FOUR RIVERS SANITATION AUTHORITY

SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224
2022

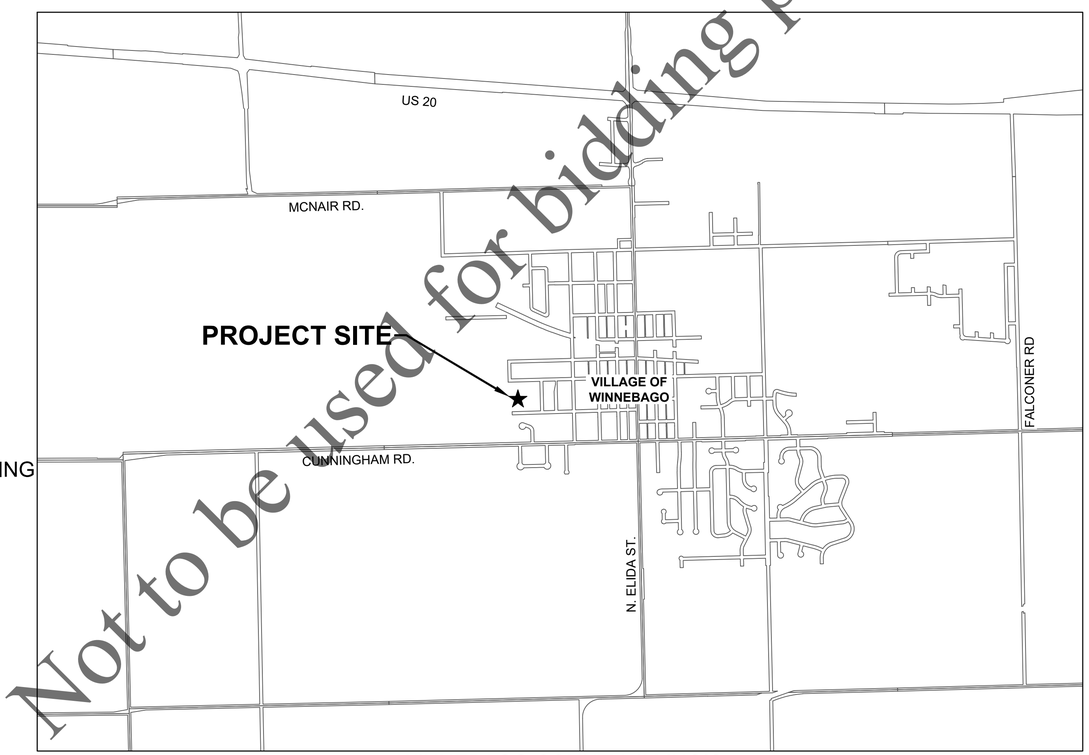
Not to be used for bidding purposes

BOARD OF TRUSTEES

RICHARD POLLACK	PRESIDENT
BEN BERNSTEN	VICE-PRESIDENT
GINGER HAAS	CLERK/TREASURER
DONALD MASSIER	TRUSTEE
ELMER JONES	TRUSTEE

OFFICIALS

TIMOTHY S. HANSON	EXECUTIVE DIRECTOR
CHRISTOPHER T. BAER, PE	DIRECTOR OF ENGINEERING



WINNEBAGO COUNTY, ILLINOIS

INDEX OF SHEETS

1 COVER
2 LEGEND, GENERAL NOTES, & SUM OF QTYS
3 ALIGNMENT, TIES, & BENCHMARKS
4 OVERALL SITE PLAN & SWPPP
5 TEMPORARY EROSION CONTROL DETAILS
6 TYPICAL SECTIONS
7 PLAN & PROFILE STA. 0+00.00 TO STA. 4+00.00
8 PLAN & PROFILE STA. 4+00.00 TO STA. 9+00.00
9 PLAN & PROFILE STA. 9+00.00 TO STA. 13+18.14
10 SIDEWALK & CURB AND GUTTER LAYOUT
11 CROSS SECTIONS W. Winnebago and FRSA Drive - 1
12 CROSS SECTIONS W. Winnebago and FRSA Drive - 2
13 CROSS SECTIONS W. Winnebago and FRSA Drive - 3
14 CROSS SECTIONS W. Winnebago and FRSA Drive - 4
15 CROSS SECTIONS W. Winnebago and FRSA Drive - 5
16 IDOT HIGHWAY STANDARDS
17 FRSA STANDARD DETAILS rev. 2022-06-01

Four Rivers Sanitation Authority

MATTHEW L. CAMPBELL
062-065272
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

DATE: 07/28/2022
EXPIRES 11/30/21

plot date: 7/28/2022
file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Standard Sheets.dwg
sheet set: SOPER ST PS IMPROVEMENTS

LEGEND

EXISTING	PROPOSED	
		RIGHT OF WAY LINE
		PROPERTY LINE
		BUILDING
		WATER EDGE
		EASEMENT - PERMANENT SANITARY
		EASEMENT - TEMPORARY CONSTRUCTION
		VEGETATION / TREE LINE
		TREE DRIPLINE
		CONTOUR - MAJOR
		CONTOUR - MINOR
X X	X X	FENCE
		FENCE - TEMPORARY CONSTRUCTION
SF	SF	FENCE - SILT (PERIMETER EROSION BARRIER)
		ROADWAY CENTERLINE
		EDGE OF PAVEMENT
		CURB & GUTTER
		GUARD RAIL
		RAILROAD TRACKS
OC		CABLE - OVERHEAD
UC		CABLE - UNDERGROUND
OE		ELECTRIC - OVERHEAD
UE		ELECTRIC - UNDERGROUND
FO		FIBER OPTIC
G		GAS LINE
OT		TELEPHONE - OVERHEAD
UT		TELEPHONE - UNDERGROUND
TV E T GM EM E HH		PEDESTALS (CATV, ELEC, TELE), GAS METER, ELEC METER
	E HH	ELECTRIC MANHOLE, HANDHOLE
SB 1		SOIL BORING
BM# 1 CP# 1		BENCHMARK & CONTROL POINT
		MAILBOX
		UTILITY POLE W/ GUY WIRE & MAST ARM LIGHT POLE
		TREE (DECIDUOUS & CONIFEROUS)
		BUSH & SHRUB
		GROUND / LANDSCAPE LIGHT
XXX.XX	XXX.XX	SPOT ELEVATION

LEGEND

EXISTING	PROPOSED	
		SANITARY MANHOLE & SANITARY SEWER
CO	CO	SANITARY SEWER SERVICE & CLEANOUT
FM	FM	SANITARY FORCEMAIN
TPP	TPP	TREATMENT PLANT PROCESS PIPING
		STORM SEWER
		STORM MANHOLE, CATCH BASIN, CURB & GUTTER INLET, CURB INLET SPECIAL
		DRAINAGE CULVERT, WITH END SECTION
W	W	WATER MAIN
WS	WS	WATER SERVICE & WATER SERVICE VALVE
		WATER MAIN VALVE
		WATER MAIN VALVE WITH BOX
		WATER MAIN VALVE WITH VAULT
		WATER MAIN REDUCER
		FIRE HYDRANT
		YARD HYDRANT
W		WATER WELL
SH SV	SH SV	SPRINKLER HEAD & SPRINKLER VALVE
HMA CONC. AGG. TURF		EXISTING SURFACE TYPE (HOT-MIX ASPHALT, AGGREGATE, CONCRETE, TURF)
		DITCH CHECK
		INLET OR PIPE PROTECTION

PROPOSED	PROPOSED
EROSION CONTROL BLANKET	STABILIZED CONSTRUCTION ENTRANCE
HEAVY DUTY EROSION CONTROL BLANKET	RIP RAP
TEMPORARY EROSION CONTROL SEEDING	PAVEMENT REPLACEMENT
SEEDING AREA, CLASS 1	DRIVEWAY REPLACEMENT
SEEDING AREA, CLASS 2, 3, OR 4	AGGREGATE REPLACEMENT

ABBREVIATIONS

ABD =	ABANDON(ED)	LS =	LUMP SUM
CMP =	CORRUGATED METAL PIPE	MH =	MANHOLE
CO =	CLEAN OUT	PVMNT =	PAVEMENT
CTRL=	CONTROL	PRC =	PRECAST REINFORCED CONCRETE
CY =	CUBIC YARD(S)	PR =	PROPOSED
DI =	DUCTILE IRON	RCP =	REINFORCED CONCRETE PIPE
EA =	EACH	REM =	REMOVE(D)
EL =	ELEVATION	REPL =	REPLACE(D)
EROS =	EROSION	R/R =	REMOVE & REPLACE
EX =	EXISTING	SAN =	SANITARY
FES =	FLARED END SECTION	SVC =	SERVICE
FM =	FORCE MAIN	SY =	SQUARE YARD(S)
FRSA =	FOUR RIVERS SANITATION AUTHORITY	TY =	TYPE
FT =	FEET	UNK =	UNKNOWN
INV =	INVERT	VCP =	VITRIFIED CLAY PIPE
LF =	LINEAR FEET	WM =	WATER MAIN
LINCIPP =	LINED WITH CURED IN PLACE PIPE		

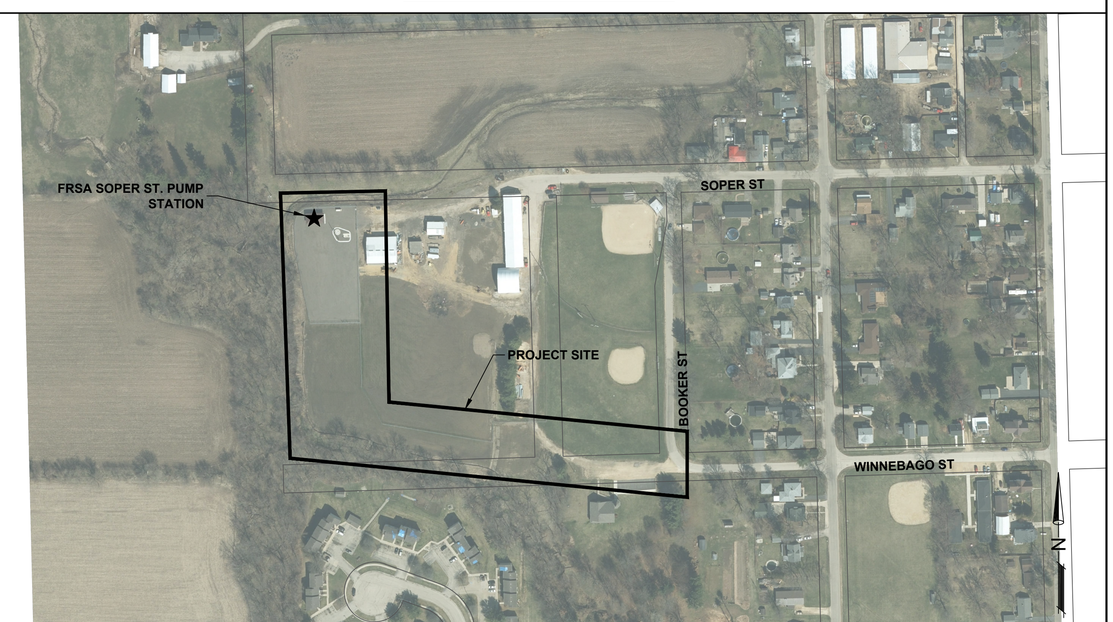
GENERAL NOTES

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE EXECUTION OF WORK TO THE LINES AND GRADES SHOWN ON THE PLANS. CONSTRUCTION SHALL NOT VARY FROM THE PLANS WITHOUT PRIOR APPROVAL FROM THE FOUR RIVERS SANITATION AUTHORITY (FRSA).
2. THE CONTRACTOR SHALL IDENTIFY ALL UTILITY LOCATIONS IN THE FIELD BY CONTACTING J.U.L.I.E. AT 811 OR 1-800-892-0123 AND ALL UTILITIES NOT ON THE J.U.L.I.E. NETWORK 48 HOURS, MINIMUM, PRIOR TO START OF CONSTRUCTION.
3. ALL UTILITY OUTAGES SHALL BE COORDINATED WITH THE PROJECT MANAGER AND THE PLANT OPERATIONS MAINTENANCE DIVISION MANAGER. PROVIDE A MINIMUM OF 72 HOURS ADVANCED NOTICE PRIOR TO ANY SERVICE INTERRUPTION. DURING THE ENTIRE PERIOD OF THE CONTRACT, PROVIDE RESTORATION OF ANY UNSCHEDULED SERVICE INTERRUPTION WITHIN 30 MINUTES DURING NORMAL WORKING HOURS, OR WITHIN 2 HOURS OUTSIDE OF NORMAL WORKING HOURS. THE FRSA RESERVES THE RIGHT TO REQUEST ADDITIONAL ADVANCED NOTICE AND/OR COORDINATION MEETINGS FOR MAJOR OUTAGES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND SHALL IMMEDIATELY NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES WITH THE PROJECT PLANS OR SPECIFICATIONS.
5. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN THE STATE OF ILLINOIS, LATEST EDITION, AND THE REQUIREMENTS OF THE FOUR RIVERS SANITATION AUTHORITY.
6. ALL ROADWAY CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, THE REQUIREMENTS OF THE VILLAGE OF WINNEBAGO AND THE FOUR RIVERS SANITATION AUTHORITY.
7. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE I.E.P.A. NPDES PERMIT AND THE ILLINOIS URBAN MANUAL FOR SOIL EROSION AND SEDIMENT CONTROL.
8. PROTECTION OF WATER SUPPLIES SHALL BE IN ACCORDANCE WITH TITLE 35, C, SECTION 370.350 OF THE ILLINOIS RECOMMENDED STANDARDS FOR SEWAGE WORKS.

SUMMARY OF QUANTITIES

ITEM	DESCRIPTION	QTY	UNIT
1	PERIMETER SILT FENCE	879	LF
2	PAVEMENT REMOVAL	371	SY
3	EARTH EXCAVATION	1708	CY
4	AGGREGATE BASE COURSE, TYPE B	1130	TON
5	AGGREGATE SUBGRADE IMPROVEMENT, 12"	400	CY
6	HOT MIX ASPHALT BINDER COURSE, IL-19.0, N50	803	TON
7	HOT MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	735	TON
8	PORTLAND CEMENT CONCRETE SIDEWALK, 4"	680	SF
9	DETECTABLE WARNING	26	SF
10	COMBINATION CURB AND GUTTER, B6.18 (DEPRESSED)	160	LF
11	PIPE CULVERTS, CLASS D, TYPE1, 15"	38	LF
12	METAL END SECTION, 15"	2	EA
13	MANHOLES TO BE ADJUSTED	3	EA
14	GRADING AND SHAPING	4910	SY
15	SEEDING, CLASS 1 WITH FERTILIZER	4910	SY
16	EROSION CONTROL BLANKET	4910	SY
17	TRAFFIC CONTROL AND PROTECTION, COMPLETE	1	LS
18	CONSTRUCTION LAYOUT	1	LS

