

**FLOODPLAIN DEVELOPMENT PERMIT APPLICATION**

Application # PRWFP20250975

Date: 3/24/2025

TO THE ADMINISTRATOR: The undersigned hereby makes application for a permit to develop in a floodplain. The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such work shall be done in accordance with the requirements of the Floodplain Management Ordinance, with all other applicable county/city ordinances, and the laws and regulations of the State of Missouri.

Joseph Snook, Administrator, City of Lee's Summit Parks and Recreation

Developer/Owner or Agent  
220 SE Green Street, Lee's Summit, 64063  
Address  
816.969.1504, Joe.Snook@citofls.net  
Phone eMail Address (required)

TBD

Builder

TBD

Address

TBD

Phone

**SITE INFORMATION**

- Location: SE 1/4; SE 1/4; Section 35; Township 48N; Range 31W  
Property Address: 901 Bluestem, Lee's Summit, MO 64086
- Type of Development: Filling ☐ Grading ☐ Excavation ☒ Minimum Improvement ☐ Substantial Improvement ☐  
Routine Maintenance ☐ New Construction ☐ Other ☐
- Description of Development: Dredging Legacy Lake to restore elevations to pre-existing conditions. All dredge material will be placed outside of floodplains.
- Premises: Structure Size: N/A ft. x N/A ft. Area of site: N/A sq. ft.  
Principal Use: N/A Accessory Uses (storage, parking, etc.): N/A
- Value of Improvement (fair market): \$ N/A Pre-Improvement/Assessed Value of Structure: \$ N/A
- Property located in a designated FLOODWAY? Yes ☐ No ☒ (If Yes to Question 6, certification must be provided prior to permit issuance indicating this project will result in no increase in the 1% base flood elevations.)
- Property located in a designated floodplain FRINGE? Yes ☒ No ☐
- Elevation of the 1% Base Flood / 100-year flood (ID source): 925, FIRM 29095C0437G MSL/NGVD
- Elevation of the proposed development site: Dredging to take place down to 906 MSL/NGVD
- Elevation/floodproofing requirement: N/A MSL/NGVD
- Other floodplain elevation information/FIRM panel numbers (ID and describe source): FIRM Panel 29095C0441G
- Other Permits required? Corps of Engineer 404 Permit: Yes ☒ No ☐ Provided ☒  
MO Dept. of Natural Resources: Yes ☒ No ☐ Provided ☒

NOTE: All provisions of City of Lee's Summit UDO Article 6, Division II, Floodplain Management Ordinance, shall be in compliance.

**APPLICATION APPROVAL/DENIAL**

Plans and Specifications Approved ☒ / Denied ☐ this 17th Day of April, 2025

Signature of Developer/Owner  
Joseph Snook, Administrator  
Print Name and Title

Authorizing Official  
George M. Binger III, P.E., CFM / City Engineer  
Print Name and Title

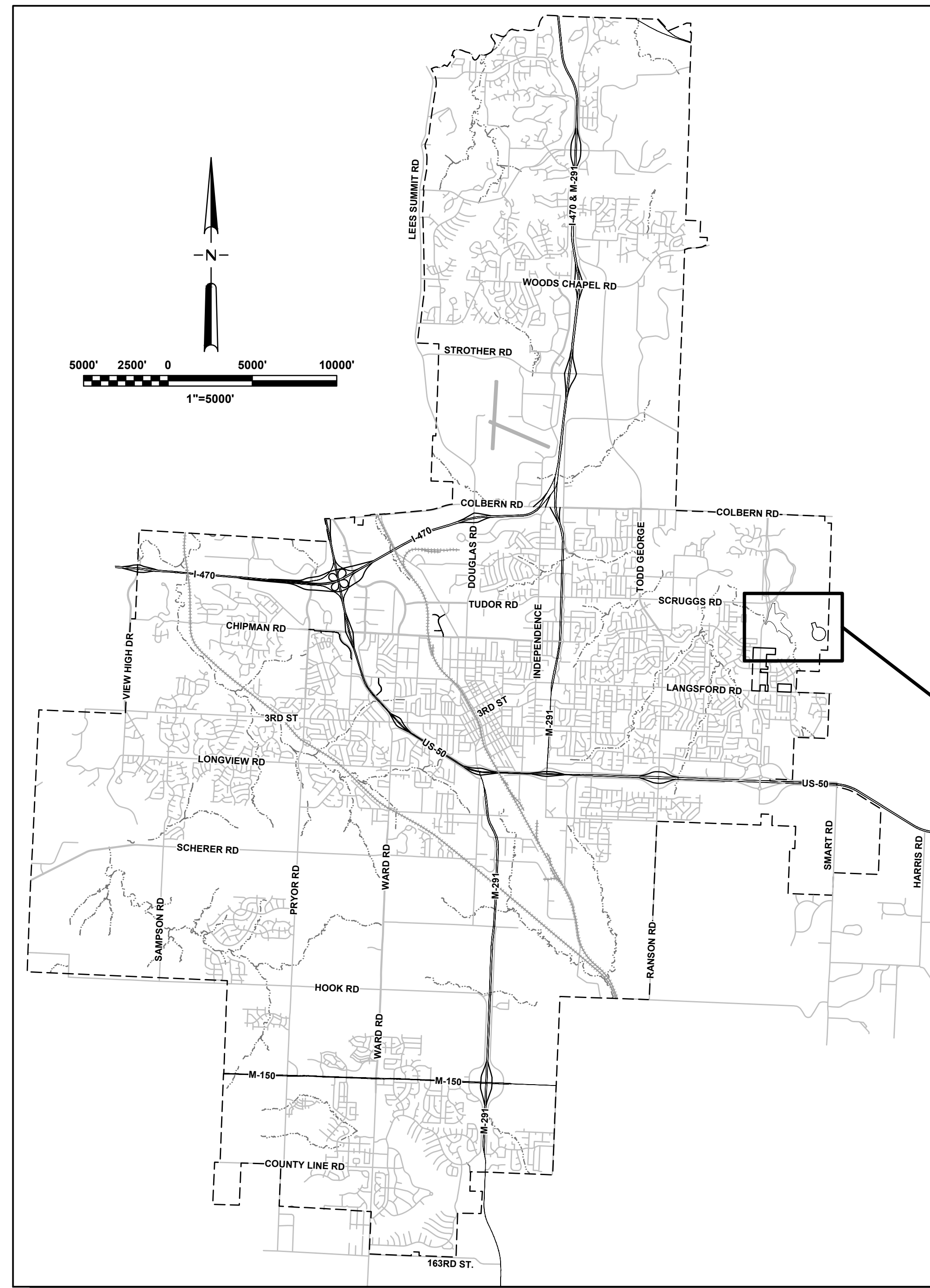
IF APPROVED, THIS PERMIT REQUIRES A CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT FLOOR) OF ANY NEW OR SUBSTANTIALLY-IMPROVED RESIDENTIAL BUILDING WILL BE ELEVATED 2 FEET ABOVE THE BASE FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A NON-RESIDENTIAL BUILDING, PERMIT APPROVAL WILL REQUIRE A CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT) OF A NEW OR SUBSTANTIALLY IMPROVED NON-RESIDENTIAL BUILDING WILL BE ELEVATED OR FLOODPROOFED, 2 FEET ABOVE THE BASE FLOOD ELEVATION.

THIS APPLICATION IS USED WITH THE CONDITION THAT THE DEVELOPER/OWNER WILL PROVIDE CERTIFICATION BY A REGISTERED ENGINEER, ARCHITECT, OR LAND SURVEYOR OF THE "AS-BUILT" LOWEST FLOOR (INCLUDING BASEMENT) ELEVATION OF ANY NEW OR SUBSTANTIALLY-IMPROVED BUILDING COVERED BY THIS PERMIT APPLICATION.





**LEGACY LAKE DREDGING**  
**PARKS AND RECREATION DEPARTMENT**  
**CITY OF LEE'S SUMMIT, MISSOURI**  
**BID NO. XXX-XX**



## VICINITY MAP

**11"x17" PLOT WILL BE  
HALF SCALE UNLESS  
OTHERWISE NOTED**

## SHEET INDEX

## GENERAL

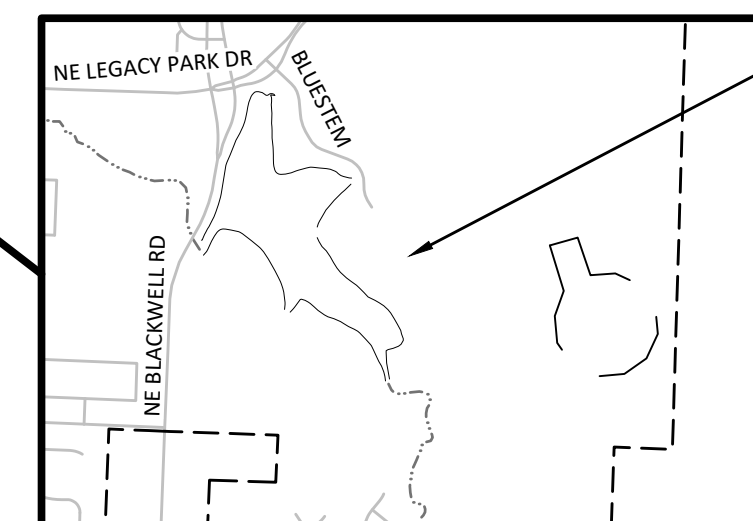
G001	COVER SHEET
G002	LEGENDS AND NOTES
G003	SOIL BORINGS
G004	SOIL BORINGS

## SITE PLANS

C100	OVERVIEW AND KEY MAP
C101	DREDGING PLAN
C102	SEDIMENT DISPOSAL
C103	DREDGING HEAT MAP
C104	SURFACE CROSS SECTIONS

## DETAIL SHEETS

C501	DETAILS
C502	DETAILS



PROJECT LOCATION  
LEGACY LAKE

## **UTILITY COMPANIES**

**BEFORE EXCAVATING CALL: 1 (800) DIG-RITE**

**GAS**  
SPIRE ENERGY  
RICHI GARCIA  
(816) 507-0713  
richi.garcia@spireenergy.com

**ELECTRICITY**  
EVERGY  
RON DEJARNETTE  
(816) 347-4316  
1105 SE US HWY 40  
BLUE SPRINGS, MO 64014  
ron.dejarnette@evergy.com

