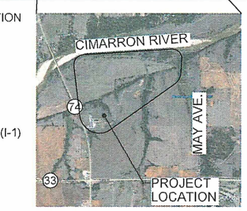
Cimarron Environmental Response Trust

Groundwater Remediation

Logan County, Oklahoma

SEPTEMBER 2022
142089

Preliminary Design Drawings



PROJECT LOCATION

ADDRESS:
100 NORTH HIGHWAY 74
GUTHRIE, OK 73044

LEGAL DESCRIPTION:
NE, NW, & SW 1/4 Sec. 12, T16N R4W I.M., NE 1/4 Sec. 11, T16N R4W I.M., Sec. 1 & 2 South of River, T16N R4W I.M.

N

NOT TO SCALE

ONE OR TWO CHARACTER DISCIPLINE DESIGNATOR (MAY NOT BE PRESENT IF CALLOUT AND TITLE ARE ON DRAWINGS WITHIN THE SAME DISCIPLINE)

LETTER OR NUMBER DESIGNATOR

A
FP001

DRAWING SEQUENCE NUMBER INDICATES WHERE TITLE IS LOCATED (MAY NOT BE PRESENT IF CALLOUT AND TITLE ARE ON THE SAME DRAWING)

SECTION, DETAIL, AND ELEVATION SYMBOL IDENTIFIERS

A
FP001

A
FP001

SECTION CALLOUT EXAMPLE

7
FP001

DETAIL CALLOUT EXAMPLE

B
A001

ELEVATION CALLOUT EXAMPLE

THE WORD "SECTION" MAY BE REPLACED WITH "ELEVATION" OR "DETAIL"

SECTION

A
001

SECTION, DETAIL, OR ELEVATION TITLE EXAMPLE

SECTION, DETAIL, AND ELEVATION IDENTIFICATION SYSTEM

GENERAL DRAWINGS

DWG. NO.	TITLE
	COVER-INDEX (I-1)
BMCD-GWREMED-G001	GENERAL NOTES (I-1)
BMCD-GWREMED-G002	NOTES, LEGEND AND ABBREVIATIONS (I-1)

CIVIL DRAWINGS

DWG. NO.	TITLE
BMCD-GWREMED-C001	EXISTING CONDITIONS (I-2)
BMCD-GWREMED-C002	OVERALL SITE PLAN AND SHEET LAYOUT KEY (I-2)
BMCD-GWREMED-C003	PARTIAL SITE PLAN - NORTH (I-2)
BMCD-GWREMED-C004	PARTIAL SITE PLAN - SOUTH (I-2)
BMCD-GWREMED-C005	PARTIAL SITE PLAN - EAST (I-2)
BMCD-GWREMED-C006	WESTERN AREA TREATMENT FACILITY GRADING PLAN AND LAYOUT (I-2)
BMCD-GWREMED-C007	WESTERN AREA TREATMENT FACILITY SITE PLAN (I-2)
BMCD-GWREMED-C008	WESTERN AREA TREATMENT INJECTION SKID LAYOUT (I-2)
BMCD-GWREMED-C009	BURIAL AREA 1 TREATMENT FACILITY SITE PLAN (I-2)
BMCD-GWREMED-C010	BURIAL AREA 1 TREATMENT INJECTION SKID (I-2)
BMCD-GWREMED-C011	1206 DRAINAGE AREA REMEDIATION PLAN (I-2)
BMCD-GWREMED-C012	UPLAND ACCESS ROADS (I-2)
BMCD-GWREMED-C101	EXTRACTION TRENCH DETAILS (I-3)
BMCD-GWREMED-C102	INJECTION TRENCH DETAILS - SHEET 1 (I-4)
BMCD-GWREMED-C103	INJECTION TRENCH DETAILS - SHEET 2 (I-4)
BMCD-GWREMED-C104	PIPE & CONDUIT TRENCH SECTIONS - SHEET 1 (I-6)
BMCD-GWREMED-C105	PIPE & CONDUIT TRENCH SECTIONS - SHEET 2 (I-6)
BMCD-GWREMED-C106	OUTFALL DETAILS (I-6)
BMCD-GWREMED-C107	MISCELLANEOUS DETAILS - SHEET 1 (I-6)

CIVIL DRAWINGS CONTINUED

DWG. NO.	TITLE
BMCD-GWREMED-C108	MISCELLANEOUS DETAILS - SHEET 2 (I-6)
BMCD-GWREMED-C109	MISCELLANEOUS DETAILS - SHEET 3 (I-6)
BMCD-GWREMED-C110	MISCELLANEOUS DETAILS - SHEET 4 (I-6)
BMCD-GWREMED-C200	WESTERN AREA TREATMENT FACILITY AND BURIAL AREA 1 SECTIONS, AND WATF UTILITY TRENCH PROFILE (I-6)

MECHANICAL DRAWINGS

DWG. NO.	TITLE
BMCD-GWREMED-M101	EXTRACTION WELL/SUMP AND VAULT DETAILS (I-3)
BMCD-GWREMED-M102	INJECTION AND EXTRACTION WELL DETAILS (I-3, I-4)
BMCD-GWREMED-M103	WESTERN AREA TREATMENT INJECTION SYSTEM LAYOUT (I-4)
BMCD-GWREMED-M104	BURIAL AREA 1 TREATMENT INJECTION SYSTEM LAYOUT (I-4)
BMCD-GWREMED-M201	CONSTRUCTION DETAILS INDEX - EXTRACTION WELLS/SUMPS (I-3)
BMCD-GWREMED-M202	CONSTRUCTION DETAILS INDEX - INJECTION WELLS (I-4)
BMCD-GWREMED-M203	PUMP SELECTION INDEX - EXTRACTION WELLS/SUMPS (I-3)

PROCESS DRAWINGS

DWG. NO.	TITLE
BMCD-GWREMED-P001	P&ID NOTES AND LEGEND (I-1)
BMCD-GWREMED-P101	WESTERN AREA GROUNDWATER EXTRACTION SYSTEM P&ID (I-3)
BMCD-GWREMED-P102	BURIAL AREA 1 GROUNDWATER EXTRACTION SYSTEM P&ID (I-3)
BMCD-GWREMED-P103	WESTERN AREA GROUNDWATER INJECTION SYSTEM P&ID - SHEET 1 (I-4)
BMCD-GWREMED-P104	WESTERN AREA GROUNDWATER INJECTION SYSTEM P&ID - SHEET 2 (I-4)
BMCD-GWREMED-P105	BURIAL AREA 1 GROUNDWATER INJECTION SYSTEM P&ID (I-4)

PROCESS DRAWINGS CONTINUED

DWG. NO.	TITLE
BMCD-GWREMED-P205	GROUNDWATER EXTRACTION AND INJECTION FLOW RATE SUMMARY (I-3, I-4)

ELECTRICAL DRAWINGS

DWG. NO.	TITLE
BMCD-GWREMED-E001	ELECTRICAL LEGEND AND ABBREVIATION (I-1)
BMCD-GWREMED-E002	ELECTRICAL GENERAL NOTES (I-1)
BMCD-GWREMED-E101	ELECTRICAL SINGLE LINE WATF (I-5)
BMCD-GWREMED-E102	ELECTRICAL SINGLE LINE BA1 (I-5)
BMCD-GWREMED-E103	CABLE AND CONDUIT SCHEDULE - SHEET 1 (I-5)
BMCD-GWREMED-E104	CABLE AND CONDUIT SCHEDULE - SHEET 2 (I-5)
BMCD-GWREMED-E105	CABLE AND CONDUIT SCHEDULE - SHEET 3 (I-5)
BMCD-GWREMED-E106	PANELBOARD SCHEDULE (I-5)
BMCD-GWREMED-E201	ELECTRICAL DETAIL SHEET 1 - CONNECTION DETAILS (I-5)
BMCD-GWREMED-E202	ELECTRICAL DETAIL SHEET 2 - DUCT BANK DETAILS (I-5)
BMCD-GWREMED-E203	ELECTRICAL DETAIL SHEET 3 - EQUIPMENT LOCATIONS (I-5)
BMCD-GWREMED-E204	ELECTRICAL COMMUNICATION SYSTEM ARCHITECTURE - SHEET 1 (I-5)
BMCD-GWREMED-E205	ELECTRICAL COMMUNICATION SYSTEM ARCHITECTURE - SHEET 2 (I-5)

no.	date	by	ckd	description
A	08/16/22	AA	MC	ISSUED FOR PRELIMINARY DESIGN

BURNS McDONNELL

PRELIMINARY - NOT FOR CONSTRUCTION

Cover-Index

GENERAL NOTES:

1. THE PROJECT SITE IS OWNED BY ENVIRONMENTAL PROPERTIES MANAGEMENT, LLC. ADDRESS: 100 NORTH HIGHWAY 74, GUTHRIE, OK 73044, PHONE: 405-642-5152.
2. THE PROJECT ENGINEER AND CONTRACTOR IS BURNS & MCDONNELL ENGINEERING COMPANY, INC. ADDRESS: 9400 WARD PARKWAY, KANSAS CITY, MO 64114, PHONE: 816-333-9400.
3. THE SUBCONTRACTOR SHALL COORDINATE ACCESS DURING CONSTRUCTION WITH CONTRACTOR, OWNER AND ADJACENT PROPERTY OWNERS. TRAFFIC MANAGEMENT SHALL BE SUBJECT TO CONTRACTOR'S APPROVAL.
4. THE LOCATIONS OF UTILITIES SHOWN HAVE BEEN DETERMINED FROM AVAILABLE INFORMATION. THEREFORE, THE RELATIONSHIP BETWEEN PROPOSED WORK AND EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE.
5. THE HORIZONTAL AND VERTICAL LOCATING OF ALL EXISTING ABOVE GROUND AND BELOW GROUND UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT GUARANTEED. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND LOCATING ALL UTILITIES IN THE PATH OF AND ADJACENT TO THE PROPOSED WORK. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE SUBCONTRACTOR SHALL CALL OKLAHOMA ONE CALL AT OKIE811 OR 1-800-522-OKIE WITH SUITABLE NOTICE FOR THEIR LOCATING AND MARKING OF PUBLIC UTILITIES. SUBCONTRACTOR SHALL NOTIFY OWNER 48 HOURS IN ADVANCE OF ONE CALL NOTIFICATION. THE SITE IS GENERALLY NOT OCCUPIED.
6. THE CONSTRUCTION DRAWINGS REPRESENT THE FINISHED WORK. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION. SUBCONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIALS, AND TOOLS NECESSARY TO COMPLETELY PERFORM THE WORK IN A SAFE, EXPEDITIOUS, AND PROFESSIONAL WORKMANLIKE MANNER. SUBCONTRACTOR SHALL COORDINATE SCHEDULE OF THE WORK WITH THE OWNER AND CONTRACTOR. SUBCONTRACTOR SHALL INSTALL EQUIPMENT AND MATERIALS PER MANUFACTURER'S RECOMMENDATIONS UNLESS NOTED OTHERWISE. THE SUBCONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR PROPER HANDLING AND INSTALLATION OF EQUIPMENT AND MATERIALS.
7. SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO ENSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ANY CLAIMS RESULTING FROM HIS/HER ACTIONS AND ACTIVITIES. VISITS TO THE SITE BY OWNER AND CONTRACTOR SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
8. THE SUBCONTRACTOR SHALL ACCEPT FULL RESPONSIBILITY FOR EQUIPMENT, MATERIALS, AND TOOLS THROUGH PROJECT COMPLETION. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SAFEGUARDING OF THE INSTALLATION AND MATERIALS/EQUIPMENT STORED ON THE SITE TO PREVENT THEFT, VANDALISM, OR DAMAGE. SUBCONTRACTOR SHALL STORE EQUIPMENT, MATERIALS, AND TOOLS IN A SECURE LOCATION (ON OR OFF-SITE).
9. SUBCONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE OF THE PROJECT LIMITS UNLESS APPROVED IN ADVANCE BY THE CONTRACTOR.
10. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPROPRIATE LICENSES AND TRADE PERMITS REQUIRED TO PERFORM THE WORK. SUBCONTRACTOR SHALL PROVIDE CERTIFICATES OF INSURANCE AND OTHER DOCUMENTATION REQUIRED BY JURISDICTIONAL AGENCIES BEFORE PERFORMING THE WORK.
11. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA REQUIREMENTS AND THE CIMARRON ENVIRONMENTAL RESPONSE TRUST SITE-SPECIFIC HEALTH & SAFETY PLAN (BURNS AND MCDONNELL).
12. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
13. THESE NOTES AND OTHER DRAWING NOTES CONTAINED HEREWITH ARE PROVIDED TO MEET SPECIFIC REQUIREMENTS AND TO SUPPLEMENT THE CONTRACT DOCUMENTS. THESE NOTES NEITHER REPLACE NOR OVERRIDE THE PROVISIONS AND REQUIREMENTS OF THE CONTRACT DOCUMENTS.
14. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH ANY SHOP DRAWINGS PROVIDED BY SUPPLIERS. ALL SHOP DRAWINGS PROVIDED BY OTHERS SHALL BE SUBMITTED TO THE CONTRACTOR FOR REVIEW PRIOR TO THE FABRICATION OF MATERIAL OR THE PURCHASE OF NON-RETURNABLE STOCK. DIMENSIONAL REVIEW IS THE SUBCONTRACTOR'S RESPONSIBILITY.
15. UNKNOWN SITUATIONS OR CONDITIONS NOT COVERED IN THE CONTRACT DOCUMENTS MAY ARISE DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO NOTIFY THE CONTRACTOR IF SUCH A CONDITION IS IDENTIFIED. THE PRESENCE OF OWNER, CONTRACTOR, OR THE MANUFACTURER'S REPRESENTATIVE AT THE PROJECT SITE DOES NOT RELIEVE THE SUBCONTRACTOR OF THE RESPONSIBILITY FOR A PROPER INSTALLATION.
16. ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS SHALL BE VERIFIED IN THE FIELD BY THE SUBCONTRACTOR AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED PART OF WORK.
17. ALL WORK SHOWN IS IN APPROXIMATE LOCATIONS. THE SUBCONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF/HERSELF WITH THE EXISTING CONDITIONS BEFORE SUBMITTING HIS/HER BID.
18. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR: 1) PROVIDING POTABLE WATER AND TEMPORARY SANITARY FACILITIES FOR SUBCONTRACTOR'S PERSONNEL, 2) FURNISH, INSTALL, AND MAINTAIN TEMPORARY UTILITIES FOR ADEQUATE CONSTRUCTION, SAFETY, AND SECURITY, 3) MODIFY, RELOCATE, AND EXTEND SYSTEMS AS WORK PROGRESSES, REPAIR DAMAGE CAUSED BY INSTALLATION OR USE OF TEMPORARY FACILITIES, AND 4) REMOVE TEMPORARY FACILITIES ON COMPLETION OF WORK OR UNTIL SERVICE OR FACILITIES ARE NO LONGER NEEDED OR ARE REPLACED BY AUTHORIZED USE OF COMPLETED PERMANENT FACILITIES.
19. THE SUBCONTRACTOR IS RESPONSIBLE FOR ESTABLISHING A STAGING AREA FOR MATERIALS AND EQUIPMENT. SUBCONTRACTOR'S STAGING AREA SHALL BE APPROVED BY CONTRACTOR OR OWNER. SUBCONTRACTOR'S STAGING AREA IS SUBJECT TO CHANGE AT THE DIRECTION OF CONTRACTOR OR OWNER AND MAY CHANGE BASED ON OPERATIONAL REQUIREMENTS OF THE PROJECT SITE.
20. REQUESTS FOR INFORMATION (RFIs) SHALL INCLUDE A DETAILED, LEGIBLE DESCRIPTION OF THE ITEM NEEDING INTERPRETATION. CONTRACTOR WILL REVIEW EACH RFI, DETERMINE ACTION REQUIRED, AND ISSUE A RESPONSE TO SUBCONTRACTOR.
21. SUBMITTALS SHALL BE APPROVED BY CONTRACTOR PRIOR TO THE INSTALLATION OF PRODUCTS ON-SITE. SUBCONTRACTOR'S INSTALLATION OF UNAPPROVED PRODUCTS IS AT SUBCONTRACTOR'S RISK AND COST.
22. SUBCONTRACTOR SHALL MIX CLEAN INJECTION TRENCH SPOILS WITH 1206 SPOILS UNTIL HOMOGENEOUS AND PLACE IN 12" LIFTS. SUBCONTRACTOR SHALL ALSO MIX CLEAN INJECTION TRENCH SPOILS WITH GETR-WU-02 SPOILS UNTIL HOMOGENOUS AND PLACE IN 12" LIFTS. RADIOLOGICAL TESTING WILL BE COMPLETED BY OTHERS AND IS SUBJECT TO APPROVAL BEFORE PROCEEDING TO THE NEXT LIFT. CONTRACTOR TO OBSERVE AND PROVIDE GUIDANCE.
23. IF ANY DISCREPANCIES ARE NOTED BETWEEN THESE CONSTRUCTION DOCUMENTS AND INFORMATION PROVIDED OR AN ERROR IS SUSPECTED, IT SHALL BE IMMEDIATELY REPORTED TO THE CONTRACTOR AND THE PROJECT MANAGER.
24. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.
25. ALL CONSTRUCTION ACTIVITY, INCLUDING OPERATION OF HEAVY MACHINERY, EXCAVATION, FILLING, GRADING, CLEARING OF VEGETATION, DISPOSAL OF WASTE, AND STOCKPILING OF MATERIAL MUST TAKE PLACE WITHIN THE APPROVED WORK AREA AS AGREED UPON BY CONTRACTOR.
26. AT A MINIMUM, THE SUBCONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL CONSTRUCTION ACCESS ROADS AND WORK AREAS DURING CONSTRUCTION OF THE PROJECT IN ORDER TO MAINTAIN SAFE AND OPERABLE WORK CONDITIONS.
27. NOISE IMPACTS FROM CONSTRUCTION SHALL BE MINIMIZED AND MITIGATED TO THE EXTENT POSSIBLE. SUBCONTRACTOR SHALL MAINTAIN ALL EQUIPMENT IN GOOD OPERATING CONDITIONS AND ALL MOTORS AND ENGINES WILL BE MUFFLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND WILL COMPLY WITH STATE ENVIRONMENTAL LAW.
28. FUGITIVE DUST RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE BY IMPLEMENTING APPROPRIATE CONTROL MEASURES. DUST SHALL BE ELIMINATED FROM STOCKPILED SOILS, UNPAVED ROADS, ETC. BY THE APPLICATION OF WATER OR STONE, RESPECTIVELY, AS NECESSARY. A WATERING VEHICLE SHALL BE AVAILABLE FOR THE DURATION OF PROJECT ACTIVITIES, AND THROUGHOUT RESTORATION.
29. ALL INJECTION SUPPLY PIPE BENDS SHALL BE SWEEP FITTINGS.