PROJECT LOCATION MAP



Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

SOPER ST. PS ACCESS IMPROVEMENTS

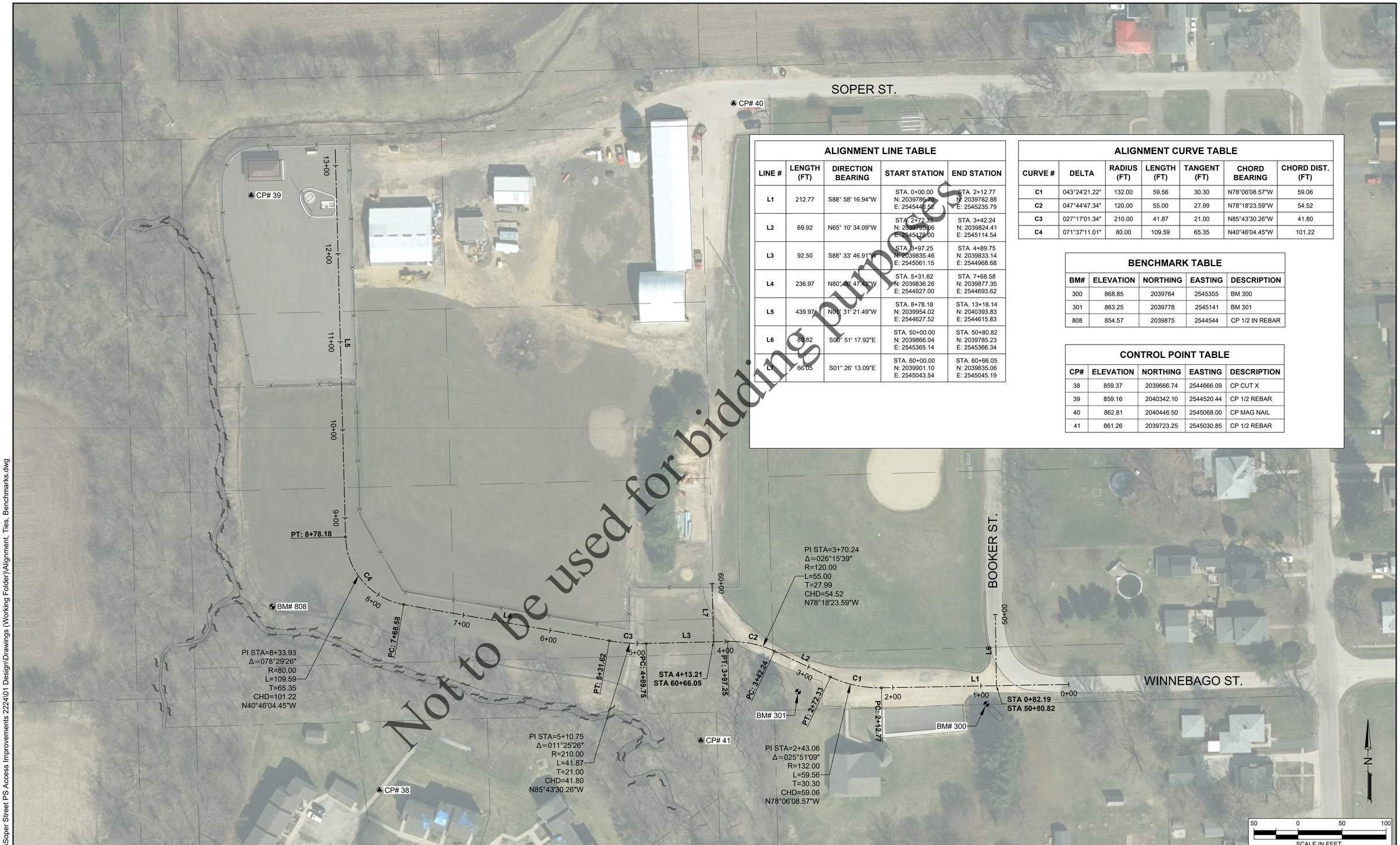
CAPITAL PROJECT #2224

LEGEND, GENERAL NOTES, & SUM OF QTYS

Sheet No. 2 of 17

Date: 7/28/2022

file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Standard Sheets.dwg



Not to be used for bidding purposes

ALIGNMENT LINE TABLE

LINE #	LENGTH (FT)	DIRECTION BEARING	START STATION	END STATION
L1	212.77	S88° 58' 16.94"W	STA. 0+00.00 N: 2039786.70 E: 2545448.52	STA. 2+12.77 N: 2039782.88 E: 2545235.79
L2	69.92	N65° 10' 34.09"W	STA. 2+72.33 N: 2039795.06 E: 2545178.00	STA. 3+42.24 N: 2039824.41 E: 2545114.54
L3	92.50	S88° 33' 46.91"W	STA. 3+97.25 N: 2039835.46 E: 2545061.15	STA. 4+89.75 N: 2039833.14 E: 2544968.68
L4	236.97	N80° 49' 47.42"W	STA. 5+31.62 N: 2039836.26 E: 2544927.00	STA. 7+68.58 N: 2039877.35 E: 2544693.62
L5	439.97	N01° 31' 21.49"W	STA. 8+78.18 N: 2039954.02 E: 2544627.52	STA. 13+18.14 N: 2040393.83 E: 2544615.83
L6	80.82	S00° 51' 17.92"E	STA. 50+00.00 N: 2039866.04 E: 2545365.14	STA. 50+80.82 N: 2039785.23 E: 2545366.34
L7	66.05	S01° 26' 13.09"E	STA. 60+00.00 N: 2039901.10 E: 2545043.54	STA. 60+66.05 N: 2039835.06 E: 2545045.19

ALIGNMENT CURVE TABLE

CURVE #	DELTA	RADIUS (FT)	LENGTH (FT)	TANGENT (FT)	CHORD BEARING	CHORD DIST. (FT)
C1	043°24'21.22"	132.00	59.56	30.30	N78°06'08.57"W	59.06
C2	047°44'47.34"	120.00	55.00	27.99	N78°18'23.59"W	54.52
C3	027°17'01.34"	210.00	41.87	21.00	N85°43'30.26"W	41.80
C4	071°37'11.01"	80.00	109.59	65.35	N40°46'04.45"W	101.22

BENCHMARK TABLE

BM#	ELEVATION	NORTHING	EASTING	DESCRIPTION
300	868.85	2039764	2545355	BM 300
301	863.25	2039778	2545141	BM 301
808	854.57	2039875	2544544	CP 1/2 IN REBAR

CONTROL POINT TABLE

CP#	ELEVATION	NORTHING	EASTING	DESCRIPTION
38	859.37	2039666.74	2544666.09	CP CUT X
39	859.16	2040342.10	2544520.44	CP 1/2 REBAR
40	862.81	2040446.50	2545068.00	CP MAG NAIL
41	861.26	2039723.25	2545030.85	CP 1/2 REBAR

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

SOPER ST. PS ACCESS IMPROVEMENTS

CAPITAL PROJECT #2224

ALIGNMENT, TIES, & BENCHMARKS

Sheet No. 3 of 17

Date: 7/28/2022

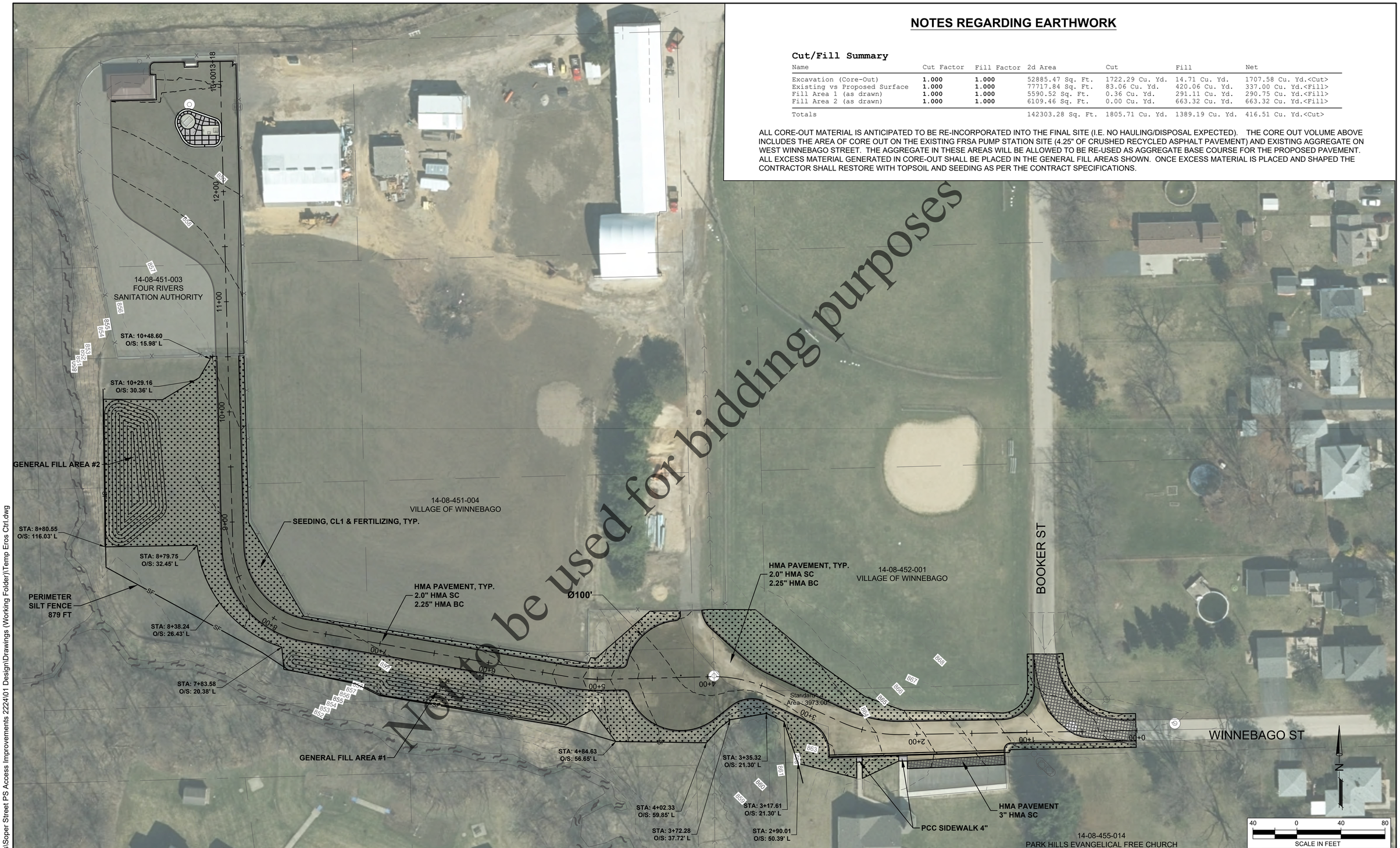
file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Alignment, Ties, Benchmarks.dwg

NOTES REGARDING EARTHWORK

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Excavation (Core-Out)	1.000	1.000	52885.47 Sq. Ft.	1722.29 Cu. Yd.	14.71 Cu. Yd.	1707.58 Cu. Yd.<Cut>
Existing vs Proposed Surface	1.000	1.000	77717.84 Sq. Ft.	83.06 Cu. Yd.	420.06 Cu. Yd.	337.00 Cu. Yd.<Fill>
Fill Area 1 (as drawn)	1.000	1.000	5590.52 Sq. Ft.	0.36 Cu. Yd.	291.11 Cu. Yd.	290.75 Cu. Yd.<Fill>
Fill Area 2 (as drawn)	1.000	1.000	6109.46 Sq. Ft.	0.00 Cu. Yd.	663.32 Cu. Yd.	663.32 Cu. Yd.<Fill>
Totals			142303.28 Sq. Ft.	1805.71 Cu. Yd.	1389.19 Cu. Yd.	416.51 Cu. Yd.<Cut>

ALL CORE-OUT MATERIAL IS ANTICIPATED TO BE RE-INCORPORATED INTO THE FINAL SITE (I.E. NO HAULING/DISPOSAL EXPECTED). THE CORE OUT VOLUME ABOVE INCLUDES THE AREA OF CORE OUT ON THE EXISTING FRSA PUMP STATION SITE (4.25" OF CRUSHED RECYCLED ASPHALT PAVEMENT) AND EXISTING AGGREGATE ON WEST WINNEBAGO STREET. THE AGGREGATE IN THESE AREAS WILL BE ALLOWED TO BE RE-USED AS AGGREGATE BASE COURSE FOR THE PROPOSED PAVEMENT. ALL EXCESS MATERIAL GENERATED IN CORE-OUT SHALL BE PLACED IN THE GENERAL FILL AREAS SHOWN. ONCE EXCESS MATERIAL IS PLACED AND SHAPED THE CONTRACTOR SHALL RESTORE WITH TOPSOIL AND SEEDING AS PER THE CONTRACT SPECIFICATIONS.



file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Temp Eros Ctrl.dwg

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

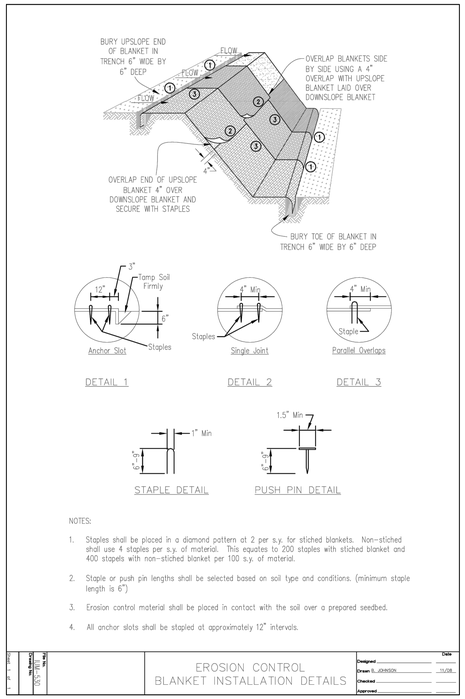
SOPER ST. PS ACCESS IMPROVEMENTS

CAPITAL PROJECT #2224

OVERALL SITE PLAN & SWPPP

Sheet No. 4 of 17

Date: 7/28/2022

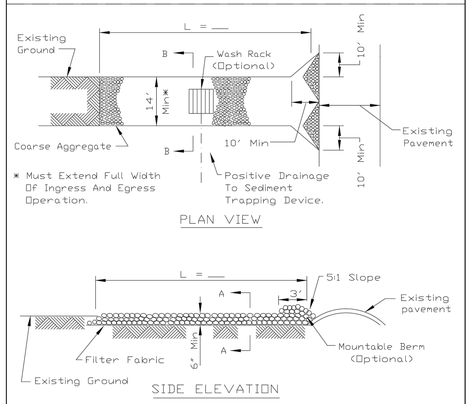


NOTES:

1. Staples shall be placed in a diamond pattern at 2 per s.y. for stiched blankets. Non-stiched shall use 4 staples per s.y. of material. This equates to 200 staples with stiched blanket and 400 staples with non-stiched blanket per 100 s.y. of material.
2. Staple or push pin lengths shall be selected based on soil type and conditions. (minimum staple length is 6")
3. Erosion control material shall be placed in contact with the soil over a prepared seedbed.
4. All anchor slots shall be stapled at approximately 12" intervals.

EROSION CONTROL BLANKET INSTALLATION DETAILS

STABILIZED CONSTRUCTION ENTRANCE PLAN



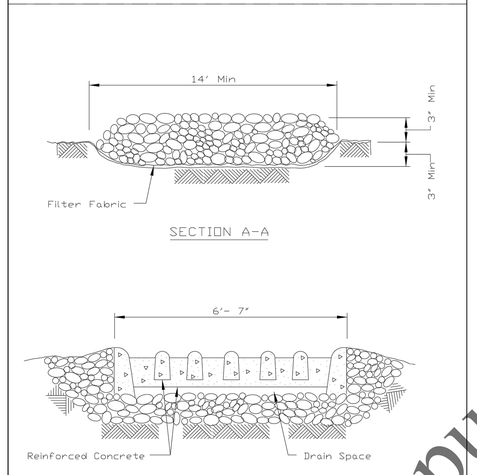
NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

REFERENCE
Project
Designed Date
Checked Date
Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-630
SHEET 1 OF 2
DATE 8-18-94

STABILIZED CONSTRUCTION ENTRANCE PLAN



REFERENCE
Project
Designed Date
Checked Date
Approved Date

NRCS Natural Resources Conservation Service

STANDARD DWG. NO. IL-630
SHEET 2 OF 2
DATE 8-18-94

SWPPP NOTES

GENERAL NOTES

THE ESTIMATED AREA OF DISTURBANCE FOR THIS PROJECT EXCEEDS 1 ACRE. A NOTICE OF INTENT (NOI) WILL BE FILED. A STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.P.) HAS BEEN PREPARED FOR THIS PROJECT. THE CONTRACTOR SHALL INSTALL A SWPPP MAILBOX IN AN ACCESSIBLE LOCATION ONSITE THAT SHALL CONTAIN THE SWPPP PLAN, ANY CHANGES TO THE SWPPP PLAN, INSPECTION REPORTS, AND ALL OTHER RELEVANT DOCUMENTS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE ILLINOIS URBAN MANUAL, CURRENT EDITION, IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, THE FOUR RIVERS SANITATION AUTHORITY (FRSA), AND THE PROJECT SPECIFICATIONS AND DETAILS.

THE EROSION CONTROL DEVICES, MATERIALS AND PROCEDURES SHOWN IN THESE PLANS ARE TO BE CONSIDERED A MINIMUM. ADDITIONAL DEVICES OR MATERIALS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS, AT THE DIRECTION OF THE ENGINEER. ANY DEVICES, MATERIALS, OR PROCEDURES REQUIRED BY THE ENGINEER DUE TO THE CONTRACTOR'S ACTIONS OR NEGLIGENCE WILL BE AT NO ADDITIONAL COST TO THE FRSA.

ALL DISTURBED AREAS SHALL BE SEEDED UNLESS AGRICULTURAL OR OTHERWISE NOTED ON THE PLANS. THE CONTRACTOR SHALL RESTRICT ALL TO WORK TO TEMPORARY EASEMENTS OR WORK AREAS DELINEATED ON PLANS. THE CONTRACTOR SHALL TAKE WHATEVER ACTIONS AND MEASURES ARE DEEMED NECESSARY BY THE FRSA OR AUTHORIZED AGENCY TO ELIMINATE EXCESSIVE SILTATION OR EROSION AND TO STABILIZE THE PROJECT AREA. DISCHARGE OF HAZARDOUS SUBSTANCES INTO STORM WATER SHALL BE SUBJECT TO IEPA REPORTING AND CLEANUP REQUIREMENTS.

CONTROL MEASURES

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE BEFORE CONSTRUCTION IN EACH AREA, AS DETERMINED BY THE ENGINEER, AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. CONSTRUCTION ACTIVITIES SHALL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE PRACTICAL. THE FOLLOWING CONTROLS WILL BE PROVIDED AS A MINIMUM FOR THE DURATION OF THIS PROJECT:

- SEDIMENT CONTROL SHALL BE PROVIDED DOWNSLOPE OF ALL STOCKPILE AREAS.
- STABILIZED CONSTRUCTION ENTRANCES MUST BE INSTALLED AS DETAILED AND WHERE REQUIRED BY THE ROADWAY AUTHORITY OR FRSA.
- INLET PROTECTION MUST BE INSTALLED FOR ALL INLETS THAT COULD BE SUBJECT TO SILTATION, AS DETERMINED BY THE ENGINEER.
- ALL ROADWAYS SHALL BE KEPT CLEAN OF DEBRIS, MUD, SOIL, AND CONSTRUCTION MATERIALS AND SHALL BE INSPECTED AT THE END OF EACH DAY AND CLEANED AS NECESSARY.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 DAYS IF THEY ARE TO REMAIN DISTURBED FOR MORE THAN 14 DAYS.

