



May 13, 2024

Addendum No. 2
BL049-24
Wolf Lake (Y-14) Dam Rehabilitation

The following addition/changes modify the Bid No. BL049-24 "Wolf Lake (Y-14) Dam Rehabilitation Contract Documents, dated April 2024, as first advertised on April 03, 2024.

I. Questions:

Q1. Please provide the expected influent/incoming water fill rates (CFS or GPM) for various events/stages (average, 1" rain event, 100 year flood, etc.) for each of the lake. This is necessary to determine cofferdam and dewatering scopes.

A1. The two-year storm peak inflow discharge for Y14 was calculated to be 911 cfs which is associated with a 3.7 inch rainfall event over 24 hours. The inflow discharge from a two (2) inch, 24-hour rainfall event was calculated to be 200 cfs. The cofferdam elevation and selection of appropriate inflow event for the work is to be selected by the Contractor. The Contractor may sequence the work to limit working during wet periods or allow for the area protected by the cofferdam to be wet during periods when the Contractor is not working.

Q2. Drawing C-001, Note 16 states "THE EXISTING LOW-LEVEL DRAWDOWN GATE IS REPORTEDLY OPERABLE AND CAN BE USED TO FACILITATE LAKE DRAWDOWN", however Stantec Report "Structural Inspections of Outlet Control Structures and Principal Spillway Pipes" states in Table 1 that Y-14 Dam – "Low-Level Gate" is "Inoperable" and later in the report notes "Gate stem severely bent" and "was severely bent rendering it unusable (Photo 3)". Please confirm the gate has been repaired to an operable state for the contractor under this contract to be able to use the gate to drain the lake.

A2. This response should be considered an update to A13 from Addendum 1.

The low level gate has not been tested in recent years, and its condition is unknown. The gate should be assumed to be Inoperable.

Gate operation will be the contractor's responsibility once on site. If the Contractor assesses the gate to be operable for drawdown then the contractor is allowed to use the low drain gate to control water; however, the contractor must adhere to the drawdown limits noted in the plans and specifications. Additionally, the contractor must have emergency measures ready (i.e., equipment, materials) in the event that the gate cannot be closed, and drawdown cannot be controlled within the allowable limits. If the existing gate is used, details on the proposed emergency measures to close the gate and how the gate would be opened shall be provided in the Water Control Plan for approval.

Q3. Drawing C-001, Suggested Sequence of Construction, item G states "ANY ACTIVE INFILTRATION WILL NEED TO BE STOPPED VIA INJECTION GROUTING PRIOR TO CIPP INSTALLATION." Injection grouting is not in the bid form and is not listed in the specifications. Please confirm any repairs to the PSP will be part of a separate change order and not considered incidental to the work since the scope (if any) is unknown.

A3. If active infiltration is identified after the pre-CIPP installation CCTV inspection to be performed by the Contractor, details on how to stop the infiltration will be provided by the Designer. This work would be part of a separate change order.

Q4. "Drawing CP-101 appears to show as-built elevations around the OCS's, but these elevations appear to be higher than the OCS invert. Is there any anticipated excavation or demucking around the OCS's that will be required? If so, please clarify and provide limits of excavation/demucking and consider adding a unit price item to handle this work as the quantity is unknown. Can the material be left onsite and not hauled off?"

A4. Localized excavation/demucking around the OCS is anticipated. Drawing CP-101 and CP-102 have been reissued to present additional top of sediment and hard bottom elevations.

The horizontal limits of excavation/demucking shall be the minimum area required to perform the Work (ex: cleaning OCS, replacing low level drawdown gate, construct a cofferdam). In no event, shall excavation/demucking occur beyond the lake access limits. The vertical limits of excavation shall be to the elevation required to replace and operate the low-level drawdown gate and should not expose the vertical sides of the foundation. If a hard stratum (ex: compacted material, rock) is encountered, that material shall remain in place. Excavated/demucked material shall be removed and disposed of off-site. Excavation/demucking and associated hauling and disposal within the Lake is considered incidental up to 250 cubic yards to Bid Item No. 3 (Dewatering and Water Control with Low-Level Gate Drain). If additional excavation/demucking is required and approved by GCDWR, the removal, hauling, and disposal will be paid under Bid Item 28a for Debris Removal. Specification 01 22 15 – Measurement and Payment, Paragraph 1.6.D has been revised to include this clarification.

Q5. Drawings EC-101 and EC-102 show different symbols (triangles or dashes) around the site for Ds1 & Ds2 areas. Please clarify what the different symbols signify.

A5. A legend has been added to EC-101 and EC-102 to provide clarification.

Q6. Drawing CP-102 (below match line for CP-101) calls out "Permanent Access Road" Detail 3/CP-502. Please confirm this permanent access road is the same as Bid Item 4g "Construction Road (Cr)". Note 01 22 15, 1.6, E, 4. States "Permanent Construction Road".

A6. Permanent Access Road as called out on Drawing CP-102 and as shown on Detail 3/CP-502 is the same as and is to be paid for under Bid Item 4g Construction Road (Cr).

Q7. Drawing CP-102 (bottom right side of page) calls out "EXISTING GRAVEL ACCESS ROAD CORRIDOR APPLY GAB FOR STABILIZATION AS DIRECTED. KEEP ACCESS ROAD CLEAR FOR GEORGIA POWER INGRESS/EGRESS". Please clarify what bid item will pay for adding GAB as directed. Note Bid Item 28h is for sizes No. 3 thru No. 9, which GAB is not included.

A7. Graded Aggregate Base (GAB) that is to be applied to the existing gravel access road is to be paid under Bid Item 28h. NRCS Construction Specification 25 – Rockfill, Paragraph 10.a(1)(a) has been revised to include GAB as Classified Stone.

Q8. Specification 01 22 15, 1.6, G. 4. states "removal of sediment and debris from the stilling basin". The contract drawings don't contain any notes about sediment removal, and there isn't a way to quantify the amount of sediment or the scope due to the stilling basin always being flooded/full of water. Please add a bid item (by the CY) to allow the contractor to properly price the work, or please provide an approximate depth of sediment or volume for the contractor to base their bid on.

A8. For removal of sediment and debris from the stilling basin, up to 250 CY of sediment and debris removed from the stilling basin shall be paid for under Bid Item 6 – Clearing and Grubbing. If additional quantity of sediment and debris over 250 CY are required to be removed from the stilling basin, that additional quantity will be paid for under Bid Item 28a - Debris Removal as authorized by the Owner or Owner's Representative. Specification 01 22 15 – Measurement and Payment, Paragraph 1.6.G has been revised to include this clarification. In addition, the numbering under Paragraph 1.6.G has been corrected.

Q9. Drawing CP-102 has several notes stating "Remove Vegetation from Riprap". Which Bid Item should include this cost? Bid Item 6 seems to be the best fit, but it is not mentioned in the

- measurement and payment description.**
- A9. This work is to be paid for under Bid Item 6. Specification 01 22 15 – Measurement and Payment, Paragraph 1.6.G has been revised to include removal of vegetation for riprap as part of the Work to be included in Bid Item 6. In addition, the numbering under Paragraph 1.6.G has been corrected.
- Q10. Drawing CP-101 has a note stating “REMOVE RIPRAP FROM STILLING BASIN AND PLACE IN EXIST RIPRAP PROTECTION AT RCC SPILLWAY”. The stilling basin appears to always be flooded and no way to see the concrete bottom of the stilling basin. Please clarify how much rip rap is expected to be removed from the stilling basin, as the drawings don’t indicate any rip rap in the stilling basin. Also from the site visit the rip rap that is partially visible appears to be fairly dirty, please confirm the rip rap is not to be cleaned, and only removed and placed in the designated areas. If it is now your intent to clean the rip rap please clarify the desired cleaning procedure and expectations.**
- A10. Riprap to be relocated to existing riprap protection areas at the RCC spillway shall to be included in the 250 CY of sediment and debris to be removed from the stilling basin as addressed in A8. Rip rap is not required to be cleaned. If additional quantity over 250 CY are required to be removed from the stilling basin, that additional quantity will be paid for under Bid Item 28a - Debris Removal as authorized by the Owner or Owner's Representative. Specification 01 22 15 – Measurement and Payment, Paragraph 1.6.G has been revised to include this clarification. In addition, the numbering under Paragraph 1.6.G has been corrected.
- Q11. The CCTV inspection video “Y14 Dam CCTV Footage 1_2019” appears to show a significant amount of water coming in from the top of the pipe at about 3 minutes and 55 seconds into the video, which is about 217’ from the outfall of the pipe (according to the video at 4:26). Can you confirm that the water shown pouring in during the video is from inside the OCS and not a leak in the pipe?**
- A11. The water presented at 3 minutes and 55 seconds is at approximately 215.4 feet and is coming from the OCS.
- Q12. Specification 31 23 19, 1.1, C., 2. States “Contractor shall draw down the stilling basin prior to performing work related to the outlet control structure, principal spillway pipe, RCC spillway, stilling basin or in areas immediately adjacent to the stilling basins.”. Please confirm that the intent of the note related to stilling basin draw down/dewatering prior to performing work on the RCC spillway is only pertaining to a small amount of the RCC spillway/step work that is close to the stilling basin bottom that could be impacted by stilling basin water levels. Note that there is a lot of RCC step concrete repair work that is not impacted by stilling basin draw down or water level. We understand this information will be part of the Water Control Plan submittal, but the wanted to clarify the intent as it can greatly impact cost and schedule of the bid/project. Please also note the maximum amount of time the lake and stilling basin can be completely drawn down is 2 months (31 23 19, 1.5,A.,2.), which would not allow the contractor enough time to complete all the “outlet control structure, principal spillway pipe, RCC spillway, stilling basin or in areas immediately adjacent to the stilling basins” in time.**
- A12. The intent of dewatering the stilling basin specifically related to the RCC spillway/step work is to be able to remove rip rap, perform RCC spillway/step work close to the stilling basin water level, perform CIPP lining, and clean sediment and debris from the stilling basin. Cleaning of sediment and debris from the stilling basin includes removal of sediment and debris that results from cleaning the RCC steps as part of the preparation to perform repairs and apply the parge coats to the RCC steps. See A14 for answer related to allowable time for the lake to be drawn down.
- Q13. Specification 31 23 19, 1.2, B. Bypass Pumping Design Requirements appears to imply the intent of the bypass/dewatering system is to keep the work area dry at all times. However as discovered on other similar projects for the County, the amount of potential inflow during storm events would require a very extensive and expensive bypass system that is not the intent (bypass system could cost as much or more than all the remaining project scope). Note that such a massive bypass pumping system would be very intrusive to the neighbors. Instead the work area is allowed to be flooded and the contractor sequences the work to avoid impacts of the rain events that flood the work area. Please confirm the bypassing intent on this project.**

- A13. Minimum bypass flows shall be provided from the start of draining until the lake is refilled to normal pool. The intent of the bypass system to keep the site dry for areas that are actively being worked on so as to not damage construction components (ex: gates) or in-progress work, and allow proper curing of concrete repairs. The work area may be allowed to temporarily flood when the Contractor is not actively working and concrete repair materials have met their initial cure period so as not to be damaged. Contractor sequencing of repairs is encouraged to prevent damage from weather events, and is responsible for correcting any damage to repairs from weather events. As noted in CS35 for Concrete Repair, "The repair material shall be protected against premature surface drying, rainfall, and freezing for at least 72 hours. For proprietary repair material, the manufacturer's recommendations for curing shall be followed. Replacement concrete repair material shall be protected from drying and freezing for 7 days after placement." Concrete repairs shall also be protected from flooding during this curing stage as well.