**TELEPHONE**  
AT&T  
CRAIG PERKINS  
(816) 275-2721 500  
East 8th Street, Room 1152  
Kansas City, MO 64106  
CP0772@att.com

**WATER & WASTEWATER**  
LEE'S SUMMIT WATER UTILITIES  
(816) 969-1940  
1200 SE HAMBLEN RD.  
LEE'S SUMMIT, MO 64081

**STREETS & STORMWATER**  
PUBLIC WORKS OPERATIONS  
DIVISION  
(816) 969-1870  
1971 SE HAMBLEN RD.  
LEE'S SUMMIT, MO 64082

**SCHOOLS**  
LS R-7 SCHOOL DISTRICT  
TRANSPORTATION  
KEITH HENRY  
(816) 986-2405

**LS R-7 SCHOOL DISTRICT**  
FIBER OPTICS  
KINZIE WOODERSON  
(816) 986-105


**CABLE**  
COMCAST  
JIM DUFF  
(816) 795-2257  
3400 NW DUNCAN RD.  
BLUE SPRINGS, MO 64015  
james\_duff@cable.comcast.com

**GOOGLE FIBER**  
ANDREA SAKLA  
(415) 736-9962  
908 BROADWAY BLVD.  
KANSAS CITY, MO 64105  
kc-google-uc@google.com

**SPECTRUM**  
(816) 508-7287  
TROY PREWITT, STEVE BAXTER  
8221 WEST 119TH STREET  
OVERLAND PARK, KS 66213  
troy@cablem.com  
steve.baxter@twcable.com



**NOTE:** KNOWN UNDERGROUND UTILITIES IN THE VICINITY OF THE WORK ARE SHOWN ON THESE PLANS, ALTHOUGH OTHERS MAY EXIST. THE LOCATIONS SHOWN ARE BELIEVED TO BE REASONABLY CORRECT, BUT DO NOT PURPORT TO BE ABSOLUTELY SO. BEFORE STARTING WORK, THE CONTRACTOR SHALL GIVE NOTICE TO AND OBTAIN INFORMATION FROM EACH OWNER AND OPERATOR OF EXISTING UNDERGROUND FACILITIES IN ACCORDANCE WITH THE MISSOURI UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION STATUTE (RSMO CHAPTER 319.015 - 319.050).

[illegible]

**LEE'S SUMMIT**  
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN ST. KEEL  
LEE S. SUMMERS, INC. 84008

LEGACY LAKE DREDGING  
PROJECT NAME #2 - BID NO #????.??  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

COVER SHEET

PRELIMINARY  
NOT FOR CONSTRUCTION  
60% DESIGN SUBMITTAL  
01/2025

DRAWN BY:	DEO
CHECKED BY:	WAW
DATE:	01/31/2025
PROJECT #:	10415715

**G001**



1. ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS AND COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES.
2. CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE PROJECT AREA AND THOROUGHLY FAMILIARIZE THEMSELVES WITH THE ACTUAL JOB CONDITIONS PRIOR TO BIDDING AND THE START OF WORK. FAILURE TO VISIT THE PROJECT SITE SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING THE WORK IN ACCORDANCE TO THE PLANS, SPECIFICATIONS, SPECIAL PROVISIONS AND CONTRACT.
3. CONTRACTOR SHALL THOROUGHLY REVIEW AND BECOME FAMILIAR WITH THE PROJECT PLANS, SPECIFICATIONS AND ANY SPECIAL CONDITIONS OF THE CONTRACT DOCUMENTS PRIOR TO BEGINNING CONSTRUCTION ON THE PROJECT.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, PAYING ALL FEES AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
5. THE MEANS OF THE WORK AND SAFETY OF THE CONTRACTOR'S EMPLOYEES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
6. ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THE COMPLETION OF THIS WORK.
7. WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSE, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY THE OWNER AT THE CONTRACTOR'S EXPENSE.
8. NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION FROM THE OWNER'S REPRESENTATIVE.
9. DO NOT RESTRICT DRAINAGE CHANNELS. CONTRACTOR SHALL BE AWARE OF EXISTING DRAINAGE CONDITIONS AND FACILITIES AND SHALL ENSURE DRAINAGE IS MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
10. CONTRACTOR SHALL NOT BE ALLOWED TO WORK WEEKENDS OR HOLIDAYS WITHOUT REQUESTING PRIOR APPROVAL FROM THE OWNER THREE WORKING DAYS IN ADVANCE.
11. CONTRACTOR MUST MAINTAIN THRU TRAFFIC AT ALL TIMES. IF ONE LANE IS TEMPORARILY CLOSED, CONTRACTOR SHALL PROVIDE FLAGGERS AND SIGNAGE PER THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
12. ALL WORK SHALL BE WITHIN EXISTING CITY LEE'S SUMMIT PARKS AND RECREATION (LSPR) PROPERTY, UTILITY EASEMENTS OR TEMPORARY EASEMENTS.
13. ALL EXISTING UTILITIES INDICATED ON THE DRAWINGS ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER; HOWEVER ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR TO OBTAIN THE EXACT LOCATION OF SAME SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE. CONTRACTOR SHALL HAVE EACH UTILITY MARKED BY MISSOURI-ONE-CALL.
14. CONTRACTOR SHALL NOTIFY LEES SUMMIT WATER UTILITIES DEPARTMENT AND LSPR OPERATIONS STAFF AT LEAST 48 HOURS IN ADVANCE OF ANY WORK INVOLVING CLOSING OR OPENING OF ANY WATER VALVES.
15. CONTRACTOR SHALL NOTIFY UTILITY OWNERS AT LEAST 48 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO UTILITIES.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING, AND IF DAMAGED, RESTORING EXISTING FACILITIES (CONCRETE, UTILITIES, FENCES, ETC.) TO PRE-CONSTRUCTION CONDITION OR EQUAL. NO PAYMENT WILL BE MADE FOR THIS RESTORATION UNLESS LISTED IN THE CONTRACT UNIT PRICES.
17. ALL DISTURBED AREAS, INCLUDING ACCESS AND HAUL ROADS, ARE TO BE REWORKED TO THEIR EXISTING CONDITIONS AND SEEDED.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING SURVEY MONUMENTS WHICH INCLUDE RIGHT OF WAY MARKERS AND PROPERTY PINS. THE CONTRACTOR WILL BE REQUIRED TO REESTABLISH SURVEY MONUMENTS WHICH ARE DAMAGED OR DESTROYED BY CONSTRUCTION OPERATIONS. MONUMENTS SHALL BE REESTABLISHED BY A MISSOURI LICENSED LAND SURVEYOR IN ACCORDANCE WITH MISSOURI STATE LAWS AT CONTRACTOR'S EXPENSE.
19. CONTRACTOR SHALL AVOID DAMAGING TREES DURING THE PROJECT. ANY WORK THAT MAY DAMAGE TREES WILL BE ADDRESSED ON A CASE BY CASE BASIS.

1. EFFLUENT DISCHARGED FROM THE SEDIMENT CONTAINMENT BASIN SHALL BE NO GREATER THAN 25 NTU OVER THE AVERAGE LAKE TURBIDITY. CONTRACTOR SHALL ADJUST SEDIMENT CONTAINMENT BASIN OUTLET OR PROVIDE FLOATING TURBIDITY CURTAINS AS NECESSARY.
2. EFFLUENT TESTING SHALL BE DONE ON A DAILY BASIS AND LAKE TURBIDITY TESTED WEEKLY.
3. EFFLUENT TESTING SHALL OCCUR AT DISCHARGE PIPE LOCATION OR IMMEDIATELY OUTSIDE C TURBIDITY CURTAIN. LAKE TURBIDITY TESTING SHALL BE WITHIN THE VICINITY OF THE LAKE SPILLWAY.