CIVIL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
2. PRIOR TO FILL MATERIAL PROCUREMENT, SUBCONTRACTOR SHALL SUBMIT TO CONTRACTOR DOCUMENTATION DEMONSTRATING ALL IMPORTED FILL MATERIAL IS CLEAN (NOT CONTAMINATED) AND SUITABLE FOR USE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS, AND PROJECT SPECIFICATIONS.
3. SUBCONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO A CONDITION EQUAL TO OR BETTER THAN PRE-CONSTRUCTION CONDITIONS. TREES SPECIFIED FOR REMOVAL SHALL NOT BE REPLACED.
4. SUBCONTRACTOR SHALL PROTECT THE WORK AREAS WITH APPROPRIATE FENCING, BARRICADES, AND SIGNAGE.
5. ALL WORK SHALL BE DONE TO THE LINES, SLOPES, THICKNESS, AND GRADES INDICATED IN THE CONTRACT DRAWINGS. ALL ESTABLISHED MONUMENTS, BENCHMARKS, REFERENCE POINTS, STAKES, AND OTHER CENTRAL POINTS SHALL BE PRESERVED BY THE SUBCONTRACTOR. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR IN WRITING OF BENCHMARKS, REFERENCE LINES, OR OTHER CONTROL POINTS WHICH MAY HAVE BEEN DISTURBED OR WHICH APPEAR TO BE OFF LINE OR GRADE.
6. DISTURBED AREAS SHALL BE SEEDED, FERTILIZED, AND STABILIZED (WITH VEGETATIVE MULCH) IN ACCORDANCE WITH THE ODOT COMMISSION SPECIFICATIONS. SEED MIXTURE SHALL BE IN ACCORDANCE WITH TABLE 735.1 OF THE ODOT COMMISSION CHAPTER 735. SUBMIT SEED MIXTURE TO CONTRACTOR FOR APPROVAL PRIOR TO APPLICATION. DISTURBED AREAS SHALL HAVE ESTABLISHED 90% VEGETATION COVERAGE TO BE ACCEPTABLE.

ACCESS ROAD NOTES

1. MIRAFI RS580i WOVEN GEOTEXTILE OR ENGINEER APPROVED EQUIVALENT SHALL BE PLACED ON THE PREPARED SUBGRADE AND STRETCHED AS TIGHT AND AS FLAT AS PRACTICAL.
2. THE GEOTEXTILE SHALL BE LAID IN THE DIRECTION OF CONSTRUCTION TRAFFIC AND PER MANUFACTURER'S RECOMMENDATIONS. GEOTEXTILE PANELS SHOULD BE OVERLAPPED BOTH SIDE-TO-SIDE AND END-TO-END. OVERLAP SHALL BE PER MANUFACTURER'S SPECIFICATIONS OR A MINIMUM OF 18-INCHES, WHICHEVER IS GREATER.
3. THE FIRST FIVE FEET OF PLACED GEOTEXTILE ON EACH LATERAL ADJACENT TO THE ACCESS ROAD SHALL BE CUT AND LAID AS A SEPARATE SECTION.
4. SOIL, ROCKS, OR PINS APPROVED BY ENGINEER CAN BE USED TO HOLD FABRIC EDGES AND OVERLAPS DOWN UNTIL THE AGGREGATE IS PLACED TO PREVENT IT FROM LIFTING DURING PLACEMENT OF THE FIRST AGGREGATE LIFT. ON CURVES, THE GEOTEXTILE MAY BE FOLDED OR CUT TO CONFORM TO THE CURVE.
5. THE INITIAL LIFT OF AGGREGATE SHALL BE PLACED, SPREAD AND COMPACTED ON THE GEOTEXTILE FABRIC IN A 6-INCH LIFT. DO NOT OPERATE EQUIPMENT DIRECTLY ON GEOTEXTILE FABRIC.
6. TO THE EXTENT POSSIBLE IN THE FLOODPLAIN (WAA), MAINTAIN EXISTING DRAINAGE PATTERNS WITH ROAD CONSTRUCTION AND GRADING WHILE PROVIDING POSITIVE DRAINAGE OF ROADS. SPOIL EXCESS MATERIAL ON EITHER SIDE OF NEW ROAD AND TAPER TO EXISTING GRADE WHERE POSSIBLE TO MAINTAIN DRAINAGE, OR SPOIL EXCESS MATERIAL IN THE AREA INDICATED ON THE DRAWINGS, OR AS APPROVED BY THE CONTRACTOR, AND RESTORE IN ACCORDANCE WITH NOTES ABOVE.

COORDINATION AND COMMUNICATION:

1. SUBCONTRACTOR SHALL APPOINT A PRIMARY CONSTRUCTION SUPERINTENDENT, SUBJECT TO THE APPROVAL OF THE CONTRACTOR AND OWNER, WHO SHALL BE PRESENT ON THE CONSTRUCTION SITE AT ALL TIMES DURING WORKING HOURS AND ACCESSIBLE AT ALL TIMES WHILE WORK IS IN PROGRESS. WHEN THE SUBCONTRACTOR'S PRIMARY CONSTRUCTION SUPERINTENDENT IS NOT AVAILABLE ON THE CONSTRUCTION SITE, AN ALTERNATE REPRESENTATIVE SHALL BE PROVIDED. SUBCONTRACTOR SHALL PROVIDE NAMES AND CONTACT INFORMATION OF REPRESENTATIVES TO THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. IN ACCORDANCE WITH SNM-928, SUBCONTRACTORS ARE PROHIBITED FROM ACCESSING THE SITE UNLESS SPECIFICALLY DESIGNATED CONTRACTOR OR OWNER PERSONNEL ARE PRESENT.
2. SUBCONTRACTOR IS RESPONSIBLE FOR SUBMITTING ALL PRELIMINARY AND UPDATED CONSTRUCTION PROGRESS SCHEDULES, PROCUREMENT SCHEDULES, SCHEDULE OF SUBMITTALS AND SCHEDULE OF VALUES WITH INPUT AND COMMITMENTS FROM SUBCONTRACTORS AND SUPPLIERS.
3. CONTRACTOR WILL SCHEDULE AND CONDUCT DAILY SAFETY MEETINGS AND WEEKLY PROGRESS MEETINGS. SUBCONTRACTOR SHALL BE PREPARED TO DISCUSS CURRENT CONSTRUCTION PROGRESS AND ANY ANTICIPATED FUTURE CHANGES TO SCHEDULE.
4. THE SUBCONTRACTOR SHALL COORDINATE ACCESS DURING CONSTRUCTION WITH CONTRACTOR, OWNER, AND ADJACENT SITE PROPERTY OWNERS.

CONSTRUCTION LAYOUT AND SURVEYING NOTES:

1. SUBCONTRACTOR SHALL PROVIDE NEATLY RED MARKED DRAWINGS IDENTIFYING ANY MODIFICATIONS TO THE CONTRACT DOCUMENTS AND INDICATING CONFORMANCE TO CONSTRUCTION RECORD CONDITIONS TO THE CONTRACTOR UPON COMPLETION OF THE WORK.
2. THE CONTRACTOR SHALL REVIEW COMPLETENESS, ACCURACY, AND FORMAT OF SUBMITTED RECORD DRAWINGS. IF THE RECORD DRAWINGS ARE CONSIDERED UNACCEPTABLE, THEY SHALL BE RETURNED TO THE SUBCONTRACTOR FOR CORRECTION AND RESUBMITTED AT SUBCONTRACTOR'S EXPENSE.
3. SUBCONTRACTOR SHALL MAKE AVAILABLE ALL SURVEYS IN AUTOCAD 2018 (OR NEWER) FORMAT AND SHALL PROVIDE SURVEY POINTS IN .CSV FILE FORMAT.
4. CONTRACTOR MAY DIRECT SUBCONTRACTOR TO ALTER THE ALIGNMENTS, LENGTHS, AND DEPTHS OF INJECTION AND EXTRACTION TRENCHES BASED ON FIELD OBSERVATION.
5. TOPOGRAPHY FEATURES AND AERIAL IMAGERY SHOWN ARE FROM A GROUND SURVEY DATED JULY 2014, AND AN AERIAL SURVEY DATED MAY 2014. TOPOGRAPHY UPDATED WITH GROUND SURVEY PERFORMED NOVEMBER 11, 2016 WITHIN BOUNDARIES INDICATED ON C001.

no.	date	by	ckd	description
A	08/22/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Enviornmental Response Trust
GENERAL NOTES

project	contract
142089	-

drawing: BMCD-GWREMED-G001 — rev. A

sheet of sheets

file G001 GEN-NOTES-AB.DWG

EROSION CONTROL NOTES:

1. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL MEASURES REQUIRED AND AS A RESULT OF SUBCONTRACTOR'S ACTIVITIES. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION AT THE SITE.
2. CONTRACTOR WILL PROVIDE THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) TO SUBCONTRACTOR . SUBCONTRACTOR SHALL REVIEW SWPPP PRIOR TO PREPARING AND SUBMITTING A BID.
3. SUBCONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY, OWNER, OR CONTRACTOR. ADDITIONAL CONTROLS SHALL BE IMPLEMENTED AS DICTATED BY THE SITE CONDITIONS AT SUBCONTRACTOR'S EXPENSE THROUGHOUT ALL PHASES OF THE CONTRACT WORK. NOTIFY CONTRACTOR OF ANY DISTURBANCES THAT ARE BEYOND THE PLANNED LIMITS OF CONSTRUCTION ACTIVITIES.
4. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. SUBCONTRACTOR SHALL REMOVE EROSION CONTROL FEATURES AT THE COMPLETION OF THE CONTRACT WORK IF SAID FEATURES ARE NOT BIODEGRADABLE. REMOVAL SHALL NOT OCCUR UNTIL VEGETATION OR PERMANENT CONTROL MEASURES HAVE BEEN ESTABLISHED.
5. SUBCONTRACTOR SHALL MINIMIZE CLEARING TO THE EXTENT PRACTICAL.
6. ADDITIONAL EROSION CONTROL MEASURES SHALL BE DEPLOYED DURING EXCAVATION ACTIVITIES CONDUCTED WITHIN THE BOUNDARIES OF FORMER URANIUM POND 1 AND 2 LIMITS, AS DETAILED ON THESE CONSTRUCTION DRAWINGS. POTENTIALLY IMPACTED SOIL REMOVED FROM THESE AREAS (DEFINED AS MATERIAL REMOVED FROM 6 FEET BELOW GROUND SURFACE AND ABOVE SANDSTONE A FOR URANIUM POND 1 AND 5 FEET BELOW GROUND SURFACE AND ABOVE SANDSTONE A FOR URANIUM POND 2) SHALL BE SEGREGATED FROM CLEAN SOIL AND STAGED WITH BMPs TO PREVENT SEDIMENT MIGRATION. ADDITIONAL BMPs SHALL BE DEPLOYED TO PREVENT STORM WATER RUN-OFF AND POTENTIALLY IMPACTED SOILS FROM ENTERING AND ACCUMULATING IN THE TRENCHES. SOIL MATERIAL ENTERING AND ACCUMULATING IN THE TRENCH SHALL BE REMOVED AND HANDLED AS POTENTIALLY IMPACTED MATERIAL. POTENTIALLY IMPACTED SOIL REMOVED SHALL BE PLACED BACK IN THE TRENCH AND BELOW THE MINIMUM IMPACTED MATERIAL DEPTH AS FOLLOWS:
   - 6.1. GWI-UP1-03 AND GWI-UP1-04: POTENTIALLY IMPACTED SOIL IS DEFINED AS SOIL MATERIAL WITHIN THE FORMER URANIUM POND 1 LIMITS BELOW 6 FEET BELOW GROUND SURFACE AND ABOVE GRAVEL FILTER FABRIC.
   - 6.2. GWI-UP2-01: POTENTIALLY IMPACTED SOIL IS DEFINED AS SOIL MATERIAL WITHIN THE FORMER URANIUM POND 2 LIMITS BELOW 5 FEET BELOW GROUND SURFACE AND ABOVE GRAVEL FILTER FABRIC.
7. ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES AND STANDARDS. ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE INSTALLED AS SHOWN ON THE APPROVED PLAN AND THE SWPPP.
8. SITE DRAINAGE PATTERNS, INCLUDING THE PROJECT SITE AND ADJACENT PROPERTIES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD UNLESS OTHERWISE APPROVED BY THE CONTRACTOR.
7. THE SUBCONTRACTOR SHALL MAINTAIN ALL SEDIMENTATION CONTROL DEVICES AND TAKE ANY PRECAUTIONARY MEASURES TO ENSURE THAT SEDIMENT DOES NOT ENTER ANY NATURAL STREAM CHANNEL LOCATED WITHIN THE SITE.
8. GROUND COVER REQUIREMENTS SHALL BE FOLLOWED IN ADDITION TO STANDARD EROSION CONTROL REQUIREMENTS. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A PERMANENT STAND OF VEGETATION ON ALL DISTURBED AREAS AND MEETING ALL FINAL STABILIZATION REQUIREMENTS.

WASTE MANAGEMENT NOTES:

1. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, MANAGEMENT, LOADING, AND STORAGE OF WASTE MATERIALS ON-SITE, AND DISPOSAL OFF-SITE. WASTE MATERIALS INCLUDE:
   - A. WASTE AND CONSTRUCTION AND DEMOLITION DEBRIS.
   - B. WASH WATER ASSOCIATED WITH CONCRETE TRUCKS, VEHICLE CLEANING, AND EQUIPMENT CLEANING.
   - C. SUBCONTRACTOR SHALL NOT REMOVE WASTE MATERIALS FROM THE SITE WITHOUT OBTAINING WRITTEN APPROVAL FROM OWNER AND CONTRACTOR.
2. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR TRANSPORTATION, DISPOSAL, AND OBTAINING HAULING AND DISPOSAL PERMITS.
3. SUBCONTRACTOR SHALL DISPOSE OF WASTE MATERIALS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
4. TREES AND BRUSH GENERATED DURING CLEARING AND GRUBBING ACTIVITIES SHALL BE STOCKPILED IN OWNER-APPROVED AREAS AND REMOVED FROM THE SITE.
5. THE SUBCONTRACTOR SHALL REMOVE FROM THE SITE THOSE MATERIALS NOT INDICATED TO BE SALVAGED. ALL REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE SUBCONTRACTOR WHO SHALL LEGALLY DISPOSE OF THEM.
6. SUBCONTRACTOR SHALL NOT REMOVE WASTE MATERIALS FROM THE SITE WITHOUT OBTAINING WRITTEN APPROVAL FROM OWNER AND CONTRACTOR.

LEGEND

	UTILITY TRENCH ALIGNMENT (APPLIES TO C002 ONLY)
C	BURIED COMMUNICATION CONDUIT/ CABLE
I I	BURIED INSTRUMENTATION CONDUIT/ CABLE
FO FO	BURIED FIBER OPTIC CONDUIT/ CABLE
E E	BURIED ELECTRICAL CONDUIT/ CABLE
ET ET	GROUNDWATER EXTRACTION TRENCH
GW GW	BURIED GROUNDWATER EXTRACTION PIPE
IS IS	BURIED INJECTION WATER SUPPLY PIPE
IT IT	INJECTION TRENCH
W	WATER SUPPLY LNE
PL	PROPERTY LNE
	EASEMENT
	BURIED WATER DISCHARGE PIPE
936	EXISTING SURFACE ELEVATION CONTOUR
936	PROPOSED SURFACE ELEVATION CONTOUR
	EXISTING FENCE
	PROPOSED FENCE
	EXISTING CHANNEL
	PROPOSED CHANNEL
	FUTURE OUTFALL LINE, BY OTHERS
	EDGE OF PROPOSED ACCESS ROAD AND LATERALS
	CLEARING LIMITS
	ACCESS ROAD C WITH STATION MARKS
	STRAW WATTLE
	EROSION CONTROL BLANKET
	EXTRACTION TRENCH SUMP
	INJECTION WELL
	EXTRACTION WELL
	EXISTING MONITOR WELL
	PROPOSED CLEANOUT (ARROW INDICATES DIRECTION OF CLEANOUT)

ABBREVIATIONS:

APPROX.	APPROXIMATE
BA1	BURIAL AREA 1
BLDG.	BUILDING
BMPs	BEST MANAGEMENT PRACTICES
C	CENTER LINE
L	
CMP.	CORRUGATED METAL PIPE
CP.	CONTROL POINT
CPP	CONTROL PANEL POWER
DIA.	DIAMETER
DWG.	DRAWING
E.	EAST
EL.	ELEVATION
EQ	EQUAL
E.W.	EACH WAY
EX. OR EXIST.	EXISTING
FT.	FEET
GE	GROUNDWATER EXTRACTION
GETR	GROUNDWATER EXTRACTION TRENCH
GWI	GROUNDWATER INJECTION
HDPE	HIGH DENSITY POLYETHLYENE
INC.	INCORPORATED
INJ.	INJECTION
LAT	LATERAL
MAX.	MAXIMUM
MIN.	MINIMUM
MISC.	MISCELLANEOUS
N.	NORTH
O.C.	OFF CENTER
O.D.	OUTSIDE DIAMETER
ODOT	OKLAHOMA DEPARTMENT OF TRANSPORTATION
OG&E	OKLAHOMA GAS & ELECTRIC
OSHA	OCCUPATIONAL SAFETY HEALTH ADMINISTRATION
OZ.	OUNCE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS
RFI	REQUEST FOR INFORMATION
RTU	REMOTE TELEMETRY UNIT
SP	SPACED
S.Q	SQUARE
ST.	STREET
STA	STATION
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TYP.	TYPICAL
UP	URANIUM POND
U	URANIUM
VNSFS	VEOLIA NUCLEAR SOLUTIONS FEDERAL SERVICES
WA	WESTERN AREA
WATF	WESTERN AREA TREATMENT FACILITY
WU	WESTERN UPLAND
WAA	WESTERN ALLUVIAL AREA
Y	YARD

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BURNS McDONNELL
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designed: B. WEIS	checked: R. BETTMENG

Cimarron Enviornmental Response Trust
NOTES, LEGEND AND ABBREVIATIONS

project: 142089
contract:
drawing: BMCD-GWREMED-G002
rev.: A
sheet of sheets
file G002 GEN-NOTES-AB.DWG

ABBREVIATIONS

EQUIPMENT & SPECIALTIES

BL	HIGH PRESSURE BLOWER
BOP/D	BOTTOM OF PIPE/DUCT
C	COMPRESSOR
CV	CHECK VALVE
EJ	EXPANSION JOINT, FLEXIBLE CONNECTOR
FAN	FAN OR LOW PRESSURE BLOWER
FOT/B	FLAT ON TOP/BOTTOM
HB	HOSE BIBB
MP	METERING PUMP
MOV	MOTOR OPERATED VALVE
MXR	MIXER
NOZ	NOZZLE
P	PUMP
PI	PRESSURE INDICATOR
PT	PRESSURE TRANSMITTER
QCU	QUICK CONNECT UNIT
REC	RECEIVER
RO	ORIFICE PLATE OR RESTRICTION DEVICE
SFI	SIGHT FLOW INDICATOR
SG	SIGHT GLASS
SLR	SILENCER
SOV	SOLENOID OPERATED VALVE
STR	STRAINER
TK	TANK
V	VESSEL
WTR	WATER TREATMENT (POLISHER, SOFTENER, DEMINERALIZER)
XM	MISCELLANEOUS MECHANICAL EQUIPMENT
XP	MISCELLANEOUS PIPING SPECIALTY

LINE CODES

CPR	COPPER PIPE
CS	CARBON STEEL
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
GLV	GALVANIZED STEEL PIPE
PRH	PRESSURE HOSE
PVC	POLYVINYL CHLORIDE PIPE
DIP	DUCTILE IRON PIPE
SS	STAINLESS STEEL

GENERAL

AG	ABOVEGROUND
BA1	BURIAL AREA #1
COMM	COMMUNICATION
CPP	CONTROL POWER PANEL
FC	FAIL CLOSED
FO	FAIL OPEN
FOP	FIBER OPTIC
FL	FAIL LAST POSITION
GAL	GALLON
HOA	HAND / OFF / AUTO
INSTR	INSTRUMENT
LSH	LEVEL SWITCH HIGH
LSL	LEVEL SWITCH LOW
MCC	MOTOR CONTROL CENTER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OD	OUTER DIAMETER
PB	PUSH BUTTON
PSIG	POUNDS PER SQUARE INCH GAUGE
RTU	REMOTE TERMINAL UNIT
SCFM	STANDARD CUBIC FEET / MINUTE
SCH	SCHEDULE
SP	SET POINT
UG	UNDERGROUND
LO	LOCKED OPEN
O/C	OPEN - CLOSE
QTY	QUANTITY
TYP	TYPICAL
UG	UNDERGROUND
V	VOLT
WA	WESTERN AREA

SERVICE CODES

CA	COMPRESSED AIR
EGW	EFFLUENT WATER
EXH	EXHAUST
EVP	EFFLUENT VAPOR
GW	GROUNDWATER
IGW	INFLUENT GROUNDWATER
INW	INFLUENT WATER
IVP	INFLUENT VAPOR
PRD	PRODUCT
VNT	VENT

TAG NUMBERS

"YY-ZZ"

YY = DEVICE TYPE
(1,2 OR 3 LETTER CODE, ABBREVIATIONS - AS DETAILED ABOVE)

ZZ = IDENTIFYING NUMBER
NO DUPLICATES UNLESS ITEMS ARE IN SAME I & C "LOOP" OR MEASURE THE SAME POINT.

SERVICE XXX DWG # TO/FROM
SERVICE XXX DWG # TO/FROM
SERVICE DWG # XXX TO/FROM
PROCESS LINE AND INSTRUMENT SIGNAL CONTINUATION
CONNECTOR NUMBER

UTILITY CONNECTOR — XXXXX / P&ID # — CONNECTOR NUMBER

LINE IDENTIFICATION

4" - CWS - XXXX

LINE SIZE
SERVICE CODE
LINE CODE

LINE DESIGNATION

- MAIN PROCESS LINE
- ELECTRICAL POWER
- INSTRUMENTATION SIGNAL/POWER
- COMMUNICATIONS
- EQUIPMENT BOUNDARIES
- COMPRESSED AIR LINE

EQUIPMENT

- SUBMERSIBLE PUMP
- REGENERATIVE BLOWER
- CENTRIFUGAL PUMP
- MOTOR
- AIR COMPRESSOR
- METERING PUMP

INSULATION IDENTIFICATION

PIPING
- INSULATED (NOT TRACED)
- INSULATED (TRACED)

PIPING AND VALVE SYMBOLS

- BALL VALVE / SAMPLE PORT
- GLOBE VALVE
- GATE VALVE
- CHECK VALVE
- RELIEF VALVE
- BUTTERFLY VALVE
- M — MAGNETIC FLOWMETER
- VACUUM RELIEF VALVE
- VENT
- CONCENTRIC REDUCER
- UNION
- REMOVABLE CAP
- FLANGE
- BAG FILTER
- AGITATOR/MIXER
- MATERIAL TRANSITION AND TRANSITION TO BELOW GROUND
- HOSE CONNECTION
- VFD — VARIABLE FREQUENCY DRIVE

INSTRUMENTATION AND CONTROL LEGEND

LOCATION/ACCESSIBILITY	DISCRETE INSTRUMENTS	PLC	DISCRETE HARDWARE INTERLOCK
FIELD MOUNTED 1. FIELD OR LOCALLY MOUNTED. 2. ACCESSIBLE TO AN OPERATOR AT DEVICE.	○	⬡	◇
PRIMARY LOCATION NORMALLY ACCESSIBLE TO AN OPERATOR 1. CENTRAL OR MAIN CONTROL ROOM. 2. FRONT OF MAIN PANEL OR CONSOLE MOUNTED. 3. VISIBLE ON VIDEO DISPLAY. 4. ACCESSIBLE TO AN OPERATOR AT DEVICE OR CONSOLE.	⊖	⊟	

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, FLAME, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE (TYPICALLY CONDUCTIVITY - ELECTRICAL)			CONTROL	CLOSED
D	USER'S CHOICE (TYPICALLY DENSITY OR SPECIFIC GRAVITY)	DIFFERENTIAL			DIVERT
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE OR GAUGING (DIMENSIONAL)		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	USER'S CHOICE (TYPICALLY MOISTURE OR HUMIDITY)	MOMENTARY			MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY OR HEAT DUTY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	THROUGH
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

INSTRUMENT IDENTIFICATION
(TYPICAL ALL INSTRUMENTS)

SEQUENCE NUMBER — XX / XXXX — INSTRUMENT IDENTIFICATION SEE TABLE ABOVE

GENERAL NOTES

1. LEGEND IS GENERAL IN NATURE AND MAY INDICATE MORE INFORMATION THAN IS APPLICABLE TO PROJECT. SEE PROJECT PLANS FOR SPECIFIC NOTES, SPECIFICATIONS, SYMBOLS, AND ABBREVIATIONS.
2. MECHANICAL EQUIPMENT AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, CONTRACT DOCUMENTS, INTERNATIONAL MECHANICAL AND PLUMBING CODES, AND APPLICABLE CODES AND REGULATIONS.
3. ALL MECHANICAL EQUIPMENT SHALL BE LOCATED FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVING.

