INDEX OF DRAWINGS	
NUM	SHEET TITLE
1	COVER SHEET
2	EXISTING CONDITIONS
3	GRADING & DRAINAGE PLAN
4	STORM DRAIN PROFILES
5	STAKING & PAVING PLAN
6	UTILITY PLAN
7-15	SOIL EROSION CONTROL PLAN
16	DRAINAGE SUMMARY PLAN
17-18	CONSTRUCTION DETAILS

THIS PROJECT IS NOT LOCATED IN A 100 YR FLOOD PLAIN PER FEMA MAP # 13153C0085E EFFECTIVE 09/28/2007

PROPERTY DEVELOPER:

MACNASTY PROPERTIES, LLC
100 WILLINGHAM COURT
WARNER ROBINS, GA 31088
(478) 225-9840

CONTRACTOR:

STROUD AND COMPANY
427 8th STREET
MACON, GA 31201
(478) 743-5097

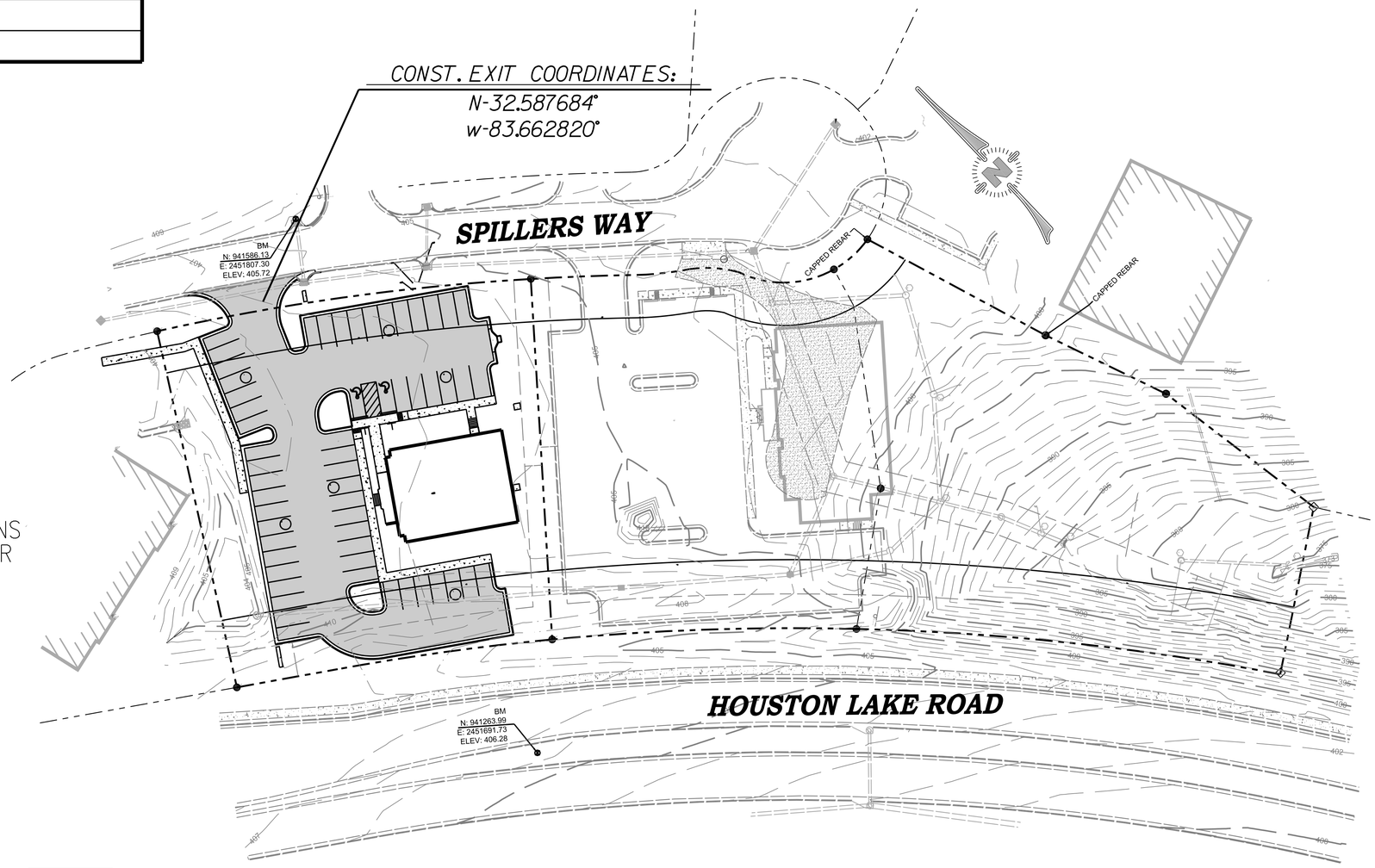
ALL UTILITY CONSTRUCTION SHALL CONFORM TO CITY OF WARNER ROBINS UTILITY DEPARTMENT WATER & SEWER STANDARDS, LATEST EDITION

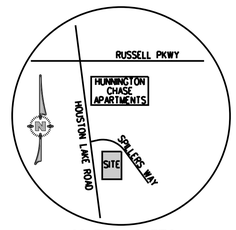
ALL NON-METAL PIPING SHALL HAVE TRACER WIRE.

LAND LOT 143
LAND DISTRICT 5

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax
rsaunders@saunderseng.com

CONSTRUCTION PLANS FOR
NEW BUILDING AT 200 SPILLERS WAY





LOCATION SKETCH

LEGEND	EXISTING	NEW
PROPERTY LINE		
CONTOUR LINE	450	450
POWER POLE		
OVER HEAD POWER	OHP	
GAS LINE	G	
WATER LINE	W	W
FIRE HYDRANT		
WATER VALVE		
SAN. SEWER W/ MANHOLE	SAN	
CLEANOUT		
DRAIN INLET		
CATCH BASIN D.O.T. STD. 1033D		
STORM DRAIN		
SILT FENCE		
SPOT ELEVATION		
CONCRETE SIDEWALK		
ASPHALT PAVING		

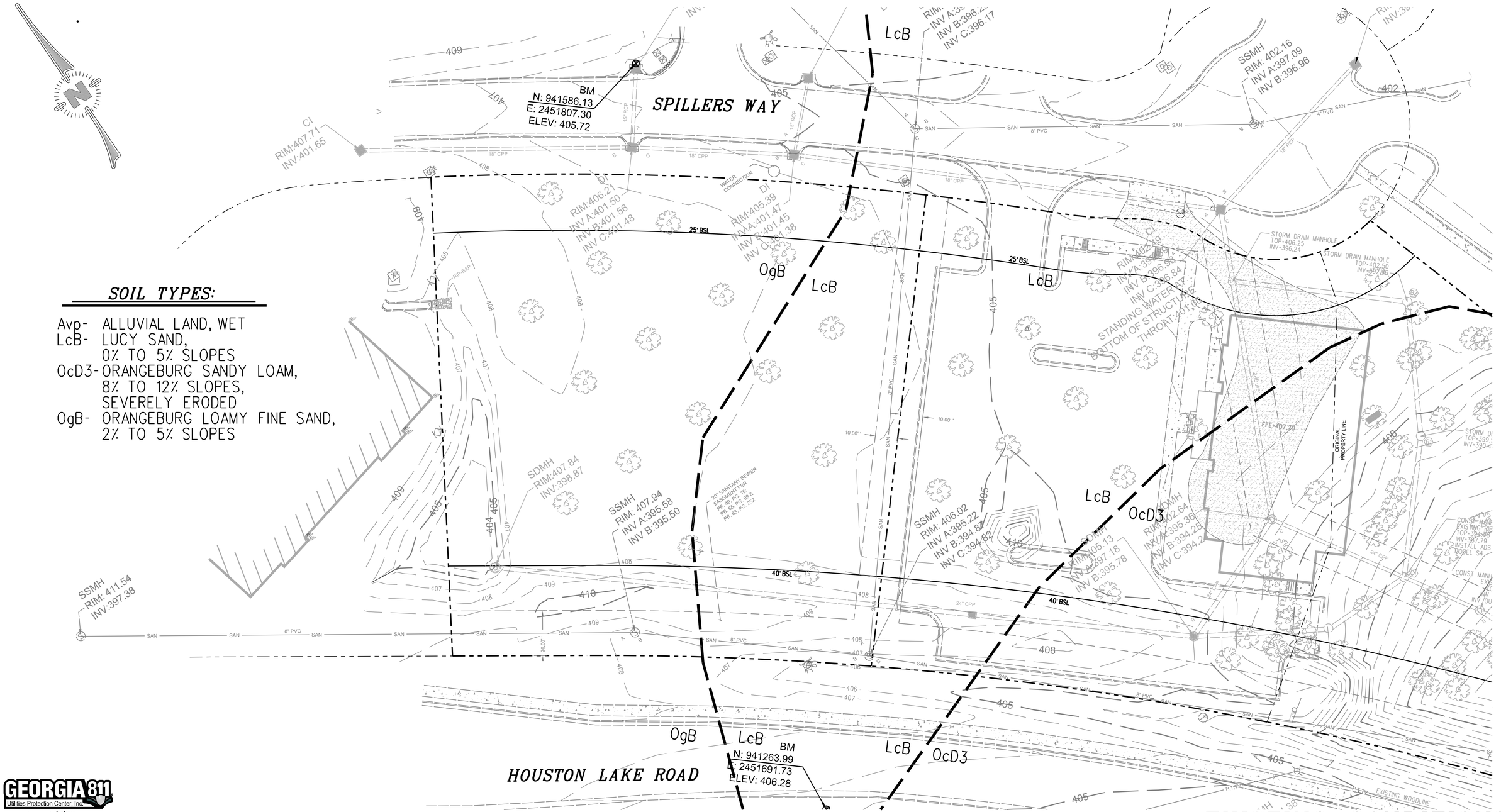
STROUD AND COMPANY

GEORGIA REGISTERED NO 24204 PROFESSIONAL ENGINEER RICHARD B. SAUNDERS

GEORGIA811 www.Georgia811.com

JULY, 2026

SHEET - 1



GEORGIA 811 Utilities Protection Center, Inc. Know what's below. Call before you dig.

EXISTING CONDITIONS

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE

20 0 20 40 60
Graphic Scale in Feet

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED No 24204 PROFESSIONAL ENGINEER RICHARD B. SAUNDERS

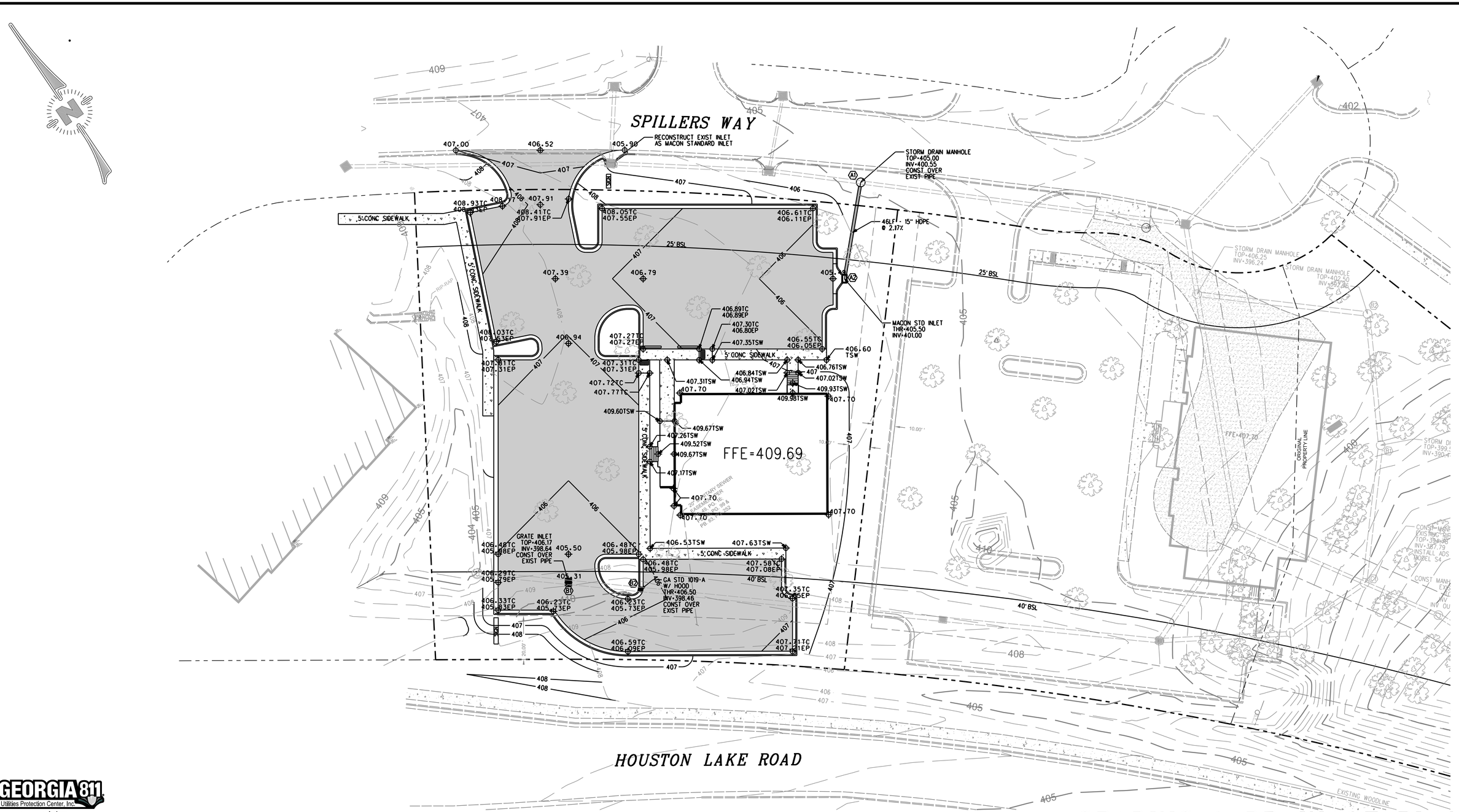
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY

CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088

SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:	
DATE:	JULY. 2026
JOB NO:	1361
DRAWING NO:	3-1
SCALE:	AS SHOWN
SHEET NO:	2



GEORGIA 811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

GRADING & DRAINAGE PLAN

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE

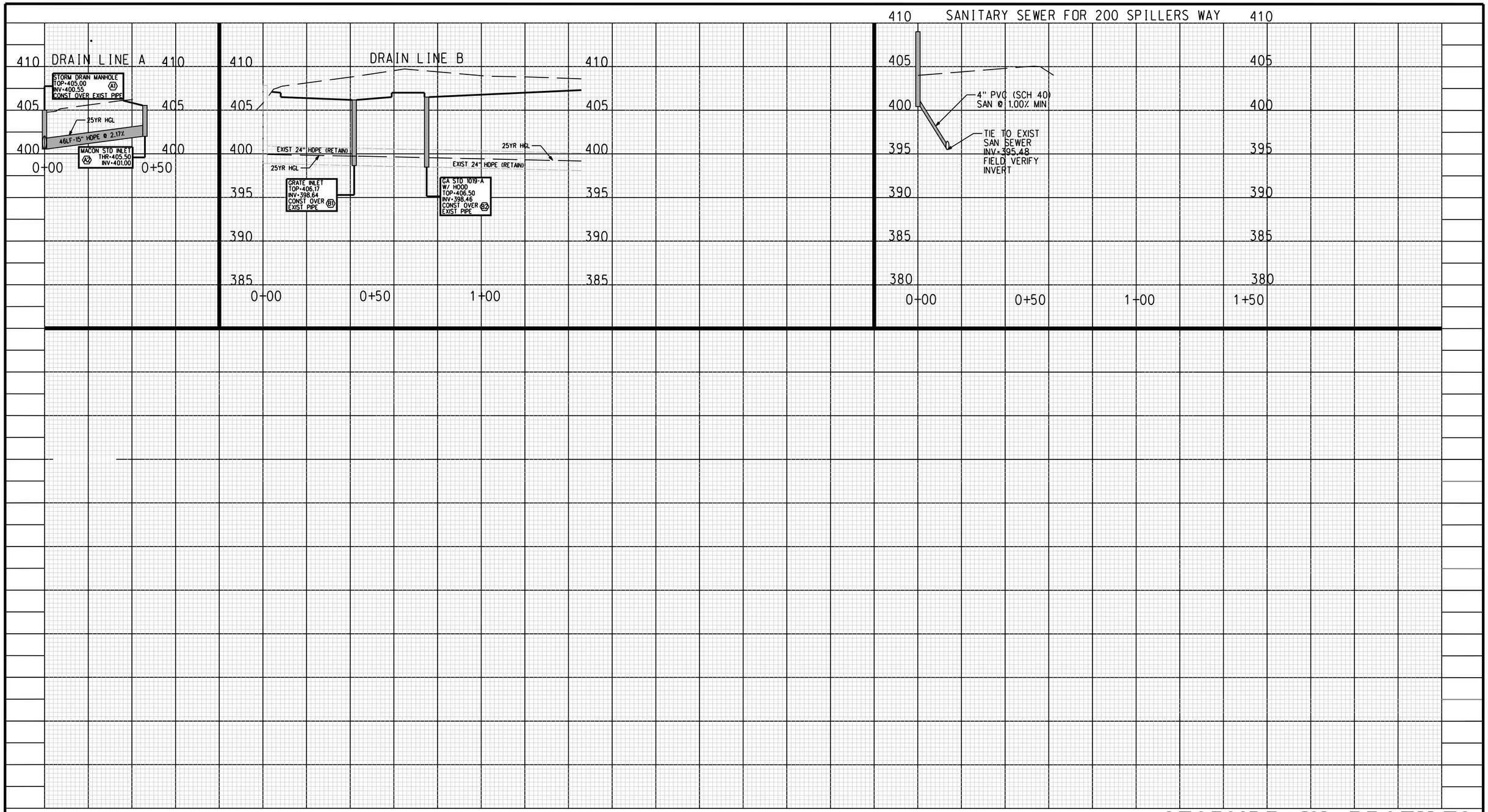
20 0 20 40 60
Graphic Scale in Feet

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED No 24204 PROFESSIONAL ENGINEER RICHARD B. SAUNDERS
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:	DRAWING NO: 5-1
DATE: JULY, 2026	SCALE: AS SHOWN
JOB NO: 1361	SHEET NO: 3



