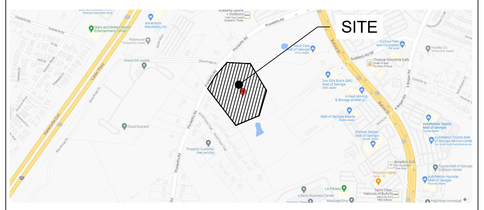
Plot Date: Monday, May 6, 2024 4:20:53 PM

LOCATION MAP (N.T.S.)



VICINITY MAP
1"=2,000'

NORTH

CLEARING & GRADING PLANS FOR

1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD
CITY OF BUFORD, GWINNETT COUNTY GA 30519

LAND LOT(S): 218
DISTRICT(S): 7TH
PARCEL #7218 003
GWINNETT COUNTY, GEORGIA

SHEET INDEX

COVER	C-100
SURVEY	C-101
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EROSION CONTROL DETAILS	C-606 THRU C-608
TREE SURVEY	C-700
TREE CALCULATIONS	C-701

LAND DISTURBANCE ACTIVITY SCHEDULE

Activities begin APRIL 2024 WEEK	0	2	4	6	8	10	12	14	16	18	20
Timber salvage operations											
Installation of construction exit, sediment barriers, and other perimeter controls											
Clearing and grubbing of areas necessary for the installation of sediment retention basins and related structures											
Installation of sediment retention basins and related structures											
Clearing and grubbing of remaining areas											
Mass grading											
Permanent stabilization/landscaping											
Permanent stabilization of areas at final grade and temporary stabilization of remaining areas											
Maintenance of Erosion Control Measures											
Removal of erosion and sediment control measures											
Final landscaping, grassing, etc., cleaning of storm drains											

MISCELLANEOUS NOTES

IF THE CONTRACTOR, IN THE COURSE OF WORK FINDS ANY DISCREPANCY BETWEEN THE PLANS, AND THE PHYSICAL CONDITIONS OF THE LOCALITY, OR ANY ERRORS, OMISSIONS, VARYING/CONFLICTING CODE DESCREPANCIES IN THE PLANS OR THE LAYOUT AS GIVEN BY THE ENGINEER, IT SHALL BE HIS DUTY TO **IMMEDIATELY** INFORM THE ENGINEER, IN WRITING, AND ENGINEER WILL PROMPTLY VERIFY THE SAME. ANY WORK DONE AFTER SUCH DISCOVERY, UNTIL AUTHORIZED, WILL BE AT CONTRACTOR'S RISK. THESE DOCUMENTS ARE INSTRUMENTS OF SERVICE FOR USE SOLELY WITH RESPECT TO THIS PROJECT AND ARE NOT TO BE REPRODUCED OR USED FOR THE CONSTRUCTION OF ANOTHER PROJECT WITHOUT SPECIFIC AUTHORIZATION. ALL DIMENSIONS, PROPOSED ITEMS AND EXISTING UTILITIES TO BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION. NOTIFY THE LICENSED PROFESSIONAL OF RECORD IMMEDIATELY IF A DISCREPANCY IS FOUND. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR BEING LIABLE FOR ALL CHANGES. NO COMBUSTIBLE MATERIALS WILL BE ALLOWED ONSITE AND NO BUILDING PERMITS WILL BE ISSUED FOR THIS DEVELOPMENT UNTIL WATER SERVICE IS PROVIDED VIA A WATER MAIN, WHICH IS THE RESPONSIBILITY OF THE DEVELOPER OF THIS SUBDIVISION. WATER AND SEWER WILL BE PROVIDED BY GWINNETT COUNTY. ALL RETAINING WALL PERMITS MUST BE ISSUED PRIOR TO PERMITTING OF THE SDP.

OWNER/DEVELOPER PRIMARY PERMITEE

BOGAN ENTERPRISES, LLC
11555 MEDLOCK BRIDGE ROAD, SUITE #190
JOHNS CREEK, GA 30097
PAUL KHANSARI 404-429-3621
PAULKHANSARI@GMAIL.COM

24 HR CONTACT

BOGAN ENTERPRISES, LLC
11555 MEDLOCK BRIDGE ROAD, SUITE #190
JOHNS CREEK, GA 30097
PAUL KHANSARI 404-429-3621
PAULKHANSARI@GMAIL.COM

ENGINEER

LJA ENGINEERING
299 SOUTH MAIN STREET, SUITE A
ALPHARETTA, GEORGIA 30009
TYLER MARCHMAN, PE 770-255-4730
TMARCHMAN@LJA.COM

SURVEYOR

CHRISTOPHER E. MOORE & ASSOCIATES, INC.
320 N CLAYTON ST
LAWRENCEVILLE, GA 30046
PHONE: (770) 963-7418
EMAIL: CHRIS@CMALAND.COM

THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL OCCUR PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES

SITE DATA

TOTAL ACRES:	+/- 11.11 AC.
ZONING:	M1
DISTURBED AREA:	+/- 7.97 AC.

CITY OF BUFORD NOTES

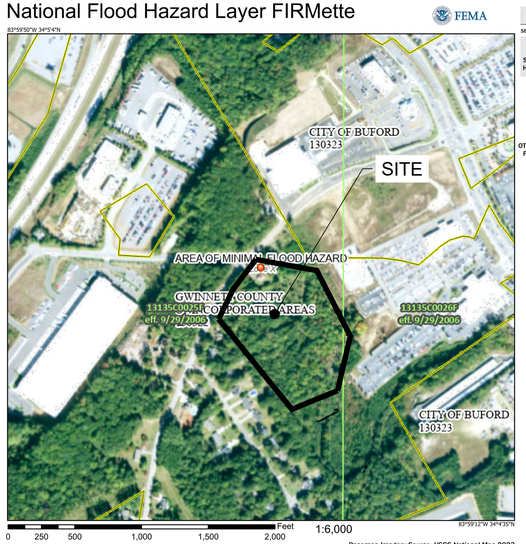
THE DEVELOPER SHOULD BE AWARE THAT ANY UTILITY IMPROVEMENTS (WATER, SANITARY SEWER, NATURAL GAS, AND /OR STORM DRAINAGE) TO BE DEDICATED TO THE CITY AND BECOME CITY RESPONSIBILITY MUST BE INSTALLED BY A CONTRACTOR ON THE CITY'S APPROVED CONTRACTOR LIST, OR OBTAIN APPROVAL BY THE CITY TO BE ADDED TO THE LIST PRIOR TO THE BEGINNING OF INSTALLATION.

THE CITY OF BUFORD ASSUMES NO RESPONSIBILITY FOR OVERFLOW OR EROSION OF NATURAL OR ARTIFICIAL DRAINS BEYOND THE EXTENT OF THE STREET RIGHT -OF-WAY, OR FOR THE EXTENSION OF CULVERTS BEYOND THE POINT SHOWN ON THE APPROVED DEVELOPMENT PLANS. THE CITY OF BUFORD DOES NOT ASSUME RESPONSIBILITY FOR THE MAINTENANCE OF PIPE IN DRAINAGE EASEMENTS BEYOND THE CITY RIGHT-OF-WAY.

STREAM BUFFER ARE TO REMAIN IN A NATURAL AND UNDISTURBED CONDITION.

STRUCTURES ARE NOT ALLOWED IN DRAINAGE EASEMENTS.

NATIONAL FLOOD HAZARD MAP 13135C0016G EFF. 3/4/2013



TEXT LEGEND

AC = ACREAGE
AE = ACCESS EASEMENT
BC = BACK OF CURB
DE = DRAINAGE EASEMENT
HW = HEADWALL
LL = LAND LOT
LLL = LAND LOT LINE
PL = PROPERTY LINE
POB = POINT OF BEGINNING
SC = SPILL CURB
EASEMENT
STA = STATION
SW = CONCRETE SIDEWALK
TCE = TEMPORARY

LEGEND

x——x = FENCE
= STORM LINE
= BRANCH/CREEK
= DRAINAGE FLOW ARROW

CALL BEFORE YOU DIG

NOTE: DEVELOPER SHALL BE RESPONSIBLE FOR ANY CONFLICTS WITH EXISTING UTILITIES.

CERTIFICATE OF DEVELOPMENT PLANS APPROVAL

ALL REQUIREMENTS OF THE CITY OF BUFORD UNIFIED DEVELOPMENT ORDINANCE (UDO) RELATIVE TO THE PREPARATION AND SUBMISSION OF A DEVELOPMENT PERMIT APPLICATION HAVING BEEN FULFILLED, AND SAID APPLICATION AND ALL SUPPORTING PLANS AND DATA HAVING BEEN REVIEWED AND APPROVED BY CITY OF BUFORD DEPARTMENTS AS REQUIRED UNDER THEIR RESPECTIVE AND APPLICABLE REGULATIONS, APPROVAL OF THIS SITE PLAN IS HEREBY GRANTED AND ALL OTHER DEVELOPMENT PLANS ASSOCIATED WITH THIS PROJECT SHALL BE SUBJECT TO ALL FURTHER PROVISIONS OF SAID UDO.

DIRECTOR _____ DATE _____

DEPARTMENT OF PLANNING AND DEVELOPMENT

NOTE: THIS CERTIFICATE EXPIRES 12 MONTHS FROM THE DATE OF APPROVAL UNLESS A DEVELOPMENT PERMIT IS ISSUED.

