

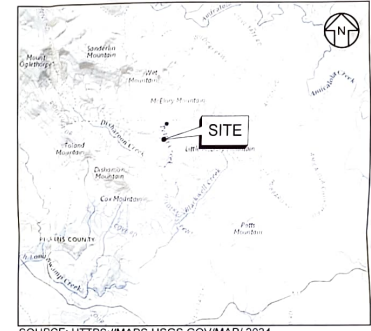
# LLO REPAIR LAKE PETIT DAM JASPER, GEORGIA AUGUST 2024



SOURCE: GOOGLE MAPS 2023  
**LOCATION MAP**  
0 10 MILES 20 MILES  
SCALE IN FEET

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	AERIAL PHOTOGRAPH
3	EXISTING CONDITIONS & PROPOSED DEMOLITION
4	PROPOSED STEM FRAME
5	PROPOSED STEM FRAME DETAILS

LAKE PETIT DAM INFORMATION	
STATE ID	NO. 112-009-00462
NO.	000000
GPS LOCATION	34.4621 NORTH, -84.2203 WEST
NORMAL POOL LEVEL ELEVATION	EL. 1035.5
TOP OF DAM ELEVATION	EL. 1047.9
UPSTREAM TOE DAM ELEVATION (APPROXIMATELY)	EL. 1040
DOWNSTREAM TOE ELEVATION (APPROXIMATELY)	EL. 1030
RESERVOIR SURFACE AREA, NORMAL POOL	107 ACRES
NORMAL POOL VOLUME	4275 AC-FT
RESERVOIR SURFACE AREA (MAX. WATER STORAGE ELEV.)	172 ACRES
MAX. WATER STORAGE VOLUME	5,635 ACRES
NOTES:	
EL. ELEVATION (FT NAVD83)	



SOURCE: [HTTPS://MAPS.USGS.GOV/MAP/2024](https://maps.usgs.gov/map/2024)  
**VICINITY MAP**  
0 10,000' 20,000'  
SCALE IN FEET



GEORGIA 811  
CALL BEFORE YOU DIG  
DIAL 811 OR CALL  
1-800-285-7411  
UTILITIES PROTECTION CENTER  
SERVICE AND SAFE WORK SITE  
**NOTE: CONSTRUCTION MUST  
COORDINATE WITH UTILITY  
PROVIDERS TO MAINTAIN UTILITY  
SERVICE AND A SAFE WORK SITE**



PREPARED FOR:  
BIG CANOE PROPERTY OWNERS ASSOCIATION  
10586 BIG CANOE  
JASPER, GA 30143

24 HOUR - LLO REPAIR CONTACT:  
LYDELL MACK  
BIG CANOE PROPERTY OWNERS ASSOCIATION  
PHONE: 678.578.9763



PREPARED BY:  
GEOSYNTec CONSULTANTS, INC.  
835 GEORGIA AVENUE, SUITE 500  
CHATTANOOGA, TN 37402  
TELEPHONE: 423.385.2310



ISSUED FOR CONSTRUCTION

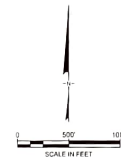


DATE	MAY 2024
PROJECT NO.	GST0091
FILE	GST0061001
SHEET NO.	1 of 5

REV	DATE	DESCRIPTION	DRN	APP
1	08/16/2024	ISSUED FOR CONSTRUCTION	MAF	VJD
2	08/16/2024	ADDED/REVISED COMMENTS	MAF	VJD
3	08/16/2024	PERMIT DRAWINGS	MAF	VJD



DESIGN BY	NPH	TITLE	COVER SHEET
DRAWN BY	MAF	PROJECT	LLO REPAIR
CHECKED BY	NPH	SITE	LAKE PETIT DAM - BIG CANOE
REVIEWED BY	VJMF		
APPROVED BY	VJD		



APPROVED  
STATE OF GEORGIA  
DEPT. OF NATURAL RESOURCES  
AUG 13 2024  
Environmental Protection Division  
Safe Dams Program

NOTE

1. AERIAL IMAGERY SHOWN IS PROVIDED BY BING MAPS (THROUGH AUTOCAD CIVIL 3D)

ISSUED FOR CONSTRUCTION

2	08/16/2024	ISSUED FOR CONSTRUCTION	MAJ	VJD		
1	01/25/2024	ACQUIRED SEP COMMENTS	MAJ	VJD		
0	05/31/2024	PERMIT DRAWS	MAJ	VJD		
REF	DATE	DESCRIPTION	DTN	APP		