STORMDRAIN PROFILES

Saunders
Engineering
Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE:
1"=20' HORIZ
1"=5' VERT

DATE	REVISIONS	DATE	REVISIONS

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31008
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:
DATE: JULY, 2026
JOB NO: 1361
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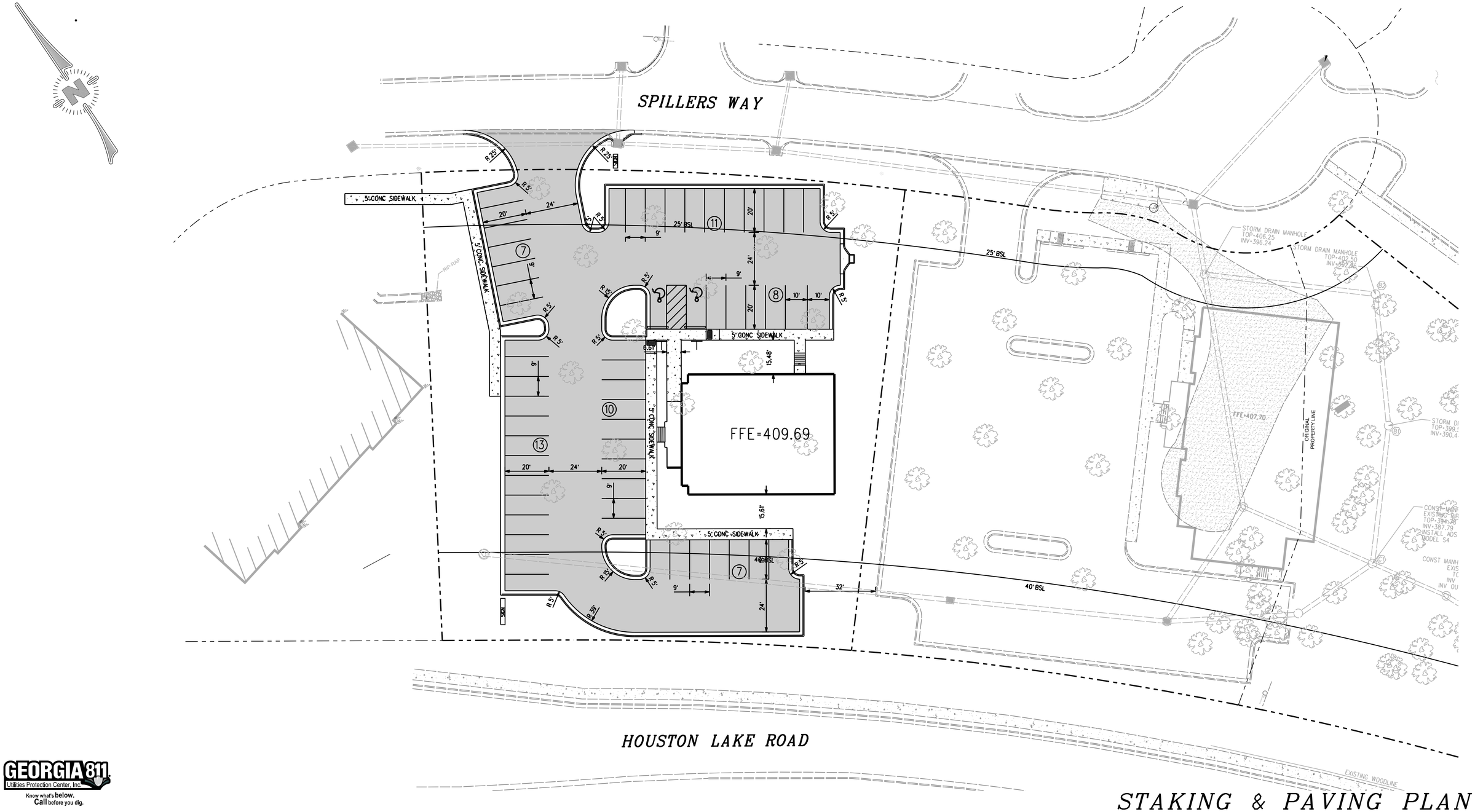


GEORGIA 811
Utilities Protection Center, Inc.
Know what's below.
Call before you dig.

STAKING & PAVING PLAN

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE

20 0 20 40 60
Graphic Scale in Feet

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED No 24204 PROFESSIONAL ENGINEER RICHARD B. SAUNDERS

GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

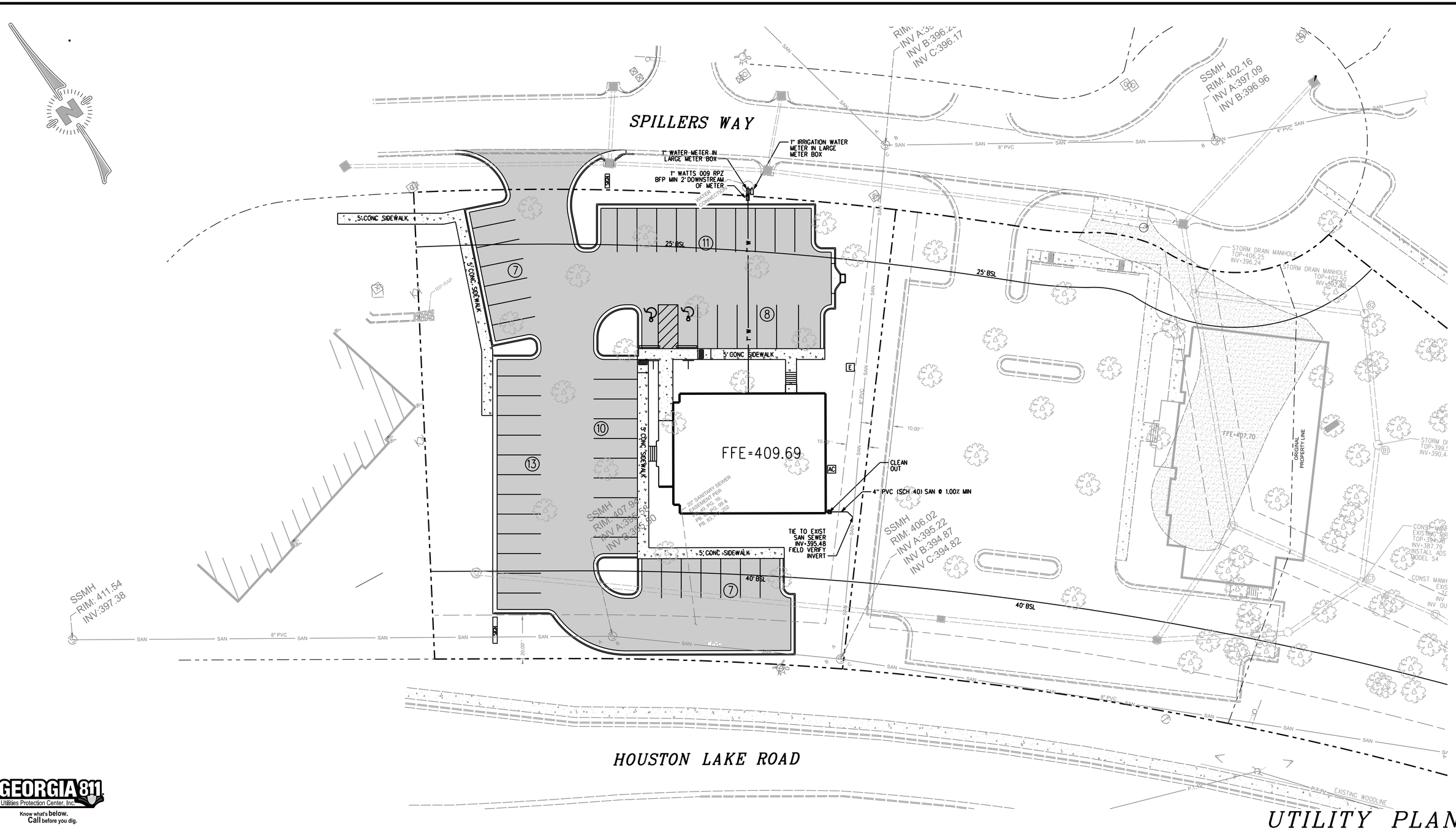
200 SPILLERS WAY

CITY OF WARNER ROBINS, GEORGIA

MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088

SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:	DRAWING NO: 8-1
DATE: JULY. 2026	SCALE: AS SHOWN
	SHEET NO: 5
JOB NO: 1361	



GEORGIA 811 Utilities Protection Center, Inc.
Know what's **below.** **Call** before you dig.

UTILITY PLAN

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

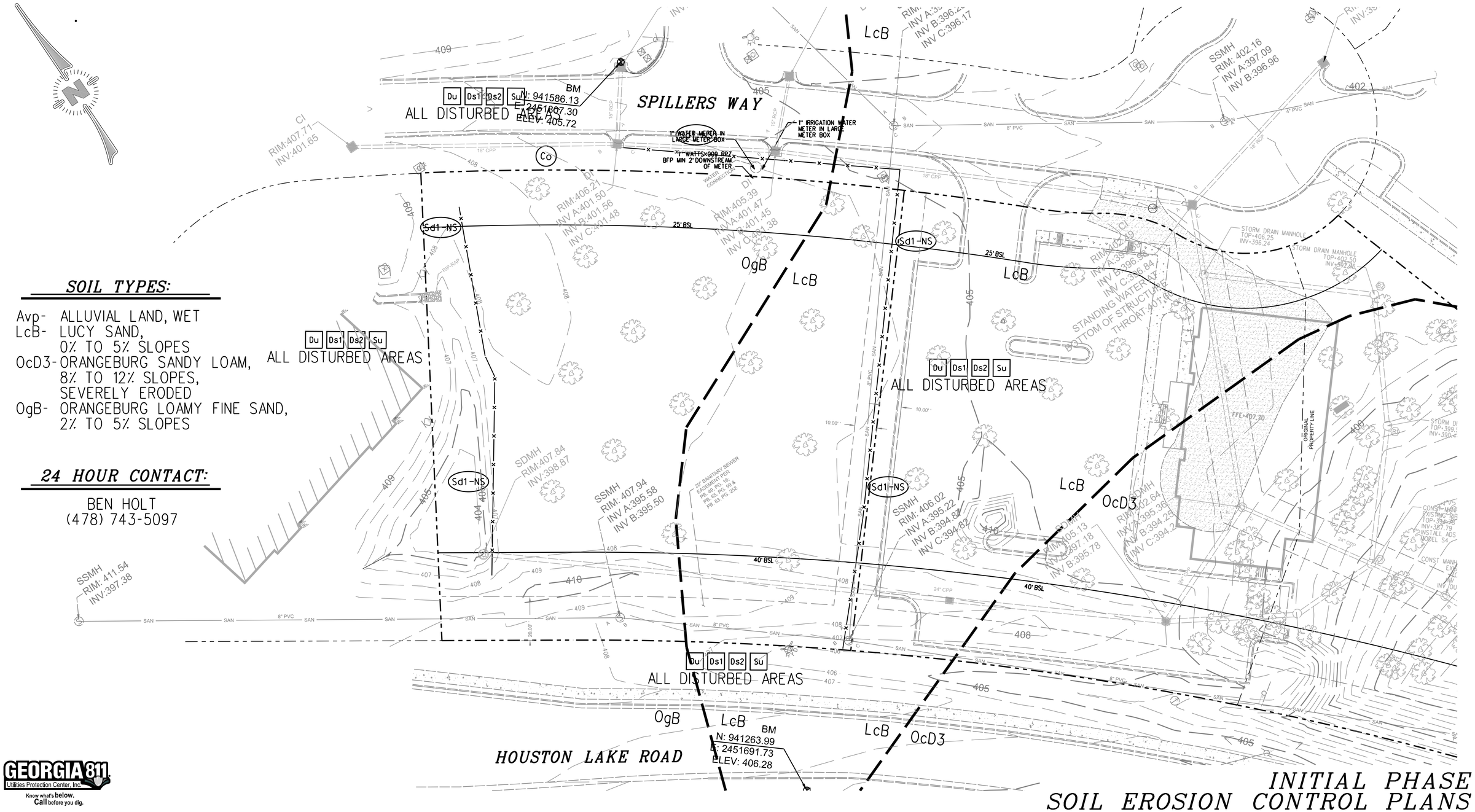
SCALE
20 0 20 40 60
Graphic Scale in Feet

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED No 24204 PROFESSIONAL ENGINEER RICHARD B. SAUNDERS
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:	DRAWING NO:
	9-1
DATE: JULY. 2026	SCALE: AS SHOWN
JOB NO: 1361	SHEET NO: 6



SOIL TYPES:

Avp- ALLUVIAL LAND, WET
LcB- LUCY SAND, 0% TO 5% SLOPES
OcD3- ORANGEBURG SANDY LOAM, 8% TO 12% SLOPES, SEVERELY ERODED
OgB- ORANGEBURG LOAMY FINE SAND, 2% TO 5% SLOPES

24 HOUR CONTACT:

BEN HOLT
(478) 743-5097

GEORGIA 811
Utilities Protection Center, Inc.
Know what's below. Call before you dig.

INITIAL PHASE SOIL EROSION CONTROL PLANS

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE
20 0 20 40 60
Graphic Scale in Feet

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED No 24204 PROFESSIONAL ENGINEER RICHARD B. SAUNDERS
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:	
DATE:	JULY. 2026
JOB NO:	1361
DRAWING NO:	11-1
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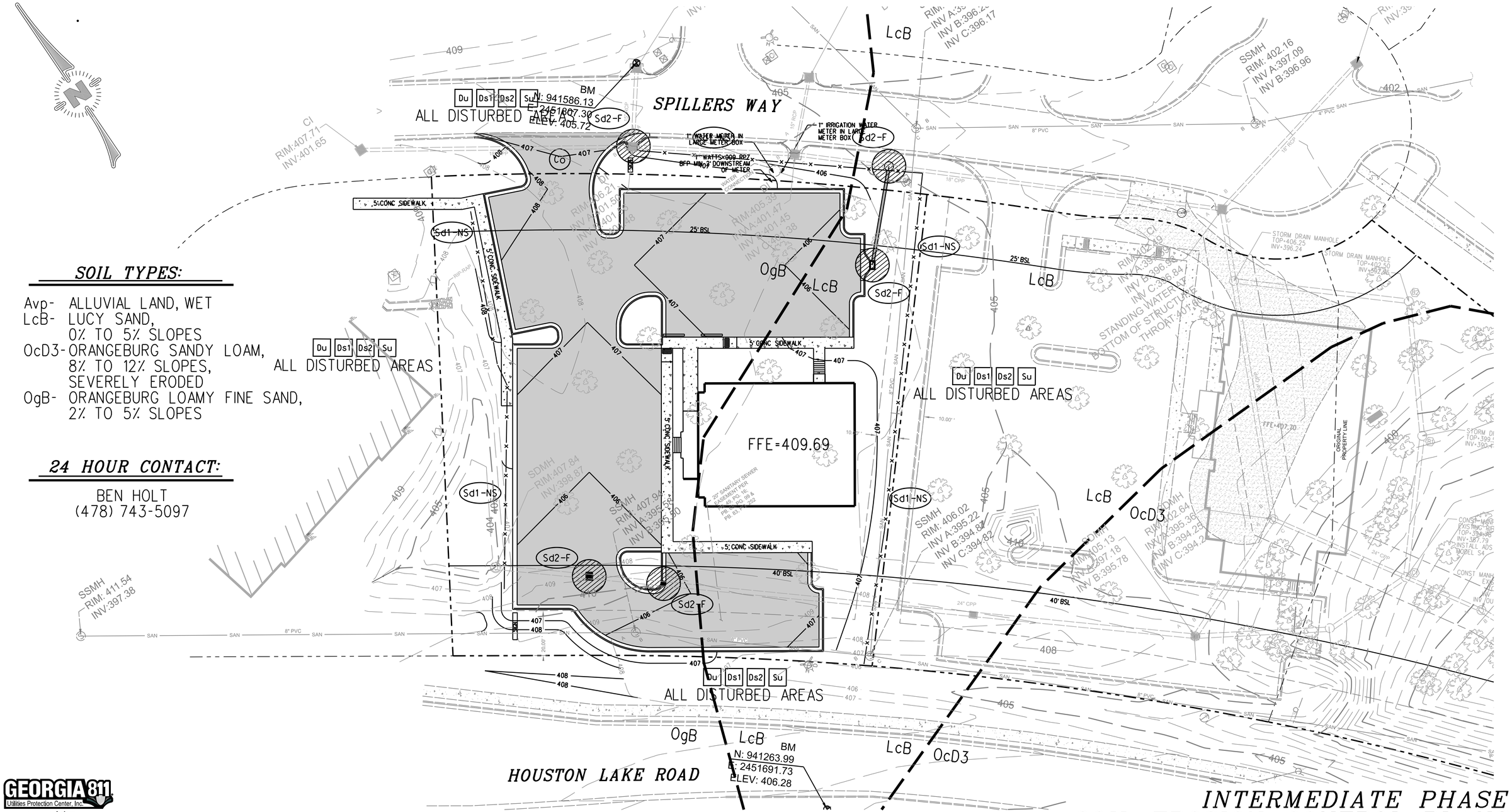


SOIL TYPES:

Avp- ALLUVIAL LAND, WET
LcB- LUCY SAND, 0% TO 5% SLOPES
OcD3- ORANGEBURG SANDY LOAM, 8% TO 12% SLOPES, SEVERELY ERODED
OgB- ORANGEBURG LOAMY FINE SAND, 2% TO 5% SLOPES

24 HOUR CONTACT:

BEN HOLT
(478) 743-5097

GEORGIA 811
Utilities Protection Center, Inc.
Know what's below. Call before you dig.

