

PLOTTED: Monday, November 27, 2023 4:33:48 PM

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PLANS FOR 11TH STREET DRAINAGE IMPROVEMENTS ONAWA DRAINAGE DISTRICT

The Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction Series 2015, Plus General Supplemental Specifications; and applicable Supplemental Specifications, Developmental Specifications, and Special Provisions shall apply to construction on this project.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications

SCALES: As Noted



VICINITY MAP
NOT TO SCALE

INDEX OF SHEETS	
NO.	DRAWING TITLE
A.01	TITLE SHEET
A.02	LEGEND
B.01	TYPICAL SECTION
C.01	QUANTITIES & GENERAL NOTES
D.01	STORM DRAIN PLAN & PROFILE
U.01	MODIFIED SW-508 DETAILS

MONONA COUNTY BOARD OF SUPERVISORS

APPROVED

CHAIRMAN

DATE

CITY OF ONAWA, IA

APPROVED

CHAIRMAN

DATE



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

DATE

NAME: PATRICK E. MOUW, P.E.

LICENSE NUMBER: 20839

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2023

ALL

PAGES OR SHEETS COVERED BY THIS SEAL:



DATE	REVISIONS	SCALE	AS NOTED
		DRAWN	JWD
		CHECKED	PEM
		APPROVED	PEM
		DATE	11-27-2023
		ISSUED FOR	CONSTRUCTION



11TH STREET DRAINAGE IMPROVEMENTS
ONAWA DRAINAGE DISTRICT

203 Sergeant Square Dr. - Suite B • Sergeant Bluff, Iowa 51054-0220
712-943-5055 • 712-943-5088(FAX) • 877-241-8009(WATS)

TITLE SHEET

DWG. NO.

A.01

PROJECT 35128

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STANDARD SYMBOLS

	Interstate Highway Symbol		Fire Hydrant		Guardrail (Beam or Cable)
	U.S. Highway Symbol	WH	Water Hydrant (Rural)	GP	Guard Post (one or two)
	Iowa Highway Symbol	ST	Septic Tank		Guard Post (over two)
	County Road Highway Symbol	C	Cistern	FP	Filler Pipe
	Evergreen Tree		L.P. Gas Tank (No Footing)	GV	Gas Valve
	Deciduous Tree	UST	Underground Storage Tank	WV	Water Valve
	Fruit Tree		Lotrine	SL	Speed Limit Sign
SB	Shrub (Bushes)		Luminaire	MM	Mile Marker Post
	Timber		Traffic Signal	SIGN	Sign
	Hedge		Traffic Signal with Luminaire	WHU	Water Hook Up
	Stump	TP	Telephone Pedestal	RT	Radio Tower
	Swamp	TVP	Television Pedestal	EB	Electric Box
	Rock Outcrop		Telephone Pole	TCB	Traffic Signal Control Box
	Broken Concrete		Telephone Pole (Second Company)	RRB	Rail Road Signal Control Box
	Revetment (Rip Rap)		Telephone Pole (Third Company)	TSB	Telephone Switch Box
	Cemetery		Telephone Pole (Fourth Company)		
	Grave		Telephone Pole (Fifth Company)		
CV	Cave		Power Pole		
SH	Sink Hole		Power Pole (Second Company)		
	Board Fence		Power Pole (Third Company)		
	Chain Link Fence		Power Pole (Fourth Company)		
	Barbwire Fence		Power Pole (Fifth Company)		
	Security Fence		Electrical Highline Tower (Metal or Concrete)		
	Woven Fence		Telephone Riser Pole		
	Barbwire and Woven Fence		Power Riser Pole		
	Terrace		Telegraph Pole		
	Earth Dam or Dike (Existing)		Satellite TV Dish		
	Earth Dam or Dike (Proposed)	W	Existing Water Line		
	Tile Outlet	W2	Existing Water Line (Second Company)		
	Edge of Water	San	Existing Sanitary Sewer Line		
	Existing Drainage	T	Existing Telephone Line		
	Proposed Drainage	T2	Existing Telephone Line (Second Company)		
	Right of Way Rail or Lot Corner	FO	Existing Fiber Optics Telephone Line		
	Concrete Monument	St. S.	Existing Storm Sewer Line		
	Well	G	Existing Gas Line		
	Windmill	G-HP	Existing High Pressure Gas Line		
	Beehive Intake	G2	Existing Gas Line (Second Company)		
	Existing Intake	G2-HP	Existing High Pressure Gas Line (Second Company)		
	Proposed Intake	E	Existing Power Line		
	Existing Utility Access (Manhole)	E2	Existing Power Line (Second Company)		
	Proposed Utility Access (Manhole)	TV	Cable Television Line		