INSPECTIONS

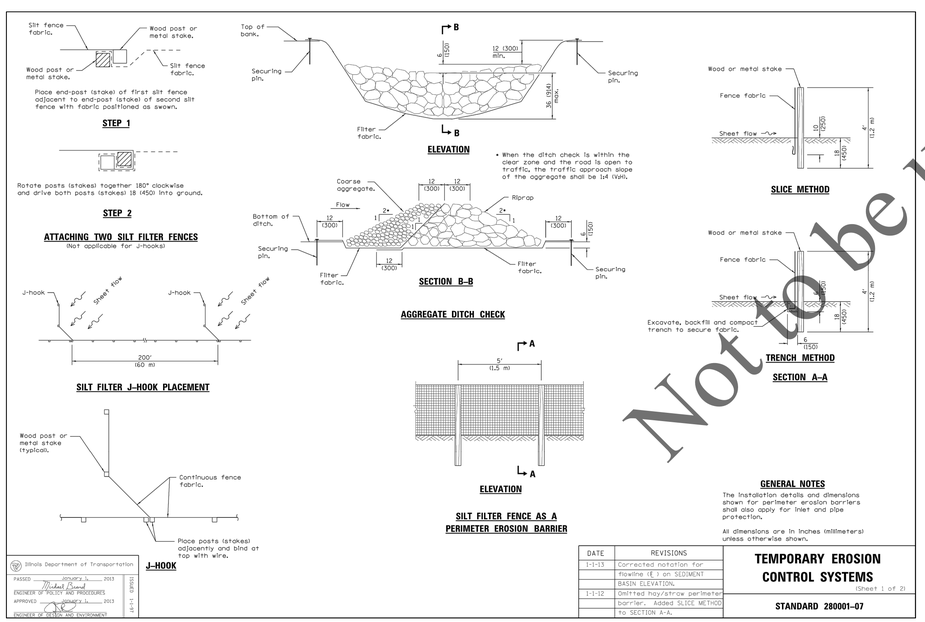
INSPECTIONS MUST BE COMPLETED BY A QUALIFIED PERSON EVERY 7 DAYS AND WITHIN 24 HOURS OF EACH RAIN EVENT WITH OVER 0.5" OF RAIN OR SNOWFALL EQUIVALENT. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REPAIRED AND MODIFIED AS NEEDED TO BE EFFECTIVE AND TO PREVENT EROSION AND POLLUTANTS FROM DISCHARGING FROM SITE. A REPORT SHALL BE COMPLETED WITH EACH INSPECTION, AND SHALL BE KEPT ACCESSIBLE ONSITE WITH THE S.W.P.P.P.

MAINTENANCE

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR OF ALL EROSION AND SEDIMENT CONTROL DEVICES AND PROTECTIVE MEASURES AS REQUIRED TO MAINTAIN THE INTENDED FUNCTION. SEDIMENT COLLECTED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS AS NEEDED. ANY DEBRIS OR SILT DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES, DITCHES, ETC., THAT COULD OBSTRUCT FLOW SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. ALL DRAINAGE STRUCTURES SHALL BE KEPT FREE OF DIRT AND DEBRIS. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES WITHIN 30 DAYS OF FINAL SITE STABILIZATION APPROVAL BY THE FRSA. THE SITE SHALL HAVE A MIN. OF 70% VEGETATIVE COVER TO BE CONSIDERED STABILIZED.

OTHER DISCHARGES

NON STORM WATER DISCHARGES INCLUDING WASHING OF VEHICLES, CONCRETE WASH-OUT, WATER FOR DUST CONTROL, AND TRENCH DEWATERING DISCHARGES SHALL BE DIRECTED AWAY FROM UNPROTECTED, BARE, OR UNSTABILIZED SOIL AND APPROPRIATE MEASURES SHALL BE IMPLEMENTED TO PREVENT EROSION OR RUNOFF FROM THE SITE. DEWATERING DISCHARGE MUST BE INTO SILT CONTAINMENT BAGS WITH PROPERLY ENGINEERED ANIONIC POLYMER AND FABRIC PORE SIZE. UNDER NO CIRCUMSTANCE SHALL DEWATERING DISCHARGE BE ALLOWED TO FLOW DIRECTLY INTO WATERWAYS. A DEWATERING DISCHARGE PLAN SHALL BE SUBMITTED TO THE FRSA FOR APPROVAL.

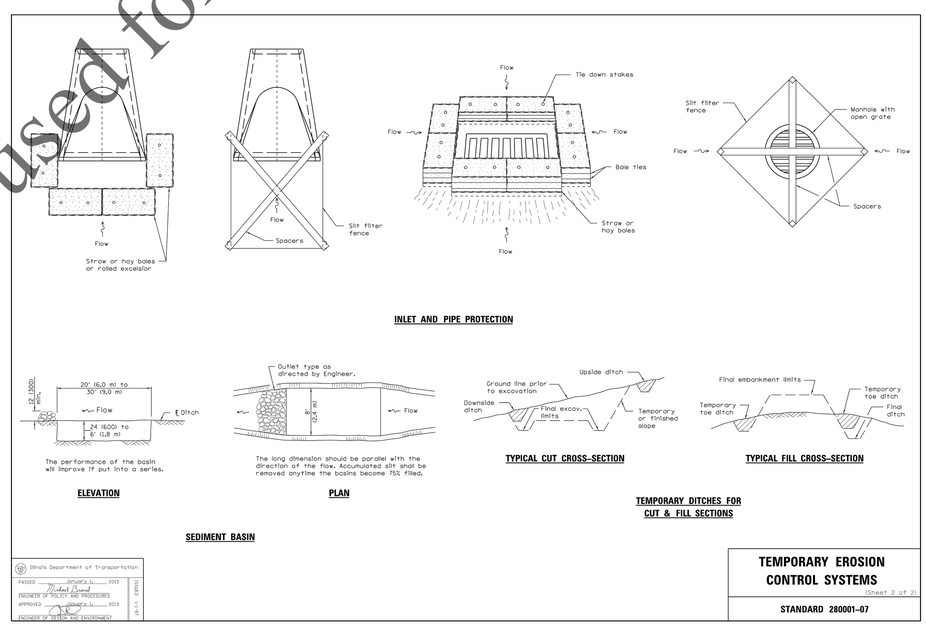


GENERAL NOTES
The installation details and dimensions shown for perimeter erosion barriers shall also apply for inlet and pipe protection.
All dimensions are in inches (millimeters) unless otherwise shown.

Illinois Department of Transportation
PASSED January 1, 2013
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2013
ENGINEER OF DESIGN AND ENVIRONMENT
(SIGNED) 10-01-12

DATE	REVISIONS
1-1-13	Corrected notation for flowline (℄) on SEDIMENT BASIN ELEVATION.
1-1-12	Omitted hay/straw perimeter barrier. Added SLICE METHOD to SECTION A-A.

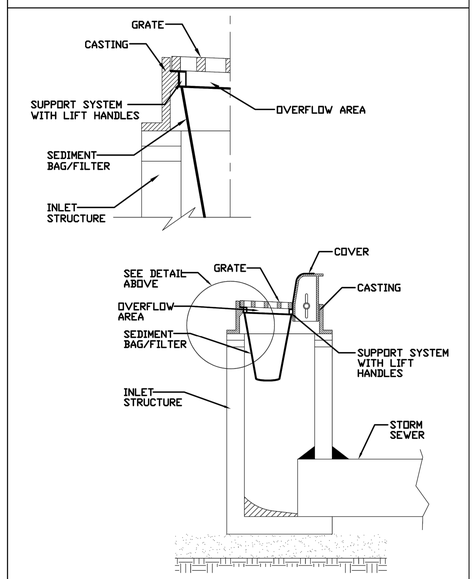
TEMPORARY EROSION CONTROL SYSTEMS (Sheet 1 of 2)
STANDARD 280001-07



Illinois Department of Transportation
PASSED January 1, 2013
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2013
ENGINEER OF DESIGN AND ENVIRONMENT
(SIGNED) 10-01-12

TEMPORARY EROSION CONTROL SYSTEMS (Sheet 2 of 2)
STANDARD 280001-07

INLET PROTECTION - PAVED AREAS DROP-IN PROTECTION



REFERENCE
Project
Designed Date
Checked Date
Approved Date

STANDARD DWG. NO. IUM-561D
SHEET 1 OF 1
DATE 01-11-11

Not to be used for bidding purposes

file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Temp Eros Ctrl.dwg

Four Rivers Sanitation Authority

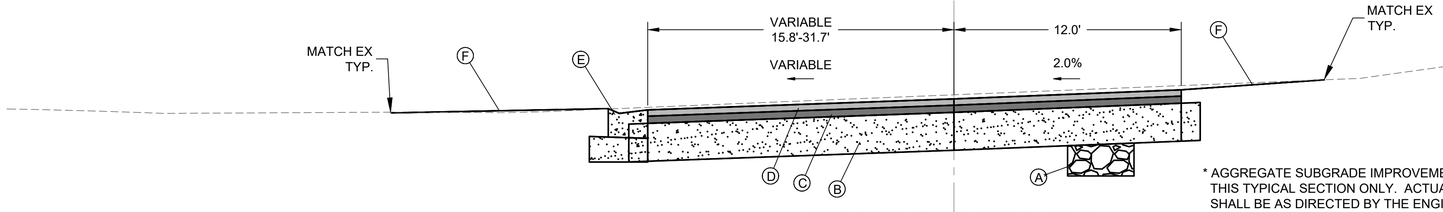
No.	DATE	REVISION	INT.

SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

TEMPORARY EROSION CONTROL DETAILS

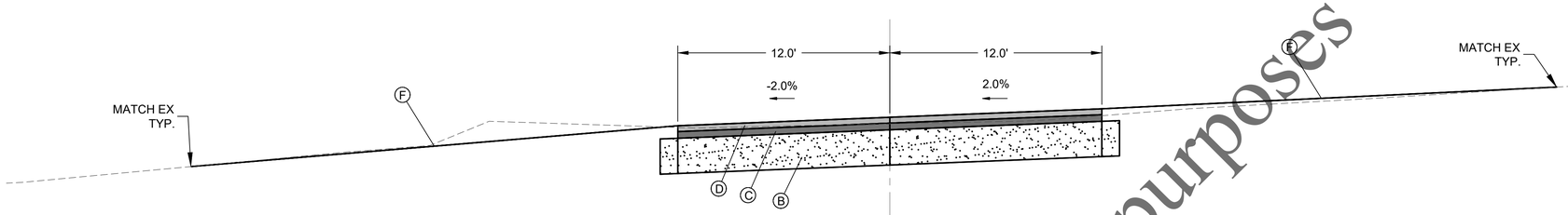
Sheet No. 5 of 17

Date: 7/28/2022

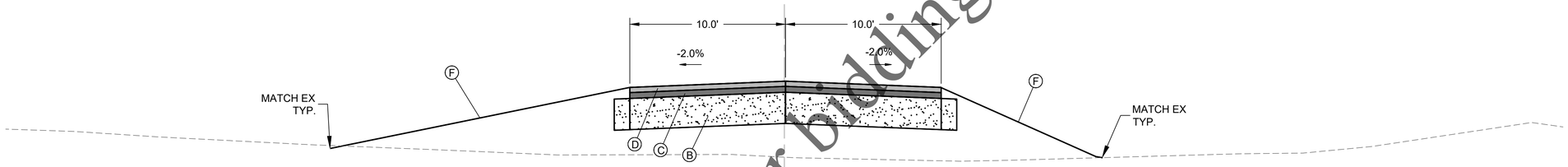


STA 1+20.87 TO STA 2+68.43

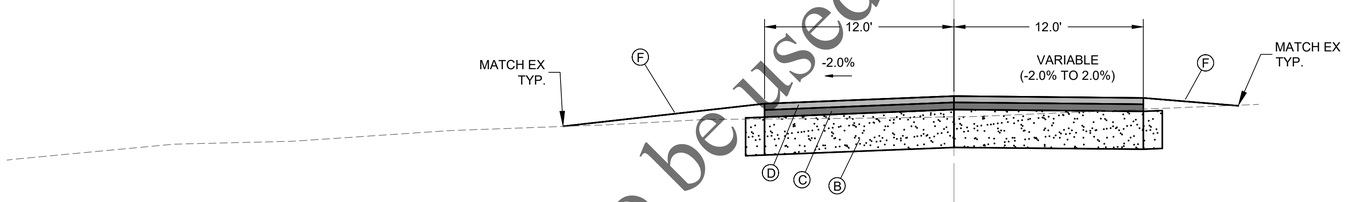
* AGGREGATE SUBGRADE IMPROVEMENT SHOWN THIS TYPICAL SECTION ONLY. ACTUAL LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER.



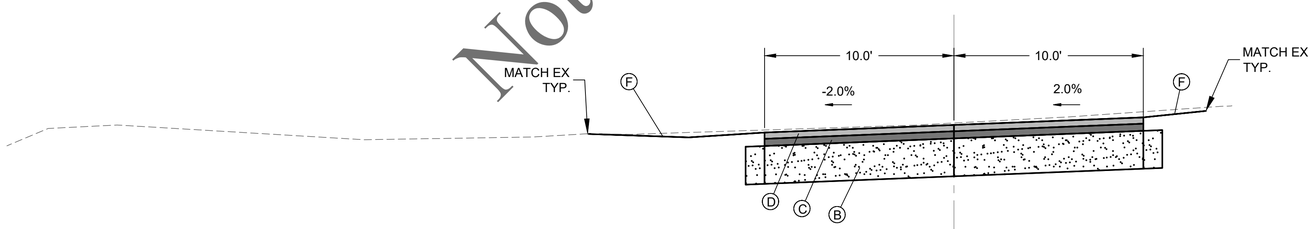
STA 2+95.88 TO STA 3+40.62



STA 4+77.46 TO STA 5+10.50



STA 5+10.50 TO STA 5+75.00



STA 5+75.00 TO STA 10+50.00 (SOUTH ENT. TO SOPER ST. PUMP STATION)

LEGEND

- (A) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL, AND AGGREGATE SUBGRADE IMPROVEMENT, AT LOCATIONS & DEPTHS TO BE DETERMINED BY THE ENGINEER.
- (B) AGGREGATE BASE COURSE, TY. B (12"; 8" CA-02, 4" CA-06) (EXTEND 1.0' BEYOND EDGE OF PAVEMENT)
- (C) HMA BINDER COURSE, IL-19.0, N50, 2 1/4"
- (D) HMA SURFACE COURSE, MIX 'C', N50, 2"
- (E) COMBINATION CONCRETE CURB & GUTTER TY. B6.18 (DEPRESSED)
- (F) TOPSOIL FURNISH & PLACE, 4" (MINIMUM) SEEDING CLASS 1 & FERTILIZING EROSION CONTROL BLANKET (MATCH EX ELEV AT LOCATION SHOWN ON PLANS)

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE USE(S)	SURFACE COURSE	BINDER COURSE
PG:	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0 @ N50	4.0 @ N50
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL 9.5	IL 19.0
FRICTION AGGREGATE	MIX "C"	N/A
MIX UNIT WEIGHT	112 lbs/sy/in	112 lbs/sy/in
THESE MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT		

Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

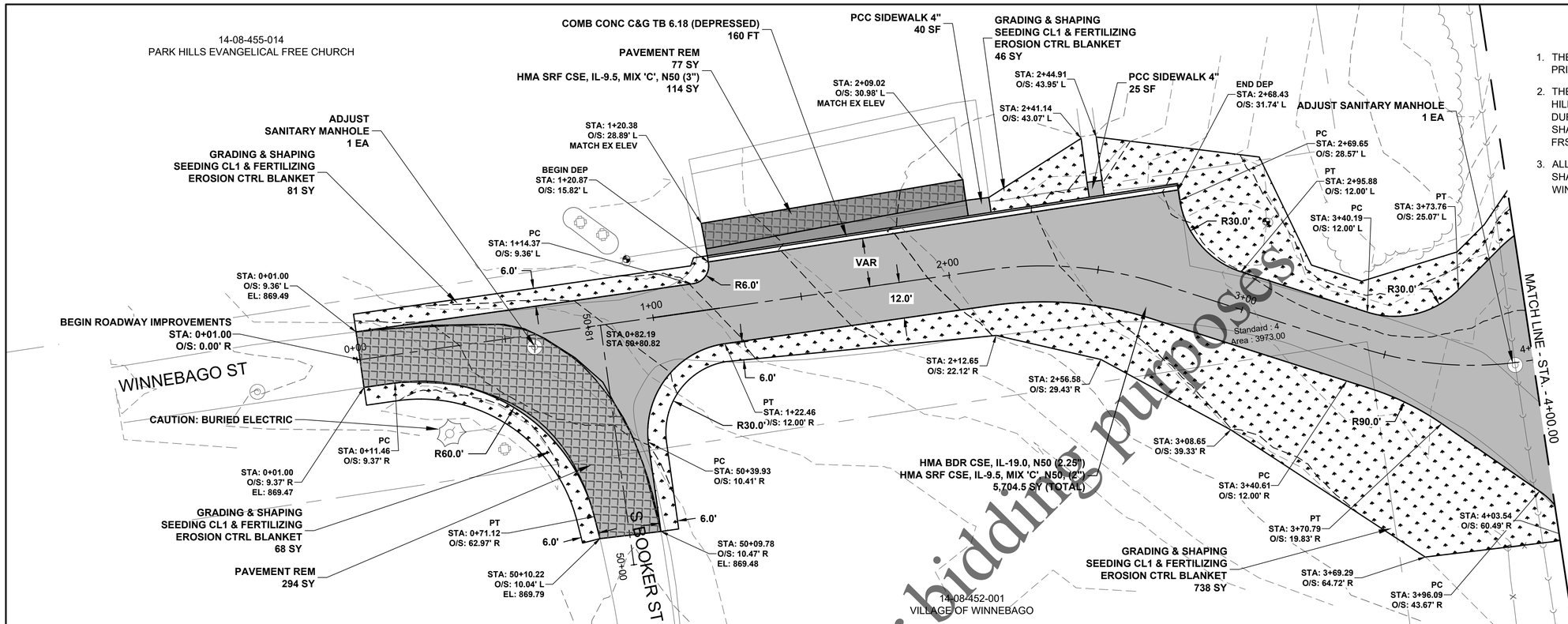
SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