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	CX0 PLANS SUBMITTAL	SD	SD	TM
2	03/12/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM
3	05/06/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM

Civil Engineering By LJA:
Tyler Marchman, GA PE040989
Cell: 770-855-2430
tylerm@allianceco.com

GEORGIA REGISTERED NO. 040989 PROFESSIONAL ENGINEER TYLER SCOTT MARCHMAN 5-6-24

GASWCC LEVEL II
CERTIFICATION #59016
EXPIRATION DATE: 11/17/2025

LJA ENGINEERING
299 S. MAIN STREET
ALPHARETTA, GA 30009
770-225-4730

BOGAN ENTERPRISES, LLC
11555 MEDLOCK BRIDGE RD.
SUITE #190
JOHNS CREEK, GA 30097
paulkhansari@gmail.com

CLEARING AND GRADING PLANS FOR 1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

PROJECT NUMBER
3934-2301

SHEET TITLE
COVER

SHEET NUMBER
C-100

File Location: s:\sesf\projects\gs\3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-cover-zoning-site plan

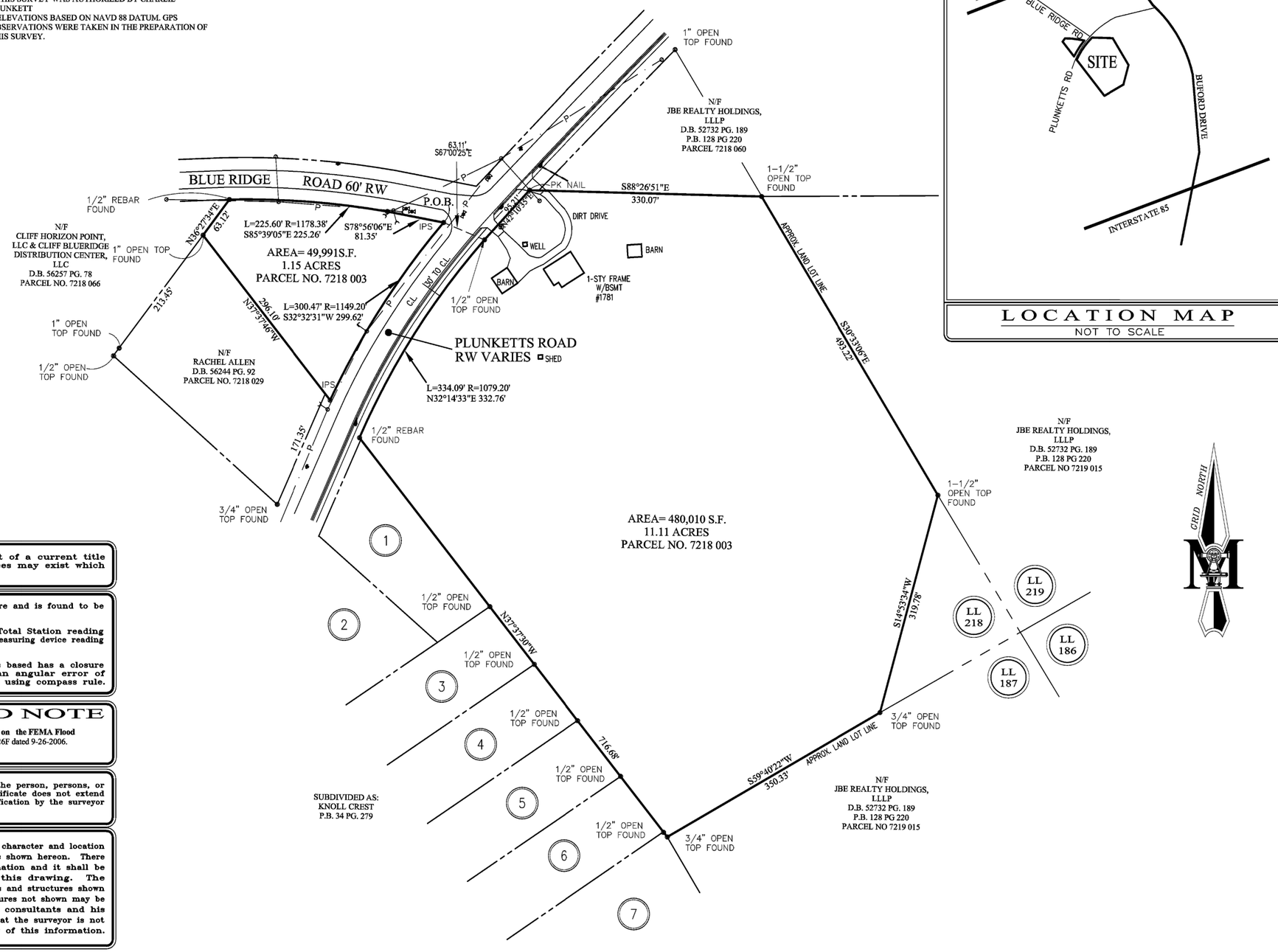
PLAT B: 00146 P: 00028
Recorded: 09/03/2019 10:13 AM
19LD49868 Pages: 1 Fees: $10.00
Richard T. Alexander, Jr.
Clerk of Superior Court, Gwinnett County, GA
eFile Participant IDs: 2231782116,

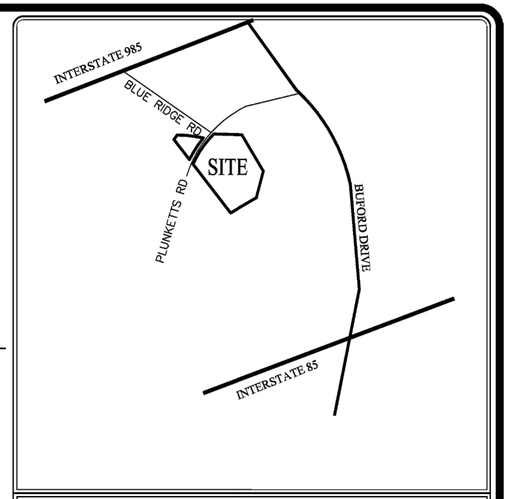
NOTE:

1. ALL MATTERS OF TITLE ARE EXCEPTED.
2. THIS PLAT IS SUBJECT TO ALL LEGAL EASEMENTS AND RIGHTS-OF-WAY, PUBLIC OR PRIVATE.
3. THIS SURVEY WAS AUTHORIZED BY CHARLIE PLUNKETT
4. ELEVATIONS BASED ON NAVD 88 DATUM. GPS OBSERVATIONS WERE TAKEN IN THE PREPARATION OF THIS SURVEY.

LEGEND

- ELECTRIC METER
- ELECTRIC BOX or SECURITY CAMERA
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- WATER METER
- WATER VALVE
- JUNCTION BOX/STORM SEWER MANHOLE
- HEADWALL
- CATCH BASINS
- DROP INLETS
- STORM SEWER LINE
- CURB INLET
- FLARED END SECTION
- SQUARE OUTLET CONTROL STRUCTURE
- PROPERTY CORNER
- FIELD LOCATED PIN (AS NOTED)
- CONCRETE MONUMENT FOUND
- —W— APPROX WATER LINE
- S.S.E. SANITARY SEWER EASEMENT
- L.L. LAND LOT
- L.L.L. LAND LOT LINE
- R/W RIGHT-OF-WAY





LOCATION MAP
NOT TO SCALE

GRID NORTH

This survey was made without the benefit of a current title commitment. Easements and encumbrances may exist which benefit and burden this property.

This map or plat has been calculated for closure and is found to be accurate within 1 foot in 100,000+feet.

This plat has been prepared using a Nikon Total Station reading directly to 1 second and an electronic distance measuring device reading directly to 1, one hundredth of a foot.

The field data upon which this map or plat is based has a closure precision of (1) foot in 29,587 feet and an angular error of 1 seconds per angle point, and was adjusted using compass rule.

FLOOD HAZARD NOTE

"This property does not lie in a FEMA Flood Zone, as depicted on the FEMA Flood Insurance Rate Map of of Gwinnett County, Ga. 13135C0025F/26F dated 9-26-2006.

This plat was prepared for the exclusive use of the person, persons, or entity named in the certificate hereon. Said certificate does not extend to any unnamed person without an express recertification by the surveyor

Information regarding the reputed presence, size, character and location of existing underground utilities and structures is shown hereon. There is no certainty of the accuracy of this information and it shall be considered in that light by those using this drawing. The location and arrangement of underground utilities and structures shown hereon may be inaccurate and utilities and structures not shown may be encountered. The owner, his employees, his consultants and his contractors shall hereby distinctly understand that the surveyor is not responsible for the correctness or sufficiency of this information.

GRAPHIC SCALE - IN FEET
50 0 100 200 300 400

The survey was prepared in conformity with the Technical Standards for Property Surveys in Georgia as set forth in Chapter 180-7 of the Rules of the Georgia Board of Registration for Professional Engineers and Land Surveyors and as set forth in the Georgia Plat Act O.C.G.A. 15-6-67.

CHRISTOPHER E. MOORE & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYING
848 FAIRWAY DRIVE~ MONROE, GA. 30655
Phone:(770) 963-7418 chris@cmaland.com