RIGHT OF WAY LEGEND

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

CONVENTIONAL SIGNS

	Survey Line
	Section Corner
	Proposed Profile Grade
	Railroad
	Field Tile
	Culverts
	Stream

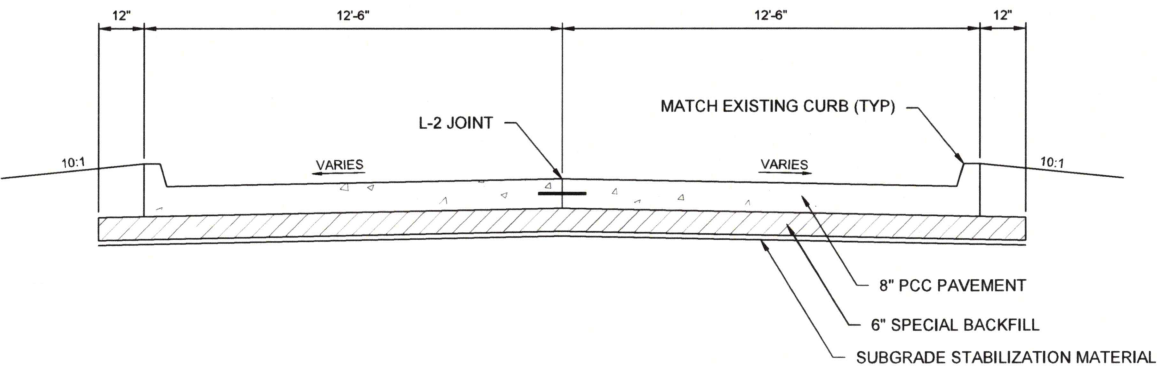
Legend And Symbol Information Sheet

(Symbols are Typical Only, actual size may vary)

LEGEND

DATE	REVISIONS	SCALE	AS NOTED	11TH STREET DRAINAGE IMPROVEMENTS ONAWA DRAINAGE DISTRICT		LEGEND	DWG. NO.
		DRAWN	JWD				A.02
		CHECKED	PEM	203 Sergeant Square Dr. - Suite B • Sergeant Bluff, Iowa 51054-0220 712-943-5055 • 712-943-5088(FAX) • 877-241-8009(WATS)			PROJECT 35128
		APPROVED	PEM				
		DATE	11-27-2023				
		ISSUED FOR	CONSTRUCTION				





TYPICAL ROADWAY SECTION

NTS

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11TH STREET DRAINAGE IMPROVEMENTS ONAWA DRAINAGE DISTRICT
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TYPICAL SECTION
PROJECT 35128

