	PB6	208+13.65	TYPE II							
7.0	01	188+79.95	TYPE IV							
8.0	02	188+15.54	TYPE I							
9.0	03	188+05.00	TYPE I							
10.0	04	188+77.09	TYPE I							
11.0	01	195+68.36	TYPE IV							
12.0	02	195+90.62	TYPE I							
13.0	03	194+79.88	TYPE I							
14.0	04	194+76.74	TYPE I							

100_17
8/15/22

TABULATION OF SILT FENCES

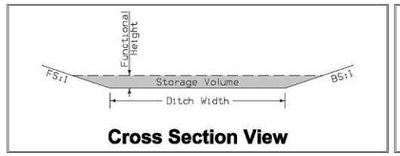
Refer to EC-201

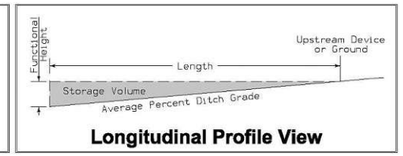
Line No.	Station From	Station To	Side	Length (FT)	Remarks
1.0	182+09.67	183+72.47	Right	164.00	Stage 1
2.0	183+67.55	184+42.83	Right	76.00	Stage 1
3.0	184+79.66	186+02.30	Right	126.00	Stage 1
4.0	185+95.97	187+00.85	Right	106.00	Stage 1
5.0	+.00				
6.0	197+67.93	199+20.70	Right	154.00	Stage 2A
7.0	199+21.33	200+27.40	Right	107.00	Stage 2A
8.0	200+28.66	201+65.00	Right	138.00	Stage 2A
9.0	201+92.18	202+36.71	Right	47.00	Stage 2A
10.0	202+38.97	204+12.99	Right	175.00	Stage 2A
11.0	204+12.99	204+38.13	Right	27.00	Stage 2A
12.0	204+35.20	204+53.84	Right	20.00	Stage 2A
13.0	204+54.37	204+80.38	Right	28.00	Stage 2A
14.0	208+72.80	209+07.29	Right	36.00	Stage 2A
15.0	209+85.95	209+87.20	Right	20.00	Stage 2A
16.0	215+21.83	215+52.35	Left	49.00	Stage 2A
17.0	+.00				
18.0	+.00			327.00	Undistributed (25%)
Total:				**1600**	

Totals:
Silt Fence = 1600 LF
Removal of Silt Fence or Silt Fence for Ditch Checks = 800 LF
Maintenance of Silt Fence or Silt Fence for Ditch Check = 160 LF

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201





* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

Line No.	Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
2.0		Type 1	190+95.38	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.8	522.00	Stage 2A
3.0		Type 1	191+70.98	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.8	522.00	Stage 2A
4.0		Type 1	192+45.77	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.8	522.00	Stage 2A
5.0		Type 1	193+23.36	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.8	522.00	Stage 2A
6.0		Type 1	193+99.82	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.8	522.00	Stage 2A
9.0		Type 1	196+88.08	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
10.0		Type 1	197+88.27	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
11.0		Type 1	198+88.10	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
12.0		Type 1	199+83.37	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
14.0		Type 1	205+24.15	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
15.0		Type 1	206+24.21	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
16.0		Type 1	207+24.01	Right	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
20.0		Type 1	192+49.42	Left	20.0	2.0	10.0	3.5	3.0	6.0	1.8	522.00	Stage 2A
21.0		Type 1	193+24.21	Left	20.0	2.0	10.0	3.5	3.0	6.0	1.8	522.00	Stage 2A
22.0		Type 1	193+93.29	Left	20.0	2.0	10.0	3.5	3.0	6.0	1.8	522.00	Stage 2A
24.0		Type 1	196+76.18	Left	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
25.0		Type 1	197+75.67	Left	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
26.0		Type 1	198+74.62	Left	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
27.0		Type 1	200+96.77	Left	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
27.0		Type 1	200+22.74	Left	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
27.0		Type 1	199+48.68	Left	20.0	2.0	10.0	3.5	3.0	6.0	1.0	696.00	Stage 2A
29.0		Type 1	205+64.53	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
29.0		Type 1	207+16.42	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
30.0		Type 1	207+89.19	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
32.0		Type 1	209+78.81	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
33.0		Type 1	210+79.21	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
34.0		Type 1	211+79.75	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
35.0		Type 1	212+79.68	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
36.0		Type 1	213+79.08	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
37.0		Type 1	214+79.48	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
37.0		Type 1	215+34.61	Left	20.0	2.0	10.0	3.5	3.0	6.0	0.5	696.00	Stage 2A
39.0			+.00		310.0	31.0	155.0						Undistributed (50%)
Total:					**930**	**93**	**465**						

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	180+93.49		Right	Perimeter and Slope	12 inch	30.00	Stage 1 - Intake
2.0	180+93.49		Left	Perimeter and Slope	12 inch	30.00	Stage 1 - Intake
3.0	180+93.61		Left	Perimeter and Slope	12 inch	30.00	Stage 1 - Intake
4.0	180+98.16	182+32.89	Right	Perimeter and Slope	12 inch	137.00	Stage 1
5.0	181+08.03	182+09.21	Right	Perimeter and Slope	12 inch	104.00	Stage 1
6.0	182+34.13	184+24.52	Right	Perimeter and Slope	12 inch	192.00	Stage 1
7.0	184+24.86	184+45.56	Right	Perimeter and Slope	12 inch	27.00	Stage 1
8.0	184+82.37	185+05.19	Right	Perimeter and Slope	12 inch	35.00	Stage 1
9.0	184+87.73	185+38.47	Left	Perimeter and Slope	12 inch	54.00	Stage 1
10.0	185+06.66	186+56.25	Right	Perimeter and Slope	12 inch	152.00	Stage 1
11.0	185+32.42	186+25.02	Left	Perimeter and Slope	12 inch	95.00	Stage 1
12.0	186+25.54	187+56.56	Left	Perimeter and Slope	12 inch	134.00	Stage 1
13.0	186+57.24	187+65.38	Right	Perimeter and Slope	12 inch	111.00	Stage 1
14.0	187+53.53	188+07.27	Left	Perimeter and Slope	12 inch	55.00	Stage 1
15.0	187+70.16		Right	Perimeter and Slope	12 inch	30.00	Stage 1 - Intake
16.0	187+70.35		Left	Perimeter and Slope	12 inch	30.00	Stage 1 - Intake
17.0	187+70.49		Left	Perimeter and Slope	12 inch	30.00	Stage 1 - Intake
18.0	187+70.56		Right	Perimeter and Slope	12 inch	30.00	Stage 1 - Intake
19.0	187+74.13	188+08.42	Right	Perimeter and Slope	12 inch	36.00	Stage 1
20.0	188+14.01	188+21.00	Right	Perimeter and Slope	12 inch	16.00	Stage 1
21.0	188+26.00		Left	Perimeter and Slope	12 inch	30.00	Stage 1 - Intake
22.0	+.00						
23.0	191+45.48		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
24.0	188+69.33		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
25.0	188+77.18	190+06.88	Right	Perimeter and Slope	12 inch	132.00	Stage 2A
26.0	189+01.55	190+09.63	Left	Perimeter and Slope	12 inch	109.00	Stage 2A
27.0	190+07.48	191+41.23	Right	Perimeter and Slope	12 inch	136.00	Stage 2A
28.0	190+11.05	191+41.39	Left	Perimeter and Slope	12 inch	133.00	Stage 2A
29.0	191+45.14		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
30.0	191+49.65	193+21.17	Right	Perimeter and Slope	12 inch	173.00	Stage 2A
31.0	191+50.70	192+54.96	Left	Perimeter and Slope	12 inch	107.00	Stage 2A
32.0	192+56.38	193+36.75	Left	Perimeter and Slope	12 inch	82.00	Stage 2A
33.0	193+21.83	194+40.75	Right	Perimeter and Slope	12 inch	120.00	Stage 2A
34.0	193+37.18	194+40.91	Left	Perimeter and Slope	12 inch	106.00	Stage 2A
35.0	194+45.01		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
36.0	194+46.47		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
37.0	194+46.79		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
38.0	194+49.57	194+69.75	Left	Perimeter and Slope	12 inch	23.00	Stage 2A
39.0	194+52.63	194+69.15	Right	Perimeter and Slope	12 inch	19.00	Stage 2A
40.0	194+74.88	194+92.57	Right	Perimeter and Slope	12 inch	22.00	Stage 2A
41.0	194+78.36		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
42.0	194+95.95	195+02.10	Right	Perimeter and Slope	12 inch	33.00	Stage 2A
43.0	195+42.69		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
44.0	195+53.68	195+73.05	Left	Perimeter and Slope	12 inch	28.00	Stage 2A
45.0	195+82.11	196+95.61	Left	Perimeter and Slope	12 inch	116.00	Stage 2A
46.0	197+00.00		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
47.0	197+01.46		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
48.0	197+04.40	198+27.74	Left	Perimeter and Slope	12 inch	126.00	Stage 2A
49.0	198+27.90	199+33.70	Left	Perimeter and Slope	12 inch	108.00	Stage 2A
50.0	199+34.21	200+86.03	Left	Perimeter and Slope	12 inch	154.00	Stage 2A
51.0	199+45.90	200+85.05	Right	Perimeter and Slope	12 inch	140.00	Stage 2A
52.0	200+00.04		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Culvert inlet
53.0	200+90.28		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
54.0	200+90.44		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
55.0	200+93.78	202+51.33	Right	Perimeter and Slope	12 inch	159.00	Stage 2A

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
56.0	200+95.36	201+72.22	Left	Perimeter and Slope	12 inch	79.00	Stage 2A
57.0	201+49.92	201+74.81	Left	Perimeter and Slope	12 inch	30.00	Stage 2A
58.0	201+88.19	202+26.88	Left	Perimeter and Slope	12 inch	42.00	Stage 2A
59.0	201+97.66	202+51.28	Left	Perimeter and Slope	12 inch	56.00	Stage 2A
60.0	202+55.87		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
62.0	202+56.05		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
63.0	202+60.34	203+86.87	Left	Perimeter and Slope	12 inch	128.00	Stage 2A
64.0	202+60.62	203+25.57	Right	Perimeter and Slope	12 inch	68.00	Stage 2A
65.0	203+26.43	204+61.82	Right	Perimeter and Slope	12 inch	137.00	Stage 2A
66.0	203+69.53		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Culvert inlet
67.0	203+90.76	204+01.33	Left	Perimeter and Slope	12 inch	31.00	Stage 2A
68.0	204+35.27	204+60.48	Left	Perimeter and Slope	12 inch	28.00	Stage 2A
69.0	204+65.30		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
70.0	204+65.51		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
71.0	204+67.49	205+22.55	Right	Perimeter and Slope	12 inch	57.00	Stage 2A
72.0	204+69.81	205+21.77	Left	Perimeter and Slope	12 inch	55.00	Stage 2A
73.0	205+26.10		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
74.0	205+26.10		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
75.0	205+28.67	206+66.41	Right	Perimeter and Slope	12 inch	139.00	Stage 2A
76.0	205+30.35	206+72.23	Left	Perimeter and Slope	12 inch	145.00	Stage 2A
77.0	206+67.05	207+91.06	Right	Perimeter and Slope	12 inch	126.00	Stage 2A
78.0	206+72.21	207+91.19	Left	Perimeter and Slope	12 inch	121.00	Stage 2A
79.0	207+95.34		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
80.0	207+95.43		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
81.0	207+98.85	208+38.09	Right	Perimeter and Slope	12 inch	42.00	Stage 2A
82.0	208+00.38	208+28.39	Left	Perimeter and Slope	12 inch	30.00	Stage 2A
83.0	208+09.73		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Culvert inlet
84.0	208+68.27	209+81.19	Left	Perimeter and Slope	12 inch	114.00	Stage 2A
85.0	209+86.69		Right	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
86.0	209+87.09		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
87.0	209+92.35	211+22.96	Left	Perimeter and Slope	12 inch	133.00	Stage 2A
88.0	211+23.38	212+44.28	Left	Perimeter and Slope	12 inch	123.00	Stage 2A
89.0	212+44.95	213+57.95	Left	Perimeter and Slope	12 inch	115.00	Stage 2A
90.0	213+64.41		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
91.0	213+68.28	213+95.96	Left	Perimeter and Slope	12 inch	31.00	Stage 2A
92.0	214+00.75		Left	Perimeter and Slope	12 inch	30.00	Stage 2A - Intake
93.0	214+04.97	215+08.07	Left	Perimeter and Slope	12 inch	107.00	Stage 2A
94.0	215+19.92	215+91.53	Left	Perimeter and Slope	12 inch	104.00	Stage 2A
95.0	+.00						
96.0	168+16.71		Right	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
97.0	167+81.57	168+12.06	Right	Perimeter and Slope	12 inch	32.00	Stage 3A
98.0	168+21.27	168+46.71	Right	Perimeter and Slope	12 inch	27.00	Stage 3A
99.0	169+09.33	170+11.36	Right	Perimeter and Slope	12 inch	104.00	Stage 3A
100.0	170+16.60		Right	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
101.0	170+74.16	172+12.18	Right	Perimeter and Slope	12 inch	141.00	Stage 3A
102.0	170+91.59	171+91.32	Right	Perimeter and Slope	12 inch	101.00	Stage 3A
103.0	171+96.21		Right	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
104.0	171+96.60		Left	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
105.0	171+99.60	172+20.65	Right	Perimeter and Slope	12 inch	28.00	Stage 3A
106.0	172+22.76	172+27.91	Right	Perimeter and Slope	12 inch	21.00	Stage 3A
107.0	172+57.73	172+63.68	Right	Perimeter and Slope	12 inch	25.00	Stage 3A
108.0	172+66.47	173+97.16	Right	Perimeter and Slope	12 inch	134.00	Stage 3A
109.0	173+97.33	175+20.78	Right	Perimeter and Slope	12 inch	127.00	Stage 3A
110.0	175+26.57		Right	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
111.0	175+26.59		Left	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

112.0	175+29.03	175+51.10	Right	Perimeter and Slope	12 inch	24.00	Stage 3A
113.0	175+56.65	175+63.56	Right	Perimeter and Slope	12 inch	30.00	Stage 3A
114.0	176+01.93	177+42.08	Right	Perimeter and Slope	12 inch	142.00	Stage 3A
115.0	176+07.84	177+61.00	Right	Perimeter and Slope	12 inch	155.00	Stage 3A
116.0	176+64.95	177+21.34	Left	Perimeter and Slope	12 inch	59.00	Stage 3A
117.0	177+15.23	177+36.71	Left	Perimeter and Slope	12 inch	24.00	Stage 3A
118.0	177+45.75	177+88.10	Right	Perimeter and Slope	12 inch	45.00	Stage 3A
119.0	177+51.20		Left	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
120.0	177+54.14	178+68.32	Left	Perimeter and Slope	12 inch	116.00	Stage 3A
121.0	177+67.62		Right	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
122.0	177+69.10	177+94.94	Right	Perimeter and Slope	12 inch	29.00	Stage 3A
123.0	177+70.84	178+68.13	Right	Perimeter and Slope	12 inch	98.00	Stage 3A
124.0	177+75.31	178+05.70	Left	Perimeter and Slope	12 inch	32.00	Stage 3A
125.0	178+05.25	178+59.33	Left	Perimeter and Slope	12 inch	57.00	Stage 3A
126.0	178+23.26	178+68.68	Right	Perimeter and Slope	12 inch	49.00	Stage 3A
127.0	178+68.95	179+21.02	Right	Perimeter and Slope	12 inch	53.00	Stage 3A
128.0	178+84.50		Right	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
129.0	178+84.68		Left	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
130.0	179+01.37	180+17.52	Right	Perimeter and Slope	12 inch	119.00	Stage 3A
131.0	179+01.78	180+16.80	Left	Perimeter and Slope	12 inch	117.00	Stage 3A
132.0	179+16.73	180+18.02	Right	Perimeter and Slope	12 inch	103.00	Stage 3A
133.0	180+23.40	180+30.97	Left	Perimeter and Slope	12 inch	19.00	Stage 3A
134.0	180+31.13		Left	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
135.0	180+64.13		Left	Perimeter and Slope	12 inch	30.00	Stage 3A - Intake
136.0	180+64.52	180+69.48	Right	Perimeter and Slope	12 inch	29.00	Stage 3A
137.0	+.00						
138.0	162+44.14		Left	Perimeter and Slope	12 inch	30.00	Stage 3B - Intake
139.0	162+21.60	162+32.51	Left	Perimeter and Slope	12 inch	15.00	Stage 3B
140.0	162+37.86	162+44.20	Left	Perimeter and Slope	12 inch	8.00	Stage 3B
141.0	163+08.29	163+16.29	Left	Perimeter and Slope	12 inch	20.00	Stage 3B
142.0	163+17.27	163+22.81	Left	Perimeter and Slope	12 inch	11.00	Stage 3B
143.0	163+26.63		Left	Perimeter and Slope	12 inch	30.00	Stage 3B - Intake
144.0	163+33.12	163+38.98	Left	Perimeter and Slope	12 inch	7.00	Stage 3B
145.0	163+46.39	164+07.42	Left	Perimeter and Slope	12 inch	62.00	Stage 3B
146.0	164+14.80		Left	Perimeter and Slope	12 inch	30.00	Stage 3B - Intake
147.0	164+21.78	165+03.61	Left	Perimeter and Slope	12 inch	83.00	Stage 3B
148.0	165+42.92	165+65.23	Left	Perimeter and Slope	12 inch	23.00	Stage 3B
149.0	166+16.54	166+84.61	Left	Perimeter and Slope	12 inch	71.00	Stage 3B
150.0	166+90.44		Left	Perimeter and Slope	12 inch	30.00	Stage 3B - Intake
151.0	166+97.19	167+41.38	Left	Perimeter and Slope	12 inch	45.00	Stage 3B
152.0	167+64.97	168+11.13	Left	Perimeter and Slope	12 inch	49.00	Stage 3B
153.0	168+16.21		Left	Perimeter and Slope	12 inch	30.00	Stage 3B - Intake
154.0	168+21.53	168+30.41	Left	Perimeter and Slope	12 inch	11.00	Stage 3B
155.0	168+54.41	169+02.59	Left	Perimeter and Slope	12 inch	50.00	Stage 3B
156.0	169+10.51	169+64.33	Left	Perimeter and Slope	12 inch	55.00	Stage 3B
157.0	169+64.43	170+09.63	Left	Perimeter and Slope	12 inch	47.00	Stage 3B
158.0	170+15.90		Left	Perimeter and Slope	12 inch	30.00	Stage 3B - Intake
159.0	170+23.00	170+66.16	Left	Perimeter and Slope	12 inch	45.00	Stage 3B
160.0	170+90.39	171+90.56	Left	Perimeter and Slope	12 inch	102.00	Stage 3B
161.0	171+99.41	172+26.03	Left	Perimeter and Slope	12 inch	28.00	Stage 3B
162.0	172+40.19	173+49.49	Left	Perimeter and Slope	12 inch	111.00	Stage 3B
163.0	173+91.91	175+75.75	Left	Perimeter and Slope	12 inch	185.00	Stage 3B
164.0	175+26.05		Left	Perimeter and Slope	12 inch	30.00	Stage 3B - Intake
165.0	+.00						
166.0	+.00				12 inch	2477.00	Undistributed - 25%

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
167.0	+.00						
168.0	181+43.51		Left	Ditch Check	20 inch	20.00	Stage 1
169.0	182+12.09		Left	Ditch Check	20 inch	20.00	Stage 1
170.0	182+78.54		Left	Ditch Check	20 inch	20.00	Stage 1
171.0	183+44.66		Left	Ditch Check	20 inch	20.00	Stage 1
172.0	184+11.83		Left	Ditch Check	20 inch	20.00	Stage 1
173.0	+.00						
175.0	201+46.32		Left	Perimeter and Slope	20 inch	50.00	Stage 2A - Culvert Inlet
176.0	202+88.21		Left	Ditch Check	20 inch	20.00	Stage 2A
177.0	203+55.13		Left	Ditch Check	20 inch	20.00	Stage 2A
178.0	204+87.31		Left	Perimeter and Slope	20 inch	50.00	Stage 2A - Culvert Inlet
179.0	204+98.90		Left	Perimeter and Slope	20 inch	50.00	Stage 2A - Culvert Inlet
180.0	+.00						
181.0	177+68.56		Left	Perimeter and Slope	20 inch	50.00	Stage 3A - Culvert Inlet
182.0	178+69.13		Left	Ditch Check	20 inch	20.00	Stage 3A
183.0	178+95.50		Left	Ditch Check	20 inch	20.00	Stage 3A
184.0	179+39.95		Left	Ditch Check	20 inch	20.00	Stage 3A
185.0	+.00						
186.0	173+75.43		Left	Ditch Check	20 inch	20.00	Stage 3B
187.0	173+97.20		Left	Ditch Check	20 inch	20.00	Stage 3B
188.0	174+19.10		Left	Ditch Check	20 inch	20.00	Stage 3B
189.0	174+41.09		Left	Ditch Check	20 inch	20.00	Stage 3B
190.0	174+63.09		Left	Ditch Check	20 inch	20.00	Stage 3B
191.0	174+86.35		Left	Ditch Check	20 inch	20.00	Stage 3B
192.0	175+07.06		Left	Ditch Check	20 inch	20.00	Stage 3B
193.0	175+29.06		Left	Ditch Check	20 inch	20.00	Stage 3B
194.0	175+54.01		Left	Ditch Check	20 inch	20.00	Stage 3B
195.0	175+73.05		Left	Ditch Check	20 inch	20.00	Stage 3B
196.0	175+95.05		Left	Ditch Check	20 inch	20.00	Stage 3B
197.0	+.00						
198.0	+.00			Perimeter and Slope	20 inch	50.00	Undistributed - 25%
199.0	+.00			Ditch Check	20 inch	110.00	Undistributed - 50%

Totals:

Perimeter and Slope Sediment Control Device, 12 in. Dia. = 12380 LF

Perimeter and Slope Sediment Control Device, 20 in. Dia. = 250 LF

Removal of Perimeter and Slope or Ditch Check Sediment Control Device = 13260 LF

Ditch Check Sediment Control Device, 20 in. Dia. = 530 LF

ROLLED EROSION CONTROL

Refer to EC-101, EC-103 and EC-104.

Line No.	Road Identification	Station From	Station To	Side	Length (FT)	Width (FT)	TRM Type (EC-104)	TRM Quantity (Squares)	Slope Protection (EC-103) (Squares)	Special Ditch Control (EC-101) (Squares)	Remarks
1.0	USH 6	190+18.96	192+44.05	Right	225.0	6.0				13.5	Stage 2A
2.0	USH 6	199+79.61	200+96.70	Left	117.0	6.0				7.0	Stage 2A
3.0	USH 6	200+96.70	201+77.66	Left					24.3		Stage 2A
4.0	USH 6	201+47.03	202+15.39	Right					31.4		Stage 2A
5.0	USH 6	204+45.75	205+25.50	Right					29.4		Stage 2A
6.0	USH 6	204+58.79	205+24.89	Left					26.0		Stage 2A
7.0											
8.0	USH 6	177+16.18	178+07.58	Left					30.6		Stage 3A
9.0	USH 6	177+69.97	178+70.83	Right					50.3		Stage 3A
10.0	USH 6	178+69.71	179+83.49	Right	115.0	6.0				6.9	Stage 3A
Total:									**192**	**27.4**	

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	180+93.46	Right	5.0	1	1.0	Stage 1
2.0	187+67.31	Right	5.0	1	1.0	Stage 1
3.0	187+74.03	Right	5.0	1	1.0	Stage 1
4.0	187+70.14	Right	5.0	1	1.0	Stage 1
5.0	+.00					
6.0	180+93.46	Left	5.0	1	1.0	Stage 1
7.0	180+96.74	Left	5.0	1	1.0	Stage 1
8.0	187+67.40	Left	5.0	1	1.0	Stage 1
9.0	187+70.35	Left	5.0	1	1.0	Stage 1
10.0	187+73.04	Left	5.0	1	1.0	Stage 1
11.0	188+28.56	Left	5.0	1	1.0	Stage 1
12.0	+.00					
13.0	191+45.47	Right	5.0	1	1.0	Stage 2A
14.0	194+46.73	Right	9.0	1	1.0	Stage 2A
15.0	194+75.18	Right	5.0	1	1.0	Stage 2A
16.0	197+00.00	Right	5.0	1	1.0	Stage 2A
17.0	202+56.05	Right	5.0	1	1.0	Stage 2A
18.0	207+95.47	Right	5.0	1	1.0	Stage 2A
19.0	209+86.88	Right	5.0	1	1.0	Stage 2A
20.0	+.00					
21.0	188+67.71	Left	15.0	1	1.0	Stage 2A
22.0	191+44.79	Left	5.0	1	1.0	Stage 2A
23.0	194+43.17	Left	5.0	1	1.0	Stage 2A
24.0	194+45.03	Left	5.0	1	1.0	Stage 2A
25.0	194+49.18	Left	5.0	1	1.0	Stage 2A
26.0	195+41.10	Left	9.0	1	1.0	Stage 2A
27.0	197+01.64	Left	9.0	1	1.0	Stage 2A
28.0	200+90.44	Left	5.0	1	1.0	Stage 2A
29.0	202+56.04	Left	5.0	1	1.0	Stage 2A
30.0	204+65.30	Left	5.0	1	1.0	Stage 2A
31.0	205+26.10	Left	5.0	1	1.0	Stage 2A
32.0	207+95.34	Left	5.0	1	1.0	Stage 2A
33.0	209+87.20	Left	5.0	1	1.0	Stage 2A
34.0	213+64.20	Left	5.0	1	1.0	Stage 2A
35.0	214+00.62	Left	5.0	1	1.0	Stage 2A
36.0	+.00					
37.0	168+16.89	Right	5.0	1	1.0	Stage 3A
38.0	170+16.78	Right	5.0	1	1.0	Stage 3A
39.0	175+26.77	Right	5.0	1	1.0	Stage 3A
40.0	178+84.69	Right	20.0	1	1.0	Stage 3A
41.0	+.00					
42.0	171+96.90	Left	9.0	1	1.0	Stage 3A
43.0	175+26.82	Left	9.0	1	1.0	Stage 3A
44.0	177+50.00	Left	5.0	1	1.0	Stage 3A
45.0	178+84.82	Left	20.0	1	1.0	Stage 3A
46.0	180+32.56	Left	9.0	1	1.0	Stage 3A
47.0	180+61.59	Left	9.0	1	1.0	Stage 3A
48.0	+.00					
49.0	162+47.82	Left	9.0	1	1.0	Stage 3B
50.0	163+27.43	Left	9.0	1	1.0	Stage 3B
51.0	164+15.00	Left	9.0	1	1.0	Stage 3B
52.0	166+90.57	Left	9.0	1	1.0	Stage 3B
53.0	168+16.30	Left	9.0	1	1.0	Stage 3B
54.0	170+16.17	Left	9.0	1	1.0	Stage 3B
55.0	171+96.90	Left	9.0	1	1.0	Stage 3B

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
56.0	175+26.82	Left	9.0	1	1.0	Stage 3B
Total:			**350**	**50**	**50**	

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	200+90.28	Right	1.0	1	1.0	Stage 2A
2.0	204+65.51	Right	1.0	1	1.0	Stage 2A
3.0	205+26.10	Right	1.0	1	1.0	Stage 2A
4.0	171+96.36	Right	1.0	1	1.0	Stage 3A
5.0	177+67.62	Right	1.0	1	1.0	Stage 3A
6.0	164+79.77	Left	1.0	1	1.0	Stage 3B
Total:			**6**	**6**	**6**	

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	180+87.82	181+63.64	EB	Trees - Clearing and Grubbing																	0.013		Stage 1
2.0	201+89.61	202+04.80	EB	Trees - Clearing and Grubbing																	0.015		Stage 2A
3.0	204+56.69	204+74.51	EB	Trees - Clearing and Grubbing																	0.024		Stage 2A
4.0	173+56.59	174+08.11	EB	Trees - Clearing and Grubbing																	0.014		Stage 3A
5.0	174+24.84		EB	Trees - Clearing and Grubbing	1															1.6			Stage 3A
6.0	176+06.99	177+40.52	EB	Trees - Clearing and Grubbing																	0.040		Stage 3A
7.0	180+76.78	180+87.82	EB	Trees - Clearing and Grubbing																	0.003		Stage 3A
8.0	174+56.23	175+12.91	WB	Trees - Clearing and Grubbing																	0.002		Stage 3B
Total:																				**1.6**	**0.111**		

ADJUSTMENT OF FIXTURES

Line No.	Item No.	Location Station	Side	Distance	Type of Fixture	Adjustment
1.0	1	172+29.91	Left	15.33' LT	Sanitary Sewer Manhole	Manhole Adjustment, Minor; lower ~0.50 feet; 15 in. existing riser
2.0	2	172+60.74	Right	20.54' RT	Water Main Valve Box	Valve Box Adjustment, Minor; raise ~0.15 feet
3.0	3	172+66.19	Right	33.07' RT	Water Main Valve Box	Valve Box Adjustment, Minor; lower ~0.15 feet
4.0	4	172+67.87	Right	33.17' RT	Fire Hydrant	Fire Hydrant Adjustment; lower ~0.50 feet
5.0	5	175+82.85	Right	21.93' RT	Water Main Valve Box	Valve Box Adjustment, Minor; lower ~0.15 feet
6.0	6	175+95.07	Right	51.15' RT	Water Main Valve Box	Valve Box Adjustment, Minor; raise ~0.95 feet
7.0	7	175+95.97	Right	51.16' RT	Fire Hydrant	Fire Hydrant Adjustment; raise ~1.05 feet
8.0	8	190+23.64	Left	59.55' LT	Sanitary Sewer Manhole	Manhole Ajdustment, Major; lower ~1.83 feet

Totals:
Manhole Adjustment, Minor = 1 EACH
Manhole Adjustment, Major = 1 EACH
Valve Box Adjustment, Minor = 4 EACH
Fire Hydrant Adjustment = 2 EACH

WATER MAIN FITTINGS AND APPURTENANCES

Water Main Fitting or Appuretenance Proposed Location						Fitting	Appurtenance	Remarks
Alignment Name	Station	Offset	Alignment Name	Station	Offset			
USH 6	172+51.06	25.5' RT					6 IN GATE VALVE	RELOCATE AND REPLACE EXISTING VALVE
USH 6	172+60.53	54.6' RT					6 IN GATE VALVE	RELOCATE AND REPLACE EXISTING VALVE
USH 6	183+45.92	37.7' RT					6 IN GATE VALVE	RELOCATE AND REPLACE EXISTING VALVE
USH 6	190+17.67	53.0' RT	Water Main 1	5000+00.00	0.0'	12 IN X 8 IN TEE		8 IN TOWARDS EAST
USH 6	190+58.40	53.0' RT	Water Main 1	5000+09.00	0.0'		8 IN GATE VALVE	
USH 6	192+66.95	41.4' RT	Water Main 1	5002+49.50	11.3' LT		FIRE HYDRANT ASSEMBLY	
USH 6	193+12.40	53.0' RT	Water Main 1	5002+94.90	0.0'		8 IN GATE VALVE	
USH 6	193+17.00	53.0' RT	Water Main 1	5002+99.40	0.0'	8 IN X 8 IN TEE		
USH 6	195+85.80	38.6' RT	Water Main 1	5005+68.60	3.5' LT		FIRE HYDRANT ASSEMBLY	
USH 6	195+90.30	42.1' RT	Water Main 1	5005+73.10	0.0'		8 IN GATE VALVE	
USH 6	199+52.80	40.0' RT	Water Main 1	5009+35.50	0.0'		8 IN GATE VALVE	
USH 6	199+57.30	38.5' RT	Water Main 1	5009+40.00	3.5' LT		FIRE HYDRANT ASSEMBLY	
USH 6	206+59.10	57.0' RT	Water Main 1	5016+41.20	15.0' RT		YARD HYDRANT	
USH 6	206+64.00	45.5' RT	Water Main 1	5016+46.70	3.5' RT		FIRE HYDRANT ASSEMBLY	
USH 6	206+68.50	42.0' RT	Water Main 1	5016+51.20	0.0'		8 IN GATE VALVE	
USH 6	208+80.50	40.4' RT	Water Main 1	5018+64.20	3.5' LT		FIRE HYDRANT ASSEMBLY	
USH 6	208+84.40	44.1' RT	Water Main 1	5018+68.70	0.0'		8 IN GATE VALVE	
USH 6	212+45.00	68.2' RT	Water Main 1	5020+60.50	0.0'		8 IN GATE VALVE	
USH 6	212+49.50	65.0' RT	Water Main 1	5020+65.00	3.5' LT		FIRE HYDRANT ASSEMBLY	
USH 6	212+84.20	103.7' RT	Water Main 1	5024+76.20	0.0'	11.25 DEGREE BEND		
USH 6	215+40.00	100.1' RT	Water Main 1	5025+31.20	0.0'		8 IN FLUSHING DEVICE (BLOWOFF)	
USH 6	215+45.00	100.1' RT	Water Main 1	5025+36.20	0.0'		8 IN GATE VALVE	
USH 6	215+48.30	99.9' RT	Water Main 1	5026+15.60	0.0'	45 DEGREE BEND		
USH 6	215+53.00	94.5' RT	Water Main 1	5025+43.30	0.0'	12 IN X 8 IN TEE		8 IN TOWARDS SOUTHWEST
USH 6	193+17.00	40.4' RT	Water Main - Kimberlite Spur	6000+12.25	0.0'		8 IN GATE VALVE	
			Total:		**8 IN X 8 IN TEE**	**1**		
					12 IN X 8 IN TEE	**2**		
					11.25 DEGREE BEND	**1**		
					45 DEGREE BEND	**1**		
					6 IN GATE VALVE		**3**	
					8 IN GATE VALVE		**9**	
					FIRE HYDRANT ASSEMBLY		**6**	
					YARD HYDRANT		**1**	
					8 IN FLUSHING DEVICE (BLOWOFF)		**1**	

WATER MAIN

Water Main Proposed Location						Pipe Material and Diameter (IN)	Length (LF)	Remarks
Alignment Name	Station	Offset	Alignment Name	Station	Offset			
USH 6	190+17.67	53.0' RT	Water Main 1	5000+00.00	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	9	Connect to existing 12" water main
USH 6	190+58.40	53.0' RT	Water Main 1	5000+09.00	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	249	
USH 6	192+66.95	53.0' RT	Water Main 1	5002+49.50	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	46	
USH 6	193+12.40	53.0' RT	Water Main 1	5002+94.90	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	4	
USH 6	193+17.00	53.0' RT	Water Main 1	5002+99.40	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	269	
USH 6	195+85.80	38.6' RT	Water Main 1	5005+68.60	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	4	
USH 6	195+90.30	42.1' RT	Water Main 1	5005+73.10	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	362	
USH 6	199+52.80	40.0' RT	Water Main 1	5009+35.50	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	4	
USH 6	199+57.30	38.5' RT	Water Main 1	5009+40.00	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	591	
USH 6	206+64.00	45.5' RT	Water Main 1	5016+46.70	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	4	
USH 6	206+68.50	42.0' RT	Water Main 1	5016+51.20	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	213	
USH 6	208+80.50	40.4' RT	Water Main 1	5018+64.20	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	4	
USH 6	208+84.40	44.1' RT	Water Main 1	5018+68.70	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	104	
USH 6	212+45.00	68.2' RT	Water Main 1	5020+60.50	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	4	
USH 6	212+49.50	65.0' RT	Water Main 1	5020+65.00	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	411	
USH 6	212+84.20	103.7' RT	Water Main 1	5024+76.20	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	52	
USH 6	215+40.00	100.1' RT	Water Main 1	5025+31.20	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	5	
USH 6	215+45.00	100.1' RT	Water Main 1	5025+36.20	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	5	
USH 6	215+48.30	99.9' RT	Water Main 1	5026+15.60	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.	3	
USH 6	215+53.00	94.5' RT	Water Main 1	5025+43.30	0.0'	Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.		Connect to existing 12" water main
USH 6	193+17.00	52.8' RT	Water Main (Kimberlite)	6000+00.00	0.0'	Water Main with Casing Pipe, Trenched, Polyvinyl Chloride Pipe (PVC), 8 IN.	123	
					Total:	**Water Main, Trenchless, Polyvinyl Chloride Pipe (PVC), 8 IN.**	**2,343**	**LF**
						Water Main with Casing Pipe, Trenched, Polyvinyl Chloride Pipe (PVC), 8 IN.	**123.0**	**LF**

TOPSOIL STRIPPING AND PLACEMENT

Line No.	Road Identification	Dir. of Traffic	Station From	Station To	Topsoil Stripping Thickness (IN)	Topsoil Placement Thickness (IN)	Remarks
			+.00				
1.0	Stage 2 - EB USH 6	EB	170+98.86	210+06.86	8.0	8.0	
2.0	Stage 3 - WB USH 6	WB	170+98.86	210+06.86	8.0	8.0	

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	EB USH 6	170+98.86	171+95.33	Right	24.0	6.0	95.4	170+98.86		7.1	Connect to existing subdrain
2.0								171+95.33	DR-303		
3.0	EB USH 6	171+95.33	172+31.46	Right	24.0	6.0	63.3	171+95.33	DR-303	4.7	
4.0								172+31.46			Connect to existing subdrain
5.0	EB USH 6	172+55.24	175+25.32	Right	24.0	6.0	300.1	172+55.24		22.2	Connect to existing subdrain
6.0								175+25.32	DR-303		
7.0	EB USH 6	175+25.32	175+68.65	Right	24.0	6.0	71.7	175+25.32	DR-303	5.3	
8.0								175+68.65			Connect to existing subdrain
9.0	EB USH 6	175+90.86	177+67.59	Right	24.0	6.0	204.1	175+90.86		15.1	Connect to existing subdrain
10.0								177+67.59	DR-303		
11.0	EB USH 6	177+67.59	178+72.32	Right	24.0	6.0	105.8	177+67.59	DR-303	7.8	
12.0								178+72.32	DR-303		
13.0	EB USH 6	178+98.01	180+29.00	Right	24.0	6.0	163.4	178+98.01	DR-303	12.1	
14.0								180+29.00			Connect to Type B Cleanout
15.0	EB USH 6	180+67.18	180+93.46	Right	24.0	6.0	59.6	180+67.18		4.4	Connect to Type B Cleanout
16.0								180+93.46	DR-303		
17.0	EB USH 6	180+93.46	184+36.51	Right	24.0	6.0	353.0	180+93.46	DR-303	26.1	
18.0								184+36.51			Connect to Type B Cleanout
19.0	EB USH 6	184+36.51	187+70.32	Right	24.0	6.0	346.1	184+36.51		25.6	Connect to Type B Cleanout
20.0								187+70.32	DR-303		
21.0	EB USH 6	187+70.32	191+45.32	Right	24.0	6.0	378.5	187+70.32	DR-303	28.0	
22.0								191+45.32	DR-303		
23.0	EB USH 6	191+45.32	194+45.32	Right	24.0	6.0	303.0	191+45.32	DR-303	22.4	
24.0								194+45.32	DR-303		
25.0	EB USH 6	194+45.32	195+08.17	Right	24.0	6.0	95.4	194+45.32	DR-303	7.1	
26.0								195+08.17			Connect to existing subdrain
27.0	EB USH 6	195+55.17	1+97.00	Right	24.0	6.0	190.6	195+55.17		14.1	Connect to existing subdrain
28.0								1+97.00	DR-303		
29.0	EB USH 6	1+97.00	200+90.32	Right	24.0	6.0	391.4	1+97.00	DR-303	29.0	
30.0								200+90.32	DR-303		
31.0	EB USH 6	200+90.32	202+56.05	Right	24.0	6.0	166.8	200+90.32	DR-303	12.4	
32.0								202+56.05	DR-303		
33.0	EB USH 6	202+56.05	204+65.32	Right	24.0	6.0	210.4	202+56.05	DR-303	15.6	
34.0								204+65.32	DR-303		
35.0	EB USH 6	204+65.32	205+26.10	Right	24.0	6.0	60.0	204+65.32	DR-303	4.4	
36.0								205+26.10	DR-303		
37.0	EB USH 6	205+26.10	207+95.34	Right	24.0	6.0	270.5	205+26.10	DR-303	20.0	
38.0								207+95.34	DR-303		
39.0	EB USH 6	207+95.34	209+86.93	Right	24.0	6.0	195.9	207+95.34	DR-303	14.5	
40.0								209+86.93	DR-303		
41.0	EB USH 6	209+86.93	210+06.85	Right	24.0	6.0	21.2	209+86.93	DR-303	1.6	
42.0								210+06.85			Connect to existing subdrain
43.0											
44.0	WB USH 6	170+98.86	171+95.32	Left	24.0	6.0	97.7	170+98.86		7.2	Connect to existing subdrain
45.0								171+95.32	DR-303		
46.0	WB USH 6	171+95.32	175+25.32	Left	24.0	6.0	333.0	171+95.32	DR-303	24.7	
47.0								175+25.32	DR-303		
48.0	WB USH 6	175+25.32	177+51.09	Left	24.0	6.0	228.8	175+25.32	DR-303	16.9	
49.0								177+51.09	DR-303		
50.0	WB USH 6	177+51.09	178+72.32	Left	24.0	6.0	124.2	177+51.09	DR-303	9.2	
51.0								178+72.32	DR-303		
52.0	WB USH 6	178+98.46	180+32.13	Left	24.0	6.0	160.6	178+98.46	DR-303	11.9	
53.0								180+32.13	DR-303		
54.0	WB USH 6	180+62.32	180+93.46	Left	24.0	6.0	55.2	180+62.32	DR-303	4.1	
55.0								180+93.46	DR-303		

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
56.0	WB USH 6	180+93.46	184+34.26	Left	24.0	6.0	349.1	180+93.46	DR-303	25.9	
57.0								184+34.26			Connect to Type B Cleanout
58.0	WB USH 6	184+34.26	187+70.32	Left	24.0	6.0	344.1	184+34.26		25.5	Connect to Type B Cleanout
59.0								187+70.32	DR-303		
60.0	WB USH 6	187+70.32	188+31.77	Left	24.0	6.0	79.3	187+70.32	DR-303	5.9	
61.0								188+31.77	DR-303		Connect to existing intake
62.0	WB USH 6	188+64.92	191+45.32	Left	24.0	6.0	299.6	188+64.92	DR-303	22.2	Connect to existing intake
63.0								191+45.32	DR-303		
64.0	WB USH 6	191+45.32	194+45.32	Left	24.0	6.0	303.4	191+45.32	DR-303	22.5	
65.0								194+45.32	DR-303		
66.0	WB USH 6	194+45.32	194+96.22	Left	24.0	6.0	93.0	194+45.32	DR-303	6.9	
67.0								194+96.22			Connect to existing subdrain
68.0	WB USH 6	195+43.22	1+97.00	Left	24.0	6.0	186.8	195+43.22		13.8	Connect to existing subdrain
69.0								1+97.00	DR-303		
70.0	WB USH 6	1+97.00	200+90.62	Left	24.0	6.0	393.8	1+97.00	DR-303	29.2	
71.0								200+90.62	DR-303		
72.0	WB USH 6	200+90.62	202+56.04	Left	24.0	6.0	168.7	200+90.62	DR-303	12.5	
73.0								202+56.04	DR-303		
74.0	WB USH 6	202+56.04	204+65.32	Left	24.0	6.0	212.3	202+56.04	DR-303	15.7	
75.0								204+65.32	DR-303		
76.0	WB USH 6	204+65.32	205+26.10	Left	24.0	6.0	63.8	204+65.32	DR-303	4.7	
77.0								205+26.10	DR-303		
78.0	WB USH 6	205+26.10	207+95.35	Left	24.0	6.0	272.0	205+26.10	DR-303	20.1	
79.0								207+95.35	DR-303		
80.0	WB USH 6	207+95.35	209+87.14	Left	24.0	6.0	194.9	207+95.35	DR-303	14.4	
81.0								209+87.14	DR-303		
82.0	WB USH 6	209+87.14	210+07.20	Left	24.0	6.0	21.4	209+87.14	DR-303	1.6	
83.0								210+07.20			Connect to existing subdrain
Total:							**8027.9**			**594.4**	

Totals:
Subdrain, Longitudinal, (Shoulder) 6 in. Dia. = 8028 LF
Subdrain Outlet, DR-303 = 64 EACH
Subdrain Cleanout, Type B = 4 EACH

All Longitudinal Subdrains are Type 12.
Subdrain under box culvert backfill is not included in this tabulation.

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- WH Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box
- Bend
- Reducer
- Tee
- Valve Cap
- Hydrant

UTILITY LEGEND

City of Tiffin

- W — Water
- SAN. — Sanitary
- ST S — Storm Sewer
- Street Lights and Traffic Signals

Brett Mehmen
bbtiffin@southslope.net
(319) 631-1698

Alliant Energy

- E1 — Buried Electric
- E2 — Aerial Electric
- Utility Poles and Street Lights

Dean Colony
DeanColony@alliantenergy.com
(319) 786-1905

International Transmission

- T2 — Buried Telephone
- Utility Poles

Chad Levi
clevi@itctransco.com
(319) 297-6765

Mediacom

- TV — Buried Telecommunications
- TV2 — Aerial Telecommunications

Donald Bergthold
dbergthold@mediacomcc.com
(319) 351-0408

MidAmerican Gas - Distribution

- G — Buried Low Pressure Gas

Joseph Retek
joseph.retek@midamerican.com
(319) 341-4457

MidAmerican Gas - Transmission

- GHP — Buried High Pressure Gas

William Barry
william.barry@midamerican.com
(319) 298-5146

Segra

- FO3 — Buried Fiber
- T3 — Buried Telephone

James Keegan
James.Keegan@segrafiber.com
(319) 304-5597

South Slope Telephone

- FO — Buried Fiber

Randy Cline
randy@southslope.com
(319) 665-5316

Uniti - CLEC

- FO2 — Buried Fiber
- FO5 — Aerial Fiber

Stephen Kness
Stephen.Kness@uniti.com
(319) 538-1985

Uniti - ILEC

- FO4 — Buried Fiber
- T1 — Buried Telephone
- Handhole Structures

Trae Bodensteiner
trae.bodensteiner@uniti.com
(614) 840-5500

NOTE: Utilities without quality level indicated in linestyles on plan sheets are 'Quality Level D' obtained from maps and records.

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING	**Design Color No.**	
Lavender	(9)	Temporary Pavement Shading
Yellow	(4)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading
Red	(3)	Delineates Restricted Areas

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(10)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

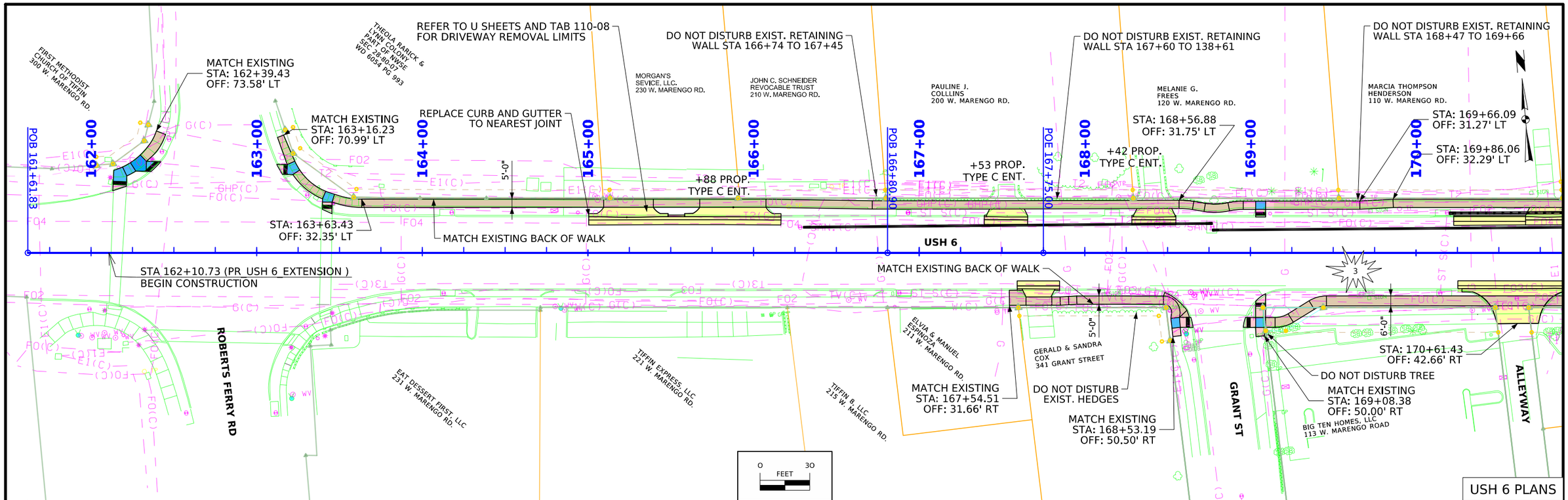
- Reference Point — Survey Line
- Station — Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- C/A Access Control
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)



UTILITY CONFLICT NOTES:

3. CONFLICTING HANDHOLE TO BE RELOCATED BY UTILITY. COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

UNITI ILEC
4. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

CITY OF TIFFIN T-80N R-7W SEC. 28

STA: 170+98.87
OFF: 32.34' LT
EL: 719.46

WILLIAM ROGERS
100 W. MARENGO RD.

+78 PROP. TYPE C ENT.

STA 170+98.86 (PR_USH 6)
BEGIN PAVING

STA: 172+47.96
OFF: 31.09' LT
EL: 716.61

+35 PROP. PROP. TYPE C ENT.

STA: 173+98.52
OFF: 64.60' LT
EL: 709.57

CITY OF TIFFIN
LOT "A"- REEVE'S ADD.
PART ONE

STA: 176+01.29
OFF: 66.01' LT
EL: 700.93

STA: 177+64.09
OFF: 31.50' LT
EL: 701.97

STA: 177+84.09
OFF: 31.50' LT
EL: 701.78

CASEY'S MARKETING COMPANY
403 STEPHANS STREET

STA: 177+99.09
OFF: 33.50' LT
EL: 701.72

171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00

MANHOLE ADJUSTMENT, MINOR

USH 6

VALVE, GATE, DIP, 6 IN.
INSTALL ON EXISTING WATER MAIN

VALVE BOX ADJUSTMENT, MINOR

CAREW ENTERPRISES, LLC
107 W. MARENGO ROAD

FIRE HYDRANT ADJUSTMENT

STA: 173+21.37
OFF: 33.50' RT
EL: 0.00

VALVE, GATE, DIP, 6 IN.
INSTALL ON EXISTING WATER MAIN

LISA A. VOREL
330 MAIN STREET

VALVE BOX ADJUSTMENT, MINOR

COMBINED CONCRETE SIDEWALK AND RETAINING WALL STA. 175+54

MATCH EXISTING
STA: 175+55.59
OFF: 49.60' RT

LEANORD & DOLORES VOREL
331 SUMMERHAYS STREET

MATCH EXISTING
STA: 175+79.76
OFF: 58.73' RT

FIRE HYDRANT ADJUSTMENT

CURTIS R. ALLEN
330 SUMMERHAYS STREET

MATCH EXISTING
STA: 176+00.92
OFF: 53.88' RT

PROPOSED 10' X 6'
CIP RCB CULVERT EXTENSION
REFER TO V SHEETS

ALLEYWAY

MAIN ST

SUMMERHAYS ST

BROWN ST

STA: 172+02.75
OFF: 44.52' RT
EL: 716.01

CAREW ENTERPRISES, LLC
107 W. MARENGO ROAD

MATCH EXISTING
STA: 172+16.36
OFF: 66.59' RT

MATCH EXISTING
STA: 172+69.50
OFF: 64.75' RT

MATCH EXISTING
STA: 172+43.35
OFF: 60.02' RT

0 30
FEET

ROBIN & JOHN DURIAN
320 SUMMERHAYS STREET

CITY OF TIFFIN
204 BROWN STREET

AMBER HERRING
315 STEPHANS STREET

USH 6 PLANS

UTILITY CONFLICT NOTES:

MEDIACOM
1. CONFLICTING JUNCTION BOX TO BE RELOCATED BY UTILITY. COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

MIDAMERICAN DISTRIBUTION
2. CONFLICTING REGULATOR STATION TO BE RELOCATED BY UTILITY. COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

UNITI ILEC
4. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

735 730 725 720 715 710 705 700 695 690 685 680

VPI = +45.00
EL = 718.82
L = 325.00'
K = 126
SSD = 495'
DES. SPD. = 55 MPH

-0.65% -3.23%

BEGIN PAVING
STA. 170+98.86
ELEV. 718.58

MAIN ST
172+43.35

VPT = 173+07.50
EL = 713.57

VPC = 175+05.00
EL = 707.18

SUMMERSHAY ST
175+79.76

PROPOSED CL PROFILE

EXISTING CL PROFILE

+74 LT
698.88

+84 LT
700.57

-3.23% +1.45%

VPI = +80.00
EL = 698.29
L = 550.00'
K = 117
SSD = 495'
DES. SPD = 55 MPH

VLP = 178+84.69
EL = 701.05

+50 RT
697.55

+60 RT
697.63

718.57 718.14 717.67 717.15 716.58 715.96 715.30 714.58 713.81 713.00 712.19 711.39 710.58 709.77 708.96 708.15 707.34 706.55 705.81 705.13 704.50 703.92 703.39 702.92 702.50 702.13 701.82 701.56 701.35 701.20 701.10 701.05 701.06 701.12 701.23 701.39

171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER D.3

11:24:02 AM 8/4/2026 khankins pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_D02.dgn

CITY OF TIFFIN T-80N R-7W SEC. 28

MATCH EXISTING
STA: 180+16.92
OFF: 38.50' LT

STEPHANS ST

MATCH EXISTING
STA: 180+47.77
OFF: 56.95' LT

IOWA CITY EAST-SIDE
DEVELOPMENT, LLC
400 STEPHANS ST. UNIT B

RAIRDEN REAL
ESTATE, LLC
511 STATE ST. UNIT 101

ASPEN VENTURES, LLC
591 STATE ST. UNIT D

CROELL AVE

MATCH EXISTING
STA: 188+86.87
OFF: 72.47' LT

MATCH EXISTING
STA: 188+48.24
OFF: 64.73' LT

MATCH EXISTING
STA: 188+08.18
OFF: 59.13' LT

180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00

6'-0" 5'-0" 6'-0" 6'-0" 6'-0" 6'-0" 6'-0" 6'-0" 5'-0" 5'-0" 5'-0" 5'-0" 5'-0"

USH 6

10'-0 1/8" 4'-11 13/16"

MATCH EXISTING
STA: 180+18.64
OFF: 39.10' RT

STEPHANS ST

MATCH EXISTING
STA: 180+48.24
OFF: 58.74' RT

DOUGLAS & LOUISE
SHALLA
312 STEPHANS STREET

STA: 182+26.07
OFF: 45.50' RT
EL: 704.92
VALVE, GATE, DIP, 6 IN.
INSTALL ON EXISTING WATER MAIN

443 MARENGO LC
443 E. MARENGO RD.

MATCH EXISTING
STA: 184+67.30
OFF: 74.71' RT

STA: 185+42.27
OFF: 37.50' RT
EL: 707.86

MATCH EXISTING
STA: 188+49.50
OFF: 61.01' RT

CHAD L.
FREEMAN
607 E. MARENGO ROAD

CROELL AVE

0 30
FEET

USH 6 PLANS

UTILITY CONFLICT NOTES:

UNITI ILEC
4. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

725 720 715 710 705 700 695 690 685 680 675

STEPHANS ST
180+47.77
VPT = 180+55.00
EL = 702.28

+99 LT
700.24

PROPOSED CL PROFILE

EXISTING CL PROFILE

GROVE PARK ACCESS
184+67.30

+79 LT
704.39

VHP = 185+45.70
EL = 707.34

VPI = +75.00
EL = 709.82
L = 625.00'
K = 195
SSD = 645'
DES. SPD. = 65 MPH

1.45% -1.75%

CROELL AVE
188+48.24

+09 RT
699.76

+98 RT
699.67

STEPHANS ST
180+48.24

+87 RT
698.62

VPC = 182+62.50
EL = 705.29

+17 RT
703.35

+19 RT
703.83

+94 RT
705.24

NORTH CROELL AVE
188+49.50

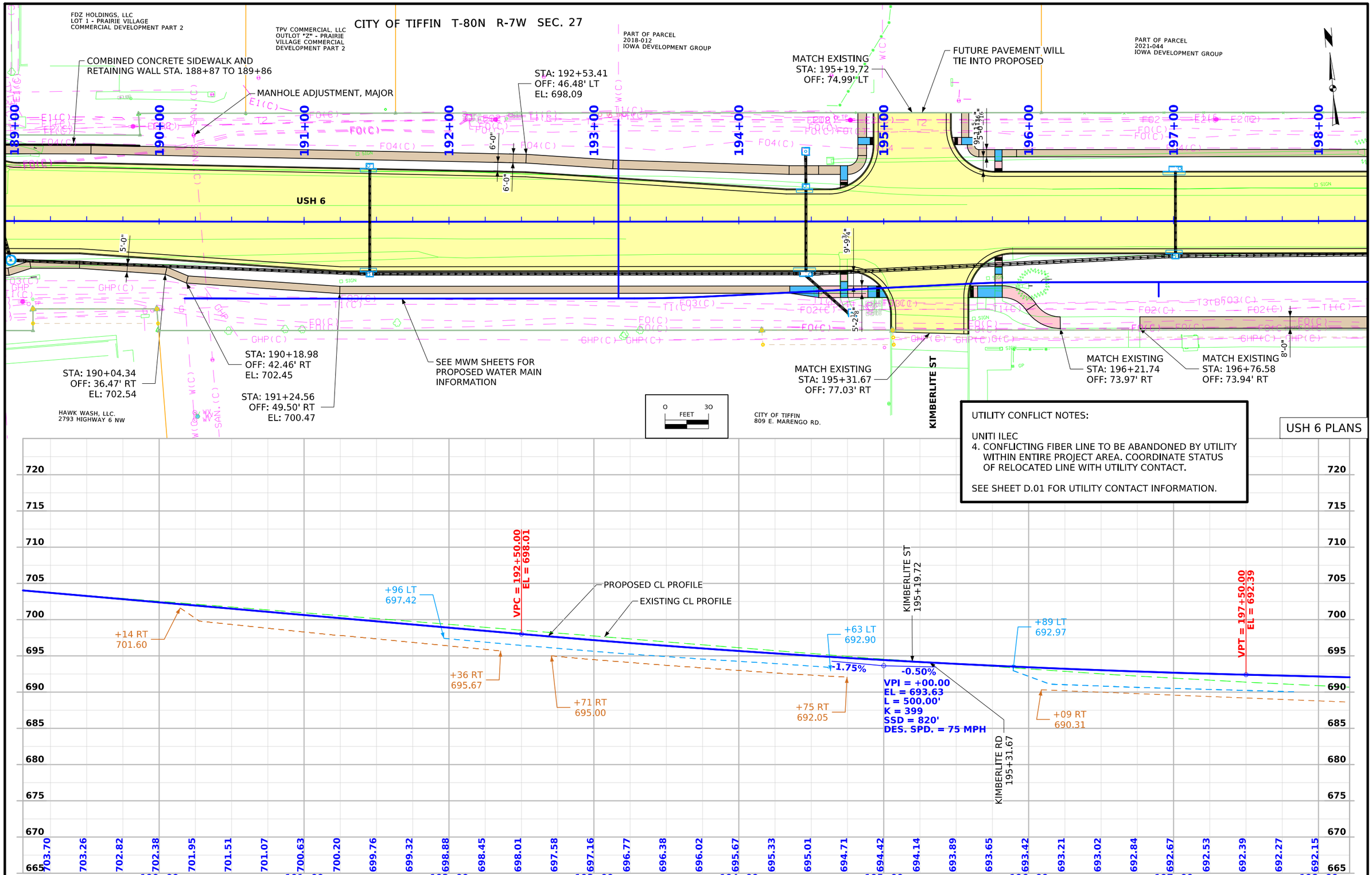
VPT = 188+87.50
EL = 704.35

701.61 701.88 702.21 702.57 702.93 703.30 703.66 704.02 704.38 704.75 705.11 705.47 705.80 706.10 706.36 706.60 706.80 706.97 707.11 707.21 707.29 707.33 707.34 707.32 707.27 707.18 707.06 706.91 706.73 706.52 706.27 706.00 705.69 705.35 704.97 704.57 704.13

180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00

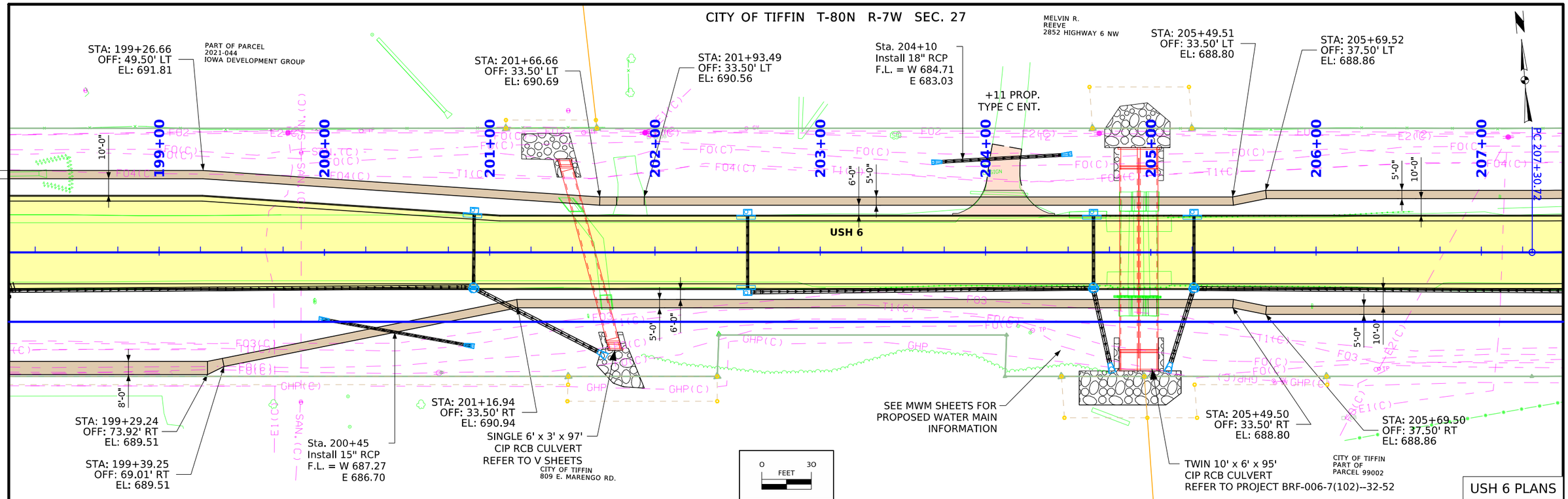
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER D.4

11:24:08 AM 8/4/2026 khankins pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_D02.dgn



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER D.5

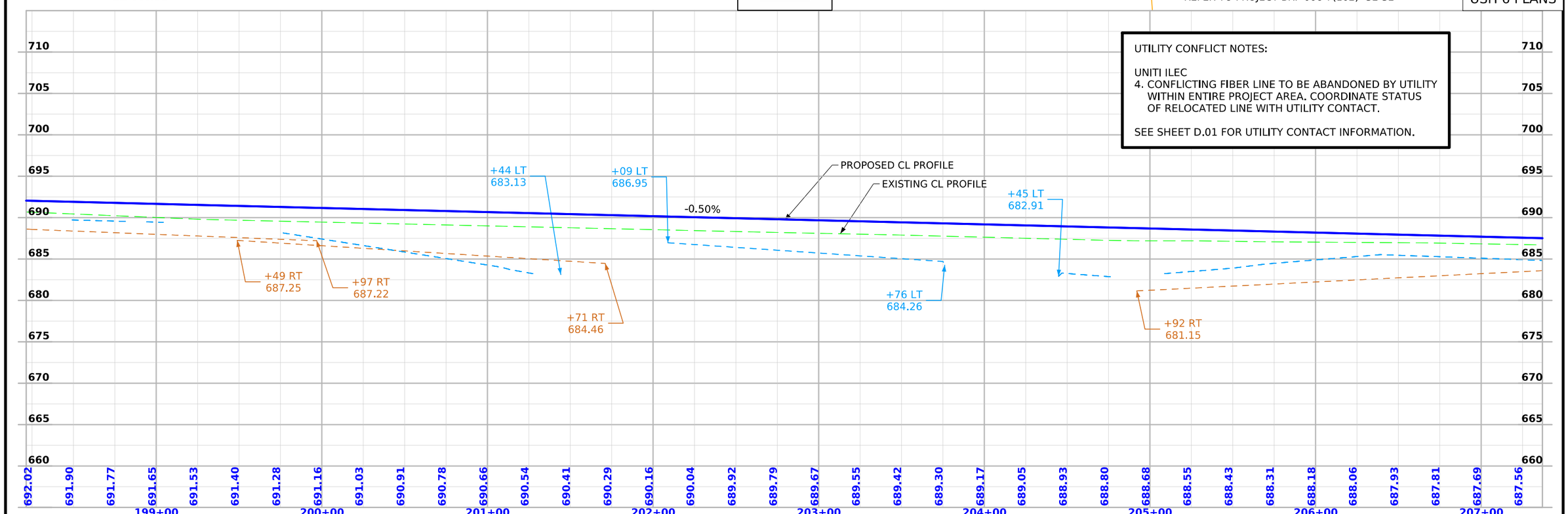
11:24:15 AM 8/4/2026 khankins pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_D02.dgn



UTILITY CONFLICT NOTES:

UNITI ILEC
4. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER D.6

11:24:25 AM 8/4/2026 khankins pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_D02.dgn

CITY OF TIFFIN T-80N R-7W SEC. 27

MELVIN R. REEVE
2852 HIGHWAY 6 NW

STA: 208+13.92
OFF: 52.21' LT

STA: 208+10.42
OFF: 37.50' LT
EL: 687.66

Δ = 01°49'04.18" (LT)
T = 90.91'
L = 181.80'
R = 5730.00'
E = 0.72'

Sta. 200+45
Install 18" RCP
F.L. = W 683.94
E 683.48

STA: 208+78.45
OFF: 57.43' LT

STA: 210+07.03
OFF: 45.14' LT
EL: 686.27

STA: 213+28.59
OFF: 46.23' LT
EL: 684.57

STA: 215+40.24
OFF: 75.51' LT
EL: 685.11

STA: 215+81.29
OFF: 124.76' LT
EL: 685.24

MATCH EXISTING
STA: 215+83.57
OFF: 131.92' LT

STA: 215+71.05
OFF: 100.34' LT
EL: 685.42

PC 207+30.74
208+00
209+00
PT 209+12.51
210+00
211+00
212+00
213+00
214+00
215+00
216+00
POE 216+16.53

10'-0"
5'-0"
5'-0"
5'-0"
5'-0"
5'-0"

USH 6

STA 210+06.86 (PR_USH 6)
END PAVING

STA 215+88.27 (PR_USH 6)
END CONSTRUCTION

PI 208+21.62

STA: 208+00.07
OFF: 37.92' RT
EL: 687.72

MATCH EXISTING
STA: 208+59.66
OFF: 71.18' RT

CITY OF TIFFIN
PART OF
PARCEL 99002

CITY OF TIFFIN
809 E. MARENGO RD.

SEE MWM SHEETS FOR
PROPOSED WATER MAIN
INFORMATION

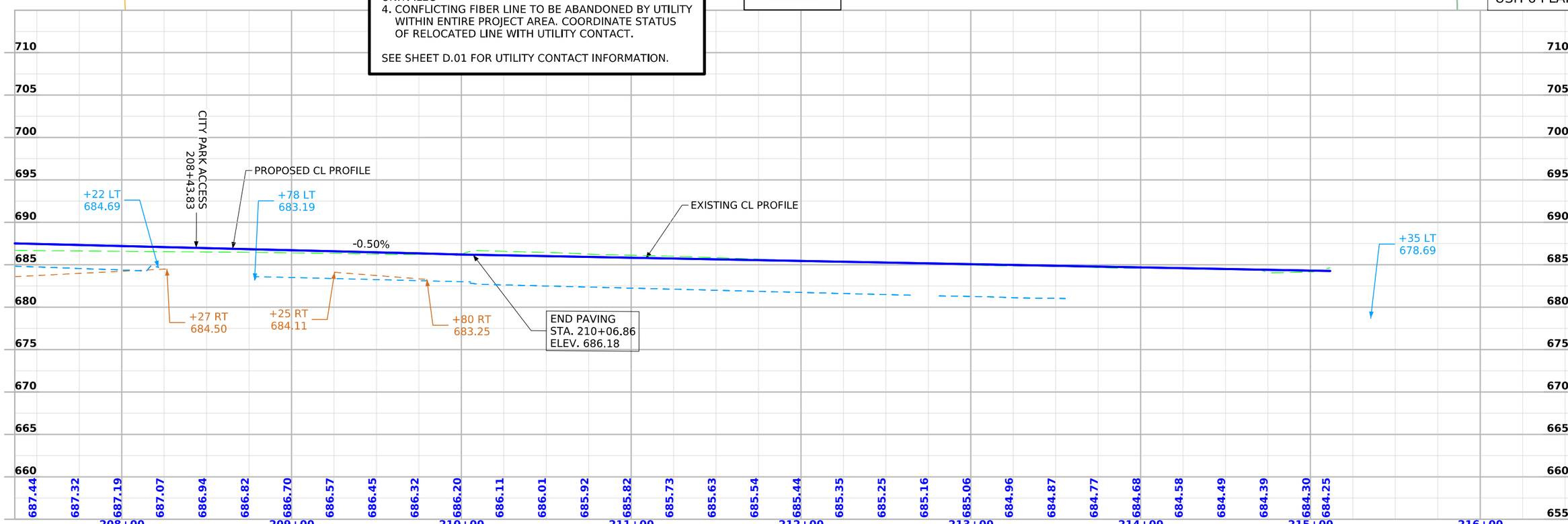
0 30
FEET

UTILITY CONFLICT NOTES:

UNITI ILEC
4. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

USH 6 PLANS



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER D.7

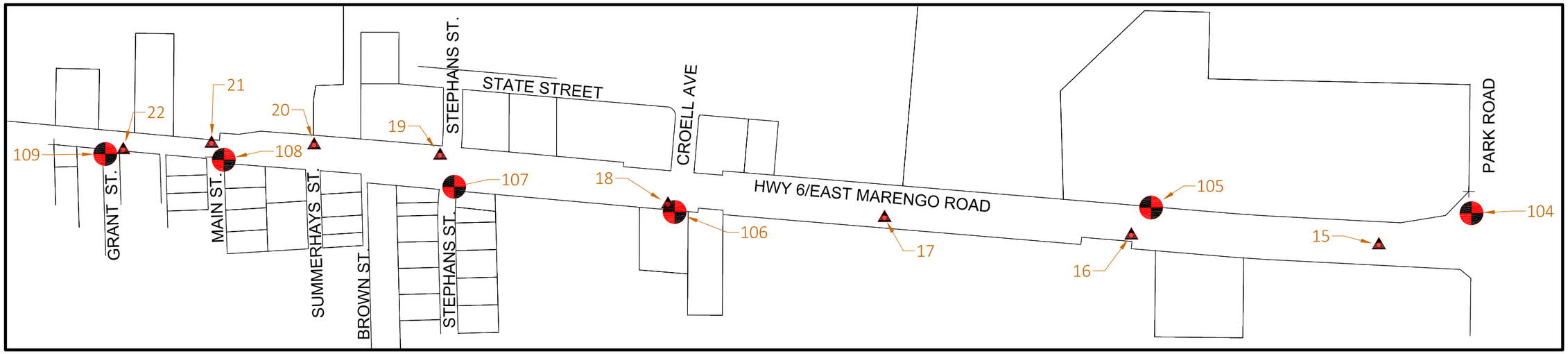
11:24:27 AM 8/4/2026 khankins pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_D02.dgn

ALIGNMENT COORDINATES

Line No.	Name	Location	Point on Tangent Station	Point on Tangent Y Northing	Point on Tangent X Easting	Begin Spiral Station	Begin Spiral Y Northing	Begin Spiral X Easting	Begin Curve Station	Begin Curve Y Northing	Begin Curve X Easting	Simple Curve PI or Master PI Station	Simple Curve PI or Master PI Y Northing	Simple Curve PI or Master PI X Easting	End Curve Station	End Curve Y Northing	End Curve X Easting	End Spiral Station	End Spiral Y Northing	End Spiral X Easting
1.0	1	Pr_USH 6_Extension	161+61.83	7954057.955	20499877.47															
2.0	1	Pr_USH 6_Extension	167+75.00	7954002.077	20500488.09															
3.0																				
4.0	1	Pr_USH 6	166+80.90	7954010.652	20500394.39															
5.0	2	Pr_USH 6	171+38.58	7953968.945	20500850.16															
6.0	3	Pr_USH 6	178+92.75	7953909.201	20501601.96															
7.0	4	Pr_USH 6	184+95.77	7953855.422	20502202.58															
8.0	5	Pr_USH 6	191+00.00	7953803.037	20502804.53															
9.0	6	Pr_USH 6	205+48.45	7953682.579	20504247.96															
10.0	7	Pr_USH 6							207+30.72	7953667.425	20504429.6	208+21.62	7953659.867	20504520.19	209+12.51	7953655.186	20504610.98			
11.0	8	Pr_USH 6	216+16.53	7953618.938	20505314.06															
12.0																				
13.0	1	WM_Alignment_1	5000+00.00	7953757.325	20502717.91															
14.0	2	WM_Alignment_1	5003+74.14	7953726.256	20503090.75															
15.0	3	WM_Alignment_1	5004+48.95	7953705.611	20503162.66															
16.0	4	WM_Alignment_1	5005+66.65	7953695.822	20503279.96															
17.0	5	WM_Alignment_1	5006+05.27	7953720.762	20503309.44															
18.0	6	WM_Alignment_1	5009+49.69	7953692.119	20503652.67															
19.0	7	WM_Alignment_1	5010+46.38	7953647.818	20503738.61															
20.0	8	WM_Alignment_1	5011+92.18	7953635.694	20503883.91															
21.0	9	WM_Alignment_1	5012+40.27	7953666.749	20503920.62															
22.0	10	WM_Alignment_1	5014+45.90	7953649.646	20504125.53															
23.0	11	WM_Alignment_1	5015+02.46	7953606.459	20504162.07															
24.0	12	WM_Alignment_1	5015+48.45	7953602.634	20504207.89															
25.0	13	WM_Alignment_1	5016+06.43	7953640.083	20504252.16															
26.0	14	WM_Alignment_1	5020+03.13	7953607.1	20504647.49															
27.0	15	WM_Alignment_1	5020+43.13	7953603.427	20504687.32															
28.0	16	WM_Alignment_1	5020+83.13	7953599.406	20504727.12															
29.0	17	WM_Alignment_1	5021+23.13	7953595.038	20504766.88															
30.0	18	WM_Alignment_1	5022+01.03	7953585.527	20504844.2															
31.0	19	WM_Alignment_1	5023+36.84	7953565.369	20504978.5															
32.0	20	WM_Alignment_1	5024+88.68	7953570.467	20505130.25															
33.0	21	WM_Alignment_1	5025+58.14	7953521.969	20505179.97															
34.0	22	WM_Alignment_1	5026+18.91	7953522.727	20505240.74															
35.0	22	WM_Alignment_1	5026+26.02	7953527.818	20505245.71															
36.0																				
37.0	1	WM 8 (PVC)	5999+99.72	7953732.179	20503016.32															
38.0	1	WM 8 (PVC)	6001+22.70	7953854.737	20503026.55															

SPIRAL OR CIRCULAR CURVE DATA

Line No.	Name	Location	SCS	S	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	C	T	L	R	E	Remarks
1.0	C1	Pr_USH 6										1.818	90.906	181.796	5730	0.721	



SURVEY CONTROL:

HORIZONTAL DATUM IS RELATIVE TO THE IOWA REGIONAL COORDINATE SYSTEM ZONE 10.

VERTICAL DATUM IS NAVD88 RELATIVE TO GEOID18.

CONTROL POINTS

Point #	Northing	Easting	Elevation	Raw Description
15	7953631.820	20504959.200	685.37	CP 3/4" REBAR MSA CAP
16	7953665.593	20504105.670	687.14	CP 3/4" REBAR MSA CAP
17	7953725.597	20503255.050	692.75	CP 3/4" REBAR MSA CAP
18	7953772.235	20502508.270	705.74	CP 3/4" REBAR MSA CAP
19	7953940.588	20501722.450	702.28	CP 3/4" REBAR MSA CAP
20	7953975.704	20501288.240	701.96	CP 3/4" REBAR MSA CAP
21	7953982.049	20500934.620	716.54	CP 3/4" REBAR MSA CAP
22	7953959.559	20500630.140	720.14	CP 3/4" REBAR MSA CAP

BENCHMARKS

Point #	Northing	Easting	Elevation	Raw Description
104	7953741.4520	20505278.9200	686.454	BONNET BOLT ON HYD. ARROW POINTS TO NW COR. HWY 6/PARK RD
105	7953760.8000	20504174.2500	686.912	RR SPIKE IN PP JUST E. OF DRIVE AT
106	7953745.5320	20502531.5900	705.134	CUT "X" ON TOP OF CURB W. SIDE OF ENTRANCE TO RESTAURANT
107	7953832.2950	20501771.3700	704.197	BONNET BOLT ON HYD. ARROW PTS TO SE COR. HWY 6
108	7953925.4950	20500977.1000	717.116	BONNET BOLT ON HYD. ARROW PTS TO SE COR. HWY6/MAIN
109	7953945.2490	20500568.5700	721.072	BONNET BOLT ON HYD W/ BURY TAG SW COR HWY6/GRANT

108_23A
8/15/22

TRAFFIC CONTROL PLAN

1. TRAFFIC CONTROL ON THIS PROJECT SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR THE STREETS AND HIGHWAYS AS ADOPTED BY THE IOWA DEPARTMENT OF TRANSPORATION PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC) CHAPTER 13.
2. ROAD CLOSURES
   A. STAGE 1 - EB/WB THROUGH TRAFFIC ON US 6. SB TRAFFIC ON CROELL BETWEEN STATE ST AND US 6. SEE DETOUR PLANS.
   B. STAGE 2A - EB/WB THROUGH TRAFFIC ON US 6. SB TRAFFIC ON CROELL BETWEEN STATE ST AND US 6. KIMBERLITE ST AT US 6. SEE DETOUR PLANS.
   C. STAGE 3A – EB/WB THROUGH TRAFFIC ON US 6. MAIN ST, SUMMERHAYS ST, AND STEPHANS ST AT US 6. SEE DETOUR PLANS.
3. TEMPORARY PAVEMENT SHOULD BE PLACED WHERE NECESSARY TO MAINTAIN A MINIMUM 12’ LANE WIDTH DURING STAGES 1 AND 2C.
4. PROPOSED PERMANENT PAVEMENT MARKINGS SHALL BE INSTALLED AT THE END OFEACH STAGE SO AS NOT TO CONFLICT WITH ANY TEMPORARY TRAFFIC CONTROL.
5. ALL OPEN TRENCHES SHALL BE FILLED TO THE LEVEL OF THE ADJOINING PAVEMENT BEFORE OPENING THE LANE TO TRAFFIC.
6. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUSINESSES AND PRIVATE DRIVEWAYS THROUGHOUT THE DURATION OF THE PROJECT AT ALL TIMES UNLESS SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE CONTRACTOR AND THE PROPERTY OWNER. THE CONTRACTOR MUST NOTIFY ALL PROPERTY OWNERS 3 BUSINESS DAYS PRIOR TO CONSTRUCTION IN FRONT OF THE BUSINESS OR PRIVATE DRIVEWAY.
7. EMERGENCY ACCESS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE CITY OF TIFFIN AT LEAST 1 WEEK PRIOR TO ANY CHANGES IN STAGING OR EMERGENCY ACCESS ROUTE.
8. ALL TRAFFIC CONTROL DEVICES WILL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
9. DETOUR SIGNS ARE TO BE COVERED WHEN DETOUR ROUTE IS NOT IN EFFECT. THE CONTRACTOR SHALL MAINTAIN DETOUR SIGNING ALONG THE ROUTE. SEE DETOUR PLANS.
10. WHERE POSSIBLE, ALL POST MOUNTED SIGNS SHALL BE PLACED SO THE EDGE OF THE SIGN IS AT LEAST 2 FEET BEYOND THE CURB OR EDGE OF SHOULDER. ALL SIGNS TO BE IN PLACE LONGER THAN THREE DAYS MUST BE POST-MOUNTED.
11. PERMANENT SIGNING THAT CONVEYS A MESSAGE CONTRARY TO THE MESSAGE FOR TEMPORARY SIGNING AND NOT APPLICABLE TO THE WORKING CONDITIONS SHALL BE COVERED BY THE CONTRACTOR WHEN DIRECTED BY THE ENGINEER.

STAGING NOTES

CONTRACTOR SHALL NOT START ANY WORK UNTIL AFTER TRAFFIC CONTROL IS IN PLACE AND APPROVED BY THE ENGINEER. REFER TO SHEET J.11 FOR THE DETOUR SIGNING DETAILS FOR STAGES REQUIRING ROAD CLOSURES.

CONTRACTOR IS ALLOWED TO SUBMIT A REVISED STAGING PLAN TO THE ENGINEER TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE FOR SPECIFIC TIMES. CONTRACTOR SHALL PROVIDE THE REVISED STAGING PLAN TO THE ENGINEER AT LEAST 1 WEEK PRIOR TO IMPLEMENTATION FOR REVIEW. CONTRACTOR'S REVISED STAGING PLAN MUST BE APPROVED BY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.

SIGNS, CHANNELIZING DEVICES, DRUMS, AND SAFETY FENCE ARE CONSIDERED INCIDENTAL TO THE TRAFFIC CONTROL BID ITEM.

CONTRACTOR TO COORDINATE WITH AND PROVIDE ACCES NORTH-SOUTH ACROSS CLOSED PORTIONS OF CROELL AND STEPHANS FOR EMERGENCY SERVICES AT ALL TIMES.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUSINESSES AND PRIVATE DRIVEWAYS THROUGHOUT THE DURATION OF THE PROJECT AT ALL TIMES UNLESS SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE CONTRACTOR AND THE PROPERTY OWNER. THE CONTRACTOR MUST NOTIFY ALL PROPERTY OWNERS 3 BUSINESS DAYS PRIOR TO CONSTRUCTION IN FRONT OF THE BUSINESS OR PRIVATE DRIVEWAY.

STAGE 1

TRAFFIC

1. INSTALL USH 6 DETOUR SIGNING PRIOR TO ROAD CLOSURE. SEE SHEET J.11 FOR DETOUR DETAILS.
2. SEE SHEET J.4-5 FOR TRAFFIC CONTROL DETAILS.
3. CLOSE CROELL AVE TO SB TRAFFIC. CLOSE USH 6 BETWEEN STEPHANS ST AND CROELL AVE.
4. MAINTAIN ACCESS TO CROELL AVE SOUTH OF USH 6.
5. PORTABLE DYNAMIC MESSAGE SIGN PLACED SEVEN CALENDAR DAYS PRIOR TO CLOSING AT ROBERTS FERRY RD AND PARK RD:

U.S 6
CLOSED
DATE
STEPHANS
TO
CROELL

PORTABLE DYNAMIC MESSAGE SIGN DURING CONSTRUCTION AT ROBERTS FERRY RD AND PARK RD:

U.S. 6
CLOSED
AHEAD
STEPHANS
TO
CROELL

CONSTRUCTION

1. CONSTRUCT TEMPORARY PAVEMENT ON SE CORNER OF CROELL AVE / USH 6 INTERSECTION.
2. CONSTRUCT PROPOSED STORM SEWER AND WATER MAIN IN STAGE 1 CONSTRUCTION AREA AS SHOWN. COVER AND PROTECT ENDS OF PIPES REQUIRING STAGING CONNECTIONS BETWEEN STAGE 1 AND LATER STAGES.
3. CONSTRUCT PERMANENT PAVEMENT AS SHOWN.
4. CONSTRUCT SIDEWALKS AS SHOWN.
5. INSTALL PERMANENT PAVEMENT MARKINGS IN SUCH A WAY AS TO NOT CONFLICT WITH ANY TEMPORARY TRAFFIC CONTROL.

STAGE 2A

TRAFFIC

1. USH 6 DETOUR SIGNING FROM STAGE 1 TO REMAIN IN PLACE.
2. SEE SHEET J.6-7 FOR TRAFFIC CONTROL DETAILS.
3. CLOSE KIMBERLITE ST. CLOSE USH 6 FROM CROELL AVE TO PARK RD.
5. MAINTAIN ACCESS TO ALL BUSINESSES AND PRIVATE DRIVEWAYS AS NOTED ABOVE. MAINTAIN ACCESS TO CROELL AVE SOUTH OF USH 6.
6. PORTABLE DYNAMIC MESSAGE SIGN PLACED SEVEN CALENDAR DAYS PRIOR TO CLOSING AT ROBERTS FERRY RD AND PARK RD:

U.S 6
CLOSED
DATE
CROELL
TO
PARK RD

PORTABLE DYNAMIC MESSAGE SIGN DURING CONSTRUCTION AT ROBERTS FERRY RD AND PARK RD:

U.S. 6
CLOSED
AHEAD
CROELL
TO
PARK RD

108_26A
8/15/22

STAGING NOTES

CONSTRUCTION

1. REMOVE EXISTING CULVERTS AT STA 204+92.77. CONSTRUCT DOUBLE 10’X6’ CIP RCB CULVERT ACROSS USH 6.
2. REMOVE EXISTING CULVERT AT STA 201+60.18. CONSTRUCT 6’X3’ CIP RCB CULVERT ACROSS USH 6.
3. CONSTRUCT PROPOSED STORM SEWER AND WATER MAIN IN STAGE 2A CONSTRUCTION AREA AS SHOWN. COVER AND PROTECT ENDS OF PIPES REQUIRING STAGING CONNECTIONS BETWEEN STAGE 2A AND LATER STAGES.
4. CONSTRUCT PERMANENT PAVEMENT AS SHOWN.
5. CONSTRUCT SIDEWALKS AS SHOWN.
6. INSTALL PERMANENT PAVEMENT MARKINGS IN SUCH A WAY AS TO NOT CONFLICT WITH ANY TEMPORARY TRAFFIC CONTROL.

STAGE 2B

TRAFFIC

1. COVER USH 6 DETOUR SIGNING.
2. SEE SHEET J.8 FOR TRAFFIC CONTROL DETAILS.
3. MAINTAIN ACCESS TO CROELL AVE SOUTH OF USH 6.

CONSTRUCTION

1. CONSTRUCT REMAINING PORTION OF PERMANENT PAVEMENT AT CROELL AVE INTERSECTION.

STAGE 2C

TRAFFIC

1. COVER USH 6 DETOUR SIGNING.
2. OPEN ROADWAY TO TRAFFIC BETWEEN 2027 AND 2028 CONSTRUCTION SEASONS.
3. SEE SHEETS J.8 FOR TRAFFIC CONTROL DETAILS.

CONSTRUCTION

1. CONSTRUCT TEMPORARY PAVEMENT.
2. CONSTRUCT TEMPORARY PAVEMENT MARKINGS AS SHOWN.

STAGE 3A

TRAFFIC

1. UNCOVER USH 6 DETOUR SIGNING PRIOR TO ROAD CLOSURE. SEE SHEET J.11 FOR DETOUR DETAILS.
2. INSTALL TEMPORARY PEDESTRIAN DETOUR SIGNS AS SHOWN. MAINTAIN PEDESTRIAN CROSSING ACROSS USH 6 AT STEPHANS ST. REFER TO TC-602 AS NECESSARY. MATERIALS REQUIRED TO MAINTAIN ACCESS ARE TO BE INCIDENTAL TO TRAFFIC CONTROL.
3. SEE SHEET J.9 FOR TRAFFIC CONTROL DETAILS.
4. CLOSE MAIN ST, SUMMERHAYS ST, AND STEPHANS ST INTERSECTIONS. CLOSE USH 6 BETWEEN MAIN ST AND STEPHANS ST. REFER TO STANDARD ROAD PLAN TC-252.
5. MAINTAIN ACCESS TO ALL BUSINESSES AND PRIVATE DRIVEWAYS AS NOTED ABOVE.
6. PORTABLE DYNAMIC MESSAGE SIGN PLACED SEVEN CALENDAR DAYS PRIOR TO CLOSING AT ROBERTS FERRY RD AND PARK RD:

U.S 6
CLOSED
DATE
MAIN
TO
STEPHANS

PORTABLE DYNAMIC MESSAGE SIGN DURING CONSTRUCTION AT ROBERTS FERRY RD AND PARK RD:

U.S. 6
CLOSED
AHEAD
MAIN
TO
STEPHANS

CONSTRUCTION

1. CONSTRUCT 10’X6’ CIP RCB CULVERT EXTENSION AT STATION 177+84.40.
2. CONSTRUCT PROPOSED STORM SEWER IN STAGE 3A CONSTRUCTION AREA AS SHOWN.
3. CONSTRUCT PERMANENT PAVEMENT AS SHOWN.
4. CONSTRUCT SIDEWALKS AS SHOWN.
5. INSTALL PERMANENT PAVEMENT MARKINGS IN SUCH A WAY AS TO NOT CONFLICT WITH ANY TEMPORARY TRAFFIC CONTROL.

STAGE 3B

TRAFFIC

1. REMOVE USH 6 DETOUR SIGNING.
2. INSTALL TEMPORARY PEDESTRIAN DETOUR SIGNING AS SHOWN. MAINTAIN AT LEAST ONE PEDESTRIAN CROSSING OF USH 6 AT ROBERTS FERRY RD AT ALL TIMES.
3. SEE SHEET J.10 FOR TRAFFIC CONTROL DETAILS.
4. OPEN USH 6 TO NORMAL TRAFFIC.
5. MAINTAIN ACCESS TO ALL BUSINESS AND PRIVATE DRIVEWAYS AS NOTED ABOVE.

CONSTRUCTION

1. CONSTRUCT SIDEWALK.
2. CONSTRUCT CONCRETE DRIVES.

111_01
10/14/22

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
HSIPX-000-T(459)--3L-00	Pavement Markings - Grooved
STPN-006-7(101)--2J-52	PCC Sidewalk
STPN-006-7(102)--2J-52	RCB Culvert Replacement - Twin Box

CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

- Pavement Removal
- Proposed Granular Subbase
- Proposed Special Backfill
- Temporary Barrier Rail
- Proposed Granular Shoulder
- Temporary Shoulder
- Existing Shoulder Strengthening
- Permanent Barrier Rail
- Channelizing Device

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White
Violet	(15)	Temporary barrier rail, Unpinned
Flush Orange	(228)	Temporary barrier rail, Pinned

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Proposed Granular Surface Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

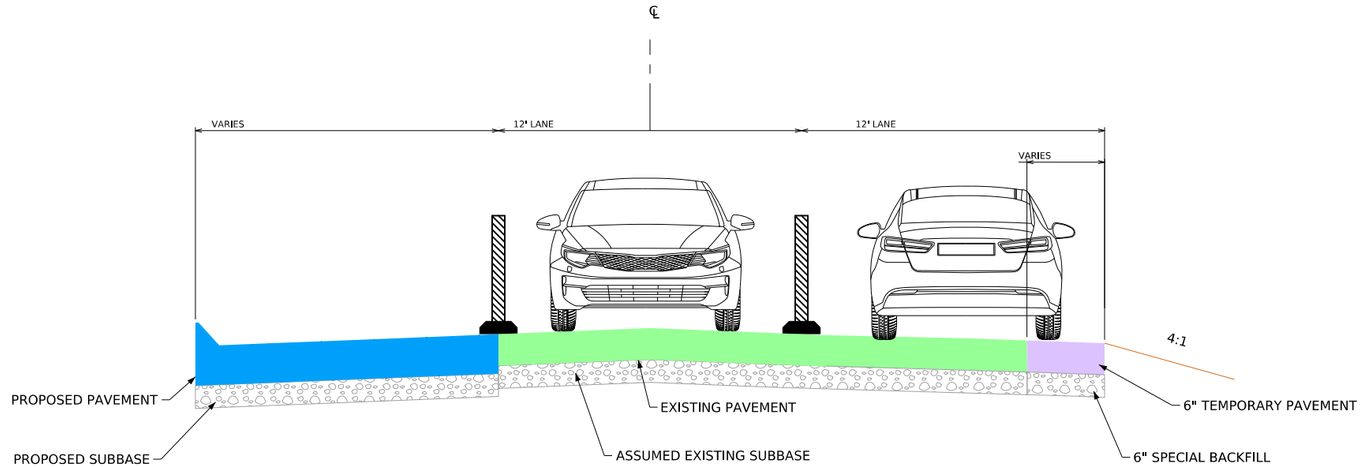
PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

- Channelizing Device
- Drum
- Temporary Lane Separator
- Tubular Marker
- Channelizer Marker
- Concrete Barrier Marker
- Delineator
- Temporary Barrier Rail
- Pavement Removal
- Sand Barrel Layout
- Crash Cushion (Temp or Perm)
- Traffic Signal
- Flagger
- Temporary Floodlighting
- Traffic Sign
- Type III Barricade
- Type A Warning Light
- Direction of Traffic
- Safety Closure
- Lane Identification

NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

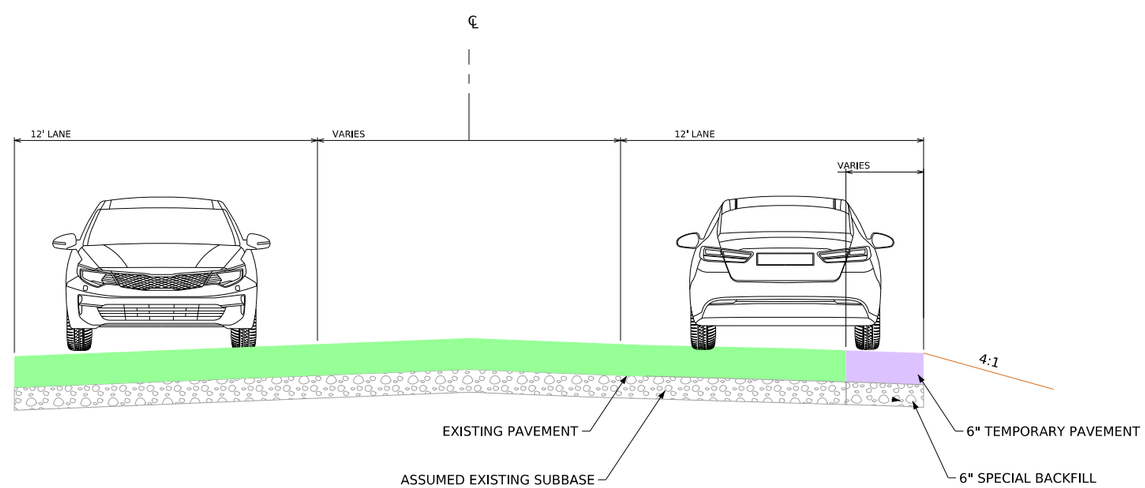
TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES J)



Typical Section (Croell Ave) - Stage 1 Construction

Looking North



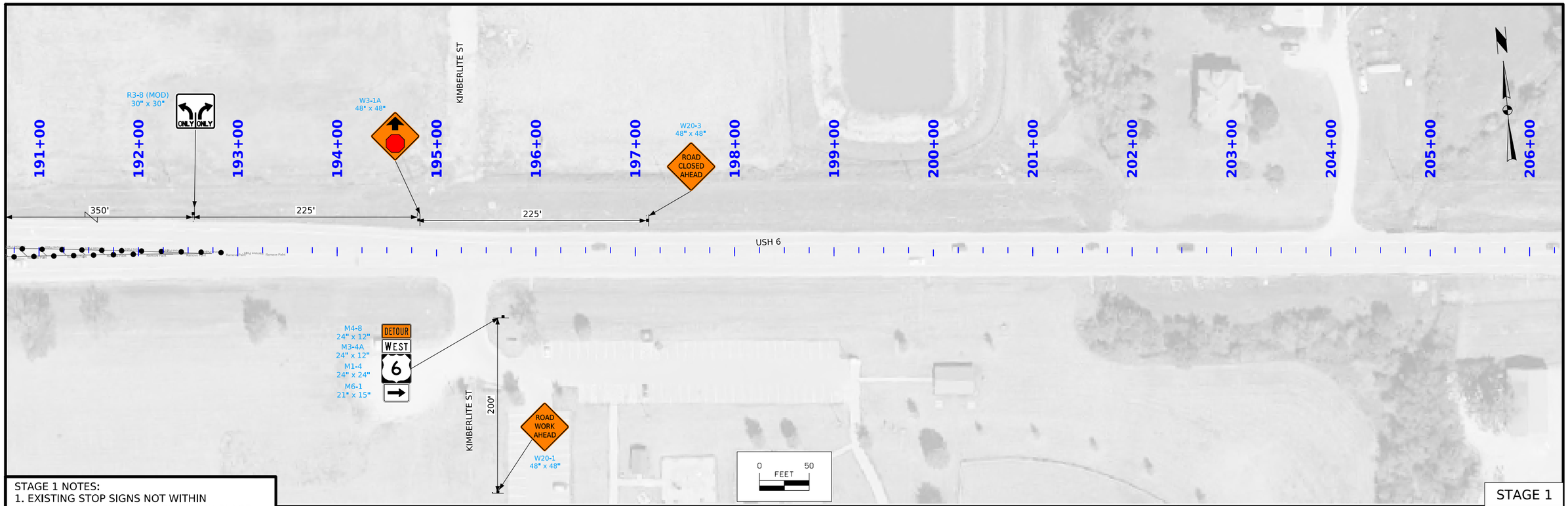
Typical Section (U.S. 6) - Stage 2C Construction

Looking East

STAGE 1 NOTES:
1. EXISTING STOP SIGNS NOT WITHIN CONSTRUCTION AREA TO REMAIN IN PLACE.
2. REFER TO SHEET J.11 FOR DETOUR SIGNING.
3. SEE INSET A ON SHEET J.5.
4. CONTRACTOR TO COORDINATE WITH AND PROVIDE ACCESS NORTH-SOUTH ACROSS CLOSED PORTIONS OF CROELL AND STEPHANS FOR EMERGENCY SERVICES AT ALL TIMES.

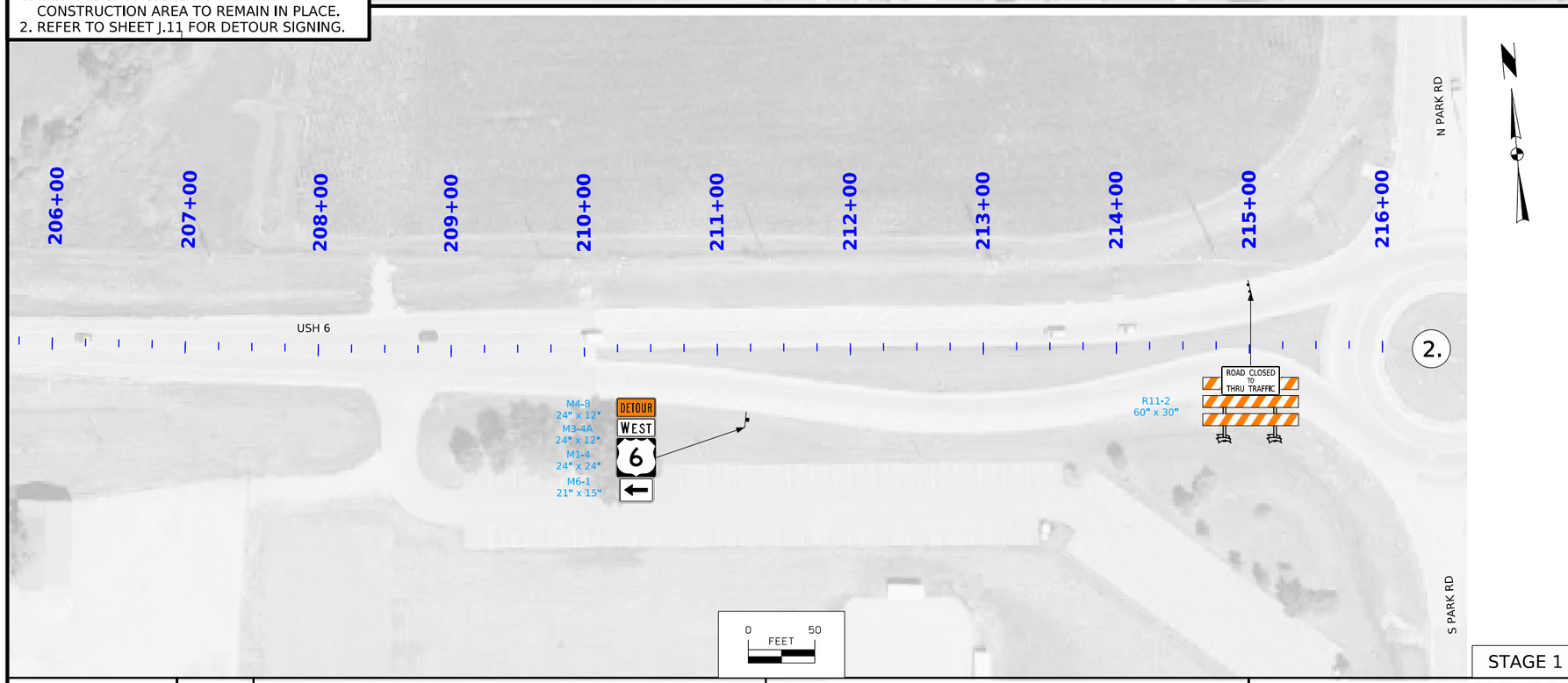
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER J.6

9:41:35 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_J06_S1.dgn

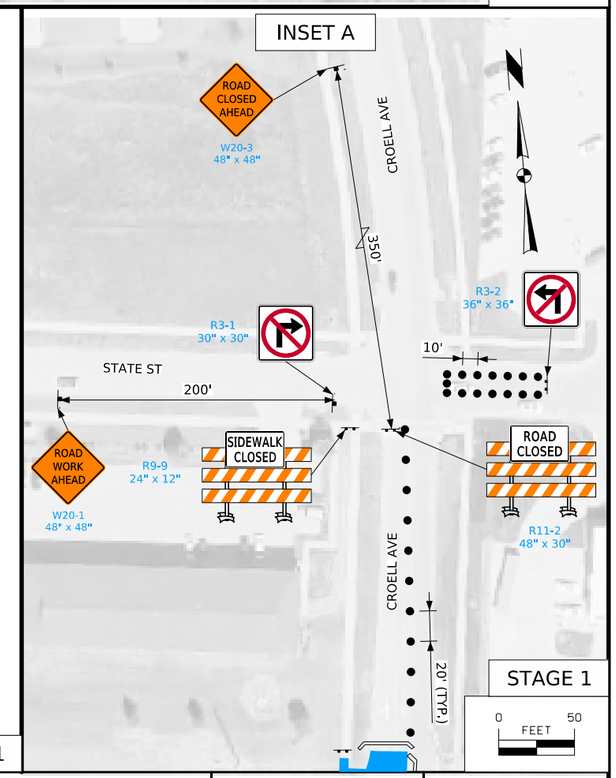


STAGE 1

STAGE 1 NOTES:
1. EXISTING STOP SIGNS NOT WITHIN CONSTRUCTION AREA TO REMAIN IN PLACE.
2. REFER TO SHEET J.11 FOR DETOUR SIGNING.