GEORGIA REGISTERED No.2828 LAND SURVEYOR CHRISTOPHER E. MOORE

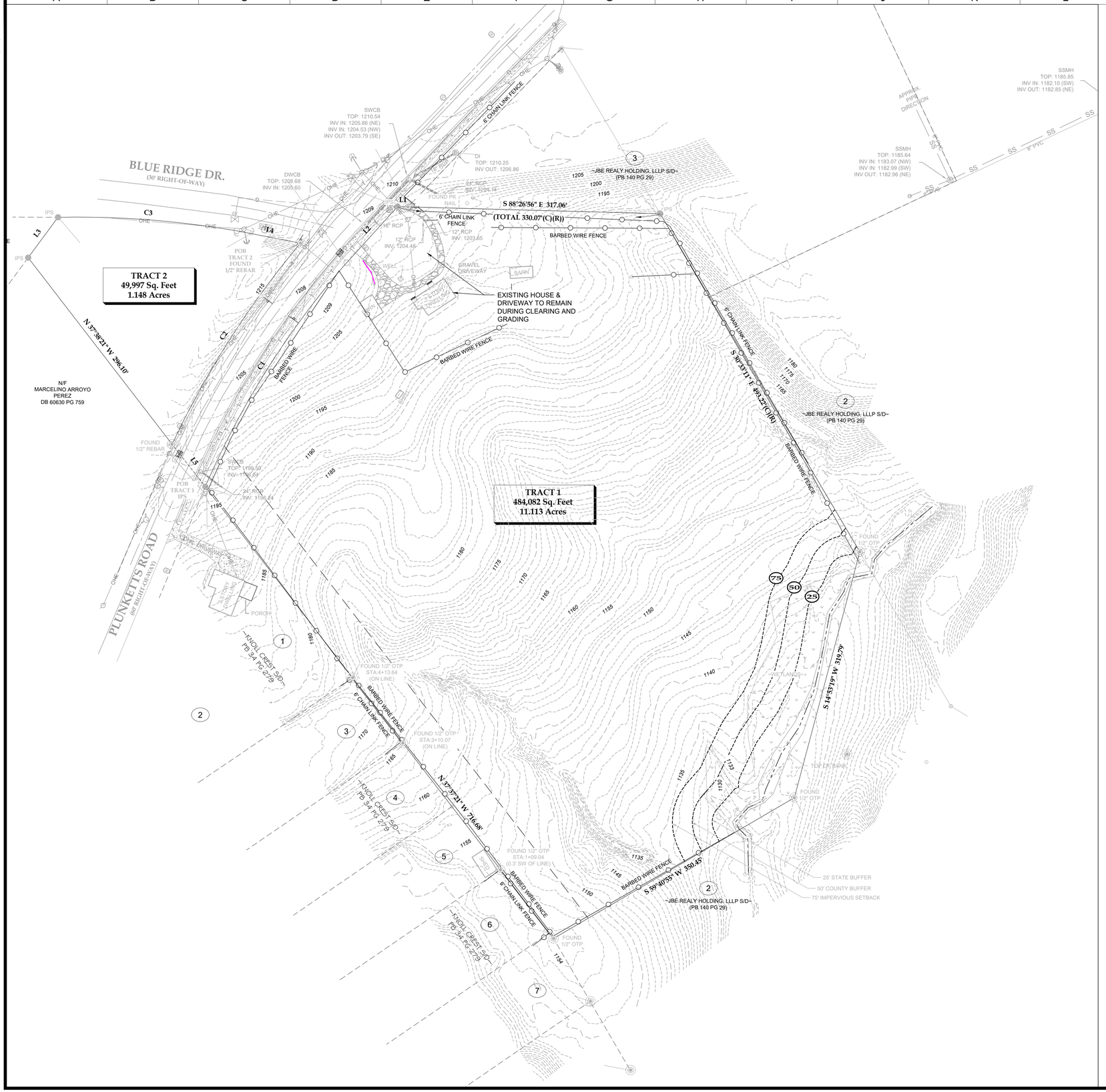
BOUNDARY SURVEY OF

GLADYS PLUNKETT ESTATE

DEED BOOK 18263 PG 78
LAND LOT 218 ~ 7TH DISTRICT
GWINNETT COUNTY, GEORGIA
6-4-2015 ~ SCALE: 1"= 100'
JOB# 150024/190045

REVISIONS

NO.	DATE	DESCRIPTION	BY
1.	8-30-19	SURVEY UPDATE	CEM



LEGEND

- (25) 25' STATE WATER BUFFER
- (50) 50' UNDISTURBED BUFFER
- (75) 75' IMPERVIOUS SETBACK

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	C&G PLANS SUBMITTAL	SD	SD	TM
2	03/12/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM
3	05/06/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM

Civil Engineering By LJA:
Tyler Marchman, GA PE040989
Cell: 770-855-2430
tylerm@allianceco.com

GEORGIA REGISTERED NO. 040989 PROFESSIONAL ENGINEER TYLER SCOTT MARCHMAN
5-6-24

GASWCC LEVEL II
CERTIFICATION #59016
EXPIRATION DATE: 11/17/2025

LJA ENGINEERING
299 S. MAIN STREET
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JOHNS CREEK, GA 30097
paulkhansari@gmail.com

CLEARING AND GRADING PLANS FOR
1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

NORTH

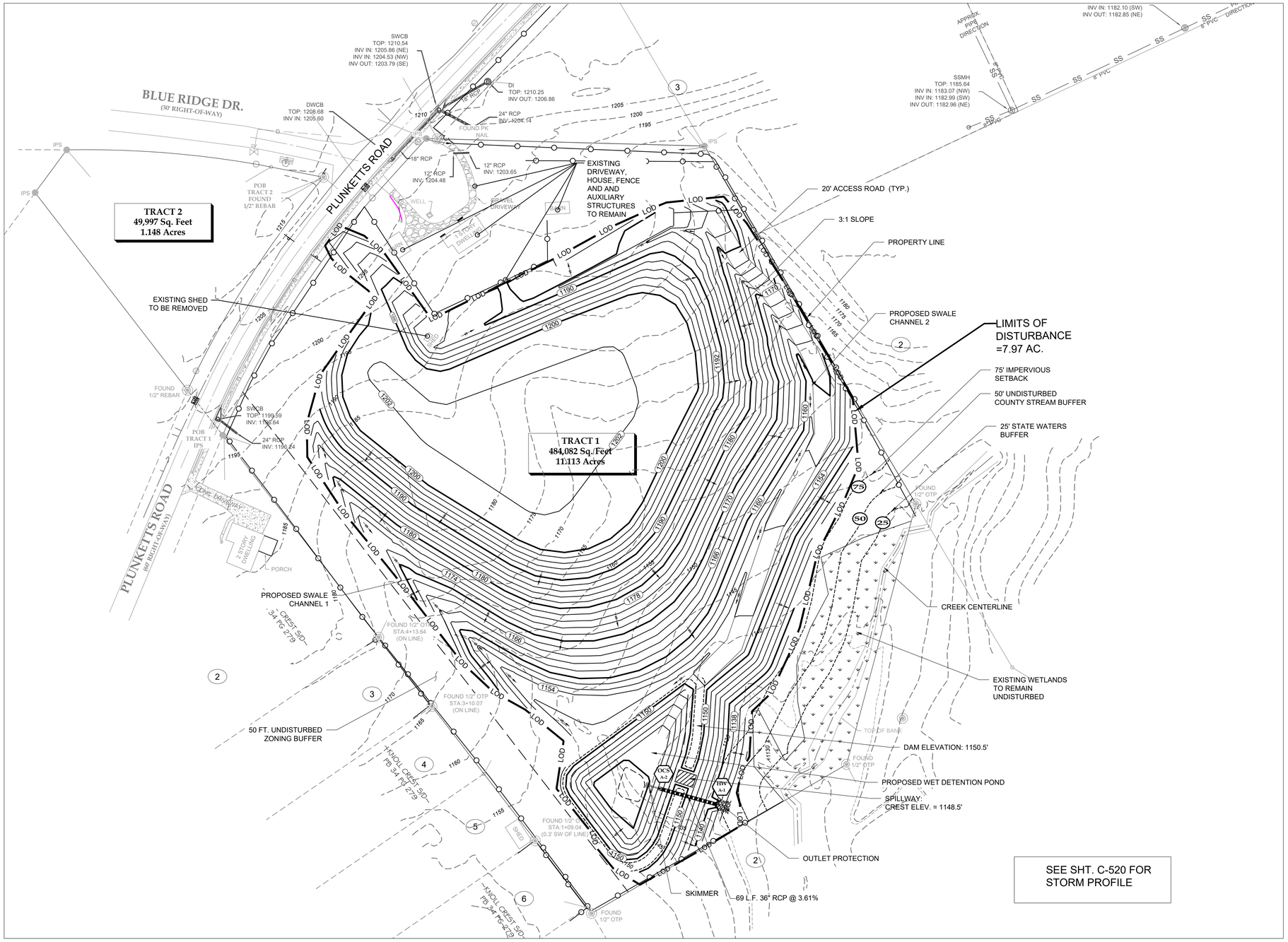
SCALE: 1"= 60'
0 60

PROJECT NUMBER
3934-2301

SHEET TITLE
EXISTING CONDITIONS

SHEET NUMBER
C-102

Plot Date: Monday, May 6, 2024 4:21:34 PM
File Location: s:\aecfprojects\ga3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-cover-zoning-site plan

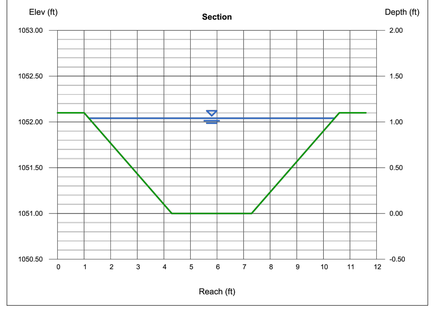


Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Monday, Jan 8 2024

CHANNEL 2

Trapezoidal		Highlighted	
Bottom Width (ft)	= 3.00	Depth (ft)	= 1.04
Side Slopes (z:1)	= 3.00, 3.00	Q (cfs)	= 9.800
Total Depth (ft)	= 1.10	Area (sqft)	= 6.36
Invert Elev (ft)	= 1051.00	Velocity (ft/s)	= 1.54
Slope (%)	= 4.30	Wetted Perim (ft)	= 9.58
N-Value	= 0.150	Crit Depth, Yc (ft)	= 0.57
		Top Width (ft)	= 9.24
Calculations		EGL (ft)	= 1.08
Compute by:	Known Q		
Known Q (cfs)	= 9.80		

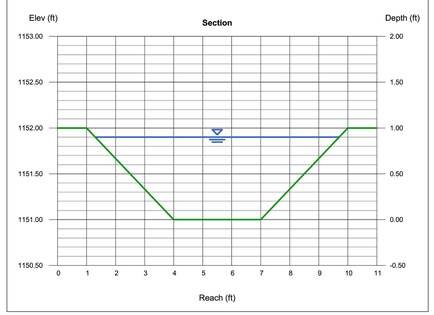


Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Monday, Jan 8 2024

CHANNEL 2

Trapezoidal		Highlighted	
Bottom Width (ft)	= 3.00	Depth (ft)	= 0.90
Side Slopes (z:1)	= 3.00, 3.00	Q (cfs)	= 9.800
Total Depth (ft)	= 1.00	Area (sqft)	= 5.13
Invert Elev (ft)	= 1151.00	Velocity (ft/s)	= 1.91
Slope (%)	= 7.80	Wetted Perim (ft)	= 8.69
N-Value	= 0.150	Crit Depth, Yc (ft)	= 0.57
		Top Width (ft)	= 8.40
Calculations		EGL (ft)	= 0.96
Compute by:	Known Q		
Known Q (cfs)	= 9.80		



STORM STRUCTURE LEGEND

- HW XXX — HEADWALL
- 25 — 25' STATE WATER BUFFER
- 50 — 50' UNDISTURBED BUFFER
- 75 — 75' IMPERVIOUS SETBACK

GEORGIA811 www.Georgia811.com
Know what's below. Call before you dig.

NOTE: DEVELOPER SHALL BE RESPONSIBLE FOR ANY CONFLICTS WITH EXISTING UTILITIES.

