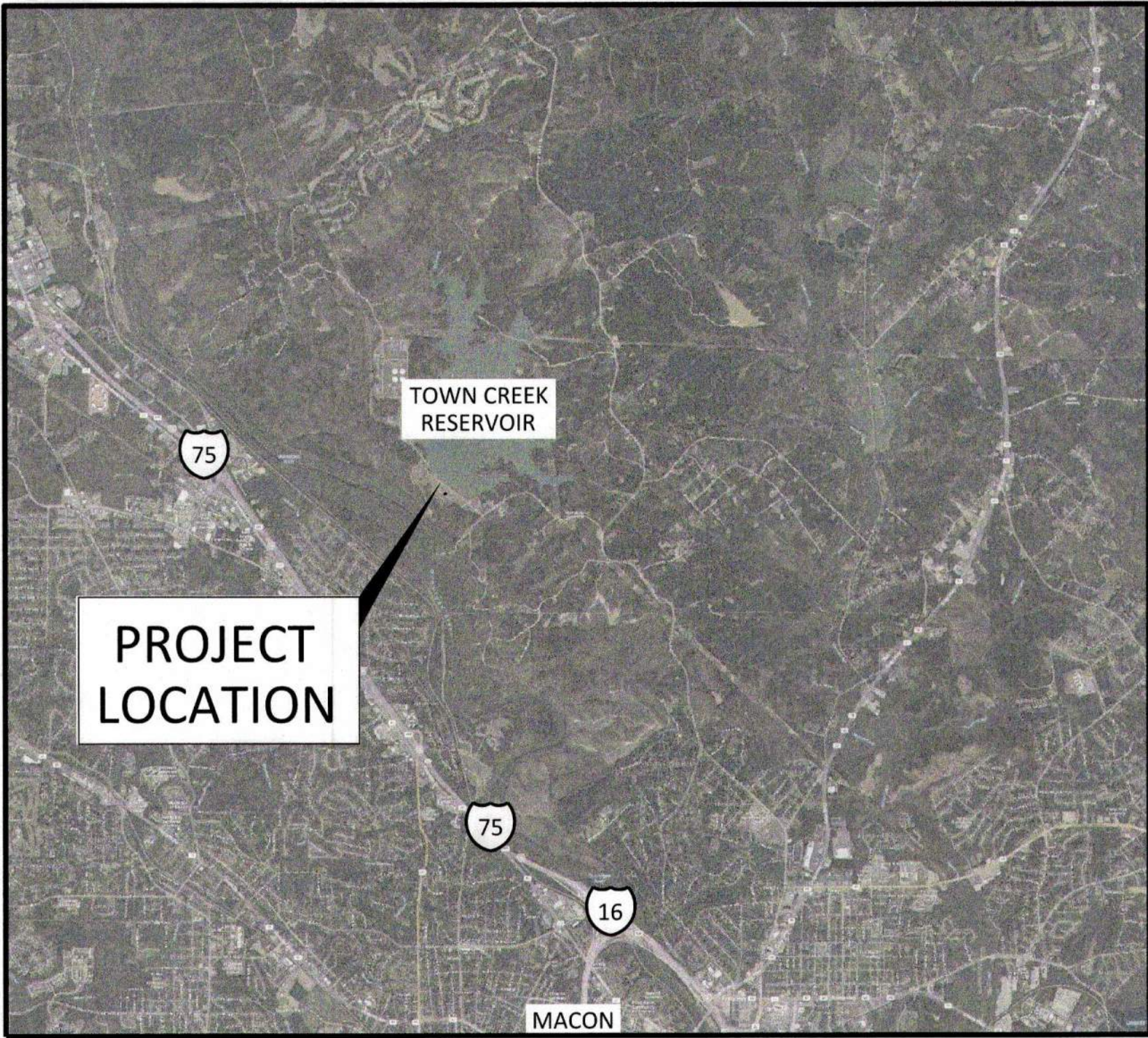


MACON WATER AUTHORITY



VICINITY MAP
0 5000 10000
SCALE IN FEET



SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
GENERAL	
G-0	COVER
G-1	GENERAL NOTES
G-2	EXISTING SITE PLAN
CIVIL	
C-1	PROPOSED SITE PLAN 1 OF 2
C-2	PROPOSED SITE PLAN 2 OF 2
C-3	PROFILE SECTION AND DETAILS
C-4	EROSION CONTROL DETAILS

PROJECT LOCATION:
TOWN CREEK RESERVOIR DAM
AMERSON WATER TREATMENT PLANT
DR LEE RD.
MACON, GA 31211

PROJECT NARRATIVE:
THESE PLANS SHOW THE REPAIR MEASURES FOR AN
EXISTING DOWN DRAIN THAT FAILED ON THE
DOWNSTREAM FACE OF THE TOWN CREEK RESERVOIR DAM.

CONSTRUCTION DRAWINGS FOR TOWN CREEK RESERVOIR DAM DOWN DRAIN REPAIRS

GA STATE ID: 084-043-04724
NID NO: GA04542

TOTAL PROJECT AREA: 0.50 AC
TOTAL DISTURBED AREA: 0.50 AC
ADDITIONAL IMPERVIOUS AREA: 0.00 AC

CONSTRUCTION EXIT COORDINATES:
LAT: 32.902024 DEG
LON: -83.660808 DEG

OWNER:
MACON WATER AUTHORITY
MICHEL WANNA
ASSISTANT EXECUTIVE DIRECTOR & VICE PRESIDENT
MWANNA@MACONWATER.ORG

24-HOUR EMERGENCY CONTACT:
JARAD ZELLNER
DIRECTOR, WATER OPERATIONS
JZELLNER@MACONWATER.ORG
(478)464-5600

6/28/2024



MWA24201

APPROVED
STATE OF GEORGIA
DEPT. OF NATURAL RESOURCES
AUG 06 2024
Environmental Protection Division
Safe Dams Program



GEORGIA 811
CALL BEFORE YOU DIG
DIAL 811 OR CALL
1-800-282-7411
UTILITIES PROTECTION
CENTER
IT'S THE LAW



NOTE: CONTRACTOR MUST COORDINATE
WORK WITH UTILITY PROVIDERS TO MAINTAIN
UTILITY SERVICE AND A SAFE WORK SITE.



ENGINEER OF RECORD:
MAXWELL BLOOM
FREESE AND NICHOLS, INC.
MAX.BLOOM@FREESE.COM
(404) 334-4310

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433
Expires 6/30/2026

ACAD Ref: C3D 2023

UNLESS OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS, NO SEPARATE PAY ITEMS ARE PROVIDED FOR THE REQUIREMENTS IN THESE GENERAL NOTES, WHICH SHALL BE INCIDENTAL TO CONSTRUCTION.