DWG. NO.
B.01

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ESTIMATED PROJECT QUANTITIES							
ITEM NO.	ITEM CODE	ITEM	UNIT	QUANTITY DIVISION 1 CITY OF ONAWA	QUANTITY DIVISION 2 ONAWA DD	AS BUILT QUANTITY DIVISION 1	AS BUILT QUANTITY DIVISION 2
1	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	27.0	0.0		
2	2102-0425071	SPECIAL BACKFILL	CY	14.8	0.0		
3	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	SY	58.8	0.0		
4	2301-1033080	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 8 IN.	SY	57.7	0.0		
5	2402-0425040	FLOODED BACKFILL	CY	12.9	0.0		
6	2435-0250700	INTAKE, SW-507	EACH	2.0	0.0		
7	2435-0250810	INTAKE, SW-508 MODIFIED	EACH	1.0	0.0		
8	2503-0112010	STORM SEWER GRAVITY MAIN, TRENCHED, POLYVINYL CHLORIDE PIPE (PVC), 10 IN.	LF	0.0	25.0		
9	2503-0122010	STORM SEWER GRAVITY MAIN, TRENCHLESS, POLYVINYL CHLORIDE PIPE (PVC), 10 IN.	LF	0.0	341.0		
10	2510-6745850	REMOVAL OF PAVEMENT	SY	6.4	0.0		
11	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	EACH	1.0	0.0		
12	2528-8445110	TRAFFIC CONTROL	LS	0.5	0.5		
13	2533-4980005	MOBILIZATION	LS	0.5	0.5		
14	2601-2634100	MULCH	ACRE	0.1	0.0		
15	2601-2636044	SEEDING AND FERTILIZING (URBAN)	ACRE	0.1	0.0		

STANDARD ROAD PLANS		
The following Standard Road Plans apply to construction work on this project		
NUMBER	DATE	TITLE
DR-101	04-18-17	PIPE CULVERT (BEDDING AND BACKFILL)
PV-101	04-19-22	JOINTS
PV-102	04-21-20	PCC CURB DETAILS
SW-103	04-20-21	FLEXIBLE GRAVITY PIPE TRENCH BEDDING
SW-507	04-21-20	SINGLE OPEN-THROAT CURB INTAKE, SMALL BOX
SW-508	04-21-20	SINGLE OPEN-THROAT CURB INTAKE, LARGE BOX
SW-602	04-21-20	CASTINGS FOR STORM SEWER MANHOLES
TC-202	04-18-23	WORK WITHIN 15 FT OF TRAVELED WAY
TC-211	10-15-19	LANE CLOSURE ON LOW VOLUME ROADWAY
TC-252	04-21-20	ROUTES CLOSED TO TRAFFIC

GENERAL NOTES	
1.	THE TOP SIX (6) INCHES OF THE DISTURBED AREAS SHALL BE FREE OF ROCK AND DEBRIS AND SHALL BE SUITABLE FOR THE ESTABLISHMENT OF VEGETATION, SUBJECT TO THE APPROVAL OF THE CONTRACTING AUTHORITY.