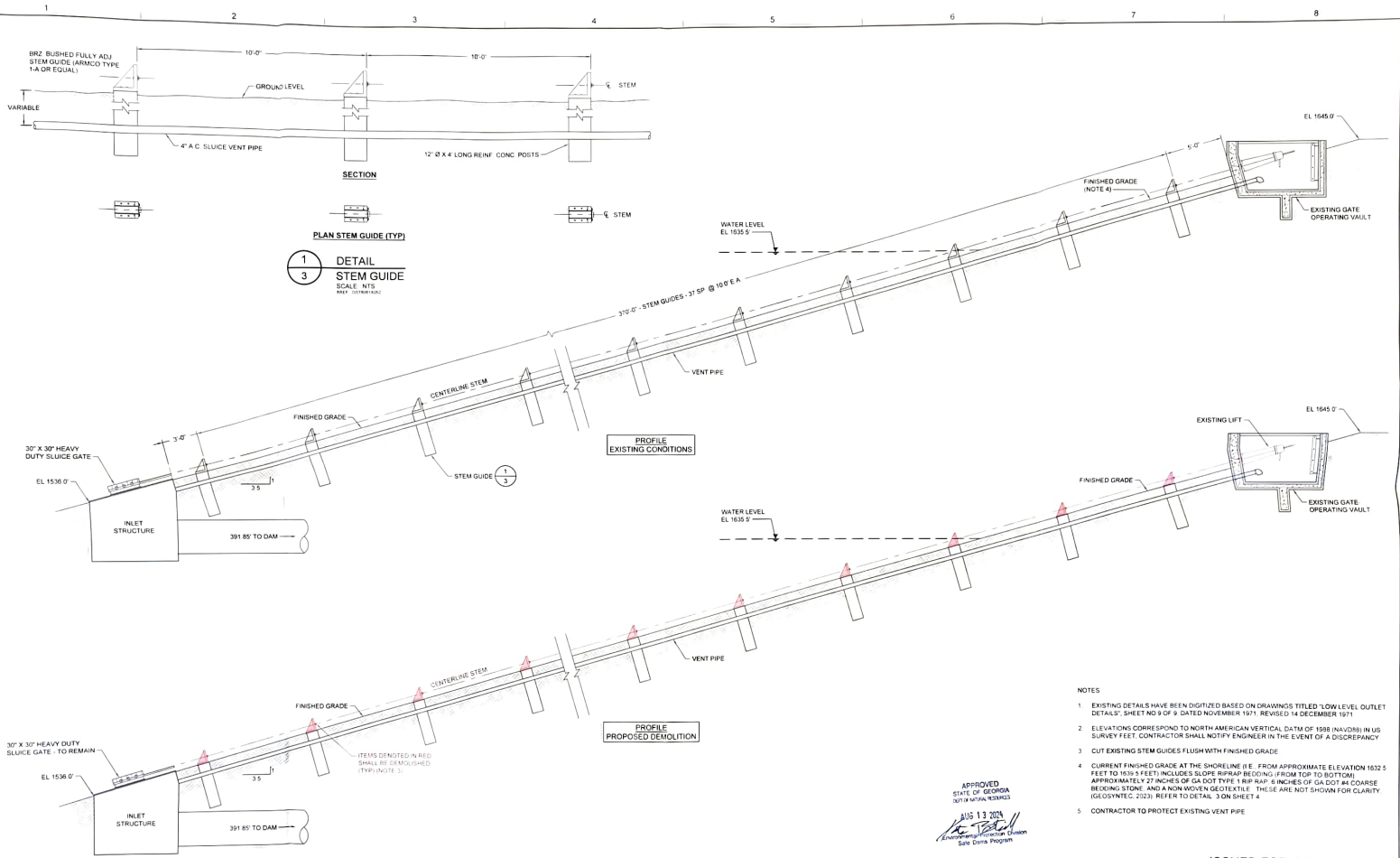
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DRAWN BY	MAF	PROJECT	
CHECKED BY	NPH		LLO REPAIR
REVIEWED BY	WMT	SITE	LAKE PETIT DAM - BIG CANOE
APPROVED BY	VJD		