- BEFORE BEGINNING CONSTRUCTION, CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES OR CONFLICTS FOUND IN DRAWINGS AND/OR FIELD DIMENSIONS.
- CONTRACTOR TO PROVIDE ENGINEER SUFFICIENT TIME TO NOTIFY GA SAFE DAMS PROGRAM 10 DAYS PRIOR TO THE START OF CONSTRUCTION
- PLANS HAVE BEEN REVIEWED AND APPROVED BY THE GEORGIA SAFE DAMS PROGRAM. AS SUCH, THE PLANS SHALL NOT BE SUBSTANTIALLY OR MATERIALLY ALTERED WITHOUT PRIOR WRITTEN APPROVAL OF THE MANAGER OF THE GEORGIA SAFE DAMS PROGRAM (GA-SDP). ANY WORK PERFORMED UNDER A PROPOSED CHANGE PRIOR TO GA-SDP APPROVAL OR WITHOUT THE CONSENT OF THE ENGINEER WILL BE PERFORMED AT THE CONTRACTOR'S OWN RISK.
- CONTRACTOR SHALL ABIDE BY ALL APPLICABLE GOVERNMENTAL AND REGULATORY STANDARDS AND REQUIREMENTS AND SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FOR CONSTRUCTION OF THE FACILITIES SHOWN IN THE DRAWINGS.
- THE GEOGRAPHIC COORDINATE SYSTEM IS NAD83 GEORGIA STATE PLANE, WEST ZONE. THE VERTICAL DATUM IS NAVD 88. TOPOGRAPHIC CONTOURS SHOWN ON THIS PLAN WERE DERIVED FROM STATEWIDE LIDAR FLOWN IN 2020 AND PROCESSED BY THE UNITED STATES GEOLOGIC SOCIETY (USGS) AT A RESOLUTION OF 1M. THE ENGINEER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THIS DATA. THE CONTRACTOR SHALL FIELD-VERIFY SITE TOPOGRAPHY AS NECESSARY TO COMPLETE THE WORK.
- CONSTRUCTION SURVEYING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR INCLUDING BUT NOT LIMITED TO LIMITS OF CONSTRUCTION, CENTERLINE, ETC. THE CONTRACTOR SHALL VERIFY ALL CONTROL MONUMENTATION AND NOTIFY OWNER OF ANY DISCREPANCIES PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR'S OPERATIONS MUST STAY WITHIN THE LIMITS OF DISTURBANCE (LOD) DESIGNATED ON THE DRAWINGS. CONTRACTOR SHALL STAKE THE LIMITS OF CONSTRUCTION PRIOR TO BEGINNING WORK. CONTRACTOR SHALL MAINTAIN STAKES UNTIL WORK IS COMPLETE.
- CONTRACTOR MAY USE EXISTING PUBLIC ROADS FOR TRANSPORTING MATERIALS AND EQUIPMENT. CONTRACTOR SHALL FOLLOW THE LAWS FOR ROAD WEIGHT RESTRICTIONS. DAMAGE CAUSED BY CONSTRUCTION VEHICLES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE APPROPRIATE SIGNAGE, BARRICADES, FLAGMEN, ETC. REQUIRED TO MAINTAIN SAFE TRAFFIC FLOW AT ALL TIMES FOR ANY WORK ACTIVITY ON OR ADJACENT TO ANY CITY, COUNTY OR GDOT ROADWAY. ALL TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH GDOT'S MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS ADJACENT TO THE PROJECT SITE FREE OF MUD, TRASH, AND CONSTRUCTION DEBRIS.
- MAXIMUM SPEED LIMIT ON THE PROJECT SITE SHALL BE 20 M.P.H.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING GENERAL SAFETY, INCLUDING THE PERSONAL SAFETY OF THE CONSTRUCTION STAFF AND THE GENERAL PUBLIC WHILE THEY ARE WITHIN THE DISRUPTED PROPERTY LIMITS AND FOR THE SAFETY OF PUBLIC AND PRIVATE PROPERTY.
- NO FIREARMS SHALL BE ALLOWED ON THE PROJECT SITE.
- IN ACCORDANCE WITH GEORGIA STATE LAW, AT LEAST 3 DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING A GEORGIA REGISTERED NOTIFICATION CENTER (I.E. GEORGIA ONE CALL, ETC.), IN ORDER TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF THE CONSTRUCTION SO THAT IF IT IS NECESSARY TO CHANGE OR MOVE THE UTILITY, THE PROGRESS OF THE WORK WILL NOT BE DELAYED. CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES RESULTING FROM FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES.
- CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT OF ALL POWER AND TELEPHONE POLES AND GUY WIRES WITHIN 15 FEET OF WORK AREAS. REPAIR DAMAGED POLES AND GUY WIRES OR RELOCATE POLES AND GUY WIRES AS REQUIRED BY THE UTILITY OWNER AT NO ADDITIONAL COST TO THE OWNER. MARK OR SHIELD ANY OVERHEAD POWER LINES ON SITE THAT ARE LESS THAN 30 FT. FROM THE GROUND SURFACE.
- VARIOUS LOCATIONS OF THE WORK ARE SUBJECT TO FLOODING OR STANDING WATER DURING WET WEATHER PERIODS. CONTRACTOR SHALL PLAN THIS WORK FOR DRY WEATHER PERIODS OR PROVIDE DEWATERING AND OTHER WET WEATHER PROVISIONS IN ACCORDANCE WITH THE CARE OF WATER PLAN.
- CONTRACTOR SHALL LEAVE EXCAVATIONS IN SECURE AND STABLE CONDITION AT THE END OF EACH DAY.
- THE CONTRACTOR SHALL CONDUCT ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS. PROPER SAFETY PROCEDURES ARE OF SPECIAL CONCERN ON THE PROJECT CONSIDERING THAT WORKERS MAY BE WORKING IN TRENCH EXCAVATIONS.
- IN DISTURBED AREAS OUTSIDE THE FOOTPRINT OF THE PROPOSED STRUCTURES, AND OUTSIDE OF THE PROPOSED NORMAL POOL, RESTORE GROUND TO ORIGINAL GRADE AND PREVENT PONDING OF STORM WATER RUNOFF ON ALL GROUND DISTURBED BY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL RESTORE GROUND THROUGHOUT THE WARRANTY PERIOD WHERE SETTLEMENT HAS CREATED STORM WATER PONDING.
- UNLESS WRITTEN PERMISSION IS PROVIDED OTHERWISE, TEMPORARY FILLS IN WATER BODIES SHALL BE REMOVED IN THEIR ENTIRETY AND THE AFFECTED AREAS RETURNED TO PRE-CONSTRUCTION ELEVATIONS.
- ALL EXCESS SOIL AND ROCK MATERIAL THAT IS UNSUITABLE FOR USE ON THE PROJECT MAY BE PLACED IN THE WASTE AREAS AS SHOWN ON THE DRAWINGS, IN THE BORROW PITS, OR IN ANOTHER LOCATION, IF APPROVED BY THE ENGINEER. ALL WASTE RUBBLE AND TRASH IS TO BE REMOVED FROM THE PROJECT SITE.
- ALL REFERENCES TO EXISTING GROUND IN SECTIONS AND DETAILS REFER TO THE GROUND LEVEL AFTER CLEARING, GRUBBING, TOPSOIL STRIPPING, AND FOUNDATION PREPARATION. THIS IS TO BE SURVEYED AS NEEDED BY THE CONTRACTOR TO ESTABLISH PROJECT QUANTITIES.

- COMPACTION NOTES:
- BACKFILL SHALL BE OBTAINED FROM AN APPROVED BORROW SOURCE AND OF TYPE ML, CL, SM, OR SC ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM.
 - A STANDARD PROCTOR TEST SHALL BE OBTAINED FOR EACH PROPOSED BORROW SOURCE TO DETERMINE THE MAXIMUM DRY DENSITY (MDD) AND OPTIMUM MOISTURE CONTENT OF THE PROPOSED BACKFILL MATERIAL.
 - BACKFILL SHALL HAVE A MINIMUM OF 40% PASSING THE #200 SIEVE AND A PLASTICITY INDEX GREATER THAN 40.
 - BACKFILL SHALL BE PLACED IN LOOSE LIFTS BETWEEN 4 AND 6 INCHES IN THICKNESS AND COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY, WITH A MOISTURE CONTENT BETWEEN OPTIMUM AND OPTIMUM + 4% AS DETERMINED BY ASTM D698. A MINIMUM OF ONE DENSITY TEST PER DAY SHALL BE PERFORMED DURING BACKFILLING. THE DRY UNIT WEIGHT OBTAINED FROM THE STANDARD PROCTOR TEST SHALL BE GREATER THAN 90 LBS.
 - COMPACTION SHALL BE ACHIEVED BY EITHER A WALK BEHIND SHEEPS FOOT ROLLER OR A HAND HELD JUMPING JACK.
 - THE PREVIOIUS LAYER OF COMPACTED BACKFILL SHALL BE SCARIFIED AND/OR MOISTURE CONDITIONED TO AFFECT A GOOD BOND WITH THE SUCCESSIVE LAYER.
 - THE MAXIMUM PARTICLE SIZE SHALL NOT EXCEED TWO-THIRDS OF THE LIFT THICKNESS AND SHALL CONTAIN LESS THAN ONE PERCENT BY WEIGHT OF ORGANICS

LINETYPES	
	TREE SAVE FENCE
	SILT FENCE (SINGLE ROW)
	SILT FENCE (DOUBLE ROW)
	CHECK DAM (STONE)
	TURBIDITY CURTAIN
	EXISTING PROPERTY LINE
	LIMITS OF DISTURBANCE
	EXISTING POOL/WATER LEVEL
	PROPOSED NORMAL POOL
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING BURIED ELECTRIC
	EXISTING BURIED TELEPHONE
	EXISTING WATERLINE
	EXISTING STORM DRAIN

APPROVED
STATE OF GEORGIA
DEPT OF NATURAL RESOURCES

AUG 06 2024

Environmental Protection Division
Safe Dams Program

Freeze and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433



FREEZE & NICHOLS
360 Interstate North Parkway,
Suite 250
Atlanta, GA 30339
Phone - (404) 334-4310
Web - www.freeze.com

MACON WATER AUTHORITY
TOWN CREEK RESERVOIR DAM
DOWN DRAIN REPAIRS
CIVIL
GENERAL NOTES

NO.	ISSUE	BY	DATE	F&N JOB NO.	DATE	DESIGNED	JLG	DRAWN	AVR	REVISED	CHECKED	WEB	FILE NAME	GN-NOTES.dwg
0	VERIFY SCALE													
1	Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.													