The Contractor may employ various measures to achieve these goals such as utilizing pumps, siphons, cofferdams, and/or weather monitoring. The Contractor's Water Control Plan will need to be approved by DWR and conform to all applicable specifications and requirements.

- Q14. Specification 31 23 19, 1.5, A, 2 only allows for 2 months for the lake and stilling basin to be completely drawn down. In a previous bid for the county it was modified to allow 3 months. Note in that bid there was no RCC spillway work (making this bid's allowed draw down time even more onerous). Please extend the amount of time the lake can be drawn down to four months (assuming contractor is allowed to work on some parts of RCC while lake is not drawn down, see earlier question). Given that all the work is impacted by weather (precipitation, temperature, etc.) there will be many days that work cannot be done, thus extending the anticipated time for the work.**

- A14. The maximum amount of time that the lake and stilling basin can be completely drawn down has been extended to 3 months (not including initial drawdown and refilling). Work performed on the RCC spillway above the stilling basin water level does not require the Lake to be drawn down. Specification 31 23 19 - Dewatering, Paragraph 1.5.A.2 has been revised to include this revision.

- Q15. The current contract time for substantial completion is 210 days. With the time required to write contracts (say 2-3 weeks), get submittals from vendors and approved by engineer (say 5 weeks), and fabrication time for the gate (16 weeks) and metal items (TBD lead time) there is not enough time to complete the work. Please add an additional 60 days to the schedule or add an administration period of 60 days to allow for submittals to be approved and fabrication to start prior to mobilization.**

- A15. The current contract time shall remain at 210 days for substantial completion.

- Q16. NRCS Construction Specification "35 - Concrete Repair" 18., (2), b. mentions "Prior to examination of the OCS, full lake drawdown to the foundations will be required in accordance with Section 31 23 19 Dewatering and the Contractor-supplied Water Control Plan. Following lake drawdown, the exposed concrete surface of the OCS should be cleaned with pressurized water in accordance with the Drawings." Regarding the foundation/footing scope, please confirm that silt and/or debris shall be removed from the top/horizontal surface of the "foundation"/footing, pressure washed, and repaired as required. Confirm the vertical/sides of the foundation/footing is not required to be exposed and/or repaired.**

- A16. The vertical/sides of the foundation should not be exposed. The foundation should not be exposed more than necessary to replace and operate the gate. If the horizontal surface of the footing is exposed, the concrete shall be cleaned and coated with the concrete repair material utilized for the OCS.

II. Revisions:

- R1. Construction Plan Sheets CP-101 through CP-102:** Replace Sheets CP-101 through CP-102 dated 2/14/2024 in the Construction Plans with the attached revised Sheets CP-101 through CP-102 dated 5/9/2024. See A4.

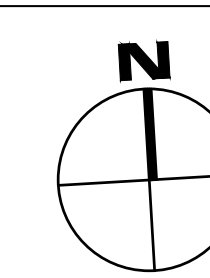
- R2. Construction Plan Sheets EC-101 through EC-102:** Replace Sheets EC-101 through EC-102 dated 2/14/2024 in the Construction Plans with the attached revised Sheets EC-101 through EC-102 dated 5/9/2024. See A5.
- R3. Specification Section 01 22 15 Measurement and Payment:** Replace Specification Section 01 22 15 Measurement and Payment with the attached revised Specification Section 01 22 15 Measurement and Payment in its entirety. See A4, A8, A9, and A10.
- R4. Specification Section 31 23 19 Dewatering:** Replace Specification Section 31 23 19 Dewatering with the attached revised Specification Section 31 23 19 Dewatering in its entirety. See A14.
- R5. NRCS Construction Specification 25 Rockfill:** Replace NRCS Construction Specification 25 Rockfill with the attached revised NRCS Construction Specification 25 Rockfill in its entirety. See A7.
- R6. Bid Form:** Replace Bid Form pages 18 through 22 with the attached revised Bid Form pages 18R through 22R. The quantity for Bid Item 28a Debris Removal has been increased from 15 CY to 100 CY.

III. Attachments:

- A1. Construction Plan Sheets CP-101 through CP-102**
- A2. Construction Plan Sheets EC-101 through EC-102**
- A3. Specification Section 01 22 15 Measurement and Payment**
- A4. Specification Section 31 23 19 Dewatering**
- A5. NRCS Construction Specification 25 Rockfill**
- A6. Bid Form Pages 18R through 22R**

All bidders shall acknowledge receipt of this addendum by inserting its number and date in the Bid Form. Failure to do so may subject the bidder to disqualification. This addendum forms a part of the Contract Documents.

Sincerely,
Brittany Bryant, CPPB
Purchasing Associate III



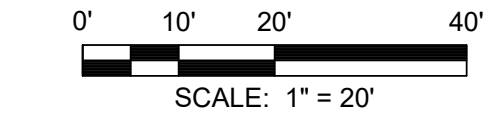
NRCS DAM Y-14 MAINTENANCE
PROJECT NO.: F-0234-35
GWINNETT COUNTY DEPARTMENT OF
WATER RESOURCES
684 WINDER HIGHWAY
LAWRENCEVILLE, GA 30045

SEAL



COUNTY APPROVAL

SCALE



NO.	DESCRIPTION	DATE

REVISIONS

DRAWN BY	AB
APPROVED BY	SF
CHECKED BY	SF
DATE	05/09/2024

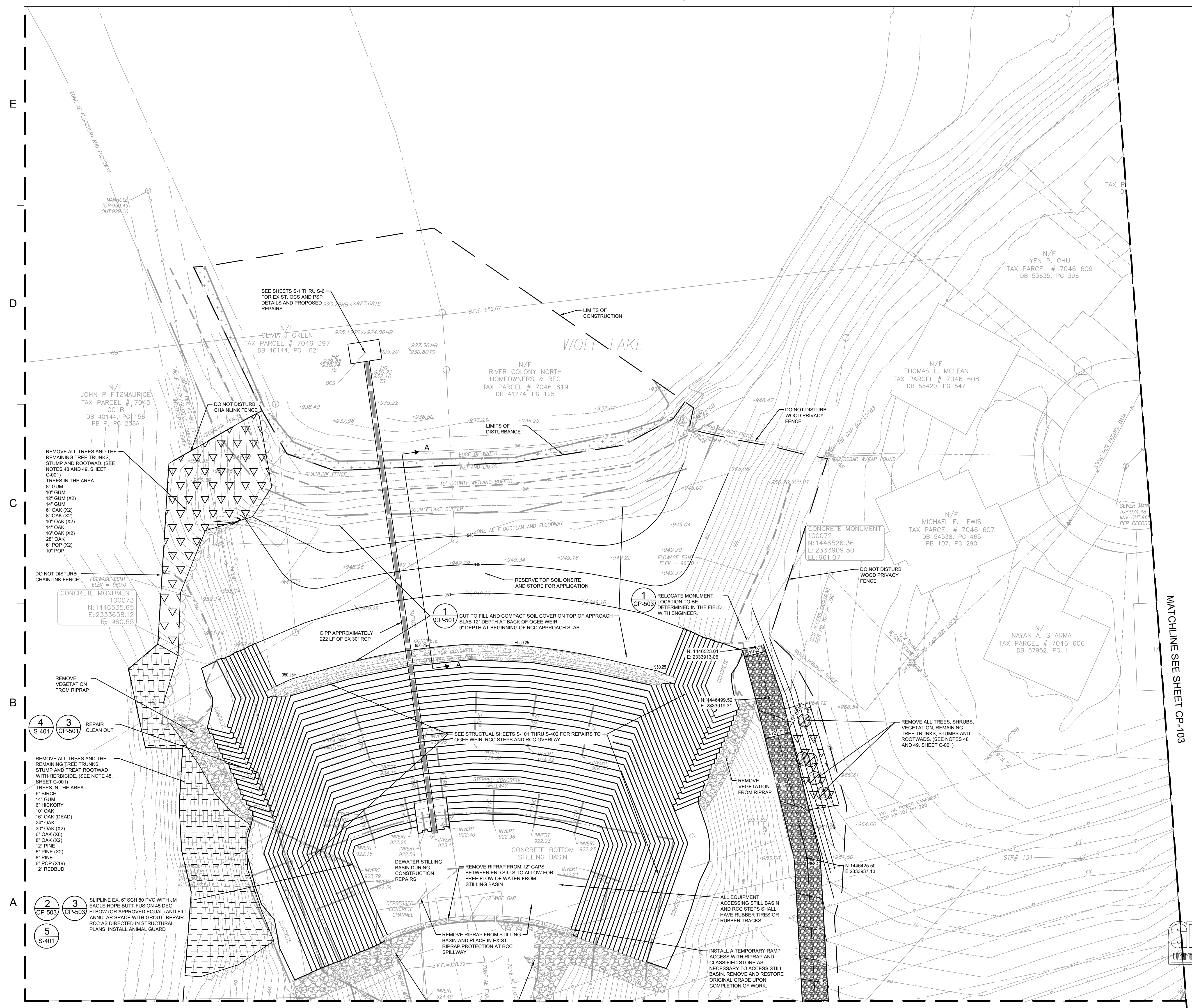
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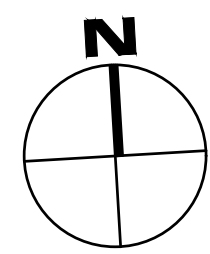
REPAIR & MAINTENANCE PLAN (1)

PROJECT NO. 50146395

CP-101

SHEET NO.

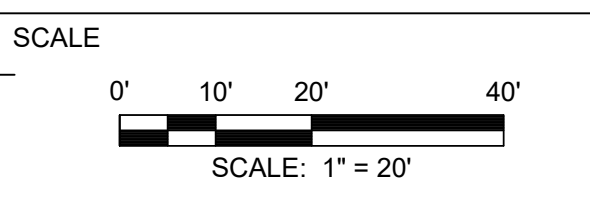




SEAL



COUNTY APPROVAL



NO.	DESCRIPTION	DATE

REVISIONS

DRAWN BY	AB
APPROVED BY	SF
CHECKED BY	SF
DATE	05/09/2024

TITLE

REPAIR & MAINTENANCE PLAN (2)

PROJECT NO. 50146395

CP-102

SHEET NO.