STAGE 1

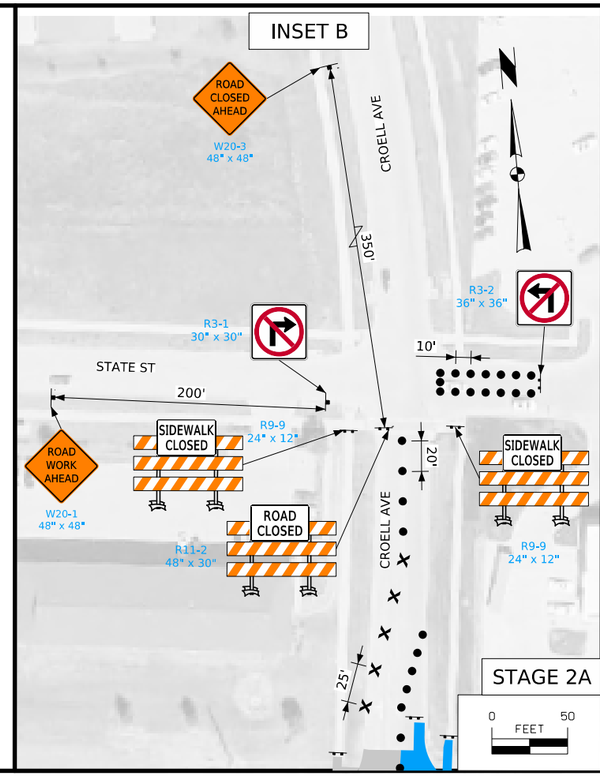


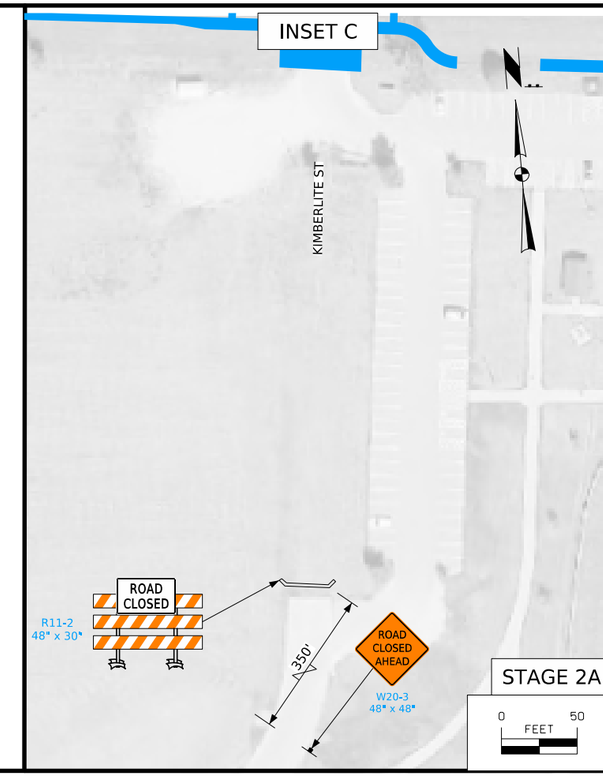
STAGE 1

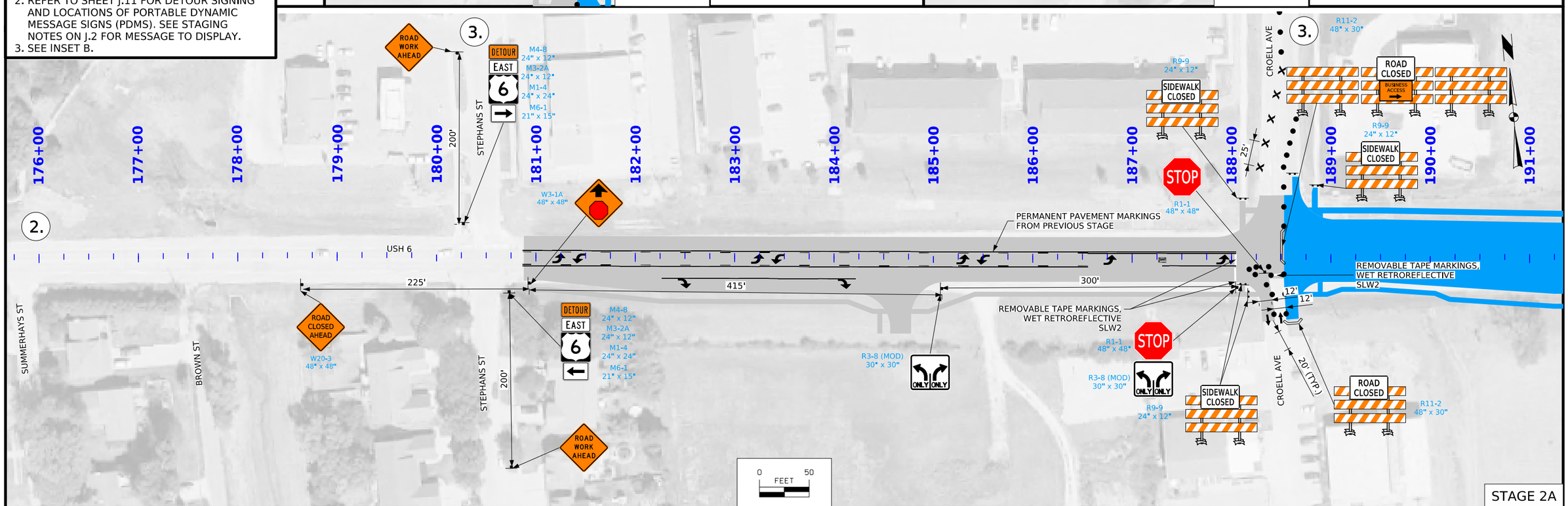
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER J.7

9:41:36 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_J06_S1.dgn

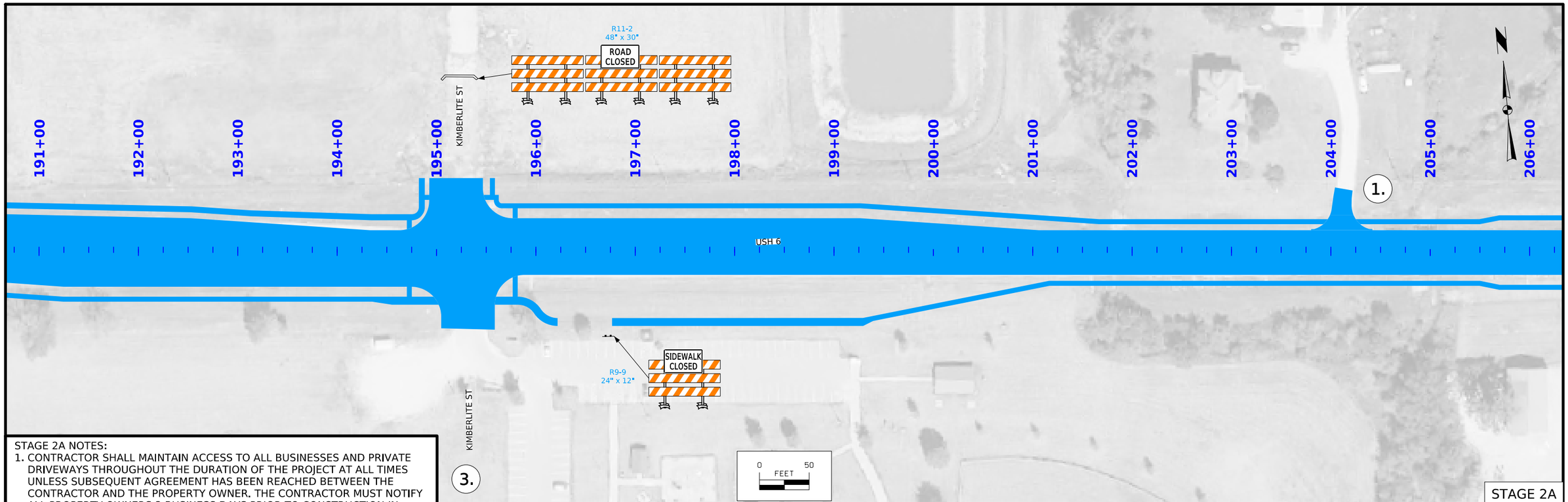
STAGE 2A NOTES:
1. EXISTING STOP SIGN AT STEPHANS ST TO REMAIN IN PLACE.
2. REFER TO SHEET J.11 FOR DETOUR SIGNING AND LOCATIONS OF PORTABLE DYNAMIC MESSAGE SIGNS (PDMS). SEE STAGING NOTES ON J.2 FOR MESSAGE TO DISPLAY.
3. SEE INSET B.





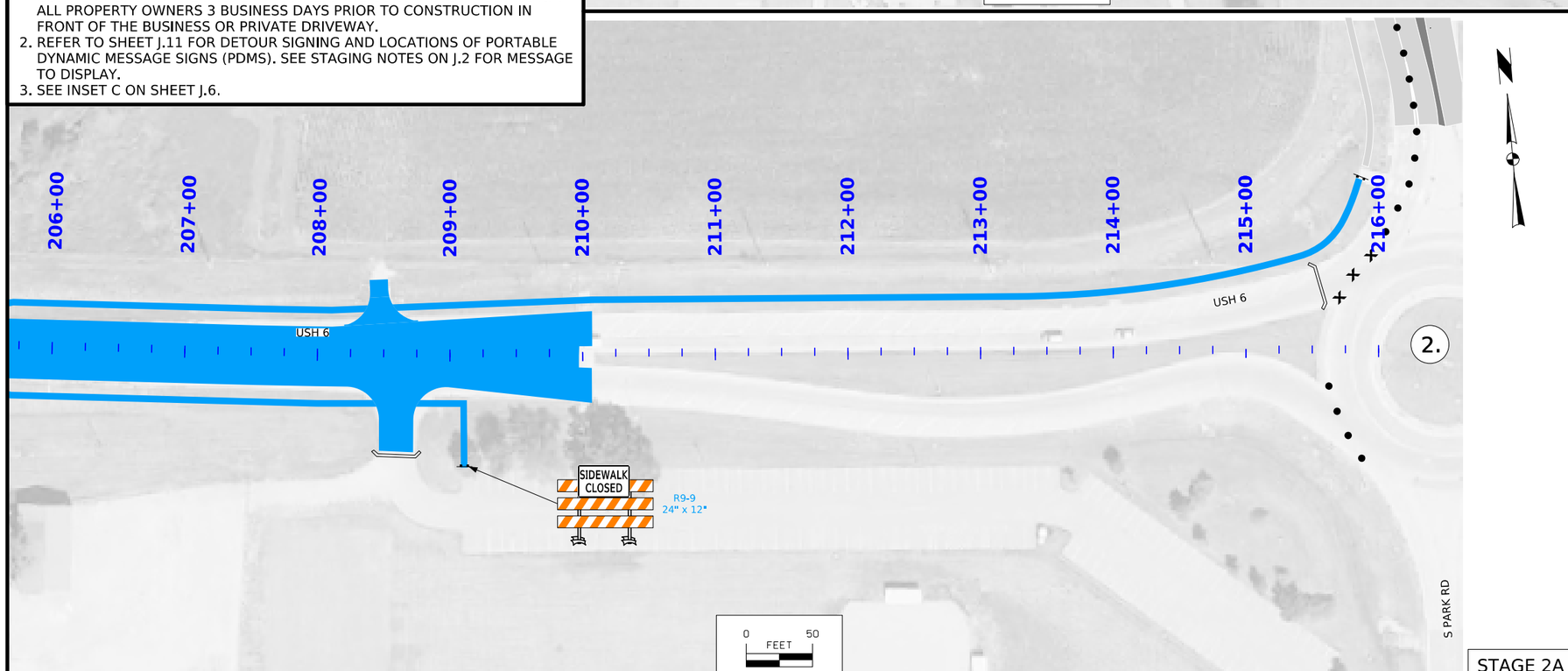


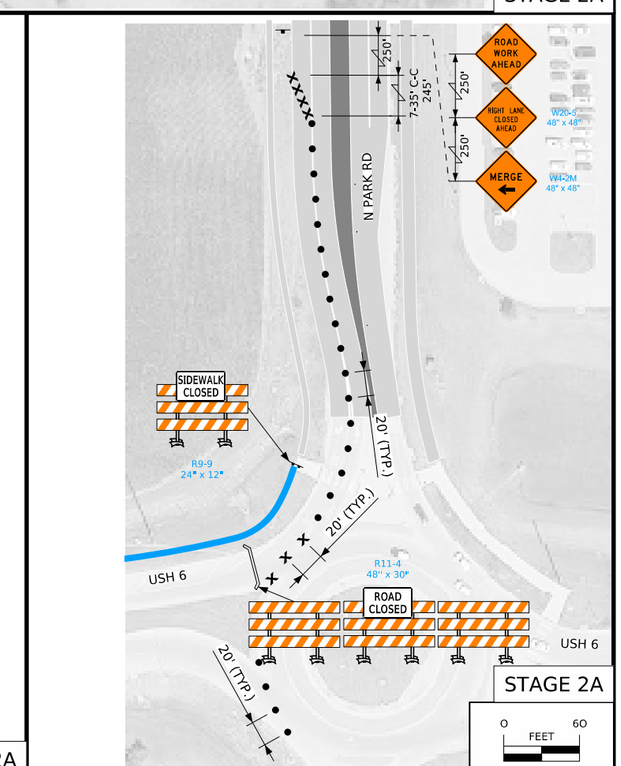
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER J.8



STAGE 2A NOTES:

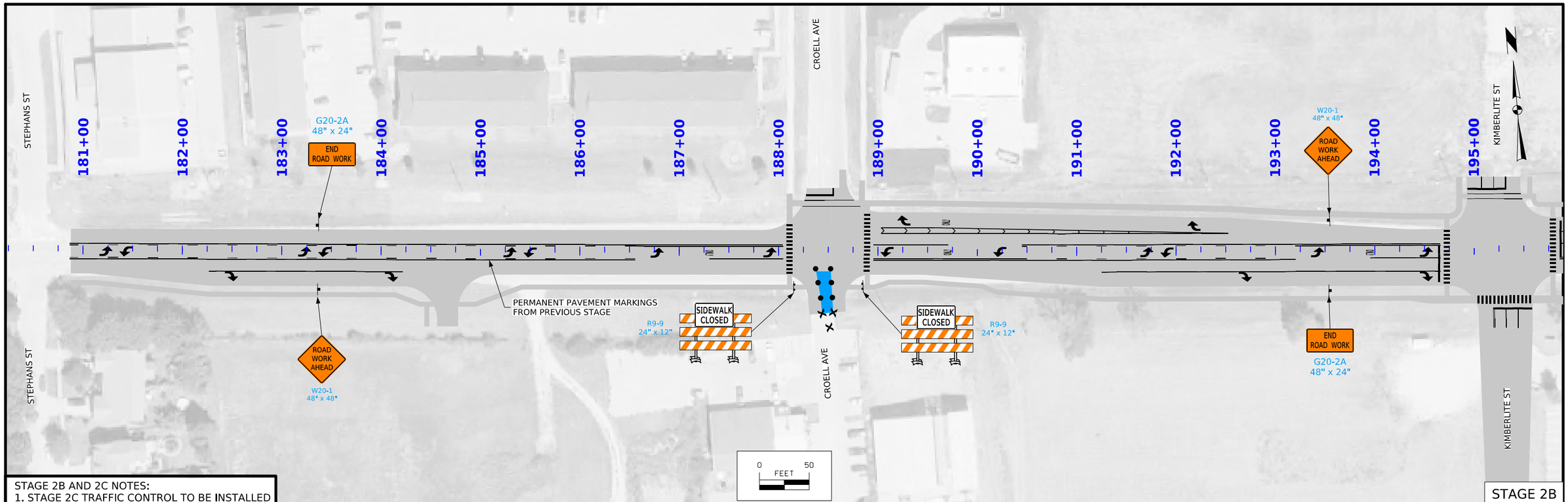
1. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUSINESSES AND PRIVATE DRIVEWAYS THROUGHOUT THE DURATION OF THE PROJECT AT ALL TIMES UNLESS SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE CONTRACTOR AND THE PROPERTY OWNER. THE CONTRACTOR MUST NOTIFY ALL PROPERTY OWNERS 3 BUSINESS DAYS PRIOR TO CONSTRUCTION IN FRONT OF THE BUSINESS OR PRIVATE DRIVEWAY.
2. REFER TO SHEET J.11 FOR DETOUR SIGNING AND LOCATIONS OF PORTABLE DYNAMIC MESSAGE SIGNS (PDMS). SEE STAGING NOTES ON J.2 FOR MESSAGE TO DISPLAY.
3. SEE INSET C ON SHEET J.6.





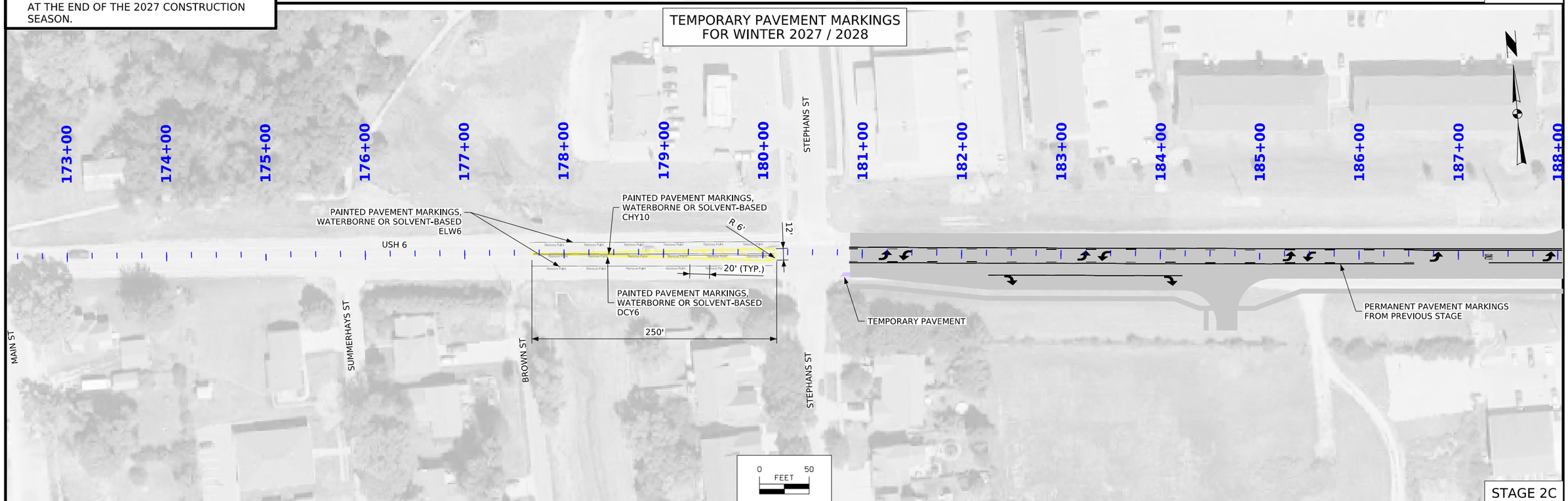
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER J.9

STAGE 2B AND 2C NOTES:
1. STAGE 2C TRAFFIC CONTROL TO BE INSTALLED AT THE END OF THE 2027 CONSTRUCTION SEASON.



STAGE 2B

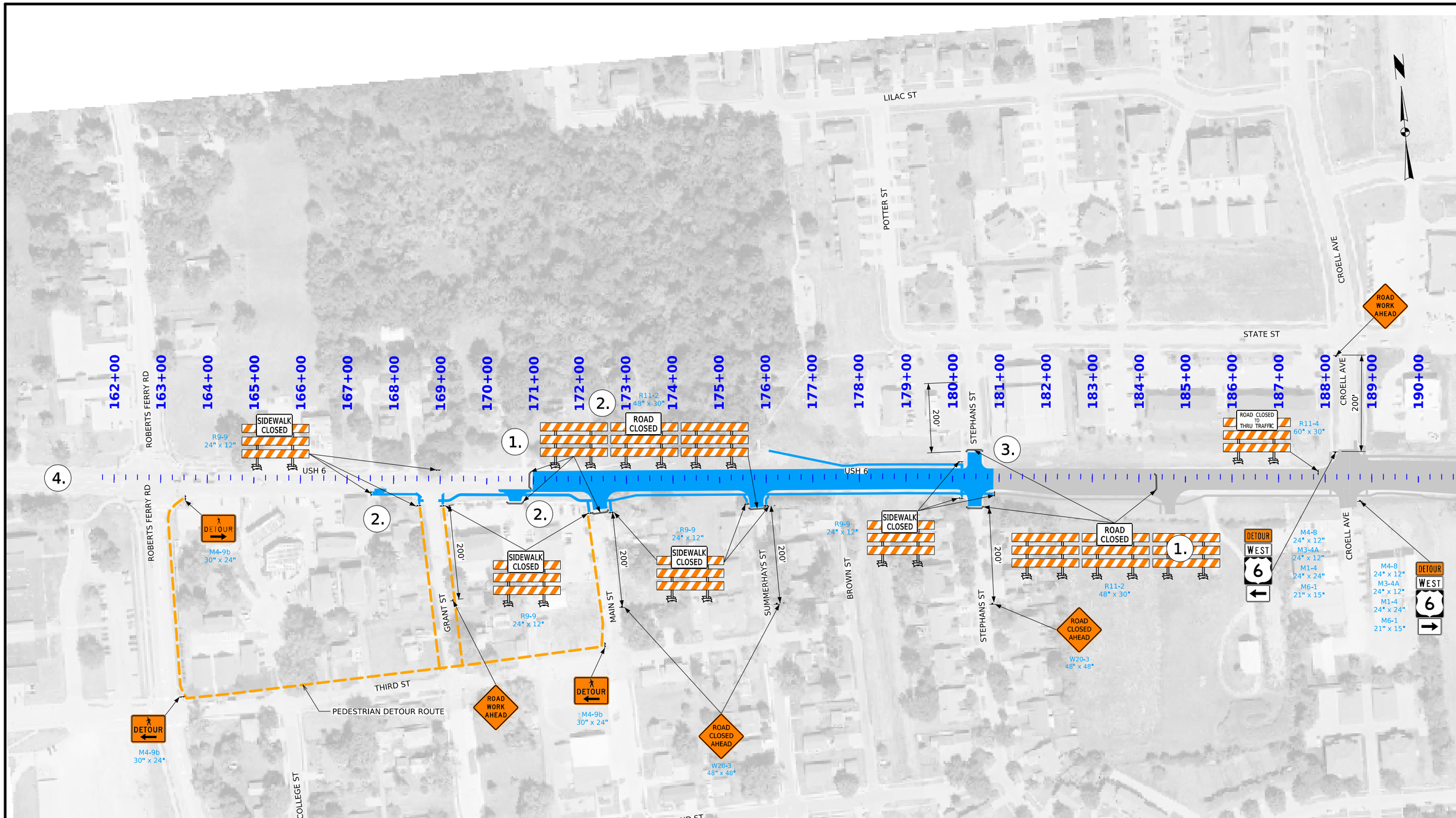
TEMPORARY PAVEMENT MARKINGS FOR WINTER 2027 / 2028



STAGE 2C

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER J.10

9:41:54 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_J06_S2B.dgn

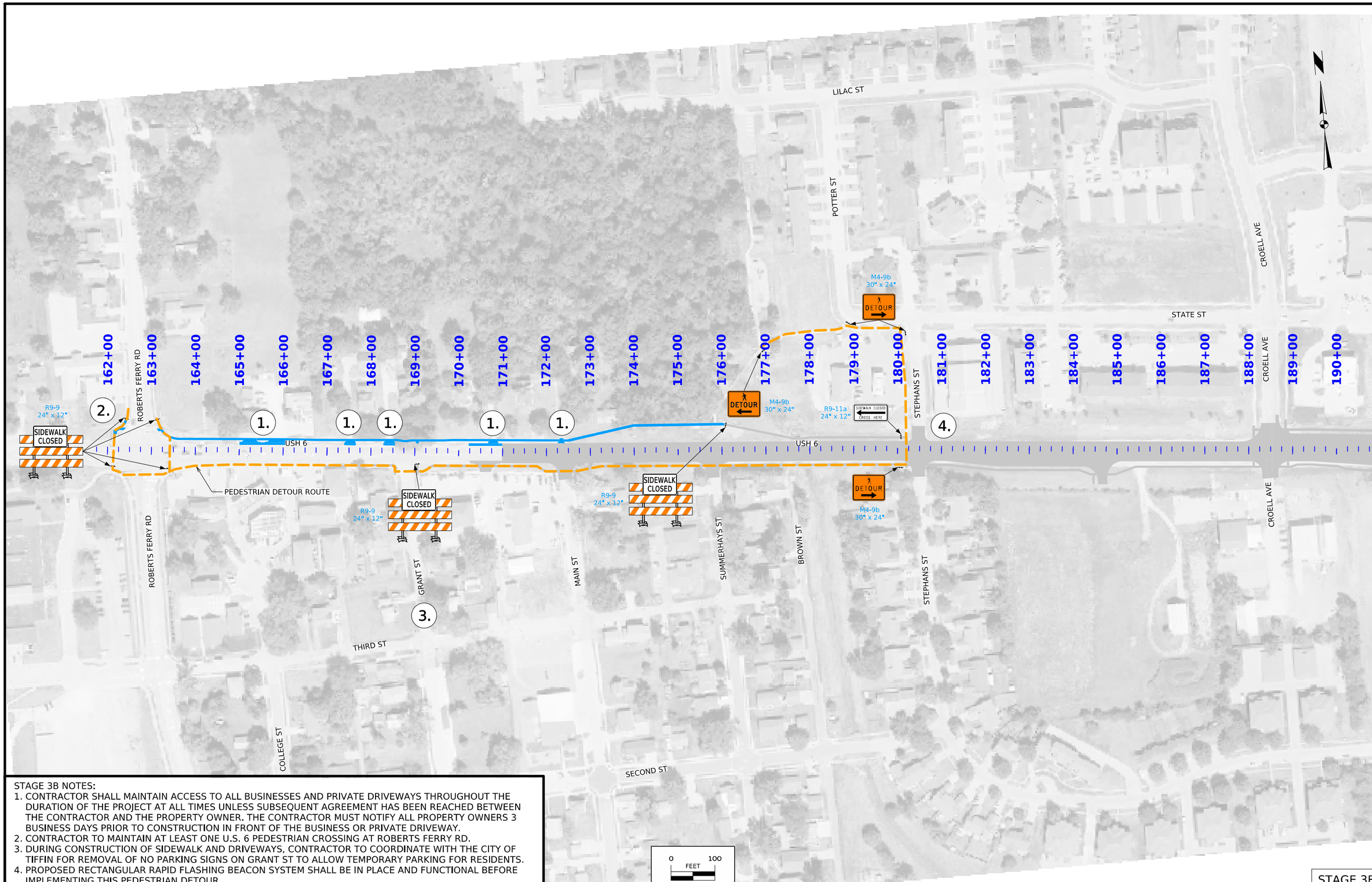


STAGE 3A NOTES:

1. REFER TO STAGING NOTES AND STANDARD ROAD PLAN TC-252 FOR SIGNING FOR ROAD CLOSURES.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUSINESSES AND PRIVATE DRIVEWAYS THROUGHOUT THE DURATION OF THE PROJECT AT ALL TIMES UNLESS SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE CONTRACTOR AND THE PROPERTY OWNER. THE CONTRACTOR MUST NOTIFY ALL PROPERTY OWNERS 3 BUSINESS DAYS PRIOR TO CONSTRUCTION IN FRONT OF THE BUSINESS OR PRIVATE DRIVEWAY.
3. CONTRACTOR TO MAINTAIN U.S. 6 PEDESTRIAN CROSSING AT STEPHANS ST. REFER TO STANDARD ROAD PLAN TC-602. MATERIALS REQUIRED TO MAINTAIN ACCESS SHALL BE INCIDENTAL TO TRAFFIC CONTROL.
4. REFER TO SHEET J.11 FOR DETOUR SIGNING AND LOCATIONS OF PORTABLE DYNAMIC MESSAGE SIGNS (PDMS). SEE STAGING NOTES ON J.2 FOR MESSAGE TO DISPLAY.

STAGE 3A

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER J.11



STAGE 3B NOTES:

1. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUSINESSES AND PRIVATE DRIVEWAYS THROUGHOUT THE DURATION OF THE PROJECT AT ALL TIMES UNLESS SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE CONTRACTOR AND THE PROPERTY OWNER. THE CONTRACTOR MUST NOTIFY ALL PROPERTY OWNERS 3 BUSINESS DAYS PRIOR TO CONSTRUCTION IN FRONT OF THE BUSINESS OR PRIVATE DRIVEWAY.
2. CONTRACTOR TO MAINTAIN AT LEAST ONE U.S. 6 PEDESTRIAN CROSSING AT ROBERTS FERRY RD.
3. DURING CONSTRUCTION OF SIDEWALK AND DRIVEWAYS, CONTRACTOR TO COORDINATE WITH THE CITY OF TIFFIN FOR REMOVAL OF NO PARKING SIGNS ON GRANT ST TO ALLOW TEMPORARY PARKING FOR RESIDENTS.
4. PROPOSED RECTANGULAR RAPID FLASHING BEACON SYSTEM SHALL BE IN PLACE AND FUNCTIONAL BEFORE IMPLEMENTING THIS PEDESTRIAN DETOUR.

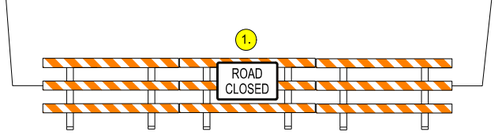
STAGE 3B

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER J.12

ROAD DETOUR
US HIGHWAY 6 IMPROVEMENT PROJECT
ALL STAGES

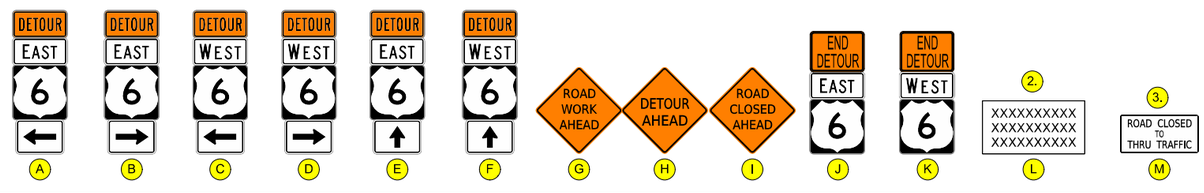
TABULATION OF DETOUR SIGNS

"M" SERIES			
SIGN	TYPE	SIZE	COLOR
6	M1-4	24" x 24"	BLACK ON WHITE
EAST	M3-2a	30" x 24"	BLACK ON WHITE
WEST	M3-4a	30" x 24"	BLACK ON WHITE
DETOUR	M4-8	24" x 12"	BLACK ON ORANGE
END DETOUR	M4-8a	24" x 18"	BLACK ON ORANGE
←	M6-1	21" x 15"	BLACK ON WHITE
→	M6-1	21" x 15"	BLACK ON WHITE
↑	M6-3	21" x 15"	BLACK ON WHITE
"W" SERIES			
SIGN	TYPE	SIZE	COLOR
ROAD WORK AHEAD	W20-1	48" x 48"	BLACK ON ORANGE
DETOUR AHEAD	W20-2	48" x 48"	BLACK ON ORANGE
ROAD CLOSED AHEAD	W20-3	48" x 48"	BLACK ON ORANGE
"R" SERIES			
SIGN	TYPE	SIZE	COLOR
ROAD CLOSED	R11-2	48" x 30"	BLACK ON WHITE
ROAD CLOSED TO THRU TRAFFIC	R11-4	60" x 30"	BLACK ON WHITE

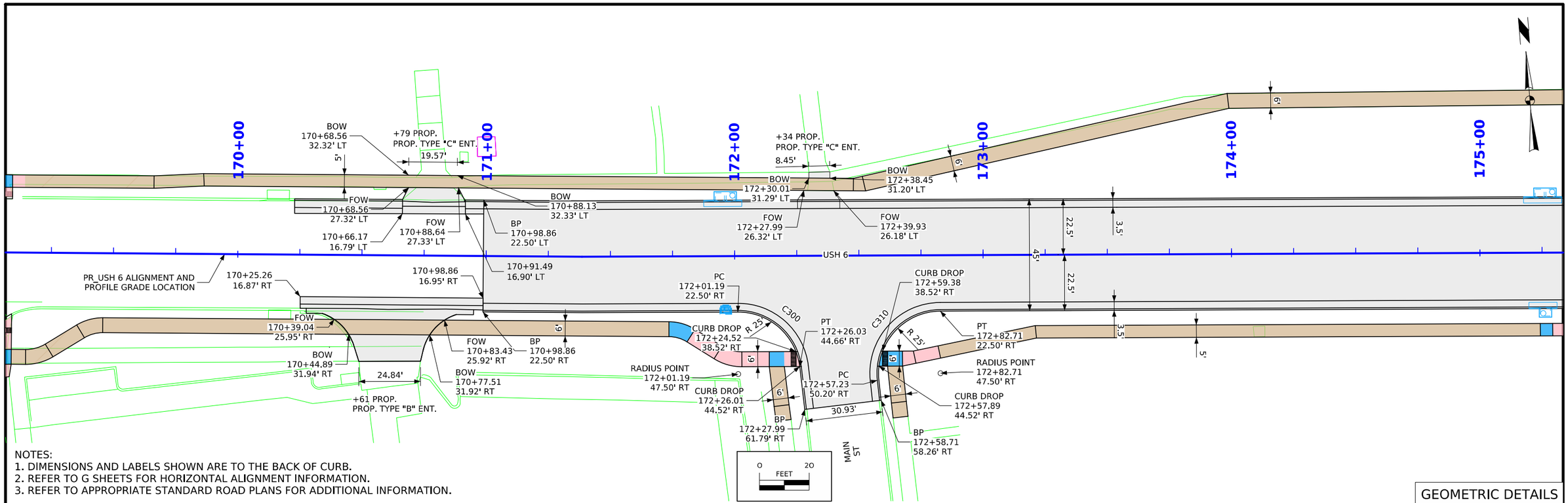


SPECIFIC NOTES

1. SEE STAGING SHEETS FOR SPECIFIC LOCATIONS OF FULL ROAD CLOSURE WITH TYPE III BARRICADES
2. PLACE PORTABLE DYNAMIC MESSAGE SIGNS (PDMS) 7 DAYS PRIOR TO CONSTRUCTION WITH MESSAGE AS DESCRIBED IN STAGING NOTES ON J.2
3. SIGN SHALL BE MOUNTED ON A TYPE III BARRICADE.

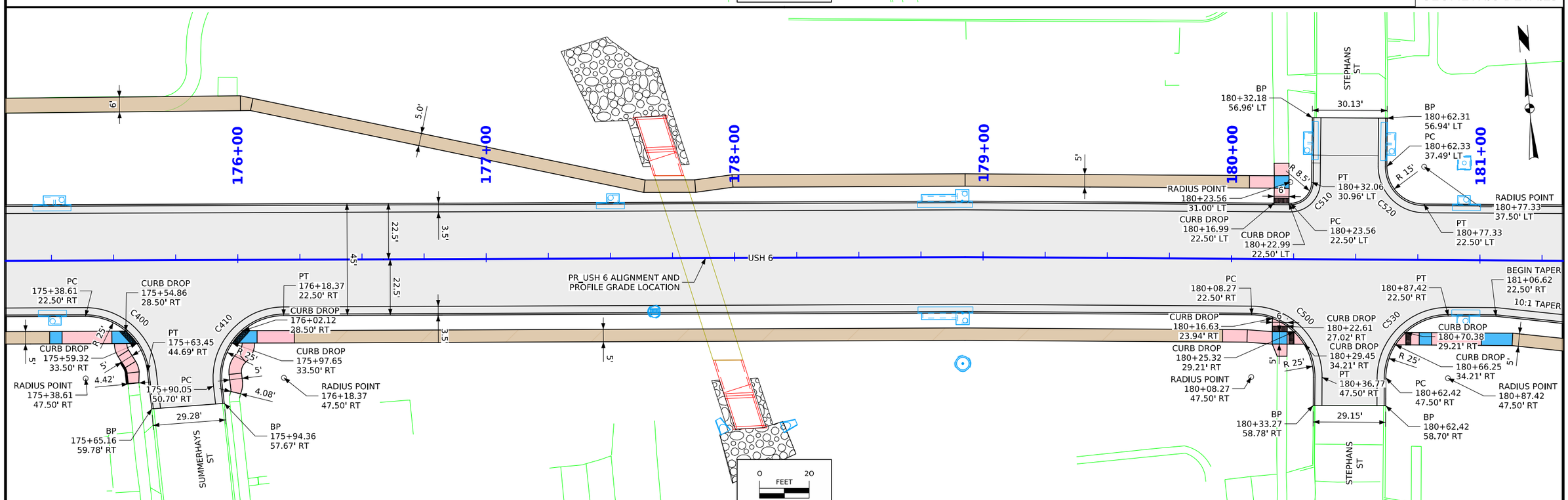


FILE NO.	ENGLISH	DESIGN TEAM **MSA PROFESSIONAL SERVICES**	**JOHNSON** COUNTY	PROJECT NUMBER **STP-006-7(098)--2C-52**	SHEET NUMBER **J.13**



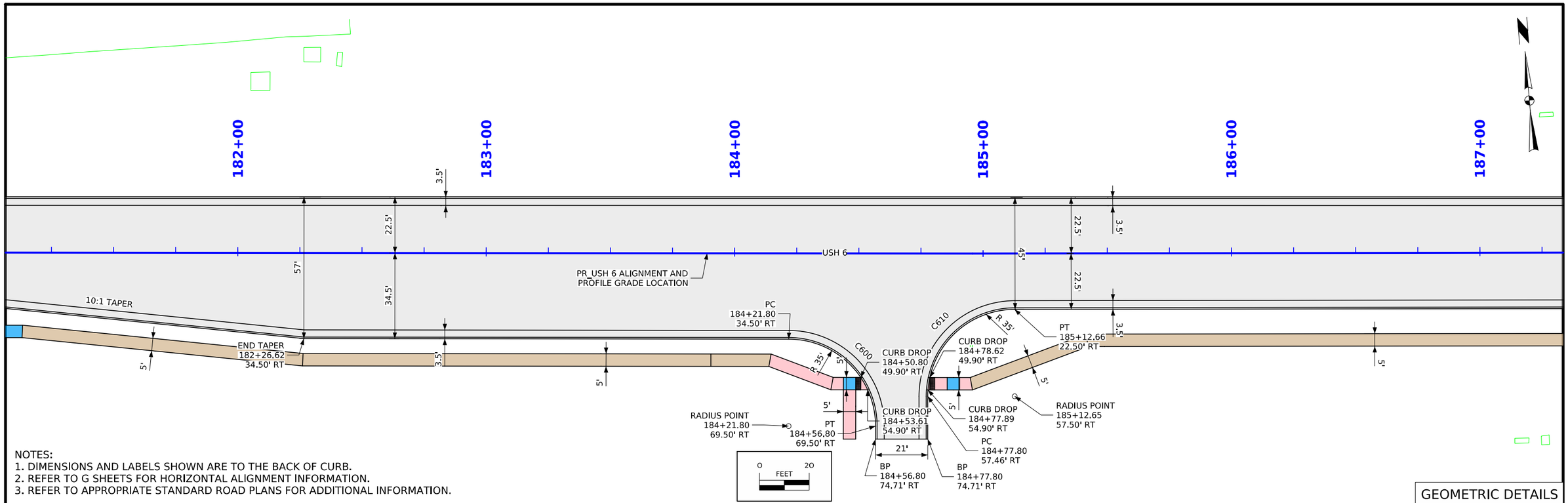
NOTES:
1. DIMENSIONS AND LABELS SHOWN ARE TO THE BACK OF CURB.
2. REFER TO G SHEETS FOR HORIZONTAL ALIGNMENT INFORMATION.
3. REFER TO APPROPRIATE STANDARD ROAD PLANS FOR ADDITIONAL INFORMATION.

GEOMETRIC DETAILS



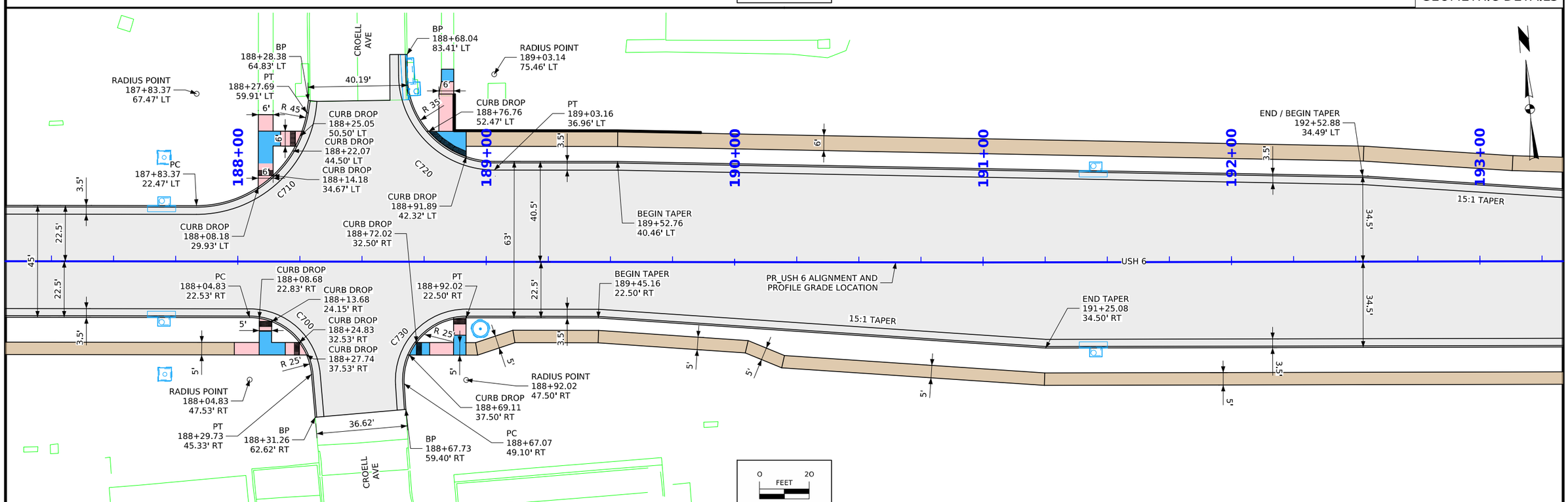
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.1

11:26:42 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_L01.dgn

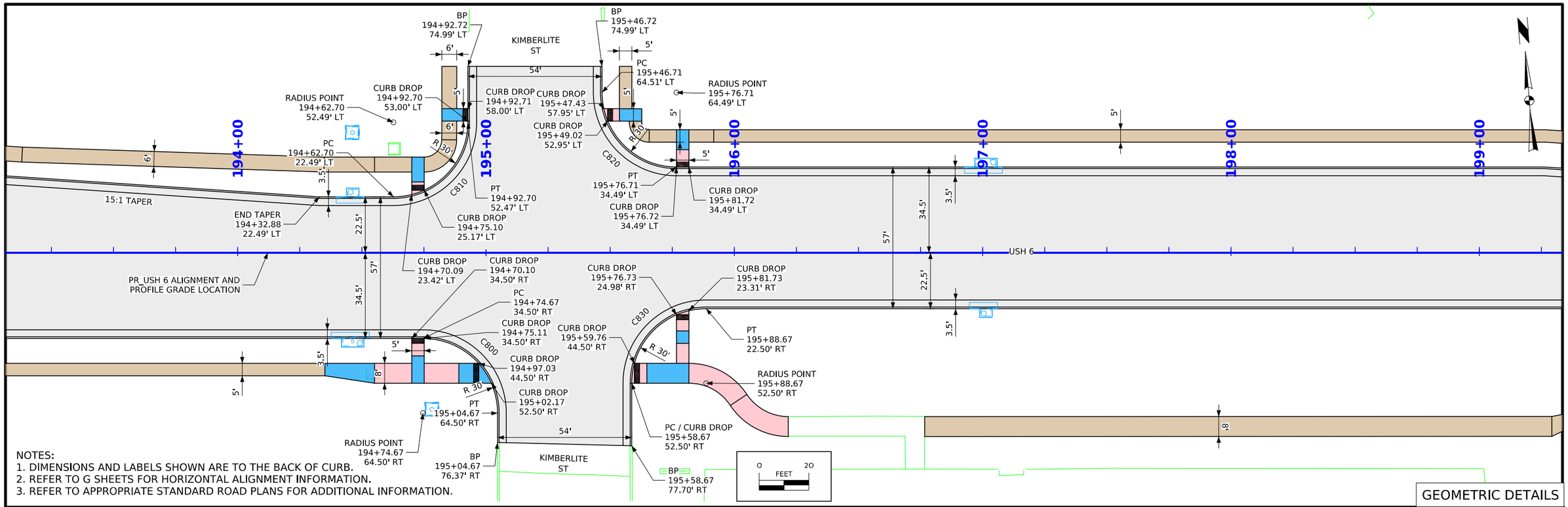


NOTES:
1. DIMENSIONS AND LABELS SHOWN ARE TO THE BACK OF CURB.
2. REFER TO G SHEETS FOR HORIZONTAL ALIGNMENT INFORMATION.
3. REFER TO APPROPRIATE STANDARD ROAD PLANS FOR ADDITIONAL INFORMATION.

GEOMETRIC DETAILS

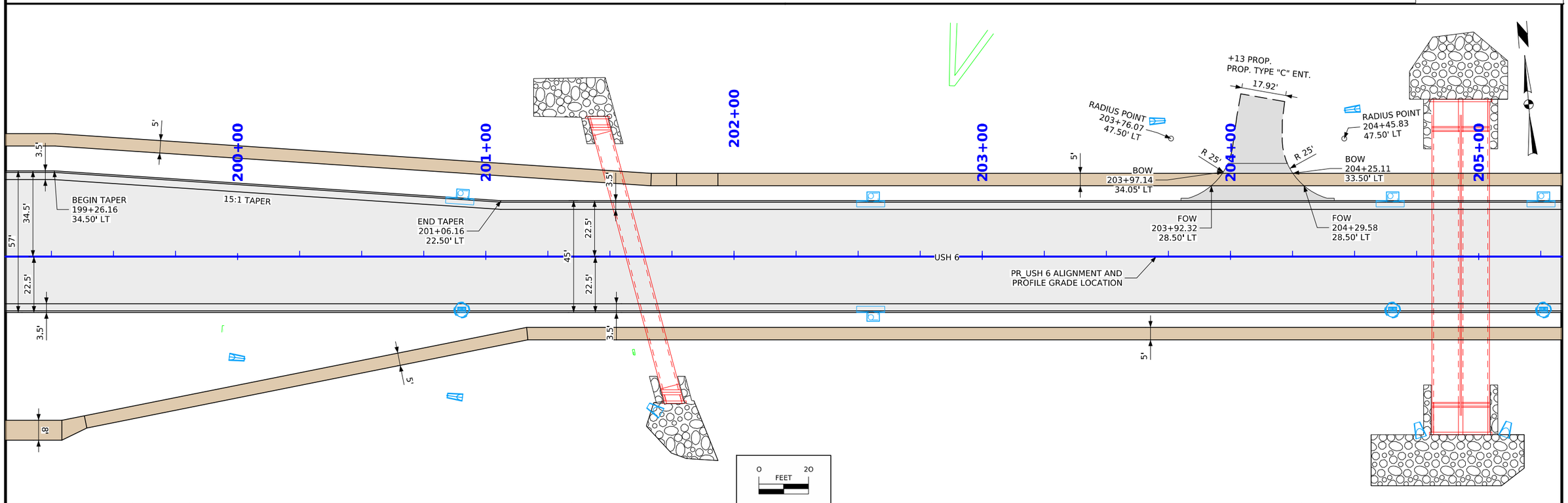


FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.2



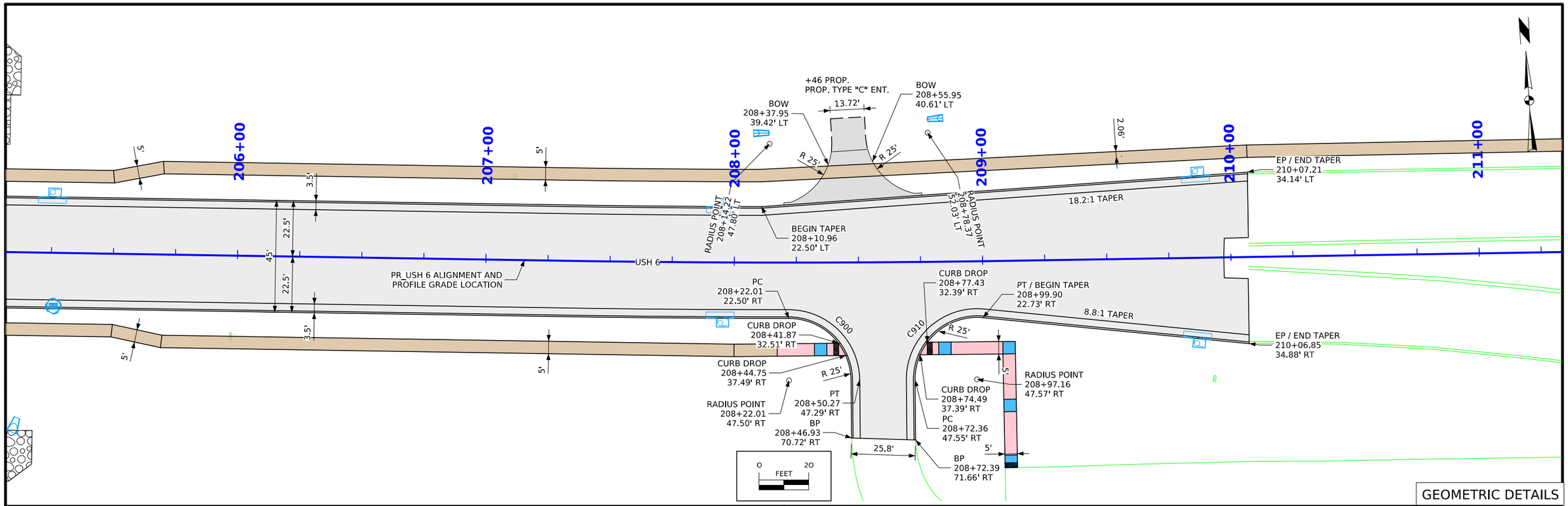
NOTES:
1. DIMENSIONS AND LABELS SHOWN ARE TO THE BACK OF CURB.
2. REFER TO G SHEETS FOR HORIZONTAL ALIGNMENT INFORMATION.
3. REFER TO APPROPRIATE STANDARD ROAD PLANS FOR ADDITIONAL INFORMATION.

GEOMETRIC DETAILS



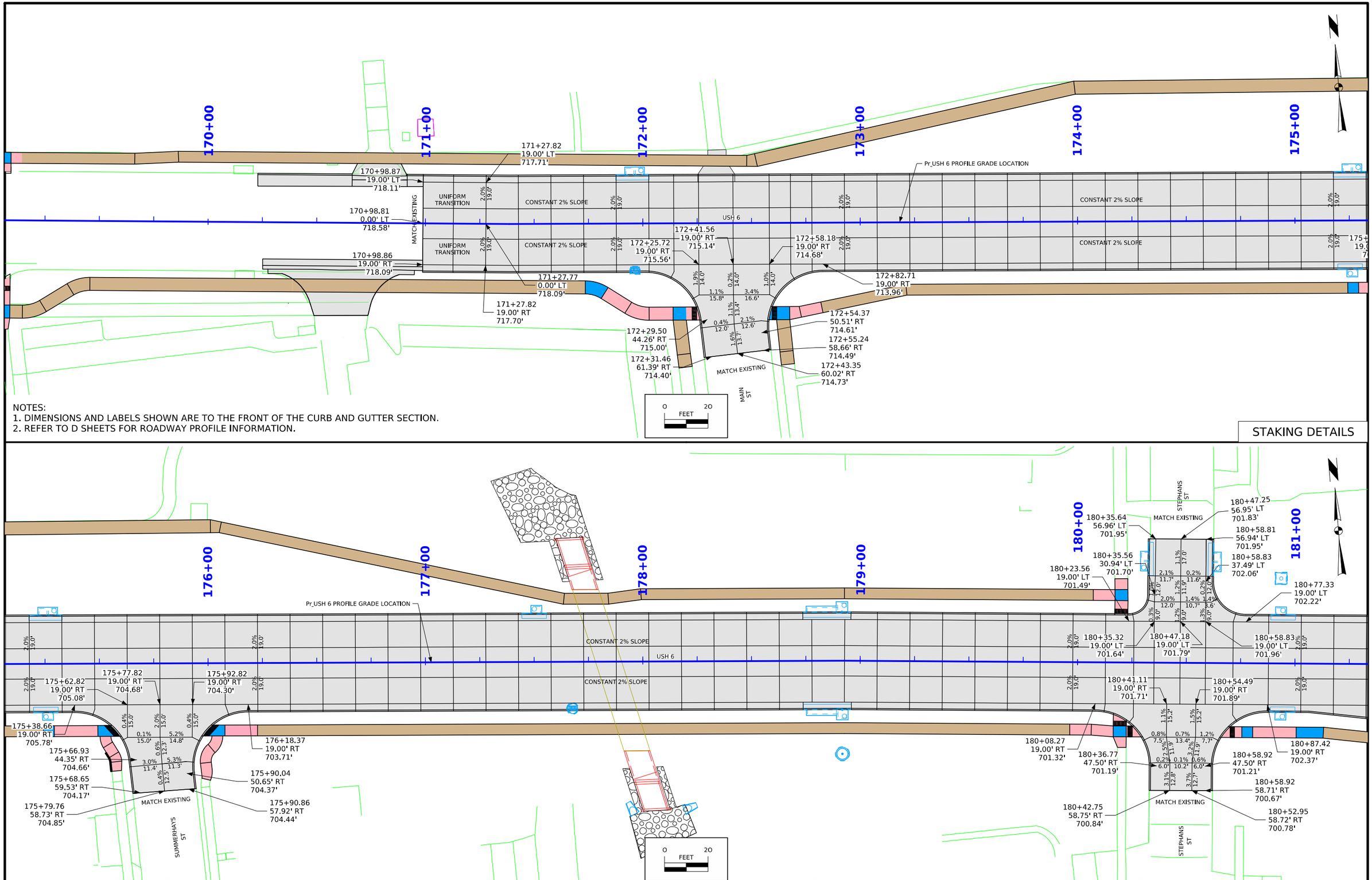
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.3

11:19:16 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_L01.dgn



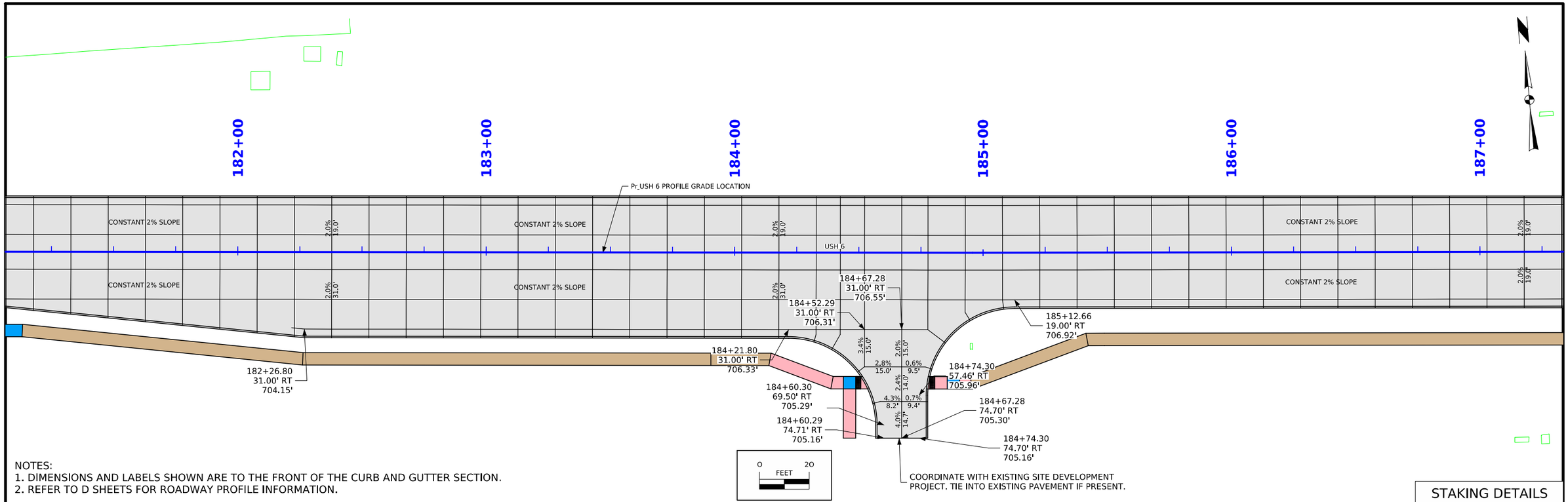
GEOMETRIC DETAILS

NOTES:
1. DIMENSIONS AND LABELS SHOWN ARE TO THE BACK OF CURB.
2. REFER TO G SHEETS FOR HORIZONTAL ALIGNMENT INFORMATION.
3. REFER TO APPROPRIATE STANDARD ROAD PLANS FOR ADDITIONAL INFORMATION.



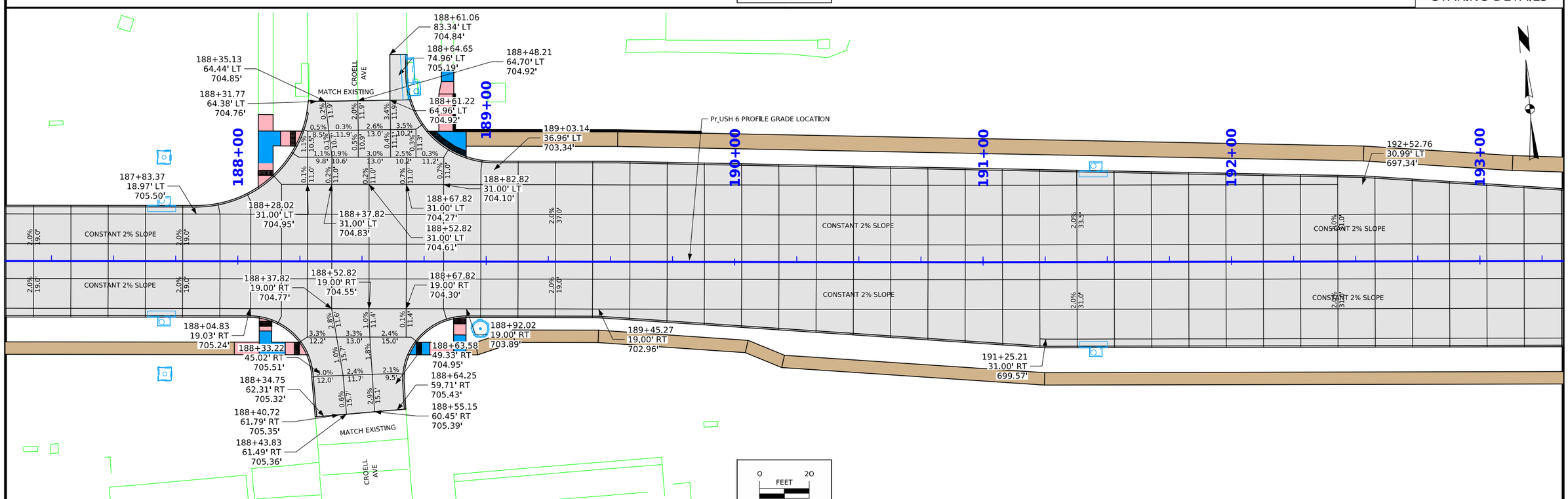
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.5

11:20:32 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_L03.dgn

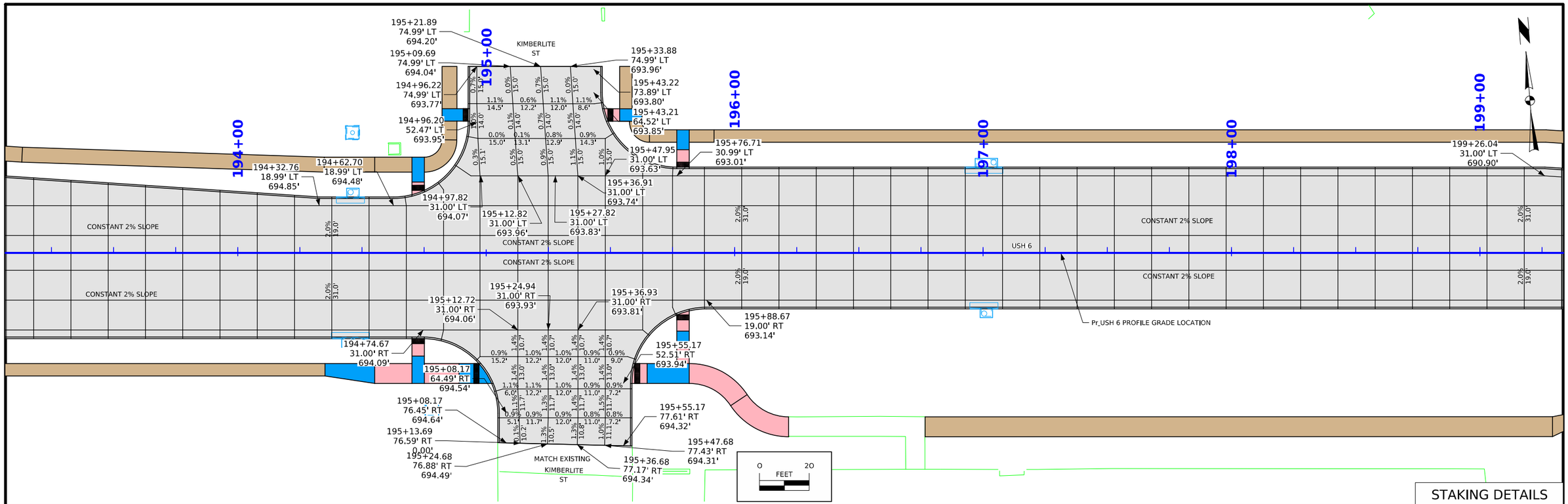


NOTES:
1. DIMENSIONS AND LABELS SHOWN ARE TO THE FRONT OF THE CURB AND GUTTER SECTION.
2. REFER TO D SHEETS FOR ROADWAY PROFILE INFORMATION.

STAKING DETAILS

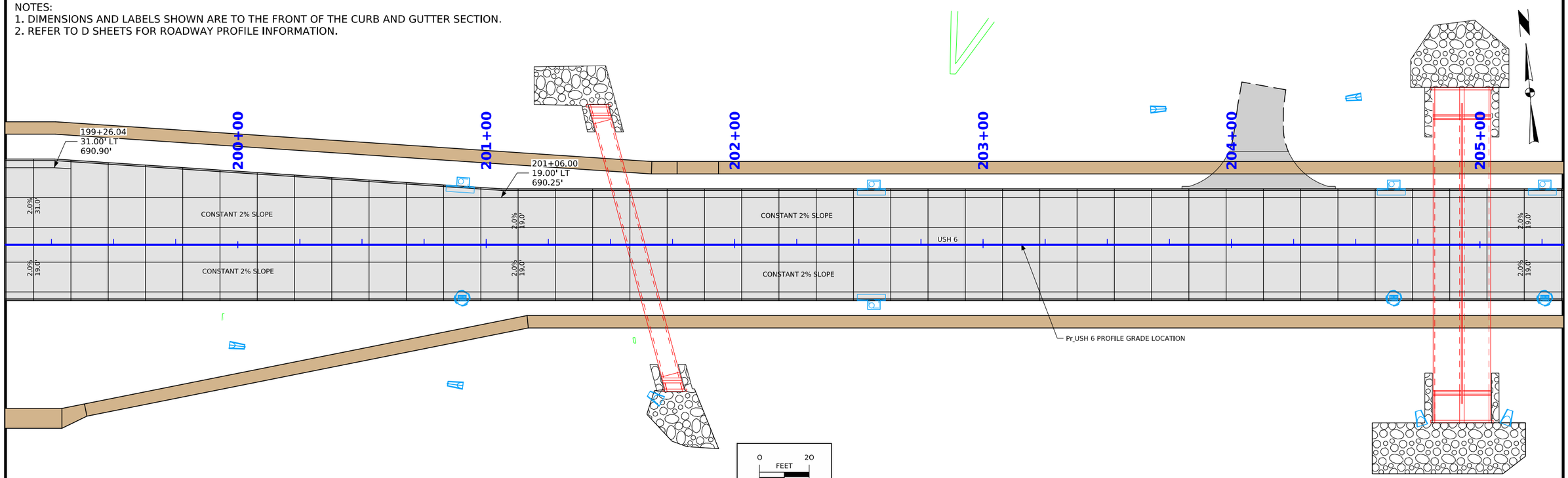


FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.6



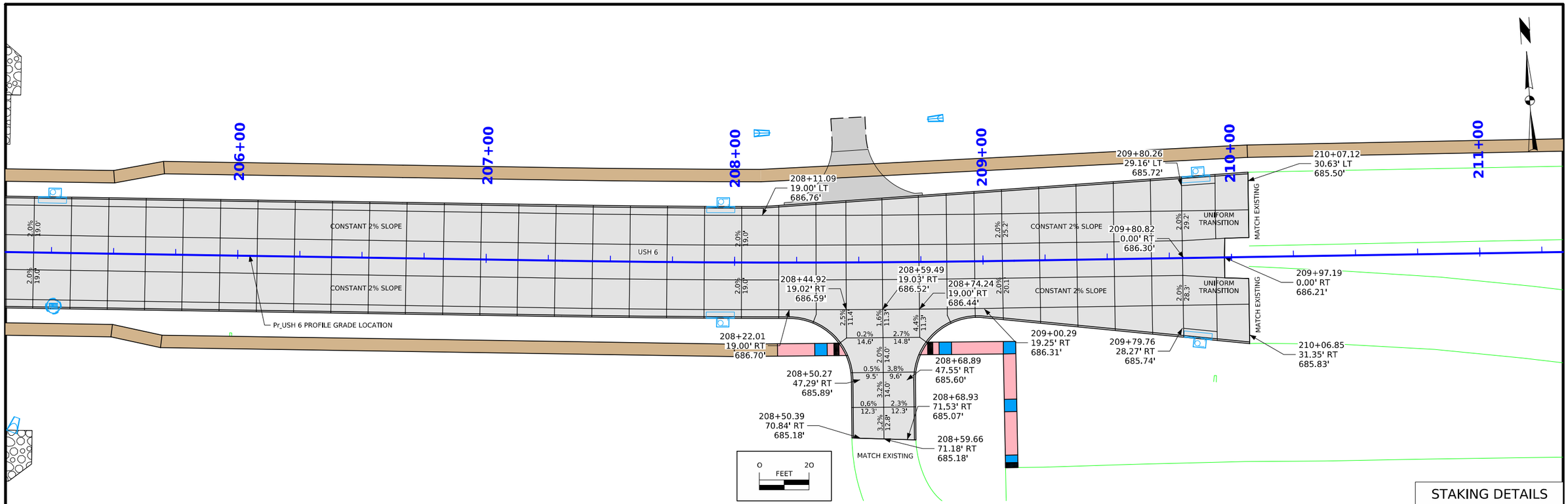
STAKING DETAILS

NOTES:
1. DIMENSIONS AND LABELS SHOWN ARE TO THE FRONT OF THE CURB AND GUTTER SECTION.
2. REFER TO D SHEETS FOR ROADWAY PROFILE INFORMATION.



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.7

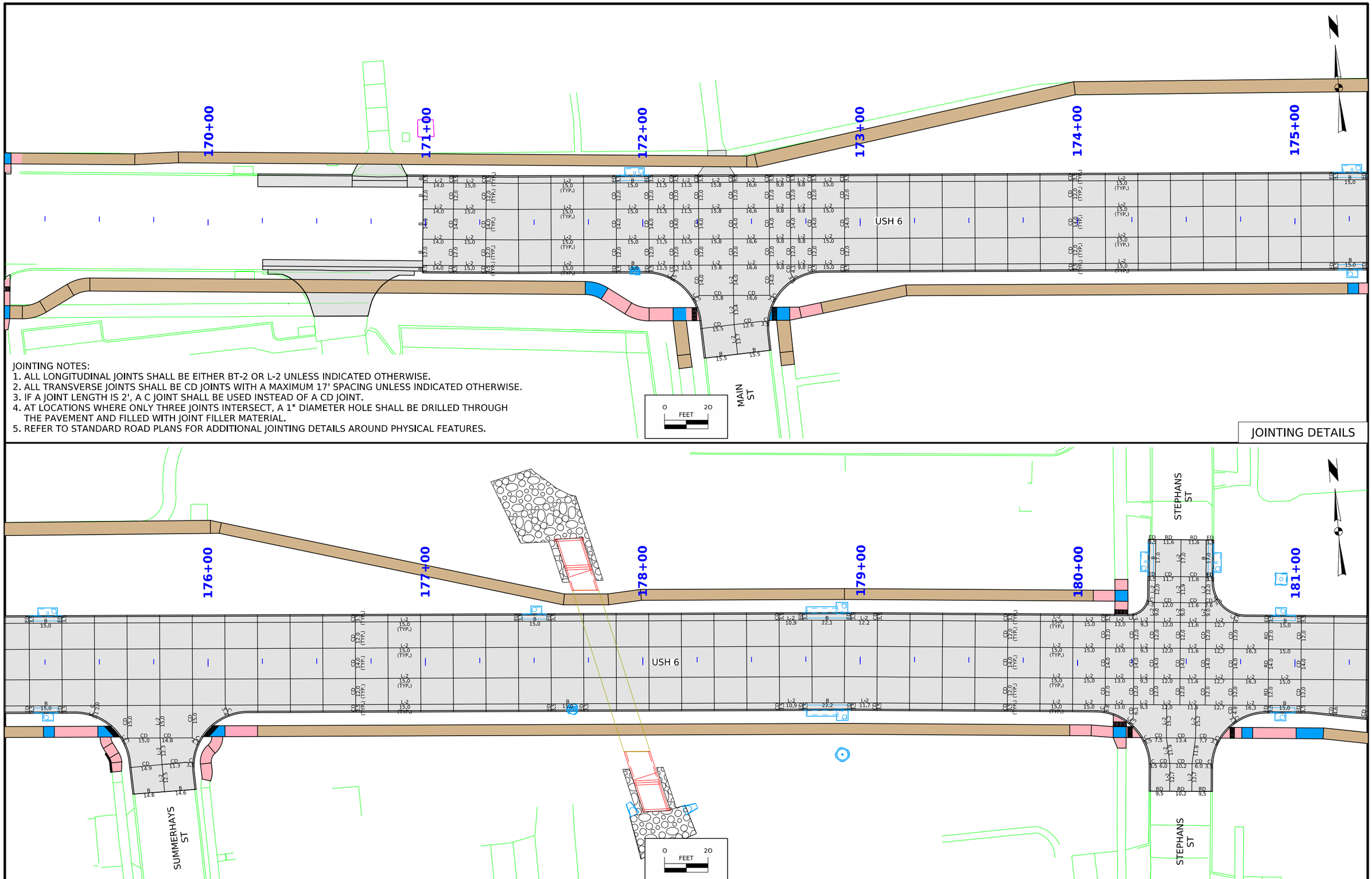
11:20:39 AM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_L03.dgn



STAKING DETAILS

NOTES:
1. DIMENSIONS AND LABELS SHOWN ARE TO THE FRONT OF THE CURB AND GUTTER SECTION.
2. REFER TO D SHEETS FOR ROADWAY PROFILE INFORMATION.

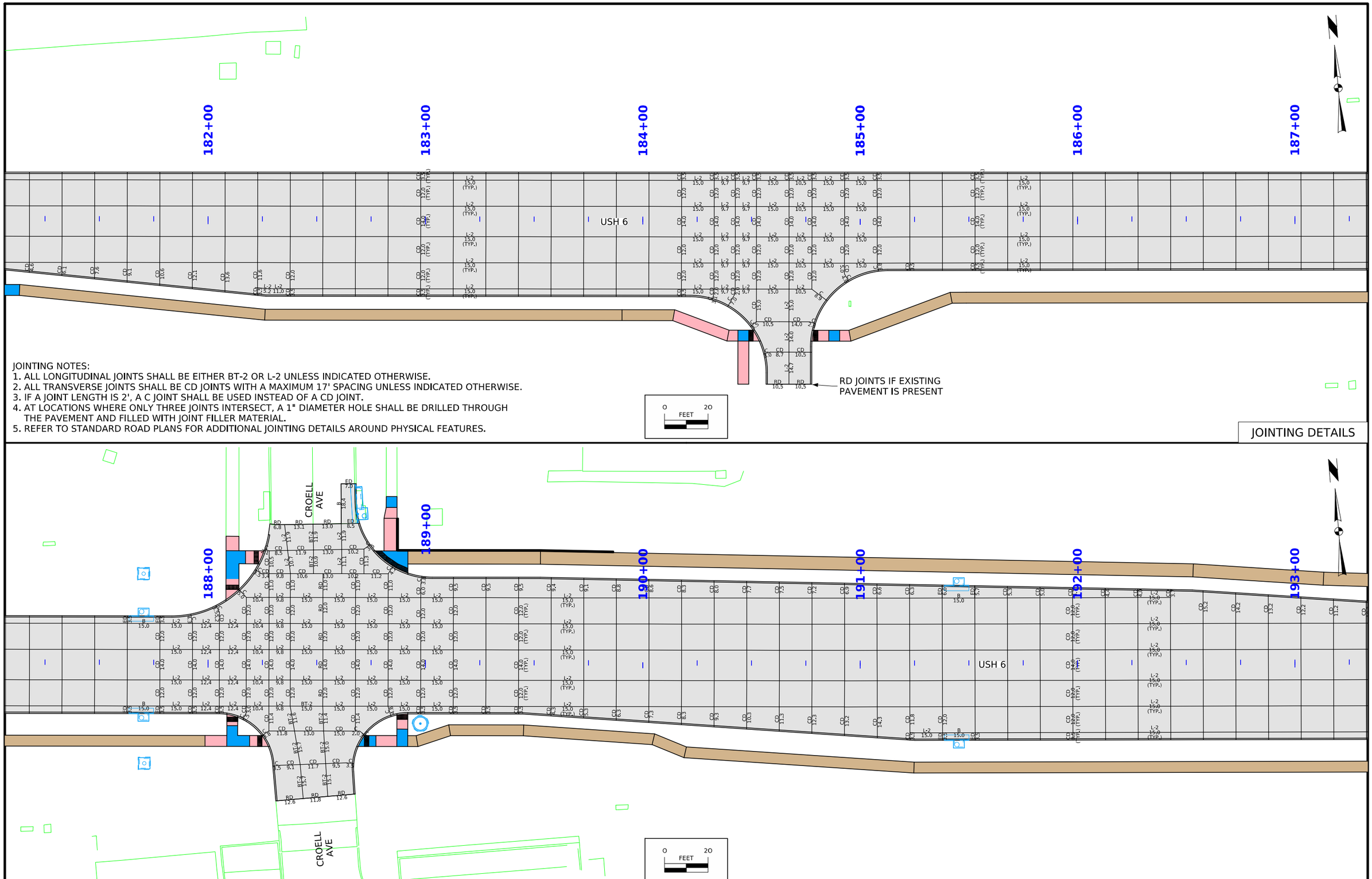
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.8



JOINTING NOTES:
1. ALL LONGITUDINAL JOINTS SHALL BE EITHER BT-2 OR L-2 UNLESS INDICATED OTHERWISE.
2. ALL TRANSVERSE JOINTS SHALL BE CD JOINTS WITH A MAXIMUM 17' SPACING UNLESS INDICATED OTHERWISE.
3. IF A JOINT LENGTH IS 2', A C JOINT SHALL BE USED INSTEAD OF A CD JOINT.
4. AT LOCATIONS WHERE ONLY THREE JOINTS INTERSECT, A 1" DIAMETER HOLE SHALL BE DRILLED THROUGH THE PAVEMENT AND FILLED WITH JOINT FILLER MATERIAL.
5. REFER TO STANDARD ROAD PLANS FOR ADDITIONAL JOINTING DETAILS AROUND PHYSICAL FEATURES.

JOINTING DETAILS

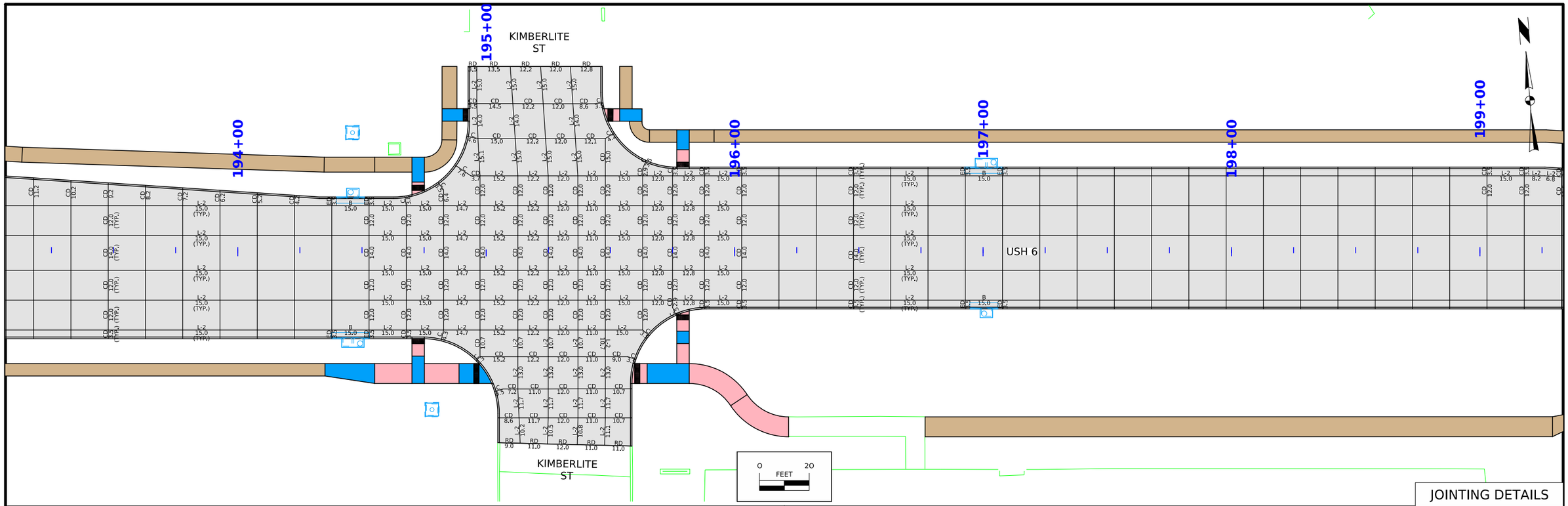
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.9



JOINTING NOTES:
1. ALL LONGITUDINAL JOINTS SHALL BE EITHER BT-2 OR L-2 UNLESS INDICATED OTHERWISE.
2. ALL TRANSVERSE JOINTS SHALL BE CD JOINTS WITH A MAXIMUM 17' SPACING UNLESS INDICATED OTHERWISE.
3. IF A JOINT LENGTH IS 2', A C JOINT SHALL BE USED INSTEAD OF A CD JOINT.
4. AT LOCATIONS WHERE ONLY THREE JOINTS INTERSECT, A 1" DIAMETER HOLE SHALL BE DRILLED THROUGH THE PAVEMENT AND FILLED WITH JOINT FILLER MATERIAL.
5. REFER TO STANDARD ROAD PLANS FOR ADDITIONAL JOINTING DETAILS AROUND PHYSICAL FEATURES.

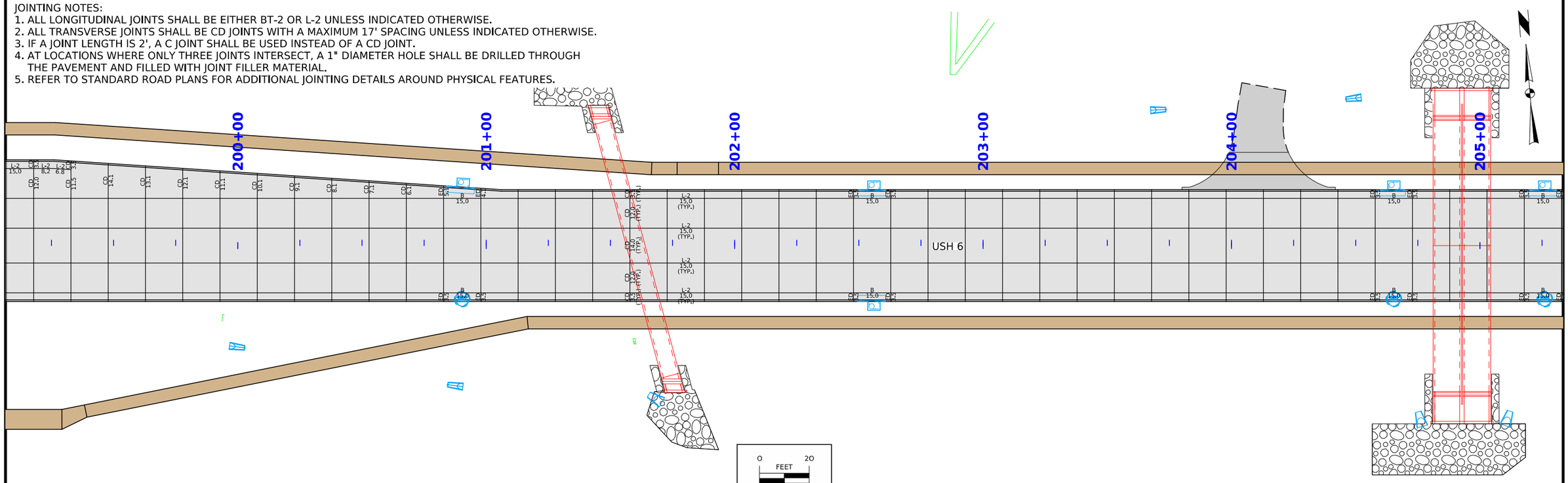
JOINTING DETAILS

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.10

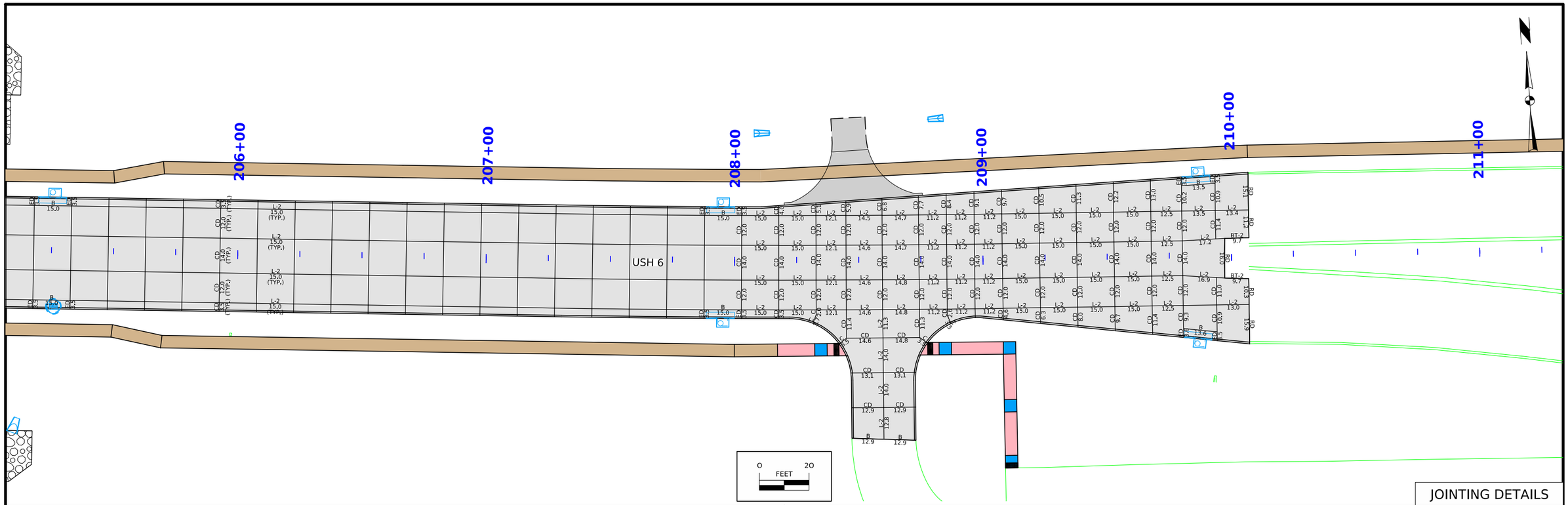


JOINTING DETAILS

JOINTING NOTES:
1. ALL LONGITUDINAL JOINTS SHALL BE EITHER BT-2 OR L-2 UNLESS INDICATED OTHERWISE.
2. ALL TRANSVERSE JOINTS SHALL BE CD JOINTS WITH A MAXIMUM 17' SPACING UNLESS INDICATED OTHERWISE.
3. IF A JOINT LENGTH IS 2', A C JOINT SHALL BE USED INSTEAD OF A CD JOINT.
4. AT LOCATIONS WHERE ONLY THREE JOINTS INTERSECT, A 1" DIAMETER HOLE SHALL BE DRILLED THROUGH THE PAVEMENT AND FILLED WITH JOINT FILLER MATERIAL.
5. REFER TO STANDARD ROAD PLANS FOR ADDITIONAL JOINTING DETAILS AROUND PHYSICAL FEATURES.



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER L.11



JOINTING DETAILS

JOINTING NOTES:
1. ALL LONGITUDINAL JOINTS SHALL BE EITHER BT-2 OR L-2 UNLESS INDICATED OTHERWISE.
2. ALL TRANSVERSE JOINTS SHALL BE CD JOINTS WITH A MAXIMUM 17' SPACING UNLESS INDICATED OTHERWISE.
3. IF A JOINT LENGTH IS 2', A C JOINT SHALL BE USED INSTEAD OF A CD JOINT.
4. AT LOCATIONS WHERE ONLY THREE JOINTS INTERSECT, A 1" DIAMETER HOLE SHALL BE DRILLED THROUGH THE PAVEMENT AND FILLED WITH JOINT FILLER MATERIAL.
5. REFER TO STANDARD ROAD PLANS FOR ADDITIONAL JOINTING DETAILS AROUND PHYSICAL FEATURES.

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
1	171+96.32	-22.5	SW-509	716.21	707.50			P-1A	ExStorm-Inlet 5	1	2000	15.0	176	172.0	2.6	Type 3	714.52	710.00		M.12	
2	171+96.33	22.5	SW-501	716.21	712.00		Type R Casting	P-1	1	3	2000	15.0	326	322.0	2.5	Type 3	708.00	700.00		M.12	
3	175+26.31	-22.5	SW-509	706.09	700.00			P-2	2	1	2000	15.0	49	45.0	3.3	Type 3	712.50	711.00		M.13	
4	175+26.31	22.5	SW-507	706.08	702.43			P-3	3	5	2000	18.0	223	219.0	2.3	Type 3	698.00	693.00		M.13	
5	177+51.09	-22.5	SW-507	701.36	692.20			P-4	4	3	3000	15.0	49	45.0	3.3	Type 3	703.00	701.50		M.13	Requires Flowable Mortar backfill
6	177+67.59	22.5	SW-502 (48 in.)	701.20	691.00		Type R Casting	P-5	5	6	2000	18.0	49	45.0	1.6	Type 3	692.70	692.00		M.13	
7	177+90.18	63.2	DR-201 Type 1 (24 in.)	690.84				P-6	6	7	3000	24.0	47	45.0	1.5	Type 3	691.50	690.84		M.13	
8	180+32.13	-46.7	SW-509	701.78	697.45			P-8	8	9	2000	18.0	34	30.0	1.8	Type 3	698.25	697.70		M.15	
9	180+62.32	-46.6	SW-509	701.94	696.90		Connect to existing 12 HDPE	P-9	9	10	2000	18.0	30	26.0	1.9	Type 3	697.40	696.90		M.15	
10	180+93.47	-39.1	SW-513 (4 ft. X 4 ft.)	701.24	696.10		Opening on east side	P-10	10	11	2000	18.0	15	11.0	0.9	Type 3	696.60	696.50		M.15	
11	180+93.46	-22.5	SW-507	702.39	695.70			P-11	11	12	2000	18.0	49	45.0	0.8	Type 3	696.20	695.85		M.15	
12	180+93.46	22.5	SW-507	702.39	695.10			P-12	12	14	2000	18.0	202	198.0	0.9	Type 3	695.55	693.70		M.15	
14	178+91.68	22.5	SW-545	700.60	692.70	13.8		P-14	14	19	2000	24.0	18	14.0	1.5	Type 3	693.20	693.00		M.14	
16	178+91.69	-22.5	SW-545	700.60	694.60	13.8		P-16	16	14	2000	18.0	49	45.0	3.1	Type 3	695.10	693.70		M.14	
19	178+91.68	42.8	SW-401 (60 in.)	698.99	692.20		Type E Casting	P-19	19	20	2000	24.0	71	69.0	0.9	Type 3	692.70	692.06		M.14	
20	178+24.54	66.1	DR-201 Type 1 (24 in.)	692.06																	
21	187+70.32	22.5	SW-507	705.59	698.10			P-21	21	25	2000	15.0	126	122.0	1.0	Type 3	698.60	697.35		M.16	
22	187+70.31	-41.8	SW-513 (4 ft. X 4 ft.)	703.35	699.09		Openings on east and west sides	P-22	22	23	2000	15.0	17	13.0	1.1	Type 3	699.59	699.45		M.16	
23	187+70.32	-22.5	SW-507	705.59	698.70			P-23	23	21	2000	15.0	49	45.0	0.8	Type 3	699.20	698.85		M.16	
24	187+70.71	45.4	SW-513 (4 ft. X 4 ft.)	704.62	700.45		Openings on east and west sides	P-24	24	21	2000	15.0	21	17.0	4.4	Type 3	701.00	700.25		M.16	
25	188+97.71	26.9	SW-401 (72 in.)	704.40	696.60		Type E Casting	P-25	25	27	2000	18.0	247	243.0	1.1	Type 3	697.10	694.50		M.16	
26	188+68.68	-69.4	SW-545	704.83	699.80	9.8		P-26	26	25	2000	18.0	99	95.0	3.1	Type 3	700.30	697.40		M.16	
27	191+45.32	34.5	SW-507	699.15	693.70			P-27	27	29	2000	18.0	299	295.0	1.7	Type 3	694.10	689.05		M.17	
28	191+45.40	-36.8	SW-507	699.11	695.00			P-28	28	27	2000	15.0	75	71.0	1.3	Type 3	695.40	694.45		M.17	
29	194+46.32	34.5	SW-509	694.37	688.10			P-29	29	33	2000	24.0	253	249.0	0.6	Type 3	688.60	687.15		M.17	
30	194+46.18	-48.4	SW-513 (4 ft. X 4 ft.)	693.63	689.45		Opening on east and west sides	P-30	30	31	2000	15.0	24	20.0	1.5	Type 3	690.30	690.00		M.17	
31	194+46.33	-22.5	SW-507	694.61	689.40			P-31	31	29	2000	15.0	61	57.0	1.1	Type 3	689.90	689.30		M.17	
32	194+78.19	63.0	SW-513 (4 ft. X 4 ft.)	692.47	688.26		Opening on east side	P-32	32	29	2000	15.0	43	39.0	0.7	Type 3	689.55	689.30		M.17	
33	197+01.32	22.5	SW-507	692.22	686.35			P-33	33	35	2000	24.0	389	385.0	0.7	Type 3	686.85	684.00		M.18	
34	197+01.32	-34.5	SW-509	691.98	687.64			P-34	34	33	2000	15.0	61	57.0	1.1	Type 3	688.20	687.60		M.18	
35	200+90.32	22.5	SW-502 (60 in.)	690.26	683.20		Type R Casting	P-35	35	37	2000	24.0	84	82.0	1.7	Type 3	683.70	682.29		M.18	
36	200+90.62	-23.5	SW-507	690.24	685.00			P-36	36	35	2000	15.0	47	43.0	2.5	Type 3	685.50	684.45		M.18	
37	201+65.42	60.0	DR-201 Type 1 (24 in.)	682.29																	
40	202+56.04	-22.5	SW-507	689.44	684.50			P-40	40	41	2000	15.0	49	45.0	1.8	Type 3	685.00	684.20		M.19	
41	202+56.04	22.5	SW-507	689.44	682.95			P-41	41	42	2000	24.0	209	205.0	1.9	Type 3	683.45	679.50		M.19	
42	204+65.32	22.5	SW-502 (60 in.)	688.40	678.70		Type R Casting	P-42	42	44	2000	24.0	46	44.0	4.0	Type 3	679.20	677.44		M.19	
43	204+65.32	-22.5	SW-507	688.40	682.00			P-43	43	42	2000	15.0	46	42.0	2.4	Type 3	682.50	681.50		M.19	
44	204+75.13	66.9	DR-201 Type 1 (24 in.)	677.44																	
45	209+87.16	-33.0	SW-507	685.61	681.60			P-45	45	46	3000	15.0	70	66.0	1.1	Type 3	682.10	681.40		M.20	Requires Flowable Mortar backfill
46	209+86.93	32.6	SW-507	685.56	679.80			P-46	46	47	2000	24.0	192	188.0	0.5	Type 3	680.80	679.80		M.20	
47	207+95.35	22.5	SW-507	686.76	687.70			P-47	47	49	2000	24.0	269	265.0	0.5	Type 3	679.70	678.35		M.20	
48	207+95.34	-22.5	SW-507	686.76	681.00			P-48	48	47	2000	15.0	49	45.0	3.3	Type 3	681.50	680.00		M.20	
49	205+26.10	22.5	SW-502 (60 in.)	688.10	677.25		Type R Casting	P-49	49	51	2000	24.0	47	45.0	4.9	Type 3	678.25	676.06		M.20	
50	205+26.10	-22.5	SW-507	688.10	680.50			P-50	50	49	2000	15.0	46	42.0	2.4	Type 3	681.00	680.00		M.20	
51	205+12.15	66.6	DR-201 Type 1 (24 in.)	676.06																	
52	213+95.80	-61.0	DR-201 Type 1 (15 in.)	679.79				P-52A	ExStorm-Inlet 15	52	2000	15.0	6	6.0	0.5	Type 3	679.82	679.79			Connect to existing pipe

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

Totals:
Manhole, Storm Sewer, SW-401, 60 in. = 1 EACH
Manhole, Storm Sewer, SW-401, 72 in. = 1 EACH
Intake, SW-501 = 1 EACH
Intake, SW-502, 48 in. = 1 EACH
Intake, SW-502, 60 in. = 3 EACH
Intake, SW-507 = 19 EACH
Intake, SW-509 = 6 EACH
Intake, SW-513 = 5 EACH
Intake, SW-545 = 3 EACH
Aprons, Concrete, 24 in. Dia. = 5 EACH

Storm Sewer Gravity Main, Trenched, Reinforced Concrete Pipe (RCP), 2000D (Class III), 15 in. = 1271 LF
Storm Sewer Gravity Main, Trenched, Reinforced Concrete Pipe (RCP), 2000D (Class III), 18 in. = 1296 LF
Storm Sewer Gravity Main, Trenched, Reinforced Concrete Pipe (RCP), 2000D (Class III), 24 in. = 1578 LF
Storm Sewer Gravity Main, Trenched, Reinforced Concrete Pipe (RCP), 3000D (Class IV), 15 in. = 111 LF
Storm Sewer Gravity Main, Trenched, Reinforced Concrete Pipe (RCP), 3000D (Class IV), 24 in. = 47 LF
Flowable Mortar = 30 CY

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- WH Water Hydrant (Rural)
- ST Septic Tank
- C Cistern
- LP L.P. Gas Tank (No Footing)
- UST Underground Storage Tank
- Latrine
- Satellite TV Dish
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box

UTILITY LEGEND

City of Tiffin

— W — Water
— SAN. — Sanitary
— ST S — Storm Sewer
Street Lights and Traffic Signals

Brett Mehmen
bbtiffin@southslope.net
(319) 631-1698

Alliant Energy

— E1 — Buried Electric
— E2 — Aerial Electric
Utility Poles and Street Lights

Dean Colony
DeanColony@alliantenergy.com
(319) 786-1905

International Transmission

— T2 — Buried Telephone
Utility Poles

Chad Levi
clevi@itctransco.com
(319) 297-6765

Mediacom

— TV — Buried Telecommunications
— TV2 — Aerial Telecommunications

Donald Bergthold
dbergthold@mediacomcc.com
(319) 351-0408

MidAmerican Gas - Distribution

— G — Buried Low Pressure Gas

Joseph Retek
joseph.retek@midamerican.com
(319) 341-4457

MidAmerican Gas - Transmission

— GHP — Buried High Pressure Gas

William Barry
william.barry@midamerican.com
(319) 298-5146

Segra

— FO3 — Buried Fiber
— T3 — Buried Telephone

James Keegan
James.Keegan@segrafiber.com
(319) 304-5597

South Slope Telephone

— FO — Buried Fiber

Randy Cline
randy@southslope.com
(319) 665-5316

Uniti - CLEC

— FO2 — Buried Fiber
— FO5 — Aerial Fiber

Stephen Kness
Stephen.Kness@uniti.com
(319) 538-1985

Uniti - ILEC

— FO4 — Buried Fiber
— T1 — Buried Telephone
Handhole Structures

Trae Bodensteiner
trae.bodensteiner@uniti.com
(614) 840-5500

NOTE: Utilities without quality level indicated in linestyles on plan sheets are 'Quality Level D' obtained from maps and records.

PLAN VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features, and Labels
Magenta	(5)	Existing Utilities
Blue, Dark	(1)	Proposed Storm Sewer Pipes, Alignment, Stationing, and Tic Marks
Blue, Light	(230)	Proposed Storm Sewer Intakes or Structures

SHADING	Design Color No.	
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Medium	(80)	Proposed Granular Shading
Tan	(8)	Proposed Sidewalk Shading

PROFILE VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Ground Line Profile
Magenta	(5)	Existing Utilities Information
Blue, Dark	(1)	Proposed Pipes
Blue, Light	(230)	Proposed Intakes or Structures

PLAN VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

- Plug and Abandon Existing Pipe or Structure
- Removal of Existing Pipe or Structure
- Previously Constructed Pipe or Structure
- Direction of Pipe Flow

PROFILE VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

- Existing Ground
- Proposed Ground
- Previously Constructed Pipe or Structure
- Proposed Pipe
- Proposed Structure

Reference Point
Station

- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Clearing & Grubbing Area
- Pavement Removal

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- A/C Access Control

STORM SEWER LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES M)

PAULINE J.
COLLLINS
200 W. MARENGO RD.

MELANIE G.
FREES
120 W. MARENGO RD.

MARCIA THOMPSON
HENDERSON
110 W. MARENGO RD.

WILLIAM
ROGERS
100 W. MARENGO RD.

POB 166+80.90

167+00

168+00

169+00

170+00

171+00

172+00

CONNECTION TO EXISTING INTAKE
EXSTORM-INLET5

P-1A

P-1

P-2

USH 6

STORM SEWER INTAKE
TO BE INSULATED

PROVIDE FLEXIBLE WATERTIGHT GASKETS
PER ASTM C443 FOR STORM PIPE AND STRUCTURE
JOINTS WITHIN 10' OF EXISTING WATER MAIN ALONG P-2

ELVIA & MANUEL
ESPINOZA
211 W. MARENGO RD.