1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEPARTMENT OF NATURAL RESOURCES (DNR) NPDES PERMIT AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS AND REQUIRED CONTAINMENT STRUCTURES. THE CONTRACTOR SHALL IMPLEMENT, MAINTAIN, COMPLETE REQUIRED INSPECTIONS, AND UPDATE THE SWPPP AS REQUIRED TO MEET ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
2. CONTRACTORS SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMPs) AS REQUIRED BY THIS PLAN AND SWPPP.
3. BMPs AND CONTROLS SHALL CONFIRM CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
4. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT. CLEARING SHALL NOT OCCUR OUTSIDE THE PROJECT LIMITS SHOWN ON THE CONSTRUCTION PLANS UNLESS APPROVED BY THE OWNER IN WRITING.
5. EROSION AND SEDIMENT CONTROL (ESC) SHALL BE THE CONTRACTOR'S RESPONSIBILITY INCLUDING MAINTAINING ESC SYSTEMS, REPLACING DAMAGED OR FAILED ESC DEVICES, AND INSPECTING THE SITE IN ORDER TO REPAIR THE ESC SYSTEM WITHIN 24 HOURS AFTER A 1/2-INCH RAIN EVENT.
6. CONTRACTOR SHALL PROVIDE ADEQUATE ESC TO PREVENT SOIL AND/OR DEBRIS FROM ENTERING PAVEMENT, DITCHES, CREEKS, YARDS OR SURFACE WATERS. REPAIR OR DREDGING OF SURFACE WATERS THAT RECEIVE STORM WATER RUNOFF FROM THE PROJECT SITES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. STAGING LOCATION FOR CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER.
8. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
9. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
10. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
11. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
12. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE SEED BY THE CONTRACTOR. THESE AREAS SHALL BE SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
13. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
14. ON-SITE AND OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATION SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
15. SLOPES SHALL BE LEFT IN ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURE (SILT FENCES, STRAW WATTLES, ETC.) TO PREVENT EROSION THROUGH THE DURATION OF THE PROJECT.
17. ALL CONSTRUCTION SHALL BE ESTABLISHED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
18. AN UPDATED COPY OF THE SWPPP SHALL BE KEPT ONSITE FOR THE DURATION OF THE PROJECT.
19. ALL SUBCONTRACTORS ENGAGED IN ACTIVITIES AT THE CONSTRUCTION SITE THAT COULD IMPACT STORM WATER MUST BE IDENTIFIED AND COMPLETE A CERTIFICATION STATEMENT PRIOR TO CONSTRUCTION.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING ALL AREAS DISTURBED BY BASIN CONSTRUCTION INCLUDING ACCESS ROUTES, STAGING AREAS, AND STOCKPILE AREAS.
21. THIS PLAN SHOWS THE LOCATION AND DETAILS OF BMPs TO BE INSTALLED. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING EROSION AND DISCHARGE OF SEDIMENT AND OTHER POLLUTANTS FROM THE SITE AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE NECESSARY BMPs DURING ALL PHASES OF CONSTRUCTION REGARDLESS OF WHETHER THEY ARE SPECIFICALLY NOTED ON THIS PLAN, INCLUDING BMP ADDITIONS OR CHANGES APPROVED BY THE PROJECT MANAGER, AND SHALL MAINTAIN AND REPLACE CONTROLS AS NECESSARY DURING CONSTRUCTION TO CONTROL EROSION AND MINIMIZE THE DISCHARGE OF SEDIMENT AND OTHER POLLUTANTS FROM THE SITE.
22. SEDIMENT REMOVED FROM BMPs AND FACILITIES SHALL NOT BE PLACED ON STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND SHALL BE IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS OFF-SITE BORROW AND FILL AREAS.
23. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT DEPOSITION, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BMPs TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT DEPOSITION.
24. AFTER FINAL STABILIZATION HAS BEEN ACHIEVED WITH 70% PLANT DENSITY OVER 100% (WITH THE WATER QUALITY INSPECTORS APPROVAL) OF THE SITE OR OTHER PERMANENT MATERIALS PER CHAPTER 16, TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS SHALL BE STABILIZED IMMEDIATELY, THE CONTRACTOR OR THEIR REPRESENTATIVE MUST NOTIFY THE WATER QUALITY INSPECTOR TO SCHEDULE A MEETING AT THE SITE TO REVIEW FINAL STABILIZATION MEASURES AND REMOVAL OF THE SEDIMENT AND EROSION CONTROLS.


APPROX	APPROXIMATELY
ARV	AIR RELEASE VALVE
BFV	BUTTERFLY VALVE
BM	BENCHMARK
BOL	BEGINNING OF LINE
DEPT	DEPARTMENT
DI	DUCTILE IRON
DIA	DIAMETER
DND	DO NOT DISTURB
E	EAST
EA	EACH
ESMT	EASEMENT
ELEC	ELECTRIC
EL	ELEVATION
EOL	END OF LINE
ENGR	ENGINEER
ESC	EROSION AND SEDIMENT CONTROL
FO	FIBER OPTIC
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HOR	HORIZONTAL
LN	LANE
LF	LINEAR FOOT
LS	LUMP SUM
MODOT	MISSOURI DEPT. OF TRANSPORTATION
MJ	MECHANICAL JOINT
N	NORTH
NTS	NOT TO SCALE
PE	POLYETHYLENE
PVC	POLYVINYL CHLORIDE
PC	POWER & CABLE POLE
PT	POWER & TELEPHONE POLE
PTC	POWER, TELEPHONE, & CABLE POLE
PROJ	PROJECT
RJ	RESTRAINED JOINT
R/W	RIGHT OF WAY
S	SOUTH
S	SILT FENCE
SS	SANITARY SEWER
SSC	SOLID SLEEVE COUPLING
ST	STORM SEWER
SW	SOUTHWEST
SY	SQUARE YARD
STA	STATION
T/E	TRASH ENCLOSURE
U.E.	UTILITY EASEMENT
UTIL	UTILITY
W	WEST


EXISTING		PROPOSED
	WATER VALVE	
	WATER METER	
	SANITARY SEWER MANHOLE	
	POWER/TRAFFIC SIGNAL POLE	
	FIRE HYDRANT	
	TREE/LARGE BRUSH	
	STORM INLET/JUNCTION BOX	
	GAS METER	
	MAIL BOX	
	POWER POLE	
	POWER ANCHOR	
	SIDEWALK	
	UNDERGROUND UTILITY MARKER	
	OVERHEAD ELECTRIC	
	UNDERGROUND ELECTRIC	
	SANITARY SEWER	
	WATER LINE	
	STORM SEWER	
	UNDERGROUND GAS LINE	
	UNDERGROUND TELEPHONE	
	UNDERGROUND FIBER OPTIC	
	UNDERGROUND CABLE TV	
	SECTION LINE	
	RIGHT-OF-WAY LINE	
	LOT LINE	
	PERMANENT EASEMENT LINE	
	TEMPORARY EASEMENT LINE	


[illegible]




Surface Elevation <b>975</b>		Completion Date: <b>10/28/24</b>						
Datum <b>NAVD88</b>								
DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/ROD	SAMPLES	SHEAR STRENGTH, tsf			
					STANDARD PENETRATION RESISTANCE (ASTM D 1586)			
					WATER CONTENT, %			
					PL 10 20 30 40 50 LL			
	ROOT ZONE - 12 inches							
	CLAY - brown and gray to brown, stiff, fat - CH							
5			5-6-7	SS1	▲			
10			4-4-7	SS2	▲			
15	Auger refusal at 10.75 feet.							
GROUNDWATER DATA		DRILLING DATA		Drawn by: RAW Date: 10/29/24				
X FREE WATER NOT ENCOUNTERED DURING DRILLING		4" AUGER HOLLOW STEM WASHBORING FROM FEET DJT DRILLER RAW LOGGER CME 55TRK DRILL RIG HAMMER TYPE Auto		Check by: RAW Date: 10/29/24				
REMARKS:				App'd by: M/HM Date: 10/30/24				
								
				Legacy Park Lake Dredge Lee's Summit, Missouri				
				LOG OF BORING: B- 1				
				Project No. J046831.01				

Surface Elevation <b>976</b>		Completion Date: <b>10/28/24</b>						
Datum <b>NAVD88</b>								
DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/ROD	SAMPLES	SHEAR STRENGTH, tsf			
					STANDARD PENETRATION RESISTANCE (ASTM D 1586)			
					WATER CONTENT, %			
					PL 10 20 30 40 50 LL			
	ROOT ZONE - 12 inches							
	CLAY - brown and gray, stiff and very stiff, fat - CH							
5			4-8-8	SS1	▲			
10	some gravel		3-5-9	SS2	▲			
15	Weathered SHALE		50/6"	SS3				
	sampler refusal Auger refusal at 14.2 feet.							
GROUNDWATER DATA		DRILLING DATA		Drawn by: RAW Date: 10/29/24				
X FREE WATER NOT ENCOUNTERED DURING DRILLING		4" AUGER HOLLOW STEM WASHBORING FROM FEET DJT DRILLER RAW LOGGER CME 55TRK DRILL RIG HAMMER TYPE Auto		Check by: RAW Date: 10/29/24				
REMARKS:				App'd by: M/HM Date: 10/30/24				
								
				Legacy Park Lake Dredge Lee's Summit, Missouri				
				LOG OF BORING: B- 2				
				Project No. J046831.01				

