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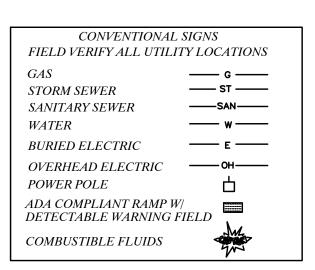
CITY OF MADISON

CITY ENGINEERING DIVISION DEPARTMENT OF PUBLIC WORKS PLAN OF PROPOSED IMPROVEMENT

COMMERCIAL AVENUE SANITARY SEWER RECONSTRUCTION

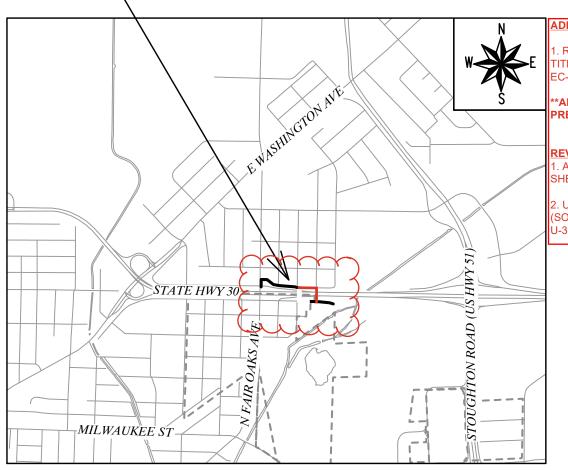
PROJECT LOCATION

CITY PROJECT NO. 14921 CONTRACT NO. 9486



NOTES:

ALL GUTTERS SHALL DRAIN WITH A MINIMUM GRADE OF 0.50% TOWARD STORM SEWER INLETS.



ADDENDUM #3: 9/3/2024

1. REMOVED AND REPLACED FOLLOWING SHEETS: TITLE, D-2, EC-1-EC-6, U-1-U-8. ADDED SHEETS EC-3A EC-3B, U-3A, U-3B

**ADDENDUM #3 CHANGES NOT SHOWN - SEE PREVIOUS VERSION FOR DETAILS

REVISION #1: 10/14/2024

1. ADDENDUM #3 MARKUPS HIDDEN ON PLANS (ALL SHEETS)

2. UNMARKED ATC FIBER ON COMMERCIAL AVE. (SOUTH) ADDED WITH ADDITIONAL ULOS (EC-3B, EC-5, U-3B, & U-5)

PUBLIC IMPROVEMENT PROJECT APPROVED

AUGUST 6, 2024

BY THE COMMON COUNCIL OF MADISON, WISCONSIN

PUBLIC IMPROVEMENT DESIGN APPROVED BY:

Aug 15, 2024

City Engineer

Date

SANITARY SEWER DESIGNED BY:

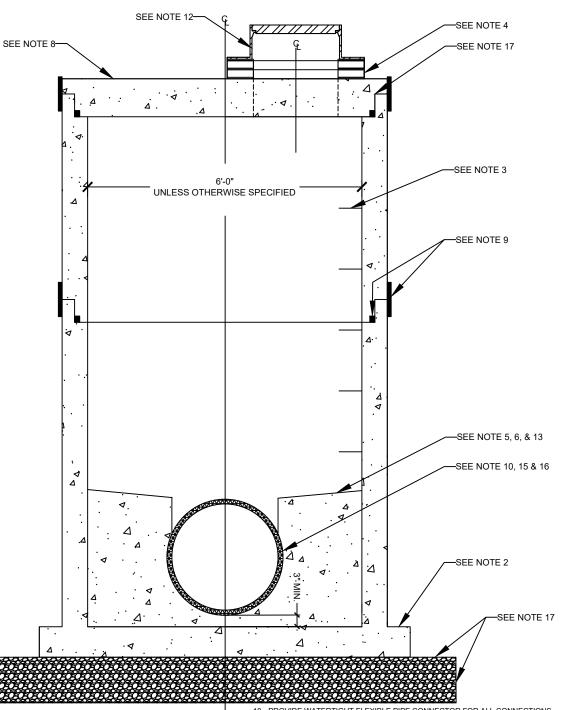


Aug 15, 2024

STREET DESIGNED BY:



Aug 15, 2024



- MANHOLE SECTIONS AND THICKNESSES SHALL BE PRECAST REINFORCED CONCRETE CONSTRUCTED PER ASTM C-478 (ROUND) OR C-913 (SQUARE).
- THE BASE THICKNESS SHALL BE 8 INCHES FOR DEPTHS 10 FEET OR LESS AND 12 INCHES FOR DEPTHS OVER 10 FEET.
- STEPS SHALL BE INSTALLED IN AIR RELEASE VALVE MANHOLES (FORCEMAIN) FOR ANY MANHOLE DEPTH, OR FOR A GRAVITY SEWER IF THE MANHOLE IS EQUAL OR GREATER TO A 30' DEPTH. STEPS SHALL NOT BE INSTALLED IN GRAVITY SEWER MANHOLES WITH LESS THAN A 30' DEPTH. IF INSTALLED, STEPS SHALL BE M.A. INDUSTRIES OR EQUAL, AND INSTALLED 16" ON CENTER PER MANUFACTURER'S RECOMMENDATIONS. STEPS SHALL BE CENTERED ON BENCH. TOP STEP SHALL BE 24" FROM DECK UNDERSIDE.
- MANHOLE CHIMNEYS SHALL HAVE FROM 3 TO 9 INCHES OF ADJUSTING RINGS. OPENING SHALL BE 24" OFFSET, CENTERED OVER BENCH & MANHOLE STEPS (IF ANY)
- THE BENCH SHALL BE 75% OF THE HEIGHT OF THE PIPE WITH A MAX HEIGHT OF 24"
 FOR PIPES 24" DIA. OR LARGER, OR TO THE PIPE CROWN FOR PIPES LESS THAN 24" DIA. BENCH SHALL BE SLOPED 1" - 2" PER FOOT.
- THE INVERT CHANNEL SHALL BE TOWELED TO SMOOTH, DENSE SURFACE AND A SEMICIRCULAR SHAPE CONFORMING TO THE INSIDE OF THE ADJACENT SEWER.
- TOP DECK SHOULD BE A FLATTOP UNLESS OTHERWISE NOTED.
 JOINTS SHALL RECEIVE NON-HARDENING BUTYL RUBBER SEALANT MINIMUM
- THICKNESS 3/4", TYP. EXTERIOR JOINTS SHALL RECEIVE JOINT PROTECTION SUCH AS MACWRAP OR APPROVED EQUAL TO A MINIMUM WIDTH OF 9", TYP.

- 10. PROVIDE WATERTIGHT FLEXIBLE PIPE CONNECTOR FOR ALL CONNECTIONS UNLESS OTHERWISE NOTED.
- MANHOLE INTERIOR COATINGS TO BE DIRECTED BY THE DISTRICT
- 12. CHIMNEY, FRAME, & COVER **PER SHEET SD-201.**13. MINIMUM HEIGHT FROM TOP OF BENCH TO DECK UNDERSIDE SHALL BE 7'-0". 14. PICKHOLES SHALL UNDER NO CIRCUMSTANCES PENETRATE THRU CONCRETE. EARHOLE STYLE PICKHOLES OR USE SUPERFICIAL LIFTING HOOKS SHOULD BE USED
- INSTEAD. ALL PICKHOLES SHALL BE MORTARED PRIOR TO BACKFILLING.

 15. BOOT EXPANDERS SHALL BE INSTALLED AT THE 12 O'CLOCK POSITION WITH SCREW
- ENDS CAPPED, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER.

 16. CONCRETE OPENINGS MUST BE CORED FOR SURFACE APPLIED WATERTIGHT FLEXIBLE PIPE CONNECTORS (I.E. KOR-N-SEAL BOOTS). POURING ONLY ACCEPTABLE IF
- CONNECTOR IS DESIGNED TO BE POURED-IN-PLACE (I.E. A-LOK).
- 17. 11-0" MIN. COMPACTED BEDDING

 18. FOR A RECONSTRUCTED MANHOLE, IF A JOINT BETWEEN MANHOLE SECTIONS IS NOT A TONGUE AND GROOVE CONFIGURATION, THE CONTRACTOR SHALL INSTALL DOWELS AT A MINIMUM OF THREE LOCATIONS AROUND THE PERIMETER OF THE MANHOLE. THE DOWELS SHALL BE #4 REBAR EMBEDDED 3-INCHES INTO EACH SECTION OF THE MANHOLE IN LIFTLOE THIS THE CONTRACTOR MAY INSTALL 6"X6" SST PLATES AT A MINIMUM OF THREE LOCATIONS ON THE OUTSIDE OF THE MANHOLE. THE PLATES SHALL BE ANCHORED WITH TWO 3/8" DIAMETER SST BOLTS ON EACH SIDE OF THE JOINT AT ALL LOCATIONS.

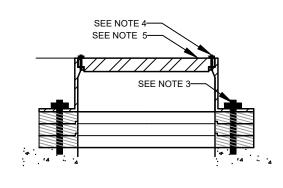
(2) - CONCEALED TYPE PICKHOLES TYPE "C" SURFACEw/PERMAGRIP TEXTURE PER NF-22642 (3) NON-ROCK SEE NOTE 4 FEATURES, 120° APART HIGH RAISED LETTERS FLUSH w/TOP SURFACE **PROFILE** <u>PLAN</u>

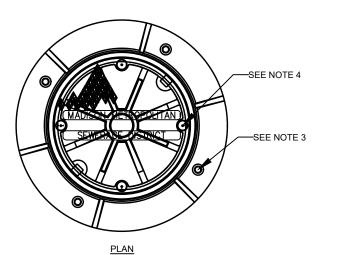
STANDARD

- 1. STANDARD MANHOLE, ACCESS HOLE, LADDER, CONNECTORS & BENCH SHALL BE PER SHEET SD-101.
- CHIMNEY SHALL HAVE A MINIMUM HEIGHT OF 3" AND A MAXIMUM HEIGHT OF 9" OF ADJUSTING RINGS. ADJUSTING RINGS SHALL BE CRETEX PRO-RING OR
- SEAL BETWEEN RINGS, CASTING, AND TOP DECK PER MANUFACTURER REQUIREMENTS.
- MANHOLE CHIMNEYS SHALL OPENING SHALL BE 24" OFFSET, CENTERED OVER MANHOLE STEPS.
- MANHOLE FRAME AND COVER SHALL BE CAST IRON WITH HEAVY DUTY, INDENTED TOP WITH SOLID LIDS AND MACHINED BEARING SURFACES. NON-ROCKING
- SELF SEALING, WITH CONCEALED PICK HOLES, STAMPED WITH THE LETTERING "MADISON
 METROPOLITAN SEWERAGE DISTRICT", NF-10500151.
- HEIGHT (NF-16892301 OR EQUAL) MAY BE PERMITTED PER MADISON METROPOLITAN DISTRICT APPROVAL. CHIMNEY SEALS DETERMINED ON A CASE-BY-CASE

9" HEIGHT (NF-10502301 OR EQUAL) IS STANDARD. 4"

BROKEN OR CRACKED ADJUSTING RINGS ARE NOT PERMITTED AND WILL BE REJECTED.





BOLTED DOWN

FOLLOW STANDARD CHIMNEY DETAIL REQUIREMENTS UNLESS OTHERWISE SUPERCEDED BY FOLLOWING NOTES.

PROFILE

- INSTALL ADHESIVE AT RING FACES PER MANUFACTURER REQUIREMENTS.
- SECURE CASTING TO MANHOLE TOP DECK WITH 1"
 DIAMETER ANCHOR HOLES, MINIMUM 2" EMBEDMENT, IN
 FOUR LOCATIONS WITH HEX HEAD SCREWS. ALL HARDWARE
 TO BE STAINLESS STEEL.
- SECURE LID TO CASTING IN HOLES WITH 1/2" BOLT WITH 3/4" HEX HEAD, WASHER, AND RUBBER GASKET. ALL HARDWARE TO BE STAINLESS STEEL. COAT LID HARDWARE WITH ANTI-SEIZE LUBRICANT BEFORE INSTALLING.
- LID SHALL BE NF-19160436 OR EQUAL WITH 1" RAISED LETTERS AND TYPE "C" CHECKERED TOP DESIGN
 W/PERMAGRIP SURFACE TEXTURE. 9" FRAME SHALL BE NF-19160280 OR EQUAL.