Geosyntec  
consultants

835 GEORGIA AVENUE, SUITE 504

DATE	MAY 2024
PROJECT NO	GST8061
FILE	GST8061C02
SHEET NO	2 of 5



- NOTES**
- EXISTING DETAILS HAVE BEEN DIGITIZED BASED ON DRAWINGS TITLED "LOW LEVEL OUTLET DETAILS", SHEET NO 9 OF 9, DATED NOVEMBER 1971, REVISED 14 DECEMBER 1971
  - ELEVATIONS CORRESPOND TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN US SURVEY FEET. CONTRACTOR SHALL NOTIFY ENGINEER IN THE EVENT OF A DISCREPANCY
  - CUT EXISTING STEM GUIDES FLUSH WITH FINISHED GRADE
  - CURRENT FINISHED GRADE AT THE SHORELINE (I.E. FROM APPROXIMATE ELEVATION 1532.5 FEET TO 1570.5 FEET) INCLUDES SLOPE RIPRAP BEDDING (FROM TOP TO BOTTOM) APPROXIMATELY 27 INCHES OF GA DOT TYPE 1 RIP RAP, 6 INCHES OF GA DOT #4 COARSE BEDDING STONE, AND A NON-WOVEN GEOTEXTILE. THESE ARE NOT SHOWN FOR CLARITY (GEOINTEC 2023). REFER TO DETAIL 3 ON SHEET 4
  - CONTRACTOR TO PROTECT EXISTING VENT PIPE

APPROVED  
STATE OF GEORGIA  
307.19 NOTAL RECORDS

AUG 13 2024

*Signature*  
Sara C. Pugh  
State of Georgia

REV	DATE	DESCRIPTION	APP
1	08/15/2024	ISSUED FOR CONSTRUCTION	MAF
2	08/15/2024	ADDRESSED RFP COMMENTS	MAF
3	07/25/2024	PERMIT DRAWINGS	MAF
4	07/25/2024	PERMIT DRAWINGS	MAF
5	07/25/2024	PERMIT DRAWINGS	MAF
6	07/25/2024	PERMIT DRAWINGS	MAF
7	07/25/2024	PERMIT DRAWINGS	MAF
8	07/25/2024	PERMIT DRAWINGS	MAF
9	07/25/2024	PERMIT DRAWINGS	MAF
10	07/25/2024	PERMIT DRAWINGS	MAF



DESIGN BY	NPH	TITLE	EXISTING CONDITIONS & PROPOSED DEMOLITION
DRAWN BY	MAF	PROJECT	LLO REPAIR
CHECKED BY	NPH	SITE	LAKE PETIT DAM - BIG CANOE
REVIEWED BY	WMT		
APPROVED BY	VJD		



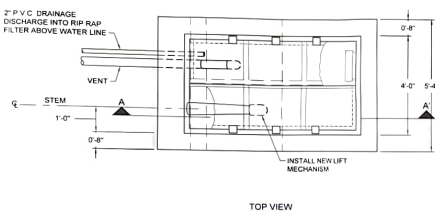
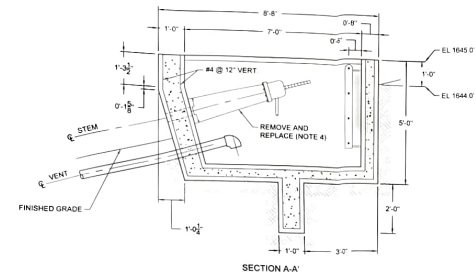
**Geosyntec**  
consultants

