

RURAL WATER SYSTEM #1
WETLAND COMPLEX

HOSPERS, IOWA

CONSTRUCTION PLANS

ISG PROJECT # 23-30403



LEGEND

- EXISTING**
- WATERSHED BOUNDARY
 - CITY LIMITS
 - SECTION LINE
 - QUARTER SECTION LINE
 - RIGHT OF WAY LINE
 - PROPERTY / LOTLINE
 - EASEMENT LINE
 - ACCESS CONTROL
 - WATER EDGE
 - WETLAND BOUNDARY
 - FENCE LINE
 - EXISTING OPEN DITCH
 - CULVERT
 - TILE
 - PRIVATE TILE
 - WATER
 - GAS
 - OVERHEAD ELECTRIC
 - UNDERGROUND ELECTRIC
 - UNDERGROUND TELEPHONE
 - UNDERGROUND TV
 - OVERHEAD UTILITY
 - UNDERGROUND UTILITY
 - UNDERGROUND FIBER OPTIC
 - CONTOUR (MAJOR)
 - CONTOUR (MINOR)
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - TREE LINE
 - DROP INTAKE
 - HYDRANT
 - POWER POLE

- PROPOSED**
- EASEMENT
 - PROPOSED OPEN DITCH
 - OPEN DITCH REPAIR
 - CULVERT (RCP)
 - CULVERT (CMP)
 - CULVERT (HDPE)
 - TILE
 - TILE (PIPE WIDTH)
 - PRIVATE TILE
 - WATER
 - GAS
 - OVERHEAD ELECTRIC
 - UNDERGROUND ELECTRIC
 - UNDERGROUND TV
 - CONTOUR (MAJOR)
 - CONTOUR (MINOR)
 - DROP INTAKE
 - SLOUGH REPAIR
 - SPOIL PLACEMENT
 - TREE CLEARING
 - REMOVE TREE
 - BUFFER



LOCATION MAP

SHEET INDEX

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- C3-21 PROPOSED SITE
- C3-30 PIPE PROFILES
- C3-31 PIPE PROFILES
- C3-32 PIPE PROFILES
- C3-33 PIPE PROFILES
- C4-10 OVERALL GRADING
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- C4-30 CROSS SECTION (A-A)
- C4-31 CROSS SECTION (B-B)
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- C5-10 SITE RESTORATION
- C6-10 UTILITY



SEAL

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

Caleb Rasmussen 4-28-2025

(signature) (date)

Printed or typed name CALEB RASMUSSEN

License number 25713

My license renewal date is December 31, 2026

Pages or sheets covered by this seal:
ALL SHEETS

GIS DISCLAIMER:

INFORMATION FOR THE BOUNDARY / LOT LINES, AND UNDERGROUND UTILITIES SHOWN WAS DERIVED FROM DIGITAL DATABASES AND IS FOR INFORMATIONAL PURPOSES ONLY. DATA MAY NOT HAVE BEEN PREPARED FOR, OR BE SUITABLE FOR: LEGAL, ENGINEERING, OR SURVEYING PURPOSES.

PROJECT INDEX:

OWNER:

RURAL WATER SYSTEM #1
44381 380TH ST
HOSPERS, IA 51238

PROJECT ADDRESS / LOCATION:

S14 T96N R43W

LYNN TWP
HOSPERS, IOWA

MANAGING OFFICE:



STORM LAKE OFFICE
1725 LAKE AVE. NORTH
STORM LAKE, IA 50588
PHONE: 712.732.7745

PROJECT MANAGER: CALEB RASMUSSEN
EMAIL: CALEB.RASMUSSEN@ISGINC.COM

SPECIFICATIONS REFERENCE

ALL CONSTRUCTION SHALL COMPLY WITH SIOUX COUNTY'S REQUIREMENTS AND WITH THE IOWA NRCS STANDARD SPECIFICATIONS. COMPLIANCE WITH THE 2024 EDITION OF THE STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS) SHALL BE MADE AS SUPPLEMENT WHEN INDICATED OR UNLESS DIRECTED OTHERWISE.

PROJECT DATUM

HORIZONTAL COORDINATES HAVE BEEN REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83), ON THE IOWA REGIONAL COORDINATE SYSTEM (ZONE 1), IN U.S. SURVEY FEET. ELEVATIONS HAVE BEEN REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). RTK GPS METHODS WERE USED TO ESTABLISH HORIZONTAL AND VERTICAL COORDINATES FOR THIS PROJECT.

B.M. ELEVATION=1361.90

ALUMINUM CAP IN BRIDGE RAIL NORTH WEST SIDE OF BRIDGE ON 360TH ST. 0.3 MILES WEST OF INTERSECTION SB STATE HWY 60 AND 360TH ST

TOPOGRAPHIC SURVEY

THIS PROJECT'S TOPOGRAPHIC SURVEY CONSISTS OF DATA COLLECTED IN APRIL 2024 BY ISG.

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PROJECT

RURAL WATER
SYSTEM #1

WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	23-30403
FILE NAME	30403-C0-TITLE
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

TITLE

SHEET

C0-10



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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE	
DATE	DESCRIPTION
	BY

PROJECT NO.	23-30403
FILE NAME	30403-CO-NOTES
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

CONSTRUCTION
NOTES &
QUANTITIES

SHEET

C0-20

ITEMS OF WORK

Bid Item	Sub-Item	Description	Specifications No.	Quantity	Unit or Select	As-Built
1	-	Site stripping & preparation	IA CS-001	1	LS	
2	-	Crop damage	IA CS-001	0	AC	
3	-	Temporary Access	IA CS-001	1	LS	
4	-	Other: Pollution Control	IA CS-005	1	LS	
5	-	Buffer Seeding	IA CS-006	19.7	AC	
6	-	Mobilization and Demobilization	IA CS-008	1	LS	
7	-	Excavation (General)	IA CS-021	279.285	CY	
8	-	Earthfill (General)	IA CS-023	126	CY	
9	-	Earthfill (Wasting)	IA CS-023	279.169	CY	
10	-	Topsoil Placement	IA CS-026	32.304	CY	
11	-	Tied Concrete Block Mat	IA CS-031	15.000	SF	
12	-	Corrugated profile wall (Dual wall) Polyethylene pipe:				
13	-	12" Polypropylene pipe	IA CS-046	2.047	LF	
14	-	24" 3-Chamber Water Control Structure Assembly	IA CS-046	57	LF	
15	-	2-Chamber Water Control Structure Assembly	IA CS-046	1	EA	
16	-	Perforated CMP Riser with Trash Guard	IA CS-046	3	EA	
17	-	18" CMP tile outlets (20 LF each):	IA CS-051	10	EA	
18	-	15" x 20' Class E Riprap	IA CS-051	3	EA	
18	-	Class E Riprap	IA CS-061	1,607	TN	

REQUIRED SHOP DRAWINGS AND INSPECTIONS

Bid Item	Sub-Item	Description	Specifications No.	Shop Drawing	Required Inspection or Survey
1	-	Site stripping & preparation	IA CS-001		Inspection: verify topsoil strip depth Review: by survey or contractor equipment (laser level, machine control)
2	-	Crop damage	IA CS-001		Inspection: area damaged Review: engineer's survey of damaged area
3	-	Temporary Access	IA CS-001		
4	-	Other: Pollution Control	IA CS-005		
5	-	Buffer Seeding	IA CS-006	X	Inspection: seed bed preparation Review: visual
6	-	Mobilization and Demobilization	IA CS-008		
7	-	Excavation (General)	IA CS-021		Inspection: soils suitability for earthen berm Review: visual, non-destructive field testing (ribboning)
8	-	Earthfill (General)	IA CS-023		Inspection: Compaction of earthen berm Review: visual, field testing as required (proof roll, denting)
9	-	Earthfill (Wasting)	IA CS-023		Inspection: Final grading Review: visual + survey as conditions dictate
10	-	Topsoil Placement	IA CS-026		Inspection: subgrade to verify topsoiling depth Review: by survey or contractor equipment (laser level, machine control)
11	-	Tied Concrete Block Mat	IA CS-031	X	Inspection: subgrade prior to installation, keys, anchors. Review: visual
12	-	Corrugated profile wall (Dual wall) Polyethylene pipe:			
13	-	12" Polypropylene pipe	IA CS-046	X	Inspection: Initial blinding, use of ASTM Class 2 backfill Review: visual, engineer supplied pipe crawler (if conditions dictate), survey of flow line elevations upon notice from contractor
14	-	24" 3-Chamber Water Control Structure Assembly	IA CS-046	X	Inspection: Initial blinding, use of ASTM Class 2 backfill Review: visual, engineer supplied pipe crawler (if conditions dictate), survey of flow line elevations upon notice from contractor
15	-	2-Chamber Water Control Structure Assembly	IA CS-046	X	Inspection: Structure installation (concrete base, dissimilar pipe connection, backfill) Review: Visual
16	-	Perforated CMP Riser with Trash Guard	IA CS-046	X	Inspection: Structure installation (concrete base, dissimilar pipe connection, backfill) Review: Visual
17	-	18" CMP tile outlets (20 LF each):	IA CS-051	X	Inspection: Dissimilar pipe connection Review: visual
18	-	15" x 20' Class E Riprap	IA CS-051	X	Inspection: soil tight joint Review: visual
18	-	Class E Riprap	IA CS-061	X	Inspection: Subgrade preparation with fabric (less around riser), final installation Review: visual, survey or contractor equipment (laser level, machine control) as conditions dictate

WETLAND CONSTRUCTION NOTES

- EARTHWORK
 - NO FILL SHALL BE PLACED WITHIN THE FLOODPLAIN UNLESS SHOWN ON THE SITE PLAN. NO FILL SHALL BE PLACED OUTSIDE THE EASEMENT AREA. THE RAILROAD RIGHT OF WAY, OR ANY ROAD RIGHT OF WAY.
 - SPOIL AREAS NEAR THE ROAD SHALL NOT BE CONSTRUCTED MORE THAN 4-FT HIGHER THAN TOP OF ROAD ELEVATION.
- ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS, WHICH INCLUDE, BUT ARE NOT LIMITED TO, THE OWNER- CONTRACTOR AGREEMENT, THE PROJECT MANUAL, DRAWINGS OF ALL DISCIPLINES AND ALL ADDENDA, MODIFICATIONS, AND CLARIFICATIONS ISSUED BY ARCHITECT/ENGINEER.
- CONTRACT DOCUMENTS SHALL BE ISSUED TO ALL SUBCONTRACTORS BY THE GENERAL CONTRACTOR IN COMPLETE SETS IN ORDER TO ACHIEVE THE FULL EXTENT AND COMPLETE COORDINATION OF ALL WORK.
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR CONDITIONS REQUIRING INFORMATION OR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
- DETAILS SHOWN ARE INTENDED TO BE INDICATIVE OF THE PROFILES AND TYPE OF DETAILING REQUIRED THROUGHOUT THE WORK. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO DETAILS SHOWN, WHERE SPECIFIC DIMENSIONS, DETAILS, OR DESIGN INTENT CANNOT BE DETERMINED. NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, CLEANED, AND CONDITIONED ACCORDING TO MANUFACTURERS' INSTRUCTIONS. IN CASE OF DISCREPANCIES BETWEEN MANUFACTURERS' INSTRUCTIONS AND THE CONTRACT DOCUMENTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
- ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO AVOID GALVANIC CORROSION.
- THE LOCATION AND TYPE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY AND ARE ACCURATE AND COMPLETE TO THE BEST OF THE KNOWLEDGE OF I & S GROUP, INC. (ISG). NO WARRANTY OR GUARANTEE IS IMPLIED. THE CONTRACTOR SHALL VERIFY THE SIZES, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM PLAN.
- UTILITIES - CONTRACTOR IS RESPONSIBLE FOR CALLING IOWA ONE CALL: 1-800-282-8989 AND PROTECTION OF ALL UTILITIES.
- SAFETY - ALL WORK SHALL BE DONE ACCORDING TO OSHA STANDARDS FOR PROTECTION OF LIFE. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATION.
- CONTRACTOR SHALL IMMEDIATELY REPORT TO ENGINEER ALL PREVIOUSLY UNKNOWN TILE LINES ENCOUNTERED DURING THE WORK AND LEAVE THE TILE LINES UNCOVERED FOR EVALUATION BY ENGINEER.
- CONTROL - CONTRACTOR IS TO PROTECT ALL CONTROL POINT AND WORK LIMIT PINS SET PRIOR TO CONSTRUCTION.
- WATER - CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE THROUGHOUT CONSTRUCTION TO ENSURE FAVORABLE WORKING CONDITIONS, INCLUDING DEWATERING AS NECESSARY.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER TO ENSURE SOILS MEET MINIMUM MOISTURE REQUIREMENTS.
- RUBBISH DISPOSAL - STRUCTURES, ROCKS, FENCE, AND RUBBISH ENCOUNTERED WITHIN THE EASEMENT AREA ARE TO BE DISPOSED OF BY BURIAL OR OTHER APPROVED MEANS. MISCELLANEOUS ROCKS AND RUBBISH ENCOUNTERED DURING EXCAVATION ARE TO BE INCLUDED FOR BURIAL AS WELL. A MINIMUM OF THREE (3) FEET OF COVER OVER BURIED RUBBISH IS REQUIRED.
- EQUIPMENT STAGING - CONTRACTOR TO DESIGNATE EQUIPMENT STAGING AREA AT PRECONSTRUCTION MEETING.
- ACCESS SHALL BE COORDINATED WITH THE LANDOWNER PRIOR TO MOBILIZATION. CARE SHOULD BE TAKEN TO PROTECT EXISTING VEGETATION. THE CONTRACTOR IS RESPONSIBLE FOR SEEDING ANY DISTURBED AREAS DUE TO CONSTRUCTION ACCESS.
- SUPPLEMENTAL DETAILS:
 - SUDAS 4030 Z25 - METAL GUARD
 - SUDAS 4020 Z11 - STORM SEWER PIPE CONNECTIONS
 - SUDAS 8040, 105 - WATTLE
 - SUDAS 8040, 117 - SEDIMENT BAFLE
 - SUDAS 8040, 119 - SILT FENCE
 - SUDAS 8040, 120 - STABILIZED CONSTRUCTION EXIT