MMSD STANDARD TYPICAL MANHOLE DETAIL (SD-101)

NOT TO SCALE

MMSD STANDARD MANHOLE CHIMNEY (SD-201)

NOT TO SCALE



COMMERCIAL AVENUE

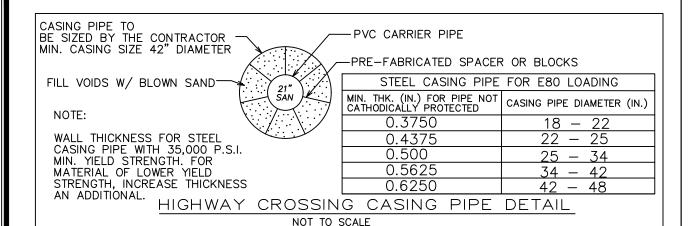
MMSD STRUCTURE DETAILS

SANITARY SEWER RECONSTRUCTION

MADISON, WI 9486

14921

14921



SAS #1 NOTES:

- 1) SAS #1 WILL BE AN MMSD STRUCTURE. THE STRUCTURE WILL BE RENAMED MH10-305A FOLLOWING COMPLETION OF THE PROJECT.
- SAS #1 SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MMSD STANDARD DETAIL DRAWINGS SHOWN ON SHEET D-1 AND AS OUTLINED IN THE SPECIAL PROVISIONS.
- CONTRACTOR SHALL CONTACT RAY SCHNEIDER (608) 347-3628 OR RAYS@MADSEWER.ORG, FIVE DAYS PRIOR TO MAKING THE CONNECTION TO MMSD SEWER MAIN TO ARRANGE INSPECTION OF SAS #1 INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING FOR MMSD CONNECTION PERMIT, PERMIT FEE, AND MEETING ALL MMSD PERMIT REQUIREMENTS.
- SALVAGE AND RE-USE CASTING AND RINGS FROM EXISTING STRUCTURE (MMSD MH10-305) FOR SAS #1. CONTACT RAY SCHNEIDER IF ADDITIONAL RINGS ARE NEEDED.

ADDENDUM #3: 9/3/2024 REMOVED AND REPLACED FOLLOWING SHEETS: TITLE, D-2, EC-1-EC-6, U-1-U-8, ADDED SHEETS EC-3A, EC-3B, U-3A, & U-3B

REVISION #1: 10/14/2024 ADDENDUM #3 MARKUPS HIDDEN ON PLANS (ALL SHEETS

UTILITY SHEET NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WISDOT PERMIT DT1553 -APPLICATION/PERMIT TO CONSTRUCT, OPERATE AND MAINTAIN UTILITY FACILITIES ON HIGHWAY RIGHT-OF-WAY, ON BEHALF OF THE CITY OF MADISON. THIS PERMIT COVERS SEWER CONSTRUCTION ON WISDOT RIGHT-OF-WAY AND WORK ON N FAIR OAKS AVE THAT ENCROACHES ON THE WI HWY 30 EXIT RAMP.
- INSTALL EXTERNAL SAS WRAP IN CONFORMANCE WITH S.D.D. 5.7.2 ON STRUCTURES SAS #1 THROUGH SAS #12.
- UTILITY TRENCH PATCH TYPE III SHALL BE INSTALLED FOR AREAS OF ASPHALT PAVEMENT RESTORATION AND UTILITY TRENCH PATCH TYPE IV SHALL BE INSTALLED FOR AREAS OF GRAVEL PATH RESTORATION. UTILITY TRENCH PATCHING SHALL BE PAID BY LINEAR FOOT OF TRENCH (TRENCH-FOOT).
- CONCRETE PAVEMENT RECONSTRUCTION ON N FAIR OAKS AVENUE WILL BE REQUIRED FOLLOWING SEWER CONSTRUCTION. CONCRETE PAVEMENT RECONSTRUCTION SHALL BE PAID BY THE SQUARE YARD UNDER BID ITEM 40411.
- REMOVE EXISTING MEDIAN ON N FAIR OAKS AVE FOR SEWER CONSTRUCTION AND MAINTENANCE OF TRAFFIC. RECONSTRUCT MEDIAN FOLLOWING SEWER CONSTRUCTION - SEE D-3, D-4, & P-1.
- EXISTING SURFACE GRADES FOR WI HWY 30 ARE BASED UPON LIDAR AND NOT SURVEY.
- REMOVAL OF CHAIN LINK FENCING SHOULD BE MINIMIZED AND ONLY AS NEEDED FOR ACCESS AND CONSTRUCTION. CITY ENGINEERING SHALL PROVIDE APPROVAL BEFORE FENCING REMOVAL. REMOVED FENCING SHALL BE REPLACED - SEE BID ITEM 90007.