TYPICAL SECTIONS

Sheet No. 6 of 17

Date: 7/28/2022

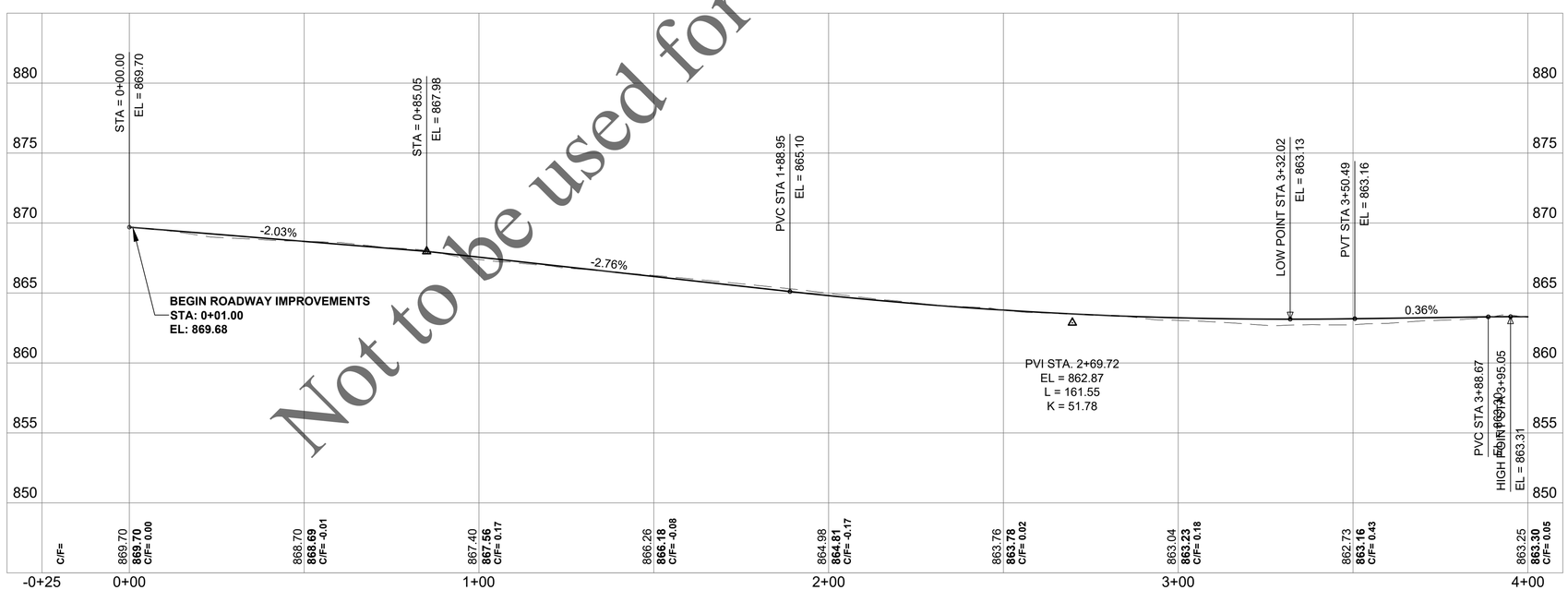
file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Typical sections.dwg



NOTES

1. THE CONTRACTOR SHALL LOCATE ALL BURIED UTILITIES PRIOR TO CORE-OUT OF THE EXISTING ROADWAY.
2. THE CONTRACTOR SHALL ENSURE ACCESS TO THE PARK HILLS EVANGELICAL FREE CHURCH IS MAINTAINED FOR THE DURATION OF CONSTRUCTION. TEMPORARY PROVISIONS SHALL BE COORDINATED WITH THE PROPERTY OWNER AND FRSA AND SHALL BE INCIDENTAL TO CONSTRUCTION.
3. ALL TRAFFIC CONTROL MEASURES (BARRICADES, ETC.) SHALL BE COORDINATED WITH THE FRSA AND VILLAGE OF WINNEBAGO.

SEE SHEET 8



W. WINNEBAGO AND FRSA DRIVE PROFILE

No.	DATE	REVISION	INT.

Four Rivers Sanitation Authority

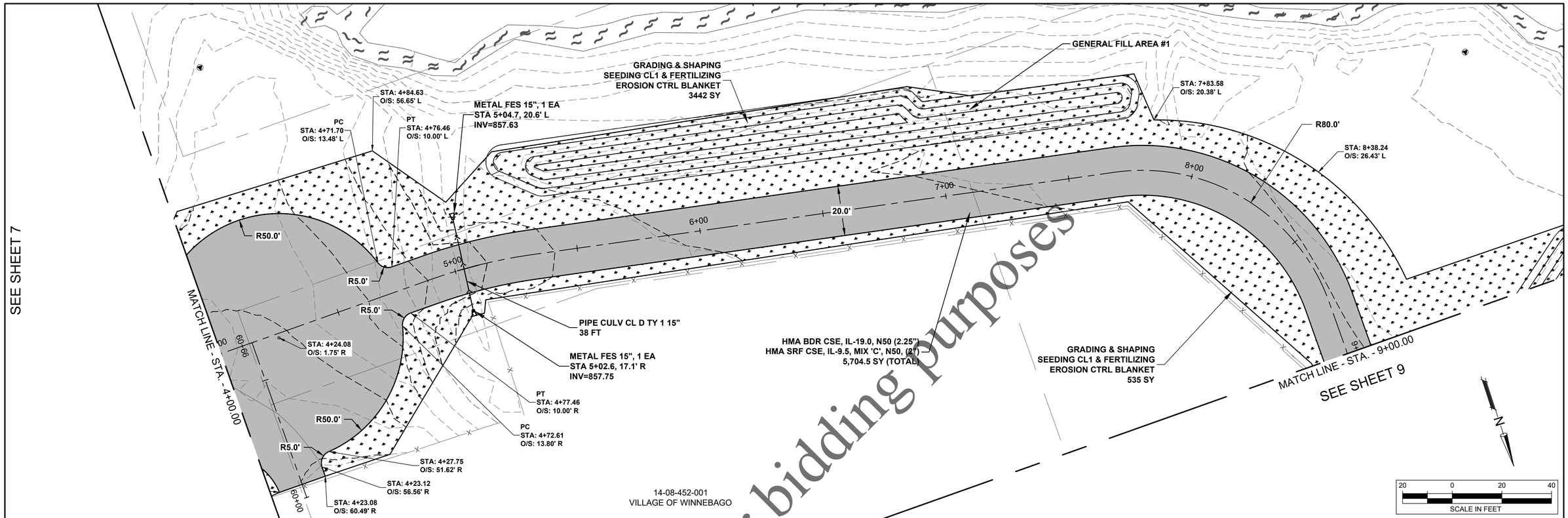
SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

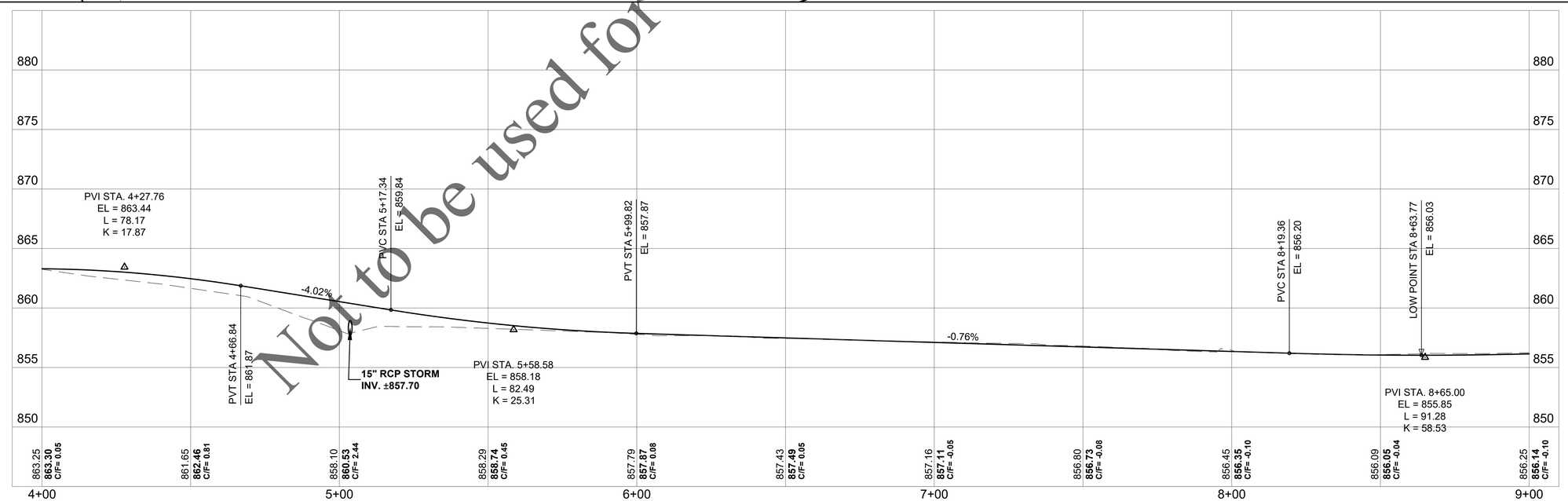
PLAN & PROFILE STA. 0+00.00 TO STA. 4+00.00

Sheet No. 7 of 17

Date: 7/28/2022

file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Design - May 2022.dwg





W. WINNEBAGO AND FRSA DRIVE PROFILE

Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

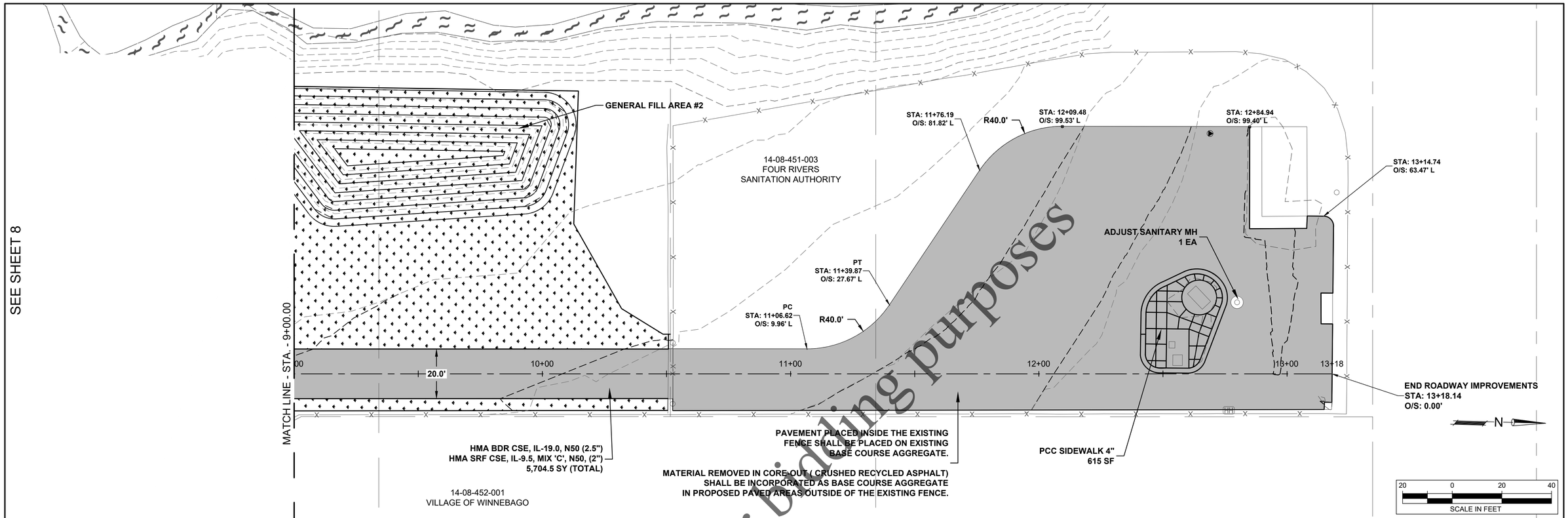
SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

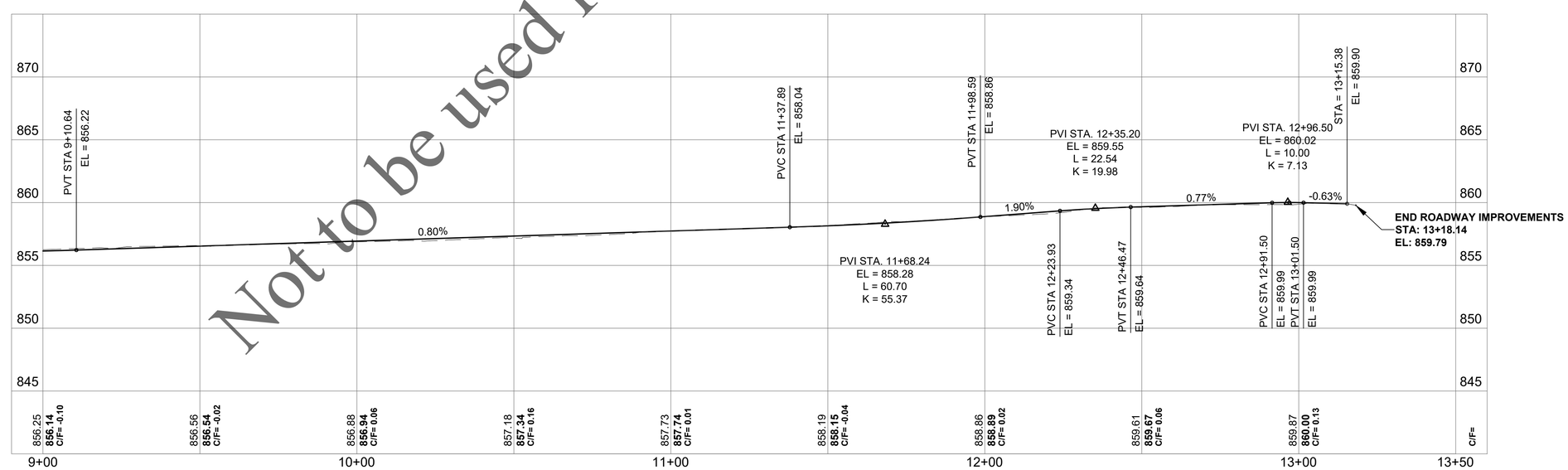
PLAN & PROFILE STA. 4+00.00 TO STA. 9+00.00

Sheet No.
8 of 17

Date:
7/28/2022

file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Design - May 2022.dwg





W. WINNEBAGO AND FRSA DRIVE PROFILE

Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

SOPER ST. PS ACCESS IMPROVEMENTS

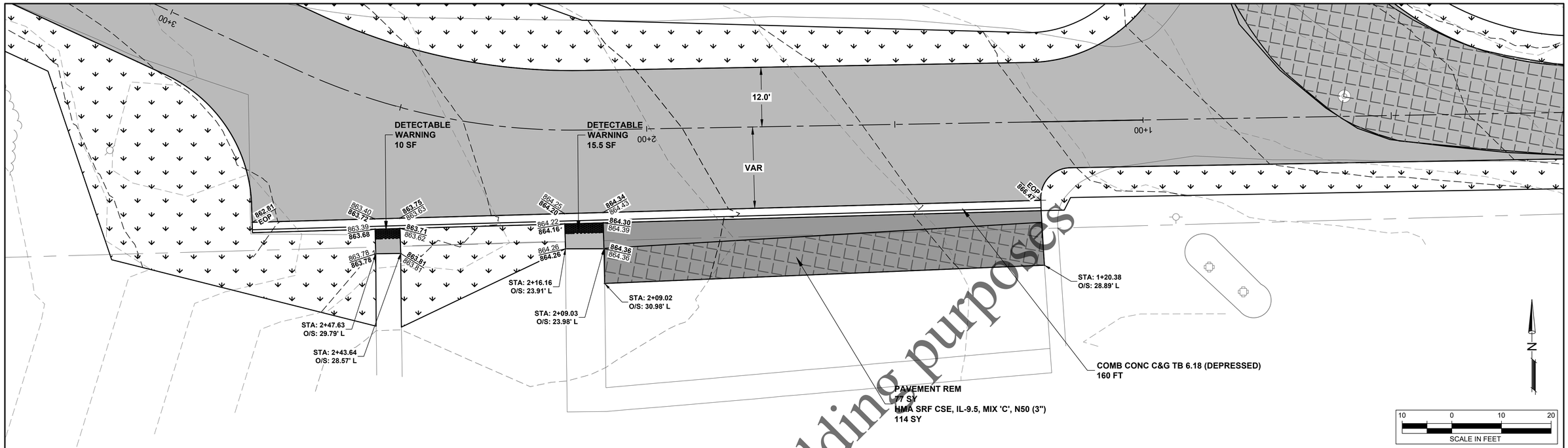
CAPITAL PROJECT #2224

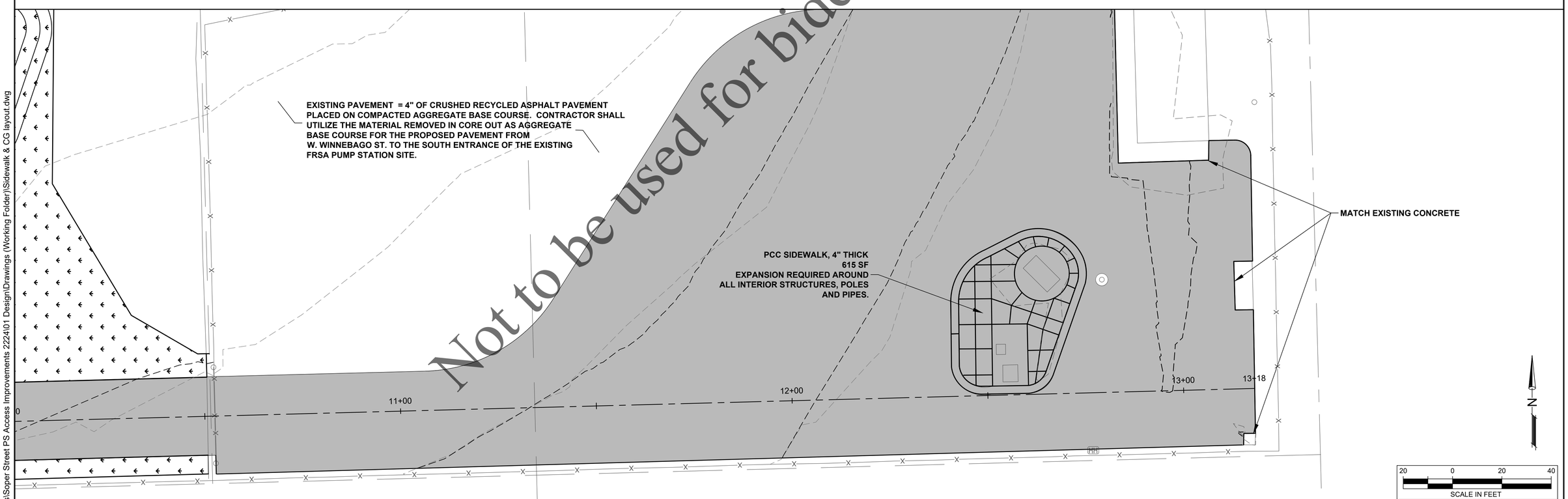
PLAN & PROFILE STA. 9+00.00 TO STA. 13+18.14