INTERMEDIATE PHASE SOIL EROSION CONTROL PLANS

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

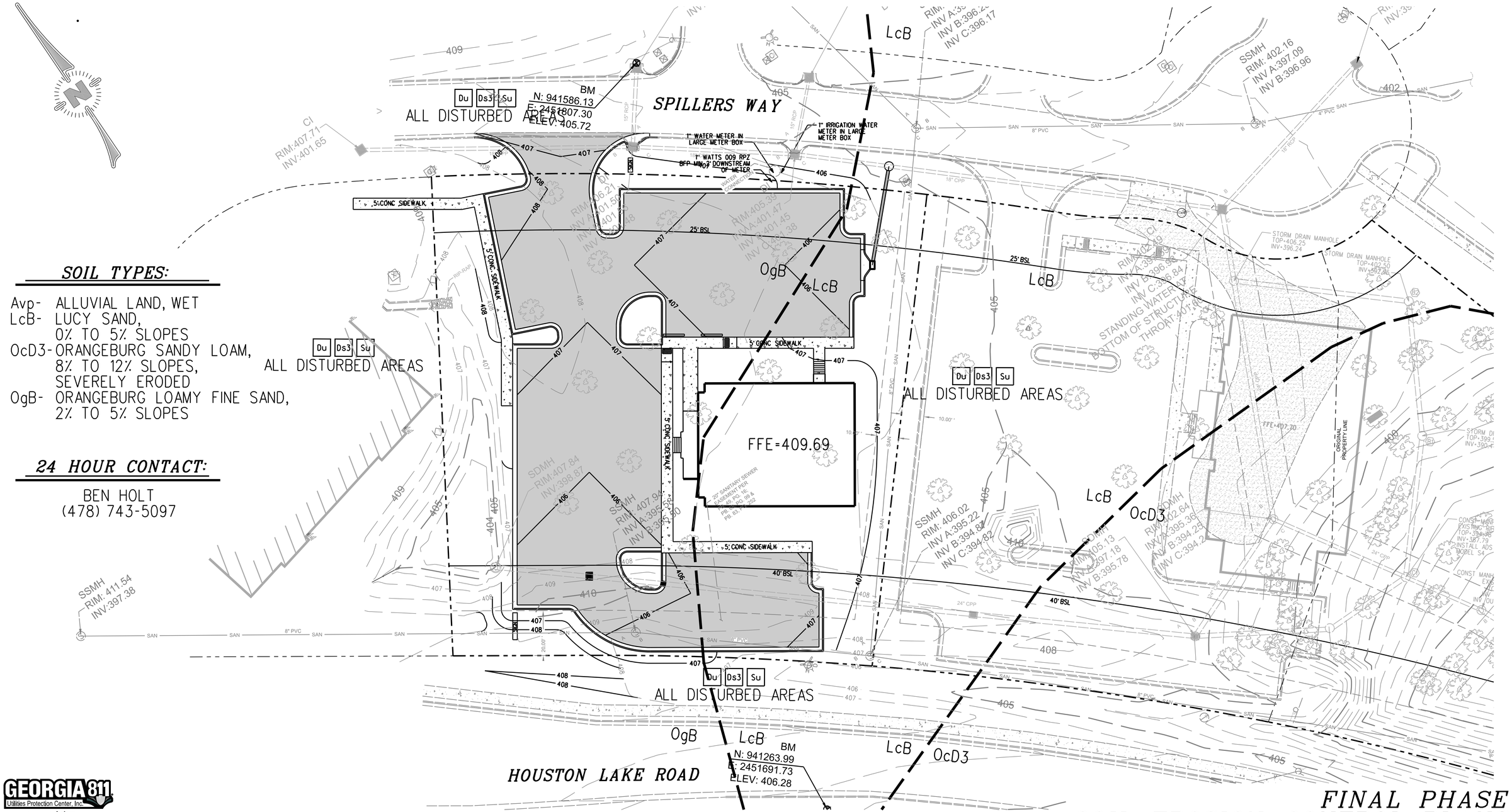
SCALE
20 0 20 40 60
Graphic Scale in Feet

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED No 24204 PROFESSIONAL ENGINEER RICHARD B. SAUNDERS
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:
DATE: JULY, 2026
JOB NO: 1361
DRAWING NO: 11-2
SCALE: AS SHOWN
SHEET NO: 8



SOIL TYPES:

Avp- ALLUVIAL LAND, WET
LcB- LUCY SAND, 0% TO 5% SLOPES
OcD3- ORANGEBURG SANDY LOAM, 8% TO 12% SLOPES, SEVERELY ERODED
OgB- ORANGEBURG LOAMY FINE SAND, 2% TO 5% SLOPES

24 HOUR CONTACT:

BEN HOLT
(478) 743-5097

GEORGIA 811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

FINAL PHASE SOIL EROSION CONTROL PLANS

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE
20 0 20 40 60
Graphic Scale in Feet

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED No 24204 PROFESSIONAL ENGINEER RICHARD B. SAUNDERS
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:	DRAWING NO: 11-3
DATE: JULY, 2026	SCALE: AS SHOWN
JOB NO: 1361	SHEET NO: 9

Owner/Developer: (Primary Permittee)

Owner Name: MacNasty Properties, LLC
Address: 100 Willington Court
City State Zip: Warner Robins, GA 31088
Phone Number: (478) 225-9840
Email: stroud@stroudandcompany.com

24 Hour Contact

Name: Ben Holt
Phone: (478) 743-5097
Email: bholt@stroudandcompany.com

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN(ESPC)

This plan was prepared as required by NPDES General Permit No.GAR 100001. These plan sheets and all requirements of the General Permit as well as local, state, and federal regulations or laws apply.

SITE DESCRIPTION

Owner/Developer as Primary Permittee will oversee site construction located within the property situated in Land Lot 143 of the 5 Land District, City of Warner Robins, Houston County, Georgia. The magnitude of the entire development contains 3 acres with 2.32 acres disturbed.

Describe existing conditions of the property: Existing partialy wooded field

Describe property to be developed: Proposed buildings w/ paved parking

No existing wetlands will be impacted by this development.

No state waters exist within 200 feet of the project site.
Construction will begin with placement of perimeter silt protection barriers and construction entrances. After these erosion control best management practices have been installed, clearing and grubbing of vegetation will commence in areas that are to be disturbed. The site will then be graded and utilities will be trenched. Once brought to final grade, the roads will be paved while all other exposed areas will be stabilized with vegetation, sidewalks or structures.

During construction, all storm water run off will be routed through the BMP's shown on the phased erosion control plans to reduce pollutants (suspended solids and sediment) in the storm water discharge from the site.

After site construction, storm water run off from this development will flow into the storm water control facility which will reduce the pollutants in the storm water discharge by using water quality control ponds and/or proprietary water quality control devices.

The difference in Pre-Development and Post-Development of the project corridor will be the addition of asphaltic based pavement.

All building materials, building products, construction waste, trash, landscaping materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other similar materials must be covered in plastic sheeting or temporary shelters to minimize exposure to precipitation and to stormwater.

RUNOFF COEFFICIENT
Weighted pre construction CN curve number: 55
Weighted post construction CN curve number: 76

NAME OF RECEIVING WATERS
Howard Branch

OWNER / OPERATOR'S CERTIFICATION

(1) I CERTIFY THAT THE RECEIVING WATER(S) OR THE OUTFALL(S) OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S) WILL BE MONITORED IN ACCORDANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN.

(2) I CERTIFY THAT THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN HAS BEEN PREPARED IN ACCORDANCE WITH PART IV OF THE GENERAL NPDES PERMIT GAR 100001. THE PLAN WILL BE IMPLEMENTED, AND THAT SUCH PLAN WILL PROVIDE FOR COMPLIANCE WITH THIS PERMIT.

(3) I CERTIFY UNDER THE PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED UPON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

(4) I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT GAR 100001.

(5) I CERTIFY THAT THE APPLICABLE PORTIONS OF THE EROSION CONTROL PLANS WILL BE PROVIDED TO EACH SECONDARY PERMITTEE PRIOR TO THE SECONDARY PERMITTEE CONDUCTION ANY CONSTRUCTION ACTIVITY.

OWNER / OPERATOR'S SIGNATURE

SURVEY INFORMATION

Boundary information provided by: SAM, LLC
Topographic information provided by: SAM, LLC

The site is located in Land Lot 143, Land District 5, Houston County, GA. Gross acreage of tract: 3 more or less.

EROSION CONTROL CERTIFICATION

(1) I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH LAND DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECIEVING WATERS) OF THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR100001

(2) I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION.

(3) I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (a) ALL PERENNIAL AND INTERMEDIATE STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHINS MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMEDIATE STREAMS AND OTHER WATER BODIES, OR (b) WHERE ARE SUCH SPECIFIC IDENTIFIED PERENNIAL OF INTERMEDIATE STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGEMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO GAR 100001, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC INDENTIFIED SAMPLED RECIEVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC INDENTIFIED UN-SAMPLED RECIEVING WATER.

(4) THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT AND CERTIFY THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMPS AND SEDIMENT BASINS IN ACCORDANCE WITH PART IV.A.5. WITHIN 7 DAYS AFTER INSTALLATION

(5) I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgement, utilizing the factors required in General NPDES Permit No. GAR 100001, that the increase in turbidity of each specific identified sampled recieving water will be representative of the increase in the turbidity of a specific identified un-sampled recieving water.

RICHARD [illegible] GSWCC LEVEL II CERTIFICATION: 00000000156

CONST. EXIT COORDINATES:

N-32.587684°
w-83.662820°

ROUTED FLOWS:

STORM FREQUENCY	FLOWS (CFS)
Q2	2.70
Q5	3.17
Q10	5.19
Q25	9.63
Q50	14.26
Q100	16.82

CONSTRUCTION SCHEDULE:

ITEM	DESCRIPTION	MONTHS OF CONSTRUCTION 1	2	3	4	5	6	7	8	9
1	SILT BARRIER INSTALLATION									
2	CLEARING AND GRUBBING									
3	RETENTION BASIN									
4	GRADING									
5	STORM DRAINAGE									
6	UTILITIES									
7	TEMPORARY GRASSING									
8	BUILDING									
9	CURB AND GUTTERS									
10	SIDEWALKS									
11	BASE AND PAVING									
12	FINAL GRASSING & REMOVAL OF TEMPORARY STRUCTURES									
13	MAINTAIN SOIL AND EROSION CONTROL MEASURES									

APPROX. STARTING DATE: MAY 15, 2025
APPROX. COMPLETION DATE: FEB 15, 2026

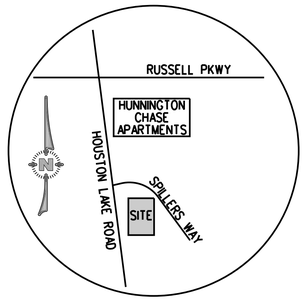
SOUTHERN COASTAL PLAIN VEGETATIVE COVERS

MONTH	TEMPORARY SEED	RATE/ACRE	PERMANENT SEED	RATE/ACRE
January	Ryegrass*	40 lb.	Unhulled Bermuda Sericea Lespedeza[2]	6 lb. 75 lb.[1]
February			Unhulled Bermuda Sericea Lespedeza[2]	6 lb. 75 lb.
March	Rye Annual Lespedeza Weeping Lovegrass	28 lb. 10 lb. 2 lb.	Unhulled Bermuda Sericea Lespedeza[2]	6 lb. 75 lb.
April	Rye Brown Top Millet Annual Lespedeza Sudan Grass*	28 lb. 10 lb. 10 lb. 60 lb.	Weeping Lovegrass Hulled Bermuda Bahia	2 lb. 3 lb. 30 lb.
May	Weeping Lovegrass Sudan Grass* Brown Top Millet	2 lb. 60 lb. 10 lb.	Weeping Lovegrass Hulled Bermuda Bahia	2 lb. 6 lb. 30 lb.
June	Weeping Lovegrass Sudan Grass* Brown Top Millet	2 lb. 60 lb. 10 lb.	Weeping Lovegrass Hulled Bermuda	2 lb. 6 lb.
July	Weeping Lovegrass Sudan Grass* Brown Top Millet	2 lb. 60 lb. 10 lb.		
August	Ryegrass*	40 lb.		
September	Wheat	3 bu.	Sericea Lespedeza (Unscarified)	75 lb.
October	Wheat	3 bu.	Unhulled Bermuda Sericea Lespedeza[2]	6 lb. 75 lb.
November	Wheat	3 bu.	Unhulled Bermuda Sericea Lespedeza	6 lb. 75 lb.
December	Wheat Ryegrass	3 bu. 40 lb.	Unhulled Bermuda Sericea Lespedeza	6 lb. 75 lb.

[1] Use a minimum of 40 lbs. scarified seed. Remainder may be unscarified, clean hulled seed
[2] Use either common Serala, or Interstate Sericea Lespedeza.

*Very competitive and is not to be used in mixtures.

FERTILIZER SHALL BE 10-10-10 AND APPLIED AT A RATE OF 1500 LB/ACRE
LIME SHALL BE APPLIED AT A RATE OF 2 TON/ACRE
MULCH SHALL BE APPLIED AT A RATE OF 2 TON/ACRE



LOCATION SKETCH

EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

PRE-DEVELOPED FLOWS

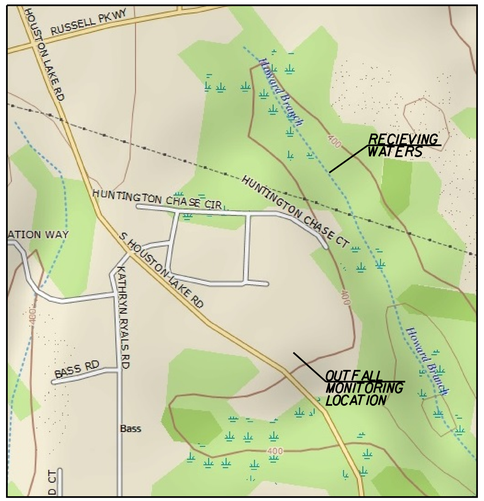
AREA = 3.61AC Cn=59
Tc=23.1min

STORM FREQUENCY	FLOWS (CFS)
Q2	3.19
Q5	6.25
Q10	8.74
Q25	12.00
Q50	15.40
Q100	17.14

POST-DEVELOPED FLOWS

AREA = 3.61AC Cn=76
Tc=8min

STORM FREQUENCY	FLOWS (CFS)
Q2	11.20
Q5	17.31
Q10	21.61
Q25	27.24
Q50	32.94
Q100	35.80



WATERSHED MAP

SOIL DISTURBING ACTIVITIES INCLUDE:

Construction will begin with placement of perimeter silt protection barriers and construction entrances. After these erosion control best management practices have been installed, clearing and grubbing of vegetation will commence in areas that are to be disturbed. The site will then be graded and utilities will be trenched. Once brought to final grade, the roads will be paved while other exposed areas will be stabilized with vegetation, sidewalks or structures.

Soil Disturbing Activities Include:
- Installing a stabilized construction exit, perimeter and other erosion and sediment controls
- Cleaning and grubbing
- Excavation of the foundation
- Grading and excavation for utilities
- Preparation for final planting and seeding
- Completion of on-site stabilization

SEQUENCE OF MAJOR ACTIVITIES

See construction schedule

LIMITS OF DISTURBANCE:

Limits of disturbance shall be no greater than 50 acres for each individual permittee (ie Primary, Secondary, or tertiary) at any one time and no more than 50 contiguous acres at one time without prior written authorization from the EPD district office. If EPD approves the request to disturb 50 acres or more at any one time the ES&PC plan must include at least 4 of the bmp's listed in appendix I.

AMENDMENTS AND REVISIONS:

All amendments/revisions to the es&pc plan which have a significant effect on bmp's with a hydraulic component must be certified by the design professional and submitted to the local reviewing authority for review.

CRITICAL WORK ZONE EROSION CONTROL NOTES:

Shaded areas shown on grading phase erosion control plans represent critical work zones. At the end of each work day all slopes 2:1 or steeper and higher than 5 feet shall receive surface roughening, polymers, and erosion control matting. Additionally, all fill slopes shall receive a diversion dike and temporary down drains along the top of the slope preventing drainage spilling over the edge and down the face of the slope. The temporary down drains shall be constructed with perforated stand pipes at the top of the slope and reconstructed each day as the slope increases in height.