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	CX0 PLANS SUBMITTAL	SD	SD	TM
2	03/12/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM
3	05/06/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM

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GASWCC LEVEL II
CERTIFICATION #59016
EXPIRATION DATE: 11/17/2025

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JOHNS CREEK, GA 30097
paulkhansari@gmail.com

CLEARING AND GRADING PLANS FOR 1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

NORTH

SCALE: 1"= 60'
0 60

PROJECT NUMBER: 3934-2301

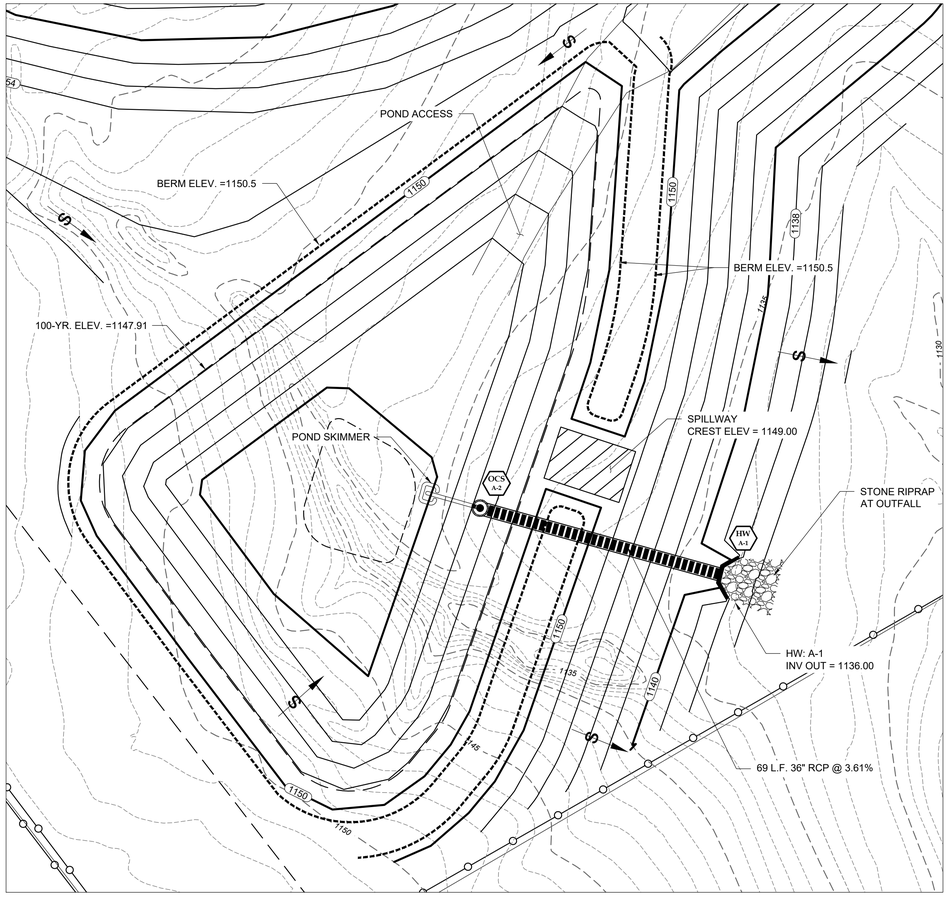
SHEET TITLE: GRADING PLAN

SHEET NUMBER: C-500

Plot Date: Monday, May 6, 2024 5:05:36 PM
File Location: s:\sedprojects\ga\3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-utilities-grading-drainage

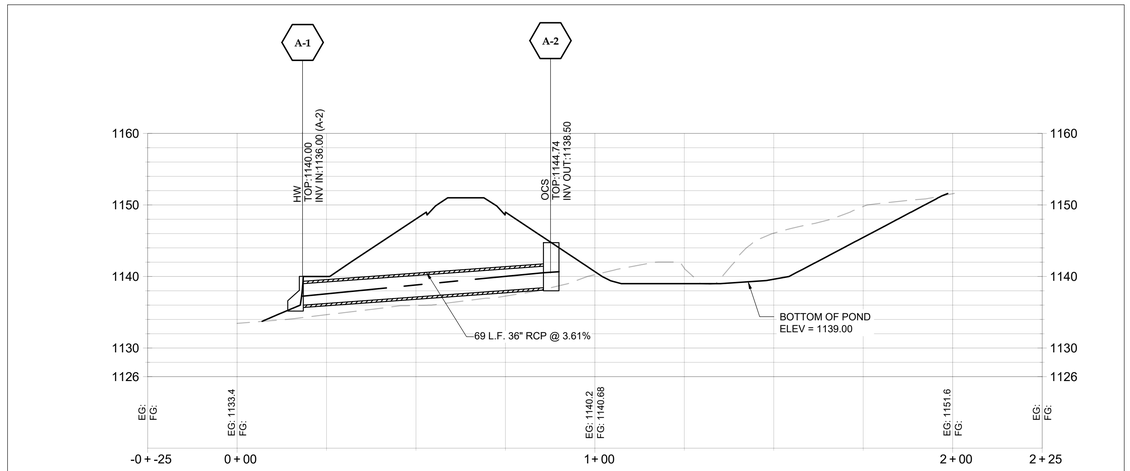
STORMWATER MANAGEMENT POND PLAN VIEW

SCALE: 1"= 20'



STORMWATER MANAGEMENT POND PROFILE VIEW

1"= 20' HORIZONTAL
1"= 10' VERTICAL



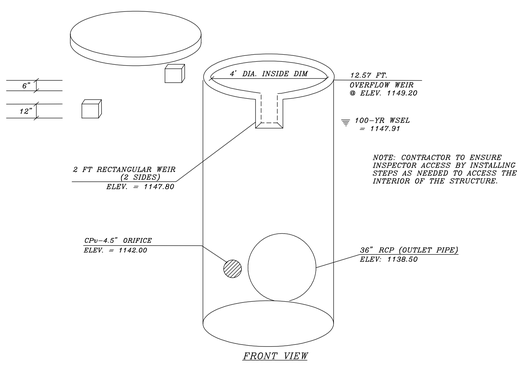
STORM A PROFILE

PIPE CHART (125% OF 100-YR. FLOW)

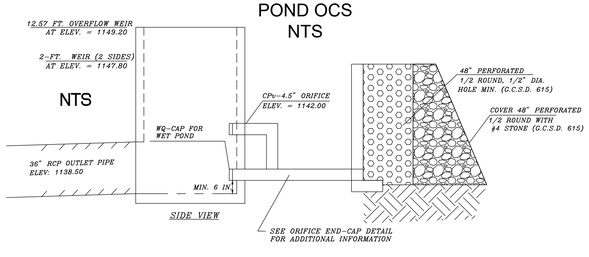
Upstream Structure	Downstream Structure	Pipe Diameter	Pipe Length	Pipe Material	n-value Pipe	Invert Up	Invert Dn	Pipe Slope	Capacity Full	Drainage Area	Runoff Coeff	Time of Concentration, Tc	System Intensity	Flow Rate	Total Runoff	Storage	Average Velocity	HGL Up	HGL Dn	Grnd / Rim Elev Up	Grnd / Rim Elev Dn
		(in)	(ft)			(ft)	(ft)	(%)	(cfs)	(ac)	(C)	(min)	(in/hr)	(cfs)	(cfs)	(cft)	(ft/s)	(ft)	(ft)	(ft)	(ft)
A-2	A-1	36.00	69.00	RCP	0.013	1138.50	1136.00	3.61	126.95	0.00	0.00	5.00	0.00	61.56	0.00	343.14	13.75	1141.03	1137.47	1144.74	1140.00

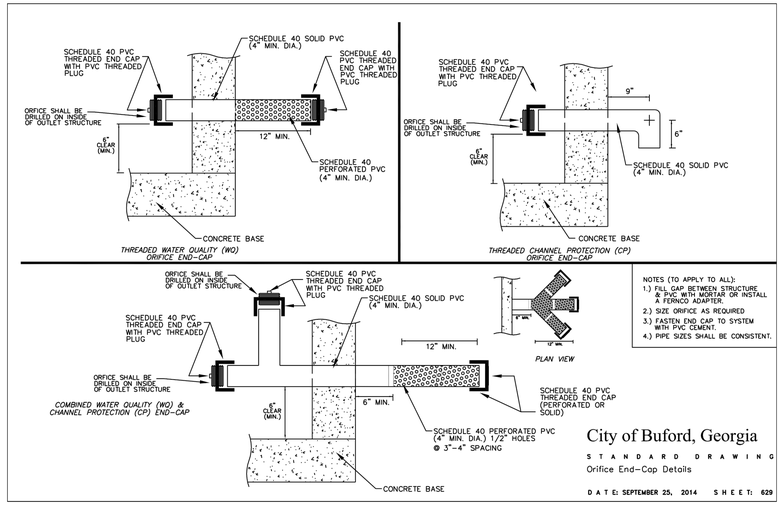
Principal spillway > 125% of the 100-yr flow
(Used 36" pipe for full build-up conditions to pass 125% of unrouted flow).