SELF ACTUATED VALVES

- REDUCING REGULATOR (SELF-CONTAINED)
- BACKPRESSURE REGULATOR (SELF-CONTAINED)
- REDUCING REGULATOR WITH EXTERNAL PRESSURE TAP
- BACKPRESSURE REGULATOR WITH EXTERNAL TAP
- TEMPERATURE CONTROL

ACTUATORS

- SINGLE DIAPHRAGM OPERATED
- OPERATED WITH MANUALLY OPERATED HAND WHEEL
- DIAPHRAGM WITH POSITIONER SINGLE OR DOUBLE DIAPHRAGM
- FAIL SPRING OPEN
- FAIL SPRING CLOSE PISTON OPERATED (FC) AIR / PISTON
- PISTON OPERATED (DOUBLE ACTING) PISTON OPERATED (FO) AIR / PISTON
- PISTON OPERATED WITH POSITIONER
- M — MOTOR OPERATED
- S — SOLENOID OPERATED

SINGLE LINE PIPING

- ELBOW TURNING DOWN
- ELBOW TURNING UP
- BOTTOM CONNECTION
- TOP CONNECTION

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date	detailed
SEPTEMBER 2022	A. ANSTAETT
designed	checked
E. DULLE	E. DULLE

Cimmaron Environmental Response Trust
P&ID NOTES AND LEGEND

project 142089 | contract
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sheet of sheets
file P001.DWG

STANDARD ELECTRICAL LEGEND

POWER

- 30/3 — NON-FUSED DISCONNECT. SUBSCRIPT DENOTES AMPERE FRAME RATING AND NUMBER OF POLES. MH 4'-0" AFF UNLESS OTHERWISE NOTED.
- 30AF/3 — FUSED DISCONNECT. SUBSCRIPT DENOTES FUSE RATING AND NUMBER OF POLES.
- 30/3/1 — COMBINATION MOTOR STARTER. SUBSCRIPT DENOTES AMPERE FRAME RATING, POLES AND NEMA STARTER SIZE. MH 4'-0" AFF UNLESS OTHERWISE NOTED.
- 30/3 — CONTACTOR. SUBSCRIPT DENOTES AMPERE RATING AND NUMBER OF POLES. MH 4'-0" AFF UNLESS OTHERWISE NOTED
- MOTOR STARTER. MH 4'-0" AFF UNLESS OTHERWISE NOTED
- J — JUNCTION BOX
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT CAPPED
- CONDUIT TEE
- CONDUIT COUPLING
- CONTROL OR POWER PANEL
- MANHOLE OR HANDHOLE
- P — PULL BOX
- ELECTRIC HEAT TRACING
- T — TRANSFORMER (T)
- CPP# — ELECTRICAL PANELBOARD
  INSERT DENOTES PANEL NAME
  CONTROL POWER PANEL: CPP
  POWER OR DISTRIBUTION PANEL: PP, DP
  SWITCHGEAR: SG
  AUTOMATIC TRANSFER SWITCH: ATS
  PRE-WIRED CONTROL PANEL: PWCP
  PROGRAMMABLE LOGIC CONTROLLER: PLC

GROUNDING

- GROUNDING CONDUCTOR BURIED OR CONCEALED
- GROUNDING CONDUCTOR EXPOSED
- LIQUID FLEXIBLE METAL CONDUIT
- WELDED GROUND CONNECTION
- COMPRESSION/BOLTED GROUND CONNECTION
- GROUND ROD - Ø3/4" x 10', COPPER CLAD
- GROUND TEST WELL
- PIGTAIL FOR EQUIPMENT/ STRUCTURE CONNECTION
- 18" LIGHTNING AIR TERMINAL

MISCELLANEOUS

- LT — LEVEL TRANSMITTER
- TT — TEMPERATURE TRANSMITTER
- T EF — THERMOSTAT
- P — PUMP
- T — TEMPERATURE INDICATOR
- TB — TERMINAL BOX
- LI — LEVEL INDICATOR
- FM — FLOW METER
- FT — FLOW TRANSMITTER
- PT — PRESSURE TRANSMITTER
- PS — PRESSURE SWITCH
- FS — FLOW SWITCH
- LS — LEVEL SWITCH
- EQUIPMENT TAG CALL OUT
- 1 — KEYED NOTE

ONE- LINE DIAGRAMS

- SWITCH TAG, 30A, 3P, (20A) — DISCONNECT SWITCH, FUSED
  30 = FRAME RATING
  3 = POLES
  (20) = FUSE AMPERE RATING
- SWITCH TAG, 30A, 3P — DISCONNECT SWITCH, NON-FUSED
  30 = FRAME RATING
  3 = POLES
- BREAKER TAG, 15AT, (20)AF — MOLDED CASE CIRCUIT BREAKER OR MOTOR CIRCUIT PROTECTOR
  15 = TRIP RATING
  (20) = FRAME RATING
- # 1 — MOTOR
  # = MOTOR TAG
  1 = HORSEPOWER (HP)
- G — GENERATOR
- AUTOMATIC TRANSFER SWITCH
- XFMR TAG, 150 KVA — TRANSFORMER
  RATING
- GROUNDED WYE CONNECTED
- DELTA CONNECTED
- TAG, SIZE 0 — MOTOR STARTER AND OVERLOAD
  0 - STARTER SIZE
- ELECTRIC HEATER
- M — UTILITY METER
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSION
- P-# — ELECTRICAL CABLE
  INSERT DENOTES CABLE NUMBER
  POWER: P
  CONTROL: C
- VFD, VFD TAG, 1 HP, (3R) — VARIABLE FREQUENCY DRIVE
  1 = HORSEPOWER RATING
  (3R) = NEMA RATING
- FT, FT TAG — FLOW TRANSMITTER
- E, E-1, VT — ELECTRICAL TRANSITION VAULT
  E = ELECTRICAL
  VT = VAULT
  E-1 = TAG
- C, C-1, VT — COMMUNICATION TRANSITION VAULT
  C = ELECTRICAL
  VT = VAULT
  C-1 = TAG
- PP-1, [480], 1PH, 200A 3W, 18kA, MLO — PANELBOARD
  PP-1 = PP - PANELBOARD; 1-TAG
  [480] = VOLTAGE
  1PH, 200A 3W = PHASE, BUS SIZE (AMP)
  WIRE CONFIGURATION
  18kA = SHORT CIRCUIT CURRENT RATING
  MLO = MAIN LUG ONLY
- PP-1, [480], 1PH, 200A 3W, 18kA, MCB [100A] — PANELBOARD
  PP-1 = PP - PANELBOARD; 1-TAG
  [480] = VOLTAGE
  1PH, 200A 3W = PHASE, BUS SIZE (AMP)
  WIRE CONFIGURATION
  18kA = SHORT CIRCUIT CURRENT RATING
  MCB = MAIN CIRCUIT BREAKER, [AMP RATING]

ELECTRICAL CALLOUT SYMBOLS

ONE OR TWO CHARACTER DISCIPLINE DESIGNATOR (MAY NOT BE PRESENT IF CALLOUT AND TITLE ARE ON DRAWINGS WITHIN THE SAME DISCIPLINE)

A / FP001

LETTER OR NUMBER DESIGNATOR

DRAWING SEQUENCE NUMBER INDICATES WHERE TITLE IS LOCATED (MAY NOT BE PRESENT IF CALLOUT AND TITLE ARE ON THE SAME DRAWING)

SECTION, DETAIL, AND ELEVATION SYMBOL IDENTIFIERS

THE WORD "SECTION" MAY BE REPLACED WITH "ELEVATION" OR "DETAIL"

SECTION A / 001

SECTION, DETAIL, OR ELEVATION TITLE EXAMPLE

A / FP001 — A / FP001 — A / FP001

SECTION CALLOUT EXAMPLE

B / A001

ELEVATION CALLOUT EXAMPLE

7 / FP001

DETAIL CALLOUT EXAMPLE

SECTION, DETAIL, AND ELEVATION IDENTIFICATION SYSTEM

ELECTRICAL ABBREVIATIONS

A	- AMPERE, AMP
AC	- AIR CONDITION
AF	- AMP FRAME
AFF	- ABOVE FINISHED FLOOR
AFG	- ABOVE FINISHED GRADE
A.I.	- ANALOG INPUT
ANLZ.	- ANALYZER
AT	- AMP TRIP
ATS	- AUTOMATIC TRANSFER SWITCH
APPROX	- APPROXIMATELY
BFG	- BELOW FINISHED GRADE
BOD	- BOTTOM OF DUCT
B	- BUZZER
C	- CONDUIT
CKT	- CIRCUIT
CL2	- CHLORINE
CONT	- CONTINUATION
CNTL	- CONTROL
CPP	- CONTROL POWER PANEL
CPU	- COMPUTER
CR	- CONTROL RELAY
DED	- DEDICATED
DCS	- DISTRIBUTED CONTROL SYSTEM
DIST	- DISTRIBUTION
DIV	- DIVISION
EC	- ELECTRICAL CONTRACTOR
ELEC	- ELECTRICAL
EM	- STANDBY, ALTERNATE POWER CIRCUIT
EMT	- ELECTRICAL METAL TUBING
ENCL	- ENCLOSURE
F	- FUSE
GD	- GRADE
G	- GROUND
GFI	- GROUND FAULT INTERRUPTER
GL	- GROUND LUG
GND	- GROUND
ID	- INSIDE DIAMETER
I/O	- INPUT / OUTPUT
KVA	- KILOVOLT AMPERE
KV	- KILOVOLT
KW	- KILOWATT
LFMC	- LIQUID TIGHT FLEX METAL CONDUIT
M	- MAGNETIC CONTACTOR
MAX	- MAXIMUM
MCB	- MOLDED CASE CIRCUIT BREAKER/MAIN
MCC	- MOTOR CONTROL CENTER
MCP	- MOTOR CIRCUIT PROTECTOR
MLO	- MAIN LUG ONLY
MIN	- MINIMUM
MPS	- MOTOR PROTECTION SWITCH
N2	- NITROGEN
NEC	- NATIONAL ELECTRIC CODE
NF	- NON FUSED
OD	- OUTSIDE DIAMETER
OEM	- ORIGINAL EQUIPMENT MANUFACTURER
P	- POLE
PC	- POWER CONNECTION BOX
PH	- PHASE
PLC	- PROGRAMMABLE LOGIC CONTROLLER
PP	- POWER PANEL
PVC	- POLYVINYL CHLORIDE
PWR	- POWER
R	- ALARM LIGHT
RGS	- RIGID GALVANIZED STEEL CONDUIT
RX	- RECEIVER
SP	- SPARE
SPD	- SURGE PROTECTIVE DEVICE
SW	- SWITCH
TB	- TERMINAL BLOCK
TEMP	- TEMPERATURE
TOS	- TOP OF STEEL
TYP	- TYPICAL
TX	- TRANSMITTER
UDS	- UTILITY DISTRIBUTION SYSTEM
UPS	- UNINTERRUPTIBLE POWER SUPPLY
UV	- ULTRA-VIOLET
V	- VOLT
VA	- VOLT AMPS
VAC	- VOLTAGE ALTERNATING CURRENT
VDC	- VOLTAGE DIRECT CURRENT
W	- WIRE, WATT
WP	- WEATHERPROOF
XFMR	- TRANSFORMER

INSTRUMENTATION ABBREVIATIONS

C	- COMMON OR CONDUCTOR
CONC.	- CONCRETE
CR	- CONTROL RELAY
DC	- DIRECT CURRENT
DISC	- DISCONNECT
DWG	- DRAWING
FE	- FLOW ELEMENT
FIN.	- FINISH
FM	- FLOW METER
FT	- FLOW TRANSMITTER
I/O	- INPUT / OUTPUT
LSH	- LEVEL SWITCH HIGH
NC	- NORMALLY CLOSED
NO	- NORMALLY OPEN
NO.	- NUMBER
PT	- PRESSURE TRANSMITTER
PS	- PRESSURE SWITCH
REQ'D	- REQUIRED
TP	- TWISTED PAIR (CABLE)
TSP	- TWISTED SHIELDED PAIR (CABLE)
DC	- DIRECT CURRENT

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date	detailed
SEPTEMBER 2022	A. HIMES
designed	checked
A. HIMES	S. DEFRANCESCO

Cimarron Environmental Response Trust
ELECTRICAL LEGEND & ABBREVIATION

project	contract
142089	

drawing: BMCD-GWREMED-E001 — rev. A

sheet ___ of ___ sheets

file E001.dwg

GENERAL NOTES:

1. THESE GENERAL NOTES APPLY TO ALL DRAWINGS UNLESS OTHERWISE NOTED. ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED.
2. THE EXACT LOCATION OF CONDUITS, DEVICES AND EQUIPMENT MAY DEVIATE FROM THE LOCATION INDICATED ON THESE DRAWINGS.
3. SUBCONTRACTOR SHALL FIELD ROUTE CONDUITS TO AVOID INTERFERENCE WITH OTHER EXISTING AND PROPOSED UTILITIES.
4. ALL WORK PERFORMED SHALL CONFORM TO ALL APPLICABLE CODES, INCLUDING BUT NOT LIMITED TO, THE LATEST VERSION OF THE NATIONAL ELECTRIC CODE ADOPTED BY AUTHORITIES HAVING JURISDICTION.
5. LABEL ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO SAFETY SWITCHES, MOTOR STARTERS, COMBINATION STARTERS, AND CONTACTORS INSTALLED, WITH DESIGNATIONS AS SHOWN.
6. ABOVE GRADE CONDUIT SHALL BE 1" TRADE SIZE MINIMUM AND SHALL BE RGS TYPE AND BELOW GRADE CONDUIT SHALL BE 1" TRADE SIZE MINIMUM AND SHALL BE PVC (SCH 80), UNLESS OTHERWISE NOTED.
7. ALL 600 VOLT POWER WIRING SHALL BE TYPE XHHW-2 SINGLE CONDUCTOR IN CONDUIT ONLY. ALL CONTROL WIRING SHALL BE MINIMUM #14 AWG MULTI-CONDUCTOR TYPE XLPE. ALL INSTRUMENTATION WIRING SHALL BE #18 AWG MULTI-CONDUCTOR TYPE XLPE SHIELDED PAIRS UNLESS OTHERWISE STATED.
8. MINIMUM CONDUCTOR SIZE FOR 480 VOLT POWER CIRCUITS SHALL BE #10 AWG. MINIMUM CONDUCTORS SIZE FOR POWER AND LIGHTING CIRCUITS LESS THAN 480 VOLT SHALL BE #12 AWG.
9. PULL A GROUND WIRE TO EACH DEVICE AND PIECE OF EQUIPMENT. ALL EQUIPMENT AND DEVICES SHALL BE GROUNDED ACCORDING TO ARTICLE 250 OF THE NEC.
10. ALL CIRCUIT BREAKERS SHALL BE 15 AMP MIN, UNLESS OTHERWISE NOTED.
11. ELECTRICAL SUBCONTRACTOR IS RESPONSIBLE FOR MAKING FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT INSTALLED AND/OR RELOCATED, UNLESS OTHERWISE STATED ON THE DRAWING. SPECIFICALLY STATEMENT OF WORK FOR WESTERN AREA TREATMENT FACILITY STOPS AT DEMARCATION VAULT FOR SOURCE POWER, REFERENCE DRAWINGS E101 AND E102.
12. SIZE JUNCTION AND PULL BOXES PER NATIONAL ELECTRICAL CODE, UNLESS OTHERWISE NOTED.