2.	ALL BORROW AREAS, STOCKPILE AREAS, HAUL ROADS, AND AREAS USED FOR EQUIPMENT ON THIS PROJECT REQUIRE SUBSOIL TILLAGE TO AN AVERAGE DEPTH OF 16 TO 20 INCHES PRIOR TO PLACEMENT OF TOPSOIL AND/OR STABILIZING CROP SEEDING. COMPLETE THIS TILLAGE AT 3 FOOT MAXIMUM CENTERS AND AT RIGHT ANGLES TO THE FINISHED SLOPE.
3.	USE TILLAGE EQUIPMENT EQUIPPED WITH AN ARROWHEAD TYPE SHOE THAT WILL PROVIDE LATERAL DISPLACEMENT AND LIMIT THE MOVEMENT OF THE SUBSOIL TO THE SURFACE. OBTAIN THE ENGINEER'S APPROVAL FOR THE EQUIPMENT. THIS WORK IS INCIDENTAL TO OTHER WORK ON THE PROJECT.
4.	FOLLOWING THE SUBSOIL TILLAGE, THE AREA IS TO REMAIN IN A "LOOSENED" CONDITION. ADDITIONAL COMPACTION OR THE OPERATION OF HEAVY EQUIPMENT, OTHER THAN REQUIRED FOR TOPSOIL PLACEMENT AND SHAPING, WILL NOT BE ALLOWED ON AREAS WHICH HAVE RECEIVED SUBSOIL TILLAGE.
5.	THE ENGINEER MAKES NO GUARANTEE THAT ANY UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER FURTHER DOES NOT WARRANT THAT ANY UTILITY SHOWN ARE IN THE EXACT LOCATION INDICATED. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT IOWA ONE CALL AT 1-800-292-8989 FOR UTILITY LOCATES.
6.	THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN REASONABLE ACCESS TO INDIVIDUAL PROPERTIES DURING CONSTRUCTION.
7.	CONTRACTOR IS TO USE DUE CAUTION IN WORKING OVER AND AROUND ALL TILE LINES. BREAKS IN THE TILE LINE DUE TO THE CONTRACTOR'S CARELESSNESS ARE TO BE REPLACED AT THE CONTRACTOR'S EXPENSE WITHOUT COST TO THE DRAINAGE DISTRICT. ANY TILE LINES BROKEN OR DISTURBED BY CUT LINES WILL BE REPLACED AS DIRECTED BY THE ENGINEER IN CHARGE OF CONSTRUCTION AND AT THE DRAINAGE DISTRICTS EXPENSE.
8.	CONSTRUCTION STAKING WILL BE PROVIDED BY THE OWNER IN ACCORDANCE WITH ARTICLE 1105.15 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING AN INDEPENDENT CHECK OF ALL CONSTRUCTION STAKES FOR THE PROJECT. THIS INDEPENDENT CHECK SHALL BE SUFFICIENT TO UNDERSTAND THE PLACEMENT AND INTENT OF THE STAKES.