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PROJECT

**RURAL WATER
SYSTEM #1**

**WETLAND
COMPLEX**

HOSPERS IOWA

REVISION SCHEDULE

DATE DESCRIPTION BY

PROJECT NO.	23-30403
FILE NAME	30403-C0-DETAILS
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDM
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

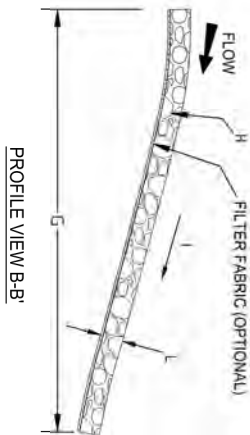
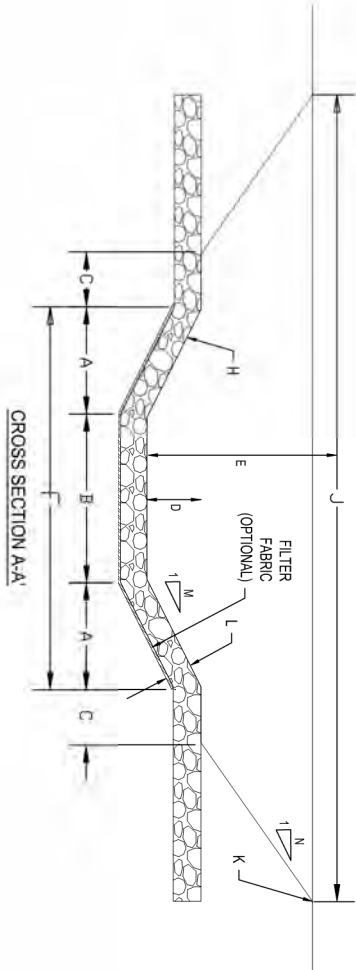
TITLE

SITE DETAILS

SHEET

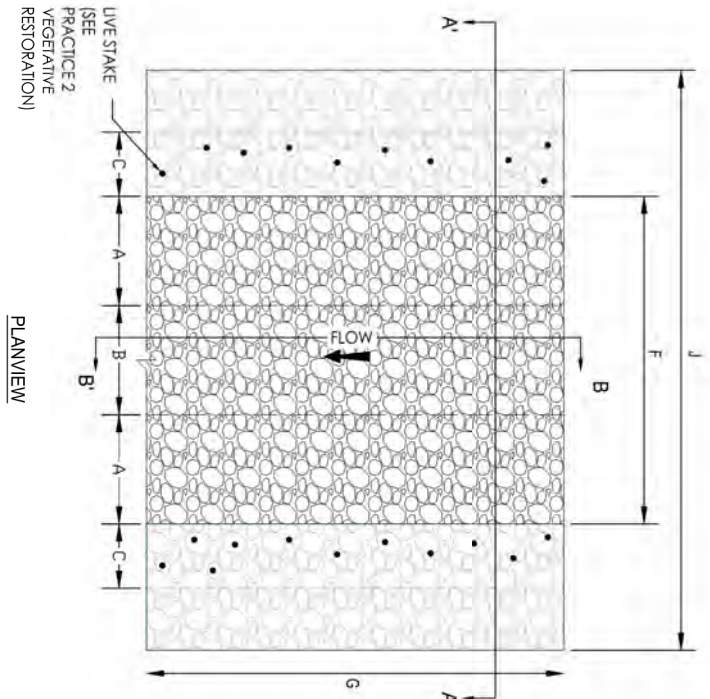
C0-22

	SOUTH RIFFLE	NORTH RIFFLE
A	6.30	6.30
B	21.51	21.50
C	10.00	10.00
D	2.10	2.10
E	7.95	5.85
F	34.10	34.10
G	35.00	35.00
H	I.A DOT CLASS E	
I	2.29%	2.29%
J	77.26	62.27
K	1351.80	1350.09
L	2.25	2.25
M	3:1	3:1
N	2:1 MAX	2:1 MAX

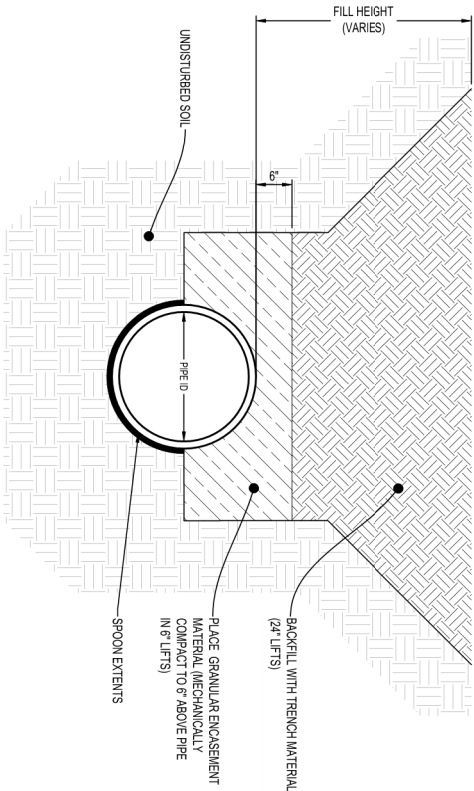


ROCK RIFFLE

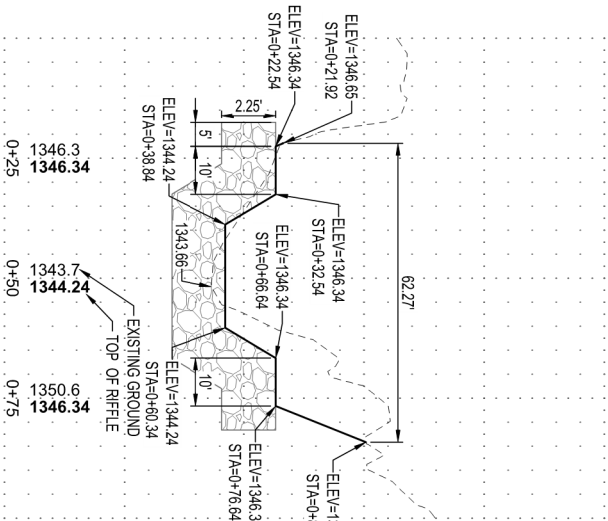
NTS



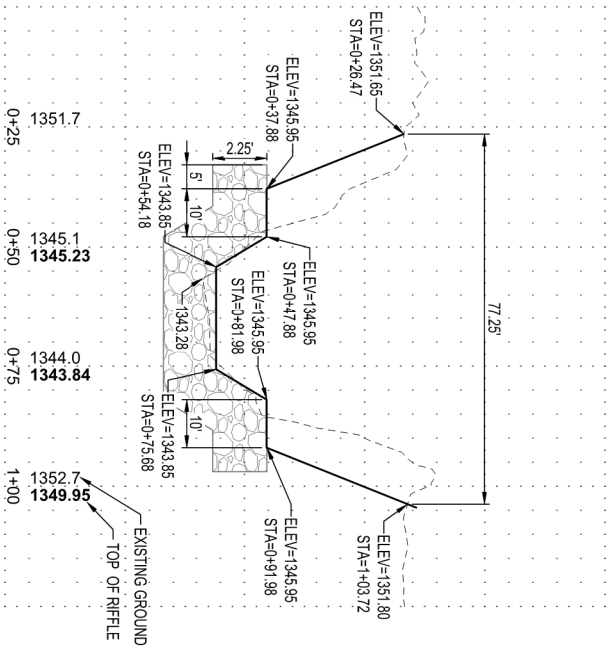
- NOTES:**
1. GRANULAR ENCASEMENT AND BACKFILL SHALL BE INCIDENTAL TO CONSTRUCTION.
 2. SPOON DIMENSIONS SHALL COMPLY WITH PIPE MANUFACTURERS SPECIFICATIONS.
 3. ALL PIPE WITH A FILL HEIGHT GREATER THAN 15 FEET SHALL BE FULLY ENCASED IN ASTM CLASS 1 MATERIAL.



NORTH RIFFLE



SOUTH RIFFLE





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PROJECT

RURAL WATER
SYSTEM #1

WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	23-30403
FILE NAME	30403-C2-EXIST
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

EXISTING SITE

SHEET

C2-10





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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

DATE	REVISION SCHEDULE	DESCRIPTION	BY

PROJECT NO.	23-30403
FILE NAME	30403-C3-OVERALL SITE
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

OVERALL SITE

SHEET

C3-10



SITE ACCESS

350TH STREET

NOTE: ALL TIED CONCRETE BLOCK MATING INCLUDES 25' DIMENSIONAL OVERRUN FOR MANUFACTURER VARIABILITY

8' BT BOTTOM DIVERSION WITH 8:1 SIDESLOPES

INSTALL 24" POLYPROPYLENE PIPE. SEE SHEET C4-30 FOR PROFILE

WETLAND #5
1.64 ACRES
NWL = 1344.50

WETLAND #1
3.50 ACRES
NWL = 1350.00

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

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0.18 ACRES

FOREBAY
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AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

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0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS

WT-B

PM-A

PM-WCS

WS-B

PMS-WCS

WS-A

PMS-A

WS-WCS

AQUIFER CONTACT
0.55 ACRES

FOREBAY
0.18 ACRES

FOREBAY
0.47 ACRES

AQUIFER CONTACT
1.12 ACRES

WT-A

WT-WCS



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PROJECT

RURAL WATER
SYSTEM #1

WETLAND
COMPLEX

HOSPERS IOWA

DATE	REVISION	SCHEDULE	DESCRIPTION	BY

PROJECT NO.	23-30403
FILE NAME	30403-C3-SITE
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