SEAL



COUNTY APPROVAL

SCALE



NO. DESCRIPTION DATE

REVISIONS

DRAWN BY _____ JJ

APPROVED BY _____ SF

CHECKED BY _____ SF

DATE _____ 05/09/2024

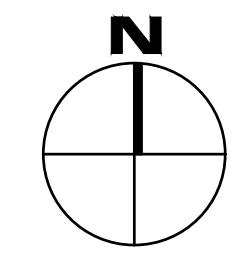
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INITIAL &
INTERMEDIATE
ES&PC PLAN (1)

PROJECT NO. 50146395

EC-101

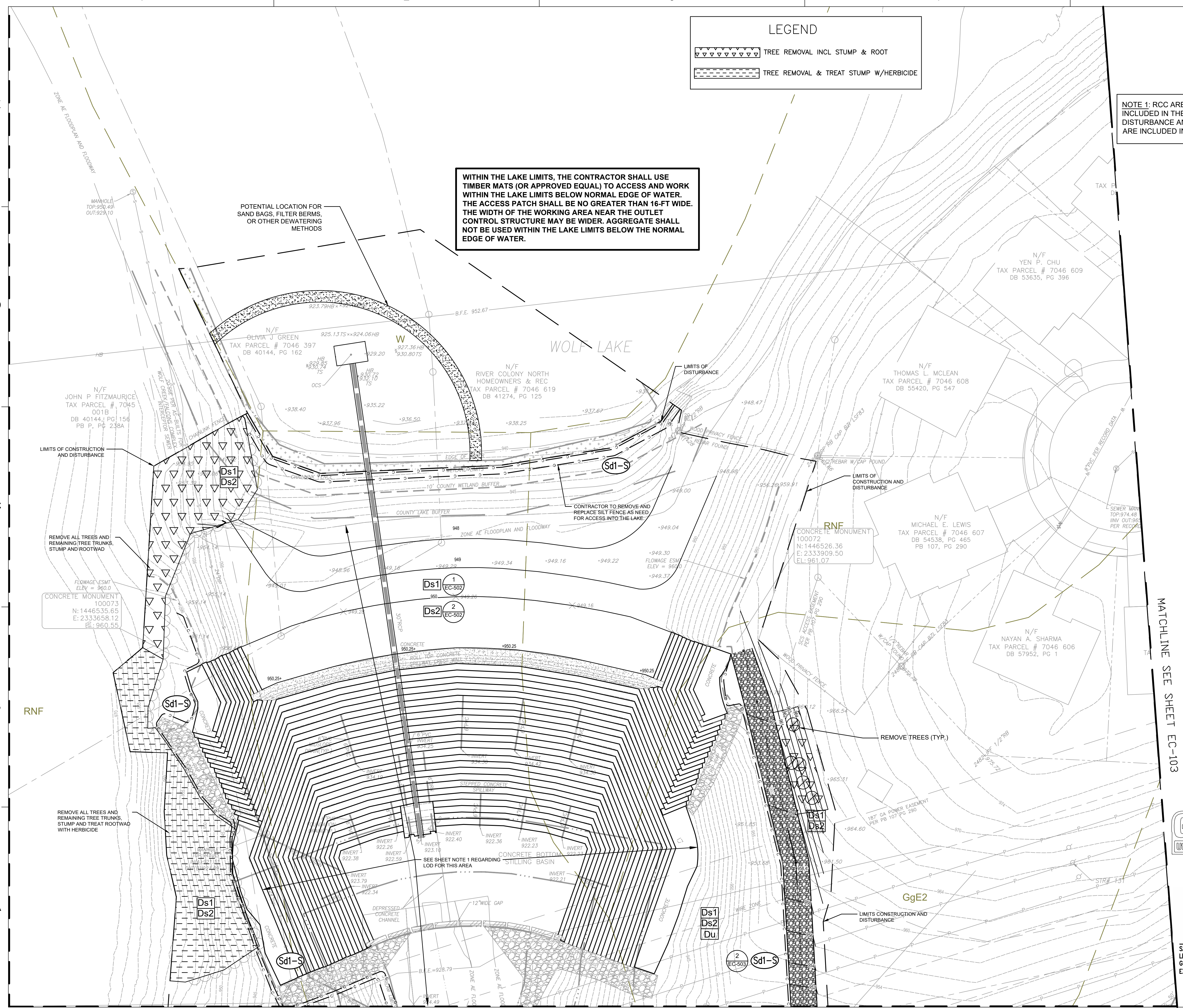
SHEET NO.



LEGEND
[Symbol: Dashed line with triangles] TREE REMOVAL INCL STUMP & ROOT
[Symbol: Dashed line with squares] TREE REMOVAL & TREAT STUMP W/HERBICIDE

NOTE 1: RCC AREA AND THE STILLING BASIN WAS NOT INCLUDED IN THE CALCULATIONS FOR LIMITS OF DISTURBANCE AND SEDIMENT CAPTURE. THESE AREAS ARE INCLUDED IN THE LIMITS OF CONSTRUCTION ONLY.

WITHIN THE LAKE LIMITS, THE CONTRACTOR SHALL USE TIMBER MATS (OR APPROVED EQUAL) TO ACCESS AND WORK WITHIN THE LAKE LIMITS BELOW NORMAL EDGE OF WATER. THE ACCESS PATCH SHALL BE NO GREATER THAN 16-FT WIDE. THE WIDTH OF THE WORKING AREA NEAR THE OUTLET CONTROL STRUCTURE MAY BE WIDER. AGGREGATE SHALL NOT BE USED WITHIN THE LAKE LIMITS BELOW THE NORMAL EDGE OF WATER.



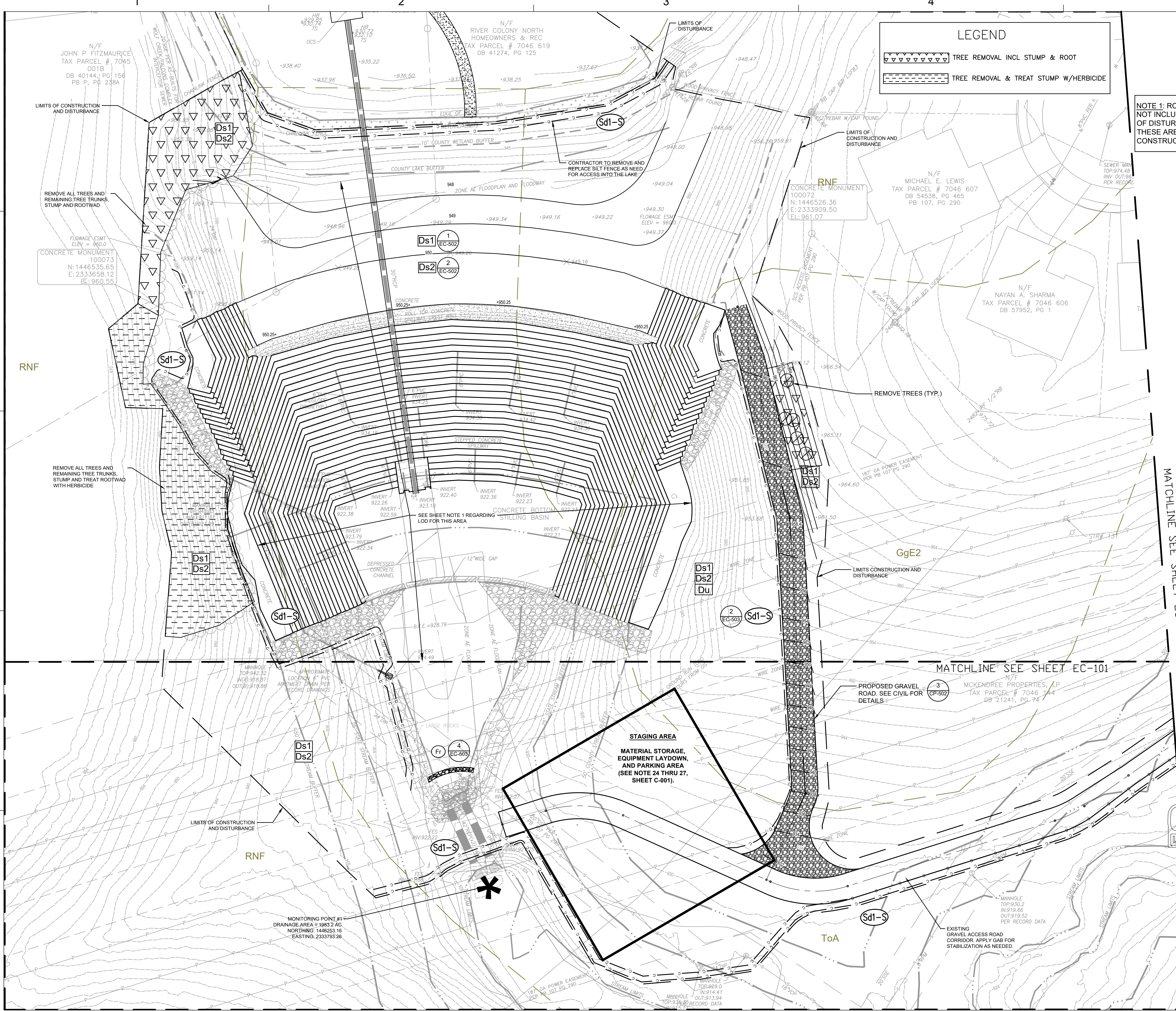
MATCHLINE SEE SHEET EC-103



Know what's below.
Call before you dig.

Samuel L. Fleming

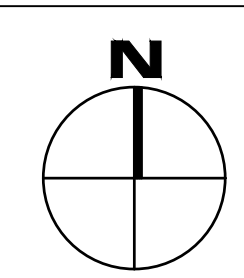
SAMUEL L. FLEMING, PE
LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION NO. 22173
EXPIRES 11/09/2024



LEGEND

- ▼▼▼▼▼▼▼▼ TREE REMOVAL INCL STUMP & ROOT
- ▬▬▬▬▬▬▬▬ TREE REMOVAL & TREAT STUMP W/HERBICIDE

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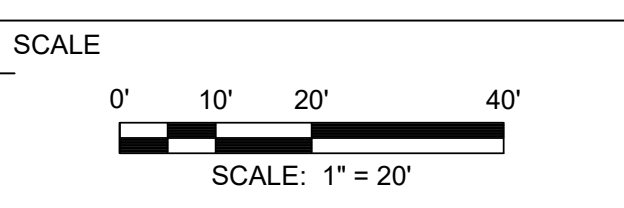


DEWBERRY ENGINEERS, INC.
2951 Flowers Road South
Suite 102
Atlanta, GA 30341-5533
678.530.0022
GA Lic. No. PEF024406 (6/30/2024)

NRCs DAM Y-14 MAINTENANCE
PROJECT NO.: F-0234-35
GWINNETT COUNTY DEPARTMENT OF
WATER RESOURCES
684 WINDER HIGHWAY
LAWRENCEVILLE, GA 30045



COUNTY APPROVAL



NO.	DESCRIPTION	DATE

REVISIONS

DRAWN BY	DATE
JJ	
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CHECKED BY	DATE
SF	
DATE	
05/09/2024	



Samuel L. Fleming

SAMUEL L. FLEMING, PE
LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION NO. 22173
EXPIRES 11/09/2024

INITIAL & INTERMEDIATE ES&PC PLAN (2)

PROJECT NO. 50146395

EC-102

SHEET NO.

SECTION 01 22 15

MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.1 SUMMARY

- A. This section defines the measurement and payment for each Bid Item of Work listed on the Bid Form Worksheet to be performed under the Contract for the Maintenance Project for NRCS Dam Y-14 Outlet Works and Auxiliary Spillway. Measurement and payment shall be made for each Bid Item based on the description in this Specification Section.
- B. Bid Prices included on the Bid Form shall be full compensation for all materials, labor, equipment, tools, construction equipment and machinery, heat, utilities, transportation, taxes, bonds, overhead, markup, incidentals, and services necessary for the execution and completion of the Work in the Contract Documents to be performed under this Contract.
- C. For the Work described, actual used and installed quantities of each bid item shall be measured in the field and certified by the Construction Manager (CM), Construction Representative (CR), Engineer of Record (EOR), and/or Gwinnett County Department of Water Resources (GCDWR) upon completion of construction in the manner set forth for each item in this and other sections of the Specifications. Payment for all items listed on the Bid Form will constitute full compensation for all Work as specified, indicated on the Drawings, or as directed by the EOR or GCDWR.
- D. Pay items included in the Owner Directed Items on the Bid Form are for any additional work that is determined to be required to complete the project but was not originally shown in the Bid Documents or is indicated to be used “as directed by Owner”. For bidding purposes, use of Owner Directed Items to pay for items of work that were shown in the Bid Documents is PROHIBITED. Measurement and payment under Owner Directed Items shall be in accordance with the limits established in writing by GCDWR upon directing such work.
- E. The Contractor shall assist and fully cooperate with Construction Oversight Team, EOR, and/or GCDWR to determine proper measurement of quantities for each item by providing complete and reasonable backup documentation as requested by the Construction Oversight Team, EOR, and/or GCDWR to substantiate payment due.