MADISON, WI 9486

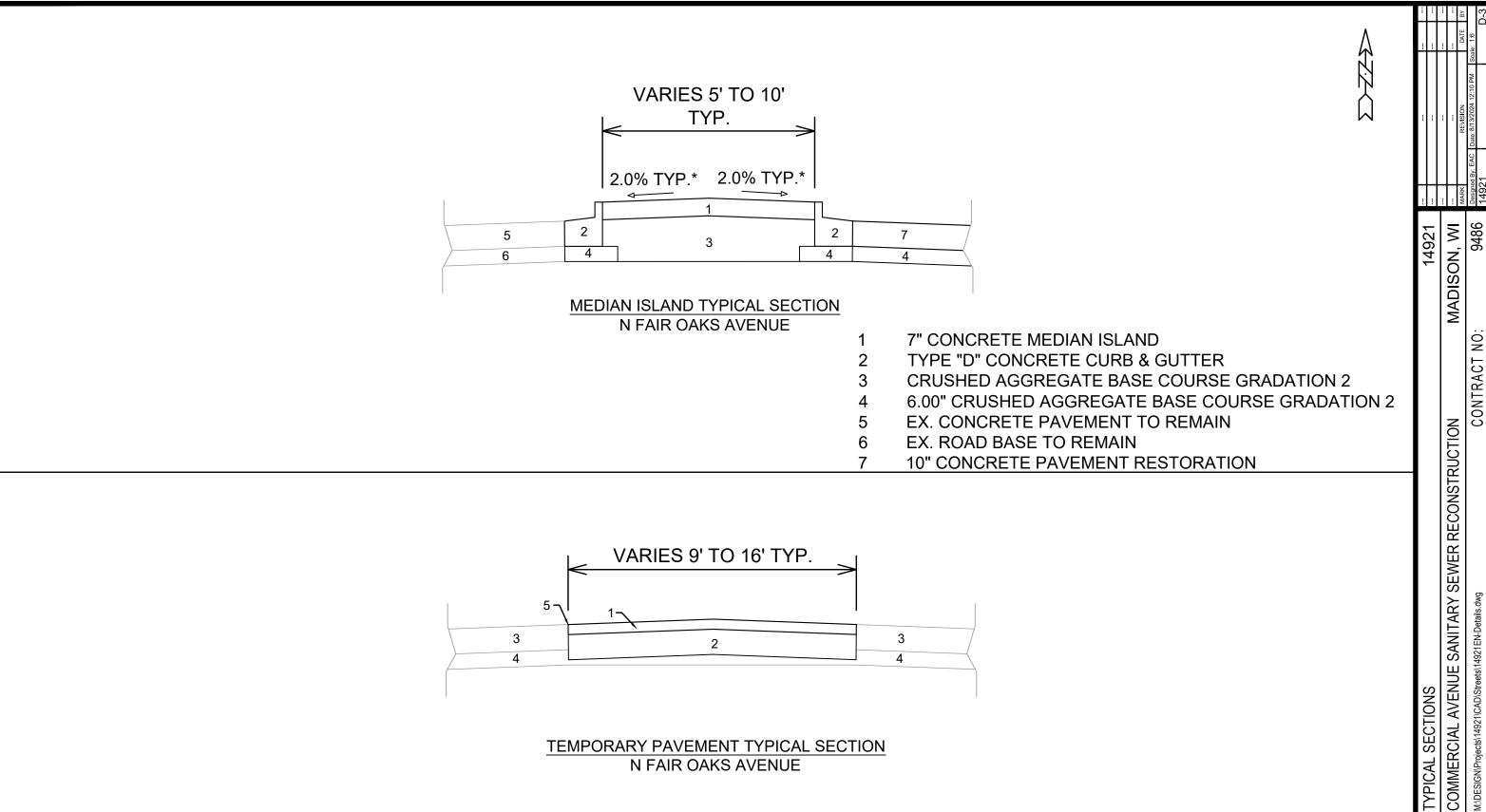
SEWER RECONSTRUCTION

SANITARY (

14921

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D-2



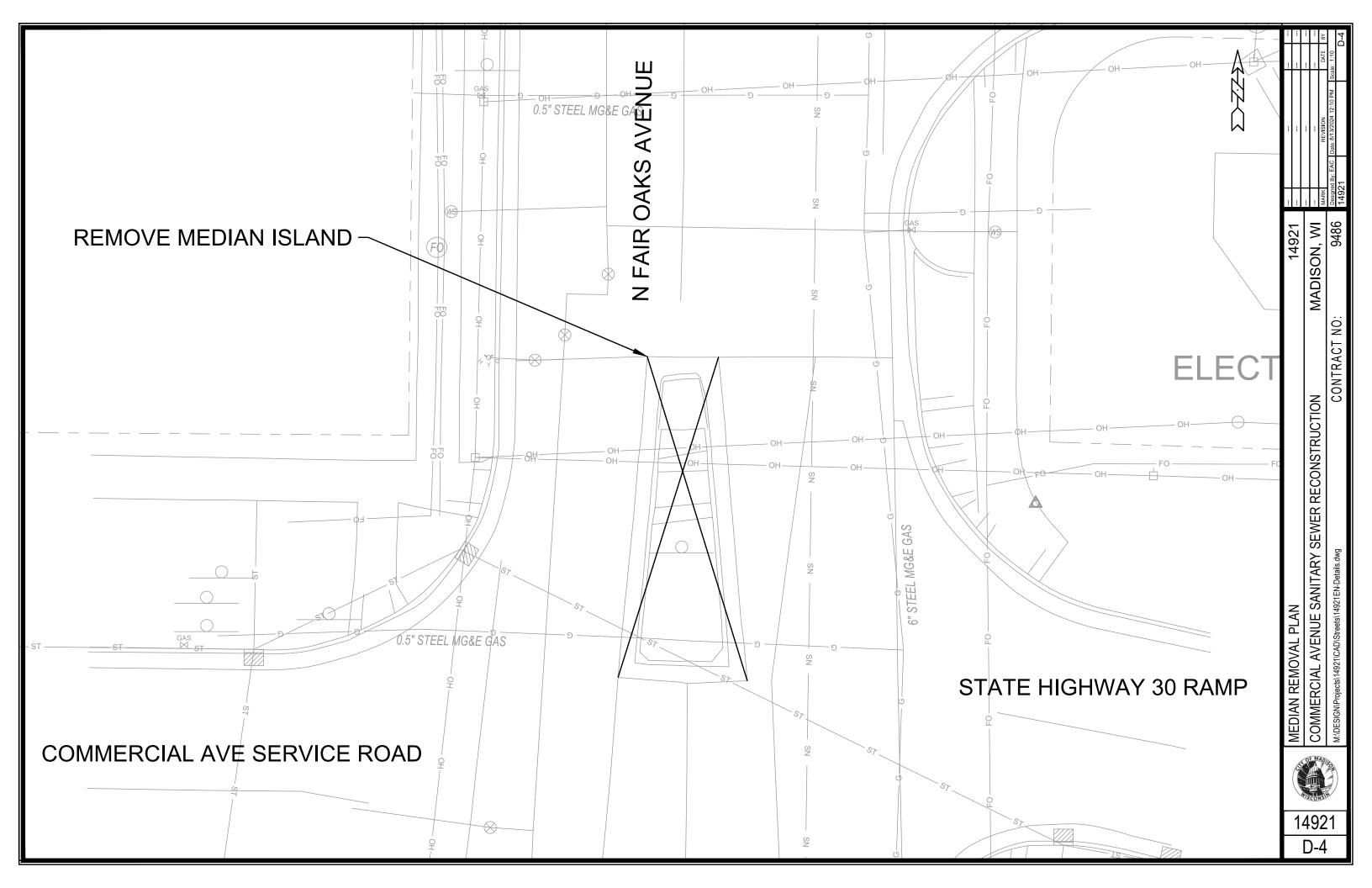
TEMPORARY PAVEMENT TYPICAL SECTION N FAIR OAKS AVENUE

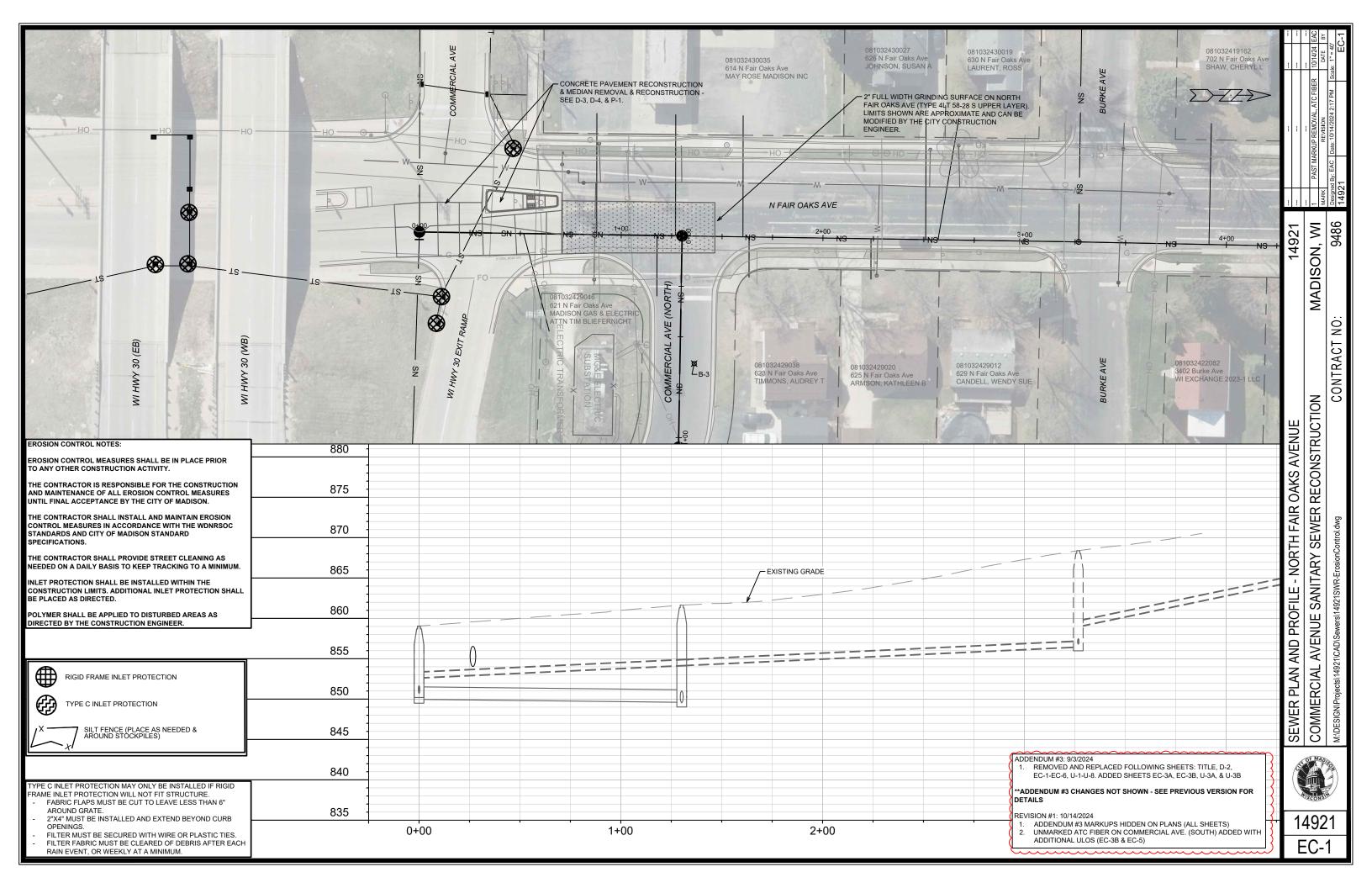
- 4" HMA PAVEMENT 4LT 58-28 S