PROPOSED SITE

SHEET

C3-21



NOTE: ALL TIED CONCRETE BLOCK MATTING INCLUDES 2FT DIMENSIONAL OVERRUN FOR MANUFACTURER VARIABILITY



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PROJECT

RURAL WATER
SYSTEM #1

WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE

DATE	DESCRIPTION	BY

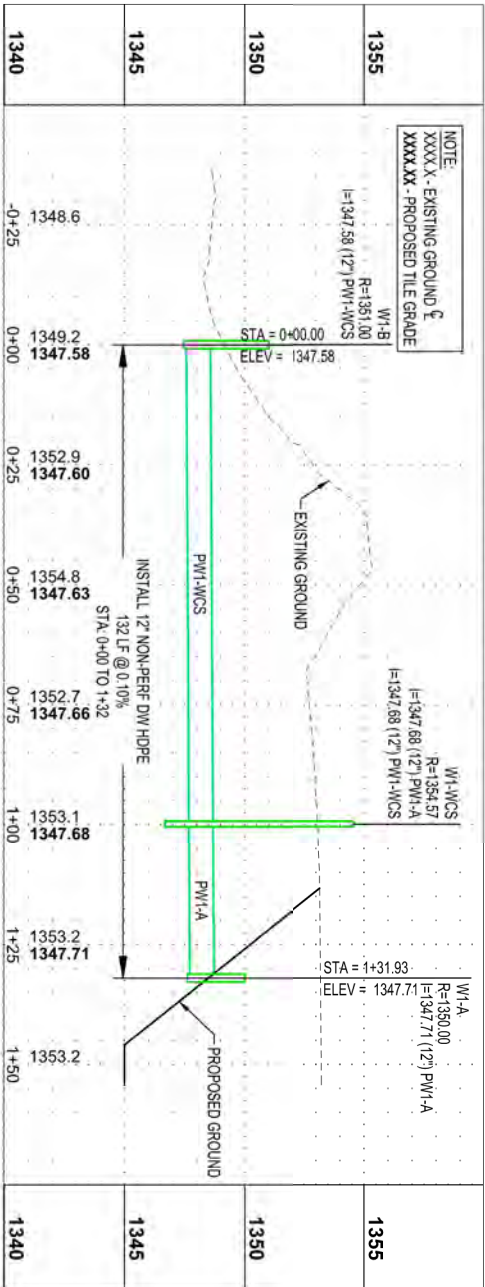
PROJECT NO.	23-30403
FILE NAME	30403-C3-PROFILE
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDM
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

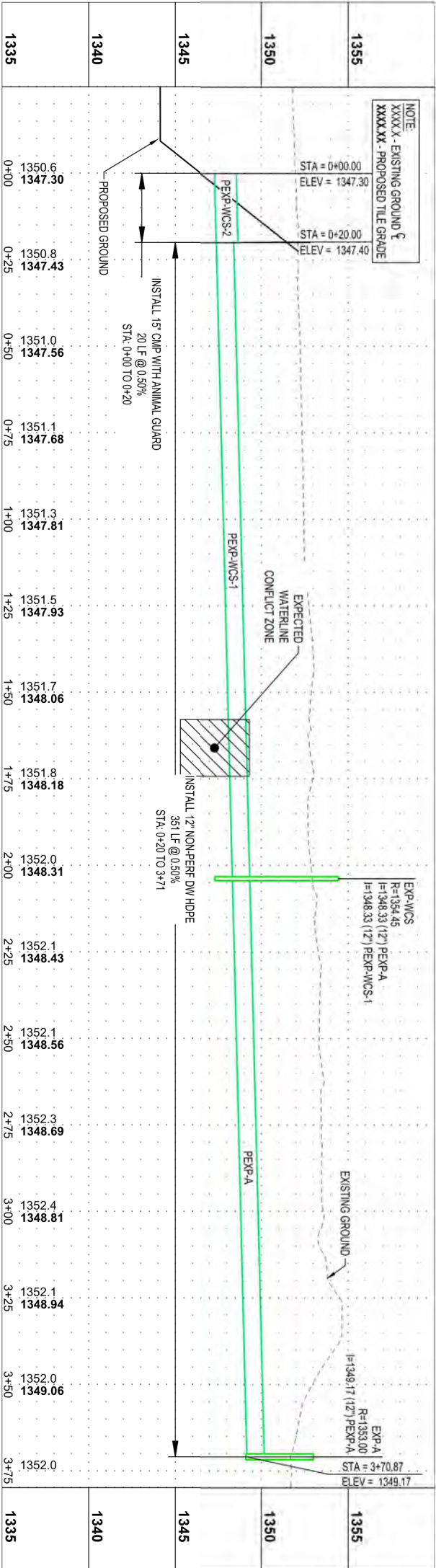
PIPE PROFILES

SHEET

C3-30



NORTH EXISTING POND TO WETLAND 2





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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE	
DATE	DESCRIPTION

PROJECT NO.	23-30403
FILE NAME	30403-C3-PROFILE
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

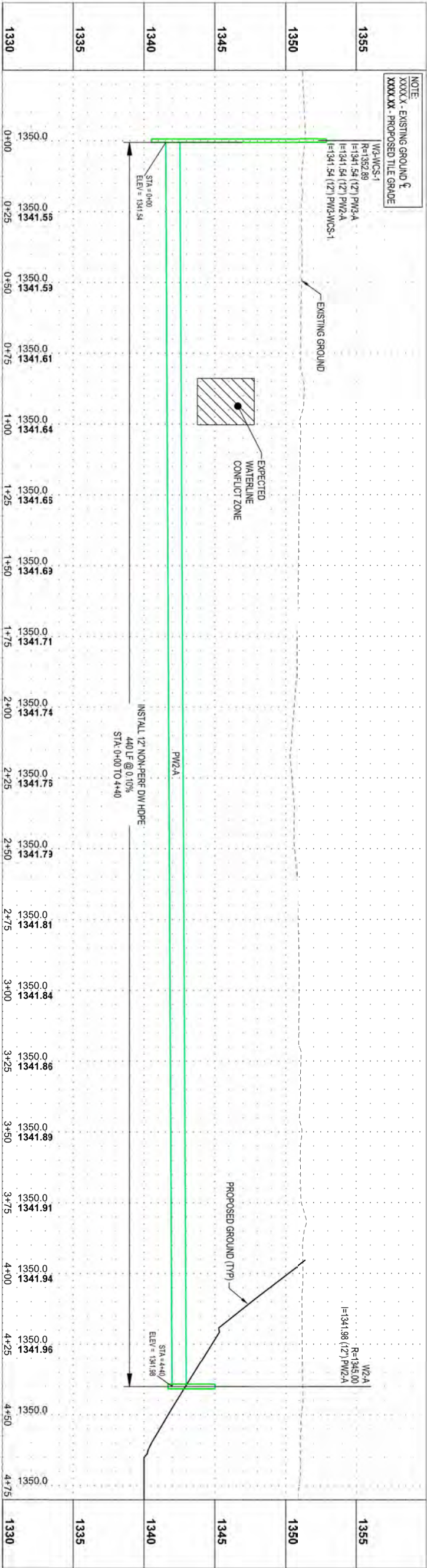
TITLE

PIPE PROFILES

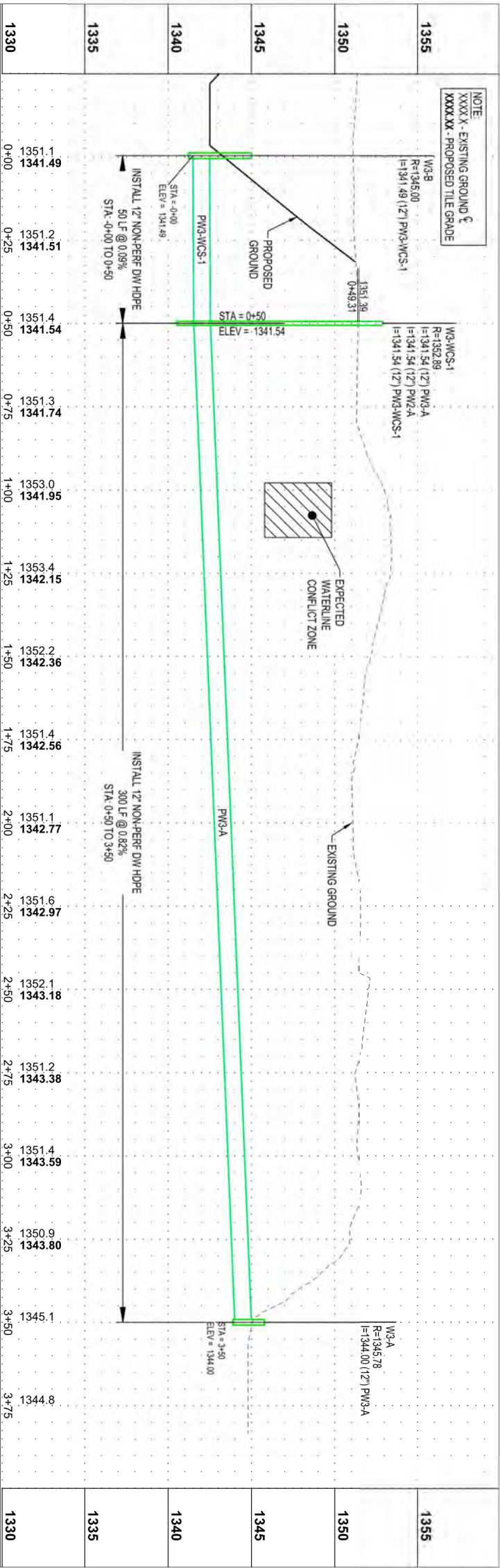
SHEET

C3-31

WETLAND 2 OUTLET



WETLAND 3 TO EXISTING SOUTH POND





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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE	
DATE	DESCRIPTION

PROJECT NO.	23-30403
FILE NAME	30403-C3-PROFILE
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