433 GEORGIA AVENUE, SUITE 100  
CHATTANOOGA, TN 37422

ISSUED FOR CONSTRUCTION

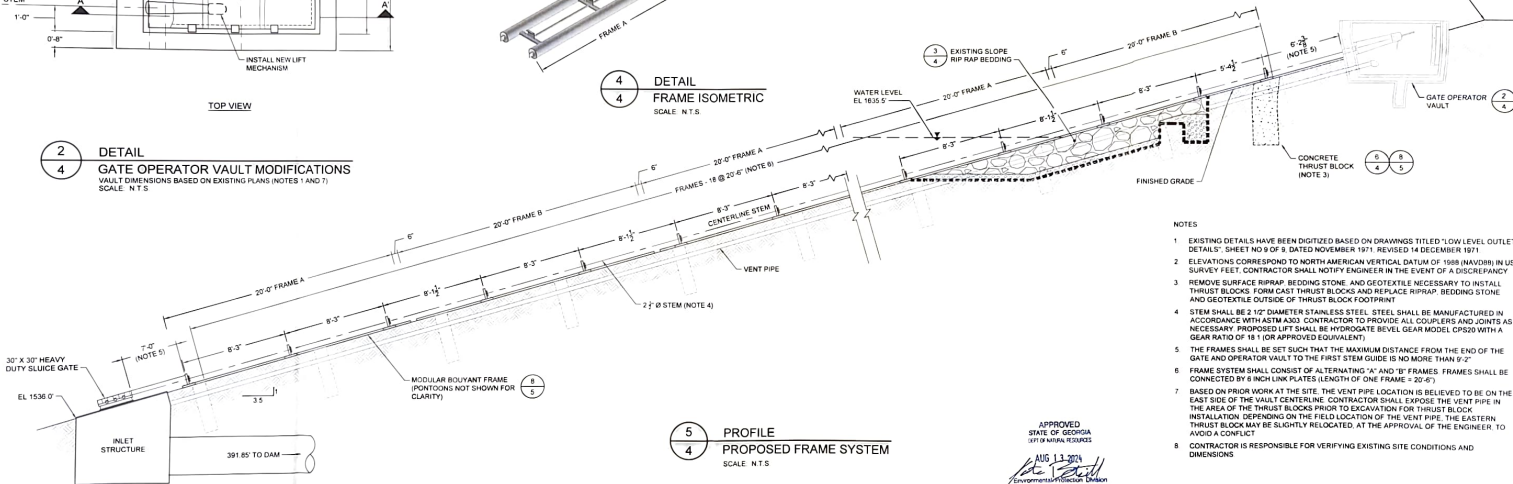
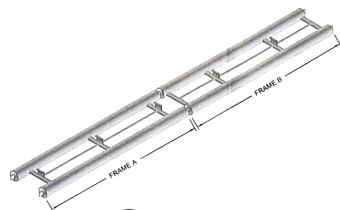
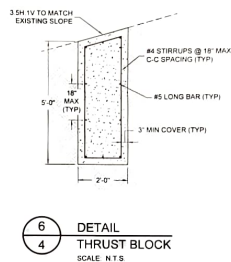
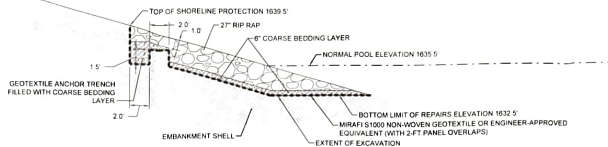
DATE	MAY 2024
PROJECT NO.	GS2024
FILE	GS2024-001
SHEET NO.	3 OF 5





2  
4

DETAIL  
GATE OPERATOR VAULT MODIFICATIONS  
VAULT DIMENSIONS BASED ON EXISTING PLANS (NOTES 1 AND 7)  
SCALE: N.T.S.



- ## NOTES

- EXISTING DETAILS ARE BEING DITCHED BASED ON DRAWINGS TITLE "LOW LEVEL OUTLET DETAILS". SHEET NO 9 OF 8 DATED 11/10/2018. REVISED 14 DECEMBER 2017.
7. THE CONTRACTOR SHALL BE NOTIFIED BY THE ENGINEER IN ADVANCE OF ANY SURVEY FEE. CONTRACTOR SHALL NOTIFY ENGINEER IN THE EVENT OF A DISCREPANCY REMOVE SURFACE BRUSH, BEDDING STONE, AND GETTEXTILE NECESSARY TO INSTALL THE VENT PIPE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF BRUSH AND GETTEXTILE OUTSIDE OF THRUST BLOCK FOOTPRINT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF THE VENT PIPE IN ACCORDANCE WITH ASTM A333. CONTRACTOR TO PROVIDE ALL MANHOLES AND JOINTS AS SPECIFIED IN THE DRAWINGS. THE VENT PIPE SHALL BE MANUFACTURED WITH A GEAR RATIO OF "18" (OR APPROVED EQUIVALENT).
9. THE FRAMES SHALL BE SET SUCH THAT THE MAXIMUM DISTANCE FROM THE END OF THE EARTH CHUTE TO THE VENT PIPE SHALL BE 10 FEET.
10. THE FRAME SYSTEM SHALL CONSIST OF ALTERNATING "A" AND "B" FRAMES. FRAMES SHALL BE CONNECTED BY 6 INCH UNL PLATES (LENGTH SHALL BE FRAME + 20").
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING FRAMES TO THE EAST SIDE OF THE VAULT CENTERLINE. CONTRACTOR SHALL EXPOSE THE VENT PIPE IN THE EXISTING EARTH CHUTE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE INSTALLATION DEPENDING ON THE FIELD LOCATION OF THE VENT PIPE. THE EASTERN DIRECTION SHALL BE LOGICALLY ELICITED. AT THE APPROVAL OF THE ENGINEER, IT MAY AVOID A CONFLICT.
12. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING SITE CONDITIONS AND