GERALD & SANDRA
COX
341 GRANT STREET

BIG TEN HOMES, LLC
113 W. MARENGO ROAD

CAREW ENTERPRISES, LLC
107 W. MARENGO ROAD

CAREW ENTERPRISES, LLC
107 W. MARENGO ROAD

CAREW ENTERPRISES, LLC
321 MAIN STREET

GRANT ST

ALLEYWAY

MAIN ST

0 20
FEET

UTILITY CONFLICT NOTES:

ALLIANT
1. CONFLICTING ELECTRIC LINE TO BE RELOCATED BY UTILITY.
COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

MIDAMERICAN DISTRIBUTION
2. CONFLICTING GAS LINE TO BE RELOCATED BY UTILITY.
COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

SEGRA
4. AVOID EXISTING FIBER LINE DURING CONSTRUCTION.

SOUTH SLOPE TELEPHONE
5. CONFLICTING FIBER LINE TO BE RELOCATED BY UTILITY.
COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

UNITI ILEC
8. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY
WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS
OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

STORM SEWER LAYOUT PLAN
USH 6

FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.4

11:10:21 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn

WILLIAM
ROGERS
100 W. MARENGO RD.

CITY OF TIFFIN
LOT "A"- REEVE'S ADD.
PART ONE

CASEY'S
MARKETING COMPANY
403 STEPHANS STREET

PROPOSED BOX CULVERT EXTENSION
REFER TO V SHEETS

173+00
174+00
175+00
176+00
177+00
178+00

P-1
P-3
P-4
P-5
P-6
P-14
P-16
P-19

USH 6

STORM SEWER INTAKE
TO BE INSULATED

STORM SEWER INTAKE
TO BE INSULATED

PROVIDE FLEXIBLE WATERTIGHT GASKETS
PER ASTM C443 FOR STORM PIPE AND STRUCTURE
JOINTS WITHIN 10' OF EXISTING WATER MAIN ALONG P-4

PROVIDE FLEXIBLE WATERTIGHT GASKETS
PER ASTM C443 FOR STORM PIPE AND STRUCTURE
JOINTS WITHIN 10' OF EXISTING WATER MAIN
ALONG P-5 AND P-6

LISA A.
VOREL
330 MAIN STREET

LEANORD & DOLORES
VOREL
331 SUMMERHAYS STREET

CURTIS R.
ALLEN
330 SUMMERHAYS STREET

ROBIN & JOHN
DURIAN
320 SUMMERHAYS STREET

SUMMERHAYS ST

BROWN ST

CITY OF TIFFIN
204 BROWN STREET

0 20
FEET

UTILITY CONFLICT NOTES:

ALLIANT
1. CONFLICTING ELECTRIC LINE TO BE RELOCATED BY UTILITY.
COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

MIDAMERICAN TRANSMISSION
3. AVOID EXISTING HIGH PRESSURE GAS LINE DURING CONSTRUCTION.

SEGRA
4. AVOID EXISTING FIBER LINE DURING CONSTRUCTION.

SOUTH SLOPE TELEPHONE
5. CONFLICTING FIBER LINE TO BE RELOCATED BY UTILITY.
COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

UNITI ILEC
8. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY
WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS
OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

STORM SEWER LAYOUT PLAN
USH 6

FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.5

11:10:22 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn

CASEY'S
MARKETING COMPANY
403 STEPHANS STREET

STEPHANS ST

IOWA CITY EAST-SIDE
DEVELOPMENT, LLC
400 STEPHANS ST. UNIT B

RAIRDEN REAL
ESTATE, LLC
511 STATE ST. UNIT 101

ASPEN VENTURES, LLC
591 STATE ST. UNIT D

CONNECT TO EXISTING 12" HDPE
INCIDENTAL TO INTAKE CONSTRUCTION

SUBDRAIN CLEANOUT, TYPE B

179+00
180+00
181+00
182+00
183+00
184+00

P-8
P-9
P-10
P-11
P-12
P-14
P-16
P-19

8
9
10
11
12
14
16
19

1

USH 6

SUBDRAIN CLEANOUT, TYPE B

SUBDRAIN CLEANOUT, TYPE B

AMBER
HERRING
315 STEPHANS STREET

DOUGLAS & LOUISE
SHALLA
312 STEPHANS STREET

STEPHANS ST

443 MARENGO LC
443 E. MARENGO RD.

0 20
FEET

UTILITY CONFLICT NOTES:

ALLIANT
1. CONFLICTING ELECTRIC LINE TO BE RELOCATED BY UTILITY.
COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

UNITI ILEC
8. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY
WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS
OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

STORM SEWER LAYOUT PLAN
USH 6

FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.6

11:10:24 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn

ASPEN VENTURES, LLC
591 STATE ST. UNIT D

CROELL AVE

FDZ HOLDINGS, LLC
LOT 1 - PRAIRIE VILLAGE
COMMERCIAL DEVELOPMENT PART 2

TPV COMMERCIAL, LLC
OUTLOT "Z" - PRAIRIE
VILLAGE COMMERCIAL
DEVELOPMENT PART 2

185+00
186+00
187+00
188+00
189+00
190+00

USH 6

P-21
P-22
P-23
P-24
P-25
P-26

21
22
23
24
25
26

1

CONNECT TO EXISTING 24" RCP
INCIDENTAL TO INTAKE CONSTRUCTION

3

STORM SEWER INTAKE
TO BE INSULATED

PROVIDE FLEXIBLE WATERTIGHT GASKETS
PER ASTM C443 FOR STORM PIPE AND STRUCTURE
JOINTS WITHIN 10' OF EXISTING WATER MAIN ALONG P-24

PROPOSED WATER MAIN
REFER TO MWM SHEETS

CROELL AVE

CHAD L.
FREEMAN
607 E. MARENGO ROAD

HAWK WASH, LLC.
2793 HIGHWAY 6 NW

CITY OF TIFFIN
809 E. MARENGO RD.

0 20
FEET

UTILITY CONFLICT NOTES:

ALLIANT
1. CONFLICTING ELECTRIC LINE TO BE RELOCATED BY UTILITY.
COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

MIDAMERICAN TRANSMISSION
3. AVOID EXISTING HIGH PRESSURE GAS LINE DURING CONSTRUCTION.

UNITI ILEC
8. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY
WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS
OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

STORM SEWER LAYOUT PLAN
USH 6

FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.7

11:10:25 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn

TPV COMMERCIAL, LLC
OUTLOT "Z" - PRAIRIE VILLAGE COMMERCIAL DEVELOPMENT PART 2

PART OF PARCEL
2018-012
IOWA DEVELOPMENT GROUP

KIMBERLITE ST

PART OF PARCEL
2021-044
IOWA DEVELOPMENT GROUP

191+00
192+00
193+00
194+00
195+00
196+00

28
P-28
P-25
27
P-27
29
P-29
P-30
30
31
P-31
P-32
32

USH 6

PROPOSED WATER MAIN
REFER TO MWM SHEETS

5
7

KIMBERLITE ST

CITY OF TIFFIN
809 E. MARENGO RD.

0 20
FEET

UTILITY CONFLICT NOTES:

SOUTH SLOPE TELEPHONE
5. CONFLICTING FIBER LINE TO BE RELOCATED BY UTILITY. COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

UNITI CLEC
7. CONFLICTING FIBER LINE TO BE RELOCATED BY UTILITY. COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

UNITI ILEC
8. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

STORM SEWER LAYOUT PLAN
USH 6

FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.8

11:10:27 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn

PART OF PARCEL
2021-044
IOWA DEVELOPMENT GROUP

MELVIN R.
REEVE
2852 HIGHWAY 6 NW

PROPOSED BOX CULVERT
REFER TO V SHEETS

197+00
198+00
199+00
200+00
201+00
202+00

34
36
40
P-34
P-36
P-40
P-33
P-41
P-29
33
35
41
P-35
37

USH 6

1
3

PROPOSED WATER MAIN
REFER TO MWM SHEETS

UTILITY CONFLICT NOTES:

ALLIANT
1. CONFLICTING ELECTRIC LINE TO BE RELOCATED BY UTILITY.
COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

MIDAMERICAN TRANSMISSION
3. AVOID EXISTING HIGH PRESSURE GAS LINE DURING CONSTRUCTION.

UNITI ILEC
8. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY
WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS
OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

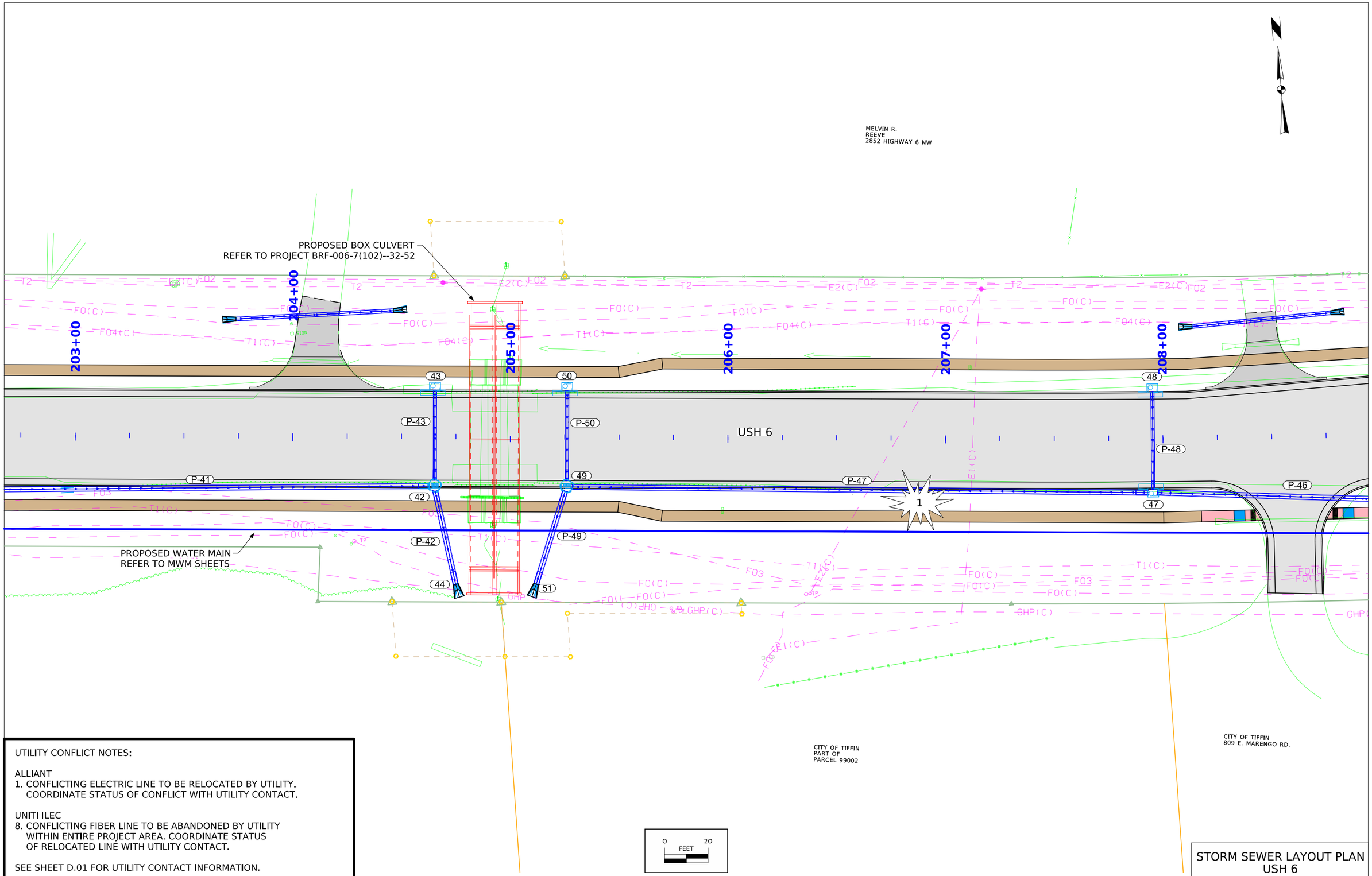
CITY OF TIFFIN
809 E. MARENGO RD.

0 20
FEET

STORM SEWER LAYOUT PLAN
USH 6

FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.9

11:10:28 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



UTILITY CONFLICT NOTES:

ALLIANT
1. CONFLICTING ELECTRIC LINE TO BE RELOCATED BY UTILITY. COORDINATE STATUS OF CONFLICT WITH UTILITY CONTACT.

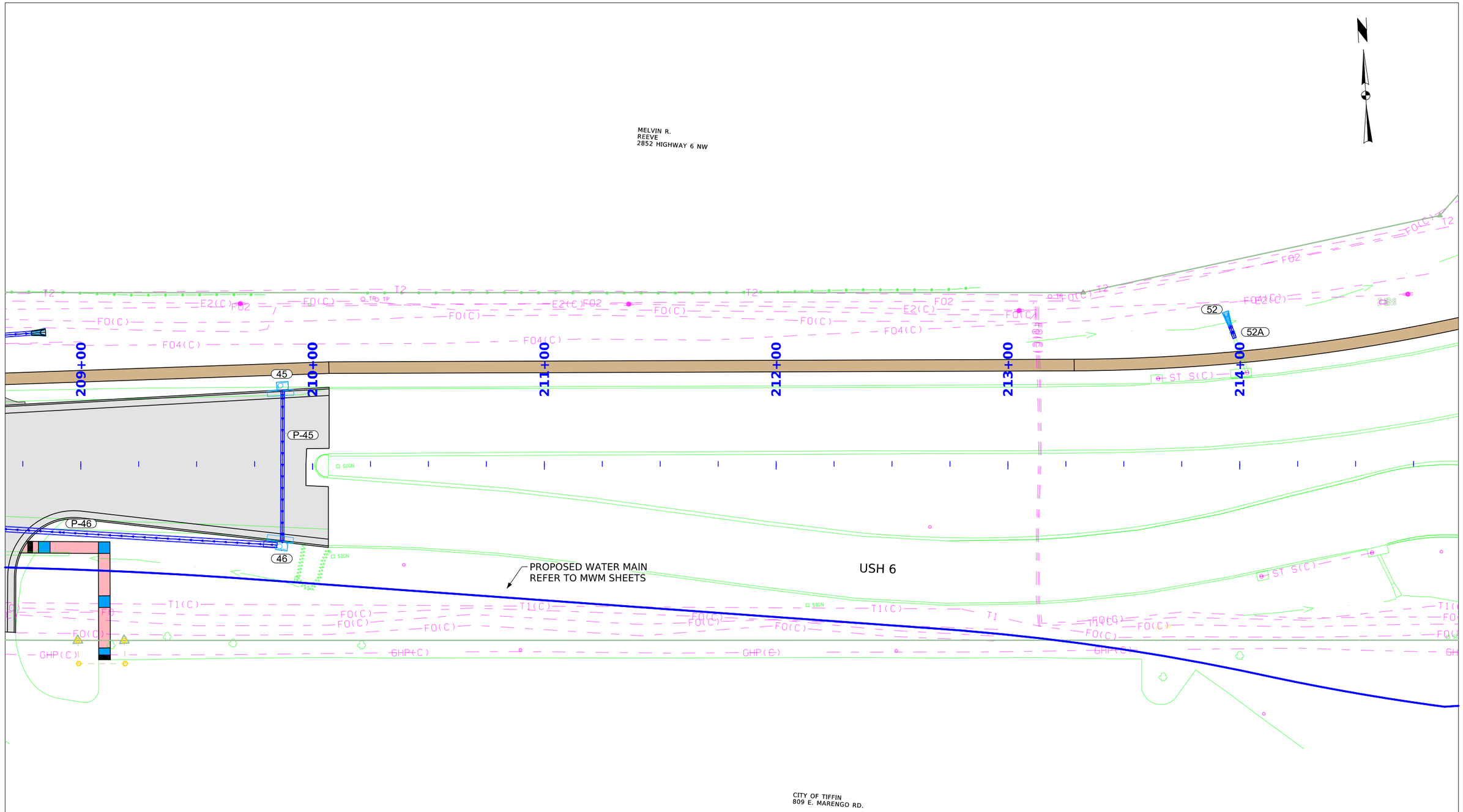
UNITI ILEC
8. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

STORM SEWER LAYOUT PLAN
USH 6

FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.10

11:10:31 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



UTILITY CONFLICT NOTES:

UNITI ILEC
8. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

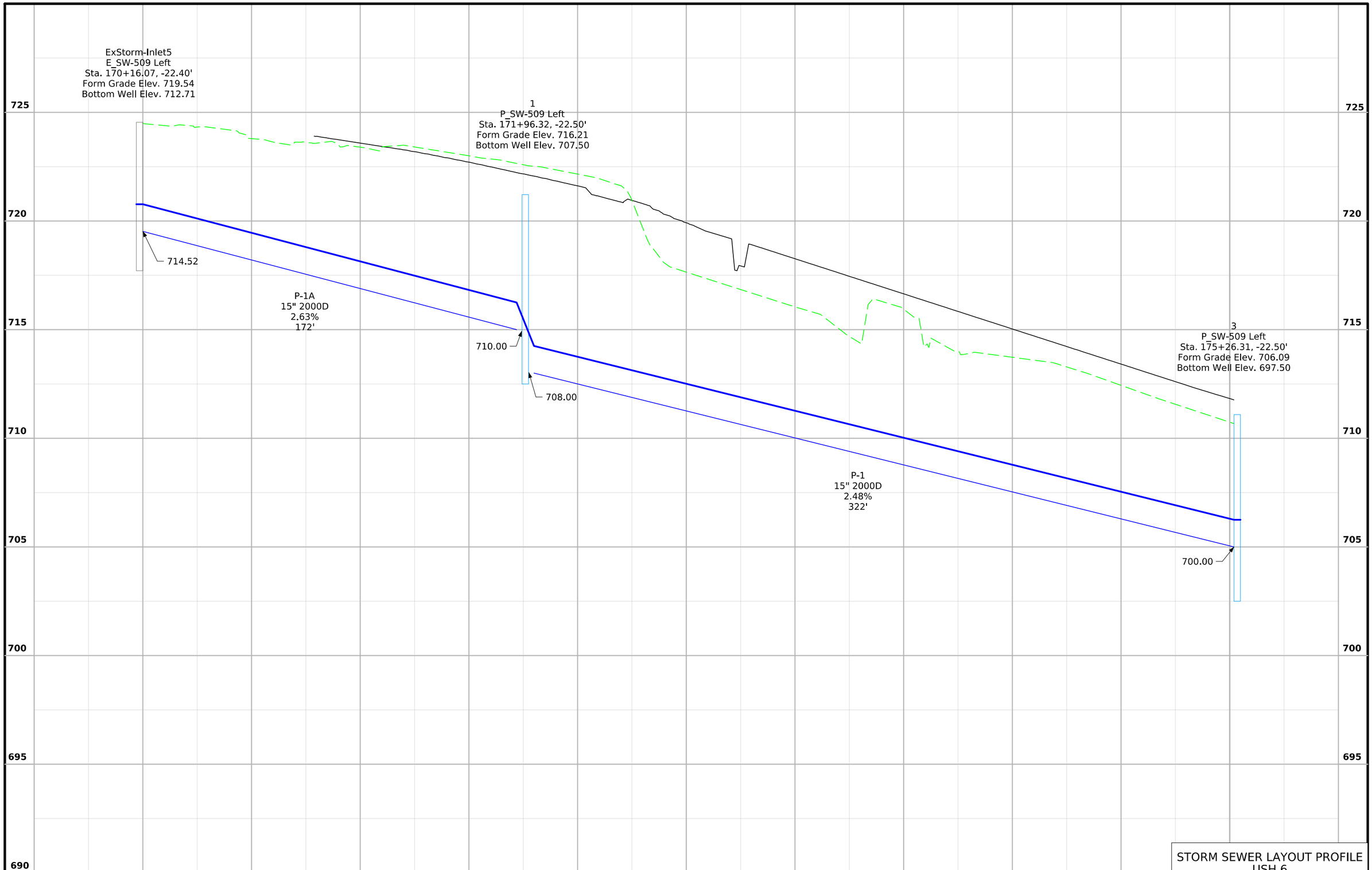
SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.

0 FEET 20

STORM SEWER LAYOUT PLAN
USH 6

FILE NO. 98765	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.11

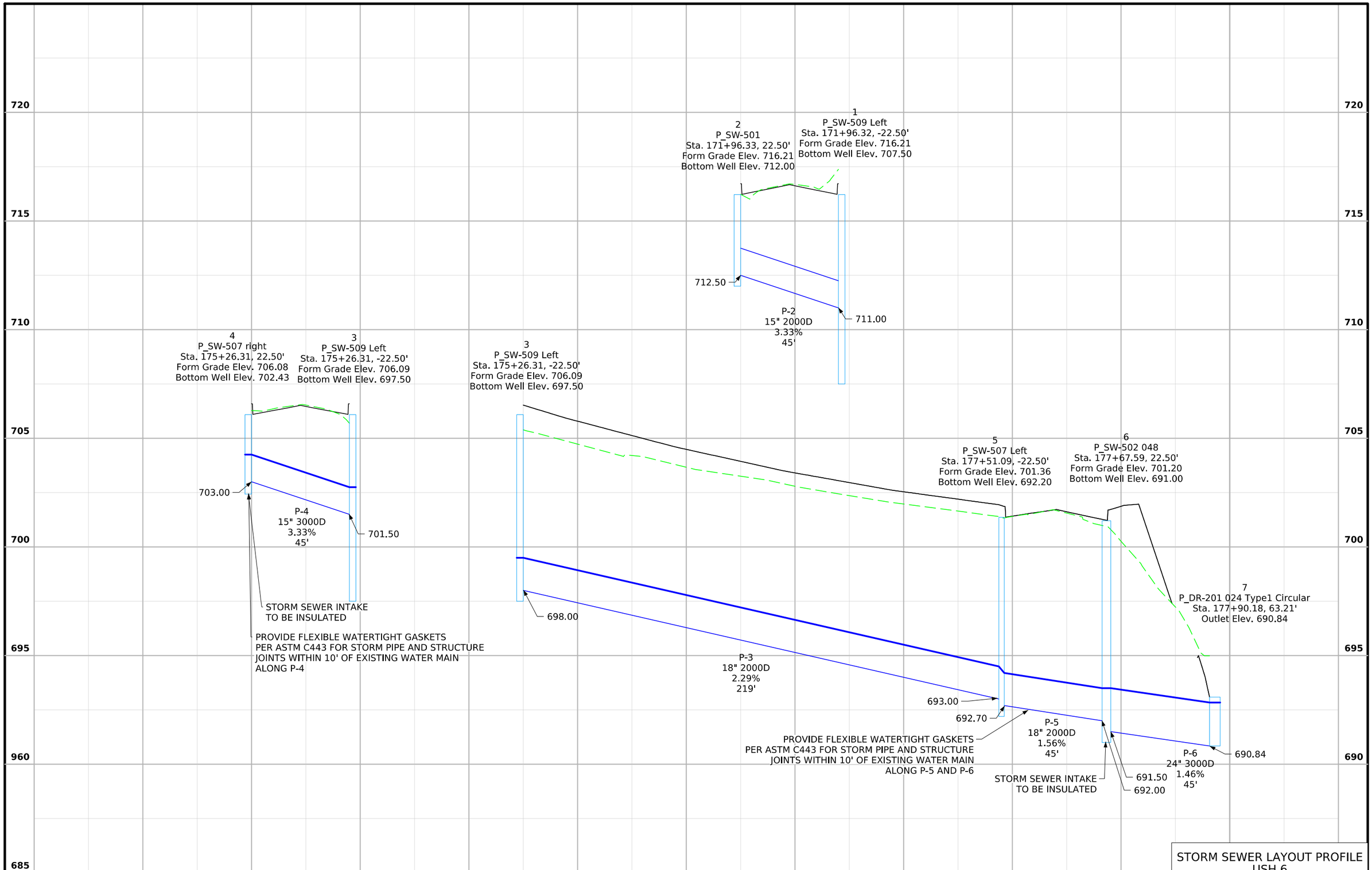
11:10:33 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



STORM SEWER LAYOUT PROFILE
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.12

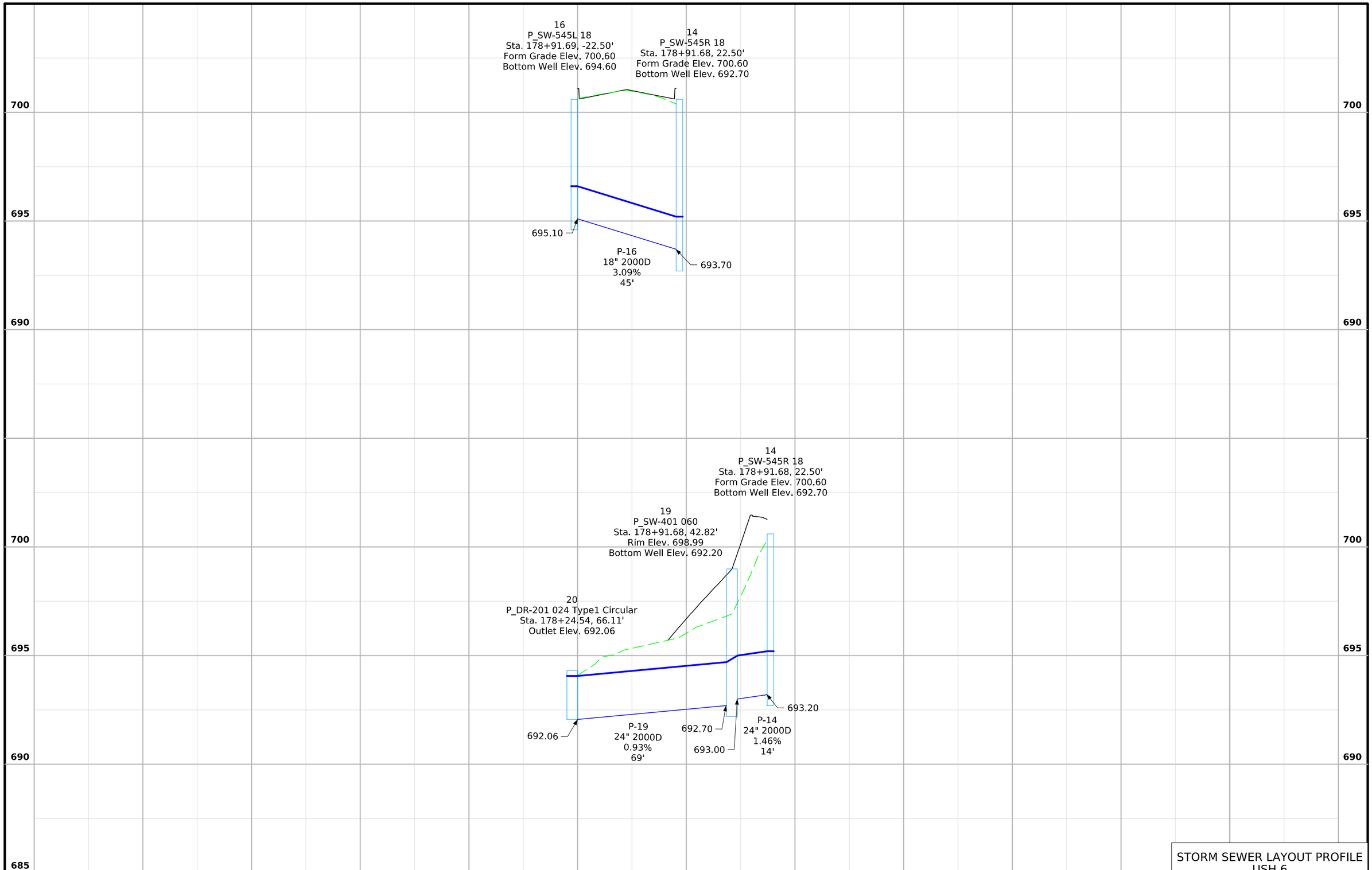
11:10:34 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



STORM SEWER LAYOUT PROFILE
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.13

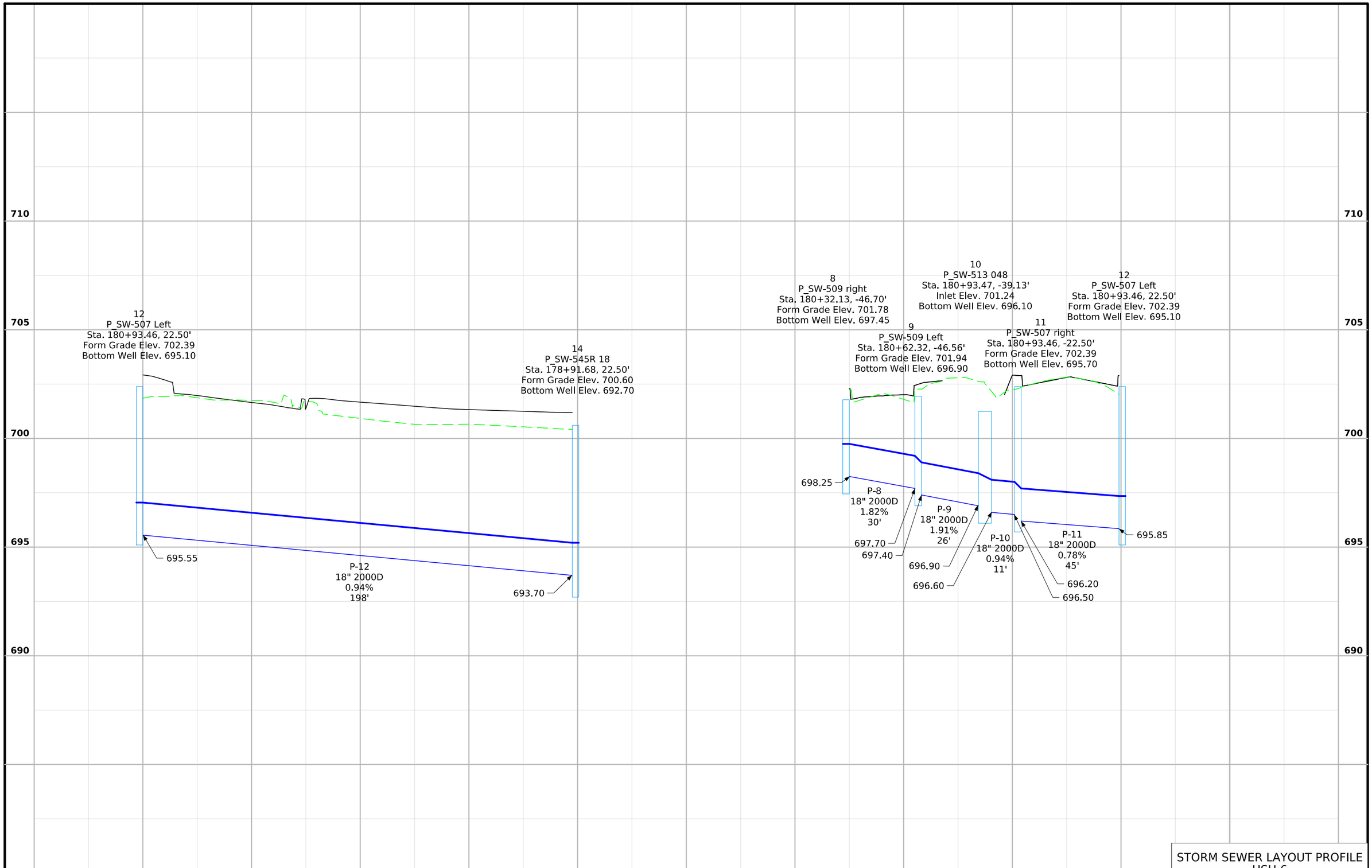
11:10:35 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



STORM SEWER LAYOUT PROFILE
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.14

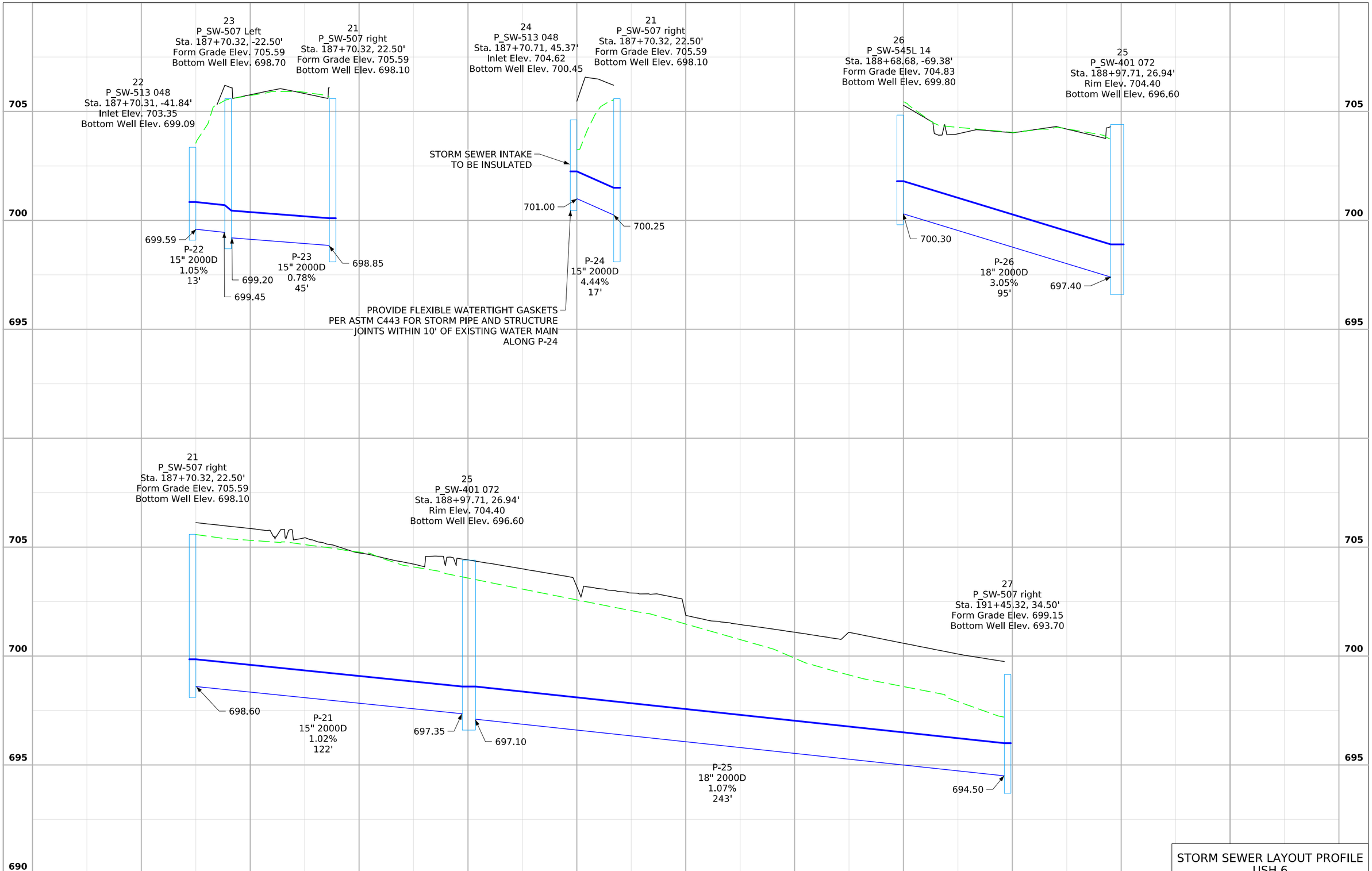
11:10:36 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



STORM SEWER LAYOUT PROFILE
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.15

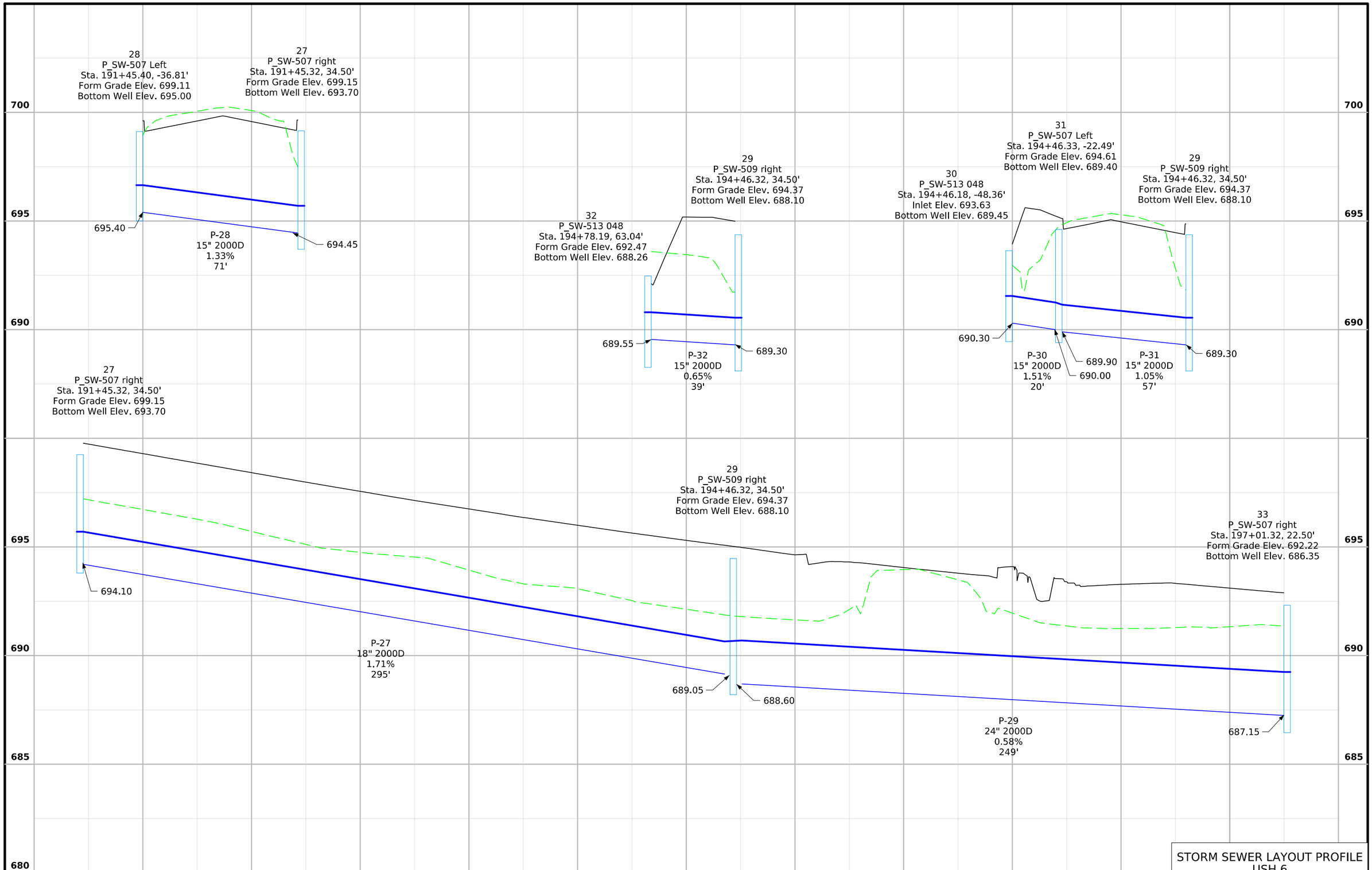
11:10:37 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



STORM SEWER LAYOUT PROFILE
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.16

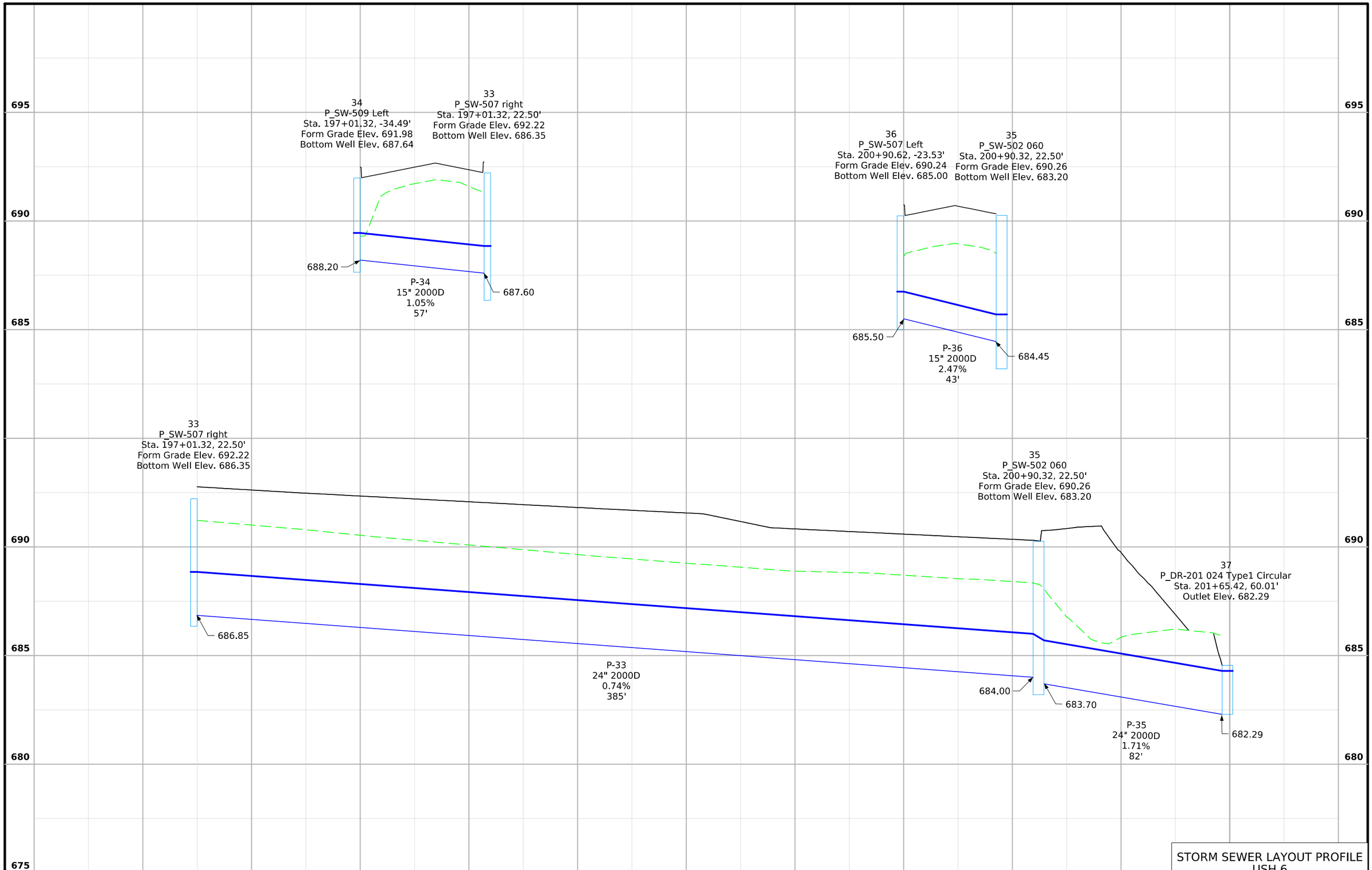
11:10:38 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



STORM SEWER LAYOUT PROFILE
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.17

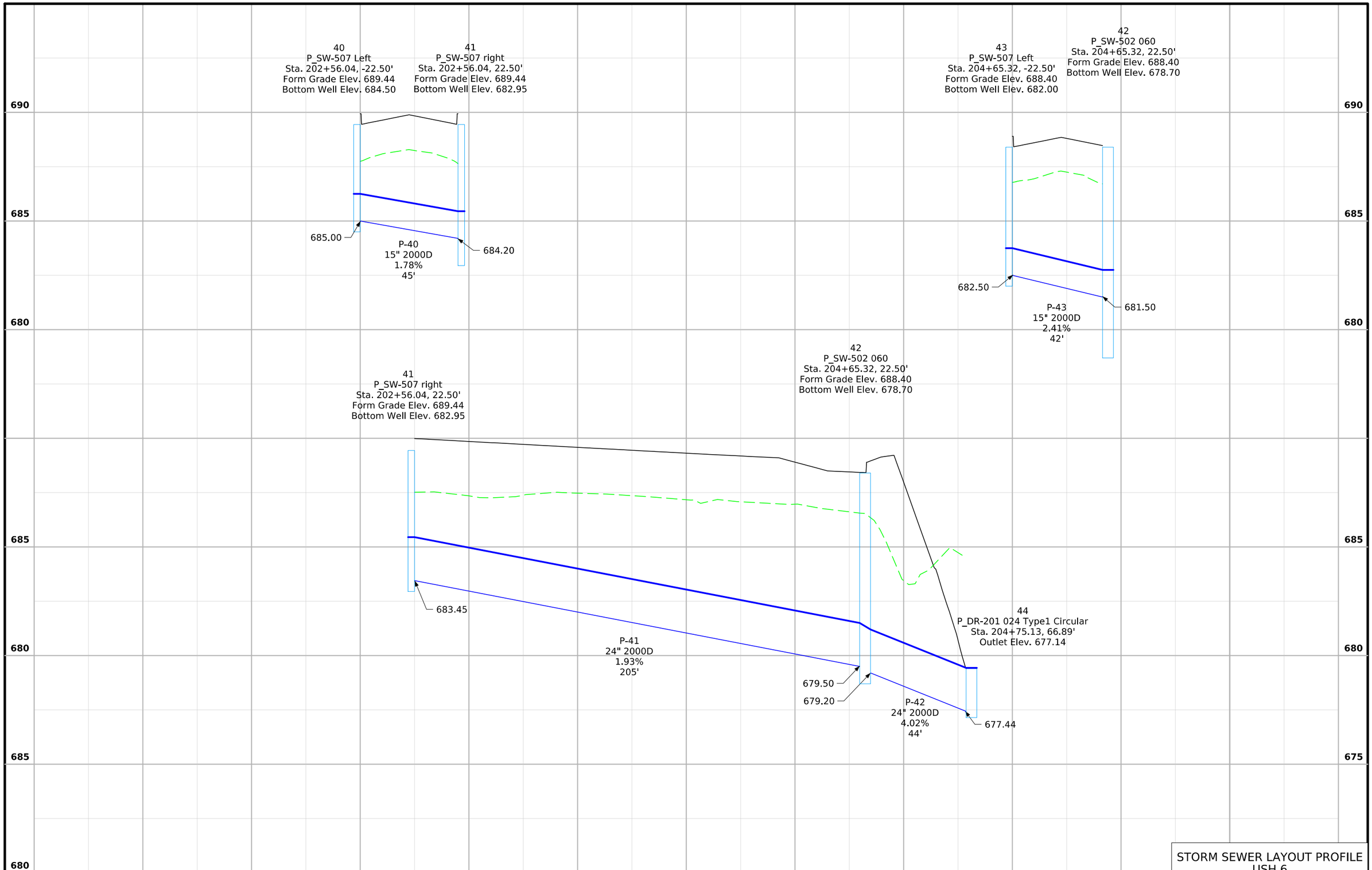
11:10:40 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



STORM SEWER LAYOUT PROFILE
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.18

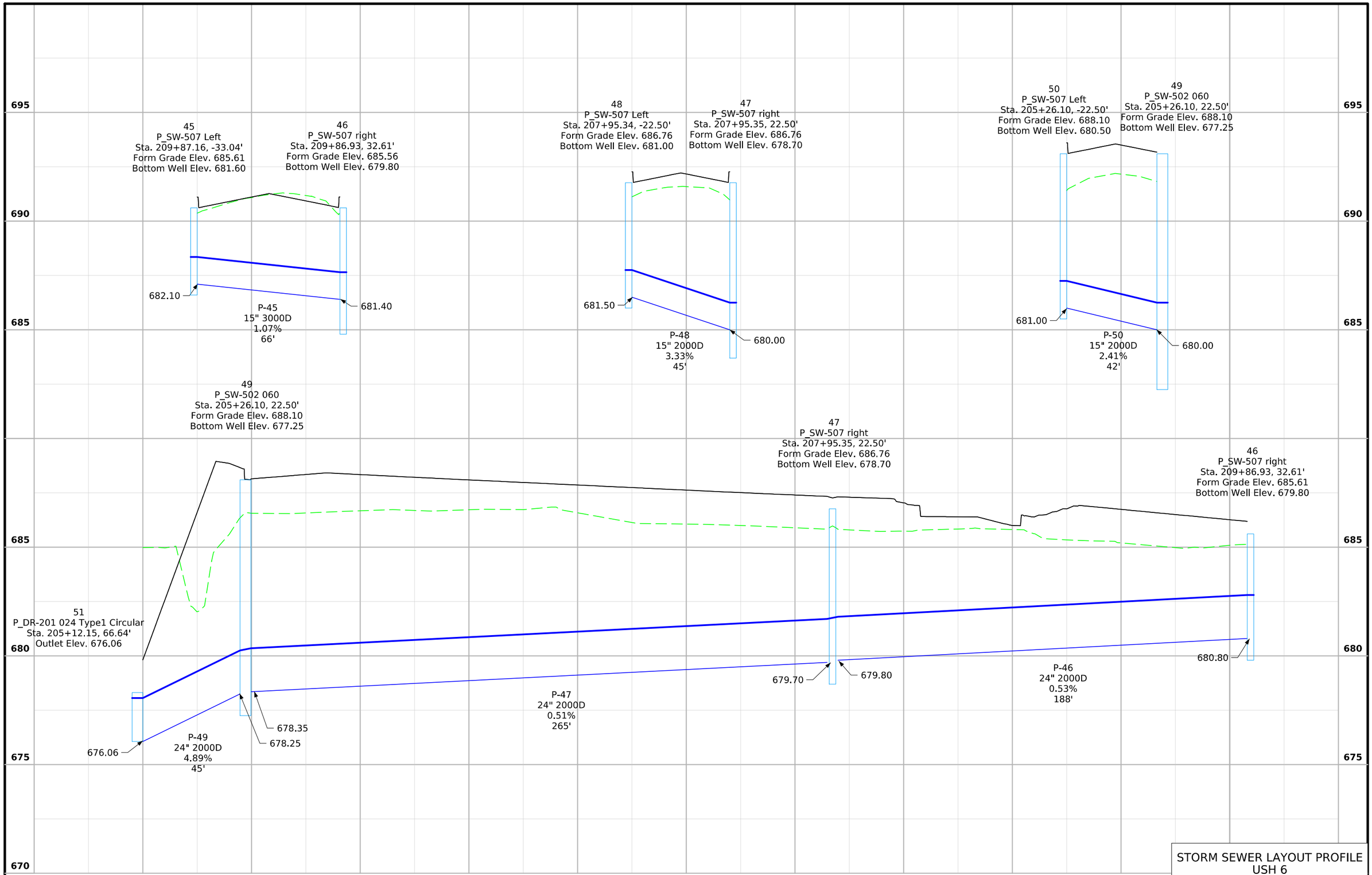
11:10:41 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



STORM SEWER LAYOUT PROFILE
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.19

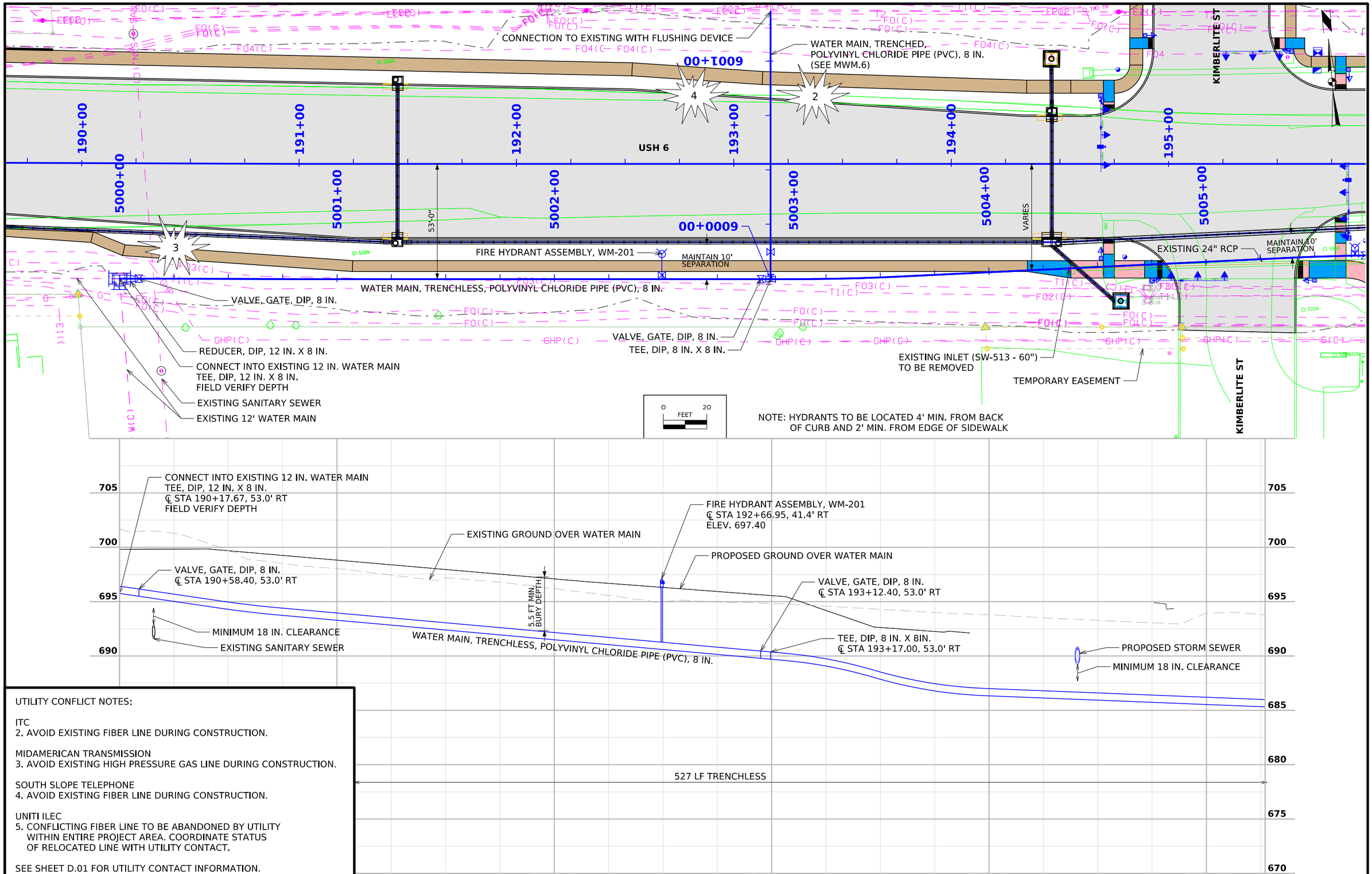
11:10:42 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



STORM SEWER LAYOUT PROFILE
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER M.20

11:10:43 AM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_M03.dgn



UTILITY CONFLICT NOTES:

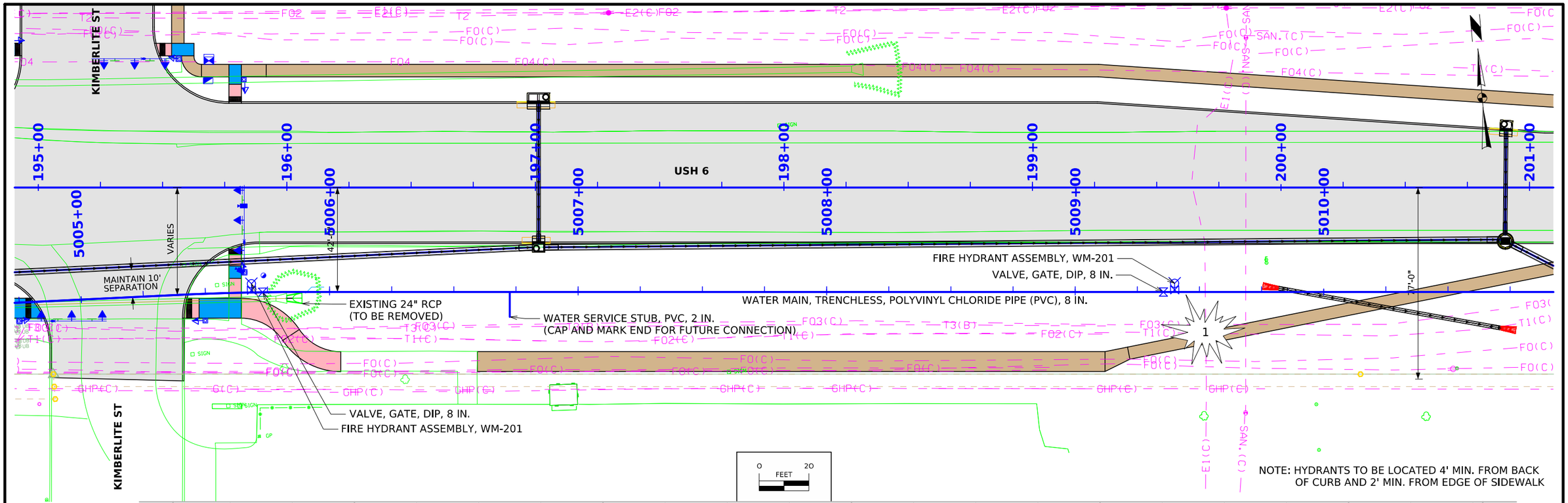
ITC
2. AVOID EXISTING FIBER LINE DURING CONSTRUCTION.

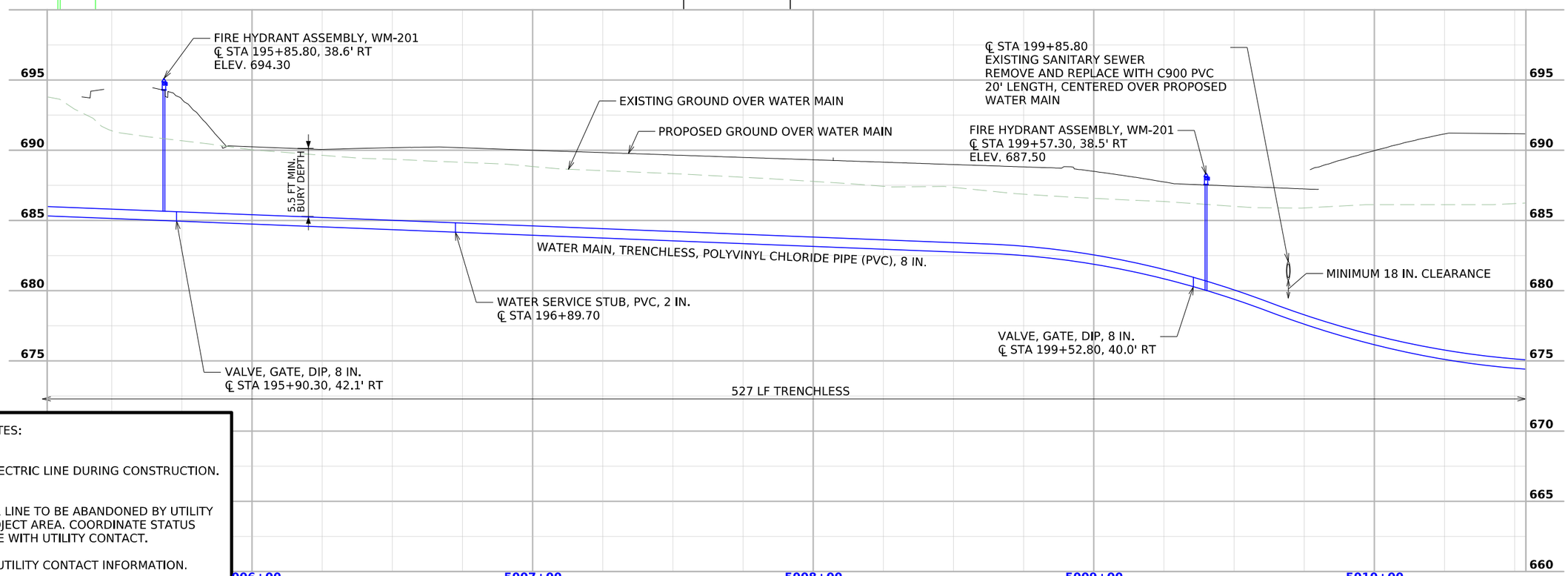
MIDAMERICAN TRANSMISSION
3. AVOID EXISTING HIGH PRESSURE GAS LINE DURING CONSTRUCTION.

SOUTH SLOPE TELEPHONE
4. AVOID EXISTING FIBER LINE DURING CONSTRUCTION.

UNITI ILEC
5. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.



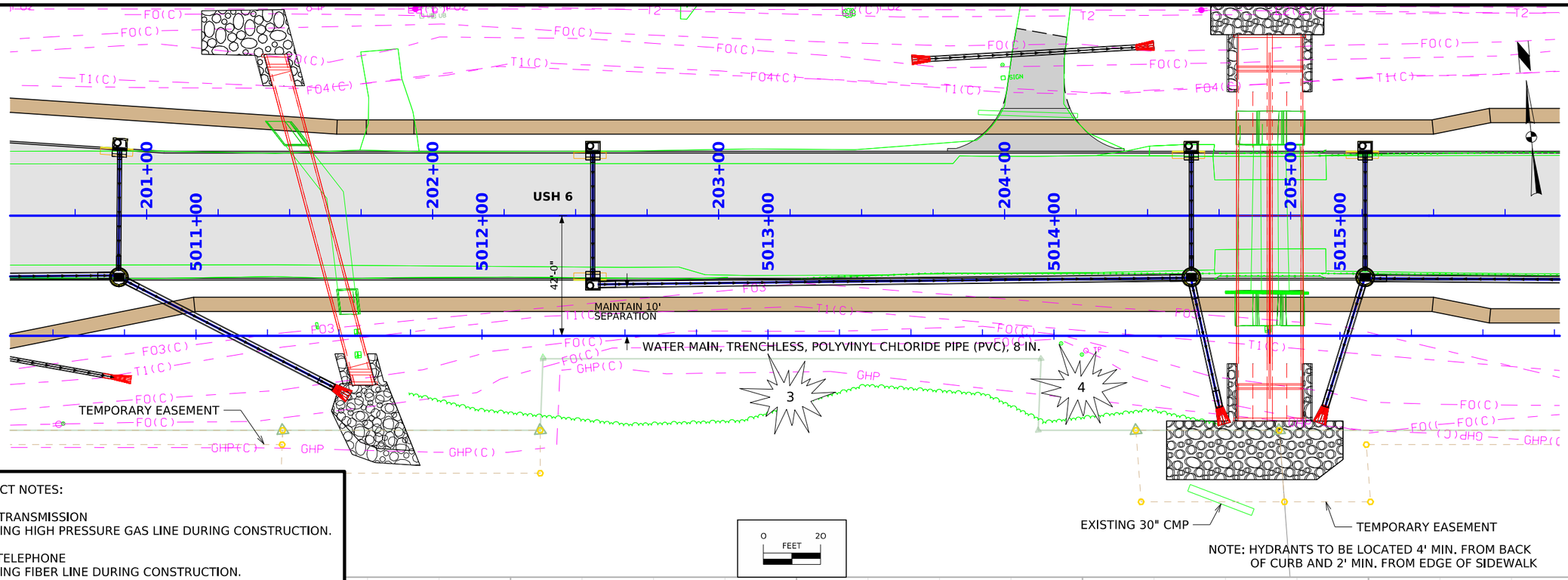


UTILITY CONFLICT NOTES:

ALLIANT
1. AVOID EXISTING ELECTRIC LINE DURING CONSTRUCTION.

UNITI ILEC
5. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.



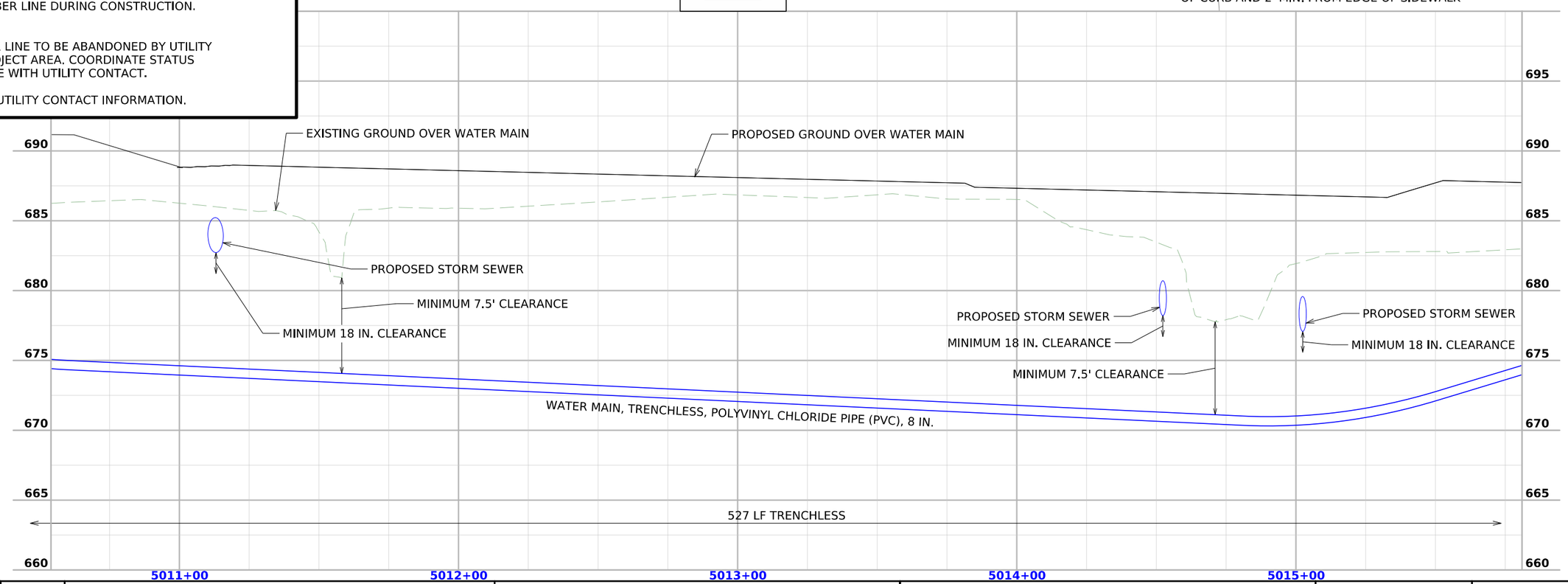
UTILITY CONFLICT NOTES:

MIDAMERICAN TRANSMISSION
3. AVOID EXISTING HIGH PRESSURE GAS LINE DURING CONSTRUCTION.

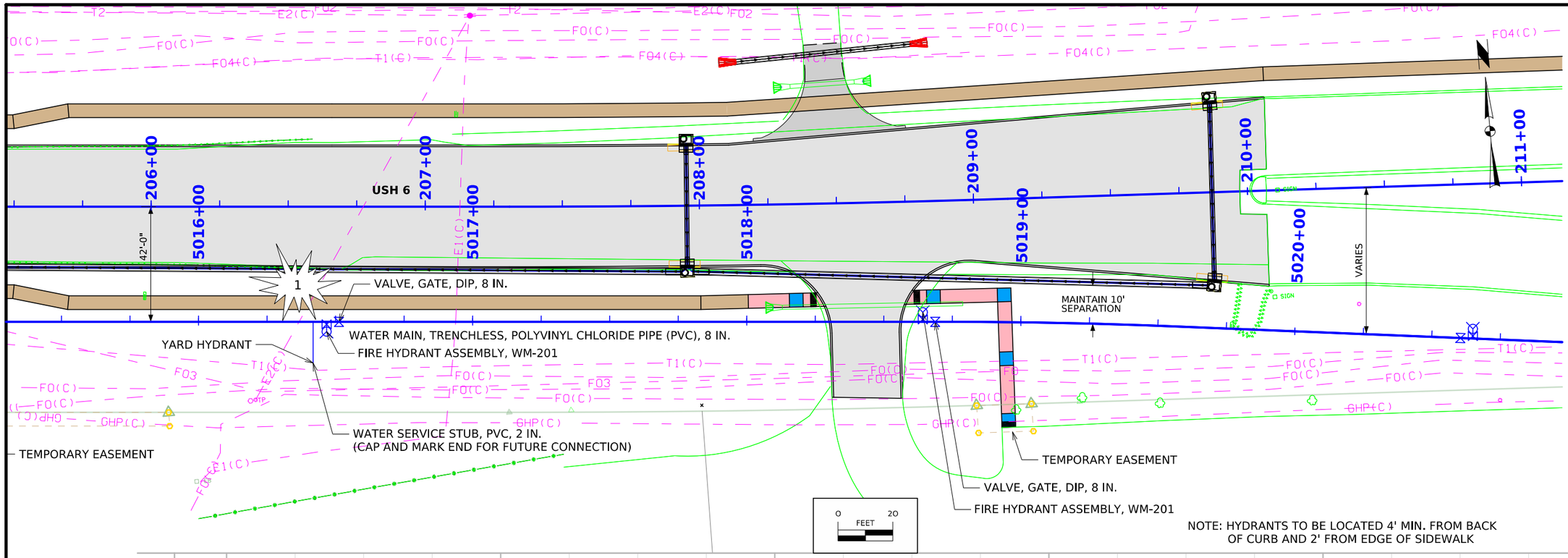
SOUTH SLOPE TELEPHONE
4. AVOID EXISTING FIBER LINE DURING CONSTRUCTION.

UNITI ILEC
5. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

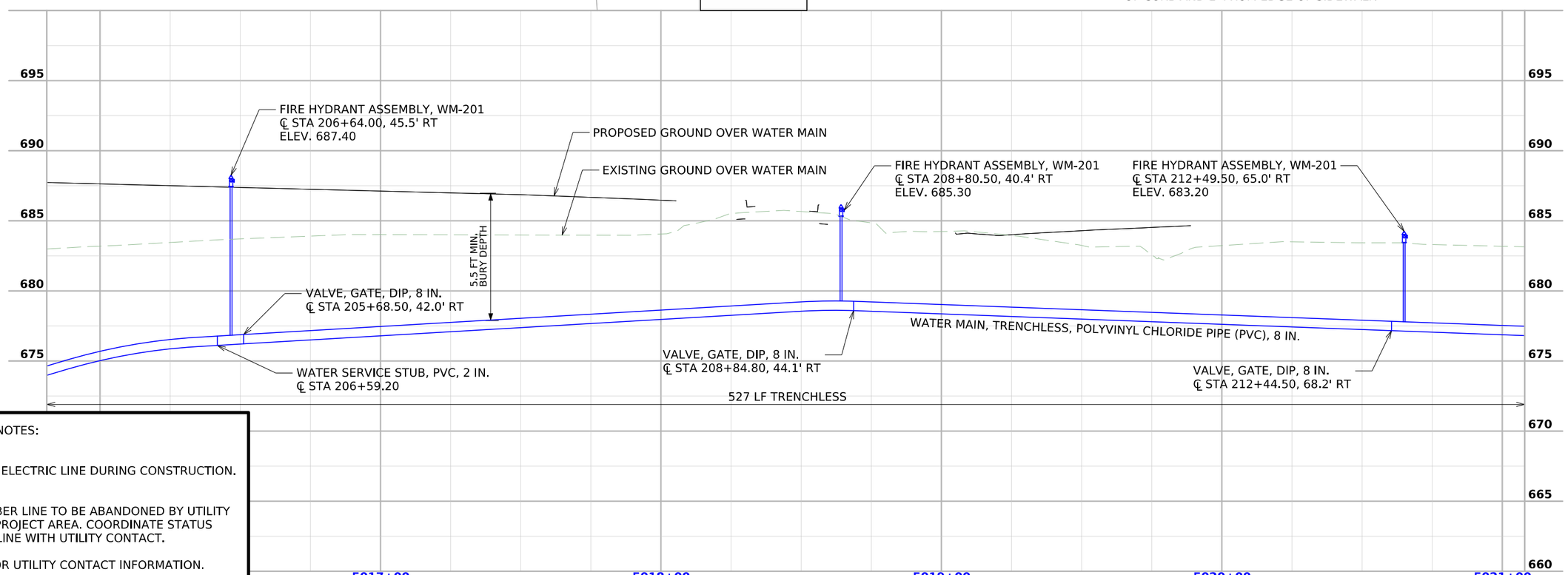
SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER MWM.3



NOTE: HYDRANTS TO BE LOCATED 4' MIN. FROM BACK OF CURB AND 2' FROM EDGE OF SIDEWALK

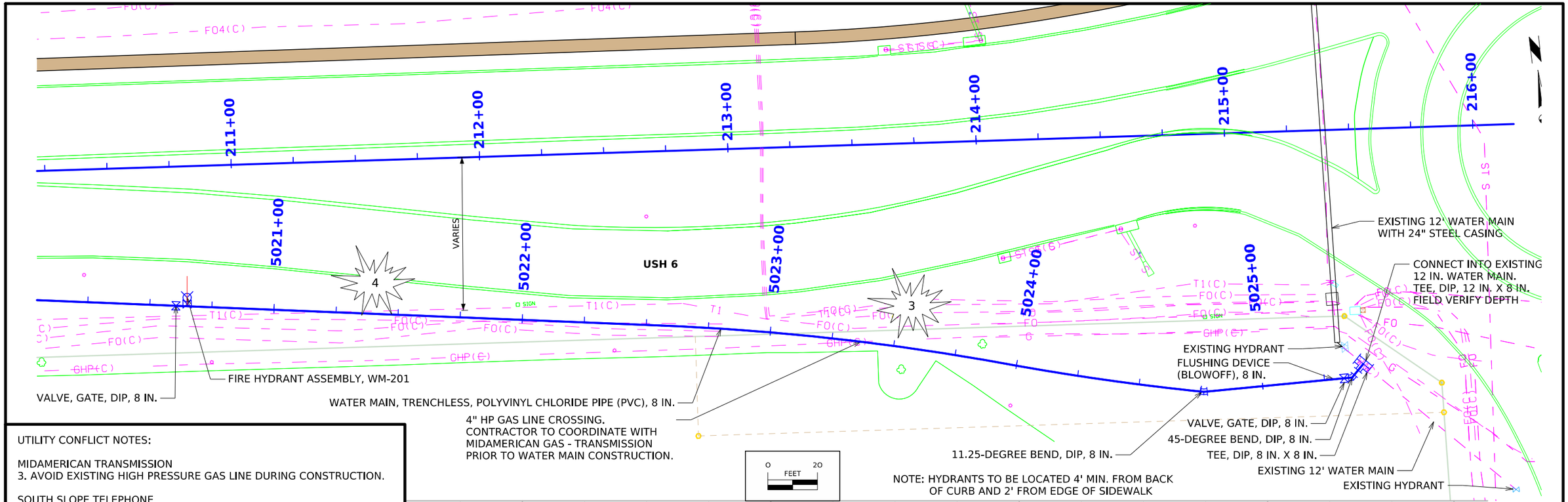


UTILITY CONFLICT NOTES:

ALLIANT
1. AVOID EXISTING ELECTRIC LINE DURING CONSTRUCTION.

UNITI ILEC
5. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.



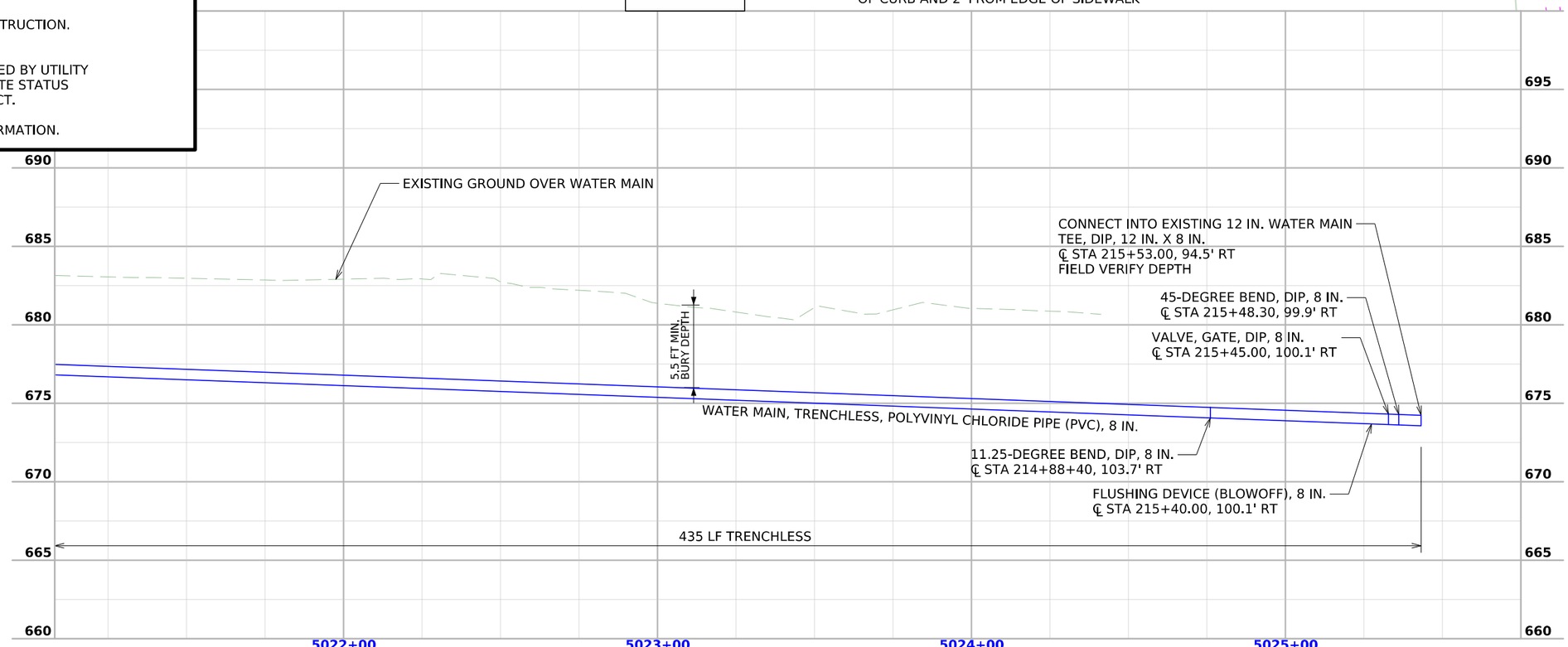
UTILITY CONFLICT NOTES:

MIDAMERICAN TRANSMISSION
3. AVOID EXISTING HIGH PRESSURE GAS LINE DURING CONSTRUCTION.

SOUTH SLOPE TELEPHONE
4. AVOID EXISTING FIBER LINE DURING CONSTRUCTION.

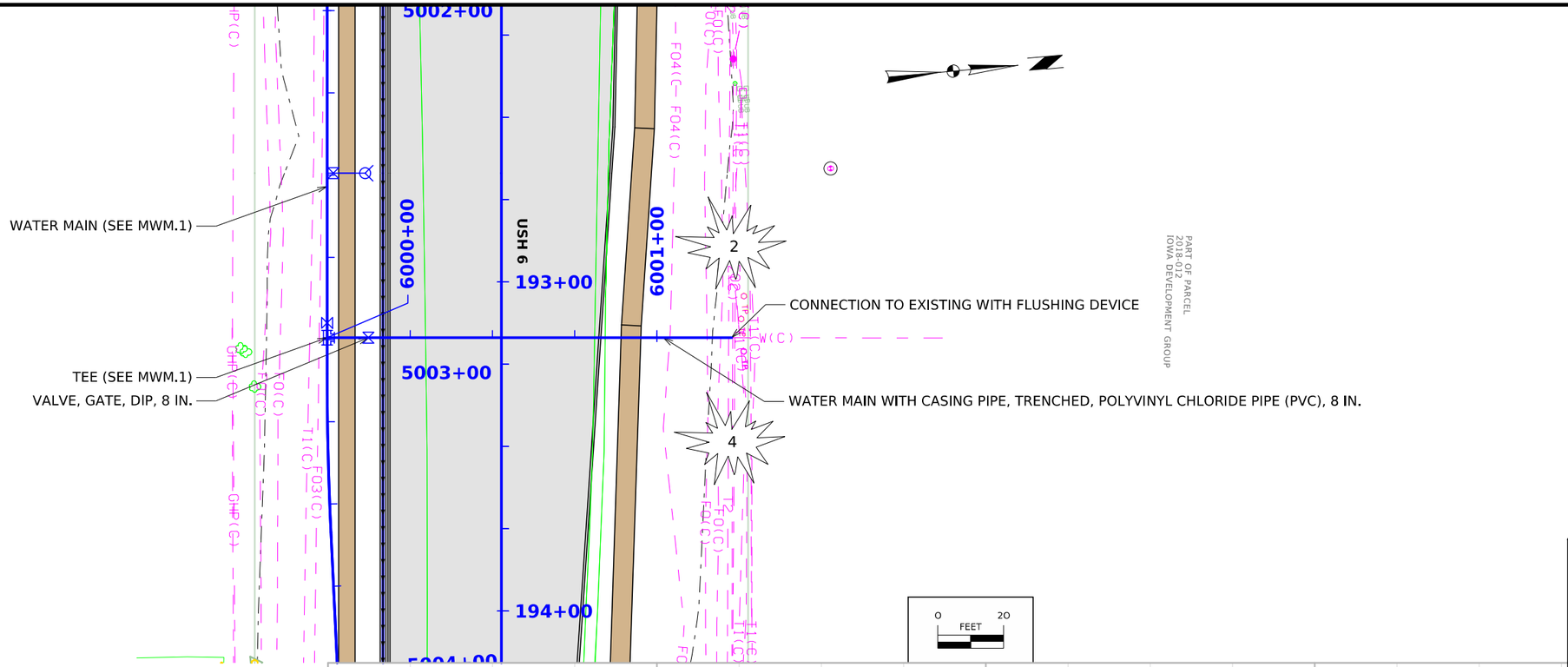
UNITI ILEC
5. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER MWM.5

1:48:03 PM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_MWM.dgn



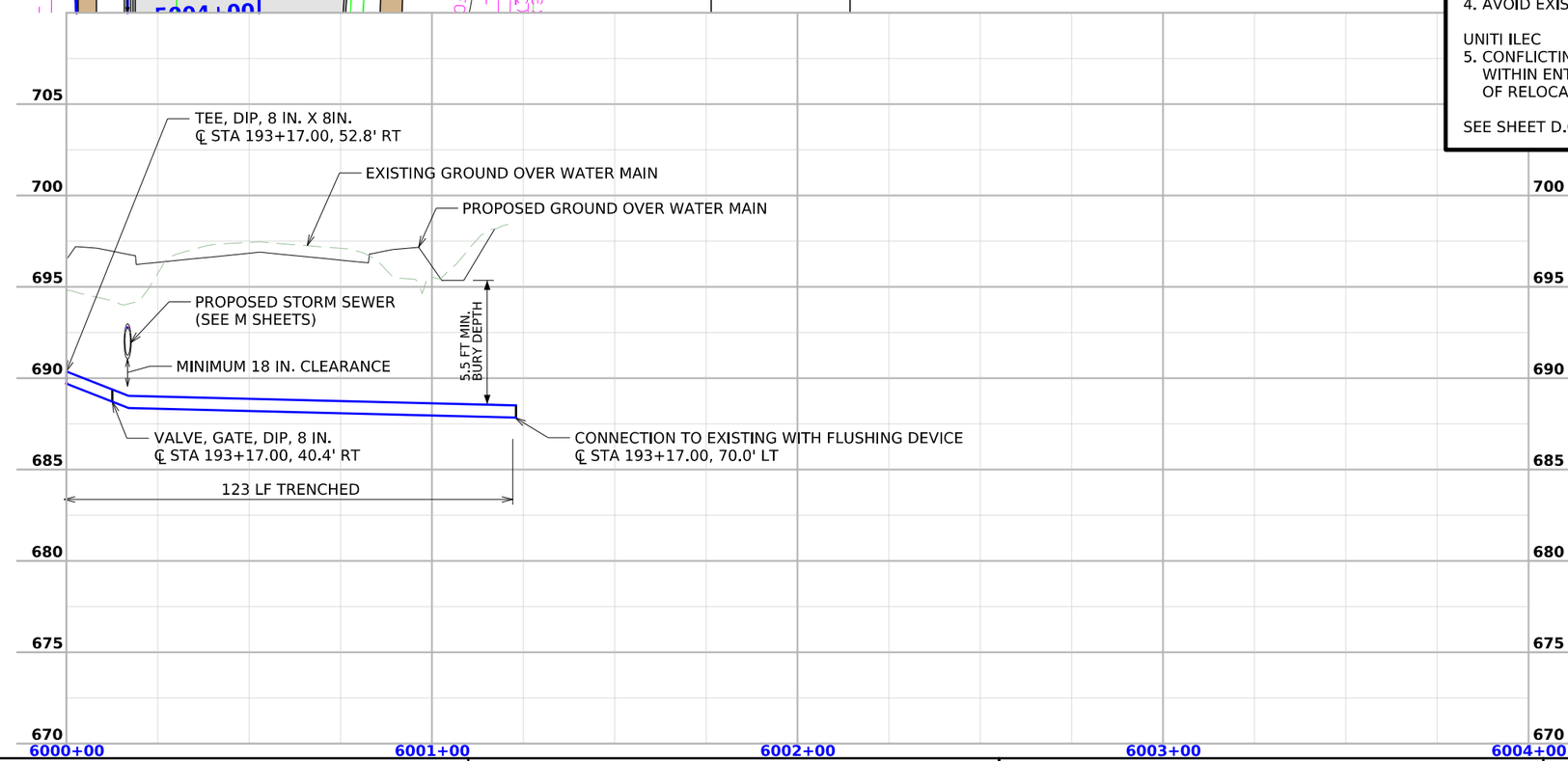
UTILITY CONFLICT NOTES:

ITC
2. AVOID EXISTING FIBER LINE DURING CONSTRUCTION.

SOUTH SLOPE TELEPHONE
4. AVOID EXISTING FIBER LINE DURING CONSTRUCTION.

UNITI ILEC
5. CONFLICTING FIBER LINE TO BE ABANDONED BY UTILITY WITHIN ENTIRE PROJECT AREA. COORDINATE STATUS OF RELOCATED LINE WITH UTILITY CONTACT.

SEE SHEET D.01 FOR UTILITY CONTACT INFORMATION.



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER MWM.6

1:48:04 PM 8/4/2026 csmith pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_MWM.dgn

ESTIMATE OF TRAFFIC SIGNAL QUANTITIES (CROELL AVE)			
ITEM NO.	DESCRIPTION	UNIT	PROPOSED QUANTITIES
7	3" CONDUIT	LF	506
18	HANDHOLE, TYPE I	EACH	3
19	HANDHOLE, TYPE IV	EACH	1

ESTIMATE OF TRAFFIC SIGNAL QUANTITIES (KIMBERLITE STREET)			
ITEM NO.	DESCRIPTION	UNIT	PROPOSED QUANTITIES
1	COMBINATION MAST ARM SIGNAL AND LIGHTING POLE, 35 FT, BLACK	EACH	4
2	PEDESTAL POLE, 10 FT, BLACK	EACH	4
3	SIGNAL FACE, 3-SECTION HEAD WITH TUNNEL VISORS, 12" LED WITH BACKPLATE (RED, YELLOW, GREEN)	EACH	8
4	SIGNAL FACE, 3-SECTION HEAD WITH TUNNEL VISORS, 12" LED WITH BACKPLATE (RED LT ARROW, YELLOW LT ARROW, FY LT ARROW)	EACH	2
5	SIGNAL FACE, 4-SECTION HEAD WITH TUNNEL VISORS, 12" LED WITH BACKPLATE (RED LT ARROW, YELLOW LT ARROW, FY LT ARROW, GREEN LT ARROW)	EACH	2
6	SIGNAL FACE, 16" HAND-WALKING PERSON, SIDE OF POLE MOUNT 9LED PEDESTRIAN COUNTDOWN)	EACH	8
7	3" CONDUIT	LF	638
8	2" CONDUIT	LF	76
9	2C #14 PB LEAD-IN CABLE	LF	957
10	5C #14 TRAFFIC SIGNAL CABLE	LF	450
11	16C #14 TRAFFIC SIGNAL CABLE	LF	451
12	1C #6 BARE GROUNDING WIRE	LF	858
13	1C #10 TRACER WIRE	LF	713
14	1C #10 POWER CABLE (STREET LIGHT)	LF	1342
15	CAT 5e	LF	446
16	PULL TAPE	LF	713
17	HANDHOLE, TYPE I	EACH	3
18	HANDHOLE, TYPE IV	EACH	1
19	ACCESIBLE PEDESTRIAN PUSH BUTTON, R10-E SIGN	EACH	8
20	TRAFFIC SIGN R10-12A	EACH	4
21	TRAFFIC SIGN, D3-1 MARENGO RD	EACH	2
22	TRAFFIC SIGN, D3-1 KIMBERLITE ST	EACH	2
23	CONCRETE FOOTING: CONTROLLER CABINET	EACH	1
24	CONCRETE FOOTING: PEDESTAL POLE	EACH	4
25	CONCRETE FOOTING: 36" DIA. X 12' DEPTH	EACH	4
26	LED LUMINAIRE HEAD	EACH	4
27	TRAFFIC SIGNAL CABINET	EACH	1
28*	TRAFFIC SIGNAL CONTROLLER	EACH	1
29*	BATTERY BACKUP SYSTEM	EACH	1
30*	MALFUNCTION MANAGEMENT UNIT (MMU)	EACH	1
31*	VIDEO DETECTION SYSTEM	EACH	1
32*	EMERGENCY VEHICLE PREEMPTION SYSTEM	EACH	1

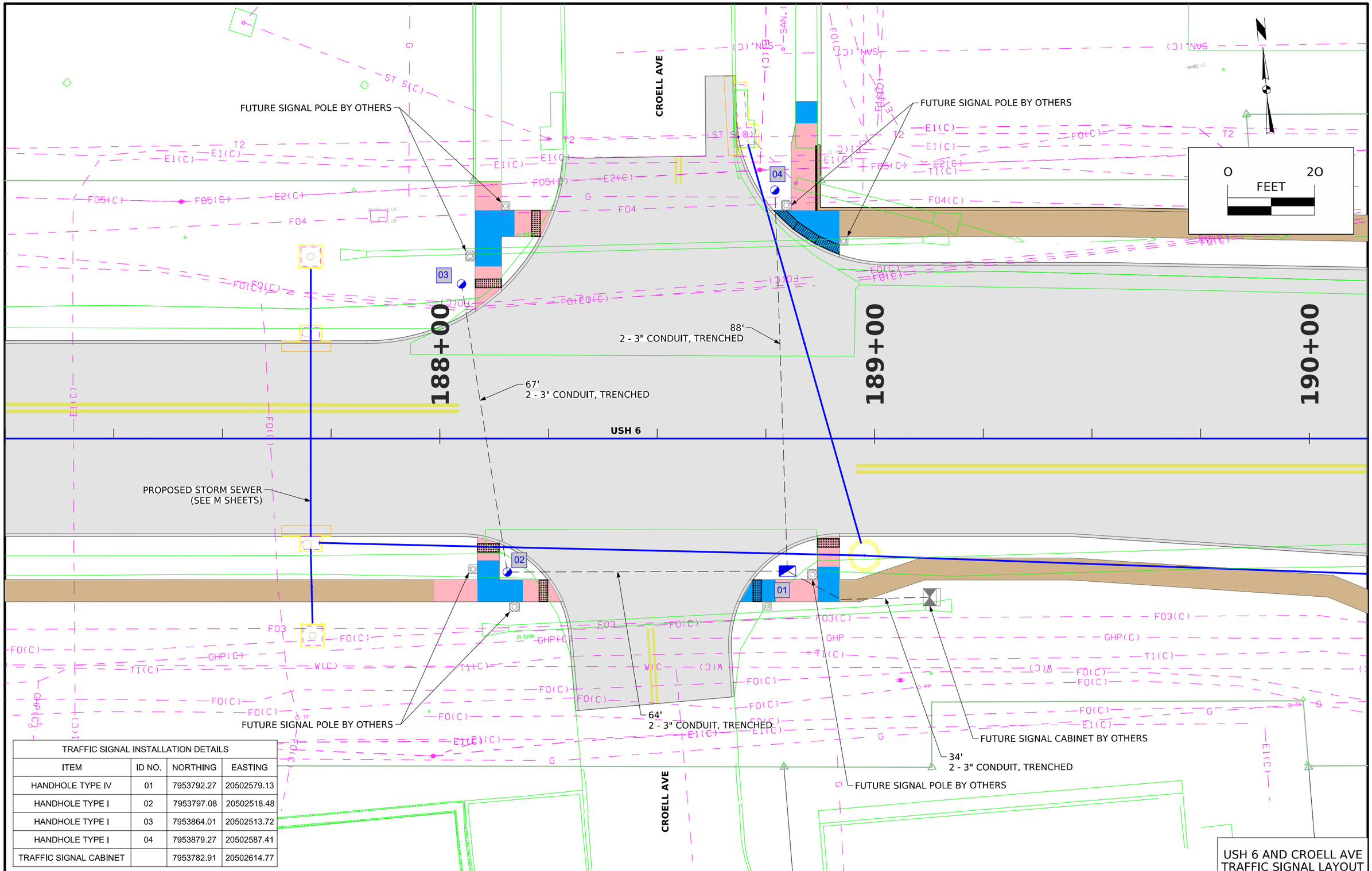
TRAFFIC SIGNAL LEGEND

- TRENCHED SIGNAL CONDUIT
- BORED SIGNAL CONDUIT
- TRAFFIC SIGNAL CABINET AND CONTROLLER
- # — PUSH BUTTON POLE, SIDEWALK MOUNTING, AND IDENTIFYING NUMBER
- # — TRAFFIC SIGNAL FOUNDATION, PEDESTAL POLE, AND IDENTIFYING NUMBER
- # — TRAFFIC SIGNAL FOUNDATION, TRAFFIC SIGNAL POLE, AND IDENTIFYING NUMBER
- ## — PEDESTRIAN HEAD SYMBOL AND IDENTIFYING NUMBER
- ##' — MASTARM SUSPENDED TRAFFIC SIGNAL AND LENGTH OF MASTARM
- ## — VIDEO DETECTION ZONE AND IDENTIFYING NUMBER
- VIDEO DETECTION CAMERA
- ## — HANDHOLE, TYPE IV AND IDENTIFYING NUMBER
- ## — HANDHOLE TYPE I AND IDENTIFYING NUMBER
- LUMINAIRE
- X — MASTARM MOUNTED SIGN AND IDENTIFYING LETTER
- 802 — PEDESTRIAN PUSH BUTTON, R10-3E SIGN, AND IDENTIFYING NUMBER

TRAFFIC SIGNAL EQUIPMENT DETAILS	
28*	TRAFFIC SIGNAL CONTROLLER SHALL BE CUBIC/TRAFFICWARE COMMANDER.
29*	BATTERY BACKUP SYSTEM SHALL BE SIGNAL SENSE SYSTEM DOUBLE CONVERSION BATTERY BACKUP, MODEL SSDC 1000
30*	MALFUNCTION MANAGEMENT UNIT (MMU) SHALL BE EBERLE DESIGN INC (EDI) MMU.
31*	VIDEO DETECTION SHALL BE MIOVISION SMARTVIEW 360 WITH MIOVISION SMARTVIEW APPROACH CAMERAS FOR ADVANCED DETECTION AND VIDEO DETECTION SYSTEM. LOCATIONS SHOWN ON PLANS ARE FOR ILLUSTRATION PURPOSES ONLY, COORDINATE WITH MANUFACTURER FOR OPTIMAL INSTALLATION LOCATION. ALL VIDEO DETECTION ETHERNET CABLE, MOUNTING HARDWARE AND OTHER EQUIPMENT NECESSARY FOR THE VIDEO DETECTION SYSTEM IS CONSIDERED INCIDENTAL TO THE VIDEO DETECTION ITEM.
32*	EMERGENCY VEHICLE PREEMPTION SHALL BE MIOVISION OPTICOM GPS BASED SYSTEM. ALL NECESSARY EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.

TRAFFIC SIGNAL GENERAL NOTES:

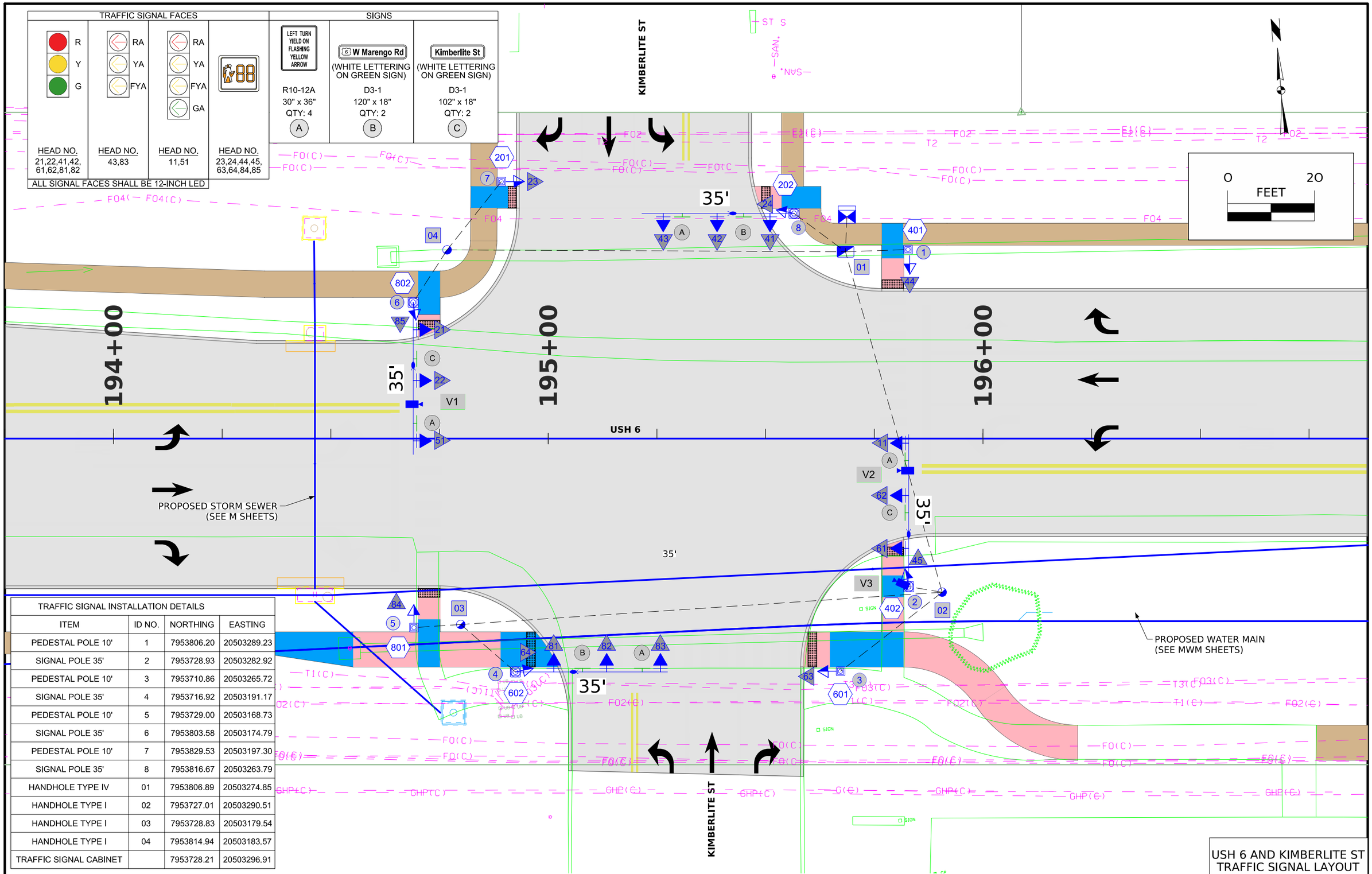
1. ALL QUANTITIES SHOWN IN THE PLANS AND SPECIFICATIONS ARE FOR INFORMATIONAL AND ESTIMATING PURPOSES ONLY. THE CONTRACTOR'S LUMP SUM BID FOR THIS PROJECT SHALL INCLUDE ALL LABOR AND MATERIAL NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL TRAFFIC SIGNAL INSTALLATION, IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.
2. LINEAR MEASUREMENTS ARE TAKEN BETWEEN POLE BASE, CONTROLLER, AND HANDHOLE CENTERS AND DO NOT INCLUDE ALLOWANCES FOR MAST ARM LENGTHS, VERTICAL RISES, OR SPLICES.
3. THE PLAN LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO EXCAVATION ON THE PROJECT TO ESTABLISH LOCATIONS.
4. THE LOCATIONS OF ALL FOOTINGS, HANDHOLES, DETECTOR LOOPS, AND CONDUIT ARE TO BE COORDINATED WITH THE ENGINEER AND ARE SUBJECT TO ADJUSTMENT IN THE FIELD BY THE ENGINEER.
5. THE CONTRACTOR SHALL FIELD VERIFY FOUNDATION LOCATIONS PRIOR TO ORDERING POLES SUCH THAT MINIMUM VERTICAL CLEARANCE OVER ROADWAYS CAN BE MAINTAINED.
6. THE CONTRACTOR SHALL INSTALL ONE SIGNAL CABLE FROM EACH SIGNAL HEAD TO THE BASE OF THE POLE. A 7-CONDUCTOR CABLE SHALL BE USED IN THE POLE FOR A 5-SECTION VEHICLE SIGNAL HEAD. A 5-CONDUCTOR CABLE SHALL BE USED IN THE POLES FOR ALL OTHER 3- AND 4-SECTION VEHICLE HEADS. TWO (2) #10 AWG 1C CONDUCTORS SHALL BE INSTALLED FROM THE LUMINAIRE TO THE BASE OF THE POLE AND BE SPLICED ONTO THE LIGHTING CONDUCTORS IN THE POLE BASE.
7. THE BODY OF THE SIGNAL HEAD HOUSING SHALL BE OF THE BLACK POLYCARBONATE TYPE.
8. INSTALL A #6 AWG BARE COPPER GROUND WIRE BETWEEN THE GROUND RODS IN THE SIGNAL FOOTINGS AND THE CONTROLLER CABINET TO FORM A CONTINUOUSLY GROUNDED SYSTEM. THE GROUND WIRE SHALL BE INSTALLED IN ALL CONDUITS.
9. ALL CONDUIT SHALL BE RIGID PVC OR INNERDUCT CONDUIT, UNLESS OTHERWISE NOTED. DUCT SEAL ALL CONDUIT LINE AFTER THE INSTALLATION OF WIRE.
10. INSTALL PEDESTRIAN PUSHBUTTON SIGNS (R10-3E) ABOVE EACH PEDESTRIAN PUSHBUTTON.
11. THE CONTRACTOR SHALL FURNISH A SCHEDULE OF UNIT PRICES FOR EACH ITEM LISTED IN THE ESTIMATE OF TRAFFIC SIGNAL QUANTITIES.
12. CONTRACTOR IS RESPONSIBLE FOR COORDINATING POWER SERVICE LOCATION WITH POWER SERVICE PROVIDER PRIOR TO CONDUIT/CIRCUIT INSTALLATION.
13. UNLESS OTHERWISE DIRECTED, TRAFFIC SIGNAL HEADS ON MAST ARMS SHALL BE ALIGNED OVER THE CENTER OF INTERSECTION APPROACH LANES. APPROXIMATE TRAFFIC SIGNAL HEAD LOCATIONS ON MAST ARM ARE SHOWN ON POLE DETAIL SHEET. CONTRACTOR SHALL COORDINATE WITH CITY PROJECT ENGINEER TO DETERMINE PLACEMENT IN FIELD.
14. INSTALLATION OF DETECTION UNITS, PRE-EMPTION DEVICES, AND VEHICLE DETECTION ZONES SHALL BE COORDINATED WITH THE CITY OF TIFFIN AND BE SET IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
15. SIGNAL POLES SHALL USE A TRANSFORMER BASE WHERE REQUIRED BY THE IOWA DOT STANDARD SPECIFICATIONS. SIGNAL POLES AND MASTARMS SHALL HAVE A BLACK FINISH, RAL 9005.
16. CONTRACTOR SHALL COORDINATE TRAFFIC SIGNAL WIRING TERMINATIONS IN THE CABINET WITH CITY STAFF.
17. SIGNAL WIRING SHALL ONLY BE SPLICED IN POLE BASES OR SIGNAL CABINETS. USE SILICONE-FILLED WIRE NUTS FOR ALL SIGNAL WIRE CONNECTIONS.