POND OCS DETAIL



POND OCS
NTS





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L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

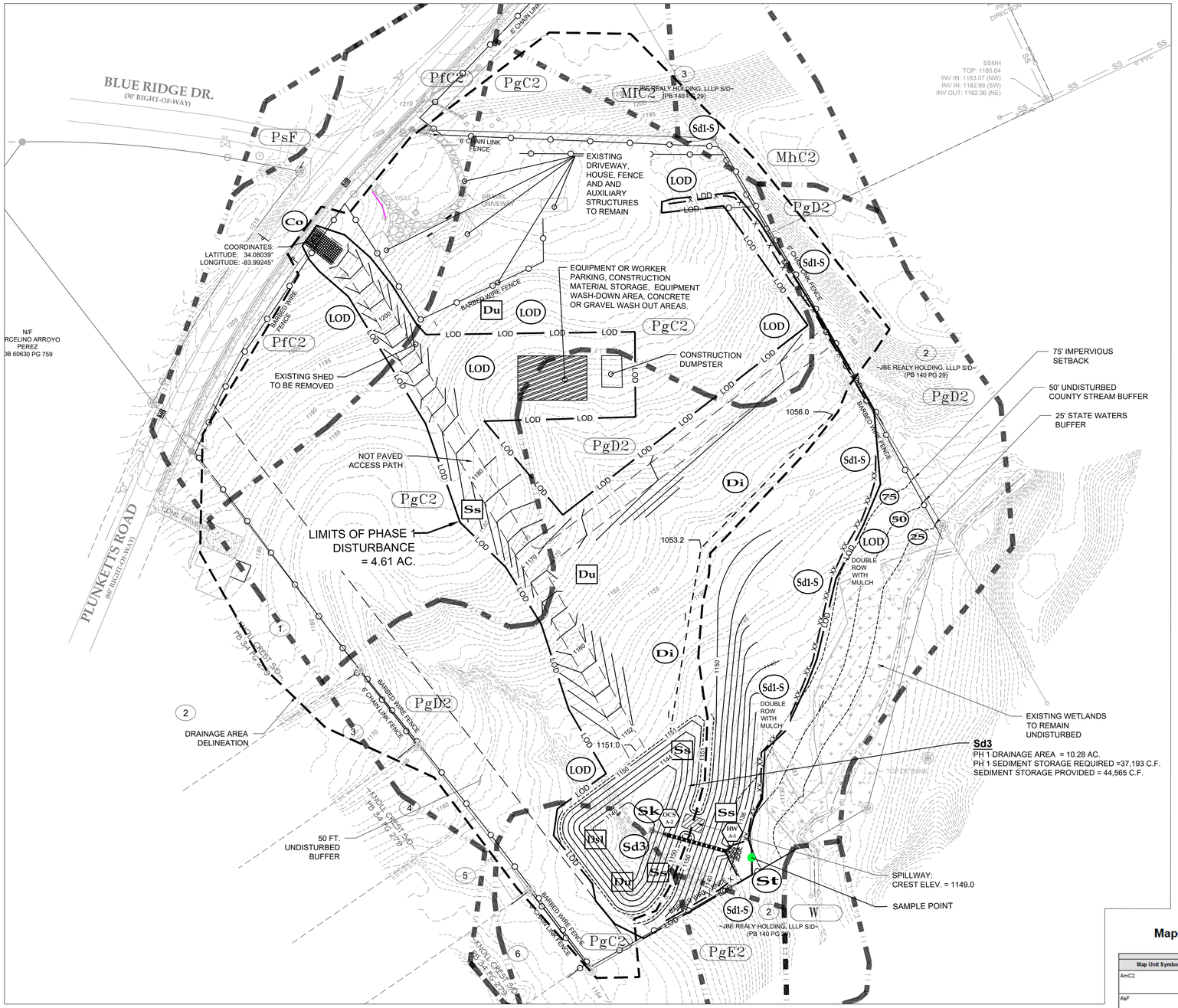
NORTH

PROJECT NUMBER
3934-2301

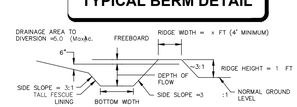
SHEET TITLE
STORMWATER MANAGEMENT POND

SHEET NUMBER
C-520

Plot Date: Tuesday, May 7, 2024 10:02:04 AM
File Location: s:\sec\projects\gis\3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\an sheets\3934-2301-utilities-grading-drainage



TYPICAL BERM DETAIL



SEDIMENT STORAGE NOTES

1. IT IS INTENDED FOR THE TEMPORARY SEDIMENT BASIN TO REMAIN IN PLACE PERMANENTLY.
2. DUST CONTROL TO BE CONTROLED BY FOLLOWING DUST CONTROL DETAIL WITHIN THESE PLANS.

NOTE: DEVELOPER SHALL BE RESPONSIBLE FOR ANY CONFLICTS WITH EXISTING UTILITIES.

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

NOTE:
DIVERSION BERMS SHALL BE PROVIDED TO DIVERT WATER TO THE TEMPORARY PONDS AND TRAPS WITHIN THE INITIAL PHASING

TYPICAL EROSION LINE LEGEND

- CLEAR LIMITS / LIMITS OF DISTURBANCE
- X — X — X — SILT FENCE
- XX — XX — XX — DOUBLE ROW SILT FENCE
- TR — TR — TR — TREE PROTECTION FENCE
- SOIL CLASSIFICATION BOUNDARY LINE
- SOIL — SOIL CLASSIFICATION
- 25 — 25' STATE WATERS BUFFER
- 50 — 50' UNDESTURBED COUNTY STREAMBUFFER
- 75 — 75' IMPERVIOUS SETBACK
- LOD — LIMITS OF DISTURBANCE

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	COASTAL DUNE STABILIZATION (WITH VEGETATION)		Ds1	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM. SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AmC2	Appling sandy loam, 6 to 10 percent slopes, moderately eroded	2.7	10.3%
AsF	Ashlar-Wateree complex, 15 to 45 percent slopes, stony	0.3	1.3%
CYC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	0.1	0.3%
MhC2	Madison gravelly sandy loam, 6 to 10 percent slopes, eroded	0.8	2.9%
MiC2	Madison sandy clay loam, 6 to 10 percent slopes, moderately eroded	0.8	3.1%
MiD2	Madison sandy clay loam, 10 to 15 percent slopes, moderately eroded	1.6	6.3%
PfC2	Pacolet sandy loam, 6 to 10 percent slopes, moderately eroded	2.2	8.4%
PgB2	Pacolet sandy clay loam, 2 to 6 percent slopes, moderately eroded	0.4	1.5%
PgC2	Pacolet sandy clay loam, 6 to 10 percent slopes, moderately eroded	7.1	27.5%
PgD2	Pacolet sandy clay loam, 10 to 15 percent slopes, moderately eroded	7.8	29.9%
PgE2	Pacolet sandy clay loam, 15 to 25 percent slopes, moderately eroded	1.9	7.2%
W	Water	0.3	1.3%
Totals for Area of Interest		**25.9**	**100.0%**

CLEARING PHASE NOTES

PRIOR TO LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION 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 IT'S 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 BURNING 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.

PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, LIMITS OF LAND DISTURBANCE SHALL CLEARLY AND ACCURATELY BE DEMARCATED WITH STAKES, RIBBONS OR OTHER APPROPRIATE MEANS, AND SHALL BE DEMACATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE 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 SHALL BE PLACED AS SHOWN ON THE PLANS.
2. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION EXIT, ALL PERIMETER EROSION CONTROL AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.
3. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY.

WITHIN SEVEN (7) DAYS AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES, THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORSEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE PROJECT PROFESSIONAL DURING THE SITE INSPECTION.

AFTER APPROVAL OF INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CLEARING AND GRUBBING ACTIVITIES. AS CLEARING PERMITS, THE CONTRACTOR SHALL CONSTRUCT SEDIMENT PONDS AS SHOWN ON PLANS.

THE CONTRACTOR CAN UTILIZE CLEARED TREES AS BARRIER BRUSH SEDIMENT CONTROL 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.

ALL SILT FENCES MUST MEET THE REQUIREMENTS OF SECTION 171-TEMPORARY SILT FENCE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF GEORGIA, STANDARD SPECIFICATIONS, 1983 EDITION.

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.

SEDIMENT AND EROSION CONTROL MEASURES MUST BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED 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 A VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.

CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE PROPER FUCTIONING.

FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED PLANS.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION		Di	An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Fr	FILTER RING		Fr	A temporary stone barrier constructed at storm drain inlets and pond outlets.
Lv	LEVEL SPREADER		Lv	A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Re	RETAINING WALL		Re	A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Sd1	SEDIMENT BARRIER		Sd1	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP		Sd2	A temporary protective device formed at or around an inlet to a storm drain to trap sediment.
Sd4	TEMPORARY SEDIMENT TRAP		Sd4	A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER		Sk	A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Sr	TEMPORARY STREAM CROSSING		Sr	A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION		St	A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Tp	TOPSOILING		Tp	The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION		Tr	To protect desirable trees from injury during construction activity.

DESCRIPTION OF STAGES

1. INITIAL STAGE - ESTABLISH / INSTALL SEDIMENT BASIN AND DIVERSIONS. ENSURE TREESAVE AND ALL SILT FENCE IS INSTALLED PRIOR TO DISTURBANCE. CONSTRUCTION EXITS, STAGING AREA, AND STOCKPILE AREAS, TO BE ESTABLISHED. DS1, DUST CONTROL, AND SLOPE STABILIZATION / SILT FENCING TO BE ESTABLISHED / MAINTAINED AS NEEDED.

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	CX0 PLANS SUBMITTAL	SD	SD	TM
2	03/12/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM
3	05/06/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM

Civil Engineering By LJA:
Tyler Marchman, GA PE040989
Cell: 770-855-2430
tylerm@allianceco.com

GEORGIA REGISTERED NO. 040989 PROFESSIONAL ENGINEER TYLER SCOTT MARCHMAN 5-6-24

GASWCC LEVEL II
CERTIFICATION #59016
EXPIRATION DATE: 11/17/2025

LJA ENGINEERING
299 S. MAIN STREET
ALPHARETTA, GA 30009
770-225-4730

BOGAN ENTERPRISES, LLC
11555 MEDLOCK BRIDGE RD.
SUITE #190
JOHNS CREEK, GA 30097
paulkhansari@gmail.com

CLEARING AND GRADING PLANS FOR 1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