1.2 FIELD MEASUREMENT

- A. Final measured quantities determined in the field at time of construction shall govern over approximate quantities shown on the Bid Form, unless otherwise noted.
- B. No partial payment will be made for a unit price item until all work associated with the pay item has been completed.
- C. Payment for materials and equipment does not constitute acceptance of the product. “Products” shall mean materials or equipment permanently incorporated into the work.
- D. Payment on a unit price basis will not be made for Work outside dimensions shown in the Contract Documents.

1.3 CHANGE IN QUANTITIES

- A. An increase in the quantity of a bid item will follow Section "C-700 Standard General Conditions," Section 11.03 "Unit Price Work."
- B. A final adjusting Change Order shall be made for adjustment of the actual quantities installed prior to submittal of the final pay request.

1.4 MEASUREMENT AND BASIS FOR PAYMENTS ON LUMP SUM ITEMS

- A. Measurement for progress payments is the invoice value for stored materials and the earned value for all other cost for constructing each item. Earned value is expressed as the value of the Work completed divided by the total value of installation cost. The total amount paid will be equal to the total lump sum amount for that item or as described herein.

1.5 MEASUREMENT AND BASIS FOR PAYMENTS ON UNIT PRICE ITEMS

- A. Measure the Work using the unit of measure indicated in this Section for each unit price line item. Measurements are to be taken and quantities computed for submittal of the monthly pay request. Payment will be made only for the actual measured unit and/or computed length, area, solid contents, number, and weight unless other provisions are made in the Contract Documents. Payment on a unit price basis will not be made for Work outside dimensions shown in the Contract Documents.
- B. Payment will be made for the actual quantity of Work completed and for materials and equipment stored during the payment period as is measured in the field and confirmed by GCDWR upon completion of construction in the manner set forth for each item in this and other sections of the Specifications. Payment amount is the Work quantity measured per Paragraph A above multiplied by the unit price for that line item in the Agreement. Such price and payment shall constitute full compensation to the Contractor for furnishing all plant, labor, equipment, tools and materials not furnished by GCDWR and for performing all operations required to provide to GCDWR the entire Project complete in place as specified and as specified in the Contract Documents.

1.6 MEASUREMENT AND BASIS FOR PAYMENT FOR BASE PAY ITEMS

- A. The following items 1 through 27 comprise the Base Bid Total as listed on the Bid Form Worksheet.
- B. Item 1: Mobilization and Demobilization
 - 1. Work shall include administrative costs including, but not limited to, mobilization, demobilization, temporary facility delivery, installation, maintenance, bonds, insurance, project signage, submittals, shop drawings, pre-construction video, and site coordination. General office administration for the Project construction shall be included in the individual Line Items.
 - 2. Measurement shall not be made for this item.
 - 3. Payment will only be allowed for the percentage cost (max 5%) for the Base Project. Mobilization and Demobilization will be paid as contract lump sum price. Partial payments for Mobilization and Demobilization will be made at the first partial pay estimate paid on the Contract at the rate of 20% of the lump sum price, on each subsequent pay estimates paid on the Contract at the rate of 20% of the lump sum price, and any remaining unpaid percentage of the lump sum price will be paid on the final pay estimate on the Contract.

C. Item 2: Construction Survey

1. Work shall include layout, construction staking, setting survey monuments, and other survey requirements, including but not limited to complete engineering layout of the Work needed for construction. This Item is inclusive of competent personnel, equipment, accurate surveying instruments, stakes, platforms, tools, and materials, re-surveys, office administration, final as-built records, and incidentals necessary to construct the Project as described in the Contract Documents and to close the Project. No separate payment will be made.
2. Measurement shall not be made for this item.
3. This Item will be paid as Contract lump sum price. Partial payments for Construction Survey will be made at the first partial pay estimate paid on the Contract at the rate of 20% of the lump sum price, on each subsequent pay estimates paid on the Contract at the rate of 10% of the lump sum price, and any remaining unpaid percentage of the lump sum price will be paid on the final pay estimate on the Contract.

D. Item 3: Dewatering and Water Control with Low-Level Gate Drain

1. Work shall include all materials, labor, equipment, and incidentals necessary for initial lake dewatering, installation of water control structures, control surface water run-on, runoff, and dewatering in accordance with the Contract Documents, Specification Sections 31 23 19 and 31 52 00, and other applicable Specification Sections. Excavation or footprint preparation is incidental to this Line Item. Pumping or means necessary to maintaining dewatering of trenches to control groundwater, provide access to saturated areas, dewater the stilling basin, and to maintain temporary cofferdam areas shall be considered as incidental to those activities and shall not be considered for additional payment under this or other Line Items. Excavation/demucking and associated hauling and disposal within the Lake is considered incidental up to 250 cubic yards (CY) to this Bid Item. If additional excavation/demucking is required and approved by the Owner or Owner's Representative, the removal, hauling, and disposal will be paid under Bid Item 28a for Debris Removal.
2. Measurement shall not be made for this item.
3. This Item will be paid as Contract lump sum price. Partial payments for Dewatering and Water Control with Low-Level Gate Drain will be made at the first partial pay estimate paid on the Contract at the rate of 20% of the lump sum price, on each subsequent pay estimates paid on the Contract at the rate of 10% of the lump sum price, and any remaining unpaid percentage of the lump sum price will be paid on the final pay estimate on the Contract.

E. Item 4: Erosion, Sediment, and Pollution Controls

1. Work shall include all materials, labor, equipment, and incidentals necessary to install the system of erosion, sedimentation, and pollution control measures in accordance with the Contract Documents. Work shall also include all materials, labor, equipment, and incidentals necessary to maintain, make minor repairs and changes, inspections, monitoring, reporting, remove of, and legally dispose of erosion control measures as described in the Contract Documents.
2. Approved ES&PC plans and Notes serve as the minimum requirements and additional minor measures and/or modifications may be required by the Engineer and shall be provided by the Contractor at the unit price for the bid item.
3. This Line Item includes a construction entrance/exit to as described in the Contract Documents. The site has a primary construction access point.

4. This Line Item includes a permanent construction road as described in the Contract Documents. Work for the construction road shall include all materials including aggregate and geotextile, labor, equipment, and incidentals necessary to construct, maintain, and make minor repairs and changes as described in the Contract Documents.
5. Measurement shall be as indicated for each Best Management Practice (BMP) actually installed, as indicated on the Contract Drawings, as directed by the Engineer, or as directed by GCDWR.
6. Payment will be made at the unit rates listed below upon approval by the Engineer and acceptance by the Owner:
 - (a) Silt Fence (Sd1-S): Payment shall be made for each linear foot (LF) installed; no payment shall be made for silt fencing required to be reinstalled for any reason.
 - (b) Inlet Sediment Trap (Sd2-P): Payment shall be made for each (EA) number of inlet sediment traps installed.
 - (c) Filter Ring (Fr): Payment shall be made for each (EA) number of filter rings installed.
 - (d) Tree Protection (Tr): Payment shall be made for the linear feet (LF) of tree protection fencing actually installed in accordance with the Construction Drawings.
 - (e) Construction Exit (Co): Payment shall be for each (EA) construction exit installed and maintained throughout the duration of the project as shown on the Construction Drawings or as approved by the GCDWR.
 - (f) Mulch (Ds1): Payment shall be made for the total acres (AC) of erosion control mulching actually installed in accordance with the Construction Drawings.
 - (g) Construction Road (Cr): Payment shall be made for the total square yards (SY) of permanent construction road actually installed in accordance with the Construction Drawings and accepted by the GCDWR.

F. Item 5: Fish Removal

1. Work shall include all materials, labor, equipment, and incidentals necessary to complete Fish Removal activities as described in the Contract Documents and in accordance with Specification 10 89 01.
2. Measurement shall not be made for this Bid Item.
3. Payment for this item shall be provided at 100% on the first pay estimate after completion of the work, upon approval by the Designer and acceptance by the Owner.

G. Item 6: Clearing and Grubbing

1. Work shall include all materials, labor, equipment, and incidentals necessary to complete Clearing and Grubbing activities as described in the Contract Documents including but not limited to clearing the work area of all trees and brush, removal of vegetation from rip rap, removal of sediment and debris from the stilling basin, relocation of existing riprap from the culvert inlet and stilling basin to upland areas, grubbing the work area of stumps, roots, and root mats, as well as on-site and off-site handling, hauling, and legal disposal of waste materials. Excavation, backfill, compaction, and treatment of trunk, stump, and rootwads with herbicide associated with clearing and grubbing is incidental to the Line Item. No additional payment shall be made for clearing and grubbing outside of the construction limits, or the limits of disturbance as described in the Contract Documents without written authorization by GCDWR. For removal of sediment and debris from the stilling basin, up to 250 cubic yards (CY) of sediment and debris removed from the stilling basin shall be paid for under this Bid Item. If additional quantity of sediment and debris over 250 CY are required to be removed from the stilling basin, that additional quantity will be paid for under Bid Item 28a - Debris Removal as authorized by the Owner or Owner's Representative.

2. Measurement for Clearing and Grubbing will be made on the basis of the unit price per acre of area fully cleared and grubbed as measured in the horizontal plane and as shown on the Drawings.
3. Payment shall be made for each acre cleared and grubbed upon approval by the Engineer and acceptance by the Owner.

H. Item 7: Structure Removal

1. Work shall include all materials, labor, equipment, and incidentals necessary to remove, haul offsite, stockpile, salvage, store, reset, and/or legally dispose of existing drain and cleanout pipes and existing fence, including gate, as described in the Contract Documents. Damaged fence and/or gate sections shall be replaced with new materials in kind as directed and approved by GCDWR and/or the Engineer under Owner Directed Bid Item Nos. 28m thru 28o. No additional payment shall be made for fence and/or gate sections damaged at the negligence of the Contractor.
2. Measurement shall be as indicated for each (EA) structure removed and, if applicable reset, as indicated on the Construction Drawings, as directed by the Engineer, or as directed by GCDWR.
3. Payment will be made at the unit rates listed below upon approval by the Engineer and acceptance by the Owner:
 - (a) Remove Existing Drain and Cleanout Pipes: Payment shall be made for each linear foot (LF) removed.
 - (b) Remove and Reset Existing Fence Including Gate: Payment shall be made for each linear foot (LF) removed and reset.

I. Item 8: Concrete Repair

1. Work shall include all materials, labor, equipment, and incidentals necessary for pressure washing, cleaning, sanding, routing, grinding, delaminated concrete removal, surface preparation, installation of sealants and surface coating materials, installation of injection materials, installation of backer rods, installation of spall repair materials, and installation of epoxy grout materials in accordance with the Contract Documents.
2. Measurement shall be as indicated for each item of concrete repair actually completed, as indicated on the Construction Drawings, as directed by the Engineer or Designer, or as directed by GCDWR.
3. Payment will be made at the unit rates listed below upon approval by the Engineer or Designer and acceptance by the Owner:
 - (a) Outlet Control Structure Concrete Surface Cleaning: Payment shall be made for each square foot (SF) of outlet control structure surface cleaned in accordance with the Construction Drawings.
 - (b) Outlet Control Structure Concrete Repair of Deteriorated Joints and Joint Edge Spalls: Payment shall be made for each linear foot (LF) of outlet control structure deteriorated joints and joint edge spalls repaired in accordance with the Construction Drawings.
 - (c) Outlet Control Structure Concrete Spall Repair (Type 3): Payment shall be made for each square foot (SF) of outlet control structure concrete spalls (Type 3) repaired in accordance with the Construction Drawings.