TRAFFIC SIGNAL INSTALLATION DETAILS			
ITEM	ID NO.	NORTHING	EASTING
HANDHOLE TYPE IV	01	7953792.27	20502579.13
HANDHOLE TYPE I	02	7953797.08	20502518.48
HANDHOLE TYPE I	03	7953864.01	20502513.72
HANDHOLE TYPE I	04	7953879.27	20502587.41
TRAFFIC SIGNAL CABINET		7953782.91	20502614.77

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER N.2

12:24:21 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_N01.dgn



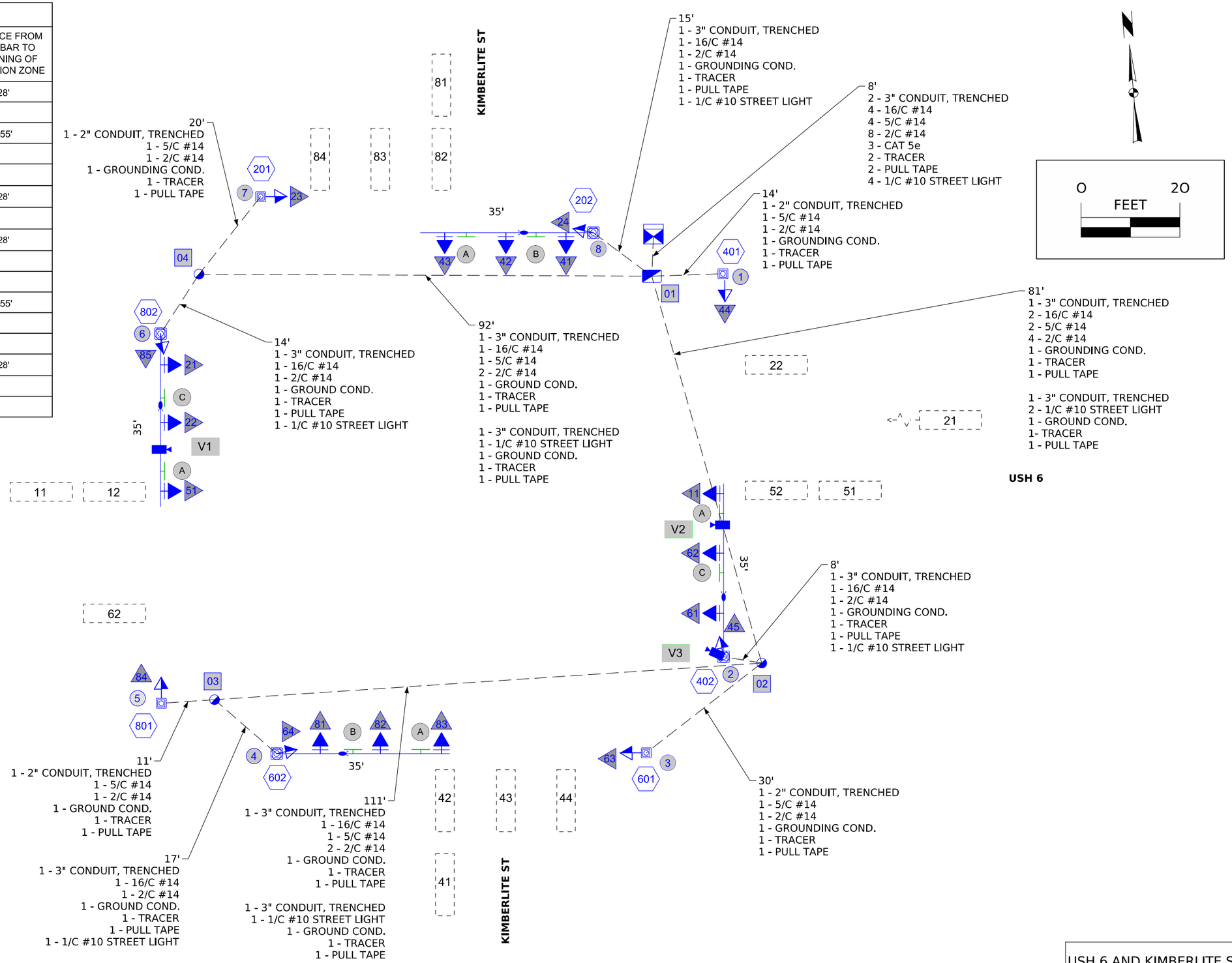
TRAFFIC SIGNAL INSTALLATION DETAILS			
ITEM	ID NO.	NORTHING	EASTING
PEDESTAL POLE 10'	1	7953806.20	20503289.23
SIGNAL POLE 35'	2	7953728.93	20503282.92
PEDESTAL POLE 10'	3	7953710.86	20503265.72
SIGNAL POLE 35'	4	7953716.92	20503191.17
PEDESTAL POLE 10'	5	7953729.00	20503168.73
SIGNAL POLE 35'	6	7953803.58	20503174.79
PEDESTAL POLE 10'	7	7953829.53	20503197.30
SIGNAL POLE 35'	8	7953816.67	20503263.79
HANDHOLE TYPE IV	01	7953806.89	20503274.85
HANDHOLE TYPE I	02	7953727.01	20503290.51
HANDHOLE TYPE I	03	7953728.83	20503179.54
HANDHOLE TYPE I	04	7953814.94	20503183.57
TRAFFIC SIGNAL CABINET		7953728.21	20503296.91

USH 6 AND KIMBERLITE ST
TRAFFIC SIGNAL LAYOUT

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER N.3

12:24:22 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_N01.dgn

DETECTOR SUMMARY				
DETECTOR NUMBER	DETECTOR SIZE	PED PUSH BUTTON	PHASE CALLED	DISTANCE FROM STOP BAR TO BEGINNING OF DETECTION ZONE
11	6'x20'		1	28'
12	6'x20'		1	
21	6'x20'		2	255'
22	6'x20'		2	
201,202		X	2	
51			5	28'
52			5	
41	6'x20'		4	28'
42,43,44	6'X20'		4	
401,402		X	4	
61	6'x20'		6	255'
62	6'x20'		6	
601,602		X	6	
81	6'X20'		8	28'
82,83,84	6'x20'		8	
801,802		X	8	



USH 6 AND KIMBERLITE ST
WIRING LAYOUT

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER N.4

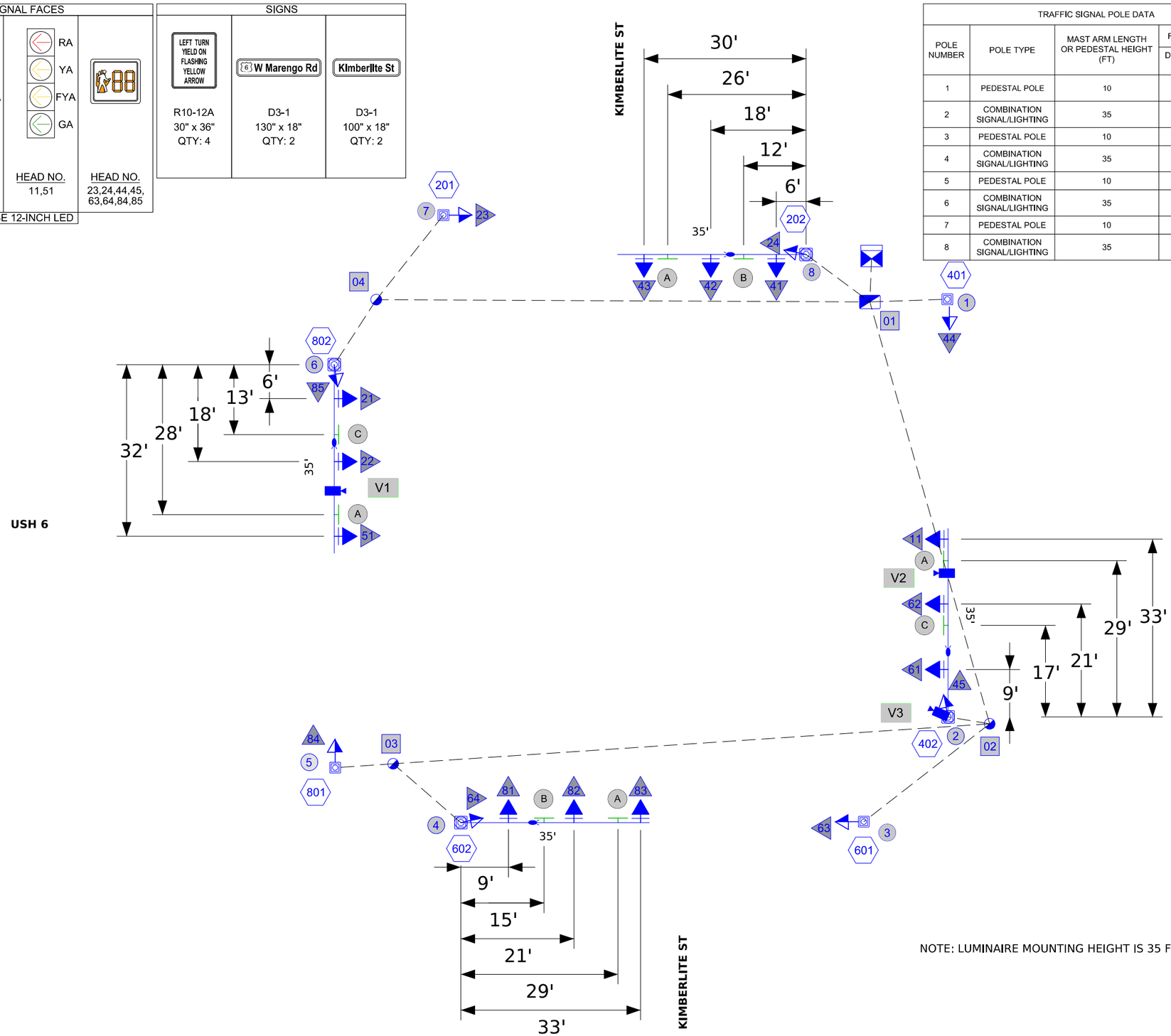
11:02:38 AM 8/3/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_N01.dgn

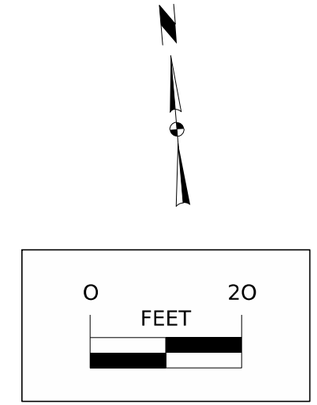
TRAFFIC SIGNAL FACES			
R, Y, G	RA, YA, FYA	RA, YA, FYA, GA	88
HEAD NO. 21,22,41,42, 61,62,81,82	HEAD NO. 43,83	HEAD NO. 11,51	HEAD NO. 23,24,44,45, 63,64,84,85

ALL SIGNAL FACES SHALL BE 12-INCH LED

SIGNS		
LEFT TURN YIELD ON FLASHING YELLOW ARROW	W Marengo Rd	Kimberlite St
R10-12A 30" x 36" QTY: 4	D3-1 130" x 18" QTY: 2	D3-1 100" x 18" QTY: 2

TRAFFIC SIGNAL POLE DATA				
POLE NUMBER	POLE TYPE	MAST ARM LENGTH OR PEDESTAL HEIGHT (FT)	FOOTING DIMENSIONS	
			DIAMETER (FT)	DEPTH (FT)
1	PEDESTAL POLE	10	2	4
2	COMBINATION SIGNAL/LIGHTING	35	3	12
3	PEDESTAL POLE	10	2	4
4	COMBINATION SIGNAL/LIGHTING	35	3	12
5	PEDESTAL POLE	10	2	4
6	COMBINATION SIGNAL/LIGHTING	35	3	12
7	PEDESTAL POLE	10	2	4
8	COMBINATION SIGNAL/LIGHTING	35	3	12





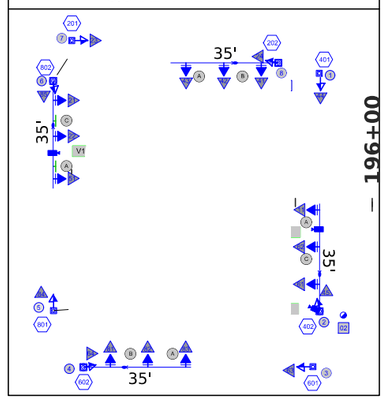
NOTE: LUMINAIRE MOUNTING HEIGHT IS 35 FT AND 15 FT MAST ARMS AT 0 DEGREES ORIENTATION

USH 6 AND KIMBERLITE ST
POLE DETAILS

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER N.5

12:24:24 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_N01.dgn

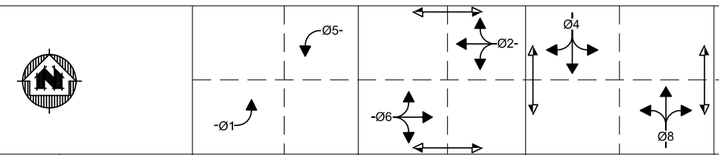
SIGNAL FACE LOCATION



LEGEND

——▶	ACTUATED VEHICULAR MOVEMENT
——▷	NON-ACTUATED VEHICULAR MOVEMENT
——▶	PARTIALLY RESTRICTED VEHICULAR MOVEMENT
——▷	ACTUATED PEDESTRIAN MOVEMENT
——▷	NON-ACTUATED PEDESTRIAN MOVEMENT
R/W	RIGHT OF WAY INTERVAL
Ø	TRAFFIC PHASE
R	CIRCULAR RED
Y	CIRCULAR YELLOW
G	CIRCULAR GREEN
↑G	GREEN STRAIGHT AHEAD ARROW
<Y	YELLOW LEFT ARROW
<FY	FLASHING YELLOW LEFT ARROW
<G	GREEN LEFT ARROW
Y>	YELLOW RIGHT ARROW
FY>	FLASHING YELLOW RIGHT ARROW
G>	GREEN RIGHT ARROW
W	WALK
DW	DON'T WALK
FDW	FLASHING DON'T WALK
AØ	ALL OTHER PHASES
OL	OVERLAP

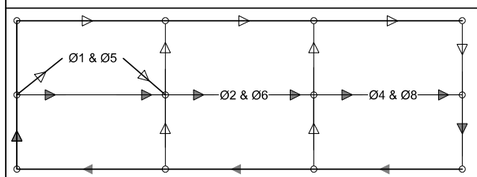
PROPOSED PHASE SEQUENCE CHART



APPROACH	SIGNAL HEAD NO.	Ø1+Ø5 R/W	Ø1+Ø5 CLEAR TO Ø						Ø2+Ø6 R/W	Ø2+Ø6 CLEAR TO Ø						Ø4+Ø8 R/W	Ø4+Ø8 CLEAR TO Ø					
			AØ							AØ	AØ						AØ	AØ				
NORTHBOUND KIMBERLITE ST	43	<R	<R	--	--	--	--	--	<R	<R	<R	--	--	--	--	<FY	<FY	<Y	--	--	--	--
	41,42	R	R	--	--	--	--	--	R	R	R	--	--	--	--	G	G	Y	--	--	--	--
	44,45	DW	DW	--	--	--	--	--	DW	DW	DW	--	--	--	--	W	FDW	DW	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SOUTHBOUND KIMBERLITE ST	83	<R	<R	--	--	--	--	--	<R	<R	<R	--	--	--	--	<FY	<FY	<Y	--	--	--	--
	81,82	R	R	--	--	--	--	--	R	R	R	--	--	--	--	G	G	Y	--	--	--	--
	84,85	DW	DW	--	--	--	--	--	DW	DW	DW	--	--	--	--	W	FDW	DW	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EASTBOUND MARENGO RD (USH 6)	11	<G	<Y	--	--	--	--	--	<FY	<FY	<Y	--	--	--	--	<R	<R	<R	--	--	--	--
	61,62	R	R	--	--	--	--	--	G	G	Y	--	--	--	--	R	R	R	--	--	--	--
	63,64	DW	DW	--	--	--	--	--	W	FDW	DW	--	--	--	--	DW	DW	DW	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WESTBOUND MARENGO RD (USH 6)	51	<G	<Y	--	--	--	--	--	<FY	<FY	<Y	--	--	--	--	<R	<R	<R	--	--	--	--
	21,22	R	R	--	--	--	--	--	G	G	Y	--	--	--	--	R	R	R	--	--	--	--
	23,24	DW	DW	--	--	--	--	--	W	FDW	DW	--	--	--	--	DW	DW	DW	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

APPROACH	SIGNAL HEAD NO.	R/W	CLEAR TO Ø						R/W	CLEAR TO Ø						R/W	CLEAR TO Ø					
NORTHBOUND KIMBERLITE ST	43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	41,42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	44,45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SOUTHBOUND KIMBERLITE ST	83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	81,82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	84,85	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EASTBOUND MARENGO RD (USH 6)	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	61,62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	63,64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WESTBOUND MARENGO RD (USH 6)	51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	21,22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	23,24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

PHASE FLOW DIAGRAM



NOTE: ——▶ FLOW PATH IF ALL PHASES ARE REQUESTED
——▷ FLOW PATH WHEN PHASE IS NOT REQUESTED BEFORE RIGHT OF WAY TRANSFER

SUGESTED INITIAL TIMINGS (SECONDS)

	PHASE 1	2	3	4	5	6	7	8
MINIMUM GREEN	6	15	---	8	6	15	---	8
PASSAGE	3	3	---	3	3	3	---	3
MAXIMUM I	6	44	---	8	6	44	---	8
MAXIMUM II	---	---	---	---	---	---	---	---
YELLOW CHANGE	3.0	4.5	---	3.0	3.0	4.5	---	3.0
RED CLEARANCE	2.0	1.5	---	3.0	2.0	1.5	---	3.0
WALK	---	7	---	7	---	7	---	7
FLASHING DON'T WALK	---	18	---	18	---	20	---	18
ADDED INITIAL	---	---	---	---	---	---	---	---
TIME TO REDUCE	---	---	---	---	---	---	---	---
TIME BEFORE REDUCTION	---	---	---	---	---	---	---	---
RECALL POSITION	---	---	---	---	---	---	---	---
VEHICLE CALL MEMORY	---	---	---	---	---	---	---	---
VOLUME DENSITY	---	---	---	---	---	---	---	---
MAXIMUM INITIAL	---	---	---	---	---	---	---	---
MINIMUM GAP	---		---	---	---	---	---	---
	---	---	---	---	---	---	---	---

NOTE: CONFIRM FINAL TRAFFIC SIGNAL TIMINGS WITH THE CITY OR ENGINEER BEFORE IMPLEMENTATION.

CONTROLLER AND CABINET HARDWARE

PHASES USED:	6
EXPANSBLE TO:	8
MINIMUM NUMBER OF BACKPANEL POSITIONS:	---

FLASHING OPERATIONS

MARENGO RD	RED
KIMBERLITE ST	RED
PRE-SIGNAL	RED

TYPE OF INTERCONNECT

NONE	X
TBC	---
CLOSED LOOP TWISTED PAIR *	---
CLOSED LOOP FIBER OPTIC *	---
RADIO	---
* LOCATION OF THE MASTER CONTROLLER	---
SIGNAL SYSTEM*:	---

TYPE OF PRE-EMPT

NONE	---
RAILROAD	---
EMERGENCY VEHICLE	---
OPTICOM	---
TOMAR	---
HARDWIRE	---
OTHER	X
QUEUE DETECTOR	---

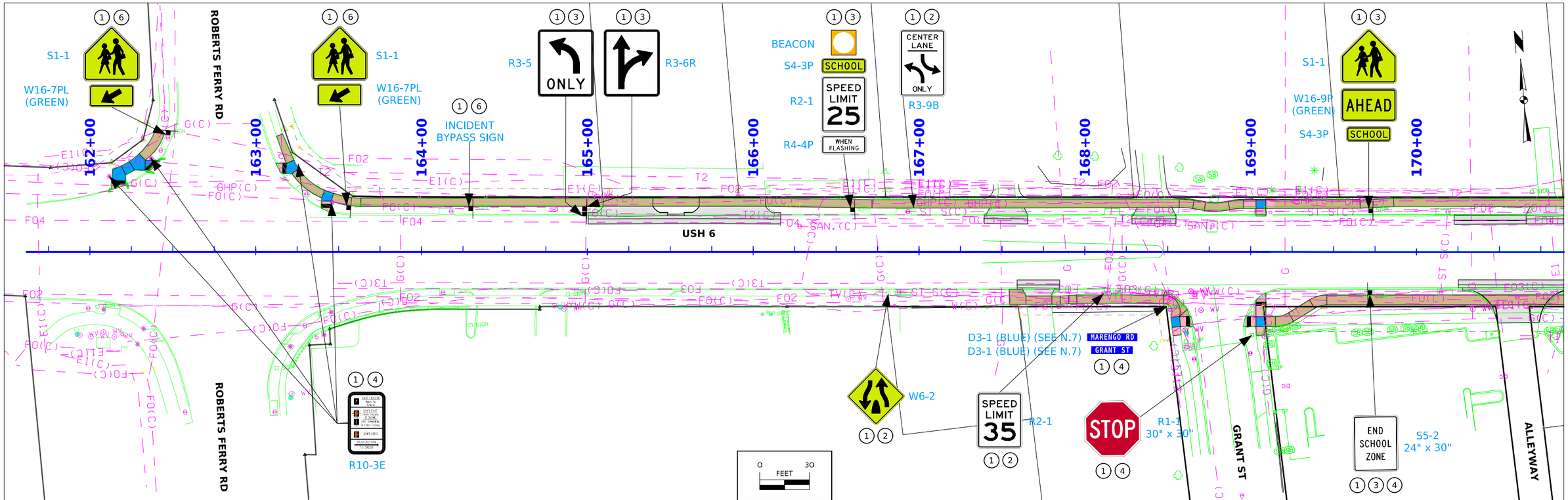
PHASE SEQUENCE NOT ALLOWED

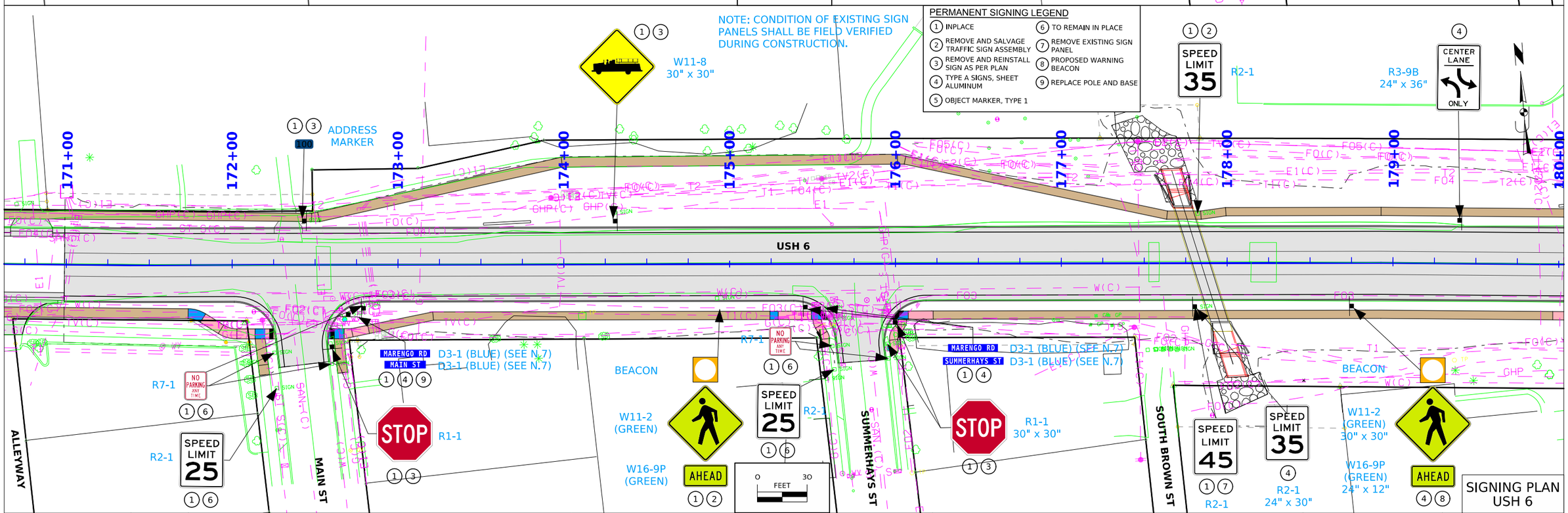
FROM	TO
Ø2+Ø6	Ø1+Ø6
Ø2+Ø6	Ø2+Ø5
DUAL ENTRY PHASES	
Ø2+Ø6, Ø4+Ø8	

TYPE OF LIGHTING

BY OTHER AGENCY	---
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	---

USH 6 AND KIMBERLITE ST
PHASING DIAGRAM

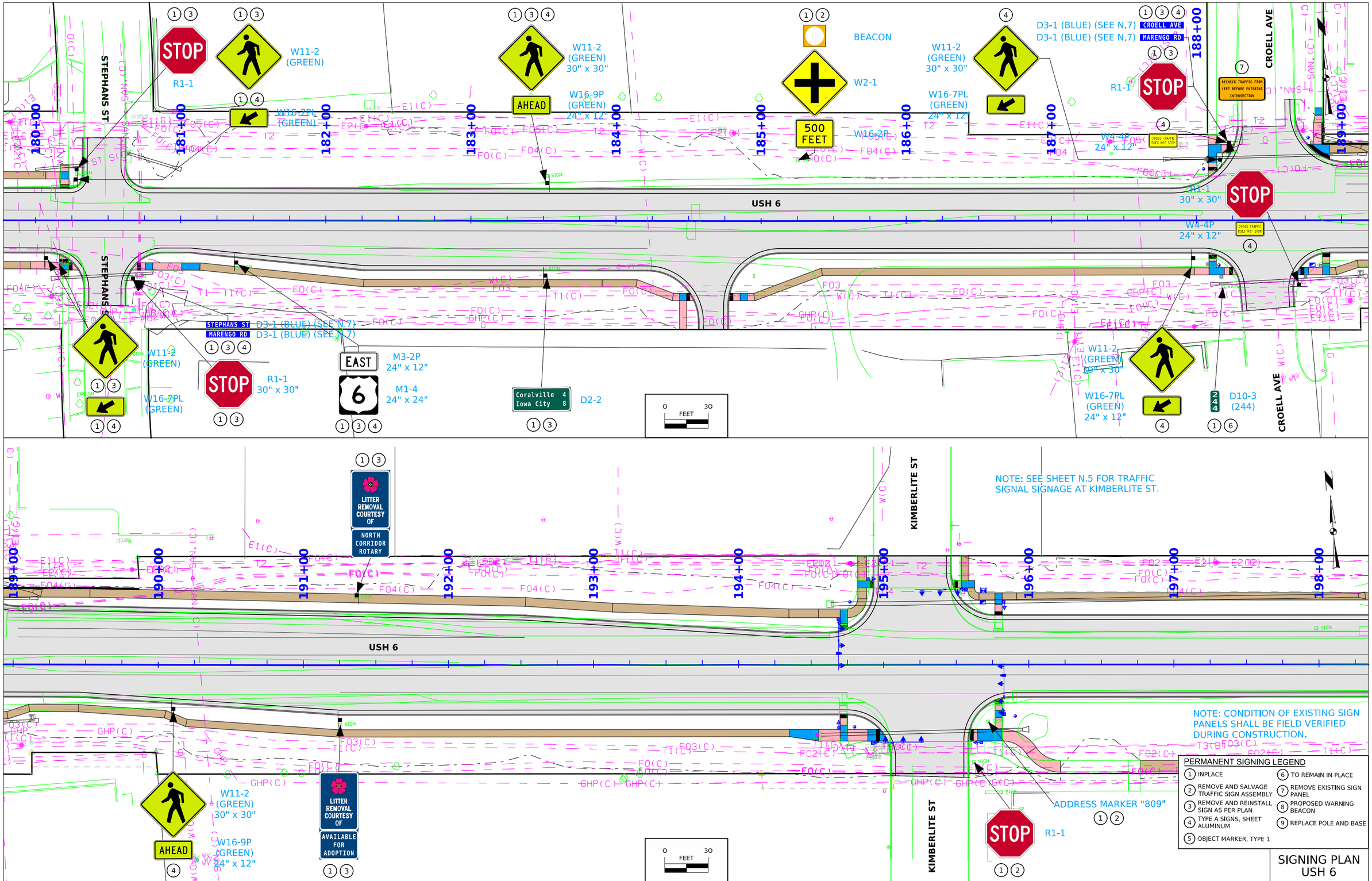




SIGNING PLAN
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER N.7

12:24:39 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_N01.dgn

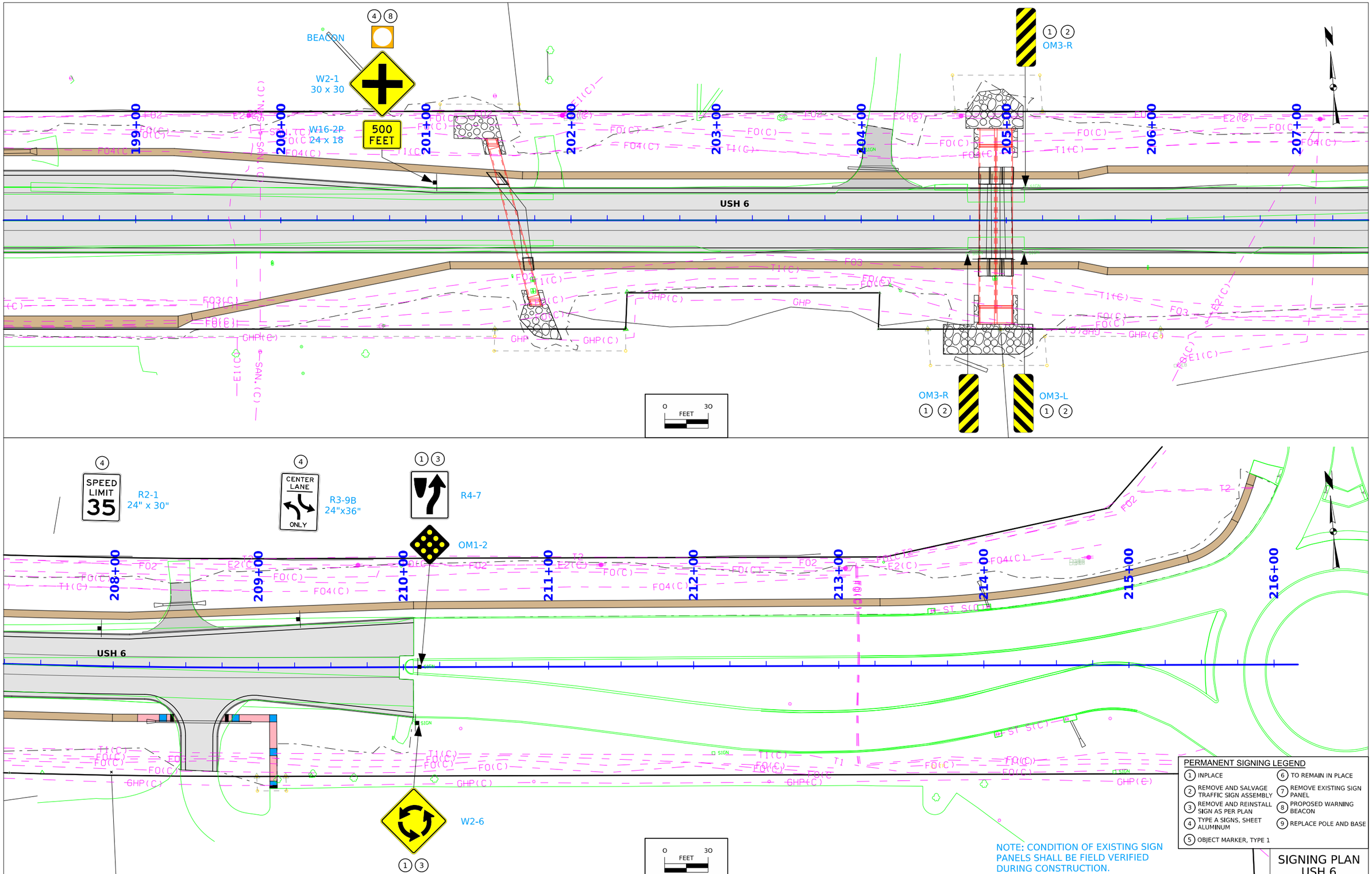


PERMANENT SIGNING LEGEND

1. INPLACE
2. REMOVE AND SALVAGE TRAFFIC SIGN ASSEMBLY
3. REMOVE AND REINSTALL SIGN AS PER PLAN
4. TYPE A SIGNS, SHEET ALUMINUM
5. OBJECT MARKER, TYPE 1
6. TO REMAIN IN PLACE
7. REMOVE EXISTING SIGN PANEL
8. PROPOSED WARNING BEACON
9. REPLACE POLE AND BASE

SIGNING PLAN
USH 6

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER N.8



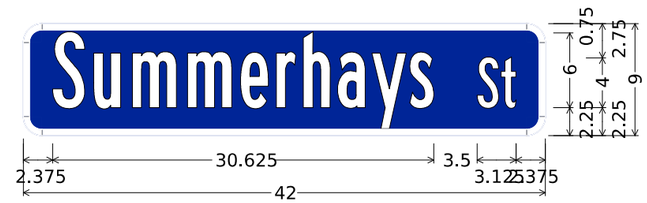
PERMANENT SIGNING LEGEND

1. INPLACE
2. REMOVE AND SALVAGE TRAFFIC SIGN ASSEMBLY
3. REMOVE AND REINSTALL SIGN AS PER PLAN
4. TYPE A SIGNS, SHEET ALUMINUM
5. OBJECT MARKER, TYPE 1
6. TO REMAIN IN PLACE
7. REMOVE EXISTING SIGN PANEL
8. PROPOSED WARNING BEACON
9. REPLACE POLE AND BASE

SIGNING PLAN
USH 6

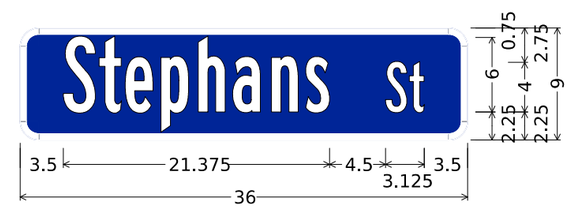
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER N.9

D3-1;
1.500" Radius, 0.500" Border, White on, Blue;
"Grant", B 2K; "St", B 2K;

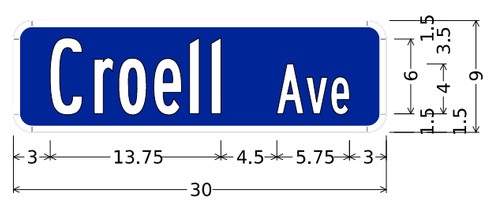


D3-1;
1.500" Radius, 0.500" Border, White on, Blue;
"Summerhays", B 2K; "St", B 2K;

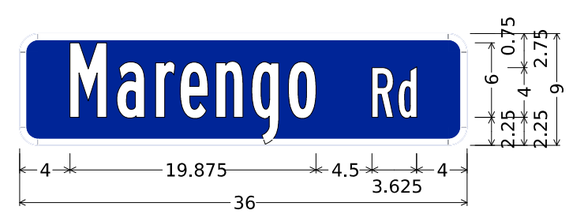
D3-1;
1.500" Radius, 0.500" Border, White on, Blue;
"Main", B 2K; "St", B 2K;



D3-1;
1.500" Radius, 0.500" Border, White on, Blue;
"Stephans", B 2K; "St", B 2K;



D3-1;
1.500" Radius, 0.500" Border, White on, Blue;
"Croell", B 2K; "Ave", B 2K;



D3-1;
1.500" Radius, 0.500" Border, White on, Blue;
"Marengo", B 2K; "Rd", B 2K;

ESTIMATE OF LIGHTING QUANTITIES			
ITEM	DESCRIPTION	UNIT	PROPOSED QUANTITIES
CONTROL CABINET	CONTROL CABINET WITH FOUNDATION (LI-152)	LS	1
POWER SUPPLY	POWER SERVICE CONNECTION WITH METER PEDESTAL	LS	1
WIRE AND CABLE	LUMINAIRE CABLE - 1c #10 AWG (INSIDE POLE)	LIN FT	2,376
	LUMINAIRE CABLE - 1c #10 AWG	LIN FT	22,955
	POWER CABLE - 1c #3 AWG	LIN FT	150
	POWER GROUND WIRE - 1c #8 AWG	LIN FT	50
	GROUND WIRE - 1c #6 BARE	LIN FT	7,985
	TRACER WIRE - 1c #10	LIN FT	8,035
CONDUIT	2" PVC, TRENCHED/BORED	LIN FT	4,752
LUMINAIRE	LUMINAIRE FIXTURE, LED, TYPE 4 DISTRIBUTION	EACH	33
	CONNECTOR - L-1, FUSED	EACH	33
	CONNECTOR - Y-1, FUSED	EACH	66
MISC.	STREET LIGHT POLE, 30' MOUNTING HEIGHT AND 8' ARM	EACH	33
	LIGHT POLE FOUNDATION (LI-201)	EACH	33
	HANDHOLE - TYPE II - 17" x 30" x 24" PRE-CAST POLYMER-CONCRETE HANDHOLE	EACH	6

TRAFFIC SIGNAL LEGEND

	STREET LIGHT POLE
	HANDHOLE
M	METER PEDESTAL
	CONTROL CABINET
	CONDUIT
∅	SECONDARY SERVICE POINT
COND	CONDUIT
LUM	LUMINAIRE (1c #10)
GND	GROUND WIRE (1c #10)
TR	TRACER WIRE (1c #10)

TRAFFIC SIGNAL GENERAL NOTES:

1. STREET LIGHTING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2015, EXCEPT AS MODIFIED BY THESE PLANS.

2. PLAN QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY AND THESE WILL NOT BE PAID FOR SEPARATELY. PAYMENT FOR LIGHTING WILL BE MADE AT THE LUMP SUM CONTRACT PRICE.

3. UTILIZE THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD ROAD PLAN LI-201 LIGHT POLE FOUNDATIONS, TYPE A, FOR STREET LIGHTING POLES.

4. LIGHTING POLES SHALL BE ROUND, TAPERED STEEL PROVIDING A 30 FT MOUNTING HEIGHT WITH AN 8 FT ARM AND A BREAKAWAY BASE. POLES SHALL BE GALVANIZED AND ELECTROSTATICALLY PAINTED WITH PRIME COAT AND BLACK FINISH COAT. ALL VISIBLE MOUNTING HARDWARE SHALL MATCH POLE FINISH. INSTALL TWO 1-CONDUCTOR #10 AWG CABLES FROM THE LUMINAIRE TO THE BASE OF THE POLE.

5. LUMINAIRE FIXTURES SHALL BE COBRA HEAD STYLE LED FIXTURES, OR APPROVED EQUAL, AT LEAST 100 LUMEN PER WATT EFFICACY, 4000K COLOR TEMPERATURE, RATED FOR 100,000 HOURS, MINIMUM 5 YEAR WARRANTY, AND BLACK FINISH. ALL FIXTURES SHALL BE CONTROLLED THROUGH THE PHOTOCELL LOCATED ON THE CONTROL CABINET, NO PHOTOCELL PER FIXTURE. NUMBER OF LUMENS FOR EACH DISTRIBUTION VARY AS FOLLOWS:

   A. TYPE 4 DISTRIBUTION FIXTURES SHALL BE RATED FOR 9,500 LUMENS MINIMUM/ 11,000 LUMENS MAXIMUM

6. PROVIDE LIGHTING CONTROL CABINET PER MODIFIED STANDARD ROAD PLAN LI-152.

7. PROVIDE FOUR SEPARATE 20 AMP BREAKERS TO CONTROL STREET LIGHTING. ALL STREET LIGHTS HALL BE CONTROLLED BY PHOTOCELL (LONG LIFE 15YR WARRANTY) LOCATED ON CONTROL CABINET. PROVIDE 120-VOLT, SINGLE PHASE, SERVICE TO EACH FIXTURE. LIGHTING CIRCUIT SHALL CONSIST OF 2-1c #10 AWG CABLES WITH A TRACER WIRE. PROVIDE A MINIMUM OF TWO ADDITIONAL BREAKER POSITIONS, NO BREAKERS, CONNECTED THROUGH THE PHOTOCELL FOR FUTURE USE. PROVIDE A MINIMUM OF TWO ADDITIONAL BREAKER POSITIONS, NO BREAKERS, NOT CONNECTED TO THE PHOTOCELL FOR FUTURE USE. LABEL BREAKER POSITIONS WITH PERMANENT METHOD.

8. SERVICE CONNECTION - INSTALL METER PEDESTAL, 200 AMP SERVICE WITH DISCONNECT, AND CONDUIT CONNECTING METER PEDESTAL TO ADJACENT TRANSFORMER. PROVIDE SERVICE CONNECTION FROM METER PEDESTAL TO CONTROL CABINET AS SHOWN. COORDINATE SERVICE CONNECTION WITH ALLIANT ENERGY, DEAN COLONY (319-786-1905). ALLIANT ENERGY WILL INSTALL TRANSFORMER AND SERVICE CABLES.

Lighting Design

PROFESSIONAL ENGINEER
SCOTT R. CHILSON
17104
IOWA

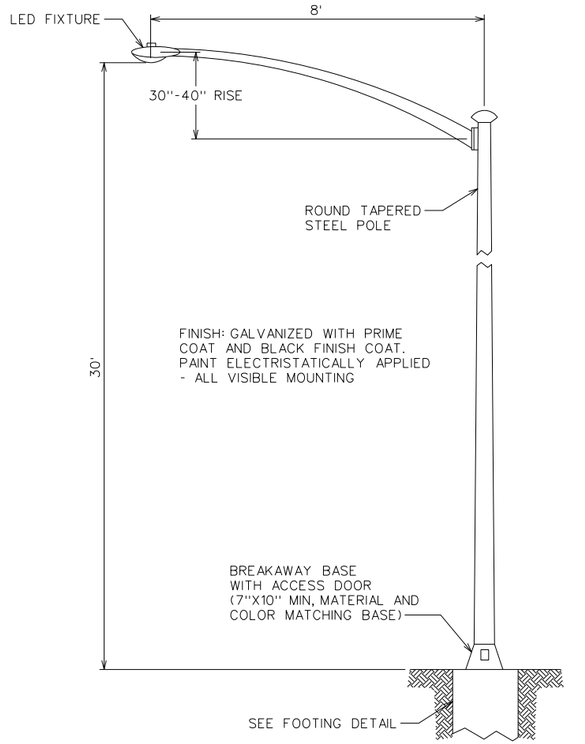
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Scott Chilson — Signature — 06/29/2026 Date

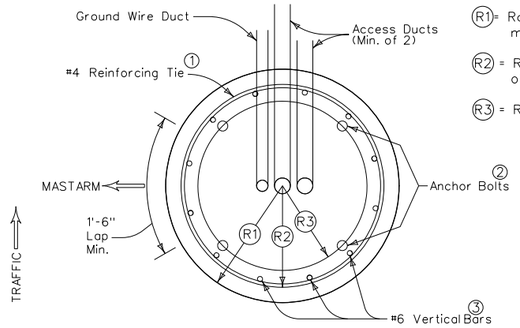
Scott Chilson — Printed or Typed Name

My license renewal date is December 31, 2027

Pages or sheets covered by this seal: P.1-6



1 P.3 LIGHT POLE
NOT TO SCALE

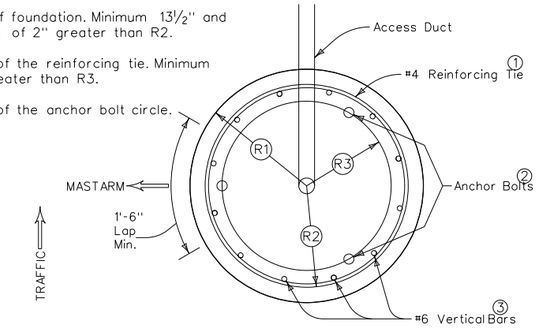


PLAN (TRANSFORMER BASE)

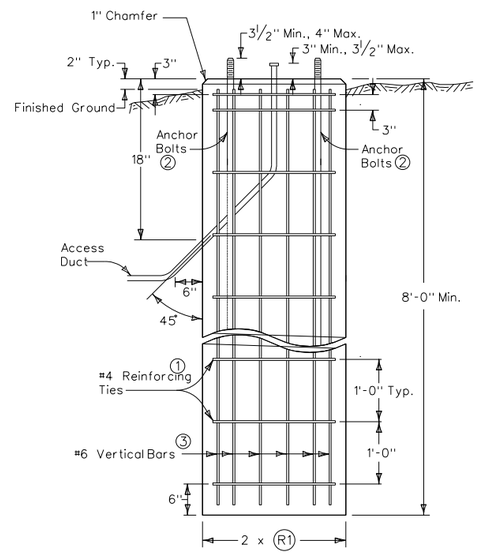
R1 = Radius of foundation. Minimum 13½" and minimum of 2" greater than R2.

R2 = Radius of the reinforcing tie. Minimum of 1" greater than R3.

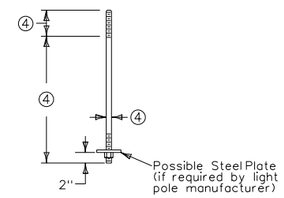
R3 = Radius of the anchor bolt circle.



PLAN (SLIP BASE)



TYPICAL SECTION
TYPE A FOUNDATION



ANCHOR BOLT

The Type A Foundation is the normally required foundation construction. Where rock, shale, sandstone, broken or shattered rock, or other similar material is encountered, the Engineer may approve the use of the Type B or C Foundation. Dispose of all excavations in the area adjacent to the foundation and shape to the natural contour unless directed otherwise by the Engineer.

Minimum diameter of foundation is determined by the Anchor Bolt Circle required for the diameter of the pole being installed. Where dimensional requirements indicated cannot be met with normal foundations, enlarge the foundation as necessary to accommodate the required diameter at no additional cost to the Contracting Authority.

Provide minimum 2" clear for all reinforcement.

Cap open ends of conduit during construction to prevent infiltration of foreign material. After the cable is installed, seal the upper end of the ducts against entry of moisture by a method approved by the Engineer.

For access ducts, use a 2" nominal inside diameter duct. For Transformer Base foundations, install a minimum of two access ducts, unless specified otherwise. Also install a 1" nominal inside diameter duct for the ground wire duct.

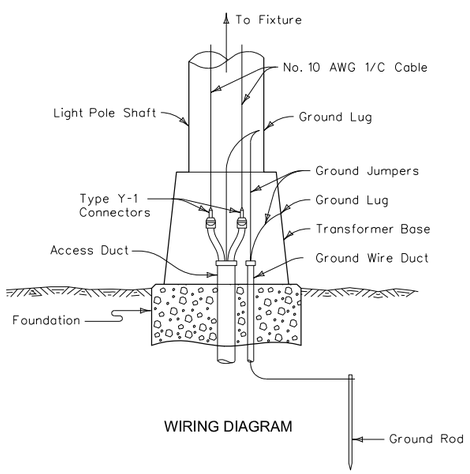
1 #4 bars lapped a minimum of 1'-6" as indicated. Ties may be welded to vertical bars.

2 Use full length galvanized anchor bolts: four for Transformer Base, three for Slip Base. Refer to the light pole manufacturer's requirements for anchor bolt, nut, and plate dimensions. Obtain a template from the light pole manufacturer for anchor bolt placement. Do not weld anchor bolts.

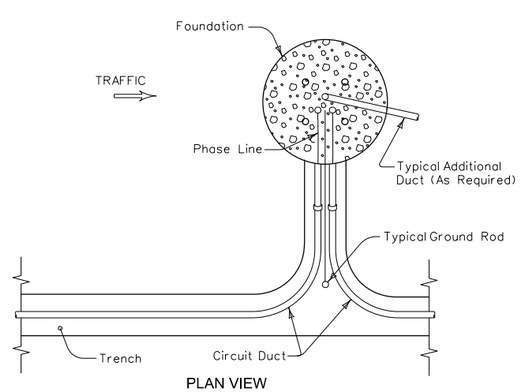
3 Place 12 equally spaced bars. Use #6 bars for 27 inch diameter drilled shaft. Use #7 bars for 30 inch diameter drilled shaft. Use #8 bars for 36 inch diameter drilled shaft.

4 Refer to light pole manufacturer's recommendations for Anchor Bolt dimensions.

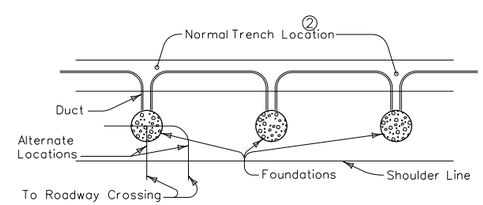
2 P.3 LIGHT POLE FOUNDATION (LI-201)
NOT TO SCALE



WIRING DIAGRAM



PLAN VIEW



TYPICAL LAYOUTS 1
CONNECTIONS TO FOUNDATIONS

Alternate designs may be submitted to the Engineer for approval.

Lighting circuits consist of single conductor phase lines with bare ground wires installed in continuous underground ducts.

Locate standard trenches for lighting distribution circuits 3 feet outside the line of the light pole foundations, except for roadway crossing, access to connection points, or other cases detailed on the project plans or approved by the Engineer.

The Engineer may allow variation from minimum depths for roadway crossings, access to connection points, soil conditions, or other special cases. Where rock is encountered, a minimum trench depth of 2 feet is required.

Ducts installed under pavement slabs, drives, and other similar locations detailed in the project plans are designated as "crossings" and distinguished from other underground circuit ductwork. Refer to LI-141 for additional details.

Use Y-1 connectors for all load taps in phase lines and use Y-3 connectors for all circuit branch taps, unless specified or detailed otherwise. When the method of in-line splicing is not specified on the project plans, the Engineer may approve the use of connector assemblies or field molded splices.

Provide 600 volt fuses as specified, 5 amperes for each Type Y-1 connector.
Seal all unused connector openings against entry of moisture as directed by the Engineer.

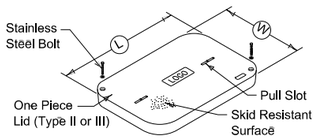
1 Use a separate access duct for each connection to pole foundation.

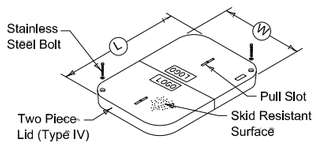
2 Refer to NEC requirements for trench depth.

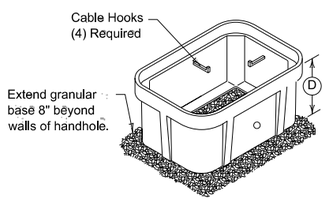
3 P.3 LIGHT POLE ELECTRICAL INSTALLATION (LI-142 MOD)
NOT TO SCALE

LIGHTING DETAILS

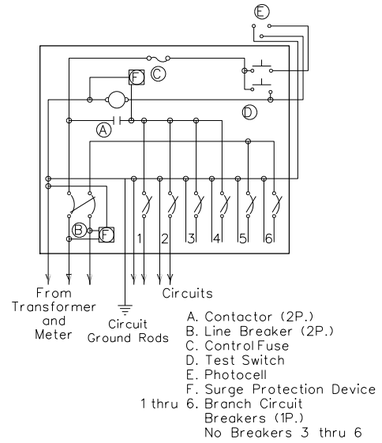
HANDHOLE DIMENSIONS TABLE (NOMINAL)			
TYPE	(L)	(W)	(D)
II	30"	17"	24"
III	36"	24"	30"
IV	48"	30"	36"



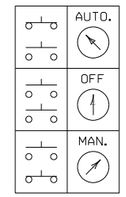




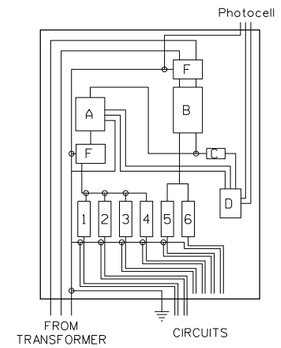
1 P.4 PRECAST CONCRETE COMPOSITE HANDHOLE (LI-103)
NOT TO SCALE



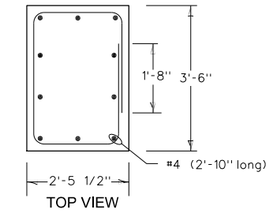
SCHEMATIC DIAGRAM



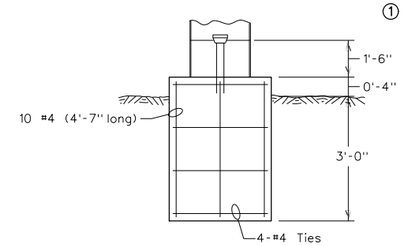
SWITCH OPERATION



CONTROL PANEL WIRING DIAGRAM



TOP VIEW



SIDE VIEW
CONTROLLER PAD

Alternate design may be submitted to the Engineer for approval.

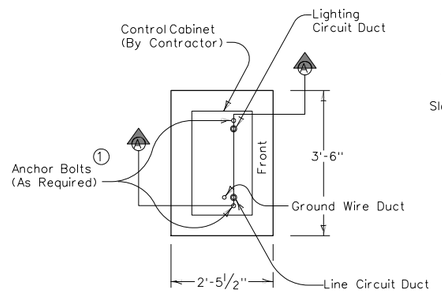
All circuit ducts shown, including ground wire duct, are included in the estimated quantities for plastic conduit contained in the tabulations.

The estimated quantities for wire and cable contained in the tabulations include connections to the loadside terminals of the branch circuit breakers.

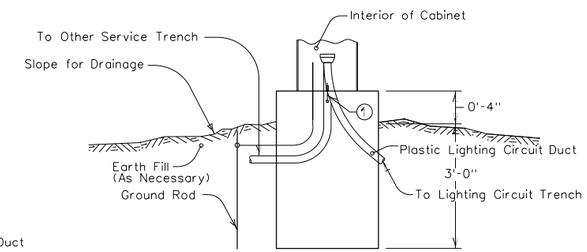
Ground wire for control cabinet is incidental to cabinet installation.

The No. 12, AWG grounding jumper for the photoelectric control is incidental to the length of ground wire.

(1) 1/2" x 4" long Bolts (2 required)



PLAN VIEW



SECTION A-A

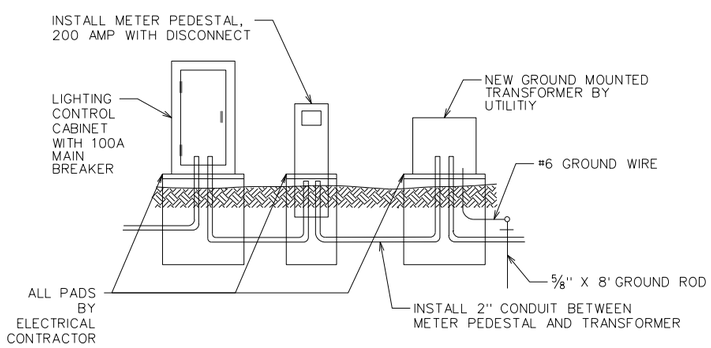
ESTIMATED QUANTITIES (One Pad)	
Reinforcing Steel	53.9 lbs.
Structural Concrete	1.1 yd^3

LAYOUT LEGEND
Control Cabinet (Pad-Mounted)

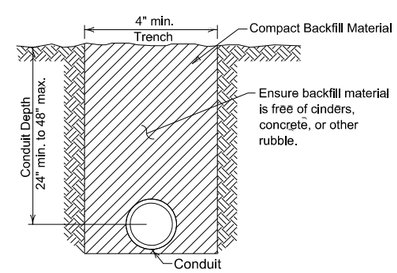
INSTALLATION DETAILS

2 P.4 CONTROL CABINET (LI-152 MOD)
NOT TO SCALE

- METER PEDESTAL TO BE PROVIDED BY CONTRACTOR. CONFIRM SPECIFICATIONS WITH LINN COUNTY REC
- ALLIANT ENERGY TO INSTALL TRANSFORMER, METER, SERVICE CABLES BETWEEN METER AND TRANSFORMER, AND MAKE FINAL CONNECTIONS WITH TRANSFORMER

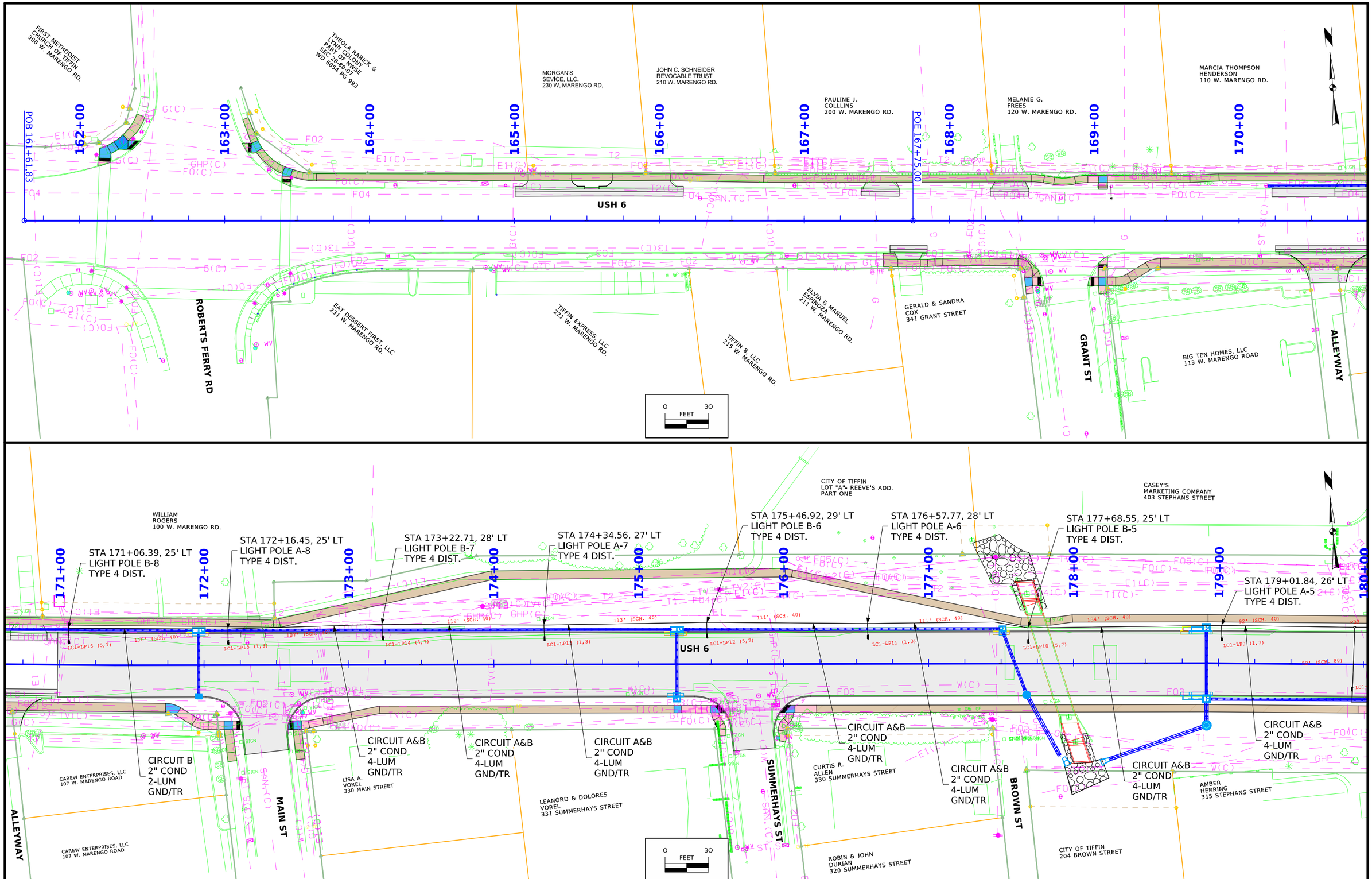


3 P.4 SERVICE CONNECTION (METER PEDESTAL)
NOT TO SCALE



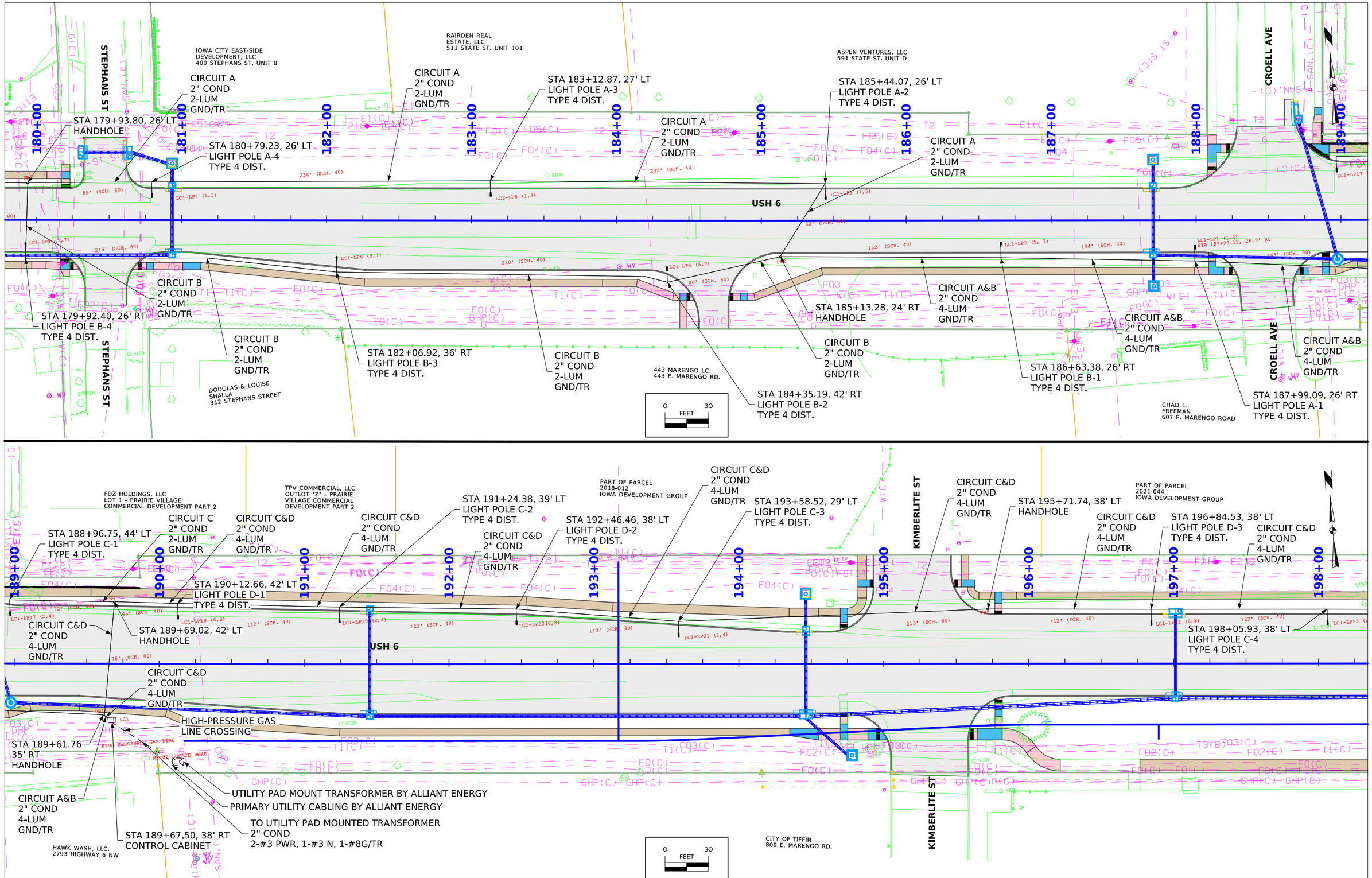
4 P.4 CONDUIT IN TRENCH (LI-103)
NOT TO SCALE

LIGHTING DETAILS



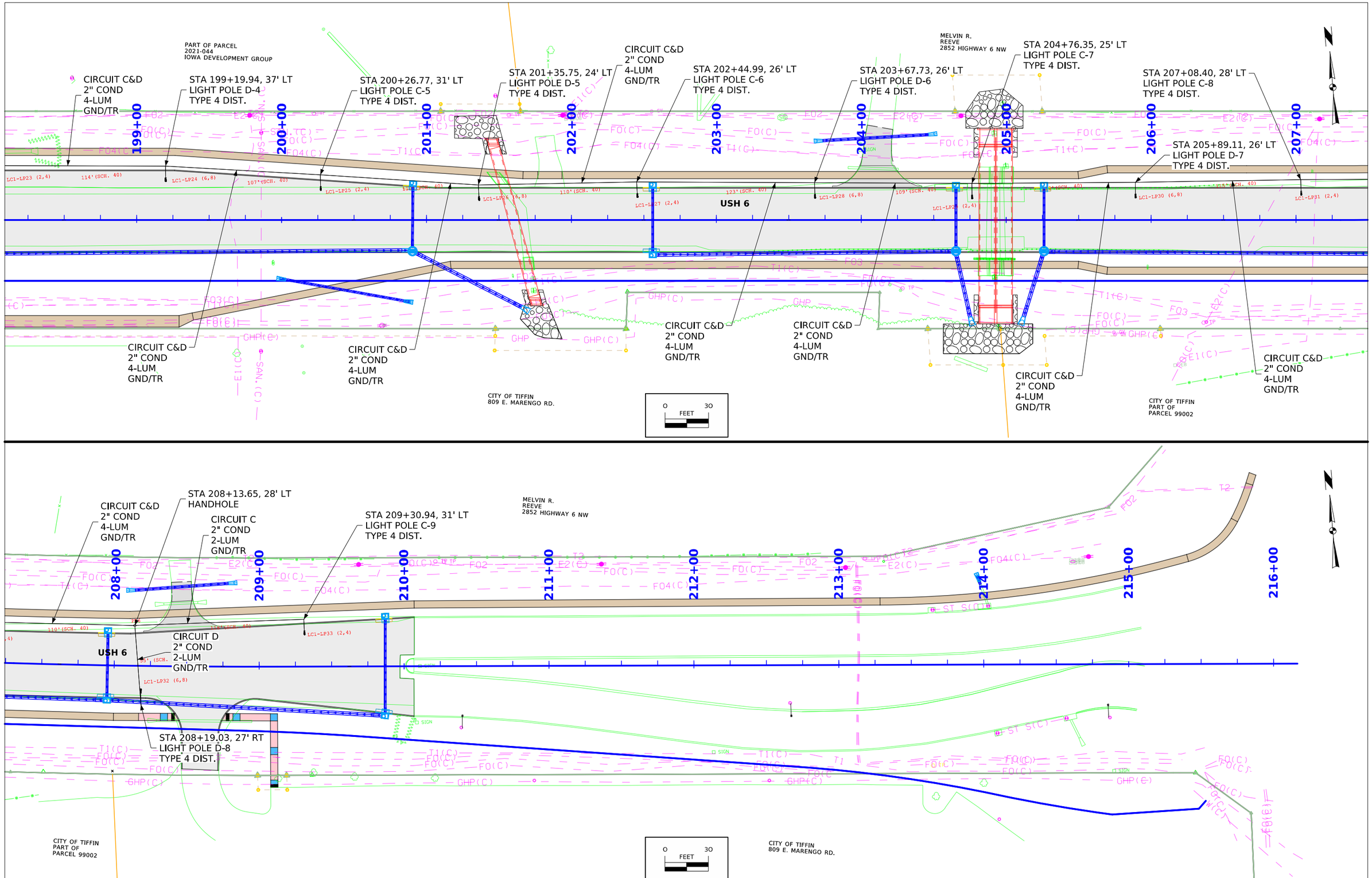
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER P.4

12:37:47 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_P01.dgn



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER P.5

12:37:48 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_P01.dgn



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER P.6

12:37:50 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_P01.dgn

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 perorming 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. On projects where DOT is the Contracting Authority, is current with erosion control training or certification.
3. 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.
4. 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.
5. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
6. 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.
7. Is familiar with the Project PPP and storm water site map.
8. On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
9. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
10. Is signature authority on Notice of Discontinuation.
11. Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).
12. Makes information to determine permit compliance available to the DNR upon their request.

110_12
1/13/23

POLLUTION PREVENTION PLAN

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.

II. PROJECT SITE DESCRIPTION

A. This Pollution Prevention Plan (PPP) is for the construction of a PCC roadway reconstruction and widening, PCC sidewalks, storm sewer, water main, and box culverts on US 6 (Marengo Rd) in the City of Tiffin, IA.

B. This PPP covers approximately 12.84 acres with an estimated 12.84 acres being disturbed. The portion of the PPP covered by this contract has 12.84 acres disturbed.

C. The PPP is located in an area of two soil associations (Fayette and Otley-Ladoga). The estimated weighted average runoff coefficient number for this PPP after completion will be 0.51.

D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans. Supplemental information is located in the Tabulations in the C or CE 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 an Unnamed Stream that discharges into Clear 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 storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R 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 or R 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 or R sheets. Additional information may be found in the Tabulations in the C or T Tabulation sheets, or is referenced in Section 2105 of the 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 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 storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be

POLLUTION PREVENTION PLAN

found on the B or R sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C or R 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 storm water site map and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R 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. 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 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 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.

110_12
1/13/23

POLLUTION PREVENTION PLAN

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 construction. 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.

Signature

James Watters
Printed or Typed Name

Signature

Mark K. Harle
Printed or Typed Name

LINE STYLE LEGEND OF LANDSCAPE SHEETS

LINESTYLE	Design Element
- - - - - - - - - - - -	Living Snow Fence Single Row
:::::::::::::::::::	Living Snow Fence Double Row
———	Mechanical Edge

CELL LEGEND OF LANDSCAPE SHEETS

CELL	Design Element	Plant Diameter
	Clearing and Grubbing	
	Proposed Shrub	6 FT
	Proposed Understory Tree	12 FT
	Proposed Conifer Tree	18 FT
	Proposed Overstory Tree	30 FT

PATTERN LEGEND OF LANDSCAPE SHEETS

- Brush Clearing
- Spray Area
- Clearing & Grubbing

LINE STYLE LEGEND OF EROSION CONTROL SHEETS

LINESTYLE	Design Element
	Silt Fence
9	Perimeter and Slope Sediment Control Device (9")
12	Perimeter and Slope Sediment Control Device (12")
20	Perimeter and Slope Sediment Control Device (20")
	Open-Throat Curb Intake Sediment Filter
	Concentrated Flow
	Rock Check and Rock Check Dam
	Sheet Flow

CELL LEGEND OF EROSION CONTROL SHEETS

CELL	Design Element
	Temporary Sediment Control basin
	Erosion Control for Circular Intake or Manhole Well
	Erosion Control for Rectangular Intake or Manhole Well
	Grate Intake Sediment Filter Bag
	Silt Basin
	Silt Fence Tail
	Stormwater Drainage Basin Discharge Point

PLAN VIEW COLOR LEGEND OF EROSION CONTROL SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
Black	(0)	Permanent Erosion Control Features
Blaze Orange	(222)	Temporary Erosion Control Features

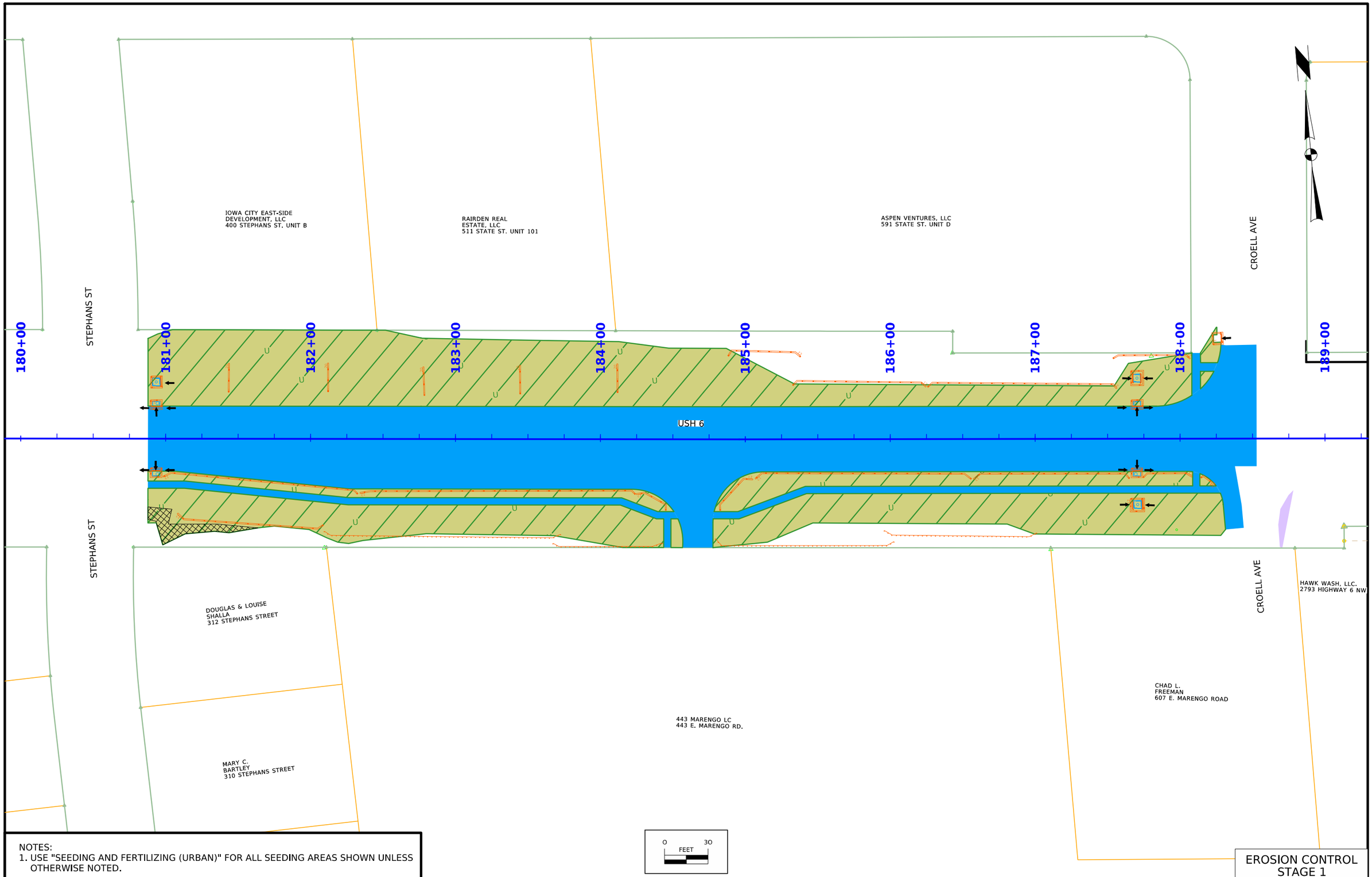
SHADING	Design Color No.		Transparency
Citron	(234)	Mulching, All Types	50%
Light Brown	(238)	Special Ditch Control, Wood Excelsior Mat	0%
Grass Green	(233)	8FT Mow Strip	50%
Red	(3)	Delineates Restricted Areas	0%

PATTERN LEGEND OF EROSION CONTROL SHEETS

- Seeding and Fertilizing
- R — Seeding and Fertilizing (Rural)
- U — Seeding and Fertilizing (Urban)
- N — Native Grass Seeding
- ST — Salt Tolerant Seeding
- WL — Wetland Grass Seeding
- WF — Wildflower Seeding
- SOD — Sodding
- Turf Reinforcement Mat Type 1
- Turf Reinforcement Mat Type 2
- Turf Reinforcement Mat Type 3
- Turf Reinforcement Mat Type 4
- Slope Protection, Wood Excelsior Mat
- Transition Mat
- Rock Features, Permanent
- Rock Features, Temporary

EROSION CONTROL LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES R)

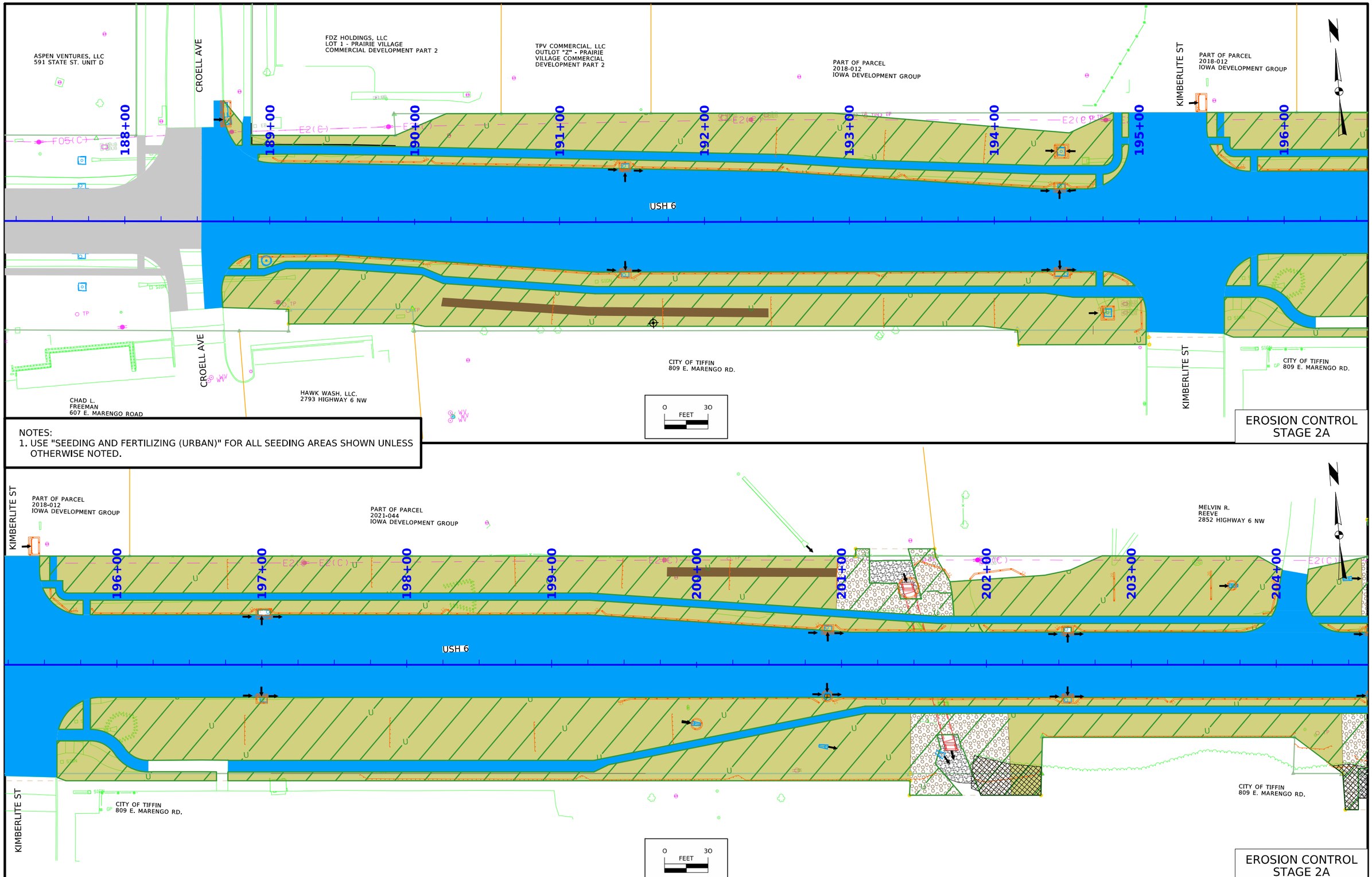


NOTES:
1. USE "SEEDING AND FERTILIZING (URBAN)" FOR ALL SEEDING AREAS SHOWN UNLESS OTHERWISE NOTED.

EROSION CONTROL
STAGE 1

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER RR.2

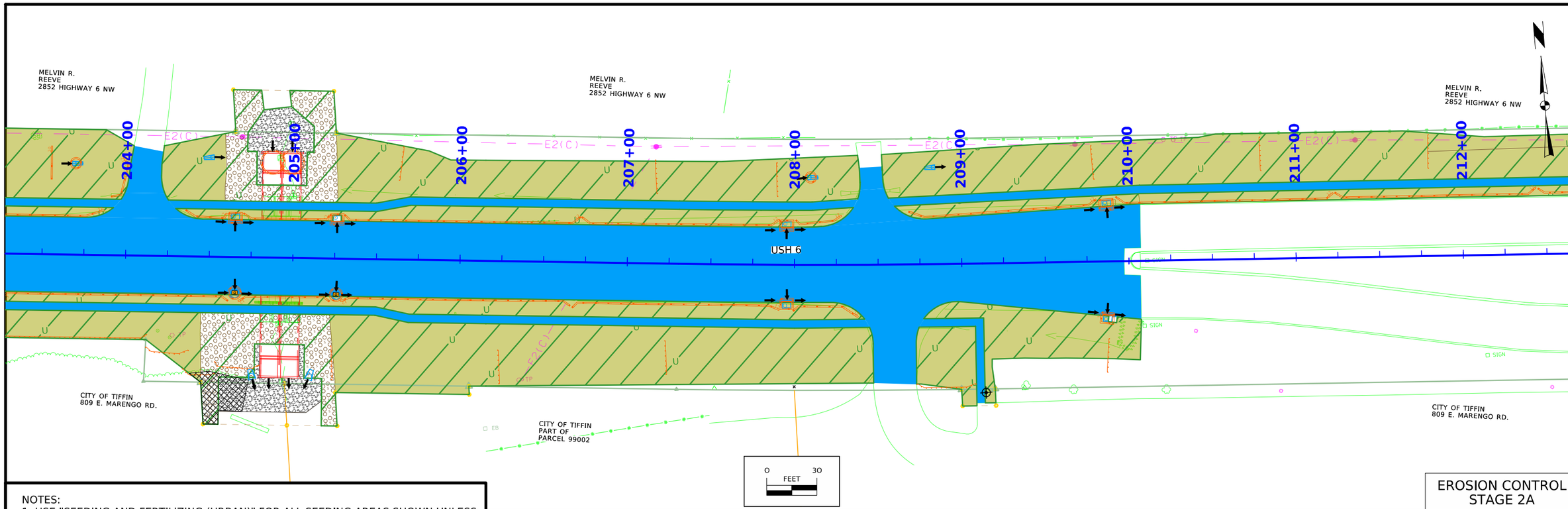
12:44:02 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_RR3_S1.dgn



NOTES:
1. USE "SEEDING AND FERTILIZING (URBAN)" FOR ALL SEEDING AREAS SHOWN UNLESS OTHERWISE NOTED.

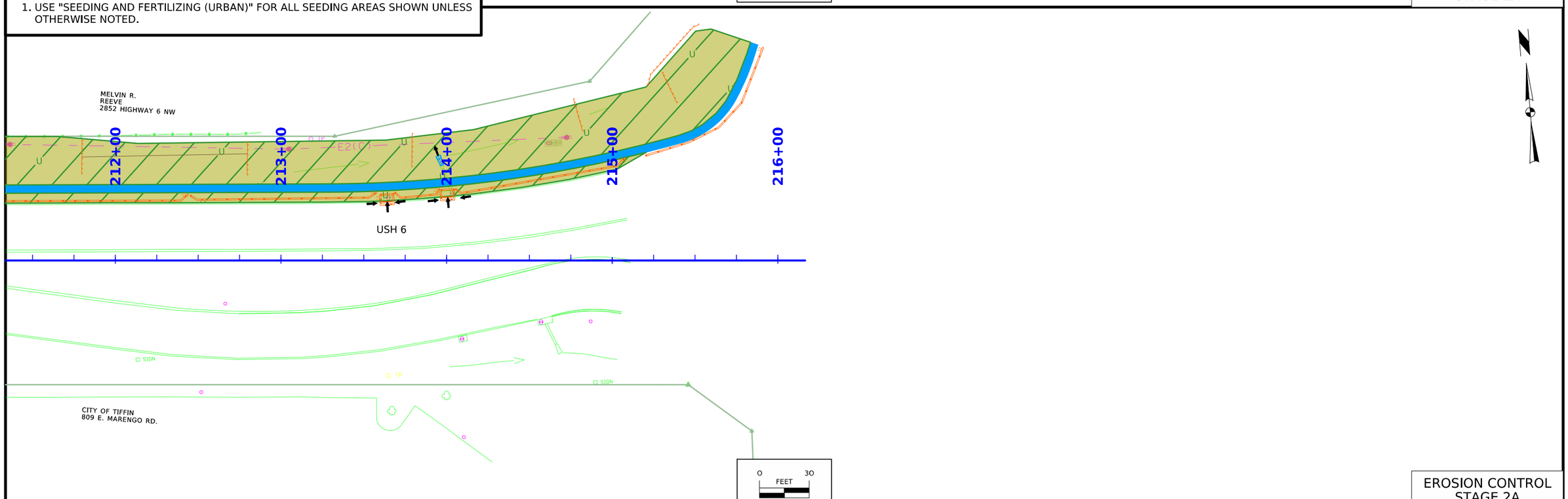
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER RR.3

12:44:10 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_RR3_S2A.dgn



NOTES:
1. USE "SEEDING AND FERTILIZING (URBAN)" FOR ALL SEEDING AREAS SHOWN UNLESS OTHERWISE NOTED.

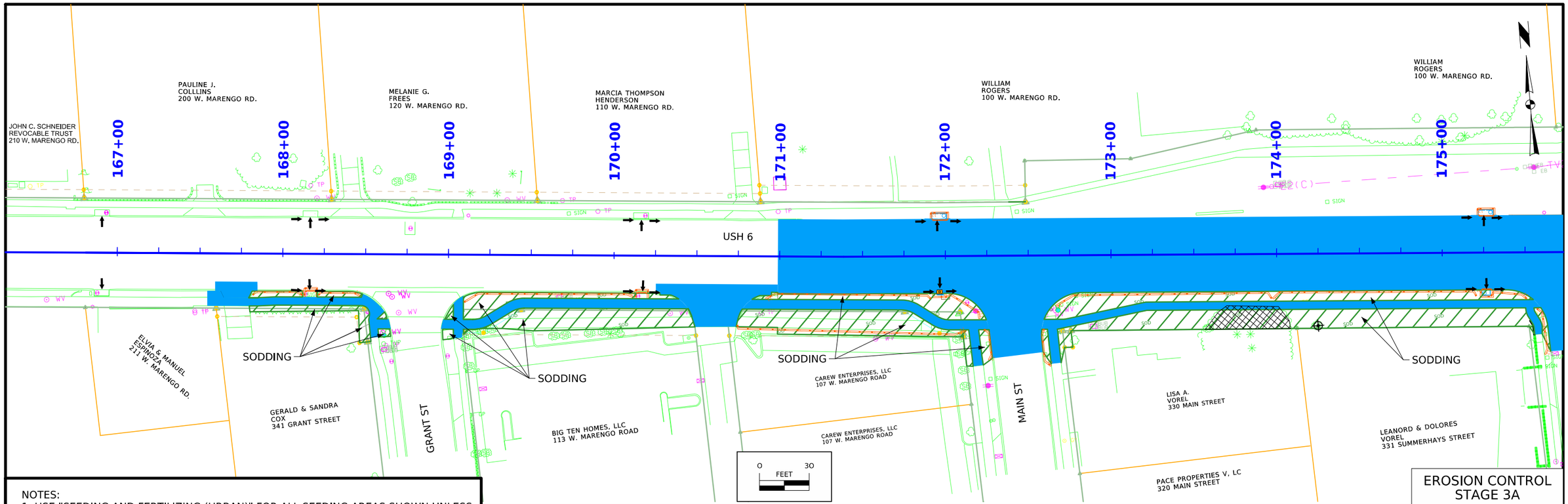
EROSION CONTROL
STAGE 2A



EROSION CONTROL
STAGE 2A

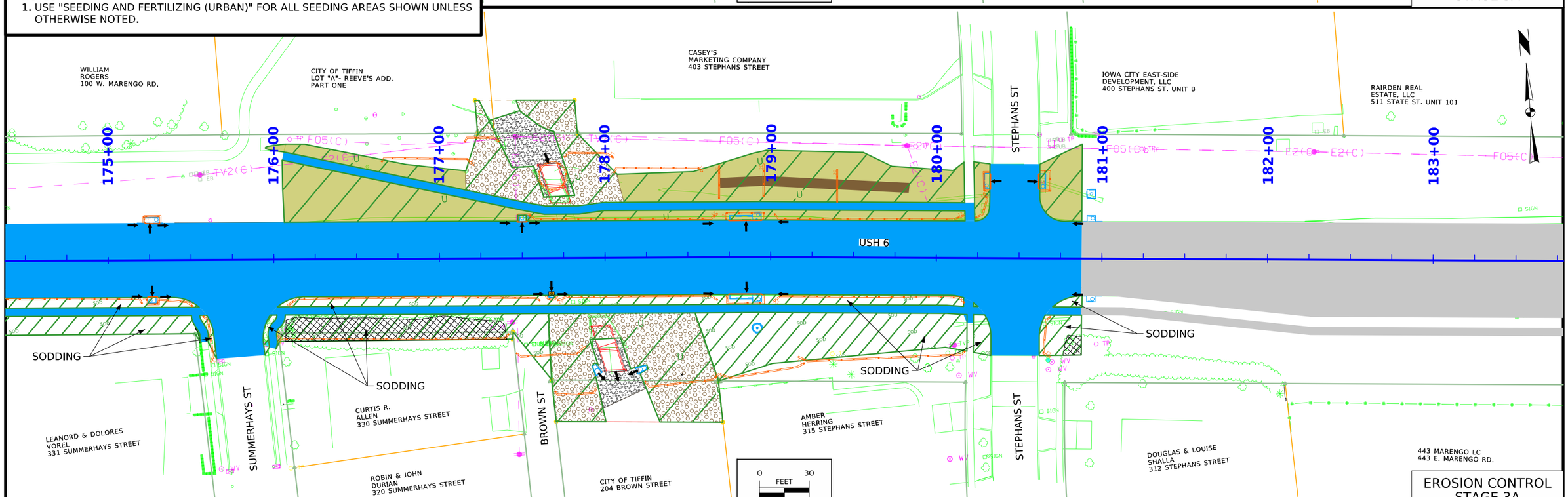
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER RR.4

12:44:11 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_RR3_S2A.dgn



NOTES:
1. USE "SEEDING AND FERTILIZING (URBAN)" FOR ALL SEEDING AREAS SHOWN UNLESS OTHERWISE NOTED.

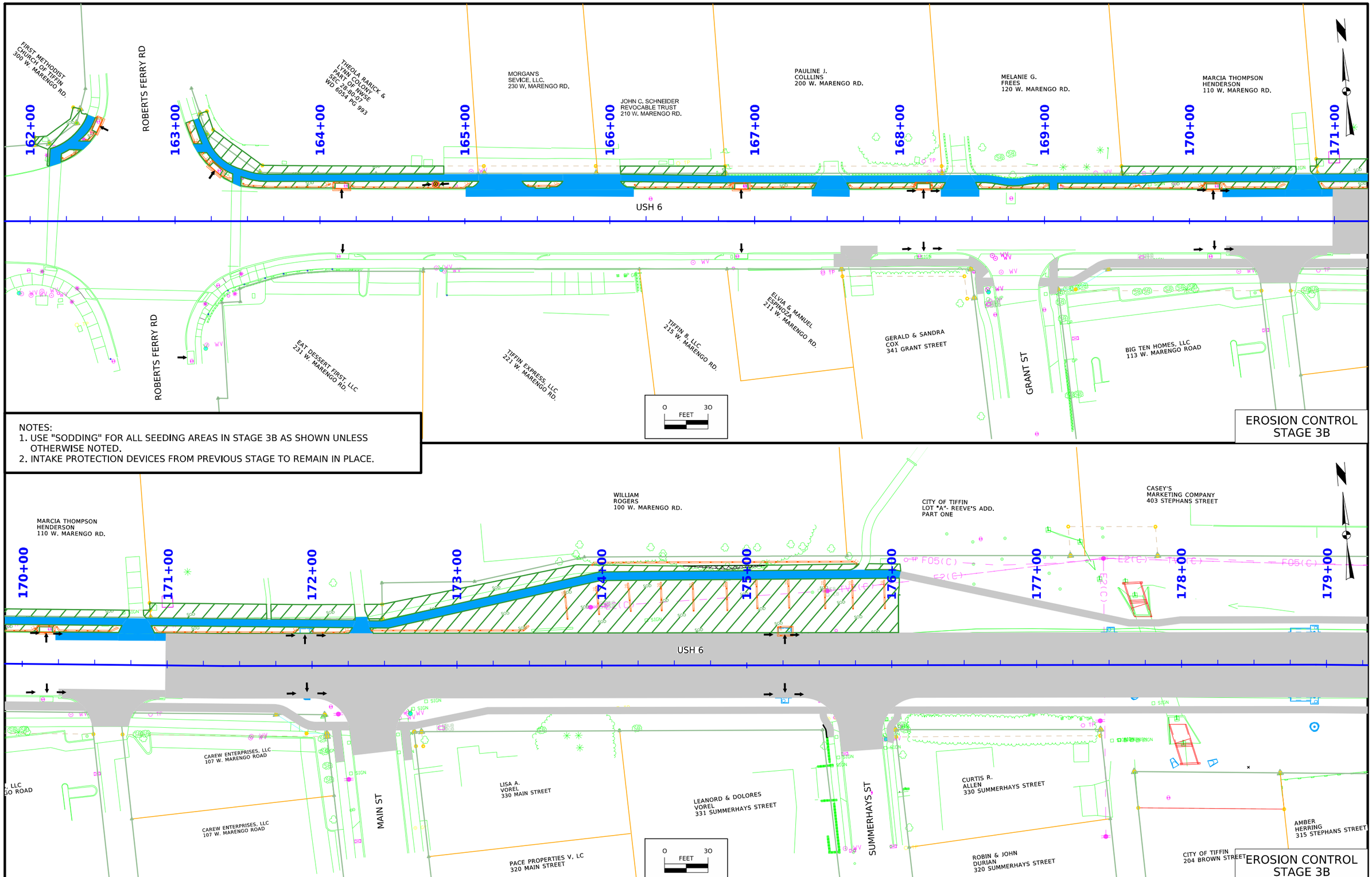
EROSION CONTROL STAGE 3A



EROSION CONTROL STAGE 3A

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER RR.5

12:44:19 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_RR3_S3A.dgn



NOTES:
1. USE "SODDING" FOR ALL SEEDING AREAS IN STAGE 3B AS SHOWN UNLESS OTHERWISE NOTED.
2. INTAKE PROTECTION DEVICES FROM PREVIOUS STAGE TO REMAIN IN PLACE.

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER RR.6

12:44:27 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_RR3_S3B.dgn

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- WH Water Hydrant (Rural)
- Septic Tank
- C Cistern
- LP L.P. Gas Tank (No Footing)
- UST Underground Storage Tank
- Latrine
- Satellite TV Dish
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box

UTILITY LEGEND

City of Tiffin

— W — Water
— SAN. — Sanitary
— ST S — Storm Sewer
Street Lights and Traffic Signals

Brett Mehmen
bbtiffin@southslope.net
(319) 631-1698

Alliant Energy

— E1 — Buried Electric
— E2 — Aerial Electric
Utility Poles and Street Lights

Dean Colony
DeanColony@alliantenergy.com
(319) 786-1905

International Transmission

— T2 — Buried Telephone
Utility Poles

Chad Levi
clevi@itctransco.com
(319) 297-6765

Mediacom

— TV — Buried Telecommunications
— TV2 — Aerial Telecommunications

Donald Bergthold
dbergthold@mediacomcc.com
(319) 351-0408

MidAmerican Gas - Distribution

— G — Buried Low Pressure Gas

Joseph Retek
joseph.retek@midamerican.com
(319) 341-4457

MidAmerican Gas - Transmission

— GHP — Buried High Pressure Gas

William Barry
william.barry@midamerican.com
(319) 298-5146

Segra

— FO3 — Buried Fiber
— T3 — Buried Telephone

James Keegan
James.Keegan@segrafiber.com
(319) 304-5597

South Slope Telephone

— FO — Buried Fiber

Randy Cline
randy@southslope.com
(319) 665-5316

Uniti - CLEC

— FO2 — Buried Fiber
— FO5 — Aerial Fiber

Stephen Kness
Stephen.Kness@uniti.com
(319) 538-1985

Uniti - ILEC

— FO4 — Buried Fiber
— T1 — Buried Telephone
Handhole Structures

Trae Bodensteiner
trae.bodensteiner@uniti.com
(614) 840-5500

NOTE: Utilities without quality level indicated in linestyles on plan sheets are 'Quality Level D' obtained from maps and records.

