

CLOSURE OF MULTIPLE LAGOONS & WELLS

CENTRAL MISSOURI CORRECTIONAL FACILITY

JEFFERSON CITY, MISSOURI

OWNER: STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR

DEPARTMENT OF CORRECTIONS
ANNE L. PRECYTHE,
DIRECTOR

PROJECT
MANAGEMENT: OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION
BRIAN YANSEN,
DIRECTOR

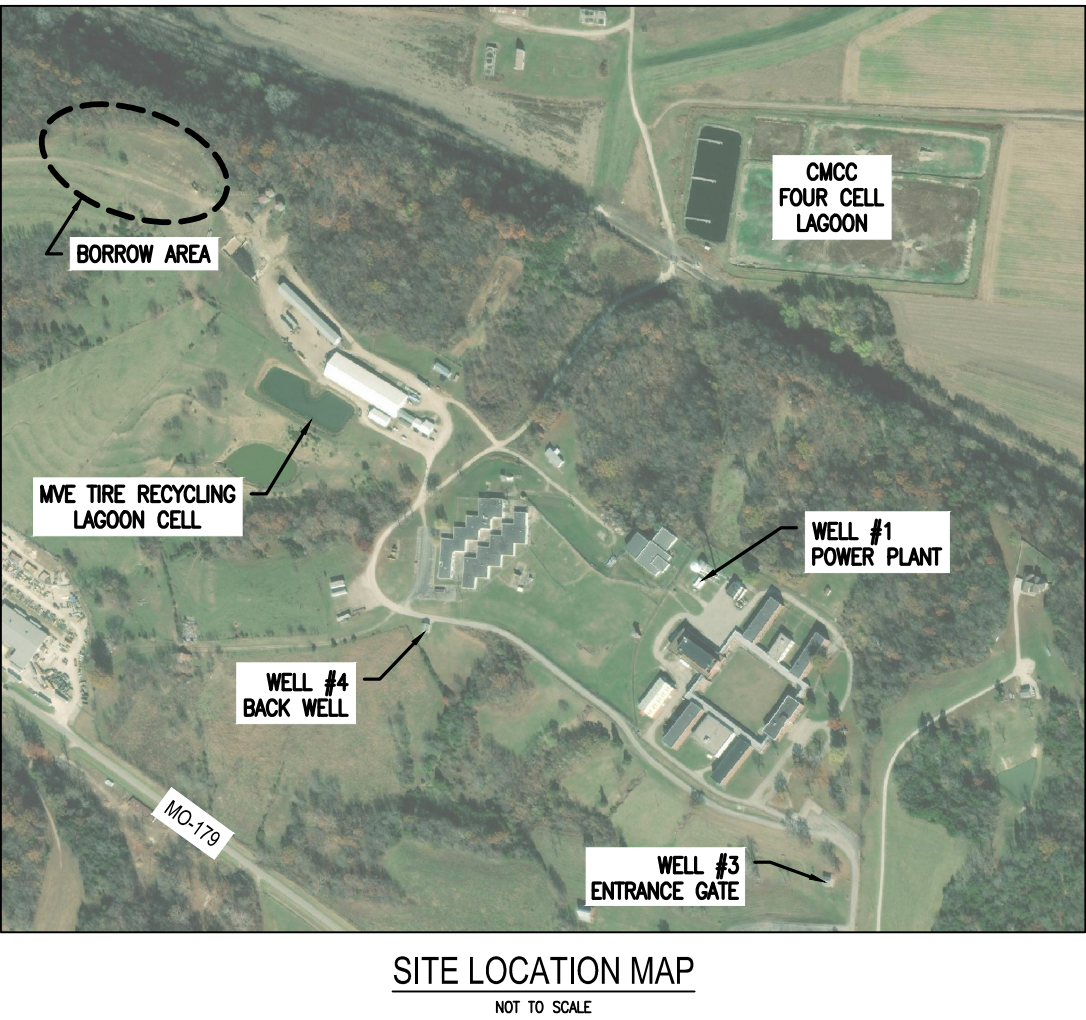
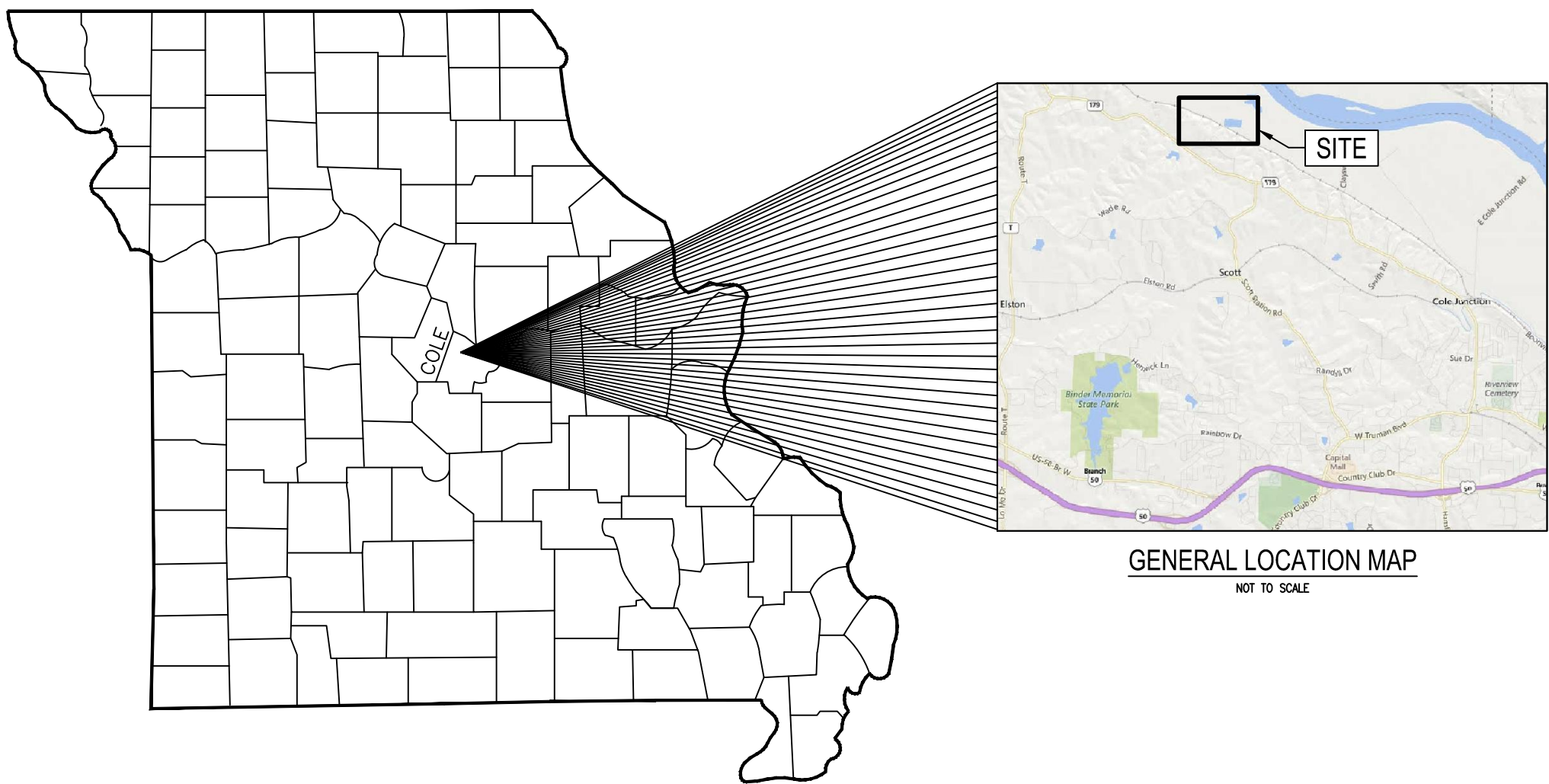


DESIGNER: ALLSTATE CONSULTANTS LLC

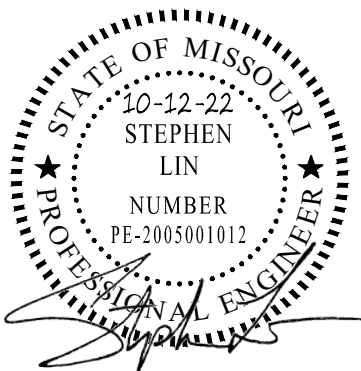
PROJECT NUMBER: C1919-01

SITE NUMBER: 7001

FACILITY ASSET NUMBERS: 9327001046 TIRE RECYCLING BUILDING
9327001005 WASTEWATER TREATMENT LAGOONS
9327001034 WELL HOUSE NO. 1 (POWER PLANT)
9327001035 WELL HOUSE NO. 3 (ENTRANCE GATE)
9327001036 WELL HOUSE NO. 4 (BACK WELL)



- GENERAL**
- 1) THESE PLANS ARE INTENDED TO COMPLY WITH THE REQUIREMENTS OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES.
 - 2) THE ELEVATION DATUM FOR THIS PROJECT IS BASED ON OUR OBSERVATION OF MISSOURI GEOGRAPHICAL REFERENCE STATION L333 LOCATED IN THE NW1/4 OF SECTION 19, TOWNSHIP 45 NORTH, RANGE 12 WEST, COLE COUNTY, MISSOURI. THE ELEVATION OF THE MONUMENT IS 586.70 (NAVD 1988).
 - 3) THE OFFICE OF ADMINISTRATION'S MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND DISTURBANCE PERMIT IS MOR100038 (EXPIRATION 7-4-2027)
 - 4) THE CONTRACTOR SHALL PROVIDE ALL UTILITIES NECESSARY FOR COMPLETION OF CLOSURE AND CONSTRUCTION ACTIVITIES ONSITE.
 - 5) THE DEWATERING OF THE MVE TIRE RECYCLING FACILITY LAGOON CELL SHALL BE COMPLETED PRIOR TO THE REMOVAL OF THE SEWER PIPE WITHIN THE RAILROAD RIGHT-OF-WAY. THE DEWATERING OF THE CMCC FOUR-CELL LAGOON MAY RUN CONCURRENTLY WITH DEWATERING OF THE MVE TIRE RECYCLING FACILITY LAGOON CELL. ADDITIONAL INSTRUCTIONS CAN BE FOUND IN THE CLOSURE OF LAGOONS AND WELL, MULTIPLE FOR CMCC REPORT.



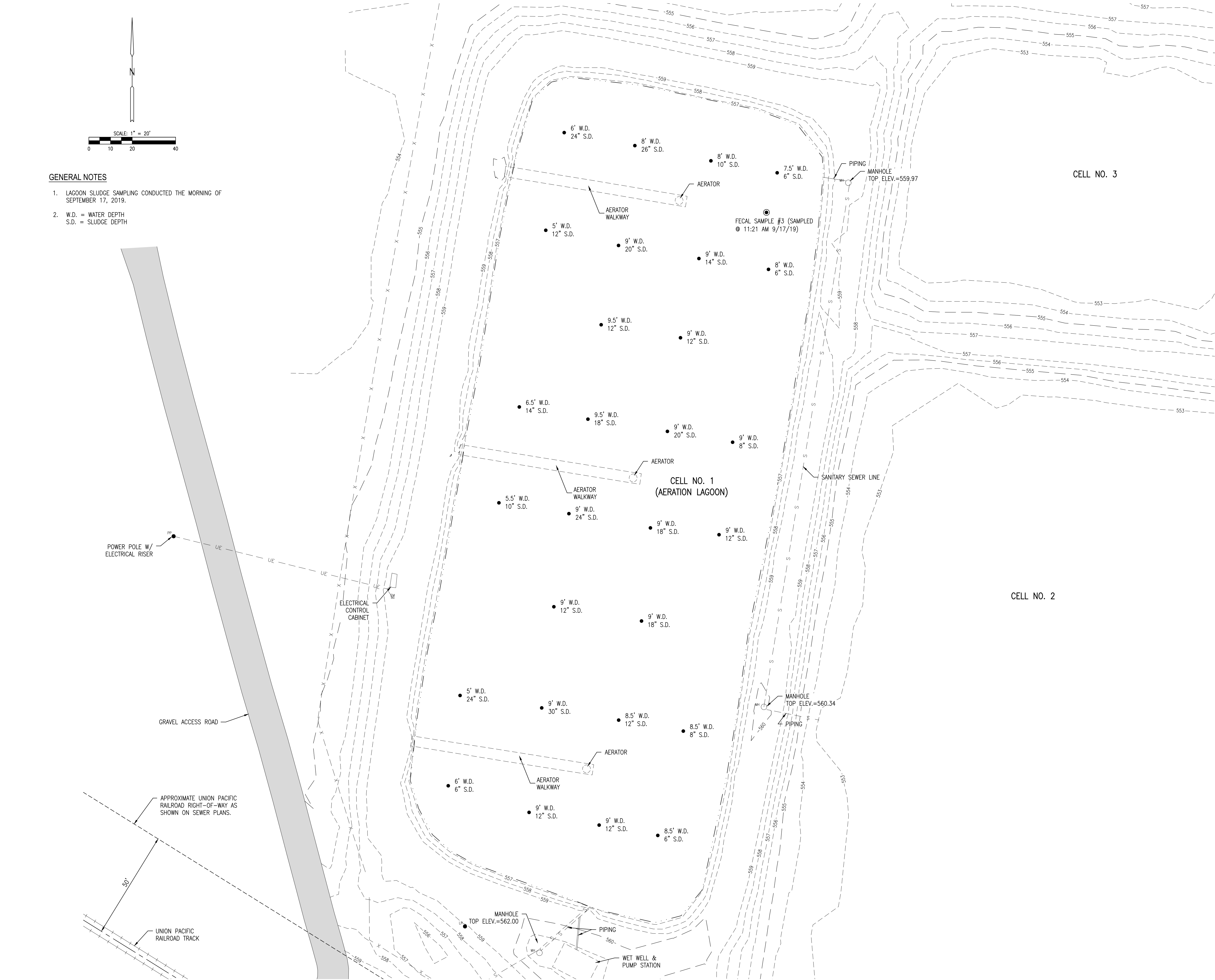
STEPHEN LIN, P.E.
PE-20050010012

SHEET NUMBER:

C-1

1 OF 13 SHEETS

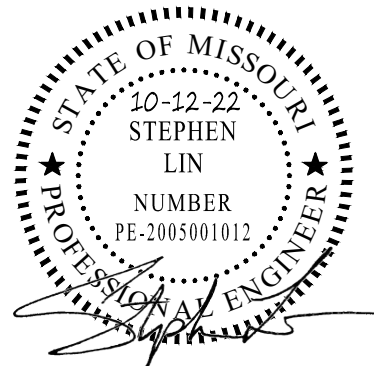
October 12, 2022



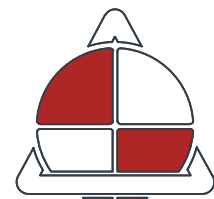
GENERAL NOTES

- LAGOON SLUDGE SAMPLING CONDUCTED THE MORNING OF SEPTEMBER 17, 2019.
- W.D. = WATER DEPTH
S.D. = SLUDGE DEPTH

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



STEPHEN LIN, P.E.
PE-20050010012



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CONSULTANTS**

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MISSOURI STATE CERTIFICATE
OF AUTHORITY #2007004004

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
CORRECTIONS

CLOSURE OF
MULTIPLE LAGOONS
AND WELLS

CENTRAL MISSOURI
CORRECTIONAL CENTER
2580 MO-179
JEFFERSON CITY, MO

PROJECT # C1919-01
SITE # 7001
ASSET # 9327001005

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 10/12/2022

CAD DWG FILE: SURVEY-BASE CHURCH FARM
DRAWN BY: MJF
CHECKED BY: RCS
DESIGNED BY: CDS & SL

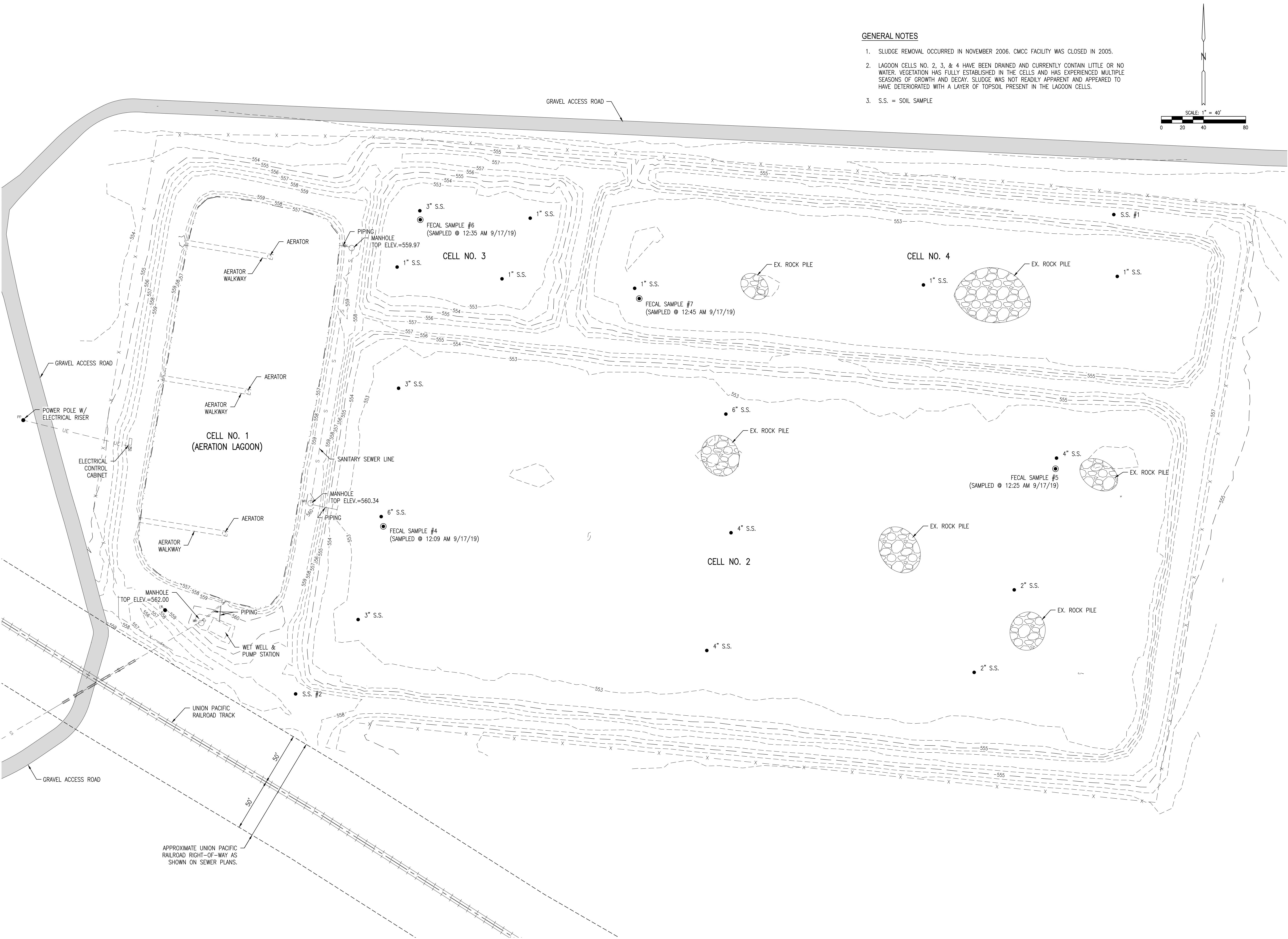
SHEET TITLE:

TOPOGRAPHIC SURVEY
BIOSOLIDS SAMPLING
RESULTS CELL NO. 1

SHEET NUMBER:

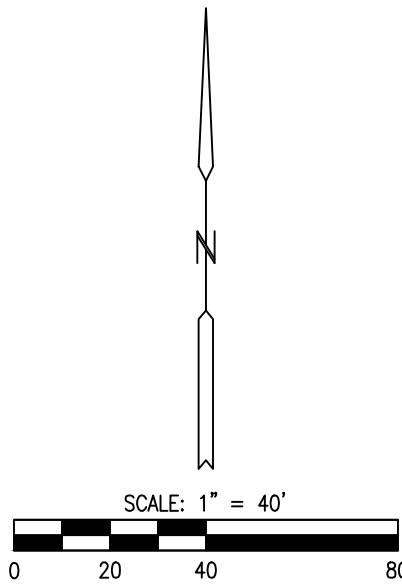
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SHEET 2 OF 13
10/12/2022



GENERAL NOTES

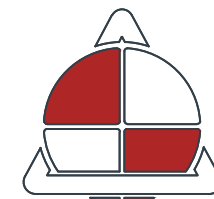
1. SLUDGE REMOVAL OCCURRED IN NOVEMBER 2006. CMCC FACILITY WAS CLOSED IN 2005.
2. LAGOON CELLS NO. 2, 3, & 4 HAVE BEEN DRAINED AND CURRENTLY CONTAIN LITTLE OR NO WATER. VEGETATION HAS FULLY ESTABLISHED IN THE CELLS AND HAS EXPERIENCED MULTIPLE SEASONS OF GROWTH AND DECAY. SLUDGE WAS NOT READILY APPARENT AND APPEARED TO HAVE DETERIORATED WITH A LAYER OF TOPSOIL PRESENT IN THE LAGOON CELLS.
3. S.S. = SOIL SAMPLE



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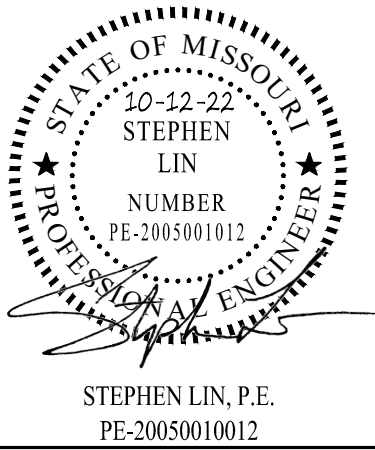
SHEET TITLE:

TOPOGRAPHIC SURVEY
& BIOSOLIDS SAMPLING
RESULTS - CELL NO. 2, 3 & 4

SHEET NUMBER:

C-3

SHEET 3 OF 13
10/12/2022



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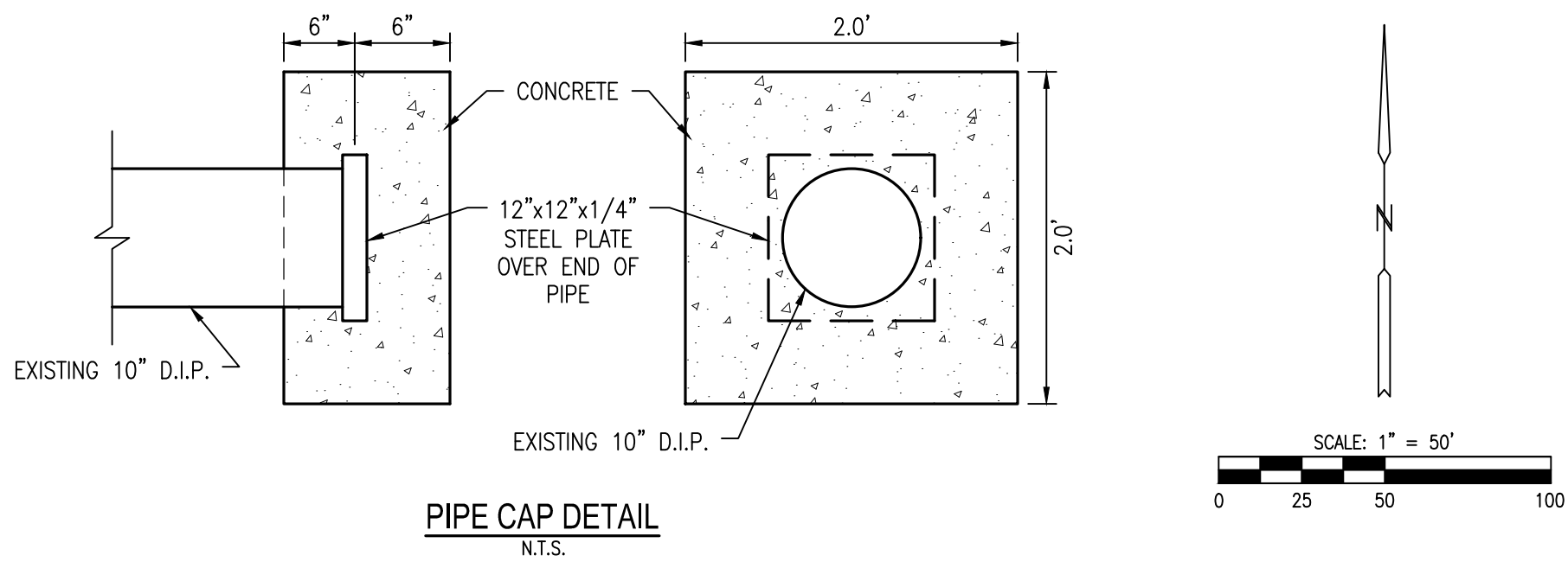
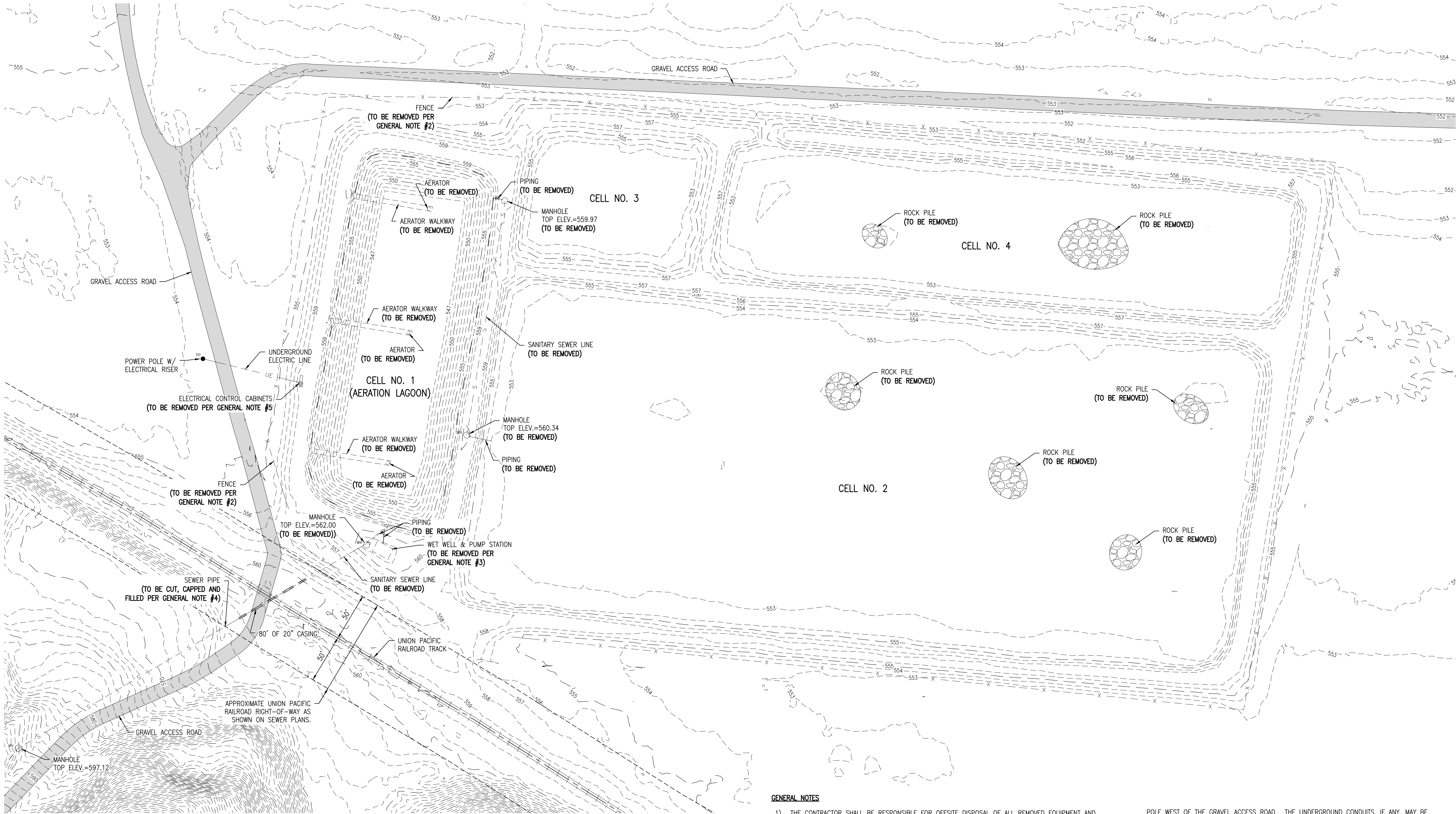
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DEMOLITION PLAN