ESTIMATE REFERENCE INFORMATION		
ITEM NO.	ITEM NO.	DESCRIPTION
1	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW ITEM INCLUDES 27 C.Y. CUT, 1 C.Y. OF FILL AT 30% SHRINK. TYPE A COMPACTION SHALL BE REQUIRED ON THE FILL. WASTE EXCAVATION SHALL BE HAULED AND DISPOSED BY THE CONTRACTOR. INCLUDES ANY INCIDENTAL CLEARING AND GRUBBING.
2	2102-0425071	SPECIAL BACKFILL INCLUDES 5 CY FOR RESTORING DRIVEWAY SURFACING AS DETAILED ON THE D SHEET.
3	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID SEE SHEET B.01 FOR PLACEMENT LOCATION.
4	2301-1033080	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 8 IN. TRANSVERSE JOINTS SHALL NOT BE SKEWED. INCLUDES CERTIFIED PLANT INSPECTION. ALL NEW JOINTS SHALL BE SAWED AND SEALED PRIOR TO ROAD OPENING. SAW CUTTING SHALL BE INCIDENTAL TO THIS BID ITEM. USE BURLAP DRAG TO CREATE MICRO TEXTURE IN THE PAVEMENT SURFACE, MACRO TEXTURE IS NOT REQUIRED. SMOOTHNESS INCENTIVE DOES NOT APPLY TO THIS PROJECT.
5	2402-0425040	FLOODED BACKFILL REFER TO STANDARD ROAD PLAN DR-101.
6	2435-0250700	INTAKE, SW-507 SEE D.01 SHEET FOR SIZE, PLACEMENT, AND CONNECTIONS OF PROPOSED STORM SEWER INTAKES. ITEM INCLUDES DEWATERING, GRANULAR TRENCH BACKFILL/ COMPACTION, HAULING AND DISPOSAL OF UNUSED SOILS, PIPE STRUCTURE BEDDING, BYPASS PUMPING, AND PIPE CONNECTIONS. THE CASTING SHALL BE TYPE G AS SPECIFIED IN STANDARD ROAD PLAN SW-602.
7	2435-0250810	INTAKE, SW-508 MODIFIED SEE D.01 AND U.01 SHEETS FOR SIZE, PLACEMENT, AND CONNECTIONS OF PROPOSED AND EXISTING STORM SEWER INTAKES. ITEM INCLUDES DEWATERING, GRANULAR TRENCH BACKFILL/ COMPACTION, HAULING AND DISPOSAL OF UNUSED SOILS, PIPE STRUCTURE BEDDING, BYPASS PUMPING, AND PIPE CONNECTIONS. THE CASTING SHALL BE TYPE G AS SPECIFIED IN STANDARD ROAD PLAN SW-602.
8	2503-0112010	STORM SEWER GRAVITY MAIN, TRENCHED, POLYVINYL CHLORIDE PIPE (PVC), 10 IN. CARRIER PIPE SHALL BE SDR-26 OR EQUIVALENT. BEDDING SHALL BE CLASS "F-2" ACCORDING TO STANDARD ROAD PLAN SW-102. INCLUDES PROSPECTING FOR ALL UTILITIES THAT WILL BE CROSSED IN ADVANCE OF EXCAVATION TO ALLOW OWNER AND ENGINEER TO ADJUST GRADES OR ALLOW UTILITY OWNER TO MOVE UTILITY. THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR CONTRACTORS DOWNTIME DUE TO UTILITY CONFLICTS.
9	2503-0122010	STORM SEWER GRAVITY MAIN, TRENCHLESS, POLYVINYL CHLORIDE PIPE (PVC), 10 IN. CARRIER PIPE SHALL BE SDR-26 OR EQUIVALENT. INCLUDES PROSPECTING FOR ALL UTILITIES THAT WILL BE CROSSED IN ADVANCE OF TRENCHLESS EXCAVATION TO ALLOW OWNER AND ENGINEER TO ADJUST GRADES OR ALLOW UTILITY OWNER TO MOVE UTILITY. THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR CONTRACTORS DOWNTIME DUE TO UTILITY CONFLICTS.
10	2510-6745850	REMOVAL OF PAVEMENT SEE PLAN SHEETS FOR EXTENT OF PROPOSED PAVEMENT REMOVALS. SAW CUTTING SHALL BE INCIDENTAL TO THIS BID ITEM. EXCAVATION FOR SPECIAL BACKFILL FOR NEW PAVEMENT SHALL BE INCLUDED IN THIS ITEM.
11	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES
12	2528-8445110	TRAFFIC CONTROL
13	2533-4980005	MOBILIZATION
14	2601-2634100	MULCH SHALL BE A HYDRAULIC MULCH AS SPECIFIED IN 2601.03E2 b OF THE STANDARD SPECIFICATIONS.
15	2601-2636044	SEEDING AND FERTILIZING (URBAN)