SHEET
G-1

FINAL

SEQ.



TOPOGRAPHIC CONTOURS SHOWN ON THIS PLAN WERE DERIVED FROM STATEWIDE LIDAR FLOWN IN 2020 AND PROCESSED BY THE UNITED STATES GEOLOGIC SOCIETY (USGS) AT A RESOLUTION OF 1M. THE ENGINEER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THIS DATA. THE CONTRACTOR SHALL FIELD-VERIFY SITE TOPOGRAPHY AS NECESSARY TO COMPLETE THE WORK.

TOWN CREEK RESERVOIR

RAW WATER INLET
CONTROL STRUCTURE

SEE SHEET C-1

SITE ACCESS AND
STAGING
LAT: 32.902024 DEG
LONG: -83.660808 DEG

APPROXIMATE
LOCATION OF RAW
WATER PIPELINE

APPROXIMATE LOCATION OF
EROSION FEATURE.
ESTIMATED DIMENSIONS ARE
6-FT IN DIAMETER BY 4-FT
DEEP

EXIST 15" HDPE DOWNDRAIN
(TO BE REMOVED)

TOP OF DAM

BERM

BERM

APPROVED
STATE OF GEORGIA
DEPT OF NATURAL RESOURCES

AUG 06 2024

Environmental Protection Division
Safe Dams Program



0 50' 100'
SCALE IN FEET

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004433



**FRESE
and
NICHOLS**
360 Interstate North Parkway,
Suite 250
Atlanta, GA 30339
Phone - (404) 334-4310
Web - www.freese.com

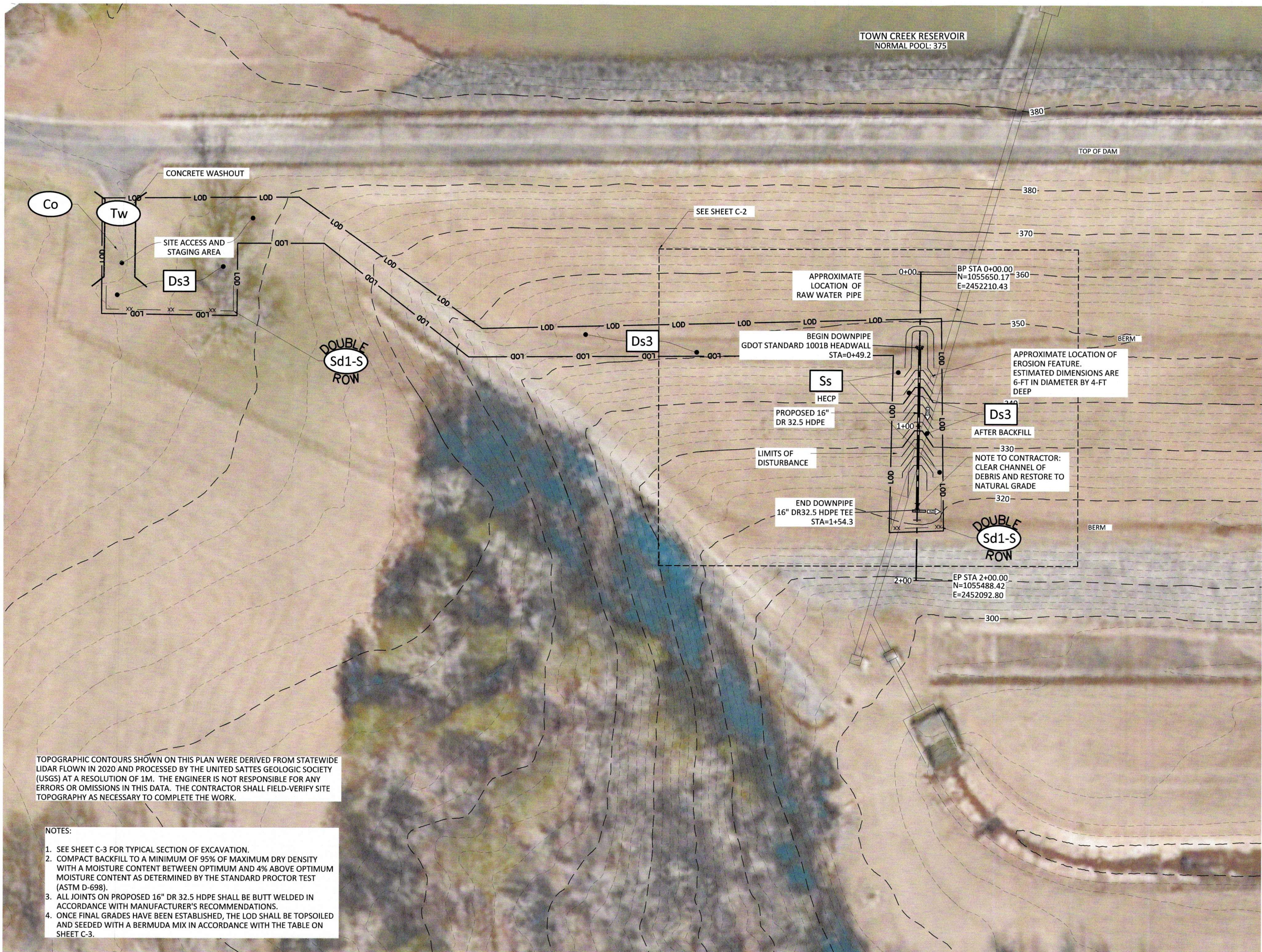
MACON WATER AUTHORITY
TOWN CREEK RESERVOIR DAM
DOWN DRAIN REPAIRS
CIVIL
EXISTING SITE PLAN

NO.	ISSUE	BY	DATE	F&N JOB NO.	DATE	DESIGNED	DRAWN	CHECKED	FILE NAME
				MWA2401	6/28/2024	JLG	AVR	MEB	GN-EX-SITE.dwg
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SHEET
G-2
SEQ. ----

FINAL

ACAD Ref: CSD 2023



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NOTES:

1. SEE SHEET C-3 FOR TYPICAL SECTION OF EXCAVATION.
2. COMPACT BACKFILL TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT BETWEEN OPTIMUM AND 4% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D-698).
3. ALL JOINTS ON PROPOSED 16" DR 32.5 HDPE SHALL BE BUTT WELDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. ONCE FINAL GRADES HAVE BEEN ESTABLISHED, THE LOD SHALL BE TOPSOILED AND SEEDED WITH A BERMUDA MIX IN ACCORDANCE WITH THE TABLE ON SHEET C-3.