NORTH

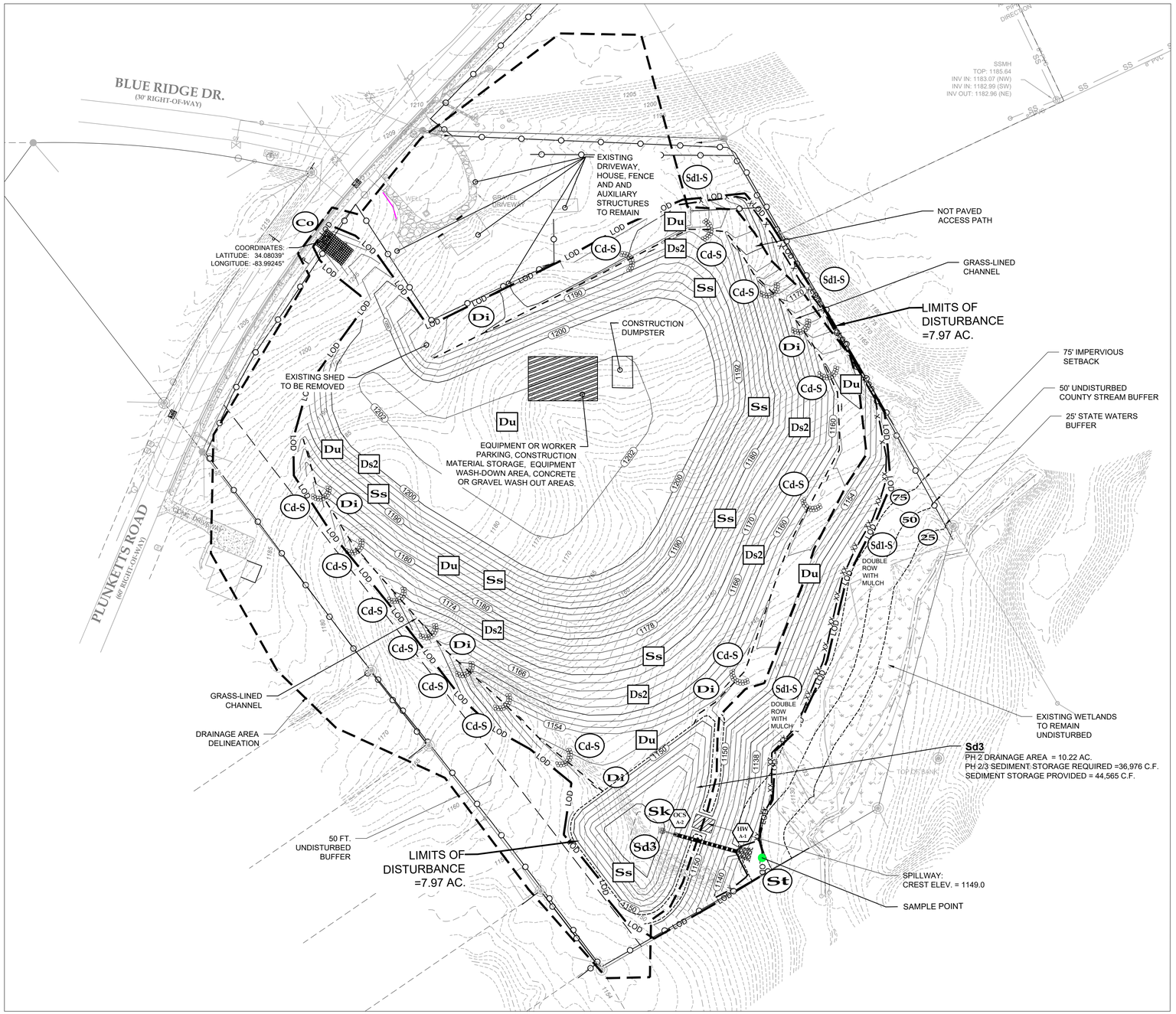
SCALE: 1"= 60'
0 60

PROJECT NUMBER
3934-2301

SHEET TITLE
EROSION CONTROL PLAN PHASE 1

SHEET NUMBER
C-601

Plot Date: Monday, May 6, 2024 4:22:37 PM
File Location: s:\sec\projects\gas\3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-erosion



GRADING PHASE NOTES

DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF IT'S NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES, AND THEREFORE LIMITED DURATIONS, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED.

EARTHWORK OPERATIONS IN THE VICINITY OF STREAM BUFFERS SHALL BE CAREFULLY CONTROLLED TO AVOID DUMPING OR SLOUGHING INTO THE BUFFER AREAS.

EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION, AND ALTER THE LOCATION OF EROSION CONTROL DEVICES ACCORDINGLY. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.

THE CONTRACTOR SHALL ESTABLISH BARRIERS AT THE TOP OF ALL SLOPES UNDER CONSTRUCTION. CUT AND FILL SLOPES SHALL NOT EXCEED 3:1.

STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED.

ALL DRAINAGE SWALES AND 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 WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.

THE CONTRACTOR SHALL LEAVE THE SEDIMENT BASIN IN PLACE UNTIL SEDIMENT SHALL BE CLEANED OUT OF THE POND WHEN IT REACHES ONE THIRD OF THE DEPT OF THE BASIN.

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.

SEDIMENT AND EROSION CONTROL MEASURES MUST BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.

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 A VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.

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.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT		Co	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION		Di	An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Fr	FILTER RING		Fr	A temporary stone barrier constructed at storm drain inlets and pond outlets.
Lv	LEVEL SPREADER		Lv	A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Re	RETAINING WALL		Re	A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Sd1	SEDIMENT BARRIER		Sd1	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP		Sd2	A temporary protective device formed at or around an inlet to a storm drain to trap sediment.
Sd4	TEMPORARY SEDIMENT TRAP		Sd4	A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER		Sk	A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Sr	TEMPORARY STREAM CROSSING		Sr	A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION		St	A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Tp	TOPSOILING		Tp	The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	COASTAL DUNE STABILIZATION (WITH VEGETATION)		Ds1	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM. SEEDING)		Ds3	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.

TYPICAL EROSION LINE LEGEND

- LOD — CLEAR LIMITS / LIMITS OF DISTURBANCE
- X — SILT FENCE
- XX — DOUBLE ROW SILT FENCE
- TR — TREE PROTECTION FENCE

- 25' STATE WATERS BUFFER
- 50' UNDESTURBED COUNTY STREAMBUFFER
- 75' IMPERVIOUS SETBACK
- LOD LIMITS OF DISTURBANCE

SEDIMENT STORAGE NOTES

1. IT IS INTENDED FOR THE TEMPORARY SEDIMENT BASIN TO REMAIN IN PLACE PERMANENTLY.
2. DUST CONTROL TO BE CONTROLED BY FOLLOWING DUST CONTROL DETAIL WITHIN THESE PLANS.

DESCRIPTION OF STAGES

- Sd3 AND DIVERSION SLOPES TO CONSTRUCTED DURING THE PHASE 1 TO STAY IN PLACE AND MAINTAINED AS NEEDED.
- START MASS GRADING OPERATION. INSTALL INTERMEDIATE PHASE EROSION CONTROL MEASURES.
- Ds2, DUST CONTROL , AND SLOPE STABILIZATION / SILT FENCING TO BE MAINTAINED AS NEEDED.

NOTE: DEVELOPER SHALL BE RESPONSIBLE FOR ANY CONFLICTS WITH EXISTING UTILITIES.

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

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	CX/G PLANS SUBMITTAL	SD	SD	TM
2	03/12/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM
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GEORGIA REGISTERED PROFESSIONAL ENGINEER NO. 040989 TYLER SCOTT MARCHMAN 5-6-24

GASWCC LEVEL II
CERTIFICATION #59016
EXPIRATION DATE: 11/17/2025

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CLEARING AND GRADING PLANS FOR 1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

NORTH

SCALE: 1"= 60'
0 60

PROJECT NUMBER
3934-2301

SHEET TITLE
EROSION CONTROL PLAN PHASE 2

SHEET NUMBER
C-602

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Plot Date: Monday, May 6, 2024 4:26:16 PM

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

SWCD:________________________________

Project Name:________ 1781 Plunketts Road **Address:**_ 1781 Plunketts Road
Local Issuing Authority:__________ Gwinnett/GA **Date on Plans:**_____ 1/10/2024
Name & Email of person filling out checklist:__________ Tyler Marchman (tmarchman@allianceco.com)

Plan Page #	Included Y/N		TO BE SHOWN ON ES&PC PLAN
C-604	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)
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)
N/A	N	3	Limits of disturbance shall be no greater 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 at least 4 of the BMPs listed in Appendix 1 of this checklist and the GAEPD approval letter. * (A copy of the written approval by GAEPD must be attached to the plan for the Plan to be reviewed.)
C-604 (#2)	Y	4	The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
C-100	Y	5	Provide the name, address, email address, and phone number of primary permittee.
C-604 (#4)	Y	6	Note total and disturbed acreages of the project or phase under construction.
C-604 (#5)	Y	7	Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
C-100	Y	8	Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
C-604 (#7)	Y	9	Description of the nature of construction activity and existing site conditions.
C-605	Y	10	Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
C-604 (#9)	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.
C-604 (#10)	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 19** of the permit.
C-604 (#11)	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 19** of the permit. *
C-604 (#12)	Y	14	Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with **Part IV.A.5 page 25** of the permit. *
C-604 (#13)	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."
C-604 (#14)	Y	16	Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
C-604 (#15)	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." *
C-604 (#16)	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." *
C-604 (#17)	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."
C-604 (#18)	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."
C-604 (#19)	Y	21	Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
C-604 (#20)	Y	22	Any construction activity which discharges storm water into an 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 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
C-604 (#21)	Y	23	If a TMDL Implementation Plan for sediment has been finalized for the 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. *
C-604 (#22&26)	N/A	24	BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *
C-604 (#26)	Y	25	Provide BMPs for the remediation of all petroleum spills and leaks.
C-604 (#24)	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. *
C-604 (#25)	Y	27	Description of practices to provide cover for building materials and building products on site. *
C-604 (#24&26)	Y	28	Description of the practices that will be used to reduce the pollutants in storm water discharges. *
C-100 & C-605	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, temporary and final stabilization).
C-604 (#28)	Y	30	Provide complete requirements of Inspections and record keeping by the primary permittee. *
C-604 (#29)	Y	31	Provide complete requirements of Sampling Frequency and Reporting of sampling results. *
C-604 (#30)	Y	32	Provide complete details for Retention of Records as per Part IV.F. of the permit. *
C-604 (#31)	Y	33	Description of analytical methods to be used to collect and analyze the samples from each location. *
C-604 (#32)	Y	34	Appendix B rationale for NTU values at all outfall sampling points where applicable. *
C-601 & C-602	Y	35	Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *
C-601 & C-602	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 perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *
C-601 & C-602	Y	37	Graphic scale and North arrow.
C-601 & C-602	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

Plan Page #	Included Y/N		TO BE SHOWN ON ES&PC PLAN
N/A	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). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.
N/A	N/A	40	Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
C-102 - C-602	Y	41	Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
C-102 - C-602	Y	42	Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
C-601 & C-602	Y	43	Delineation and acreage of contributing drainage basins on the project site.
HYDRO REP.	N/A	44	Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
C-604	Y	45	An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
C-605	Y	46	Storm drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
C-601	Y	47	Soil series for the project site and their delineation.
C-601 & C-602	Y	48	The limits of disturbance for each phase of construction.
C-605	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 included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment 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.
C-601 & C-602	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.
C-606 - C-608	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.
C-606	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 the 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, 2024

EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES

1. THIS IS A STAND ALONE DEVELOPMENT PROJECT WITH A TOTAL ACREAGE LESS THAN 50 ACRES.

THE 24-HOUR LOCAL CONTACT OF THIS PROJECT IS: BOGAN ENTERPRISES, LLC, 11555 MEDLOCK BRIDGE ROAD , STE 190, JOHNS CREEK, GA 30097. CONTACT PERSON: PAUL KHANSARI, TEL: (404) 429-3621.