- (d) Outlet Control Structure Surface Coating: Payment shall be made for each square foot (SF) up of outlet control structure coated in accordance with the Construction Drawings.
- (e) Auxiliary Spillway Concrete Surface Cleaning: Payment shall be made for each square yard (SY) of auxiliary spillway weir and roller compacted concrete cleaned in accordance with the Construction Drawings.
- (f) Auxiliary Spillway Roller Compacted Concrete Shrinkage Crack Repair: Payment shall be made for each linear foot (LF) of auxiliary spillway roller compacted concrete shrinkage cracks repaired in accordance with the Construction Drawings.
- (g) Auxiliary Spillway Weir Crack Injection: Payment shall be made for each linear foot (LF) of auxiliary spillway weir cracks repaired with injection materials in accordance with the Construction Drawings.
- (h) Auxiliary Spillway Weir Joint Repair/Installation: Payment shall be made for each linear foot (LF) of auxiliary spillway weir joints repaired and/or installed in accordance with the Construction Drawings.
- (i) Auxiliary Spillway Weir Base Sealant: Payment shall be made for each linear foot (LF) of auxiliary spillway weir base sealed in accordance with the Construction Drawings.
- (j) Auxiliary Spillway Concrete/Roller Compacted Concrete Spall Repair (Type 1): Payment shall be made for each square foot (SF) of auxiliary spillway roller compacted concrete spalls (Type 1) repaired in accordance with the Construction Drawings.
- (k) Auxiliary Spillway Concrete/Roller Compacted Concrete Spall Repair (Type 2): Payment shall be made for each square foot (SF) of auxiliary spillway roller compacted concrete spalls (Type 2) repaired in accordance with the Construction Drawings.
- (l) Auxiliary Spillway Roller Compacted Concrete Parge Coat (Horizontal Surface): Payment shall be made for each square yard (SY) of parge coat installed on auxiliary spillway roller compacted concrete horizontal surfaces in accordance with the Construction Drawings.
- (m) Auxiliary Spillway Roller Compacted Concrete Parge Coat (Vertical Face): Payment shall be made for each square yard (SY) of parge coat installed on auxiliary spillway roller compacted concrete vertical faces in accordance with the Construction Drawings

J. Item 9: Low-Level Drawdown Gate and Appurtenances Replacement

- 1. Work shall include all materials, labor, equipment, and incidentals necessary to remove and replace the outlet control structure low-level drawdown gate and appurtenances as described in the Contract Documents. This includes hauling and disposal of the existing low-level drawdown gate and appurtenances required to complete work as described in the Contract Documents.
- 2. Measurement shall be as indicated for each (EA) low-level drawdown gate, including appurtenances, removed and replaced as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
- 3. Payment for this item shall be made for each (EA) number of low-level drawdown gate, including appurtenances, removed and replaced upon approval by the Designer and acceptance by the Owner.

K. Item 10: Low-Stage Trash Rack and Appurtenances Replacement

- 1. Work shall include all materials, labor, equipment, and incidentals necessary to remove and replace the outlet control structure low-stage trash rack and appurtenances as described in the Contract Documents. This includes hauling and disposal of the existing low-stage trash rack and appurtenances required to complete work as described in the Contract Documents.

2. Measurement shall be as indicated for each (EA) low-stage trash rack, including appurtenances, removed and replaced as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
 3. Payment for this item shall be made for each (EA) number of low-stage trash rack, including appurtenances, removed and replaced upon approval by the Designer and acceptance by the Owner.
- L. Item 11: High-Stage Trash Rack and Appurtenances Replacement
1. Work shall include all materials, labor, equipment, and incidentals necessary to remove and replace the outlet control structure high-stage trash rack and appurtenances as described in the Contract Documents. This includes hauling and disposal of the existing high-stage trash rack and appurtenances required to complete work as described in the Contract Documents.
 2. Measurement shall be as indicated for each (EA) high-stage trash rack, including appurtenances, removed and replaced as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
 3. Payment for this item shall be made for each (EA) number of high-stage trash rack, including appurtenances, removed and replaced upon approval by the Designer and acceptance by the Owner.
- M. Item 12: Unused Anchorages Removal and Concrete Repair
1. Work shall include all materials, labor, equipment, and incidentals necessary to remove, haul, and dispose of the existing hardware for unused anchorages on the outlet control structure including but not limited to surface preparation and installation of specified concrete materials as described in the Contract Documents.
 2. Measurement shall be as indicated for each (EA) unused anchorages on the outlet control structure removed and associated concrete repair as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
 3. Payment for this item shall be made for each (EA) number of unused anchorages on the outlet control structure removed and associated concrete repair upon approval by the Designer and acceptance by the Owner.
- N. Item 13: Replace Gear Lift Pedestals
1. Work shall include all materials, labor, equipment, and incidentals necessary to remove and replace the outlet control structure gear lift pedestals and appurtenances as described in the Contract Documents. This includes hauling and disposal of the existing gear lift pedestal and appurtenances required to complete work as described in the Contract Documents.
 2. Measurement shall be as indicated for each (EA) gear lift pedestal, including appurtenances, removed and replaced as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
 3. Payment for this item shall be made for each (EA) number of gear lift pedestals, including appurtenances, removed and replaced upon approval by the Designer and acceptance by the Owner.
- O. Item 14: Platform Railing Installation
1. Work shall include all materials, labor, equipment, and incidentals necessary to install new platform railing on the outlet control structure as described in the Contract Documents.
 2. Measurement shall not be made for this Bid Item.

3. Payment for this item shall be provided at 100% on the first pay estimate after completion of the work, upon approval by the Designer and acceptance by the Owner.
- P. Item 15: Raised Platform Installation
1. Work shall include all materials, labor, equipment, and incidentals necessary to install new raised platform on the outlet control structure as described in the Contract Documents.
 2. Measurement shall be as indicated for each (EA) raised platform installed as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
 3. Payment for this item shall be made for each (EA) number of raised platforms installed upon approval by the Designer and acceptance by the Owner.
- Q. Item 16: Ladder Installation
1. Work shall include all materials, labor, equipment, and incidentals necessary to install new ladder on the outlet control structure as described in the Contract Documents.
 2. Measurement shall be as indicated for each linear foot (LF) of ladder installed as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
 3. Payment for this item shall be made for each linear foot (LF) of ladder platforms installed upon approval by the Designer and acceptance by the Owner.
- R. Item 17: Clean and Recoat Access Hatch
1. Work shall include all materials, labor, equipment, and incidentals necessary to clean and recoat the existing access hatch on the outlet control structure as described in the Contract Documents.
 2. Measurement shall be as indicated for each (EA) access hatch cleaned and recoated as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
 3. Payment for this item shall be made for each (EA) number of access hatch cleaned and recoated upon approval by the Designer and acceptance by the Owner.
- S. Item 18: Cured-in-Place Pipe (CIPP) Installation
1. Work shall include all materials, labor, equipment, and incidentals, including but not limited to training, preparing, design, pre- and post-installation closed-captioned television (CCTV) inspections, cleaning, setup, installation, testing, inspections, and reporting, necessary to install cured-in-place pipe (CIPP) on the existing principal spillway pipe as described in the Contract Documents.
 2. Measurement shall be as indicated for each linear foot (LF) of CIPP installed as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
 3. Payment for this item shall be made for each linear foot (LF) of CIPP installed upon approval by the Designer and acceptance by the Owner.
- T. Item 19: Clean and Recoat Steel Band – Principal Spillway Outlet Pipe
1. Work shall include all materials, labor, equipment, and incidentals necessary to clean and recoat the steel band on the existing principal spillway pipe as described in the Contract Documents.
 2. Measurement shall be as indicated for each (EA) access steel band cleaned and recoated as indicated on the Contract Drawings, as directed by the Designer, or as directed by GCDWR.
 3. Payment for this item shall be made for each (EA) number of steel bands cleaned and recoated upon approval by the Designer and acceptance by the Owner.
- U. Item 20: Plastic Pipe

1. Work shall include all materials, labor, equipment, and incidentals, including but not limited to excavation, spoil removal and disposal, bedding, pipe, geotextile, backfill, compaction, jointing materials, fittings, couplings, animal guards, and concrete work, necessary to install pipes, all sizes and types, as described in the Contract Documents.
2. Measurement shall be as indicated for each linear foot (LF) of pipe, all sizes and types, installed as indicated on the Construction Drawings, as directed by the Engineer, or as directed by GCDWR.
3. Payment will be made at the unit rates listed below upon approval by the Engineer and acceptance by the Owner:
 - (a) Drain Pipe Complete (4-inch): Payment shall be made for each linear foot (LF) installed.
 - (b) Drain Pipe Complete (6-inch): Payment shall be made for each linear foot (LF) installed.

V. Item 21: Storm Drainage Structures

1. Work shall include all materials, labor, equipment, and incidentals, including but not limited to excavation, spoil removal and disposal, chipping roller compacted concrete and disposal, bedding, headwalls, manholes, plugs, geotextile, backfill, compaction, parge coat, jointing materials, and concrete work, necessary to install storm drainage structures, all types, as described in the Contract Documents.
2. Measurement shall be as indicated for each (EA) number of storm drainage structure, all types, installed as indicated on the Construction Drawings, as directed by the Engineer, or as directed by GCDWR.
3. Payment will be made at the unit rates listed below upon approval by the Engineer and acceptance by the Owner:
 - (a) Cleanout Manhole: Payment shall be made for each (EA) cleanout manhole installed.
 - (b) Precast Headwall (6-inch): Payment shall be made for each (EA) precast headwall installed.

W. Item 22: Excavation

1. Work shall include all materials, labor, equipment, and incidentals necessary to remove to grade, haul, and legally dispose of soil or manage the stockpiled excavated soil materials as described in and in conformance with the Contract Documents.
2. Measurement will be made on the basis of the unit price per cubic yard (CY) excavated from the preconstruction ground surface to the final approved excavation surface according to the Contract Documents.
3. Payment will be provided at the unit price based on interim and final construction inspections, upon approval by the Engineer and acceptance by the Owner.

X. Item 23: Earthfill

1. Work shall include all materials, labor, equipment, and incidentals necessary to procure, haul, stockpile, place, compact, remediate density and moisture concerns, and final grade materials as described in the Contract Documents.
2. Measurement will be made on the basis of the unit price per cubic yard (CY) placed to final grade according to the Contract Documents.

3. Payment will be provided at the unit price based on interim and final construction inspections, upon approval by the Engineer and acceptance by the Owner.
- Y. Item 24: Sidewalks, Curbs, and Gutters
1. Work shall include all materials, labor, equipment, and incidentals, including but not limited to removal, hauling, handling, disposal, subgrade preparation, concrete, and joint materials, necessary to remove and replace existing sidewalk, curbs, and gutters as described in the Contract Documents.
 2. Measurement shall be as indicated for each item of completed as indicated on the Construction Drawings, as directed by the Engineer, or as directed by GCDWR.
 3. Payment will be made at the unit rates listed below upon approval by the Engineer and acceptance by the Owner:
 - (a) Sidewalk Replacement: Payment shall be made for each square yard (SY) of sidewalk removed and replaced.
 - (b) Concrete Curb & Gutter Replacement, 6-inch x 24-inch High Back: Payment shall be made for each linear foot (LF) of 6-inch x 24-inch high back concrete curb and gutter removed and replaced.
- Z. Item 25: Topsoiling (Tp)
1. Work shall include all materials, labor, equipment, and incidentals necessary to procure, haul, stockpile, place, remediate composition concerns, and final grade topsoil as described in the Contract Documents.
 2. Measurement will be made on the basis of the unit price per square yard (SY) placed to final grade according to the Contract Documents.
 3. Payment will be provided at the unit price based on interim and final construction inspections, upon approval by the Engineer and acceptance by the Owner.
- AA. Item 26: Seeding, Sprigging, and Mulching
1. Work shall include all materials, labor, equipment, and incidentals, including but not limited to sanding, watering, fertilizing, maintaining and making minor changes, necessary to mulch, seed, and/or sod in accordance with the Contract Documents.
 2. Measurement shall be as indicated for each item actually installed, as indicated on the Contract Drawings, as directed by the Engineer, or as directed by GCDWR.
 3. Payment will be made at the unit rates listed below upon approval by the Engineer and acceptance by the Owner:
 - (a) Slope Stabilization, Rolled Erosion Control Products (Ss-RECP): Payment shall be made for each square yard (SY) installed.
 - (b) Slope Stabilization, Hydraulic Erosion Control Products (Ss-HECP): Payment shall be made for each square yard (SY) installed.
 - (c) Temporary Seeded (Ds2): Payment shall be made for the total acres (AC) of installed.
 - (d) Permanent Seeding (Ds3 – Hydro Seed Kentucky 31): Payment shall be made for the total acres (AC) of installed.
 - (e) Permanent Seeding (Ds3 – Riparian Mix): Payment shall be made for the total acres (AC) of installed.