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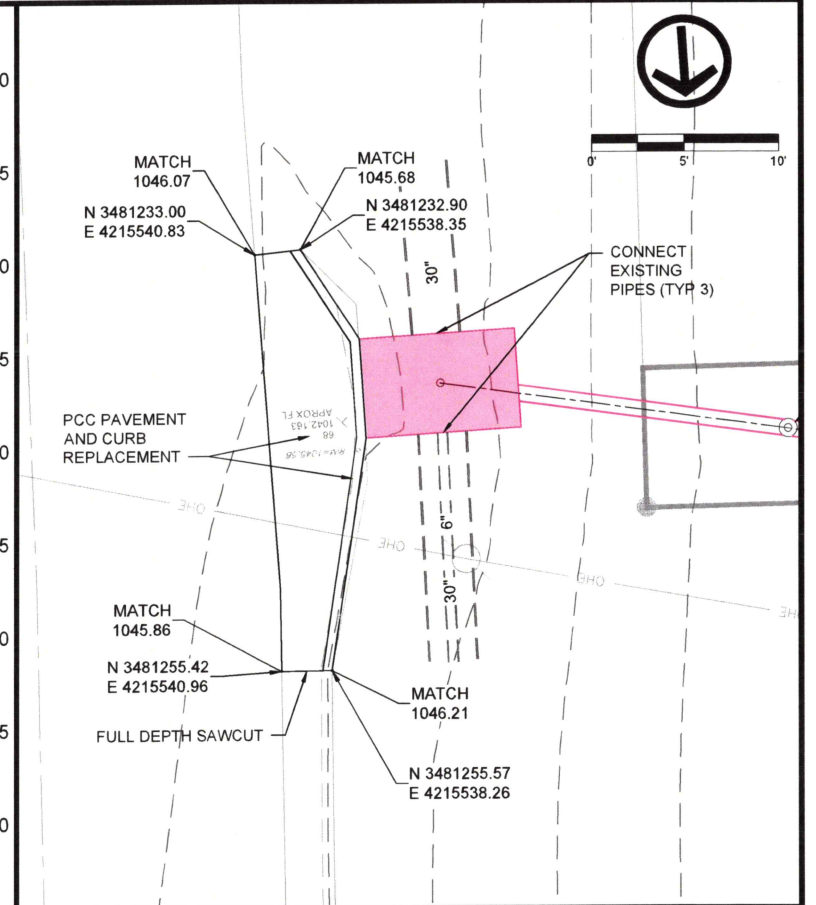