no.	date	by	ckd	description
A	03/31/20	ACH	SJD	ISSUED FOR PRELIMINARY DESIGN

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BURNS McDONNELL
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KANSAS CITY, MO 64114
816-333-9400
OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	A. HIMES
designed	checked
A. HIMES	S. DEFRANCESCO

Cimarron Environmental Response Trust
ELECTRICAL GENERAL NOTES

project	contract
142089	

drawing **BMCD-GWREMED-E002** rev. **A**

sheet of sheets

file E002.dwg

PROJECT CONTROL POINTS*

POINTS	MONITORING WELL	NORTHING	EASTING	ELEVATION (AMSL)
CP-1	T-64	321342	2091691	941.19
CP-2	T-65	321569	2091814	938.77
CP-3	T-63	321623	2091977	938.01

*LOCATION PROVIDED IS TO A BOLT LOCATED IN WELL PADS.

no.	date	by	ckd	description
A	08/16/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

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date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
EXISTING CONDITIONS

project	contract
142089	-

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sheet of sheets

file C001 EXST COND.DWG

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no.	date	by	ckd	description
A	08/19/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

NOTE:

1. PIPE & CONDUIT ALIGNMENT SHOWN REPRESENTS THE CENTERLINE OF TRENCH WHICH MAY CONTAIN WATER SUPPLY PIPES, GROUNDWATER INJECTION SUPPLY PIPES, GROUNDWATER EXTRACTION PIPES, DISCHARGE PIPING, ELECTRICAL POWER SUPPLY CABLE CONDUITS, FIBER OPTIC CONDUITS, AND COMMUNICATION CABLE CONDUITS, AS DETAILED. SEE SHEETS C003-C008 FOR INDIVIDUAL PIPE AND CABLE RUNS.

NORTH

0 200' 400'
SCALE IN FEET

PRELIMINARY - NOT FOR CONSTRUCTION

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KANSAS CITY, MO 64114
816-333-9400
OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
OVERALL SITE PLAN AND SHEET LAYOUT KEY

project	contract
142089	-

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sheet of sheets

file C002 OVERALL SITE PLAN.DWG

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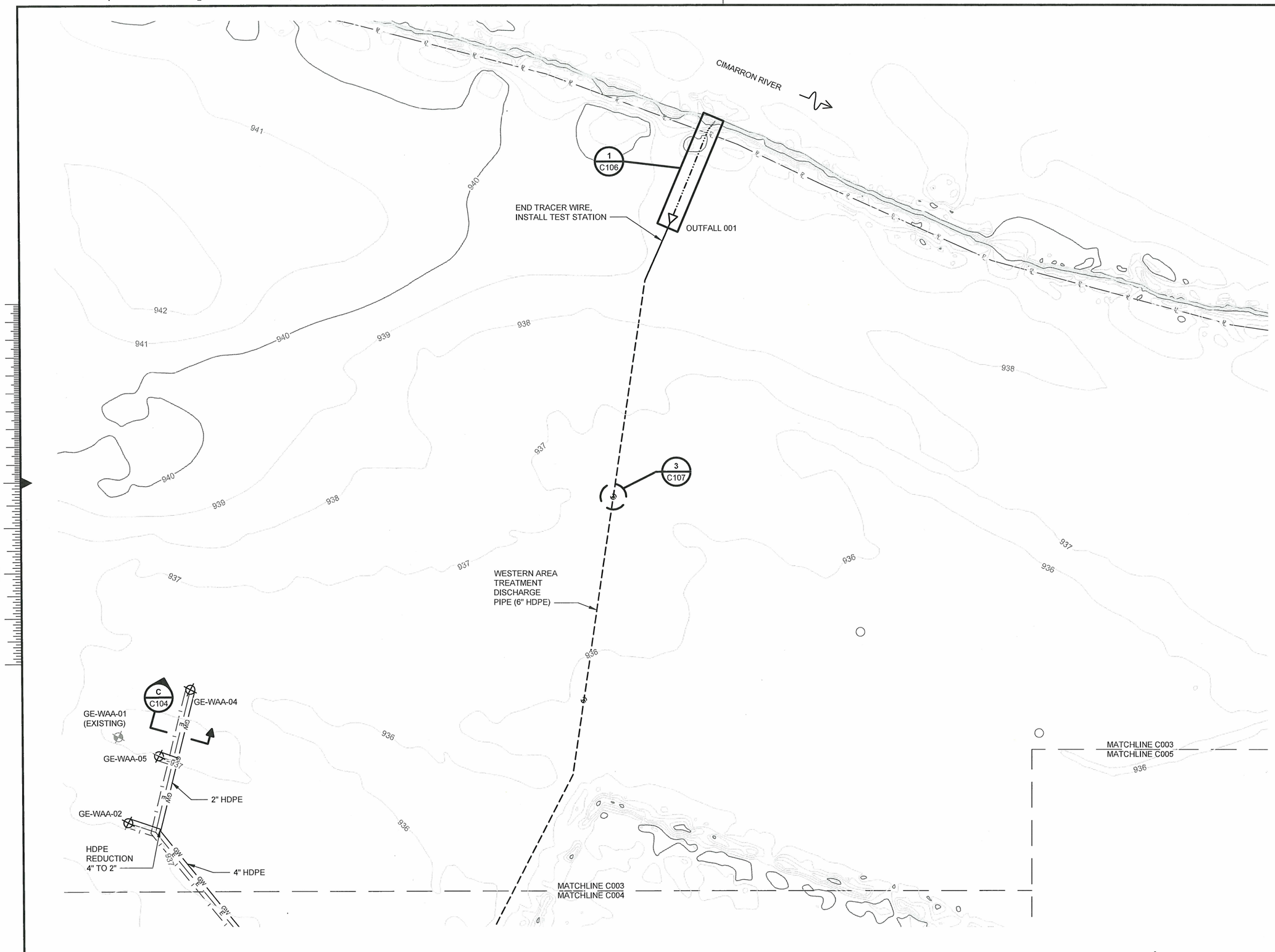

no.	date	by	ckd	description
A	08/19/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

NOTES:

1. PIPE AND CONDUIT LINE SPACING HAS BEEN EXAGGERATED FOR CLARITY IN PARTIAL SITE PLANS. REFER TO TRENCH SECTION DETAILS FOR TYPICAL PIPE AND CONDUIT SPACING. FIELD ADJUSTMENTS OF TRENCH ROUTING TO AVOID CONFLICTS SHALL BE APPROVED BY ENGINEER.
2. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR DETAILS REGARDING APPLICABLE SITE PLAN COMPONENTS.
3. PROVIDE PULL BOXES EVERY 500' (MAX.) FOR ELECTRICAL AND INSTRUMENTATION CABLES.
4. INSTALL AIR RELEASE VALVES AT THE HIGH POINTS ON ALL PRESSURE WATER PIPE SYSTEMS. SEE AIR RELEASE VALVE DETAIL, SHEET C107.

NORTH

0 100' 200'
SCALE IN FEET

PRELIMINARY - NOT FOR CONSTRUCTION

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9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
WESTERN ALLUVIAL AREA SITE PLAN

project	contract
142089	-

drawing **BMCD-GWREMED-C003** rev. **A**

sheet of sheets

file C003 PART SITE - N.DWG

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MATCH LINE C003
MATCH LINE C004

GE-WAA-03
4" HDPE

C
C104

3
C107

GETR-WU-01
(BEGIN TRENCH)

GETR-WU-01A

2" HDPE

HDPE
REDUCTION
4" TO 2"

BEGIN TRACER WIRE IN OUTFALL
TRENCH, INSTALL TEST STATION

4" HDPE

GETR-WU-01
(END TRENCH)

TREATMENT DISCHARGE
(TO OUTFALL 001)

EX. OVERHEAD
POWER LINES
(APPROX.)

PERFORATED
INJECTION PIPE

FORMER
URANIUM
POND 1

A
C104

1206 DRAINAGE
AREAS- SEE
SHEET C011 FOR
REMEDIATION
PLAN

GROUNDWATER
EXTRACTION,
INJECTION SUPPLY
PIPING, AND FIBER
OPTIC LINE

50' OG&E
EASEMENT

1
C011

EXISTING OVERHEAD
ELECTRIC (BY
UTILITY, SEE NOTES
2 & 3)

MIX EXCAVATED 1206
DRAINAGE SEDIMENT
MATERIAL WITH EXCESS
TRENCH MATERIAL AND
SPREAD WITHIN AREA
INDICATED (SEE GENERAL
NOTE 22, SHEET C001)

DO NOT
DISTURB EX.
UNKNOWN PIPE

GWI-WU-01
(BEGIN TRENCH)

3" WATER
SUPPLY PIPE

GWI-WU-01A

GWI-WU-01
(END TRENCH)

INCLUDES FIBER
OPTIC AND POTABLE
WATER PIPING

ONSITE
DISPOSAL
CELL

FORMER
URANIUM POND 2

10' OG&E
EASEMENT

EXISTING
POND

WA TREATMENT
FACILITY (SEE
SHEETS C006 &
C007)

A
C107

B
C104

INSTALL 20 LF x20'
W D_{50}=12" RIPRAP
CENTERED OVER
TRENCH
CONSTRUCTION,
WIDTH OF
CHANNEL

MATCHLINE:
SEE VIEW A FOR
CONTINUATION

ROAD AND CULVERT
IMPROVEMENTS, SEE
SHEET C012

NEW PRIVATE
WATER SERVICE
TAPS, COORDINATE
TAP AND METER
INSTALLATION
WITH LOGAN
COUNTY RURAL
WATER DISTRICT
NO.2

FIBER OPTIC
FROM UTILITY
JUNCTION BOX,
COORDINATE
WITH UTILITY
PROVIDER

3" WATER
SUPPLY PIPE

DO NOT DISTURB
HIGH PRESSURE
GAS LINE

MATCHLINE:
SEE LEFT FOR
CONTINUATION

VIEW A

MATCH LINE C004
MATCH LINE C005

no.	date	by	ckd	description
A	08/19/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

NOTES:

1. PIPE AND CONDUIT LINE SPACING HAS BEEN EXAGGERATED FOR CLARITY IN PARTIAL SITE PLANS, REFER TO TRENCH SECTION DETAILS FOR TYPICAL PIPE AND CONDUIT SPACING. FIELD ADJUSTMENTS OF PIPE ALIGNMENTS TO AVOID CONFLICTS SHALL BE APPROVED BY THE ENGINEER.
2. FUTURE OVERHEAD POWER LINE EASEMENT HAS BEEN PRELIMINARILY APPROVED BY UTILITY (30' TOTAL WIDTH ALONG THE ALIGNMENT SHOWN).
3. REFER TO SHEETS C101-C103 FOR EXTRACTION AND INJECTION TRENCH DETAILS.
4. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR DETAILS REGARDING APPLICABLE SITE PLAN COMPONENTS.
5. PROVIDE PULL BOXES EVERY 500' (MAX.) FOR ELECTRICAL AND INSTRUMENTATION CONDUITS.
6. INSTALL AIR RELEASE VALVES AT THE HIGH POINTS ON ALL PRESSURE WATER PIPE SYSTEMS. SEE AIR RELEASE VALVE DETAIL, SHEET C107.
7. REPAIR OR REPLACE ANY EXISTING FENCING THAT IS DAMAGED DURING CONSTRUCTION ACTIVITIES.
8. SUBCONTRACTOR SHALL INSTALL STRAW WATTLES DOWN GRADIENT OF ALL DISTURBED AREAS, INCLUDING TRENCHED AREAS.
9. NUMBER AND SIZE OF GROUNDWATER EXTRACTION CONVEYANCE LINES RUNNING FROM THE WAA TO THE WATF IS SUBJECT TO CHANGE DURING 90% DESIGN.

NORTH

0 100' 200'
SCALE IN FEET

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
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OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
WESTERN AREA SITE PLAN

project	contract
142089	-

drawing: BMCD-GWREMED-C004 — rev. A

sheet of sheets

file C004 PART SITE PLAN - SOUTH.DWG

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no.	date	by	ckd	description
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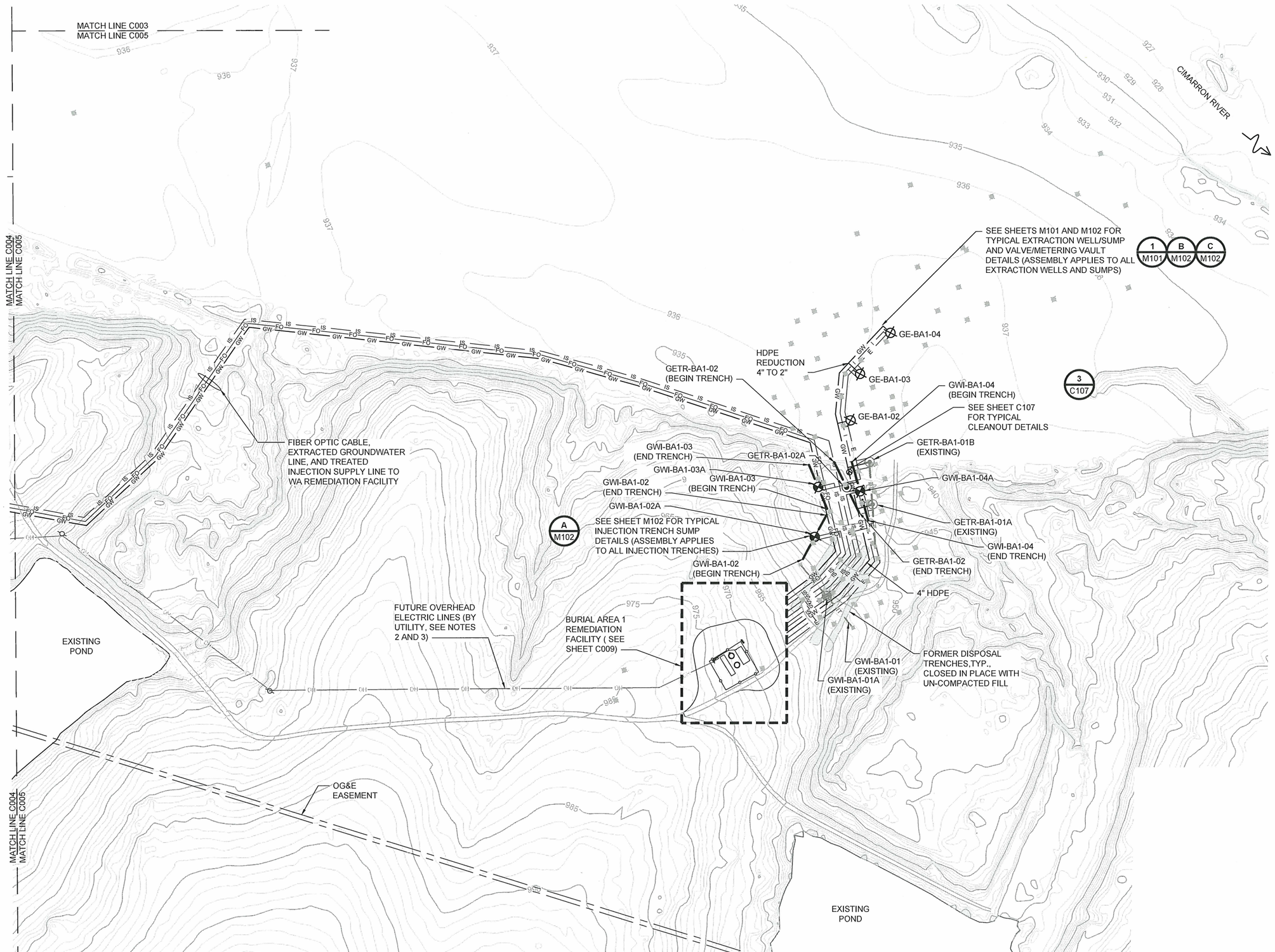