TOWN CREEK RESERVOIR
NORMAL POOL: 375

TOP OF DAM

SEE SHEET C-2

APPROXIMATE
LOCATION OF
RAW WATER PIPE

BEGIN DOWNPIPE
GDOT STANDARD 10018 HEADWALL
STA=0+49.2

Ss
HECP
PROPOSED 16"
DR 32.5 HDPE

LIMITS OF
DISTURBANCE

END DOWNPIPE
16" DR32.5 HDPE TEE
STA=1+54.3

BP STA 0+00.00
N=1055650.17
E=2452210.43

APPROXIMATE LOCATION OF
EROSION FEATURE.
ESTIMATED DIMENSIONS ARE
6-FT IN DIAMETER BY 4-FT
DEEP

Ds3
AFTER BACKFILL

NOTE TO CONTRACTOR:
CLEAR CHANNEL OF
DEBRIS AND RESTORE TO
NATURAL GRADE

EP STA 2+00.00
N=1055488.42
E=2452092.80

APPROVED
STATE OF GEORGIA
DEPT OF NATURAL RESOURCES
AUG 06 2024

Environmental Protection Division
Safe Dams Program

GSWCC
GEORGIA SOIL AND WATER
CONSERVATION COMMISSION
MAXWELL BLOOM
Level II Certified Design Professional
CERTIFICATION NUMBER 0000079755
ISSUED: 7/01/2021 EXPIRES: 7/01/2027



0 10' 20' 30' 60'
SCALE IN FEET

FINAL

Freese and Nichols, Inc.
Georgia Registered Engineering Firm PEF-004133
Expires 6/26/2028



FREES & NICHOLS
360 Interstate North Parkway,
Suite 250
Atlanta, GA 30339
Phone - (404) 334-4310
Web - www.freese.com

MACON WATER AUTHORITY
TOWN CREEK RESERVOIR DAM
DOWN DRAIN REPAIRS

PROPOSED SITE PLAN 1 OF 2

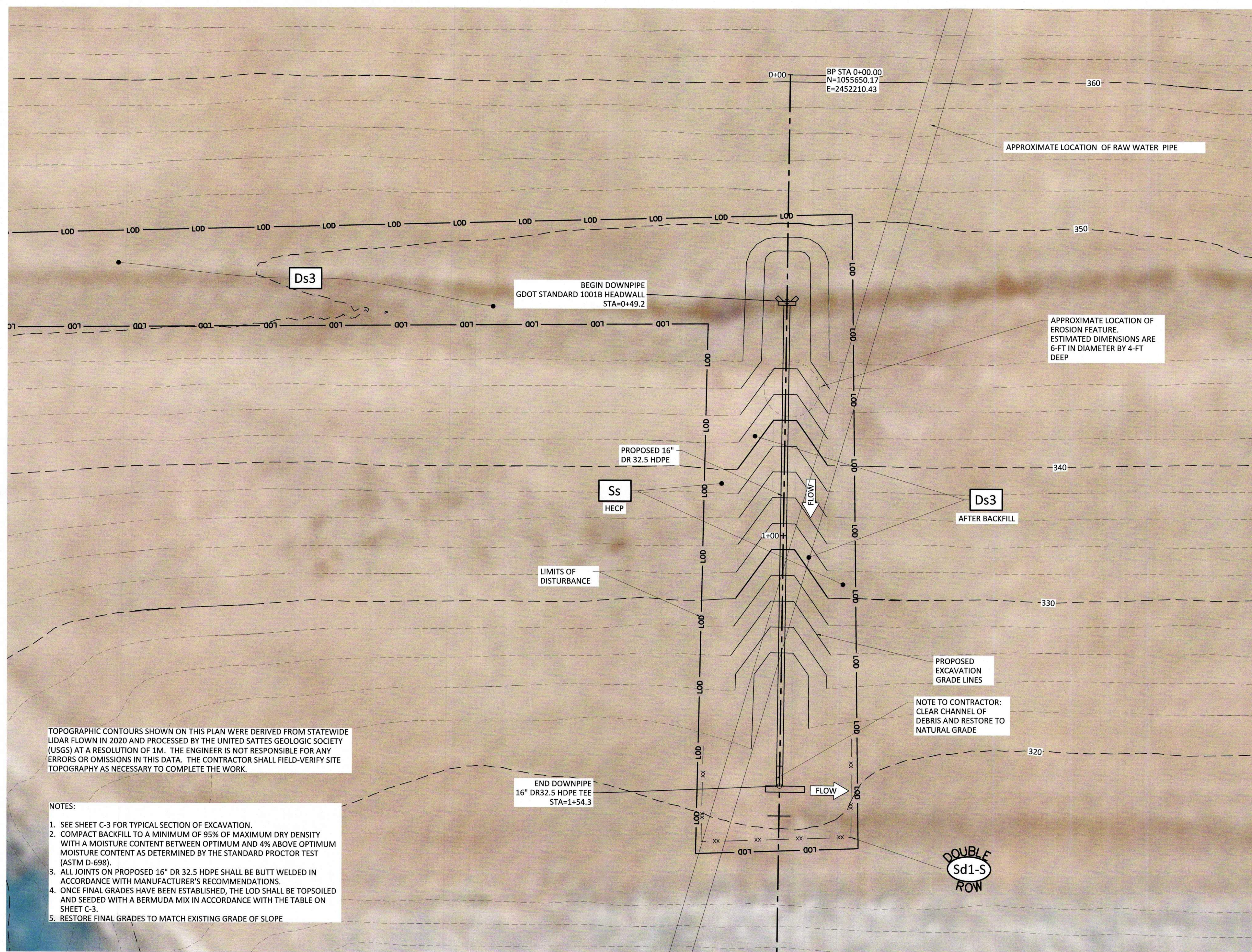
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DATE					
DESIGNED					
DRAWN					
REVISED					
CHECKED					
MEB					

SHEET
C-1

SEQ. ---

Bar is one inch on original
plan. On this sheet, adjust scale.

ACAD Ref: C3D 2023



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NOTES:

1. SEE SHEET C-3 FOR TYPICAL SECTION OF EXCAVATION.
2. COMPACT BACKFILL TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT BETWEEN OPTIMUM AND 4% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D-698).
3. ALL JOINTS ON PROPOSED 16" DR 32.5 HDPE SHALL BE BUTT WELDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. ONCE FINAL GRADES HAVE BEEN ESTABLISHED, THE LOD SHALL BE TOPSOILED AND SEEDED WITH A BERMUDA MIX IN ACCORDANCE WITH THE TABLE ON SHEET C-3.
5. RESTORE FINAL GRADES TO MATCH EXISTING GRADE OF SLOPE

Freese and Nichols, Inc.
Georgia Registered Engineering Firm REF-004433
Since 1979/2023



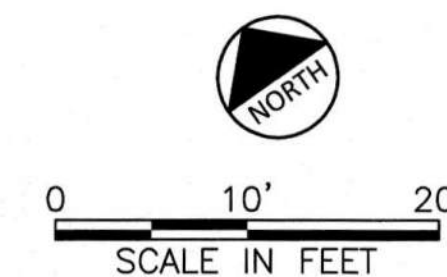
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Suite 250
Atlanta, GA 30339
Phone: (404) 334-4310
Web: www.freese.com