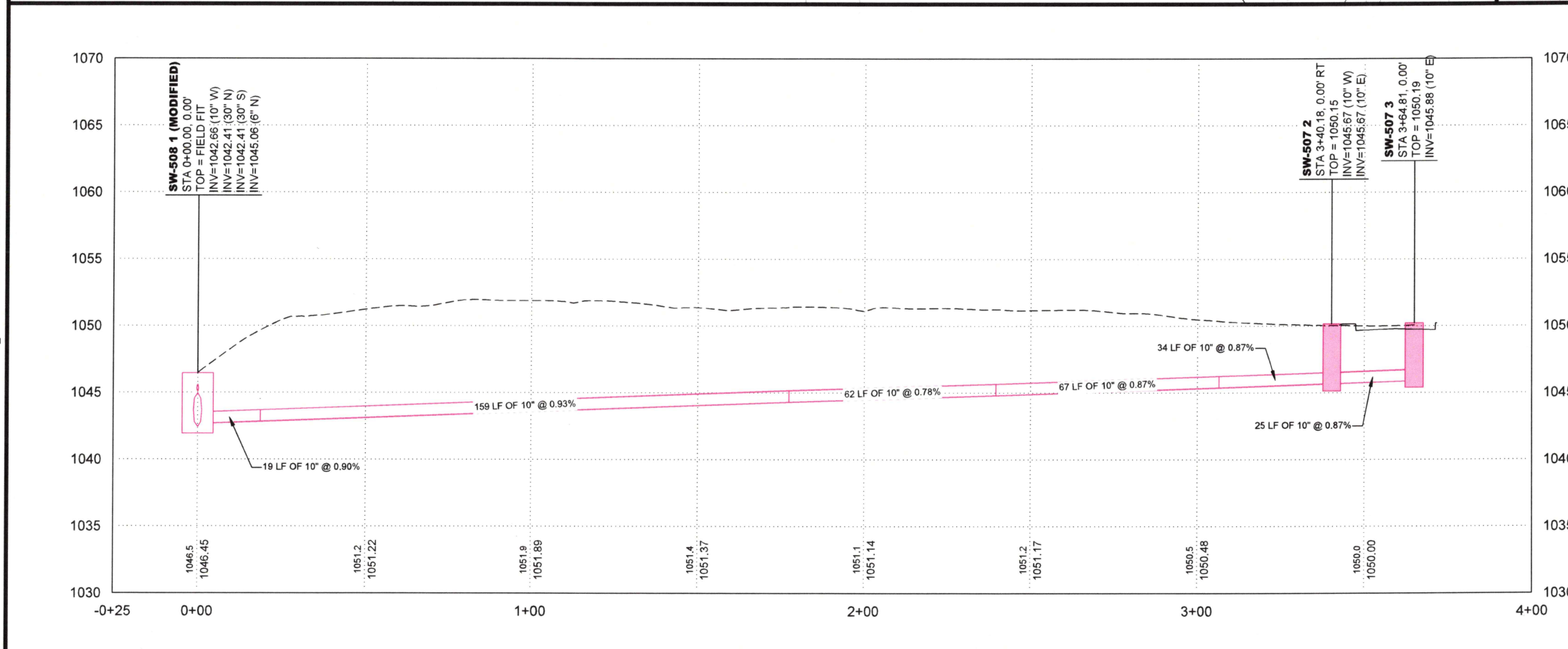
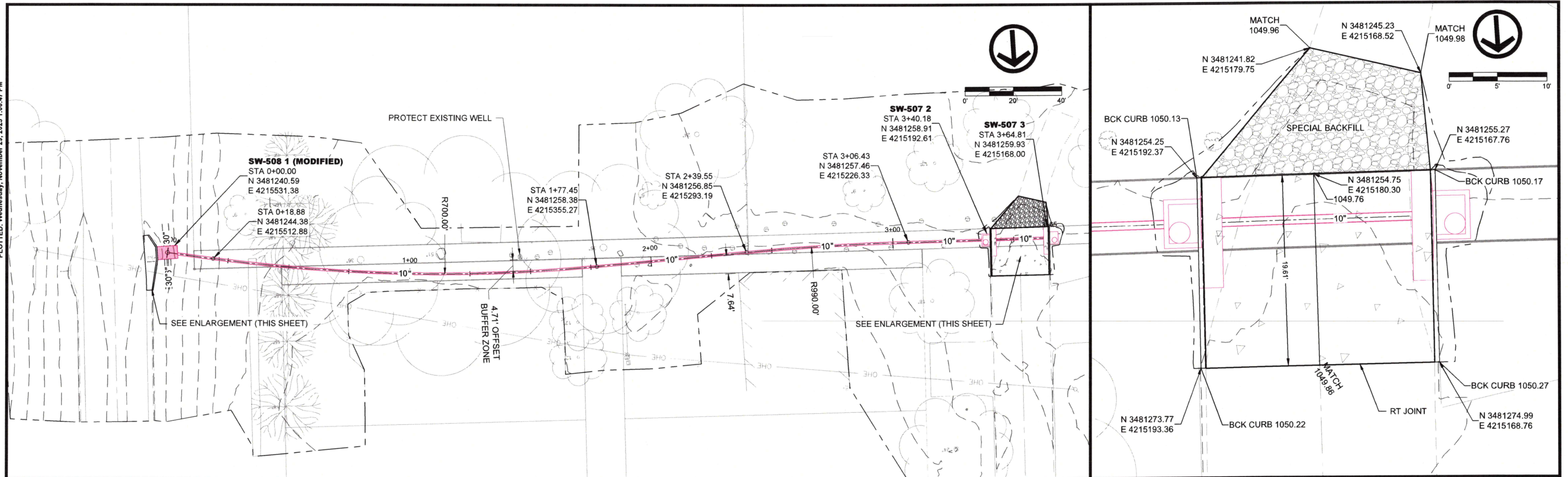