- 10" CRUSHED AGGREGATE BASE COURSE GRADATION 2
- EX. CONCRETE PAVEMENT TO REMAIN
- EX. ROAD BASE TO REMAIN
- MEDIAN ISLAND LIMITS

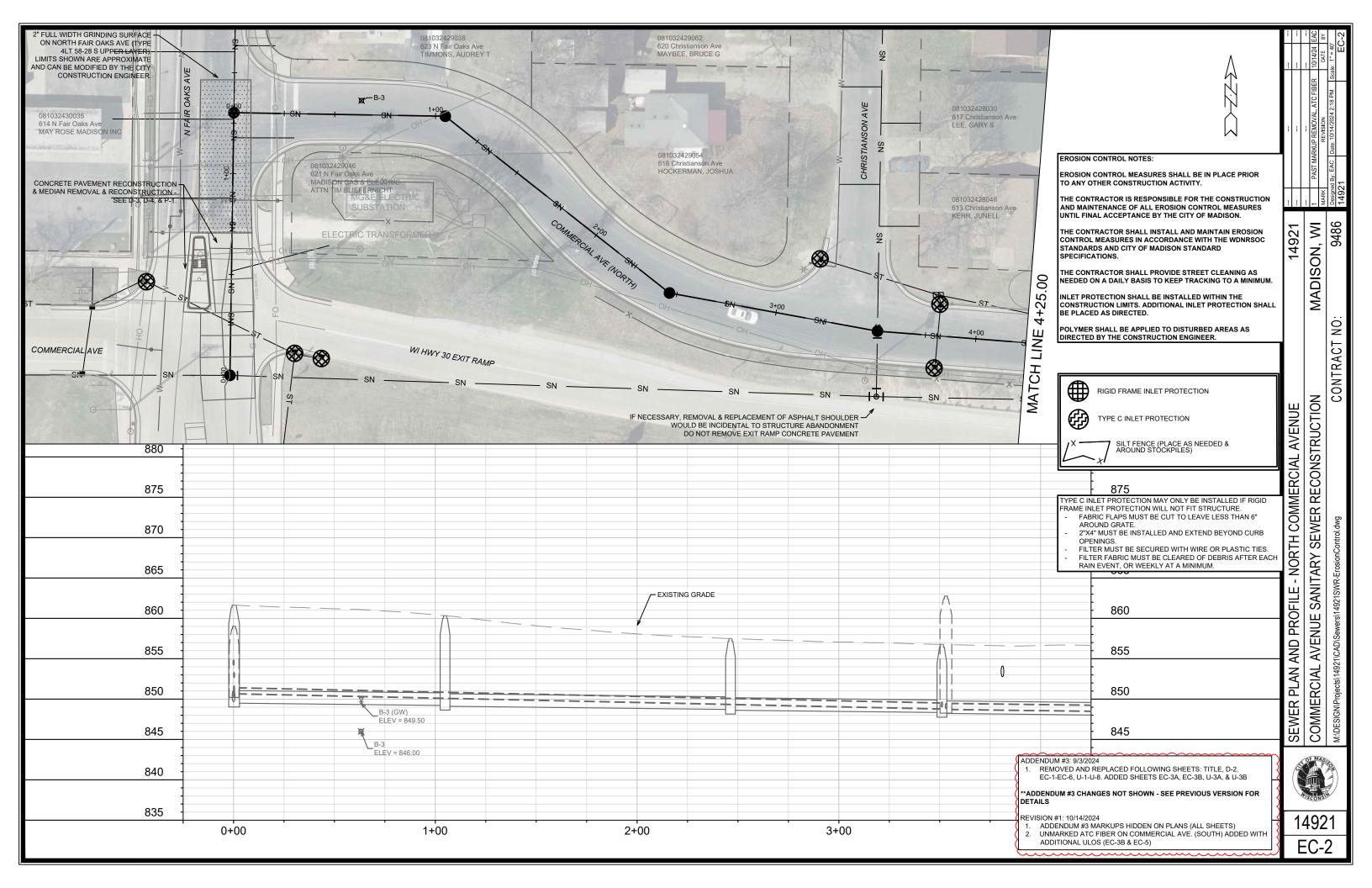


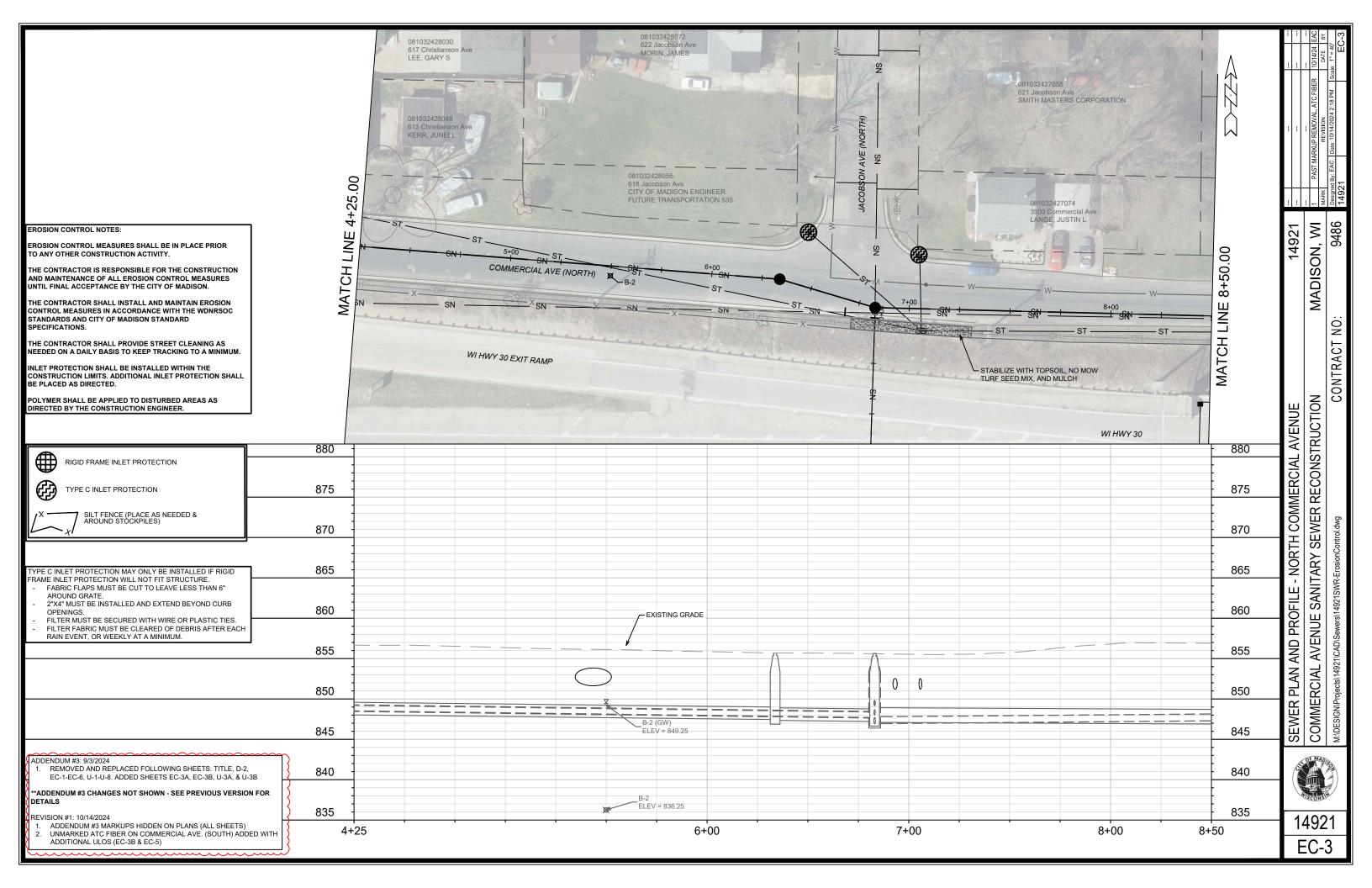
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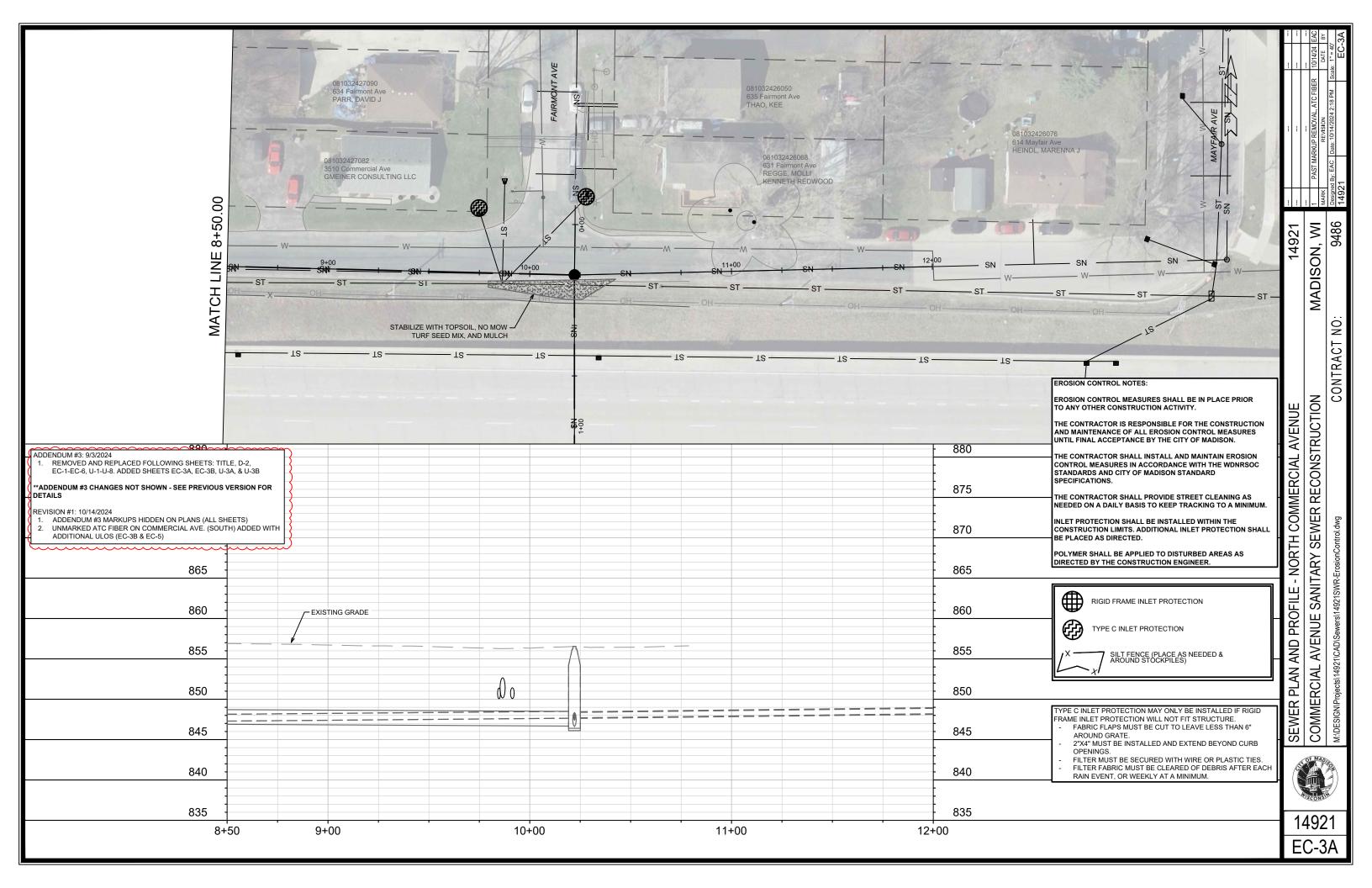
D-3