MACON WATER AUTHORITY
**TOWN CREEK RESERVOIR DAM
DOWN DRAIN REPAIRS**
CIVIL
PROPOSED SITE PLAN 2 OF 2

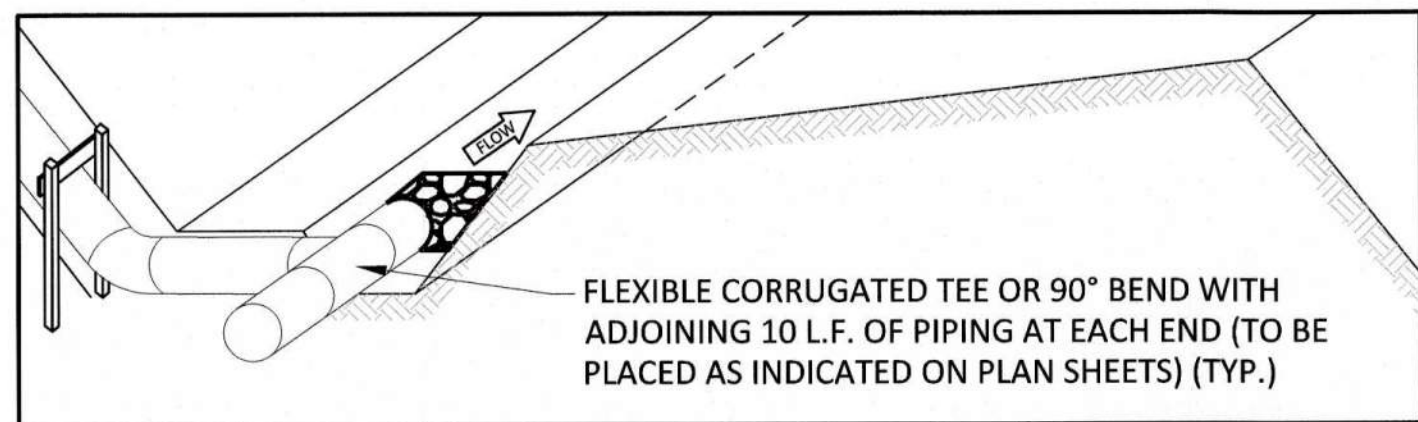
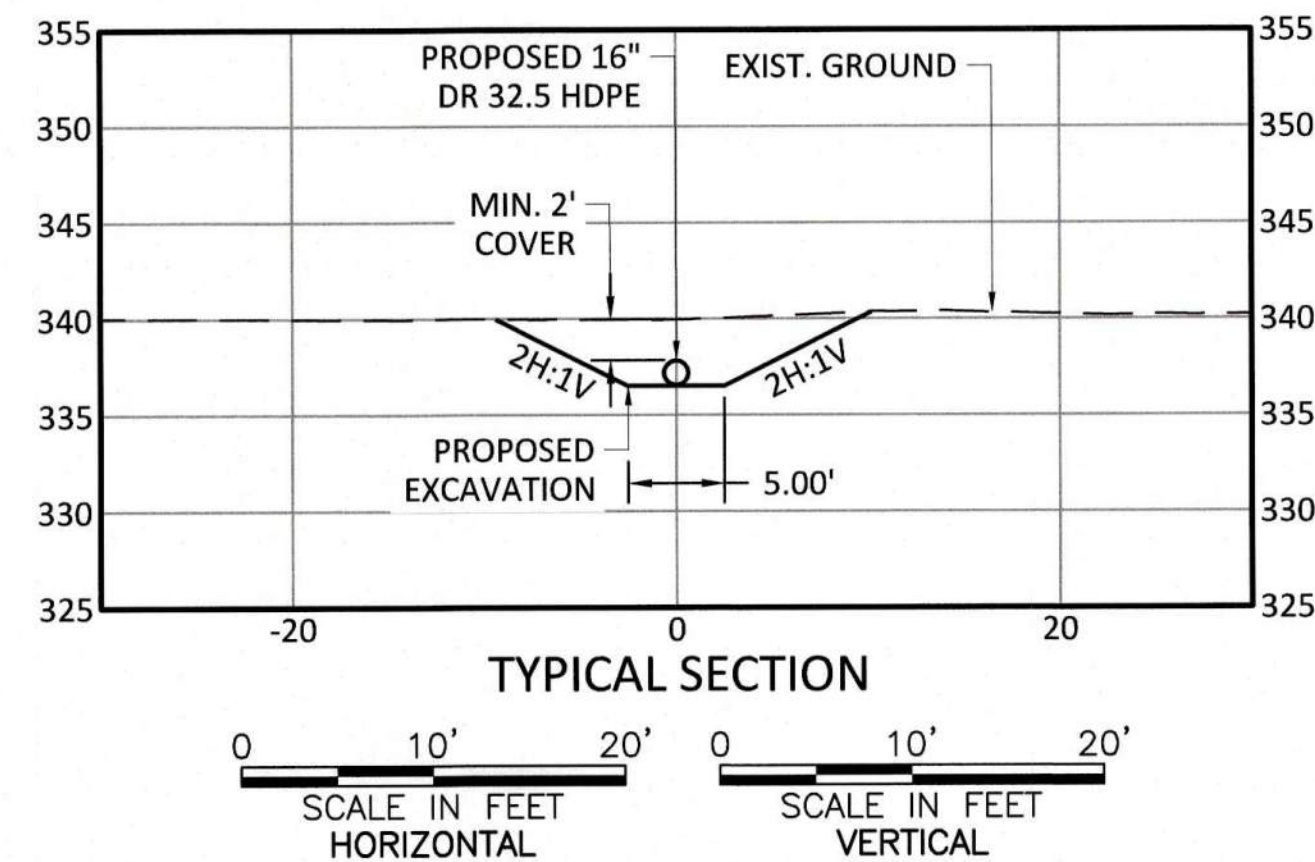
PROJECT NO.		MWA24201		DATE		6/28/2024		DESIGNED		BY		DATE		6/28/2024		DRAWN		BY		DATE		6/28/2024		REVIEWED		BY		DATE		6/28/2024		CHECKED		BY		DATE		6/28/2024	
FILE NAME		CV-PR-SITE.dwg		VERIFY SCALE		1" = 20'		Bar is one inch on original drawing and is not to be scaled on this sheet, adjust scale.																															
SHEET		C-2																																					
SEQ.		----																																					

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STATE OF GEORGIA
DEPT. OF NATURAL RESOURCES
AUG 06 2024

Environmental Protection Division
Safe Dams Program



FINAL

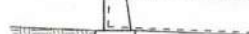


DIMENSIONS										QUANTITIES ONE "1" ENDWALL			
OPENING		WALL		FOOTING		CLASS "B" CONCRETE		STEEL					
D	AREA SQ.FT	G	H	K	F	J	CUBIC FEET	TOTAL	RODS				
						WALL		FOOTING					
						CUBIC FEET		TOTAL					
12"	1.5	3'8"	2'0"	1'0"	1'3"	2'2"	6.6	7.3	1.9	0.52	NONE		
15"	1.2	3'1"	2'3"	1'3"	1'3"	2'7"	8.3	9.1	1.6	0.5	NONE		
18"	0.8	2'4"	2'6"	1'6"	1'6"	3'0"	9.7	10.6	0.6	0.45	NONE		
24"	3.1	4'8"	3'0"	2'6"	1'6"	3'8"	13.5	15.5	2.94	1.09	2-3/4" DIA. X 2'0"		
30"	4.9	5'2"	3'6"	3'3"	1'6"	4'5"	18.7	20.0	3.87	1.43	2-3/4" DIA. X 2'0"		
36"	6.7	5'8"	4'0"	4'0"	2'0"	5'0"	23.2	25.0	4.5	1.6	2-3/4" DIA. X 2'0"		
42"	8.6	6'2"	4'6"	4'6"	2'0"	5'8"	30.3	33.2	6.5	2.35	2-3/4" DIA. X 2'0"		
48"	10.6	6'6"	5'0"	5'6"	2'0"	6'1"	37.6	39.6	7.69	2.85	2-3/4" DIA. X 2'0"		
54"	16.0	7'0"	5'6"	6'0"	2'0"	6'8"	46.5	49.0	9.5	3.4	2-3/4" DIA. X 2'0"		
60"	21.6	7'8"	6'0"	7'0"	2'0"	8'2"	56.1	49.1	10.02	3.71	2-3/4" DIA. X 2'0"		
						3d FLOOR							
						CUBIC FEET		TOTAL					
						WALL		FOOTING					
						CUBIC FEET		TOTAL					

PLACE BED OF MORTAR TO RECEIVE PIPE

CONCRETE WITHIN THE HATCHED AREA TO BE REMOVED BY CHIPPING OR IN A MANNER APPROVED BY THE ENGINEER, FORMING A RECESS NO LESS THAN 1" LARGER THAN THE OUTSIDE DIMENSION OF THE PIPE.

NOTE:
QUANTITIES OF CONCRETE ARE BASED ON INSIDE
DIAMETER OF PIPE, NO DEDUCTIONS SHALL BE
MADE FOR SHELL THICKNESS OR SKEW OF PIPE IN
COMPUTING PAY QUANTITIES.



NOTE: GRADE

⑤ IF PIPE HAS NEITHER A GROOVE NOR A SPIGOT
AT ITS INLET, AN INLET BEVEL WILL BE REQ'D.