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING	**Design Color No.**	
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Magenta	(5)	Detectable Warning
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading
Brown, Light	(236)	Grading Shading

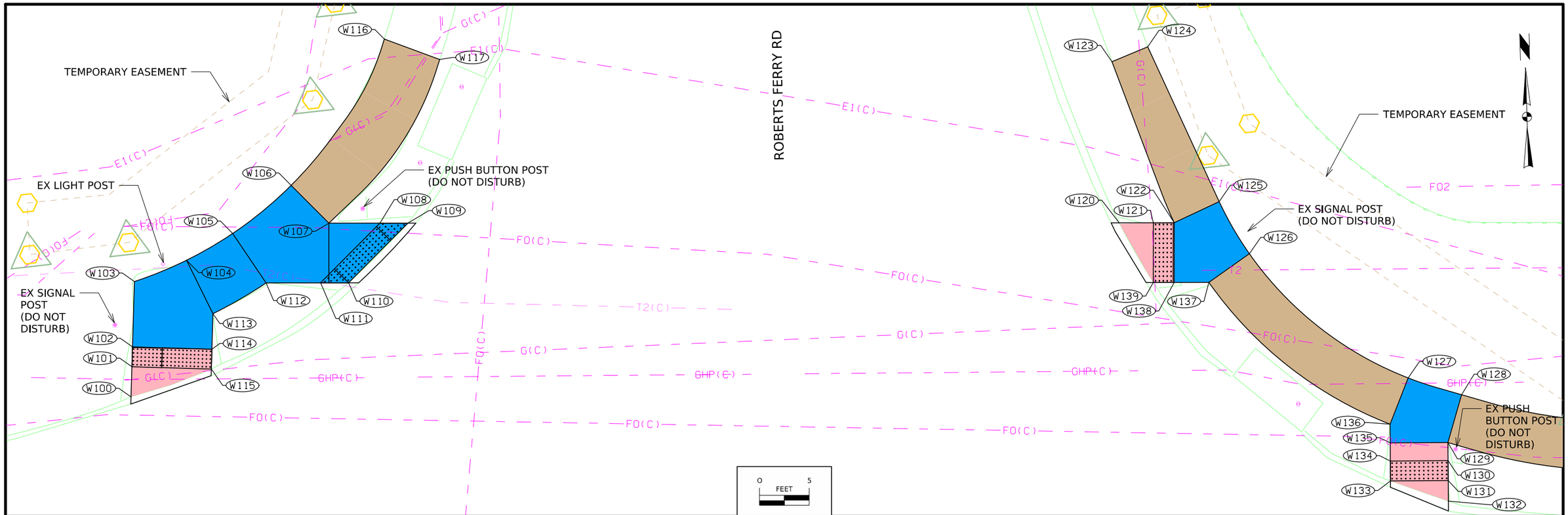
Reference Point
Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Clearing & Grubbing Area
- Pavement Removal

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- A/C Access Control

SIDEWALK LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES S)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Roberts Ferry Road	100	101	Ramp Running Slope	4	3.02	0.13	4.3	0.5% to 8.3%				
Roberts Ferry Road	100	115	Ramp Running Slope	4	8.40	0.01	0.1	0.5% to 8.3%				
Roberts Ferry Road	101	102	Ramp Running Slope	4	2.00	0.05	2.5	0.5% to 8.3%				
Roberts Ferry Road	101	115	Ramp Cross Slope	4	8.00	-0.12	-1.5	0.1% to 2.0%				
Roberts Ferry Road	102	103	Landing/Turning Space	4	6.57	0.05	0.8	0.1% to 2.0%				
Roberts Ferry Road	102	114	Landing/Turning Space	4	8.00	-0.12	-1.5	0.1% to 2.0%				
Roberts Ferry Road	103	104	Landing/Turning Space	4	5.68	-0.06	-1.1	0.1% to 2.0%				
Roberts Ferry Road	104	105	Landing/Turning Space	4	5.38	-0.05	-0.9	0.1% to 2.0%				
Roberts Ferry Road	104	113	Landing/Turning Space	4	6.00	-0.06	-1.0	0.1% to 2.0%				
Roberts Ferry Road	105	106	Landing/Turning Space	4	6.54	-0.02	-0.3	0.1% to 2.0%				
Roberts Ferry Road	105	112	Landing/Turning Space	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Roberts Ferry Road	106	107	Landing/Turning Space	4	5.37	-0.09	-1.7	0.1% to 2.0%				
Roberts Ferry Road	106	116	Sidewalk Running Slope	4	17.64	1.00	5.7	0.0% to 5.0%				
Roberts Ferry Road	107	108	Landing/Turning Space	4	5.14	-0.09	-1.8	0.1% to 2.0%				
Roberts Ferry Road	107	112	Landing/Turning Space	4	6.00	0.02	0.3	0.1% to 2.0%				
Roberts Ferry Road	107	117	Sidewalk Running Slope	4	20.24	0.86	4.2	0.0% to 5.0%				
Roberts Ferry Road	108	109	Landing/Turning Space	4	2.82	-0.04	-1.4	0.1% to 2.0%				
Roberts Ferry Road	108	111	Landing/Turning Space	4	8.47	0.02	0.2	0.1% to 2.0%				
Roberts Ferry Road	109	110	Landing/Turning Space	4	8.47	0.03	0.4	0.1% to 2.0%				
Roberts Ferry Road	110	111	Landing/Turning Space	4	2.82	0.03	1.1	0.1% to 2.0%				
Roberts Ferry Road	111	112	Landing/Turning Space	4	5.48	0.09	1.6	0.1% to 2.0%				
Roberts Ferry Road	112	113	Landing/Turning Space	4	6.18	0.08	1.3	0.1% to 2.0%				
Roberts Ferry Road	113	114	Landing/Turning Space	4	3.57	-0.05	-1.4	0.1% to 2.0%				
Roberts Ferry Road	114	115	Ramp Running Slope	4	2.00	-0.05	-2.5	0.5% to 8.3%				
Roberts Ferry Road	116	117	Match Existing Cross Slope	4	5.94	-0.23	-3.9					

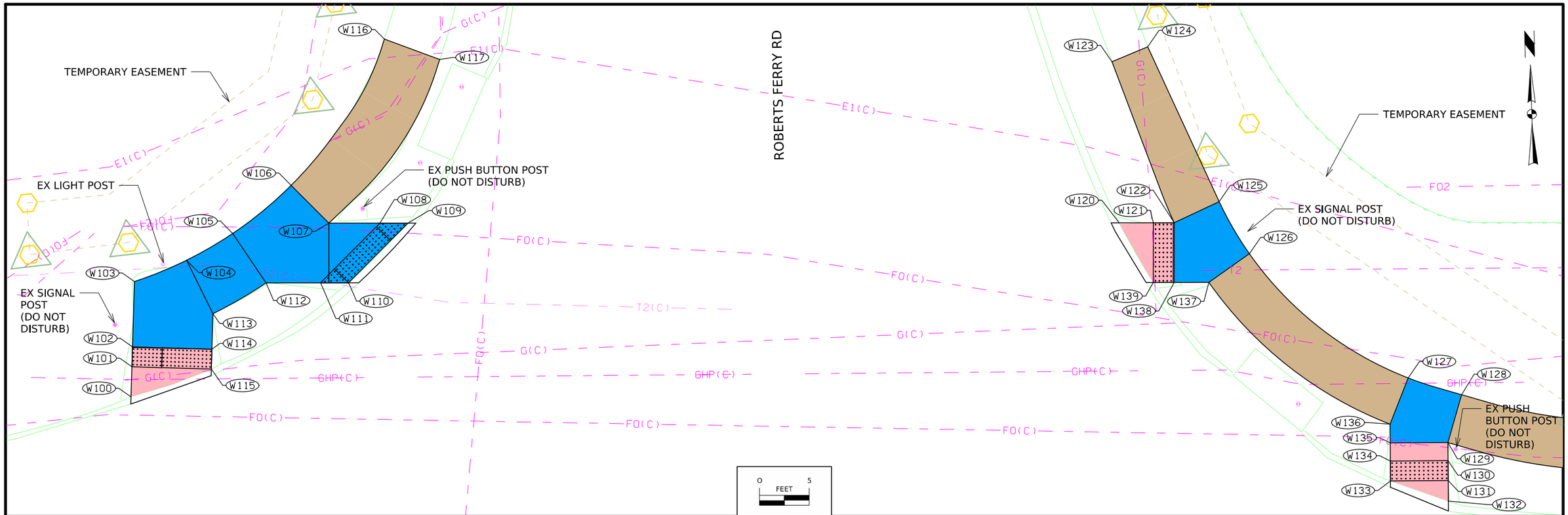
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
1.0	100	162+13.13	-38.19	723.44
2.0	101	162+13.29	-41.21	723.57
3.0	102	162+13.39	-43.21	723.62
4.0	103	162+13.73	-49.77	723.67
5.0	104	162+19.03	-51.79	723.61
6.0	105	162+23.74	-54.38	723.56
7.0	106	162+29.72	-59.08	723.54
8.0	107	162+33.43	-55.19	723.45
9.0	108	162+35.43	-55.1	723.36
10.0	109	162+41.39	-55	723.32
11.0	110	162+35.29	-49.14	723.35
12.0	111	162+33.29	-49.19	723.38
13.0	112	162+26.98	-49.33	723.47
14.0	113	162+21.57	-46.35	723.55
15.0	114	162+21.38	-42.79	723.50
16.0	115	162+21.28	-40.79	723.45
17.0	116	162+35.24	-73.58	724.54
18.0	117	162+44.96	-71.4	724.31

USH 6 AND ROBERTS FERRY RD



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Roberts Ferry Road	120	121	Ramp Running Slope	4	3.44	0.02	0.6	0.5% to 8.3%				
Roberts Ferry Road	120	139	Ramp Cross Slope	4	6.80	-0.10	-1.5	0.1% to 2.0%				
Roberts Ferry Road	121	122	Ramp Running Slope	4	2.10	0.10	4.8	0.5% to 8.3%				
Roberts Ferry Road	121	139	Ramp Cross Slope	4	6.00	-0.12	-2.0	0.1% to 2.0%				
Roberts Ferry Road	122	123	Sidewalk Running Slope	4	17.36	1.03	5.9	0.0% to 5.0%				
Roberts Ferry Road	122	125	Landing/Turning Space	4	5.00	0.08	1.6	0.1% to 2.0%				
Roberts Ferry Road	122	138	Landing/Turning Space	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Roberts Ferry Road	123	124	Match Existing Cross Slope	4	3.89	0.06	1.5					
Roberts Ferry Road	124	125	Sidewalk Running Slope	4	17.15	-1.01	-5.9	0.0% to 5.0%				
Roberts Ferry Road	125	126	Landing/Turning Space	4	6.06	-0.05	-0.8	0.1% to 2.0%				
Roberts Ferry Road	126	127	Sidewalk Running Slope	4	20.57	-0.15	-0.7	0.5% to 8.3%				
Roberts Ferry Road	126	137	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Roberts Ferry Road	127	128	Landing/Turning Space	4	5.64	-0.03	-0.5	0.1% to 2.0%				
Roberts Ferry Road	127	136	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Roberts Ferry Road	128	129	Landing/Turning Space	4	5.00	-0.08	-1.6	0.1% to 2.0%				
Roberts Ferry Road	129	130	Ramp Running Slope	4	1.82	-0.09	-4.9	0.5% to 8.3%				
Roberts Ferry Road	129	135	Landing/Turning Space	4	5.80	0.01	0.2	0.1% to 2.0%				
Roberts Ferry Road	130	131	Ramp Running Slope	4	2.00	0.10	5.0	0.5% to 8.3%				
Roberts Ferry Road	130	134	Ramp Cross Slope	4	5.80	-0.02	-0.3	0.1% to 2.0%				
Roberts Ferry Road	131	132	Ramp Running Slope	4	2.08	0.19	9.1	0.5% to 8.3%				
Roberts Ferry Road	131	133	Ramp Cross Slope	4	5.80	-0.05	-0.9	0.1% to 2.0%				
Roberts Ferry Road	132	133	Ramp Cross Slope	4	6.25	-0.24	-3.8	0.1% to 2.0%				
Roberts Ferry Road	133	134	Ramp Running Slope	4	2.00	0.13	6.5	0.5% to 8.3%				
Roberts Ferry Road	134	135	Ramp Running Slope	4	1.83	0.12	6.6	0.5% to 8.3%				
Roberts Ferry Road	135	136	Landing/Turning Space	4	1.87	0.03	1.6	0.1% to 2.0%				
Roberts Ferry Road	136	137	Sidewalk Running Slope	4	23.49	0.15	0.6	0.0% to 5.0%				
Roberts Ferry Road	137	138	Landing/Turning Space	4	3.48	-0.05	-1.4	0.1% to 2.0%				
Roberts Ferry Road	138	139	Ramp Running Slope	4	2.00	-0.13	-6.5	0.5% to 8.3%				

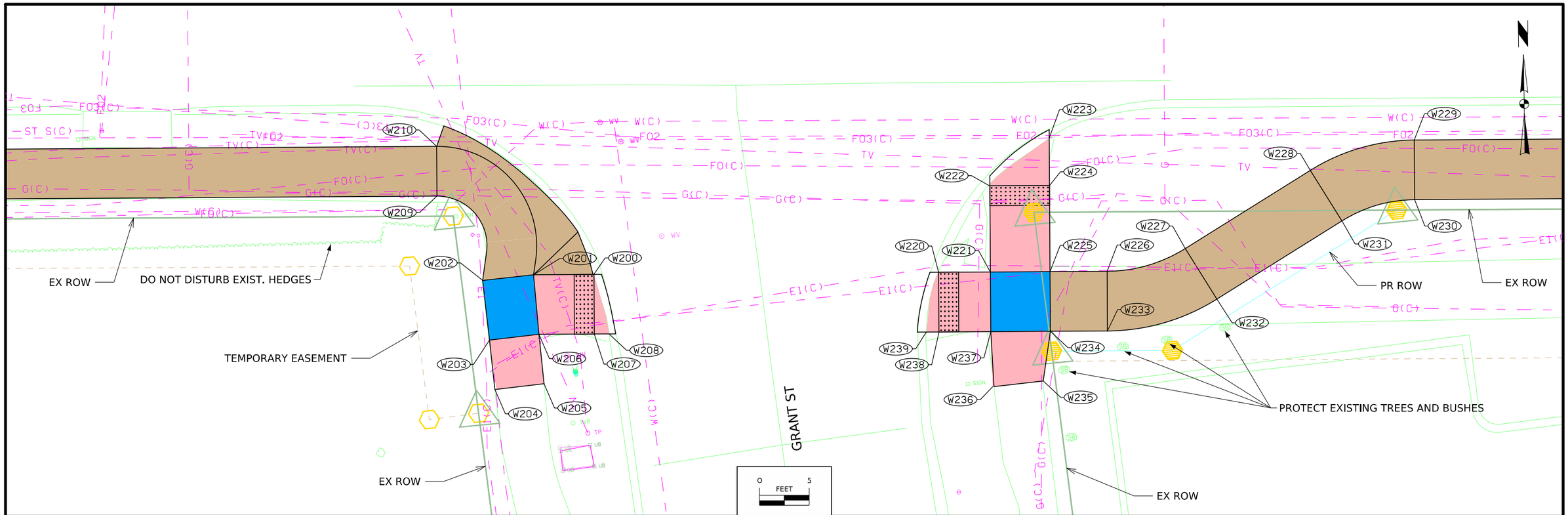
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
19.0	120	163+12.95	-53.4	722.88
20.0	121	1363+16.38	-53.32	722.90
21.0	122	163+18.48	-53.28	723.00
22.0	123	163+12.60	-69.61	724.03
23.0	124	163+16.22	-71.03	724.09
24.0	125	163+23.05	-55.3	723.08
25.0	126	163+25.97	-50	723.03
26.0	127	163+41.65	-37.14	722.88
27.0	128	163+46.99	-35.33	722.85
28.0	129	163+45.61	-30.55	722.77
29.0	130	163+45.61	-28.73	722.68
30.0	131	163+45.61	-26.73	722.58
31.0	132	163+45.61	-24.65	722.77
32.0	133	163+39.64	-26.82	722.53
33.0	134	163+39.68	-28.82	722.66
34.0	135	163+39.71	-30.65	722.78
35.0	136	163+39.74	-32.52	722.81
36.0	137	163+21.83	-47.2	722.96
37.0	138	163+18.34	-47.28	722.91
38.0	139	163+16.24	-47.33	722.78

USH 6 AND ROBERTS FERRY RD



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Grant Street	200	201	Ramp Running Slope	4	6.09	0.24	3.9	0.5% to 8.3%				
Grant Street	200	207	Ramp Cross Slope	4	6.01	0.01	0.2	0.1% to 2.0%				
Grant Street	200	208	Ramp Cross Slope	4	6.19			0.1% to 2.0%				
Grant Street	201	202	Landing/Turning Space	4	5.17	0.08	1.5	0.1% to 2.0%				
Grant Street	201	206	Landing/Turning Space	4	6.02	-0.09	-1.5	0.1% to 2.0%				
Grant Street	201	210	Sidewalk Running Slope	4	18.70	0.68	3.6	0.0% to 5.0%				
Grant Street	202	203	Landing/Turning Space	4	6.06	-0.09	-1.5	0.1% to 2.0%				
Grant Street	202	209	Sidewalk Running Slope	4	11.40	0.56	4.9	0.0% to 5.0%				
Grant Street	203	204	Ramp Running Slope	4	5.03	-0.29	-5.8	0.5% to 8.3%				
Grant Street	203	206	Landing/Turning Space	4	4.98	-0.08	-1.6	0.1% to 2.0%				
Grant Street	204	205	Match Existing Cross Slope	4	4.87	-0.10	-2.1					
Grant Street	205	206	Ramp Running Slope	4	5.00	0.31	6.2	0.5% to 8.3%				
Grant Street	206	207	Ramp Running Slope	4	5.57	-0.14	-2.5	0.5% to 8.3%				
Grant Street	207	208	Ramp Running Slope	4	1.49	-0.01	-0.7	0.5% to 8.3%				
Grant Street	209	210	Sidewalk Cross Slope	4	5.00	0.04	0.8	0.1% to 2.0%				

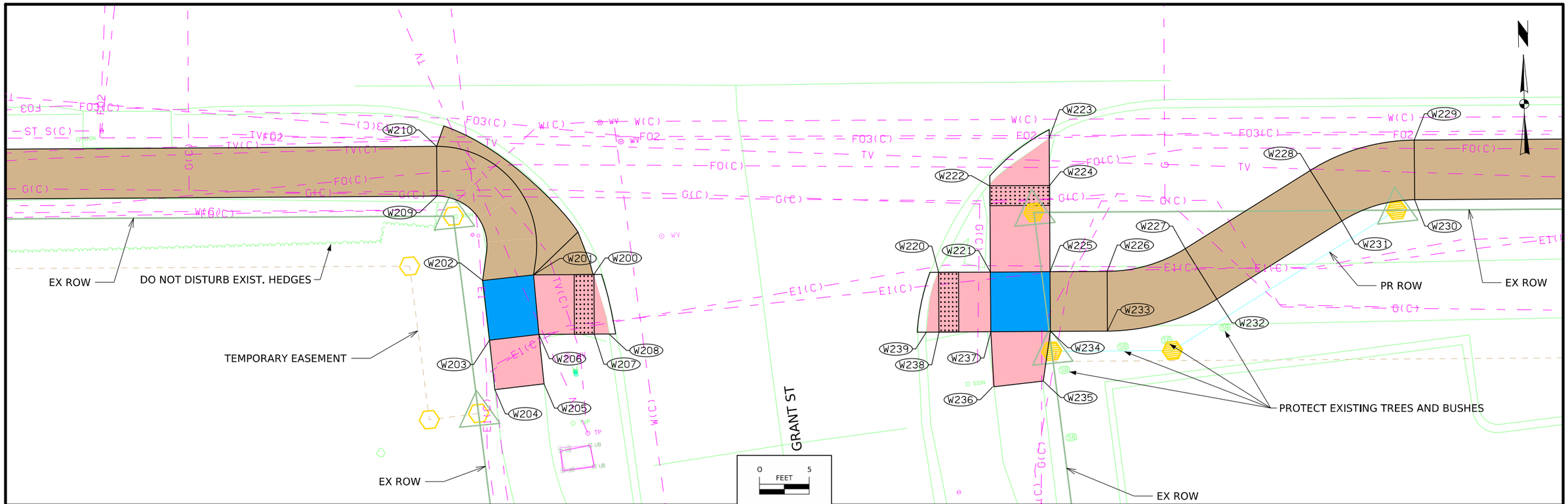
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
1.0	200	168+63.23	39	719.44
2.0	201	168+57.17	39	719.68
3.0	202	168+52.03	39.52	719.76
4.0	203	168+52.69	45.52	719.67
5.0	204	168+53.33	50.48	719.38
6.0	205	168+58.15	49.95	719.28
7.0	206	168+57.66	44.98	719.59
8.0	207	168+63.23	44.98	719.45
9.0	208	168+64.72	44.98	720.44
10.0	209	168+47.50	31	720.32
11.0	210	168+47.50	26	720.36

USH 6 AND GRANT ST (SOUTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Grant Street	220	221	Ramp Running Slope	4	5.22	0.11	2.1	0.5% to 8.3%				
Grant Street	220	238	Ramp Cross Slope	4	6.00	-0.05	-0.8	0.1% to 2.0%				
Grant Street	220	239	Ramp Cross Slope	4	6.13	-0.06	-1.0	0.1% to 2.0%				
Grant Street	221	222	Ramp Running Slope	4	8.66	0.05	0.6	0.5% to 8.3%				
Grant Street	221	225	Landing/Turning Space	4	6.00	0.11	1.8	0.1% to 2.0%				
Grant Street	221	237	Landing/Turning Space	4	6.00	0.08	1.3	0.1% to 2.0%				
Grant Street	222	224	Ramp Cross Slope	4	6.00	0.11	1.8	0.1% to 2.0%				
Grant Street	222	223	Ramp Cross Slope	4	7.55	0.18	2.4	0.1% to 2.0%				
Grant Street	223	224	Ramp Running Slope	4	4.76	-0.07	-1.5	0.5% to 8.3%				
Grant Street	224	225	Ramp Running Slope	4	8.66	-0.05	-0.6	0.5% to 8.3%				
Grant Street	225	226	Sidewalk Running Slope	4	5.77	-0.03	-0.5	0.0% to 5.0%				
Grant Street	225	234	Landing/Turning Space	4	6.00	0.03	0.5	0.1% to 2.0%				
Grant Street	226	227	Sidewalk Running Slope	4	8.30	-0.04	-0.5	0.0% to 5.0%				
Grant Street	226	233	Sidewalk Cross Slope	4	6.00	0.09	1.5	0.1% to 2.0%				
Grant Street	227	228	Sidewalk Running Slope	4	14.84	-0.08	-0.5	0.0% to 5.0%				
Grant Street	227	232	Sidewalk Cross Slope	4	6.00	0.23	3.8	0.1% to 2.0%				
Grant Street	228	229	Sidewalk Running Slope	4	11.60	-0.06	-0.5	0.0% to 5.0%				
Grant Street	228	231	Sidewalk Cross Slope	4	6.00	0.38	6.3	0.1% to 2.0%				
Grant Street	229	230	Sidewalk Cross Slope	4	6.00	0.48	8.0	0.1% to 2.0%				
Grant Street	230	231	Sidewalk Running Slope	4	8.10	-0.04	-0.5	0.0% to 5.0%				
Grant Street	231	232	Sidewalk Running Slope	4	14.84	-0.07	-0.5	0.0% to 5.0%				
Grant Street	232	233	Sidewalk Running Slope	4	12.00	-0.10	-0.8	0.0% to 5.0%				
Grant Street	233	234	Sidewalk Running Slope	4	5.61	-0.03	-0.5	0.0% to 5.0%				
Grant Street	234	235	Ramp Running Slope	4	5.06	-0.35	-6.9	0.5% to 8.3%				
Grant Street	234	237	Landing/Turning Space	4	6.00	-0.06	-1.0	0.1% to 2.0%				
Grant Street	235	236	Match Existing Cross Slope	4	5.13	-0.03	-0.6					
Grant Street	236	237	Ramp Running Slope	4	5.51	0.32	5.8	0.5% to 8.3%				
Grant Street	237	238	Ramp Running Slope	4	5.22	-0.24	-4.6	0.5% to 8.3%				
Grant Street	238	239	Ramp Running Slope	4	1.27	-0.01	-0.8	0.5% to 8.3%				

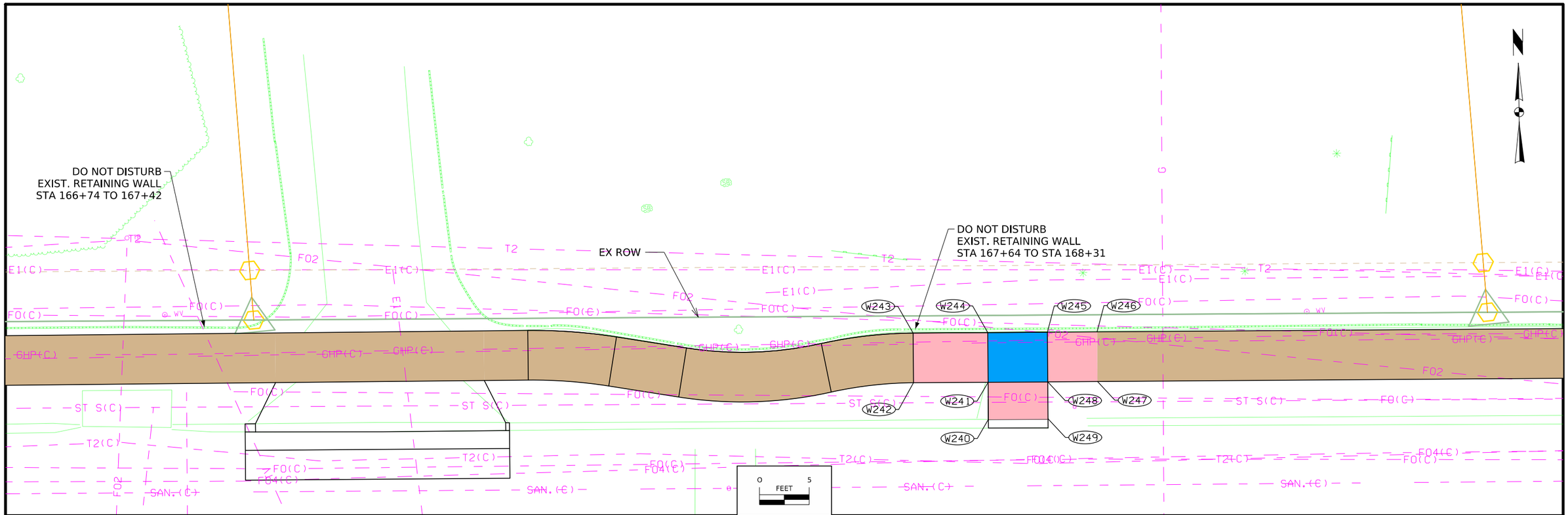
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
12.0	220	168+97.87	39	719.47
13.0	221	169+03.14	39	719.58
14.0	222	169+03.14	30.33	719.63
15.0	223	169+09.14	25.57	719.81
16.0	224	169+09.14	30.33	719.74
17.0	225	169+09.14	39	719.69
18.0	226	169+14.88	39	719.66
19.0	227	169+22.76	36.81	719.62
20.0	228	169+35.39	28.98	719.54
21.0	229	169+45.88	26	719.48
22.0	230	169+45.88	32	719.96
23.0	231	169+38.54	34.09	719.92
24.0	232	169+25.91	41.87	719.85
25.0	233	169+14.88	45	719.75
26.0	234	169+09.14	45	719.72
27.0	235	169+08.38	50	719.37
28.0	236	169+03.42	50.53	719.34
29.0	237	169+03.14	45	719.66
30.0	238	168+97.91	45	719.42
31.0	239	168+95.57	45	719.41

USH 6 AND GRANT ST (SOUTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Grant Street	240	241	Ramp Running Slope	4	3.76	0.24	6.4	0.5% to 8.3%				
Grant Street	240	249	Ramp Cross Slope	4	6.06	-0.01	-0.2	0.1% to 2.0%				
Grant Street	241	242	Ramp Running Slope	4	7.51	0.36	4.8	0.5% to 8.3%				
Grant Street	241	244	Landing/Turning Space	4	5.00	0.08	1.6	0.1% to 2.0%				
Grant Street	242	243	Ramp Cross Slope	4	5.00	0.07	1.4	0.1% to 2.0%				
Grant Street	243	244	Ramp Running Slope	4	7.52	-0.35	-4.7	0.5% to 8.3%				
Grant Street	244	245	Landing/Turning Space	4	5.99	-0.01	-0.2	0.1% to 2.0%				
Grant Street	245	246	Ramp Running Slope	4	5.00	0.50	10.0	0.5% to 8.3%				
Grant Street	245	248	Landing/Turning Space	4	5.00	-0.09	-1.8	0.1% to 2.0%				
Grant Street	246	247	Ramp Cross Slope	4	5.00	-0.36	-7.2	0.1% to 2.0%				
Grant Street	247	248	Ramp Running Slope	4	5.00	-0.23	-4.6	0.5% to 8.3%				
Grant Street	248	249	Ramp Running Slope	4	3.76	-0.23	-6.1	0.5% to 8.3%				

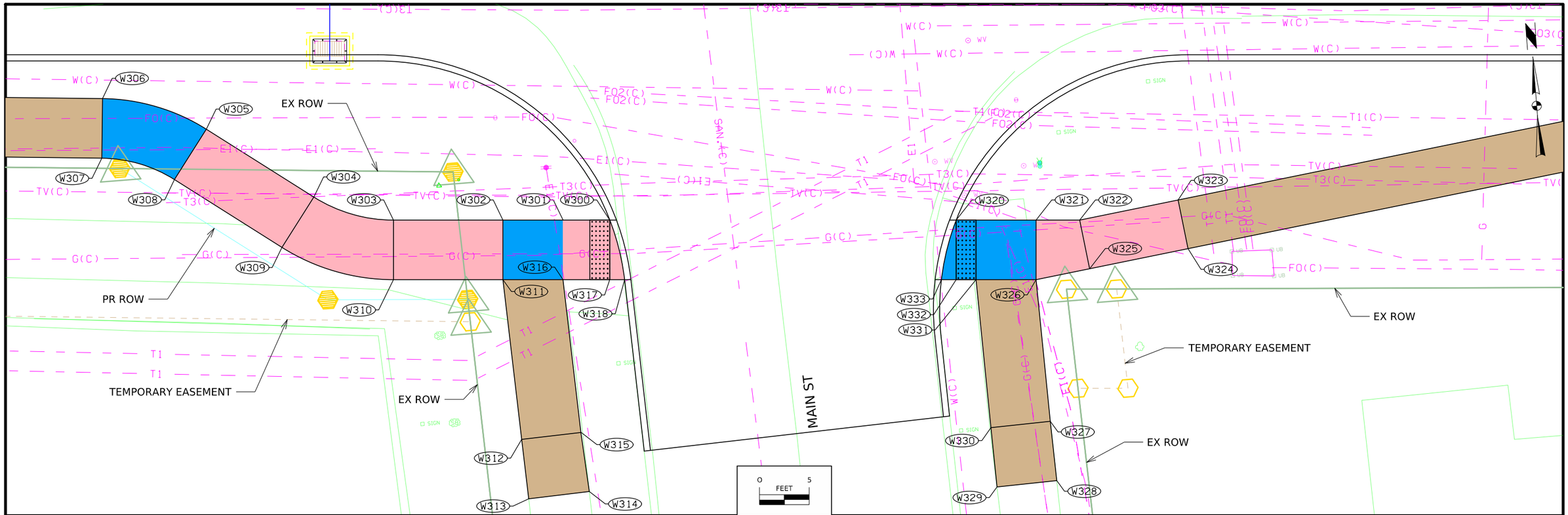
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
32.0	240	169+03.17	-22.53	720.05
33.0	241	169+03.17	-26.24	720.29
34.0	242	168+95.65	-26.24	720.65
35.0	243	168+95.65	-31.24	720.72
36.0	244	169+03.17	-31.24	720.37
37.0	245	169+09.17	-31.25	720.36
38.0	246	169+14.17	-31.25	720.86
39.0	247	169+14.17	-26.25	720.50
40.0	248	169+09.17	-26.25	720.27
41.0	249	169+09.17	-22.53	720.04

USH 6 AND GRANT ST
(NORTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Main Street	300	301	Ramp Running Slope	4	4.70	0.29	6.2	0.5% to 8.3%				
Main Street	300	317	Ramp Cross Slope	4	6.00	-0.04	-0.7	0.1% to 2.0%				
Main Street	300	318	Ramp Cross Slope	4	6.17	-0.13	-2.1	0.1% to 2.0%				
Main Street	301	302	Landing/Turning Space	4	6.00	0.09	1.5	0.1% to 2.0%				
Main Street	301	316	Landing/Turning Space	4	6.00	-0.07	-1.2	0.1% to 2.0%				
Main Street	302	303	Ramp Running Slope	4	11.02	0.61	5.5	0.5% to 8.3%				
Main Street	302	311	Landing/Turning Space	4	6.00	-0.07	-1.2	0.1% to 2.0%				
Main Street	303	304	Ramp Running Slope	4	8.45	0.47	5.6	0.5% to 8.3%				
Main Street	303	310	Ramp Cross Slope	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Main Street	304	305	Ramp Running Slope	4	12.80	0.70	5.5	0.5% to 8.3%				
Main Street	304	309	Ramp Cross Slope	4	6.00	0.10	1.7	0.1% to 2.0%				
Main Street	305	306	Landing/Turning Space	4	11.00	0.10	0.9	0.1% to 2.0%				
Main Street	305	308	Ramp Cross Slope	4	6.00	0.11	1.8	0.1% to 2.0%				
Main Street	306	307	Landing/Turning Space	4	6.00	0.09	1.5	0.1% to 2.0%				
Main Street	307	308	Landing/Turning Space	4	7.60	-0.08	-1.1	0.1% to 2.0%				
Main Street	308	309	Ramp Running Slope	4	12.80	-0.71	-5.5	0.5% to 8.3%				
Main Street	309	310	Ramp Running Slope	4	11.80	-0.66	-5.6	0.5% to 8.3%				
Main Street	310	311	Ramp Running Slope	4	11.02	-0.59	-5.4	0.5% to 8.3%				
Main Street	311	312	Sidewalk Running Slope	4	16.26	-0.45	-2.8	0.0% to 5.0%				
Main Street	311	316	Landing/Turning Space	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Main Street	312	313	Sidewalk Running Slope	4	6.00	-0.17	-2.8	0.0% to 5.0%				
Main Street	312	315	Sidewalk Cross Slope	4	6.00	-0.05	-0.8	0.1% to 2.0%				
Main Street	313	314	Match Existing Cross Slope	4	6.00	-0.05	-0.8					
Main Street	314	315	Sidewalk Running Slope	4	6.00	0.17	2.8	0.0% to 5.0%				
Main Street	315	316	Sidewalk Running Slope	4	15.50	0.41	2.6	0.0% to 5.0%				
Main Street	316	317	Ramp Running Slope	4	4.70	-0.26	-5.5	0.5% to 8.3%				
Main Street	317	318	Ramp Running Slope	4	1.49	-0.09	-6.0	0.5% to 8.3%				

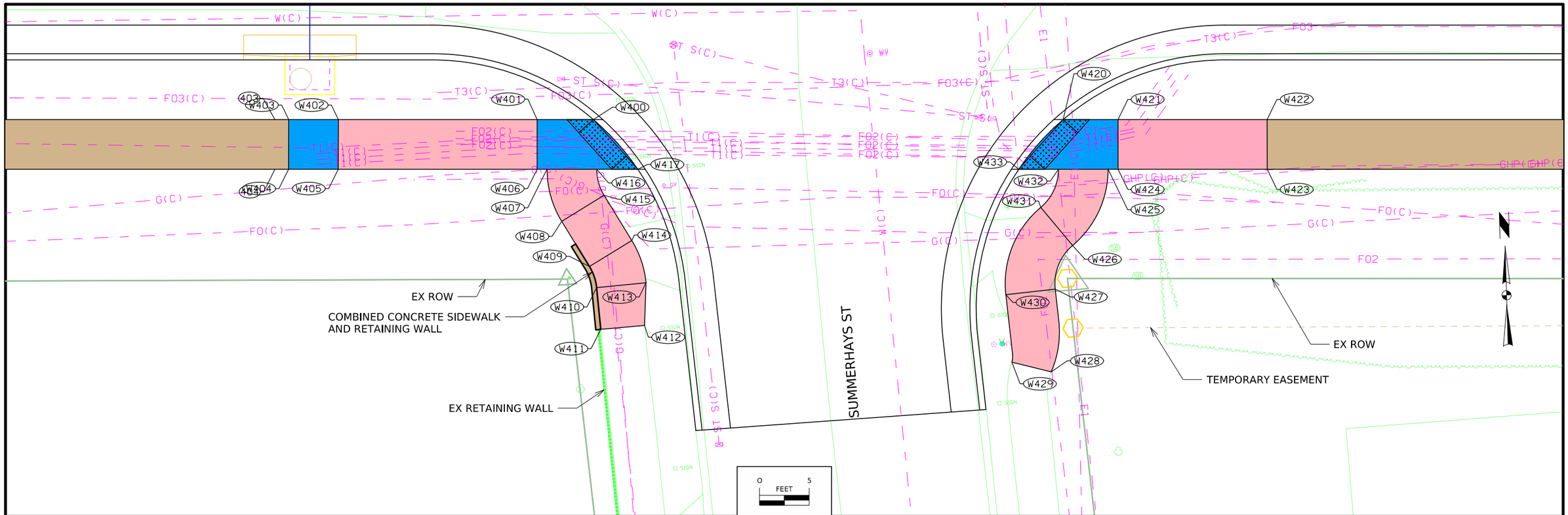
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
1.0	300	172+24.52	38.52	715.10
2.0	301	172+19.82	38.52	715.39
3.0	302	172+13.77	38.52	715.48
4.0	303	172+02.75	38.52	716.09
5.0	304	171+94.74	36.2	716.56
6.0	305	171+83.92	29.37	717.26
7.0	306	171+73.47	26.28	717.36
8.0	307	171+73.40	32.28	717.45
9.0	308	171+80.72	34.44	717.37
10.0	309	171+93.53	41.28	716.66
11.0	310	172+02.75	44.52	716.00
12.0	311	172+13.77	44.52	715.41
13.0	312	172+15.65	60.51	714.96
14.0	313	172+16.36	66.59	714.79
15.0	314	172+22.46	65.86	714.74
16.0	315	172+21.80	59.86	714.91
17.0	316	172+19.81	44.52	715.32
18.0	317	172+24.52	44.52	715.06
19.0	318	172+25.95	44.52	714.97

USH 6 AND MAIN ST



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Summerhays Street	400	401	Landing/Turning Space	4	5.67	0.05	0.9	0.1% to 2.0%				
Summerhays Street	400	416	Landing/Turning Space	4	5.00	-0.10	-2.0	0.1% to 2.0%				
Summerhays Street	400	417	Landing/Turning Space	4	6.70	-0.17	-2.5	0.1% to 2.0%				
Summerhays Street	401	402	Ramp Running Slope	4	20.00	1.63	8.1	0.5% to 8.3%				
Summerhays Street	401	406	Landing/Turning Space	4	5.00	-0.06	-1.2	0.1% to 2.0%				
Summerhays Street	402	403	Landing/Turning Space	4	5.00	0.16	3.2	0.1% to 2.0%				
Summerhays Street	402	405	Ramp Cross Slope	4	5.00	0.08	1.6	0.1% to 2.0%				
Summerhays Street	403	404	Landing/Turning Space	4	5.00	0.06	1.2	0.1% to 2.0%				
Summerhays Street	404	405	Landing/Turning Space	4	5.00	-0.14	-2.8	0.1% to 2.0%				
Summerhays Street	405	406	Ramp Running Slope	4	20.00	-1.77	-8.8	0.5% to 8.3%				
Summerhays Street	406	407	Landing/Turning Space	4	1.00	-0.02	-2.0	0.1% to 2.0%				
Summerhays Street	407	408	Ramp Running Slope	4	5.51	-0.25	-4.5	0.5% to 8.3%				
Summerhays Street	407	416	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Summerhays Street	408	409	Ramp Running Slope	4	5.34	-0.25	-4.7	0.5% to 8.3%				
Summerhays Street	408	415	Ramp Cross Slope	4	5.00	0.06	1.2	0.1% to 2.0%				
Summerhays Street	409	410	Ramp Running Slope	4	2.26	-0.10	-4.4	0.5% to 8.3%				
Summerhays Street	409	414	Ramp Cross Slope	4	5.00	0.08	1.6	0.1% to 2.0%				
Summerhays Street	410	411	Ramp Running Slope	4	4.21	-0.20	-4.8	0.5% to 8.3%				
Summerhays Street	410	413	Ramp Cross Slope	4	5.00	-0.01	-0.2	0.1% to 2.0%				
Summerhays Street	411	412	Match Existing Cross Slope	4	4.42	0.01	0.2					
Summerhays Street	412	413	Ramp Running Slope	4	4.29	0.18	4.2	0.5% to 8.3%				
Summerhays Street	413	414	Ramp Running Slope	4	4.52	0.19	4.2	0.5% to 8.3%				
Summerhays Street	414	415	Ramp Running Slope	4	5.34	0.23	4.3	0.5% to 8.3%				
Summerhays Street	415	416	Ramp Running Slope	4	2.76	0.12	4.3	0.5% to 8.3%				
Summerhays Street	416	417	Landing/Turning Space	4	4.14	-0.07	-1.7	0.1% to 2.0%				

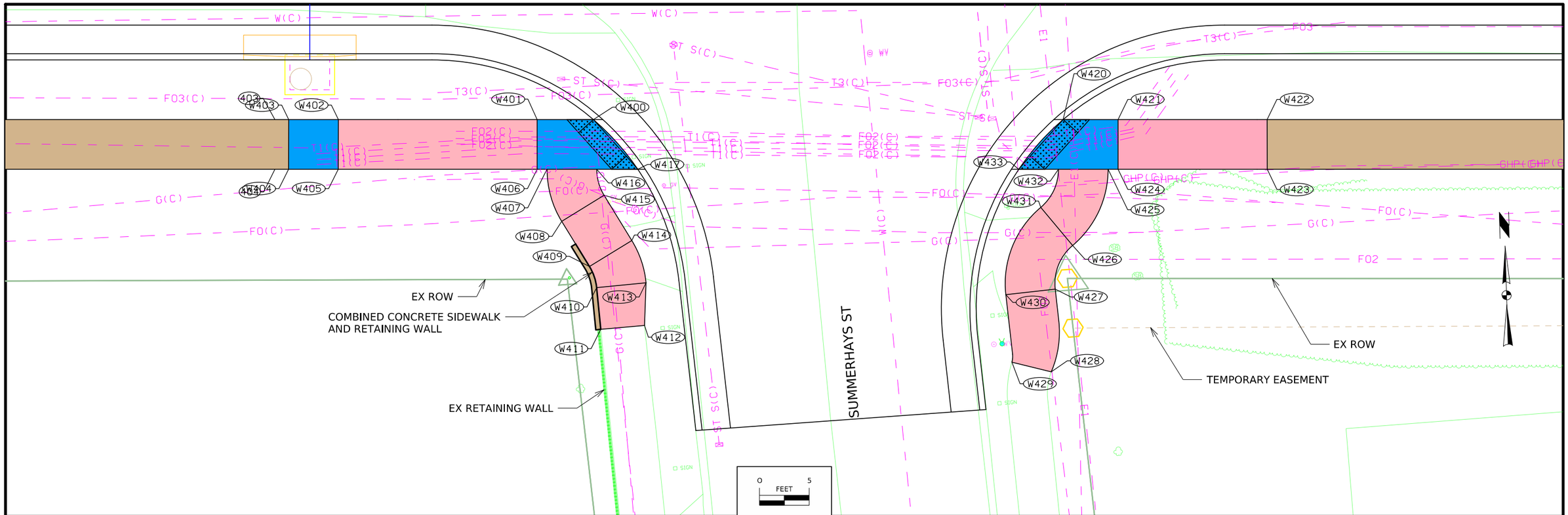
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
1.0	400	175+54.86	28.5	705.16
2.0	401	175+49.18	28.5	705.21
3.0	402	175+29.18	28.5	706.84
4.0	403	175+24.18	28.5	707.00
5.0	404	175+24.17	33.5	707.06
6.0	405	175+29.17	33.5	706.92
7.0	406	175+49.18	33.5	705.15
8.0	407	175+50.18	33.5	705.13
9.0	408	175+51.66	38.74	704.88
10.0	409	175+54.46	43.29	704.63
11.0	410	175+55.17	45.43	704.53
12.0	411	175+55.59	49.6	704.33
13.0	412	175+59.99	49.21	704.34
14.0	413	175+60.15	44.92	704.52
15.0	414	175+58.72	40.67	704.71
16.0	415	175+55.92	36.12	704.94
17.0	416	175+55.18	33.5	705.06
18.0	417	175+59.32	33.5	704.99

USH 6 AND SUMMERHAYS ST



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Summerhays Street	420	421	Landing/Turning Space	4	5.53	0.07	1.3	0.1% to 2.0%				
Summerhays Street	420	432	Landing/Turning Space	4	5.00	0.11	2.2	0.1% to 2.0%				
Summerhays Street	420	433	Landing/Turning Space	4	6.70	0.10	1.5	0.1% to 2.0%				
Summerhays Street	421	422	Ramp Running Slope	4	15.00	0.32	2.1	0.5% to 8.3%				
Summerhays Street	421	424	Landing/Turning Space	4	5.00	0.04	0.8	0.1% to 2.0%				
Summerhays Street	422	423	Ramp Cross Slope	4	5.00	-0.08	-1.6	0.1% to 2.0%				
Summerhays Street	423	424	Ramp Running Slope	4	15.00	-0.19	-1.3	0.5% to 8.3%				
Summerhays Street	424	425	Landing/Turning Space	4	1.00	-0.01	-1.0	0.1% to 2.0%				
Summerhays Street	425	426	Ramp Running Slope	4	8.74	-0.31	-3.5	0.5% to 8.3%				
Summerhays Street	425	432	Landing/Turning Space	4	5.00	-0.02	-0.4	0.1% to 2.0%				
Summerhays Street	426	427	Ramp Running Slope	4	4.93	-0.17	-3.4	0.5% to 8.3%				
Summerhays Street	426	431	Ramp Cross Slope	4	5.00	0.15	3.0	0.1% to 2.0%				
Summerhays Street	427	428	Ramp Running Slope	4	8.47	-0.30	-3.5	0.5% to 8.3%				
Summerhays Street	427	430	Ramp Cross Slope	4	5.00	0.01	0.2	0.1% to 2.0%				
Summerhays Street	428	429	Match Existing Cross Slope	4	4.08	0.08	2.0					
Summerhays Street	429	430	Ramp Running Slope	4	6.83	0.23	3.4	0.5% to 8.3%				
Summerhays Street	430	431	Ramp Running Slope	4	9.85	0.31	3.1	0.5% to 8.3%				
Summerhays Street	431	432	Ramp Running Slope	4	4.36	0.14	3.2	0.5% to 8.3%				
Summerhays Street	432	433	Landing/Turning Space	4	4.00	-0.01	-0.2	0.1% to 2.0%				

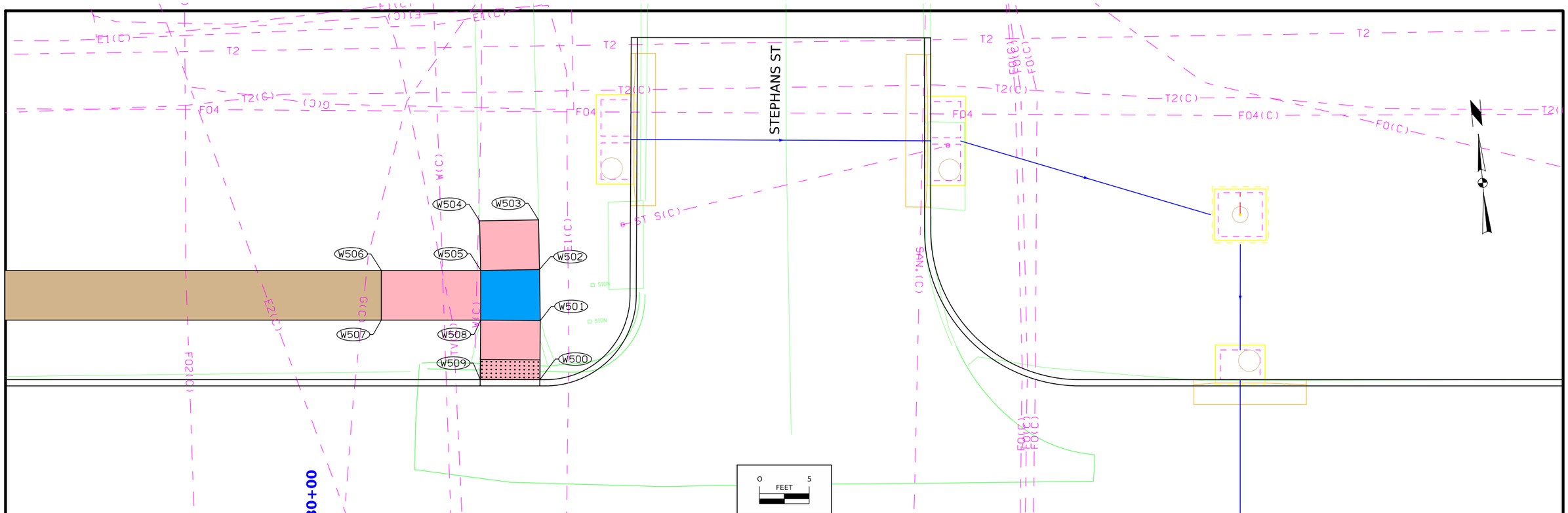
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
17.0	416	175+55.18	33.5	705.06
18.0	417	175+59.32	33.5	704.99
19.0	420	176+02.12	28.5	704.01
20.0	421	176+07.65	28.5	704.10
21.0	422	176+22.65	28.5	704.42
22.0	423	176+22.65	33.5	704.34
23.0	424	176+07.65	33.5	704.15
24.0	425	176+06.65	33.5	704.14
25.0	426	176+03.08	41.16	703.83
26.0	427	176+01.32	45.55	703.66
27.0	428	176+00.92	53.88	703.36
28.0	429	175+96.96	52.9	703.44
29.0	430	175+96.35	46.12	703.67
30.0	431	175+99.86	37.33	703.98
31.0	432	176+01.68	33.5	704.12
32.0	433	175+97.65	33.5	704.11

USH 6 AND SUMMERHAYS ST



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Stephens Street	500	501	Ramp Running Slope	4	5.95	0.22	3.7	0.5% to 8.3%				
Stephens Street	500	509	Crosswalk Cross Slope - No Yield Condition	4	6.00	-0.03	-0.5	0.0% to 5.0%				
Stephens Street	501	502	Landing/Turning Space	4	5.15	0.08	1.6	0.1% to 2.0%				
Stephens Street	501	508	Landing/Turning Space	4	6.00	0.06	1.0	0.1% to 2.0%				
Stephens Street	502	503	Ramp Running Slope	4	5.00	0.30	6.0	0.5% to 8.3%				
Stephens Street	502	505	Landing/Turning Space	4	5.91	0.06	1.0	0.1% to 2.0%				
Stephens Street	503	504	Match Existing Cross Slope	4	5.94	0.08	1.3	0.0% to 5.0%				
Stephens Street	504	505	Ramp Running Slope	4	5.00	-0.32	-6.4	0.5% to 8.3%				
Stephens Street	505	506	Ramp Running Slope	4	10.00	0.23	2.3	0.5% to 8.3%				
Stephens Street	505	508	Landing/Turning Space	4	5.00	-0.08	-1.6	0.1% to 2.0%				
Stephens Street	506	507	Ramp Cross Slope	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Stephens Street	507	508	Ramp Running Slope	4	10.00	-0.24	-2.4	0.5% to 8.3%				
Stephens Street	508	509	Ramp Running Slope	4	6.00	-0.31	-5.2	0.5% to 8.3%				

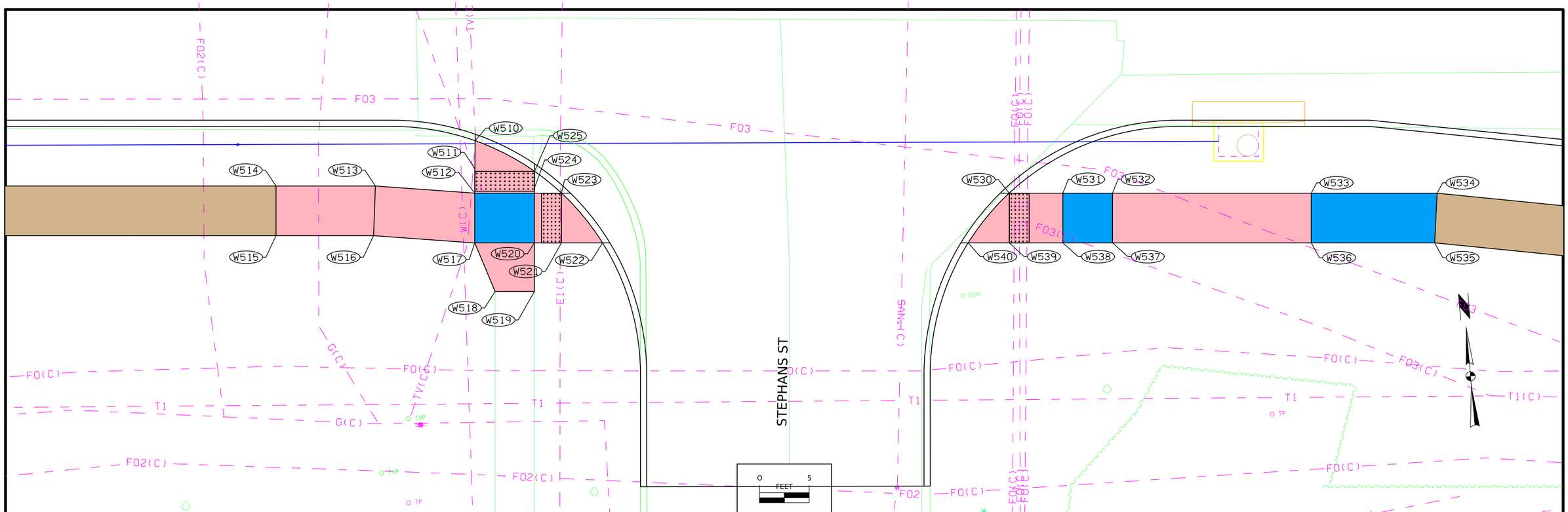
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
1.0	500	180+22.99	-22.48	701.47
2.0	501	180+23.03	-28.45	701.69
3.0	502	180+22.95	-33.6	701.77
4.0	503	180+22.86	-38.6	702.07
5.0	504	180+16.92	-38.5	702.15
6.0	505	180+17.05	-33.5	701.83
7.0	506	18+07.03	-33.5	702.06
8.0	507	18+07.03	-28.5	701.99
9.0	508	180+17.03	-28.5	701.75
10.0	509	180+17.02	-22.48	701.44

USH 6 AND STEPHANS ST
(NORTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Stephens Street	510	511	Ramp Running Slope	4	3.07	0.05	1.6	0.5% to 8.3%				
Stephens Street	510	525	Ramp Cross Slope	4	6.71	0.04	0.6	0.1% to 2.0%				
Stephens Street	511	512	Ramp Running Slope	4	2.20	0.05	2.3	0.5% to 8.3%				
Stephens Street	511	525	Ramp Cross Slope	4	6.00	-0.01	-0.2	0.1% to 2.0%				
Stephens Street	512	513	Ramp Running Slope	4	10.03	0.36	3.6	0.5% to 8.3%				
Stephens Street	512	524	Landing/Turning Space	4	6.00	-0.04	-0.7	0.1% to 2.0%				
Stephens Street	512	517	Landing/Turning Space	4	5.00	0.06	1.2	0.1% to 2.0%				
Stephens Street	513	514	Ramp Running Slope	4	10.00	0.05	0.5	0.5% to 8.3%				
Stephens Street	513	516	Ramp Cross Slope	4	5.00	-0.22	-4.4	0.1% to 2.0%				
Stephens Street	514	515	Ramp Cross Slope	4	5.00	0.09	1.8	0.1% to 2.0%				
Stephens Street	515	516	Ramp Running Slope	4	9.82	-0.36	-3.7	0.5% to 8.3%				
Stephens Street	516	517	Ramp Running Slope	4	10.20	-0.08	-0.8	0.5% to 8.3%				
Stephens Street	517	518	Ramp Running Slope	4	5.30	-0.11	-2.1	0.5% to 8.3%				
Stephens Street	517	520	Landing/Turning Space	4	6.00	-0.03	-0.5	0.1% to 2.0%				
Stephens Street	518	519	Match Existing Cross Slope	4	3.95	0.03	0.8					
Stephens Street	519	520	Ramp Running Slope	4	4.89	0.05	1.0	0.5% to 8.3%				
Stephens Street	520	521	Ramp Running Slope	4	2.73	-0.02	-0.7	0.5% to 8.3%				
Stephens Street	520	524	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Stephens Street	521	522	Ramp Running Slope	4	4.12	-0.02	-0.5	0.5% to 8.3%				
Stephens Street	521	523	Ramp Cross Slope	4	5.00	-0.06	-1.2	0.1% to 2.0%				
Stephens Street	522	523	Ramp Cross Slope	4	6.49	-0.04	-0.6	0.1% to 2.0%				
Stephens Street	523	524	Ramp Running Slope	4	2.71	0.01	0.4	0.5% to 8.3%				
Stephens Street	524	525	Ramp Running Slope	4	2.18	-0.02	-0.9	0.5% to 8.3%				

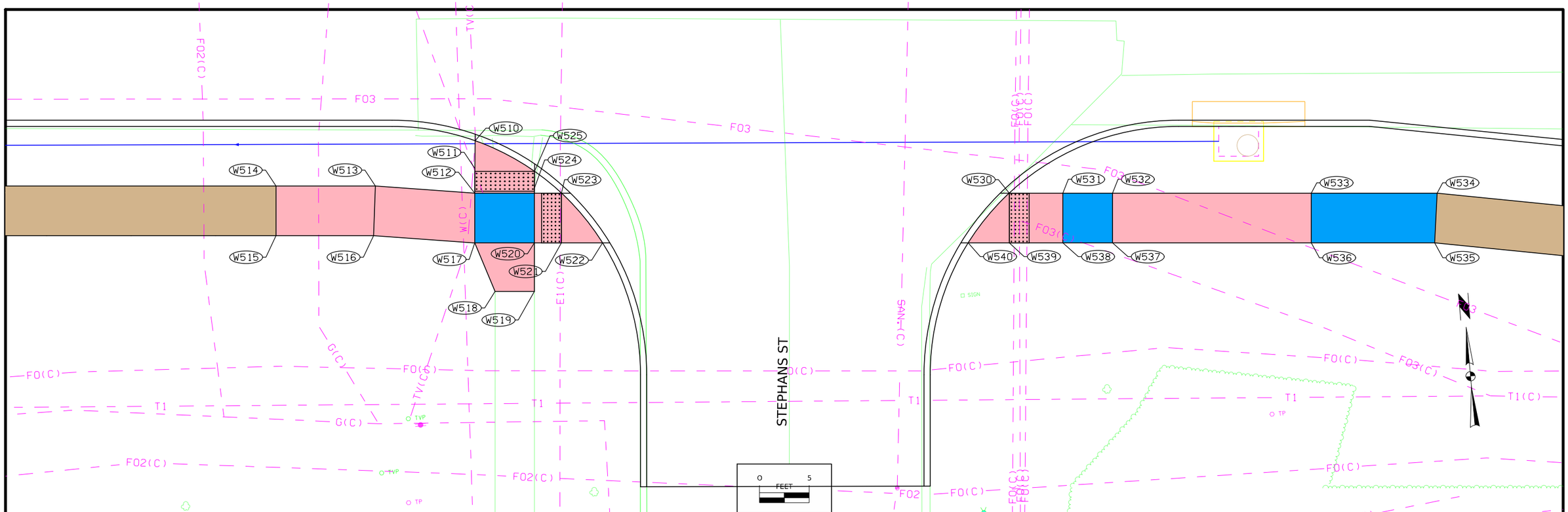
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
11.0	510	180+16.63	23.87	701.33
12.0	511	180+16.61	26.61	701.38
13.0	512	180+16.59	26.21	701.43
14.0	513	180+06.59	28.5	701.79
15.0	514	179+96.59	28.5	701.84
16.0	515	179+96.59	33.5	701.93
17.0	516	180+06.41	33.5	701.57
18.0	517	180+16.59	34.21	701.49
19.0	518	180+18.62	39	701.38
20.0	519	180+22.59	39	701.41
21.0	520	180+22.59	34.21	701.46
22.0	521	180+25.31	34.21	701.44
23.0	522	180+29.45	34.21	701.42
24.0	523	180+25.30	29.22	701.38
25.0	524	180+22.61	28.71	701.39
26.0	525	180+22.61	26.98	701.37

USH 6 AND STEPHANS ST
(SOUTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Stephens Street	530	531	Ramp Running Slope	4	5.39	0.30	5.6	0.5% to 8.3%				
Stephens Street	530	539	Ramp Cross Slope	4	5.00	0.10	2.0	0.1% to 2.0%				
Stephens Street	530	540	Ramp Cross Slope	4	6.49	-0.11	-1.7	0.1% to 2.0%				
Stephens Street	531	532	Landing/Turning Space	4	5.00	0.09	1.8	0.1% to 2.0%				
Stephens Street	531	538	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Stephens Street	532	533	Ramp Running Slope	4	20.00	1.00	5.0	0.5% to 8.3%				
Stephens Street	532	537	Landing/Turning Space	4	5.00	0.05	1.0	0.1% to 2.0%				
Stephens Street	533	534	Sidewalk Running Slope	4	12.67	0.15	1.2	0.0% to 5.0%				
Stephens Street	533	536	Ramp Cross Slope	4	5.00	0.10	2.0	0.1% to 2.0%				
Stephens Street	534	535	Sidewalk Cross Slope	4	5.00	0.10	2.0	0.1% to 2.0%				
Stephens Street	535	536	Sidewalk Running Slope	4	12.42	-0.15	-1.2	0.0% to 5.0%				
Stephens Street	536	537	Ramp Running Slope	4	20.00	-1.05	-5.3	0.5% to 8.3%				
Stephens Street	537	538	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Stephens Street	538	539	Ramp Running Slope	4	5.39	-0.27	-5.0	0.5% to 8.3%				
Stephens Street	539	540	Ramp Running Slope	4	4.19	-0.21	-5.0	0.5% to 8.3%				

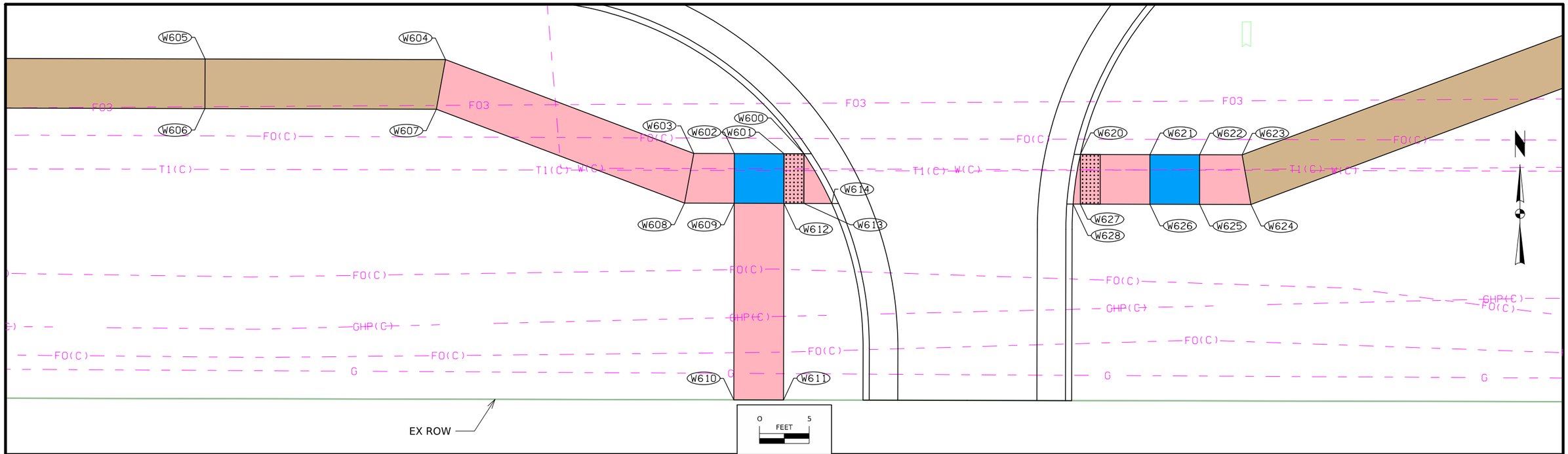
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
27.0	530	180+70.38	29.21	701.87
28.0	531	180+75.77	29.21	702.17
29.0	532	180+80.77	29.21	702.26
30.0	533	181+00.77	29.21	703.26
31.0	534	181+13.44	29.21	703.41
32.0	535	181+13.19	34.21	703.51
33.0	536	181+00.77	34.21	703.36
34.0	537	180+80.77	34.21	702.31
35.0	538	180+75.77	34.21	702.24
36.0	539	180+70.38	34.21	701.97
37.0	540	180+66.25	34.21	701.76

USH 6 AND STEPHANS ST (SOUTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Entrance	600	601	Ramp Running Slope	4	2.00	0.01	0.5	0.5% to 8.3%				
Entrance	600	613	Ramp Cross Slope	4	5.00	-0.04	-0.8	0.1% to 2.0%				
Entrance	600	614	Ramp Cross Slope		5.74	-0.07	-1.2	0.1% to 2.0%				
Entrance	601	602	Landing/Turning Space	4	5.00	0.05	1.0	0.1% to 2.0%				
Entrance	601	612	Landing/Turning Space	4	5.00	-0.02	-0.4	0.1% to 2.0%				
Entrance	602	603	Ramp Running Slope	4	4.09	0.17	4.2	0.5% to 8.3%				
Entrance	602	609	Landing/Turning Space	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Entrance	603	604	Ramp Running Slope	4	26.71	1.01	3.8	0.5% to 8.3%				
Entrance	603	608	Ramp Cross Slope	4	5.08	-0.02	-0.4	0.1% to 2.0%				
Entrance	604	605	Sidewalk Running Slope	4	24.20	-0.18	-0.7	0.0% to 5.0%				
Entrance	604	607	Ramp Cross Slope	4	5.08	0.10	2.0	0.1% to 2.0%				
Entrance	605	606	Sidewalk Cross Slope	4	5.00	0.10	2.0	0.1% to 2.0%				
Entrance	606	607	Sidewalk Running Slope	4	23.29	0.18	0.8	0.0% to 5.0%				
Entrance	607	608	Ramp Running Slope	4	26.71	-1.13	-4.2	0.5% to 8.3%				
Entrance	608	609	Ramp Running Slope	4	5.00	-0.20	-4.0	0.5% to 8.3%				
Entrance	609	610	Ramp Running Slope	4	19.80	-0.59	-3.0	0.5% to 8.3%				
Entrance	609	612	Landing/Turning Space	4	5.00	-0.02	-0.4	0.1% to 2.0%				
Entrance	610	611	Ramp Cross Slope	4	5.00	-0.02	-0.4	0.1% to 2.0%				
Entrance	611	612	Ramp Running Slope	4	19.80	0.59	3.0	0.5% to 8.3%				
Entrance	612	613	Ramp Running Slope	4	2.00	-0.03	-1.5	0.5% to 8.3%				
Entrance	613	614	Ramp Running Slope	4	2.81	-0.03	-1.1	0.5% to 8.3%				
Entrance	620	621	Ramp Running Slope	4	7.00	0.35	5.0	0.5% to 8.3%				
Entrance	620	627	Ramp Cross Slope	4	5.00	-0.02	-0.4	0.1% to 2.0%				
Entrance	620	628	Ramp Cross Slope	4	5.05	-0.05	-1.0	0.1% to 2.0%				
Entrance	621	622	Landing/Turning Space	4	5.00	0.08	1.6	0.1% to 2.0%				
Entrance	621	626	Landing/Turning Space	4	5.00	-0.02	-0.4	0.1% to 2.0%				
Entrance	622	623	Ramp Running Slope	4	4.27	0.17	4.0	0.5% to 8.3%				
Entrance	622	625	Landing/Turning Space	4	5.00	-0.02	-0.4	0.1% to 2.0%				
Entrance	623	624	Ramp Cross Slope	4	5.08	0.02	0.4	0.1% to 2.0%				
Entrance	624	625	Ramp Running Slope	4	5.18	-0.21	-4.1	0.5% to 8.3%				
Entrance	625	626	Landing/Turning Space	4	5.00	-0.08	-1.6	0.1% to 2.0%				
Entrance	626	627	Ramp Running Slope	4	7.00	-0.35	-5.0	0.5% to 8.3%				
Entrance	627	628	Ramp Running Slope	4	0.73	-0.03	-4.1	0.5% to 8.3%				

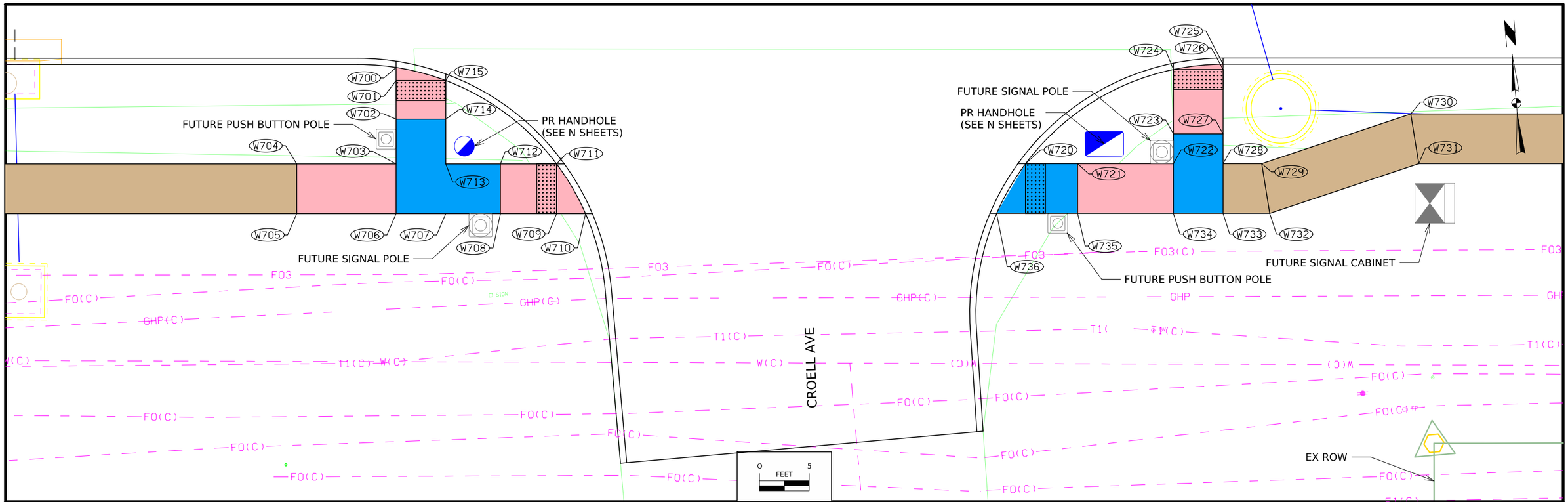
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
1.0	600	184+50.80	49.9	705.71
2.0	601	184+48.80	49.9	705.72
3.0	602	184+43.80	49.9	705.77
4.0	603	184+39.71	49.9	705.94
5.0	604	184+14.71	40.5	706.95
6.0	605	183+50.51	40.5	706.77
7.0	606	183+50.51	45.5	706.87
8.0	607	184+13.80	45.5	707.05
9.0	608	184+38.80	54.9	705.92
10.0	609	184+43.80	54.9	705.72
11.0	610	184+43.80	74.71	701.13
12.0	611	184+48.80	74.71	705.11
13.0	612	184+48.80	54.9	705.70
14.0	613	184+50.80	54.9	705.67
15.0	614	184+53.61	54.9	705.64
16.0	620	184+78.62	49.9	706.11
17.0	621	184+85.62	49.9	706.46
18.0	622	184+90.62	49.9	706.54
19.0	623	184+94.89	49.9	706.71
20.0	624	184+95.77	54.9	706.73
21.0	625	184+90.62	54.9	706.52
22.0	626	184+85.62	54.9	706.44
23.0	627	184+78.62	54.9	706.09
24.0	628	184+77.89	54.9	706.06

USH 6
STA 184+67



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Croell Avenue	700	701	Ramp Running Slope	4	1.32	0.07	5.3	0.5% to 8.3%				
Croell Avenue	700	715	Ramp Cross Slope	4	5.17	0.06	1.2	0.1% to 2.0%				
Croell Avenue	701	702	Ramp Running Slope	4	3.88	0.24	6.2	0.5% to 8.3%				
Croell Avenue	701	715	Ramp Cross Slope	4	5.00	-0.01	-0.2	0.1% to 2.0%				
Croell Avenue	702	703	Landing/Turning Space	4	4.50	0.07	1.6	0.1% to 2.0%				
Croell Avenue	702	714	Landing/Turning Space	4	5.00	0.01	0.2	0.1% to 2.0%				
Croell Avenue	703	704	Ramp Running Slope	4	10.00	0.52	5.2	0.5% to 8.3%				
Croell Avenue	703	706	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Croell Avenue	703	713	Landing/Turning Space	4	5.00	-0.02	-0.4	0.1% to 2.0%				
Croell Avenue	704	705	Ramp Cross Slope	4	5.00	0.08	1.6	0.1% to 2.0%				
Croell Avenue	705	706	Ramp Running Slope	4	10.00	-0.53	-5.3	0.5% to 8.3%				
Croell Avenue	706	707	Landing/Turning Space	4	5.00	-0.03	-0.6	0.1% to 2.0%				
Croell Avenue	707	708	Landing/Turning Space	4	5.50	-0.03	-0.5	0.1% to 2.0%				
Croell Avenue	707	713	Landing/Turning Space	4	5.00	-0.06	-1.2	0.1% to 2.0%				
Croell Avenue	708	709	Ramp Running Slope	4	5.65	-0.11	-1.9	0.5% to 8.3%				
Croell Avenue	708	712	Landing/Turning Space	4	5.00	-0.06	-1.2	0.1% to 2.0%				
Croell Avenue	709	710	Ramp Running Slope	4	2.92	-0.01	-0.3	0.5% to 8.3%				
Croell Avenue	709	711	Ramp Cross Slope	4	5.00	-0.06	-1.2	0.1% to 2.0%				
Croell Avenue	710	711	Ramp Cross Slope	4	5.79	-0.05	-0.9	0.1% to 2.0%				
Croell Avenue	711	712	Ramp Running Slope	4	5.65	0.11	1.9	0.5% to 8.3%				
Croell Avenue	712	713	Landing/Turning Space	4	5.50	0.03	0.5	0.1% to 2.0%				
Croell Avenue	713	714	Landing/Turning Space	4	4.50	-0.04	-0.9	0.1% to 2.0%				
Croell Avenue	714	715	Ramp Running Slope	4	3.88	-0.26	-6.7	0.5% to 8.3%				

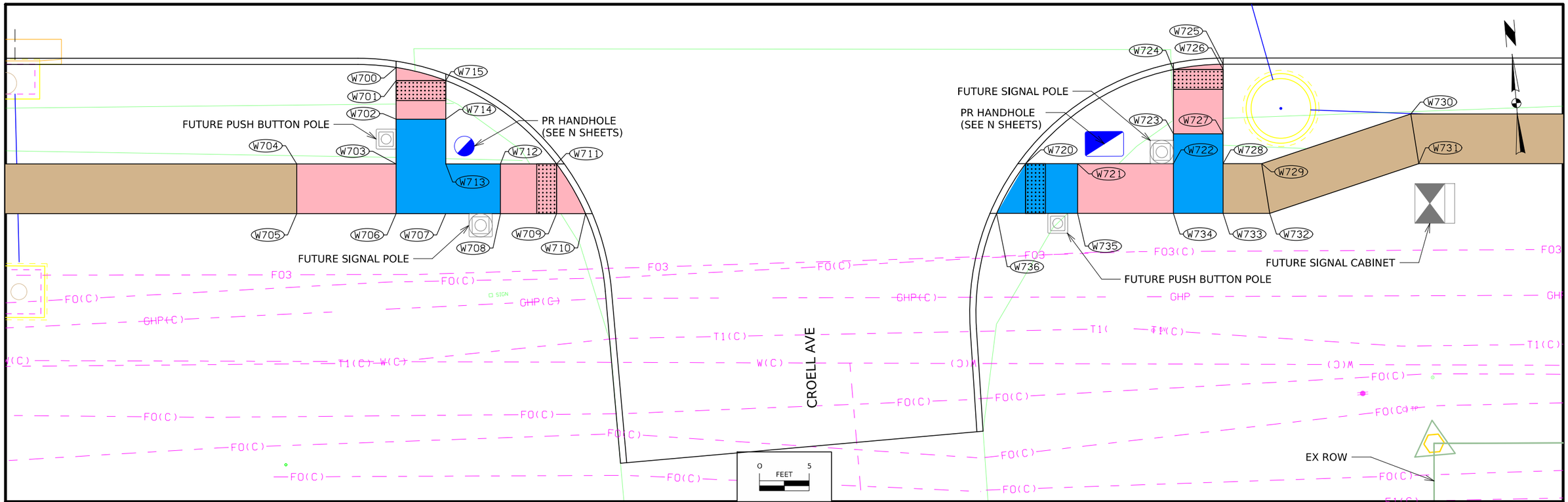
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
1.0	700	188+08.68	22.83	705.25
2.0	701	188+08.68	24.15	705.32
3.0	702	188+08.68	28.03	705.56
4.0	703	188+08.68	32.53	705.63
5.0	704	187+98.68	32.53	706.15
6.0	705	187+98.68	37.53	706.23
7.0	706	188+08.68	37.53	705.70
8.0	707	188+13.68	37.53	705.67
9.0	708	188+19.18	37.53	705.64
10.0	709	188+24.83	37.53	705.53
11.0	710	188+27.74	37.53	705.52
12.0	711	188+24.83	32.53	705.47
13.0	712	188+19.18	32.53	705.58
14.0	713	188+13.68	32.53	705.61
15.0	714	188+13.68	28.03	705.57
16.0	715	188+13.68	24.15	705.31

USH 6 AND CROELL AVE
(SOUTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Croell Avenue	720	736	Landing/Turning Space	4	5.79	0.09	1.6	0.1% to 2.0%				
Croell Avenue	721	722	Ramp Running Slope	4	9.64	0.05	0.5	0.5% to 8.3%				
Croell Avenue	721	735	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Croell Avenue	722	723	Landing/Turning Space	4	3.00	-0.04	-1.3	0.1% to 2.0%				
Croell Avenue	722	728	Landing/Turning Space	4	5.00	0.04	0.8	0.1% to 2.0%				
Croell Avenue	722	734	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Croell Avenue	723	724	Ramp Running Slope	4	6.47	-0.37	-5.7	0.5% to 8.3%				
Croell Avenue	723	727	Landing/Turning Space	4	5.00	0.05	1.0	0.1% to 2.0%				
Croell Avenue	724	725	Ramp Cross Slope	4	5.03	-0.07	-1.4	0.1% to 2.0%				
Croell Avenue	724	726	Ramp Cross Slope	4	5.00	-0.04	-0.8	0.1% to 2.0%				
Croell Avenue	725	726	Ramp Running Slope	4	0.52	0.03	5.8	0.5% to 8.3%				
Croell Avenue	726	727	Ramp Running Slope	4	0.53	0.46	86.8	0.5% to 8.3%				
Croell Avenue	727	728	Landing/Turning Space	4	3.00	0.03	1.0	0.1% to 2.0%				
Croell Avenue	728	729	Sidewalk Running Slope	4	3.89	0.20	5.1	0.0% to 5.0%				
Croell Avenue	728	733	Landing/Turning Space	4	5.00	-0.15	-3.0	0.1% to 2.0%				
Croell Avenue	729	730	Sidewalk Running Slope	4	15.81	-0.40	-2.5	0.0% to 5.0%				
Croell Avenue	729	732	Sidewalk Cross Slope	4	5.07	0.10	2.0	0.1% to 2.0%				
Croell Avenue	730	731	Sidewalk Cross Slope	4	5.07	0.18	3.6	0.1% to 2.0%				
Croell Avenue	731	732	Sidewalk Running Slope	4	15.81	0.32	2.0	0.0% to 5.0%				
Croell Avenue	732	733	Sidewalk Running Slope	4	4.70	-0.25	-5.3	0.0% to 5.0%				
Croell Avenue	733	734	Landing/Turning Space	4	5.00	-0.02	-0.4	0.1% to 2.0%				
Croell Avenue	734	735	Ramp Running Slope	4	14.87	-0.05	-0.3	0.5% to 8.3%				
Croell Avenue	735	736	Ramp Running Slope	4	2.93	-0.04	-1.4	0.5% to 8.3%				

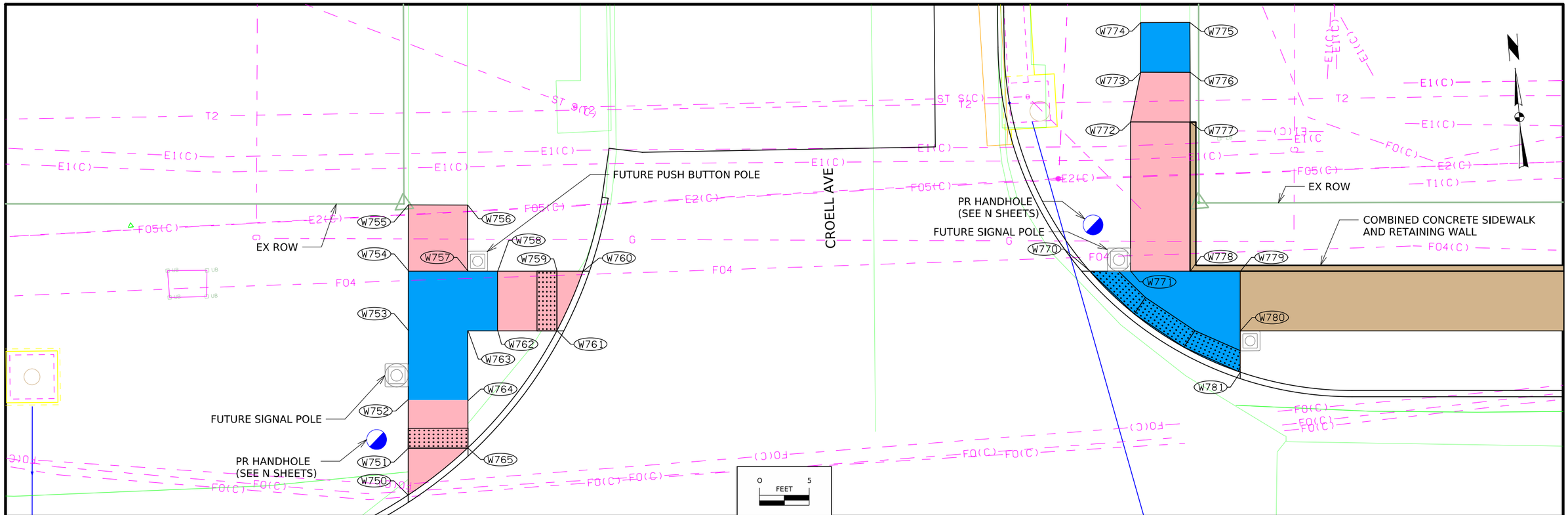
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
17.0	720	188+72.02	32.5	704.25
18.0	721	188+77.25	32.5	704.31
19.0	722	188+86.89	32.5	704.36
20.0	723	188+86.89	29.5	704.32
21.0	724	188+86.89	23.03	703.95
22.0	725	188+91.89	22.5	703.88
23.0	726	188+91.89	23.03	703.91
24.0	727	188+91.89	29.5	704.37
25.0	728	188+91.89	32.5	704.40
26.0	729	188+95.78	32.5	704.60
27.0	730	189+10.78	27.5	704.20
28.0	731	189+11.59	32.5	704.38
29.0	732	188+96.59	37.5	704.70
30.0	733	188+91.89	37.5	704.45
31.0	734	188+86.89	37.5	704.43
32.0	735	188+77.25	37.5	704.38
33.0	736	188+69.09	37.5	704.34

USH 6 AND CROELL AVE
(SOUTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Croell Avenue	750	751	Ramp Running Slope	4	4.63	0.02	0.4	0.5% to 8.3%				
Croell Avenue	750	765	Ramp Cross Slope	4	7.58	-0.08	-1.1	0.1% to 2.0%				
Croell Avenue	751	752	Ramp Running Slope	4	4.83	0.04	0.8	0.5% to 8.3%				
Croell Avenue	751	765	Ramp Cross Slope	4	6.00	-0.10	-1.7	0.1% to 2.0%				
Croell Avenue	752	753	Landing/Turning Space	4	6.00	0.05	0.8	0.1% to 2.0%				
Croell Avenue	753	754	Landing/Turning Space	4	6.00	0.09	1.5	0.1% to 2.0%				
Croell Avenue	753	763	Landing/Turning Space	4	6.00	-0.07	-1.2	0.1% to 2.0%				
Croell Avenue	754	755	Ramp Running Slope	4	6.66	0.28	4.2	0.5% to 8.3%				
Croell Avenue	754	757	Landing/Turning Space	4	6.00	-0.07	-1.2	0.1% to 2.0%				
Croell Avenue	755	756	Match Existing Cross Slope	4	6.00	-0.17	-2.8					
Croell Avenue	756	757	Ramp Running Slope	4	6.66	-0.18	-2.7	0.5% to 8.3%				
Croell Avenue	757	758	Landing/Turning Space	4	3.00	-0.04	-1.3	0.1% to 2.0%				
Croell Avenue	757	763	Landing/Turning Space	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Croell Avenue	758	759	Ramp Running Slope	4	5.97	-0.27	-4.5	0.5% to 8.3%				
Croell Avenue	758	762	Landing/Turning Space	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Croell Avenue	759	760	Ramp Running Slope	4	2.64	-0.12	-4.5	0.5% to 8.3%				
Croell Avenue	759	761	Ramp Cross Slope	4	6.00	-0.05	-0.8	0.1% to 2.0%				
Croell Avenue	760	761	Ramp Cross Slope	4	6.55	0.07	1.1	0.1% to 2.0%				
Croell Avenue	761	762	Ramp Running Slope	4	5.97	0.23	3.9	0.5% to 8.3%				
Croell Avenue	762	763	Landing/Turning Space	4	3.00	0.04	1.3	0.1% to 2.0%				
Croell Avenue	763	764	Landing/Turning Space	4	6.97	-0.07	-1.0	0.1% to 2.0%				
Croell Avenue	764	765	Ramp Running Slope	4	4.83	-0.05	-1.0	0.5% to 8.3%				

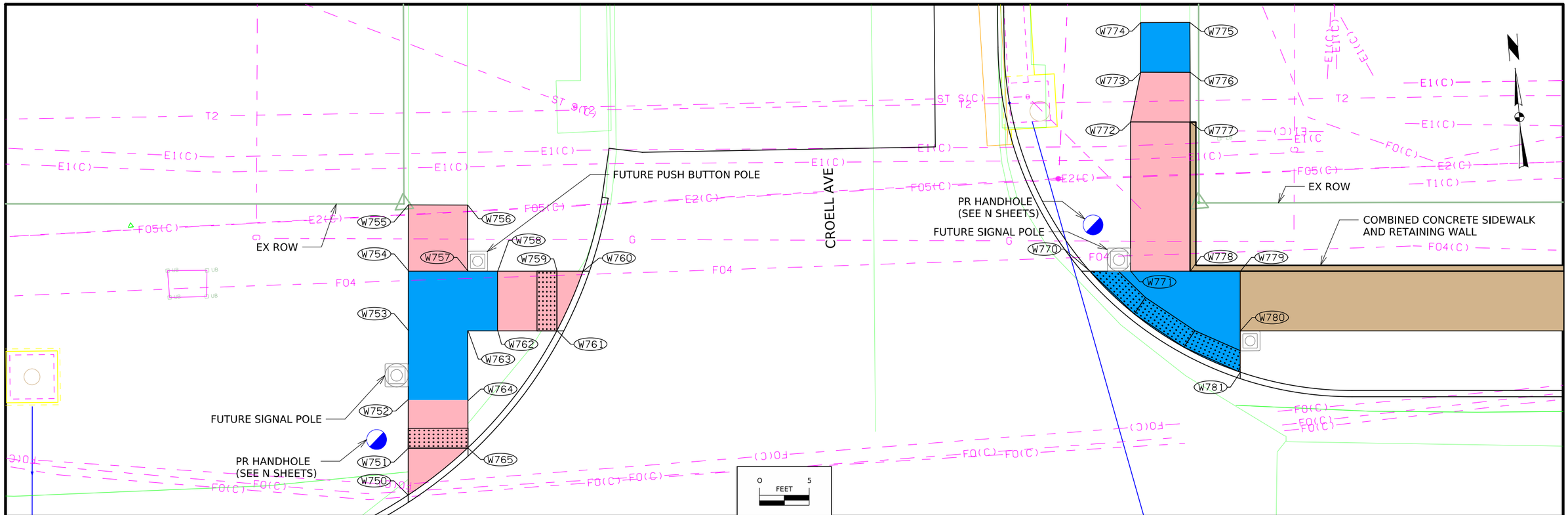
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
34.0	750	188+08.18	-29.96	705.17
35.0	751	188+08.18	-34.67	705.19
36.0	752	188+08.18	-39.5	705.23
37.0	753	188+08.18	-46.47	705.28
38.0	754	188+08.18	-52.47	705.37
39.0	755	188+08.18	-59.13	705.65
40.0	756	188+14.15	-59.11	705.48
41.0	757	188+14.15	-52.47	705.30
42.0	758	188+17.16	-52.47	705.26
43.0	759	188+23.13	-52.47	704.99
44.0	760	188+25.75	-52.47	704.87
45.0	761	188+23.13	-46.47	704.94
46.0	762	188+17.16	-46.47	705.17
47.0	763	188+14.15	-46.47	705.21
48.0	764	188+14.17	-39.5	705.14
49.0	765	188+14.15	-34.67	705.09

USH 6 AND CROELL AVE
(NORTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Croell Avenue	770	771	Landing/Turning Space	4	4.09	0.02	0.5	0.1% to 2.0%				
Croell Avenue	770	781	Landing/Turning Space	4	18.40	-0.08	-0.4	0.1% to 2.0%				
Croell Avenue	771	772	Ramp Running Slope	4	15.01	1.72	11.5	0.5% to 8.3%				
Croell Avenue	771	778	Landing/Turning Space	4	6.00	0.03	0.5	0.1% to 2.0%				
Croell Avenue	772	773	Ramp Running Slope	4	5.09	0.70	13.8	0.5% to 8.3%				
Croell Avenue	772	777	Ramp Cross Slope	4	6.00	0.05	0.8	0.1% to 2.0%				
Croell Avenue	773	774	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Croell Avenue	773	776	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Croell Avenue	774	775	Match Existing Cross Slope	4	5.00	0.06	1.2					
Croell Avenue	775	776	Landing/Turning Space	4	5.00	-0.08	-1.6	0.1% to 2.0%				
Croell Avenue	776	777	Ramp Running Slope	4	5.00	-0.70	-14.0	0.5% to 8.3%				
Croell Avenue	778	777	Ramp Running Slope	4	15.00	1.74	11.6	0.5% to 8.3%				
Croell Avenue	778	779	Landing/Turning Space	4	5.00	0.02	0.4	0.1% to 2.0%				
Croell Avenue	779	780	Landing/Turning Space	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Croell Avenue	780	781	Landing/Turning Space	4	4.14	-0.06	-1.4	0.1% to 2.0%				

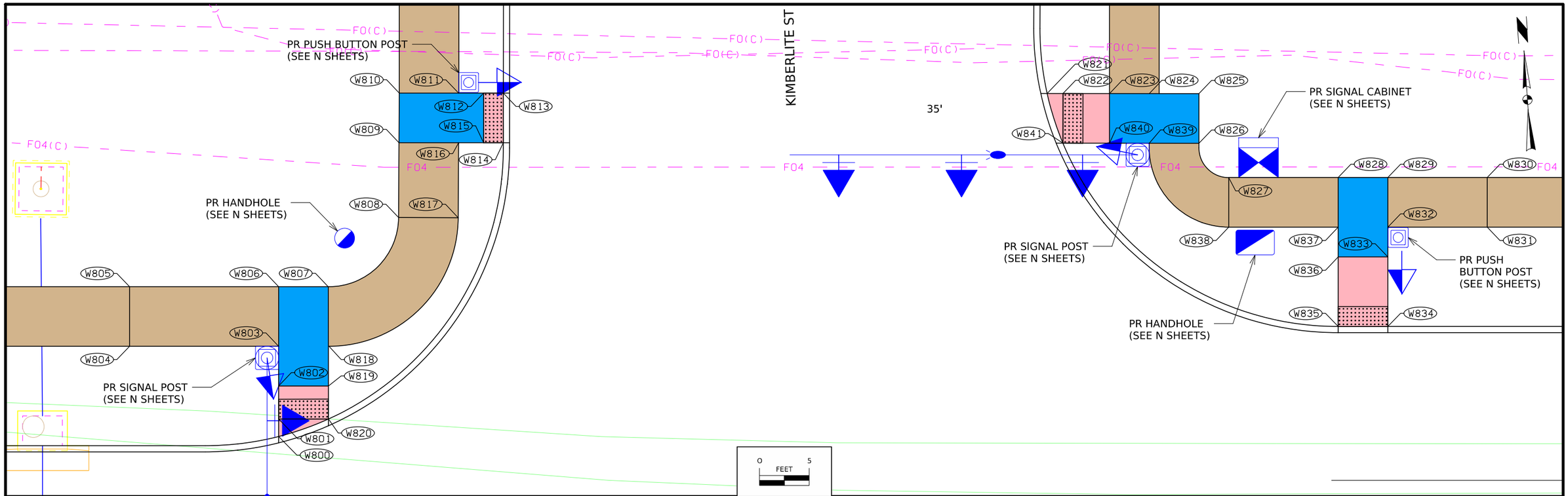
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
50.0	770	188+76.75	-52.47	703.90
51.0	771	188+80.86	-52.47	703.92
52.0	772	188+80.87	-67.48	705.64
53.0	773	188+81.87	-72.47	706.34
54.0	774	188+81.87	-77.46	706.41
55.0	775	188+86.83	-77.48	706.47
56.0	776	188+86.85	-72.48	706.39
57.0	777	188+86.85	-67.48	705.69
58.0	778	188+86.86	-52.47	703.95
59.0	779	188+91.89	-52.47	703.97
60.0	780	188+91.89	-46.46	703.88
61.0	781	188+91.89	-42.32	703.82

USH 6 AND CROELL AVE
(NORTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Kimberlite Street	800	801	Ramp Running Slope	4	1.76	0.02	1.1	0.5% to 8.3%				
Kimberlite Street	800	820	Ramp Cross Slope	4	5.31	-0.04	-0.8	0.1% to 2.0%				
Kimberlite Street	801	802	Ramp Running Slope	4	2.33	0.17	7.3	0.5% to 8.3%				
Kimberlite Street	801	820	Ramp Cross Slope	4	5.00	-0.06	-1.2	0.1% to 2.0%				
Kimberlite Street	802	803	Landing/Turning Space	4	5.00	0.06	1.2	0.1% to 2.0%				
Kimberlite Street	802	819	Landing/Turning Space	4	4.00	-0.07	-1.7	0.1% to 2.0%				
Kimberlite Street	803	804	Sidewalk Running Slope	4	15.00	0.79	5.3	0.0% to 5.0%				
Kimberlite Street	803	806	Landing/Turning Space	4	6.00	0.09	1.5	0.1% to 2.0%				
Kimberlite Street	803	818	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Kimberlite Street	804	805	Sidewalk Cross Slope	4	6.00	0.09	1.5	0.1% to 2.0%				
Kimberlite Street	805	806	Sidewalk Running Slope	4	15.00	-0.79	-5.3	0.0% to 5.0%				
Kimberlite Street	806	807	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Kimberlite Street	807	808	Sidewalk Running Slope	4	10.96	-0.29	-2.6	0.0% to 5.0%				
Kimberlite Street	807	818	Landing/Turning Space	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Kimberlite Street	808	809	Sidewalk Running Slope	4	7.55	-0.19	-2.5	0.0% to 5.0%				
Kimberlite Street	808	817	Sidewalk Cross Slope	4	6.00	-0.15	-2.5	0.1% to 2.0%				
Kimberlite Street	809	810	Landing/Turning Space	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Kimberlite Street	809	816	Landing/Turning Space	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Kimberlite Street	810	811	Landing/Turning Space	4	6.00	-0.09	-1.5	0.1% to 2.0%				
Kimberlite Street	811	812	Landing/Turning Space	4	2.50	-0.04	-1.6	0.1% to 2.0%				
Kimberlite Street	811	816	Landing/Turning Space	4	5.00	0.05	1.0	0.1% to 2.0%				
Kimberlite Street	812	813	Ramp Running Slope	4	2.00	-0.10	-5.0	0.5% to 8.3%				
Kimberlite Street	812	815	Landing/Turning Space	4	5.00	0.05	1.0	0.1% to 2.0%				
Kimberlite Street	813	814	Ramp Cross Slope	4	5.00	0.05	1.0	0.1% to 2.0%				
Kimberlite Street	814	815	Ramp Running Slope	4	2.00	0.10	5.0	0.5% to 8.3%				
Kimberlite Street	815	816	Landing/Turning Space	4	2.50	0.04	1.6	0.1% to 2.0%				
Kimberlite Street	816	817	Sidewalk Running Slope	4	7.55	0.13	1.7	0.0% to 5.0%				
Kimberlite Street	817	818	Sidewalk Running Slope	4	20.35	0.35	1.7	0.0% to 5.0%				
Kimberlite Street	818	819	Landing/Turning Space	4	4.00	-0.06	-1.5	0.1% to 2.0%				
Kimberlite Street	819	820	Ramp Running Slope	4	2.33	-0.16	-6.9	0.5% to 8.3%				

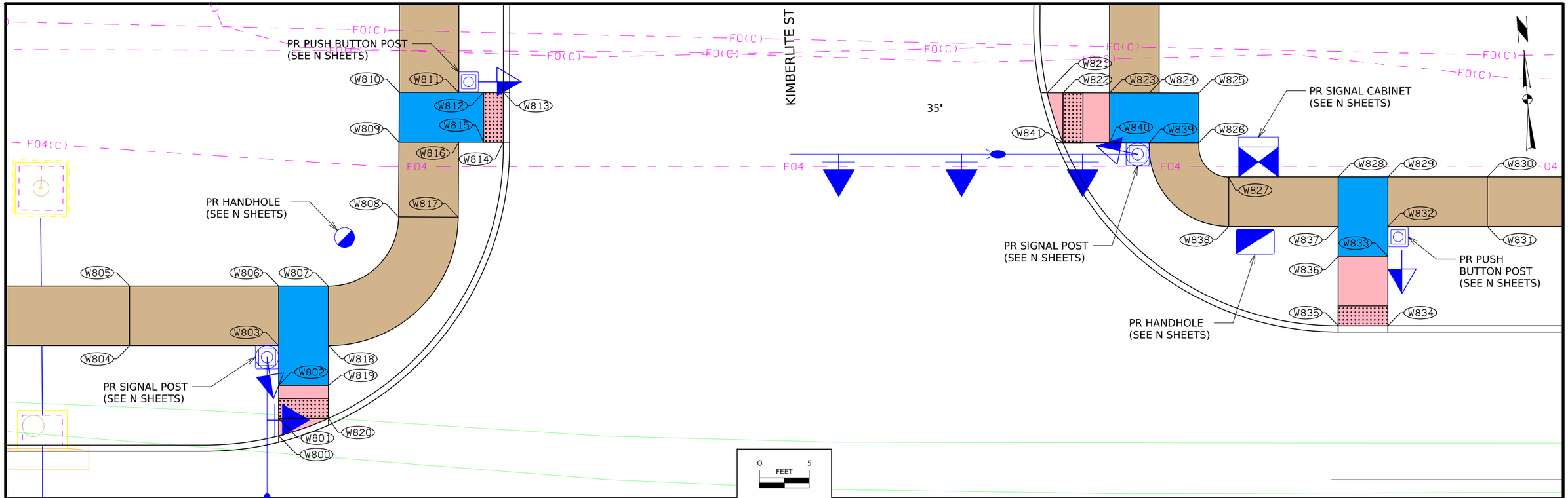
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
1.0	800	194+70.09	-23.42	694.36
2.0	801	194+70.09	-25.17	694.38
3.0	802	194+70.09	-28.5	694.55
4.0	803	194+70.09	-32.5	694.61
5.0	804	194+55.09	-32.5	695.40
6.0	805	194+55.09	-38.5	695.49
7.0	806	194+70.09	-38.5	694.70
8.0	807	194+75.10	-38.5	694.63
9.0	808	194+82.16	-45.47	694.34
10.0	809	194+82.20	-53	694.15
11.0	810	194+82.23	-58	694.10
12.0	811	194+88.23	-57.97	694.01
13.0	812	194+90.72	-58	693.97
14.0	813	194+92.71	-58	693.87
15.0	814	194+92.70	-53	693.92
16.0	815	194+90.72	-53	694.02
17.0	816	194+88.20	-52.97	694.06
18.0	817	194+88.16	-45.44	694.19
19.0	818	194+75.10	-32.5	694.54
20.0	819	194+75.10	-28.5	694.48
21.0	820	194+75.10	-25.17	694.32

USH 6 AND KIMBERLITE ST
(NORTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Endirg Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Kimberlite Street	821	822	Ramp Running Slope	4	1.60	0.08	5.0	0.5% to 8.3%				
Kimberlite Street	821	841	Ramp Cross Slope	4	5.25	0.04	0.8	0.1% to 2.0%				
Kimberlite Street	822	823	Ramp Running Slope	4	4.67	0.25	5.4	0.5% to 8.3%				
Kimberlite Street	822	841	Ramp Cross Slope	4	5.00	-0.04	-0.8	0.1% to 2.0%				
Kimberlite Street	823	824	Landing/Turning Space	4	4.00	0.06	1.5	0.1% to 2.0%				
Kimberlite Street	823	840	Landing/Turning Space	4	5.00	-0.04	-0.8	0.1% to 2.0%				
Kimberlite Street	824	825	Landing/Turning Space	4	5.00	0.08	1.6	0.1% to 2.0%				
Kimberlite Street	824	839	Landing/Turning Space	4	5.00	-0.04	-0.8	0.1% to 2.0%				
Kimberlite Street	825	826	Landing/Turning Space	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Kimberlite Street	826	827	Sidewalk Running Slope	4	4.62	-0.23	-5.0	0.0% to 5.0%				
Kimberlite Street	826	839	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Kimberlite Street	827	828	Sidewalk Running Slope	4	11.01	-0.50	-4.5	0.0% to 5.0%				
Kimberlite Street	827	838	Sidewalk Cross Slope	4	5.00	-0.24	-4.8	0.1% to 2.0%				
Kimberlite Street	828	829	Landing/Turning Space	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Kimberlite Street	828	837	Landing/Turning Space	4	5.00	-0.08	-1.6	0.1% to 2.0%				
Kimberlite Street	829	830	Sidewalk Running Slope	4	10.00	0.28	2.8	0.0% to 5.0%				
Kimberlite Street	829	832	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Kimberlite Street	830	831	Sidewalk Cross Slope	4	5.00	-0.08	-1.6	0.1% to 2.0%				
Kimberlite Street	831	832	Sidewalk Running Slope	4	10.00	-0.27	-2.7	0.0% to 5.0%				
Kimberlite Street	832	833	Landing/Turning Space	4	3.00	-0.05	-1.7	0.1% to 2.0%				
Kimberlite Street	832	837	Landing/Turning Space	4	5.00	0.04	0.8	0.1% to 2.0%				
Kimberlite Street	833	834	Ramp Running Slope	4	7.00	-0.43	-6.1	0.5% to 8.3%				
Kimberlite Street	833	836	Landing/Turning Space	4	5.00	0.05	1.0	0.1% to 2.0%				
Kimberlite Street	834	835	Crosswalk Cross Slope - No Yield Condition	4	5.00	0.04	0.8	0.0% to 5.0%				
Kimberlite Street	835	836	Ramp Running Slope	4	7.00	0.44	6.3	0.5% to 8.3%				
Kimberlite Street	836	837	Landing/Turning Space	4	3.00	0.04	1.3	0.1% to 2.0%				
Kimberlite Street	837	838	Sidewalk Running Slope	4	11.01	0.34	3.1	0.0% to 5.0%				
Kimberlite Street	838	839	Sidewalk Running Slope	4	13.00	0.40	3.1	0.0% to 5.0%				
Kimberlite Street	839	840	Landing/Turning Space	4	4.00	-0.06	-1.5	0.1% to 2.0%				
Kimberlite Street	840	841	Ramp Running Slope	4	4.67	-0.25	-5.4	0.5% to 8.3%				