SHEET NUMBER:

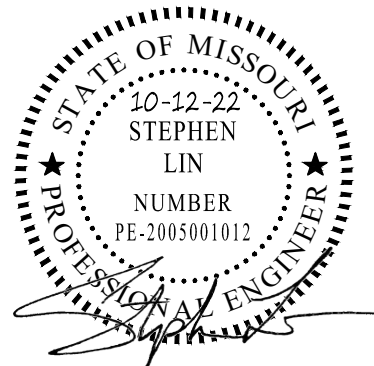
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SHEET 4 OF 13
10-12-2022

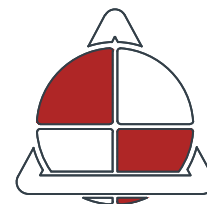


GENERAL NOTES

- 1) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OFFSITE DISPOSAL OF ALL REMOVED EQUIPMENT AND MATERIALS FROM DEMOLITION OF THE CMCC FOUR-CELL LAGOON.
- 2) THE CONTRACTOR SHALL PROVIDE ALL UTILITIES NECESSARY FOR COMPLETION OF CLOSURE AND CONSTRUCTION ACTIVITIES ONSITE.
- 3) FENCE REMOVAL WILL INCLUDE ALL POSTS, WIRE, GATES, AND ASSOCIATED SIGNAGE.
- 4) WET WELL AND PUMP STATION DEMOLITION
 - A) THE CONTRACTOR SHALL REMOVE ALL PUMP STATION EQUIPMENT INCLUDING BUT NOT LIMITED TO THE PUMPS, PIPING, ELECTRICAL EQUIPMENT, AND METAL BUILDING. THE CONCRETE SLAB THE BUILDING SITS ON SHALL BE REMOVED ALONG WITH ANY SUBSURFACE PIPING AND ELECTRICAL.
 - B) THE CONTRACTOR SHALL REMOVE ALL EXTERNAL EQUIPMENT AND ELECTRICAL WIRES FROM THE WET WELL PRIOR TO DEMOLITION. THE CONTRACTOR SHALL REMOVE ALL WASTE AND WATER FROM THE WET WELL STRUCTURE. THE INFLUENT LINE TO THE WET WELL SHALL BE CUT AND CAPPED. TO CLOSE THE WET WELL, THE CONTRACTOR WILL HAVE TWO OPTIONS. FIRST, THE CONTRACTOR CAN CRACK THE BOTTOM OF THE WET WELL STRUCTURE TO ALLOW PASSAGE OF WATER. THEN THE UPPERMOST TWO (2) FEET OF THE WET WELL BELOW THE PROPOSED FINISHED GRADE WILL BE CUT AND ALLOWED TO DROP INTO THE STRUCTURE. THEN THE CONTRACTOR MAY UTILIZE AVAILABLE CLEAN SOIL FILL, FLOWABLE CEMENT FILL OR SAND TO FILL IN THE REST OF THE VOIDS UP TO THE CUT LINE OF THE STRUCTURE (TWO (2) FEET BELOW THE PROPOSED FINISHED GRADE). THE SECOND OPTION IS THE CONTRACTOR CAN CUT THE UPPERMOST TWO (2) FEET OF THE WET WELL BELOW THE PROPOSED FINISHED GRADE AND ALLOW THE MATERIAL TO DROP INTO THE STRUCTURE. THEN THE STRUCTURE'S VOIDS CAN BE FILLED WITH FLOWABLE FILL (CEMENTITIOUS SLURRY) UP TO THE CUT LINE OF THE STRUCTURE (TWO (2) FEET BELOW THE PROPOSED FINISHED GRADE).
 - C) THE ELECTRIC WIRING FOR THE WET WELL AND PUMP STATION SHALL BE DISCONNECTED AND COMPLETELY REMOVED FROM THESE STRUCTURES TO THE DISCONNECT LOCATED ON A POWER
- 5)
 - A. PRIOR TO ANY WORK WITHIN THE UNION PACIFIC RAILROAD RIGHT-OF-WAY, THE CONTRACTOR MUST NOTIFY THEIR FIELD PERSON, LUCAS EATON AT 573-681-6223.
 - B. THE SEWER PIPE RUNNING WITHIN THE UNION PACIFIC RAILROAD RIGHT-OF-WAY SHALL BE REMOVED BY CUTTING AND CAPPING THE PIPE ON EACH SIDE OF THE RIGHT-OF-WAY. AFTER REMOVING THE SEWER PIPE WITHIN THE RIGHT-OF-WAY, THE ENCASEMENT PIPE UNDER THE TRACK AREA (THE ORIGINAL PLAN SHOWS 80 L.F. OF 20" CASING WITH 10" D.I.P. IN THE RIGHT-OF-WAY AREA) SHALL BE FILLED WITH CLSM (CONTROLLED LOW-STRENGTH MATERIAL).
 - C. CLSM DESIGN
 - i. THE CLSM MATERIAL SHALL HAVE AN UNCONFINED COMPRESSIVE STRENGTH OF 300 PSI.
 - ii. THE MIXTURE SHALL CONSIST OF WATER, PORTLAND CEMENT, FLAY ASH, AND SOME FINE OR COURSE AGGREGATE OR BOTH.
 - iii. THE MIX DESIGN SHALL ALLOW FLOWABILITY WITHOUT SEGREGATION OF AGGREGATES.
 - iv. HARDENING TIME IS OF PRIME IMPORTANCE AND CLSM SHOULD DEVELOP 50 PSI IN ABOUT ONE HOUR.
 - v. CONTRACTOR SHOULD VERIFY NO VOIDS AFTER FILLING THE ENCASEMENT PIPE.
 - D. THE ELECTRIC WIRING FOR THE ELECTRICAL CONTROL CABINETS AND PUMP STATION SHALL BE DISCONNECTED AND COMPLETELY REMOVED FROM THE STRUCTURES TO THE DISCONNECT LOCATED ON A POWER POLE WEST OF THE GRAVEL ACCESS ROAD. THE UNDERGROUND CONDUITS, IF ANY, MAY BE ABANDONED IN-PLACE. THE POWER POLE IS TO REMAIN FOR FUTURE USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF THE ELECTRICAL CONTROL CABINETS OFFSITE.
 - E. THE EFFLUENT OUTFALL PIPE SHALL BE CUT AND CAPPED IN THE NORTHERN LAGOON BERM SOUTH OF THE GRAVEL ACCESS ROAD. THE CONTRACTOR SHALL UTILIZE THE PIPE CAP DETAIL LOCATED ON SHEET C-4. THE CONTRACTOR IS NOT RESPONSIBLE FOR REMOVAL OF THE EFFLUENT OUTFALL PIPE OUTSIDE OF THE FOUR-CELL LAGOON BERM.



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ISSUE DATE: 10/12/2022

CAD DWG FILE: SURVEY-BASE CHURCH FARM
DRAWN BY: MJF
CHECKED BY: RCS
DESIGNED BY: CDS & SL

SHEET TITLE:

GRADING & LAGOON
CLOSURE DETAILS

SHEET NUMBER:

C-5

SHEET 5 OF 13
10/12/2022

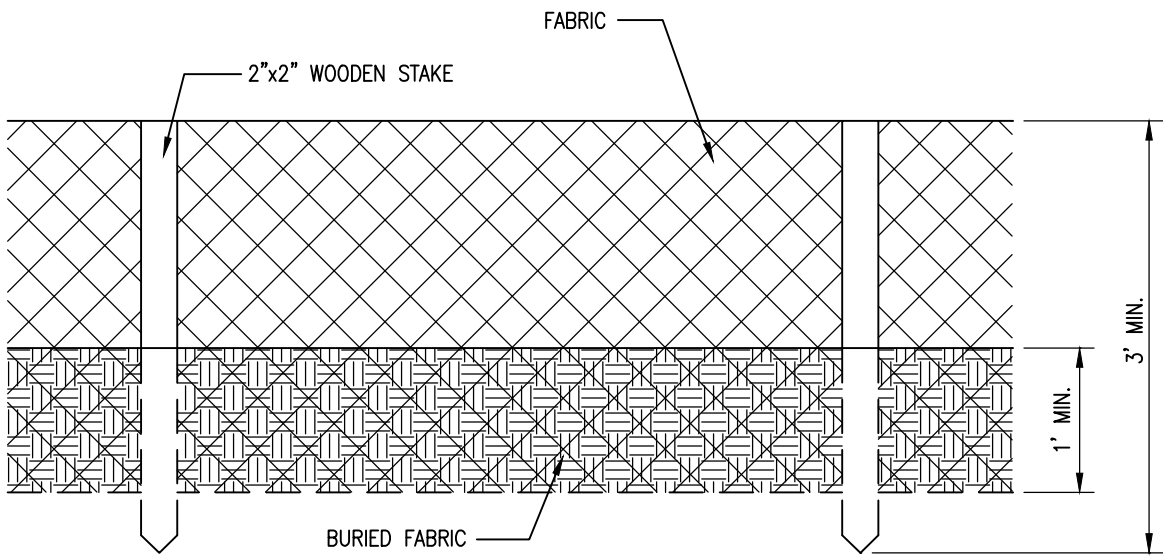
LAGOON CLOSURE PLAN NOTES:

LAGOON CLOSURE PROCEDURE

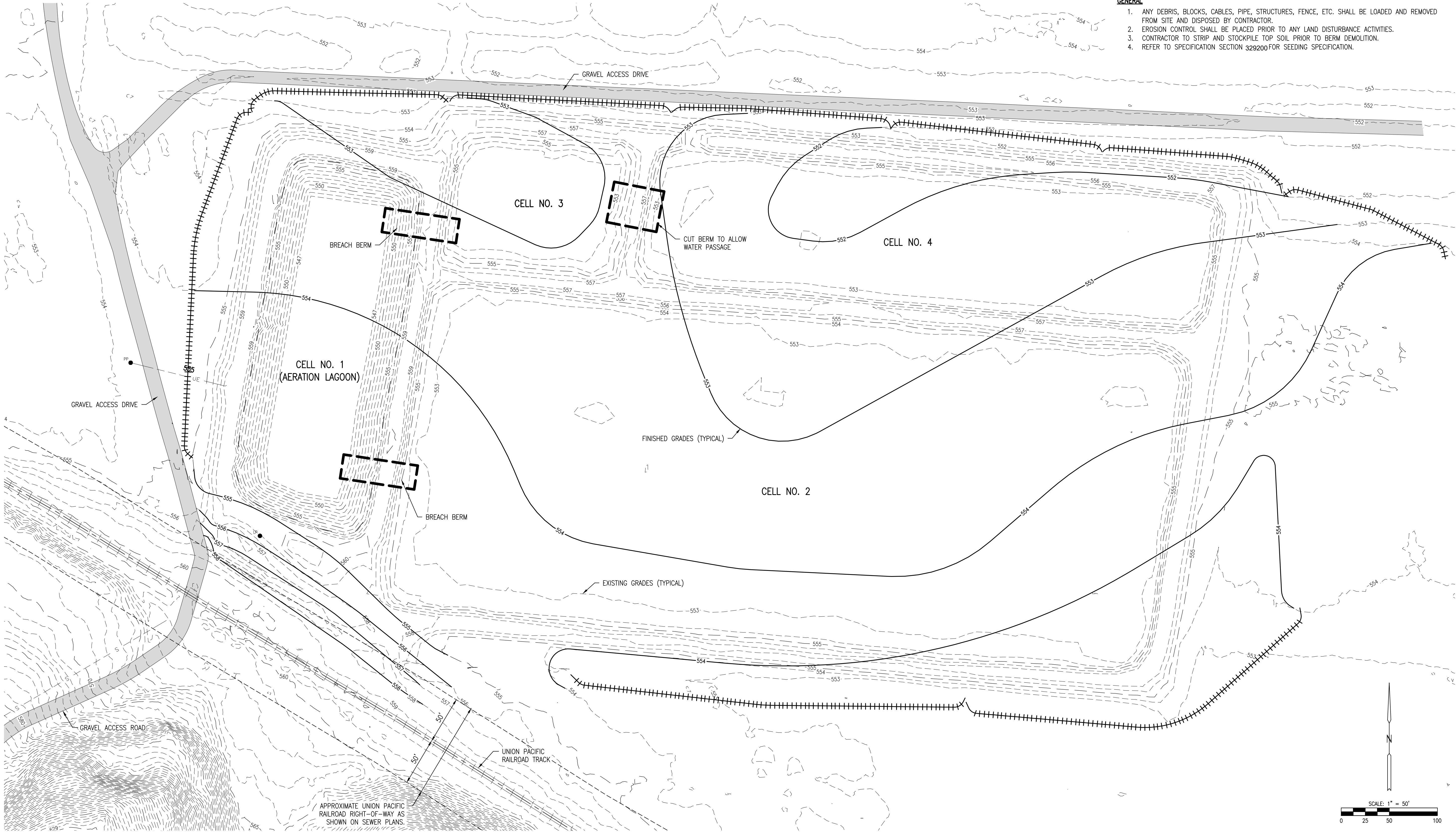
1. MVE TIRE RECYCLING FACILITY LAGOON CELL EFFLUENT WILL BE PUMPED TO CMCC LAGOON CELL NO. 1.
2. FOUR-CELL LAGOON CELLS NO. 2, NO. 3, AND NO. 4 WILL BE UTILIZED FOR DEWATERING OF LAGOON CELL NO. 1. THE CONTRACTOR MAY CONDUCT CONTROLLED INTERNAL BERM BREACHES OR ALTERNATIVELY, THE CONTRACTOR MAY PUMP WATER TO EVENLY DISPERSE WASTEWATER FROM CELL NO. 1 TO THE THREE DRAINED CELLS.
3. THE CONTRACTOR MAY DISCHARGE EFFLUENT INTO OUTFALL #001 PER THE CENTRAL MISSOURI CORRECTIONAL FACILITY WASTEWATER TREATMENT FACILITY OPERATING PERMIT MO-0097659 VIA A PUMP. THE EFFLUENT MUST BE MONITORED DURING DISCHARGE PER REQUIREMENTS DETAILED IN TABLE A (PAGE 2) OF THE OPERATING PERMIT. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.
4. THE CONTRACTOR SHALL VERIFY THE OUTFALL PIPE AND ASSOCIATED STRUCTURES ARE STILL IN PLACE AND WORKING ORDER PRIOR TO UTILIZING FOR DEWATERING OF CMCC LAGOON CELL NO. 1. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING DISCHARGE GRAB SAMPLES OF EFFLUENT AND MAINTAINING AND SUBMITTING RECORDS OF SAMPLING TO MDNR.
6. VEGETATION AND SIX (6) ROCK PILES SHALL BE REMOVED PRIOR TO SOIL AND SLUDGE MIXING.
7. AFTER SOIL SLUDGE MIXING IS COMPLETE, CELLS SHALL BE GRADED TO DRAIN WITH NO SLOPES STEEPER THAN 3H:1V.

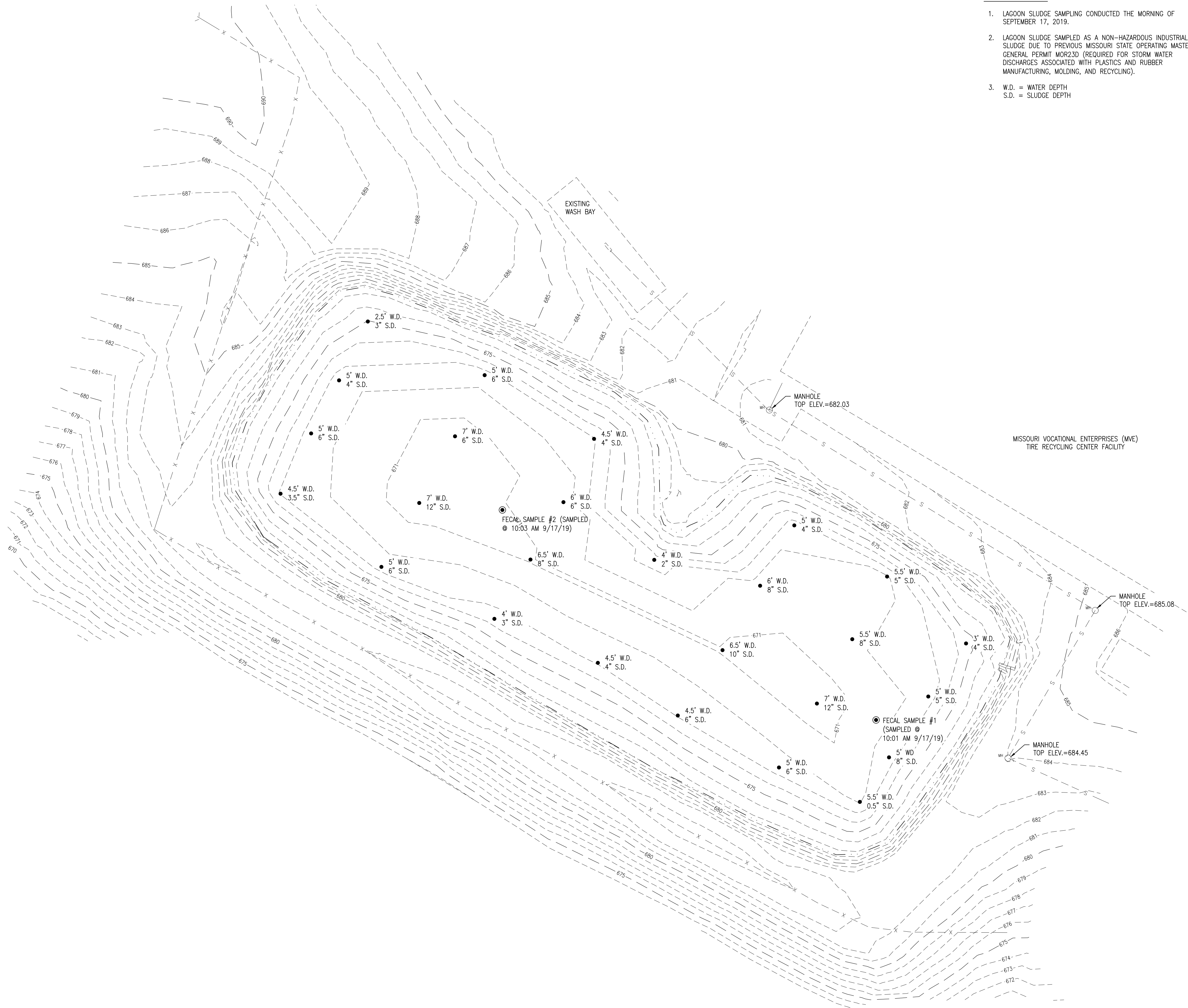
GENERAL

1. ANY DEBRIS, BLOCKS, CABLES, PIPE, STRUCTURES, FENCE, ETC. SHALL BE LOADED AND REMOVED FROM SITE AND DISPOSED BY CONTRACTOR.
2. EROSION CONTROL SHALL BE PLACED PRIOR TO ANY LAND DISTURBANCE ACTIVITIES.
3. CONTRACTOR TO STRIP AND STOCKPILE TOP SOIL PRIOR TO BERM DEMOLITION.
4. REFER TO SPECIFICATION SECTION 329200 FOR SEEDING SPECIFICATION.



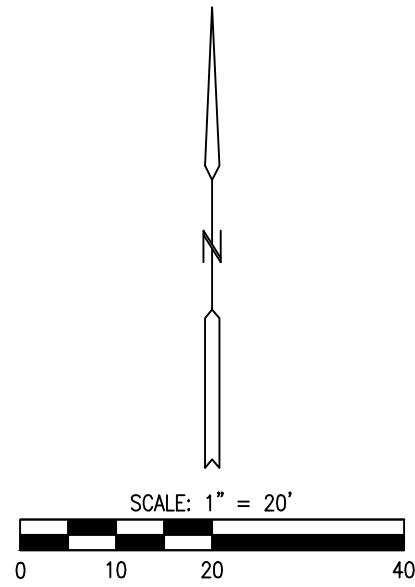
SILT FENCE INSTALLATION
N.T.S.



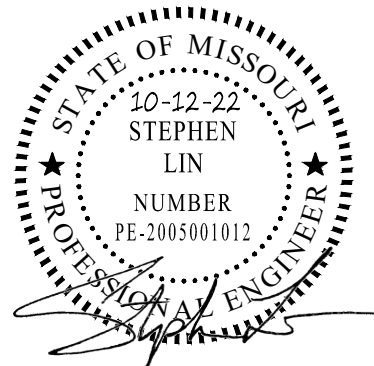


GENERAL NOTES

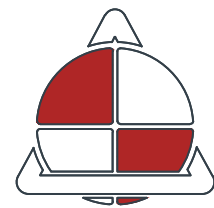
- LAGOON SLUDGE SAMPLING CONDUCTED THE MORNING OF SEPTEMBER 17, 2019.
- LAGOON SLUDGE SAMPLED AS A NON-HAZARDOUS INDUSTRIAL SLUDGE DUE TO PREVIOUS MISSOURI STATE OPERATING MASTER GENERAL PERMIT MOR23D (REQUIRED FOR STORM WATER DISCHARGES ASSOCIATED WITH PLASTICS AND RUBBER MANUFACTURING, MOLDING, AND RECYCLING).
- W.D. = WATER DEPTH
S.D. = SLUDGE DEPTH



STATE OF MISSOURI
MICHAEL L. PARSON,
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2580 MO-179
JEFFERSON CITY, MO

PROJECT # C1919-01
SITE # 7001
ASSET # 9327001046

REVISION: _____
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ISSUE DATE: 10/12/2022

CAD DWG FILE: SURVEY-BASE CHURCH FARM
DRAWN BY: MJF
CHECKED BY: RCS
DESIGNED BY: CDS & SL

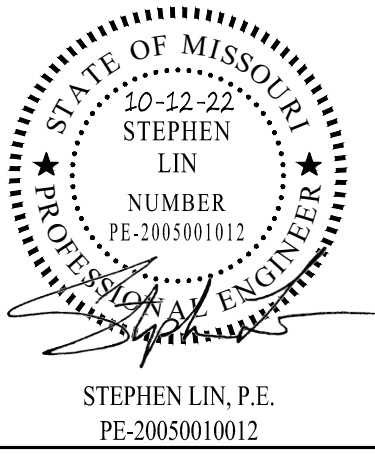
SHEET TITLE:

TOPOGRAPHIC
SURVEY & BIOSOLIDS
SAMPLING RESULTS

SHEET NUMBER:

C-6

SHEET 6 OF 13
10-12-2022



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SHEET TITLE:

GRADING & LAGOON
CLOSURE DETAILS

SHEET NUMBER:

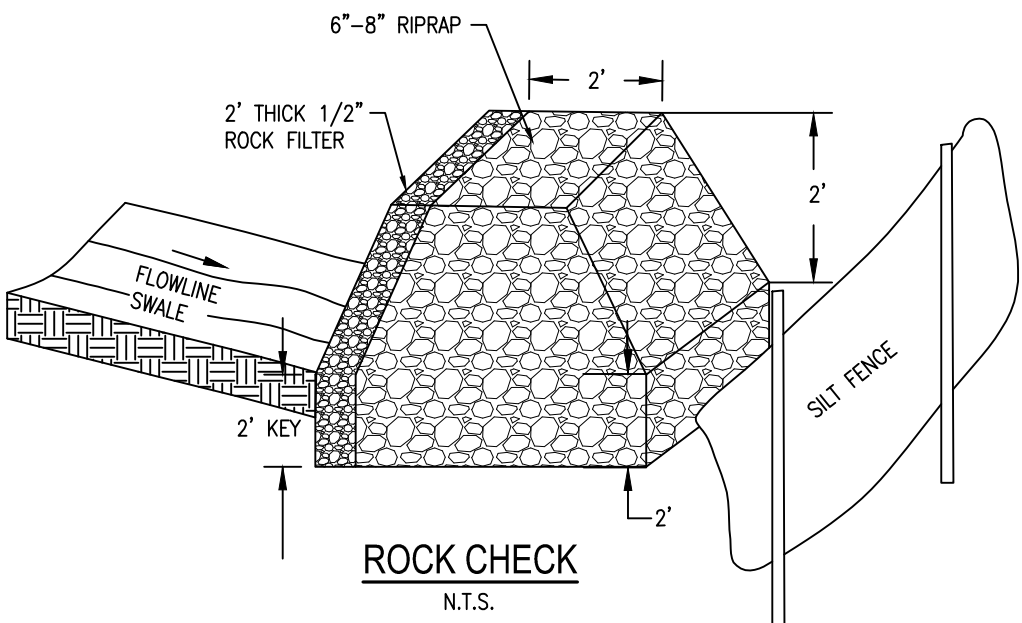
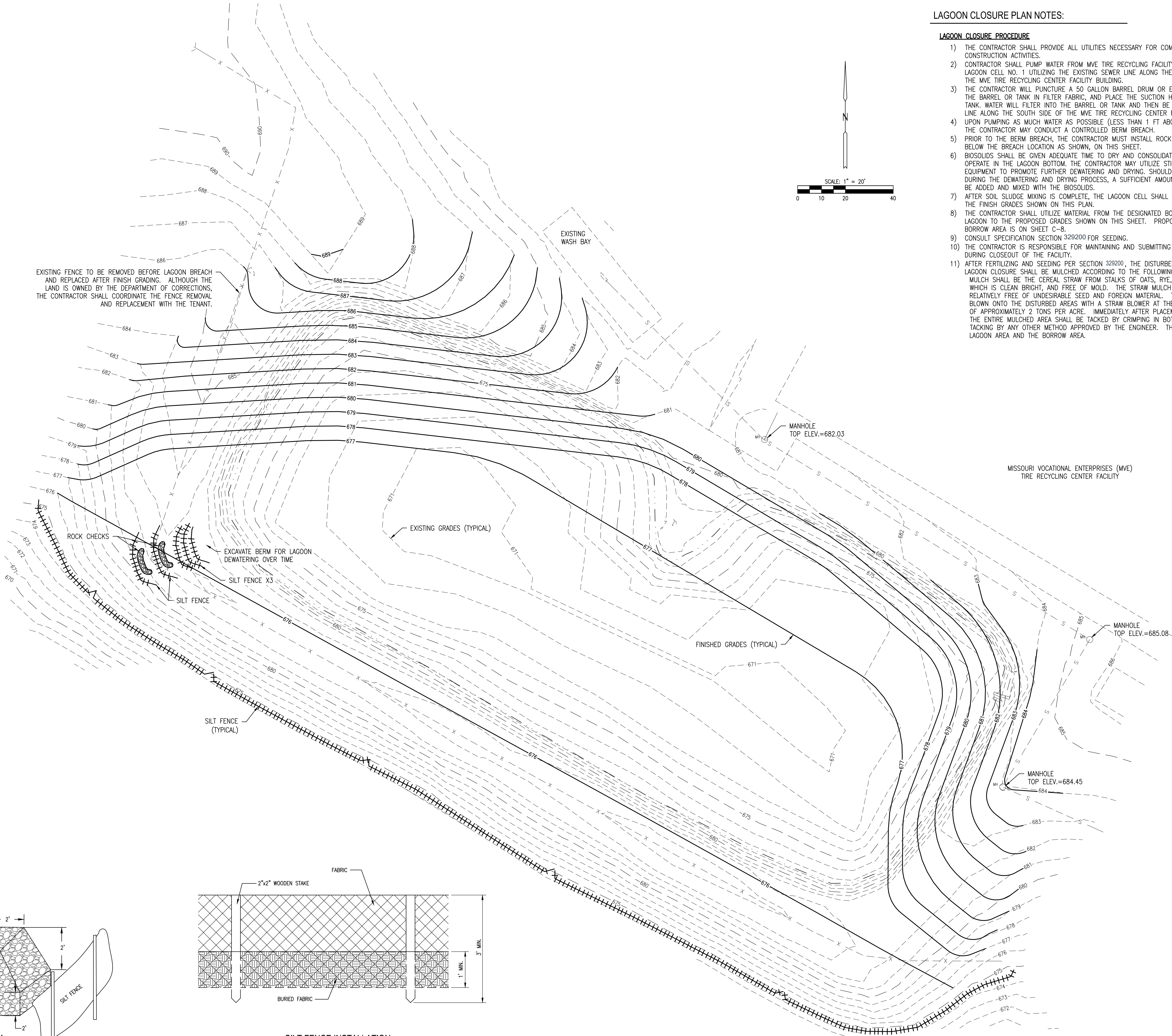
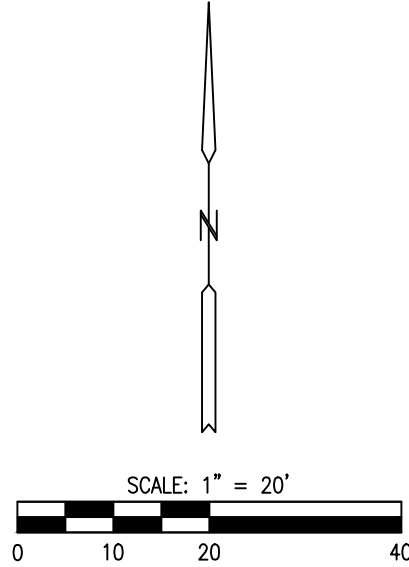
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SHEET 7 OF 13
10/12/2022

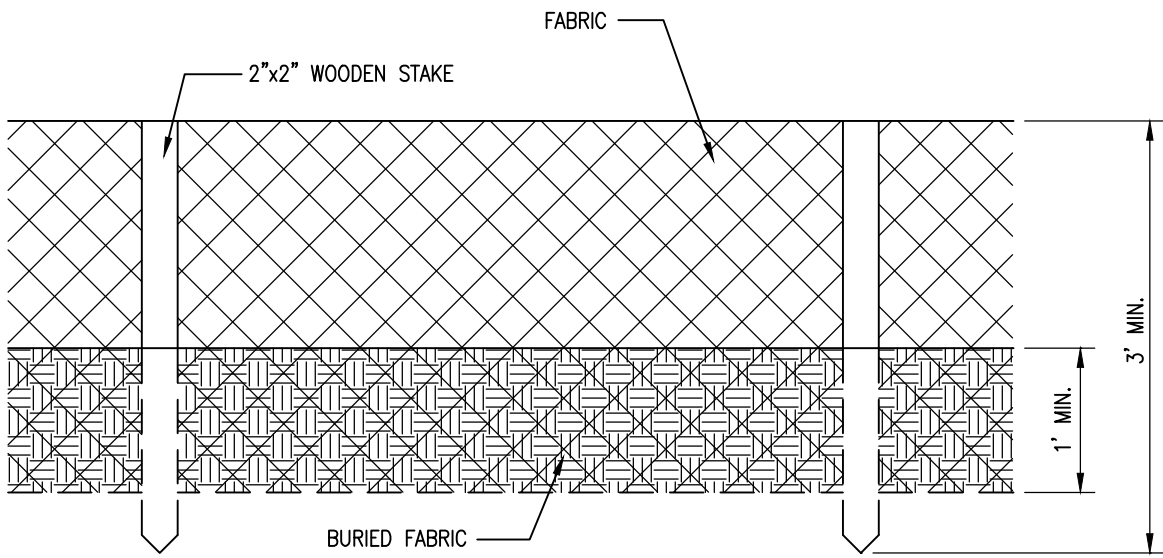
LAGOON CLOSURE PLAN NOTES:

LAGOON CLOSURE PROCEDURE

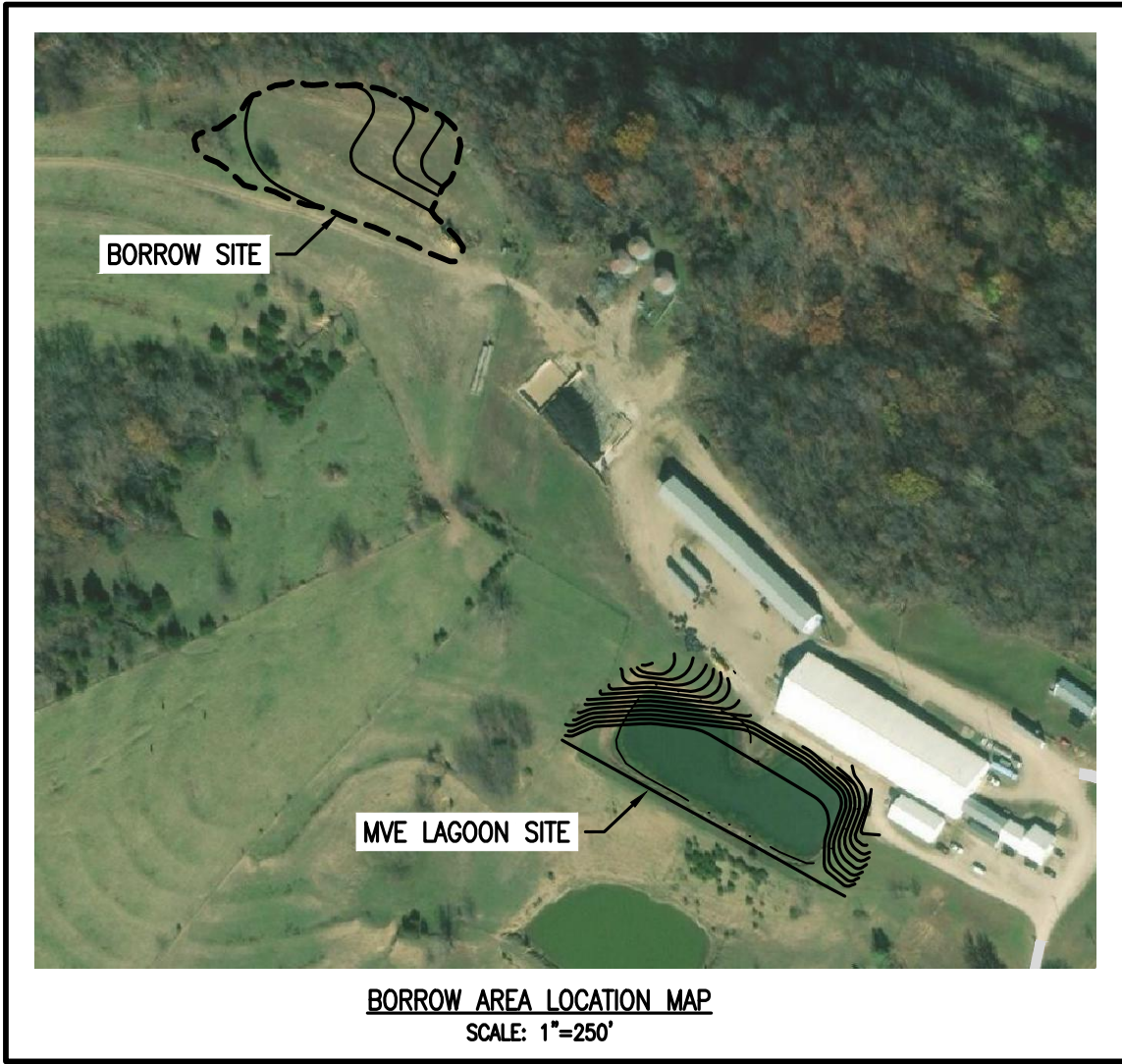
- 1) THE CONTRACTOR SHALL PROVIDE ALL UTILITIES NECESSARY FOR COMPLETION OF CLOSURE AND CONSTRUCTION ACTIVITIES.
- 2) CONTRACTOR SHALL PUMP WATER FROM MVE TIRE RECYCLING FACILITY TO THE CMCC FOUR-CELL LAGOON CELL NO. 1 UTILIZING THE EXISTING SEWER LINE ALONG THE SOUTH AND EAST SIDE OF THE MVE TIRE RECYCLING CENTER FACILITY BUILDING.
- 3) THE CONTRACTOR WILL PUNCTURE A 50 GALLON BARREL DRUM OR ENCLOSED STOCK TANK, WRAP THE BARREL OR TANK IN FILTER FABRIC, AND PLACE THE SUCTION HOSE INSIDE THE BARREL OR TANK. WATER WILL FILTER INTO THE BARREL OR TANK AND THEN BE PUMPED TO THE SEWER LINE ALONG THE SOUTH SIDE OF THE MVE TIRE RECYCLING CENTER FACILITY BUILDING.
- 4) UPON PUMPING AS MUCH WATER AS POSSIBLE (LESS THAN 1 FT ABOVE SETTLED BIOSOLIDS), THE CONTRACTOR MAY CONDUCT A CONTROLLED BERM BREACH.
- 5) PRIOR TO THE BERM BREACH, THE CONTRACTOR MUST INSTALL ROCK CHECKS AND SILT FENCE BELOW THE BREACH LOCATION AS SHOWN, ON THIS SHEET.
- 6) BIOSOLIDS SHALL BE GIVEN ADEQUATE TIME TO DRY AND CONSOLIDATE TO ALLOW EQUIPMENT TO OPERATE IN THE LAGOON BOTTOM. THE CONTRACTOR MAY UTILIZE STIRRING AND AERATING EQUIPMENT TO PROMOTE FURTHER DEWATERING AND DRYING. SHOULD ODOR BECOME AN ISSUE DURING THE DEWATERING AND DRYING PROCESS, A SUFFICIENT AMOUNT OF HYDRATED LIME SHALL BE ADDED AND MIXED WITH THE BIOSOLIDS.
- 7) AFTER SOIL SLUDGE MIXING IS COMPLETE, THE LAGOON CELL SHALL BE GRADED TO DRAIN PER THE FINISH GRADES SHOWN ON THIS PLAN.
- 8) THE CONTRACTOR SHALL UTILIZE MATERIAL FROM THE DESIGNATED BORROW AREA TO FILL THE LAGOON TO THE PROPOSED GRADES SHOWN ON THIS SHEET. PROPOSED GRADING FOR THE BORROW AREA IS ON SHEET C-8.
- 9) CONSULT SPECIFICATION SECTION 329200 FOR SEEDING.
- 10) THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND SUBMITTING LAND APPLICATION RECORDS DURING CLOSEOUT OF THE FACILITY.
- 11) AFTER FERTILIZING AND SEEDING PER SECTION 329200, THE DISTURBED AREA FOR THE MVE LAGOON CLOSURE SHALL BE MULCHED ACCORDING TO THE FOLLOWING SPECIFICATION: MULCH SHALL BE THE CEREAL STRAW FROM STALKS OF OATS, RYE, WHEAT OR BARLEY, WHICH IS CLEAN BRIGHT, AND FREE OF MOLD. THE STRAW MULCH SHALL BE DRY AND RELATIVELY FREE OF UNDESIRABLE SEED AND FOREIGN MATERIAL. THE MULCH SHALL BE BLOWN ONTO THE DISTURBED AREAS WITH A STRAW BLOWER AT THE APPLICATION RATE OF APPROXIMATELY 2 TONS PER ACRE. IMMEDIATELY AFTER PLACEMENT OF THE MULCH, THE ENTIRE MULCHED AREA SHALL BE TACKED BY CRIMPING IN BOTH DIRECTIONS OR TACKING BY ANY OTHER METHOD APPROVED BY THE ENGINEER. THIS APPLIES TO THE LAGOON AREA AND THE BORROW AREA.