[illegible]

The image shows the Georgia Soil and Water Conservation Commission (GSWCC) logo on the left, which includes a stylized water drop and the text "GSWCC" and "GEORGIA SOIL AND WATER CONSERVATION COMMISSION". To the right of the logo, the name "MAXWELL BLOOM" is printed in a large, bold, serif font. Below the name, the text "Level II Certified Design Professional" is printed in a smaller, bold, serif font. At the bottom, there are two lines of text: "CERTIFICATION NUMBER" followed by "0000079755" and "ISSUED: 7/01/2021" followed by "EXPIRES: 7/01/2027".



FREESE
NICHOLS
924

360 Interstate North Parkway,
Suite 250
Atlanta, GA 30339
Phone - (404) 334-4310
Web - www.freesenichols.com

MACON WATER AUTHORITY
TOWN CREEK RESERVOIR DAM
DOWN DRAIN REPAIRS
CIVIL
PROFILE SECTION AND DETAILS

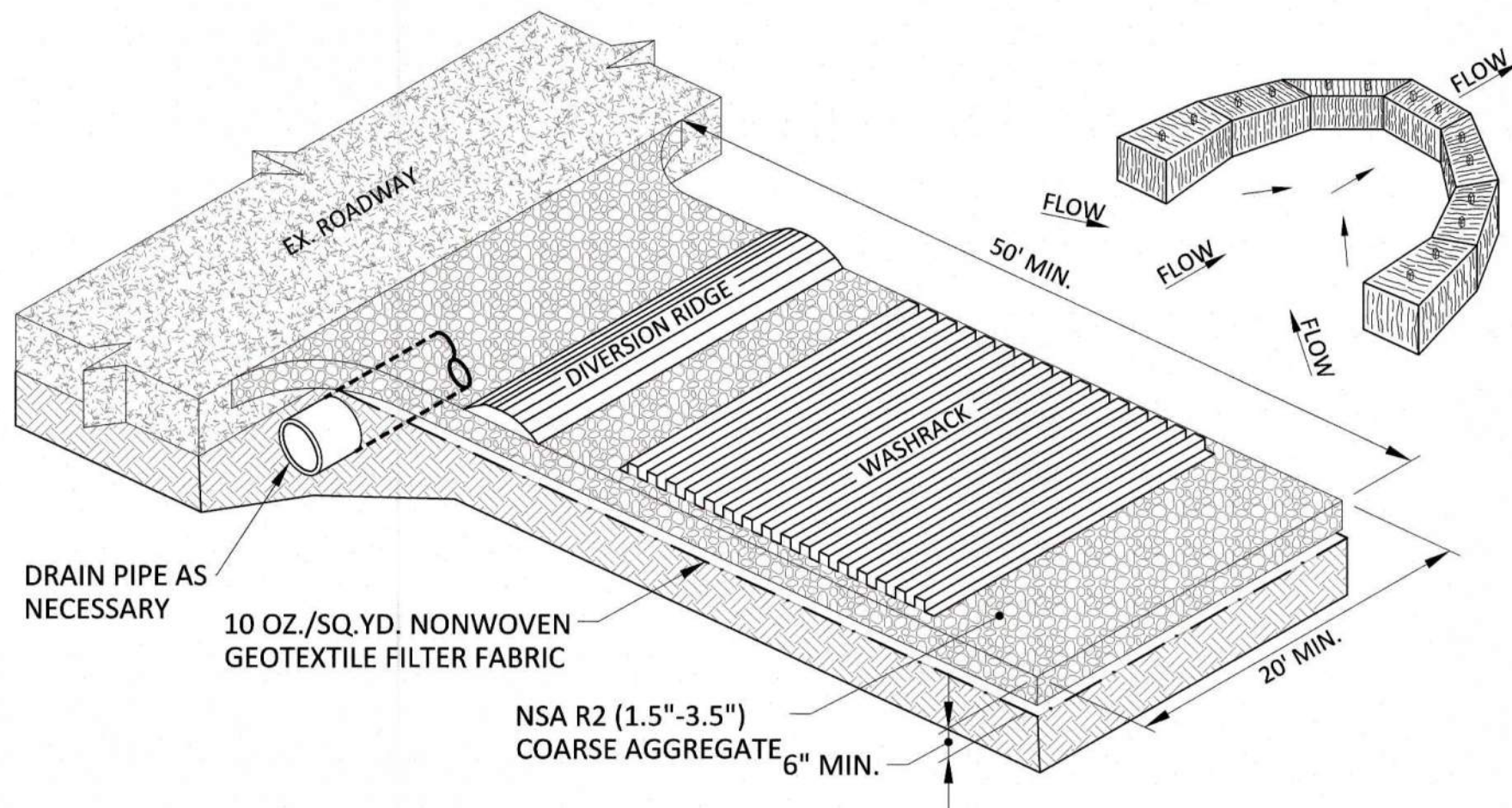
CIVIL

NO.	ISSUE	BY	DATE	J&N JOB NO.
				MW424201
			DATE	6/28/2024
			DESIGNED	JLG
			DRAWN	AVR
			REVISED	
VERIFY SCALE				CHECKED
Bar is one inch on original drawing, if not one inch on 1				MEB
0				FILE NAME
				URL per SITE

C-3

	SEQ
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FINAL



1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5" - 3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSTED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHER MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCES. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVES MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW FOR MUD ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Co CONSTRUCTION EXIT WITH TIRE WASH STATION Tw

NOTE: TIRE WASH (TW) INSTALLATION AT CONSTRUCTION ENTRANCE/EXIT IS OPTIONAL. INSTALL TO PREVENT TRACKING OF DIRT ON TO OFF SITE ROADS AS NEEDED.

Ss HYDRAULIC EROSION CONTROL PRODUCTS (HECP)
HECP SHALL UTILIZE STRAW, COTTON, WOOD OR OTHER NATURAL BASED FIBERS HELD TOGETHER BY A SOIL BINDING AGENT THAT WORKS TO STABILIZE SOIL PARTICLES. PAPER MULCH SHOULD NOT BE USED FOR EROSION CONTROL.

CRITERIA

HYDRAULIC EROSION CONTROL PRODUCTS (HECPs):
•APPLICATION RATES FOR THE HECPs SHALL CONFORM TO MANUFACTURER'S GUIDELINES FOR APPLICATION