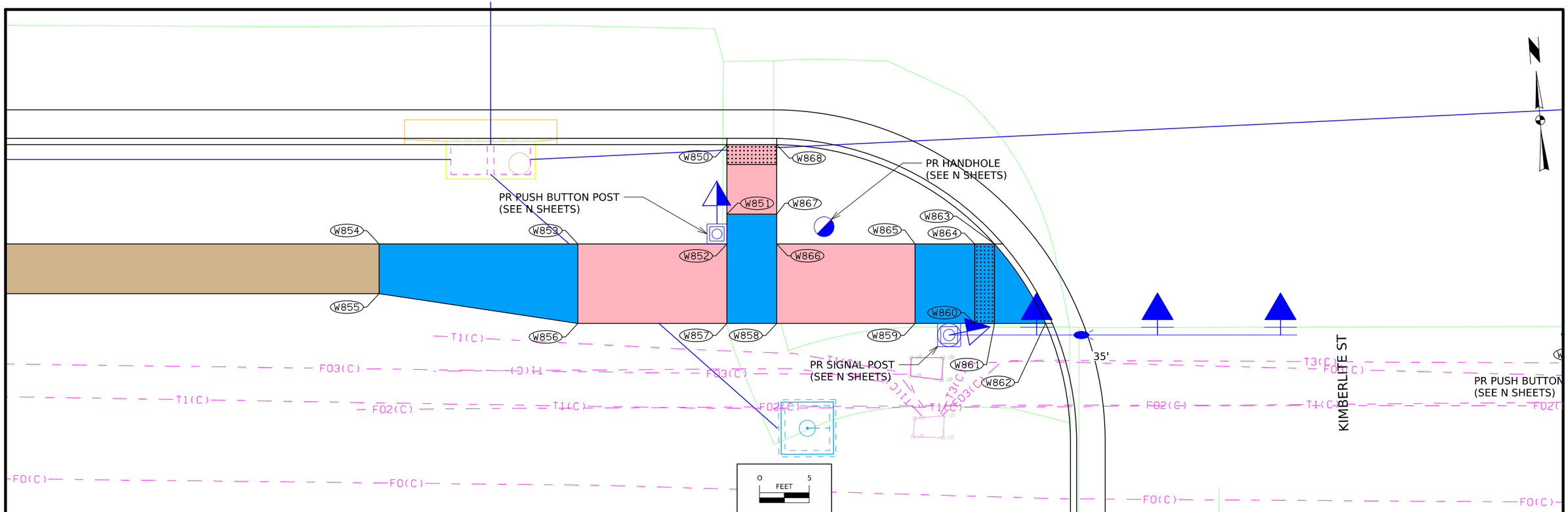
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
22.0	821	195+47.43	-57.95	693.86
23.0	822	195+49.02	-57.95	693.94
24.0	823	195+53.71	-57.95	694.19
25.0	824	195+57.71	-57.95	694.25
26.0	825	195+62.71	-57.94	694.33
27.0	826	195+62.70	-52.94	694.28
28.0	827	195+65.70	-49.49	694.05
29.0	828	195+76.71	-49.49	693.55
30.0	829	195+81.71	-49.49	693.50
31.0	830	195+91.71	-49.49	693.78
32.0	831	195+91.71	-44.5	693.70
33.0	832	195+81.71	-44.49	693.43
34.0	833	195+81.72	-41.49	693.38
35.0	834	195+81.72	-34.49	692.95
36.0	835	195+76.72	-34.49	692.99
37.0	836	195+76.72	-41.49	693.43
38.0	837	195+76.71	-44.49	693.47
39.0	838	195+65.70	-44.5	693.81
40.0	839	195+57.70	-52.95	694.21
41.0	840	195+53.70	-52.95	694.15
42.0	841	195+49.02	-52.95	693.90

USH 6 AND KIMBERLITE ST
(NORTH)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Kimberlite Street	850	851	Ramp Running Slope	4	7.00	0.38	5.4	0.5% to 8.3%				
Kimberlite Street	850	868	Crosswalk Cross Slope - No Yield Condition	4	5.00	-0.05	-1.0	0.0% to 5.0%				
Kimberlite Street	851	852	Landing/Turning Space	4	3.00	0.01	0.3	0.1% to 2.0%				
Kimberlite Street	851	867	Landing/Turning Space	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Kimberlite Street	852	853	Ramp Running Slope	4	15.00	0.65	4.3	0.5% to 8.3%				
Kimberlite Street	852	857	Landing/Turning Space	4	8.00	0.05	0.6	0.1% to 2.0%				
Kimberlite Street	852	865	Landing/Turning Space	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Kimberlite Street	853	854	Landing/Turning Space	4	20.00	0.25	1.3	0.1% to 2.0%				
Kimberlite Street	853	855	Landing/Turning Space	4	8.00	0.07	0.9	0.1% to 2.0%				
Kimberlite Street	854	855	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Kimberlite Street	855	855	Landing/Turning Space	4	20.20	-0.25	-1.2	0.1% to 2.0%				
Kimberlite Street	856	857	Ramp Running Slope	4	15.00	-0.67	-4.5	0.5% to 8.3%				
Kimberlite Street	857	858	Landing/Turning Space	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Kimberlite Street	858	859	Ramp Running Slope	4	13.92	-0.07	-0.5	0.5% to 8.3%				
Kimberlite Street	858	865	Landing/Turning Space	4	8.00	-0.05	-0.6	0.1% to 2.0%				
Kimberlite Street	859	860	Landing/Turning Space	4	6.00	-0.03	-0.5	0.1% to 2.0%				
Kimberlite Street	859	865	Landing/Turning Space	4	8.00	-0.15	-1.9	0.1% to 2.0%				
Kimberlite Street	860	861	Ramp Running Slope	4	2.00	-0.01	-0.5	0.5% to 8.3%				
Kimberlite Street	860	864	Landing/Turning Space	4	8.00	-0.02	-0.2	0.1% to 2.0%				
Kimberlite Street	861	862	Landing/Turning Space	4	5.14	-0.03	-0.6	0.1% to 2.0%				
Kimberlite Street	861	863	Landing/Turning Space	4	8.00	-0.08	-1.0	0.1% to 2.0%				
Kimberlite Street	862	863	Landing/Turning Space	4	9.52	-0.05	-0.5	0.1% to 2.0%				
Kimberlite Street	863	864	Landing/Turning Space	4	2.00	0.07	3.5	0.1% to 2.0%				
Kimberlite Street	864	865	Landing/Turning Space	4	6.00	-0.10	-1.7	0.1% to 2.0%				
Kimberlite Street	865	865	Ramp Running Slope	4	13.92	0.17	1.2	0.5% to 8.3%				
Kimberlite Street	866	867	Landing/Turning Space	4	3.00	-0.01	-0.3	0.1% to 2.0%				
Kimberlite Street	867	868	Ramp Running Slope	4	7.00	-0.38	-5.4	0.5% to 8.3%				

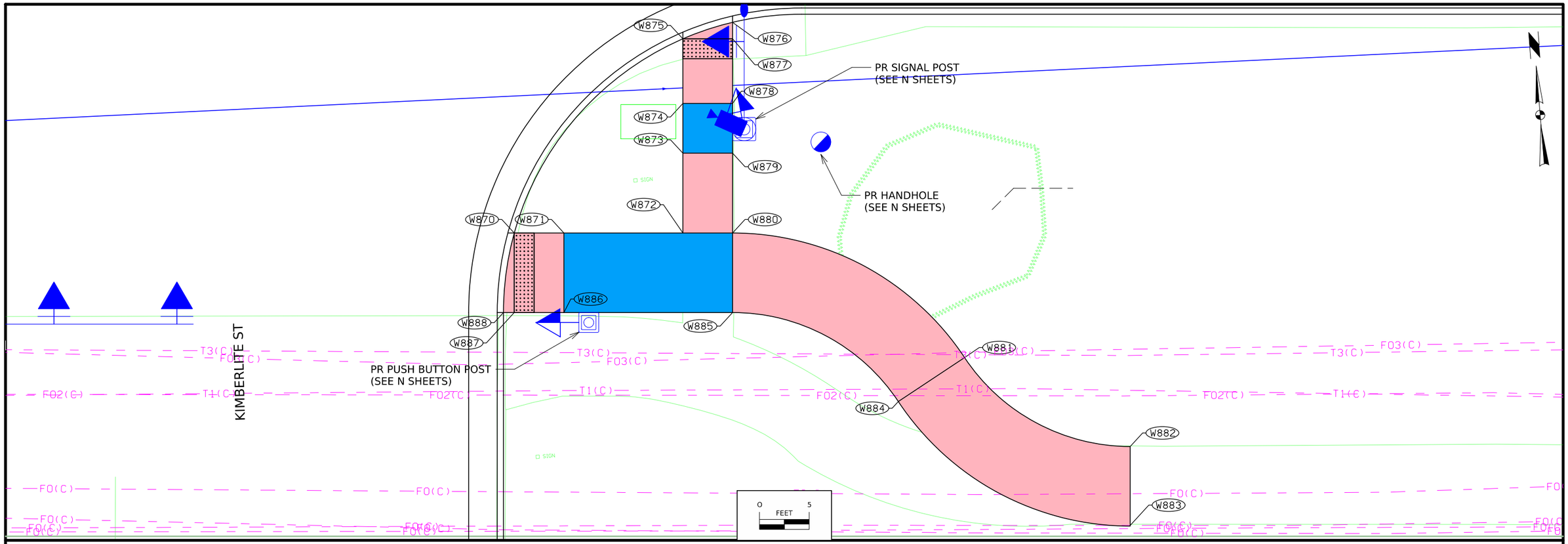
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
43.0	850	194+70.10	34.5	694.12
44.0	851	194+70.10	41.5	694.50
45.0	852	194+70.10	44.5	694.51
46.0	853	194+55.10	44.5	695.16
47.0	854	194+35.10	44.5	695.41
48.0	855	194+35.10	49.5	695.48
49.0	856	194+55.10	52.5	695.23
50.0	857	194+70.10	52.5	694.56
51.0	858	194+75.11	52.5	694.51
52.0	859	194+89.03	52.5	694.44
53.0	860	194+95.03	52.5	694.41
54.0	861	194+97.03	52.5	694.40
55.0	862	195+02.17	52.5	694.37
56.0	863	194+97.03	44.5	694.32
57.0	864	194+95.03	44.5	694.39
58.0	865	194+89.03	44.5	694.29
59.0	866	194+75.11	44.5	694.46
60.0	867	194+75.11	41.5	694.45
61.0	868	194+75.11	34.5	694.07

USH 6 AND KIMBERLITE ST
(SOUTHWEST)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Kimberlite Street	870	871	Ramp Running Slope	4	5.00	-0.03	-0.6	0.5% to 8.3%				
Kimberlite Street	870	887	Ramp Cross Slope	4	8.00	0.11	1.4	0.1% to 2.0%				
Kimberlite Street	870	888	Ramp Cross Slope	4	8.07	0.13	1.6	0.1% to 2.0%				
Kimberlite Street	871	872	Landing/Turning Space	4	12.00	-0.06	-0.5	0.1% to 2.0%				
Kimberlite Street	871	886	Landing/Turning Space	4	8.00	0.12	1.5	0.1% to 2.0%				
Kimberlite Street	872	873	Ramp Running Slope	4	8.00	-0.25	-3.1	0.5% to 8.3%				
Kimberlite Street	872	880	Landing/Turning Space	4	5.00	-0.03	-0.6	0.1% to 2.0%				
Kimberlite Street	873	874	Landing/Turning Space	4	5.00	2.95	59.0	0.1% to 2.0%				
Kimberlite Street	873	879	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Kimberlite Street	874	875	Ramp Running Slope	4	6.50	-0.07	-1.1	0.5% to 8.3%				
Kimberlite Street	874	878	Landing/Turning Space	4	5.00	-0.07	-1.4	0.1% to 2.0%				
Kimberlite Street	875	876	Ramp Cross Slope	4	5.27	-0.07	-1.3	0.1% to 2.0%				
Kimberlite Street	875	877	Ramp Cross Slope	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Kimberlite Street	876	877	Ramp Running Slope	4	1.66	0.02	1.2	0.5% to 8.3%				
Kimberlite Street	877	878	Ramp Running Slope	4	6.50	0.05	0.8	0.5% to 8.3%				
Kimberlite Street	878	879	Landing/Turning Space	4	5.00	3.05	61.0	0.1% to 2.0%				
Kimberlite Street	879	880	Ramp Running Slope	4	8.00	0.29	3.6	0.5% to 8.3%				
Kimberlite Street	880	881	Ramp Running Slope	4	27.60	-0.86	-3.1	0.5% to 8.3%				
Kimberlite Street	880	885	Landing/Turning Space	4	8.00	0.12	1.5	0.1% to 2.0%				
Kimberlite Street	881	882	Ramp Running Slope	4	19.72	-0.62	-3.1	0.5% to 8.3%				
Kimberlite Street	881	884	Ramp Cross Slope	4	8.00	0.37	4.6	0.1% to 2.0%				
Kimberlite Street	882	883	Match Existing Cross Slope	4	8.00	0.12	1.5					
Kimberlite Street	883	884	Ramp Running Slope	4	27.60	0.87	3.2	0.5% to 8.3%				
Kimberlite Street	884	885	Ramp Running Slope	4	19.72	0.61	3.1	0.5% to 8.3%				
Kimberlite Street	885	886	Landing/Turning Space	4	17.00	0.09	0.5	0.1% to 2.0%				
Kimberlite Street	886	887	Ramp Running Slope	4	5.00	0.02	0.4	0.5% to 8.3%				
Kimberlite Street	887	888	Ramp Running Slope	4	1.09	0.02	1.8	0.5% to 8.3%				

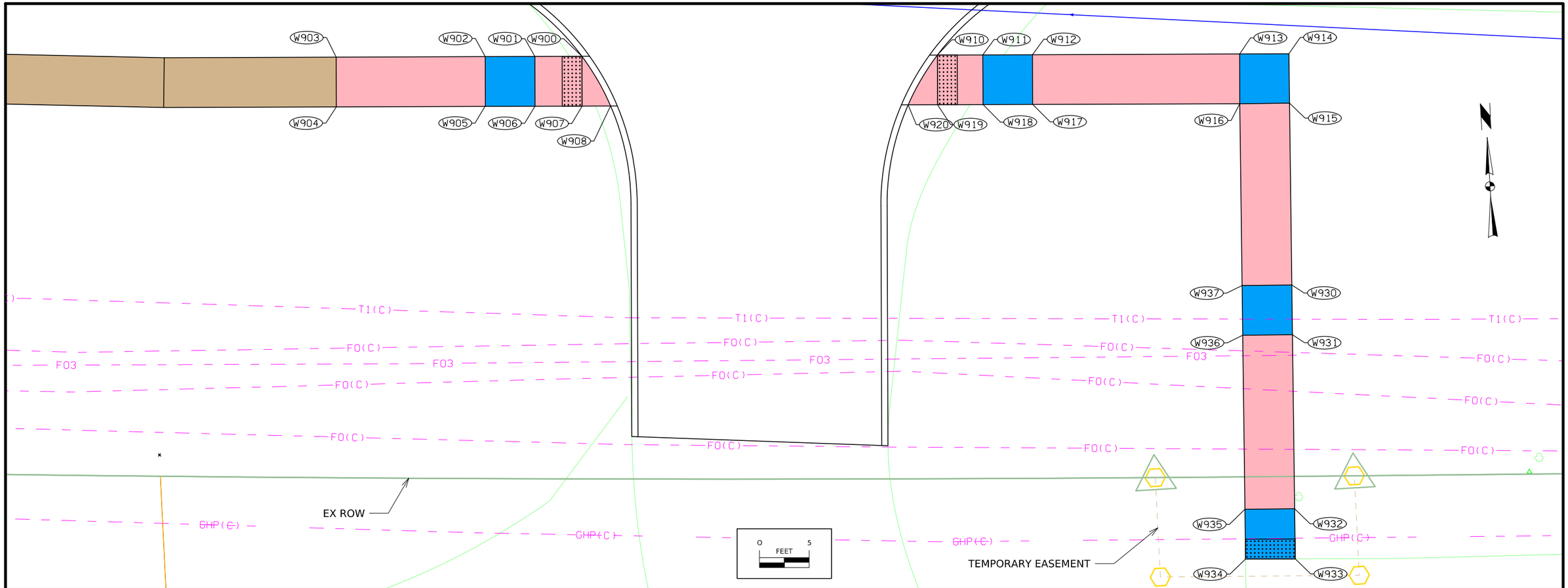
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
62.0	870	195+59.76	44.5	693.75
63.0	871	195+64.76	44.5	693.72
64.0	872	195+76.73	44.5	693.66
65.0	873	195+76.73	36.48	693.41
66.0	874	195+76.73	31.48	693.36
67.0	875	195+76.73	24.98	693.29
68.0	876	195+81.73	23.37	693.22
69.0	877	195+81.73	24.98	693.24
70.0	878	195+81.73	31.48	693.29
71.0	879	195+76.73	36.48	693.34
72.0	880	195+81.73	44.5	693.63
73.0	881	196+05.07	57.02	692.77
74.0	882	196+21.74	65.97	692.15
75.0	883	196+21.74	73.97	692.27
76.0	884	195+98.40	61.45	693.14
77.0	885	195+81.73	52.5	693.75
78.0	886	195+64.76	52.5	693.84
79.0	887	195+59.76	52.5	693.86
80.0	888	195+58.67	52.5	693.88

USH 6 AND KIMBERLITE ST
(SOUTHEAST)



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Tiffin City Park Entrance	900	901	Ramp Running Slope	4	4.74	0.28	5.9	0.5% to 8.3%				
Tiffin City Park Entrance	900	907	Ramp Cross Slope	4	5.00	0.06	1.2	0.1% to 2.0%				
Tiffin City Park Entrance	900	908	Ramp Cross Slope	4	5.76	-0.10	-1.7	0.1% to 2.0%				
Tiffin City Park Entrance	901	902	Landing/Turning Space	4	5.00	0.05	1.0	0.1% to 2.0%				
Tiffin City Park Entrance	901	905	Landing/Turning Space	4	5.00	0.08	1.6	0.1% to 2.0%				
Tiffin City Park Entrance	902	903	Ramp Running Slope	4	15.00	0.94	6.3	0.5% to 8.3%				
Tiffin City Park Entrance	902	905	Landing/Turning Space	4	5.00	0.08	1.6	0.1% to 2.0%				
Tiffin City Park Entrance	903	904	Ramp Cross Slope	4	5.00	0.07	1.4	0.1% to 2.0%				
Tiffin City Park Entrance	904	905	Ramp Running Slope	4	15.00	-0.93	-6.2	0.5% to 8.3%				
Tiffin City Park Entrance	905	905	Landing/Turning Space	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Tiffin City Park Entrance	906	907	Ramp Running Slope	4	4.74	-0.30	-6.3	0.5% to 8.3%				
Tiffin City Park Entrance	907	908	Ramp Running Slope	4	2.86	-0.16	-5.6	0.5% to 8.3%				

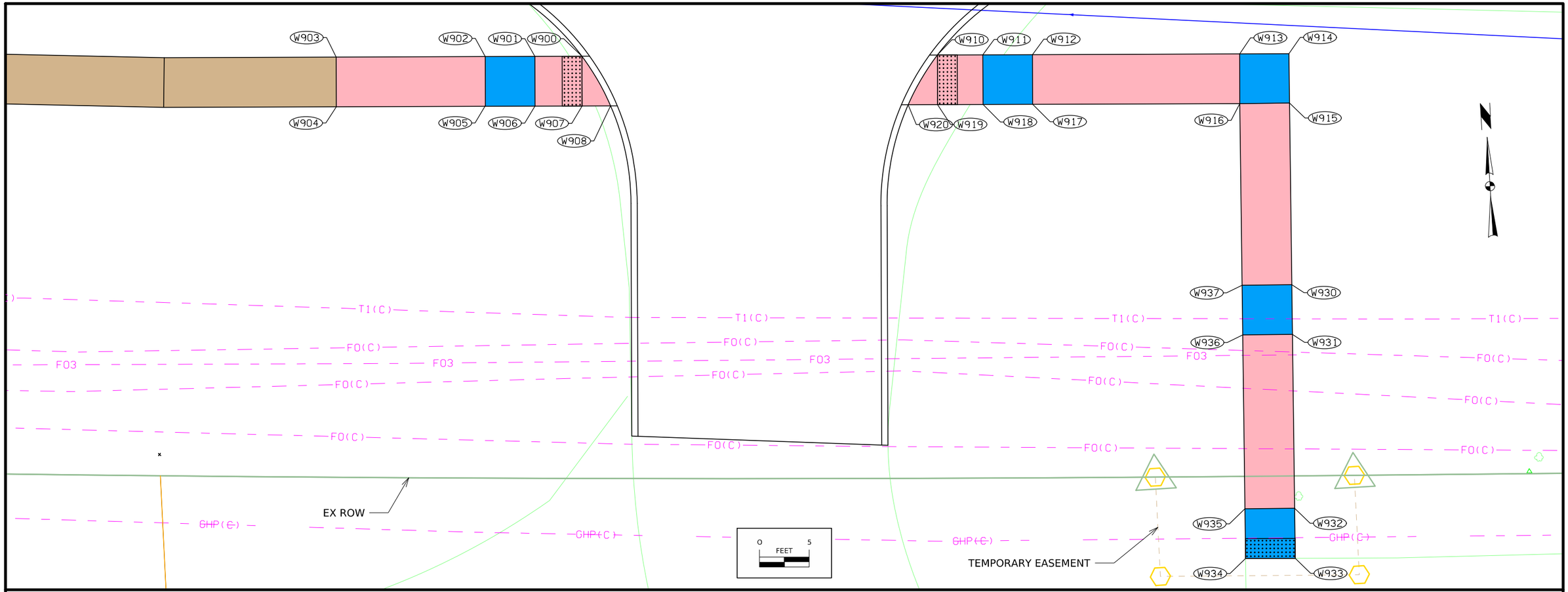
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
1.0	900	208+41.87	32.51	686.29
2.0	901	208+37.16	32.54	686.57
3.0	902	208+32.19	32.58	686.62
4.0	903	208+17.27	32.71	687.56
5.0	904	208+17.32	37.71	687.63
6.0	905	208+32.22	37.57	686.70
7.0	906	208+37.19	37.54	686.65
8.0	907	208+41.90	37.51	686.35
9.0	908	208+44.75	37.49	686.19

USH 6 AND CITY PARK ENTRANCE



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Tiffin City Park Entrance	910	911	Ramp Running Slope	4	4.58	0.09	2.0	0.5% to 8.3%				
Tiffin City Park Entrance	910	919	Ramp Cross Slope	4	5.00	-0.06	-1.2	0.1% to 2.0%				
Tiffin City Park Entrance	910	920	Ramp Cross Slope	4	5.68	-0.12	-2.1	0.1% to 2.0%				
Tiffin City Park Entrance	911	912	Landing/Turning Space	4	5.00	0.10	2.0	0.1% to 2.0%				
Tiffin City Park Entrance	911	918	Landing/Turning Space	4	5.00	-0.06	-1.2	0.1% to 2.0%				
Tiffin City Park Entrance	912	913	Ramp Running Slope	4	20.86	0.85	4.1	0.5% to 8.3%				
Tiffin City Park Entrance	912	917	Landing/Turning Space	4	5.00	-0.06	-1.2	0.1% to 2.0%				
Tiffin City Park Entrance	913	914	Landing/Turning Space	4	5.00	-0.01	-0.2	0.1% to 2.0%				
Tiffin City Park Entrance	913	916	Landing/Turning Space	4	5.00	0.02	0.4	0.1% to 2.0%				
Tiffin City Park Entrance	914	915	Landing/Turning Space	4	5.00	-0.05	-1.0	0.1% to 2.0%				
Tiffin City Park Entrance	915	916	Landing/Turning Space	4	5.00	0.08	1.6	0.1% to 2.0%				
Tiffin City Park Entrance	915	930	Ramp Running Slope	4	18.24	-1.60	-8.8	0.5% to 8.3%				
Tiffin City Park Entrance	916	917	Ramp Running Slope	4	20.86	-0.93	-4.5	0.5% to 8.3%				
Tiffin City Park Entrance	916	937	Ramp Running Slope	4	18.29	-1.61	-8.8	0.5% to 8.3%				
Tiffin City Park Entrance	917	918	Landing/Turning Space	4	5.00	-0.10	-2.0	0.1% to 2.0%				
Tiffin City Park Entrance	918	919	Ramp Running Slope	4	4.58	-0.09	-2.0	0.5% to 8.3%				
Tiffin City Park Entrance	919	920	Ramp Running Slope	4	2.96	-0.06	-2.0	0.5% to 8.3%				

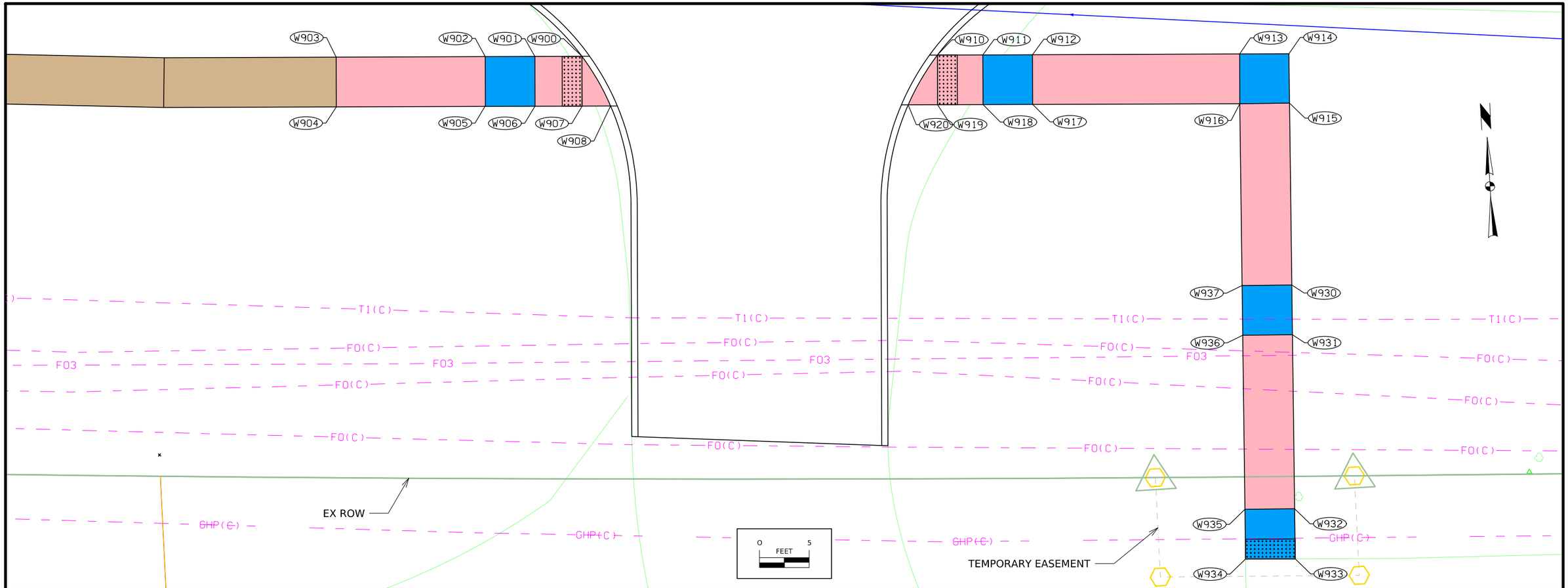
113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
10.0	910	208+77.43	32.39	685.95
11.0	911	208+81.98	32.4	686.04
12.0	912	208+86.95	32.4	686.14
13.0	913	209+07.68	32.47	686.99
14.0	914	209+12.61	32.5	686.98
15.0	915	209+12.62	37.46	686.93
16.0	916	209+07.66	37.47	687.01
17.0	917	208+86.95	37.4	686.08
18.0	918	208+81.98	37.4	685.98
19.0	919	208+77.43	37.39	685.89
20.0	920	208+74.49	37.39	685.83
21.0	930	209+12.68	55.74	685.33
22.0	931	209+12.69	60.74	685.25
23.0	932	209+12.74	78.24	683.79
24.0	933	209+12.76	83.29	683.75
25.0	934	209+07.83	83.26	683.79
26.0	935	209+07.81	78.26	683.86
27.0	936	209+07.74	60.76	685.32
28.0	937	209+07.72	55.76	685.40

USH 6 AND CITY PARK ENTRANCE



113_10
6/18/25

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
1. Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.
2. Refer to tabulation 113-01 for bid quantities.
3. See Tab 113-10A for point location information.

Roadway Identification	From Point	Ending Point	Sidewalk Designation	Sidewalk Thickness (IN)	Distance* (FT)	Change in Elevation (FT)	Slope (%)	Acceptable Constructed Range	Staking Required? (1)	Measured Slope (%)	Initials	Remarks
Tiffin City Park Entrance	930	931	Landing/Turning Space	4	5.00	-0.08	-1.6	0.1% to 2.0%				
Tiffin City Park Entrance	930	937	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Tiffin City Park Entrance	931	932	Ramp Running Slope	4	17.50	-1.46	-8.3	0.5% to 8.3%				
Tiffin City Park Entrance	931	936	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Tiffin City Park Entrance	932	933	Landing/Turning Space	4	5.00	-0.04	-0.8	0.1% to 2.0%				
Tiffin City Park Entrance	932	935	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Tiffin City Park Entrance	933	934	Landing/Turning Space	4	5.00	0.04	0.8	0.1% to 2.0%				
Tiffin City Park Entrance	934	935	Landing/Turning Space	4	5.00	0.07	1.4	0.1% to 2.0%				
Tiffin City Park Entrance	935	936	Ramp Running Slope	4	17.50	1.46	8.3	0.5% to 8.3%				
Tiffin City Park Entrance	936	937	Landing/Turning Space	4	5.00	0.08	1.6	0.1% to 2.0%				

113_10A
4/21/26

SIDEWALK COMPLIANCE VALUES

FOR INFORMATION ONLY. VALUES USED TO DETERMINE DESIGNED SLOPES. SEE TAB 113-10.

Line No.	Point	Station	Offset	Elevation
21.0	930	209+12.68	55.74	685.33
22.0	931	209+12.69	60.74	685.25
23.0	932	209+12.74	78.24	683.79
24.0	933	209+12.76	83.29	683.75
25.0	934	209+07.83	83.26	683.79
26.0	935	209+07.81	78.26	683.86
27.0	936	209+07.74	60.76	685.32
28.0	937	209+07.72	55.76	685.40

USH 6 AND CITY PARK ENTRANCE

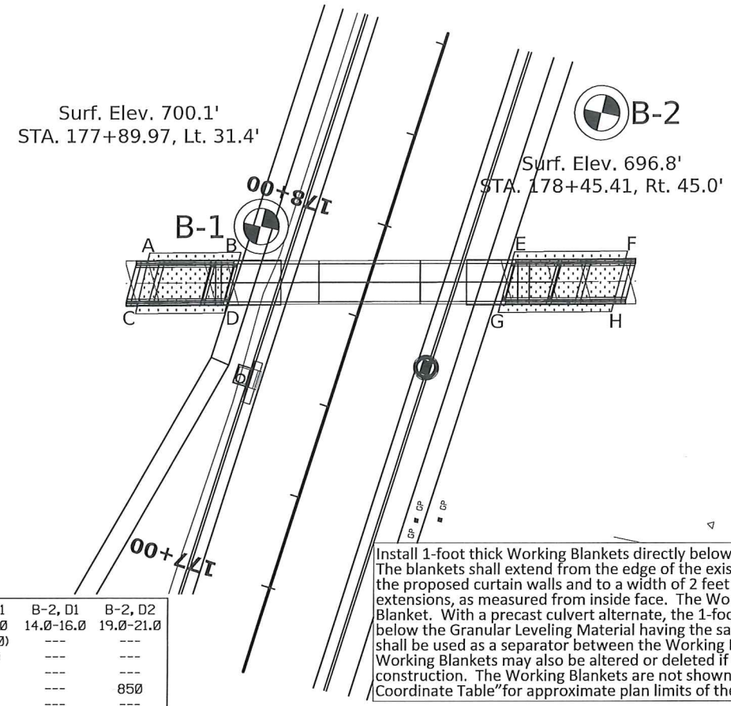
THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

Location

US 6 *Over Drainage*
In City of Tiffin
T-80N R-7W
Section 28
Johnson County
Asset ID No. 900790
Latitude 41.706875°
Longitude -91.661196°

0 FEET 20

Water Level Observations (Ft.)				
Boring No.	Date Drilled	While Drilling	Immediately after Drilling	After Drilling
B-1	4/28/2025	24.0	NA	9.0 on 4/29/2025
B-2	4/29/2025	11.0	NA	6.0 on 4/30/2025



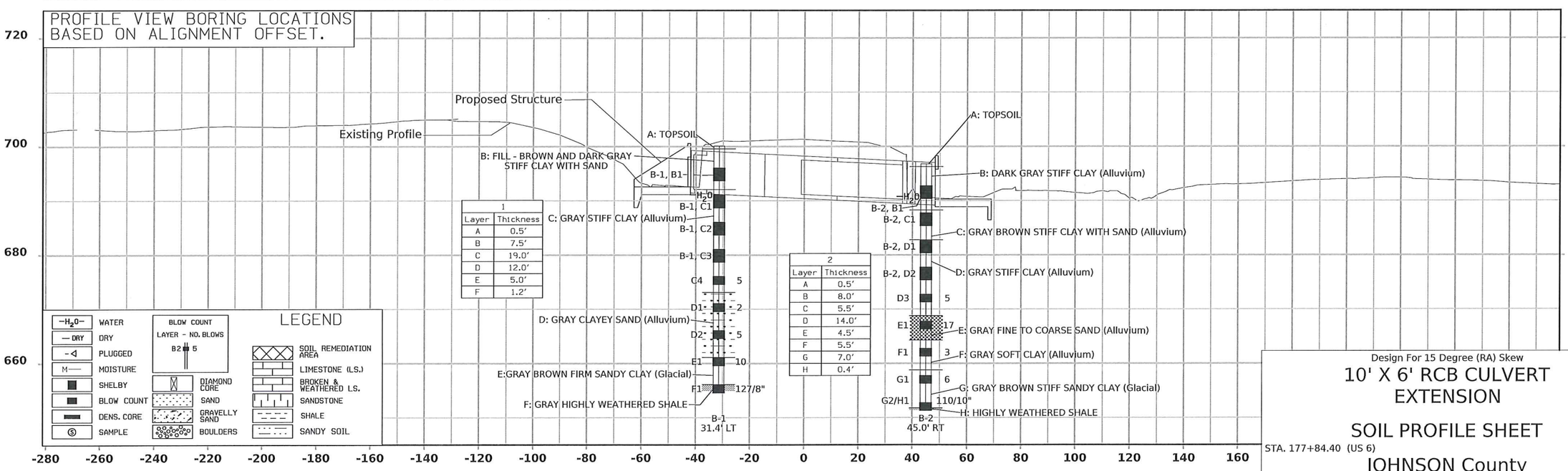
Install 1-foot thick Working Blankets directly below the proposed cast-in-place RCB culvert extensions. The blankets shall extend from the edge of the existing RCB culvert to within 3 feet of the inside face of the proposed curtain walls and to a width of 2 feet beyond the sides of the proposed culvert extensions, as measured from inside face. The Working Blankets shall consist of Granular Material for Blanket. With a precast culvert alternate, the 1-foot thick Working Blankets shall be placed directly below the Granular Leveling Material having the same plan limits stated above. Engineering Fabric shall be used as a separator between the Working Blankets and Granular Leveling Material. The Working Blankets may also be altered or deleted if determined to be unnecessary at the time of construction. The Working Blankets are not shown in profile view. Refer to the "Working Blanket Coordinate Table" for approximate plan limits of the Working Blankets.

Working Blanket Coordinate Table		
Corner	Station	Offset (Ft.)
A	177+74.53	LT 57.4
B	177+81.86	LT 34.5
C	177+58.14	LT 33.8
D	177+65.30	LT 56.0
E	178+03.73	RT 34.5
F	178+12.78	RT 62.8
G	177+87.18	RT 35.2
H	177+96.22	RT 63.5

SHELBY TUBE CORE DATA

CORE NO.	B-1, B1	B-1, C1	B-1, C2	B-1, C3	B-2, B1	B-2, C1	B-2, D1	B-2, D2
DEPTH IN FEET	4.0-6.0	9.0-11.0	14.0-16.0	19.0-21.0	4.0-6.0	9.0-11.0	14.0-16.0	19.0-21.0
CLASSIFICATION (AASHTO)	---	A-7-6 (24)	---	---	---	A-6 (10)	---	---
COEFF.CONSOL. (SQ. FT /DAY)	---	0.025	---	---	---	0.260	---	---
TRIAXIAL COMPRESSION	---	---	---	---	---	---	---	---
COHESION - PSF	---	---	645	---	1155	---	---	850
FRICTION COEFF.	---	---	---	---	---	---	---	---
MOISTURE CONTENT %	25.2	19.4	32.5	42.3	26.9	23.5	30.2	31.6
DRY DENSITY - PCF	97	103	91	78	93	94	93	91

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)



GEOTECHNICAL DESIGN

LICENSED PROFESSIONAL ENGINEER
Mark A. Dell
21208
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: Mark A. Dell — Date: 4/20/26
Printed or Typed Name: Mark A. Dell
My license renewal date is December 31, 2027

Pages or sheets covered by this seal: SPS.1 & SPS.2

Design For 15 Degree (RA) Skew

10' X 6' RCB CULVERT EXTENSION

SOIL PROFILE SHEET

STA. 177+84.40 (US 6)

JOHNSON County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0327 | Design Sheet No. 1 of 1 | FHWA/Asset 900790

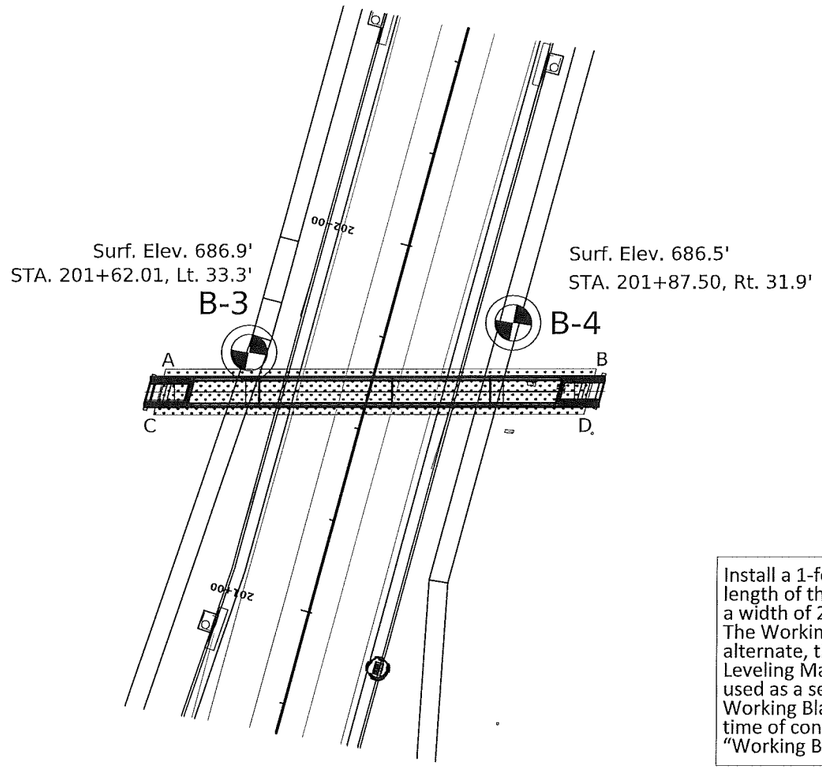
THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

Location

US 6 *Over Drainage*
In City of Tiffin
T-80N R-7W
Section 27
Johnson County
Asset ID No. 900795
Latitude 41.706317°
Longitude -91.652527°

0 20
FEET

Water Level Observations (Ft.)				
Boring No.	Date Drilled	While Drilling	Immediately after Drilling	After Drilling
B-3	4/28/2025	17.0	NA	6.0 on 4/29/2025
B-4	4/29/2025	19.0	NA	7.0 on 4/30/2025



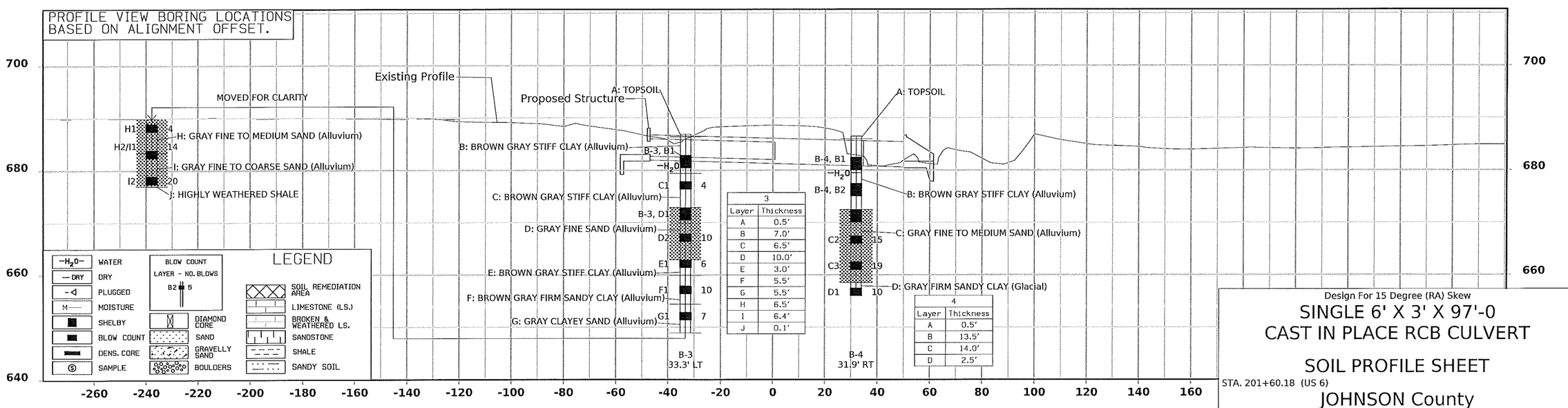
Working Blanket Coordinate Table		
Corner	Station	Offset (Ft.)
A	201+52.07	LT 53.4
B	201+81.47	RT 56.3
C	201+39.65	LT 53.4
D	201+69.04	RT 56.3

Install a 1-foot thick Working Blanket directly below the RCB culvert extending the entire length of the culvert barrel to within 3 feet of the outside face of each curtain wall and to a width of 2 feet beyond the sides of the proposed culvert, as measured from inside face. The Working Blanket shall consist of Granular Material for Blanket. With a precast culvert alternate, the 1-foot thick Working Blanket shall be placed directly below the Granular Leveling Material having the same plan limits stated above. Engineering Fabric shall be used as a separator between the Working Blanket and Granular Leveling Material. The Working Blanket may also be altered or deleted if determined to be unnecessary at the time of construction. The Working Blanket is not shown in profile view. Refer to the "Working Blanket Coordinate Table" for approximate plan limits of the Working Blanket.

SHELBY TUBE CORE DATA

CORE NO.	B-3, B1	B-3, D1	B-4, B1	B-4, B2
DEPTH IN FEET	4.0-6.0	14.0-16.0	4.0-6.0	9.0-11.0
CLASSIFICATION (AASHTO)	A-7-6 (34)	---	---	A-6 (20)
COEFF.CONSOL. (SQ. FT /DAY)	1.545	---	---	0.587
TRIAXIAL COMPRESSION	---	---	---	---
COHESION - PSF	---	---	1875	---
FRICTION COEFF.	---	---	---	---
MOISTURE CONTENT %	24.1	21.6	25.0	26.8
DRY DENSITY - PCF	99	105	101	90

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)



3	
Layer	Thickness
A	0.5'
B	7.0'
C	6.5'
D	10.0'
E	3.0'
F	5.5'
G	5.5'
H	6.5'
I	6.4'
J	0.1'

4	
Layer	Thickness
A	0.5'
B	13.5'
C	14.0'
D	2.5'

Design For 15 Degree (RA) Skew

SINGLE 6' X 3' X 97'-0 CAST IN PLACE RCB CULVERT

SOIL PROFILE SHEET

STA. 201+60.18 (US 6)

JOHNSON County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0427 | Design Sheet No. 1 of 1 | FHWA/Asset 900795

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink							
Pr_USH6_Stage_3																						
170+75.00	43	10	10	23	10	5	5	6	4	0	0	10	0	0	10							
171+00.00	87	21	20	46	21	8	8	10	11	0	0	20	0	0	20							
171+25.00	88	24	21	43	24	7	7	9	15	0	0	21	0	0	21							
171+50.00	91	29	24	38	29	6	6	7	22	0	0	24	0	0	24							
171+75.00	93	33	27	33	33	4	4	5	28	0	0	27	0	0	27							
172+00.00	115	53	26	37	53	2	2	3	50	0	0	26	0	0	26							
172+25.00	126	62	17	47	62	2	2	3	60	0	0	17	0	0	17							
172+50.00	109	44	22	43	44	10	10	13	31	0	0	22	0	0	22							
172+75.00	102	35	33	34	35	15	15	20	15	0	0	33	0	0	33							
173+00.00	104	37	33	34	37	12	12	16	21	0	0	33	0	0	33							
173+25.00	110	40	35	35	40	11	11	15	25	0	0	35	0	0	35							
173+50.00	118	43	38	37	43	8	8	10	32	0	0	38	0	0	39							
173+75.00	125	47	41	37	47	8	8	11	36	0	0	41	0	0	41							
174+00.00	132	53	41	38	53	13	13	17	36	0	0	41	0	0	41							
174+25.00	134	55	41	38	55	16	16	20	35	0	0	41	0	0	41							
174+50.00	130	52	40	38	52	19	19	24	28	0	0	40	0	0	40							
174+75.00	124	46	39	39	46	20	20	26	21	0	0	39	0	0	39							
175+00.00	113	36	38	39	36	20	20	26	10	0	0	38	0	0	38							
175+25.00	112	34	38	39	34	18	18	24	11	0	0	38	0	0	38							
175+50.00	122	41	32	49	41	15	15	20	21	0	0	32	0	0	32							
175+75.00	114	29	33	52	29	19	19	24	5	0	0	33	0	0	34							
176+00.00	97	15	39	43	15	26	26	33	-19	0	0	39	0	0	39							
176+25.00	92	15	33	44	15	28	28	36	-21	0	0	33	0	0	33							
176+50.00	90	14	31	45	14	30	30	39	-25	0	0	31	0	0	31							
176+75.00	88	12	30	46	12	40	40	52	-41	0	0	30	0	0	30							
177+00.00	91	12	33	46	12	53	53	69	-57	0	0	33	0	0	33							
177+25.00	127	35	47	46	35	88	88	114	-80	0	0	47	0	0	47							
177+50.00	138	36	54	46	36	133	133	173	-137	0	0	54	0	0	54							
177+75.00	136	31	56	46	31	178	178	232	-200	0	0	56	0	0	56							
178+00.00	130	30	55	45	30	149	149	194	-164	0	0	55	0	0	55							
178+25.00	98	13	40	46	13	85	85	111	-98	0	0	40	0	0	40							
178+50.00	93	13	34	46	13	78	78	101	-88	0	0	34	0	0	34							
178+75.00	103	19	38	45	19	78	78	102	-83	0	0	38	0	0	38							
179+00.00	109	24	40	45	24	79	79	103	-79	0	0	40	0	0	40							
179+25.00	108	24	38	45	24	73	73	96	-71	0	0	38	0	0	38							
179+50.00	103	21	36	46	21	67	67	87	-66	0	0	36	0	0	36							
179+75.00	93	15	32	46	15	61	61	80	-65	0	0	32	0	0	32							
180+00.00	100	20	34	46	20	31	31	40	-20	0	0	34	0	0	34							
180+25.00	130	43	19	67	43	2	2	2	41	0	0	19	0	0	19							
180+50.00	117	39	12	66	39	5	5	7	32	0	0	12	0	0	12							
180+75.00	107	24	40	44	24	46	46	60	-36	0	0	40	0	0	40							
181+00.00																						
Pr_USH6_Stage_3 Totals:	4,440	1,278	1,389	1,770	1,278	1,568	1,568	2,041	-763	0	0	1,389	0	0	1,391							

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink							
Pr_USH6_Stage_1																						
181+00.00																						
181+25.00	118	25	51	42	25	81	81	105	-80	0	0	51	0	0	51							
181+50.00	115	22	51	42	22	81	81	106	-83	0	0	51	0	0	51							
181+75.00	122	24	55	43	24	83	83	108	-84	0	0	55	0	0	55							
182+00.00	131	34	54	43	34	83	83	109	-74	0	0	54	0	0	54							
182+25.00	151	50	57	43	50	82	82	107	-57	0	0	57	0	0	57							
182+50.00	141	43	54	44	43	82	82	107	-64	0	0	54	0	0	54							
182+75.00	124	30	49	44	30	82	82	107	-77	0	0	49	0	0	49							
183+00.00	120	28	47	45	28	84	84	109	-81	0	0	47	0	0	47							
183+25.00	123	30	47	46	30	84	84	109	-79	0	0	47	0	0	47							
183+50.00	131	35	49	47	35	81	81	106	-71	0	0	49	0	0	50							
183+75.00	132	36	48	48	36	76	76	99	-63	0	0	48	0	0	49							
184+00.00	132	37	47	48	37	70	70	91	-54	0	0	47	0	0	47							
184+25.00	127	33	45	49	33	64	64	83	-51	0	0	45	0	0	45							
184+50.00	121	27	43	51	27	69	69	89	-63	0	0	43	0	0	44							
184+75.00	122	26	44	52	26	67	67	87	-61	0	0	44	0	0	44							
185+00.00	113	23	37	53	23	69	69	90	-67	0	0	37	0	0	37							
185+25.00	94	19	23	52	19	68	68	89	-70	0	0	23	0	0	23							
185+50.00	78	17	8	53	17	40	40	52	-36	0	0	8	0	0	8							
185+75.00	74	16	6	53	16	29	29	38	-23	0	0	6	0	0	6							
186+00.00	79	14	13	52	14	40	40	52	-37	0	0	13	0	0	13							
186+25.00	79	14	13	52	14	46	46	60	-46	0	0	13	0	0	13							
186+50.00	79	13	13	52	13	48	48	62	-49	0	0	13	0	0	13							
186+75.00	78	13	13	52	13	45	45	59	-46	0	0	13	0	0	13							
187+00.00	77	12	12	52	12	42	42	55	-43	0	0	12	0	0	13							
187+25.00	79	12	14	52	12	40	40	52	-39	0	0	14	0	0	14							
187+50.00	83	14	16	52	14	38	38	49	-35	0	0	16	0	0	16							
187+75.00	89	20	17	52	20	35	35	45	-25	0	0	17	0	0	17							
188+00.00	101	29	19	52	29	30	30	39	-10	0	0	19	0	0	19							
188+25.00	118	31	22	64	31	20	20	25	6	0	0	22	0	0	22							
188+50.00	140	41	12	88	41	5	5	7	34	0	0	12	0	0	12							
Pr_USH6_Stage_1 Totals:	3,271	770	981	1,520	770	1,764	1,764	2,295	-1,527	0	0	981	0	0	983							

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut					Fill				Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink							
Pr_USH6_Stage_2																						
188+50.00	152	49	14	89	49	6	6	8	41	0	0	14	0	0	14							
188+75.00	137	43	24	70	43	15	15	19	23	0	0	24	0	0	24							
189+00.00	115	32	20	62	32	31	31	41	-9	0	0	20	0	0	20							
189+25.00	107	23	22	62	23	47	47	61	-38	0	0	22	0	0	22							
189+50.00	108	23	22	62	23	49	49	64	-41	0	0	22	0	0	22							
189+75.00	110	25	22	63	25	47	47	62	-36	0	0	22	0	0	22							
190+00.00	125	36	26	63	36	44	44	57	-21	0	0	26	0	0	26							
190+25.00	141	48	31	62	48	43	43	57	-9	0	0	31	0	0	31							
190+50.00	142	48	33	62	48	53	53	69	-22	0	0	33	0	0	33							
190+75.00	140	44	35	61	44	65	65	84	-40	0	0	35	0	0	35							
191+00.00	138	41	36	60	41	69	69	89	-48	0	0	36	0	0	36							
191+25.00	142	44	39	60	44	72	72	94	-50	0	0	39	0	0	39							
191+50.00	149	50	40	59	50	75	75	98	-48	0	0	40	0	0	40							
191+75.00	159	58	43	59	58	74	74	96	-39	0	0	43	0	0	43							
192+00.00	172	67	47	58	67	73	73	95	-28	0	0	47	0	0	47							
192+25.00	177	73	47	58	73	78	78	101	-28	0	0	47	0	0	47							
192+50.00	178	74	47	57	74	79	79	102	-29	0	0	47	0	0	47							
192+75.00	177	72	49	56	72	74	74	97	-25	0	0	49	0	0	49							
193+00.00	173	69	48	56	69	64	64	83	-14	0	0	48	0	0	48							
193+25.00	167	64	48	56	64	66	66	86	-22	0	0	48	0	0	48							
193+50.00	162	60	48	55	60	78	78	102	-42	0	0	48	0	0	48							
193+75.00	157	55	48	54	55	83	83	107	-52	0	0	48	0	0	48							
194+00.00	151	51	48	52	51	84	84	109	-58	0	0	48	0	0	48							
194+25.00	148	49	49	51	49	87	87	113	-65	0	0	49	0	0	49							
194+50.00	147	47	49	51	47	94	94	123	-76	0	0	49	0	0	49							
194+75.00	137	37	49	50	37	92	92	120	-83	0	0	49	0	0	49							
195+00.00	141	38	41	62	38	65	65	84	-46	0	0	41	0	0	41							
195+25.00	148	42	32	74	42	54	54	70	-28	0	0	32	0	0	32							
195+50.00	124	22	44	59	22	92	92	119	-98	0	0	44	0	0	44							
195+75.00	105	7	53	45	7	109	109	142	-135	0	0	53	0	0	53							
196+00.00	107	12	53	43	12	91	91	118	-107	0	0	53	0	0	53							
196+25.00	102	14	50	37	14	91	91	118	-104	0	0	50	0	0	50							
196+50.00	90	9	49	32	9	107	107	140	-131	0	0	49	0	0	49							
196+75.00	91	8	56	27	8	122	122	159	-151	0	0	56	0	0	56							
197+00.00	89	8	59	22	8	136	136	177	-170	0	0	59	0	0	59							
197+25.00	79	4	58	17	4	152	152	198	-194	0	0	58	0	0	58							
197+50.00	72	2	58	11	2	171	171	223	-221	0	0	58	0	0	58							
197+75.00	65	2	57	6	2	188	188	244	-242	0	0	57	0	0	57							
198+00.00	59	1	56	2	1	208	208	271	-270	0	0	56	0	0	56							
198+25.00	59	0	59	0	0	228	228	296	-296	0	0	59	0	0	59							
198+50.00	61	0	61	0	0	236	236	307	-306	0	0	61	0	0	61							
198+75.00	62	0	62	0	0	246	246	320	-320	0	0	62	0	0	62							
199+00.00	61	0	61	0	0	258	258	335	-335	0	0	61	0	0	61							
199+25.00	58	0	58	0	0	265	265	344	-344	0	0	58	0	0	58							
199+50.00	57	0	57	0	0	273	273	355	-355	0	0	57	0	0	57							
199+75.00	61	2	59	0	2	284	284	369	-367	0	0	59	0	0	59							
200+00.00	70	9	61	0	9	291	291	379	-369	0	0	61	0	0	61							
200+25.00	79	19	60	0	19	287	287	373	-353	0	0	60	0	0	60							
200+50.00	87	31	56	0	31	282	282	366	-336	0	0	56	0	0	56							
200+75.00	104	49	55	0	49	273	273	355	-306	0	0	55	0	0	55							
201+00.00	123	67	56	0	67	259	259	337	-270	0	0	56	0	0	56							
201+25.00	132	76	55	0	76	129	129	168	-92	0	0	55	0	0	55							
201+50.00	126	72	54	0	72	128	128	167	-94	0	0	54	0	0	54							
201+75.00	86	38	48	0	38	217	217	282	-245	0	0	48	0	0	48							
202+00.00	48	7	41	0	7	176	176	230	-222	0	0	41	0	0	41							
202+25.00	52	11	40	0	11	171	171	222	-211	0	0	40	0	0	40							
202+50.00	71	29	42	0	29	162	162	210	-182	0	0	42	0	0	42							
202+75.00	95	51	44	0	51	156	156	202	-152	0	0	44	0	0	44							
203+00.00	115	69	46	0	69	151	151	196	-127	0	0	46	0	0	46							
203+25.00	127	80	47	0	80	148	148	192	-112	0	0	47	0	0	47							
203+50.00	120	75	45	0	75	147	147	191	-116	0	0	45	0	0	45							
203+75.00	86	47	38	0	47	128	128	166	-119	0	0	38	0	0	39							
204+00.00	49	17	32	0	17	112	112	146	-130	0	0	32	0	0	32							
204+25.00	62	22	40	0	22	161	161	209	-187	0	0	40	0	0	40							
204+50.00	184	114	66	0	114	234	234	304	-191	0	0	66	0	0	66							
204+75.00	222	121	79	0	121	406	406	527	-406	0	0	79	0	0	79							
205+00.00	170	80	72	0	80	379	379	493	-412	0	0	72	0	0	72							
205+25.00																						
Subtotals:	7,712	2,538	3,146	1,985	2,538	9,413	9,413	12,240	-9,705	0	0	3,146	0	0	3,150							

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill				Checks (EW-102)		Topsoil										
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink							
205+25.00	140	76	63	2	76	202	202	262	-186	0	0	63	0	0	63							
205+50.00	101	40	57	4	40	204	204	265	-224	0	0	57	0	0	57							
205+75.00	97	33	56	7	33	206	206	268	-234	0	0	56	0	0	56							
206+00.00	93	28	53	12	28	192	192	249	-222	0	0	53	0	0	53							
206+25.00	90	22	50	18	22	176	176	229	-207	0	0	50	0	0	50							
206+50.00	90	19	47	23	19	162	162	211	-192	0	0	47	0	0	48							
206+75.00	90	19	46	25	19	152	152	197	-179	0	0	46	0	0	46							
207+00.00	87	17	45	25	17	145	145	189	-172	0	0	45	0	0	45							
207+25.00	85	15	43	27	15	138	138	180	-165	0	0	43	0	0	43							
207+50.00	86	15	42	29	15	132	132	171	-157	0	0	42	0	0	42							
207+75.00	90	16	41	33	16	125	125	162	-146	0	0	41	0	0	41							
208+00.00	88	12	40	37	12	104	104	136	-124	0	0	40	0	0	40							
208+25.00	98	20	20	59	20	48	48	62	-43	0	0	20	0	0	20							
208+50.00	124	36	18	70	36	28	28	37	0	0	0	18	0	0	18							
208+75.00	135	33	44	57	33	66	66	86	-52	0	0	44	0	0	44							
209+00.00	128	28	45	55	28	77	77	100	-72	0	0	45	0	0	45							
209+25.00	126	31	37	58	31	69	69	90	-59	0	0	37	0	0	37							
209+50.00	132	34	39	59	34	65	65	85	-51	0	0	39	0	0	39							
209+75.00	133	37	33	63	37	63	63	81	-44	0	0	33	0	0	33							
210+00.00	83	26	25	32	26	44	44	58	-32	0	0	25	0	0	25							
210+25.00	35	12	23	0	12	26	26	34	-22	0	0	23	0	0	23							
210+50.00	35	11	23	0	11	25	25	33	-22	0	0	23	0	0	24							
210+75.00	35	11	24	0	11	25	25	33	-22	0	0	24	0	0	24							
211+00.00	32	9	23	0	9	26	26	34	-24	0	0	23	0	0	23							
211+25.00	30	7	23	0	7	26	26	34	-27	0	0	23	0	0	23							
211+50.00	26	4	22	0	4	27	27	35	-30	0	0	22	0	0	22							
211+75.00	24	3	21	0	3	28	28	37	-34	0	0	21	0	0	21							
212+00.00	22	2	20	0	2	30	30	39	-38	0	0	20	0	0	20							
212+25.00	19	1	19	0	1	32	32	41	-40	0	0	19	0	0	19							
212+50.00	18	0	18	0	0	31	31	41	-40	0	0	18	0	0	18							
212+75.00	20	1	19	0	1	31	31	41	-40	0	0	19	0	0	19							
213+00.00	22	2	21	0	2	31	31	41	-39	0	0	21	0	0	21							
213+25.00	20	1	19	0	1	30	30	39	-38	0	0	19	0	0	19							
213+50.00	16	0	16	0	0	26	26	34	-34	0	0	16	0	0	16							
213+75.00	15	0	15	0	0	20	20	25	-25	0	0	15	0	0	15							
214+00.00	14	0	14	0	0	13	13	17	-17	0	0	14	0	0	14							
214+25.00	11	0	11	0	0	7	7	9	-9	0	0	11	0	0	11							
214+50.00	9	0	9	0	0	4	4	6	-6	0	0	9	0	0	9							
214+75.00	9	0	9	0	0	4	4	5	-5	0	0	9	0	0	9							
215+00.00	9	0	9	0	0	5	5	7	-7	0	0	9	0	0	9							
215+25.00	10	0	10	0	0	6	6	7	-7	0	0	10	0	0	10							
215+50.00	16	1	15	0	1	3	3	4	-3	0	0	15	0	0	15							
215+75.00	14	2	12	0	2	1	1	1	1	0	0	12	0	0	12							
216+00.00	2	0	1	0	0	0	0	0	0	0	0	1	0	0	2							
216+16.53																						
Pr_USH6_Stage_2																						
Totals:	10,269	3,163	4,385	2,680	3,163	12,267	12,267	15,953	-12,795	0	0	4,385	0	0	4,391							

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

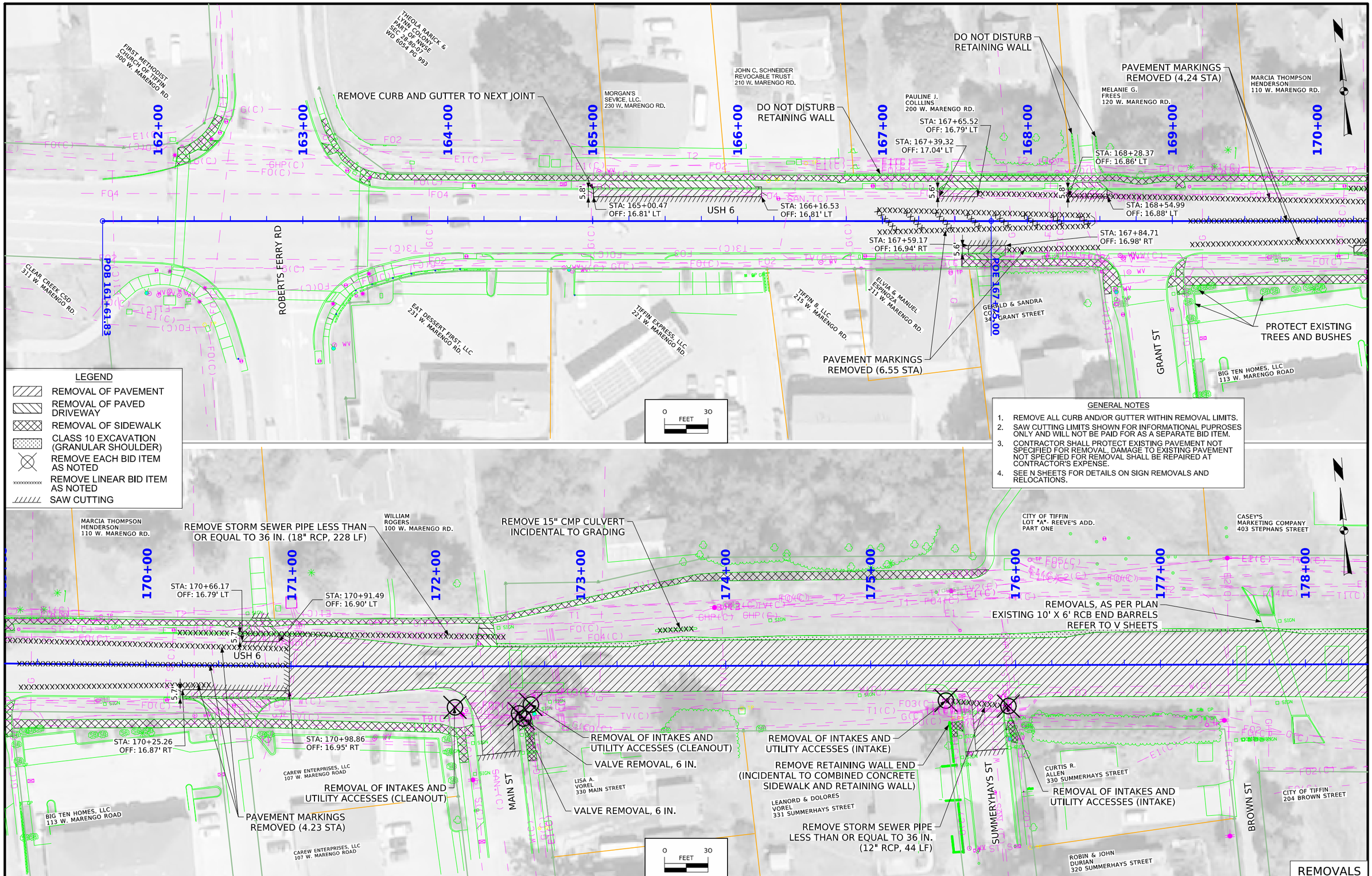
Station	Cut					Fill				Checks (EW-102)		Topsoil			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink
Summary:															
Pr_USH6_Stage_3	4,440	1,278	1,389	1,770	1,278	1,568	1,568	2,041	-763	0	0	1,389	0	0	1,391
Pr_USH6_Stage_1	3,271	770	981	1,520	770	1,764	1,764	2,295	-1,527	0	0	981	0	0	983
Pr_USH6_Stage_2	10,269	3,163	4,385	2,680	3,163	12,267	12,267	15,953	-12,795	0	0	4,385	0	0	4,391
Project Totals:	17,980	5,211	6,755	5,970	5,211	15,599	15,599	20,289	-15,085	0	0	6,755	0	0	6,765

Bid Items

		Columns	Amount
Excavation, Class 10, Roadway and Borrow:		[5] or [8]	
	Stage 3	[5]	1,278
	Stage 1	[5]	770
	Stage 2	[5]	3,163
		TOTAL	**5,211**
Embankment-In-place, Contractor Furnish:		[9]/1.3	
	Stage 3	[9]/1.3	587
	Stage 1	[9]/1.3	1,175
	Stage 2	[9]/1.3	9,842
		TOTAL	**11,604**
Topsoil, Strip, Salvage and Spread:			
	Stage 3	[12]	1,389
	Stage 1	[12]	981
	Stage 2	[12]	4,385
		TOTAL	**6,755**

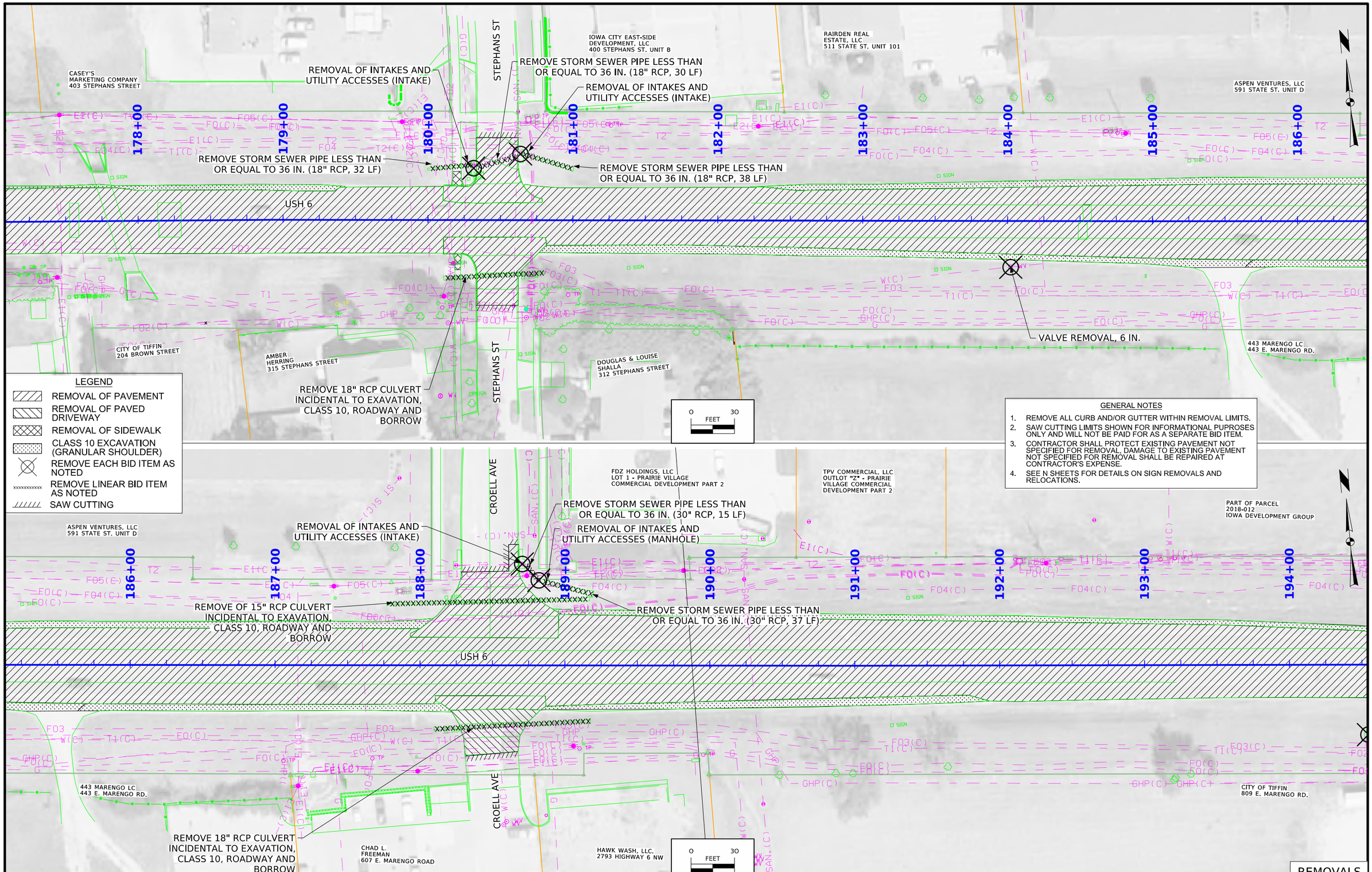
Notes

[1] Earthwork for Stages 2B and 3B are not shown separately.



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER U.1

1:26:42 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_U01.dgn



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER U.2

1:26:45 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_U01.dgn

PART OF PARCEL
2018-012
IOWA DEVELOPMENT GROUP

KIMBERLITE ST

PART OF PARCEL
2021-044
IOWA DEVELOPMENT GROUP

MELVIN R.
REEVE
2852 HIGHWAY 6 NW

194+00 195+00 196+00 197+00 198+00 199+00 200+00 201+00 202+00

REMOVAL OF INTAKES AND
UTILITY ACCESSES (INTAKE)

REMOVE STORM SEWER PIPE LESS THAN
OR EQUAL TO 36 IN. (30" RCP, 368 LF)

USH 6

REMOVAL OF INTAKES AND
UTILITY ACCESSES (INTAKE)

REMOVE STORM SEWER PIPE LESS THAN
OR EQUAL TO 36 IN. (24" RCP, 152 LF)

CITY OF TIFFIN
809 E. MARENGO RD.

KIMBERLITE ST

REMOVAL OF EXISTING STRUCTURES
EXISTING 6' X 3' RCB
REFER TO V SHEETS

CITY OF TIFFIN
809 E. MARENGO RD.

0 30
FEET

LEGEND

- REMOVAL OF PAVEMENT
- REMOVAL OF PAVED DRIVEWAY
- REMOVAL OF SIDEWALK
- CLASS 10 EXCAVATION (GRANULAR SHOULDER)
- REMOVE EACH BID ITEM AS NOTED
- REMOVE LINEAR BID ITEM AS NOTED
- SAW CUTTING

GENERAL NOTES

1. REMOVE ALL CURB AND/OR GUTTER WITHIN REMOVAL LIMITS.
2. SAW CUTTING LIMITS SHOWN FOR INFORMATIONAL PUPROSES ONLY AND WILL NOT BE PAID FOR AS A SEPARATE BID ITEM.
3. CONTRACTOR SHALL PROTECT EXISTING PAVEMENT NOT SPECIFIED FOR REMOVAL. DAMAGE TO EXISTING PAVEMENT NOT SPECIFIED FOR REMOVAL SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
4. SEE N SHEETS FOR DETAILS ON SIGN REMOVALS AND RELOCATIONS.

MELVIN R.
REEVE
2852 HIGHWAY 6 NW

REMOVE 18" CMP CULVERT
INCIDENTAL TO EXAVATION,
CLASS 10, ROADWAY AND
BORROW

MELVIN R.
REEVE
2852 HIGHWAY 6 NW

202+00 203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00

REMOVE 18" CMP CULVERT
INCIDENTAL TO EXAVATION,
CLASS 10, ROADWAY AND
BORROW

REMOVAL OF STEEL BEAM
GUARDRAIL (149 LF)

USH 6

REMOVAL OF STEEL BEAM
GUARDRAIL (148 LF)

REMOVE 18" RCP CULVERT
INCIDENTAL TO EXAVATION,
CLASS 10, ROADWAY AND
BORROW

REMOVAL OF STEEL BEAM
GUARDRAIL (149 LF)

CITY OF TIFFIN
809 E. MARENGO RD.

REFER TO PROJECT BRF-006(102)--38-52
REMOVAL OF EXISTING STRUCTURES
EXISTING 8' X 5.5' RCB
EXISTING 60" RCP
EXISTING 60" RCP

CITY OF TIFFIN
PART OF
PARCEL 99002

REMOVE EXISTING REVETMENT
INCIDENTAL TO EXCAVATION CLASS
10, ROADWAY AND BORROW

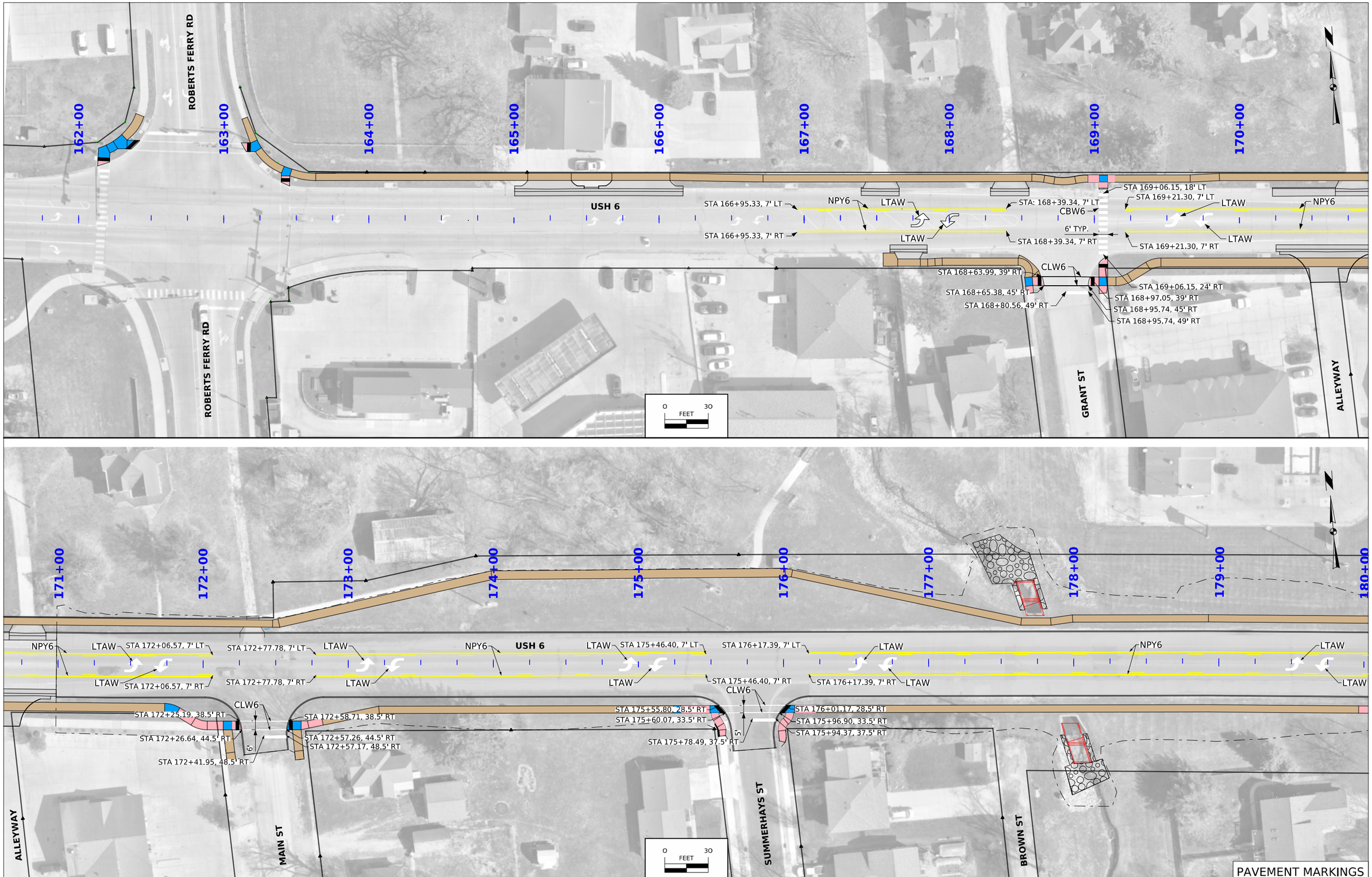
CITY OF TIFFIN
809 E. MARENGO RD.

0 30
FEET

REMOVALS

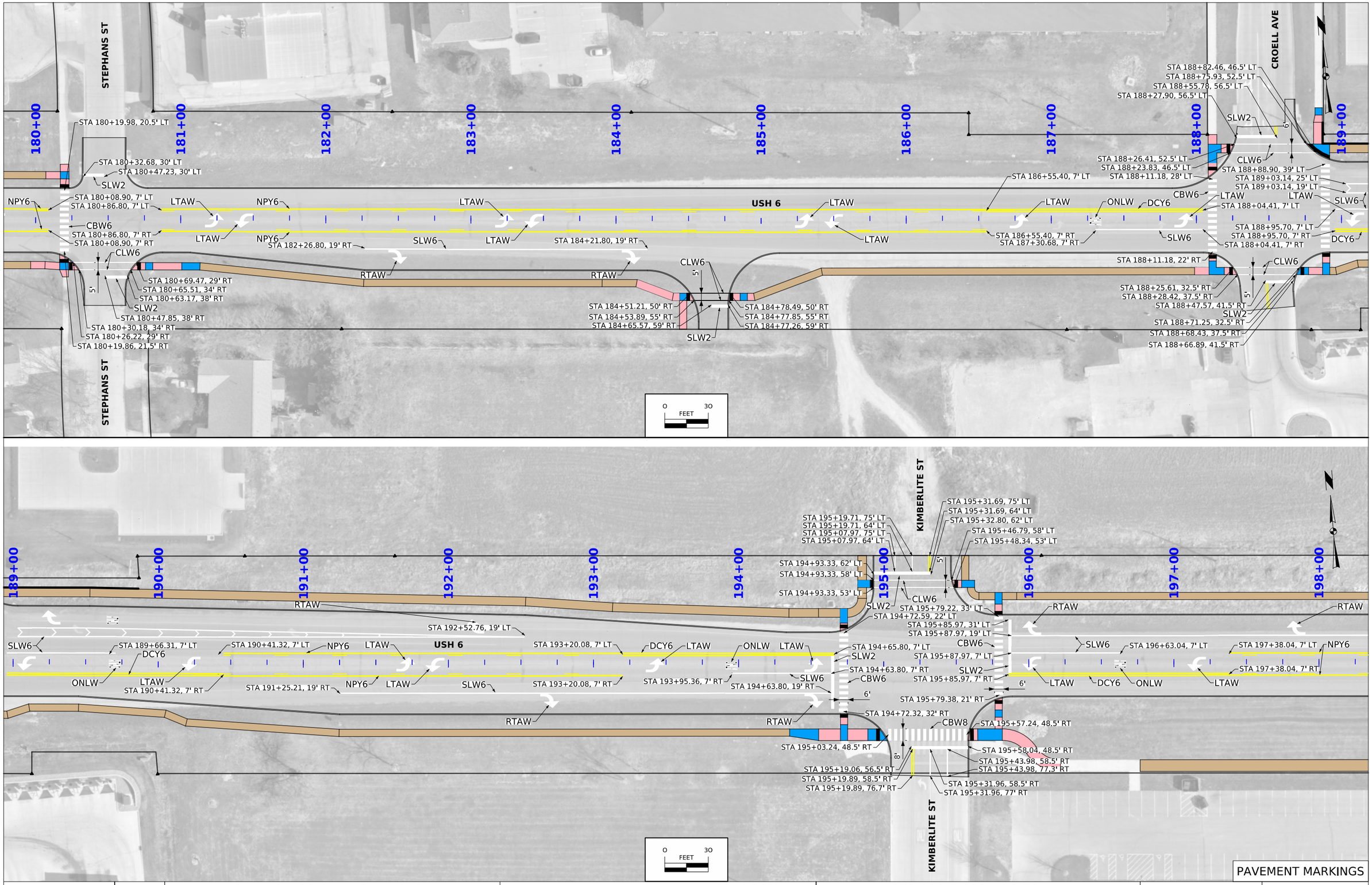
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER U.3

1:26:49 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_U01.dgn



FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER U.4

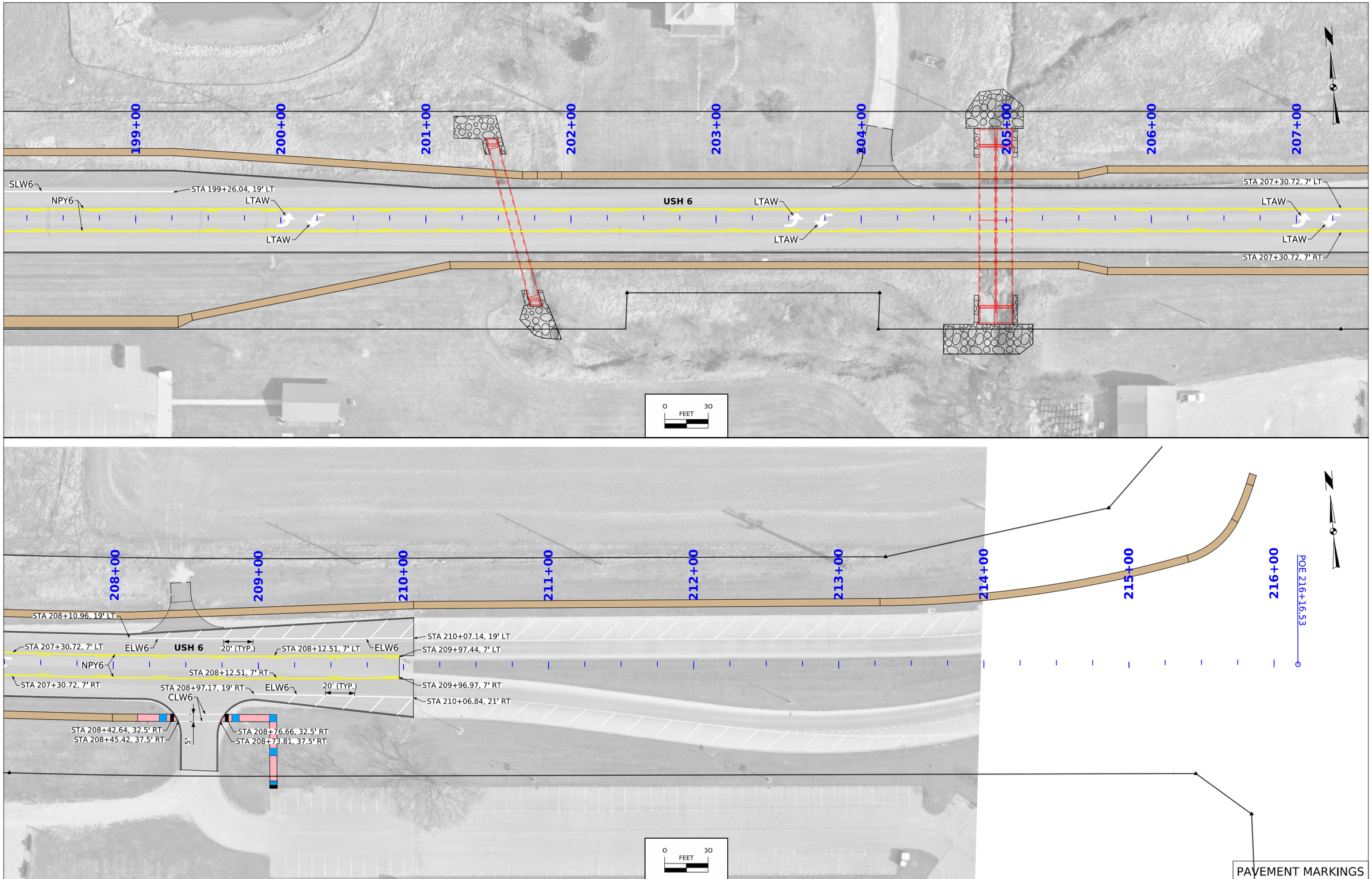
1:03:49 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_U02.dgn



PAVEMENT MARKINGS

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER U.5

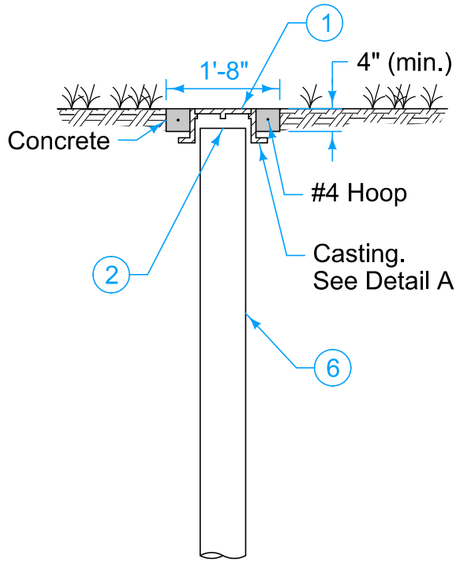
1:03:58 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_U02.dgn



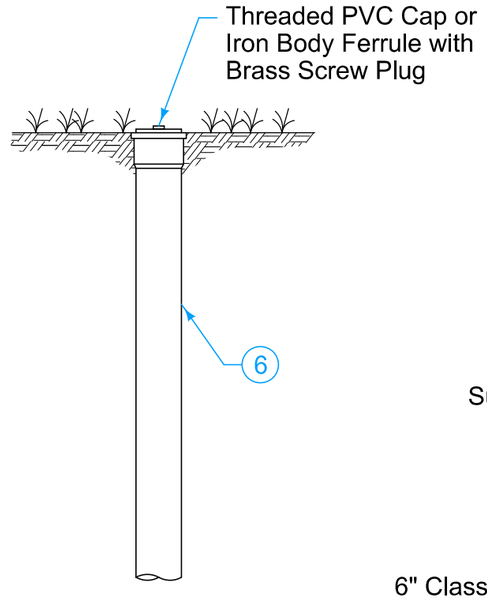
PAVEMENT MARKINGS

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER U.6

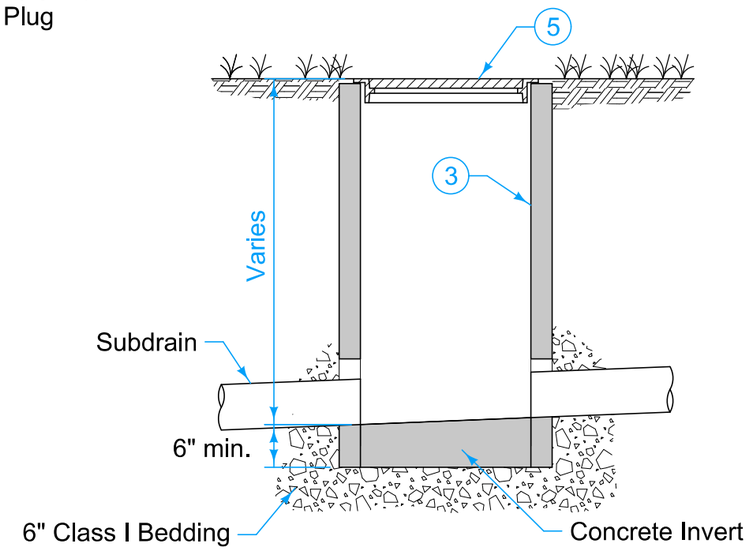
1:04:06 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_U02.dgn



TYPE A-1 CLEANOUT



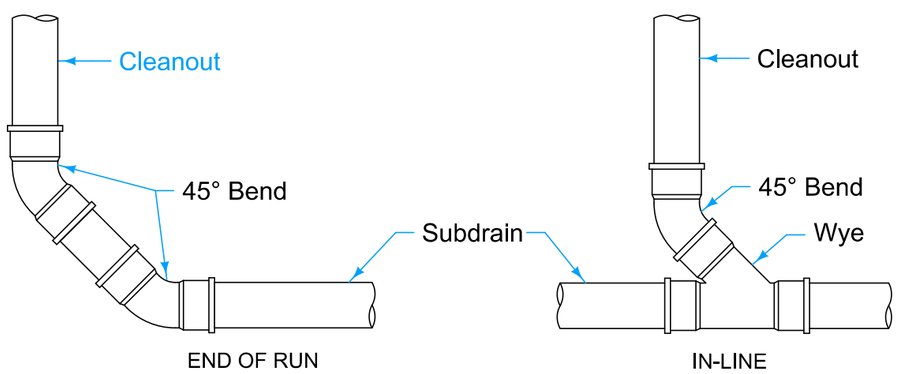
TYPE A-2 CLEANOUT



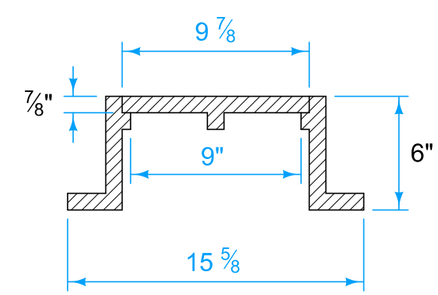
TYPE B CLEANOUT

Use in non-traffic areas.

1. Light duty casting. Label lid with "Storm" or "Storm C.O."
2. Do not allow casting to bear on top of riser pipe; provide 2 inch clearance, minimum.
3. A manufactured cleanout may be used in lieu of a Type B cleanout, if approved by the Engineer.
4. Design is intended for use in conjunction with 8 inch PVC riser pipe. Other sized caps may be used with smaller pipe, as approved by the Engineer.
5. Provide Type G casting, as required to fit pipe size.
6. PVC riser pipe; match diameter of subdrain (8 inches maximum).



TYPE A CLEANOUT CONNECTIONS



DETAIL A (1)(4)
(Dimensions are nominal)

REVISION	
3	2020 Edition

SHEET 1 of 1

SUBDRAIN CLEANOUTS

SHEET 1 OF 1

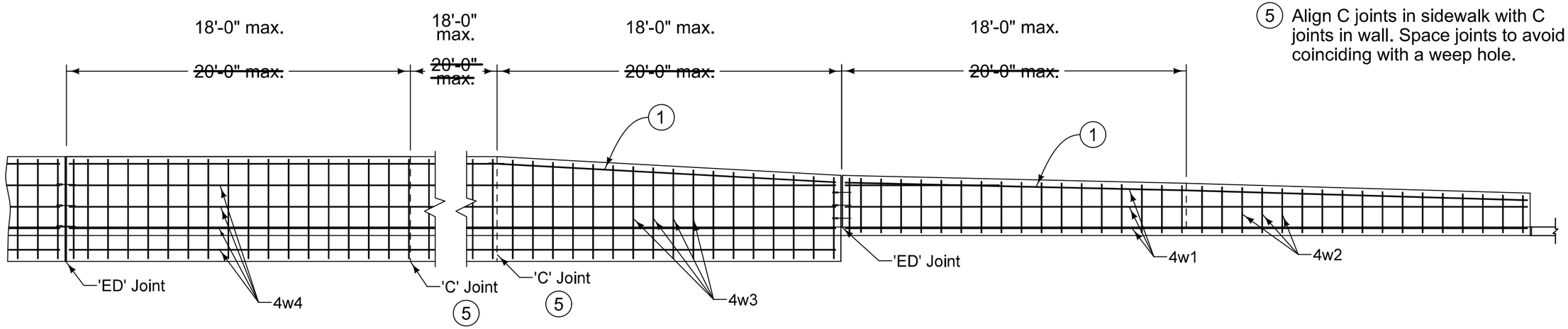
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER U.7

1:04:25 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_U03.dgn

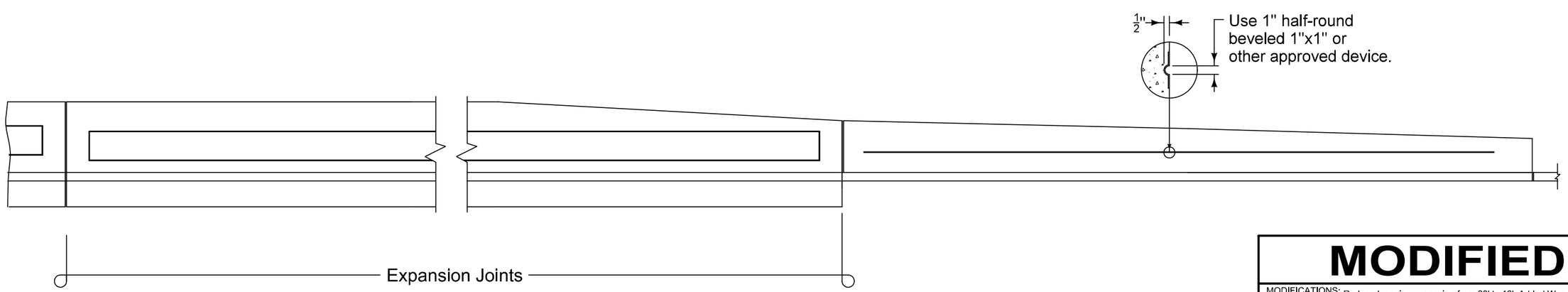
Provide a minimum concrete cover to near reinforcement of 1 1/2 inches. Provide 3 inches minimum cover at the ends of bars.

(1) Top bar parallel to top of wall. Lap 6 inch minimum as necessary. Tie securely.

(5) Align C joints in sidewalk with C joints in wall. Space joints to avoid coinciding with a weep hole.



TYPICAL LONGITUDINAL SECTION OF RETAINING WALL



TYPICAL RUSTICATION DETAIL

MODIFIED

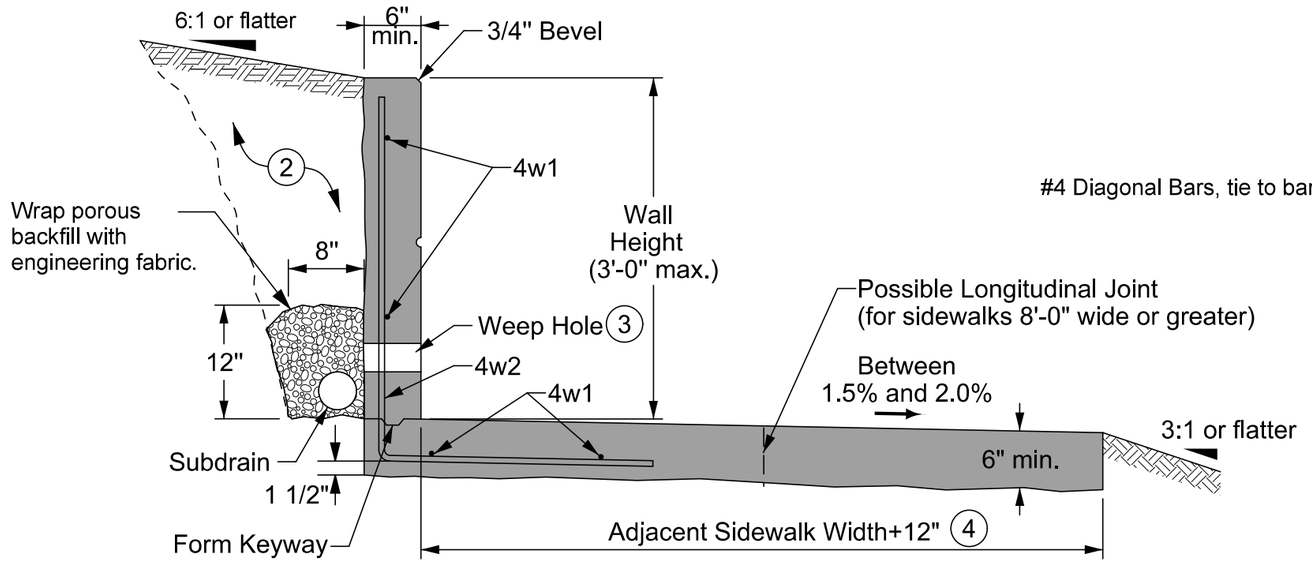
MODIFICATIONS: Reduced maximum spacing from 20' to 18'. Added Weep Hole Reinforcement detail. Added note 5.