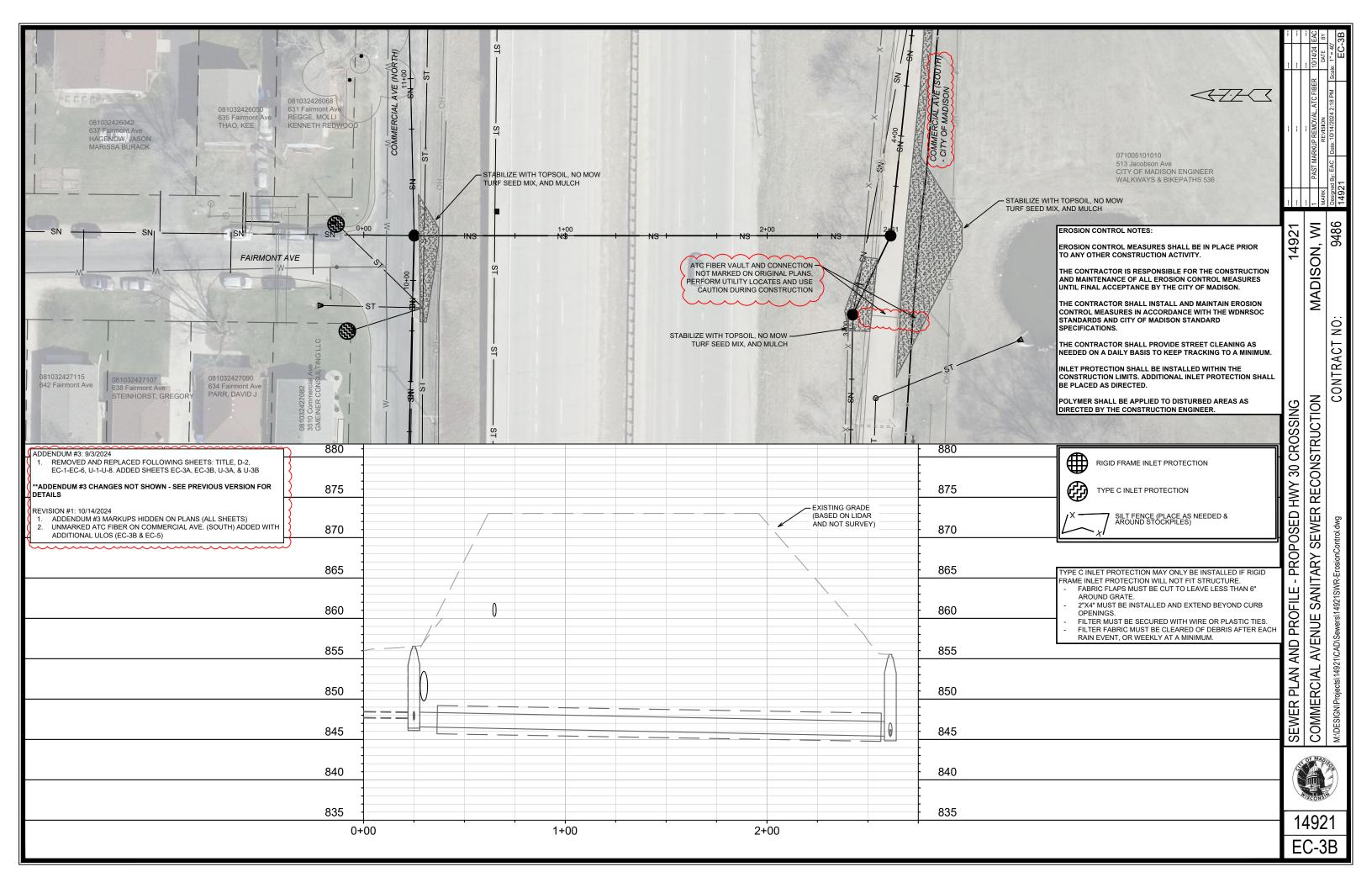


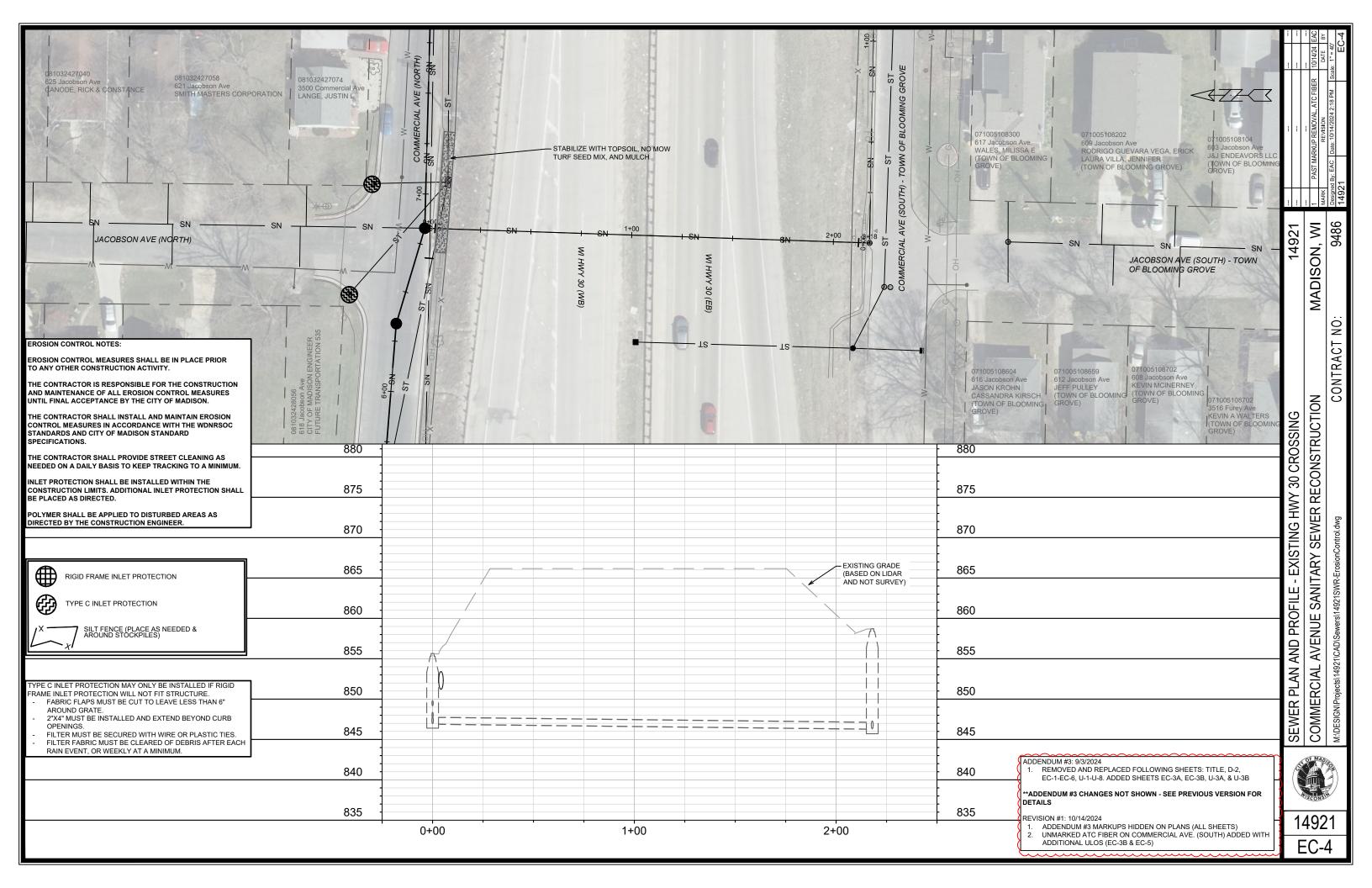


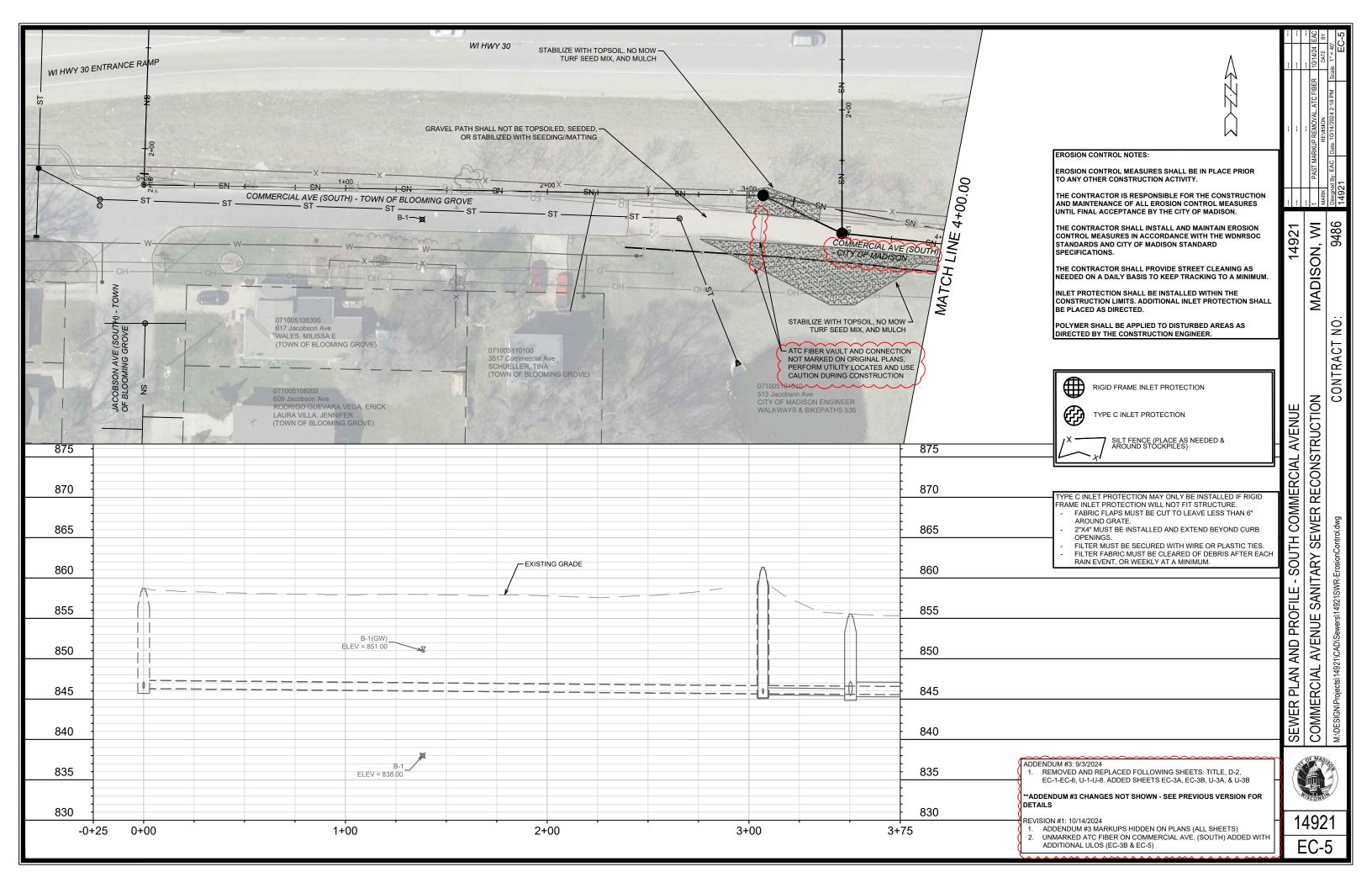


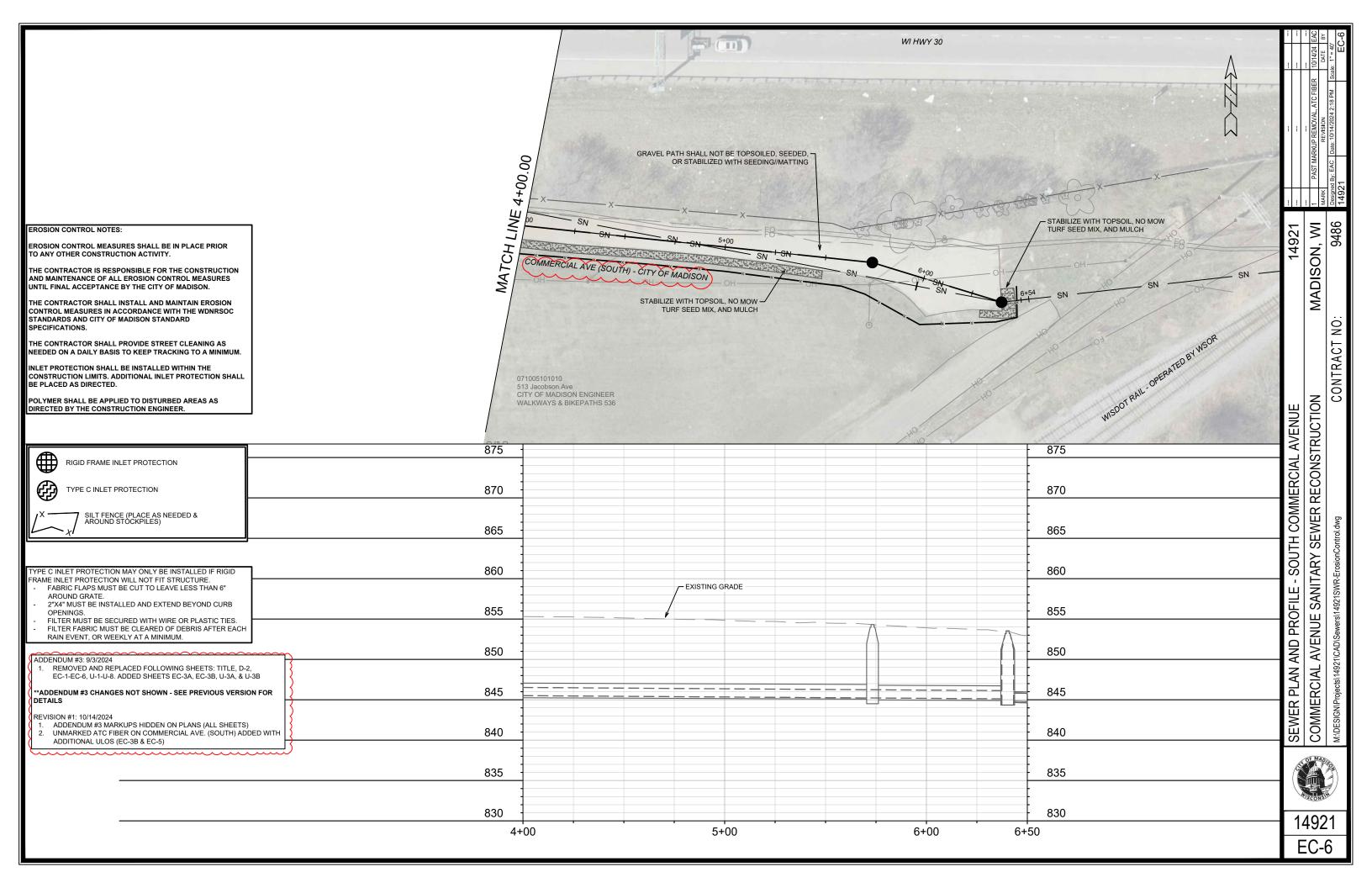


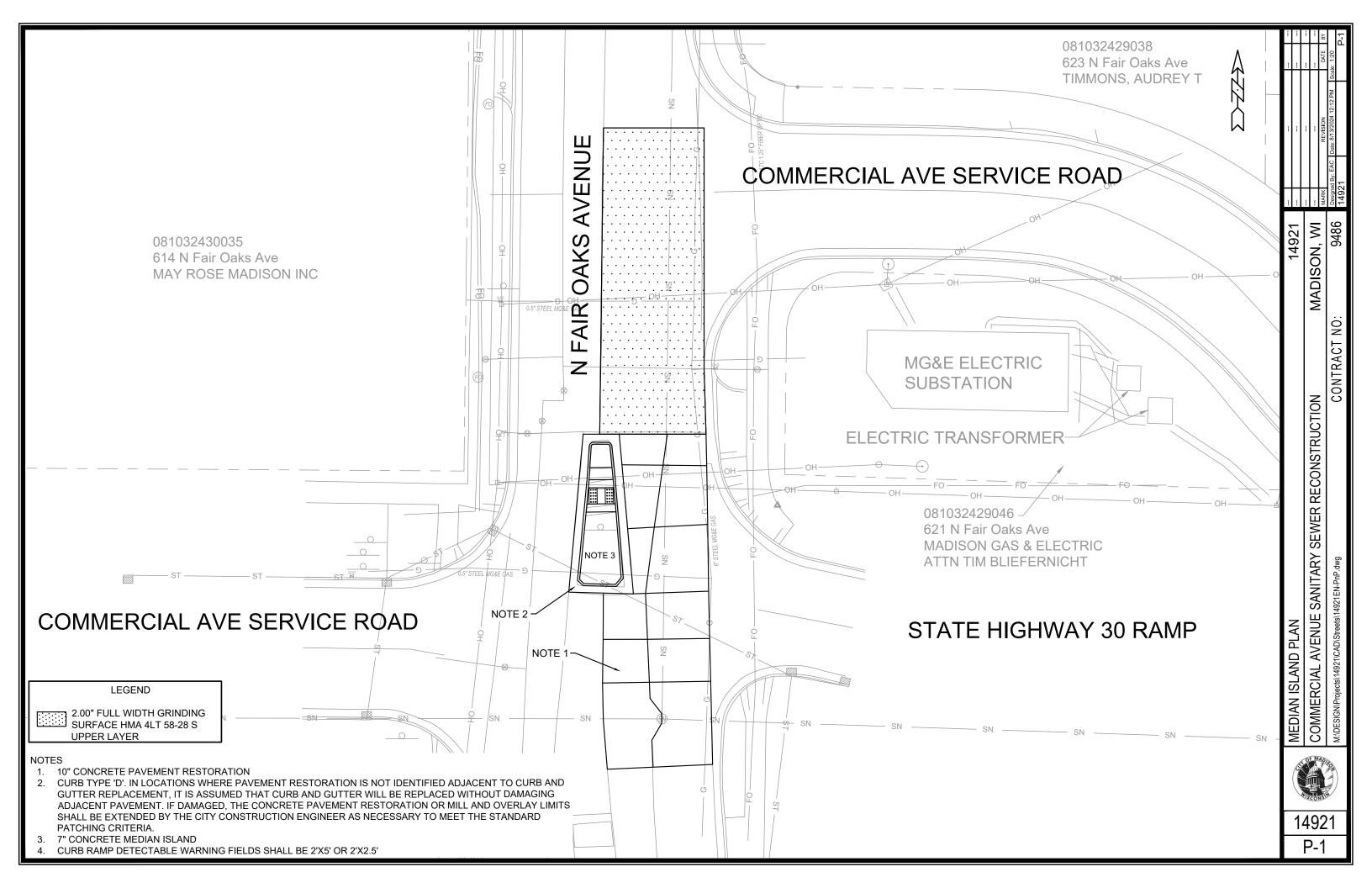


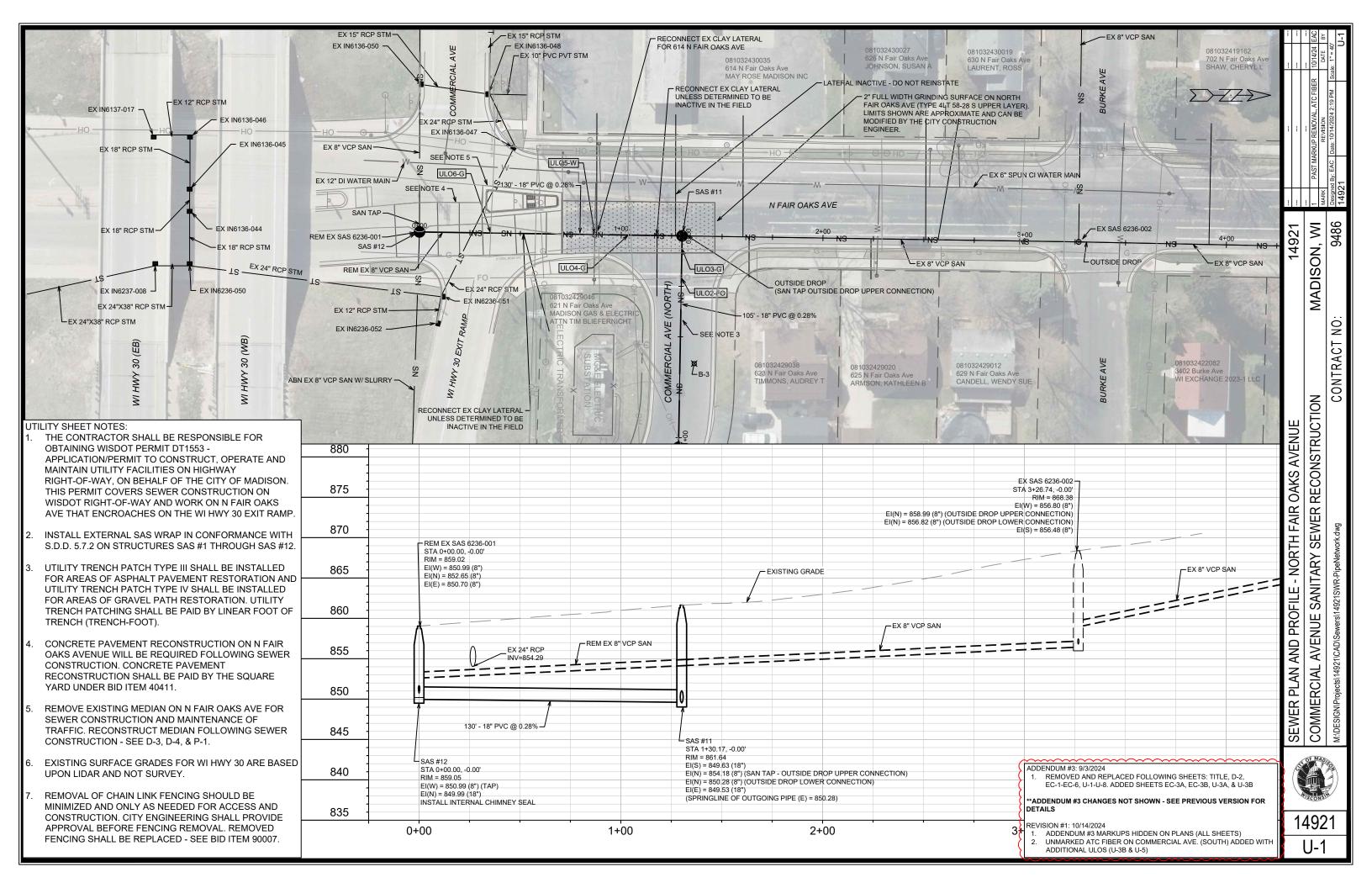


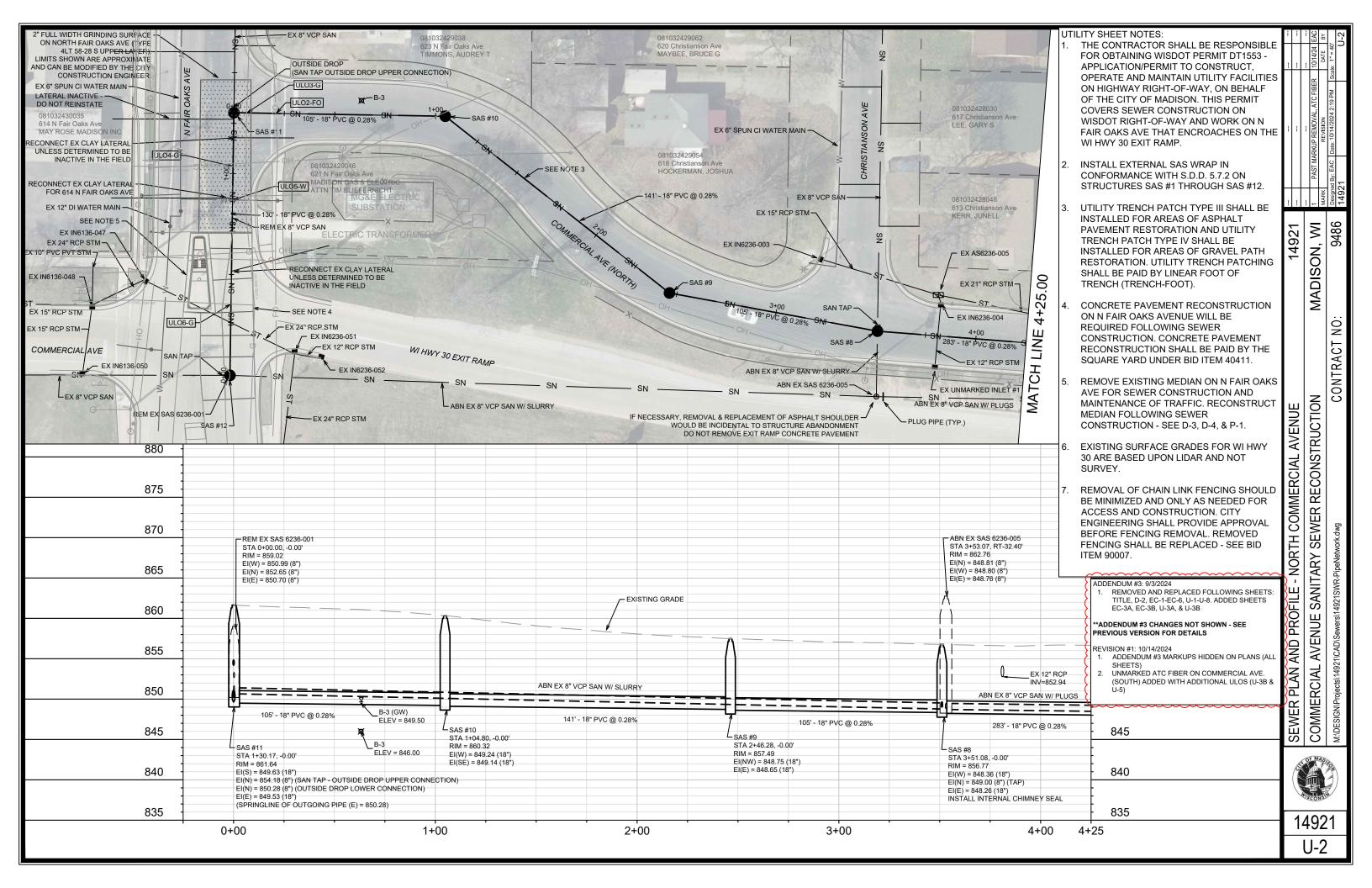


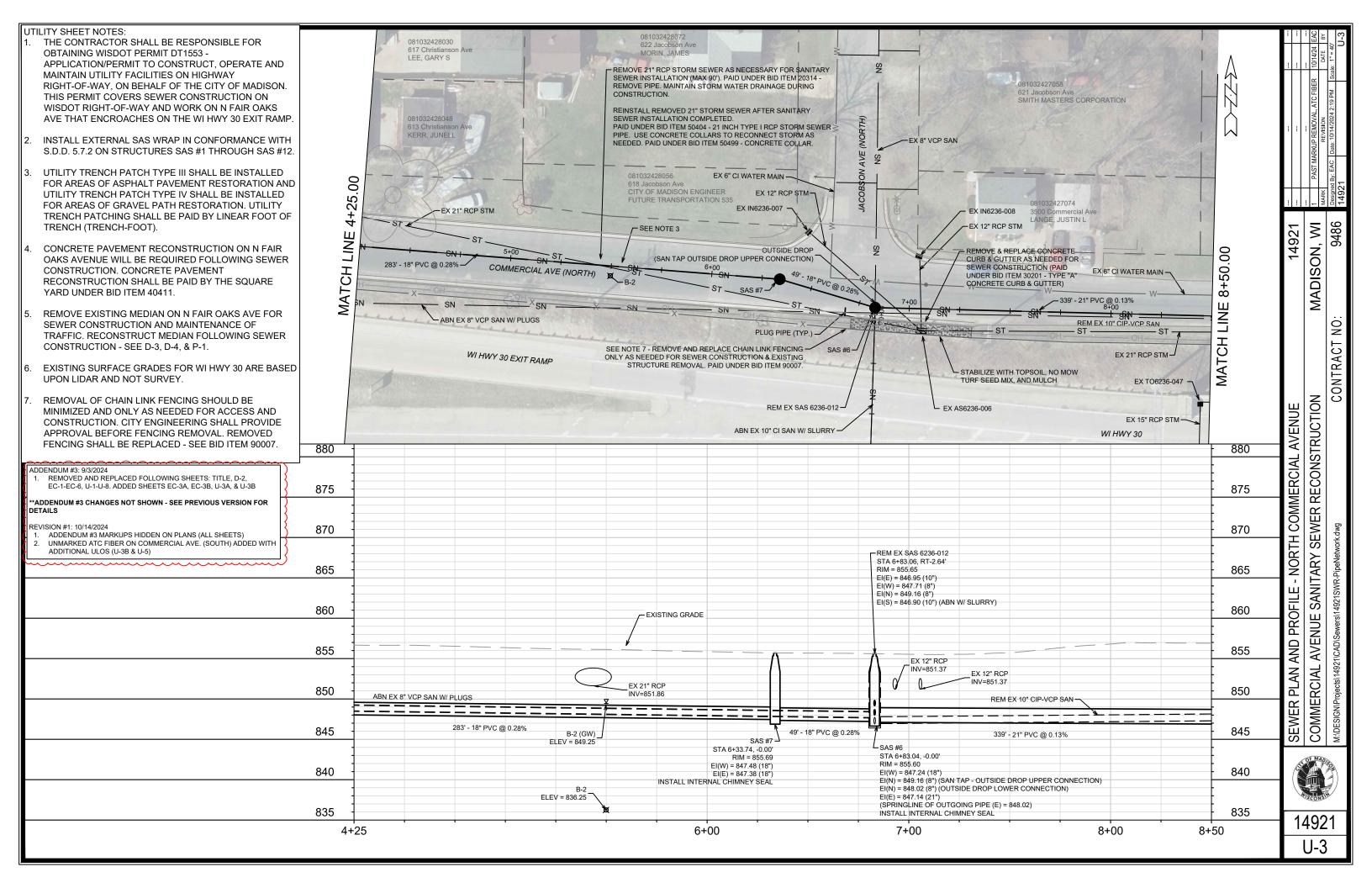


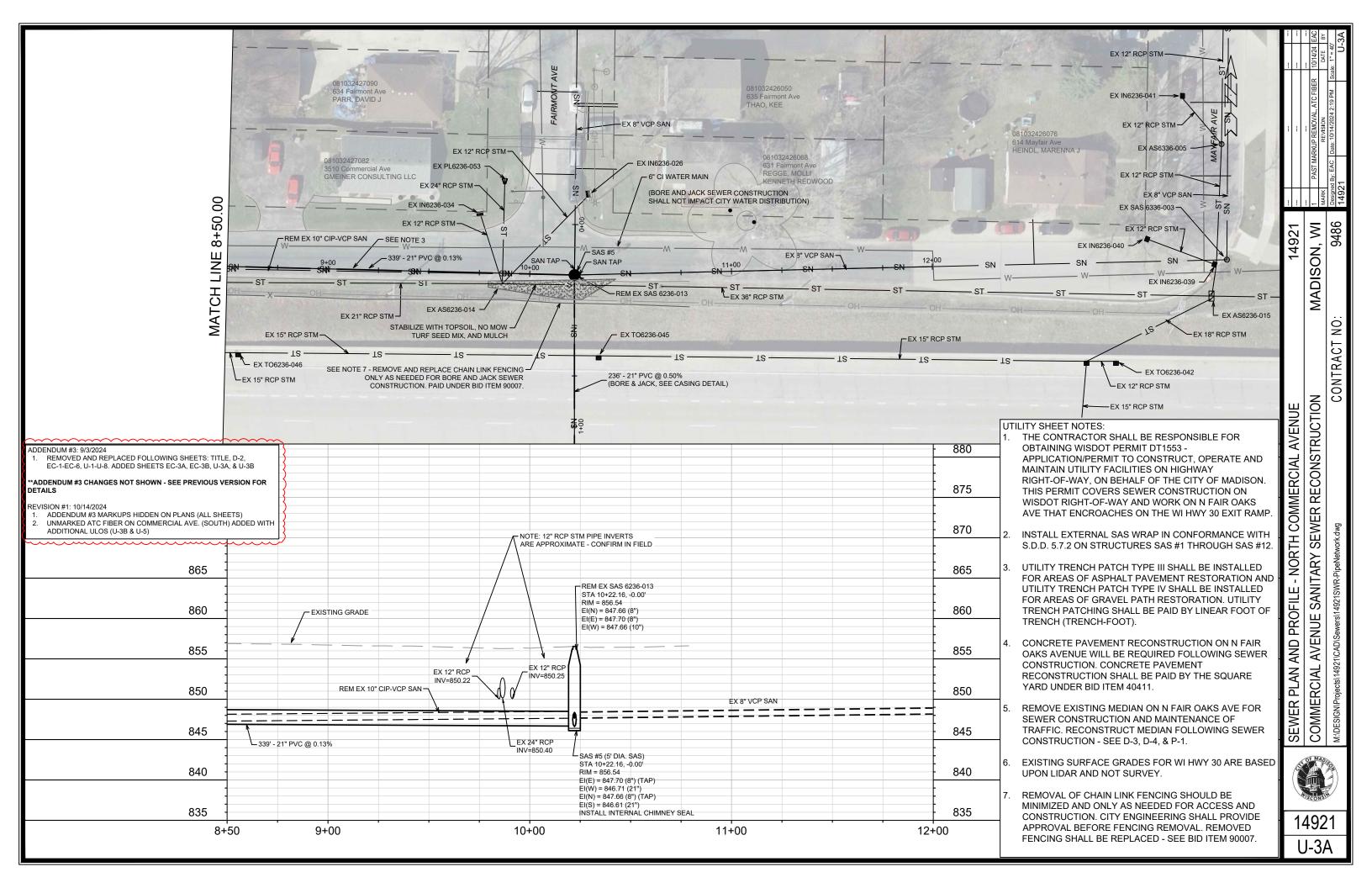


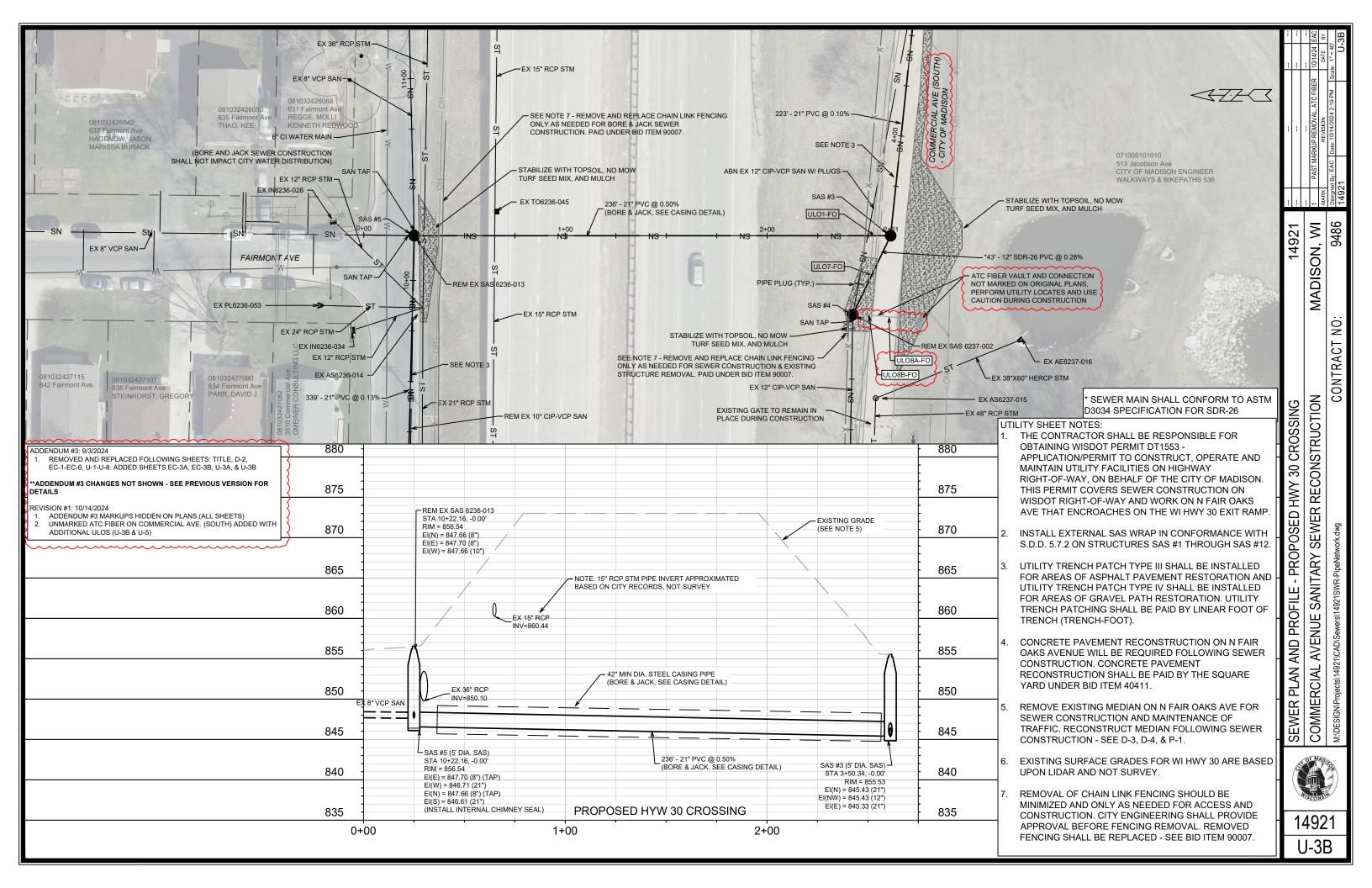


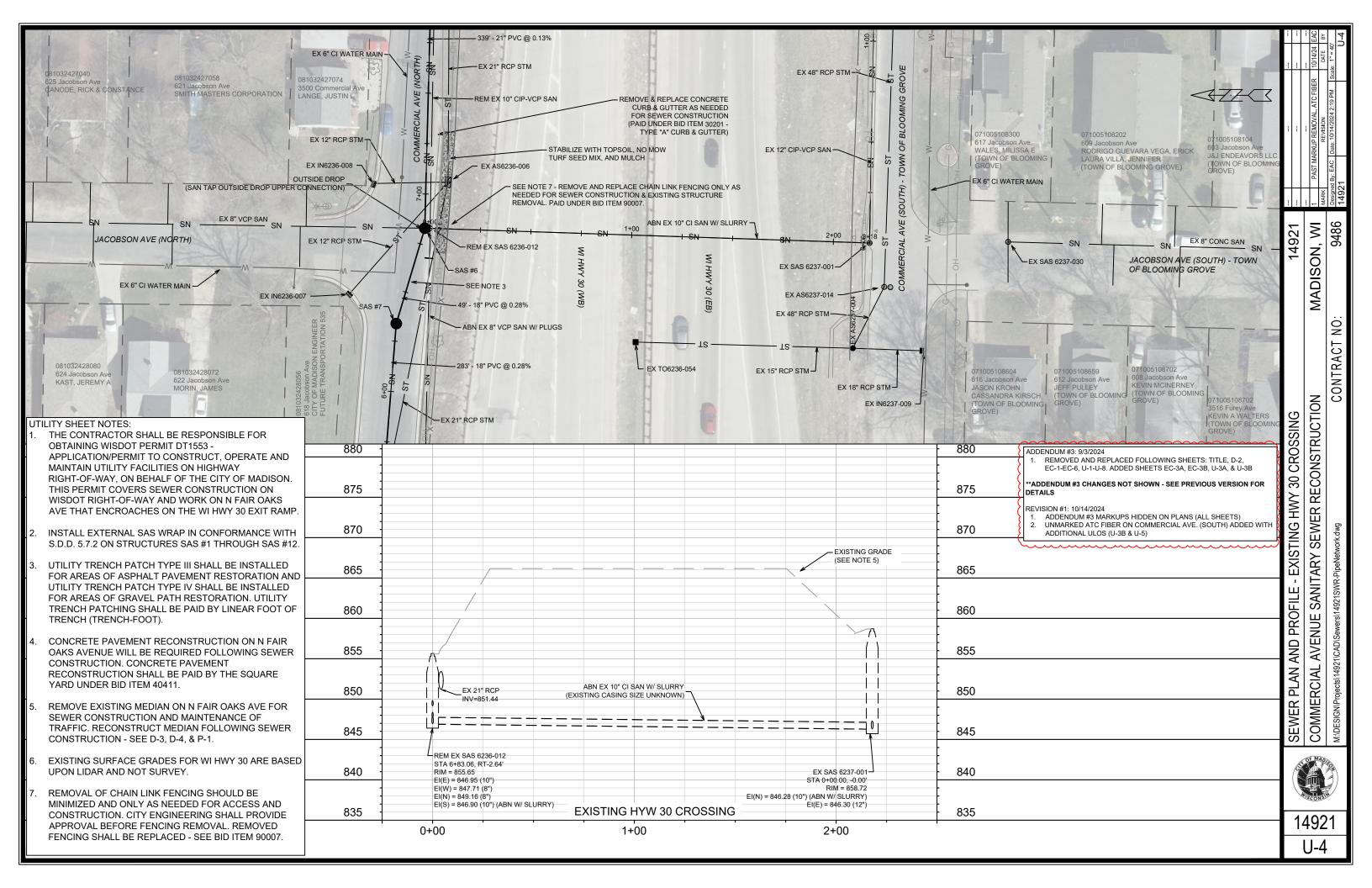


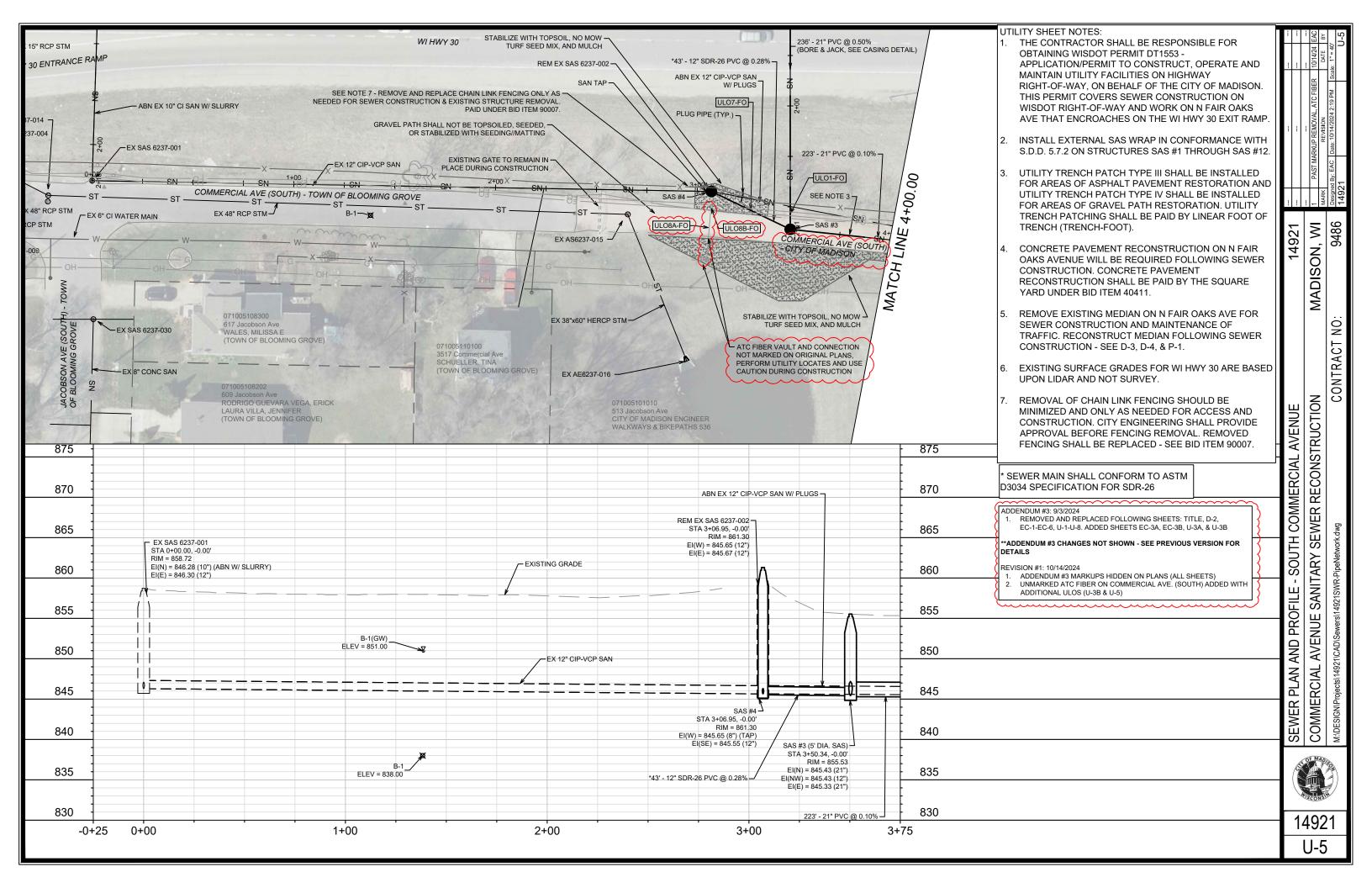


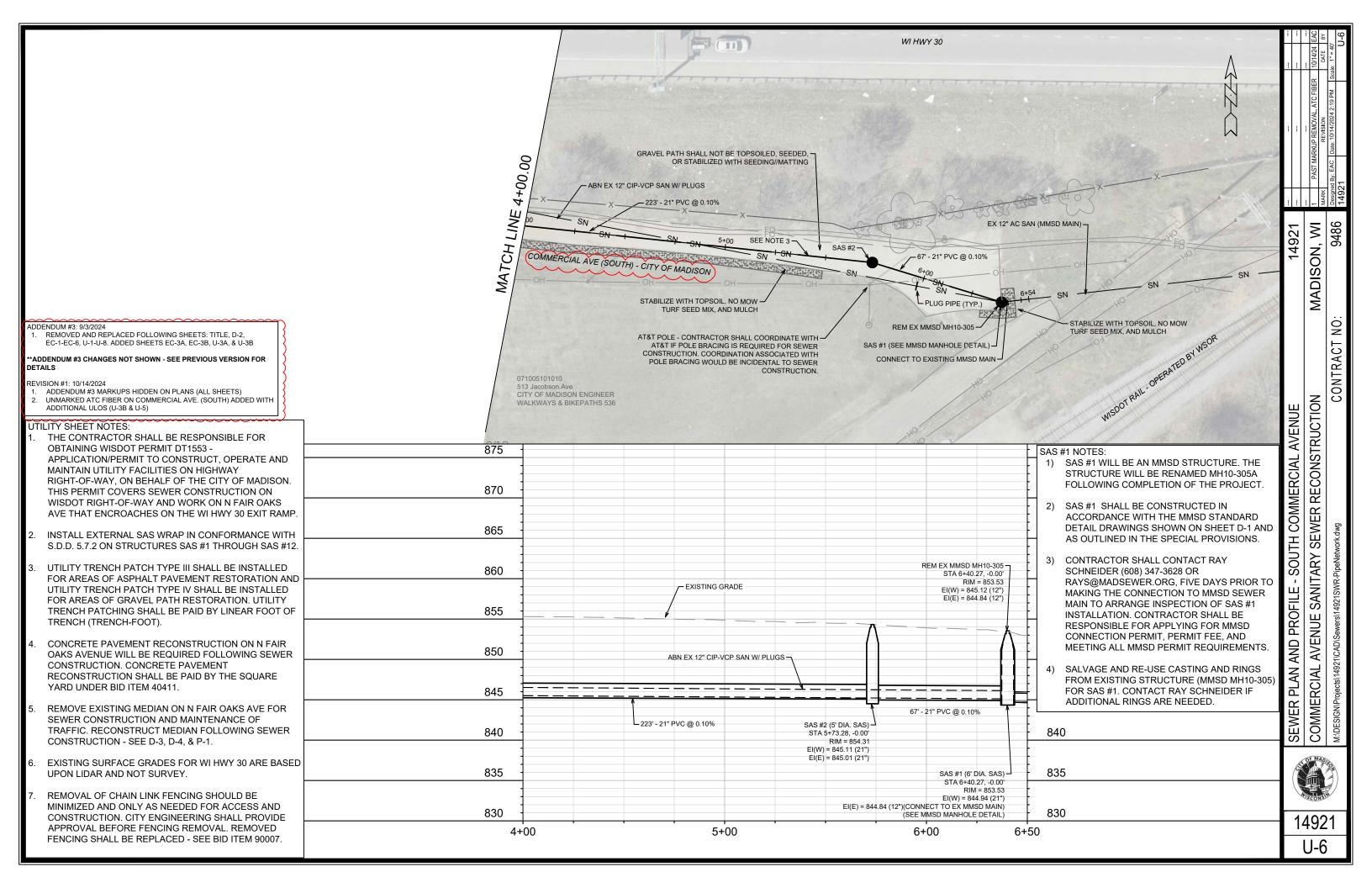












SANITARY SEWER SCHEDULE

ADDENDUM 3 - 9/3/2024 EAC

(ADDENDUM 3 CHANGES NOT SHOWN - SEE PREVIOUS VERSION)

REVISION 1 - 10/14/2024 EAC

PROPOSED SANITARY PIPES

COMMERCIAL AVENUE SANITARY SEWER
RECONSTRUCTION
PROJECT NO. 14921

SANITARY SEWER SCHEDULE

U-7

CITY OF MADISON

PROPOSED SANITARY STRUCTURES

<u> </u>	LD CAMITAIN	<u> </u>	TYLO				<u> </u>	OLD OMINIT	<u> </u>					
SAS	STATION	LOCATION	TOP OF	E.I.	DEPTH	NOTES	FROM	то	DWNSTRM	UPSTRM	PLAN	SLOPE	PVC	NOTES
NO.		(OFFSET)	CASTING		(FT)		(DNSTM)	(UPSTM)	E.I.	E.I.	LGTH (FT)	(%)	TYPE	
COMMERCIAL	AVENUE (SOUTH)						COMMERCI	AL AVENUE (SOU	<u>TH)</u>					
SAS #1	6+40.27	CL	853.53	844.84	8.69	[2]; 6' DIA. SAS	SAS #1	SAS #2	844.94	845.01	67	0.10%	21"	PS-46
SAS #2	5+73.28	CL	854.31	845.01	9.30	5' DIA. SAS	SAS #2	SAS #3	845.11	845.33	223	0.10%	21"	PS-46
SAS #3	3+50.34	CL	855.49	845.33	10.16	5' DIA. SAS	SAS #3	SAS #4	845.43	845.55	43	0.28%	12"	SDR-26