NOTES:

1. PIPE AND CONDUIT LINE SPACING HAS BEEN EXAGGERATED FOR CLARITY IN PARTIAL SITE PLANS, REFER TO TRENCH SECTION DETAILS FOR TYPICAL PIPE AND CONDUIT SPACING. FIELD ADJUSTMENTS TO AVOID CONFLICTS SHALL BE APPROVED BY THE ENGINEER.
2. SUBCONTRACTOR SHALL CLEAR 15 FEET EACH SIDE ALONG FUTURE OVERHEAD POWER LINE ALIGNMENT.
3. FUTURE OVERHEAD POWER LINE EASEMENT HAS BEEN PRELIMINARILY APPROVED BY UTILITY (30' TOTAL WIDTH ALONG THE ALIGNMENT SHOWN).
4. REFER TO SHEETS C101-C103 FOR EXTRACTION AND INJECTION TRENCH DETAILS.
5. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR DETAILS REGARDING APPLICABLE SITE PLAN COMPONENTS.
6. PROVIDE PULL BOXES EVERY 500' (MAX.) FOR ELECTRICAL AND INSTRUMENTATION CONDUITS.
7. INSTALL AIR RELEASE VALVES AT THE HIGH POINTS ON ALL PRESSURE WATER PIPE SYSTEMS. SEE AIR RELEASE VALVE DETAIL, SHEET C107.
8. DO NOT DISTURB EXISTING MONITOR WELLS WITHOUT APPROVAL BY OWNER AND CONTRACTOR.

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KANSAS CITY, MO 64114
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OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
EASTERN AREA SITE PLAN

project	contract
142089	-

drawing: **BMCD-GWREMED-C005** rev. **A**

sheet of sheets

file C005 PART SITE PLAN - EAST.DWG

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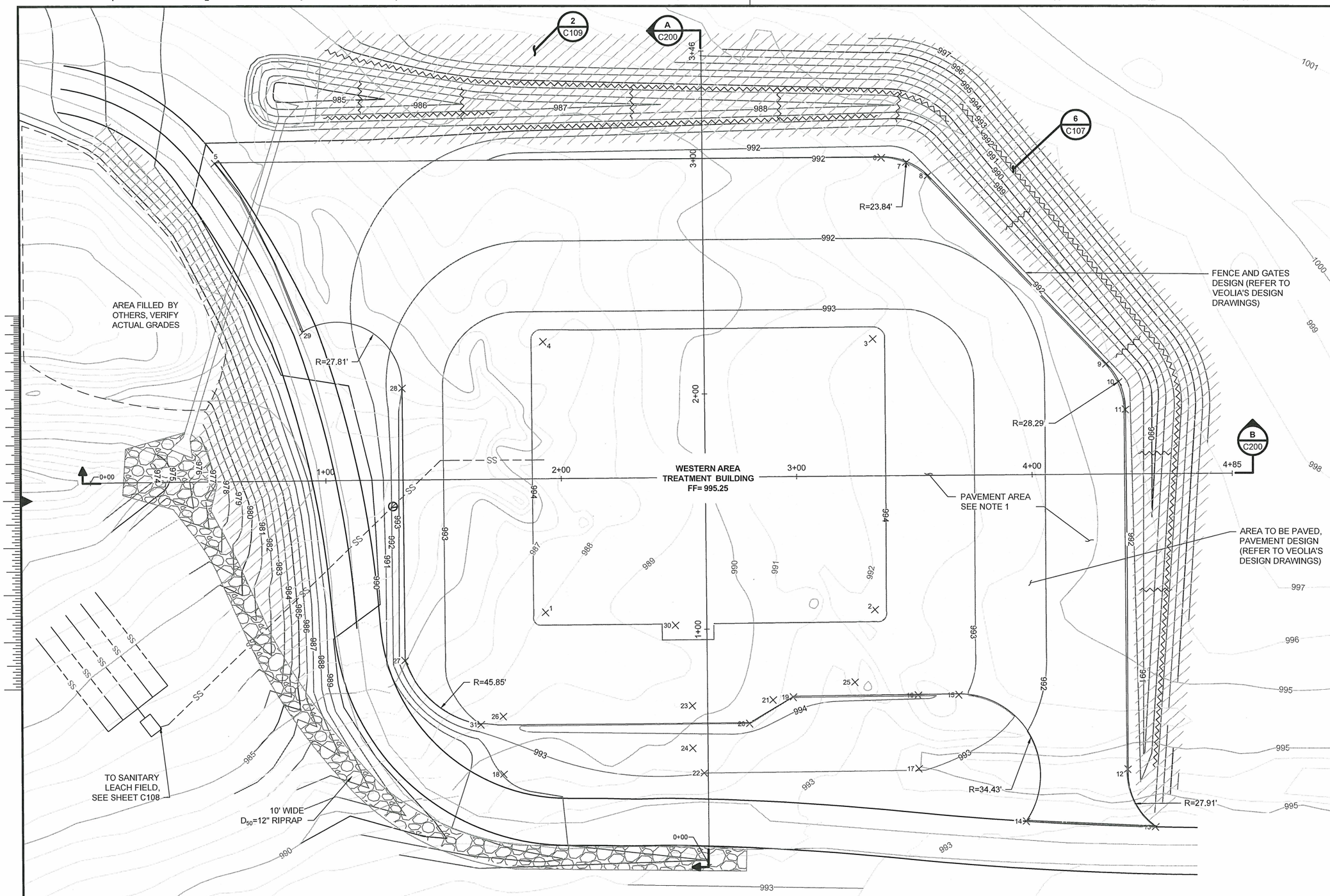

WESTERN AREA TREATMENT FACILITY GRADING PLAN AND LAYOUT

no.	date	by	ckd	description
A	08/19/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

NOTES:

1. PAVEMENT TO BE SPECIFIED BY OTHERS. GRADES SHOWN WITHIN PAVEMENT AREA REPRESENT PAVEMENT SUBGRADE SURFACE (9.8" LOWER THAN FINISHED, PAVED SURFACE). REFER TO VNSFS DESIGN DRAWINGS FOR PAVEMENT DETAILS.
2. FOUNDATION LOCATIONS AND DIMENSIONS ARE APPROXIMATE, REFER TO VNSFS DESIGN DRAWINGS FOR FOUNDATION DETAILS.
3. CONTRACTOR SHALL APPROVE SUBGRADE PRIOR TO PAVEMENT CONSTRUCTION.

COORDINATE NOTES

13 X TYPICAL COORDINATE LOCATION INDICATOR - SEE SHEET C110 FOR TABLE OF COORDINATES.

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KANSAS CITY, MO 64114
816-333-9400
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date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
WESTERN AREA TREATMENT FACILITY GRADING PLAN AND LAYOUT

project	contract
142089	-

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sheet of sheets

file C006 WATF FAC GRADE PLAN.DWG

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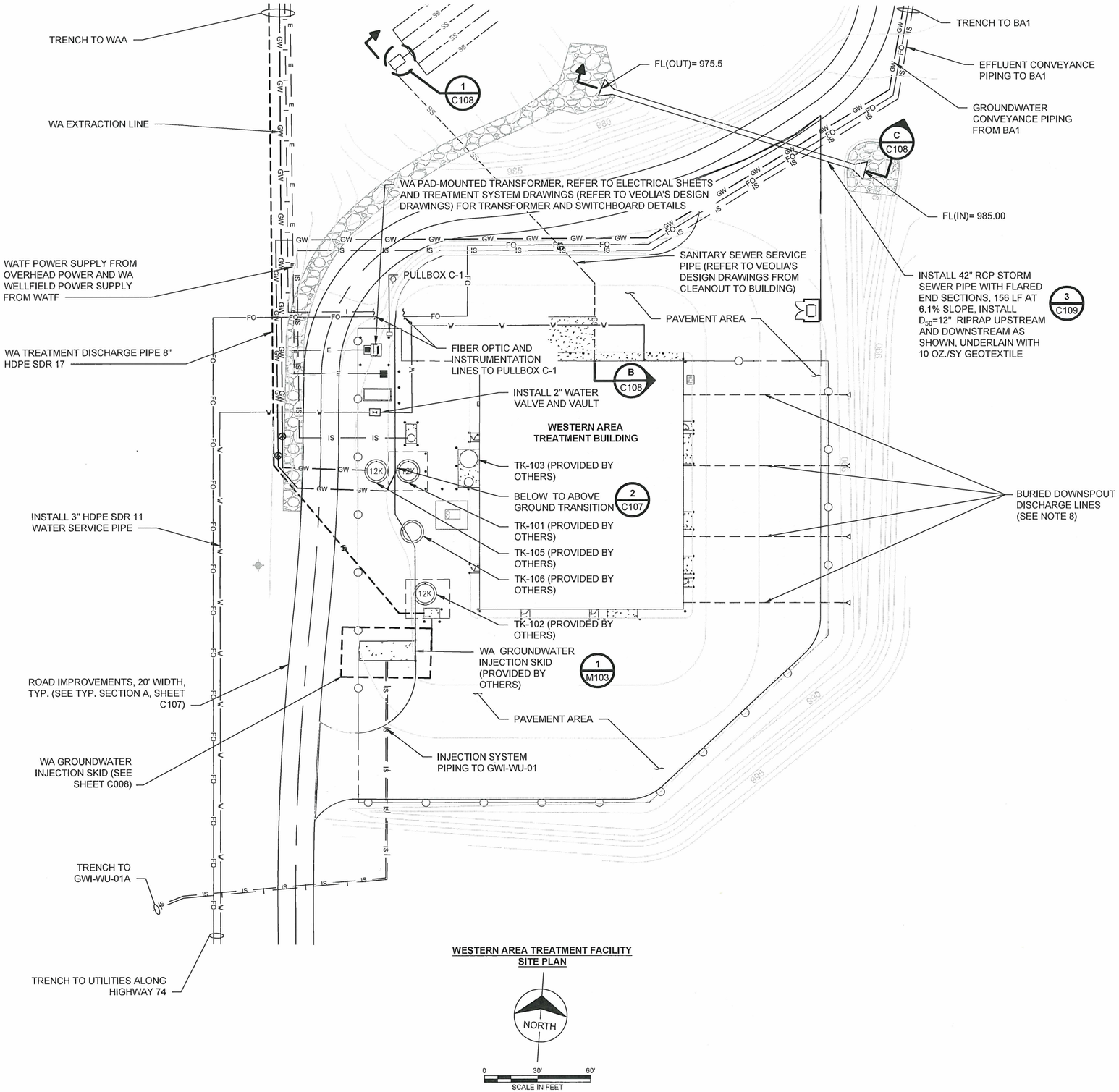

WESTERN AREA TREATMENT FACILITY SITE PLAN

no.	date	by	ckd	description
A	08/19/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

NOTES:

1. PIPE AND CONDUIT LINE SPACING HAS BEEN EXAGGERATED FOR CLARITY IN PARTIAL SITE PLANS, REFER TO TRENCH SECTION DETAILS FOR TYPICAL PIPE AND CONDUIT SPACING. FIELD ADJUSTMENTS OF PIPE ALIGNMENTS TO AVOID CONFLICTS SHALL BE APPROVED BY THE ENGINEER.
2. SUBCONTRACTOR SHALL CLEAR 15 FEET EACH SIDE ALONG FUTURE OVERHEAD POWER LINE ALIGNMENT.
3. FUTURE OVERHEAD POWER LINE EASEMENT HAS BEEN PRELIMINARILY APPROVED BY UTILITY (30' TOTAL WIDTH ALONG THE ALIGNMENT SHOWN).
4. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR DETAILS REGARDING APPLICABLE SITE PLAN COMPONENTS.
5. REFER TO SHEETS C101-C103 FOR EXTRACTION AND INJECTION TRENCH DETAILS.
6. PROVIDE PULL BOXES EVERY 500' (MAX.) FOR ELECTRICAL AND INSTRUMENTATION CONDUITS.
7. REFER TO C006 AND C008 FOR FUTURE GRADING OF FACILITY AREAS.
8. MATCH GUTTER DIAMETER AND DIMENSIONS. MAINTAIN MINIMUM SLOPE OF 0.1% TO MAINTAIN POSITIVE DRAINAGE.