COMBINED RETAINING WALL - SIDEWALK

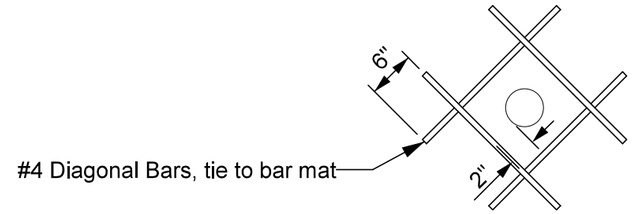
MI-221 SHEET 1 of 2

FILE NO.	ENGLISH	DESIGN TEAM **MSA PROFESSIONAL SERVICES**	**JOHNSON** COUNTY	PROJECT NUMBER **STP-006-7(098)--2C-52**	SHEET NUMBER **U.8**

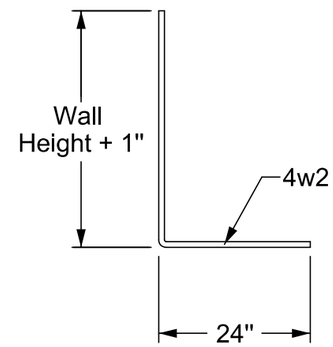
1:41:45 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_U03.dgn



TYPE A WALL TYPICAL SECTION



WEEP HOLE REINFORCEMENT



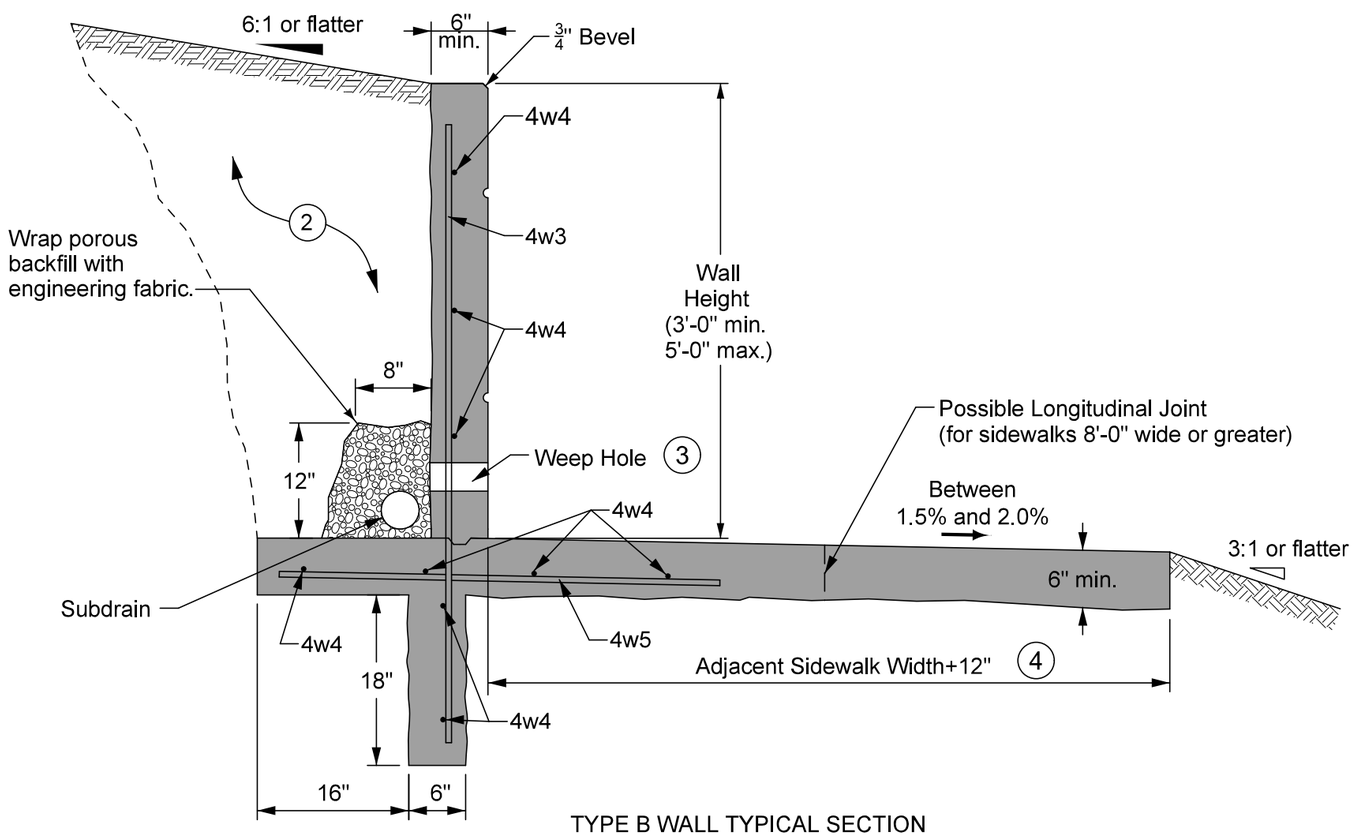
BENT BARS

Provide a minimum concrete cover to near reinforcement of 1 1/2 inches. Provide 3 inches minimum cover at the ends of bars.

2 Excavate and place backfill material as necessary.

3 Provide 3 inch diameter weep holes at 8 foot intervals. Install rodent guards in weep holes. Align bottom of weep hole with top of subdrain.

4 Additional 12 inch width is adjacent to wall.



TYPE B WALL TYPICAL SECTION

REINFORCING BAR LIST					
Wall Type	Mark	Size	Shape	Length	Spacing
Type A	4w1	4	———	Variable	15"
	4w2	4	∟	Variable	14"
Type B	4w3	4	—	Wall Height + 18"	14"
	4w4	4	—	Variable	15"
	4w5	4	—	3'-10"	14"

MODIFIED

MODIFICATIONS: Reduced maximum spacing from 20' to 18'. Added Weep Hole Reinforcement detail. Added note 5.

COMBINED RETAINING WALL - SIDEWALK

MI-221 SHEET 1 of 2

ESTIMATED CAST IN PLACE CULVERT QUANTITIES - DESIGN 0327

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL
1	2401-6750001	REMOVALS, AS PER PLAN	LS	1
2	2402-2720000	EXCAVATION, CLASS 20	CY	215
3	2402-3825025	GRANULAR MATERIAL FOR BLANKET	CY	43
4	2403-0100020	STRUCTURAL CONCRETE (RCB CULVERT)	CY	84.8
5	2404-7775000	REINFORCING STEEL	LB	13,066
6	2414-6444100	STEEL PIPE PEDESTRIAN HAND RAILING	LF	99.8

ESTIMATE REFERENCE INFORMATION - DEISGN 0327

ITEM NO.	ITEM CODE	ITEM DESCRIPTION
1	2401-6750001	REMOVALS, AS PER PLAN Includes all work for removal and off-site disposal of the existing culvert and the setting of the dowel reinforcing bars into existing concrete. Removal of scheduled items shall be in accordance with Section 2401, of the Standard Specifications. Any damage to material not to be removed shall be the responsibility of the Contractor and repaired at no extra cost to the state.
2	2402-2720000	EXCAVATION, CLASS 20 Includes filling and compacting low areas around proposed culvert. Includes 43 CY of excavation to place 1'-0" Granular Material for Blanket.
3	2402-3825025	GRANULAR MATERIAL FOR BLANKET 1'-0" granular material shall be in accordance with Section 4118 of the Standard Specifications. Includes 43 CY for a working blanket. The working blanket may be deleted if determined to be unnecessary at the time of construction.
4	2403-0100020	STRUCTURAL CONCRETE (RCB CULVERT) Includes all resilient joint filler required. The contractor is responsible for certified plant inspection.
5	2404-7775000	REINFORCING STEEL - -
6	2414-6444100	STEEL PIPE PEDESTRIAN HAND RAILING Includes furnishing all material, including anchor bolts and shims, and all of the equipment and labor required to erect the rail. Measurement is in linear feet from end to end of the railing measured along the top of the rail, including slopes.

Structural Design

LICENSED PROFESSIONAL ENGINEER
Julia I Zehner
P28800
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: Julia Zehner — Date: June 18, 2026

Printed or Typed Name: Julia Zehner

My license renewal date is December 31, 2027

Pages or sheets covered by this seal: V.1 thru V.13

Roadway Quantities shown elsewhere in these plans.

Design For 18° Skew (RA)

Single 10'-0" X 6'-0" Cast-In-Place RCB Culvert Extension

Estimated Quantities

STA. 177+84.40 (US 6)

Turn-in Date: August 2026

Johnson County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0327 | Design Sheet No. 1 of 7 | FHWA No. 900790

General Notes

It is the intent of this design to extend the existing reinforced concrete box culvert measuring 10'-0"x6'-0"x69'-0"(FHWA 900790 Maintenance No. 5243.8B006), originally constructed in 1992 under Design No. 191. The culvert will be extended on both sides by constructing a single-cell cast-in-place reinforced concrete box culvert measuring 10'-0" x 6'-0" x 18'-10" on the north side and 10'-0" x 6'-0" x 22'-7" on the south side. The extension headwalls will be skewed at 15° right ahead at station 177+84.40. All dimensions shown are based on the as-built Design No. 191 or existing survey. Electronic plans of the existing structure are available to the Contractor as part of the E-Files supplied with the contract documents.

The RCB culvert sections are designed for HL-93 live load and earth fills of 3 feet.

The lump sum bid for "Removals, as per plan" shall include all costs associated with removing portions of the existing culvert and headwalls as shown in these plans, and the setting of the dowel bar reinforcing bars into existing concrete. Removal of scheduled items shall be in accordance with Section 2401 of the specifications. Any damage to material not to be removed shall be the responsibility of the contractor and repaired at no extra cost to the state.

Faint lines on plans indicate existing structure.

Utility companies and municipalities whose facilities are shown on the plans or known to be within the construction limits shall be notified by the contractor of the construction starting date.

When de-watering presents a problem for placing the curtain walls as detailed, alternate methods such as steel sheet pile and precast concrete walls may be approved but at no additional cost. The culvert contractor is to submit complete drawings of the proposed curtain wall alternate to the engineer for approval before beginning construction.

The roadway will be closed to traffic during construction. The culvert will be constructed during stage 3A shown on the J sheets elsewhere in these plans. See traffic control plan note.

The Class 20 excavation quantity is based on the assumption that, at the start of culvert construction, the existing groundline shown on Design Sheet 3 for this design has remained undisturbed and no roadway fill has been placed.

Class 20 excavation material unsuitable for backfilling shall be disposed of in a manner that will leave the site in a neat condition.

It shall be the Culvert Contractor's responsibility to provide sites for excess excavated material. No payment for overhaul will be allowed for material hauled to these sites.

The Contractor may submit alternate frost trough dimensions for approval. Any additional costs due to change in the frost trough dimensions is to be paid for by the Contractor.

All dimensions and details shown on these plans pertinent to new construction shall be verified in the field by the contractor before starting construction.

All reinforcing bars and bars noted as dowels supplied for this structure shall be deformed reinforcement unless otherwise noted or shown.

The removal of the existing culvert shall be at the existing culvert end barrel section joint on both sides, 10'-0" from the back of the existing parapet. Removals shall be on a vertical plane perpendicular to the culvert along the existing culvert joint, and to the width of the floor of the proposed extension. The walls shall be cut normal to the barrel walls and as shown on the "Part Removal Plan". The removal line shall be initiated with a 2½"± deep saw cut on the top and both sides of each wall, and across the top of the floor. This saw cut should cut thru any existing longitudinal reinforcing thereby facilitating a neat non-spalled break line. The existing flared wingwalls and parapet shall be removed.

The proposed culvert extension shall abut against the front face of the existing reinforced concrete barrels, 10'-0" from the back of the existing parapet at the removal limits. 5z1 x 2'-6" dowel reinforcing bars with a 10" minimum embedment into existing concrete shall be set around the entire periphery of the existing culvert. 5z1 dowel reinforcing bars shall be centered in the existing slab, walls and floor. 5z1 dowel reinforcing bars shall be at 1'-0" maximum spacing C-C of dowels. 5z1 dowel reinforcing bars shall be set with polymer grout in accordance with Article 2301.03, e, of the Standard Specifications, and current Supplemental Specifications of the Iowa D.O.T. Highway Division.

Any dimensional transition required between existing structure and the extension shall be made in the first 1'-0" of new work.

See Single Reinforced Concrete Box Culvert Standards Sheet RCB G2-20 for additional notes not shown on this sheet.

Specifications:

Design:
Refer to RCB G2-20.

Construction:
Refer to RCB G2-20.

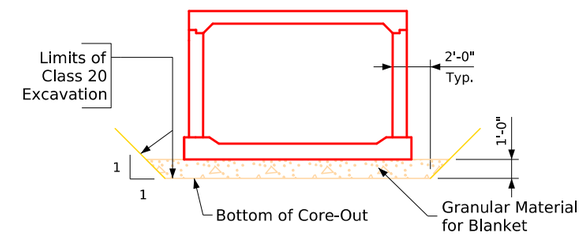
Design Stresses:

Refer to RCB G2-20.

Standards

For details and notes not shown refer to the following Iowa D.O.T. Culvert Standards:

Standard	Issued	Revised
RCB G1-20	07-2020	--
RCB G2-20	07-2020	--
RCB G3-20	07-2020	--
RCB 10-6-20	07-2020	--
PWH 15-1-20	07-2020	--
PWH 15-2-20	07-2020	--
PWH 15-3-20	07-2020	--
PWH 15-4-20	07-2020	--
PWH 15-8-20	07-2020	--



Class 20 Excavation

(Typical Section Normal to ℄ Culvert)

Granular material shall terminate 3'-0" short of the outside face of the curtain wall.
Note: Refer to Sheet SPS.1 for additional information about the working blanket.

Design History at this Site

(Includes This Design)

Des. No.	Type of Work
0191	Original Design
0327	RCB Culvert Extension - Single Box

Summary of Reinforcing Steel

Location	Quantity	Total
18'-10" Extension Section (1 Req'd)	1 @ 3,409	3,409
22'-7" Extension Section (1 Req'd)	1 @ 4,087	4,087
Standard 15° Skew Parallel Wing Headwall (2 Req'd)	2 @ 2,696	5,392
5z1 Dowel Bars (2 Sets Req'd)	2 @ 89	178
	Total (lbs)	13,066

Concrete Placement Quantities

Location	Footing	Walls	Slab	Total
18'-10" Extension Section (1 Req'd)	1 @ 7.7	1 @ 5.9	1 @ 6.0	19.6
22'-7" Extension Section (1 Req'd)	1 @ 9.2	1 @ 7.1	1 @ 7.1	23.4
Standard 15° Skew Parallel Wing Headwall (2 Req'd)	2 @ 14.5	2 @ 5.0	✳ 2 @ 1.4	41.8
			Total (c.y.)	84.8

✳Includes parapet and top of wingwall.

Pollution Prevention Plan shown elsewhere in these plans.

Traffic Control Plan

The roadway will be closed to thru traffic. Refer to the traffic control plan shown elsewhere in these plans.

Design For 18° Skew (RA)

Single 10'-0" X 6'-0" Cast-In-Place RCB Culvert Extension

General Notes

STA. 177+84.40 (US 6)

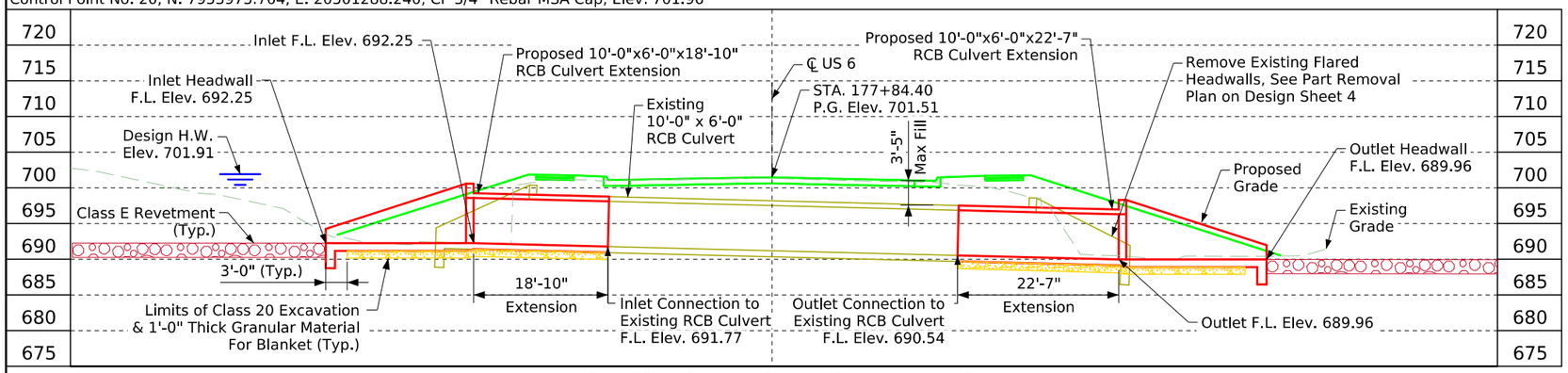
Turn-in Date: August 2026

Johnson County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0327 | Design Sheet No. 2 of 7 | FHWA No. 900790

Benchmark No. 107, N: 7953832.2950, E: 20501771.3700, Bonnet Bolt On Hyd. Arrow Points To SE Corner HWY 6, Elev. 704.197
Benchmark No. 108, N: 7953925.4950, E: 20500977.1000, Bonnet Bolt On Hyd. Arrow Points To SE Corner HWY6/Main, Elev. 717.116
Control Point No. 19, N:7953940.588, E: 20501722.450, CP 3/4" Rebar MSA Cap, Elev. 702.28
Control Point No. 20, N: 7953975.704, E: 20501288.240, CP 3/4" Rebar MSA Cap, Elev. 701.96

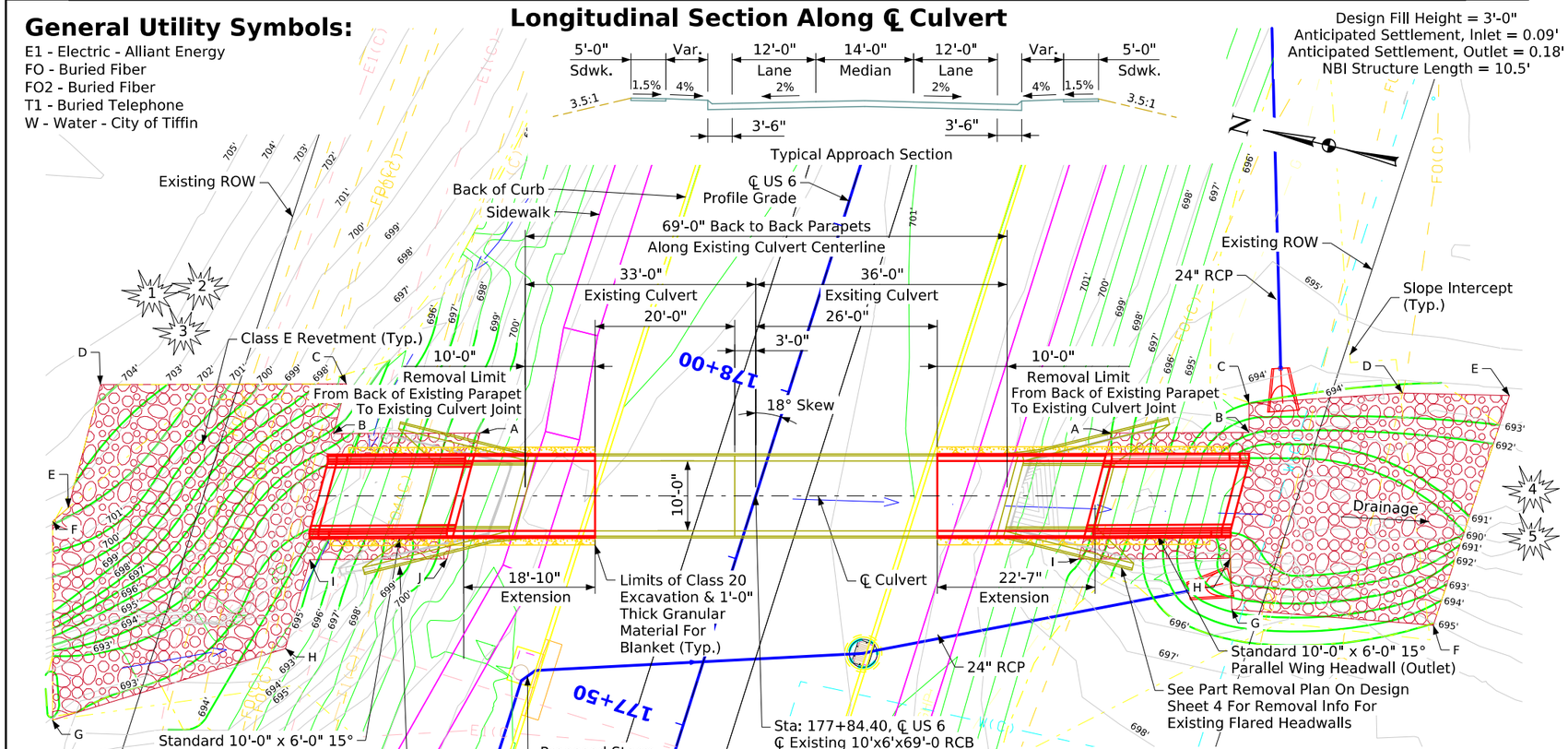


Longitudinal Section Along ℄ Culvert

Typical Approach Section

General Utility Symbols:

E1 - Electric - Alliant Energy
FO - Buried Fiber
FO2 - Buried Fiber
T1 - Buried Telephone
W - Water - City of Tiffin



Situation Plan

Utilities Note:

Utilities shown on this sheet are for information only. See Road Design sheets for utility information.

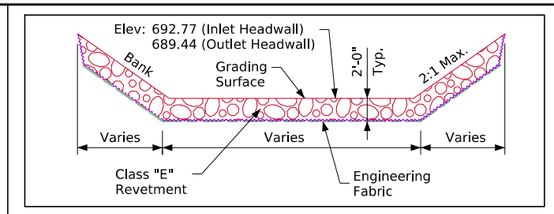
Utility Conflict Notes:

Alliant:
1. Avoid existing overhead electrical line during construction.
2. Conflicting underground electric pole to be relocated by utility.
3. Conflicting underground electrical wire to be relocated by utility.

MidAmerican Distribution:
4. Conflicting buried gas line to be relocated by utility.

MidAmerican Transmission:
5. Avoid existing high pressure gas line during construction.

Uniti - ILEC conflicting fiber line to be abandoned by utility within entire project area.
See sheet D.01 for utility contact information. Coordinate status of conflict with utility contact.



Typical Channel Protection

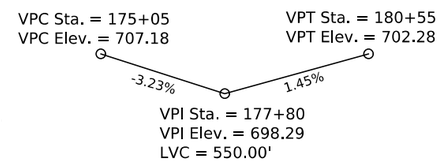
Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet	198	200	133
Outlet	140	142	94
Totals	338	342	227

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans. Quantities shown for information only. See Road Sheets.

Notes

Plan Notes:
1. Drainage through the existing culvert/channel must be maintained throughout construction.



Proposed Profile Grade US 6

Hydraulic Data

Drainage Area = 294.4 Acres
(0.46 Sq. Mi.)

Q_{50} = 705 cfs

Revetment Limits

	Inlet		Outlet	
Point	Station	Offset	Station	Offset
A	177+81.06	40.344' LT	178+08.39	45.839' RT
B	177+74.64	60.344' LT	178+14.41	64.585' RT
C	177+81.98	60.711' LT	178+18.40	63.320' RT
D	177+71.23	94.206' LT	178+26.43	83.760' RT
E	177+53.06	93.302' LT	178+30.71	98.520' RT
F	177+50.51	94.870' LT	177+96.11	98.070' RT
G	177+23.44	86.284' LT	177+89.55	69.869' RT
H	177+43.25	57.591' LT	177+96.45	67.518' RT
I	177+56.42	58.125' LT	177+89.78	46.770' RT
J	177+62.46	39.412' LT	--	--

Location

US 6 Over Drainage
In City of Tiffin
T-80N R-7W
Section 28
Johnson County
FHWA No. 900790
Maint. No. 5243.8B006
Latitude 41.706875°
Longitude -91.661196°

Hydraulic Design

PROFESSIONAL ENGINEER
LICENSED
MARIE PHELAN AMUNDSON
P24112
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: Marie Amundson Date: 5/28/2026

Marie Amundson
Printed or Typed Name

My license renewal date is December 31, 2026

Pages or sheets covered by this seal: V.3 (Hydraulic Data)

Design For 18° Skew (RA)

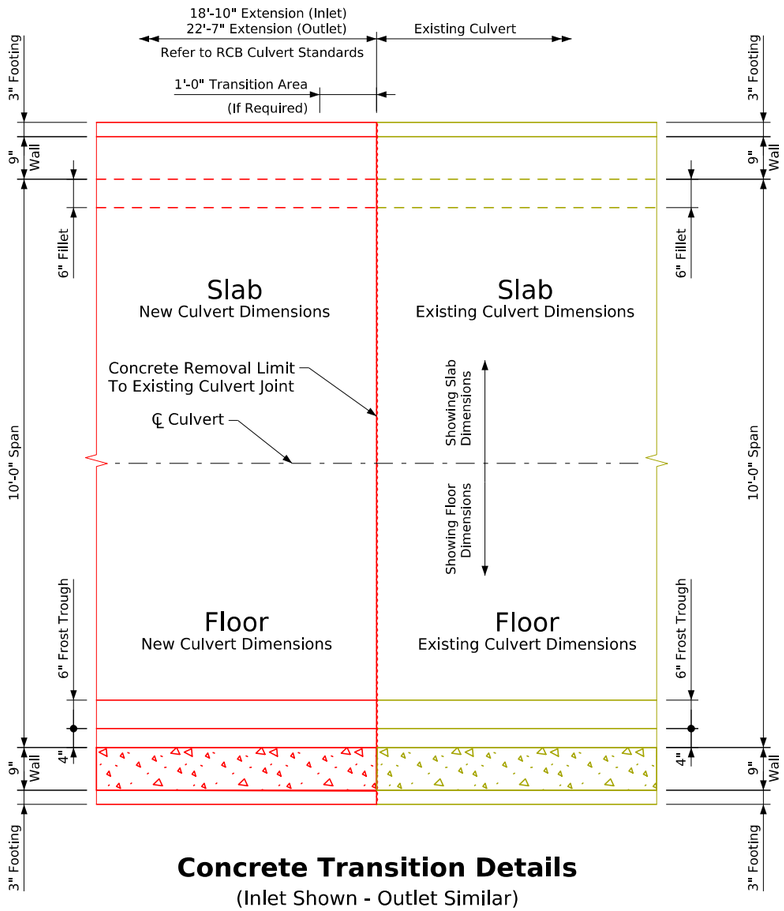
Single 10'-0" X 6'-0" Cast-In-Place RCB Culvert Extension

Situation Plan

STA. 177+84.40 (US 6)
Turn-in Date: August 2026

Johnson County
IOWA DEPARTMENT OF TRANSPORTATION

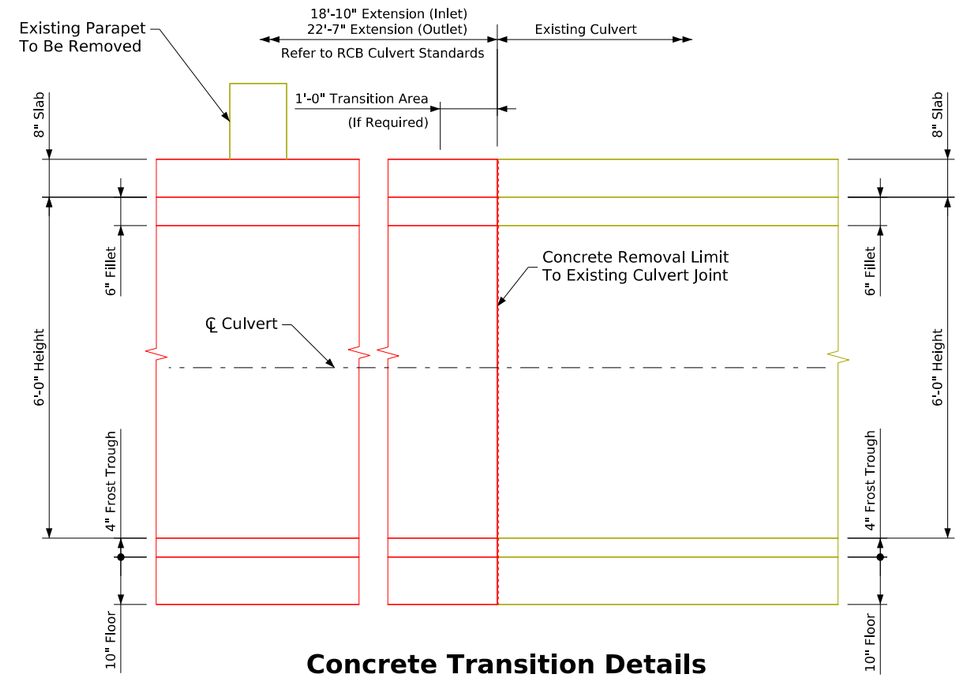
Design No. 0327 | Design Sheet No. 3 of 7 | FHWA No. 900790



Concrete Transition Details

(Inlet Shown - Outlet Similar)

(Plan View)

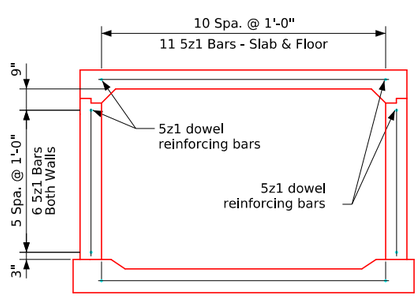


Concrete Transition Details

(Inlet Shown - Outlet Similar)

(Elevation View)

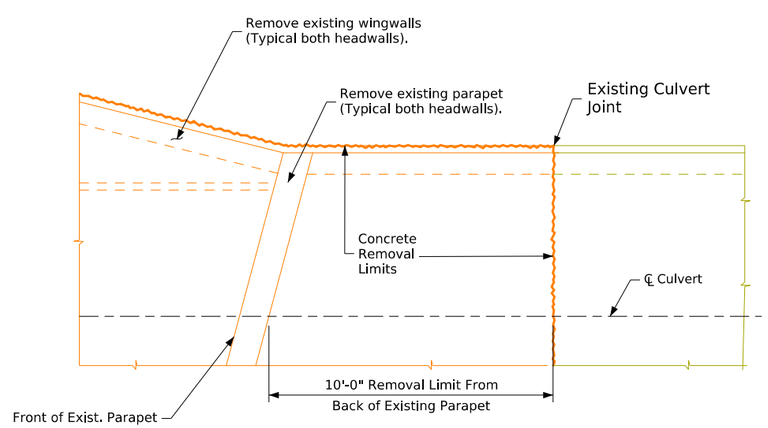
New barrel concrete thicknesses shall be maintained minimally when transitioning to meet existing barrel interior surfaces. Outside concrete surfaces do not have to be transitioned to match existing surfaces.



Section Near Extension

Not to Scale - Showing Spacing of 5z1 Dowel Reinforcing Bars - 34 Bars

(Standard barrel reinforcing not shown - refer to RCB Culvert Standard Plans)



Part Removal Plan

(Inlet Shown - Outlet Similar)

Reinforcing Bar List - Extension

Bar	Location	Shape	No.	Length	Weight
5z1	Dowel Reinforcing Bars - North Extension		34	2'-6"	89
5z1	Dowel Reinforcing Bars - South Extension		34	2'-6"	89
				Reinforcing Steel - Total (lbs.)	178

Design For 18° Skew (RA)

Single 10'-0" X 6'-0" Cast-In-Place RCB Culvert Extension

Extension Transition

STA. 177+84.40 (US 6)

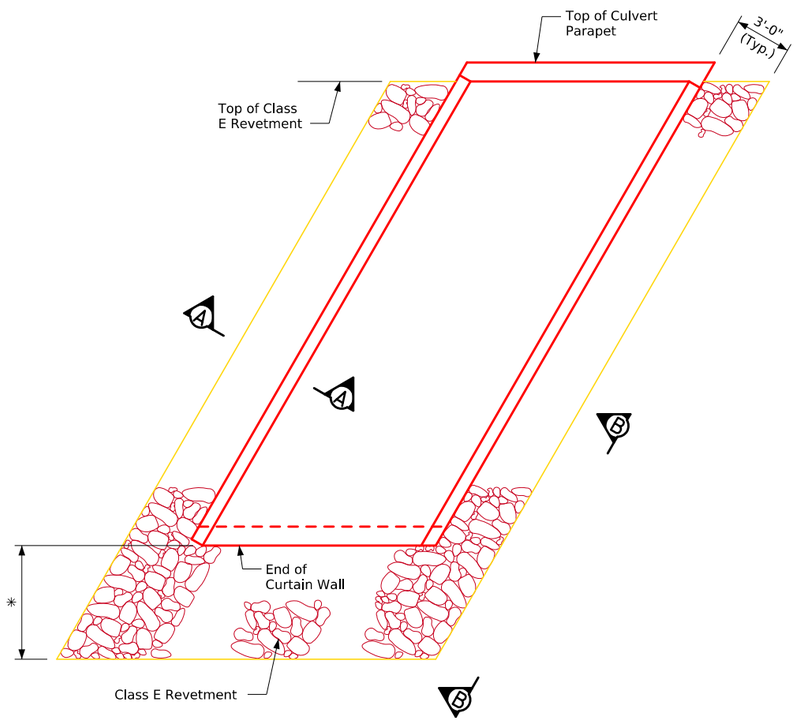
Turn-in Date: August 2026

Johnson County

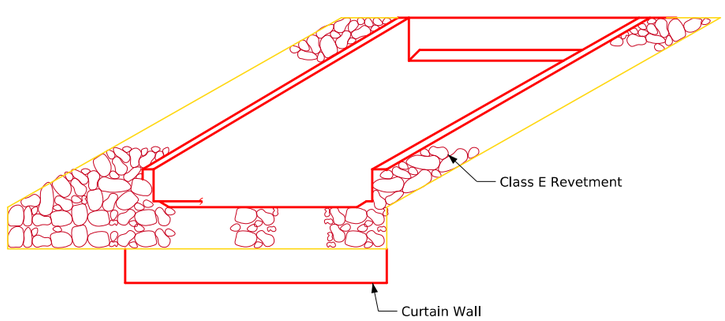
IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0327 | Design Sheet No. 4 of 7 | FHWA No. 900790

✳ = See Design Sheet 3 for limits of revetment and engineering fabric.



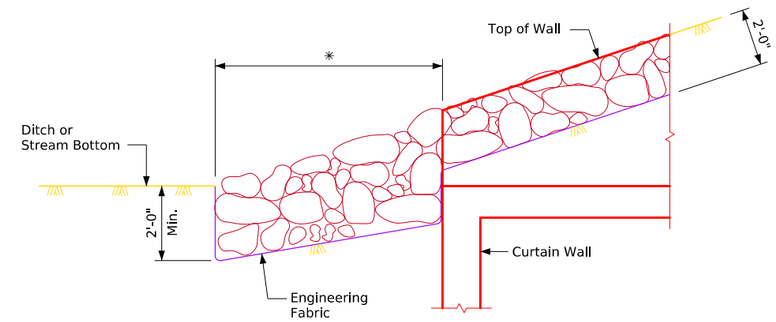
Plan View



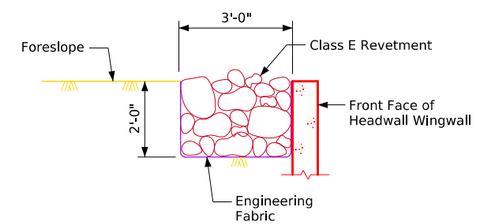
Elevation View

15° Skewed Headwall

✳ = See Design Sheet 3 for limits of revetment and engineering fabric.



View B-B



Section A-A

Typical Details

Construction Notes:

Class E Revetment shall be used and placed according to Article 2507.03, of the Standard Specifications. The engineering fabric shall meet the material requirements in accordance with Article 4196.01,B,3, of the Standard Specifications.

REVISED 1-2016 - ADDED NOTE "SEE CULVERT PLANS FOR LIMITS OF REVETMENT AND ENGINEERING FABRIC."
REVISED 02-2017 - ADDED SECTION DIRECTORS "A-A" TO ZERO SKEW PLAN VIEW DETAIL.
REVISION 01-2021 - CHANGED DESIGN SPECIFICATIONS TO AASHTO LRFD 8TH ED.
ENGLISHSINGLECULVERTS.DGN - 1092 - THIS SHEET ISSUED 04-12.

Design For 18° Skew (RA)

Single 10'-0" X 6'-0" Cast-In-Place RCB Culvert Extension

Revetment Protection Details

STA. 177+84.40 (US 6) Turn-in Date: August 2026

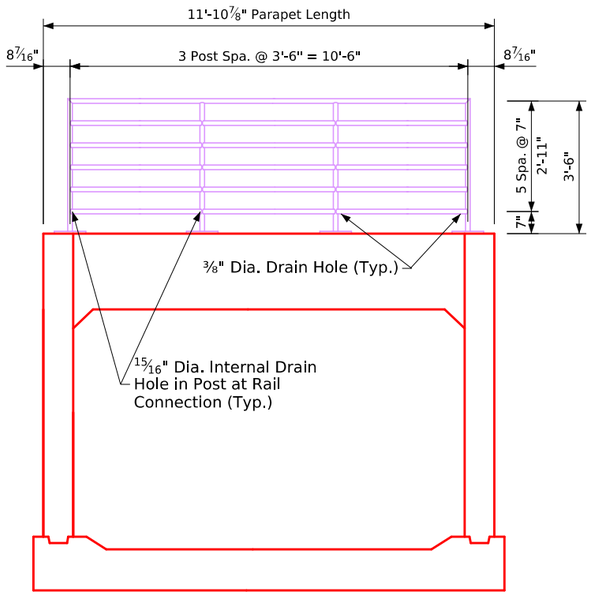
Johnson County

IOWA DEPARTMENT OF TRANSPORTATION

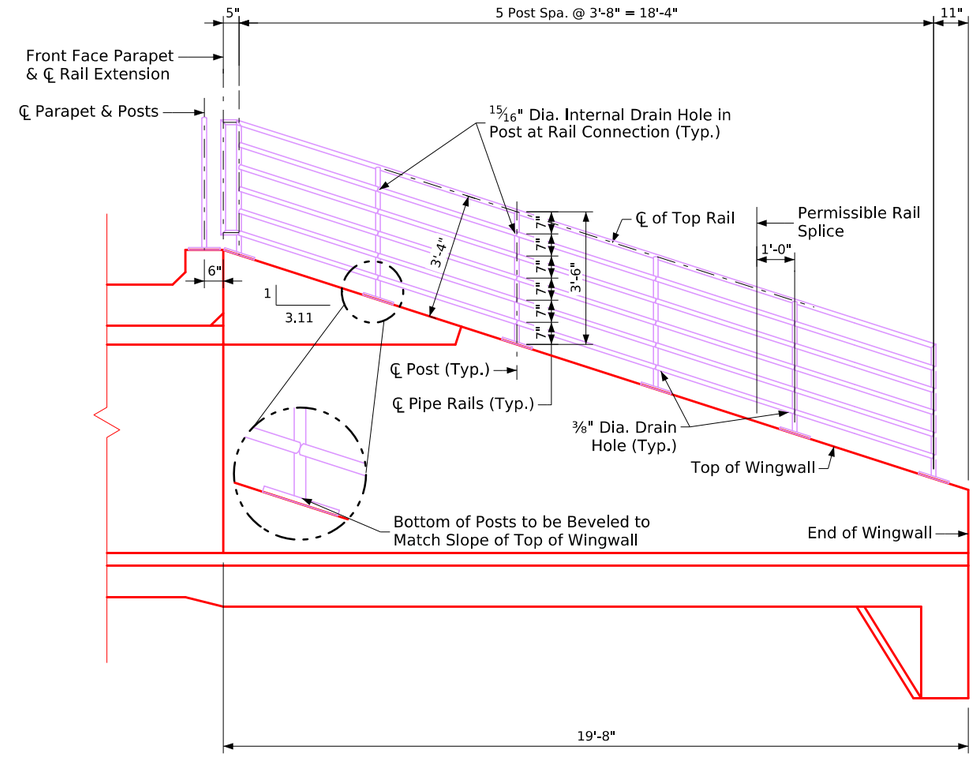
Design No. 0327 Design Sheet No. 5 of 7 Asset No. 900790

FILE NO. 32668	ENGLISH	DESIGN TEAM MSA Professional Services, Inc	Cast-In-Place Culvert Revetment Protection Details Modified Standard Sheet 1092	Johnson COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER V.5

12:08:19 PM 5/26/2026 gfreed pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\Bridge\(098)_PCC Pavement - Grade and Replace\SHT_52006098_327_900790_CIP_Z10



Partial End View of Parapet and Headwall



Elevation View of Wingwall

Steel Pipe Pedestrian Hand Railing Quantities		
Location	Unit	Quantity
North Extension	LF	49.9
South Extension	LF	49.9
	Total (LF)	99.8

Notes:

1. Post bases to be installed, centered on top of wingwalls and parapet and spaced as shown.
2. Safety rail to be provided on both north and south outlet headwall and wingwalls.

Design For 18° Skew (RA)

Single 10'-0" X 6'-0" Cast-In-Place RCB Culvert Extension

Safety Rail

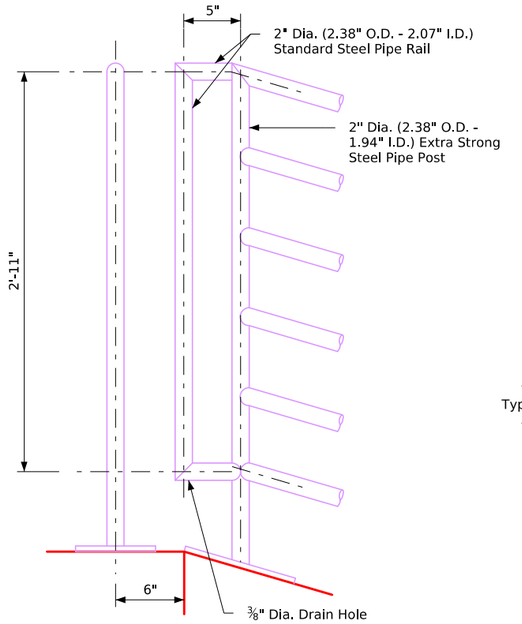
STA. 177+84.40 (US 6)

Turn-in Date: August 2026

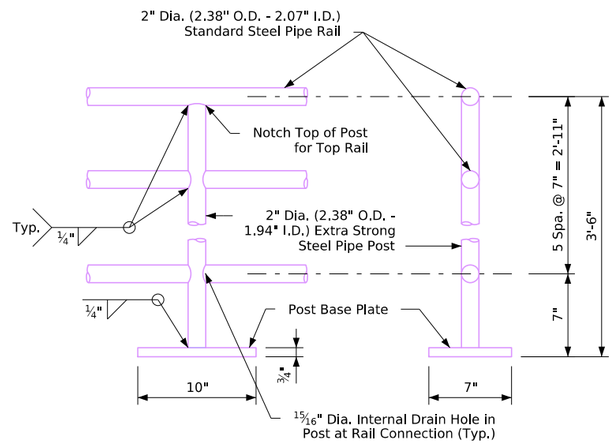
Johnson County

IOWA DEPARTMENT OF TRANSPORTATION

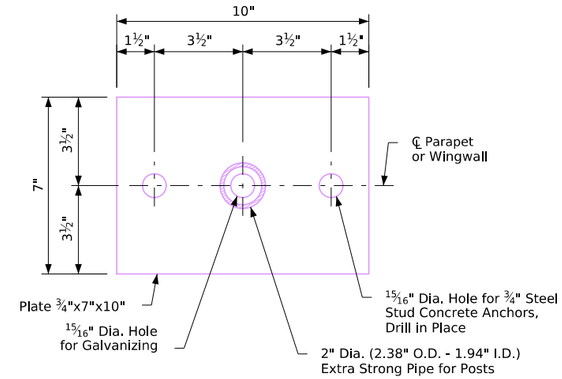
Design No. 0327 | Design Sheet No. 6 of 7 | FHWA No. 900790

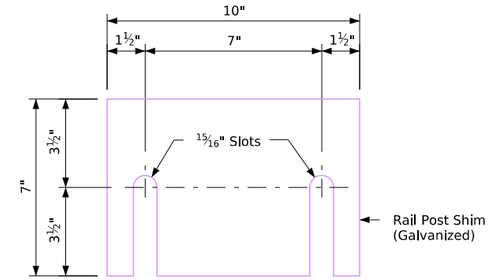


End Rail Details



Pipe Handrail Details

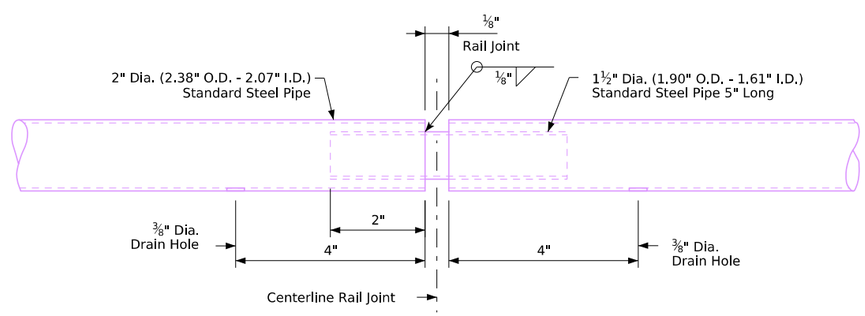




Note:
Provide 1⁄16" galvanized steel shim at each rail post. Use as required.

Post Base Plate and Shim Details

Note:
Pipe handrail assembly to be galvanized after fabrication. Drilled-in drain holes, to facilitate the hot dip galvanizing process, shall be indicated on the shop drawings.



Rail Joint Details

Pedestrian Hand Rail Notes

1. The steel pipe pedestrian hand rail is to be bid on a linear foot basis measured end to end of rail. The price bid for "Steel Pipe Pedestrian Handrail" shall be full compensation for furnishing all material, including anchor bolts and shims, and all of the equipment and labor required to erect the rail in accordance with these Plans and Specifications.
2. The material for tube rails, posts and splice tubes shall be standard and extra strong steel pipe meeting the requirements of ASTM A53, Type E or S, Grade B. Base plates and shims shall meet the requirements of ASTM A36. Panels and end sections shall be galvanized, after fabrication, in accordance with the requirements of ASTM A123.
3. Ends of rail sections are to be sawed or milled. All cut ends are to be true, smooth, and free of burrs or ragged edges.
4. No painting will be required.
5. The stud concrete anchors shall be galvanized and have a minimum pull out strength of 8000 pounds based on 4000 PSI concrete.
6. Rail is to be centered along the ℄ of wingwalls and parapets.
7. Posts shall be set plumb.

Design For 18° Skew (RA)

Single 10'-0" X 6'-0" Cast-In-Place RCB Culvert Extension

Safety Rail Details

STA. 177+84.40 (US 6) Turn-in Date: August 2026

Johnson County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0327 Design Sheet No. 7 of 7 FHWA No. 900790

FILE NO. 32668	ENGLISH	DESIGN TEAM MSA Professional Services, Inc	Johnson COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER V.7

ESTIMATED CAST IN PLACE CULVERT QUANTITIES - DESIGN 0427

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL
1	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1
2	2402-2720000	EXCAVATION, CLASS 20	CY	312
3	2402-3825025	GRANULAR MATERIAL FOR BLANKET	CY	47
4	2403-0100020	STRUCTURAL CONCRETE (RCB CULVERT)	CY	78.0
5	2404-7775000	REINFORCING STEEL	LB	9,369
6	2414-6444100	STEEL PIPE PEDESTRIAN HAND RAILING	LF	52.6

ESTIMATE REFERENCE INFORMATION - DEISGN 0427

ITEM NO.	ITEM CODE	ITEM DESCRIPTION
1	2401-6745650	REMOVAL OF EXISTING STRUCTURES Includes all work for removal and off-site disposal of the existing culvert. Removal of scheduled items shall be in accordance with Section 2401, of the Standard Specifications. Any damage to material not to be removed shall be the responsibility of the Contractor and repaired at no extra cost to the state.
2	2402-2720000	EXCAVATION, CLASS 20 Includes filling and compacting low areas around proposed culvert. Includes 47 CY of excavation to place 1'-0" Granular Material for Blanket.
3	2402-3825025	GRANULAR MATERIAL FOR BLANKET 1'-0" granular material shall be in accordance with Section 4118 of the Standard Specifications. Includes 47 CY for a working blanket. The working blanket may be deleted if determined to be unnecessary at the time of construction.
4	2403-0100020	STRUCTURAL CONCRETE (RCB CULVERT) Includes all resilient joint filler required. The contractor is responsible for certified plant inspection.
5	2404-7775000	REINFORCING STEEL - -
6	2414-6444100	STEEL PIPE PEDESTRIAN HAND RAILING Includes furnishing all material, including anchor bolts and shims, and all of the equipment and labor required to erect the rail. Measurement is in linear feet from end to end of the railing measured along the top of the rail, including slopes.

Roadway Quantities shown elsewhere in these plans.

Design For 15° Skew (RA)

Single 6'-0" X 3'-0" X 97'-0"
Cast-In-Place RCB Culvert

Estimated Quantities

STA. 201+60.18 (US 6)

Turn-In Date: August 2026

Johnson County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0427 | Design Sheet No. 1 of 6 | FHWA No. 900795

General Notes

It is the intent of this design to construct a single 6'-0" x 3'-0" x 97'-0" (FHWA No. 900795 Maintenance No. 5244.2B006) cast-in-place reinforced concrete box culvert skewed 15° right ahead at Station 201+60.18. This design is for the replacement of the existing culvert with the original construction year unknown.

The RCB culvert sections are designed for HL-93 live load and earth fills of 4 feet.

The lump sum bid for "Removal of Existing Structures" shall include all costs associated with removing the existing culvert. Removal of scheduled items shall be in accordance with Section 2401 of the specifications. Any damage to material not to be removed shall be the responsibility of the Contractor and repaired at no extra cost to the state.

Faint lines on plans indicate existing structure.

Utility companies and municipalities whose facilities are shown on the plans or known to be within the construction limits shall be notified by the contractor of the construction starting date.

When de-watering presents a problem for placing the curtain walls as detailed, alternate methods such as steel sheet pile and precast concrete walls may be approved but at no additional cost. The culvert contractor is to submit complete drawings of the proposed curtain wall alternate to the engineer for approval before beginning construction.

The roadway will be closed to traffic during construction. The culvert will be constructed during stage 2A shown on the J sheets elsewhere in these plans. See traffic control plan note.

The Class 20 excavation quantity is based on the assumption that, at the start of culvert construction, the existing groundline shown on Design Sheet 3 for this design has remained undisturbed and no roadway fill has been placed.

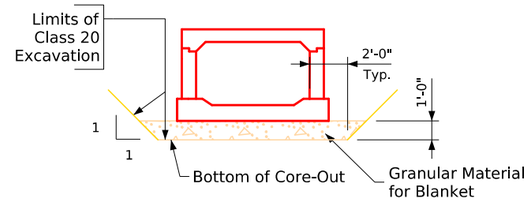
Class 20 excavation material unsuitable for backfilling shall be disposed of in a manner that will leave the site in a neat condition.

It shall be the Culvert Contractor's responsibility to provide sites for excess excavated material. No payment for overhaul will be allowed for material hauled to these sites.

All dimensions and details shown on these plans pertinent to new construction shall be verified in the field by the contractor before starting construction.

All reinforcing bars and bars noted as dowels supplied for this structure shall be deformed reinforcement unless otherwise noted or shown.

See Single Reinforced Concrete Box Culvert Standards Sheet G2-20 for additional notes not shown on this sheet.



Class 20 Excavation

(Typical Section Normal to ℄ Culvert)

Granular material shall terminate 3'-0" short of the outside face of the curtain wall.
Note: Refer to Sheet SPS.2 for additional information about the working blanket.

Specifications:

Design:
Refer to RCB G2-20.

Construction:
Refer to RCB G2-20.

Design Stresses:

Refer to RCB G2-20.

Standards

For details and notes not shown refer to the following Iowa D.O.T. Culvert Standards:

Standard	Issued	Revised
RCB G1-20	07-2020	--
RCB G2-20	07-2020	--
RCB G3-20	07-2020	--
RCB 6-3-20	07-2020	--
PWH 15-1-20	07-2020	--
PWH 15-2-20	07-2020	--
PWH 15-3-20	07-2020	--
PWH 15-4-20	07-2020	--
PWH 15-10-20	07-2020	--

Concrete Placement Quantities

Location	Footing	Walls	Slab	Total
35'-0" Barrel Section (1 Req'd)	1 @ 10.0	1 @ 5.1	1 @ 7.6	22.7
26'-0" Barrel Section (1 Req'd)	1 @ 7.4	1 @ 3.8	1 @ 5.7	16.9
18'-0" Barrel End Section (2 Req'd)	2 @ 5.1	2 @ 2.6	2 @ 3.9	23.2
Standard 15° Skew Parallel Wing Headwall (2 Req'd)	2 @ 5.0	2 @ 1.5	✳ 2 @ 1.1	15.2
			Total (c.y.)	78.0

✳Includes parapet and top of wingwall.

Summary of Reinforcing Steel

Location	Quantity	Total
35'-0" Barrel Section (1 Req'd)	1 @ 2,584	2,584
26'-0" Barrel Section (1 Req'd)	1 @ 1,919	1,919
18'-0" Barrel End Section (2 Req'd)	2 @ 1,329	2,658
Standard 15° Skew Parallel Wing Headwall (2 Req'd)	2 @ 1,104	2,208
	Total (lbs)	9,369

Design History at this Site

(Includes This Design)

Des. No.	Type of Work
Unknown	Original Design
0427	RCB Culvert Replacement - Single Box

Pollution Prevention Plan shown elsewhere in these plans.

Traffic Control Plan

The roadway will be closed to thru traffic. Refer to the traffic control plan shown elsewhere in these plans.

Design For 15° Skew (RA)

Single 6'-0" X 3'-0" X 97'-0"
Cast-In-Place RCB Culvert

General Notes

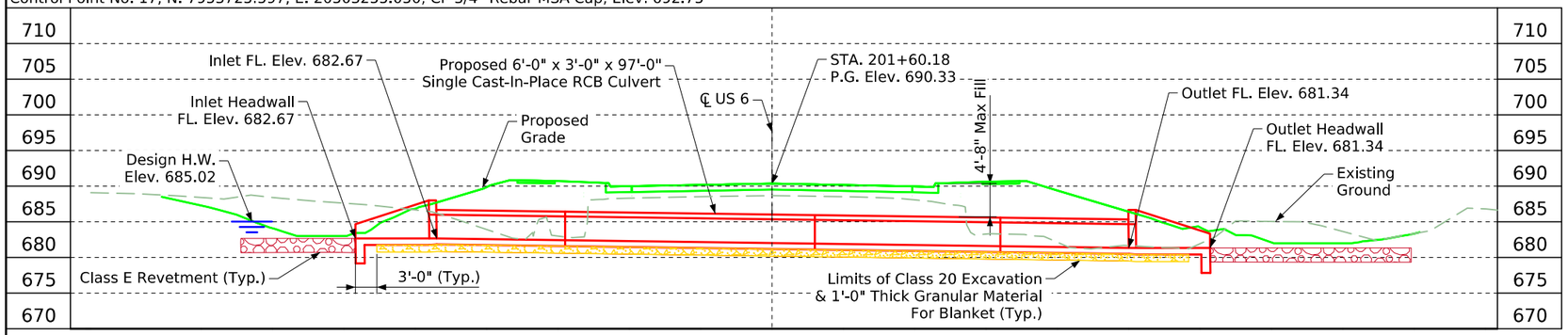
STA. 201+60.18 (US 6) Turn-in Date: August 2026

Johnson County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0427 Design Sheet No. 2 of 6 FHWA No. 900795

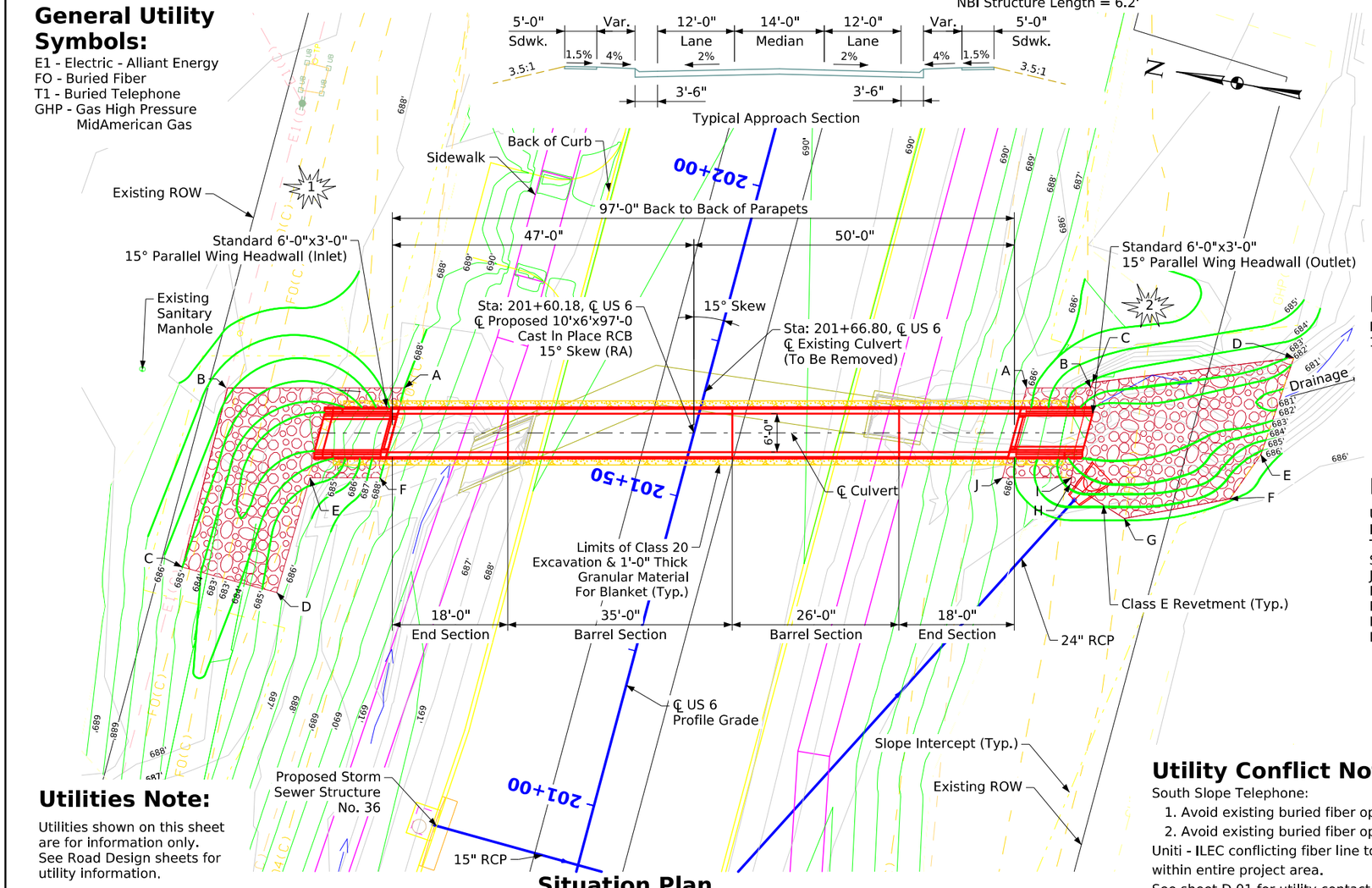
Benchmark No. 105, N: 7953760.8000, E: 20504174.2500, RR Spike in PP Just E. of Drive at House #2852 N. Side US 6, Elev. 686.912
Benchmark No. 106, N: 7953745.5320, E: 20502531.5900, Cut "X" on Top of Curb W. Side of Entrance to Restaurant, Elev. 705.134
Control Point No. 16, N: 7953665.593, E: 20504105.670, CP 3/4" Rebar MSA Cap, Elev. 687.14
Control Point No. 17, N: 7953725.597, E: 20503255.050, CP 3/4" Rebar MSA Cap, Elev. 692.75



Longitudinal Section Along ℄ Culvert

Design Fill Height= 4'-0"
Anticipated Settlement = 0.12'
NBI Structure Length = 6.2'

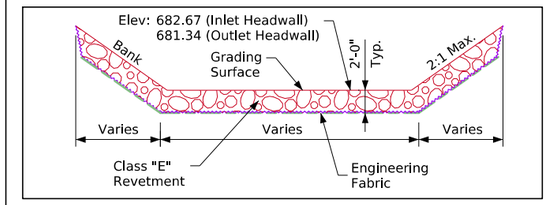
Typical Approach Section



Utilities Note:

Utilities shown on this sheet are for information only. See Road Design sheets for utility information.

Situation Plan



Typical Channel Protection

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet	67	68	45
Outlet	80	81	54
Totals	147	149	99

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans. Quantities shown for information only. See Road Sheets.

Hydraulic Data

Drainage Area = 3.79 Acres
Q_{50} = 69 cfs
HW Elev. = 685.02
Q_{100} = 89 cfs
HW Elev. = 685.45
Q_{500} = 145 cfs
HW Elev. = 687.06
Stream Slope = 84.06 Ft./Mi.

-0.50%

VPT Sta. = 197+50
VPT Elev. = 692.39

Sta. = 215+88.27
Elev. = 683.99

Proposed Profile Grade US 6

Revetment Limits

	Inlet		Outlet	
Point	Station	Offset	Station	Offset
A	201+55.26	45.398' LT	201+80.36	48.297' RT
B	201+48.13	72.018' LT	201+82.96	57.991' RT
C	201+19.31	71.602' LT	201+83.85	58.047' RT
D	201+19.31	56.398' LT	201+95.69	87.326' RT
E	201+37.92	56.008' LT	201+79.81	86.282' RT
F	201+40.77	45.398' LT	201+71.88	83.408' RT
G	--	--	201+64.66	68.295' RT
H	--	--	201+67.68	58.823' RT
I	--	--	201+68.66	58.696' RT
J	--	--	201+65.87	48.297' RT

Notes:

Plan Notes:
1. Drainage through the culvert/channel must be maintained throughout construction.

Location

US 6 Over Drainage
In City of Tiffin
T-80N R-7W
Section 27
Johnson County
FHWA No. 900795
Maint. No. 5244.2B006
Latitude 41.706317°
Longitude -91.652527°

Hydraulic Design

LICENSED PROFESSIONAL ENGINEER MARIE PHELAN AMUNDSON P24112 IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Marie Amundson 5/28/2026
Signature Date
Marie Amundson
Printed or Typed Name
My license renewal date is December 31, 2026
Pages or sheets covered by this seal: V.3 (Hydraulic Data)

Utility Conflict Notes:

South Slope Telephone:
1. Avoid existing buried fiber optic line during construction.
2. Avoid existing buried fiber optic line during construction.

Uniti - ILEC conflicting fiber line to be abandoned by utility within entire project area.
See sheet D.01 for utility contact information.

Design For 15° Skew (RA)

Single 6'-0" X 3'-0" X 97'-0" Cast-In-Place RCB Culvert

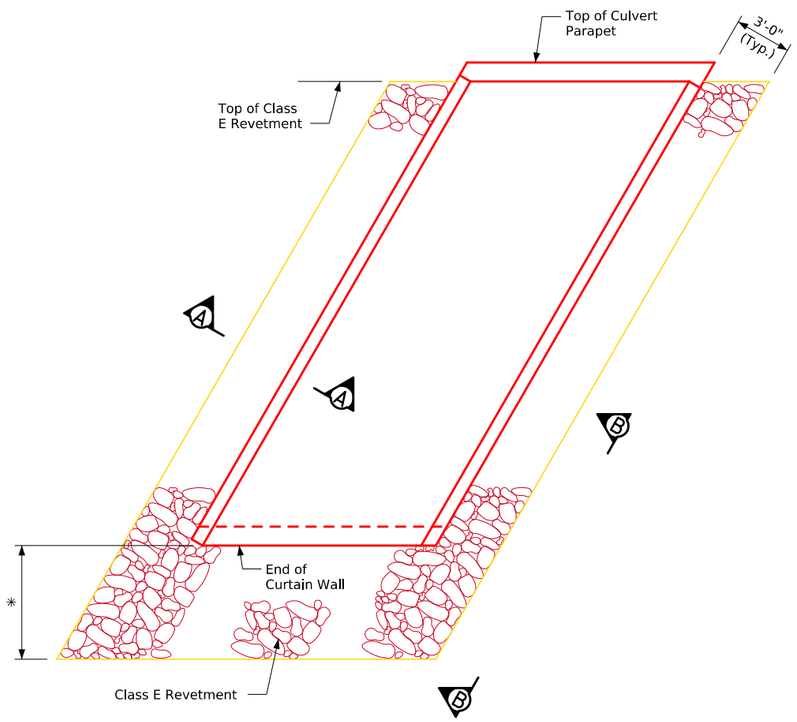
Situation Plan

STA. 201+60.18 (US 6)
Turn-in Date: August 2026

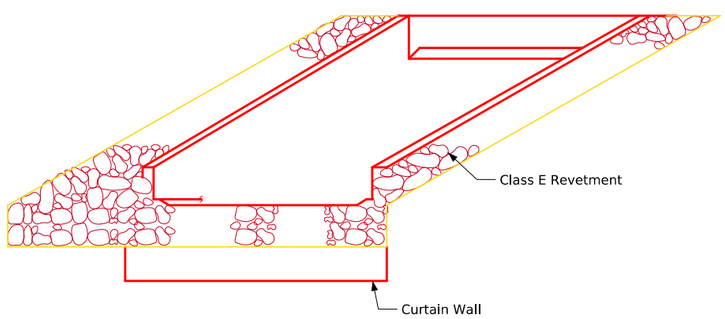
Johnson County
IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0427 | Design Sheet No. 3 of 6 | FHWA No. 900795

✳ = See Design Sheet 3 for limits of revetment and engineering fabric.



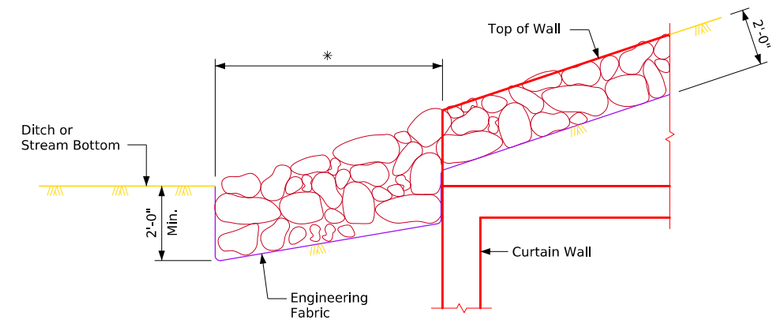
Plan View



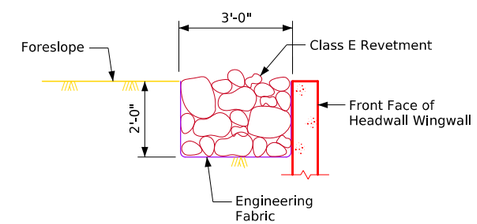
Elevation View

15° Skewed Headwall

✳ = See Design Sheet 3 for limits of revetment and engineering fabric.



View B-B



Section A-A

Typical Details

Construction Notes:

Class E Revetment shall be used and placed according to Article 2507.03, of the Standard Specifications. The engineering fabric shall meet the material requirements in accordance with Article 4196.01,B,3, of the Standard Specifications.

Design For 15° Skew (RA)

Single 6'-0" X 3'-0" X 97'-0"
Cast-In-Place RCB Culvert

Revetment Protection Details

STA. 201+60.18 (US 6)

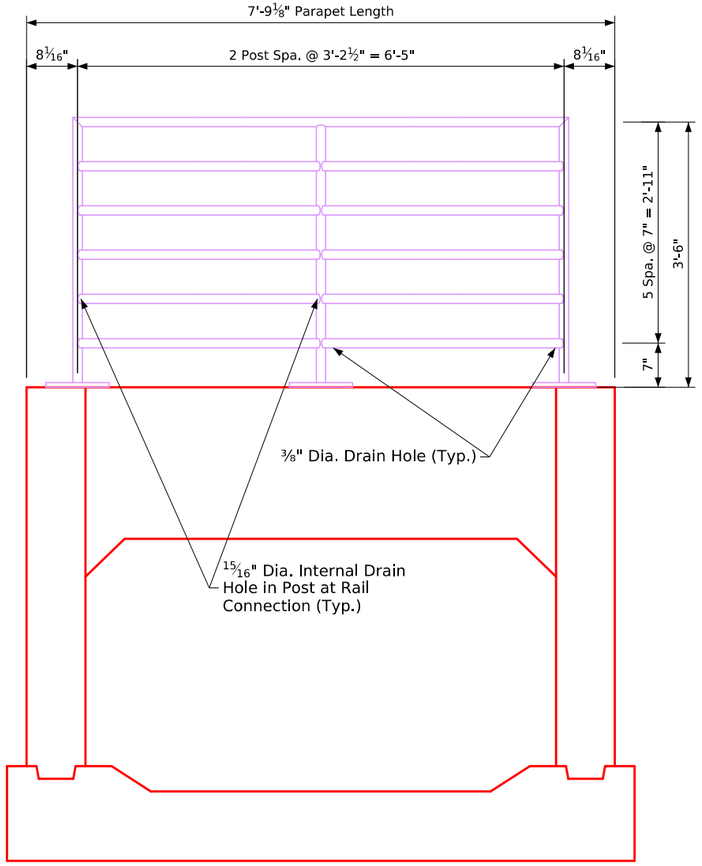
Turn-in Date: August 2026

Johnson County

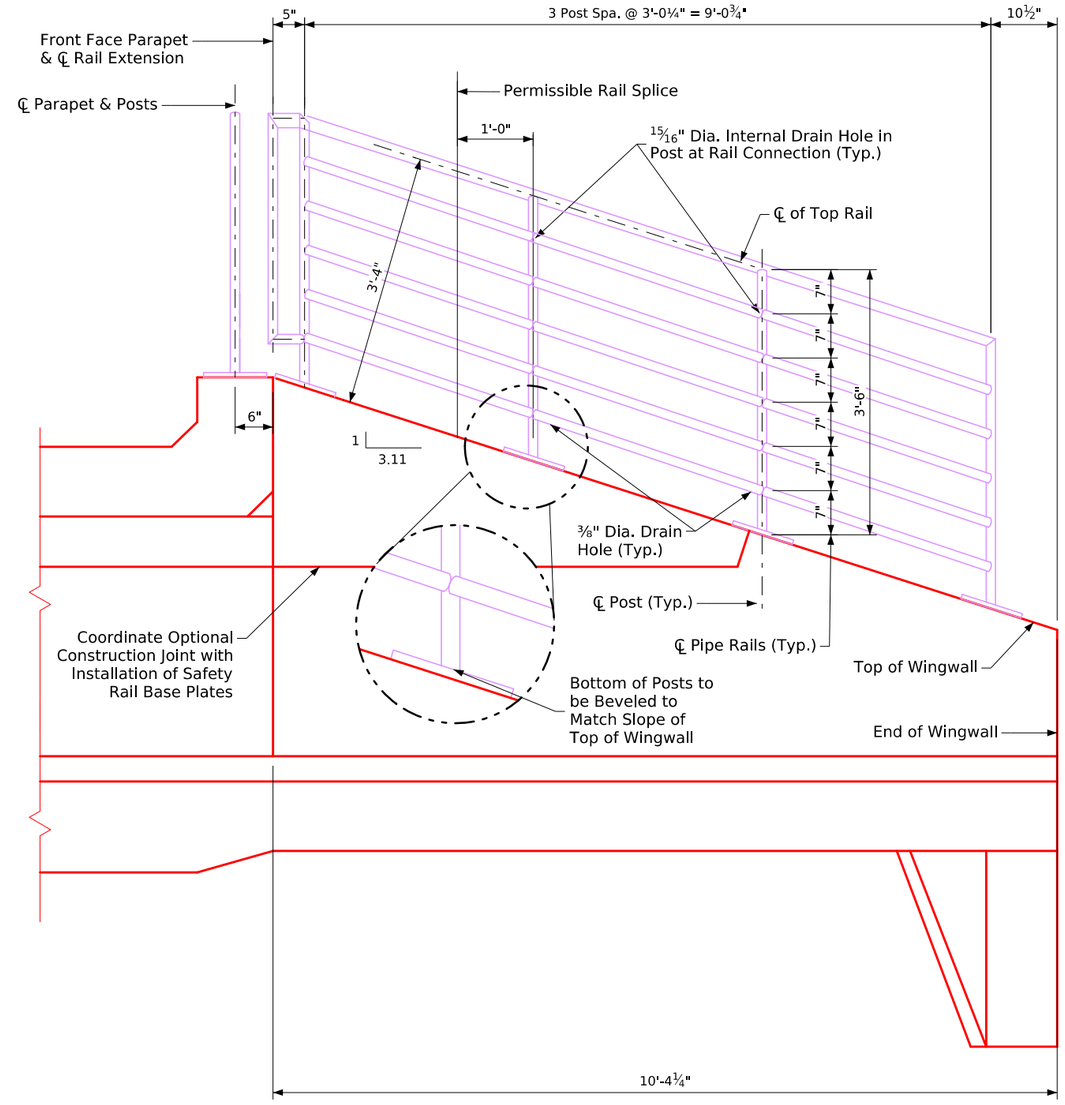
IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0427 | Design Sheet No. 4 of 6 | FHWA No. 900795

REVISED 1-2016 - ADDED NOTE "SEE CULVERT PLANS FOR LIMITS OF REVETMENT AND ENGINEERING FABRIC."
REVISED 02-2017 - ADDED SECTION DIRECTORS "A-A" TO ZERO SKEW PLAN VIEW DETAIL.
REVISION 01-2021 - CHANGED DESIGN SPECIFICATIONS TO AASHTO LRFD 8TH ED.
ENGLISHSINGLECULVERTS.DGN - 1092 - THIS SHEET ISSUED 04-12.



Partial End View of Parapet and Headwall



Elevation View of Wingwall

Steel Pipe Pedestrian Hand Railing Quantities		
Location	Unit	Quantity
North Extension	LF	26.3
South Extension	LF	26.3
	Total (LF)	52.6

Notes:

1. Post bases to be installed, centered on top of wingwalls and parapet and spaced as shown.
2. Safety rail to be provided on both north and south outlet headwall and wingwalls.

Design For 15° Skew (RA)

Single 6'-0" X 3'-0" X 97'-0"
Cast-In-Place RCB Culvert

Safety Rail

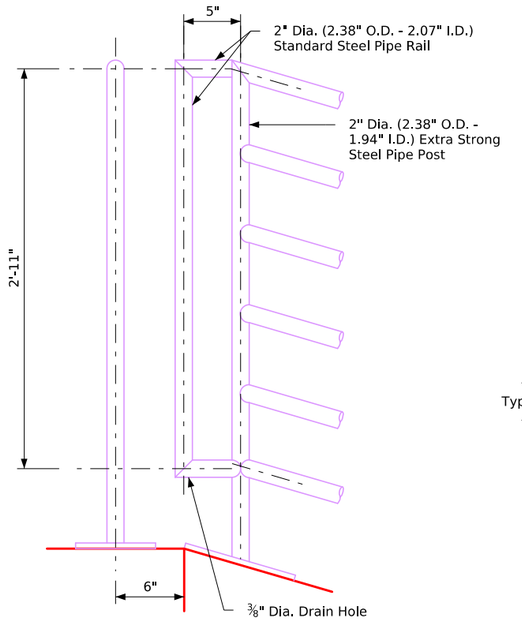
STA. 201+60.18 (US 6)

Turn-in Date: August 2026

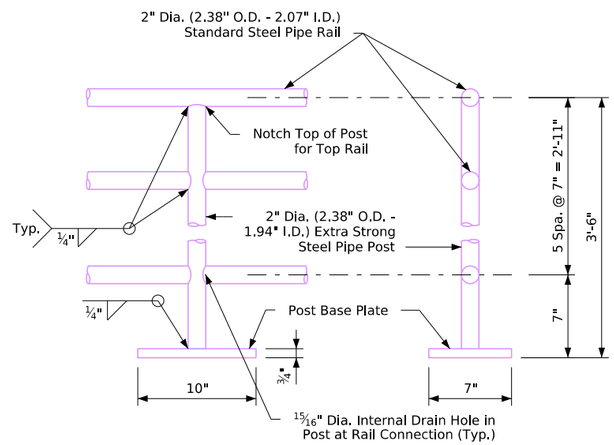
Johnson County

IOWA DEPARTMENT OF TRANSPORTATION

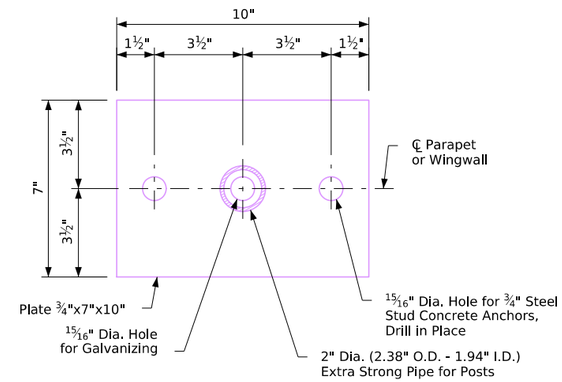
Design No. 0427 | Design Sheet No. 5 of 6 | FHWA No. 900795

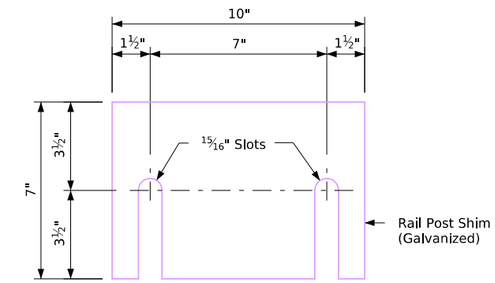


End Rail Details



Pipe Handrail Details

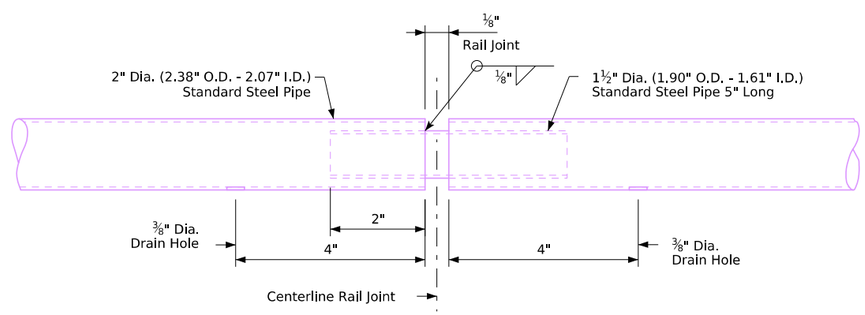




Note:
Provide 1⁄16" galvanized steel shim at each rail post. Use as required.

Post Base Plate and Shim Details

Note:
Pipe handrail assembly to be galvanized after fabrication. Drilled-in drain holes, to facilitate the hot dip galvanizing process, shall be indicated on the shop drawings.



Rail Joint Details

Pedestrian Hand Rail Notes

1. The steel pipe pedestrian hand rail is to be bid on a linear foot basis measured end to end of rail. The price bid for "Steel Pipe Pedestrian Handrail" shall be full compensation for furnishing all material, including anchor bolts and shims, and all of the equipment and labor required to erect the rail in accordance with these Plans and Specifications.
2. The material for tube rails, posts and splice tubes shall be standard and extra strong steel pipe meeting the requirements of ASTM A53, Type E or S, Grade B. Base plates and shims shall meet the requirements of ASTM A36. Panels and end sections shall be galvanized, after fabrication, in accordance with the requirements of ASTM A123.
3. Ends of rail sections are to be sawed or milled. All cut ends are to be true, smooth, and free of burrs or ragged edges.
4. No painting will be required.
5. The stud concrete anchors shall be galvanized and have a minimum pull out strength of 8000 pounds based on 4000 PSI concrete.
6. Rail is to be centered along the ℄ of wingwalls and parapets.
7. Posts shall be set plumb.

Design For 15° Skew (RA)

Single 6'-0" X 3'-0" X 97'-0"
Cast-In-Place RCB Culvert

Safety Rail Details

STA. 201+60.18 (US 6)

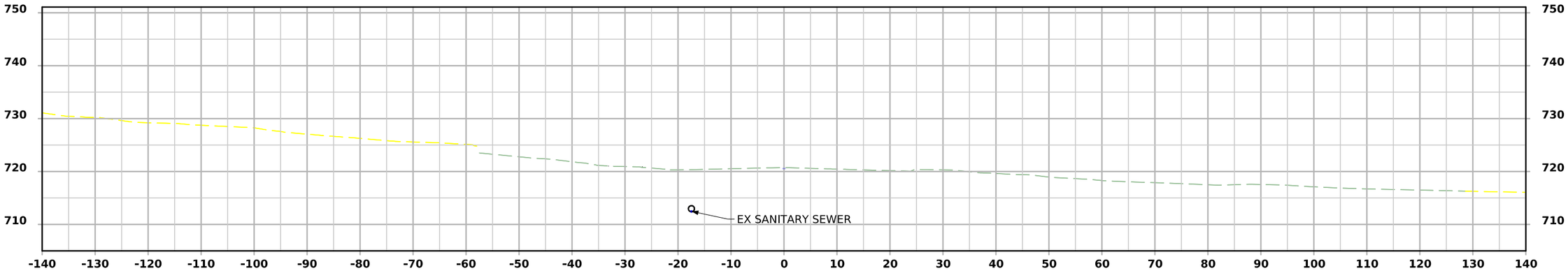
Turn-in Date: August 2026

Johnson County

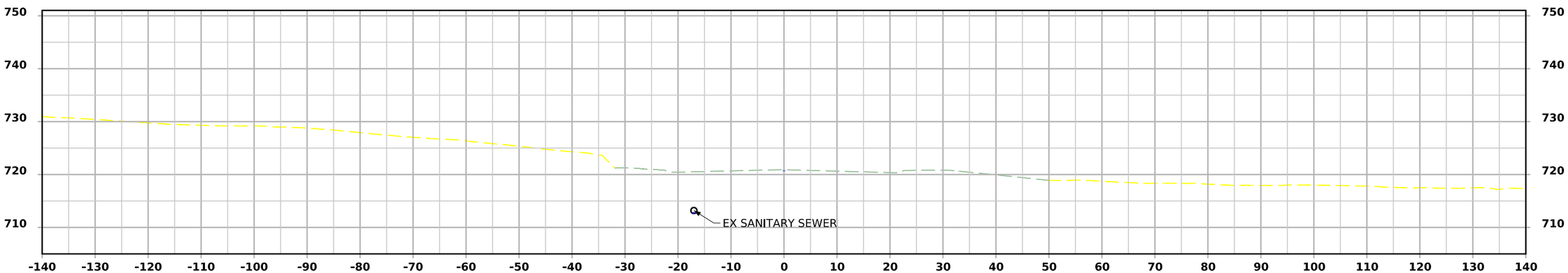
IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0427 | Design Sheet No. 6 of 6 | FHWA No. 900795

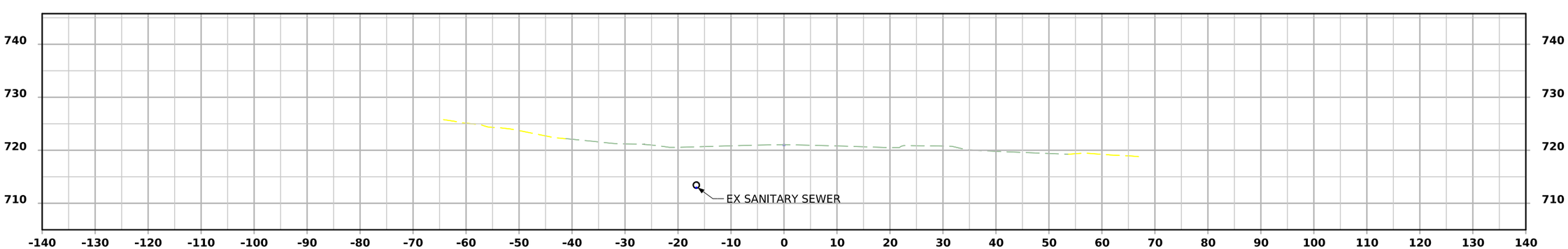
ML - USH 6



STA 168+50.00



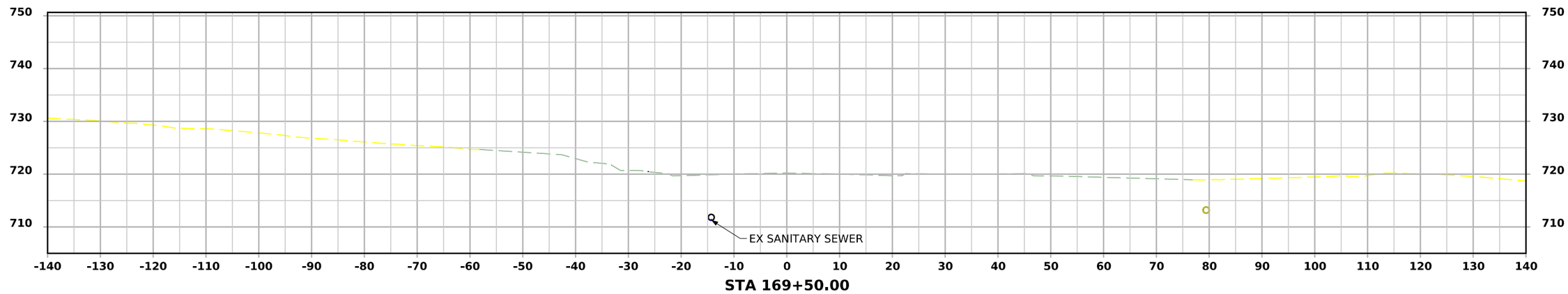
STA 168+00.00



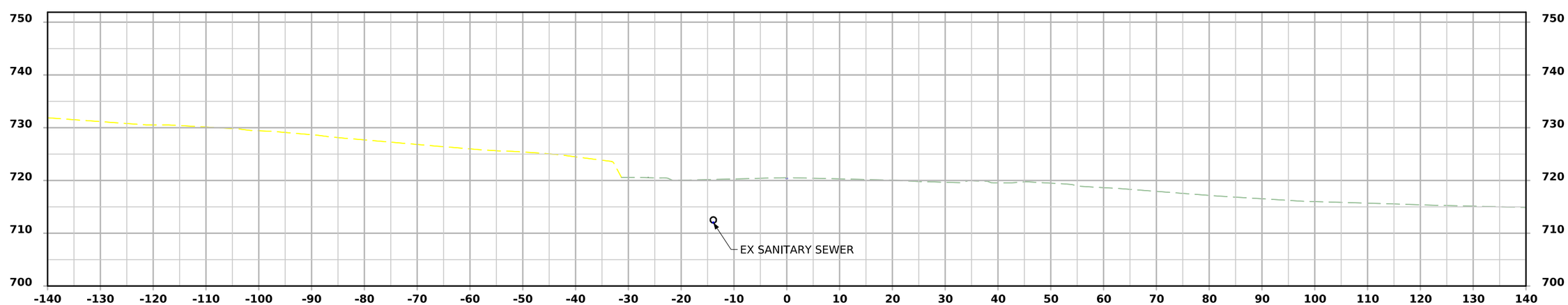
STA 167+50.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.1

ML - USH 6



STA 169+50.00

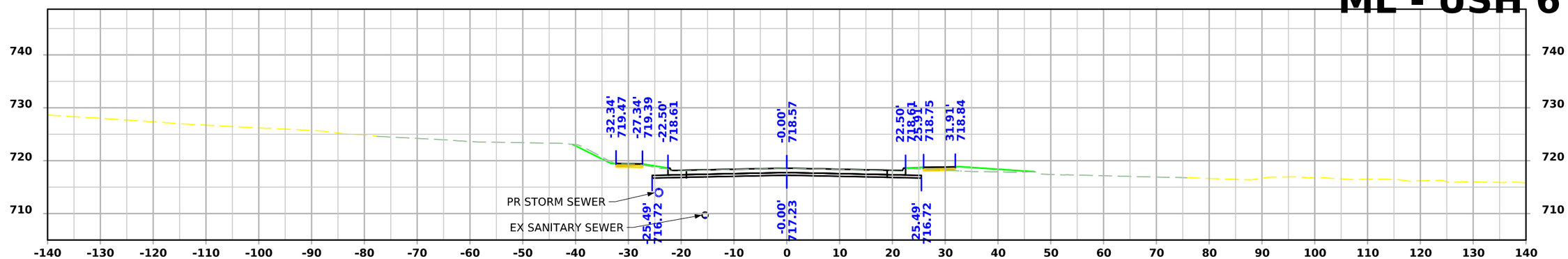


STA 169+00.00

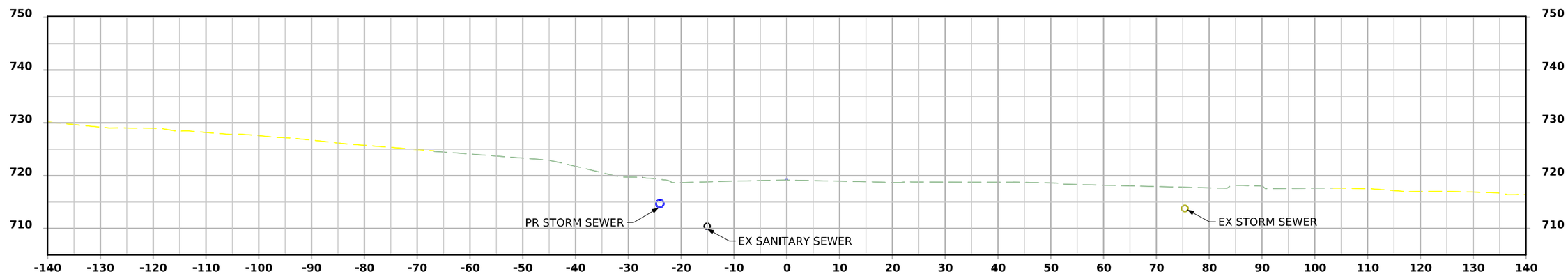
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.2

1:56:13 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

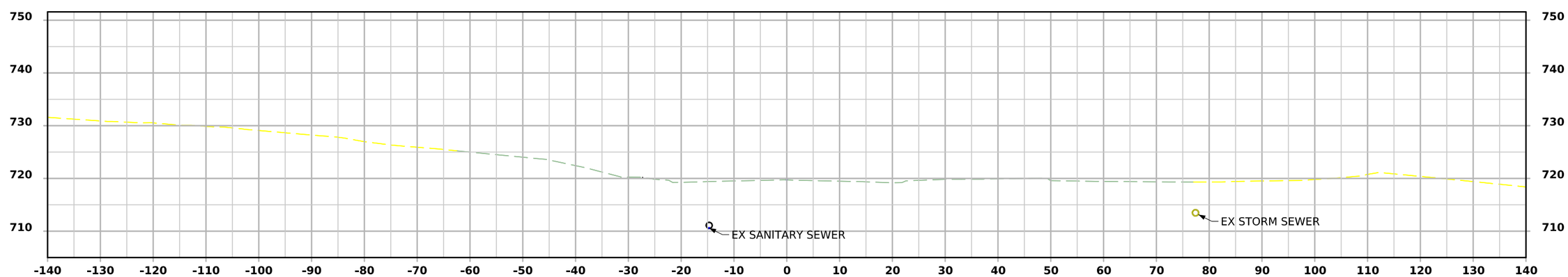
ML - USH 6



STA 171+00.00



STA 170+50.00

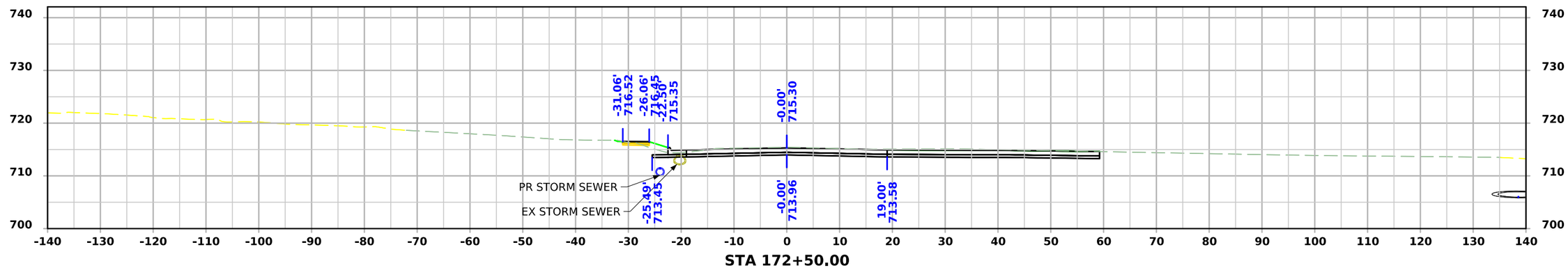


STA 170+00.00

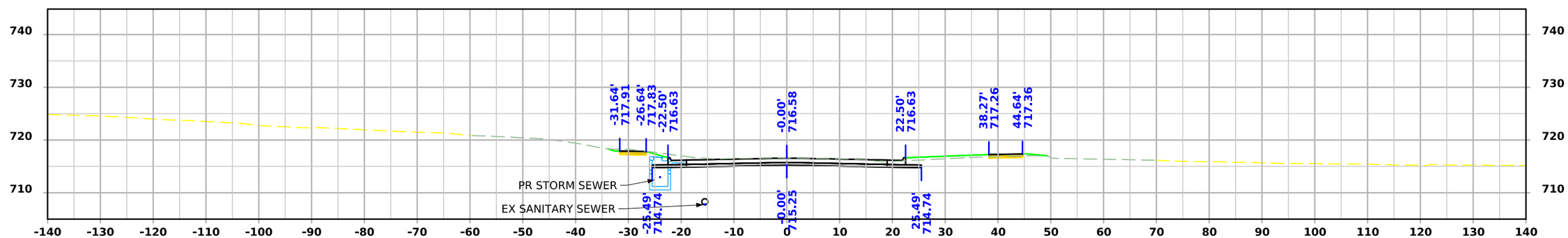
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.3

1:56:14 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

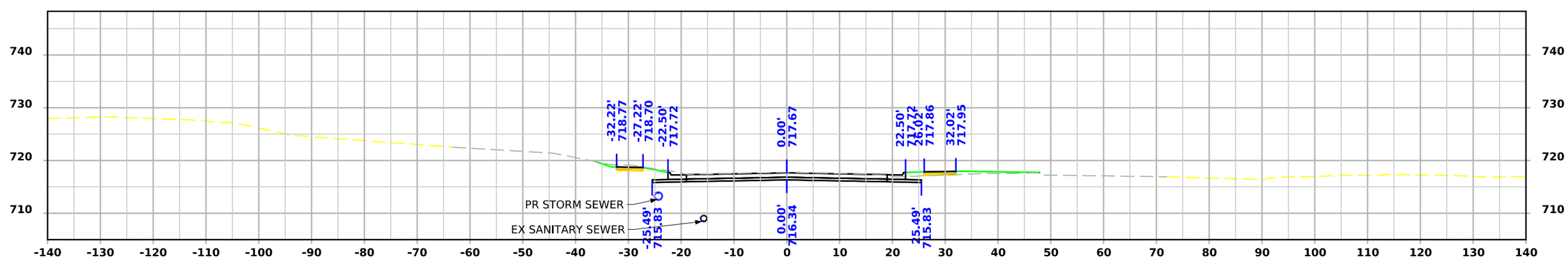
ML - USH 6



STA 172+50.00



STA 172+00.00

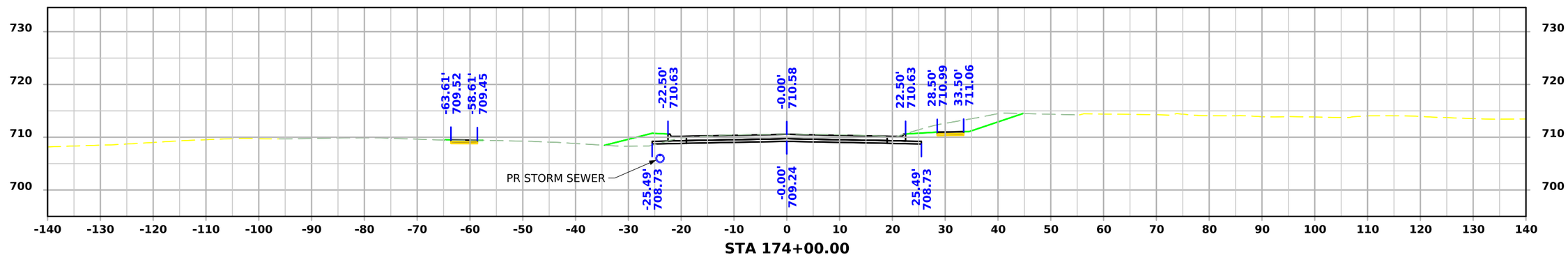


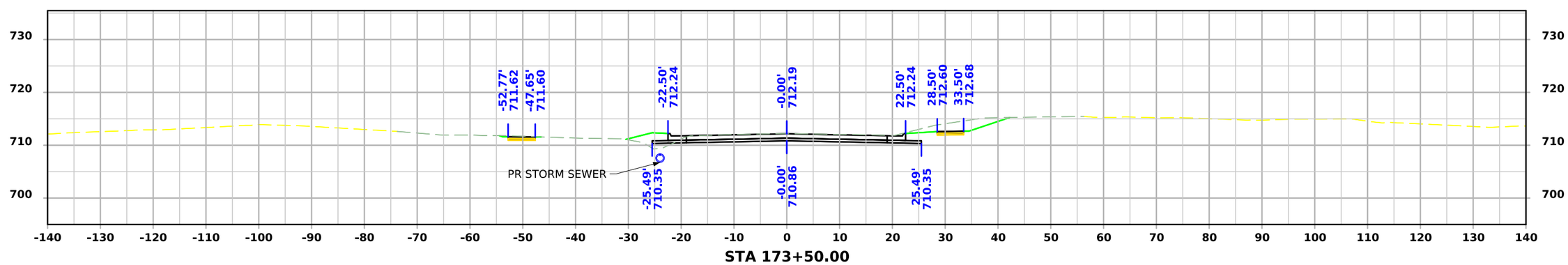
STA 171+50.00

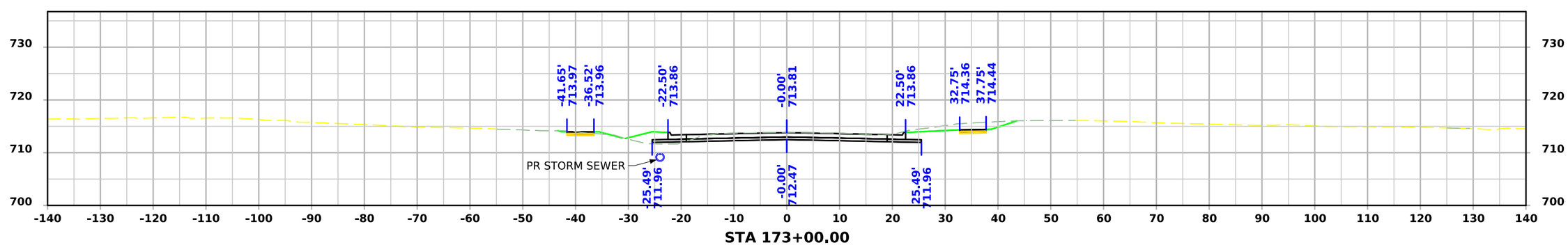
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.4

1:56:15 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

ML - USH 6

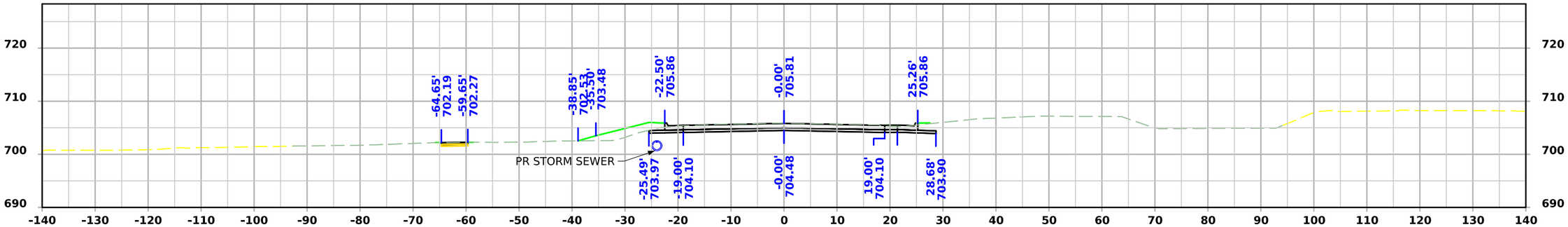




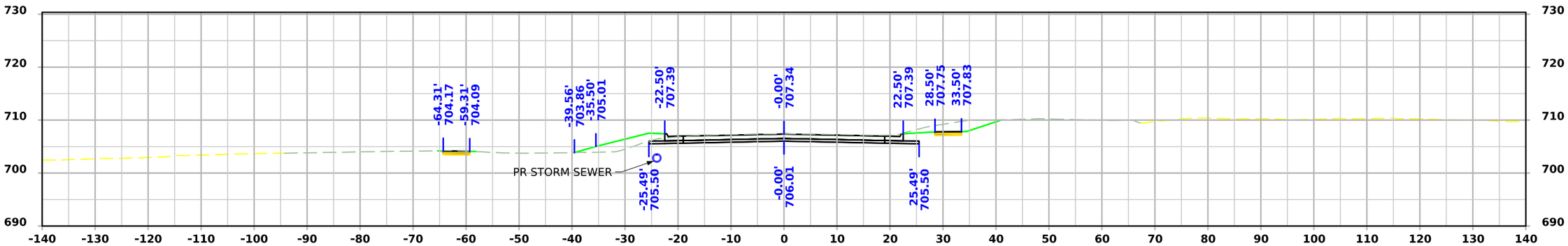


FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.5

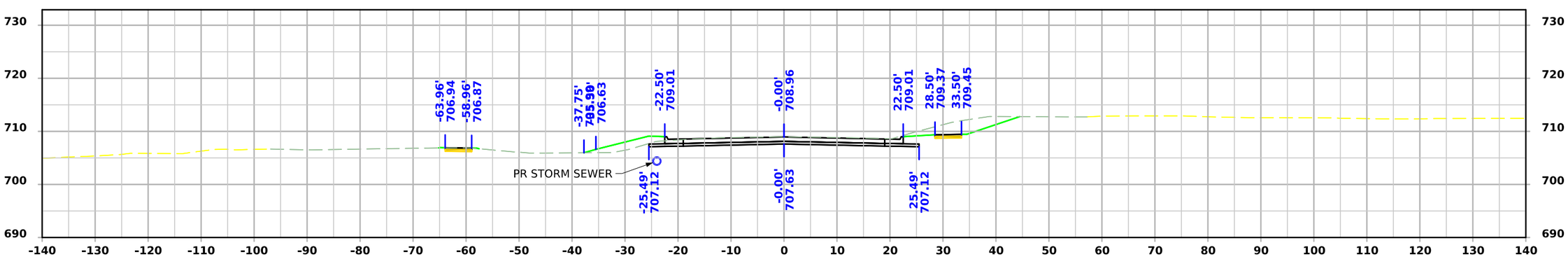
ML - USH 6



STA 175+50.00



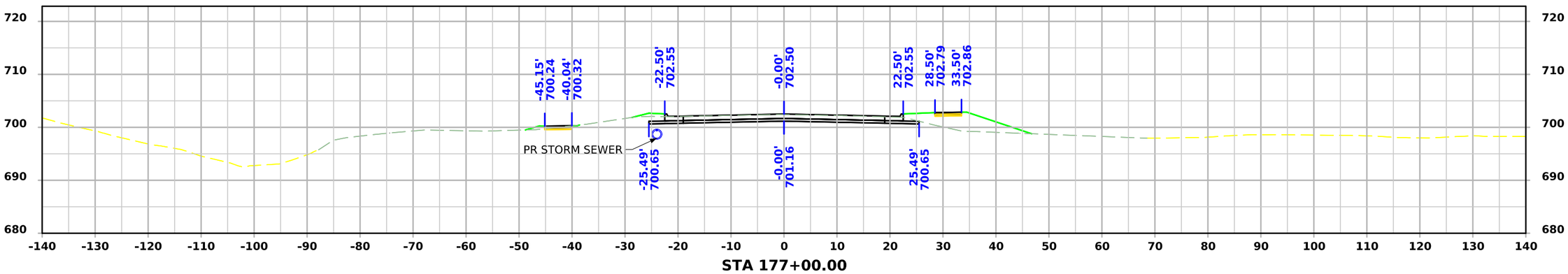
STA 175+00.00

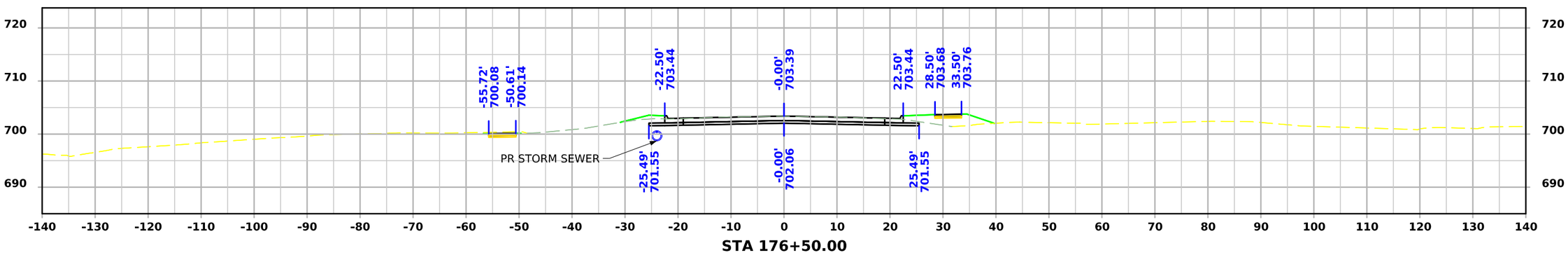


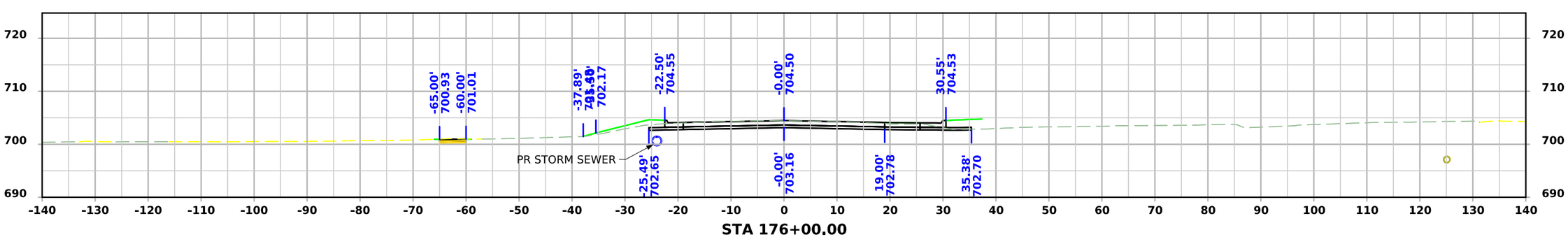
STA 174+50.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.6