Surface Elevation <b>970</b>		Completion Date: <b>10/28/24</b>						
Datum <b>NAVD88</b>								
DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/ROD	SAMPLES	SHEAR STRENGTH, tsf			
					STANDARD PENETRATION RESISTANCE (ASTM D 1586)			
					WATER CONTENT, %			
					PL 10 20 30 40 50 LL			
	ROOT ZONE - 12 inches							
	CLAY - brown, medium stiff and stiff, fat - CH							
5			5-8-7	SS1	▲			
10			2-4-4	SS2	▲			
15	Auger refusal at 13.6 feet.		50/2"	SS3				
GROUNDWATER DATA		DRILLING DATA		Drawn by: RAW Date: 10/29/24				
X FREE WATER NOT ENCOUNTERED DURING DRILLING		4" AUGER HOLLOW STEM WASHBORING FROM FEET DJT DRILLER RAW LOGGER CME 55TRK DRILL RIG HAMMER TYPE Auto		Check by: RAW Date: 10/29/24				
REMARKS:				App'd by: M/HM Date: 10/30/24				
								
				Legacy Park Lake Dredge Lee's Summit, Missouri				
				LOG OF BORING: B- 3				
				Project No. J046831.01				

Surface Elevation <b>981</b>		Completion Date: <b>10/28/24</b>						
Datum <b>NAVD88</b>								
DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/ROD	SAMPLES	SHEAR STRENGTH, tsf			
					STANDARD PENETRATION RESISTANCE (ASTM D 1586)			
					WATER CONTENT, %			
					PL 10 20 30 40 50 LL			
	ROOT ZONE - 12 inches							
	CLAY - brown gray to yellow brown gray, stiff, fat - CH							
5			5-6-6	SS1	▲			
10	shaley		3-4-5	SS2	▲			
15	Weathered SHALE		4-15-20	SS3				
	Auger refusal at 16.5 feet.							
GROUNDWATER DATA		DRILLING DATA		Drawn by: RAW Date: 10/29/24				
X FREE WATER NOT ENCOUNTERED DURING DRILLING		4" AUGER HOLLOW STEM WASHBORING FROM FEET DJT DRILLER RAW LOGGER CME 55TRK DRILL RIG HAMMER TYPE Auto		Check by: RAW Date: 10/29/24				
REMARKS:				App'd by: M/HM Date: 10/30/24				
								
				Legacy Park Lake Dredge Lee's Summit, Missouri				
				LOG OF BORING: B- 4				
				Project No. J046831.01				

Surface Elevation <b>984</b>		Completion Date: <b>10/28/24</b>						
Datum <b>NAVD88</b>								
DEPTH IN FEET	DESCRIPTION OF MATERIAL	GRAPHIC LOG	DRY UNIT WEIGHT (pcf) SPT BLOW COUNTS CORE RECOVERY/ROD	SAMPLES	SHEAR STRENGTH, tsf			
					STANDARD PENETRATION RESISTANCE (ASTM D 1586)			
					WATER CONTENT, %			
					PL 10 20 30 40 50 LL			
	ROOT ZONE - 12 inches							
	CLAY - brown to yellow brown gray, stiff, fat - CH							
5			3-5-7	SS1	▲			
10	shaley		3-4-5	SS2	▲			
15	Weathered SHALE		6-11-15	SS3				
	Auger refusal at 16 feet.							
GROUNDWATER DATA		DRILLING DATA		Drawn by: RAW Date: 10/29/24				
X FREE WATER NOT ENCOUNTERED DURING DRILLING		4" AUGER HOLLOW STEM WASHBORING FROM FEET DJT DRILLER RAW LOGGER CME 55TRK DRILL RIG HAMMER TYPE Auto		Check by: RAW Date: 10/29/24				
REMARKS:				App'd by: M/HM Date: 10/30/24				
								
				Legacy Park Lake Dredge Lee's Summit, Missouri				
				LOG OF BORING: B- 5				
				Project No. J046831.01				

PROJECT:

LEGACY LAKE DREDGING

PROJECT NAME #2 - BID NO #7?? ??

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SHEET NAME:

SOIL BORINGS

PRELIMINARY  
NOT FOR CONSTRUCTION  
60% DESIGN SUBMITTAL  
01/2025

DRAWN BY: DEO

CHECKED BY: WAW

DATE: 01/31/2025

PROJECT #: 10415715

LEE'S SUMMIT  
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

DATE

REV

DESCRIPTION

G003



Surface Elevation 971Completion Date: 10/28/24

Datum NAVD88

DEPTH IN FEET

DESCRIPTION OF MATERIAL

ROOT ZONE - 12 inches

CLAY - brown, stiff, fat - CH

Auger refusal at 11.5 feet.

GRAPHIC LOG

DRY UNIT WEIGHT (pcf)  
SPT BLOW COUNTS  
CORE RECOVERY/FOOT

SAMPLES

3-4-6 SS1

4-4-6 SS2

PLI

10 20 30 40 50 I LL

Δ - UU/2 ○ - QU/2 □ - PP/2

0.5 1.0 1.5 2.0 2.5

STANDARD PENETRATION RESISTANCE  
(ASTM D 1586)

▲ N-VALUE (BLOWS PER FOOT)

WATER CONTENT, %

Drawn by: RAW  
Date: 10/29/24

Check by: RAW  
Date: 10/29/24

App'd by: MRM  
Date: 10/30/24

U.S. Environmental & Engineering Services, Inc.  
Legacy Park Lake Dredge  
Lee's Summit, Missouri

LOG OF BORING: B- 6

Project No. J046831.01

REMARKS:

GROUNDWATER DATA

DRILLING DATA

4" AUGER HOLLOW STEM  
WASHBORING FROM FEET  
D.J.T. DRILLER RAW LOGGER  
CME 55TRK DRILL RIG  
HAMMER TYPE Auto

Δ - UU/2 ○ - QU/2 □ - PP/2

0.5 1.0 1.5 2.0 2.5

STANDARD PENETRATION RESISTANCE  
(ASTM D 1586)

▲ N-VALUE (BLOWS PER FOOT)

WATER CONTENT, %

Drawn by: RAW  
Date: 10/29/24

Check by: RAW  
Date: 10/29/24

App'd by: MRM  
Date: 10/30/24

U.S. Environmental & Engineering Services, Inc.  
Legacy Park Lake Dredge  
Lee's Summit, Missouri

LOG OF BORING: B- 6

Project No. J046831.01

REMARKS:

GROUNDWATER DATA

DRILLING DATA

4" AUGER HOLLOW STEM  
WASHBORING FROM FEET  
D.J.T. DRILLER RAW LOGGER  
CME 55TRK DRILL RIG  
HAMMER TYPE Auto

Surface Elevation 977Completion Date: 10/28/24

Datum NAVD88

DEPTH IN FEET

DESCRIPTION OF MATERIAL

ROOT ZONE - 12 inches

CLAY - brown and gray to yellow brown and gray, stiff and very stiff, fat - CH

shaley, some gravel

Auger refusal at 12.5 feet.

GRAPHIC LOG

DRY UNIT WEIGHT (pcf)  
SPT BLOW COUNTS  
CORE RECOVERY/FOOT

SAMPLES

6-8-8 SS1

4-6-9 SS2

PLI

10 20 30 40 50 I LL

Δ - UU/2 ○ - QU/2 □ - PP/2

0.5 1.0 1.5 2.0 2.5

STANDARD PENETRATION RESISTANCE  
(ASTM D 1586)

▲ N-VALUE (BLOWS PER FOOT)

WATER CONTENT, %

Drawn by: RAW  
Date: 10/29/24

Check by: RAW  
Date: 10/29/24

App'd by: MRM  
Date: 10/30/24

U.S. Environmental & Engineering Services, Inc.  
Legacy Park Lake Dredge  
Lee's Summit, Missouri

LOG OF BORING: B- 7

Project No. J046831.01

REMARKS:

GROUNDWATER DATA

DRILLING DATA

4" AUGER HOLLOW STEM  
WASHBORING FROM FEET  
D.J.T. DRILLER RAW LOGGER  
CME 55TRK DRILL RIG  
HAMMER TYPE Auto

Surface Elevation 983Completion Date: 10/28/24

Datum NAVD88

DEPTH IN FEET

DESCRIPTION OF MATERIAL

ROOT ZONE - 12 inches

CLAY - red brown to yellow brown and gray, medium stiff and stiff, fat - CH

some gravel

Weathered SHALE

Auger refusal at 16.5 feet.