ROCK CHECK
N.T.S.

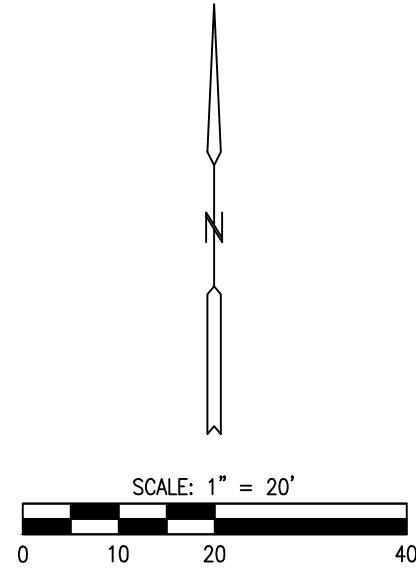


SILT FENCE INSTALLATION
N.T.S.

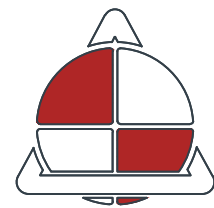
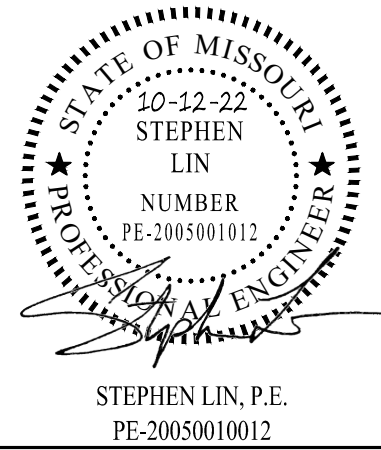


GENERAL

- 1) EROSION CONTROL SHALL BE PLACED PRIOR TO LAND DISTURBANCE ACTIVITIES.
- 2) CONTRACTOR SHALL STRIP AND STOCKPILE TOPSOIL PRIOR TO CUTTING SOIL FOR FILL IN MVE TIRE RECYCLING FACILITY LAGOON. CONTRACTOR WILL SPREAD TOPSOIL BACK OVER DISTURBED BORROW AREA AND SEED PER SPECIFICATION SECTION 329200 .
- 3) CONTRACTOR UPON FINISHING CUTTING FOR FILL SHALL GRADE BORROW AREA TO DRAIN WITH NO SLOPES STEEPER THAN 3H:1V.
- 4) ANY DEBRIS, BLOCKS, CABLES, PIPE, STRUCTURES, FENCE, ETC. UNCOVERED DURING BORROW AREA GRADING ACTIVES SHALL BE LOADED AND REMOVED FROM SITE AND DISPOSED BY CONTRACTOR.
- 5) NO EXCAVATION SHALL OCCUR WITHIN THE DRIP LINE OF ANY TREE HAVING A DIAMETER GREATER THAN 6" WITHOUT PRIOR APPROVAL FROM THE ENGINEER AND THE DEPARTMENT OF CORRECTIONS.
- 6) THE CONTRACTOR SHALL UTILIZE THE EXISTING MANHOLE LOCATED AT THE SOUTHWEST CORNER OF THE MVE FACILITIES BUILDING AS A BENCHMARK. REFER TO SHEET C-6.



STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



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MISSOURI STATE CERTIFICATE
OF AUTHORITY #2007004004

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
CORRECTIONS

CLOSURE OF
MULTIPLE LAGOONS
AND WELLS

CENTRAL MISSOURI
CORRECTIONAL CENTER
2580 MO-179
JEFFERSON CITY, MO

PROJECT # C1919-01
SITE # 7001
ASSET # 9327001046

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 10/12/2022

CAD DWG FILE: SURVEY-BASE CHURCH FARM
DRAWN BY: MJF
CHECKED BY: RCS
DESIGNED BY: CDS & SL

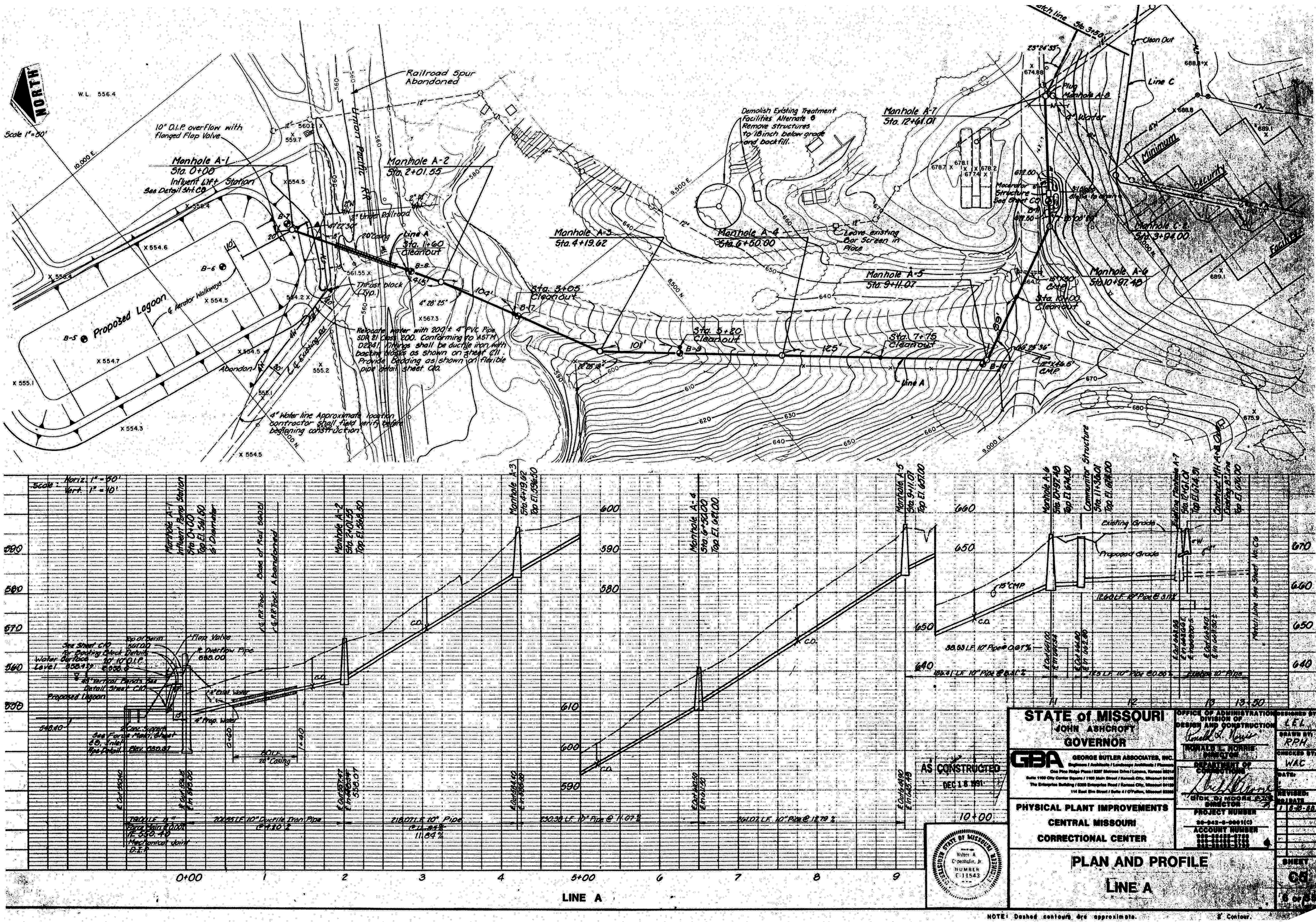
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BORROW AREA
GRADING PLAN

SHEET NUMBER:

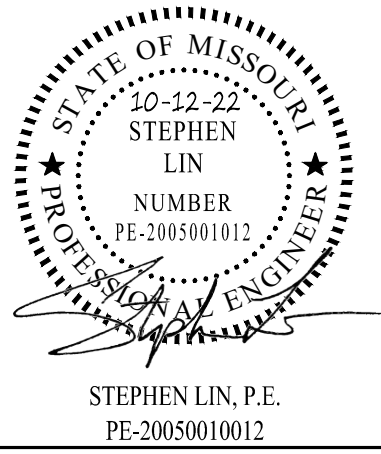
C-8

SHEET 8 OF 13
10/12/2022



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MICHAEL L. PARSON,
GOVERNOR



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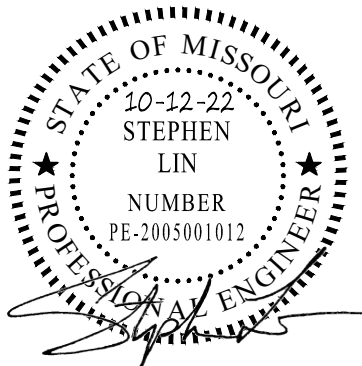
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SANITARY SEWER
(RECORD DRAWING)

SHEET NUMBER:

C-9

SHEET 9 OF 13
10/12/2022



STEPHEN LIN, P.E.
PE-20050010012



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REVISION:
DATE:

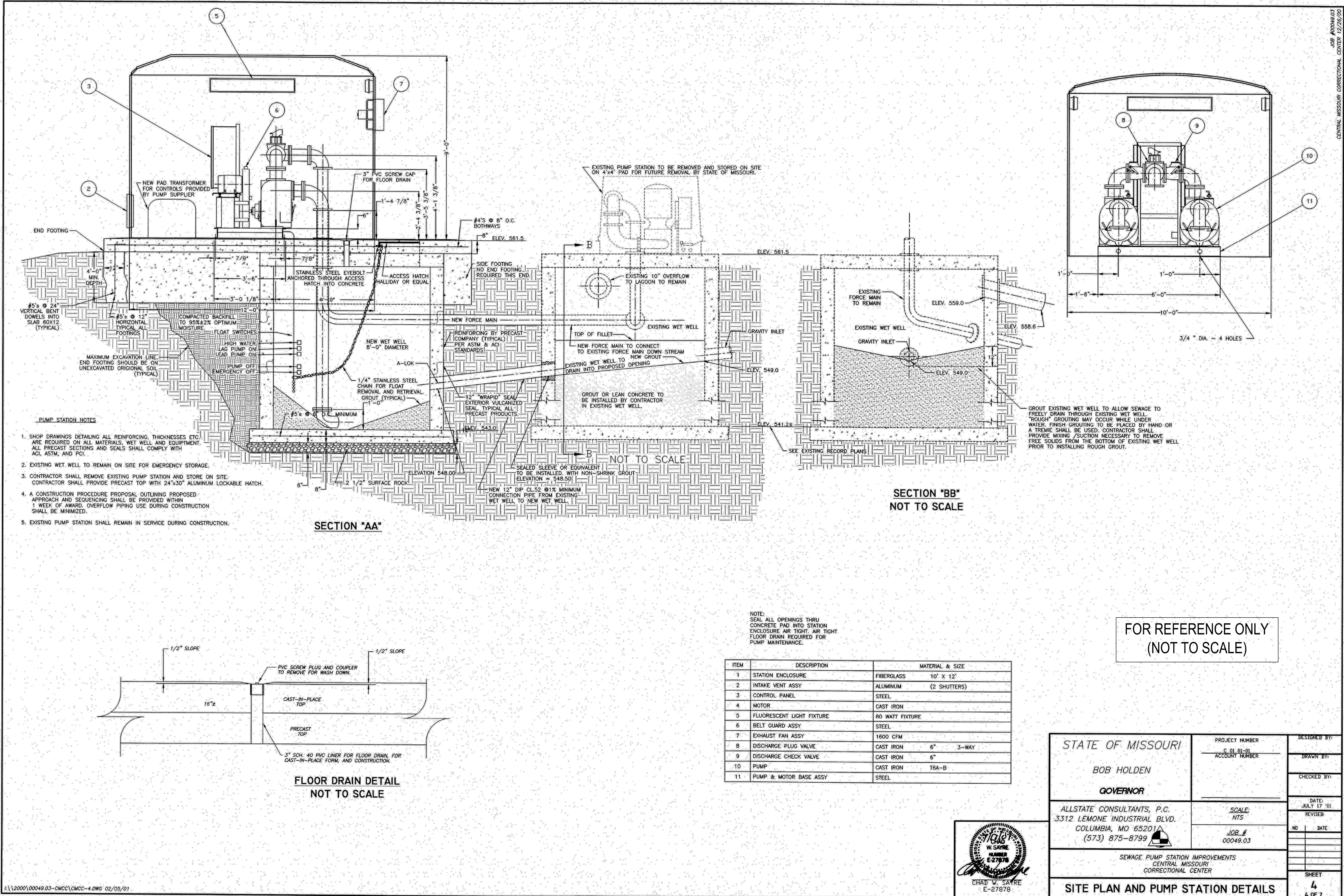
ISSUE DATE: 10-12-2022

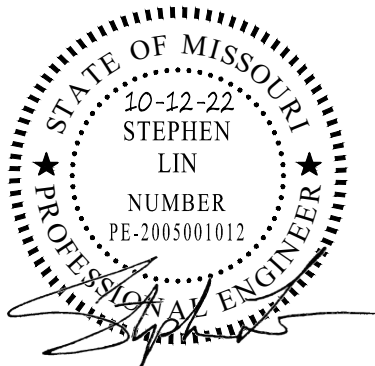
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DRAWN BY: MJF
CHECKED BY: RCS
DESIGNED BY: CDS & SL