ML - USH 6



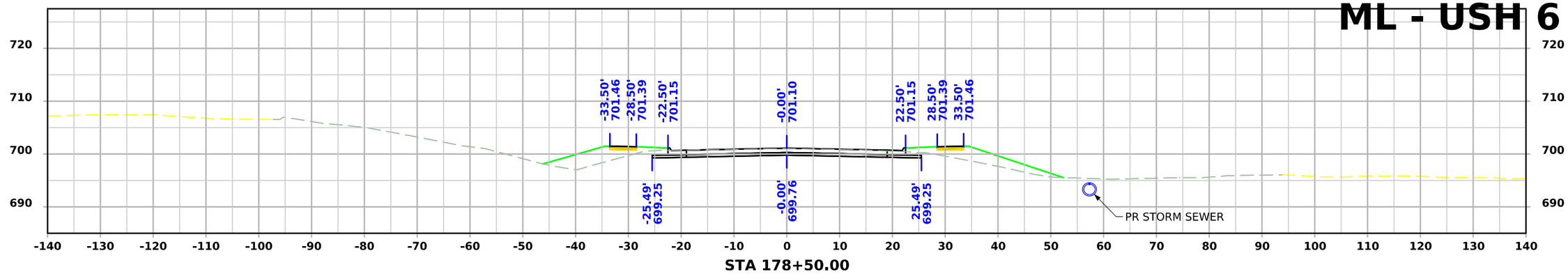




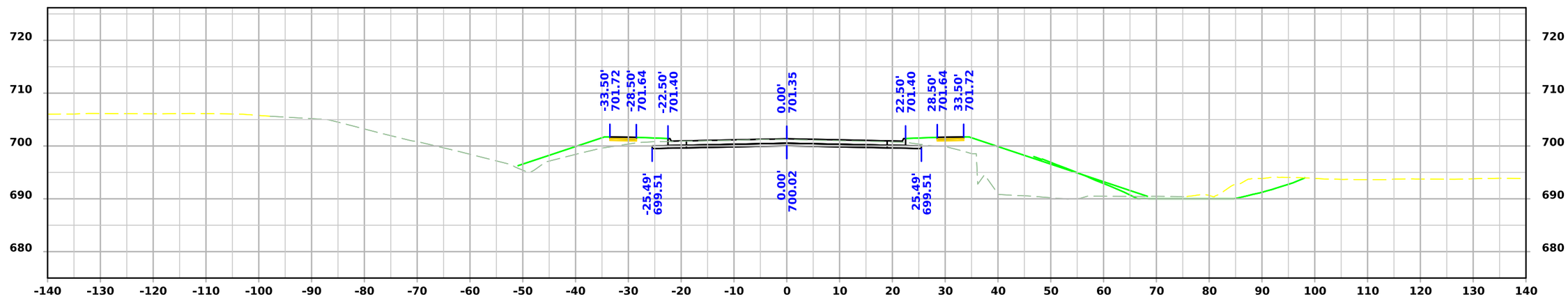
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.7

1:56:18 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

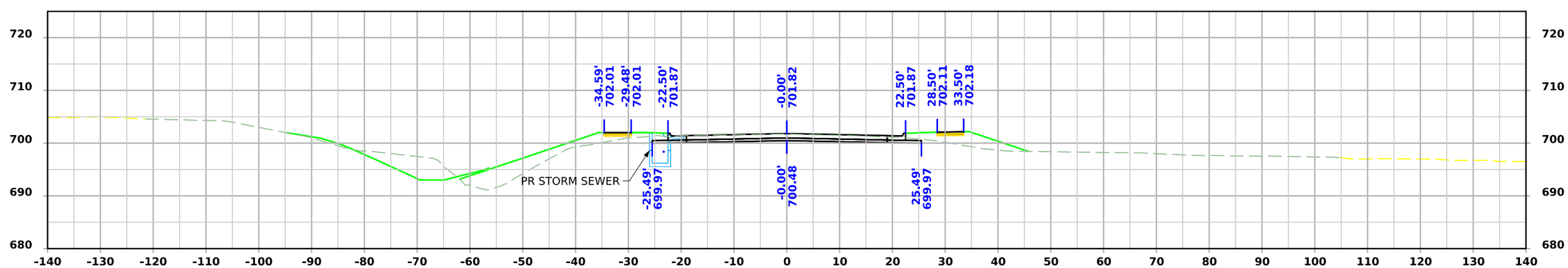
ML - USH 6



STA 178+50.00



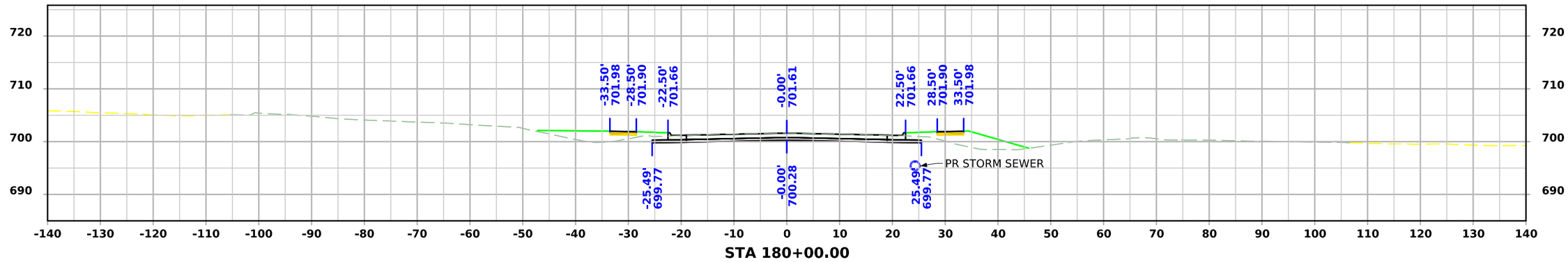
STA 178+00.00

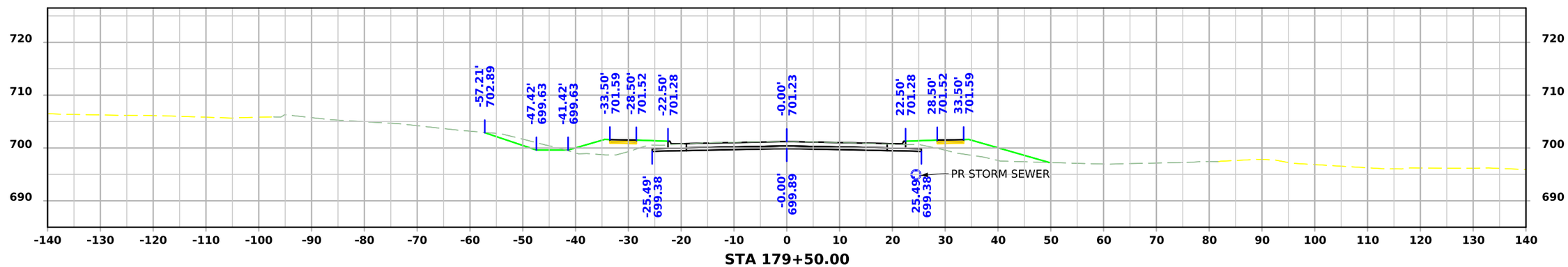


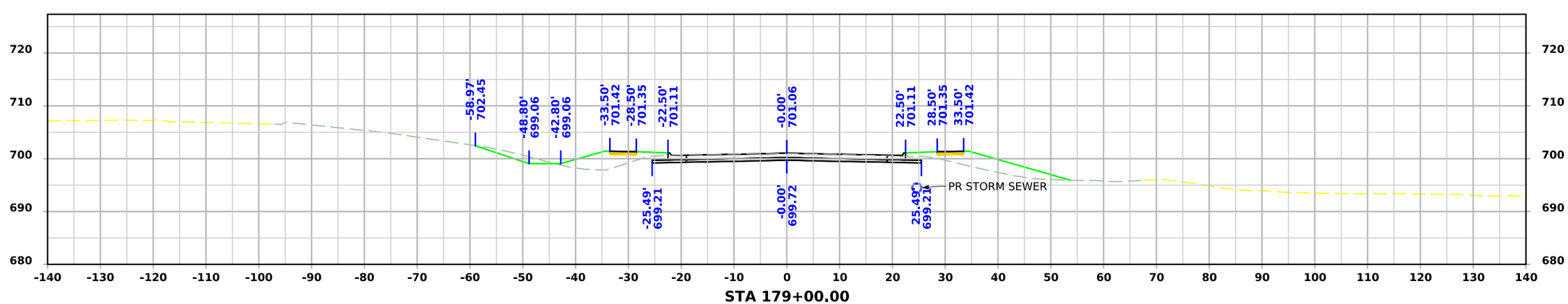
STA 177+50.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.8

ML - USH 6



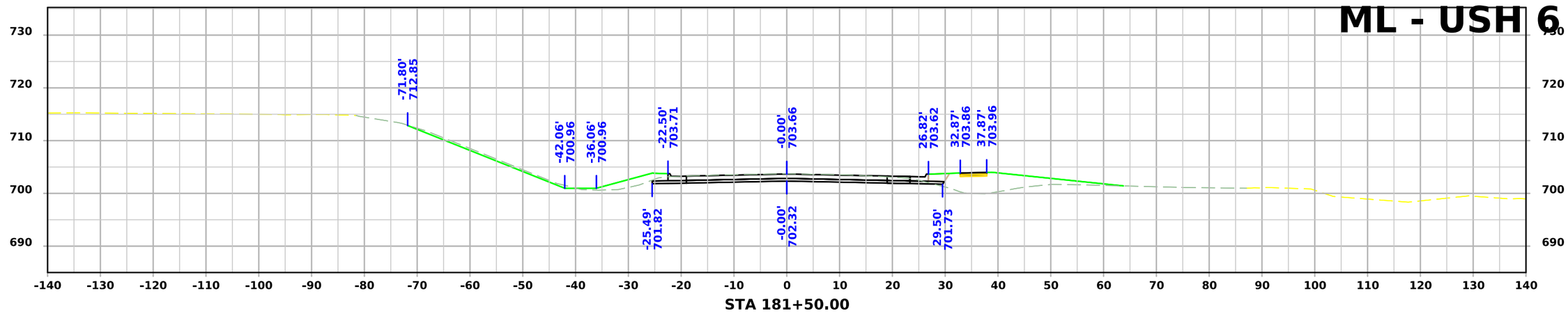




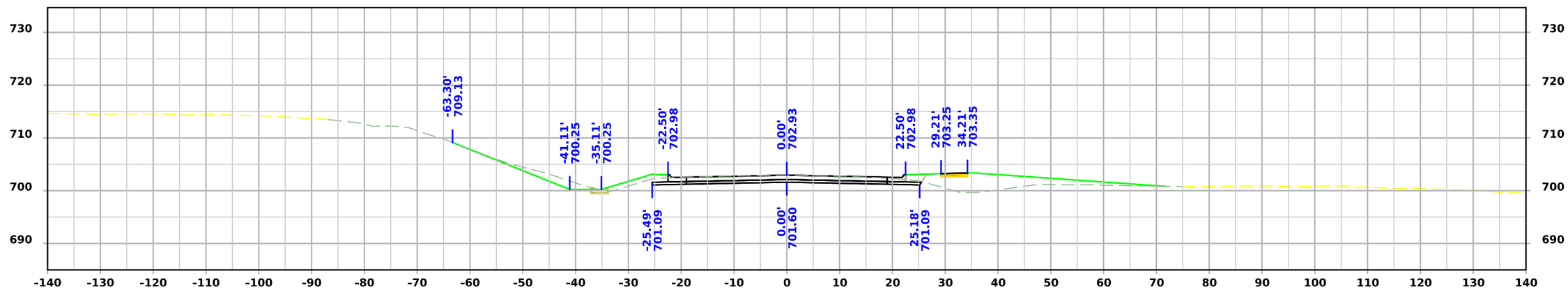
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.9

1:56:20 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

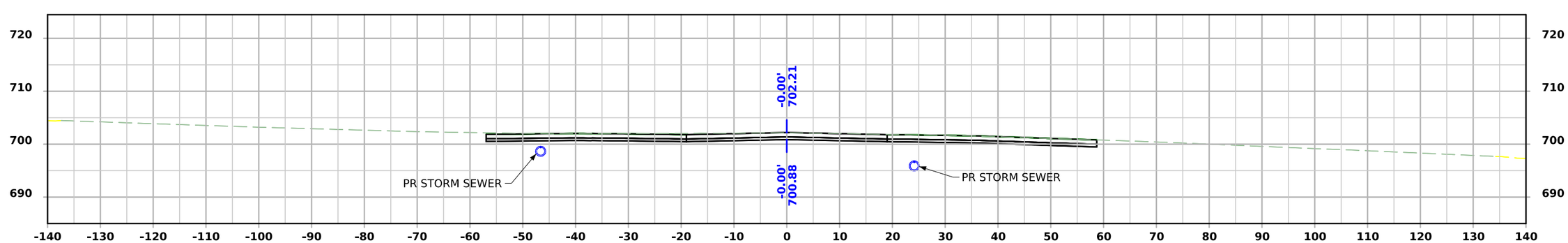
ML - USH 6



STA 181+50.00



STA 181+00.00

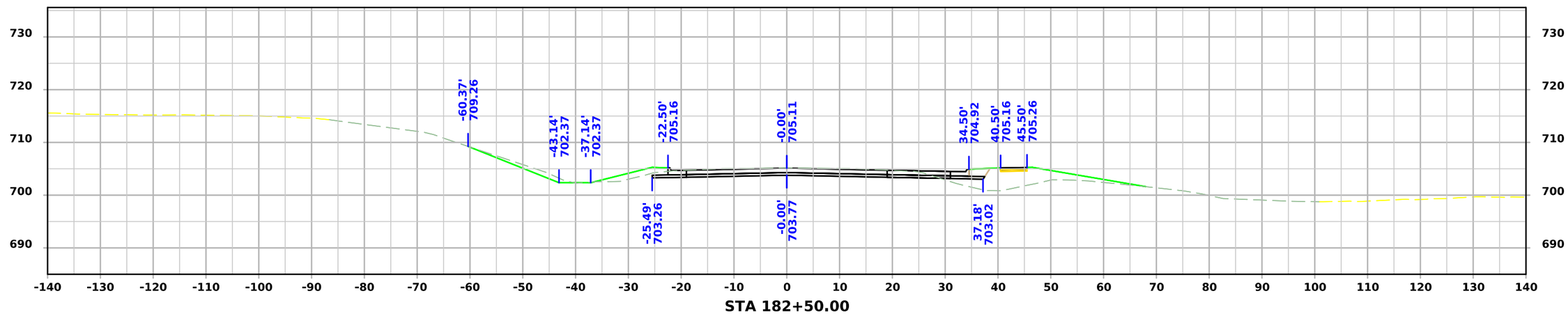


STA 180+50.00

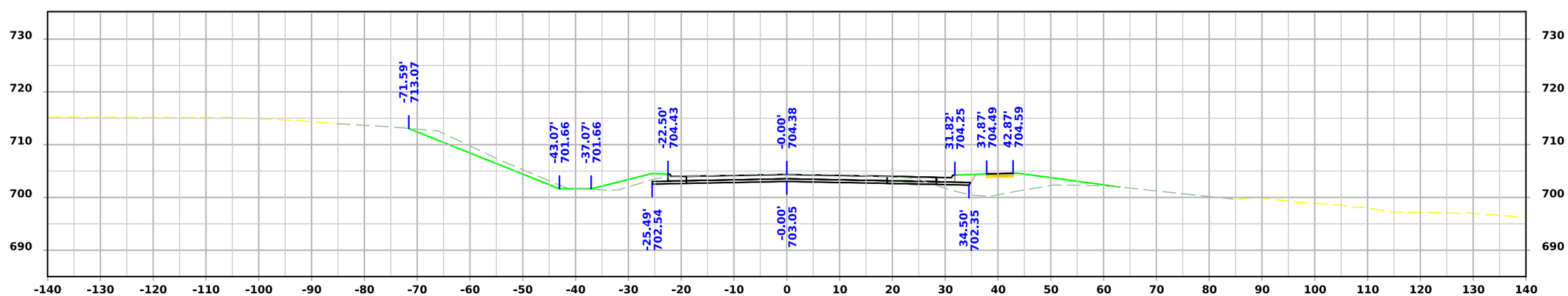
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.10

1:56:21 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

ML - USH 6



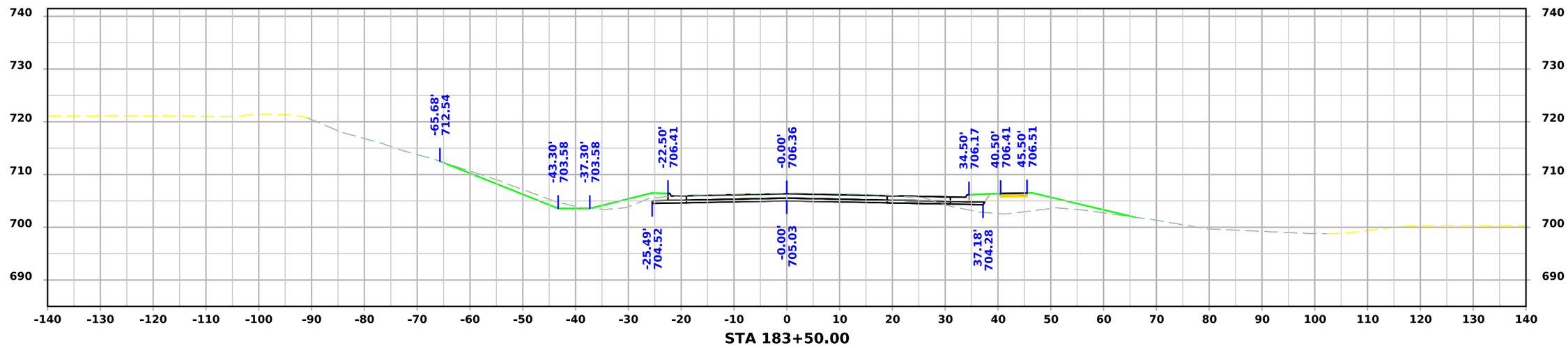
STA 182+50.00



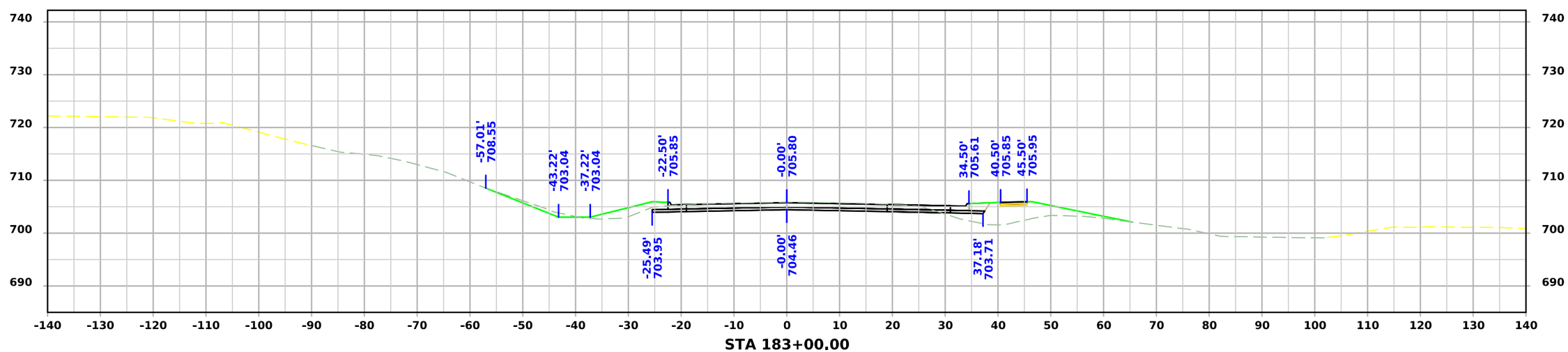
STA 182+00.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.11

ML - USH 6



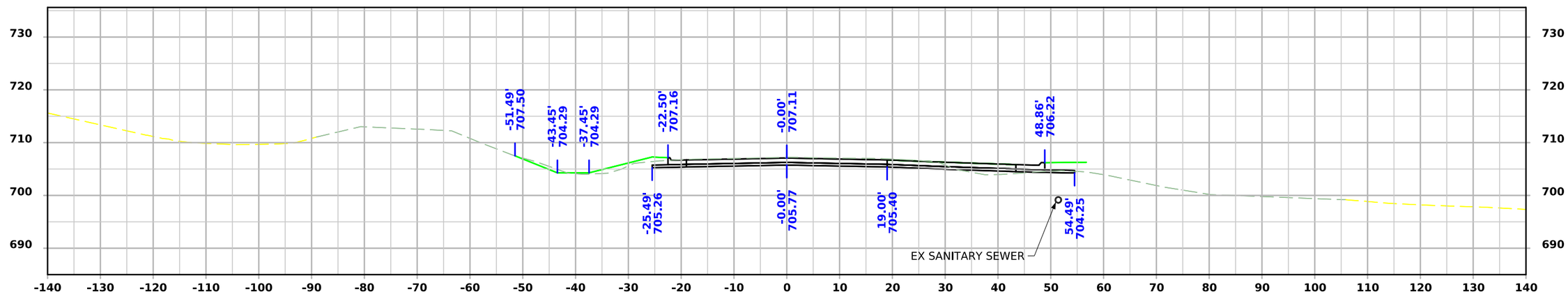
STA 183+50.00



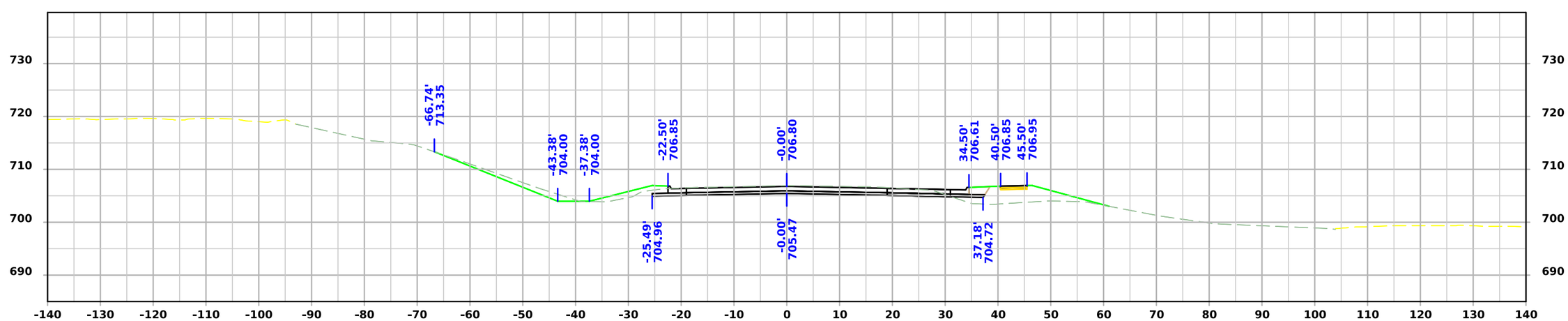
STA 183+00.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.12

ML - USH 6



STA 184+50.00

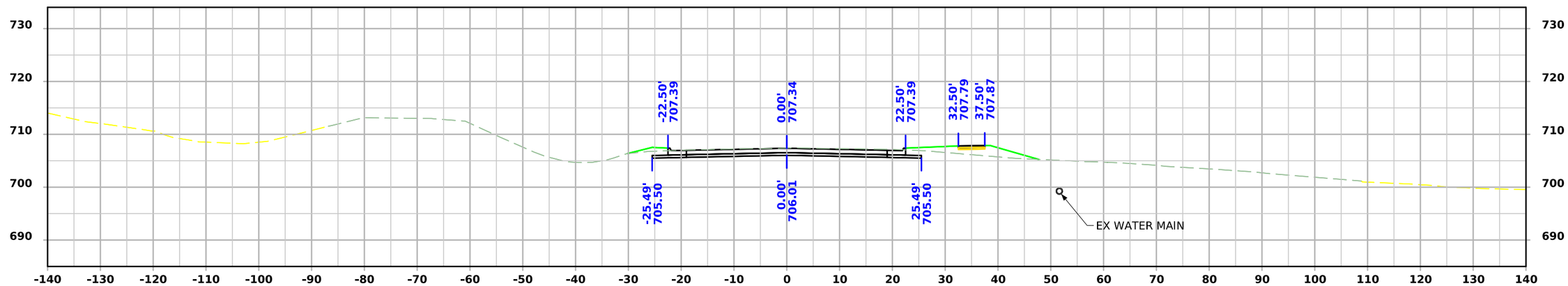


STA 184+00.00

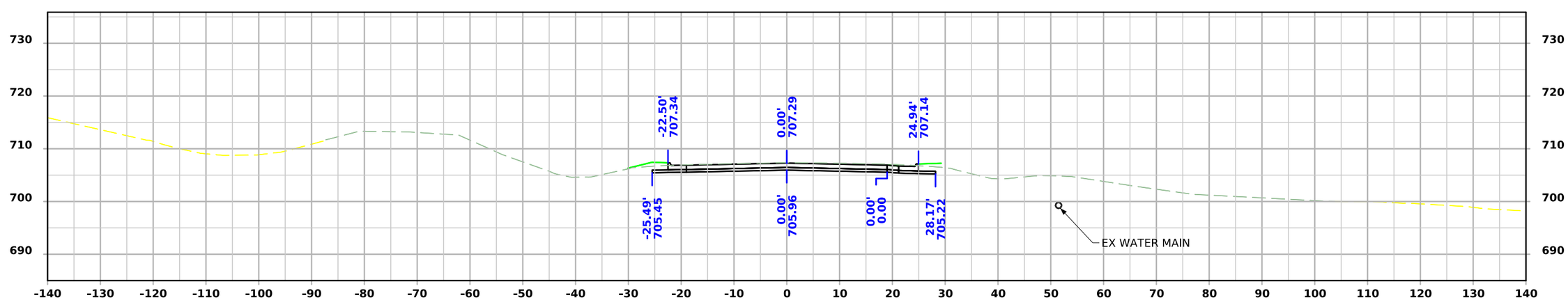
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.13

1:56:23 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

ML - USH 6



STA 185+50.00

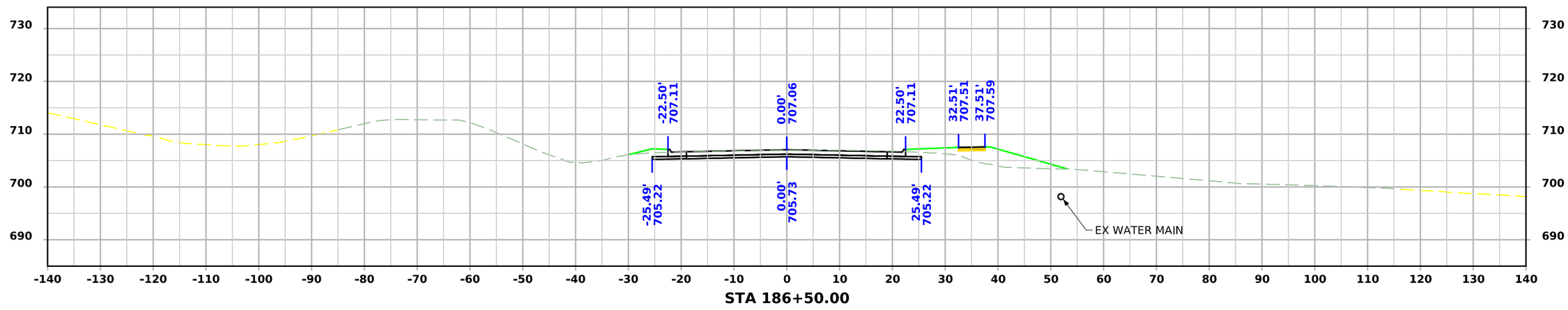


STA 185+00.00

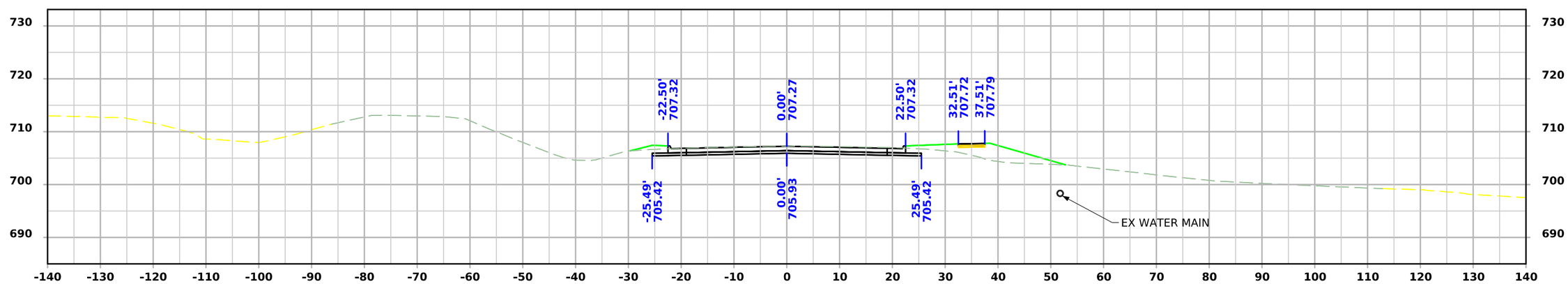
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.14

1:56:24 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

ML - USH 6



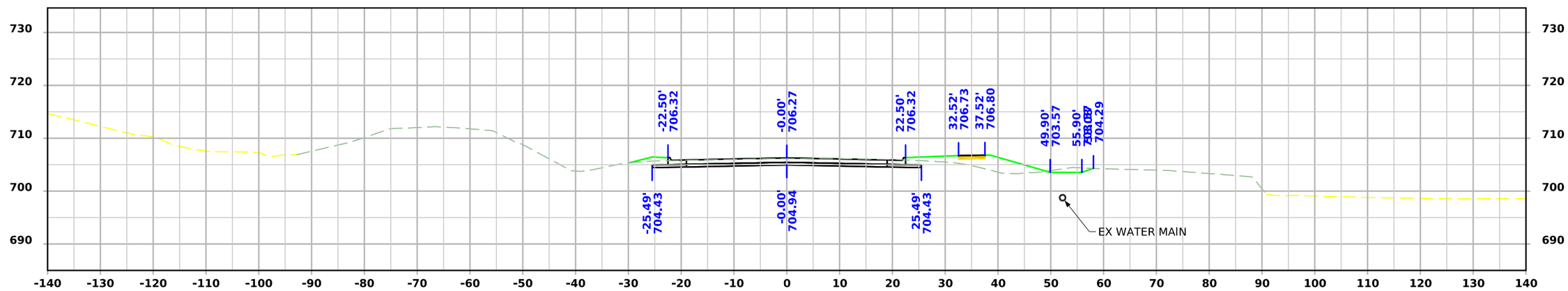
STA 186+50.00



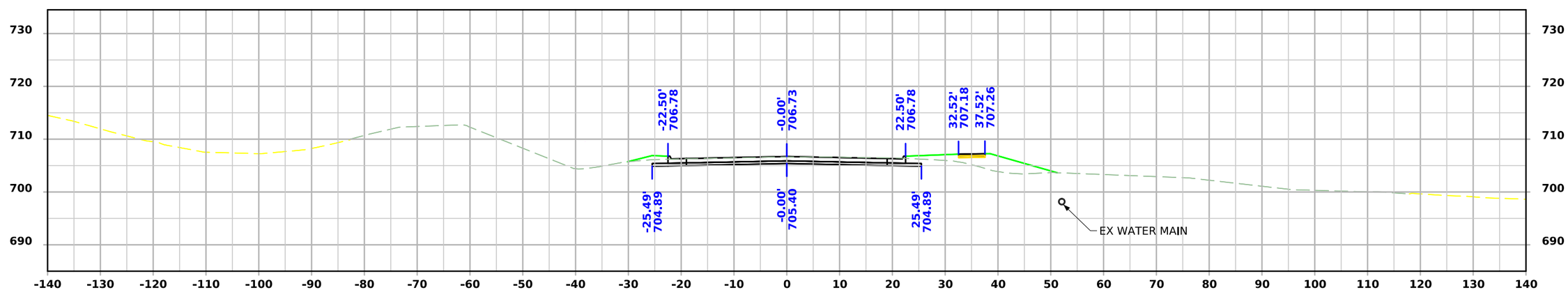
STA 186+00.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.15

ML - USH 6



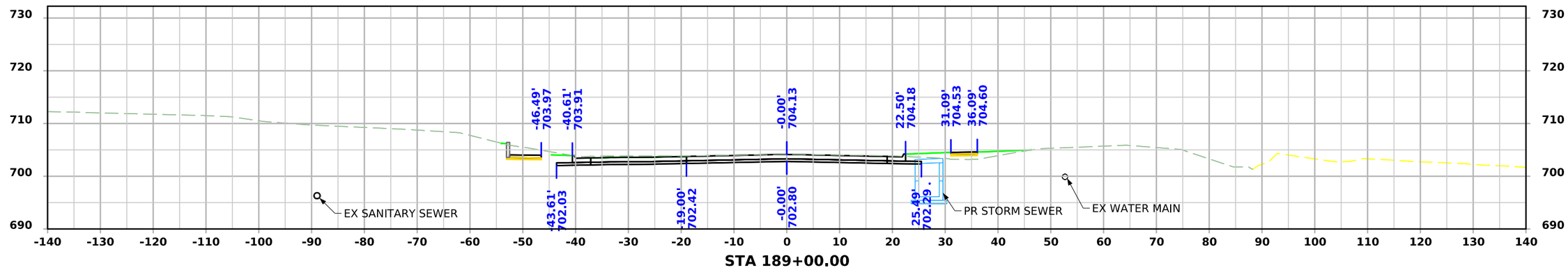
STA 187+50.00



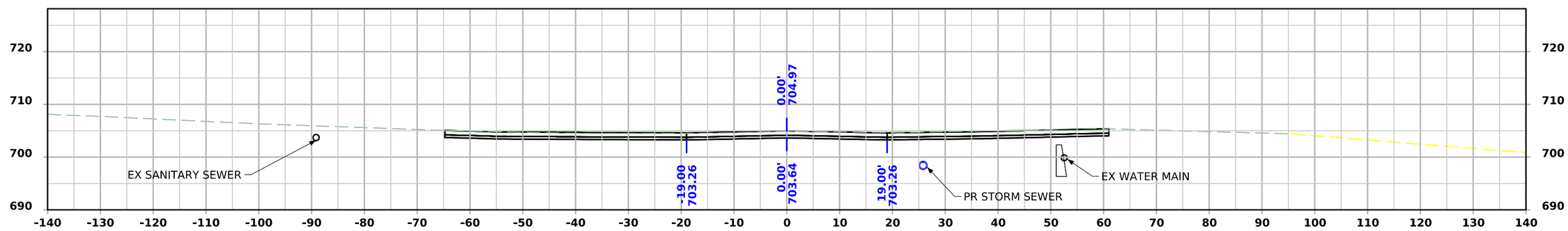
STA 187+00.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.16

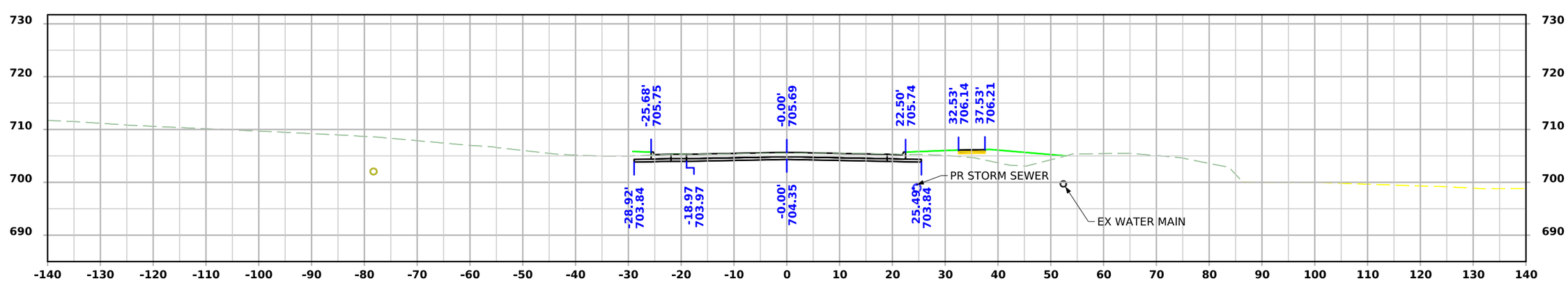
ML - USH 6



STA 189+00.00



STA 188+50.00

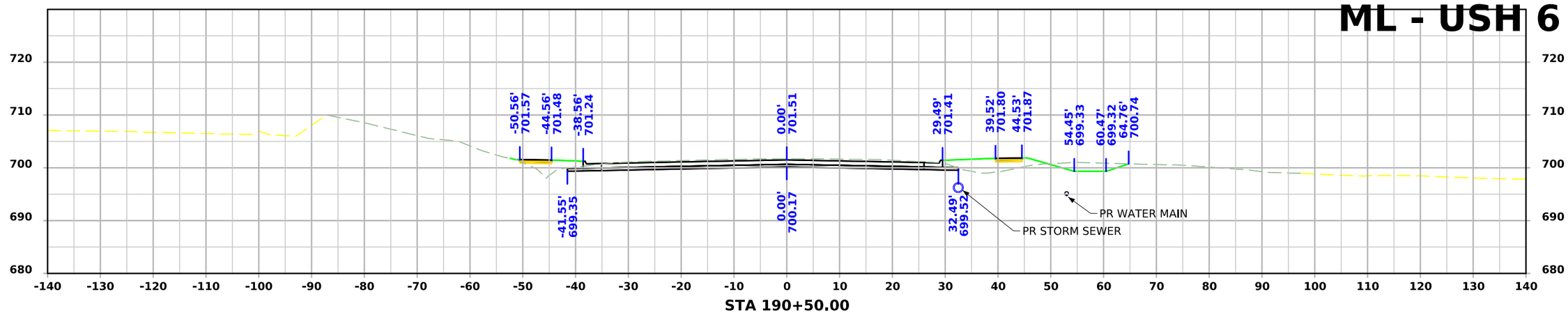


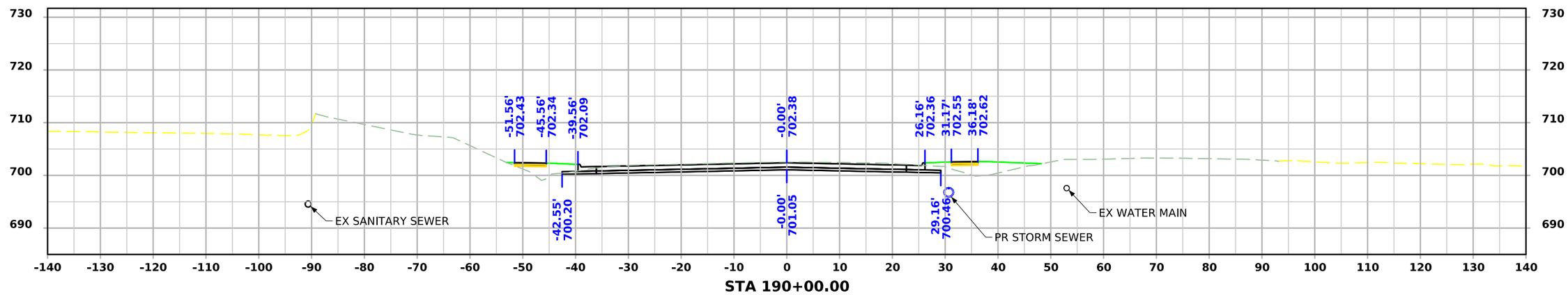
STA 188+00.00

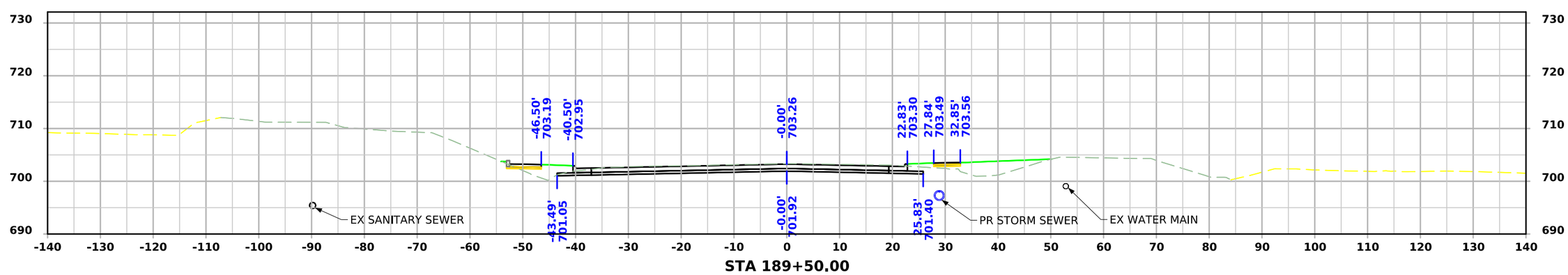
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.17

1:56:26 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

ML - USH 6

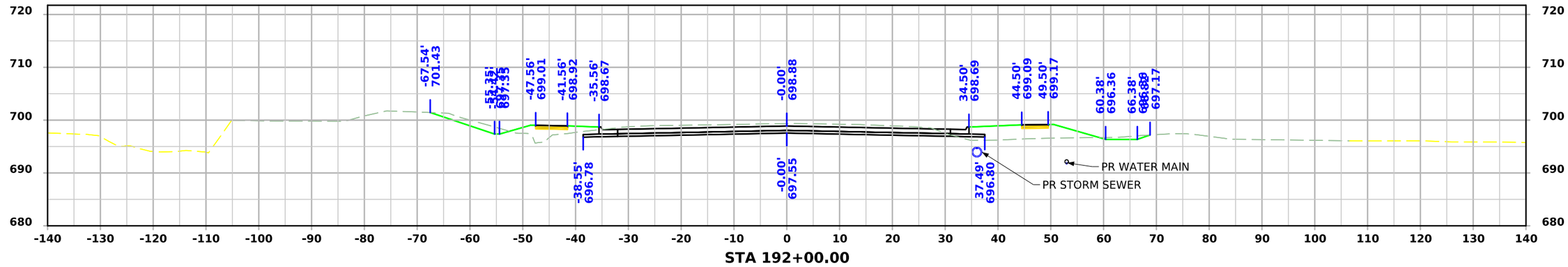


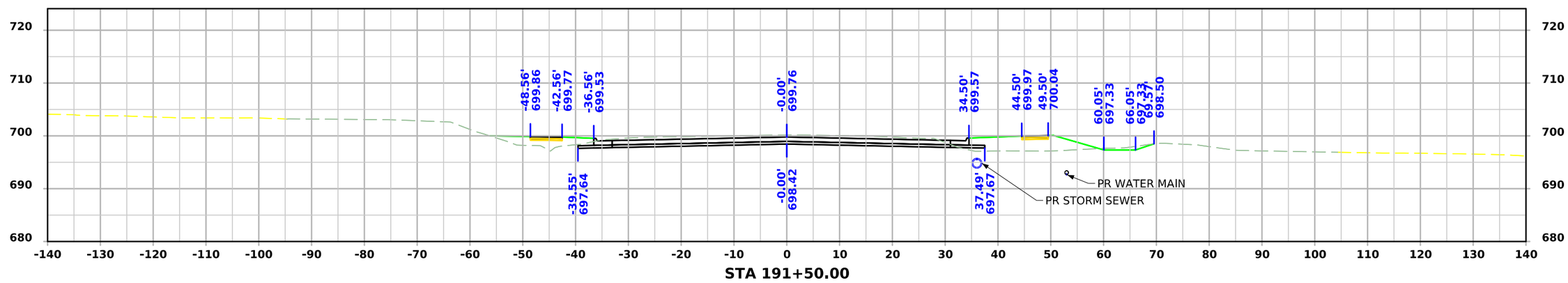


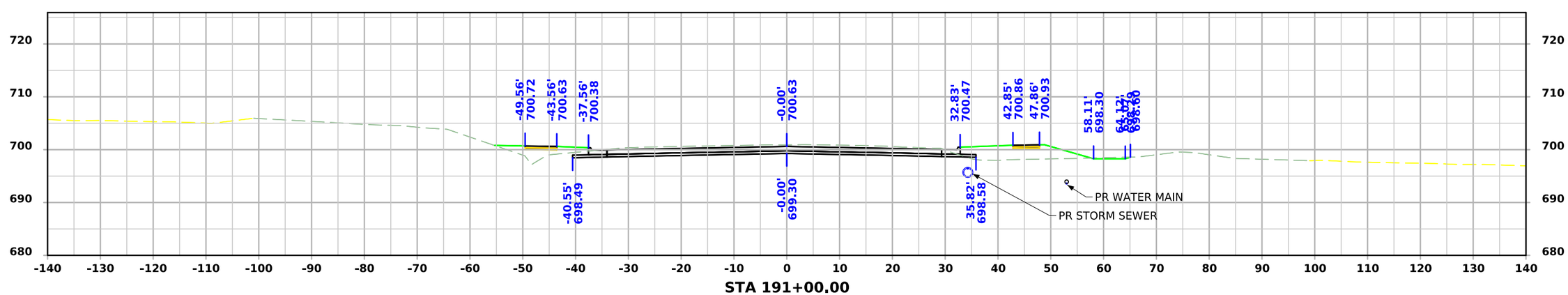


FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.18

ML - USH 6



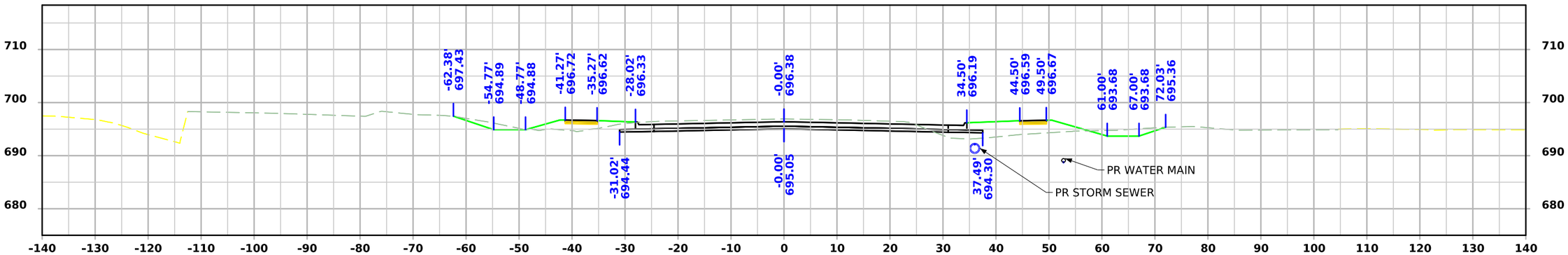




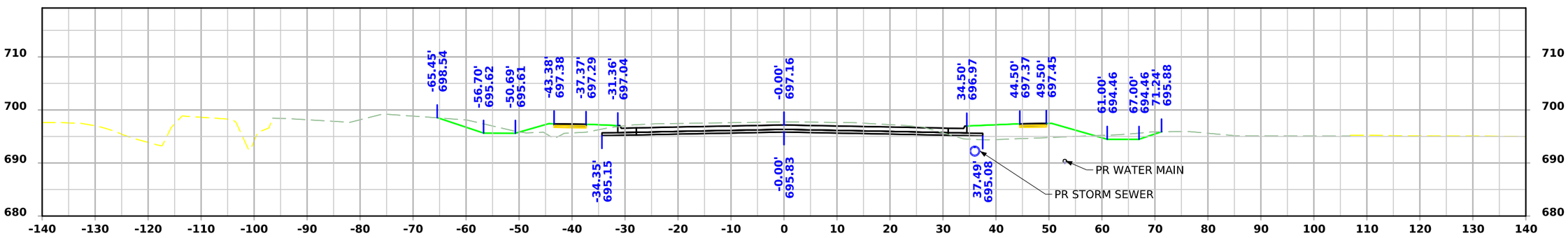
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.19

1:56:29 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

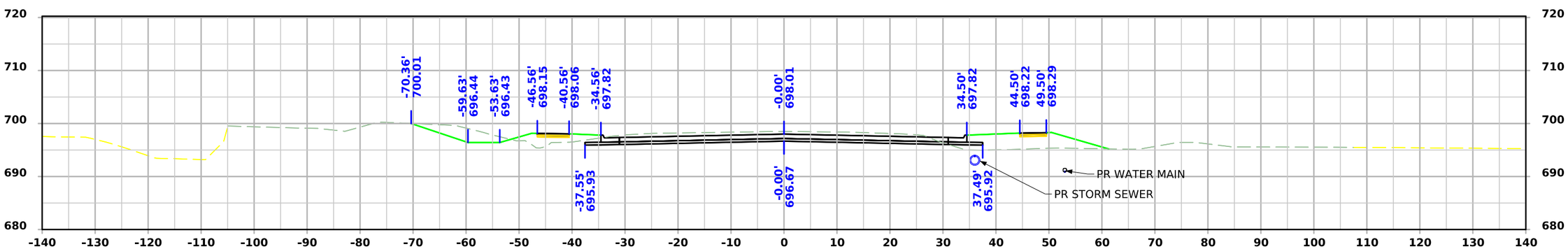
ML - USH 6



STA 193+50.00



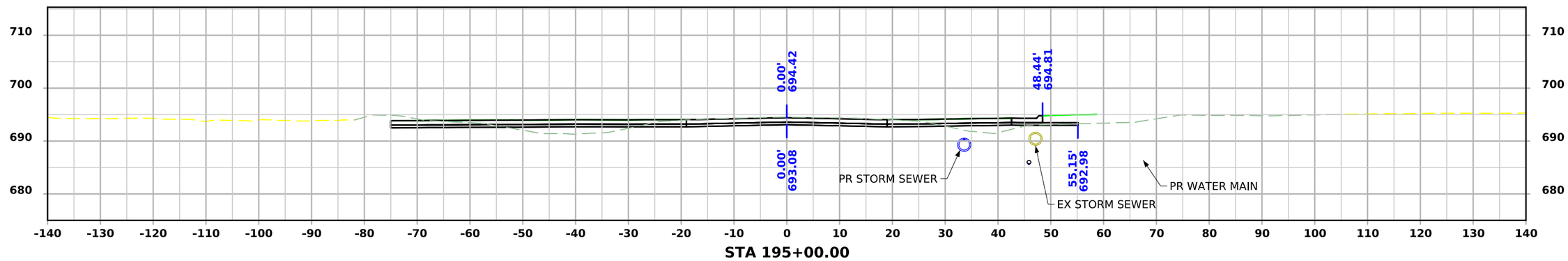
STA 193+00.00

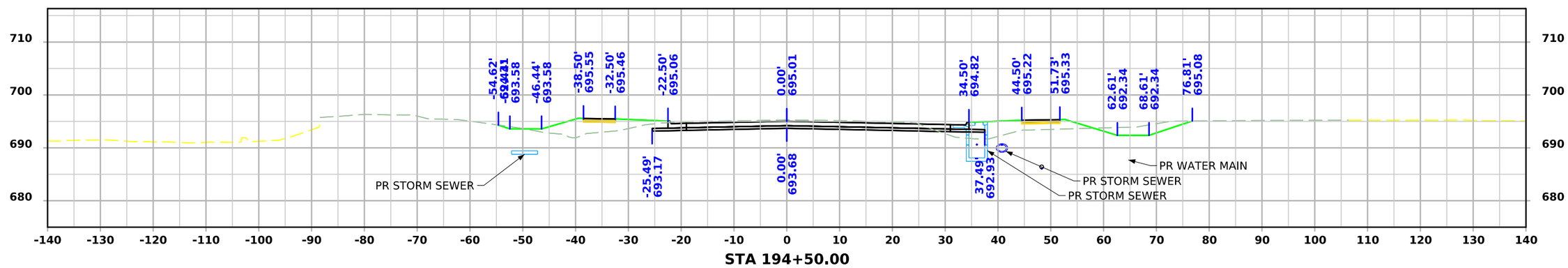


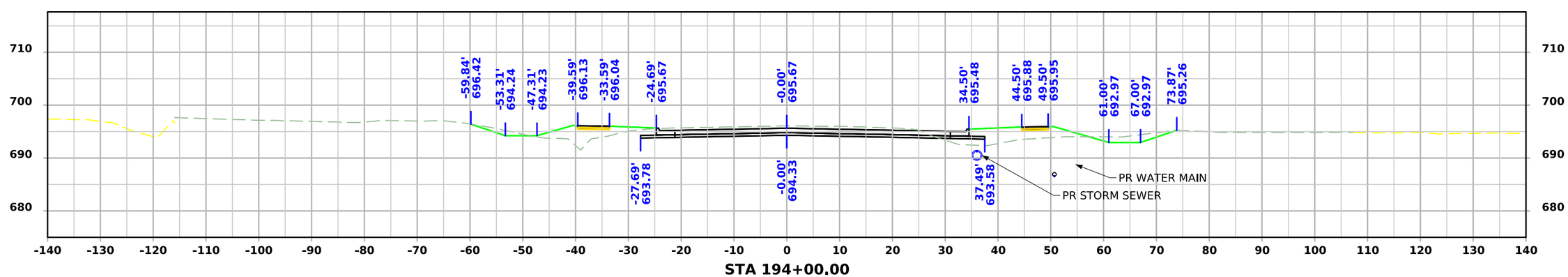
STA 192+50.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.20

ML - USH 6



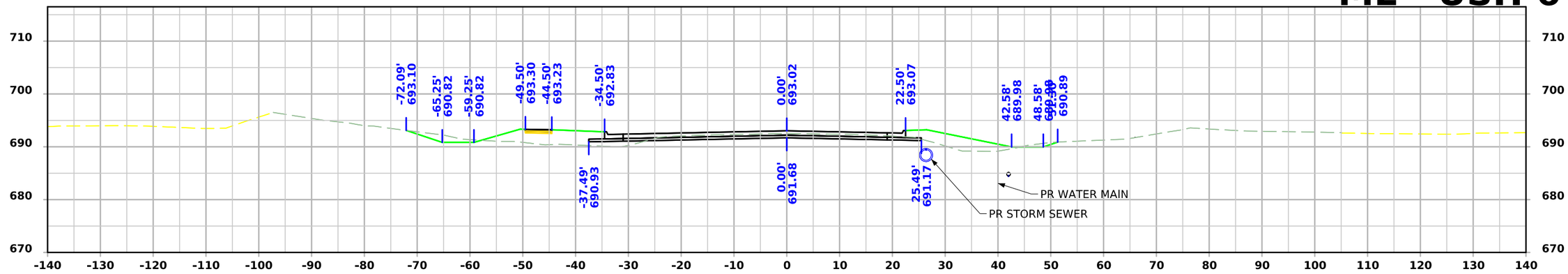




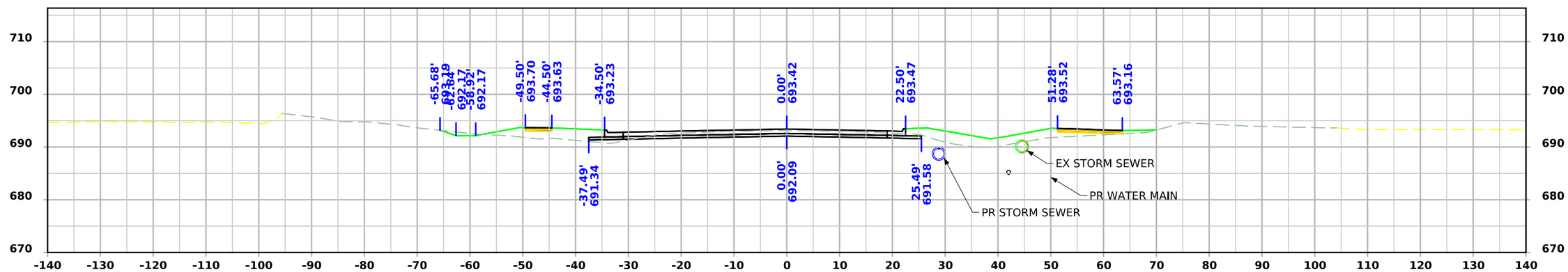
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.21

1:56:31 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

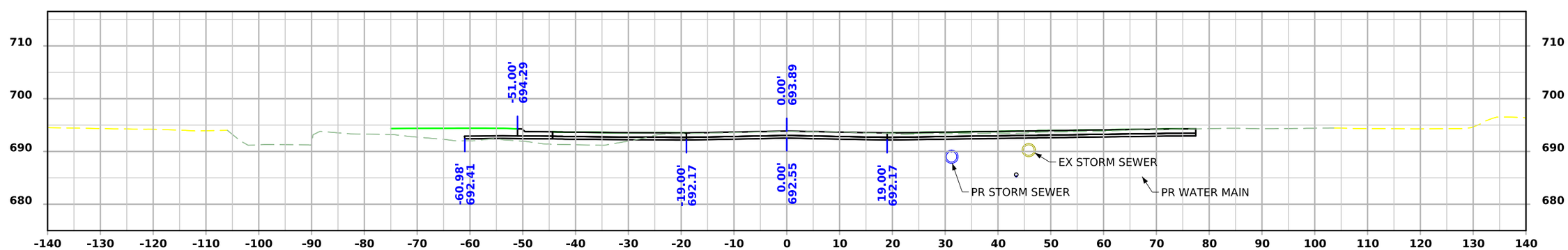
ML - USH 6



STA 196+50.00



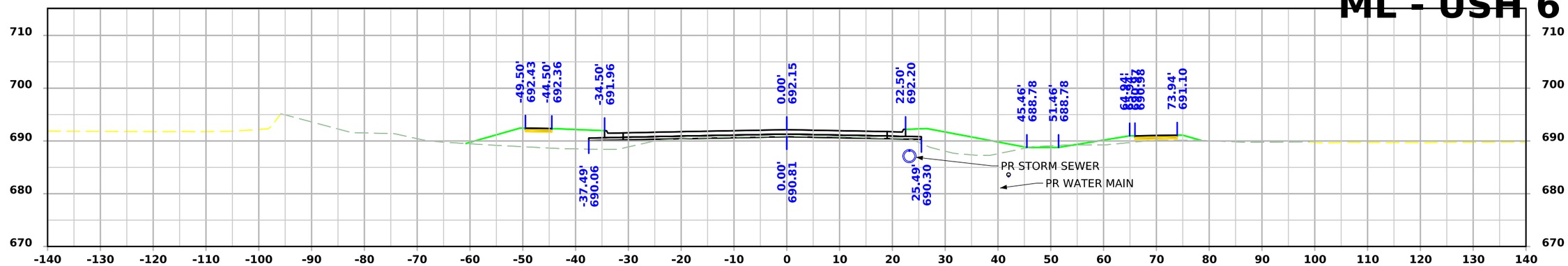
STA 196+00.00



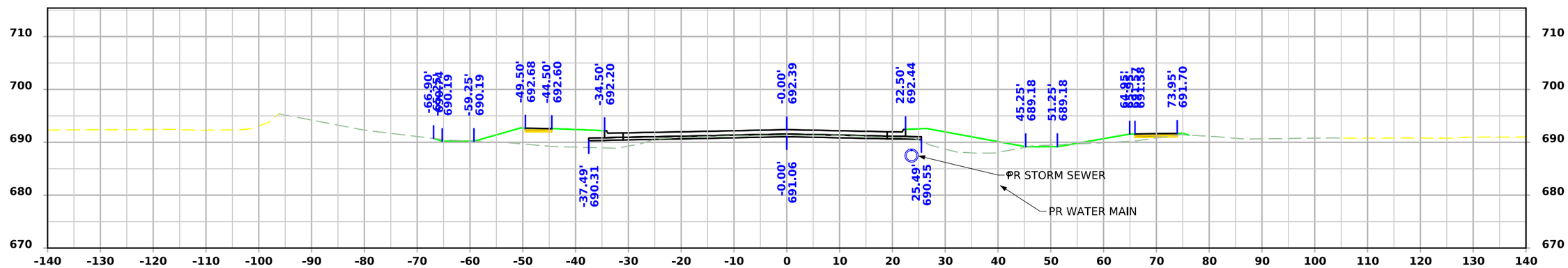
STA 195+50.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.22

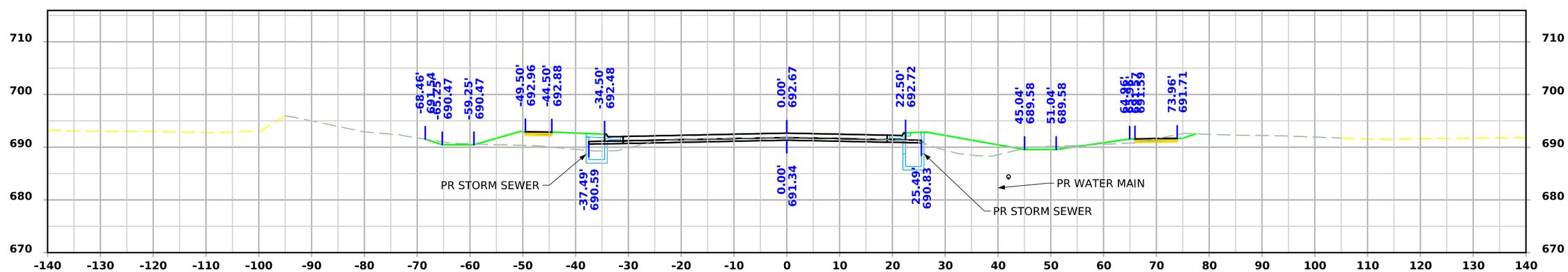
ML - USH 6



STA 198+00.00



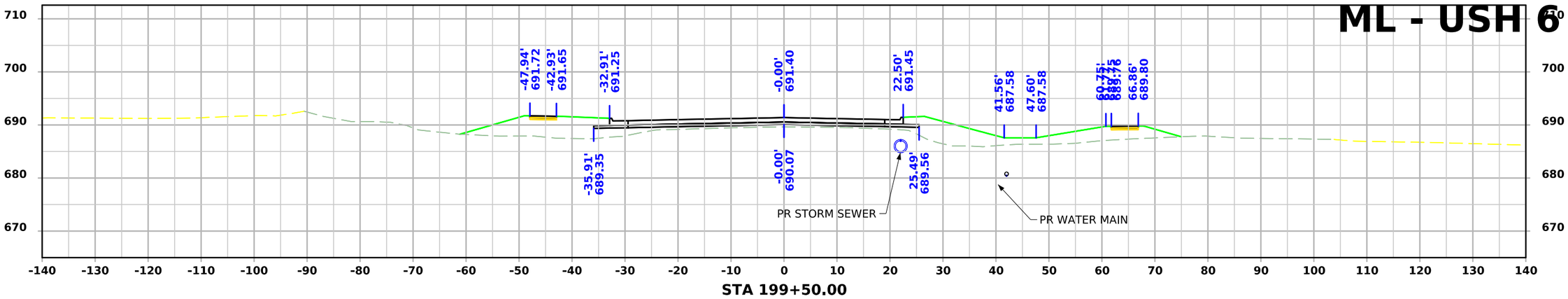
STA 197+50.00

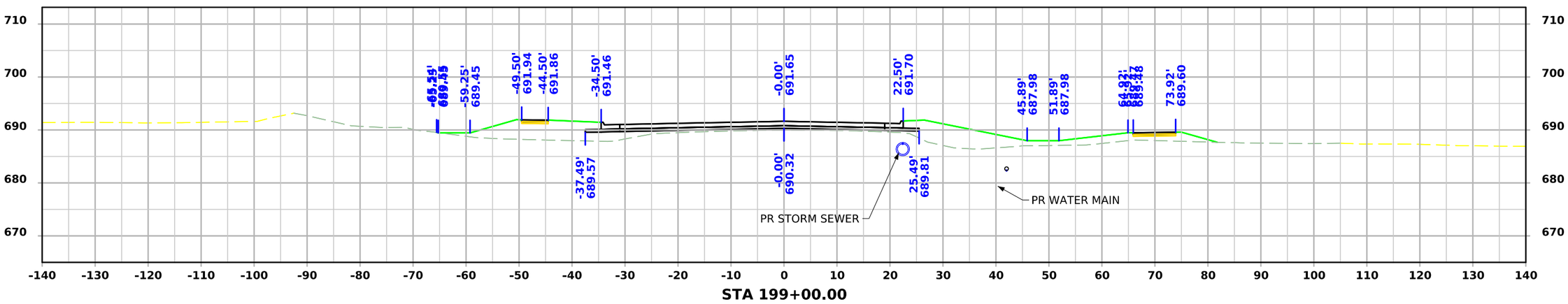


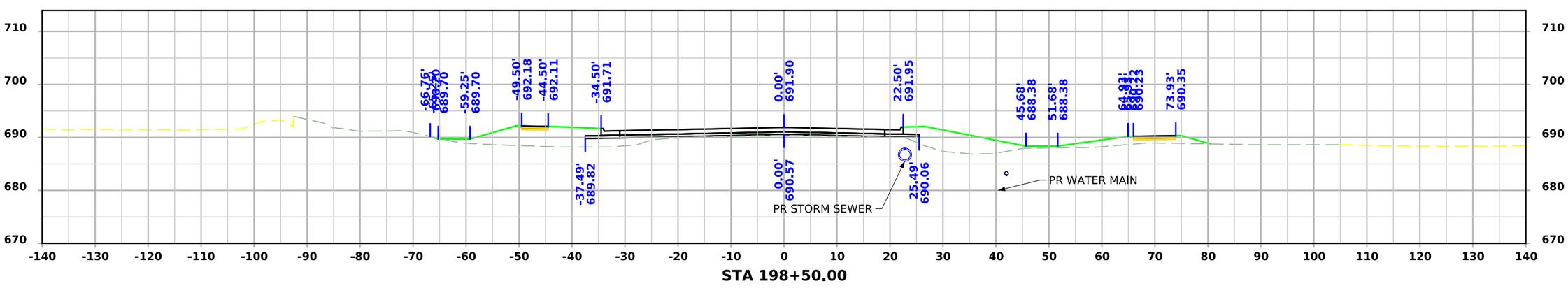
STA 197+00.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.23

ML - USH 6



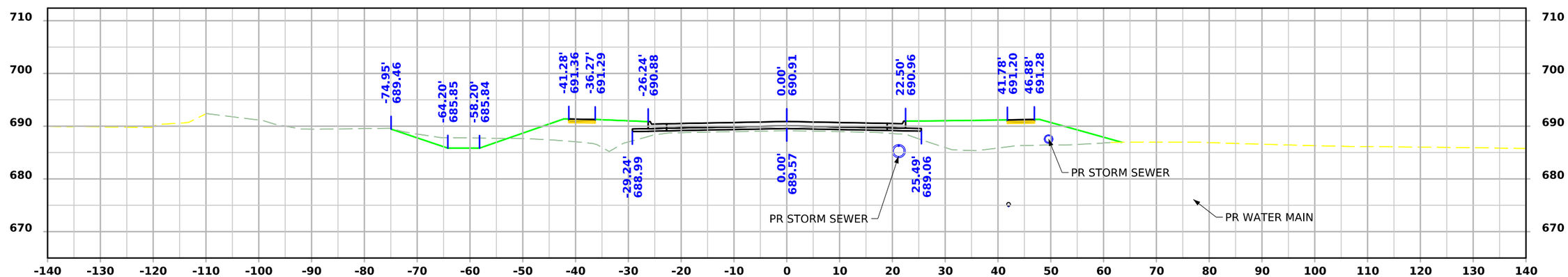




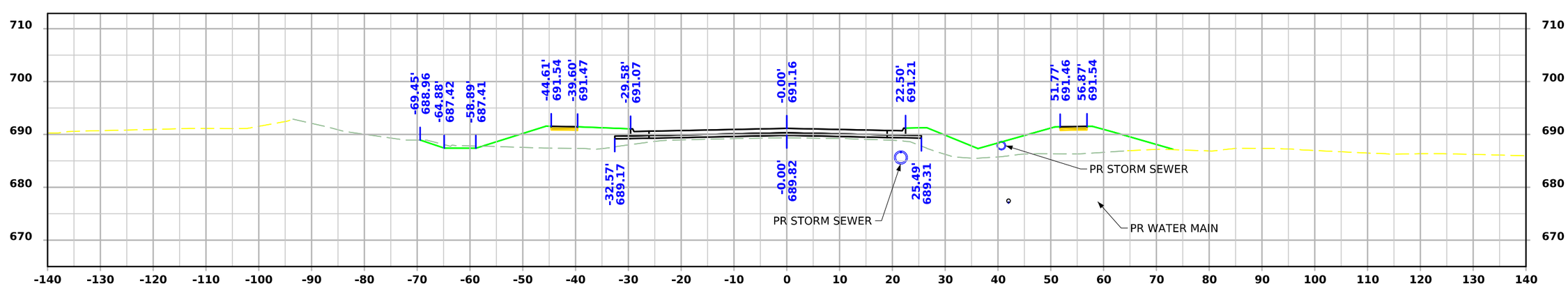
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.24

1:56:34 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

ML - USH 6



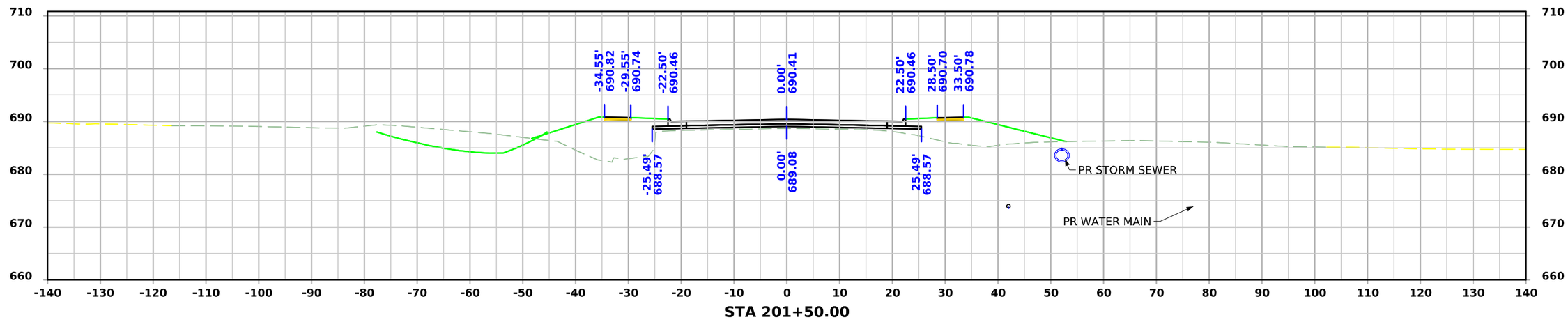
STA 200+50.00

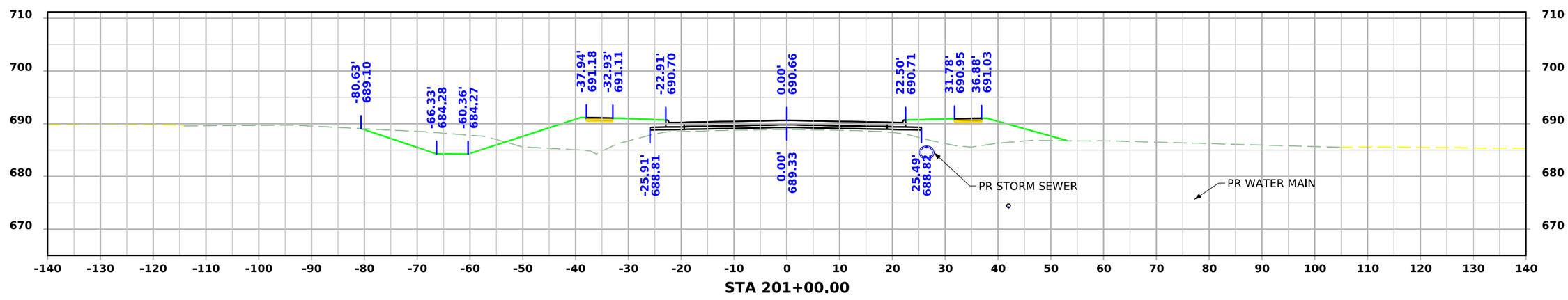


STA 200+00.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.25

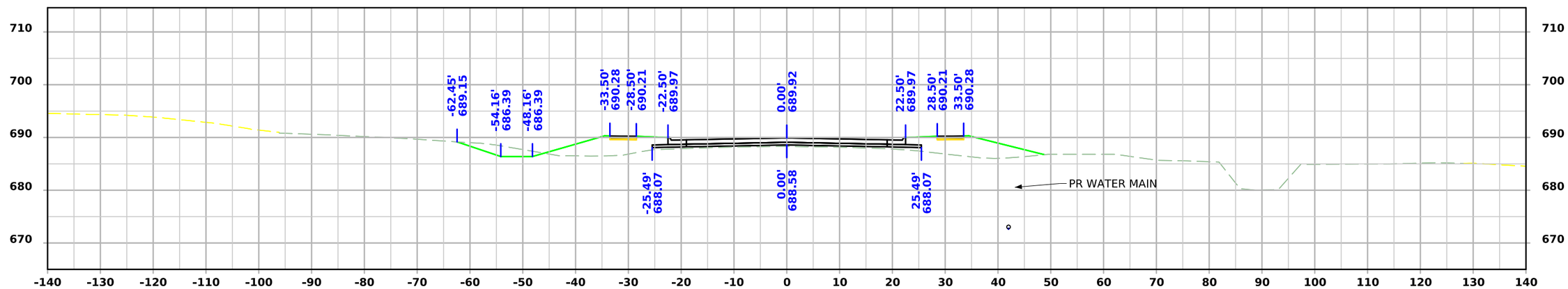
ML - USH 6



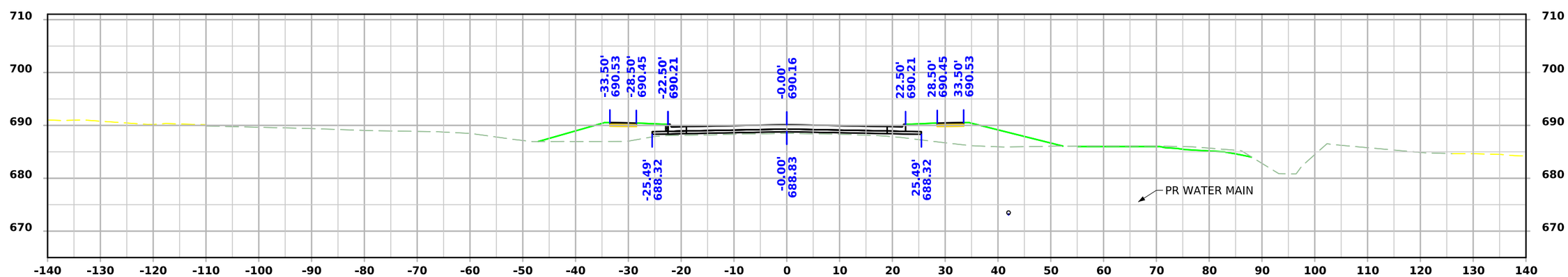


FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.26

ML - USH 6



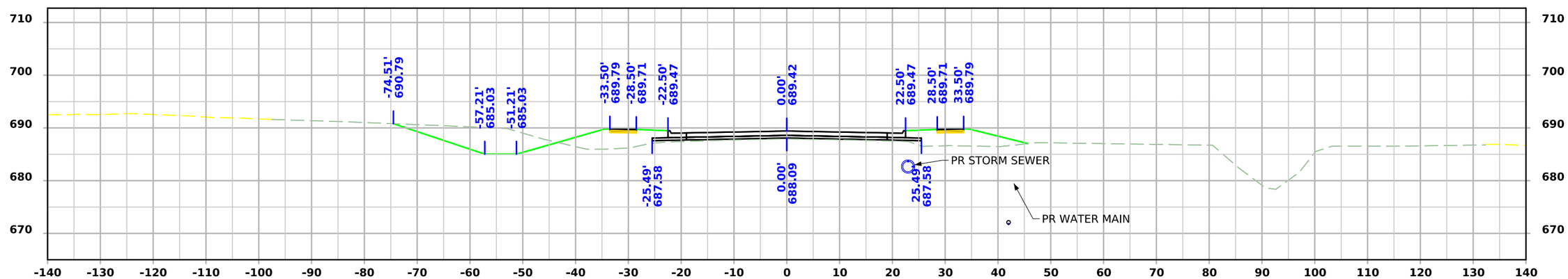
STA 202+50.00



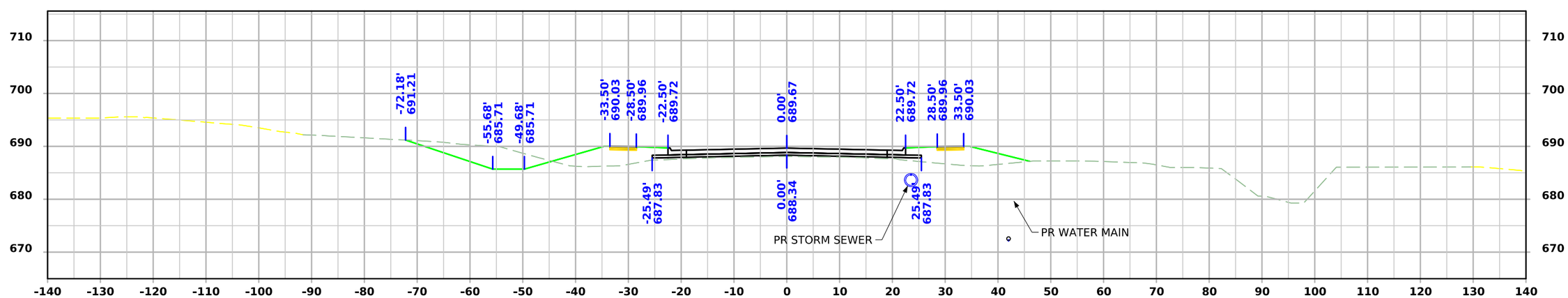
STA 202+00.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.27

ML - USH 6



STA 203+50.00

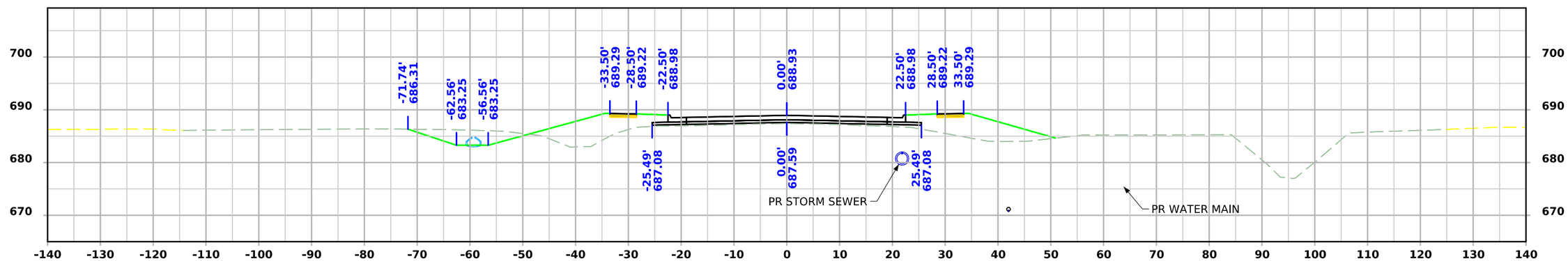


STA 203+00.00

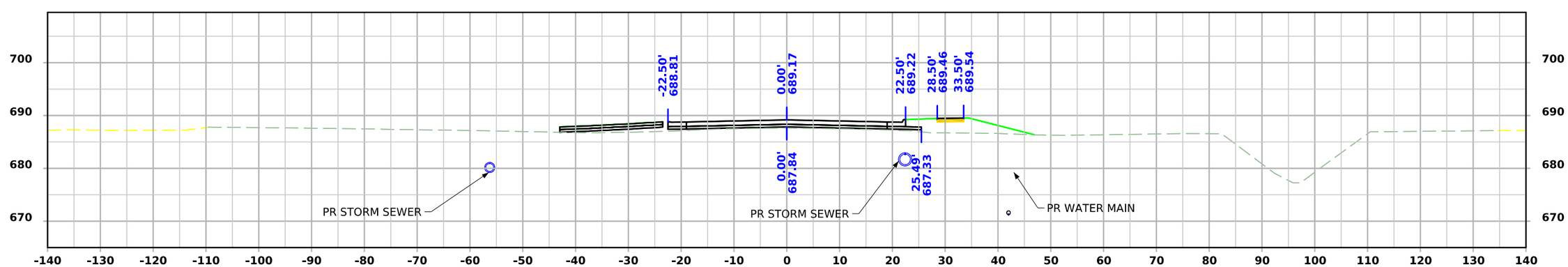
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.28

1:56:39 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

ML - USH 6



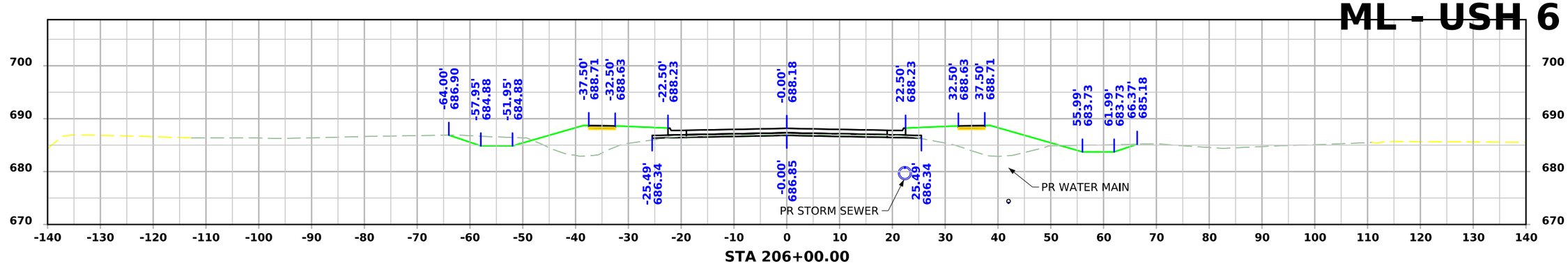
STA 204+50.00

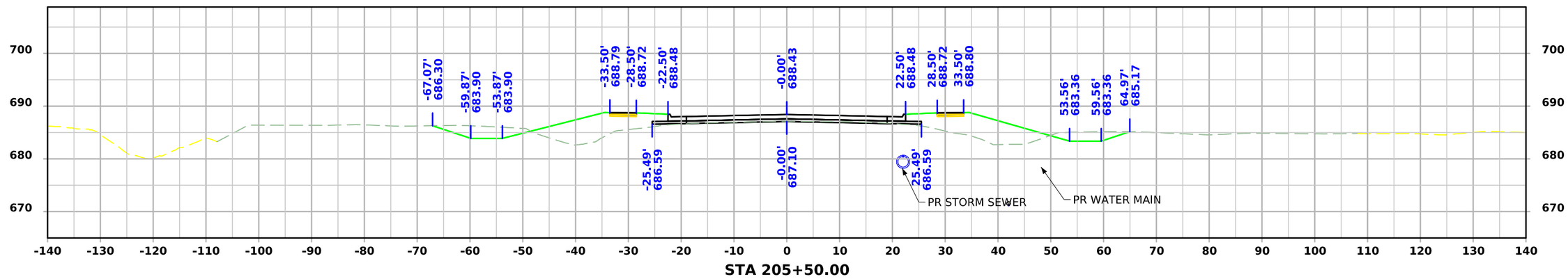


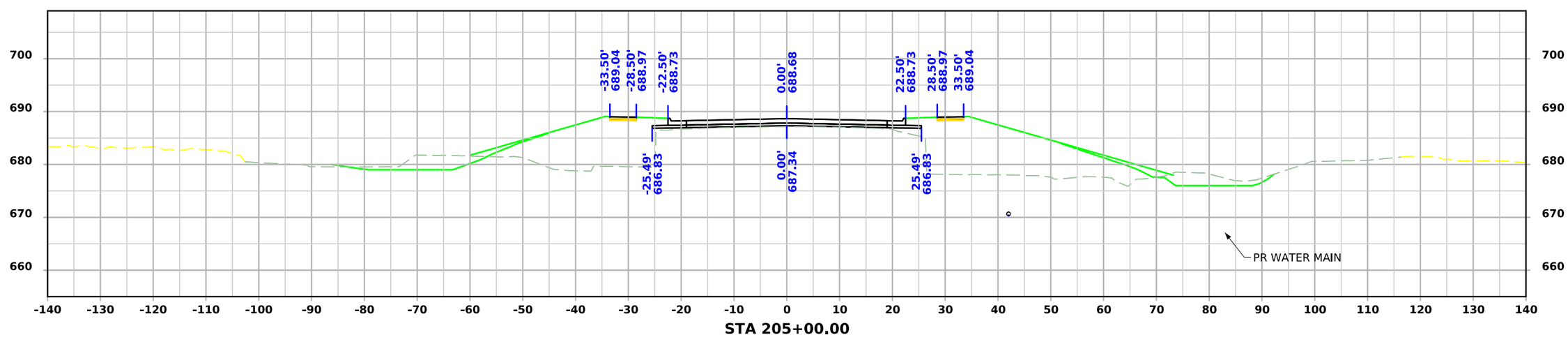
STA 204+00.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.29

ML - USH 6



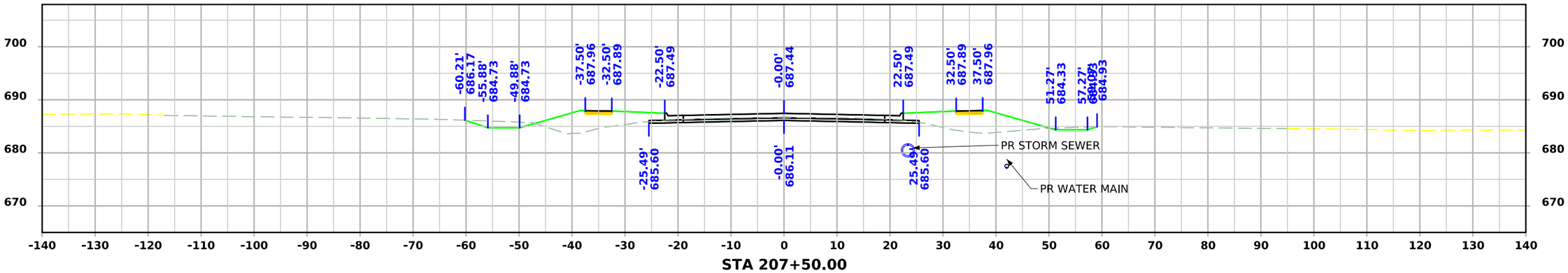


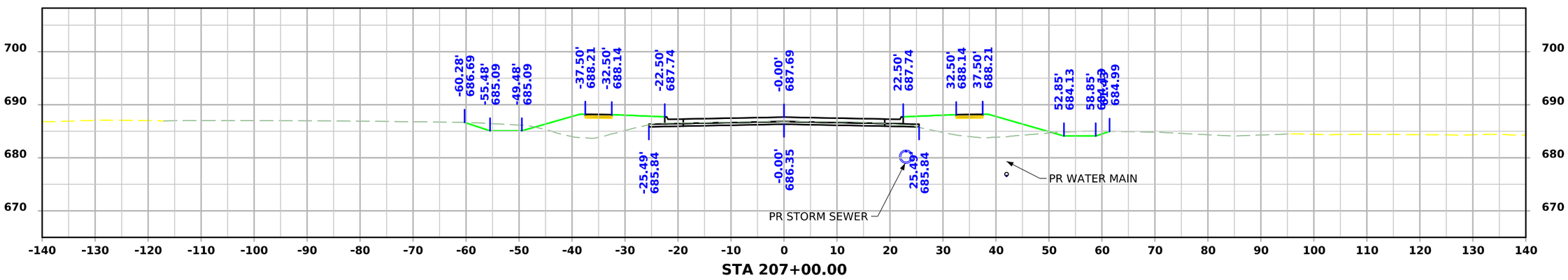


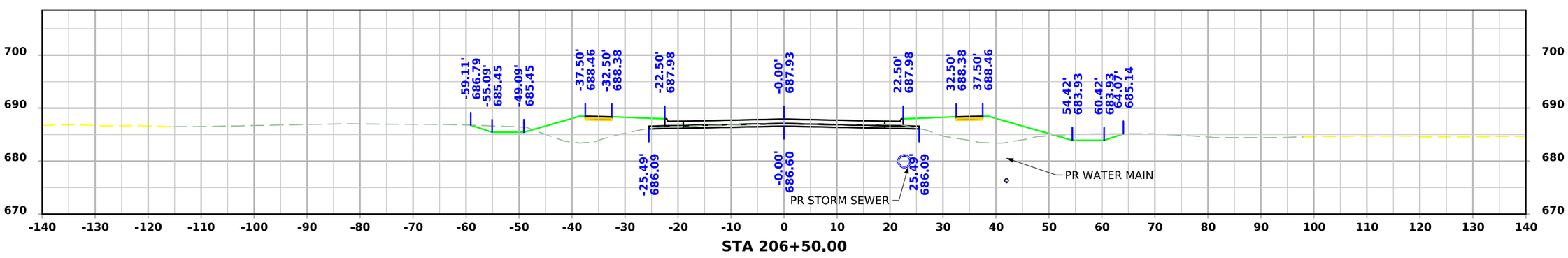
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.30

1:56:41 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

ML - USH 6



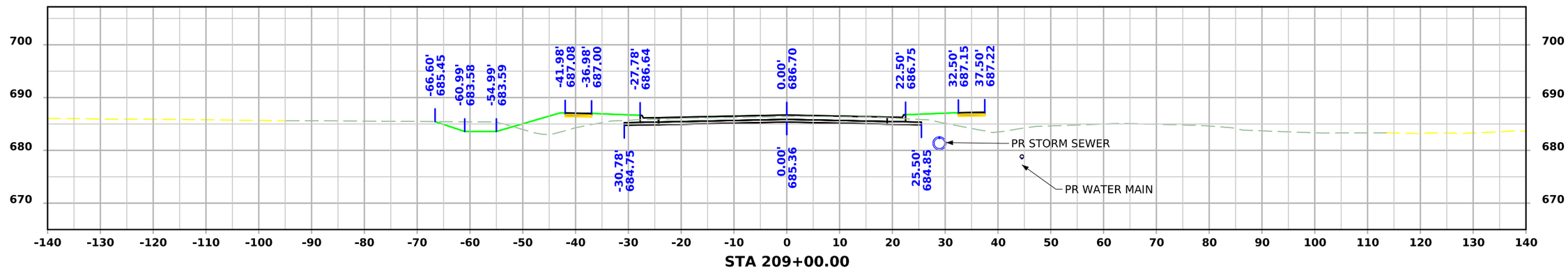


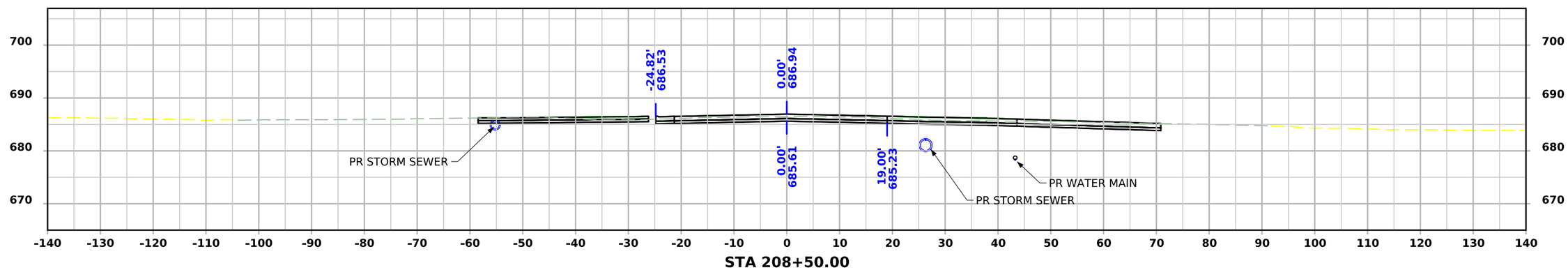


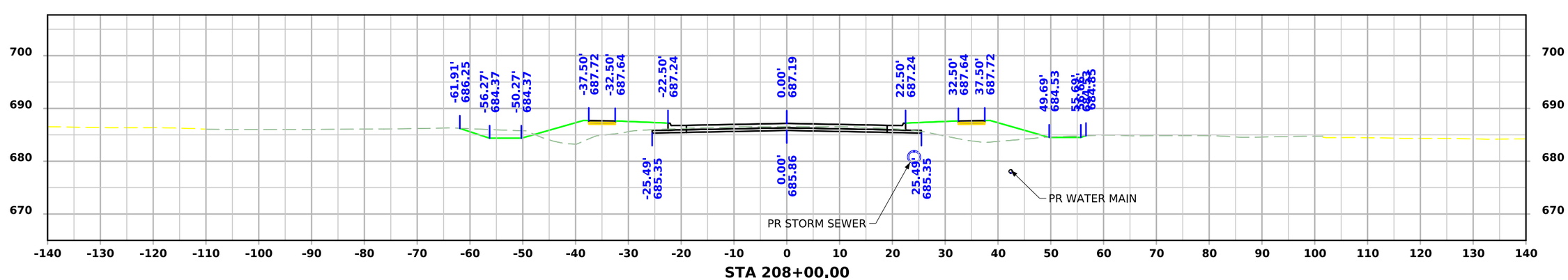
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.31

1:56:42 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

ML - USH 6



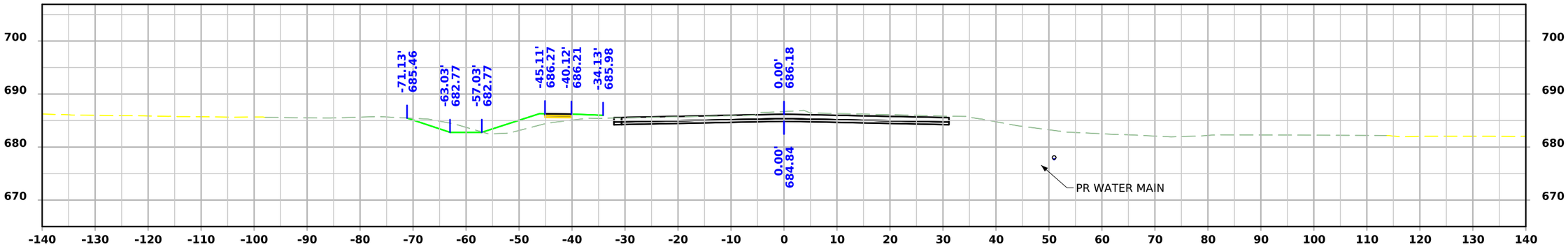




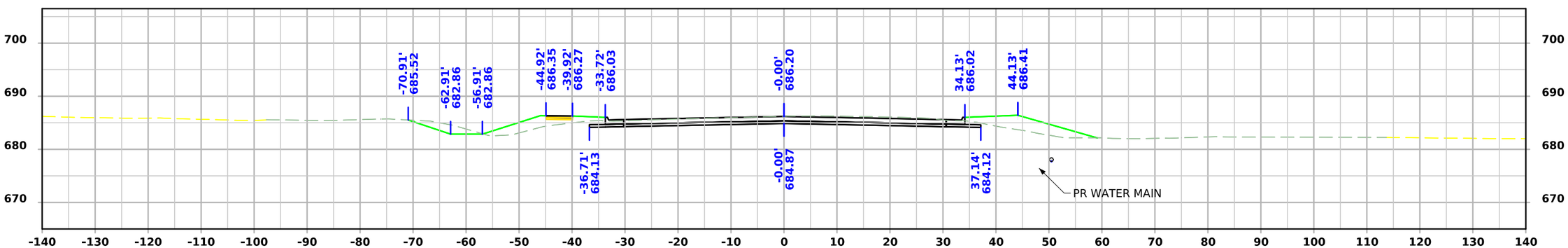
FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.32

1:56:43 PM 7/24/2026 astapleton pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5200604024\DistrictDesign\Consultant\MSA\SHT_\SHT_52006098Z10_W01_US6.dgn

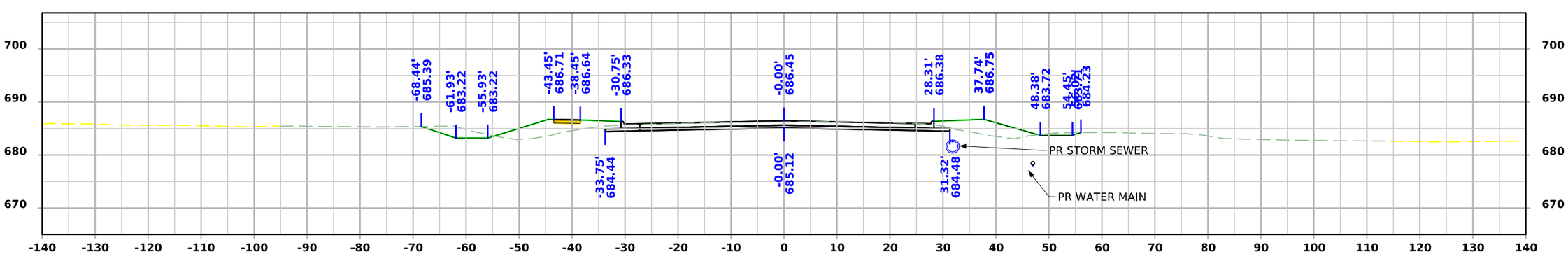
ML - USH 6



STA 210+07.03



STA 210+00.00



STA 209+50.00

FILE NO.	ENGLISH	DESIGN TEAM MSA PROFESSIONAL SERVICES	JOHNSON COUNTY	PROJECT NUMBER STP-006-7(098)--2C-52	SHEET NUMBER W.33