SOIL EROSION CONTROL NOTES

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SCALE

DATE	REVISIONS	DATE	REVISIONS

GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:
DATE: JULY. 2026
JOB NO: 1361
DRAWING NO: 11-4
SCALE: NTS
SHEET NO: 10

CLEARING PHASE - EROSION CONTROL NOTES

Prior to the land disturbing construction,the contractor shall schedule a pre-construction meeting with the area site development inspector.

The contractor shall observe the project sequence shown on the plans. The contractor shall maintain careful scheduling and performance to ensure that land stripped of its natural cover is exposed only in small quantities.

The owner agrees to provide and maintain off-street parking on the subject property during the entire construction period.

No staging areas,material storage,concrete wash out areas,or debris burn and burial holes shall be located within 500 feet of designated tree protection areas.

A copy of the approved land disturbance plan and permit shall be present on the site at all times.The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to,or concurrent with, land-disturbing activities.

Prior to commencing land disturbance activity,the limits of land disturbance shall be clearly and accurately demarcated with stakes,ribbons,or other appropriate means. The location and extent of all authorized land disturbance activity shall be demarcated for the duration of the construction activity. No land disturbance shall occur outside the approved limits indicated on the approved plans.

Prior to any other construction,a stabilized construction entrance shall be constructed at each point of entry to or exit from the site or onto any public roadway.

The following initial erosion control measures shall be implemented prior to any other construction activity.

1.The construction exit,consisting of a minimum pad size of 20 feet by 50 feet with a minimum of 6 inch thick stone shall be placed as shown on the plan.The stone size should consist of course aggregate between 1-1/2 inch & 3-1/2 inch in diameter and overlaid on a geotextile underliner.The geotextiler underliner shall meet the requirements of AASHTO M288-96,section 7.3 separation requirements.

2.Immediately after the establishment of construction entrance/exits,all perimeter erosion control and storm water management devices shall be installed as shown on the clearing phase erosion control plan.

3.Type "C" silt fence should be installed at the perimeter of the disturbed area as shown on the plan.The silt fence should be placed in accordance with the manual for erosion control in Georgia,Table 6-20.2. The silt fence should be kept erect at all times and repaired when requested by the site inspector or the project design professional of record. Silt should be removed when accumulation reaches 1/2 height of the barrier. The perimeter silt fence should be inspected daily for any failures. Any failures of said fencing should be repaired immediately.

4.Inlet sediment protection measures shall be installed on all existing storm structures as shown on the plan. See separate details for specifics on type of inlet protection specified.

5.Stone check dams shall be installed in areas of concentrated flows as shown on the plan.

6.Tree protection fencing should be installed prior to the start of any land disturbance activity and maintained until final landscape is installed. The tree protection fencing should be inspected daily. Any failures of said fencing should be repaired immediately.

7.Two rows of type "C" silt fence shall be installed along all tributary or stream buffers as shown on the plan. The two rows of silt fence should be a minimum of 3 feet apart.

After installation of initial erosion control measures the site contractor shall schedule an inspection by the project design professional within 7 days of installation. No other construction activities shall occur until the project design professional approves the installation of said erosion control measures. If unforeseen conditions exist in the field that warrant additional erosion control measures,the contractor must construct any additional erosion control devices deemed necessary by the site inspection.

After approval of the initial erosion control installation,the contractor may proceed with clearing and grubbing activities. As clearing permits the contractor shall construct temporary sediment ponds and diversion dikes as shown on the clearing phase plan to control erosion and stormwater runoff.

The contractor can utilize cleared trees as barrier brush sediment control in areas shown on plan where initial grading activities will not occur.

No burn or bury pits shall be permitted on the construction site without written permission by the owner and/or the engineer of record.

Additional silt barriers must be placed as shown on the plan as access is obtained during clearing. No grading shall take place until silt barrier installation and sediment ponds are constructed as shown on the clearing phase erosion control plan.

All silt fence must meet the requirements of section 171-temporary silt fence for the department of transportation,state of Georgia,standard specifications,1983 edition.

All items in this section of the specifications shall meet the requirements as set forth in section 161,162,163,and 164 of the Georgia D.O.T.standard specifications, for roads and bridges.

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of land disturbance.

All disturbed areas left mulched after 30 days shall be stabilized with temporary vegetation.

Sediment and erosion control measures should be checked after each rain event. Each device is to be maintained or replaced if sediment accumulation has reached one half the capacity of the device. Additional devices must be installed if new channels have developed.

The construction exit shall be maintained in a condition which will prevent track or flow of mud onto public right-of-way. This may require periodic top dressing with 1-3 inches of stone,as conditions demand. All materials spilled,dropped,washed,or tracked from vehicle onto public roadway or into storm drain must be removed immediately.

Contractor shall inspect control measures at the end of each working day to ensure measures are functioning properly.

Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control,additional erosion and sediment control measures shall be implemented to control or treat the sediment source as directed by the onsite inspector or the civil engineer.

Failure to install,operate,or maintain all erosion control measures will result in all construction being stopped on the job until such measures are corrected back to the approved erosion control plans.

The site contractor will be responsible for maintenance of all erosion control measures including replacing or repairing any damaged devices due to any construction activity by others.

FINAL PHASE - EROSION CONTROL NOTES

The following erosion control measures shall be implemented during the final erosion control phase of construction.

Sediment shall not be washed into inlets. It shall be removed from the sediment traps and disposed of and stabilized so that it will not enter the inlets again.

Mulch or temporary grassing shall be applied to all exposed areas within 7 days of land disturbance.

All disturbed areas left mulched after 30 days shall be stabilized with temporary grassing.

The contractor shall maintain all sediment ponds and erosion control measures until permanent ground cover is established. Sediment shall be cleaned out of the ponds when it reaches the half way point on the riser.

After curbing has been installed and prior to construction of catchbasin tops,all inlet sediment traps on single and double wing catch basins along with any other curb inlets shall be removed and replaced with hay bale inlet protection. After catch basin tops have been poured,contractor shall utilize curb inlet protection "Pigs in a Blanket". See separate detail for additional information.

All roadway and parking shoulders should be applied with vegetative cover as soon as final grade is achieved behind curbs.

Sediment and erosion control measures should be checked after each rain event. Each device is to be maintained or replaced if sediment accumulation has reached one-half the capacity of the device. Additional devices must be installed if new channels have developed.

The construction exit shall be maintained in a condition which will prevent track or flow of mud onto public right-of-way. This may require periodic top dressing with 1-3" of stone,as conditions demand. All materials spilled,dropped,washed,or tracked from vehicle onto public roadway or into storm drain must be removed immediately.

Contractor shall inspect control measures at the end of each working day to ensure measures are functioning properly.

Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control,additional erosion and sediment control measures shall be implemented to control or treat the sediment source as directed by the onsite inspector or the civil engineer.

Failure to install,operate,or maintain all erosion control measures will result in all construction being stopped on the job until such measures are corrected back to the approved erosion control plans.

The site contractor will be responsible for maintenance of all erosion control measures including replacing or repairing any damaged devices due to any construction activity by others.

Upon completion of the project and receipt of certificate of occupancy,the contractor shall remove all temporary erosion control measures and dispose of them unless noted on plans.

GRADING PHASE - EROSION CONTROL NOTES

The following erosion control measures shall be implemented during the preliminary grading phase of construction:

During construction,the contractor shall maintain careful scheduling and performance to ensure that land stripped of its natural ground cover is exposed only in small quantities and therefore limited durations,before permanent erosion protection is established. Note sub phases shown on plans.

Earthwork operations in the vicinity of stream buffers shall be carefully controlled to avoid dumping or sloughing into the buffer areas.

Sediment shall not be washed into inlets. It shall be removed from the sediment traps and disposed of and stabilized so that it will not enter the inlets again.

Erosion control devices shall be installed immediately after ground disturbance occurs.The location of some of the erosion control devices may have to be altered from that shown on the approved plans if drainage patterns during construction are different from the proposed drainage patters. It is the contractor's responsibility to accomplish erosion control for all drainage patterns created at various stages during construction. Any difficulty in controlling erosion during any phase of construction shall be reported to the design professional immediately.

The contractor shall furnish and maintain all necessary barricades while roadway frontage improvements are being made.

Type "A" silt fence should be installed at the toe of all fill slopes 10 feet or greater in height. The silt fence should be placed in accordance with the manual for erosion control in Georgia,Table 6-20.2. The silt fence shall be maintained until permanent ground cover is established on the slope. Silt shall be removed when accumulation reaches ½ height of the barrier. Additionally,diversion dikes shall be constructed along the top of all said fill slopes with the use of temporary down drains to control storm water run off as shown on the plans. See separate details for additional information.

The contractor shall be responsible for establishing silt fence at the toe of slopes under construction.These silt fence may be relocated and reused after permanent slope stabilization becomes fully established. As they are relocated,any defective materials in the silt fence shall be replaced. In addition,all debris and silt at the previous location shall be removed.

Type "A" silt fence shall be placed at the toe of all dirt stockpile areas. See separate details for additional information.

Cut and fill slopes are not to exceed "2H:1V"

At the end of each work day all newly disturbed slopes steeper than 2.5:1 and higher than 5 feet shall recieve surface roughening,polymers,and erosion control matting. Additionally,all fill slopes shall recieve a diversion dike and temporary down drains along the top of the slope preventing dainage spilling over the edge and down the face of the slope. The temporary down drains shall be constructed with perforated stand pipes at the top of the slope and reconstructed each day as the slope increases in height. See seperate details for additional information.

Inlet sediment protection measures shall be installed on all storm structures as they are constructed. See plan view for specific type and separate details for additional information on type of inlet protection specified.

Storm drain outlet protection shall be placed at all outlet headwalls as soon as the headwall is constructed. See separate details for additional information.

Stone check dams shall be installed in areas of concentrated flows as shown on the plan. See separate detail for additional information.

All drainage swales shall be applied with vegetative cover as soon as final grade is achieved.

All graded areas shall be applied with vegetative cover as soon as final grade is achieved.

Mulch or temporary grassing shall be applied to all exposed areas with 7 days of land disturbance.

All disturbed areas left mulched after 30 days shall be stabilized with temporary grassing.

After preliminary grading activities,the contractor shall construct temporary sediment basins and diversion dikes as shown on plan. The contractor shall maintain the sediment pond until permanent ground cover is established. Sediment shall be cleaned out of the ponds when it reaches the 1/3 depth of basin. See separate details for additional information.

Sediment and erosion control measures should be checked after each rain event. Each device is to be maintained or replaced if sediment accumulation has reached one half the capacity of the device. Additional devices must be installed if new channels have developed.

The construction exit shall be maintained in a condition which will prevent track or flow of mud onto public right-of-way. This may require periodic top dressing with 1-3 " of stone,as conditions demand. All materials spilled,dropped,washed,or tracked from vehicle onto public roadway or into storm drain must be removed immediately.

Contractor shall inspect control measures at the end of each working day to ensure measures are functioning properly.

Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control,additional erosion and sediment control measures shall be implemented to control or treat the sediment source as directed by the on site inspector or the civil engineer.

Failure to install,operate,or maintain all erosion control measures will result in all construction being stopped on the job until such measures are corrected back to the approved erosion control plans.

The Constractor will be responsible for maintenance of all erosion control measures including replacing or repairing any damaged devices due to construction by others.

GENERAL NOTES

1.NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FT UNDISTURBED STREAM BUFFER AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25' OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

2.EACH SECONDARY PERMITEE WILL BE PROVIDED WITH A COPY OF THE EROSION CONTROL PLANS OR PORTIONS OF THE PLAN APPLICABLE TO THEIR SITE AND EACH SECONDARY PERMITTEE SHALL SIGN THE PLAN OR PORTION OF THE PLAN APPLICABLE TO THEIR SITE.

3.ANY AMENDMENT TO THE EROSION CONTROL PLANS WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

4.AFTER CONSTRUCTION,EROSION AND SEDIMENTATION WILL BE MANAGED BY STABILIZED LOT CONSISTING OF PAVED DRIVEWAY,GRASSING,LANDSCAPING,AND HOME SITE.

5.MINIMIZING WIND EROSION AND CONTROLLING DUST WILL BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING METHODS:
A.COVERING 30% OR MORE OF THE SOIL SURFACE WITH NON-ERODABLE MATERIAL.
B.ROUGHENING THE SOIL TO PRODUCE RIDGES PERPENDICULAR TO THE PREVAILING WIND.
C.FREQUENT WATERING OF EXCAVATION AND FILL AREAS.
D.PROVIDING GRAVEL OR PAVING AT ENTRANCE / EXIT DRIVES

EROSION AND SEDIMENT CONTROL

CONTROLS

All perimeter silt fences and construction exits shall be in place prior to any land disturbing activities.

Existing vegetation shall be left in place until such time that land disturbing activities are to take place upon that portion of the site.When construction activities have ceased in an area,that area shall be stabilized within 14 days if the area is not yet to final grade.It shall be mulched.If the area is to be final grade and will eventually contain site improvements such as the structures or sidewalks,it shall be temporarily seeded.Areas brought to final grade that will remain pervious are to be permanently seeded.Allowable exceptions from the NPDES General Permit,GAR 100002,are noted below.

•Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded my snow cover or other adverse weather conditions,stabilization measures shall be initiated as soon as practicable.

•Where construction activity will resume on a portion of the site within 21 days from when activities ceased,(e.g.,the total time period that construction activity is temporarily ceased is less than 21 days) then stabilization measures do not have to be initiated on that portion of the site by the 14th day after construction activity temporarily ceased.

Please refer to detail sheets for the land disturbance construction schedule and temporary and permanent grassing schedules.

Storm water from this development will be routed through the existing storm water systems and grass swales to the existing lake (detention).The storm water will be discharge from the detention facilities to a tributary of Big Indian Creek.

NON-STORM WATER DISCHARGES

All non-storm water discharges will be routed through on site BMPs and the storm water management systems where possible.These discharges include flushing of water and fire lines,irrigation,water,ground water,dewatering of pits or depressions within the construction site and rinse off water of non-toxic materials.

OTHER CONTROLS

NO WASTE WILL BE DISPOSED OF INTO STORM WATER INLETS OR WATERS OF THE STATE.

WASTE MATERIALS

All waste materials will be collected and stored in a securely lidded metal dumpster. The dumpster will meet all solid waste management regulations.All trash and construction debris from the site will be deposited in the dumpster.The dumpster will be emptied a minimum of once a week or more often if necessary and trash will be hauled as required by local regulations.No construction waste will be buried onsite.

All personnel will be instructed on proper procedures for waste disposal.A notice stating these practices will be posted at the jobsite and the contractor will be responsible for seeing that these procedures are followed.

Waste materials shall not be discharged to waters of the State,except as authorized by a Section 404 Permit.

CLEARING PHASE SEDIMENT BASIN RATIONAL NOTES:

THE PROPOSED DETENTION POND WILL BE RETROFITTED TO ACCOMODATE 67 CUBIC YARDS OF STORAGE PER ACRE DISTURBED.

AS PART OF THE CONSTRUCTION PROCESS, WATER QUALITY VOLUME WILL BE EXCAVATED FROM THE BOTTOM OF THE DETENTION POND TO CONTROL POLLUTANTS IN THE STORM WATER.

SOIL EROSION CONTROL NOTES

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SCALE

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED PROFESSIONAL ENGINEER JOHN B. SAUNDERS
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:	
DATE:	JULY. 2026
JOB NO:	1361
DRAWING NO:	11-5
SCALE:	NTS
SHEET NO:	11

PERMIT COVERAGE:

This plan has been prepared to meet the requirements under the state of Georgia, department of natural resources, environmental protection division (EDP), general permit no. GAG000151 for authorization to discharge under the national pollutant discharge elimination system (NPDES), stormwater discharges associated with construction activity.
Authorized Discharges:

All discharges covered by this permit shall be composed entirely of stormwater except as provided in Part I-C.2 and Part III-A.2 of the permit

PERMIT PART I-C (Eligibility):

I. CONSTRUCTION ACTIVITIES.

This permit authorizes, subject to the conditions of this permit:

a) All discharges of storm water associated with stand alone construction projects, that will result in land disturbance equal to or greater than one (1) acre occurring on or before, and continuing after, the effective date of this permit, (hereforth referred to as existing storm water discharges from construction activities) except for discharges identified under Part I.C.3;

b) All discharges of storm water associated with stand alone construction projects, that will resulting land disturbance equal to or greater than one (1) acre occurring after the effective date of this permit, (hereforth referred to as existing storm water discharges from construction activities) and

c) Coverage under this permit is not required for discharges of storm water associated with minor land disturbing activities (such as home gardens and individual home landscaping, repairs, maintenance work, fences and other related activities which result in minor soil erosion) conducted outside of the 25 foot buffer along the banks of all state waters requiring a buffer and outside 50 foot buffer along the banks of all state waters classified as "Trout Streams" requiring a buffer on individual residential lots sold to homeowners where all planned construction activities on that lot have been completed and have undergone final stabilization.

2. MIXED STORM WATER DISCHARGES.

This permit may only authorize a storm water discharge from a construction site or construction activities that is mixed with a storm water discharge from an industrial source or activity other than construction where:

a) The industrial source or activity other than construction is located on the same site as the construction activity and is an intergral part of the construction activity.

b) The storm water discharges associated with industrial activity from the areas of the site where construction activities are occurring are in compliance with the terms of this permit; and

c) Storm water discharges associated with industrial activity from the areas of the site where industrial activity other than construction are occurring are covered by a different NPDES General Permit or Individual permit authorizing such discharges and the discharges are in compliance with a different NPDES Permit.