GRAPHIC LOG

DRY UNIT WEIGHT (pcf)  
SPT BLOW COUNTS  
CORE RECOVERY/FOOT

SAMPLES

5-6-6 SS1

2-3-4 SS2

8-17-24 SS3

PLI

10 20 30 40 50 I LL

Δ - UU/2 ○ - QU/2 □ - PP/2

0.5 1.0 1.5 2.0 2.5

STANDARD PENETRATION RESISTANCE  
(ASTM D 1586)

▲ N-VALUE (BLOWS PER FOOT)

WATER CONTENT, %

Drawn by: RAW  
Date: 10/29/24

Check by: RAW  
Date: 10/29/24

App'd by: MRM  
Date: 10/30/24

U.S. Environmental & Engineering Services, Inc.  
Legacy Park Lake Dredge  
Lee's Summit, Missouri

LOG OF BORING: B- 8

Project No. J046831.01

REMARKS:

GROUNDWATER DATA

DRILLING DATA

4" AUGER HOLLOW STEM  
WASHBORING FROM FEET  
D.J.T. DRILLER RAW LOGGER  
CME 55TRK DRILL RIG  
HAMMER TYPE Auto

Surface Elevation 968Completion Date: 10/28/24

Datum NAVD88

DEPTH IN FEET

DESCRIPTION OF MATERIAL

ROOT ZONE - 12 inches

CLAY - brown to reddish brown, medium stiff and stiff, fat - CH

weathered limestone fragments

Auger refusal at 10.5 feet.

GRAPHIC LOG

DRY UNIT WEIGHT (pcf)  
SPT BLOW COUNTS  
CORE RECOVERY/FOOT

SAMPLES

4-7-6 SS1

3-4-3 SS2

PLI

10 20 30 40 50 I LL

Δ - UU/2 ○ - QU/2 □ - PP/2

0.5 1.0 1.5 2.0 2.5

STANDARD PENETRATION RESISTANCE  
(ASTM D 1586)

▲ N-VALUE (BLOWS PER FOOT)

WATER CONTENT, %

Drawn by: RAW  
Date: 10/29/24

Check by: RAW  
Date: 10/29/24

App'd by: MRM  
Date: 10/30/24

U.S. Environmental & Engineering Services, Inc.  
Legacy Park Lake Dredge  
Lee's Summit, Missouri

LOG OF BORING: B- 9

Project No. J046831.01

REMARKS:

GROUNDWATER DATA

DRILLING DATA

4" AUGER HOLLOW STEM  
WASHBORING FROM FEET  
D.J.T. DRILLER RAW LOGGER  
CME 55TRK DRILL RIG  
HAMMER TYPE Auto

Surface Elevation 973Completion Date: 10/28/24

Datum NAVD88

DEPTH IN FEET

DESCRIPTION OF MATERIAL

ROOT ZONE - 12 inches

CLAY - brown to yellow brown, stiff, fat - CH

Auger refusal at 11.5 feet.

GRAPHIC LOG

DRY UNIT WEIGHT (pcf)  
SPT BLOW COUNTS  
CORE RECOVERY/FOOT

SAMPLES

4-5-6 SS1

2-4-6 SS2

PLI

10 20 30 40 50 I LL

Δ - UU/2 ○ - QU/2 □ - PP/2

0.5 1.0 1.5 2.0 2.5

STANDARD PENETRATION RESISTANCE  
(ASTM D 1586)

▲ N-VALUE (BLOWS PER FOOT)

WATER CONTENT, %

Drawn by: RAW  
Date: 10/29/24

Check by: RAW  
Date: 10/29/24

App'd by: MRM  
Date: 10/30/24

U.S. Environmental & Engineering Services, Inc.  
Legacy Park Lake Dredge  
Lee's Summit, Missouri

LOG OF BORING: B-10

Project No. J046831.01

REMARKS:

GROUNDWATER DATA

DRILLING DATA

4" AUGER HOLLOW STEM  
WASHBORING FROM FEET  
D.J.T. DRILLER RAW LOGGER  
CME 55TRK DRILL RIG  
HAMMER TYPE Auto

PROJECT:LEGACY LAKE DREDGING  
PROJECT NAME #2 - BID NO #??? ??  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI  
SHEET NAME:SOIL BORINGS

PRELIMINARY  
NOT FOR CONSTRUCTION  
60% DESIGN SUBMITTAL  
01/2025

DRAWN BY:DEO  
CHECKED BY:WAW  
DATE:01/31/2025  
PROJECT #:10415715

G004

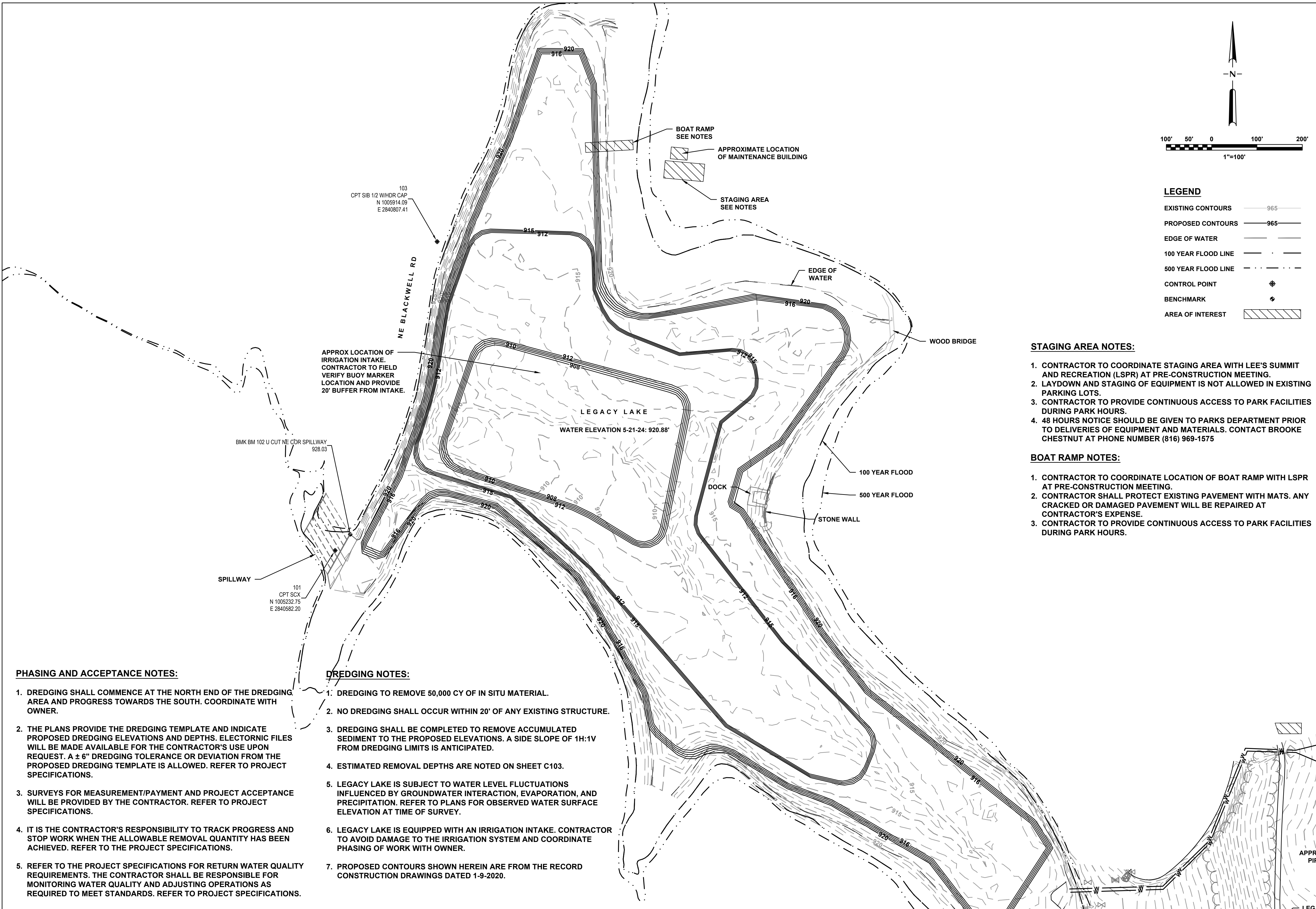
LEE'S SUMMIT  
MISSOURI  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