Sheet No.
9 of 17

Date:
7/28/2022

file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Design - May 2022.dwg





Not to be used for bidding purposes

file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Sidewalk & CG layout.dwg

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

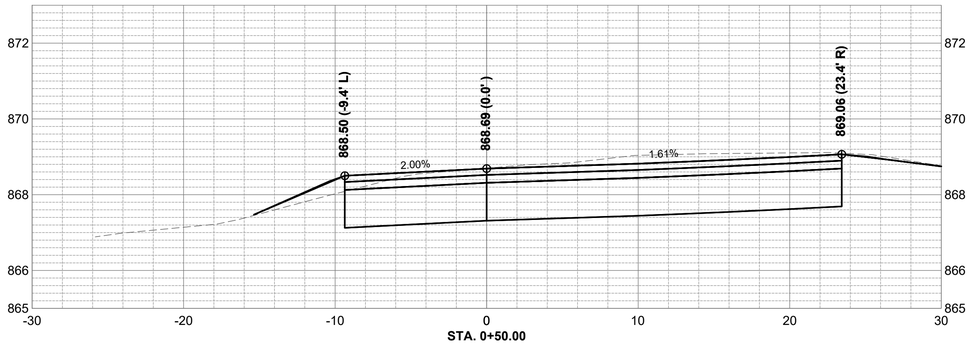
SOPER ST. PS ACCESS IMPROVEMENTS

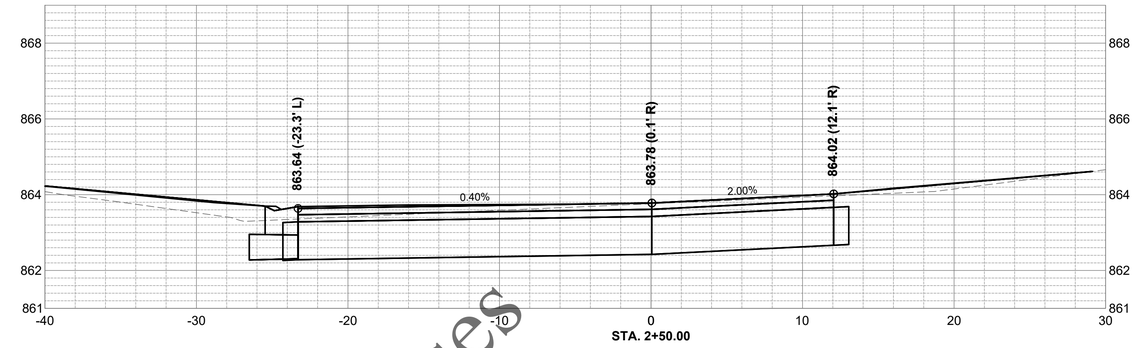
CAPITAL PROJECT #2224

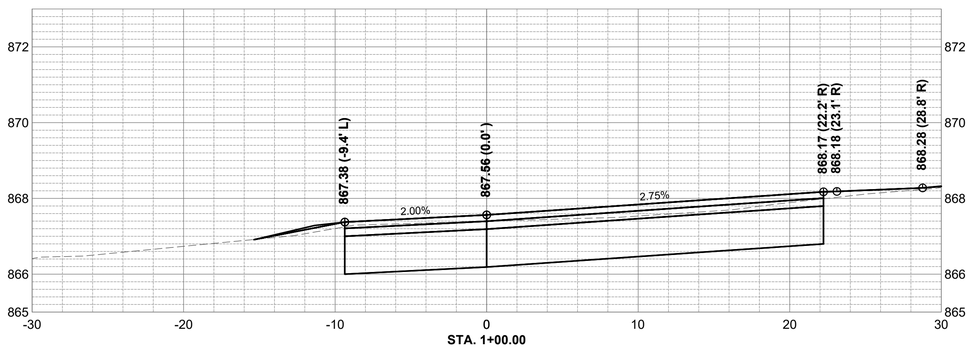
SIDEWALK & CURB AND GUTTER LAYOUT

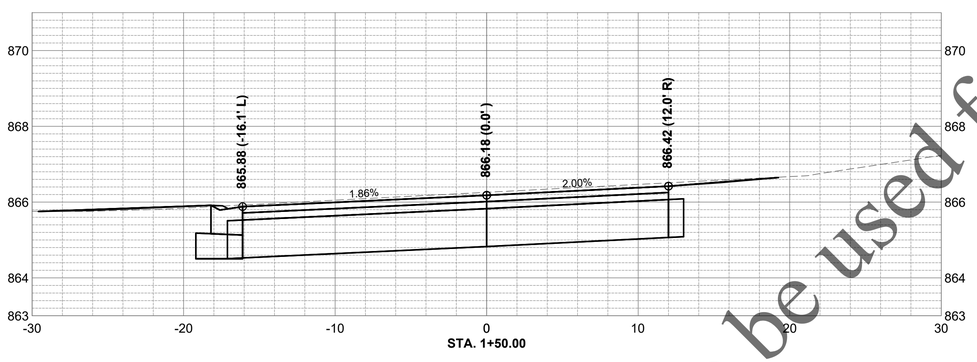
Sheet No. 10 of 17

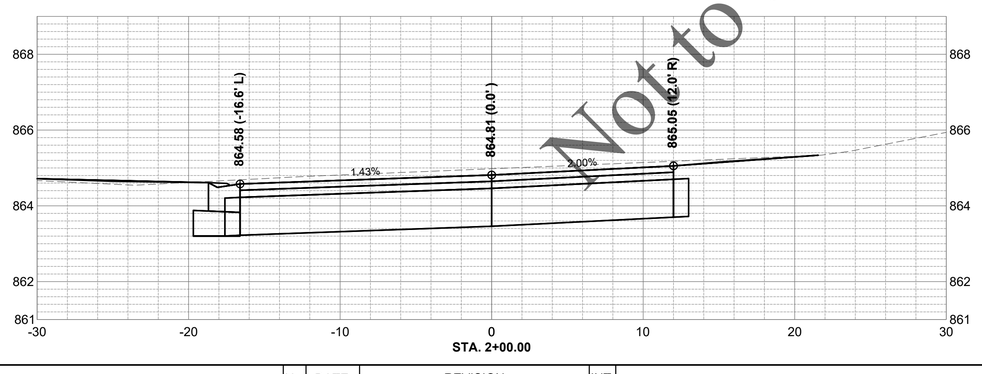
Date: 7/28/2022











Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

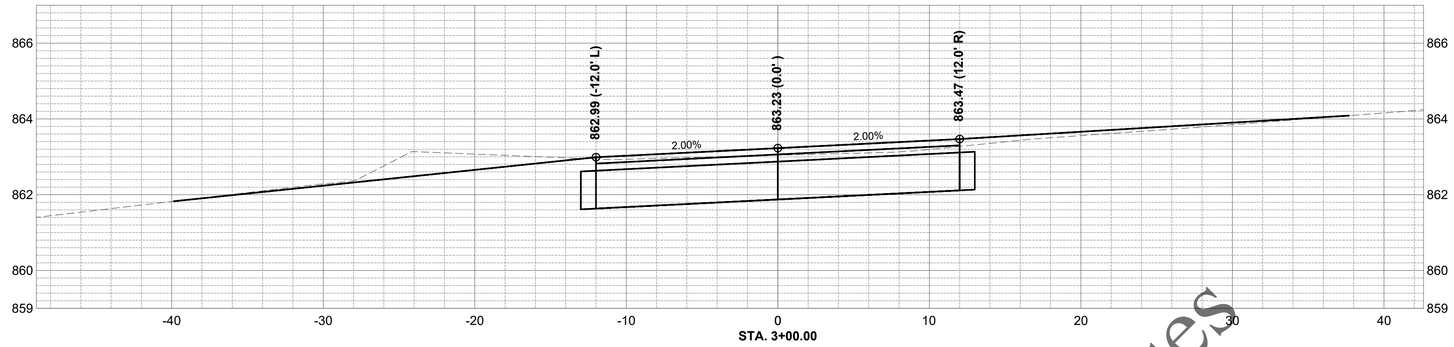
SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

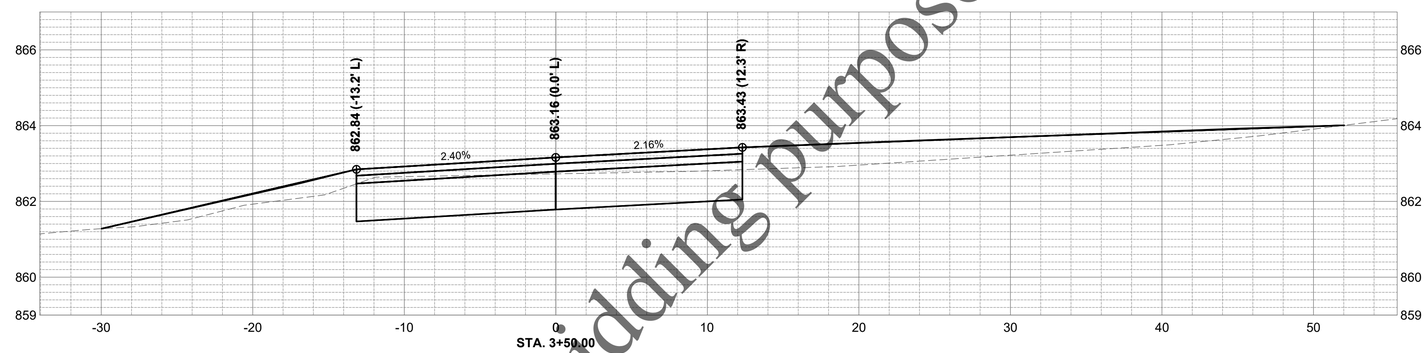
CROSS SECTIONS W. WINNEBAGO AND FRSA DRIVE - 1

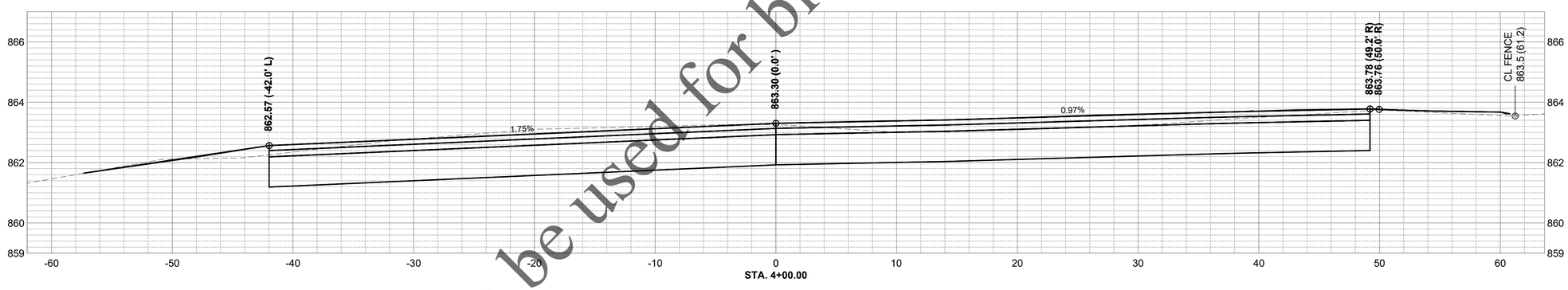
Sheet No. 11 of 17

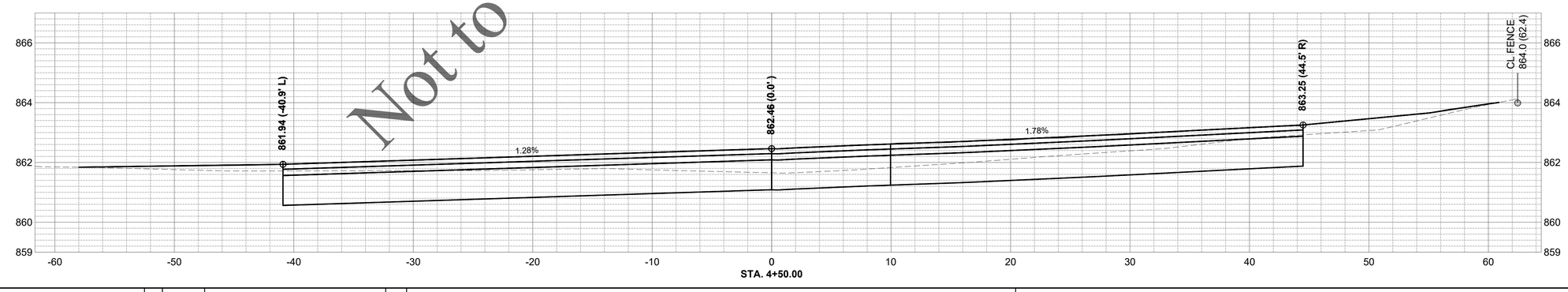
Date: 7/28/2022

file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\sections for plan set.dwg









Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

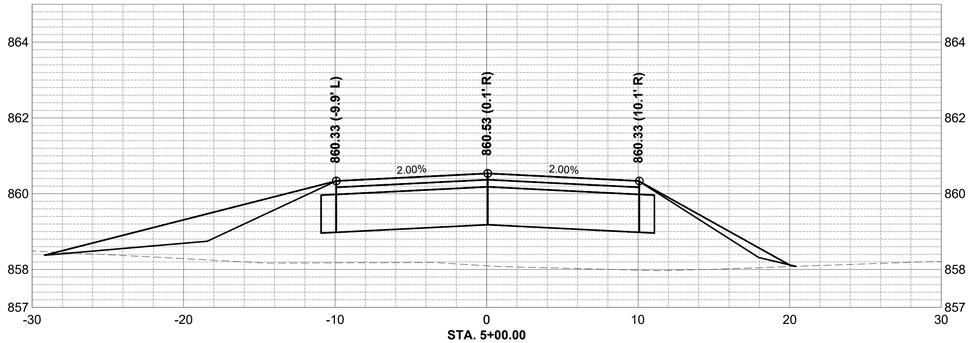
SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

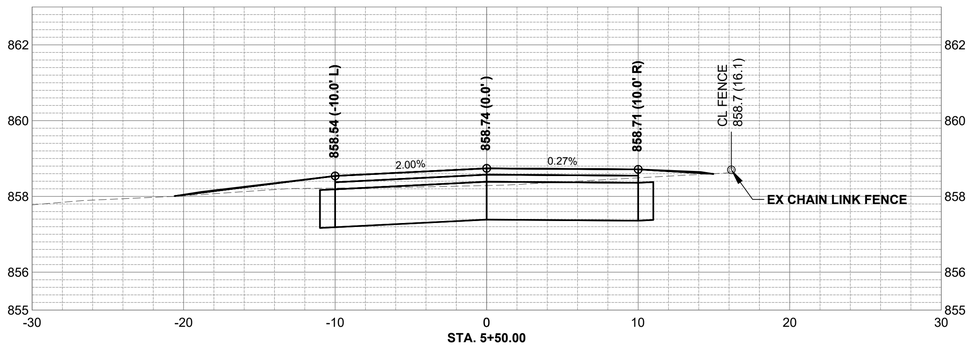
CROSS SECTIONS W. WINNEBAGO AND FRSA DRIVE - 2