- (f) Permanent Seeding (Ds3 – Hydro Seed Upland Mix): Payment shall be made for the total acres (AC) of installed.
- (g) Sodding (Ds4): Payment shall be made for the total acres (AC) of installed.

BB. Item 27: Traffic Control

1. Work shall include all materials, labor, equipment, and incidentals necessary to provide traffic control as described in the Contract Documents.
2. Measurement shall not be made for this Bid Item.
3. This Item will be paid as Contract lump sum price. Partial payments for Traffic Control will be made at the first partial pay estimate paid on the Contract at the rate of 20% of the lump sum price, on each subsequent pay estimates paid on the Contract at the rate of 10% of the lump sum price, and any remaining unpaid percentage of the lump sum price will be paid on the final pay estimate on the Contract.

CC. Item 28: Owner Directed Items

1. Work shall include all materials, labor, equipment, and incidentals necessary to complete additional items of work as directed by the Owner or Owner's representative.
2. Measurement and Payment for each item shall be made based on the following unit rates for each item upon approval by the Engineer or Designer and acceptance by the Owner:
 - a. Debris Removal: Measurement for this item shall be made for debris removed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each cubic yard (CY) of debris removed, as approved by DWR
 - b. Select Tree Removal Not Included in Clearing and Grubbing (6-inch to 12-inch): Measurement for this item shall be made for select tree removal (6-inch to 12-inch) completed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each (EA) tree removed, as approved by DWR.
 - c. Select Tree Removal Not Included in Clearing and Grubbing (Greater than 12-inch to 24-inch): Measurement for this item shall be made for select tree removal (Greater than 12-inch to 24-inch) completed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each (EA) tree removed, as approved by DWR.
 - d. Select Tree Removal Not Included in Clearing and Grubbing (Over 24-inch): Measurement for this item shall be made for select tree removal (Over 24-inch) completed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each (EA) tree removed, as approved by DWR.
 - e. Rock Riprap (Type 1): Measurement for this item shall be made for placement of Type 1 Rock Riprap at the direction of the Owner or Owner's representative. Payment shall be made for each ton of riprap, as approved by DWR.
 - f. Rock Riprap (Type 3): Measurement for this item shall be made for placement of Type 3 Rock Riprap at the direction of the Owner or Owner's representative. Payment shall be made for each ton of riprap, as approved by DWR.
 - g. Auxiliary Spillway Stilling Basin Spall Repair (Type 1): Measurement for this item shall be made for auxiliary spillway stilling basin repair (Type 1) completed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans.

Payment shall be made for each square foot (SF) of Type 1 stilling basin repair, as approved by DWR.

- h. Classified Stone: Measurement for this item shall be made for classified stone, inclusive of all sizes listed in Construction Specification 25, placed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each ton (TN) of classified stone, as approved by DWR.
- i. Geotextile (Non-Woven): Measurement for this item shall be made for non-woven geotextile installed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each square yard (SY) of non-woven geotextile, as approved by DWR.
- j. Geotextile (Woven): Measurement for this item shall be made for woven geotextile installed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each square yard (SY) of woven geotextile, as approved by DWR.
- k. Catch Basin Top Replacement: Measurement for this item shall be made for catch basin tops removed and replaced at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each (EA) catch basin top removed and replaced, as approved by DWR.
- l. Asphalt Milling and Resurfacing: Measurement for this item shall be made for milling and resurfacing asphalt pavement (1-1/2" depth) at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each square yard (SY) of asphalt pavement milled and resurfaced, as approved by DWR.
- m. Chain Link Fence: Measurement for this item shall be made for chain link fence installed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each linear foot (LF) of chain link fence, as approved by DWR.
- n. Split Rail Fence: Measurement for this item shall be made for split rail fence installed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each linear foot (LF) of split rail fence, as approved by DWR.
- o. Split Rail Fence Gate: Measurement for this item shall be made for split rail fence gate installed at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each (EA) split rail fence gate, as approved by DWR.
- p. Additional Closed Caption Television (CCTV) Inspection: Measurement for this item shall be made for additional CCTV inspection at the direction of the Owner or Owner's representative outside the limits shown on the Construction Plans. Payment shall be made for each linear foot (LF) of CCTV inspection, as approved by DWR.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 31 23 19

DEWATERING

PART 1 GENERAL

1.1 SUMMARY

A. SECTION INCLUDES:

<u>Paragraph</u>	<u>Title</u>
1.2	System Descriptions
1.3	Submittals
1.4	Quality Assurance
1.5	Sequencing and Scheduling
1.6	Maintenance
2.1	Bypass Piping Materials
2.2	Equipment
3.1	Temporary Bypass Pumping
3.2	Maintenance
4.1	Table of Required Minimum Flows

B. RELATED SECTIONS

The following listed sections do not purport to be all inclusive, as it is the Contractor's responsibility to do all the Work in accordance with the Contract Documents.

1. Summary of Work (Section 01 11 00).
2. Temporary Facilities and Controls (Section 01 50 00).

C. SCOPE

1. Contractor shall implement appropriate methods to control and monitor Lake drawdown prior to beginning construction per the Contract Documents. Maximum rate of drawdown of the Lake shall be 1-foot per day, and the embankment slopes and reservoir rim shall be monitored for signs of instability during initial drawdown, and while the lake and stilling basin are in a lowered condition. Areas that show instability shall be marked and temporary fencing with signage erected to prevent access to that area.
2. Contractor shall draw down the stilling basin prior to performing work related to the outlet control structure, principal spillway pipe, RCC spillway, stilling basin or in areas immediately adjacent to the stilling basins.
3. Contractor shall implement appropriate methods to maintain flow around the Work area and dewatering such that current outlet works and RCC spillway features can be evaluated and replaced/modified as shown in the Contract Documents.
4. The Contractor may use a combination of dewatering methods in lieu of temporary bypass pumping, subject to approval of GCDWR. The Contractor shall be responsible for pursuing written approvals where needed. The proposed means and methods for lowering the lakes, providing temporary bypass flows, and establishing cofferdams as needed to maintain dewatered work areas, shall be submitted as part of the Water Control Plan.

5. No separate measurement and payment shall be made for any Work performed or material used for this section. Full compensation for such work shall be considered as incidental to other items of Work. Costs in connection therewith shall be considered a subsidiary obligation of the Contractor and shall be included in the overall cost of the work.

1.2 SYSTEM DESCRIPTIONS

A. Bypass Pumping Performance Requirements

1. It is essential to the operation of the existing stream that a minimum (lowest 7 day average flow that occurs once every 10 years, 7Q10) flow of water can be maintained continuously throughout the duration of the Project to provide water downstream of the Work. Reference the 7Q10 minimum flows in Section 4.1.
2. Provide, maintain, and operate all temporary facilities such as dams, plugs, pumping equipment (both primary and backup units as required), conduits, and all necessary power to intercept the water flow before it reaches the point where it would interfere with the Work, carry it past the Work, and return it to the existing stream downstream of Work.
3. Sufficient bypass pumping and dewatering shall be implemented to prevent delays in schedule.
4. Design, install, and operate the temporary pumping system.
5. Contractor shall limit the transport of sediment from the lakebed further downstream either through the bypass system or through the outlet control structure during all phases of construction (ex: dewatering, active construction, and filling of the reservoir).
6. Convey the water safely past the Work area. Only base flow is required to be pumped. Do not stop or impede stream flows under any circumstances.
7. Maintain water flow around the Work area in a manner that will protect public and private property from damage and flooding.
8. Protect water resources, wetlands, and other natural and cultural resources.

B. Bypass Pumping Design Requirements

1. Provide all pipeline plugs, pumps of adequate size to handle base flow, and temporary discharge piping, to ensure that the total flow can be safely diverted while the outlet control structure is under construction. Bypass pumping system will be required to be operated 24 hours per day 7 days per week, including holidays, during bypass pumping operations. The discharge velocity shall be limited such that erosion, damage, or displacement of existing stream surfaces (e.g., rock, vegetation, etc.) do not occur.
2. Pump(s) must be capable of bypassing base flow and the removal of inflows from the work area.
3. To prevent flooding during storm events and on weekends, the Contractor shall maintain a combination of existing channel sections and stable proposed channel sections capable of conveying flow.
4. Provide temporary enclosure around all bypass pumping equipment, including a minimum

6-foot high chain link fence. The enclosure shall be lockable to prevent unauthorized entry. Submit plan of temporary enclosure construction and materials to GCDWR for approval.

1.3 SUBMITTALS

- A. Provide detailed plans and descriptions outlining all provisions and precautions regarding the handling of existing water flows. This Water Control Plan must be specific and complete including such items as schedules, locations, elevations, capacities of equipment, materials, and all other incidental items necessary and/or required to ensure proper protection of the facilities, including protection of public and private property from damage and flooding. The plan shall include but not be limited to details of the following:
1. Staging areas for pumps.
 2. Cofferdam methods, if applicable.
 3. Number, size, material, location, and method of installation of suction piping.
 4. Number, size, material, method of installation and location of installation of discharge piping.
 5. Bypass pump sizes, capacity, number of each size to be on-site and power requirements.
 6. Determination of static lift, friction losses, and flow velocity (pump curves showing pump operating range shall be submitted).
 7. Standby power generator size, location.
 8. Downstream discharge plan.
 9. Thrust and restraint block sizes and locations, as needed.
 10. Sections showing any suction and discharge pipe depth, embedment, select fill and special backfill where required.
 11. Method of protecting discharge structures from erosion and damage
 12. Method of limiting erosion during lake and stilling basin drawdown and protecting downstream discharge locations from excess sediment transport
 13. Method of noise control and sound monitoring for each pump and/or generator.
 14. Any temporary pipe supports, and anchoring required.
 15. Plans for access to bypass pumping locations.
 16. Basis for selection of bypass pumping pipe size.
 17. Schedule for installation of and maintenance of bypass pumping lines.
 18. Plan indicating selected location of bypass pumping line and air valve locations.
 19. Copy of dewatering permit, as needed.

- B. Quality Control Submittals: If required by GCDWR, submit:
 - 1. Certification of vendor's compliance with qualifications specified in Article 1.4 Quality Assurance below.
 - 2. Bypass system operators' resumes.
 - 3. Weekly maintenance and inspection logs.

1.4 QUALITY ASSURANCE

- A. Bypass Pumping
 - 1. If Contractor does not have the requisite experience outlined in the minimum qualifications, utilize a subcontractor specializing in design and operation of temporary bypass pumping systems.