DATE  
REV  
DESCRIPTION

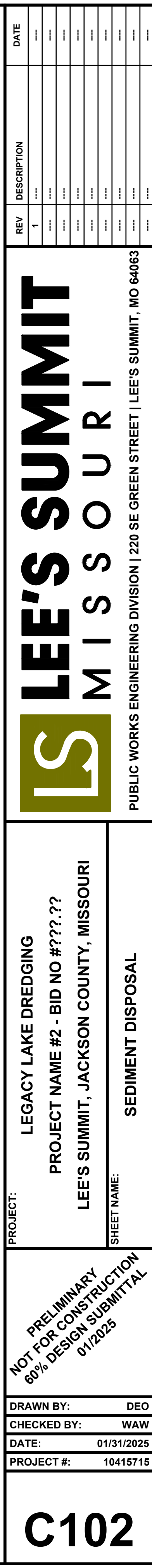








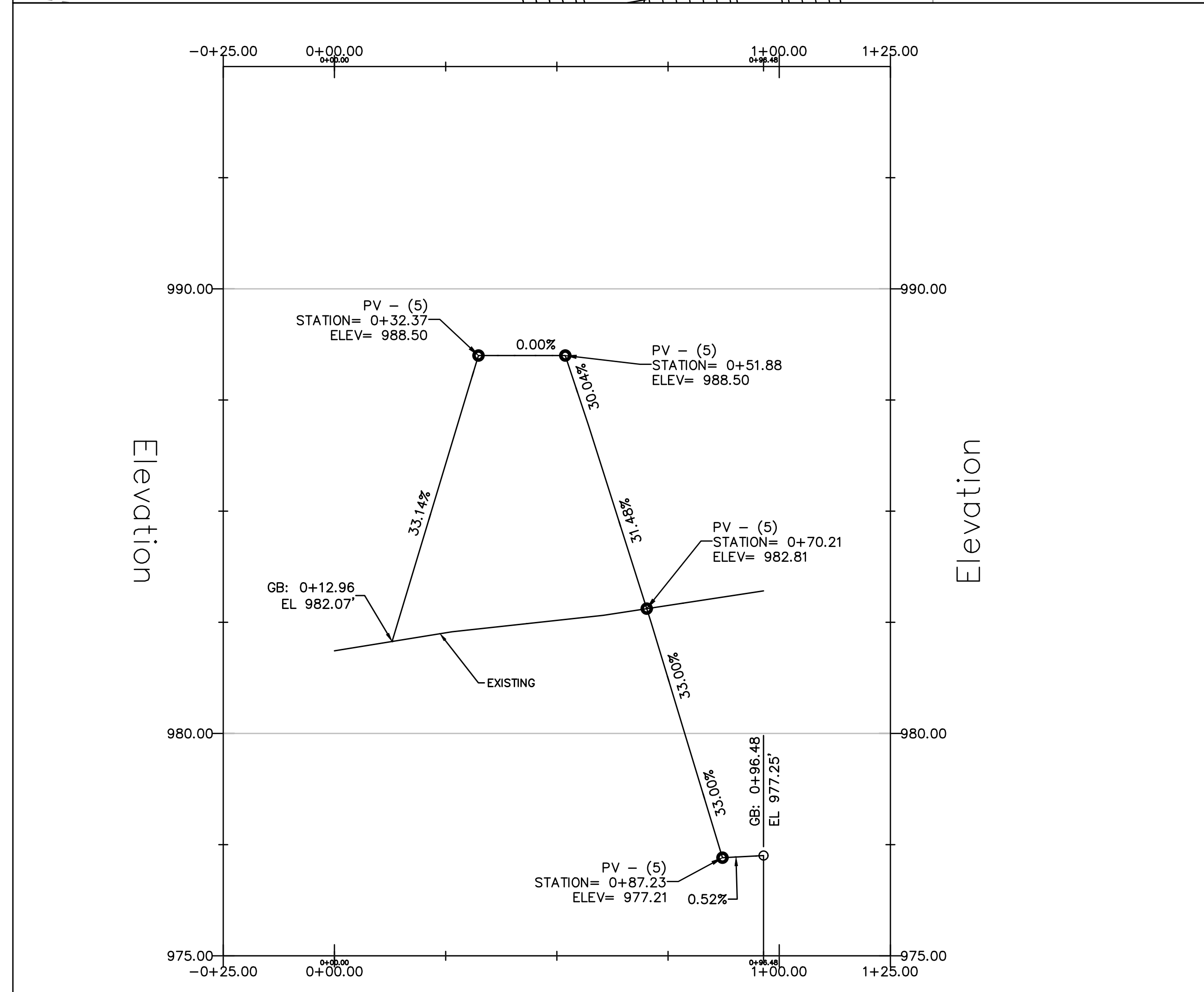
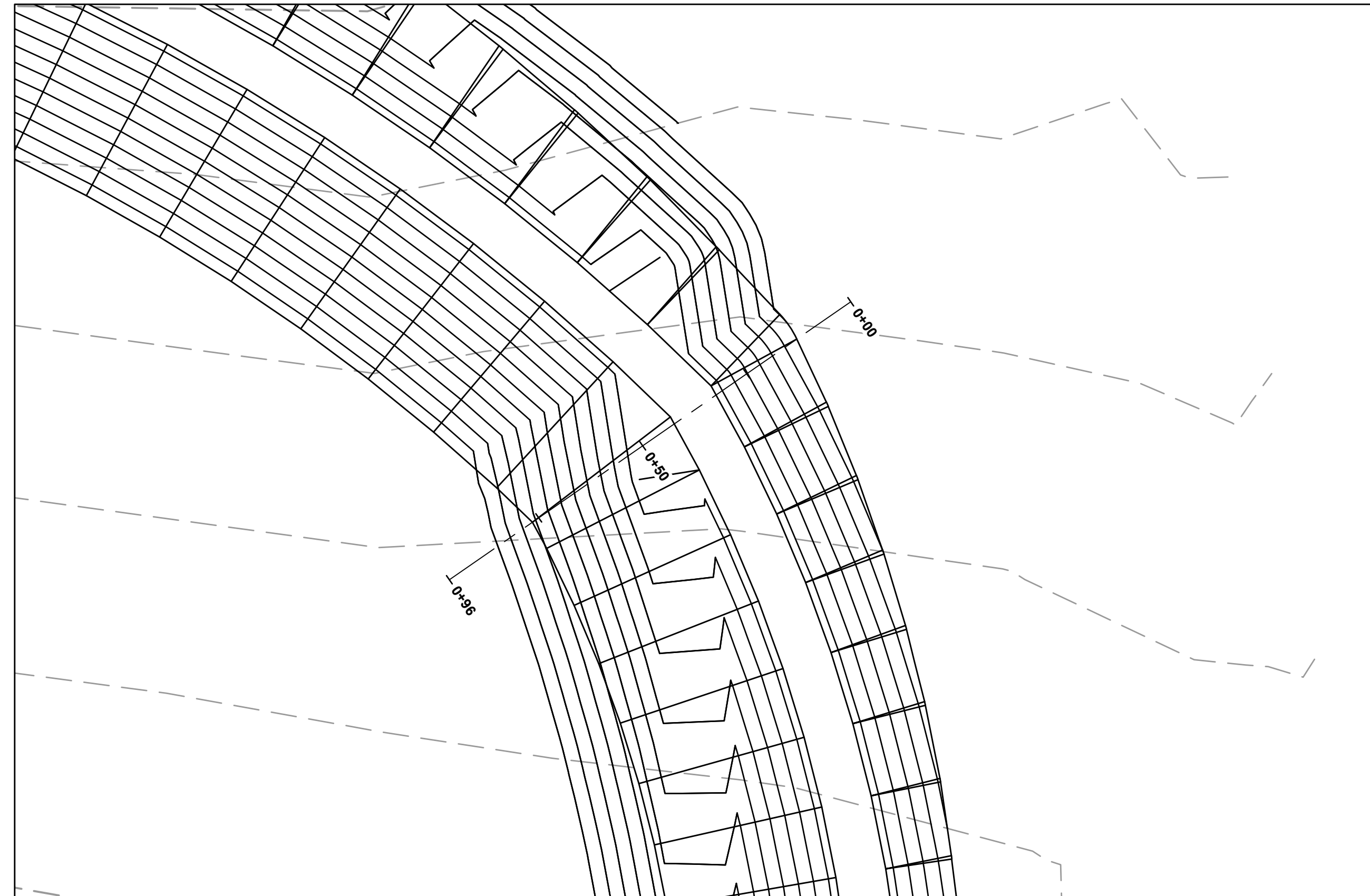
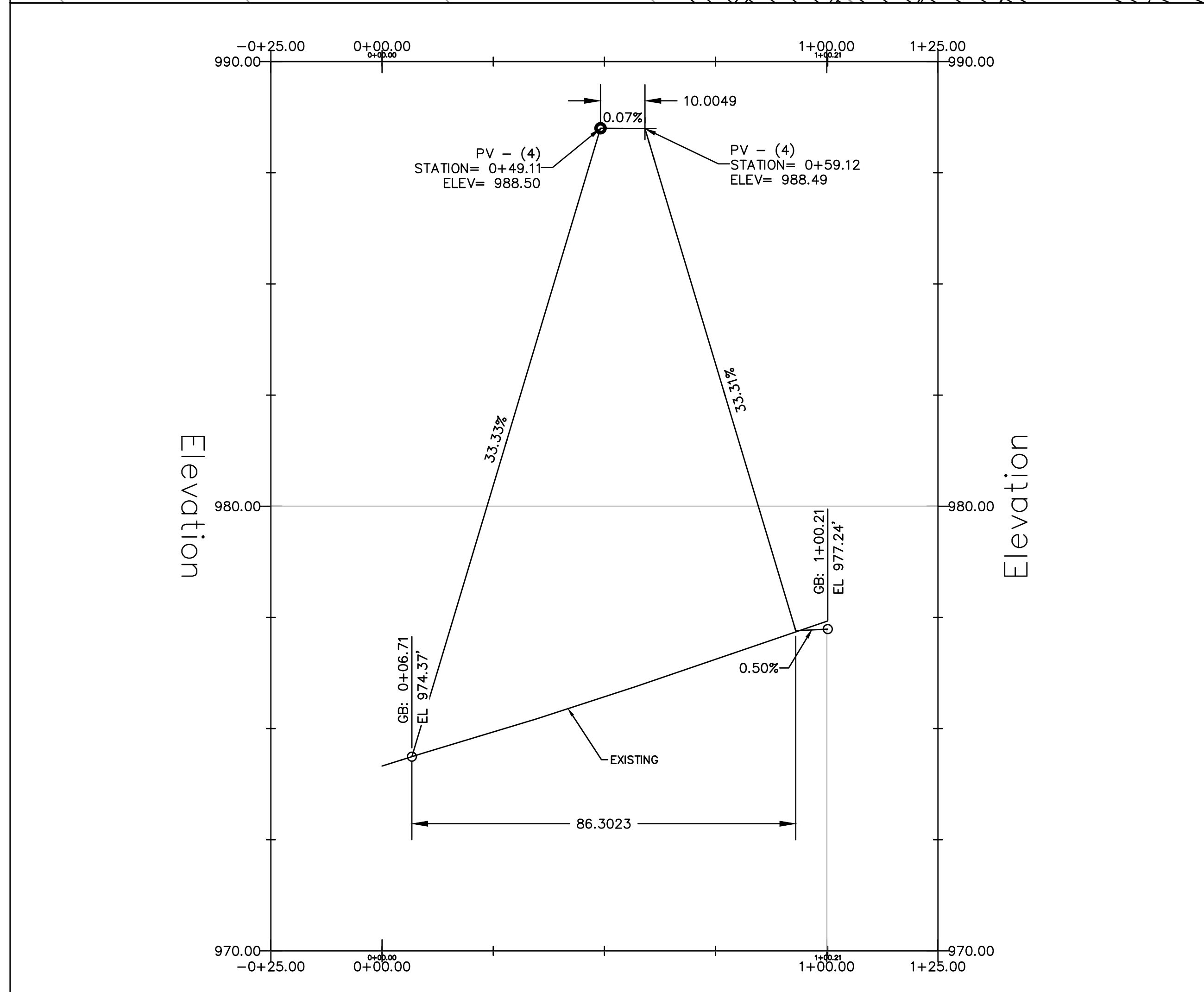
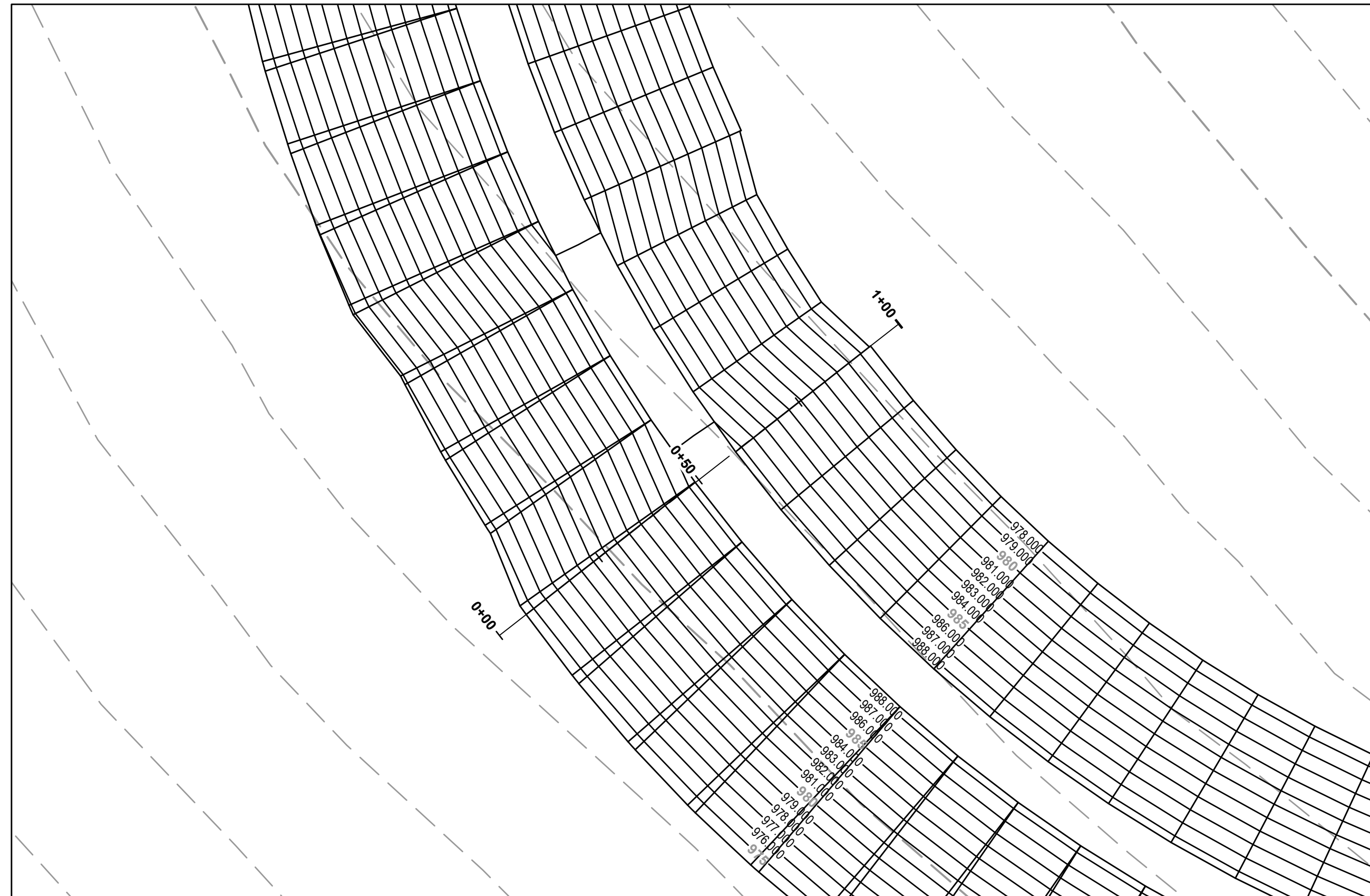