SHEET TITLE:
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(RECORD DRAWING)

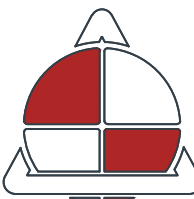
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C-10
SHEET 10 OF 13
10-12-2022





STEPHEN LIN, P.E.
PE-2005001012



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2580 MO-179
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ISSUE DATE: 10/12/2022

CAD DWG FILE: SURVEY-BASE CHURCH FARM
DRAWN BY: MJF
CHECKED BY: RCS
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SHEET TITLE:
PUMP STATION
(RECORD DRAWING)

SHEET NUMBER:

C-11

SHEET 11 OF 13
10/12/2022

LOG OF BORING NO. B-1										Page 1 of 1			
CLIENT ALLSTATE CONSULTANTS					ARCHITECT / ENGINEER								
SITE JEFFERSON CITY, MO					PROJECT CMCC LIFT STATION								
GRAPHIC LOG	DESCRIPTION				DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
							NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
	Approx. Surface Elev.: 100 ft												
	0.2 3" TOPSOIL							PA	PA				
	FILL, lean clay, brown												
	6.5							CL	PA				
	LEAN CLAY, brownish gray												
	15							CL	PA				
21					CL	PA							
SILTY CLAY, brown, mottled gray													
24					CL	PA							
BOTTOM OF BORING													
The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.													
WATER LEVEL OBSERVATIONS, ft					BORING STARTED 1-19-01								
WL <input checked="" type="checkbox"/> NONE WD <input checked="" type="checkbox"/> NONE AB					BORING COMPLETED 1-19-01								
WL <input checked="" type="checkbox"/>					RIG CME-45 FOREMAN RC								
WL <input checked="" type="checkbox"/>					APPROVED WAB JOB # 09015005								
Terracon													

NOTE:
SEAL ALL OPENINGS THRU
CONCRETE PAD INTO STATION
ENCLOSURE AIR TIGHT, AIR TIGHT
FLOOR DRAIN REQUIRED FOR
PUMP MAINTENANCE.

ITEM	DESCRIPTION	MATERIAL & SIZE
1	STATION ENCLOSURE	FIBERGLASS 10' X 12'
2	INTAKE VENT ASSY	ALUMINUM (2 SHUTTERS)
3	CONTROL PANEL	STEEL
4	MOTOR (20 hp TYPICAL)	CAST IRON
5	FLUORESCENT LIGHT FIXTURE	80 WATT FIXTURE
6	BELT GUARD ASSY	STEEL
7	EXHAUST FAN ASSY	1600 CFM
8	DISCHARGE PLUG VALVE	CAST IRON 6" 3-WAY
9	DISCHARGE CHECK VALVE	CAST IRON 6"
10	PUMP	CAST IRON T6A-B
11	PUMP & MOTOR BASE ASSY	STEEL

STATE OF MISSOURI
BOB HOLDEN
GOVERNOR

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SEWAGE PUMP STATION IMPROVEMENTS
CENTRAL MISSOURI
CORRECTIONAL CENTER

SITE PLAN AND PUMP STATION DETAILS

PROJECT NUMBER
C 01 01-01
ACCOUNT NUMBER

DESIGNED BY
DRAWN BY

CHECKED BY

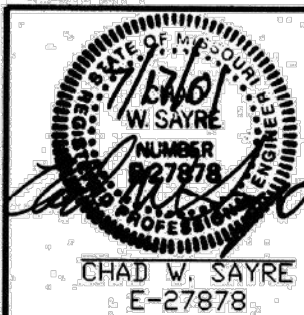
DATE
JULY 17 '01

REVISED

NO DATE

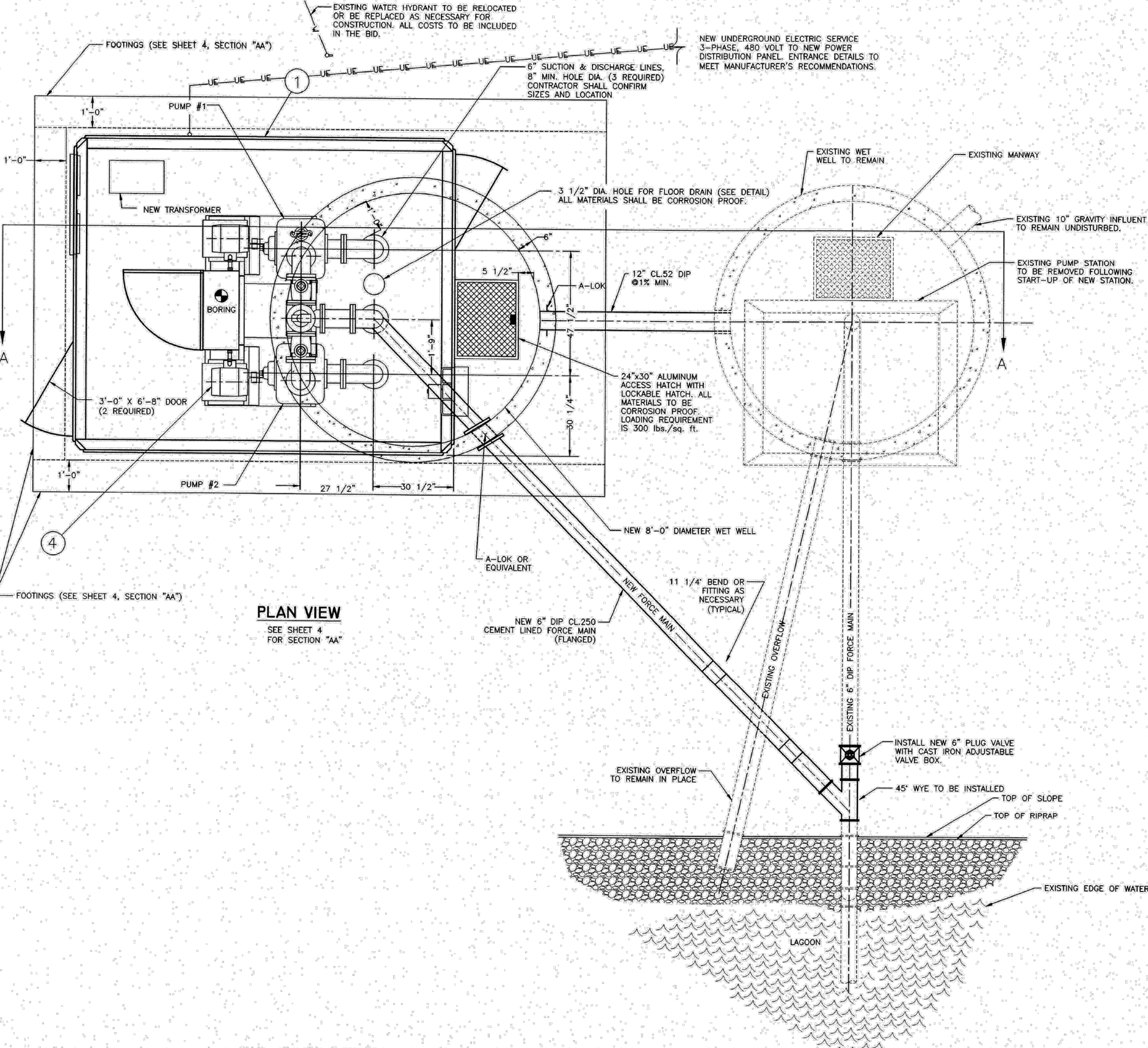
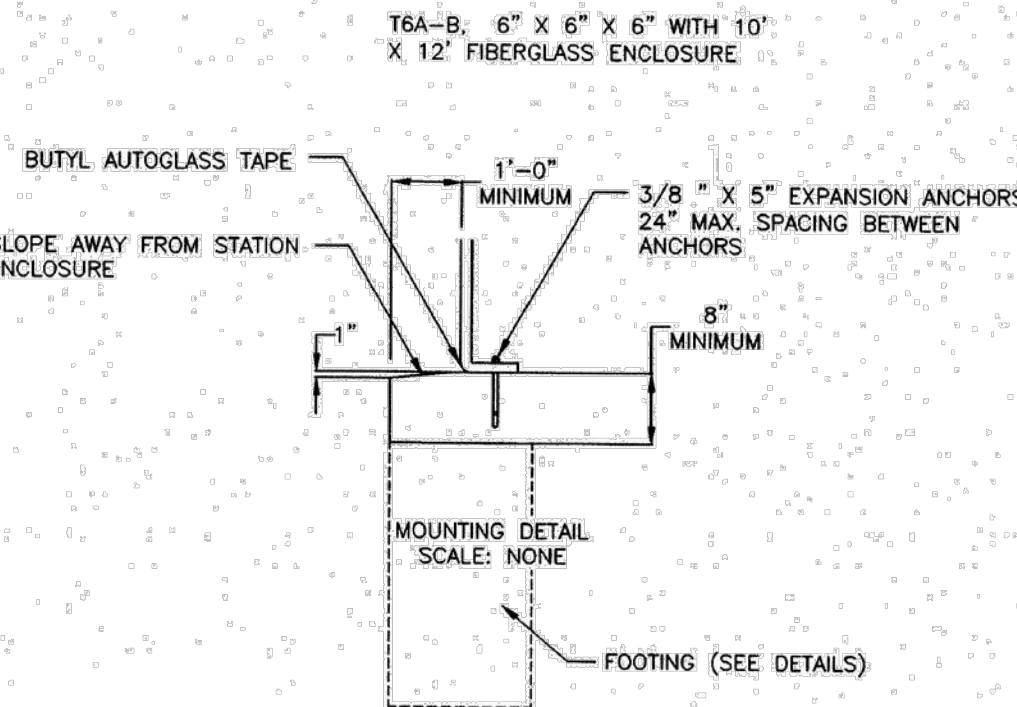
SHEET
3
OF 7

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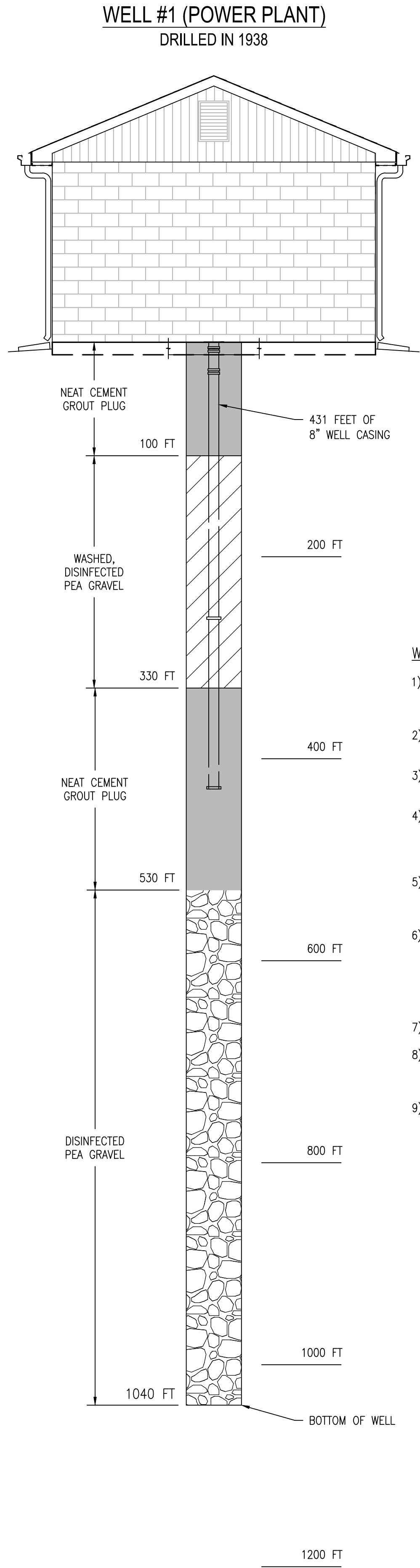


- NOTES:
- CONTRACTOR SHALL FULLY INSPECT PROJECT SITE. ALL COSTS FOR CONNECTING TO EXISTING POWER SOURCE AT EXISTING STATION SHALL BE INCLUDED IN THE LUMP SUM BID PRICE. CONTRACTOR SHALL COMPLY WITH NATIONAL ELECTRICAL STANDARDS.
 - CONCRETE, MATERIALS, AND CONSTRUCTION SHALL MEET ACI AND MODOT STANDARDS AND SHALL HAVE $f'_c=4000$ PSI.
 - REINFORCING STEEL SHALL HAVE $f_y=60$ KSI AND MEET CONSTRUCTION SPECIFICATIONS.
 - SHOP DRAWINGS SHALL BE REQUIRED ON CONSTRUCTION PROCEDURES, WET WELLS, PIPING, ELECTRICAL PANEL, AND PUMP STATION.