3. LIMITATIONS ON COVERAGE.

The following storm water discharges from constuction sites are not authorized by this permit:

a) Storm water discharges associated with an industrial activity that originate from the site after construction activities have been completed and the site has undergone final stabilization;

b) Discharges that are mixed with sources of non-storm water other than discharges which are identified in Part III.A.2. of this permit and which are in compliance with Part IV-D.7. (non-storm water discharges) of this permit;

c) Storm water discharges associated with industrial activity that are subject to an existing NPDES individual or General Permit. Such discharges may be authorized under this permit after an existing permit expires provided the existing permit did not establish numeric limitations for such discharges; and

d) Storm water discharges from constuction sites that the Director (EPD) has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard.

4. COMPLIANCE WITH WATER QUALITY STANDARDS

No discharges authorized by this permit shall cause violations of Georgia's In-Stream water quality standards as provided by the rules and regulations for water quality control, Chapter 391-3-6-.03.

PERMIT PART I-D (Authorization):

1. Any person desiring coverage under this permit as either a primary permittee, a secondary permittee, or a tertiary permittee must submit a Notice of Intent (NOI) to the EPD and the NOI must be recieved by the EPD in accordance with the requirements of Part II, using NOI forms provided by the EPD (or an exact photocopy thereof). In order for storm water discharges from construction sites to be authorized, A Notice of Intent for secondary permittee coverage can be submitted either concurrently with or after the submittal of a Notice of Intent by the Primary Permittee.

2. Unless notified by the Director to the contrary, a permittee (either primary, secondary, or tertiary) who submits an NOI in accordance with the requirements of this permit is authorized to discharge storm water from constuction sites under the terms and conditions of this permit fourteen (14) days after the date that the NOI is postmarked. The Director may deny coverage under this permit and require submittal of an application for an Individual NPDES permit or alternative general NPDES permit based on a review of the NOI or other information. Should the Director deny coverage under this permit coverage under this permit is authorized until the date specified in the Notice of Denial by the Director.

3. Where a new primary permittee of secondary permittee is to begin work on-site after an NOI for the facility/construction site has been submitted, that new primary or secondary permittee must submit a new NOI in accordance with Part II. A secondary permittee is not required to submit a new NOI or re-submit an NOI when a new primary permittee is named.

PERMIT PART I-E (Continuing Obligations of Permittees):

Unless and until responsibility for a site covered under this permit is properly terminated according to the terms of the permit, the initial permittee remains responsible for compliance with all applicable terms of the permit and for any violations of said terms.

PERMIT PART III. SPECIAL CONDITIONS, MANAGEMENT PRACTICES PERMIT VIOLATIONS AND OTHER LIMITATIONS

PERMIT PART III-A (PROHIBITION ON NON-STORM WATER DISCHARGES):

1. Except as provided in Part I.C.2. and III.A.2., all discharges covered by this permit shall be composed entirely of storm water.

2. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is explicitly listed in the erosion, sedimentation and pollution control plan and is in compliance with Part IV.D.7.: Discharges from fire fighting activities, fire hydrant flushing, potable water sources including water line flushing; irrigation drainage; air conditioning condensate; springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials or pollutants.

PERMIT PART III-B (RELEASES IN EXCESS OF REPORTABLE QUANTITIES):

1. The discharge of hazardous substances or oil in the storm water discharge(s) from a site shall be prevented. This permit does not relieve the permittee of the reporting requirements of Georgia's oil or hazardous material spills or releases act (OCGA 12-14-2..ET SEQ.), 40CFR Part 117 and 40 CRF Part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under Georgia's oil or hazardous material spills or releases act (OCGA 12-14-2..ET SEQ.), 40CFR Part 117 and 40 CRF Part 302, occurrs during a 24 hour period, the permittee is required to notify EPD at (404) 656-4863 or (800) 241-4113 and the National Response Center (NRC) at (800) 424-8802. In accordance with the requirements of Georgia's oil or hazardous material spills or releases act (OCGA 12-14-2..ET SEQ.), 40CFR Part 117 and 40 CRF Part 302 as soon as he/she has knowledge of the discharge.

2. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

PERMIT PART III-D (MANAGEMENT PRACTICES AND PERMIT VIOLATIONS):

1. Best management practices, as set forth in this permit, are required for all construction activities, and must be implemented in accordance with the design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land disturbing activity was permitted to prevent or reduce the pollution of waters of Georgia. Proper design, installation, and maintenance of Best Management Practices shall constitute a complete defense to any action by the Director or to other allegation of noncompliance with Part III.D.3. and Part III.D.4.

2. Failure to properly design, install, or maintain best management practices shall constitute a violation of this permit for each day on which such failure occurs. BMP maintenance as a result of the permittee's routine inspections shall not be considered a violation for the purposes of this paragraph. If during the course of the permittee's routine inspection BMP failures are observed which have resulted in sediment deposition into water of the State, the permittee shall correct the BMP failures and shall submit a summary of the violations to EPD in accordance with Part V.A.2. of this permit.

3. A discharge of storm water runoff from disturbed area where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such discharge results in the turbidity of receiving water(s) being increased by more than ten (10) nephelometric turbidity units for waters classified as trout streams or more than twenty-five (25) nephelometric turbidity units for waters supporting warm water fisheries, regardless of a permittee's certification under Part II.B.3.J. and Part II.B.3.J.

4. When the permittee has elected not to monitor outfall(s), the discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation for each day on which such condition results in the turbidity of the discharge exceeding the value selected from Appendix B applicable to the construction site. As set forth therein, the nephelometric turbidity unit (NTU) value shall be selected from Appendix B based upon the size of the construction site, the surface water drainage area and whether the receiving water(s) supports warm water fisheries or is a trout stream as indicated in the rules and regulations for water quality control, Chapter 391-3-6 at www.gaepd.org.

PERMIT PART IV-3.c.1 (HAZARDOUS WASTE):

All hazardous waste materials will be disposed of in the manner specified by local, state, and/or federal regulations and by the manufacture of such products. The job site superintendent, who will also be responsible for seeing that these practices are followed, will instruct site personnel in these practices. Material safety data sheets (MSDS'S) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the ESPCP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

The contractor will implement the spill prevention control and countermeasures (SPCC) plan found within this ESPCP and will train all personnel in the proper cleanup and handling of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with storm water discharges. If such contact occurs, the storm water discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated storm water. It shall be the responsibility of the job site superintendent to properly train all personnel in the use of the SPCC plan.

PERMIT PART IV-3.c.2 (OFFSITE VEHICLE TRACKING):

A stabilized construction exit has been provided to help reduce vehicle tracking of sediment. See sheet Soil Erosion Control Plans for construction exit location and details. The paved street adjacent to the site exit will be inspected daily for tracking of mud, dirt, or rock. Dump trucks hauling material from the construction site will be covered with a tarpaulin.

PERMIT PART IV-D.3.c.3 (Sanitary Wastes):

A minimum of one portable sanitary unit will be provided for every ten (10) workers on the site. All sanitary waste will be collected from the portable units a minimum of one time per week by a licensed portable facility provider in complete compliance with local and state regulations.

All sanitary waste units will be located in an area where the likehood of the unit contributing to storm water discharge is negligible. Additional containment BMP's must be implemented, such as gravel bags or specially designed plastic skid containers around the base, to prevent wastes from contributing to storm water discharges. The location of sanitary waste units must be identified on the erosion control plan grading phase, by the contractor once the locations have been determined.

PERMIT PART IV-D.3.c.4 & IV-D.3.c.5 (SPILL PREVENTION, CLEANUP & CONTROL PRACTICE):

SPILL PREVENTION

The following materials are expected onsite during construction: concrete products, asphalt, petroleum based fuels and lubricants for equipment, tar, metal building materials, lumber, sheet rock, floor coverings, electrical wire and fixtures, paints/stains/finishing treatments, paints, paint solvents, additives for soil stabilization, clearing solvents, pesticides, fertilizers, herbicides, crushed stone, plastic and metal pipes.

Practices such as good housekeeping, proper handling of hazardous products and proper spill control practices will be followed to reduce the risk of spill and spills from discharging into storm water runoff.

GOOD HOUSEKEEPING

1. Quantities of products stored onsite will be limited to the amount needed for the job.
2. Products and materials will be stored in a neat, orderly manner in appropriate containers protected from rainfall where possible.
3. Products will be kept in their original containers with manufacturer labels legible and visible.
4. Product mixing, disposal and disposal of product containers will be according to the manufacturers recommendations.
5. The contractor will inspect such material to ensure proper use, storage, and disposal.

PRODUCT SPECIFIC PRACTICES

Petroleum Based Products- Containers for products such as fuels, lubricants, and tars will be inspected daily for leaks and spills. This includes onsite vehicle and machinery daily inspections and regular preventative maintenance of such equipment. Equipment maintenance areas will be located away from state water, natural drains and storm water drainage inlets. In addition, temporary fueling tanks shall have a secondary containment liner to prevent/minimize site contamination. Discharge of oil oils, fuels, and lubricants is prohibited. Proper disposal methods will include collection in a suitable container and disposal as required by local and state regulations.

Paints/Finishes/Solvents- All products will be stored in tightly sealed original containers when not in use. Excess product will not be discharged to the storm water collection system. Excess product, materials used with these products and product containers will be disposed of according to manufacturer's specifications and recommendations.

Fertilizer/Herbicides- These products will be applied at rates that do not exceed manufacturer's specifications or above the guidelines set forth in the crop establishment or in the GSWCC manual for erosion and sediment control in Georgia. Any storage of these materials will be under a roof in sealed containers.

Building Materials- No building or construction materials will be buried or disposed of onsite. All such material will be disposed of in proper waste disposal procedures.

SPILL CLEANUP AND CONTROL PRACTICES

- *Local, State, and manufacturer's recommended methods for spill cleanup will be clearly posted and procedures will be made available to site personnel.*
- *Material and equipment necessary for spill cleanup will be kept in the material storage areas. Typical materials and equipment includes, but is not limited to, brooms, dustpans, mops, rags, gloves, goggles, cat litter, sand, sawdust and properly labeled plastic and metal waste containers.*
- *Spill prevention practices and procedures will be reviewed after a spill and adjusted as necessary to prevent future spills.*
- *All spills will be cleaned up immediately upon discovery. All spills will be reported as required by local, state, and federal regulations.*
- *FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEET ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.*
- *FOR SPILLS OF UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.*
- *FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.*
- *FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENTS WILL BE CONTACTED AS REQUIRED.*

The contractor shall notify the licensed professional who prepared this plan if more than 1320 gallons of petroleum is stored onsite (this includes capacities of equipment), or if any one piece of equipment has a countermeasures plan prepared by that licensed professional.

CONCRETE CLEANUP AND CONTROL PRACTICES

Concrete Truck Washing- NO concrete will be allowed to wash out or discharge surplus concrete or drum wash water onsite.

PERMIT PART IV-D.4 (INSPECTIONS):

A. PERMITEE REQUIREMENTS.

1. Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the primary permittee shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.

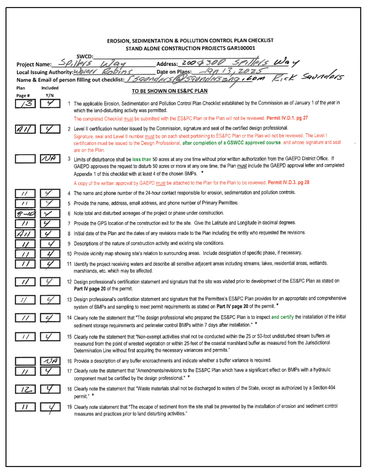
2. Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegitation and a seeding of target perennials appropriate for the region.

3. Certified personnel (provided by the primary permittee) shall inspect the following at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.50 inches rainfall or greater (unless such storms ends after 5:00 PM on any friday or on any non-working Saturday, non-working Sunday, or any non-working Federal holiday in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first): (a) disturbed areas of the primary permittee's construction site; (b) areas used by the primary permittee for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to recieving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the permittee must comply with Part IV.D.4.a.2.a(1). These inspections must be conducted until a Notice of Termination is submitted.

4. Certified personnel (provided by the primary permittee) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination is submitted to EPD) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the recieving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to recieving water(s).

5. Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later the seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.

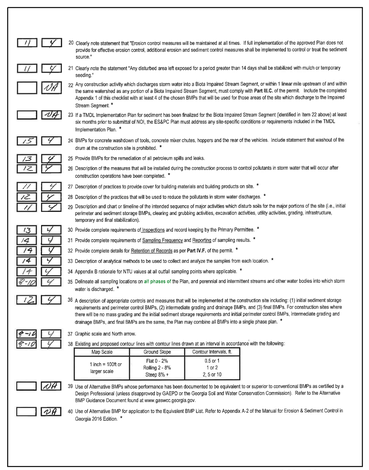
6. A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., Initial, Intermediate, or Final), and for observations relating to the Implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.1.b.i. of the permit shall be made and retained at the site or be readily available at a designated alternate location until the entire site or that portion of a construction site that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the Inspection report shall contain a statement that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.B.2. of this permit.



EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS GAR100001

SWCD:
Project Name: Spillers Way Address: 200 Spillers Way
Local Issuing Authority: Warner Robins Date on Plan: 5-21-26
Name & Email of person filling out checklist: Frederick@saundersengineering.com Rick Saunders

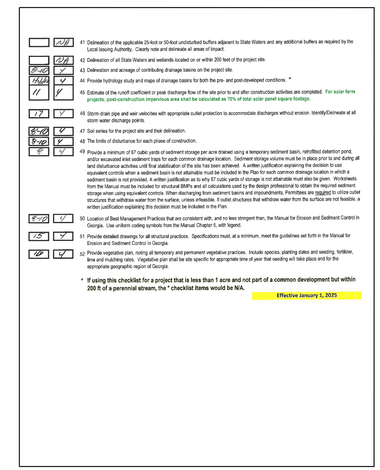
Plan Page #	Included Y/N	TO BE SHOWN ON ES&PC PLAN
1-3	Y	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed. Permit IV.D.1. pg 27
all	Y	2 Level II certification number issued by the Commission, signature and seal of the certified design professional. Signature, seal and Level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed. The Level I certification must be issued to the Design Professional, after completion of a GSWCC approved course, and sheet signature and seal are on the Plan.
	n/a	3 Limits of disturbance shall be less than 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan must include the GAEPD approval letter and completed Appendix 1 of this checklist with at least 4 of the chosen BMPs. * A copy of the written approval by GAEPD must be attached to the Plan for the Plan to be reviewed. Permit IV.D.3.i. pg 28
1	Y	4 The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
1	Y	5 Provide the name, address, email address, and phone number of Primary Permittee.
4-46	Y	6 Note total and disturbed acreages of the project or phase under construction.
1	Y	7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
all	Y	8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
1	Y	9 Descriptions of the nature of construction activity and existing site conditions.
all	Y	10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
all	Y	11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
1	Y	12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 33 of the permit.
1	Y	13 Design professional's certification statement and signature that the Permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV page 33 of the permit. *
1	Y	14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect and certify the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation. "
1	Y	15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25 feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
	n/a	16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
1	Y	17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
1-2	Y	18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
1	Y	19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."



1	Y	20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
1	Y	21 Clearly note the statement "Any disturbed areas left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
	n/a	22 Any construction activity which discharges storm water into a Biota Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as any portion of a Biota Impaired Stream Segment, must comply with Part III.C. of the permit. Include the completed Appendix 1 of this checklist with at least 4 of the chosen BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
	n/a	23 If a TMDL Implementation Plan for sediment has been finalized for the Biota Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
1-5	Y	24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Include statement that washout of the drum at the construction site is prohibited. *
1-3	Y	25 Provide BMPs for the remediation of all petroleum spills and leaks.
1-2	Y	26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
1-1	Y	27 Description of practices to provide cover for building materials and building products on site. *
1-2	Y	28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *
1-1	Y	29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, grading, infrastructure, temporary and final stabilization).
1-3	Y	30 Provide complete requirements of Inspections and record keeping by the Primary Permittee. *
1-4	Y	31 Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
1-4	Y	32 Provide complete details for Retention of Records as per Part IV.F. of the permit. *
1-4	Y	33 Description of analytical methods to be used to collect and analyze the samples from each location. *
1-4	Y	34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *
4-1.5	Y	35 Delineate all sampling locations on all phases of the Plan, and perennial and intermittent streams and other water bodies into which storm water is discharged. *
1-2	Y	36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial sediment storage requirements and initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all BMPs into a single phase plan. *
4-1.5	Y	37 Graphic scale and North arrow.
4-1.5	Y	38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft
1 inch = 100ft or larger scale	Flat 0 - 2%	0.5 or 1
	Rolling 2 - 8%	1 or 2
	Steep 8% +	2, 5 or 10

	n/a	39 Use of Alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.
	n/a	40 Use of Alternative BMP for application to the Equivalent BMP List. Refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *



	n/a	41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State Waters and any additional buffers as required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
	n/a	42 Delineation of all State Waters and wetlands located on or within 200 feet of the project site.
6-45	Y	43 Delineation and acreage of contributing drainage basins on the project site.
1-45	Y	44 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
1	Y	45 Estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed. For solar farm projects, post-construction impervious area shall be calculated as 75% of total solar panel square footage.
1	Y	46 Storm drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
6-45	Y	47 Soil series for the project site and their delineation.
6-45	Y	48 The limits of disturbance for each phase of construction.
1-6	Y	49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, Permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
6-45	Y	50 Location of Best Management Practices that are consistent with, and no less stringent than, the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual Chapter 6, with legend.
1-5	Y	51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
1-6	Y	52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates, and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

* If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream, the * checklist items would be N/A.