PROJECT:	LEGACY LAKE DREDGING	
	PROJECT NAME #2 - BID NO #??? ??	
	LEE'S SUMMIT, JACKSON COUNTY, MISSOURI	
SHEET NAME:	SURFACE CROSS SECTIONS	
NOT FOR CONSTRUCTION PRELIMINARY 60% DESIGN SUBMITTAL 01/2025		
DRAWN BY:	DEO	
CHECKED BY:	WAW	
DATE:	01/31/2025	
PROJECT #:	10415715	
C104		





# C501





1. THE COMPOST SOCK SHALL BE CLEANED IF A VISUAL INSPECTION SHOWS SILT AND DEBRIS BUILD UP AROUND IT.
2. PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. INSPECTION OF COMPOST SOCK SHOULD BE ON A REGULAR BASIS AND IMMEDIATELY AFTER MAJOR RAIN EVENTS.



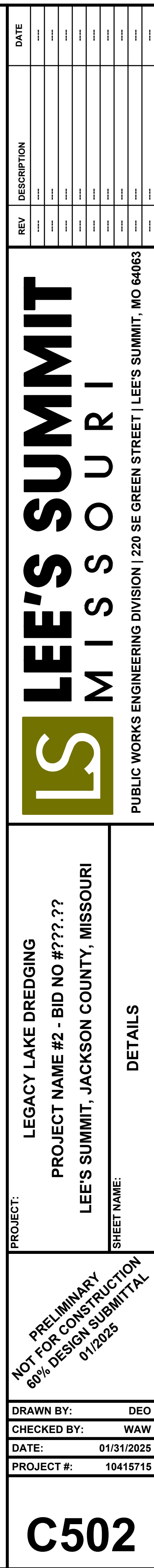
1. CONTRACTOR TO FIELD VERIFY LOCATION OF STOCKPILE AND COORDINATE WITH OWNER.
2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. CONTRACTOR SHALL ADJUST EROSION CONTROLS AS NECESSARY TO CONTAIN THE STOCKPILE.
3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

**STOCKPILE PROTECTION MAINTENANCE NOTES:**

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. IF BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.



1. RUMBLE STRIPS ARE RECOMMENDED FOR LARGER SITES.
2. AVOID PLACING EXITS IN AN OUTFALL AREA OR OTHER LOW AREAS WHERE WATER PONDS OR FLOWS.
3. A CULVERT SHALL BE INSTALLED IF EXIT CROSSES A DITCH.
4. ROCK APRON INSTALLATION SHALL BE WIDE ENOUGH TO ACCOMMODATE TURNING VEHICLES.
5. ADD NEW ROCK OR RAKE EXISTING ROCK WHEN VOIDS FILL WITH SEDIMENT.
6. ANY MUD, ROCK OR DEBRIS TRACKED ONTO PAVED SURFACES AND ACCUMULATED IN CURBS SHALL BE REMOVED USING A SWEEPER, SHOVEL, ETC.
7. REMOVE EXIT WHEN VEHICLES AND EQUIPMENT WILL NO LONGER ACCESS UNPAVED AREAS.
8. TRACK OUT MUST BE REMOVED WITHIN THE SAME BUSINESS DAY.







**DEPARTMENT OF THE ARMY**  
**U.S. ARMY CORPS OF ENGINEERS, KANSAS CITY DISTRICT**  
**601 E. 12<sup>TH</sup> STREET, 635 FEDERAL BUILDING**  
**KANSAS CITY, MO 64106-2824**

March 13, 2025

Regulatory Branch  
NWK-2024-00889  
Jackson, Missouri, GP 45

Ian Waters  
HDR Engineering, Inc.  
10450 Holmes Rd.  
Kansas City, MO 64131

Dear Mr. Waters:

This letter pertains to an application submitted on behalf of the City of Lee's Summit, Parks Department for a Department of the Army permit. It was received on January 22, 2025. The proposed work concerns maintenance dredging of Legacy Lake. The project is located in Section 35, Township 48 North, Range 31 West, Jackson County, Missouri.