1.5 SEQUENCING AND SCHEDULING

- A. General
 - 1. To meet the overall objectives of the Project, the lake and stilling basin shall be drawn down completely. Drawdown shall be limited to no more than 1-foot per day.
 - 2. The maximum amount of time that the lake and stilling basin can be completely drawn down is 3 months (not including initial drawdown and refilling). It is the contractor's responsibility to schedule construction activities on portions of the Work that require draw down such that the activities can be completed within 3 months.
 - 3. Following the conclusion of lake drawdown, initial refilling of the first five feet as measured from the invert elevation of the outlet control structure shall have no restrictions. Refill rates shall be limited to no more than 2-feet per week thereafter until normal pool conditions are obtained.
- B. Sequence Constraints
 - 1. Erosion control provisions, either permanent or approved temporary, must be in place prior to any construction activities in an area subject to the erosion control provisions.
- C. Bypass Pumping System: The Contractor may propose as part of its bypass pumping system plan to use alternate pumping arrangements, subject to approval by GCDWR. The minimum bypass requirements per site are included in Part 4 of this Specification.

1.6 MAINTENANCE

- A. Maintenance Service: Ensure that the temporary pumping system is properly maintained, and a responsible operator shall be available at all times when pumps are operating.
- B. Extra Materials: Spare parts for pumps and piping shall be kept on-site in sufficient quantity to repair system breakdowns expediently. A spare pump shall be available within 24 hours if primary pumping system fails.
- C. Adequate hoisting equipment for each pump and accessories shall be maintained on the Site.

Part 2 PRODUCTS

2.1 BYPASS PIPING MATERIALS

- A. Header Piping: The rated working pressure of the header piping shall be a minimum of 125% of the maximum expected pressure in the pipe.
- B. Discharge Piping: Discharge piping shall be used from the connection at the header piping to the discharge point. At the beginning of the Project, all discharge piping shall conform to ASTM D3350 or similar strength material. Discharge piping may be reused for subsequent bypass pumping system placements, however, GCDWR at their sole discretion shall have the right to reject sections of discharge piping deemed to be unserviceable.

2.2 EQUIPMENT

- A. All pumps used shall be fully automatic self-priming units that do not require the use of foot-valves or vacuum pumps in the priming system. The pumps may be electric, or diesel powered. All service connection pumps shall be trailer mounted. All pumps used must be constructed to allow dry running for long periods of time to accommodate the cyclical nature of stream flows.
- B. Provide the necessary stop/start controls and a visual alarm indicating a pump malfunction for each pump.
- C. The main flow back-up pumps shall be online, isolated from the primary system by a valve.
- D. Incorporate noise prevention measures for any and all equipment being used to ensure minimum noise impact on the surrounding areas.
 - 1. Include silencers or mufflers, equipment modifications, and special equipment or sound barrier walls as necessary to limit noise levels below 55 decibels at a distance of 25 feet in the direction of any residential home.
 - 2. Comply with the requirements of Section 01 50 00, Article 3.02.
 - 3. In the event the Contractor fails to comply with maximum permissible noise level decibels in the operation of the bypass pumping system, GCDWR may order the Contractor to restore gravity flow in the stream and stop operation of the bypass pumping system until such time as specified noise levels are achieved. The termination of the bypass pumping system for such reason shall not be the basis for any extension of Contract time nor for any claim for additional compensation.
- E. Repair clamps shall be full circle, stainless steel clamps.

Part 3 EXECUTION

3.1 TEMPORARY BYPASS PUMPING

- A. Preparation
 - 1. Locate any existing utilities in the area selected to locate the bypass pipelines. Locate bypass pipelines to minimize any disturbance to existing utilities.

2. Bypass pump sufficient water flows to maintain minimum 7Q10 flow continuously until normal gravity flow is restored.

B. Installation

1. The bypass pipeline must be located off streets, sidewalks, and shoulders of the roads. When the bypass pipeline crosses local streets and private driveways, place the bypass pipelines in trenches and cover with temporary pavement or other approved methods.
2. Obtain approvals for placement of the temporary pipeline within public rights-of-ways.
3. Protect the bypass discharge line from damage in the areas of other equipment operations. Protection shall be by either concrete jersey barriers or wood timbers.
4. Confine the bypass discharge pipeline to the area within the temporary construction area and construction easement, for construction of the pipeline. Concrete barriers or timber deadman posts can be used to confine the movement of the discharge pipeline during relocation.

C. Field Quality Control

1. Perform a hydrostatic pressure test for each section of discharge piping with a minimum pressure equal to 1.5 times the maximum operating pressure of the system.
2. Operator shall inspect bypass pumping system regularly to ensure uninterrupted operation.
3. An inspection log shall be kept at each pumping location. Each inspection log shall be marked with the time of inspection to ensure required maintenance and inspections are being performed.
4. Discharge bypass water in a manner that will not cause erosion or flooding, or otherwise damage existing facilities, work in progress, completed work, or adjacent property. Discharge of water must meet the requirements in Section 31 25 00 - Erosion and Sedimentation Controls.
5. Operator shall regularly inspect the receiving water to ensure sediment is not being transported downstream through either the bypass system or outlet control structure/principal spillway. These inspections shall be documented and where sediment transport is observed, measures shall be implemented to stop the sediment transport.

- D. Cleaning: Upon completion of the bypass pumping operation, clean up all areas disturbed by these operations, restoring the site to the general condition which existed prior to the start of the Work or as shown on the Contract Documents or to a manner approved by GCDWR.

3.2 MAINTENANCE

- A. The Contractor shall provide system maintenance including, but not limited to, at least daily supervision by someone skilled in the operation, maintenance, and replacement of system components and all other equipment and work required by GCDWR to maintain the work areas in a dewatered and hydrostatically relieved condition.
- B. Dewatering and pressure relief shall be a continuous operation and interruptions due to power outages, or any other reason, shall not be permitted. A responsible operator capable of starting, finishing and maintaining the dewatering system and starting standby equipment shall be on duty

at all times. Responsible personnel shall continuously monitor the dewatering and surface water central systems, until the Contractor has received approval from GCDWR that he may discontinue surface and/or groundwater control.

- C. The Contractor shall be fully responsible for the failure of any and all components of the temporary dewatering work and for damages to the Work caused by the failure to provide, maintain, and operate the temporary dewatering system, as specified. Contractor shall restore all damaged Work, including failed components of the work in this specification to the condition that existed prior to failure of components.
- D. Contractor shall maintain on-site at all times adequate spare parts to ensure expeditious repair to ensure continuous bypass flow.

Part 4 WATER FLOW INFORMATION

4.1 TABLE OF REQUIRED MINIMUM FLOWS

- A. Required minimum flows shown below must be maintained at all times when the lakes are drawn down and no flow is being passed through the PSP.

Site	7Q10 Discharge (cfs)												
	Annual	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Y14	0.12	1.11	1.55	1.85	1.54	0.94	0.57	0.32	0.19	0.15	0.19	0.50	0.73

END OF SECTION 31 23 19

Construction Specification 25—Rockfill

1. Scope

The work consists of the construction of rockfill zones of embankments and other rockfills required by the drawings and specifications, including bedding where specified.

2. Material

Material for rockfill and bedding shall be obtained from the specified sources unless otherwise specified in section 10 of this specification. The material shall be excavated, selected, processed, and handled as necessary to conform to the specified gradation requirements.

3. Foundation preparation

Foundations for rockfill shall be stripped to remove vegetation and other unsuitable material or shall be excavated as specified.

Except as otherwise specified, earth foundation surfaces shall be graded to remove surface irregularities, and test pits or other cavities shall be filled with compacted earthfill of approximately the same kind and density as the adjacent foundation material.

Rock foundation surfaces shall be cleared of all loose material not conforming to the specifications for the rockfill.

Abutments for rockfill zones of embankments shall be prepared as specified above for foundations.

Rockfill and/or bedding shall not be placed until the foundation preparation is completed and the foundation and excavations have been inspected and approved.

4. Bedding

When a bedding layer beneath rockfill is specified, the bedding material shall be spread uniformly on the prepared subgrade surfaces to the depth indicated. Compaction of the bedding material shall be as specified in section 10 of this specification.

5. Placement

Method 1—The rock shall be dumped and spread into position in approximately horizontal layers not to exceed 3 feet in thickness. It shall be placed to produce a reasonably homogeneous stable fill that contains no segregated pockets of large or small fragments or large unfilled spaces caused by bridging of the larger rock fragments.

Method 2—The rock shall be dumped and spread into position in approximately horizontal layers not to exceed 3 feet in thickness. The rock shall be placed so that the completed fill shall be graded with the smaller rock fragments placed in the inner portion of the embankment and the larger rock fragments placed on the outer slopes. Rock shall be placed to produce a stable fill that contains no large unfilled spaces caused by bridging of the larger fraction.

6. Control of moisture

The moisture content of rockfill material shall be controlled as specified in section 10 of this

specification. When the addition of water is required, it shall be applied in a manner to avoid excessive wetting of adjacent earthfill. Except as specified in section 10 of this specification, control of the moisture content is not required.

The moisture content of the bedding material shall be controlled to ensure that bulking of the sand materials does not occur during compaction operations.

7. Compaction of rockfill

Rockfill shall be compacted as described below for the class of compaction specified or by an approved equivalent method.

Class I compaction—Each layer of fill shall be compacted by at least four passes over the entire surface with a steel-drum vibrating roller that weighs at least 5 tons and exerting a vertical vibrating force of not less than 20,000 pounds at a frequency not less than 1,200 times per minute.

Class II compaction—Each layer of fill shall be compacted by at least four passes over the entire surface by a track of a crawler-type tractor weighing at least 20 tons.

Class III compaction—No compaction is required beyond that resulting from the placing and spreading operations.

Heavy equipment shall not be operated within 2 feet of any structure. Vibrating rollers shall not be operated within 5 feet of any structure. Compaction by means of drop weights operating from a crane, hoist, or similar equipment is not permitted.

When compaction other than Class III compaction is specified, rockfill placed in trenches or other locations inaccessible to heavy equipment shall be compacted by manually controlled pneumatic or vibrating tampers or by equivalent methods approved by the engineer.

8. Compaction of bedding

Bedding shall be compacted according to the following requirements for the Class of compaction specified:

Class A compaction—Each layer of bedding shall be compacted to a relative density of not less than 70 percent as determined by ASTM Method D 4254.

Class I compaction—Each layer of bedding shall be compacted by at least two passes over the entire surface with a steel-drum vibrating roller weighing at least 5 tons and exerting a vertical vibrating force not less than 20,000 pounds at a frequency not less than 1,200 times per minute, or an approved equivalent method.

Class II compaction—Each layer of bedding shall be compacted by one of the following methods or by an equivalent method approved by the engineer:

- a. At least two passes over the entire surface with pneumatic rubber-tired roller exerting a minimum pressure of 75 pounds per square inch. A pass is defined as at least one passage of the roller wheel, track, tire, or drum over the entire surface of the bedding layer.
- b. At least four passes over the entire surface with the track of a crawler-type tractor weighing a minimum of 20 tons.
- c. Controlled movement of the hauling equipment so that the entire surface is traversed by a

minimum of one tread track of the loaded equipment.

Class III compaction—No compaction is required beyond that resulting from the placing and spreading operations.

Heavy equipment shall not be operated within 2 feet of any structure. Vibrating rollers shall not be operated within 5 feet of any structure. Compaction by means of drop weights operating from a crane, hoist, or similar equipment is not permitted.