Effective January 1, 2025

SOIL EROSION CONTROL NOTES

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED PROFESSIONAL ENGINEER RICHARD B. SAUNDERS
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:
DATE: JULY. 2026
JOB NO: 1361
DRAWING NO: 11-6
SCALE: NTS
SHEET NO: 12

PERMIT PART IV-D.4 (MAINTENANCE & INSPECTION OF EROSION & SEDIMENT CONTROLS):

The following best management practice maintenance criteria are taken from the "Manual for Erosion and Sediment Control in Georgia"; latest edition.

Construction exits shall be maintained in a condition that will prevent tracking or flow of mud onto public rights of way. This may require periodic top dressing with 1.5-3.5 inch stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

Retrofit structures shall be kept clear of trash and debris. This will require continuous monitoring and maintenance, which includes sediment removal when one third of the sediment storage capacity has been lost.

Sediment shall be removed from silt fences once it has accumulated to one half the original height of the barrier. Filter fabric shall be replaced whenever it has deteriorated to such an extent that the effectiveness of the fabric is reduced (approximately six months).

Sediment shall be removed from sediment traps when the sediment has accumulated to one half the height of the trap. Sediment shall be removed from curb inlet protection immediately. For excavated inlet sediment traps, sediment shall be removed when one half of the sediment storage capacity has been lost to sediment accumulation.

Sediment shall not be washed into the inlet. It shall be removed from the sediment trap and disposed of and stabilized so that it will not enter the inlet again.

When the contributing drainage area has been permanently stabilized, all materials and any sediment shall be removed, and either salvaged or disposed of properly. The disturbed area shall be brought to proper grade, then smoothed and compacted. Appropriately stabilize all disturbed areas around the inlet.

Repair all damages caused by temporary sediment basins by soil erosion or construction equipment at or before the end of each working day. Sediment shall be removed from the basin when it reaches the specified distance below the top of the riser. Sediment shall not enter adjacent streams or drainage ways during sediment removal or disposal. The sediment shall not be deposited downstream from the embankment, adjacent to a stream or floodplain.

Inspect rip rap outlet structures after heavy rains to see if any erosion around or below the rip rap has taken place or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

Roughened areas shall be seeded and mulched as soon as possible to obtain optimum seed germination and seedling growth.

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth. Depending on the material used, anchored, and have a continuous 90% cover or greater of the soil surface. Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the areas will remain undisturbed for less than six months. If an area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed.

PERMIT No. I0000I APPENDIX B NTU TABLE

State of Georgia
Department of Natural Resources
Environmental Protection Division

Permit No. GAR100001

APPENDIX B

Nephelometric Turbidity Unit (NTU) TABLES

Trout Streams
Surface Water Drainage Area, square miles

Site Size, acres	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
1.00-10	25	50	75	150	300	500	500	500
10.01-25	25	25	50	75	150	200	500	500
25.01-50	25	25	25	50	75	100	300	500
50.01-100	20	25	25	35	59	75	150	300
100.01+	20	20	25	25	25	50	60	100

Waters Supporting Warm Water Fisheries

Surface Water Drainage Area, square miles

Site Size, acres	0-4.99	5-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	500+
1.00-10	75	150	200	400	750	750	750	750
10.01-25	50	100	100	200	300	500	750	750
25.01-50	50	50	100	100	200	300	750	750
50.01-100	50	50	50	100	100	150	300	600
100.01+	50	50	50	50	50	100	200	100

To use these tables, select the size (acres) of the construction site. Then, select the surface water drainage area (square miles). The NTU matrix value arrived at from the above tables is the one to use in Part III.D.4.

Example 1: For a site size of 12.5 acres and a "trout stream" drainage area of 37.5 square miles, the NTU value to use in Part III.D.4. is 75 NTU.

Example 2: For a site size of 51.7 acres and "waters supporting warm water fisheries" drainage area of 72 square miles, the NTU value to use in Part III.D.4. is 100 NTU.

PERMIT PART IV-D.6 (SAMPLING REQUIREMENTS):

Storm water is to be sampled for nephelometric turbudity units (NTU) at the locations as shown on the plans. Per NPDES permit GAR 100001, for construction activities, the primary permittee must complete all sampling.

PERMIT PART IV-D.6 (SAMPLING REQUIREMENTS):

This permit requires the monitoring of nephelometric turbidity in receiving water(s) or outfalls in accordance with this permit. The following procedures constitutes EPD's guidelines for sampling turbidity.

A. SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:

1) a USGS topographic map, a topographic map of a drawing (referred to as a topographic map) that is a scale equal to or more detailed than a 1:24000 map showing the location of the site or the common development; (a) the location of all perennial and intermittent streams and other water bodies as shown on a USGS topographic map, and all other perennial and intermittent streams and other water bodies located during mandatory field verification, into which the storm water is discharged and (b) the receiving water and/or outfall sampling locations. When the permittee has chosen to use a USGS topographic map and the receiving water(s) is not shown on the USGS topographic map, the location of the receiving water(s) must be hand drawn on the USGS topographic map from where the storm water(s) enters the receiving water(s) to the point where the receiving water(s) combines with the first blue line stream shown on the USGS topographic map.

2) A written narrative of site specific analytical methods used to collect and analyze the samples including quality control/quality assurance proceedures. This narrative must include precise sampling methodology for each sampling location;

3) When the permittee has determined that some or all outfalls will be sampled, a rationale must be included for the NTU limit(s) selected from Appendix B. This rationale must include the size of the construction site, the calculation of the size of the surface water drainage area, and the type of receiving water(s) (i.e. trout stream of supporting warm water fisheries); and

4) Any additional information EPD determines necessary to be part of the plan. EPD will provide written notice to the permittee of the information necessary and the time line for submittal.

B) SAMPLE TYPE

All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40CFR part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.

1) Samples containers should be labeled prior to collecting the samples.

2) Samples should be well mixed before transferring to a secondary container.

3) Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.

4) Manual, Automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sample is not activated during the qualifying event, the permittee must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of the samples is not required. Samples may be analyzed using a direct reading, properly calibrated turbidimeter. Samples are not required to be cooled.

5) Sampling and alanysis of the recieving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E.

C) SAMPLING POINTS.

1) For construction activities the primary permittee must sample all recieving water(s), or all outfall(s), or a combination of recieving water(s) and outfall(s). Samples taken for the purpose of compliance with this permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the storm water outfalls using the following minimum guidelines:

a) The upstream sample for each recieving water(s) must be taken immediately upstream of the confluence of the first storm water discharge from the permitted activity (ie the discharge farthest upstream at the site, but downstream of any other storm water discharges not associated with the permitted activity. Where appropriate, several upstream samples from accross the recieving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.

b) The downstream sample for each recieving water(s) must be taken downstream of the confluence of the last storm water discharge from the permitted activity (ie the discharge farthest downstream at the site) but upstream of any other storm water discharge not associated with the permitted activity. Where appropriate, several downstream samples from across the recieving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.

c) Ideally the samples should be taken from the horizontal and vertical center of the recieving water(s) at the storm water outfall channel(s).

d) Care should be taken to avoid stirring the bottom sediments in the recieving water(s) or in the outfall storm water channell.

e) The sampling container should be held so that the opening faces upstream.

f) The samples should be kept free from floating debris.

g) Permittees do not have to sample sheetflow that flows onto undisturbed natural areas or areas stabilized by the project. For purposes of this section, stabilized shall mean, for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures as defined in the Manual (excluding a crop of annual vegitation and a seeding of target crop perennials appropriate for the region). For infrastructure construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use.

h) All sampling pursuant to this permit must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) as to accurately reflect whether storm water runoff from the construction site is in compliance with the standard set forth in Parts III.D.3 or III.D.4, whichever is applicable.

D) SAMPLING FREQUENCY.

1) The primary permittee must sample in accordance with the plan at least once for each rainfall event described below. For a qualifying event, the permittee shall sample at the beginning of any storm water discharge to a monitoring recieving water and/or from a monitoring outfall location within fourty five (45) minutes or as soon as possible..

2) However, where manual and automatic sampling are impossible (as defined in this permit), or are beyond the permittee's control, the permittee shall take samples as soon as possible, but in no case more than twelve (12) hours after the beginning of the storm water discharge.

3) Sampling by the permittee shall occur for the following events:

a) For each area of the site that discharges to a recieving water or from an outfall, the first rain event that reaches or exceeds 0.50 inch with a storm water discharge that occurs during normal business hours as defined in this permit. After all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location sielcted as the representative sampling location;

b) In addition to (a) above, for each area of the site that discharges to a recieving water or from an outfall, the first rain event that reaches or exceeds 0.50 inch with a storm water discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the representative sampling location, whichever comes first;

c) At the time of sampling performed pursuant to (a) and (b) above, if BMPs in any area of the site that discharges to a recieving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.50 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPS are properly designed, installed and maintained;

d) Where sampling pursuant to (a), (b) or (c) above is required but not possible (or not required because there was no discharge), the permittee, in accordance with Part IV.D.4.a.(6), must include a written justification does not relieve the permittee of any subsequent sampling obligations under (a), (b) or (c) above; and

e) Existing construction activities, ie those that are occurring on or before the effective date of this permit, that have met the sampling required by (a) above shall sample in accordance with (b). Those existing construction activities that have met the sampling required by (b) above shall not be required to conduct additional sampling other that as required by (c) above.

*Note that the permittee may choose to meet the requirements of (a) and (b) above by collecting turbidity samples from any rain event that reaches or exceeds 0.50 inch and allows for monitoring at any time of the day or week.

PART IV-E (REPORTING):

1. The applicable permittees are required to submit the sampling results to the EPD at the address shown in Part II.C. by the fifteenth day of the month following the reporting period. Reporting periods are months during which samples are taken in accordance with this permit. Sampling results shall be in a clearly legible format. Upon written notification, EPD may require the applicable permittee to submit the sampling results on a more frequent basis. Sampling and analysis of any storm water discharge(s) or the recieving water(s) beyond the minimum frequency stated in this permit must be reported in a similar manner to the EPD. Sampling reports must be submitted to EPD using the electronic submittal service provided by EPD. Sampling reports must be submitted to EPD until such time as a NOT is submitted in accordance with Part VI.

2. All sampling reports shall include the following information.

a. The rainfall amount, date, exact place and time of sampling or measurements;
b. The name(s) of the certified personnel who performed the sampling and measurements;
c. The date(s) analyses were performed;
d. The time(s) analyses were initiated;
e. The name(s) of the certified performed who performed analyses;
f. References and written procedures, when available, for the analytical techniques or methods used;
g. The results of such analyses, including bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results;
h. Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU"; and
i. Certification statement that sampling was conducted as per the plan.

3. All written correspondence required by this permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of this permit. The permittee shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI. If an electronic submittal is provided by EPD then the written correspondence may be submitted electronically; if required, a paper copy must also be submitted by return receipt certified mail or similar service.

PART IV-F (RETENTION OF RECORDS):

1. The primary permittee shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI:

a) A copy of all Notices of Intent submitted to EPD;
b) A copy of the Erosion, Sediment, and Pollution Control Plan required by this permit;
c) The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of this permit;
d) A copy of all monitoring information, results, and reports required by this permit;
e) A copy of all inspection reports generated in accordance with Part IV.D.4.A. of this permit;
f) A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit, and
g) Daily rainfall information collection in accordance with Part IV.D.4.A.(IX) of this permit

2) Copies of all Notices of Intent, Notices of Termination, Inspection reports, sampling reports (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), or other reports requested by the EPD, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by this permit and all other records required by this permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of this permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written to the permittee.

COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

The contractor will obtain copies of any and all local and state regulations that are applicable to storm water management, erosion control, and pollution minimization of this job site and will comply fully with such regulations. The contractor will submit written evidence of such compliance if requested by the owner or any agent of a regulatory body. The contractor will comply with all conditions of any and all local, state, and federal agencies that have governing authority, including the conditions related to maintaining the ESPCP and evidence of compliance with the ESPCP at the job site and allowing regulatory personnel access to the job site and to records in order to determine compliance.

DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

The primary permittee and tertiary permittee(s) must retain the design professional who prepared the plan, except when the permittee has requested in writing and EPD has agreed to an alternate design professional, to inspect the installation of the initial sediment storage requirements and perimeter control BMP's which the design professional design within seven (7) days after installation.

The design professional shall determine if these BMP's have been installed and are being maintained as designed. The design professional shall report the results of the inspection to the primary permittee with seven (7) days and the permittee must correct all deficiencies within two (2) business days of receipt of the inspection report from the design professional unless weather related site conditions are such that additional time is required.

DATE OF INSPECTION _____

I Certify the site was in compliance with the ES&PC Plan on the date of inspection

_____
GSWCC LEVEL II DESIGN PROFFESIONAL CERTIFICATION #

Inpection revealed the following discrepancies from the ES&PC Plan

_____
_____
_____
_____
_____

These deficiencies must be addressed as required by law and a re-inspection should be scheduled with the design professional.

Disturbed Area Stabilization (With Mulching Only) Ds1

DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE
- To reduce runoff and erosion
- To conserve moisture
- To prevent surface compaction or crusting
- To control undesirable vegetation
- To modify soil temperature
- To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored and have a continuous 90% cover or greater of the soil surface.

Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months.

If any area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to **Ds2 -Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 – Disturbed Area Stabilization (With Sodding).**

SPECIFICATIONS

Mulching Without Seeding
This standard applies to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation

1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:

1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.

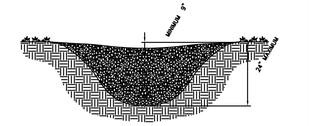
1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Apply polyethylene film on exposed areas.

Anchoring Mulch
1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application.

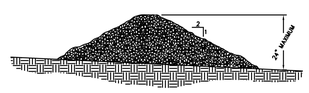
   Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification **Tac-Tackifiers**. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

Ds-S STONE CHECK DAM

CROSS SECTION



PROFILE VIEW



NOTES:
1. CHECK DAMS ARE TO BE USED ONLY IN SMALL OPEN CHANNELS (THEY ARE NOT TO BE USED IN LIVE STREAMS).
2. THE DRAINAGE AREA FOR STONE CHECK DAMS SHALL NOT EXCEED TWO ACRES.
3. THE CENTER OF THE CHECK DAM MUST BE AT LEAST 9 INCHES LOWER THAN THE OUTER EDGES.
4. THE DAM HEIGHT SHOULD BE A MAXIMUM OF 2 FEET FROM CENTER TO RIM EDGE.
5. THE SIDE SLOPES OF THE CHECK DAM SHALL NOT EXCEED A 2:1 SLOPE.
6. GEOTEXTILE SHALL BE USED TO PREVENT THE MITIGATION OF SUBGRADE SOIL PARTICLES INTO THE STONES (REFER TO AASHTO M288-96, SECTION 7.3, TABLE 3).

SOIL EROSION CONTROL NOTES

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 14004 RONALD B. SAUNDERS

GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

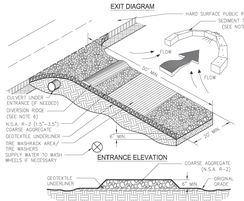
200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:
DATE: JULY. 2026
JOB NO: 1361
DRAWING NO: 11-7
SCALE: NTS
SHEET NO: 13

MAINTENANCE
The exit shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5-3.5 inch stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM



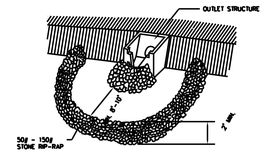
NOTES:
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION N-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL BE 6" 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 CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT POND. PROVIDE FOR DISPOSAL OF ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTENANCE: THE WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Figure 6-14.1

GSWCC 2016 Edition 6-90

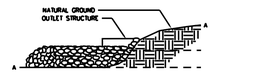
Fr STONE FILTER RING

PERSPECTIVE VIEW



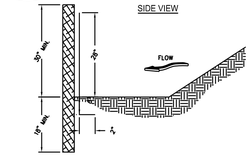
PLAN VIEW (NOT TO SCALE)

CROSS SECTION (NOT TO SCALE)

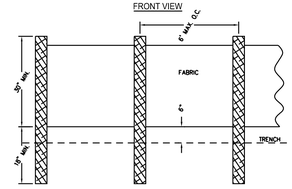


Sd1-NS SILT FENCE - TYPE NON-SENSITIVE

SIDE VIEW



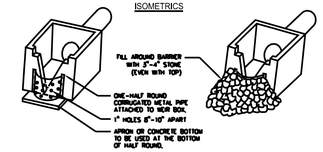
FRONT VIEW



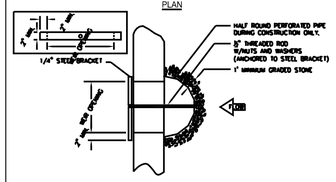
NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (") IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Rt PERFORATED HALF-ROUND PIPE WITH STONE FILTER

ISOMETRICS

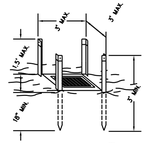


PLAN

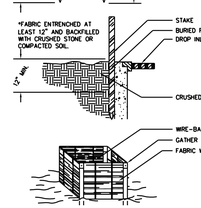


FABRIC AND SUPPORTING FRAME FOR Sd2-F INLET PROTECTION

STEEL FRAME AND SILT FENCE INSTALLATION

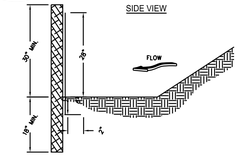


NOTES:
1. DESIGN IS FOR SLOPES NO GREATER THAN 5% (NOT DESIGNED FOR CONCENTRATED FLOWS).
2. THE STEEL POSTS SUPPORTING THE SILT FENCE MATERIAL SHOULD BE SPACED EVENLY AROUND THE PERIMETER OF THE INLET (MAXIMUM OF 5' APART).
3. THE STEEL POSTS SHOULD BE SECURELY DRIVEN AT LEAST 16" DEEP.
4. THE FABRIC SHOULD BE ENTRENCHED AT LEAST 12" AND THEN BACKFILLED WITH CRUSHED STONE OR COMPACTED SOIL.