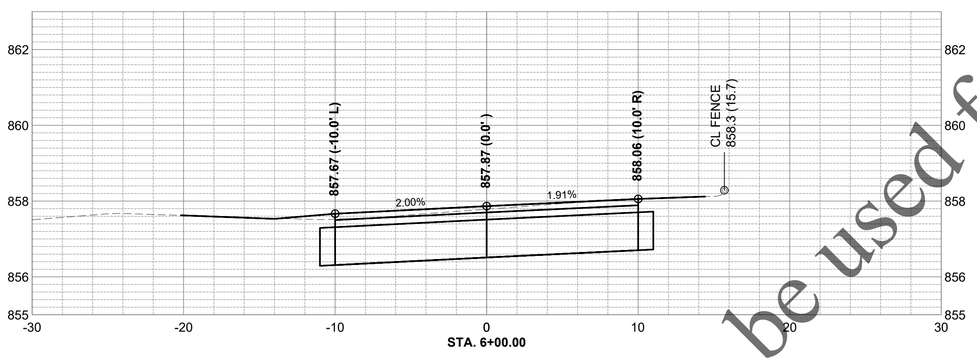
Sheet No. 12 of 17

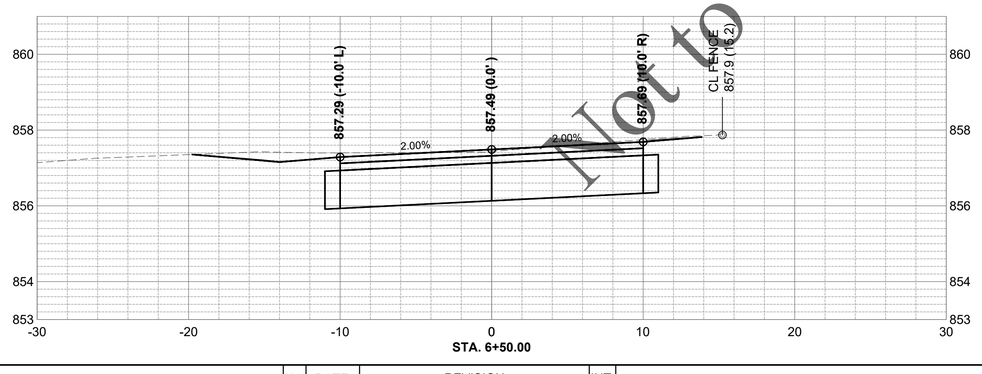
Date: 7/28/2022

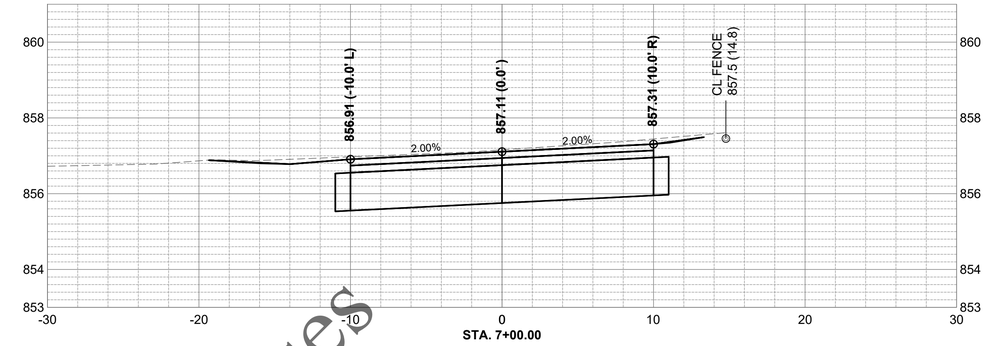
file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\sections for plan set.dwg

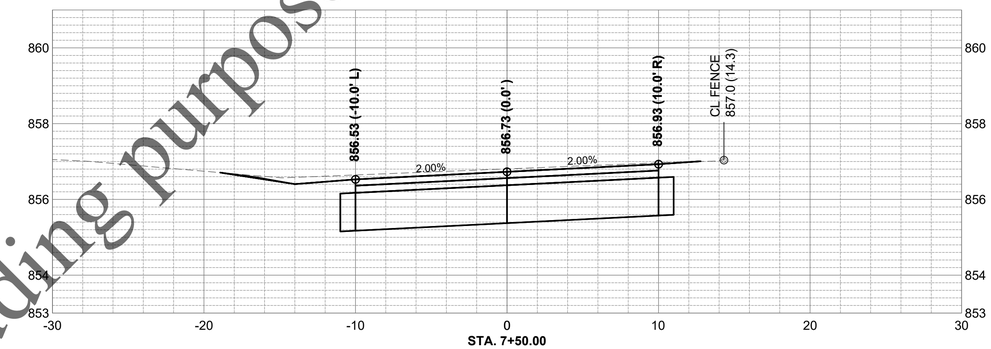


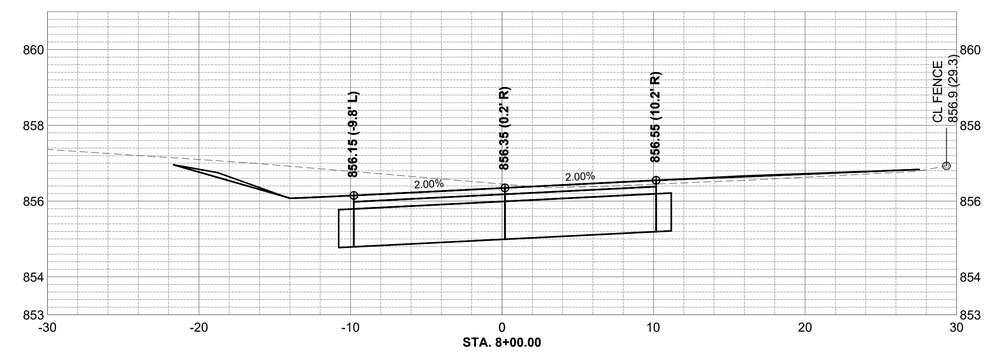


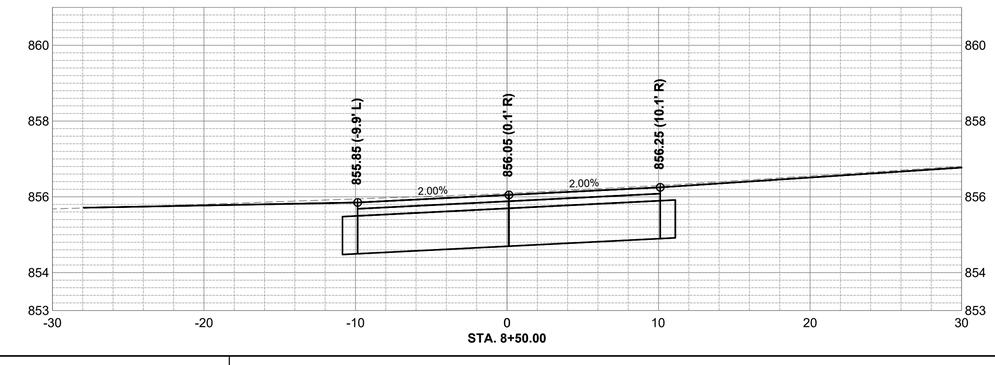












Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

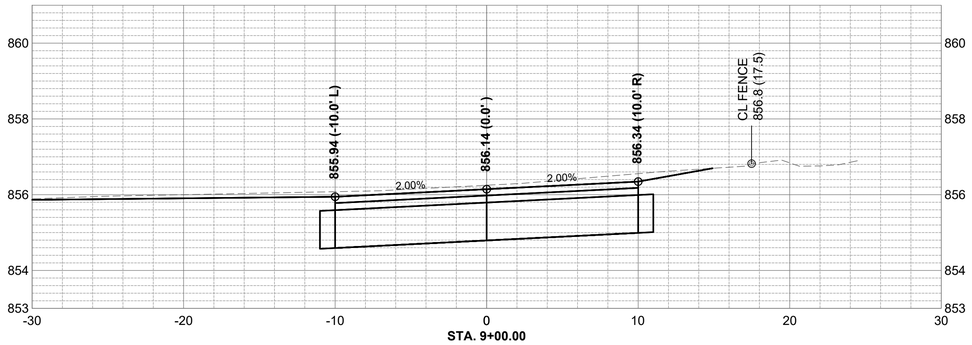
SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

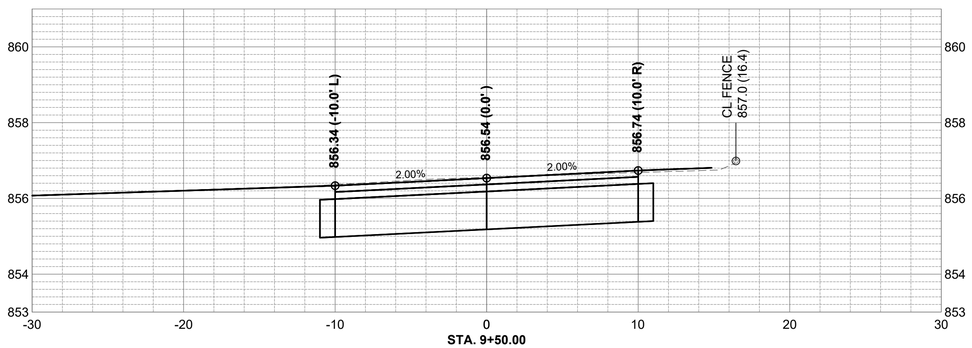
CROSS SECTIONS W. WINNEBAGO AND FRSA DRIVE - 3

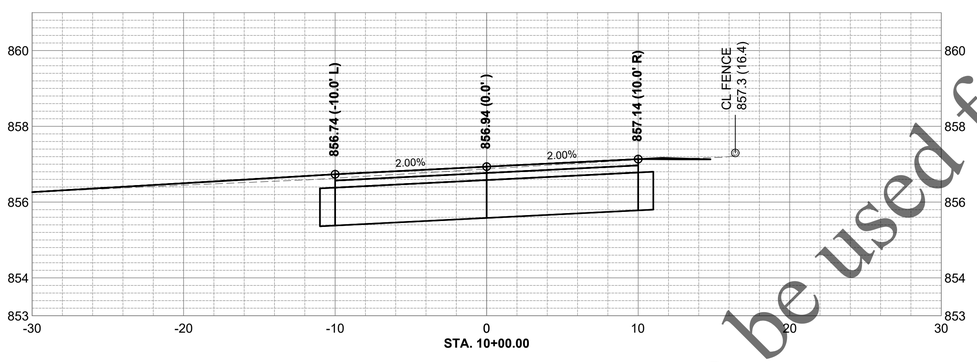
Sheet No. 13 of 17

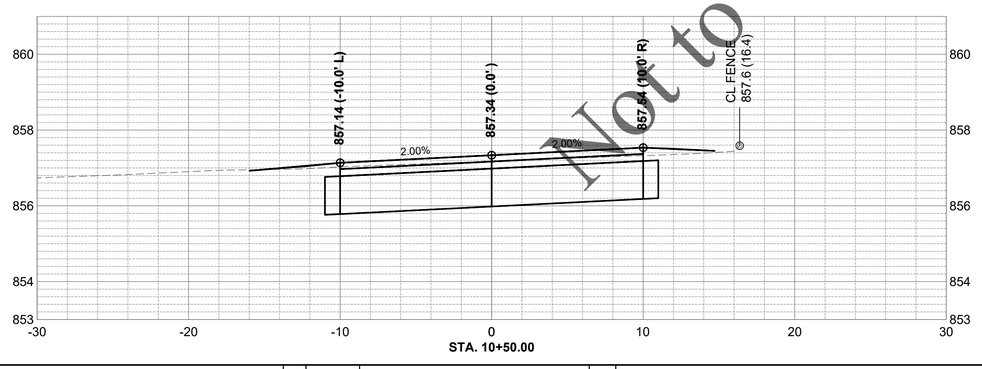
Date: 7/28/2022

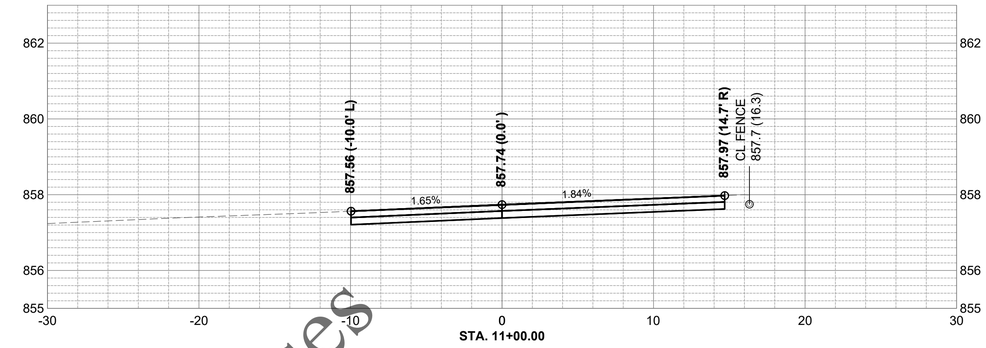
file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\sections for plan set.dwg











Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

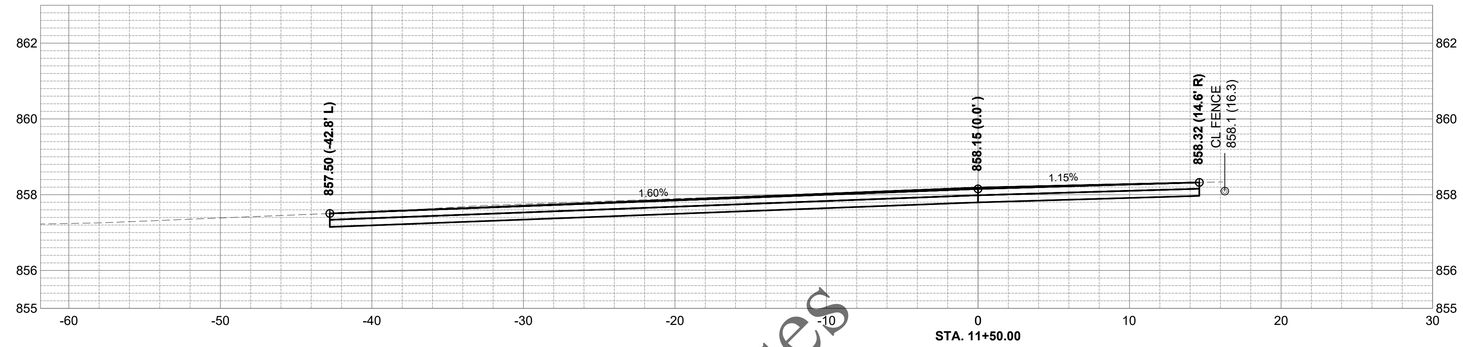
SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

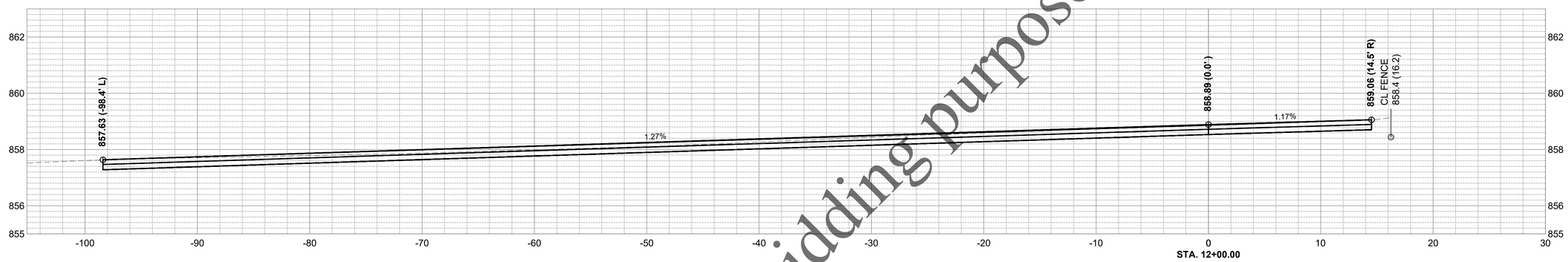
CROSS SECTIONS W. WINNEBAGO AND FRSA DRIVE - 4

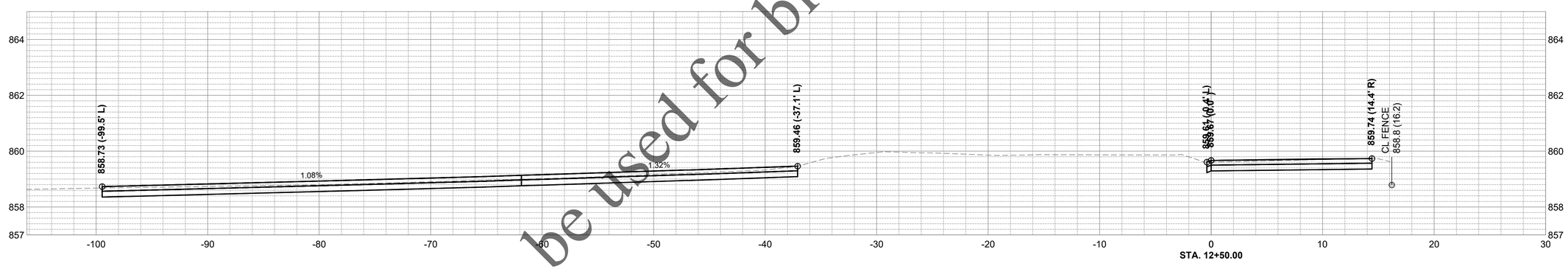
Sheet No. 14 of 17

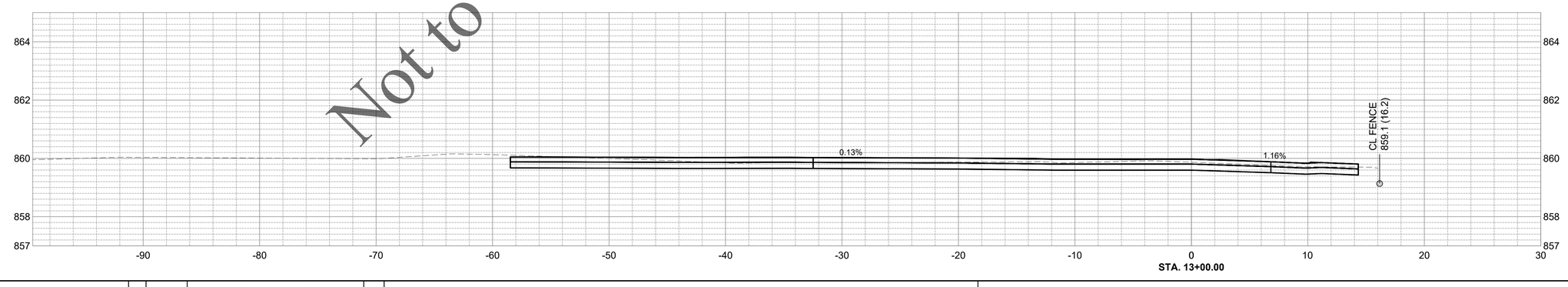
Date: 7/28/2022

file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\sections for plan set.dwg









Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

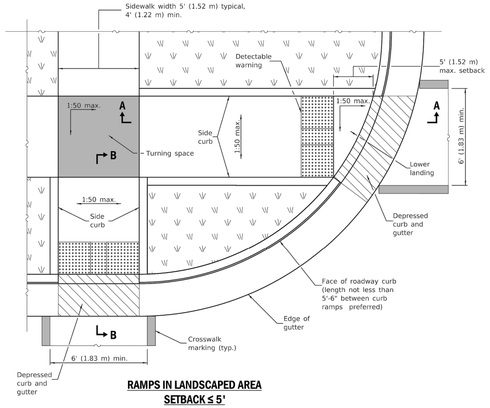
SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

CROSS SECTIONS W. WINNEBAGO AND FRSA DRIVE - 5

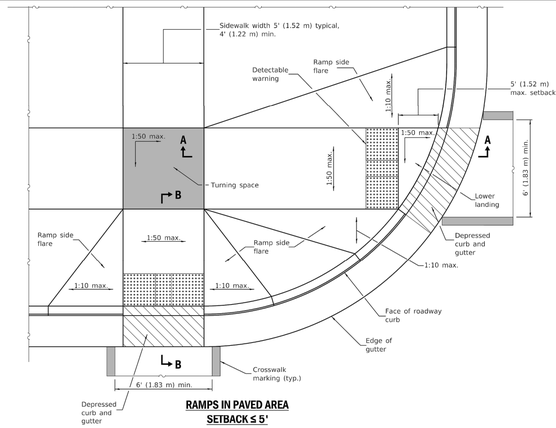
Sheet No. 15 of 17

Date: 7/28/2022

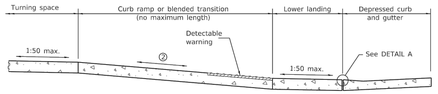
file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\sections for plan set.dwg



RAMPS IN LANDSCAPED AREA
SETBACK ≤ 5'

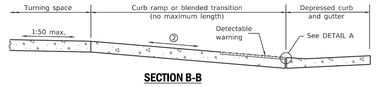


RAMPS IN PAVED AREA
SETBACK ≤ 5'



SECTION A-A

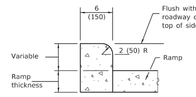
② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.



SECTION B-B

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

DETAIL A



SIDE CURB DETAIL

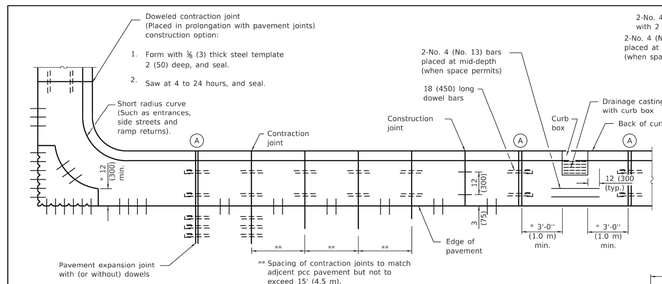
See Sheet 2 for GENERAL NOTES.

DATE	REVISIONS
1-1-19	Removed "15-foot rule", added "Blended transitions" and placement tolerances for detectable warnings.
1-1-18	Omitted diagonal slope at turning spaces and lower landings.

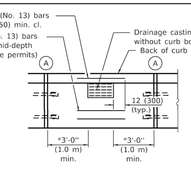
PERPENDICULAR CURB RAMPS FOR SIDEWALKS
(Sheet 1 of 2)

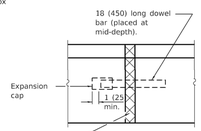
STANDARD 424001-11

Illinois Department of Transportation
PASSED January 1, 2019
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT
BBS C LPD

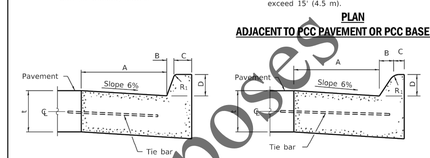


PLAN
ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE





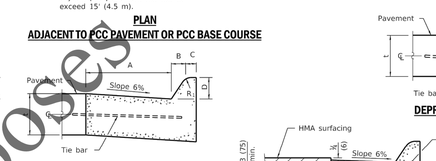
DETAIL Ⓐ
EXPANSION JOINT



BARRIER CURB

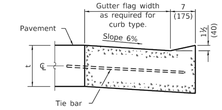
TABLE OF DIMENSIONS BARRIER CURB						
TYPE	A	B	C	D	R_1
B-6.06 ● (B-15.15)	6 (150)	2 (50)	6 (150)	9 (225)	1 (25)
B-6.12 (B-15.3)	12 (300)	2 (50)	6 (150)	6 (150)	1 (25)
B-6.18 (B-15.45)	18 (450)	2 (50)	6 (150)	6 (150)	1 (25)
B-6.24 (B-15.60)	24 (600)	1 (25)	6 (150)	6 (150)	1 (25)
B-9.06 (B-22.65)	6 (150)	2 (50)	5 (125)	9 (225)	1 (25)
B-9.12 (B-22.80)	12 (300)	2 (50)	5 (125)	9 (225)	1 (25)
B-9.18 (B-22.95)	18 (450)	2 (50)	5 (125)	9 (225)	1 (25)
B-9.24 (B-22.60)	24 (600)	2 (50)	5 (125)	9 (225)	1 (25)

● For corner islands only.

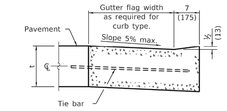


MOUNTABLE CURB

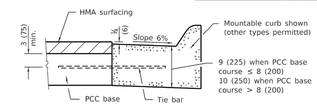
TABLE OF DIMENSIONS MOUNTABLE CURB						
TYPE	A	B	C	D	R_1	R_2
M-2.06 (M-5.15)	6 (150)	2 (50)	4 (100)	2 (50)	3 (75)	2 (50)
M-2.12 (M-5.30)	12 (300)	2 (50)	4 (100)	2 (50)	3 (75)	2 (50)
M-4.06 (M-10.15)	6 (150)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-4.12 (M-10.30)	12 (300)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-4.18 (M-10.45)	18 (450)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-4.24 (M-10.60)	24 (600)	4 (100)	3 (75)	4 (100)	3 (75)	NA
M-6.06 (M-15.15)	6 (150)	6 (150)	2 (50)	6 (150)	2 (50)	NA
M-6.12 (M-15.30)	12 (300)	6 (150)	2 (50)	6 (150)	2 (50)	NA
M-6.18 (M-15.45)	18 (450)	6 (150)	2 (50)	6 (150)	2 (50)	NA
M-6.24 (M-15.60)	24 (600)	6 (150)	2 (50)	6 (150)	2 (50)	NA



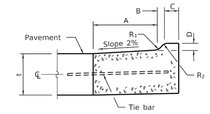
DEPRESSED CURB (TYPICAL)



DEPRESSED CURB ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED



ADJACENT TO PCC BASE COURSE WITH HMA SURFACING



M-2.06 (M-5.15) and M-2.12 (M-5.30)

GENERAL NOTES

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6% when subbase is omitted.

t = Thickness of pavement.

Longitudinal joint tie bars shall be No. 6 (No. 19) at 36 (900) centers in accordance with details for longitudinal construction joint shown on Standard 420001.

A minimum clearance of 2 (50) between the end of the tie bar and the back of the curb shall be maintained.

The dowel bars shown in contraction joints will only be required for monolithic construction.

See Standard 606301 for details of corner islands.

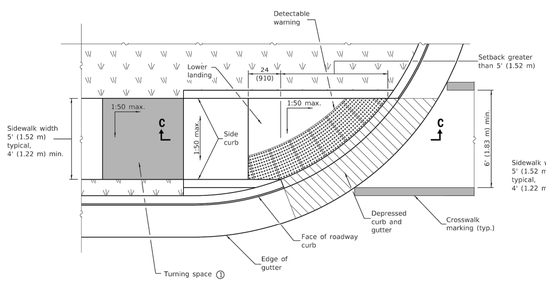
All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-22	Revised contraction joint spacing adjacent to pcc pavement.
1-1-18	Revised General Note for tie bar spacing to 36 (900) cts.

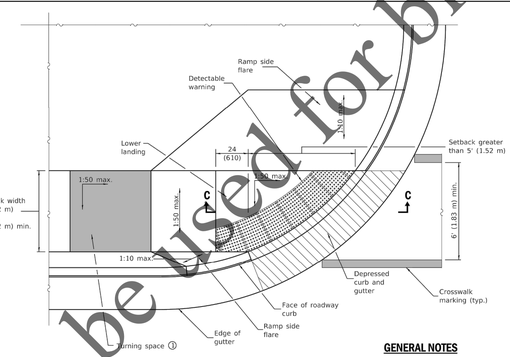
CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
(Sheet 1 of 2)

STANDARD 606001-08

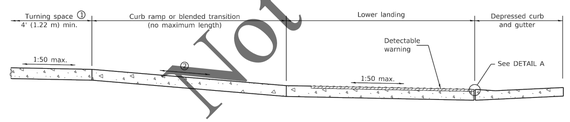
Illinois Department of Transportation
PASSED January 1, 2022
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2022
ENGINEER OF DESIGN AND ENVIRONMENT
BBS C LPD



RAMP IN LANDSCAPED AREA
SETBACK > 5'



RAMP IN PAVED AREA
SETBACK > 5'



SECTION C-C

① This turning space not required for blended transitions.

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

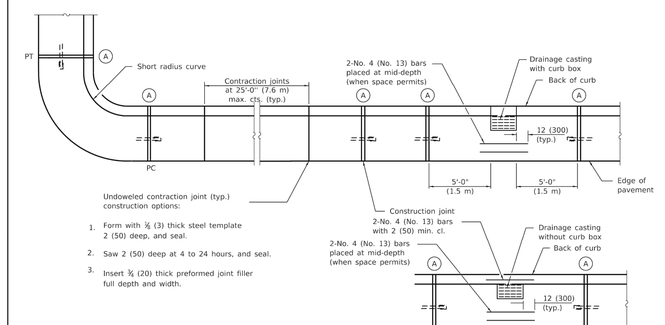
See Standard 606001 for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

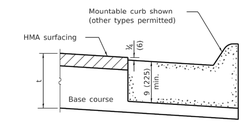
PERPENDICULAR CURB RAMPS FOR SIDEWALKS
(Sheet 2 of 2)

STANDARD 424001-11

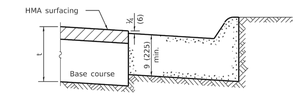
Illinois Department of Transportation
PASSED January 1, 2019
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2019
ENGINEER OF DESIGN AND ENVIRONMENT
BBS C LPD



PLAN

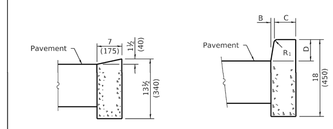


ON DISTURBED SUBGRADE



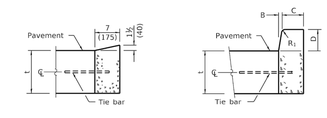
ON UNDISTURBED SUBGRADE

ADJACENT TO FLEXIBLE PAVEMENT



DEPRESSED CURB **BARRIER CURB**

ADJACENT TO FLEXIBLE PAVEMENT



DEPRESSED CURB **BARRIER CURB**

ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE

CONCRETE CURB TYPE B

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
(Sheet 2 of 2)

STANDARD 606001-08

Illinois Department of Transportation
PASSED January 1, 2022
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2022
ENGINEER OF DESIGN AND ENVIRONMENT
BBS C LPD

Not to be used for bidding purposes

Four Rivers Sanitation Authority

No.	DATE	REVISION	INT.

SOPER ST. PS ACCESS IMPROVEMENTS
CAPITAL PROJECT #2224

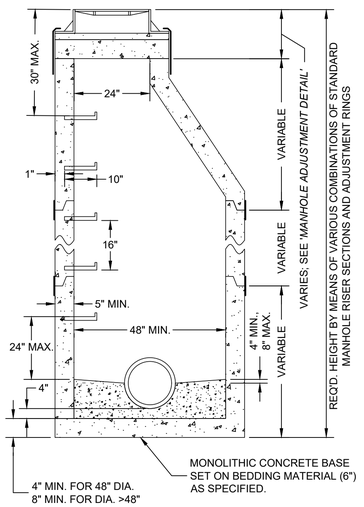
IDOT HIGHWAY STANDARDS

Sheet No. 16 of 17

Date: 7/28/2022

file: I:\District Projects\Soper Street PS Access Improvements 2224\01 Design\Drawings (Working Folder)\Standard Sheets.dwg

NOTES:
1. THE MAX. DROP FROM THE INVERT OF ANY PIPE TO THE CONCRETE CHANNEL UNDER THAT PIPE SHALL BE 8".
2. MANHOLES LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE MARKED WITH A STEEL FENCE POST AS DIRECTED.
3. ALL NEW MANHOLES SHALL BE VACUUM TESTED PER A.S.T.M. C-1244 PRIOR TO ACCEPTANCE.
4. ALL BARREL JOINTS SHALL BE SEALED WITH 3 ½" x ⅜" PRE-FORMED RUBBER BUTYL JOINT SEALANT ON THE LOWER SHIPLAP.
5. ALL BARREL JOINTS SHALL BE SEALED WITH AN EXTERNAL BARREL SEAL CENTERED ON THE JOINT (MAR MAC MACWRAP, OR APPROVED EQUAL)
6. MANHOLE STRUCTURE SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE MANHOLE RISER SECTIONS IN ACCORDANCE WITH A.S.T.M. C478-90 OR THE LATEST DESIGNATION.
7. PRECAST FLAT TOPS ARE NOT APPROVED FOR USE.
8. SEE '*MANHOLE ADJUSTMENT DETAIL*' FOR ADJUSTMENT REQUIREMENTS.
9. PIPE CONNECTIONS TO NEW MANHOLES SHALL BE MADE BY MEANS OF EITHER RUBBER GASKET SEAL (A-LOK OR APPROVED EQUAL) CONFORMING TO ASTM F-477 CAST INTEGRALLY IN MANHOLE WALL, OR RUBBER GASKET SEAL AND STAINLESS STEEL CLAMP (PSX SERIES SIX OR APPROVED EQUAL) CONFORMING TO ASTM C-923. FOR PIPE CONNECTIONS WITH A DEPTH OF >20 FT., A RUBBER GASKET SEAL (A-LOK OR APPROVED EQUAL) CONFORMING TO ASTM F-477 CAST INTEGRALLY IN MANHOLE WALL SHALL BE USED.
10. PIPE CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY MEANS OF CORE DRILLING MANHOLE WALL AND INSTALLING RUBBER GASKET SEAL AND STAINLESS STEEL CLAMP (PSX SERIES SIX OR APPROVED EQUAL) CONFORMING TO ASTM C-923.
11. THE MAXIMUM DISTANCE FROM ANY INLET PIPE INVERT TO THE OUTLET PIPE INVERT SHALL BE 2'. DISTANCES GREATER THAN 2' WILL REQUIRE AN INSIDE DROP CONNECTION PER '*INSIDE DROP CONNECTION DETAIL*'.
12. MANHOLE STEPS SHALL BE NEENAH R-1982-F OR M.A. IND. PS-1 OR APPROVED EQUAL INSTALLED AT 16" CENTERS, AND SHALL BE ORIENTED ABOVE THE OUTLET PIPE UNLESS OTHERWISE SPECIFIED.



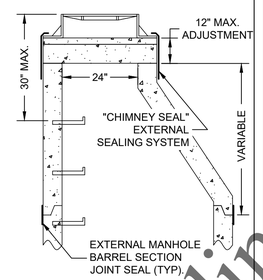
STANDARD MANHOLE DETAIL
('*MANHOLE ADJUSTMENT DETAIL*' SHALL APPLY)

rev. 12/15/20

NOTES:
1. MANHOLE FRAMES & LIDS SHALL BE PER THE TABLE BELOW.
2. FOR MANHOLES CONNECTED TO MAINS 18" DIAMETER OR LARGER, OR FOR MANHOLES LOCATED IN FLOOD PRONE AREAS, FRAMES & LIDS SHALL BE THE BOLT DOWN TYPE.
3. ALLOWABLE TYPES OF ADJUSTING RINGS INCLUDE PRECAST CONCRETE (4" HEIGHT MIN.), & EXPANDED POLYPROPYLENE (EPP). THESE CAN BE USED IN CONJUNCTION WITH EACH OTHER, EXCEPT THAT A PRECAST RING SHALL NOT BE PLACED OVER AN EPP RING.
4. FOR PRECAST ADJUSTING RINGS, ALL ADJUSTING RING JOINTS AS WELL AS THE FRAME TO ADJUSTING RING JOINT SHALL BE SEALED WITH TWO 1" BEADS OF PRE-FORMED RUBBER BUTYL JOINT SEALANT, INCLUDING FRAME TO CONCRETE JOINT. WHEN A FRAME REQUIRES PITCHING, A MIN. OF 3 SHIMS EQUALLY SPACED SHALL BE INSTALLED BETWEEN THE FRAME AND CONCRETE AND HYDRAULIC CEMENT SHALL BE USED TO FILL THE VOID BETWEEN THE FRAME & CONCRETE.
5. FOR EPP ADJUSTING RINGS, RINGS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. WHEN A FRAME REQUIRES PITCHING, THE TOP RING SHALL BE A TAPERED ADJUSTMENT RING PER MANUFACTURER'S INSTRUCTIONS.
6. NO TARRING OR GROUTING IS ALLOWED ON THE INSIDE OF MANHOLE OR ADJUSTMENT JOINTS.
7. MAXIMUM MANHOLE ADJUSTMENT IS 12". MINIMUM ADJUSTMENT IS 4" UNLESS OFF-ROAD OR IN CURB & GUTTER ROADWAY.
8. MANHOLE FRAMES SHALL BE SET ¼" MIN. TO ⅜" MAX. BELOW PAVED SURFACES, AND AT FINAL GRADE IN TURF AREAS.
9. WHEN ADJUSTING EXISTING MANHOLES, THE ENTIRE EXISTING ADJUSTMENT SHALL BE REMOVED AND REPLACED.
10. THE COMBINATION OF NEW ADJUSTING RINGS SHALL BE SUCH THAT THE MINIMUM NUMBER OF RINGS POSSIBLE ARE USED.
11. FLAT-TOPS ARE NOT PERMITTED ON 4' OR 5' DIA. MANHOLES.
12. REPLACEMENT OF EXISTING BARREL SECTIONS MAY BE REQUIRED TO MEET THE ABOVE REQUIREMENTS.
13. MANHOLE ADJUSTMENT INSERT RISER RINGS ARE NOT APPROVED FOR USE.