APPROVED  
STATE OF GEORGIA

ISSUED FOR CONSTRUCTION

[illegible]

DESIGN BY	NPH
DRAWN BY	MAF
CHECKED BY	NPH
REVIEWED BY	WMT
APPROVED BY	VJD

TITLE
PROJECT
SITE

PROPOSED STEM FRAME

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LLO REPAIR

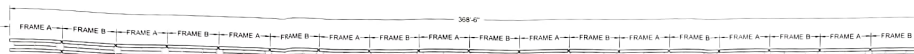
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LAKE PETIT DAM - BIG CANOE

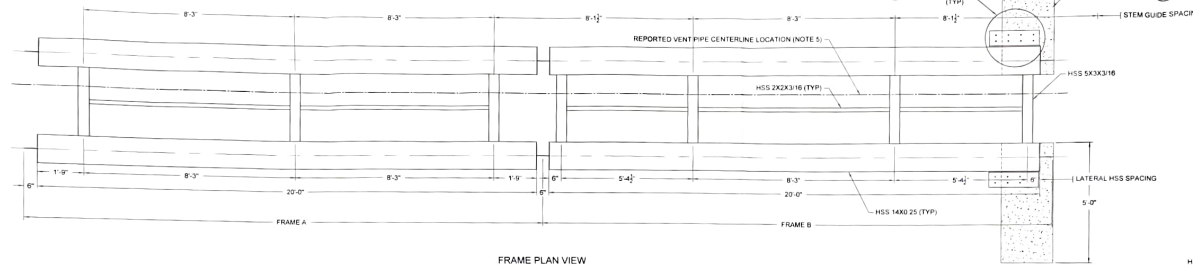


**Geosyntec**  
consultants  
835 GEORGIA AVENUE, SUITE 500  
CHATTANOOGA, TN 37402

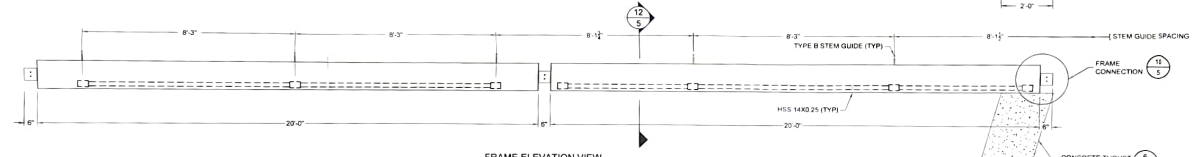
DATE	MAY 2024
PROJECT NO	GST8061
FILE	GST8061C04
SHEET NO	4 OF 5



**7**  
**5** **DETAIL**  
**FRAME PATTERN LAYOUT**  
SCALE: N.T.S.

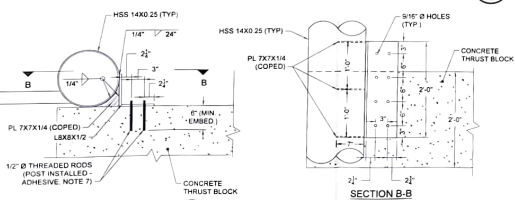


**FRAME PLAN VIEW**

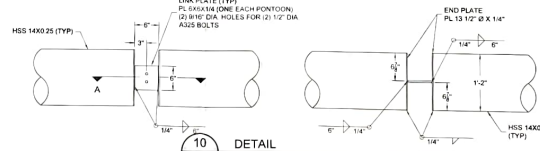


**FRAME ELEVATION VIEW**

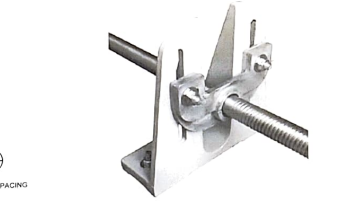
**8**  
**4** **DETAIL**  
**FRAME LAYOUT**  
SCALE: N.T.S.