The Corps of Engineers has jurisdiction over all waters of the United States. Discharges of dredged or fill material in waters of the United States, including wetlands, require prior authorization from the Corps under Section 404 of the Clean Water Act (33 USC 1344). The implementing regulation for this Act is found at 33 CFR 320-332.

Based on our review of all available information, we have determined that the proposed project is authorized by general permit GP-45 Maintenance of Man-Made Lakes and Ponds-Missouri, subject to the following conditions: The work must conform to Appendix I and to the general and special conditions in the enclosed copy of the general permit.

The Corps' decision to verify this project is based on the provided plans and project description submitted in the application. Deviations to project designs should be coordinated with this office to ensure compliance with terms and conditions of this permit verification.

The Missouri Department of Natural Resources has certified that this general permit will not violate existing state water quality standards provided you comply with the conditions included in their attached certification document. All conditions included in the water quality certification become conditions of the general permit authorization. Please review all conditions associated with this general permit. If you have any questions concerning state water quality standards or compliance issues with the associated certification conditions, please contact the Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102-0176. You may also contact the office at 573-526-3589 or by email at [wpssc401cert@dnr.mo.gov](mailto:wpssc401cert@dnr.mo.gov).

Included with this letter is a "Compliance Certification" that must be submitted to this office upon completion of the authorized work and any required mitigation. Other Federal, state, and/or local permits may be required, and you should verify this yourself.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. Please feel free to complete our Customer Service Survey form on our website at: <https://regulatory.ops.usace.army.mil/customer-service-survey/>. You may also call and request a paper copy of the survey which you may complete and return to us by mail.



Mr. Jesse Cochran, Project Manager, reviewed the information furnished and made this determination. If you have any questions concerning this matter, please feel free to contact Mr. Cochran at 816-389-3739 or by email at [jesse.s.cochran@usace.army.mil](mailto:jesse.s.cochran@usace.army.mil). Please reference Permit No. NWK-2024-00889 in all comments and/or inquiries relating to this project. This letter is only being provided to you electronically at: [ian.waters@hdrinc.com](mailto:ian.waters@hdrinc.com).

Enclosures

cc (electronically w/o enclosures):

Environmental Protection Agency,  
Watershed and Grants Branch  
U.S. Fish and Wildlife Service, Columbia, Missouri  
Missouri Department of Natural Resources,  
Water Protection Program  
State Historic Preservation Office  
Missouri Department of Conservation





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Missouri Ecological Services Field Office  
101 Park Deville Drive  
Suite A  
Columbia, MO 65203-0057  
Phone: (573) 234-2132 Fax: (573) 234-2181



In Reply Refer To:

04/09/2025 17:27:03 UTC

Project Code: 2025-0037219

Project Name: Legacy Lake Dredge

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

### Threatened and Endangered Species

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. **Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days.** The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

### Consultation Technical Assistance

Refer to the Midwest Region [S7 Technical Assistance](#) website for step-by-step instructions for making species determinations and for specific guidance on the following types of projects:



projects in developed areas, HUD, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

### Federally Listed Bat Species

Indiana bats, gray bats, and northern long-eared bats occur throughout Missouri and the information below may help in determining if your project may affect these species.

*Gray bats* - Gray bats roost in caves or mines year-round and use water features and forested riparian corridors for foraging and travel. If your project will impact caves, mines, associated riparian areas, or will involve tree removal around these features – particularly within stream corridors, riparian areas, or associated upland woodlots –gray bats could be affected.

*Indiana and northern long-eared bats* - These species hibernate in caves or mines only during the winter. In Missouri the hibernation season is considered to be November 1 to March 31. During the active season in Missouri (April 1 to October 31) they roost in forest and woodland habitats. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags  $\geq 5$  inches diameter at breast height (dbh) for Indiana bat, and  $\geq 3$  inches dbh for northern long-eared bat, that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Tree species often include, but are not limited to, shellbark or shagbark hickory, white oak, cottonwood, and maple. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, Indiana bats or northern long-eared bats could be affected.

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas;
- Trees found in highly-developed urban areas (e.g., street trees, downtown areas);
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees; and
- A stand of eastern red cedar shrubby vegetation with no potential roost trees.

### Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of “There are no listed species found within the vicinity of the project,” then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example ["No Effect" document](#) also can be found on the S7 Technical Assistance website.



2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see #3 below) – then project proponents can conclude the proposed activities **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain [Life History Information for Listed and Candidate Species](#) through the Species website.
3. If IPaC returns a result that one or more federally listed bat species (Indiana bat, northern long-eared bat, or gray bat) are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** these bat species **IF** one or more of the following activities are proposed:
  - a. Clearing or disturbing suitable roosting habitat, as defined above, at any time of year;
  - b. Any activity in or near the entrance to a cave or mine;
  - c. Mining, deep excavation, or underground work within 0.25 miles of a cave or mine;
  - d. Construction of one or more wind turbines; or
  - e. Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on listed bat species. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example ["No Effect" document](#) also can be found on the S7 Technical Assistance website.

If any of the above activities are proposed in areas where one or more bat species may be present, project proponents can conclude the proposed activities **may affect** one or more bat species. We recommend coordinating with the Service as early as possible during project planning. If your project will involve removal of over 5 acres of suitable forest or woodland habitat, we recommend you complete a Summer Habitat Assessment prior to contacting our office to expedite the consultation process. The Summer Habitat Assessment Form is available in Appendix A of the most recent version of the [Range-wide Indiana Bat Summer Survey Guidelines](#).

### Other Trust Resources and Activities

*Bald and Golden Eagles* - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

*Migratory Birds* - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA



to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

*Communication Towers* - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed [voluntary guidelines for minimizing impacts](#).

*Transmission Lines* - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to [guidelines](#) developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

*Wind Energy* - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's [Wind Energy Guidelines](#). In addition, please refer to the Service's [Eagle Conservation Plan Guidance](#), which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

#### **Next Steps**

Should you determine that project activities **may affect** any federally listed species or trust resources described herein, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

If you have not already done so, please contact the Missouri Department of Conservation (Policy Coordination, P. O. Box 180, Jefferson City, MO 65102) for information concerning Missouri Natural Communities and Species of Conservation Concern.

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

John Weber

Attachment(s):

- Official Species List



## OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Missouri Ecological Services Field Office**

101 Park Deville Drive

Suite A

Columbia, MO 65203-0057

(573) 234-2132



## PROJECT SUMMARY

Project Code: 2025-0037219

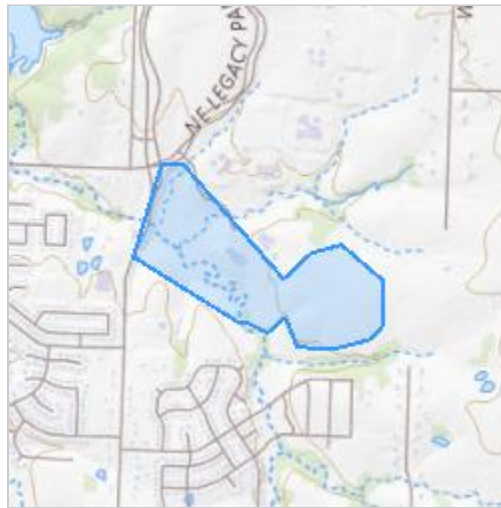
Project Name: Legacy Lake Dredge

Project Type: Disposal Dredge Material

Project Description: City of Lee's Summit is proposing to dredge approximately 50,000 cubic yards of silt from Legacy Lake to restore the Lake to preexisting conditions.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.927040149999996,-94.31459080212588,14z>



Counties: Jackson County, Missouri



## ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6329">https://ecos.fws.gov/ecp/species/6329</a>	Endangered
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/CGFBEC63BNBNPEZOFZTMTMQLWA/documents/generated/7280.pdf">https://ipac.ecosphere.fws.gov/project/CGFBEC63BNBNPEZOFZTMTMQLWA/documents/generated/7280.pdf</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a> General project design guidelines: <a href="https://ipac.ecosphere.fws.gov/project/CGFBEC63BNBNPEZOFZTMTMQLWA/documents/generated/7280.pdf">https://ipac.ecosphere.fws.gov/project/CGFBEC63BNBNPEZOFZTMTMQLWA/documents/generated/7280.pdf</a>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Proposed Threatened
Western Regal Fritillary <i>Argynnis idalia occidentalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/12017">https://ecos.fws.gov/ecp/species/12017</a>	Proposed Threatened

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.



## **IPAC USER CONTACT INFORMATION**

Agency: HDR, inc.  
Name: Ian Waters  
Address: 10450 Holmes Road  
Address Line 2: Suite 600  
City: Kansas City  
State: MO  
Zip: 64131  
Email: ian.waters@hdrinc.com  
Phone: 8163471346

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Army Corps of Engineers