2. THE PRIMARY PERMITTEE OF THIS PROJECT IS BOGAN ENTERPRISES, LLC, 11555 MEDLOCK BRIDGE ROAD , STE 190, JOHNS CREEK, GA 30097. CONTACT PERSON: PAUL KHANSARI, TEL: (404) 429-3621.

I CERTIFY UNDER 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 CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON 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. SIGNED BY PRIMARY PERMITTEE :

NAME : TYLER MARCHMAN, PE COMPANY: LJA ENGINEERING, INC. ADDRESS: 299 SOUTH MAIN STREET

CITY/ST/ZIP: ALPHARETTA, GA LEVEL IA CERT NO. 2368 SIGNATURE ....

4. THE TOTAL ACREAGE OF THE PROPERTY IS ±11.11 ACRES AND THE TOTAL DISTURBED AREA IS ±7.97 ACRES.

5. THE PROJECT IS LOCATED ON LAND LOT 218, DISTRICT 7, CITY OF BUFORD, GWINNETT COUNTY, WITH THE CONSTRUCTION EXIT AT GPS LOCATION LATITUDE: 34.08039°; LONGITUDE: -83.99245°

6. INITIAL PLAN DATE: OCTOBER 18, 2023. REVISIONS ARE SHOWN ON SHEET C-100

7. THE EXISTING SITE IS A WOODED UNDEVELOPED SITE. PROPOSED PROJECT WILL INCLUDE CLEARING AND MASS GRADING OPERATION. NO BUILDINGS OR STRUCTURES WILL BE CONSTRUCTED DURING THIS PHASE OF OPERATION. OVERSIZED SEDIMENT BASIN WILL STAY IN PLACE AFTER SITE STABILIZATION WILL BE ACHIEVED.

8. A VICINITY MAP IS INCLUDED ON SHEETS C-100 AND C-605.

9. THE MS4 IS OPERATED BY THE CITY OF BUFORD, GEORGIA, WHILE THE RECEIVING WATERS OF THIS PROJECT IS AN UNKNOWN TRIBUTARY OF IVY CREEK. NO OTHER ADJACENT STREAMS, LAKES, RESIDENTIAL AREAS, WETLANDS, ETC. WILL BE AFFECTED.

10. 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 SUPERVISION.

SIGNATURE ....

11. 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 THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR 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. GAR 100001.

SIGNATURE ....

12. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS WITHIN 7 DAYS AFTER INSTALLATION.

13. 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.

14. NO STREAM BUFFER ENCROACHMENT WILL OCCUR ON THIS PROJECT, THEREFORE NO BUFFER VARIANCE IS REQUIRED.

15. 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.

16. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

17. 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.

18. 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.

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

20. THIS PROJECT DOES DISCHARGE STORM WATER INTO OR WITHIN ONE MILE UPSTREAM OF A BIOTA IMPAIRED STREAM SEGMENT.

21. A TMDL FOR SEDIMENT HAS BEEN FINALIZED FOR THIS SECTION OF UNKNOWN TRIBUTARY OF IVY CREEK.

22. WASHOUT OF THE DRUM OF A CONCRETE TRUCK AT THE CONSTRUCTION SITE IS PROHIBITED. CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES WILL NOT BE REQUIRED FOR CLEARING AND GRADING PROJECT.

23. 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 SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802. FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802. 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 AGENCIES WILL BE CONTACTED AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1 320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

24. ALL POST-CONSTRUCTION POLLUTANTS FROM THE SITE WILL BE CONTROLLED/TREATED IN THE OVERSIZED SEDIMENT BASIN

25. FOR BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE, PROVIDE COVER (E.G. PLASTIC SHEETING, TEMPORARY ROOFS) TO MINIMIZE THE EXPOSURE OF THESE PRODUCTS TO PRECIPITATION AND TO STORMWATER, OR A SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THESE AREAS. MINIMIZATION OF EXPOSURE IS NOT REQUIRED IN CASES WHERE EXPOSURE TO PRECIPITATION AND TO STORMWATER WILL NOT RESULT IN A DISCHARGE OF POLLUTANTS, OR WHERE EXPOSURE OF A SPECIFIC MATERIAL OR PRODUCT POSES LITTLE RISK TO STORMWATER CONTAMINATION (SUCH AS FINAL PRODUCTS AND MATERIALS INTENDED FOR OUTDOOR USE).

26. ALL POLLUTANTS FROM WASTE DISPOSAL PRACTICES, SOIL ADDITIVES, REMEDIATION OF SPILLS AND LEAKS OF PETROLEUM PRODUCTS, CONCRETE TRUCK WASHOUT, ETC., SHOULD ANY OF THESE OCCUR, WILL BE CONTROLLED BY THE IMPLEMENTATION OF APPROPRIATE BEST MANAGEMENT PRACTICES. THE SITE WILL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.

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 PREVENTIVE 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 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 PRODUCTS WILL NOT BE DISCHARGED TO THE STORMWATER COLLECTION SYSTEM. EXCESS PRODUCT MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.
FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE 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 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.

27. THE CONSTRUCTION ACTIVITY SCHEDULE IS INCLUDED ON THE INDIVIDUAL E,S&P CONTROL PLAN SHEETS.

28. INSPECTIONS AND RECORD KEEPING:
(A). PERMITTEE 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 VEGETATION 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 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM 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 RECEIVING 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.(4). 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 HAS BEEN SUBMITTED) 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 RECEIVING 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 RECEIVING 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 THAN 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), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). 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 CERTIFICATION 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.G.2. OF THIS PERMIT.

29. SAMPLING FREQUENCY AND REPORTING:
(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 STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN IN FORTY-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 STORMWATER DISCHARGE.
(3). SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS: (A). FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT ALLOWS FOR SAMPLING 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 SELECTED AS THE SAMPLING LOCATION; (B). IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER 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 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 RECEIVING 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 0.5 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 PRIMARY PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6)., MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND (E). EXISTING CONSTRUCTION ACTIVITIES, I.E., 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 THAN 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 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.
(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 STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. 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 PERSONNEL WHO PERFORMED THE ANALYSES; (F). REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED; (G). THE RESULTS OF SUCH ANALYSES, INCLUDING THE 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 APPLICABLE PERMITTEES 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.

30. RETENTION OF RECORDS:
(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, SEDIMENTATION 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 SAMPLING 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 COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). 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 NOTIFICATION TO THE PERMITTEE.

31. SAMPLING REQUIREMENTS:
(6). SAMPLING REQUIREMENTS. THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS PARAGRAPH SHALL NOT APPLY TO ANY LAND DISTURBANCE ASSOCIATED WITH THE CONSTRUCTION OF SINGLE-FAMILY HOMES WHICH ARE NOT PART OF A SUBDIVISION OR PLANNED COMMON DEVELOPMENT UNLESS FIVE (5) ACRES OR MORE WILL BE DISTURBED. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY.
(A). SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:
(1). A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR 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 STAND ALONE CONSTRUCTION; (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 STORMWATER 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 STORMWATER(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). THE ANALYTICAL METHOD USED TO COLLECT AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES. 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 ON THE PLAN 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 OR 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 40 CFR 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). SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.
(2). SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.
(3). LARGE MOUTH, CLEAN 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 SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF 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 ANALYSIS OF THE RECEIVING 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 RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING 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 STORMWATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES: (A). THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORMWATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING 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 RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORMWATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING 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 RECEIVING WATER(S) OR THE STORMWATER OUTFALL CHANNEL(S). (D). CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORMWATER CHANNEL. (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 SHEET FLOW 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 VEGETATION AND SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION). (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 STORMWATER 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.

32. NTU LIMITS:
THE AREA OF THE SITE IS ±11.11 ACRES, THE SURFACE WATER DRAINAGE AREA IS LESS THAN 5 SQUARE MILES AND THE RECEIVING WATER IS CLASSIFIED AS WARM WATER, THEREFORE THE ALLOWABLE TURBIDITY FOR THIS PROJECT IS 50 NTU.

33. ALTERNATIVE BMPS:
NO ALTERNATIVE BMPS ARE USED ON THIS PROJECT.

34. DELINEATION OF UNDISTURBED BUFFERS ADJACENT TO STATE WATERS:
ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE HAVE BEEN IDENTIFIED AND/ OR DELINEATED AND WILL BE PROTECTED BY ASSOCIATED STATE AND COUNTY/CITY PROTECTION REGULATIONS AND BUFFERS. IT IS THE RESPONSIBILITY OF THE OWNER AND CONTRACTOR TO ENSURE THAT NO STATE WATER BUFFERS ARE ENCROACHED UPON.

35. DELINEATION OF ON-SITE WETLANDS AND ALL STATE WATERS ON AND WITHIN 200 FEET OF THE PROJECT SITE:
ALL ON-SITE WETLANDS AND ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE HAVE BEEN IDENTIFIED AND/ OR DELINEATED. THIS SITE CONTAINS STATE WATERS WHICH ARE PROTECTED BY ASSOCIATED STATE AND COUNTY/CITY PROTECTION REGULATIONS AND BUFFERS.

36. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM WITH THE GUIDELINES OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL".

37. THIS PROPERTY DOESN'T LIES WITHIN THE 100 YEAR FLOOD PLAIN ACCORDING TO FEMA FLOOD INSURANCE RATE MAP NUMBERS 13135C0025F AND 13135C0026F, WITH EFFECTIVE DATES OF SEPTEMBER 26, 2006.