MATERIALS – HECP

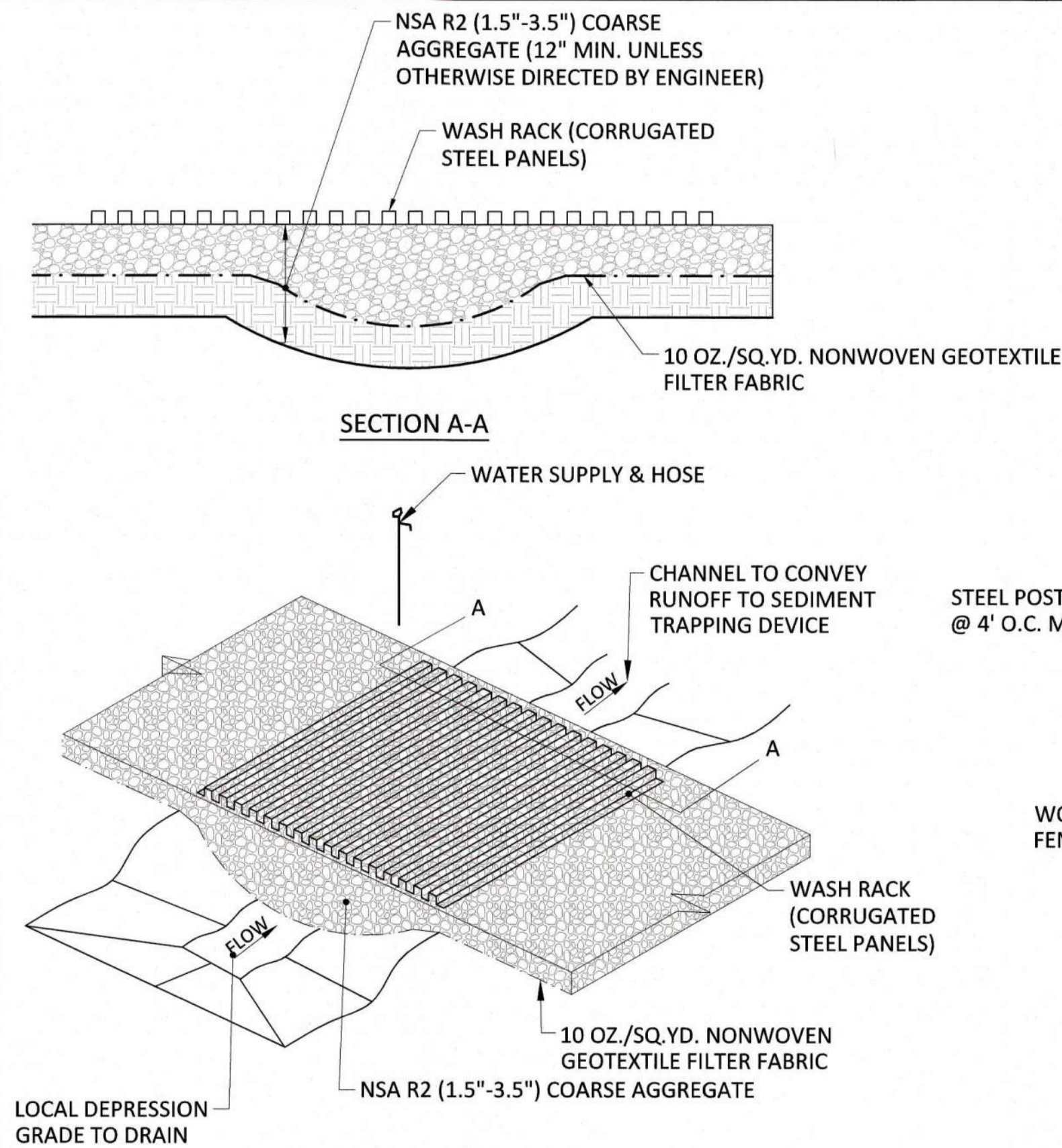
HYDRAULIC EROSION CONTROL PRODUCTS SHALL BE PREPACKAGED FROM THE MANUFACTURER. FIELD MIXING OF PERFORMANCE ENHANCING ADDITIVES WILL NOT BE ALLOWED. FIBEROUS COMPONENTS SHOULD BE ALL NATURAL OR BIODEGRADABLE.

PRODUCTS SHALL BE DETERMINED TO BE NON-TOXIC IN ACCORDANCE WITH EPA-821-R-02-012.

Ds3 TEMPORARY & PERMANENT GRASSING

VEGETATIVE COVERS										
	MONTH	TEMPORARY SEED	RATE/ACRE	RATES/1,000 SQ. FT.		PERMANENT SEED	RATE/ACRE	RATES/1,000 SQ. FT.		MAINTENANCE
				FERTILIZER	LIME STONE			FERTILIZER	LIME STONE	
1)	JANUARY	ANNUAL RYEGRASS	40 - 50 LB.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA	10 LB.	12 LB (10-10-10)	45 LB.	10 LB (10-10-10)
2)	FEBRUARY	ANNUAL RYEGRASS	40 - 50 LB.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA FESCUE	10 LB. 200 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10)
3)	MARCH	RYE	2 - 3 BU.	12 LB (10-10-10)	45 LB. 45 LB.	UNHULLED BERMUDA FESCUE	10 LB. 200 LB.	12 LB (10-10-10) 12 LB (10-10-10)	45 LB. 45 LB.	10 LB (10-10-10)
4)	APRIL	RYE BROWN TOP MILLET SUDAN ANNUAL	2 - 3 BU. 30 - 40 LB. 35 LB.	12 LB (10-10-10) 12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	HULLED BERMUDA BAHIA	40 LB. 40 - 60 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
5)	MAY	SUDAN ANNUAL BROWN TOP MILLET	35 LB. 30 - 40 LB.	35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB.	HULLED BERMUDA BAHIA	40 LB. 40 - 60 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
6)	JUNE	SUDAN ANNUAL BROWN TOP MILLET	35 LB. 30 - 40 LB.	35 LB (6-12-12) 12 LB (10-10-10)	45 LB. 45 LB.	HULLED BERMUDA BAHIA	40 LB. 40 - 60 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
7)	JULY	SUDAN GRASS BROWN TOP MILLET	35 LB. 30 - 40 LB.	35 LB (6-12-12) 12 LB (10-10-10)	45 LB.	BROWN TOP MILLET	30 - 40 LB.	12 LB (10-10-10)	45 LB.	10 LB (10-10-10)
8)	AUGUST	ANNUAL RYEGRASS	40 - 50 LB.	12 LB (10-10-10)	45 LB. 45 LB.	HULLED BERMUDA BAHIA	40 LB. 40 - 60 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
9)	SEPTEMBER	ANNUAL RYEGRASS TALL FESCUE	40 - 50 LB. 30 - 50 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB.	TALL FESCUE	200 LB.	35 LB (6-12-12)	45 LB.	10 LB (10-10-10)
10)	OCTOBER	WHEAT	2 - 3 BU.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA FESCUE	10 LB. 200 LB.	12 LB (10-10-10) 35 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10) 10 LB (10-10-10)
11)	NOVEMBER	WHEAT	2 - 3 BU.	12 LB (10-10-10)	45 LB.	UNHULLED BERMUDA FESCUE	10 LB. 200 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)
12)	DECEMBER	RYE ANNUAL RYEGRASS WHEAT	2 - 3 BU. 40 - 50 LB. 2 - 3 BU.	12 LB (10-10-10) 12 LB (10-10-10) 12 LB (10-10-10)	45 LB. 45 LB. 45 LB.	UNHULLED BERMUDA FESCUE	10 LB. 200 LB.	12 LB (10-10-10) 35 LB (6-12-12)	45 LB. 45 LB. 45 LB.	10 LB (10-10-10) 10 LB (10-10-10)

THE ABOVE SEEDING CHART LISTS ALL POTENTIAL OPTIONS. CONTRACTOR IS TO SUBMIT THE SCHEDULE AND PROPOSED SEED MIXTURE FOR THIS PROJECT FOR ENGINEER'S APPROVAL PRIOR TO SEEDING.