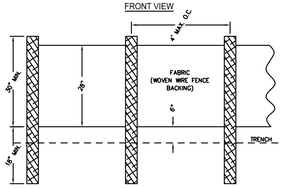


Sd1-S SILT FENCE - TYPE SENSITIVE

SIDE VIEW



FRONT VIEW

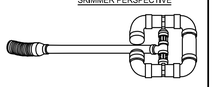


NOTES:
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
2. HEIGHT (") IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Sk SKIMMER DETAIL

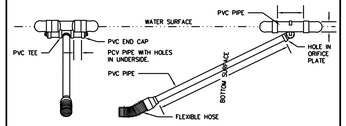
NOTE:
SKIMMER CONFIGURATION SHOWN IS TYPICAL. THE DESIGNER/ENGINEER MAY SUBMIT AN ALTERNATE SKIMMER DETAIL FOR REVIEW.

SKIMMER PERSPECTIVE



SKIMMER FRONTAL SECTION VIEW

SKIMMER SIDE SECTION VIEW

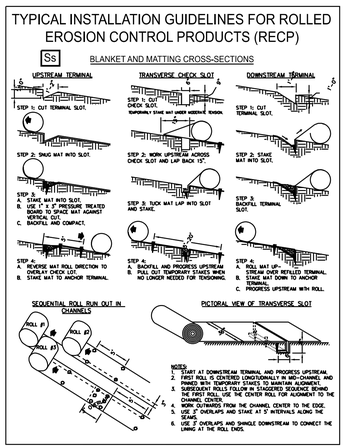


SKIMMER DESIGN

	LENGTH	WIDTH
POND TOP DIMENSIONS	225'	87'
POND BOTTOM DIMENSIONS	175'	50'
POND DEPTH	4'	
TIME TO DRAIN	72 HOURS	
SKIMMER DIMENSIONS	HEATSIDE - 4", ORIFICE - 3.8"	
MANUFACTURER'S NAME	J.W. FARCLOTH & SON, INC	

TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

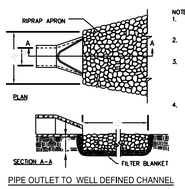
Ss BLANKET AND MATTING CROSS-SECTIONS



NOTES:
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND UNROLLED DOWNSTREAM OVER THE TERMINAL SLOT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL, USE THE CENTER ROLL TOP ALIGNMENT TO THE CHANNEL CENTER.
4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
5. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE LAP.
6. USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.

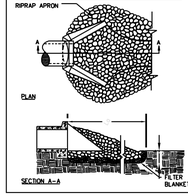
St RIPRAP OUTLET PROTECTION

PIPE OUTLET TO FLAT AREA – NO WELL DEFINED CHANNEL

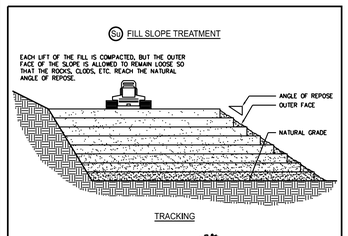


NOTES:
1. Lo IS THE LENGTH OF THE RIPRAP APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESSHAN 6".
3. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND THE SOIL FOUNDATION.

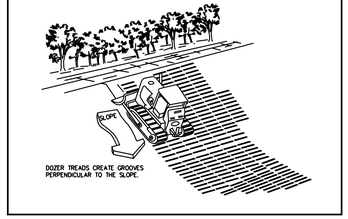
PIPE OUTLET TO WELL DEFINED CHANNEL



St FILL SLOPE TREATMENT



TRACKING



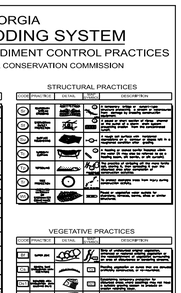
GEORGIA UNIFORM CODING SYSTEM

FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES

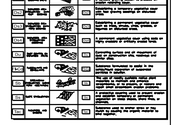
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

STRUCTURAL PRACTICES



VEGETATIVE PRACTICES



Dust Control on Disturbed Areas Du

DEFINITION
Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

PURPOSE
- To prevent surface and air movement of dust from exposed soil surfaces.
- To reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

CONDITIONS
This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

METHOD AND MATERIALS

A. Temporary Methods

Mulches. See standard **Ds1 - Disturbed Area Stabilization (With Mulching Only)**. Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification **Tac - Tackifiers**. Resins should be used according to manufacturer's recommendations.

Vegetative Cover. See specification **Ds2 - Disturbed Area Stabilization (With Temporary Seeding)**.

Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to specification **Tac - Tackifiers**.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. Permanent Methods

Permanent Vegetation. See specification **Ds3 -Disturbed Area Stabilization (With Permanent Vegetation)**. Existing trees and large shrubs may afford valuable protection if left in place.

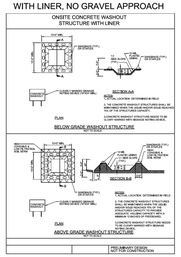
Topsoiling. This entails covering the surface with less erosive soil material. See specification **Tp - Topsoiling**.

Stone. Cover surface with crushed stone or coarse gravel. See specification **Cr-Construction Road Stabilization**.

GSWCC 2016 Edition 6-55

Know what's **below.**
Call before you dig.

WITH LINER, NO GRAVEL APPROACH



CONCRETE WASHDOWN DETAIL

LOCATION	SIZE	CFS	VELOCITY	T.W. COND.	La	W1	W2	d50	D
OUTLET#1	24"	17	6.9	MINIMUM	14'	6'	16'	0.50'	1'
OUTLET#2	18"	10	4.8	MINIMUM	12'	5'	14'	0.50'	1'

SOIL EROSION CONTROL NOTES

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE

DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. 27604 DONALD B. SAUNDERS

GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
SAUNDERS ENGINEERING CONSULTANTS, INC.
CIVIL/TRANSPORTATION CONSULTING ENGINEERS

DRAWN BY:	DRAWING NO: 11-8
DATE: JULY. 2026	SCALE: NTS
JOB NO: 1361	SHEET NO: 14

Dust Control on Disturbed Areas

Du

DEFINITION

Controlling surface and air movement of dust on construction sites, roads, and demolition sites.

PURPOSE

- To prevent surface and air movement of dust from exposed soil surfaces.
- To reduce the presence of airborne substances that may be harmful or injurious to human health, welfare, or safety, or to animals or plant life.

CONDITIONS

This practice is applicable to areas subject to surface and air movement of dust where on and off-site damage may occur without treatment.

METHOD AND MATERIALS

A. Temporary Methods

Mulches. See standard **Ds1 - Disturbed Area Stabilization (With Mulching Only)**. Synthetic resins may be used instead of asphalt to bind mulch material. Refer to specification **Tac - Tackifiers**. Resins should be used according to manufacturer's recommendations.

Vegetative Cover. See specification **Ds2 - Disturbed Area Stabilization (With Temporary Seeding)**.

Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to specification **Tac - Tackifiers**.

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

Irrigation. This is generally done as an emergency treatment. Site is sprinkled with water until the surface is wet. Repeat as needed.

Barriers. Solid board fences, snowfences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 15 times their height are effective in controlling wind erosion.

Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.

B. Permanent Methods

Permanent Vegetation. See specification **Ds3 -Disturbed Area Stabilization (With Permanent Vegetation)**. Existing trees and large shrubs may afford valuable protection if left in place.

Topsoiling. This entails covering the surface with less erosive soil material. See specification **To - Topsoiling**.

Stone. Cover surface with crushed stone or coarse gravel. See specification **Cr-Construction Road Stabilization**.

Disturbed Area Stabilization (With Mulching Only)

Ds1

DEFINITION

Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE

- To reduce runoff and erosion
- To conserve moisture
- To prevent surface compaction or crusting
- To control undesirable vegetation
- To modify soil temperature
- To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored and have a continuous 90% cover or greater of the soil surface.

Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months.

If any area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to **Ds2 -Dis-**

turbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 - Disturbed Area Stabilization (With Sodding).

SPECIFICATIONS

Mulching Without Seeding

This standard applies to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation

1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials

Select one of the following materials and apply at the depth indicated:

1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch

When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.

1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.

2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Apply polyethylene film on exposed areas.

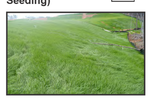
Anchoring Mulch

1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application.

   Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification **Tac-Tackifiers**. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

Disturbed Area Stabilization (With Temporary Seeding)

Ds2



DEFINITION

The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

PURPOSE

- To reduce runoff and sediment damage of down stream resources
- To protect the soil surface from erosion
- To improve wildlife habitat
- To improve aesthetics
- To improve tilth, infiltration and aeration as well as organic matter for permanent plantings

REQUIREMENT FOR REGULATORY COMPLIANCE

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting concitions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification **Ds1-Disturbed Area Stabilization (With Temporary Seeding).**

CONDITIONS

Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). Contact NRCS or the local SWCD for more information.

SPECIFICATIONS

Grading and Shaping

Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation

When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand-seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer

Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate.

Seeding

Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand. See Table 6-4.1

Mulching

Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to **Ds1 - Disturbed Area Stabilization (With Mulching Only)**.

Irrigation

During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

Disturbed Area Stabilization (With Permanent Vegetation)

Ds3

DEFINITION

The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization.

PURPOSE

- To protect the soil surface from erosion
- To reduce damage from sediment and runoff to down-stream areas
- To improve wildlife habitat and visual resources
- To improve aesthetics

REQUIREMENT FOR REGULATORY COMPLIANCE

This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than six months. This practice or sodding shall be applied immediately to all areas at final grade. **Final Stabilization** means that all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by the GA EPD for waste disposal, 100% of the soil surface is uniformlycovered in permanent vegetation with a density of 70% or greater, or landscaped according to the Plan (uniformly covered with landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures.

Permanent vegetation shall consist of, planted trees, shrubs, perennial vines; or a crop of perennial vegetation appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by stabilizing the disturbed land for its agricultural or silvicultural use. Until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation control measures shall not be removed.

CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

PLANNING CONSIDERATIONS

1. Use conventional planting methods where possible.
2. When mixed plantings are done during marginal planting periods, companion crops shall be used.
3. No-till planting is effective when planting is done following a summer or winter annual cover crop. Serricea lespedeza plantec no-till into stands of rye is an excellent procedure.
4. Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures. Refer to Specification **Ds4-Disturbed Area Stabilization (With Sodding)**.
5. Irrigation should be used when the soil is dry or when summer plantings are done.
6. Low maintenance plants, as well as natives, should be used to ensure long-lasting erosion control.
7. Mowing should not be performed during the qual nesting season (May to September).
8. Wildlife plantings should be included in critical area plantings.

Wildlife Plantings

Commercially available plants beneficial to wildlife species include the following:

Mast Bearing Trees

Beech, Black Cherry, Blackgum, Chestnut, Chinkapin, Hackberry, Hickory, Honey Locust, Native Oak, Persimmon, Sawtooth Oak and Sweetgum.

All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and bear.

Shrubs and Small Trees

Bayberry, Bicolor Lespedeza, Crabapple, Dogwood, Huckleberry or Native Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry.

Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza that produces seeds used by quail and songbirds.

Grasses, Legumes, Vines and Temporary Cover

Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Browntop Millet (for temporary cover), and Native grapes.

Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches, clovers, and lespedezas may be mixed with grass, but they may die out after a few years.

CONSTRUCTION SPECIFICATIONS

Grading and Shaping

Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation.

Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Lime and Fertilizer Rates and Analysis

Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve.

Fast-acting lime spread by hydraulic seeding equipment should be "finely ground limestone" spanning from the 180 micron size to the 5 micron size. Finely ground limestone is calcitic or dolomitic limestone ground so that 95 percent of the material will pass through a 100-mesh sieve.

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1)

Agricultural lime is generally not required where only trees are planted.

Initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species or combination of species are listed in Table 6-5.1.

Lime and Fertilizer Application

When *hydraulic seeding* equipment is used, the initial fertilizer shall be mixed with seed, innoculant (if needed), and wood cellulose or wood pulp fiber mulch and applied in a slurry. The innoculant, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be agitated during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the

hydroseeder.

Finely ground limestone can be applied in the mulch slurry or in combination with the top dressing.

When *conventional planting* is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

1. Apply before land preparation so that it will be mixed with the soil during seedbed preparation.
2. Mix with the soil used to fill the holes, distribute in furrows.
3. Broadcast after steep surfaces are scarified, pitted or trenched.
4. A fertilizer pellet shall be placed at root depth in the closing hole beside each pine tree seedling.

Plant Selection

Refer to Tables 6-4.1, 6-5.2, 6-5.3 and 6-5.4 for approved species. Species not listed shall be approved by the State Resource Conservationist of the Natural Resources Conservation Service before they are used.

Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area, time of year of planting, method of planting, and the needs and desires of the land user.

Some perennial species are easily established and can be planted alone. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass.

Other perennials, such as Bahia Grass and Serricea Lespedeza, are slow to become established and should be planted with another perennial species. The additional species will provide quick cover and ample soil protection until the target perennial species become established. For example, Common seeding combinations are 1) Weeping Lovegrass with Serricea Lespedeza (scarified) and 2) Tall Fescue with Serricea Lespedeza (unscarified).

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during their optimum planting period. A common mixture is Brown Top Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Ryegrass shall not be used in any seeding mixtures containing perennial species due to its ability to out-compete desired species chosen for permanent perennial cover.

Seed Quality

The term "pure live seed" is used to express the quality of seed and is not shown on the label. Pure live seed, PLS, is expressed as a percentage of the seeds that are pure and will germinate. Information on percent germination and purity can be found on seed tags. PLS is determined by multiplying the percent of pure seed with the percent of germination; i.e.,

(PLS = % germination x % purity)

EXAMPLE:

Common Bermuda seed
70% germination, 80% purity

PLS = 70% germination x 80% purity

PLS = 56%

The percent of PLS helps you determine the amount of seed you need. If the seeding rate is 10 pounds PLS and the bulk seed is 56 % PLS, the bulk seeding rate is:

10 lbs. PLS/acre = 17.9 lbs/acre
56% PLS

You would need to plant 17.9 lbs/acre to provide 10 lbs/acre of pure live seed.

Seedbed Preparation

Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used (but is strongly recommended for any seeding process, when possible). When conventional seeding is to be used, seedbed preparation will be done as follows:

Broadcast plantings

1. Tillage, at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate lime and fertilizer; smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a disk is to be used.
2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4. On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 6 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants

1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
3. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Innoculants

All legume seed shall be inoculated with appropriate nitrogen-fixing bacteria. The innoculant shall be a pure culture prepared specifically for the seed species and used within the dates on the container.

A mixing medium recommended by the manufacturer shall be used to bond the innoculant to the seed. For conventional seeding, use twice the amount of innoculant recommended by the manufacturer. For hydraulic seeding, four times the amount of innoculant recommended by the manufacturer shall be used.

All inoculated seed shall be protected from the sun and high temperatures and shall be planted

the same day inoculated. No inoculated seed shall remain in the hydroseeder longer than one hour.

Planting

Hydraulic Seeding

Mix the seed (innoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding

Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

No-Till Seeding

No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants

Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots.

Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface.

Where individual holes are dug, fertilizer shall be placed in the bottom of the hole; two inches of soil shall be added and the plant shall be set in the hole.

Mulching

Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% to 100% soil cover. When selecting a mulch, design professionals should consider the mulch's functional longevity, vegetation establishment enhancement, and erosion control effectiveness. Select the mulching material from the following and apply as indicated:

1. *Dry straw or dry hay* of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. *Wood cellulose mulch or wood pulp fiber* shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
3. One thousand pounds of *wood cellulose or wood pulp fiber,* which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
4. *Sericea Lespedeza* hay containing mature seed shall be applied at a rate of three tons per acre.
5. *Pine straw or pine bark* shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
6. When using temporary erosion control blankets or block sod, *mulch is not required.*
7. *Bituminous treated roving* may be applied on planted areas, slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch

Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or planting. The mulch may be spread by blower-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soil surface.

Wood cellulose or wood fiber mulch shall be applied uniformly with hydraulic seeding equipment.

Anchoring Mulch

Anchor straw or hay mulch immediately after application by one of the following methods:

1. *Hay and straw mulch* shall be pressed into the soil immediately after the mulch is spread. A special "packer disk" or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it, leaving much of it in an erect position. Mulch shall not be plowed into the soil.
2. *Synthetic tackifiers, binders or hydraulic mulch specifically designed to tack straw,* shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. All tackifiers, binders or hydraulic mulch specifically designed to tack straw should be verified nontoxic through EPA 2021.0 testing. Refer to **Tackifiers-Tac**
3. *Rye or wheat* can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of one-quarter to one-half bushel per acre.
4. *Plastic mesh or netting* with mesh no larger than one inch by one inch may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas. These materials shall be installed and anchored according to manufacturer's specifications.

Bedding Material

Mulch is used as a bedding material to conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bare areas on lawns.