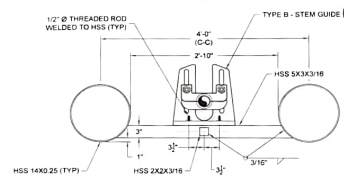
**9**  
**5** **DETAIL**  
**THRUST BLOCK CONNECTION**  
SCALE: N.T.S.



**10**  
**5** **DETAIL**  
**FRAME CONNECTION**  
SCALE: N.T.S.



**11**  
**5** **DETAIL**  
**TYPE B - STEM GUIDE**  
(NOTE 2)  
SCALE: N.T.S.



**TYPICAL SECTION**

**12**  
**5** **DETAIL**  
**FRAME SECTION**  
SCALE: N.T.S.

**NOTES**

- PROPOSED STEM LIFT SHALL BE HYDROGATE BEVEL GEAR MODEL CP336 (OR APPROVED EQUIVALENT).
- EXAMPLE DETAIL OF PROPOSED STEM GUIDE (HYDROGATE® LIFTS AND LIFT ACCESSORIES BROCHURE).
- THE TOP THREE FRAME SECTIONS (ADJACENT TO THE OPERATOR VAULT) SHALL BE GALVANIZED.
- THRUST BLOCKS TO BE INSTALLED AT THE UPPER END OF THE TOP FRAME SECTION BETWEEN THE WATERLINE AND THE EXISTING OPERATOR VAULT.
- BASED ON PRIOR WORK AT THE SITE, THE VENT PIPE LOCATION IS REPORTED TO BE ON THE EAST SIDE OF THE VAULT CENTERLINE. CONTRACTOR SHALL EXPOSE THE VENT PIPE IN THE AREA OF THE THRUST BLOCKS PRIOR TO EXCAVATION FOR THRUST BLOCK INSTALLATION. DEPENDING ON THE FIELD LOCATION OF THE VENT PIPE, THE PIPE MAY EITHER BE RE-ROUTED AROUND THE EASTERN THRUST BLOCK OR THE EASTERN THRUST BLOCK MAY BE ADJUSTED. AT THE APPROVAL OF THE ENGINEER, TO AVOID A CONFLICT.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN HORIZONTAL ALIGNMENT DURING ERECTION OF THE FRAME.
- FOUR (4) ANCHORS ARE REQUIRED PER THRUST BLOCK CONNECTION. ADDITIONAL BOLT HOLES AND PLATE LENGTH ARE PROVIDED FOR INCREASED TOLERANCE FOR FRAME INSTALLATION. MINIMUM EDGE DISTANCE FROM ANCHOR TO CONCRETE: 5.4\"/>

**FRAME MATERIALS SHALL CONSIST OF THE FOLLOWING:**

- HSS SECTIONS: ASTM A500 GR. B
- OTHER STEEL SHAPES: ASTM A36
- BOLTS: ASTM A325
- NUTS: ASTM A305
- WELDERS: ASTM F436
- THREADED ROD: ASTM F1554 GR. 36
- WELD STRENGTH: F<sub>EXX</sub> = 70ksi

APPROVED  
STATE OF GEORGIA  
LIFTING MACHINE DIVISION  
JUL 13 2024  
M. J. [Signature]  
SALE ENGINE PROGRAM

**PROPOSED STEM FRAME DETAILS**

LLO REPAIR

LAKE PETIT DAM - BIG CANOE

**ISSUED FOR CONSTRUCTION**

**Geosyntec**  
consultants

830 GEORGIA AVENUE, SUITE 300  
CHATTANOOGA, TN 37402

**Big Canoe POA**

DATE: MAY 2024  
PROJECT NO: GSTR061  
FILE: GSTR061C05  
SHEET NO: 5 OF 5

REV	DATE	DESCRIPTION	DESIGNED	CHECKED	APPROVED
2	08/10/2024	ISSUED FOR CONSTRUCTION	MMF	MMF	MMF
1	07/05/2024	ADDRESSED RFP COMMENTS	MMF	MMF	MMF
0	05/15/2024	PERMIT DRAWINGS	MMF	MMF	MMF



DESIGN BY	MMF	TITLE	PROPOSED STEM FRAME DETAILS
DRAWN BY	MMF	PROJECT	LLO REPAIR
CHECKED BY	MMF		
REVIEWED BY	MMF	SITE	LAKE PETIT DAM - BIG CANOE
APPROVED BY	MMF		