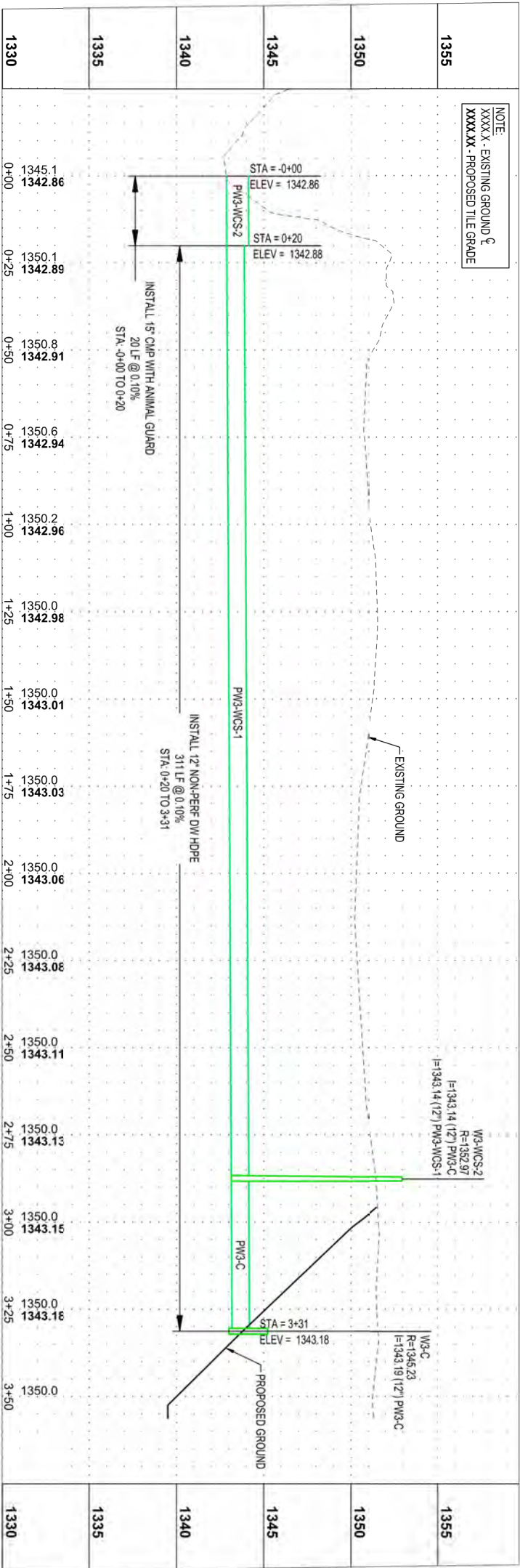
TITLE

PIPE PROFILES

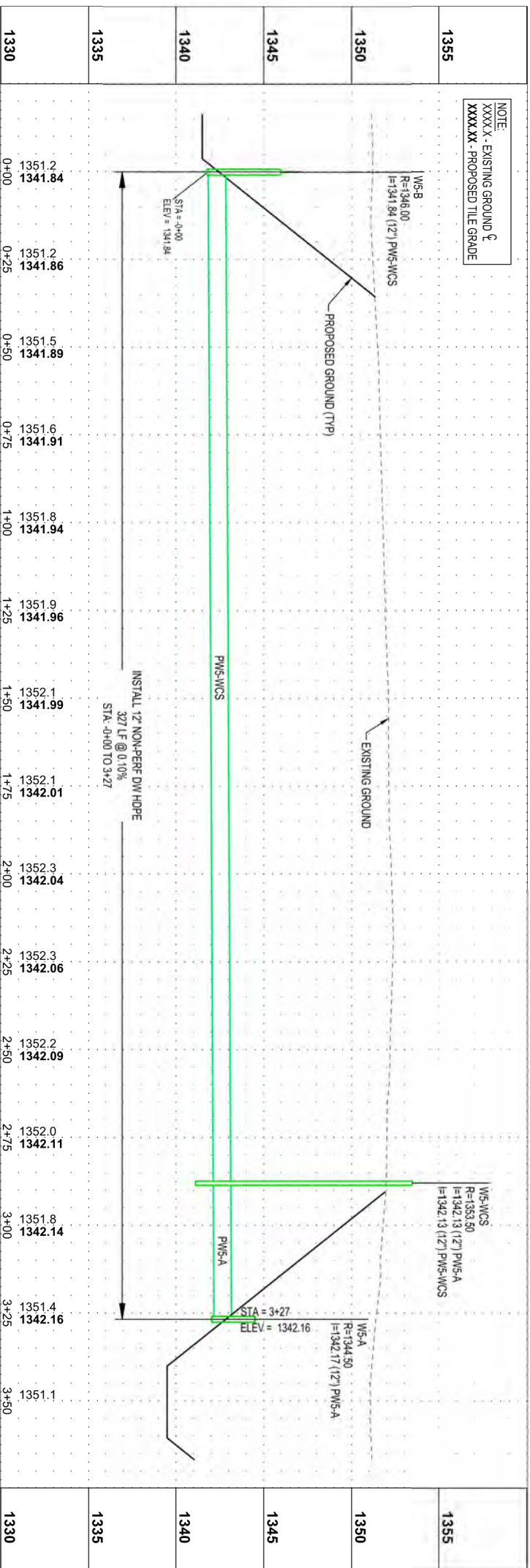
SHEET

C3-32

WETLAND 3 TO FLOYD RIVER



WETLAND 5 TO WETLAND 4





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PROJECT

RURAL WATER
SYSTEM #1

WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE

DATE	DESCRIPTION	BY

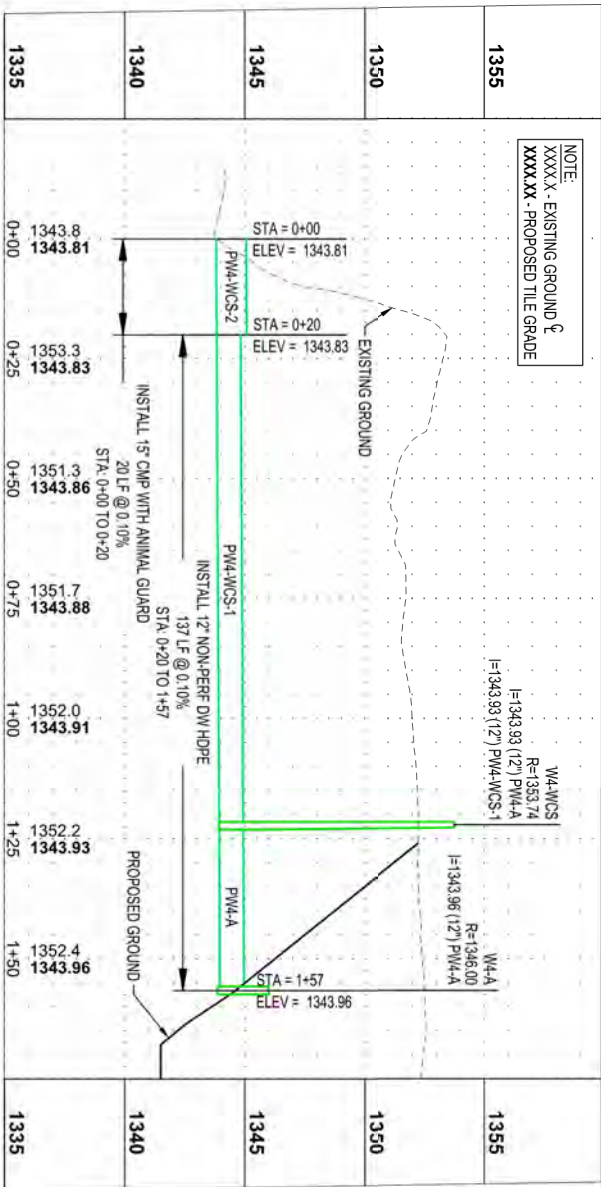
PROJECT NO.	23-30403
FILE NAME	30403-C3-PROFILE
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

PIPE PROFILES

SHEET

WETLAND 4 TO FLOYD RIVER





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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

DATE	REVISION SCHEDULE	DESCRIPTION	BY

PROJECT NO.	23-30403
FILE NAME	30403-C4-OVERALL GRAD
DRAWN BY	JMT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	

TITLE

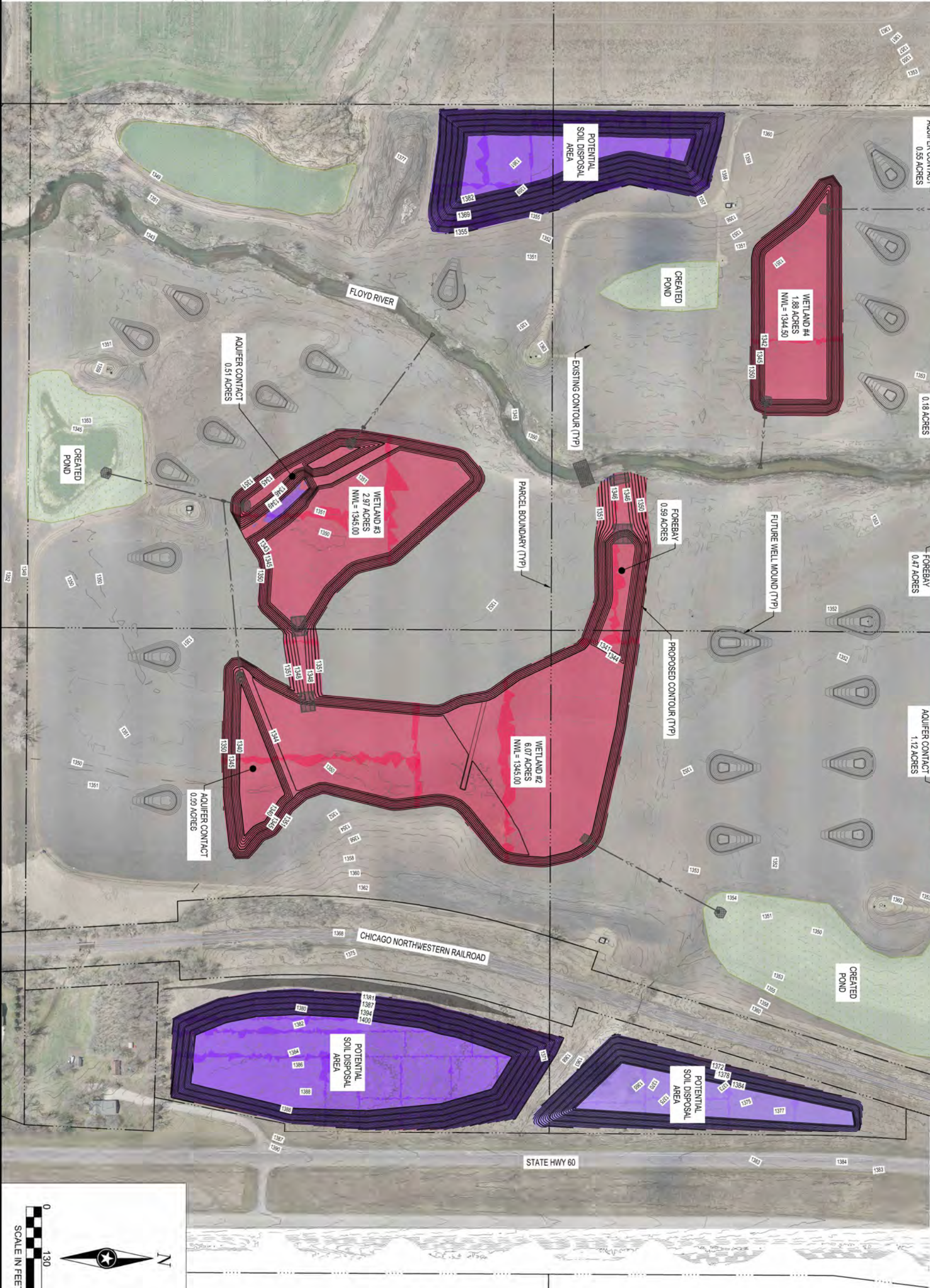
OVERALL
GRADING

SHEET

C4-10

EARTHWORK LEGEND			
<div></div>	AREA OF CUT	278,285 CY	
<div></div>	AREA OF FILL	306,913 CY (MODELED)	

NOTE: GRADING FOR FUTURE WELL MOUNDS IS NOT INCLUDED ON THIS PROJECT





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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

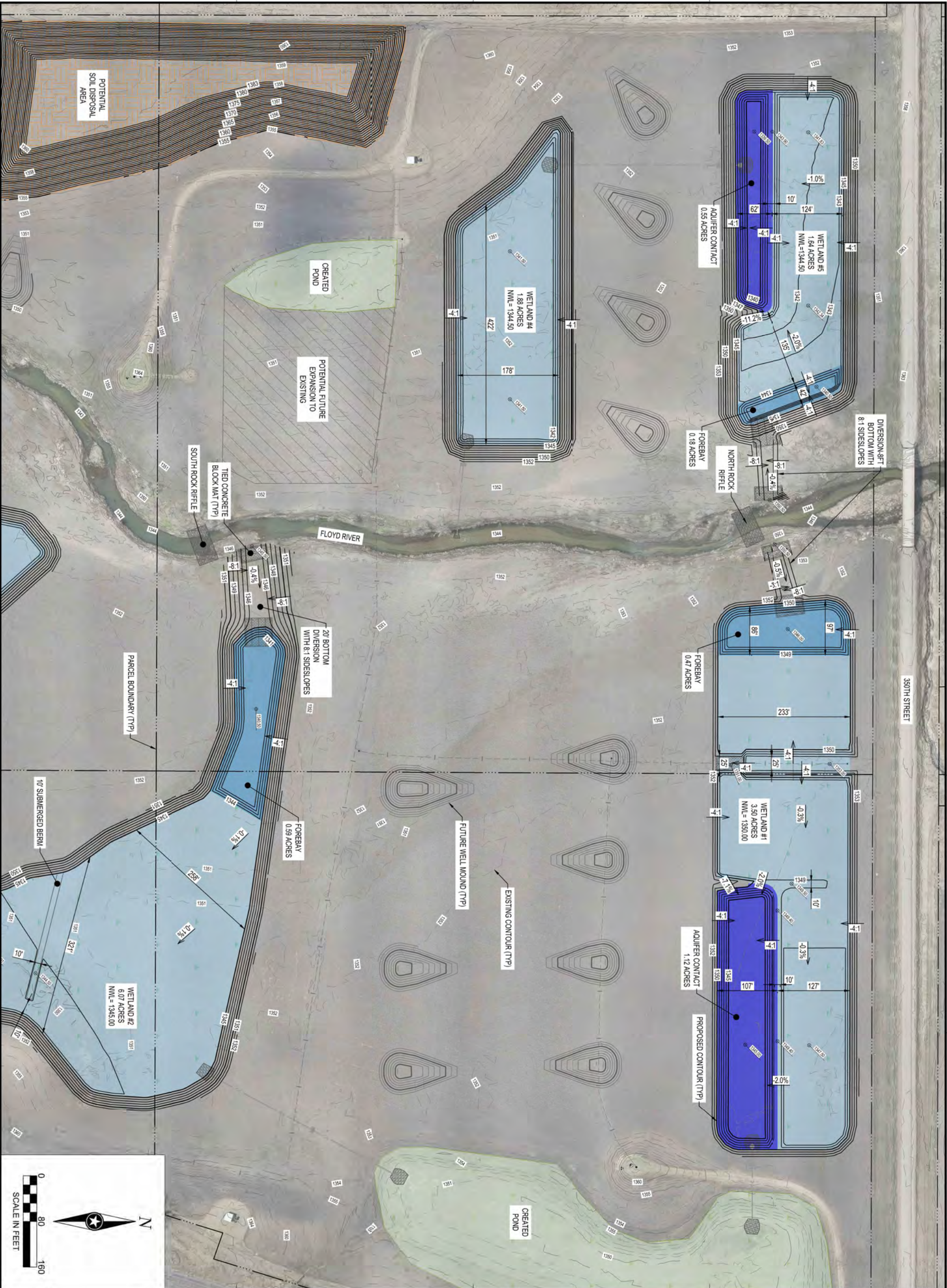
DATE	REVISION SCHEDULE	DESCRIPTION	BY

PROJECT NO.	23-30403
FILE NAME	30403-C4-GRADING
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	