APPROVED FRAME & LID TABLE

TYPE	NEENAH FRAME	NEENAH LID	EAST JORDAN FRAME	EAST JORDAN LID
REGULAR	1670-2004	R-1670-0358	00111711	00111732
LOW PROFILE	1670-2008	R-1670-0358	---	---
BOLT DOWN	1915JT08		---	---



MANHOLE ADJUSTMENT DETAIL
(FOR ADJUSTMENT OF BOTH NEW & EXISTING MANHOLES)

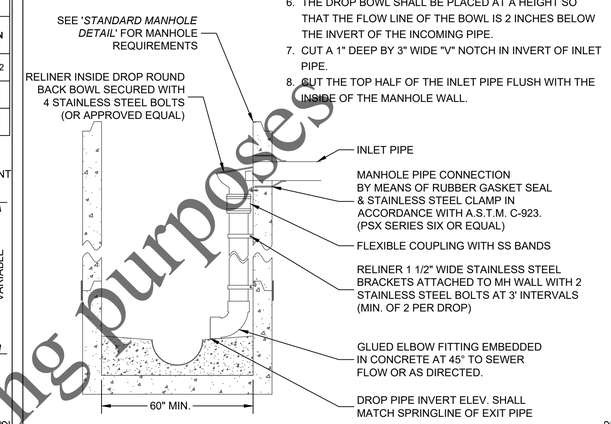
rev. 6/1/22

DROP BOWL & DROP PIPE SIZING TABLE

INLET PIPE DIA.	DROP PIPE DIA. (MIN.)
4-6 INCH	4 INCH
8 INCH	6 INCH
10 INCH	8 INCH
>10 INCH	*

* PER MFG. OR AS DIRECTED BY FRSA

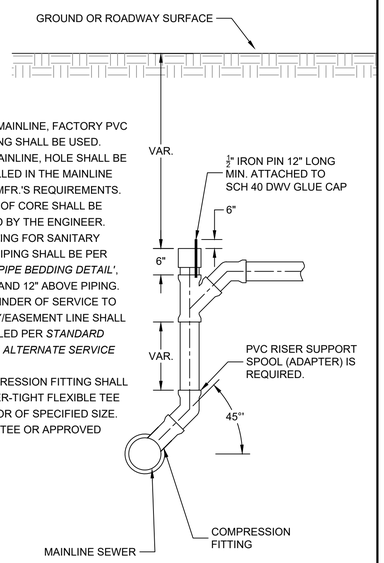
NOTES:
1. INSIDE DROP TYPE MANHOLES SHALL BE 5' MIN. INSIDE DIA.
2. ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP AS MFG. BY RELINER-DURAN INC., OR EQUAL.
3. SEE TABLE FOR DROP BOWL AND DROP PIPE SIZES.
4. ALL INSIDE DROP PIPING SHALL BE PVC SDR35 ASTM-D3034.
5. ATTACH THE ROUND BACK DROP BOWL AND EACH CLAMPING BRACKET TO THE MANHOLE WALL WITH ⅜" x 1" MIN. STAINLESS STEEL BOLTS AND EPOXY IMPREGNATED LUGS PER MFR.'S RECOMMENDATIONS.
6. THE DROP BOWL SHALL BE PLACED AT A HEIGHT SO THAT THE FLOW LINE OF THE BOWL IS 2 INCHES BELOW THE INVERT OF THE INCOMING PIPE.
7. CUT A 1" DEEP BY 3" WIDE "V" NOTCH IN INVERT OF INLET PIPE.
8. CUT THE TOP HALF OF THE INLET PIPE FLUSH WITH THE INSIDE OF THE MANHOLE WALL.



INSIDE DROP CONNECTION DETAIL
('*STANDARD MANHOLE DETAIL*' SHALL APPLY)

rev. 1/1/22

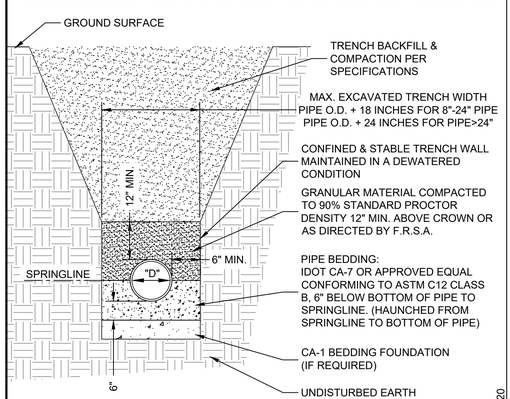
NOTES:
1. FOR NEW MAINLINE, FACTORY PVC WYE FITTING SHALL BE USED.
2. FOR EX. MAINLINE, HOLE SHALL BE CORE DRILLED IN THE MAINLINE PIPE PER MFR.'S REQUIREMENTS. LOCATION OF CORE SHALL BE APPROVED BY THE ENGINEER.
3. PIPE BEDDING FOR SANITARY SERVICE PIPING SHALL BE PER '*FLEXIBLE PIPE BEDDING DETAIL*', 6" BELOW AND 12" ABOVE PIPING.
4. THE REMAINDER OF SERVICE TO PROPERTY/EASEMENT LINE SHALL BE INSTALLED PER *STANDARD SERVICE & ALTERNATE SERVICE DETAIL*.
5. THE COMPRESSION FITTING SHALL BE A WATER-TIGHT FLEXIBLE TEE CONNECTOR OF SPECIFIED SIZE. (INSERT-A-TEE OR APPROVED EQUAL).



VERTICAL SERVICE RISER DETAIL
(FOR MAINLINE DIA. 8" - 18"; CONNECTION TO >18" MAIN PROHIBITED)

rev. 5/15/18

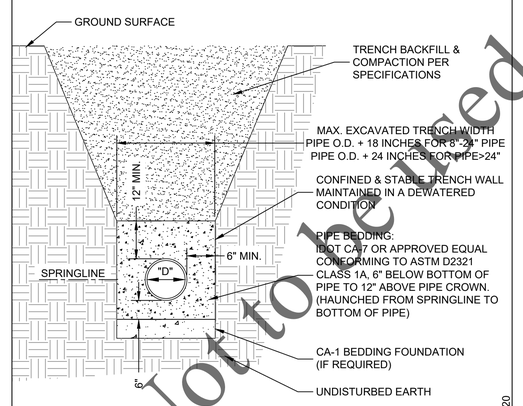
NOTES:
1. REASONABLE CARE SHALL BE USED WHEN BACKFILLING OVER SEWER. NO MATERIALS SUCH AS ROCKS OR BOULDERS SHALL BE PLACED WITHIN 24" OF THE CROWN OF THE PIPE. NO MATERIAL LARGER THAN 8" DIA. SHALL BE USED IN THE BACKFILL.
2. LOOSE MATERIAL SHALL BE REMOVED OR COMPACTED PRIOR TO PLACING PIPE BEDDING.
3. BEDDING SHALL BE WELL HAUNCHED ALONG PIPE TO ENSURE VOIDS ARE ELIMINATED.



RIGID PIPE BEDDING DETAIL

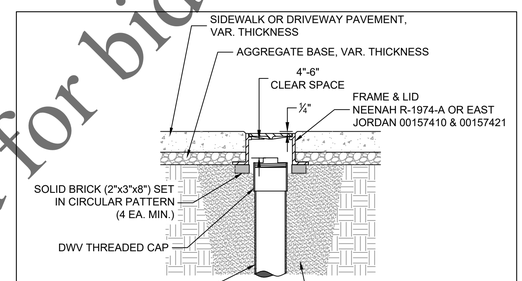
rev. 3/11/20

NOTES:
1. REASONABLE CARE SHALL BE USED WHEN BACKFILLING OVER SEWER. NO MATERIALS SUCH AS ROCKS OR BOULDERS SHALL BE PLACED WITHIN 24" OF THE CROWN OF THE PIPE. NO MATERIAL LARGER THAN 8" DIA. SHALL BE USED IN THE BACKFILL.
2. LOOSE MATERIAL TO BE REMOVED OR COMPACTED PRIOR TO PLACING PIPE BEDDING.
3. BEDDING SHALL BE WELL HAUNCHED ALONG PIPE TO ENSURE VOIDS ARE ELIMINATED.



FLEXIBLE PIPE BEDDING DETAIL

rev. 3/11/20

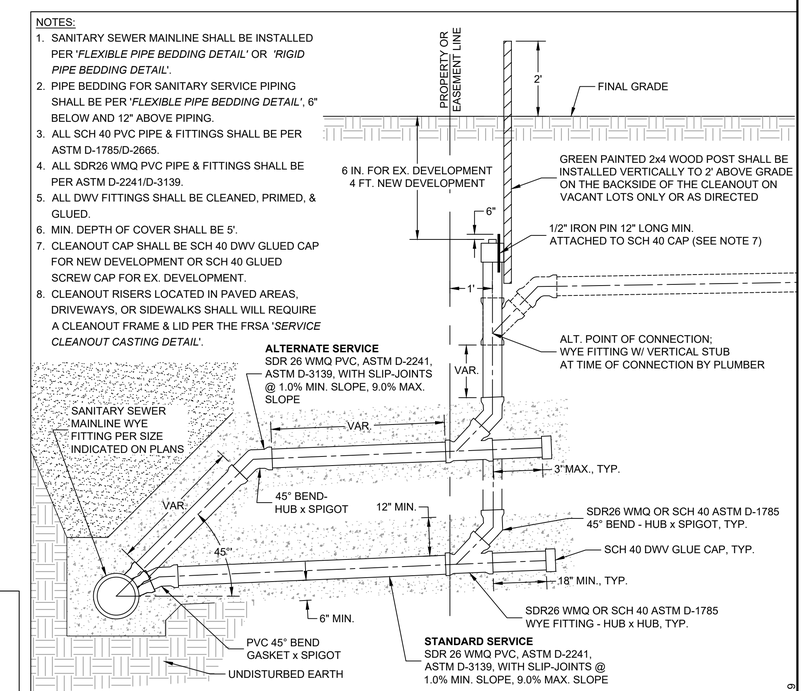


NOTES:
1. SERVICE CLEANOUT CASTINGS ARE REQUIRED FOR ALL CLEANOUTS LOCATED IN PAVED AREAS, DRIVEWAYS, OR SIDEWALKS.
2. THE LOCATION OF THE CLEANOUT SHALL BE APPROVED BY FOUR RIVERS SANITATION AUTHORITY (FRSA).
3. THE FRAME SHALL BE SET ON BRICKS THAT ARE PLACED IN A CIRCULAR PATTERN THE ENTIRE CIRCUMFERENCE OF THE FRAME. THE BRICKS SHALL BE SET ON COMPACTED TRENCH BACKFILL.
4. THE FRAME SHALL BE SET TO AN ELEVATION THAT PROVIDES 4"-6" CLEAR SPACE BETWEEN THE TOP OF THE CLEANOUT CAP AND THE BOTTOM OF THE CASTING LID.
5. THE CONTRACTOR SHALL ENSURE THAT THE CLEANOUT CAP CAN BE UNSCREWED AND REMOVED AND REPLACED WITHOUT HINDRANCE.
6. THE FRAME SHALL BE SET ¼" MIN. TO ⅜" MAX. BELOW FINAL PAVEMENT ELEVATION.

SERVICE CLEANOUT CASTING DETAIL

rev. 6/1/22

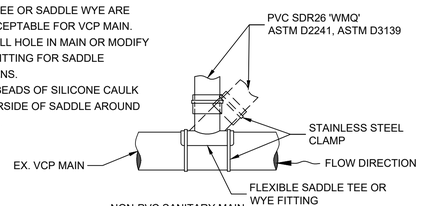
NOTES:
1. SANITARY SEWER MAINLINE SHALL BE INSTALLED PER '*FLEXIBLE PIPE BEDDING DETAIL*' OR '*RIGID PIPE BEDDING DETAIL*'.
2. PIPE BEDDING FOR SANITARY SERVICE PIPING SHALL BE PER '*FLEXIBLE PIPE BEDDING DETAIL*', 6" BELOW AND 12" ABOVE PIPING.
3. ALL SCH 40 PVC PIPE & FITTINGS SHALL BE PER ASTM D-1785/D-2665.
4. ALL SDR26 WMQ PVC PIPE & FITTINGS SHALL BE PER ASTM D-2241/D-3139.
5. ALL DWV FITTINGS SHALL BE CLEANED, PRIMED, & GLUED.
6. MIN. DEPTH OF COVER SHALL BE 5'.
7. CLEANOUT CAP SHALL BE SCH 40 DWV GLUED CAP FOR NEW DEVELOPMENT OR SCH 40 GLUED SCREW CAP FOR EX. DEVELOPMENT.
8. CLEANOUT RISERS LOCATED IN PAVED AREAS, DRIVEWAYS, OR SIDEWALKS SHALL WILL REQUIRE A CLEANOUT FRAME & LID PER THE FRSA '*SERVICE CLEANOUT CASTING DETAIL*'.



STANDARD SERVICE & ALTERNATE SERVICE DETAIL
(FOR MAINLINE DIA. 8" - 18"; CONNECTION TO >18" MAIN PROHIBITED)

rev. 4/1/19

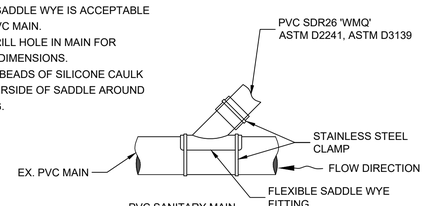
NOTES:
1. SADDLE TEE OR SADDLE WYE ARE BOTH ACCEPTABLE FOR VCP MAIN.
2. CORE DRILL HOLE IN MAIN OR MODIFY EX. VCP FITTING FOR SADDLE DIMENSIONS.
3. APPLY 2 BEADS OF SILICONE CAULK TO UNDERSIDE OF SADDLE AROUND OPENING.



FLEXIBLE SADDLE CONNECTION DETAIL
(FOR SERVICE CONNECTIONS TO NON-PVC SANITARY MAINS LESS THAN 18" DIA.)

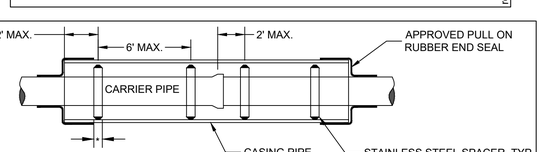
rev. 3/11/20

NOTES:
1. ONLY A SADDLE WYE IS ACCEPTABLE FOR A PVC MAIN.
2. CORE DRILL HOLE IN MAIN FOR SADDLE DIMENSIONS.
3. APPLY 2 BEADS OF SILICONE CAULK TO UNDERSIDE OF SADDLE AROUND OPENING.



FLEXIBLE SADDLE CONNECTION DETAIL
(FOR SERVICE CONNECTIONS TO PVC SANITARY MAINS LESS THAN 18" DIA.)

rev. 3/11/20



* 8" MIN. WIDTH FOR CARRIER PIPE < 48" DIA.
12" MIN. WIDTH FOR CARRIER PIPE ≥ 48" DIA.

NOTES:
1. CASING END SEALS & SPACERS SHALL BE AS MFD. BY CASCADE MFG., OR APPROVED EQUAL.
2. FOR FLEXIBLE CARRIER PIPE, SPACING OF SPACERS TO BE AS SHOWN, OR PER MFR.'S RECOMMENDATION.
3. FOR RIGID CARRIER PIPE, SPACING SHALL BE PER MFR.'S RECOMMENDATION.

CASING & SPACER DETAIL

rev. 5/15/18

01/01/2021 Revisions:
Manhole Adjustment Detail: Revised notes 1 & 2 with acceptable frames & lids. Modified notes 3, 5, & 7. Added note 8.
Rigid Pipe Bedding Detail: Revised note 1. Added note 6. Modified note 2.
Inside Drop Connection Detail: Revised note 6 & 7. Added note 8.
Service Cleanout Casting Detail: Added this detail.

Four Rivers Sanitation Authority

FOUR RIVERS SANITATION AUTHORITY (FRSA) STANDARD DETAIL SHEET
(NOT TO SCALE)
3501 KISHWAUKEE ST.
ROCKFORD, ILLINOIS 61109 PH. (815) 387-7660

SHEET 17 of 17

ISSUE 06/01/2022

Not to be used for bidding purposes