SAS #4	3+06.95	CL	861.30	845.55	15.75	[10]								
							WISCONSIN HIGHWAY 30							
							SAS #3	SAS #5	845.43	846.61	236	0.50%	21"	[3]; PS-46
COMMERCIAL	AVENUE (NORTH)						COMMERCI	AL AVENUE (NOR	:TH)					
SAS #5	10+22.16	CL	856.54	846.61	9.93	[4]; [5]; 5' DIA. SAS	SAS #5	SAS #6	846.71	847.14	339	0.13%	21"	PS-46
SAS #6	6+83.04	CL	855.60	847.14	8.46	[5]; [6];	SAS #6	SAS #7	847.24	847.38	49	0.28%	18"	PS-46
SAS #7	6+33.74	CL	855.69	847.38	8.31	[5]	SAS #7	SAS #8	847.48	848.26	283	0.28%	18"	PS-46
SAS #8	3+51.08	CL	856.77	848.26	8.51	[5]; [7];	SAS #8	SAS #9	848.36	848.65	105	0.28%	18"	PS-46
SAS #9	2+46.28	CL	857.48	848.65	8.83		SAS #9	SAS #10	848.75	849.14	141	0.28%	18"	PS-46
SAS #10	1+04.80	CL	860.32	849.14	11.18		SAS #10	SAS #11	849.24	849.53	105	0.28%	18"	PS-46
NORTH FAIR C								R OAKS AVENUE						
SAS #11	1+30.17	CL	861.64	849.53	12.11	[8]	SAS #11	SAS #12	849.63	849.99	130	0.28%	18"	PS-46
SAS #12	0+00.00	CL	859.05	849.99	9.06	[9]								

SPECIFIC NOTES

- [1] INSTALL EXTERNAL SAS WRAP IN CONFORMANCE WITH S.D.D. 5.7.2 ON STRUCTURES SAS #1 THROUGH SAS #12.
- [2] MMSD STRUCTURE CONSTRUCT IN CONFORMANCE WITH MMSD SPECIFICATIONS (SEE DETAIL DRAWING ON SHEET D-1), CONNECT TO EX MMSD 12" AC MAIN (EI(E) = 844.84), COORDINATE WITH MMSD PRIOR TO INSTALLATION
- [3] INSTALL 21" SANITARY SEWER MAIN WITH PIPE CASING BENEATH WI HWY 30 USING BORE AND JACK METHOD, MIN 42" DIA. CASING, SIZE TO BE DETERMINED BY CONTRACTOR