WETLAND
COMPLEX
DETAILED
GRADING

SHEET

C4-20





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PROJECT

RURAL WATER
SYSTEM #1

WETLAND
COMPLEX

HOSPERS IOWA

DATE	REVISION SCHEDULE	DESCRIPTION	BY

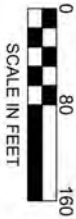
PROJECT NO.	23-30403
FILE NAME	30403-C4-GRABDE
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

DETAILED
GRADING

SHEET

C4-21





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PROJECT

**RURAL WATER
SYSTEM #1
WETLAND
COMPLEX**

HOSPERS	IOWA
---------	------

[illegible]

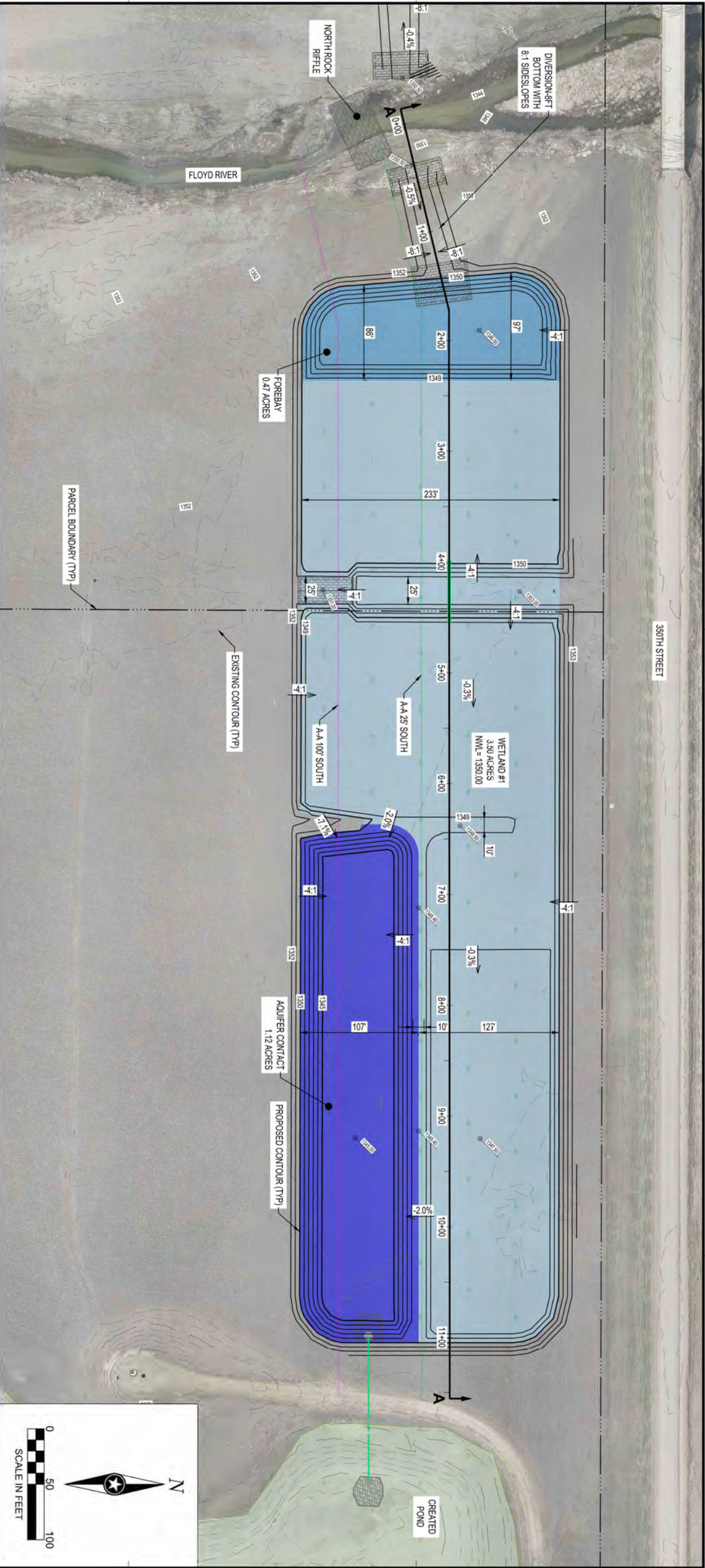
PROJECT NO.	23-30403
FILE NAME	30403-CA-CROSS SECTIONS
DRAWN BY	JAT
DESIGNED BY	RAMHPT
REVIEWED BY	CDR
ORIGINAL ISSUE DATE	4/29/2025
CLIENT PROJECT NO.	-

TITLE

CROSS SECTION (A-A)

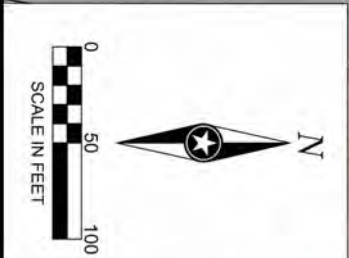
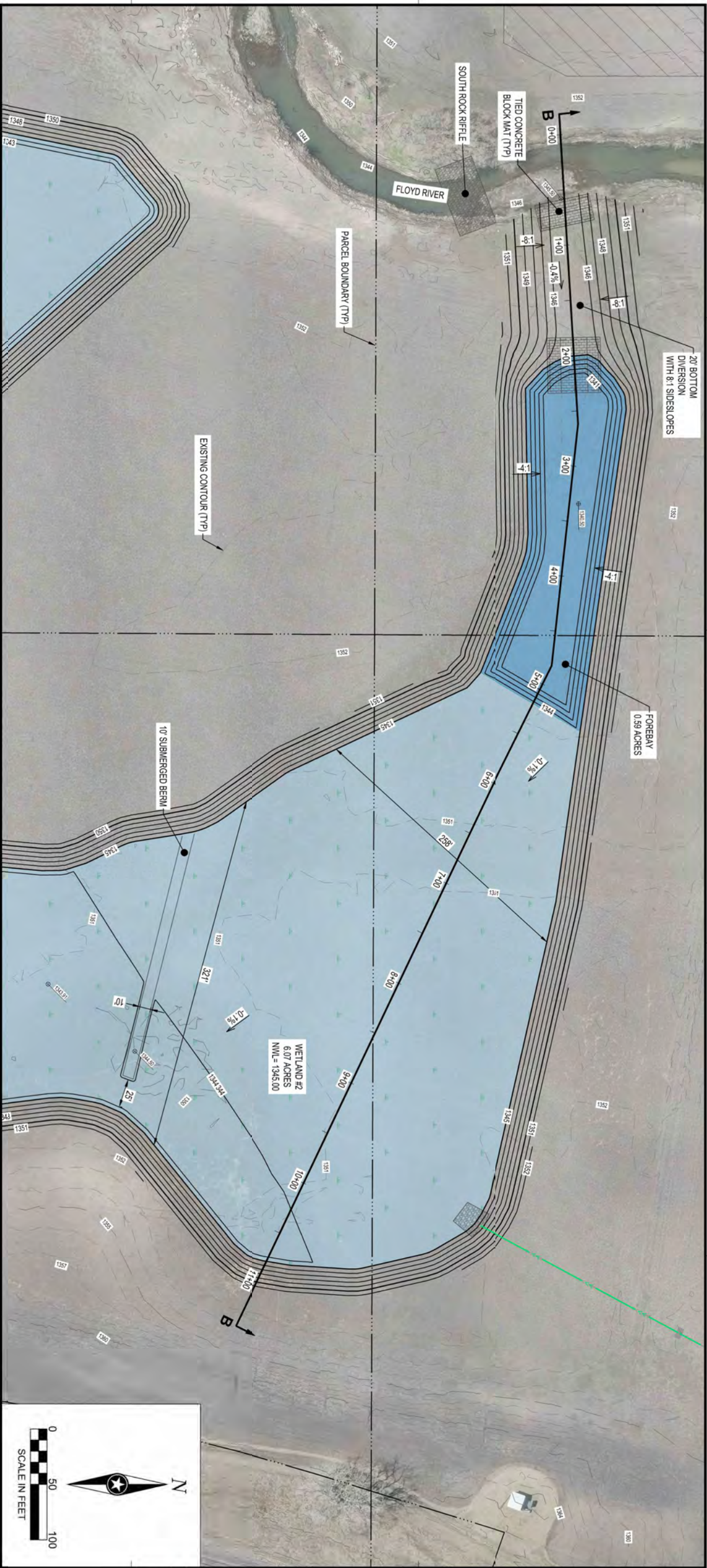
SHEET

C4-30

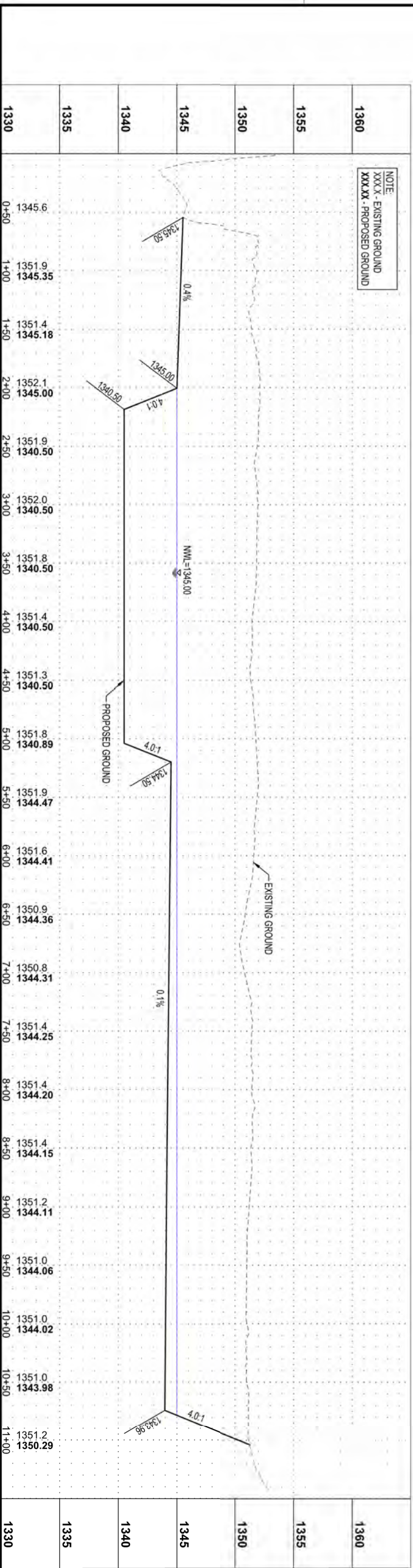


SECTION A-A

[illegible]



SECTION B-B



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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE

DATE DESCRIPTION BY

PROJECT NO.	23-30403
FILE NAME	30403-C4-CROSS SECTIONS
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CON
ORIGINAL ISSUE DATE	4/26/2025
CLIENT PROJECT NO.	-

TITLE

CROSS SECTION
(B-B)

SHEET

C4-31



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PROJECT

**RURAL WATER
SYSTEM #1
WETLAND
COMPLEX**

IOWA

[illegible]