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date	detailed
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designed	checked
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WESTERN AREA TREATMENT FACILITY SITE PLAN

project	contract
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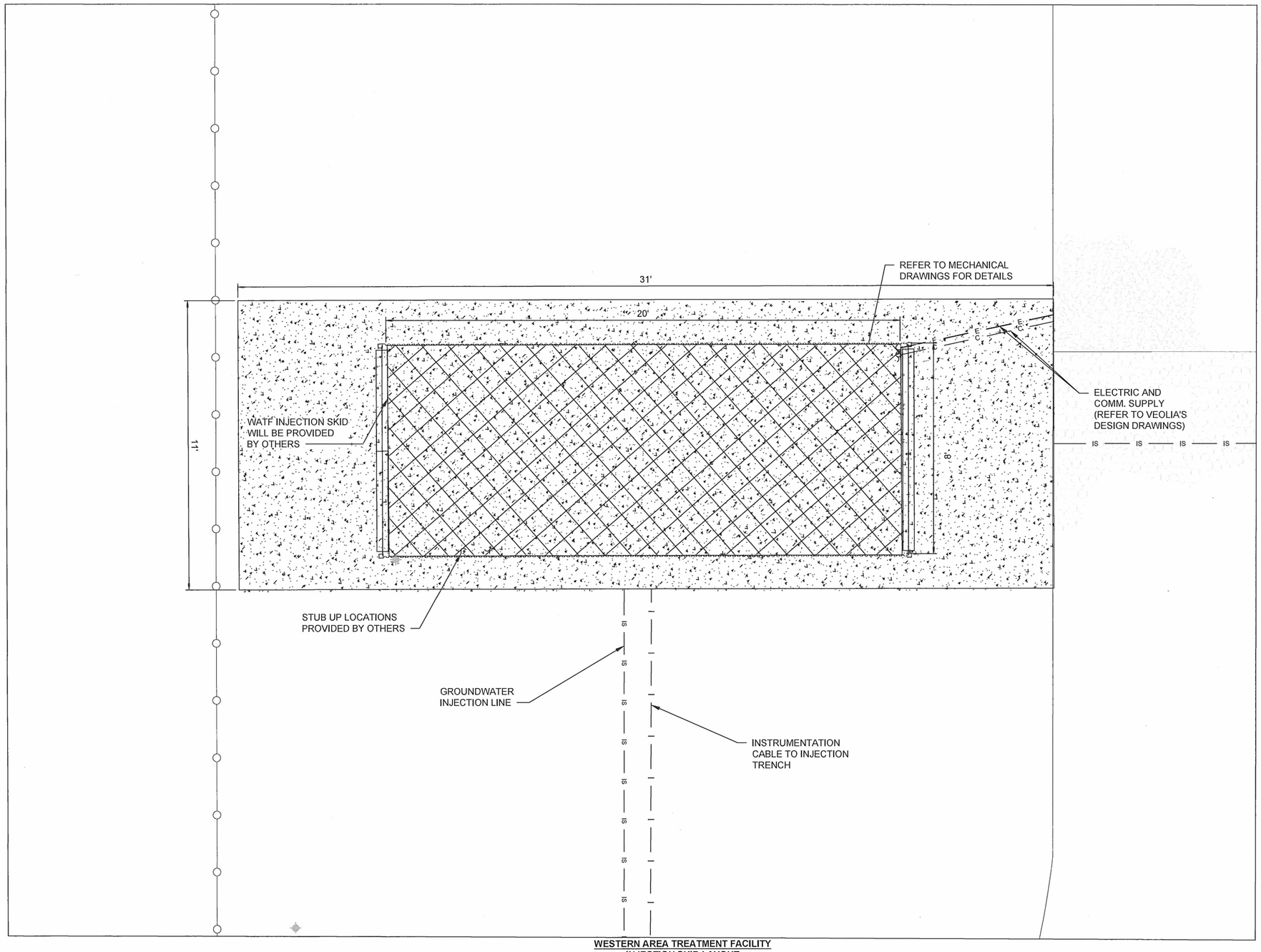
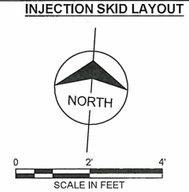
sheet of sheets

file C007 W AREA TREAT FAC SITE.DWG



WESTERN AREA TREATMENT FACILITY
INJECTION SKID LAYOUT



no.	date	by	ckd	description
A	08/19/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

NOTES:
1. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR DETAILS REGARDING APPLICABLE SITE PLAN COMPONENTS.

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816-333-9400
OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
WESTERN AREA TREATMENT
INJECTION SKID LAYOUT

project	contract
142089	-

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sheet of sheets

file C008 W AREA TREAT FAC SITE_INJ SKID.DWG

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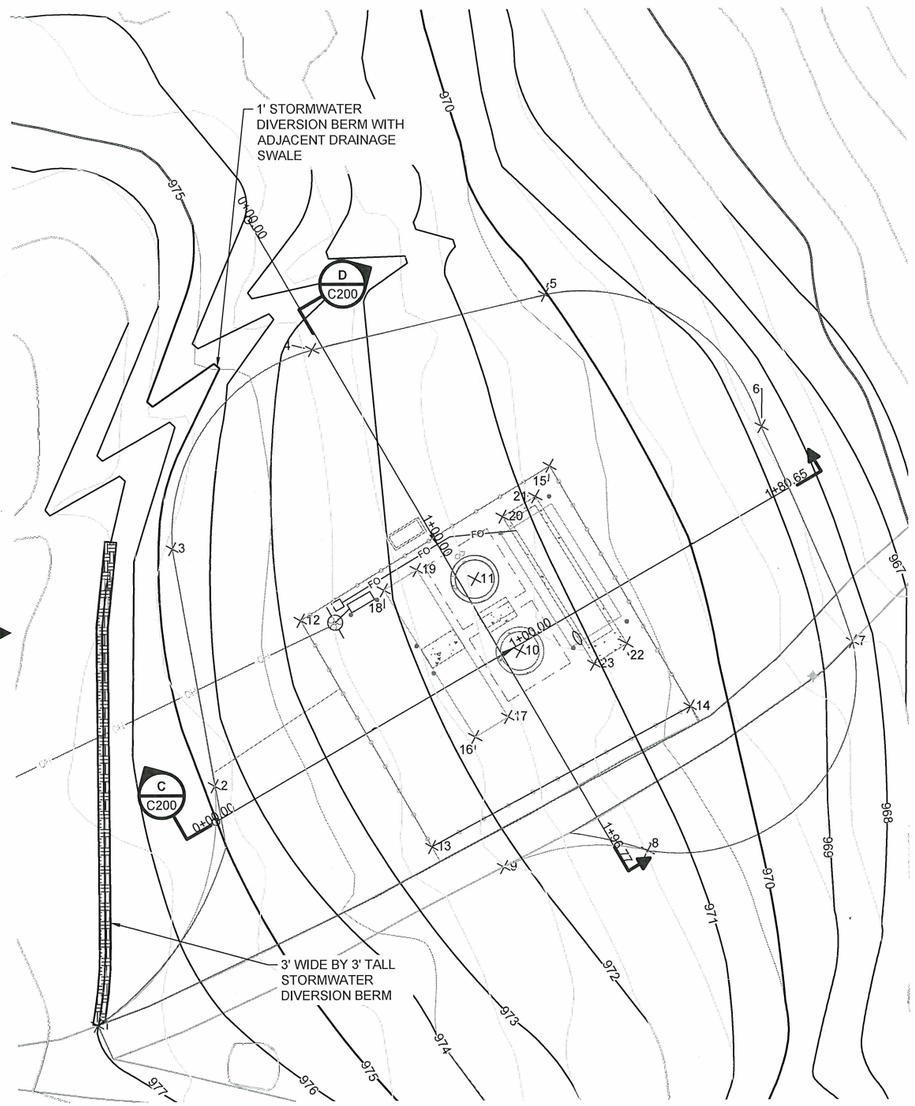
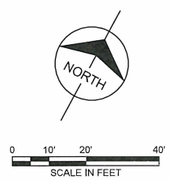
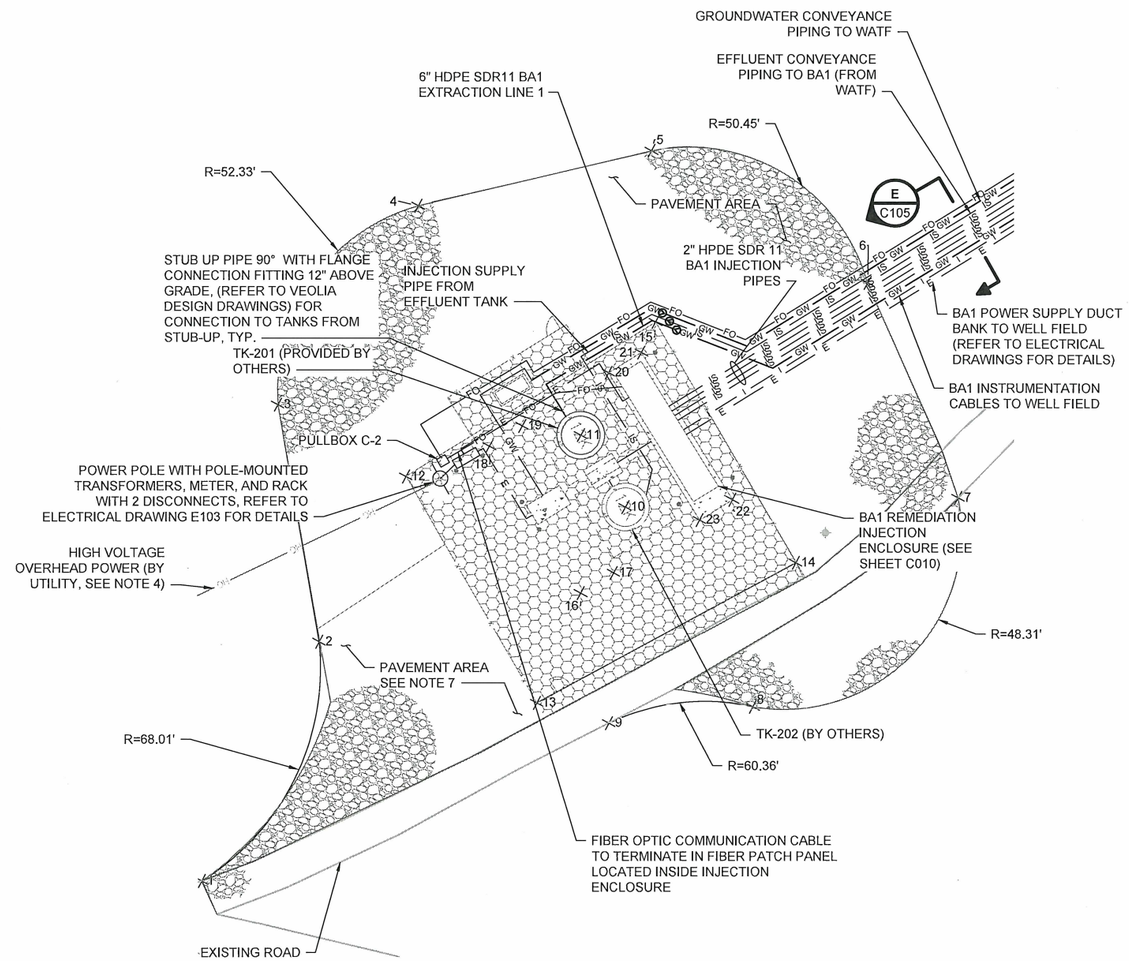
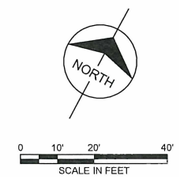


BURIAL AREA 1 REMEDIATION FACILITY GRADING PLAN





BURIAL AREA 1 REMEDIATION FACILITY SITE PLAN



no.	date	by	ckd	description
A	08/19/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

NOTES:

1. PIPE AND CONDUIT LINE SPACING HAS BEEN EXAGGERATED FOR CLARITY IN PARTIAL SITE PLANS, REFER TO TRENCH SECTION DETAILS FOR TYPICAL PIPE AND CONDUIT SPACING. FIELD ADJUSTMENTS OF PIPE ALIGNMENTS TO AVOID CONFLICTS SHALL BE APPROVED BY THE ENGINEER.
2. SUBCONTRACTOR SHALL CLEAR 15 FEET EACH SIDE ALONG FUTURE OVERHEAD POWER LINE ALIGNMENT.
3. FUTURE OVERHEAD POWER LINE EASEMENT HAS BEEN PRELIMINARILY APPROVED BY UTILITY (30' TOTAL WIDTH ALONG THE ALIGNMENT SHOWN).
4. REFER TO MECHANICAL AND ELECTRICAL SHEETS FOR DETAILS REGARDING APPLICABLE SITE PLAN COMPONENTS.
5. REFER TO SHEETS C101-C103 FOR EXTRACTION AND INJECTION TRENCH DETAILS.
6. PROVIDE PULL BOXES EVERY 500' (MAX.) FOR ELECTRICAL AND INSTRUMENTATION CONDUITS.
7. PAVEMENT TO BE SPECIFIED BY VEOLIA GRADES SHOWN REPRESENT PAVEMENT SUBGRADE SURFACE (9.8" LOWER THAN FINISHED, PAVED SURFACE).

PRELIMINARY - NOT FOR CONSTRUCTION

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KANSAS CITY, MO 64114
816-333-9400
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date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
BURIAL AREA 1 REMEDIATION FACILITY SITE PLAN

project	contract
142089	-

drawing: BMCD-GWREMED-C009 — rev. A

sheet of sheets

file C009 BURIAL AREA 1 REM FAC.DWG

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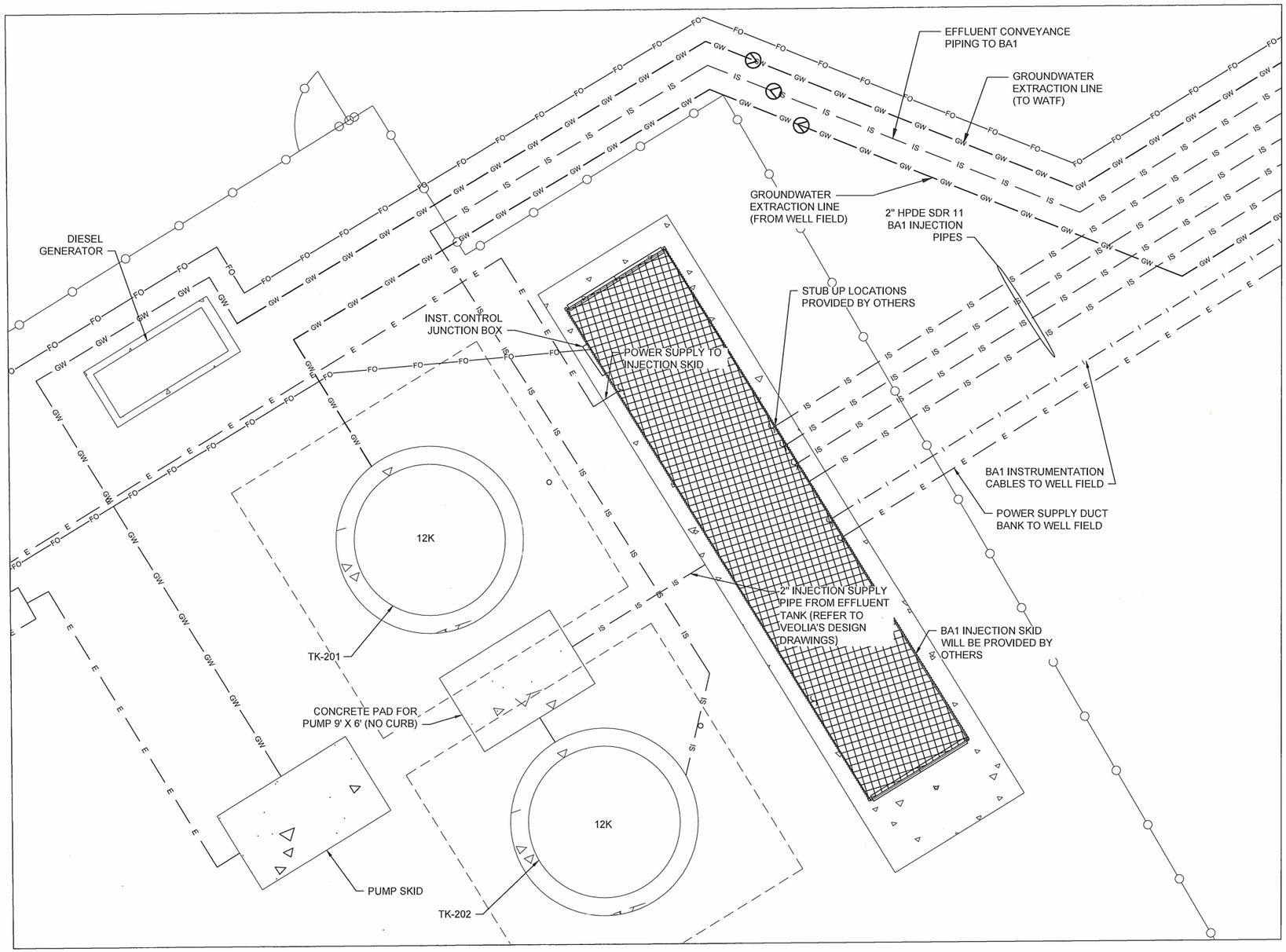
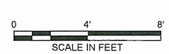