- [4] 8" TAP (EI(E) = 847.70) & 8" TAP (EI(N) = 847.66) FOR UPSTREAM MAIN CONNECTIONS
- [5] INSTALL INTERNAL CHIMNEY SEAL IN CONFORMANCE WITH S.D.D. 5.7.17
- [6] OUTSIDE DROP 1.14 V.F., 8" TAP (EI(N) = 849.16 FOR OUTSIDE DROP UPPER CONNECTION
- [7] 8" TAP (EI(N) = 849.00) FOR UPSTREAM MAIN CONNECTION
- [8] OUTSIDE DROP 3.90 V.F., 8" TAP (EI(N) = 854.18 FOR OUTSIDE DROP UPPER CONNECTION
- [9] 8" TAP (EI(W) = 850.99) FOR UPSTREAM MAIN CONNECTION.
- [10] 12" TAP (EI(W) = 845.65) FOR UPSTREAM MAIN CONNECTION

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SANITARY SEWER SCHEDULE

SANITARY STRUCTURE REMOVALS & ABANDONMENTS STRUC STATION LOCATION TOP OF E.I. DEPTH NOTES ID NO. (OFFSET) CASTING COMMERCIAL AVENUE (SOUTH) REM. CIRCULAR 5' DIA. 6+40.27 CL MMSD MH10-305 853.53 844.84 8.69 CL REM. CIRCULAR 5' DIA. SAS6237-002 3+06.95 861.30 845.65 15.65 **COMMERCIAL AVENUE (NORTH)** SAS6236-013 10+22.16 CL 856.54 847.66 8.88 REM. CIRCULAR 5' DIA. SAS6236-012 6+83.82 CL 855.65 846.81 8.84 REM. CIRCULAR 5' DIA. SAS6236-005 3+53.07 RT-32.40 862.76 848.76 14.00 ABN. CIRCULAR 5' DIA. **NORTH FAIR OAKS AVENUE** SAS6236-001 0+00.00 CL 859.02 850.70 8.32 REM. CIRCULAR 4' DIA.

 ADDENDUM 3 - 9/3/2024 EAC 	
(ADDENDUM 3 CHANGES NOT SHOWN - SEE PREVIOUS VERSION)	

REVISION 1 - 10/14/2024 EAC

COMMERCIAL AVENUE SANITARY SEWER RECONSTRUCTION SHEET NO.

PROJECT NO. 14921

SANITARY SEWER SCHEDULE

CITY OF MADISON

VCP

8-∩