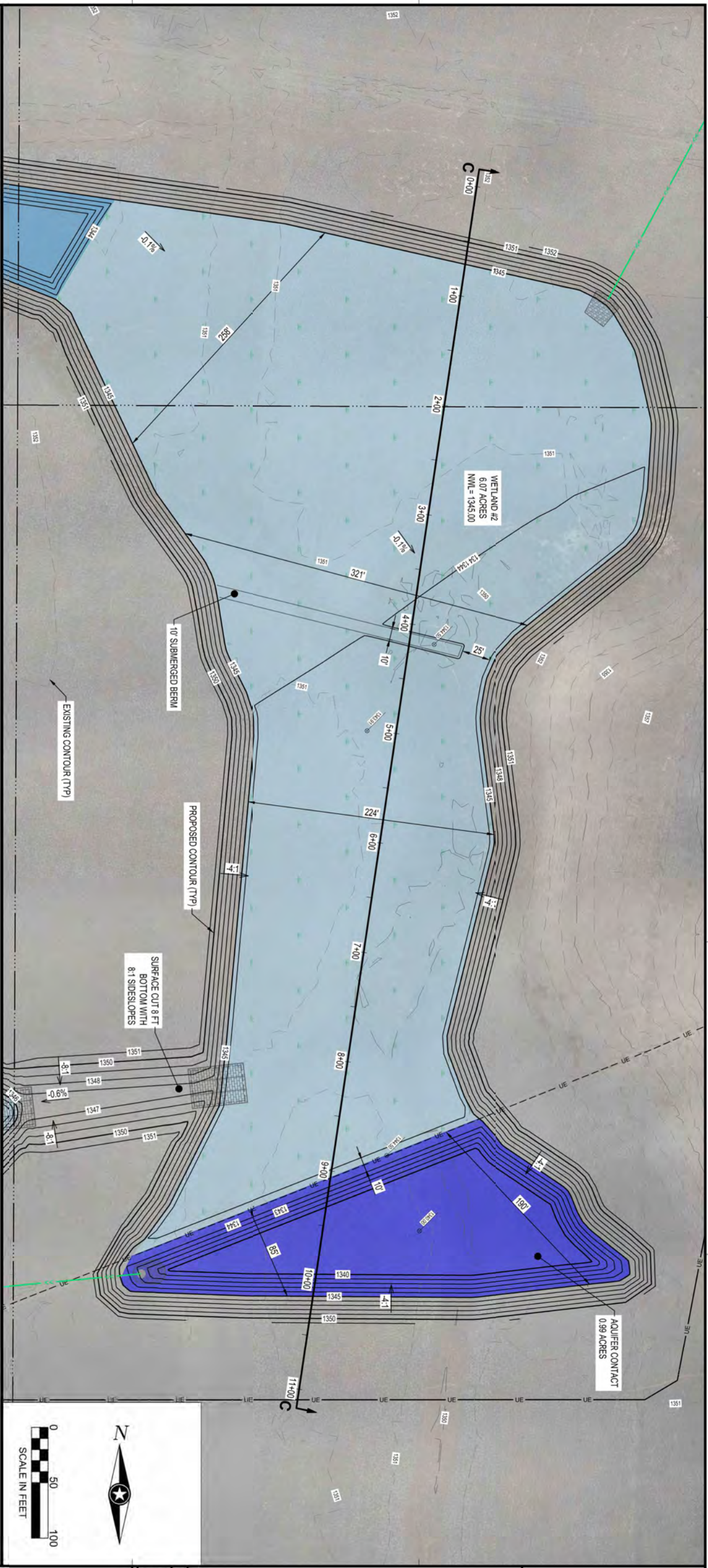
PROJECT NO.	23-30403
E NAME	30403-C4-CROSS SECTIONS
DRAWN BY	JAT
SIGNED BY	RAMMPT
VIEWED BY	CDR
ORIGINAL ISSUE DATE	12/21/2025
PROJECT NO.	

TLE

CROSS SECTION (C-C)

SHEET

C4-32



SECTION C-C

	<div>NOTE: XXX X - EXISTING GROUND XXXX X - PROPOSED GROUND</div>		
1360			
1355			
1350			
1345			
1340			
1335			
1330			

0+50	1351.8 1350.25
1+00	1351.6 1344.22
1+50	1351.3 1344.18
2+00	1351.4 1344.14
2+50	1351.1 1344.10
3+00	1350.7 1344.06
3+50	1350.2 1344.02
4+00	1349.9 1343.98
4+50	1350.1 1343.94
5+00	1350.2 1343.89
5+50	1350.7 1343.85
6+00	1350.9 1343.81
6+50	1350.7 1343.76
7+00	1350.1 1343.71
7+50	1350.0 1343.66
8+00	1350.5 1343.61
8+50	1351.4 1343.56
9+00	1351.6 1344.39
9+50	1351.5 1340.00
10+00	1351.4 1341.40
10+50	1351.3

1330	
1335	
1340	
1345	
1350	
1355	
1360	

[illegible]

ISG



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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE

DATE DESCRIPTION BY

PROJECT NO. 23-30403

FILE NAME 30403-C4-CROSS SECTIONS

DRAWN BY JAT

DESIGNED BY RMM/HPT

REVIEWED BY CDM

ORIGINAL ISSUE DATE 4/28/2025

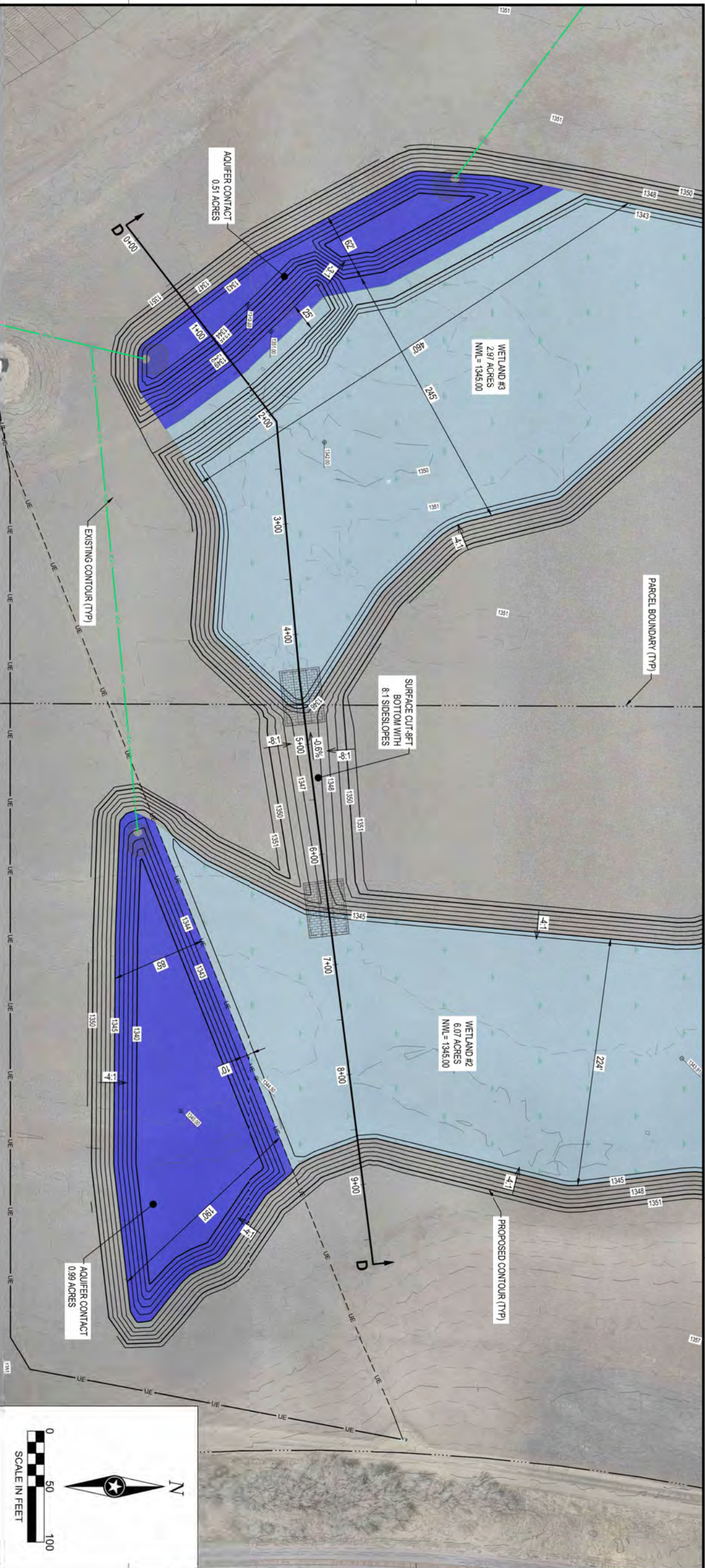
CLIENT PROJECT NO. -

TITLE

CROSS SECTION
(D-D)

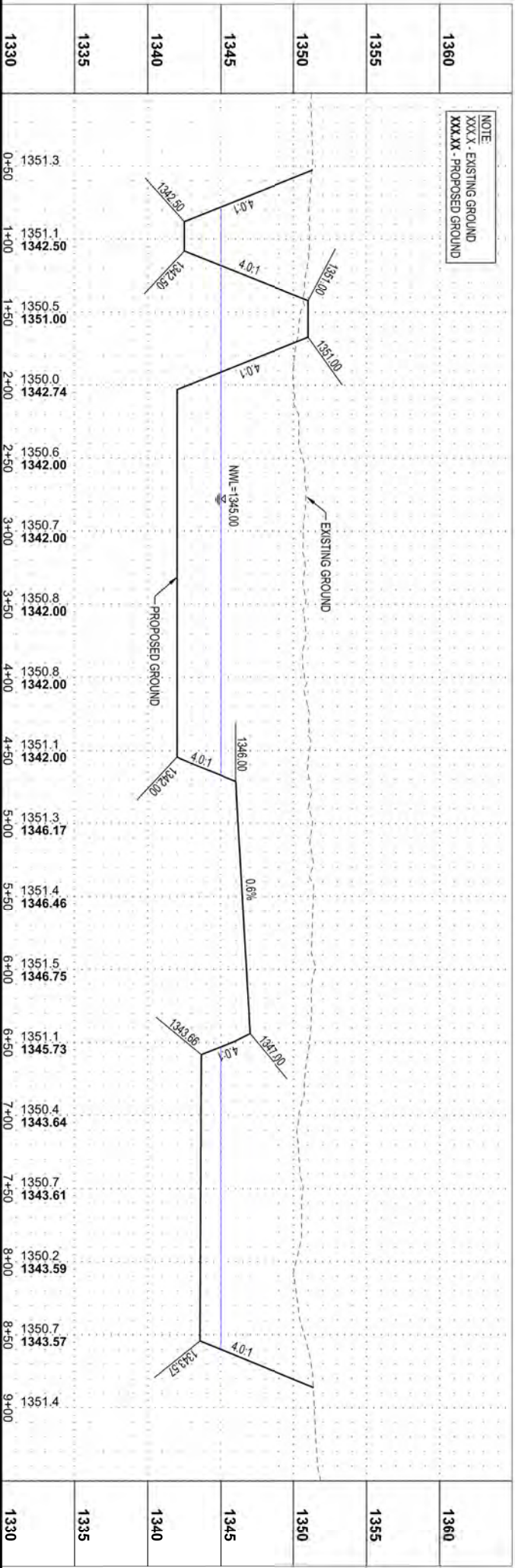
SHEET

C4-33



SECTION D-D

NOTE
XXXX - EXISTING GROUND
XXXXX - PROPOSED GROUND



ISG



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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE		BY
DATE	DESCRIPTION	