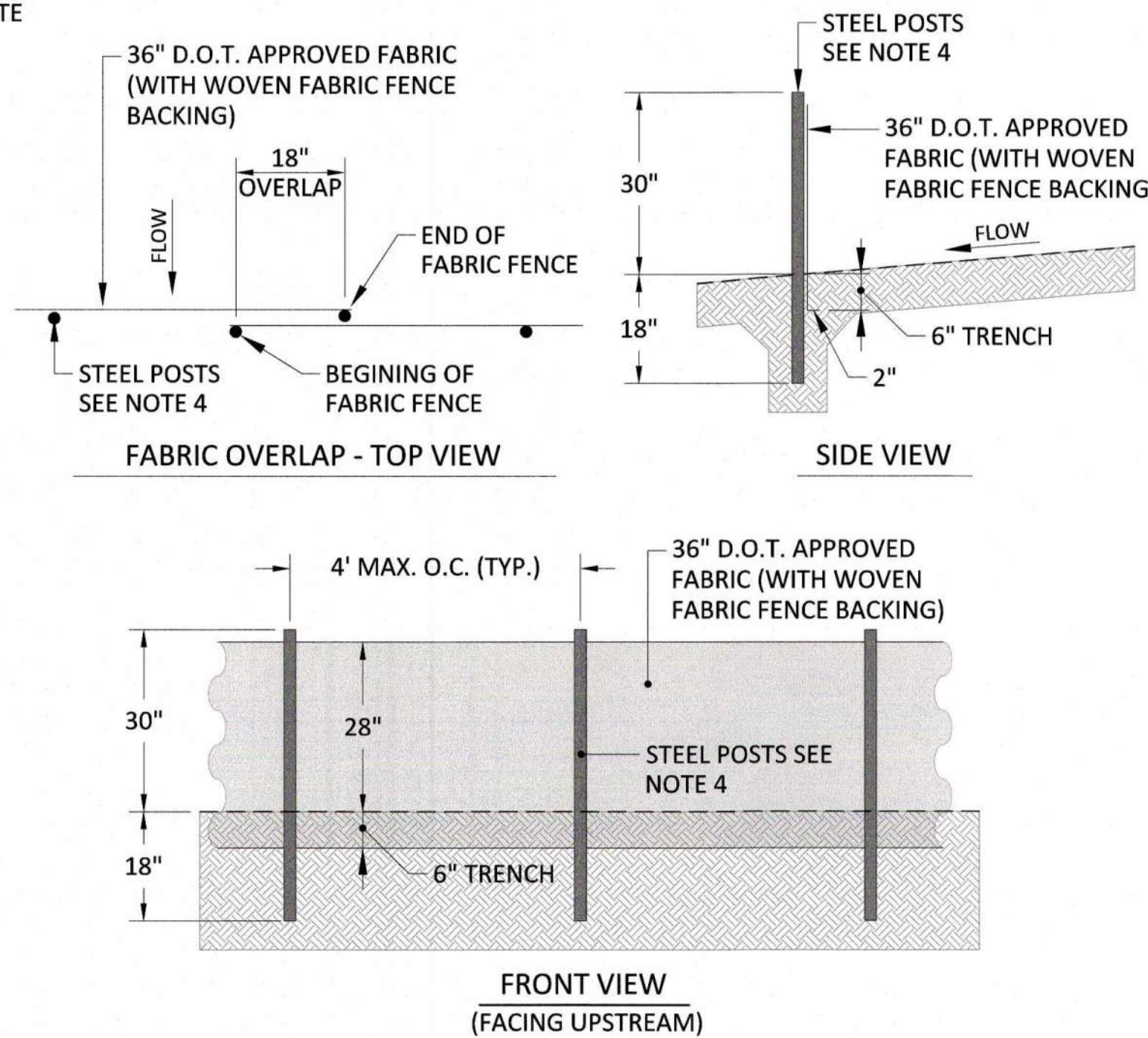


Tw TIRE WASH

NOTE: TIRE WASH (TW) INSTALLATION AT CONSTRUCTION ENTRANCE/EXIT IS OPTIONAL. INSTALL TO PREVENT TRACKING OF DIRT ON TO OFF SITE ROADS AS NEEDED.

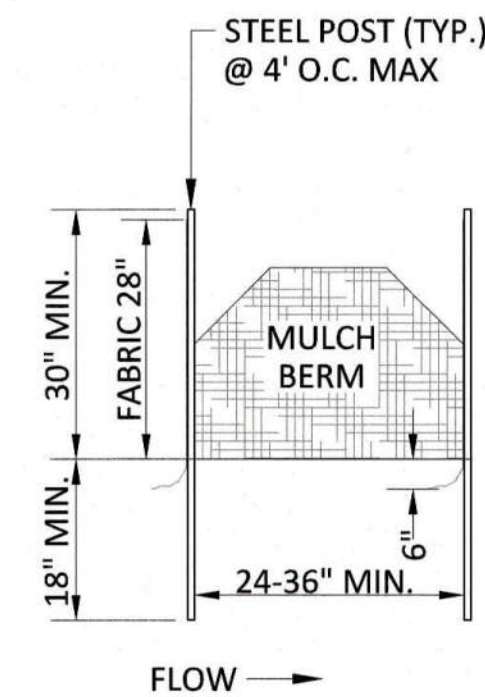
DOUBLE Sd1-S ROW

SEDIMENT BARRIER TYPE SENSITIVE (DOUBLE ROW)



1. SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.
2. SEDIMENT BARRIERS SHALL BE REPLACED WHENEVER THEY HAVE DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE PRODUCT IS REDUCED (APPROXIMATELY SIX MONTHS) OR THE HEIGHT OF THE PRODUCT IS NOT MAINTAINING 80% OF ITS PROPERLY INSTALLED HEIGHT.
3. TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.
4. POSTS SHALL BE STEEL OR AS SPECIFIED ON EROSION, SEDIMENT & POLLUTION CONTROL PLAN.

Sd1-S SEDIMENT BARRIER TYPE SENSITIVE



1. SILT FENCE TO BE TYPE C, DOUBLE -ROW AND USE STEEL STAKES.
2. AREA BETWEEN ROWS TO BE FILLED WITH MULCH 18-INCHES HIGH.
3. HAYBALES MAY BE USED IN LIEU OF MULCH.
4. WHEN SEDIMENT FILLS THE AREA BEHIND THE SILT FENCE TO 1/2 THE HEIGHT OF THE SILT FENCE, THE CONTRACTOR SHALL REMOVE THE SEDIMENT AND PLUGGED MULCH/HAYBALES AND RESHAPE THE BERM WITH CLEAN MULCH AS NEEDED.

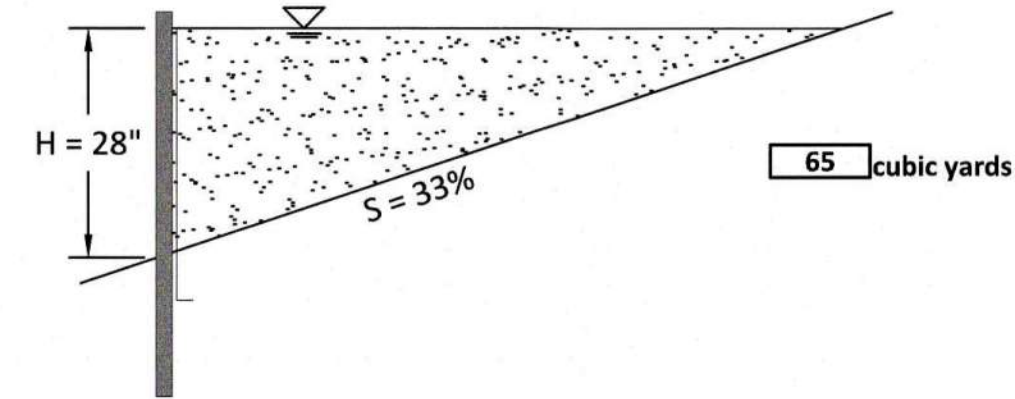
CALCULATION OF PROVIDED SEDIMENT STORAGE

TOTAL DISTURBED AREA (DA) = 0.50 acres

REQUIRED SEDIMENT STORAGE, Vs = DA (acres) * 67 cubic yards/acre

REQUIRED SEDIMENT STORAGE (Vs) = 34 cubic yards

SEDIMENT STORAGE PROVIDED BEHIND SILT FENCE.



$$VOLUME PROVIDED (V_{prov}) = 0.5 * H * (H/S) * L$$

SILT FENCE CROSS SECTION HEIGHT, H = 28 in
MAXIMUM SLOPE, S = 0.33 ft/ft
SILT FENCE PLANVIEW LENGTH, L = 214 ft/ft

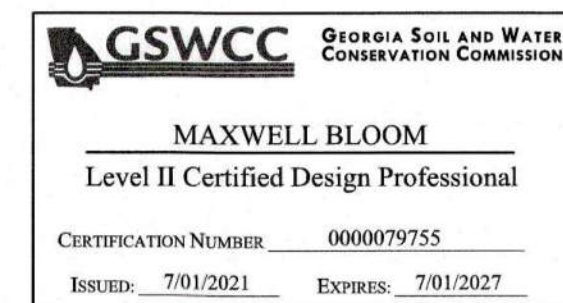
V, prov = 1752 cubic feet =

V,prov (34) > Vs (65)

APPROVED
STATE OF GEORGIA
DEPT OF NATURAL RESOURCES

AUG 06 2024

Environmental Protection Division
Safe Dams Program



FINAL

Freeze and Nichols, Inc.
Georgia Registered Engineering Firm PE-004433



FREEZE & NICHOLS
360 Interstate North Parkway,
Suite 250
Atlanta, GA 30339
Phone - (404) 334-4310
Web - www.freeze.com

MACON WATER AUTHORITY TOWN CREEK RESERVOIR DAM DOWN DRAIN REPAIRS CIVIL EROSION CONTROL DETAILS

NO.	ISSUE	DATE	BY	DATE	DESIGNED	DRAWN	REVIEWED	CHECKED	FILE NAME
1									CV-PR-SITE.dwg

SHEET

C-4

SEQ.