SANITARY PIPE REMOVALS & ABANDONMENTS PAID REM LGTH REMOVE REMOVE LGTH REM LGTH ABN LGTH SLURRY PIPE PIPE NOTES FROM TO (FT) (Y/N) (FT) PAID (FT) (FT) CY SIZE TYPE **COMMERCIAL AVENUE (SOUTH)** CIP-VCP [1]; APRX 2 PLUGS MMSD MH10-305 SAS6237-002 12" 331 331 **WISCONSIN HIGHWAY 30** SAS6237-001 SAS6236-012 218 218 4.40 10" CI [2] **COMMERCIAL AVENUE (NORTH)** SAS6236-013 SAS6236-012 339 339 10" CIP-VCP SAS6236-012 SAS6236-005 330 330 VCP [3]; APRX 2 PLUGS SAS6236-005 SAS6236-001 321 321 4.15 VCP [2] SAS6236-005 33 33 0.43 VCP SAS #8 [2]

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SANITARY ULO SCHEDULE

SAS #11

ID NO. STATION LOCATION TYPE (OFFSET)

COMMERCIAL AVENUE (SOUTH)

NORTH FAIR OAKS AVENUE

SAS6236-001

1.25" FIBER OPTIC ULO1-FO 3+46.99 LT-6.98 3+28.65 CL ULO7-FO 1.25" FIBER OPTIC **d** ULO8A-FO 3+13.80 RT-16.66 **FIBER OPTIC ⊕** ULO8B-FO 3+10.27 RT-7.38 FIBER OPTIC

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COMMERCIAL AVENUE (NORTH)

ULO3-FO 0+20.85 CL 1.25" FIBER OPTIC ULO4-G 0+06.35 CL 6" STEEL GAS

NORTH FAIR OAKS AVENUE

 ULO4-G
 1+03.55
 CL
 0.5" STEEL GAS

 ULO5-W
 0+86.90
 CL
 WATER SERVICE

 ULO6-G
 0+35.30
 CL
 0.5" STEEL GAS

SPECIFIC NOTES

- [1] ABANDON PIPE WITH PLUGS, 12" PLUG PAID UNDER BID ITEM 20336 PIPE PLUG
- [2] ABANDON PIPE WITH SLURRY PIPE PLUG NOT PAID, INCIDENTAL TO SLURRY ABANDONMENT
- [3] ABANDON PIPE WITH PLUGS, 8" PLUG NOT PAID, INCIDENTAL TO CONNECTING STRUCTURE REMOVAL/ABANDONMENT

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