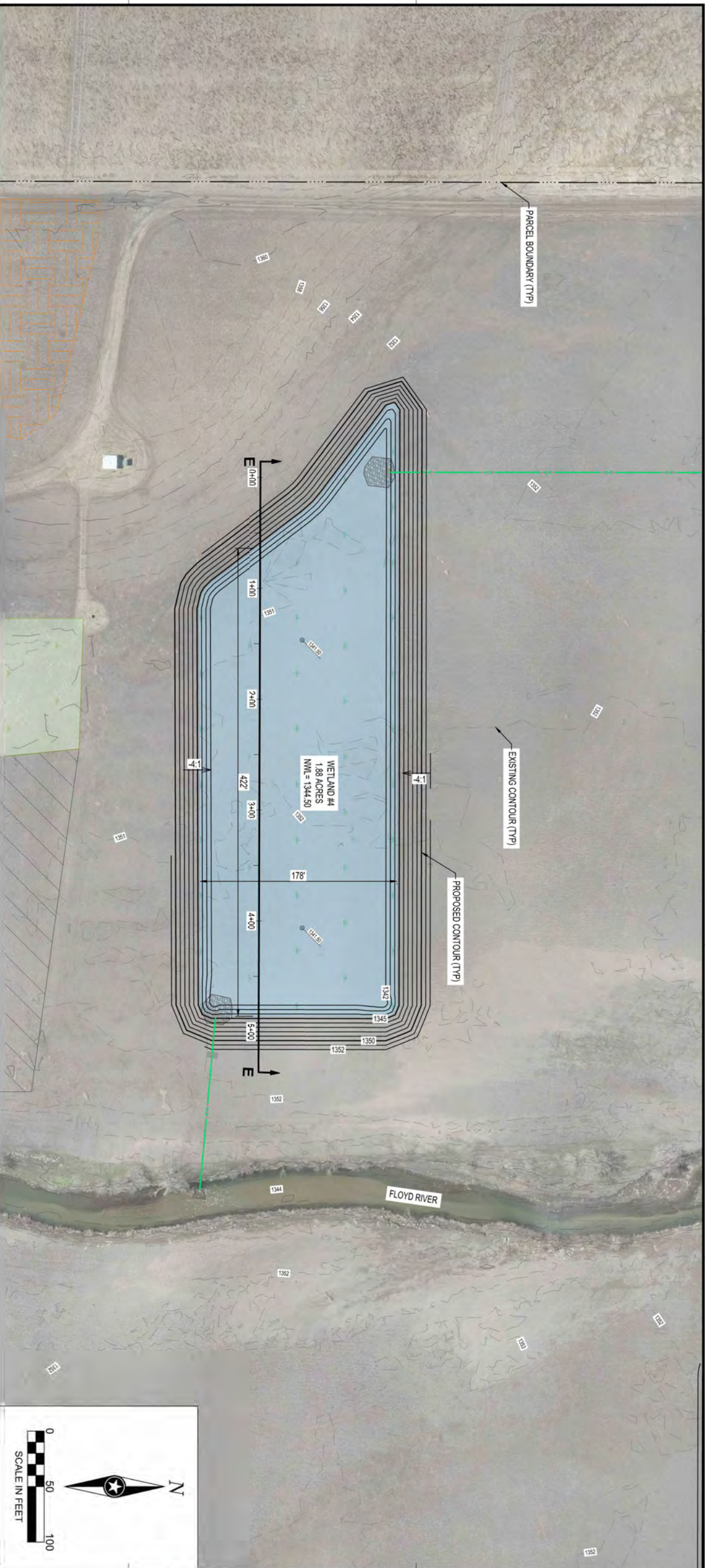
PROJECT NO.	23-30403
FILE NAME	30403-C4-CROSS SECTIONS
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

CROSS SECTION
(E-E)

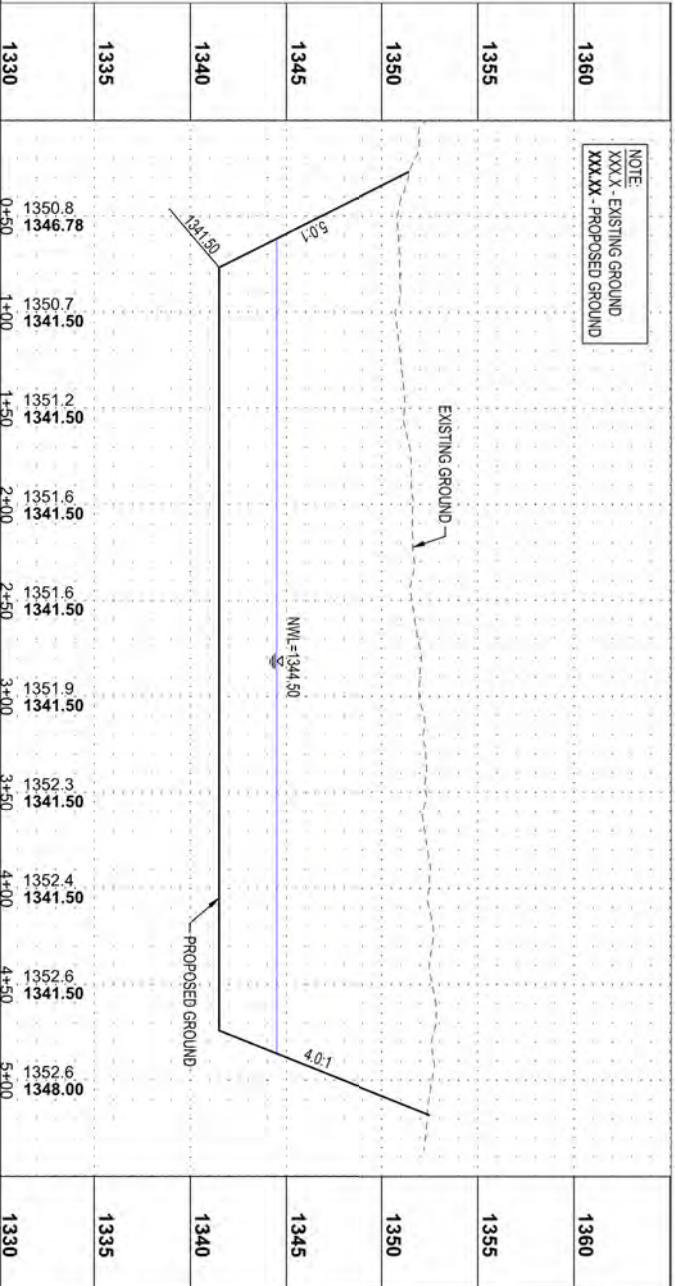
SHEET

C4-34



SECTION E-E

NOTE:
XXXX - EXISTING GROUND
XXXXX - PROPOSED GROUND





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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE		BY
DATE	DESCRIPTION	

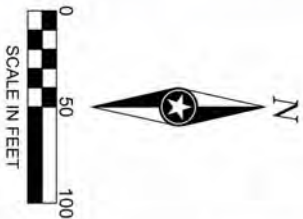
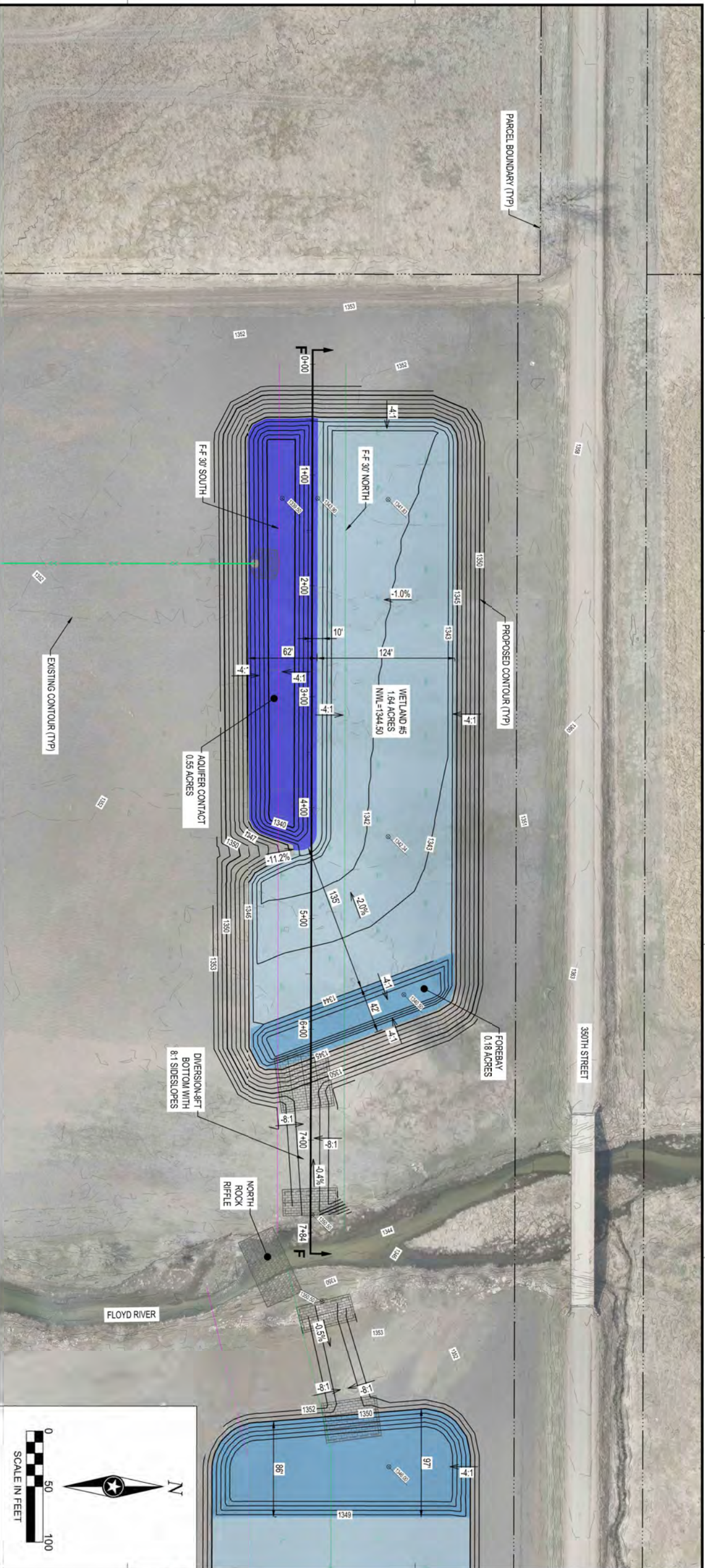
PROJECT NO.	23-30403
FILE NAME	36403-C4-CROSS SECTIONS
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	COH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

CROSS SECTION
(F-F)

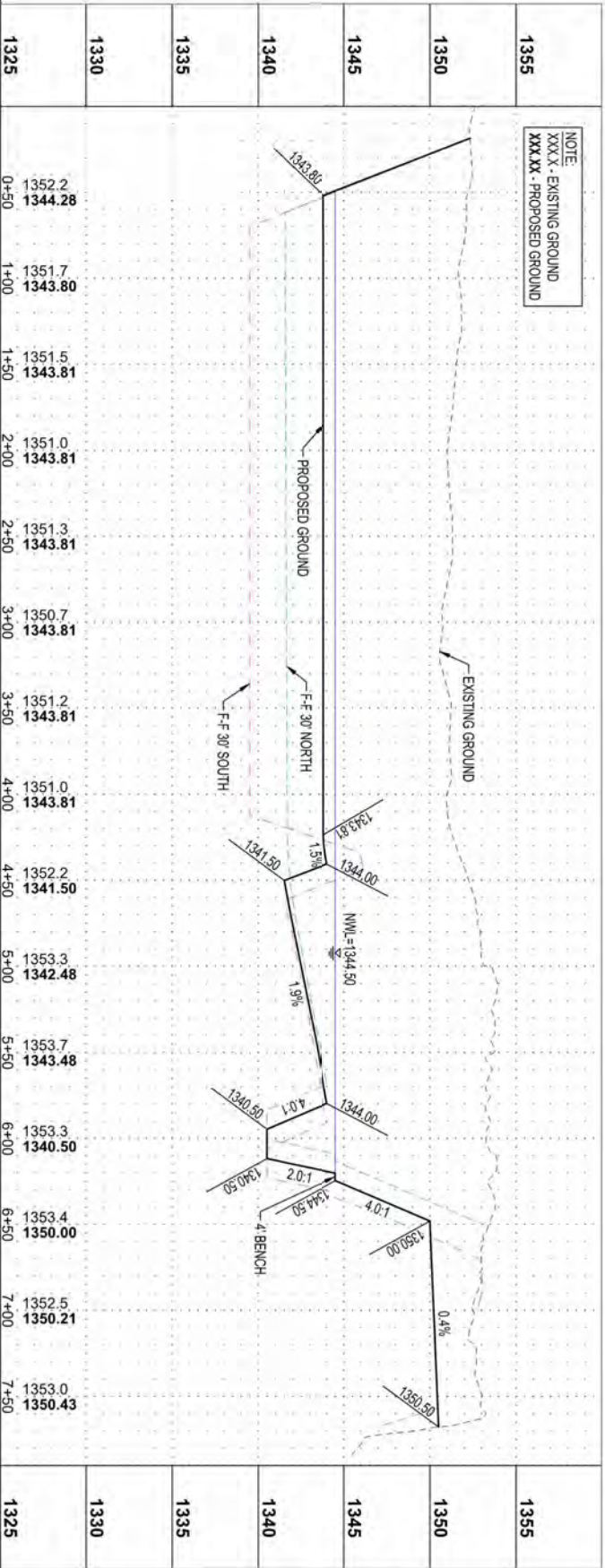
SHEET

C4-35



SECTION F-F

NOTE:
XXX.X - EXISTING GROUND
XXX.XX - PROPOSED GROUND



NOTE: IF CONTRACTOR NEGOTIATES ACCESS THROUGH ADJACENT PRIVATE PROPERTY, IDALS, RWS#1, NOR THE ENGINEER IS RESPONSIBLE FOR ANY COSTS ASSOCIATED ON PRIVATE PROPERTY AS A RESULT OF CONTRACTOR NEGOTIATIONS SUCH AS RESTORATION OR TEMPORARY ACCESS. SITE ACCESS SHALL BE MAINTAINED FOR ALL SITES TO A PUBLIC THOROUGHFARE