BURIAL AREA 1 REMEDIATION INJECTION SKID



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3. PROVIDE PULL BOXES EVERY 500' (MAX.) FOR ELECTRICAL AND INSTRUMENTATION CONDUITS.

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	M. CARLIN
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B. WEIS	J. HESEMANN

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BURIAL AREA 1 REMEDIATION INJECTION SKID

project	contract
142089	-

drawing: BMCD-GWREMED-C010 — rev. A

sheet of sheets

file C010 BURIAL AREA 1 REM FAC_INJ SKID.DWG

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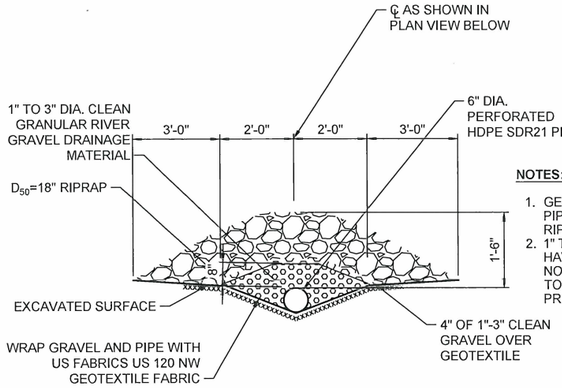
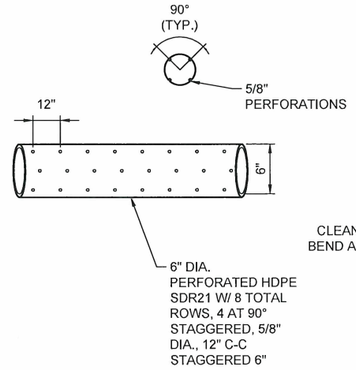


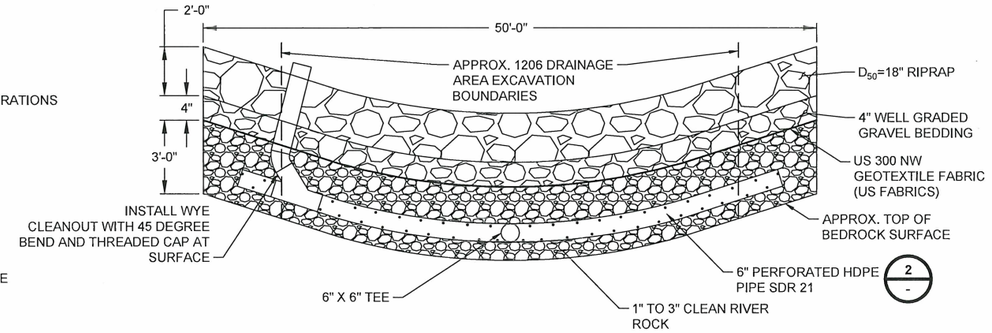
NOTES:

1. GENTLY PLACE RIPRAP OVER PIPE SECTION, DO NOT DROP RIPRAP ON DRAINAGE MATERIAL.
2. 1" TO 3" CLEAN GRAVEL SHALL HAVE LESS THAN 1% PASSING NO. 4 SIEVE. SUBMIT GRADATION TO ENGINEER PRIOR TO PROCUREMENT.

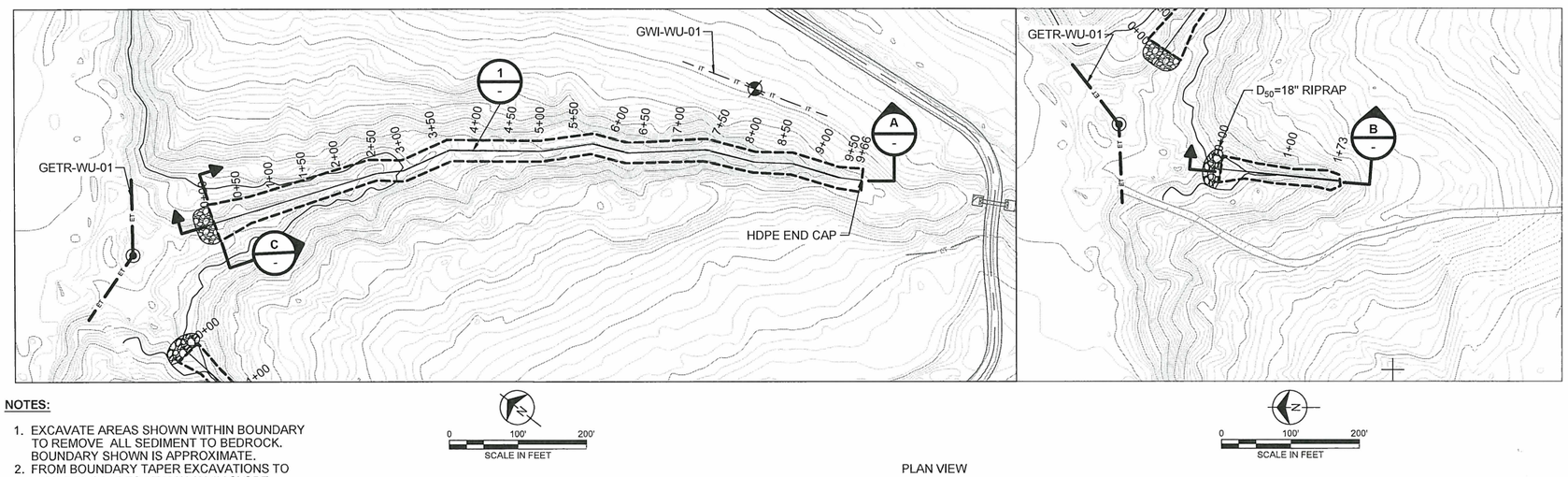
TYPICAL 1206 DRAINAGE AREA CHANNEL PIPE SECTION (1 / C004)
NOT TO SCALE



TYPICAL 1206 DRAINAGE AREA PIPE PERFORATION DETAIL (2 / -)
NOT TO SCALE



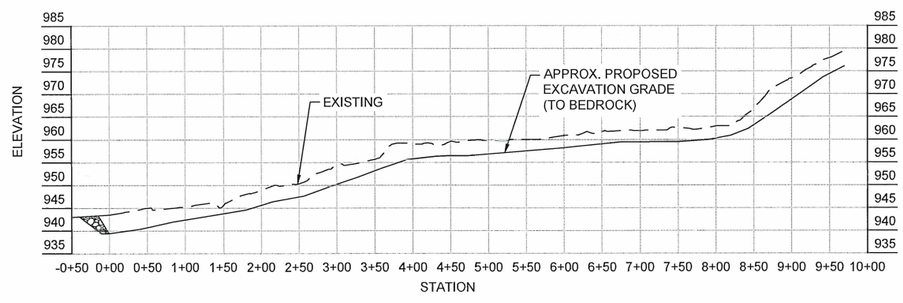
1206 INJECTION PIPE SECTION (C / -)
NOT TO SCALE



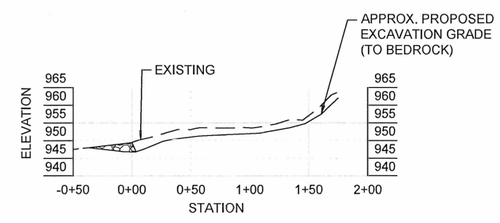
PLAN VIEW

NOTES:

1. EXCAVATE AREAS SHOWN WITHIN BOUNDARY TO REMOVE ALL SEDIMENT TO BEDROCK. BOUNDARY SHOWN IS APPROXIMATE.
2. FROM BOUNDARY TAPER EXCAVATIONS TO EXISTING GRADES AT MAX 3H:1V SLOPE.
3. APPROX. EXCAVATION DEPTHS BASED ON LIMITED FIELD INVESTIGATION.
4. SEE GENERAL NOTE 22 ON SHEET G001 REGARDING MIXING AND SPREADING OF EXCAVATED 1206 AREA SOILS.



EAST EXCAVATION PROFILE (APPROX.) (A / -)



WEST EXCAVATION PROFILE (APPROX.) (B / -)

no.	date	by	ckd	description
A	08/19/22	MRC	JRH	ISSUED FOR PRELIMINARY DESIGN

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
1206 DRAINAGE AREA
REMEDIATION PLAN

project	contract
142089	-

drawing: **BMCD-GWREMED-C011** rev. **A**

sheet of sheets

file C011 1206 DRAINAGE REM PLAN.DWG

no.	date	by	ckd	description
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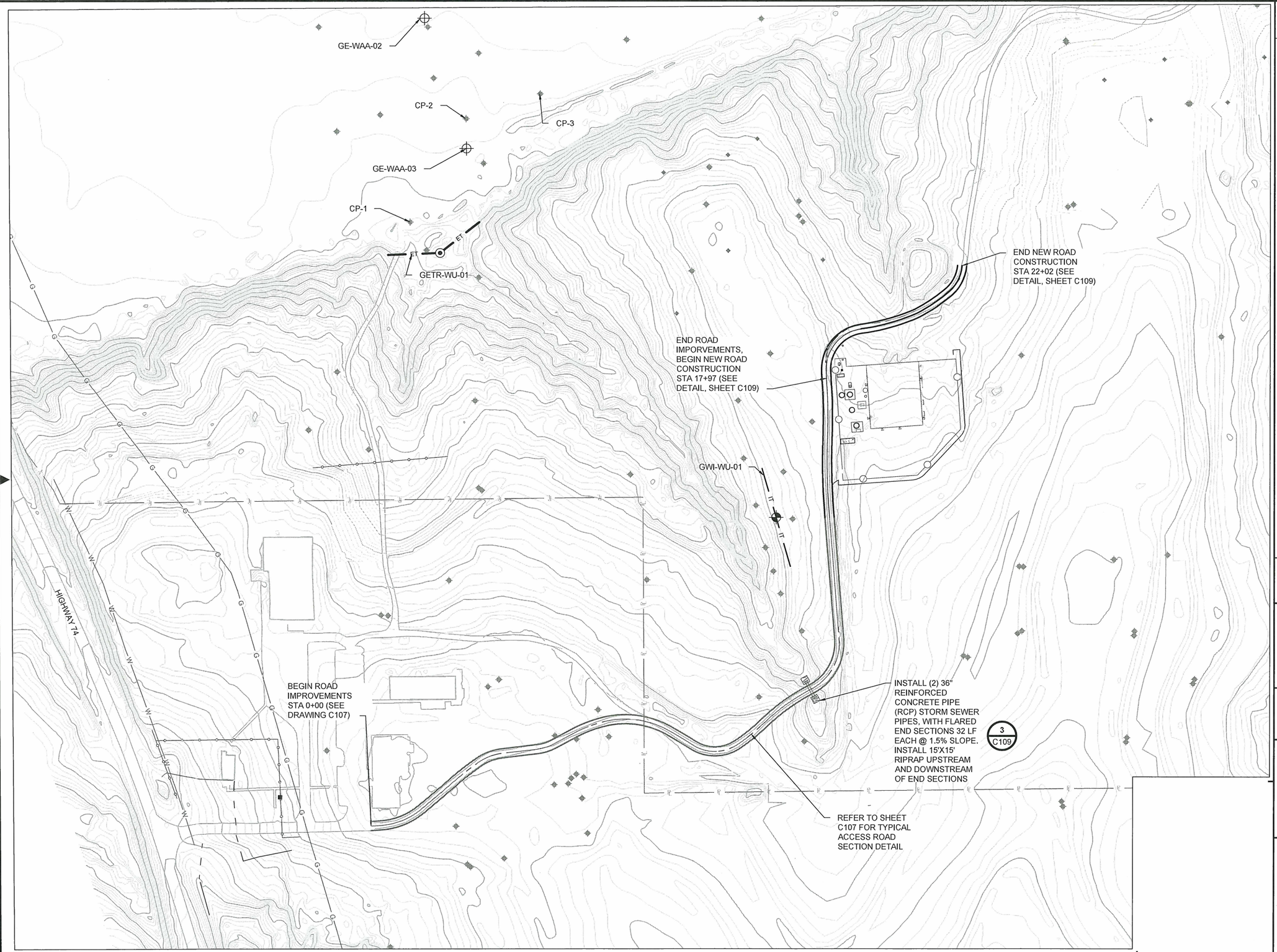

NORTH

0 100' 200'
SCALE IN FEET

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
OKLAHOMA FIRM LICENSEE NO. 421

date	detailed
SEPTEMBER 2022	M. CARLIN
designed	checked
B. WEIS	J. HESEMANN

Cimarron Environmental Response Trust
UPLAND ACCESS ROADS

project	contract
142089	-

drawing **BMCD-GWREMED-C012** rev. **A**

sheet of sheets

file C012 UPLAND ACCESS ROADS.DWG

Scale For Microfilming
Millimeters
Inches

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