ENCLOSURE MOUNTING DETAIL (TYPICAL)

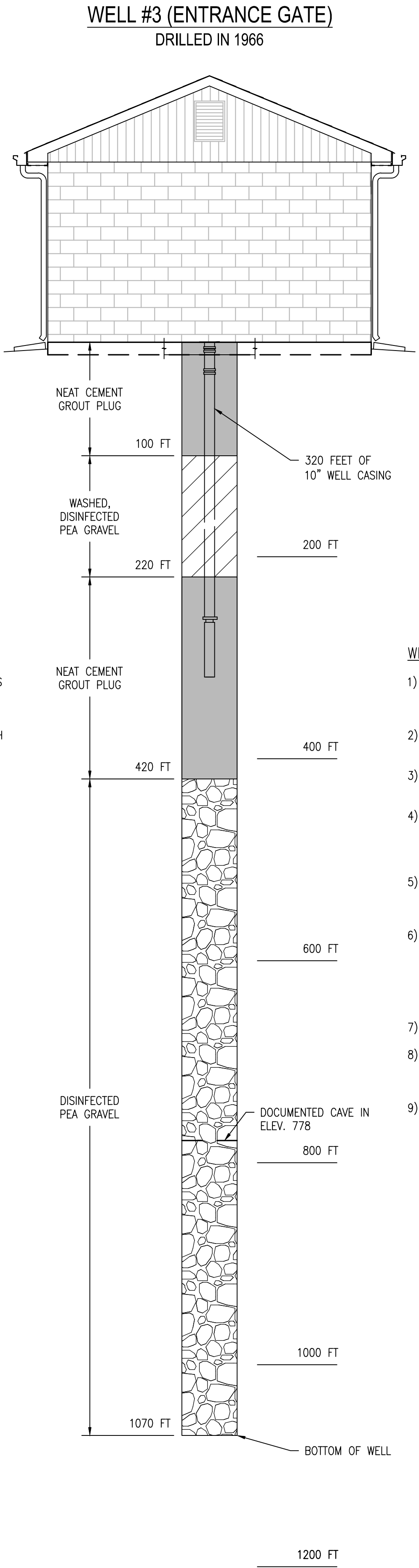






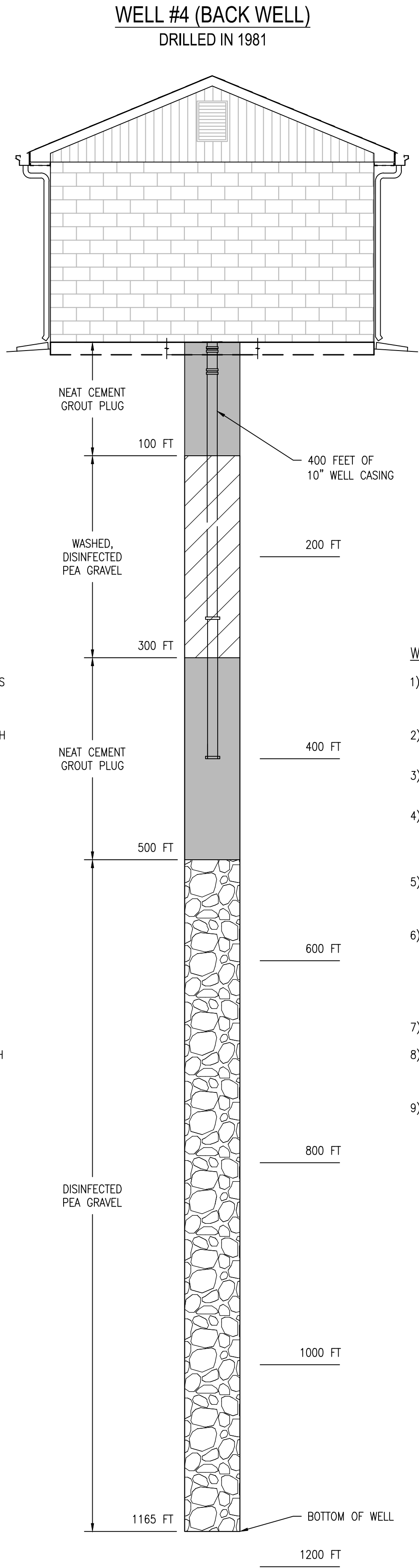
WELL #1 (POWER PLANT) NOTES:

- 1) REMOVE ALL MATERIALS (INCLUDING PUMPS AND PIPES), DEBRIS AND OBSTRUCTIONS THAT MAY INTERFERE WITH PLUGGING OPERATIONS FROM WELL.
- 2) REMOVE THE CONCRETE PAD AND CUT THE WELL CASING FLUSH WITH THE CONCRETE FLOOR OF THE BUILDING.
- 3) FILL THE WELL WITH DISINFECTED PEA GRAVEL FROM THE BOTTOM OF THE WELL TO 530 FEET BELOW GROUND SURFACE.
- 4) PLACE A GROUT PLUG USING NEAT CEMENT GROUT FROM 530 FEET BELOW GROUND SURFACE TO 330 FEET BELOW GROUND SURFACE USING ONE OF THE TREMIE OR REVERSE TREMIE METHODS. THE GROUT PLUG MUST TOTAL 200 FEET.
- 5) FILL THE WELL WITH WASHED, DISINFECTED PEA GRAVEL FROM 330 FEET BELOW GROUND SURFACE TO 100 FEET BELOW GROUND SURFACE.
- 6) PLACE A SECOND GROUT PLUG USING NEAT CEMENT GROUT FROM 100 FEET BELOW GROUND SURFACE TO 2 FEET BELOW GROUND SURFACE USING ONE OF THE TREMIE OR REVERSE TREMIE METHODS. IF THERE IS NO WATER IN THE CASING IN THIS INTERVAL, THE GRAVITY METHOD CAN BE USED. THE GROUT PLUG MUST TOTAL 100 FEET.
- 7) FILL THE REMAINING AREA WITH NEAT CEMENT OR CONCRETE.
- 8) ALTERNATIVELY, THE WELL CAN BE PLUGGED FULL LENGTH WITH NEAT CEMENT GROUT USING ON ONE OF THE TREMIE OR REVERSE TREMIE METHODS.
- 9) SUBMIT A WELL PLUGGING REGISTRATION RECORD WITHIN 60 DAYS AFTER THE PLUGGING IS COMPLETED.



WELL #3 (ENTRANCE GATE) NOTES:

- 1) REMOVE ALL MATERIALS (INCLUDING PUMPS AND PIPES), DEBRIS AND OBSTRUCTIONS THAT MAY INTERFERE WITH PLUGGING OPERATIONS FROM WELL.
- 2) REMOVE THE CONCRETE PAD AND CUT THE WELL CASING FLUSH WITH THE CONCRETE FLOOR OF THE BUILDING.
- 3) FILL THE WELL WITH DISINFECTED PEA GRAVEL FROM THE BOTTOM OF THE WELL TO 420 FEET BELOW GROUND SURFACE.
- 4) PLACE A GROUT PLUG USING NEAT CEMENT GROUT FROM 420 FEET BELOW GROUND SURFACE TO 220 FEET BELOW GROUND SURFACE USING ONE OF THE TREMIE OR REVERSE TREMIE METHODS. THE GROUT PLUG MUST TOTAL 200 FEET.
- 5) FILL THE WELL WITH WASHED, DISINFECTED PEA GRAVEL FROM 220 FEET BELOW GROUND SURFACE TO 100 FEET BELOW GROUND SURFACE.
- 6) PLACE A SECOND GROUT PLUG USING NEAT CEMENT GROUT FROM 100 FEET BELOW GROUND SURFACE TO 2 FEET BELOW GROUND SURFACE USING ONE OF THE TREMIE OR REVERSE TREMIE METHODS. IF THERE IS NO WATER IN THE CASING IN THIS INTERVAL, THE GRAVITY METHOD CAN BE USED. THE GROUT PLUG MUST TOTAL 100 FEET.
- 7) FILL THE REMAINING AREA WITH NEAT CEMENT OR CONCRETE.
- 8) ALTERNATIVELY, THE WELL CAN BE PLUGGED FULL LENGTH WITH NEAT CEMENT GROUT USING ON ONE OF THE TREMIE OR REVERSE TREMIE METHODS.
- 9) SUBMIT A WELL PLUGGING REGISTRATION RECORD WITHIN 60 DAYS AFTER THE PLUGGING IS COMPLETED.



WELL #4 (BACK WELL) NOTES:

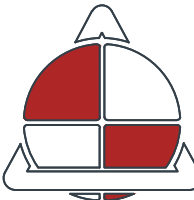
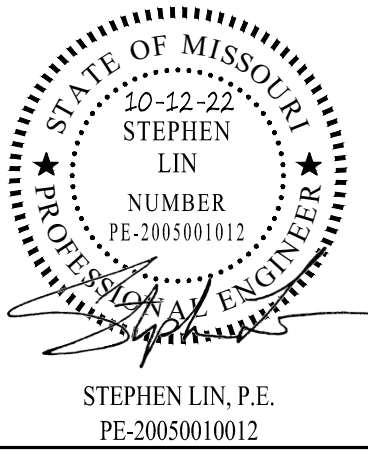
- 1) REMOVE ALL MATERIALS (INCLUDING PUMPS AND PIPES), DEBRIS AND OBSTRUCTIONS THAT MAY INTERFERE WITH PLUGGING OPERATIONS FROM WELL.
- 2) REMOVE THE CONCRETE PAD AND CUT THE WELL CASING FLUSH WITH THE CONCRETE FLOOR OF THE BUILDING.
- 3) FILL THE WELL WITH DISINFECTED PEA GRAVEL FROM THE BOTTOM OF THE WELL TO 500 FEET BELOW GROUND SURFACE.
- 4) PLACE A GROUT PLUG USING NEAT CEMENT GROUT FROM 500 FEET BELOW GROUND SURFACE TO 300 FEET BELOW GROUND SURFACE USING ONE OF THE TREMIE OR REVERSE TREMIE METHODS. THE GROUT PLUG MUST TOTAL 200 FEET.
- 5) FILL THE WELL WITH WASHED, DISINFECTED PEA GRAVEL FROM 300 FEET BELOW GROUND SURFACE TO 100 FEET BELOW GROUND SURFACE.
- 6) PLACE A SECOND GROUT PLUG USING NEAT CEMENT GROUT FROM 100 FEET BELOW GROUND SURFACE TO 2 FEET BELOW GROUND SURFACE USING ONE OF THE TREMIE OR REVERSE TREMIE METHODS. IF THERE IS NO WATER IN THE CASING IN THIS INTERVAL, THE GRAVITY METHOD CAN BE USED. THE GROUT PLUG MUST TOTAL 100 FEET.
- 7) FILL THE REMAINING AREA WITH NEAT CEMENT OR CONCRETE.
- 8) ALTERNATIVELY, THE WELL CAN BE PLUGGED FULL LENGTH WITH NEAT CEMENT GROUT USING ON ONE OF THE TREMIE OR REVERSE TREMIE METHODS.
- 9) SUBMIT A WELL PLUGGING REGISTRATION RECORD WITHIN 60 DAYS AFTER THE PLUGGING IS COMPLETED.

GENERAL NOTES:

- 1) PLUGGING MUST BE COMPLETED BY A PERMITTED MISSOURI WELL OR PUMP INSTALLATION CONTRACTOR (STANDARDS FOR NON-COMMUNITY PUBLIC WATER SUPPLIES 1982, 3.5.10 AND MINIMUM DESIGN STANDARDS FOR MISSOURI COMMUNITY WATER SYSTEMS, 3.5.2.13).
- 2) THE CONTRACTOR SHALL FOLLOW MDNR REGULATIONS FOR WELL CLOSURE AND PROVIDE A CONTACT NUMBER FOR WELLHEAD PROTECTION IN ADVANCE OF PLUGGING THE WELL.
- 3) THE CONTRACTOR SHALL SUBMIT THEIR CLOSURE PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER AND MDNR.
- 4) THE CONTRACTOR SHALL SUBMIT A WELL PLUGGING REGISTRATION RECORD FOR EACH WELL WITHIN 60 DAYS FOLLOWING PLUGGING COMPLETION.
- 5) THE NEAT CEMENT GROUT PLUG SHALL BE MIXED AT A RATIO OF NOT MORE THAN SIX GALLONS OF WATER PER 94-POUND BAG OF CEMENT.
- 6) THE CONTRACTOR SHALL COORDINATE WITH THE OFFICE OF ADMINISTRATION FACILITIES MANAGEMENT, DESIGN & CONSTRUCTION TO PROPERLY DISPOSE OF REMAINING BARRELS OF CHEMICALS IN THE WELL HOUSES.

LEGEND:

- NEAT CEMENT GROUT PLUG
- WASHED, DISINFECTED PEA GRAVEL
- DISINFECTED PEA GRAVEL



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**CLOSURE OF
MULTIPLE LAGOONS
AND WELLS**

**CENTRAL MISSOURI
CORRECTIONAL CENTER
2580 MO-179
JEFFERSON CITY, MO**

**PROJECT # C1919-01
SITE # 7001
ASSET # 9327001034,
9327001035,
9327001036**

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 10/12/2022

CAD DWG FILE: 19142.02 WELL CLOSURE PLAN
DRAWN BY: MJF
CHECKED BY: RCS
DESIGNED BY: CDS & SL

SHEET TITLE:

**WELL CLOSURE
PLANS AND PROFILES**

SHEET NUMBER:

C-13

SHEET 13 OF 13
10/12/2022