11TH STREET DRAINAGE IMPROVEMENTS ONAWA DRAINAGE DISTRICT
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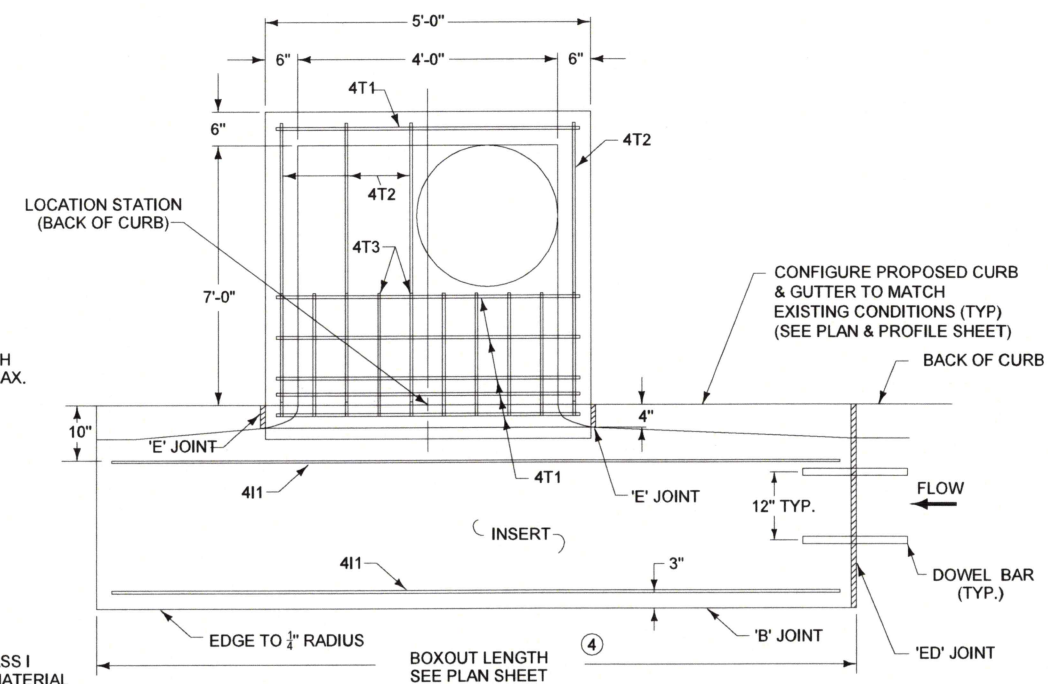
QUANTITIES & GENERAL NOTES	DWG. NO. C.01 PROJECT 35128
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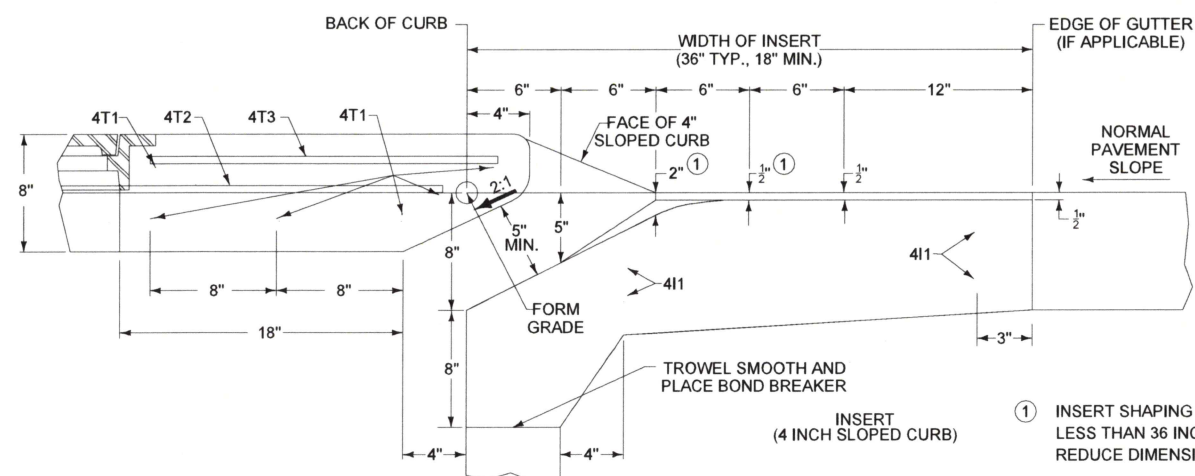
DATE		REVISIONS		SCALE		AS NOTED		11TH STREET DRAINAGE IMPROVEMENTS ONAWA DRAINAGE DISTRICT		STORM DRAIN PLAN & PROFILE		SHEET NO.	
												D.01	
												PROJECT	
												35128	



TYPICAL SECTION

- ② 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.
- ③ SLOPE OF 1.5% OR AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- ④ TRANSVERSE JOINT SPACING ON NEW CONCRETE PAVEMENT IS CONTROLLED BY THE INTAKE BOXOUT. ADJUST ADJACENT JOINT SPACING AS REQUIRED TO ACCOMMODATE BOXOUTS.

FOR RETROFIT INTAKES, MATCH EXISTING PAVEMENT JOINTS. STOP ANY TRANSVERSE PAVEMENT JOINTS THAT DO NOT CONFORM TO THE MINIMUM SPACING REQUIREMENTS AT THE EDGE OF THE INSERT AREA.



① INSERT SHAPING MAY BE MODIFIED FOR INSERT WIDTHS LESS THAN 36 INCHES. FOR AN 18 INCH INSERT, REDUCE DIMENSIONS INDICATED BY $\frac{1}{2}$ INCH.

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SHEET NO.

U.01

PROJECT	35128
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