When compaction other than Class III is specified, bedding placed in trenches or other locations inaccessible to heavy equipment shall be compacted by manually controlled pneumatic or vibrating tampers or by equivalent methods approved by the engineer.

9. Measurement and payment

For items of work for which specific unit prices are established in the contract, the volume of each type of rockfill, including bedding, with the zone boundaries and limits specified on the drawings or established by the engineer is measured and computed to the nearest cubic yard by the method of average cross-sectional end areas.

Payment for each type of rockfill is made at the contract unit price for that type of fill. Except as otherwise specified in section 10 of this specification, such payment will constitute full compensation for all labor, equipment, material, and all other items necessary and incidental to the performance of the work including furnishing, placing, and compacting the bedding material.

Compensation for any type of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary. Such items and the items to which they are made subsidiary are identified in section 10 of this specification.

10. Items of work and construction details

The following construction details are applicable to all items of work covered by this specification:

(1) In Section 2, Material:

- a. Contractor shall submit to Engineer copies of certifications or other documentation that stone aggregate complies with these specifications

(2) In Section 3, Foundation Preparation:

- a. Foundation shall be compacted and prepared to subgrade elevations prior to placement of general rockfill, bedding, or backfill.

(3) In Section 5, Placement:

- a. Method 1 shall apply.

(4) In Section 7, Compaction:

- a. Class III compaction shall apply.

(5) In Section 8, Compaction of bedding:

- a. Class III compaction shall apply.

Items of work to be performed in accordance with this specification are:

- a. Owner Directed Bid Item 28h Classified Stone
 - (1) In Section 2, Material:
 - (a) Stone aggregate conforming to the requirements of the current Georgia Department of Transportation (GDOT) Standard Specification Sections 800 and 815 and shall be inclusive of all sizes between No. 3 and No. 9 and Graded Aggregate Base (GAB), respectively.
 - (2) In Section 9, Measurement and Payment:
 - (a) Measurement and Payment for this item shall be made in accordance with Section 1.6 of Specification 01 22 15 – Measurement and Payment.
- b. Subsidiary Item, Rockfill, Drain Pipe Complete (6-inch)
 - (1) This item shall consist of all rockfill required to bed and backfill the pipe trench for the abutment drain pipe as indicated in the Construction Drawings.
 - (2) In Section 2, Material:
 - (a) Stone aggregate size shall be No. 57 or No. 89 stone conforming to the requirements of the current Georgia Department of Transportation (GDOT) Standard Specification Sections 800.

BID FORM

BID NUMBER: BL049-24

BID DATE: MAY 21, 2024

COMPANY NAME: _____

BIDDER'S SIGNATURE: _____

4. Bidder submits the following lump sum/unit prices for the **Wolf Lake (Y-14) Dam Rehabilitation** identified in Bid Form as part of this Bid. Work included within each Bid Item is described in the Specification Section listed for that Bid Item. Payment for each Bid Item is described in Contract Specification Section 01 22 15 – Measurement and Payment listed for that Bid Item.

BID SCHEDULE

BID ITEM NO.	SPEC. SECTION	DESCRIPTION	M&P*	EST. QTY	UNIT PRICE	EXTENDED PRICE
PART 1 – BASE BID ITEMS						
1	CS 8	Mobilization and Demobilization	1	1 LS	\$	\$
2	CS 7	Construction Survey	2	1 LS	\$	\$
3	31 23 19 31 52 00	Dewatering and Water Control with Low-Level Gate Drain	3	1 LS	\$	\$
4	CS 5	Erosion, Sediment and Pollution Controls	4			
4a		Silt Fence (Sd1-S)		3,500 LF	\$	\$
4b		Inlet Sediment Trap (Sd2-P)		1 EA	\$	\$
4c		Filter Ring (Fr)		1 EA	\$	\$
4d		Tree Protection (Tr)		50 LF	\$	\$
4e		Construction Exit (Co)		1 EA	\$	\$
4f		Mulch (Ds1)		1.65 AC	\$	\$
4g		Construction Road (Cr)		400 SY	\$	\$
5	10 89 01	Fish Removal	5	1 LS	\$	\$
6	CS 2	Clearing and Grubbing	6	2.1 AC	\$	\$
7	CS 3	Structure Removal	7			
7a		Remove Existing Drain and Cleanout Pipes		10 LF	\$	\$
7b		Remove and Reset Existing Fence Including Gate		80 LF	\$	\$
8	CS 35	Concrete Repair	8			

M&P* means Measurement & Payment #

BID FORM**BID NUMBER: BL049-24****BID DATE: MAY 21, 2024****COMPANY NAME:** _____**BIDDER'S SIGNATURE:** _____**BID SCHEDULE CONTINUED**

BID ITEM NO.	SPEC. SECTION	DESCRIPTION	M&P*	EST. QTY	UNIT PRICE	EXTENDED PRICE
8a		Outlet Control Structure Concrete Surface Cleaning		1,675 SF	\$	\$
8b		Outlet Control Structure Concrete Repair of Deteriorated Joints and Joint Edge Spalls		195 LF	\$	\$
8c		Outlet Control Structure Concrete Spall Repair (Type 3)		70 SF	\$	\$
8d		Outlet Control Structure Surface Coating		1,675 SF	\$	\$
8e		Auxiliary Spillway Concrete Surface Cleaning		3,650 SY	\$	\$
8f		Auxiliary Spillway Roller Compacted Concrete Shrinkage Crack Repair		650 LF	\$	\$
8g		Auxiliary Spillway Weir Crack Injection		160 LF	\$	\$
8h		Auxiliary Spillway Weir Joint Repair/Installation		60 LF	\$	\$
8i		Auxiliary Spillway Weir Base Sealant		200 LF	\$	\$
8j		Auxiliary Spillway Concrete/Roller Compacted Concrete Spall Repair (Type 1)		50 SF	\$	\$
8k		Auxiliary Spillway Concrete/Roller Compacted Concrete Spall Repair (Type 2)		170 SF	\$	\$
8l		Auxiliary Spillway Roller Compacted Concrete Parge Coat (Horizontal Surface)		2,570 SY	\$	\$
8m		Auxiliary Spillway Roller Compacted Concrete Parge Coat (Vertical Face)		1,030 SY	\$	\$
9	CS 71	Low-Level Drawdown Gate and Appurtenances Replacement	9	1 EA	\$	\$
10	CS 81	Low-Stage Trash Rack and Appurtenances Replacement	10	1 EA	\$	\$
11	CS 81	High-Stage Trash Rack and Appurtenances Replacement	11	2 EA	\$	\$
12	CS 35	Unused Anchorages Removal and Concrete Repair	12	18 EA	\$	\$
13	CS 71	Replace Gear Lift Pedestals	13	1 EA	\$	\$

M&P* means Measurement & Payment #

BID FORM

BID NUMBER: BL049-24

BID DATE: MAY 21, 2024

COMPANY NAME: _____

BIDDER'S SIGNATURE: _____

BID SCHEDULE CONTINUED

BID ITEM NO.	SPEC. SECTION	DESCRIPTION	M&P*	EST. QTY	UNIT PRICE	EXTENDED PRICE
14	CS 81	Platform Railing Installation	14	1 LS	\$	\$
15	CS 81	Raised Platform Installation	15	1 EA	\$	\$
16	CS 81	Ladder Installation	16	14 LF	\$	\$
17	CS 82	Clean and Recoat Access Hatch	17	1 EA	\$	\$
18	33 01 30.73	Cured-in-Place Pipe (CIPP) Installation	18	220 LF	\$	\$
19	CS 82	Clean and Recoat Steel Band - Principal Spillway Pipe Outlet	19	1 EA	\$	\$
20	CS 45	Plastic Pipe	20			
20a		Drain Pipe Complete (4-inch)		5 LF	\$	\$
20b		Drain Pipe Complete (6-inch)		5 LF	\$	\$
21	33 49 13	Storm Drainage Structures				
21a		Cleanout Manhole		1 EA	\$	\$
21b		Precast Headwall (6-inch)		1 EA	\$	\$
22	CS 21	Excavation	22	750 CY	\$	\$
23	CS 23	Earthfill	23	225 CY	\$	\$
24	32 16 13	Sidewalks, Curbs, and Gutters	24			
24a		Sidewalk Replacement		40 SY	\$	\$
24b		Concrete Curb & Gutter Replacement, 6-inch x 24-inch High Back		80 LF	\$	\$
25	CS26	Topsoiling (Tp)	25	1,500 SY	\$	\$
26	CS6	Seeding, Sprigging, and Mulching	26			
26a		Slope Stabilization, Rolled Erosion Control Products (Ss-RECP)		2,500 SY	\$	\$
26b		Slope Stabilization, Hydraulic Erosion Control Products (Ss-HECP)		800 SY	\$	\$

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BID DATE: MAY 21, 2024

COMPANY NAME: _____

BIDDER'S SIGNATURE: _____

BID SCHEDULE CONTINUED

BID ITEM NO.	SPEC. SECTION	DESCRIPTION	M&P*	EST. QTY	UNIT PRICE	EXTENDED PRICE
26c		Temporary Seeding (Ds2)		1.65 AC	\$	\$
26d		Permanent Seeding (Ds3 – Hydro Seed Kentucky 31)		1.4 AC	\$	\$
26e		Permanent Seeding (Ds3 – Riparian Mix)		0.06 AC	\$	\$
26f		Permanent Seeding (Ds3 – Hydro Seed Upland Mix)		0.17 AC	\$	\$
26g		Sodding (Ds4)		0.02 AC	\$	\$
27	33 41 16.10	Traffic Control	27	1 LS	\$	\$
PART 1 TOTAL						\$
PART 2 – OWNER DIRECTED ITEMS						
28a	CS 2	Debris Removal	28	100 CY	\$	\$
28b	CS 2	Select Tree Removal Not Included in Clearing and Grubbing (6-inch to 12-inch)	28	1 EA	\$	\$
28c	CS 2	Select Tree Removal Not Included in Clearing and Grubbing (Greater than 12-inch to 24-inch)	28	1 EA	\$	\$
28d	CS 2	Select Tree Removal Not Included in Clearing and Grubbing (Over 24-inch)	28	1 EA	\$	\$
28e	CS 61	Rock Riprap (Type 1)	28	50 TN	\$	\$
28f	CS 61	Rock Riprap (Type 3)	28	50 TN	\$	\$
28g	CS 35	Auxiliary Spillway Stilling Basin Spall Repair (Type 1)	28	500 SF	\$	\$
28h	CS25	Classified Stone	28	150 TN	\$	\$
28i	CS 95	Geotextile (non-woven)	28	200 SY	\$	\$
28j	CS 95	Geotextile (Woven)	28	200 SY	\$	\$
28k	33 49 13	Catch Basin Top Replacement	28	1 EA	\$	\$
28l	32 12 16	Asphalt Milling and Resurfacing	28	250 SY	\$	\$

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BID NUMBER: BL049-24

BID DATE: MAY 21, 2024

COMPANY NAME: _____

BIDDER'S SIGNATURE: _____

BID SCHEDULE CONTINUED

BID ITEM NO.	SPEC. SECTION	DESCRIPTION	M&P*	EST. QTY	UNIT PRICE	EXTENDED PRICE
28m	CS91	Chain Link Fence	28	20 LF	\$	\$
28n	CS 92	Split Rail Fence	28	20 LF	\$	\$
28o	CS 92	Split Rail Fence Gate	28	1 EA	\$	\$
28p	33 01 30.73	Additional Closed Caption Television (CCTV) Inspection	28	220 LF	\$	\$
PART 2 TOTAL						\$
OVERALL TOTAL (PART 1 + PART 2)						\$

M&P* means Measurement & Payment #