Material	Depth
Grain straw	4" to 6"
Grass Hay	4" to 6"
Pine needles	3" to 5"
Wood waste	4" to 6"

Irrigation

Irrigation will be applied at a rate that will not cause runoff.

Topdressing

Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-5.1.

Second Year and Maintenance Fertilization

Second year fertilizer rates and maintenance fertilizer rates are listed in Table 6-5.1.

Lime Maintenance Application

Apply one ton of agricultural lime every 4 to 6 years or as indicated by soil tests. Soil tests can be conducted to determine more accurate requirements, if desired.

Use and Management

Mow Sericea Lespedeza only after frost to ensure that the seeds are mature. Mow between November and March.

Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Maintain at least 6 inches of top growth under any use and management. Moderate use of top growth is beneficial after establishment.

Exclude traffic until the plants are well established. Because of the quail nesting season, mowing should not take place between May and September.

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SOIL EROSION CONTROL NOTES

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE	DATE	REVISIONS	DATE	REVISIONS

GEORGIA REGISTERED PROFESSIONAL ENGINEER C. SAUNDERS
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY

CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088

SAUNDERS ENGINEERING CONSULTANTS, INC.
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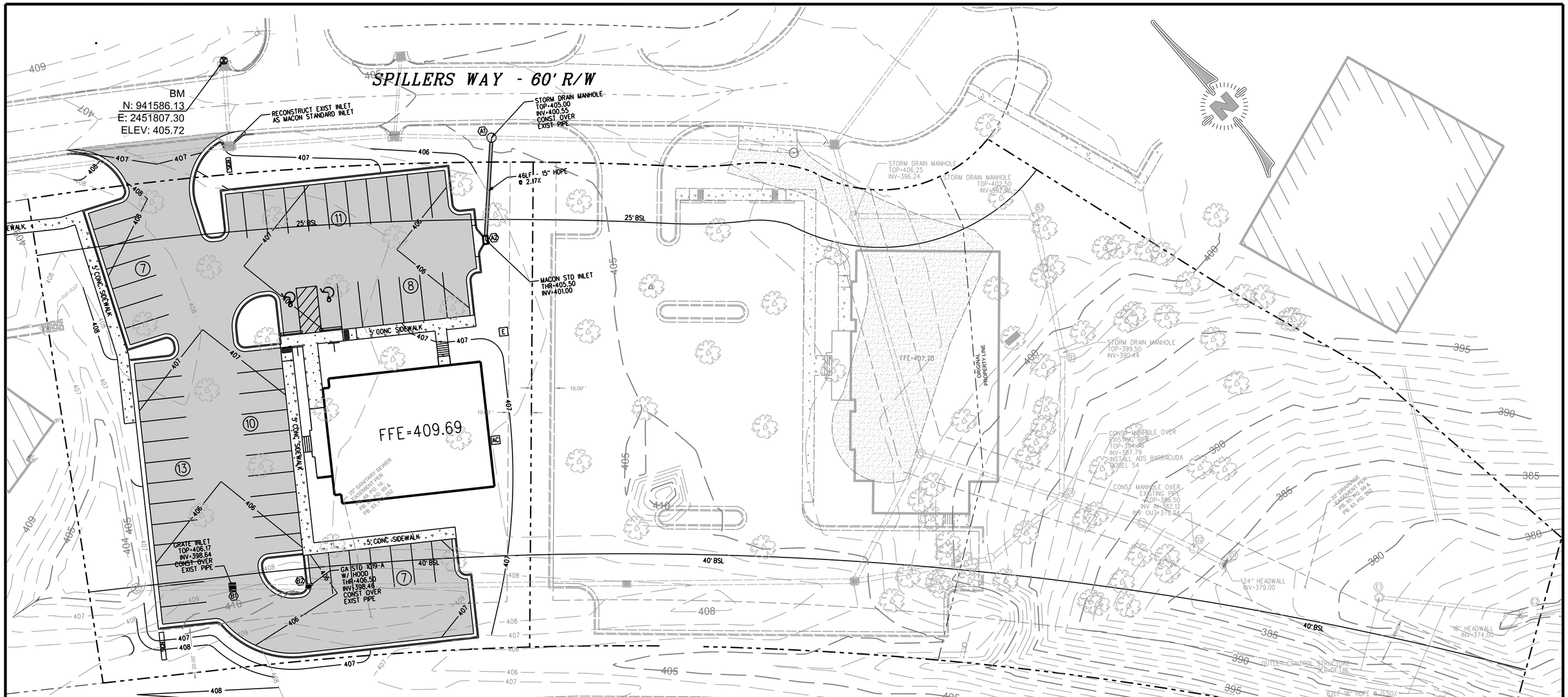
DATE: JULY. 2026	SCALE: NTS
JOB NO: 1361	SHEET NO: 15



PRE-DEVELOPED FLOWS

AREA = 3.61AC Cn=59
Tc=23.1min

STORM FREQUENCY	FLOWS (CFS)
Q2	3.19
Q5	6.25
Q10	8.74
Q25	12.00
Q50	15.40
Q100	17.14

POST-DEVELOPED FLOWS

AREA = 3.61AC Cn=76
Tc=8min

STORM FREQUENCY	FLOWS (CFS)
Q2	11.20
Q5	17.31
Q10	21.61
Q25	27.24
Q50	32.94
Q100	35.80

ROUTED FLOWS:

STORM FREQUENCY	FLOWS (CFS)
Q2	2.70
Q5	3.17
Q10	5.19
Q25	9.63
Q50	14.26
Q100	16.82

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DRAINAGE SUMMARY PLAN

Saunders Engineering Consultants, Inc.
104-C Gunn Road, Centerville, GA 31028
(478) 953-1228 (478) 953-1248 Fax

SCALE
20 0 20 40 60
Graphic Scale in Feet

DATE	REVISIONS	DATE	REVISIONS
4/17/25	REV PER CITY		

REGISTERED PROFESSIONAL ENGINEER RICHARD B. SAUNDERS 24420
GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY
CITY OF WARNER ROBINS, GEORGIA
MACNASTY PROPERTIES, LLC
100 WILLINGTON COURT
WARNER ROBINS, GA 31088
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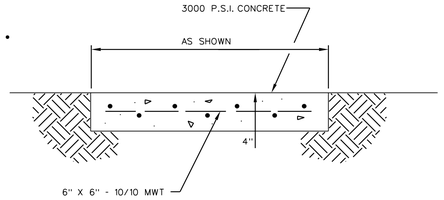
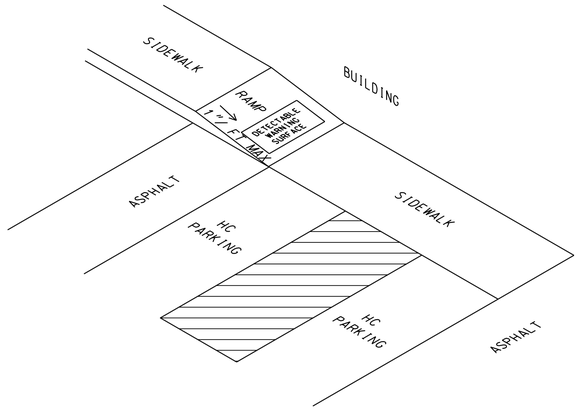
SHEET NO: 16



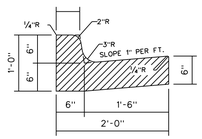
DETAIL - SIDEWALK (TYP)

N.T.S.



HANDICAP RAMP DETAIL

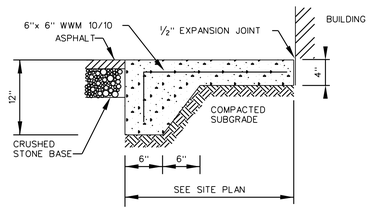
N.T.S.



NORMAL GUTTER

24" CONCRETE CURB & GUTTER DETAIL

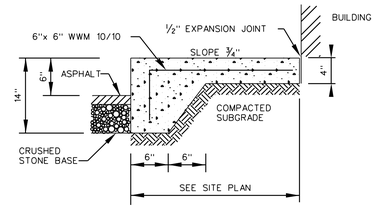
N.T.S.



SECTION

CONCRETE CURB SIDEWALK DETAIL

N.T.S.



SECTION

CONCRETE CURB SIDEWALK DETAIL

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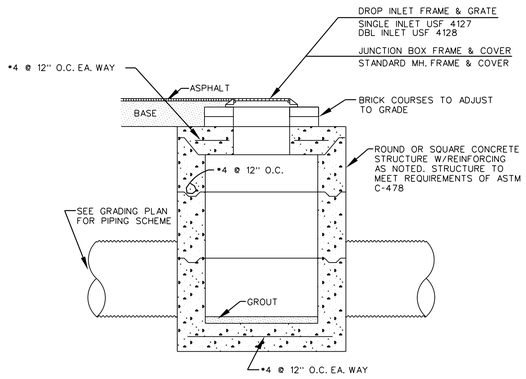
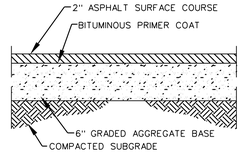


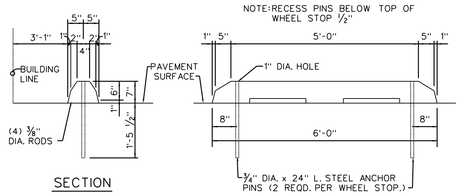
GRATE INLET/STORM MANHOLE

N.T.S.



TYPICAL PAVING DETAIL

N.T.S.

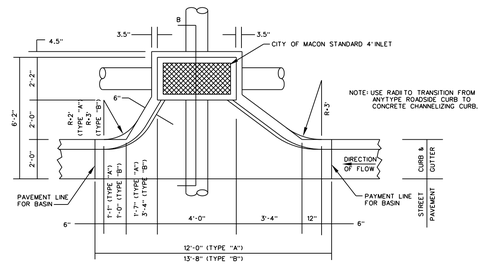


SECTION

ELEVATION

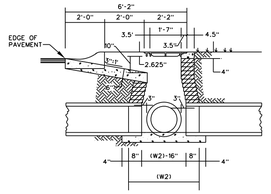
CONCRETE WHEEL STOP DETAILS

N.T.S.



PLAN

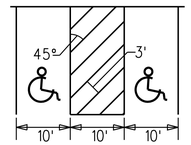
C.B. TYPE "A" USE AT INTERMEDIATE POINTS ON SLOPE
C.B. TYPE "B" USE AT LOW POINTS OF GRADE



SECTION B

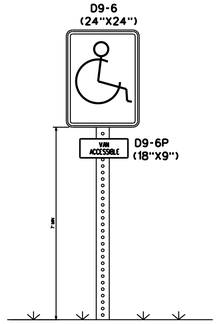
MACON STD INLET

N.T.S.



HANDICAP PARKING DETAIL

NTS



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GEORGIA REGISTERED PROFESSIONAL ENGINEER No 44104 RICHARD DUKE SAUNDERS

GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

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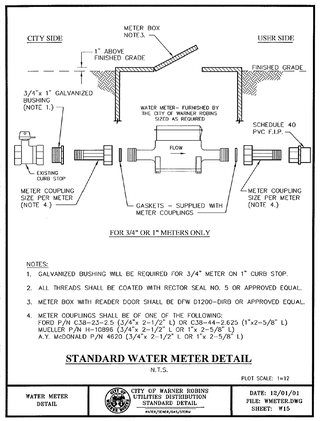
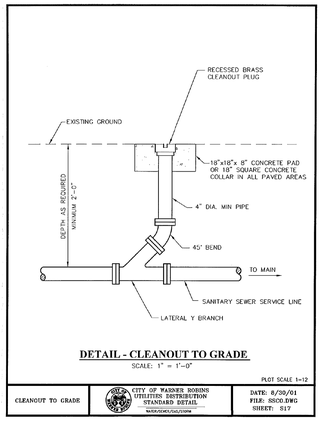


STANDARD WATER METER DETAIL

N.T.S.

PLOT SCALE: 1=12

WATER METER DETAIL	CITY OF WARNER ROBINS UTILITIES DISTRIBUTION STANDARD DETAIL	DATE: 12/01/01 FILE: WMETER.DWG SHEET: W15

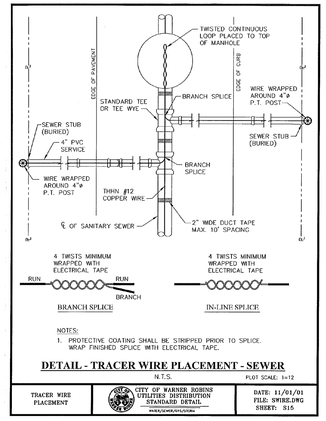


DETAIL - CLEANOUT TO GRADE

SCALE: 1" = 1'-0"

PLOT SCALE 1=12

CLEANOUT TO GRADE	CITY OF WARNER ROBINS UTILITIES DISTRIBUTION STANDARD DETAIL	DATE: 8/20/01 FILE: SSCO.DWG SHEET: S17



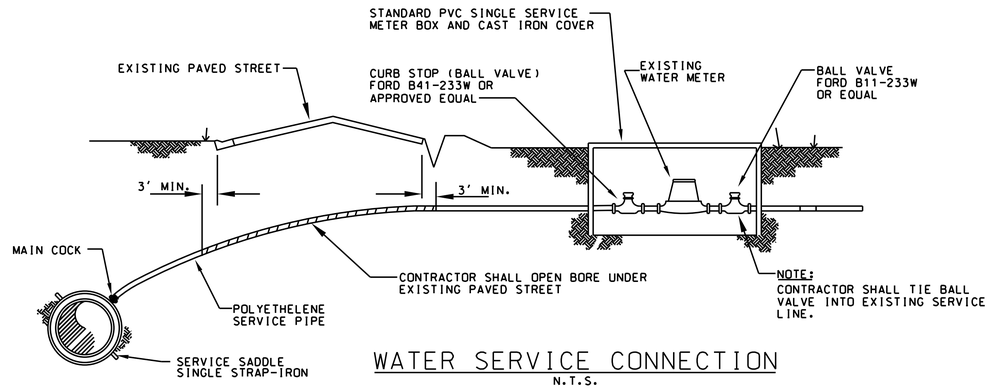
NOTES:
1. PROTECTIVE COATING SHALL BE STRIPPED PRIOR TO SPLICE. WRAP FINISHED SPLICE WITH ELECTRICAL TAPE.

DETAIL - TRACER WIRE PLACEMENT - SEWER

N.T.S.

PLOT SCALE: 1=12

TRACER WIRE PLACEMENT	CITY OF WARNER ROBINS UTILITIES DISTRIBUTION STANDARD DETAIL	DATE: 11/01/01 FILE: SWIRE.DWG SHEET: S15



WATER SERVICE CONNECTION

N.T.S.

RPYS-009

Installation, Maintenance, and Repair Manual

Series 009, LF009, LFU009, SS009, U009

Reduced Pressure Zone Assemblies

¼" - 3"

⚠ WARNING

Read this Manual BEFORE using this equipment. Failure to read and follow all safety and use information can result in death, serious bodily injury, property damage, or damage to the equipment. Keep this Manual for future reference.

⚠ WARNING

Local building or plumbing codes may require modifications to the information provided. You are required to consult the local building and plumbing codes prior to installation. If this information is not consistent with local building or plumbing codes, the local codes should be followed.

⚠ WARNING

Need for Periodic Inspection/Maintenance: This product must be tested periodically in compliance with local codes, but at least once per year or more as service conditions warrant.

If installed on a fire suppression system, all mechanical checks, tests, and maintenance must be performed by a licensed plumber and inspected in accordance with NFPA 13 and/or NFPA 25.

Corrosive water conditions and/or unauthorized adjustments or repair could render the product ineffective for the service intended. Regular checking and cleaning of the product's internal components helps assure maximum life and proper product functioning.

NOTICE

For Australia and New Zealand, line strainers should be installed between the upstream shutoff valve and the inlet of the backflow preventer.

Fittings such as end connectors intended to join alternative pipe systems made from other materials (such as plastics) shall be approved by the local authority having jurisdiction or the requirements of the appropriate Australian, New Zealand, or joint Australian-New Zealand Standard for the alternative pipe system.

Testing

For field testing procedure, refer to IS-TK-DL, IS-TK-9A, IS-TK-9BE, and IS-TK-9BZ at watts.com.

For Australia, refer to Australian standard AS/NZS 2845.3.

For other repair kits and service parts, refer to the Backflow Prevention Products Repair Kits & Service Parts price list PL-RP-BPCs at watts.com.

For technical assistance, contact your local Watts representative.

LF009 with Flood Sensor

Series 009 assemblies, sizes ½" to 2", include a sensor on the relief valve to detect continuous discharge and trigger notification of a potential flood event.

NOTICE

An add-on connection kit is required to activate the flood sensor. Without the connection kit, the flood sensor is a passive component that has no communication with any other device. See "Add-on and Retrofit Sensor Connection Kits" for ordering details.

NOTICE

Use of the flood sensor does not replace the need to comply with all applicable codes and standards. Refer to the manual for installation, operation, and maintenance of the product, including the need to provide proper drainage in the event of a discharge.

Watts no es responsable de la falla de las alertas debido a problemas de conectividad, cortes de energía o instalación incorrecta.

WATTS

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GSWCC LEVEL II CERTIFICATION NUMBER 0000000156

200 SPILLERS WAY

CITY OF WARNER ROBINS, GEORGIA

JDS LAND DEVELOPMENTS, LLC
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WARNER ROBINS, GA 31088

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