SITE ACCESS AREA: AREA A

THE DG FARM
CORPORATION

SITE ACCESS AREA: AREA B

NAME	VOLUME (CY)
WETLAND 1	42,565 (CUM)
WETLAND 2	106,889 (CUM)
WETLAND 3	49,885 (CUM)
WETLAND 4	35,538 (CUM)
WETLAND 5	43,888 (CUM)
WELL MOUNDS	23,731 (FILL)
TOTAL SOIL DISPOSAL	295,523 (FILL)
TOTAL CUT	278,963
TOTAL FILL	278,963
TOTAL	0

ALTERNATE ACCESS SITE C
CONTRACTOR TO COORDINATE WITH
IA DOT, IF DESIRED

PRIVATE PROPERTY
CONTRACTOR TO NEGOTIATE
ACCESS IF DESIRED

POTENTIAL
SOIL DISPOSAL
AREA
92,254 CY

AREA B

YD RIVER

AREA C

POTENTIAL
SOIL DISPOSAL
AREA
48,060 CY

POTENTIAL ROUTE SOIL
DISPOSAL AREAS
0.75 MILES

POTENTIAL
SOIL DISPOSAL
AREA
114,918 CY

SITE ACCESS AREA: AREA C

APPROXIMATE PROPERTY LINE (TYP)

DO NOT ENTER RAILROAD PROPERTY -

CHICAGO NORTHWESTERN RAILROAD

STATE HWY 60

—PRIVATE PROPERTY
CONTRACTOR TO NEGOTIATE
ACCESS IF DESIRED

[illegible]

**RURAL WATER
SYSTEM #1
WETLAND
COMPLEX**

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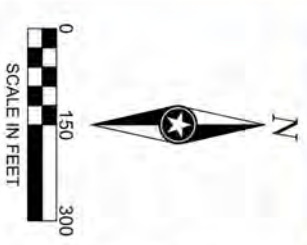


TITLE

SITE ACCESS PLAN

SHEET

C4-40





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PROJECT

RURAL WATER
SYSTEM #1
WETLAND
COMPLEX

HOSPERS IOWA

REVISION SCHEDULE		BY
DATE	DESCRIPTION	

PROJECT NO.	23-30403
FILE NAME	30403-C1-SWPPP
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

SITE
RESTORATION

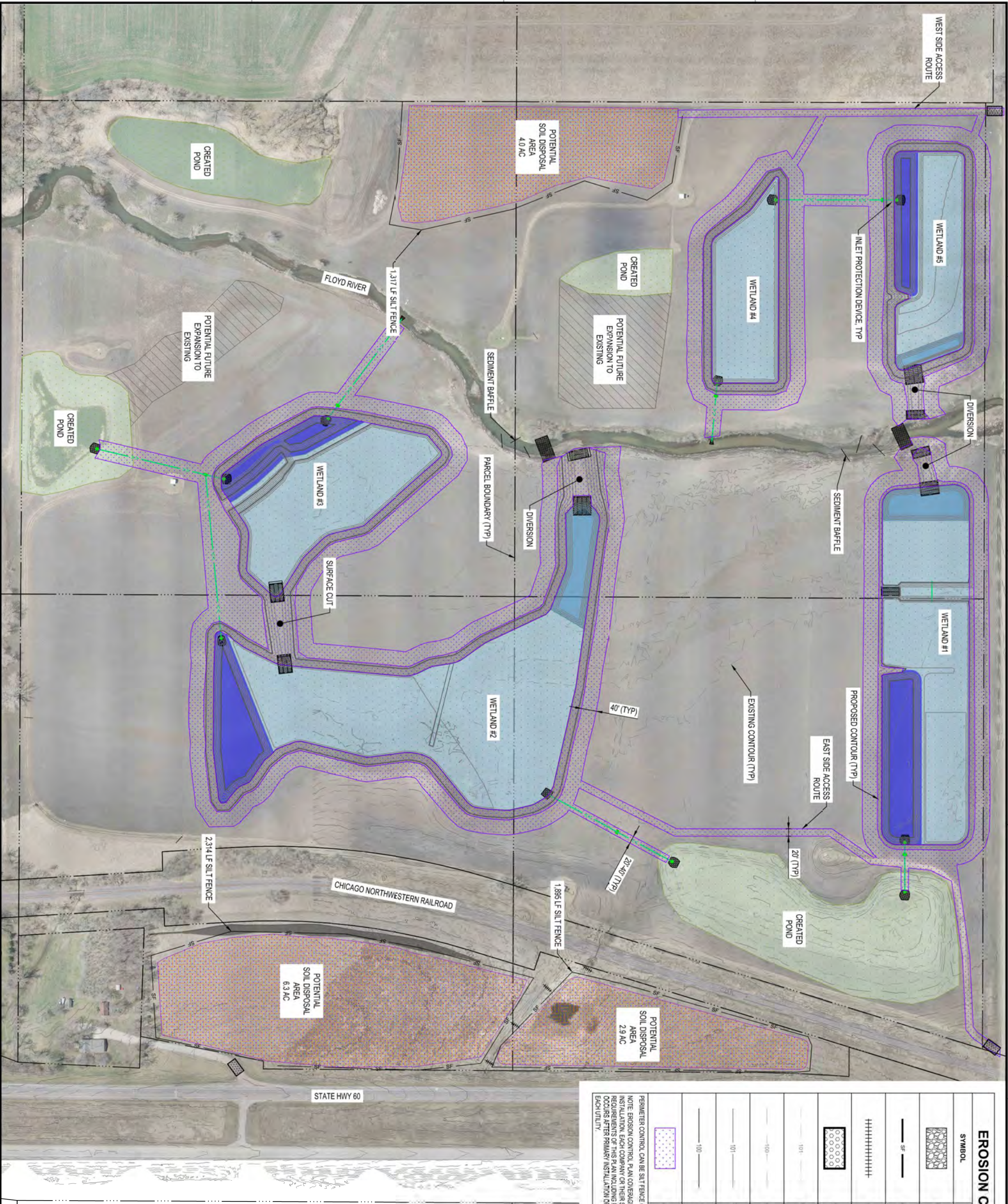
SHEET

C5-10

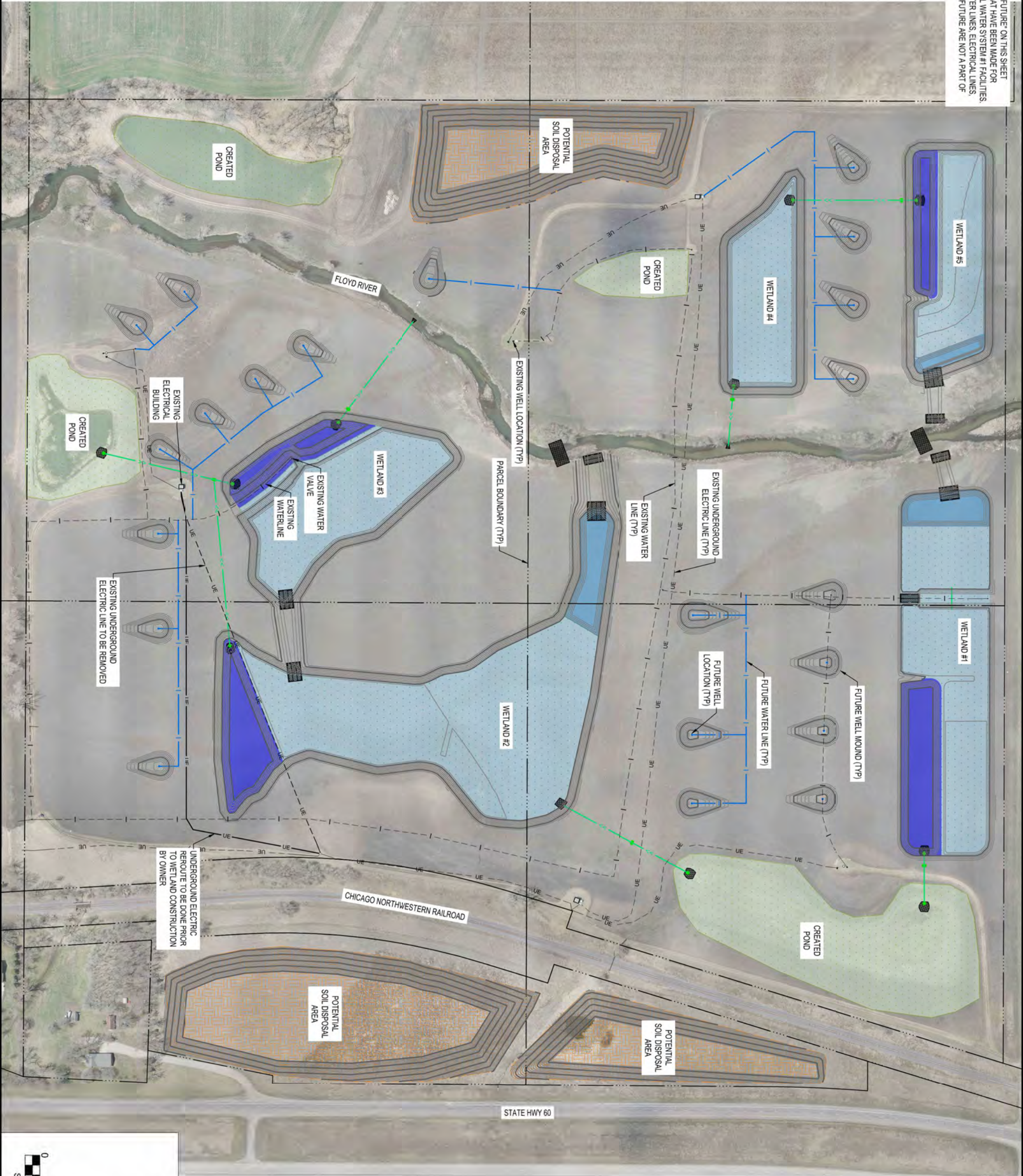
EROSION CONTROL LEGEND

SYMBOL	DESCRIPTION
	RIP RAP CLASS E
	SILT FENCE
	WATTLE
	STABILIZED CONSTRUCTION EXIT
	EXISTING CONTOUR (MINOR INTERVAL)
	EXISTING CONTOUR (MAJOR INTERVAL)
	PROPOSED CONTOUR (MINOR INTERVAL)
	PROPOSED CONTOUR (MAJOR INTERVAL)
	BUFFER SEEDING

PERIMETER CONTROL CAN BE SILT FENCE OR WATTLE
NOTE: EROSION CONTROL PLAN COVERAGE INCLUDES ELECTRIC, GAS, TELEPHONE, AND CABLE INSTALLATION. EACH COMPANY OR THEIR SUBCONTRACTOR IS RESPONSIBLE TO FOLLOW THE REQUIREMENTS OF THIS PLAN INCLUDING PROVIDING THEIR OWN RESTORATION IF INSTALLATION OCCURS AFTER PRIMARY INSTALLATION OF SEEDING/SPRINKLING/PLACING DURING CONSTRUCTION OF EACH UTILITY.



NOTE: UTILITIES LABELED AS 'FUTURE' ON THIS SHEET DEMOTE CONSIDERATIONS THAT HAVE BEEN MADE FOR FUTURE EXPANSION OF RURAL WATER SYSTEM #1 FACILITIES. PLANNED WELL MOUNDS, WATER LINES, ELECTRICAL LINES, REROUTES, ETC., LABELED AS 'FUTURE' ARE NOT A PART OF THIS PROJECT.



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PROJECT

**RURAL WATER
SYSTEM #1
WETLAND
COMPLEX**

HOSPERS IOWA

DATE	REVISION	SCHEDULE	DESCRIPTION	BY

PROJECT NO.	23-30403
FILE NAME	30403-C6-UTILITY
DRAWN BY	JAT
DESIGNED BY	RAM/HPT
REVIEWED BY	CDH
ORIGINAL ISSUE DATE	4/28/2025
CLIENT PROJECT NO.	-

TITLE

UTILITY

SHEET

C6-10