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

39. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY FIELD INSPECTOR.

BY________________________________

TYLER MARCHMAN REGISTERED GEORGIA ENGINEER No. PE 040989

LEVEL II CERTIFIED DESIGN PROFESSIONAL - CERTIFICATION NUMBER 59016

PERMIT COVERAGE:

THIS PLAN HAS BEEN PREPARED TO MEET THE REQUIREMENTS UNDER THE STATE OF GEORGIA, DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION DIVISION (EPD), GENERAL PERMIT NO. GAR100001 FOR AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FOR COMMON DEVELOPMENTS.

MANAGEMENT PRACTICES AND PERMIT VIOLATIONS (PART III.D):
1. BEST MANAGEMENT PRACTICES 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" TO PREVENT OR REDUCE THE POLLUTION OF WATERS OF GEORGIA. PROPER DESIGN, INSTALLATION, AND MAINTENANCE OF BMP'S SHALL CONSTITUTE A COMPLETE DEFENSE TO ANY ACTION BY THE DIRECTOR OR TO ANY OTHER ALLEGATION OF NONCOMPLIANCE WITH PART III.D.3 AND PART III.D.4.
2. FAILURE TO PROPERLY DESIGN, INSTALL, OR MAINTAIN BMP'S SHALL CONSTITUTE A VIOLATION OF THE PERMIT ROUTINE INSPECTIONS SHALL NOT BE CONSIDERED A VIOLATION. IF DURING THE COURSE OF THE PERMITTEE's ROUTINE INSPECTIONS BMP FAILURES ARE OBSERVED WHICH HAVE RESULTED IN SEDIMENT DEPOSITION INTO WATERS 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 THE PERMIT.
3. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BMP'S 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.1.g. AND PART II.B.3.h.

AUTHORIZED DISCHARGES (PART I.C):
1. ALL DISCHARGES OF STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT WILL RESULT IN LAND DISTURBANCE EQUAL TO OR GREATER THAN ONE ACRE. PART I.C.1.a.
2. ALL DISCHARGES COVERED BY THIS PERMIT SHALL BE COMPOSED ENTIRELY OF STORM WATER EXCEPT AS PROVIDED IN PART I.C.2 AND PART III.A.2 OF THE PERMIT.
3. AUTHORIZED MIXED STORM WATER DISCHARGES: PART I.C.2.
A. THE INDUSTRIAL SOURCE OR ACTIVITY OTHER THAN CONSTRUCTION IS LOCATED ON THE SAME SITE AS THE CONSTRUCTION ACTIVITY AND IS AN INTEGRAL PART OF THE CONSTRUCTION ACTIVITY;
B. THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES ARE OCCURRING ARE IN COMPLIANCE WITH THE TERMS OF THE PERMIT;
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.
4. THE FOLLOWING NON-STORM WATER DISCHARGES MAY BE AUTHORIZED BY THIS PERMIT PROVIDED THE NON-STORM WATER COMPONENT OF THE DISCHARGE IS EXPLICITLY IN THE PLAN AND IS IN COMPLIANCE WITH PART IV.D.7:
PART III.A.2.
A. FIRE FIGHTING ACTIVITIES;
B. FIRE HYDRANT FLUSHING;
C. POTABLE WATER SOURCES INCLUDING WATER LINE FLUSHING;
D. IRRIGATION DRAINING;
E. AIR CONDITIONING CONDENSATE;
F. SPRINGS;
G. UNCONTAMINATED GROUND WATER; AND
H. FOUNDATION OR FOOTING DRAINS WHERE THE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS OR POLLUTANTS.

LIMITATIONS ON COVERAGE PART I.C.3
THE FOLLOWING STORM WATER DISCHARGES FROM CONSTRUCTION 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 CONSTRUCTION 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.

COMPLIANCE WITH WATER QUALITY STANDARDS PART I.C.4
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.

APPENDIX 1
THE ES&PC PLAN MUST INCLUDE AT LEAST FOUR (4) OF THE FOLLOWING BMPS FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO AN IMPAIRED STREAM SEGMENT AND FOR SITES WHICH EPD HAS APPROVED IN WRITING A REQUEST TO DISTURB 5O ACRES OR MORE AT ANY ONE TIME.

The four items chosen must be appropriate for the site conditions.

Plan Page #	Included Y/N		
C-601 - C-602 & C-605	Y	b.	Increase all temporary sediment basins and retrofitted storm water management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.
C-601 & C-602	Y	h.	Reduce the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the Plan.
C-601 & C-602	Y	l.	Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever construction storm water (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.
C-601 & C-602	Y	m.	Use appropriate erosion control slope stabilization instead of concrete in all construction storm water ditches and storm drainages designed for a 25-year, 24-hour

Effective January 1, 2024

* This requirement is different for infrastructure projects:
Certified personnel for primary permittees shall conduct inspections at least once every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Part IV.D.4.a.(3)(a) – (c) of the permit.

CLEARING PHASE NOTES

PRIOR TO LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION 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 IT'S 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 BURNING 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.

PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, LIMITS OF LAND DISTURBANCE SHALL CLEARLY AND ACCURATELY BE DEMARCATED WITH STAKES, RIBBONS OR OTHER APPROPRIATE MEANS, AND SHALL BE DEMACATED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE 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 SHALL BE PLACED AS SHOWN ON THE PLANS.

2. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION EXIT, ALL PERIMETER EROSION CONTROL AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.

WITHIN SEVEN (7) DAYS AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES, THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORSEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE PROJECT PROFESSIONAL DURING THE SITE INSPECTION.

AFTER APPROVAL OF INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CLEARING AND GRUBBING ACTIVITIES. AS CLEARING PERMITS, THE CONTRACTOR SHALL CONSTRUCT SEDIMENT PONDS AS SHOWN ON PLANS.

THE CONTRACTOR CAN UTILIZE CLEARED TREES AS BARRIER BRUSH SEDIMENT CONTROL 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.

ALL SILT FENCES MUST MEET THE REQUIREMENTS OF SECTION 171-TEMPORARY SILT FENCE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF GEORGIA, STANDARD SPECIFICATIONS, 1983 EDITION.

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.

SEDIMENT AND EROSION CONTROL MEASURES MUST BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED 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 A VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.

CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE PROPER FUCTIONING.

FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED PLANS.

GRADING PHASE NOTES

DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF IT'S NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES, AND THEREFORE LIMITED DURATIONS, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED.

EARTHWORK OPERATIONS IN THE VICINITY OF STREAM BUFFERS SHALL BE CAREFULLY CONTROLLED TO AVOID DUMPING OR SLOUGHING INTO THE BUFFER AREAS.

EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION, AND ALTER THE LOCATION OF EROSION CONTROL DEVICES ACCORDINGLY. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.

THE CONTRACTOR SHALL ESTABLISH BARRIERS AT THE TOP OF ALL SLOPES UNDER CONSTRUCTION. CUT AND FILL SLOPES SHALL NOT EXCEED 3:1.

STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED.

ALL DRAINAGE SWALES AND 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 WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.

THE CONTRACTOR SHALL MAINTAIN THE SEDIMENT POND UNTIL PERMANENT GROUNDCOVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE POND WHEN IT REACHES ONE THIRD OF THE DEPT OF THE BASIN.

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.

SEDIMENT AND EROSION CONTROL MEASURES MUST BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.

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 A VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.

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.

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	C&G PLANS SUBMITTAL	SD	SD	TM
2	03/12/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM
3	05/06/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM

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GASWCC LEVEL II
CERTIFICATION #59016
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CLEARING AND GRADING PLANS FOR 1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

PROJECT NUMBER
3934-2301

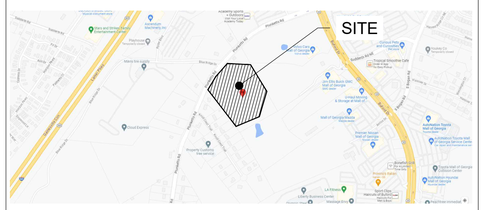
SHEET TITLE
EROSION CONTROL NOTES

SHEET NUMBER
C-604

File Location: s:\sed\projects\ga3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-erosion

Plot Date: Monday, May 6, 2024 4:09:05 PM

LOCATION MAP (N.T.S.)



VICINITY MAP
1"=2,000'

NORTH

LAND DISTURBANCE ACTIVITY SCHEDULE

Activities begin MARCH 2024 WEEK	0	2	4	6	8	10	12	14	16	18	20
Timber salvage operations											
Installation of construction exit, sediment barriers, and other perimeter controls											
Clearing and grubbing of areas necessary for the installation of sediment retention basins and related structures											
Installation of sediment retention basins and related structures											
Clearing and grubbing of remaining areas											
Mass grading											
Permanent stabilization/landscaping											
Permanent stabilization of areas at final grade and temporary stabilization of remaining areas											
Maintenance of Erosion Control Measures											
Removal of erosion and sediment control measures											
Final landscaping, grassing, etc., cleaning of storm drains											

Sd3 CALCULATION

Project Name:	1781 PLUNKETTS ROAD	
Project No:	3934-2301	
Basin ID:	Sd3	

Summary Table: Site Rainfall Location: **Atlanta**

DA =	10.28	= Drainage Area to Basin (Ac.)	
	7.50	= Disturbed Drainage Area to Basin (Ac.)	
C =	0.45		
T_c =	5	= Time of Concentration (min)	
I (2yr. Storm) =	0.17	= Rainfall Intensity, 2-yr, 24-hr storm event (in/hr)	
I (25yr. Storm) =	0.27	= Rainfall Intensity, 25-yr, 24-hr storm event (in/hr)	
Q_2 =	0.79	= Peak Discharge, 2-yr, 24-hr storm event (cfs)	
Q_{25} =	1.25	= Peak Discharge, 25-yr, 24-hr storm event (cfs)	
	1210.00	= Highest Elevation of Drainage Basin	
	1140.00	= Lowest Elevation of Drainage Basin	
	930.00	= Length of Incoming Slope	
	7.53	= Average Incoming Slope (%)	
S_e =	33.3	= Emergency Spillway Entrance Slope (%)	
S_x =	33.3	= Emergency Spillway Exit Slope (%)	
	91.00	= Average Pond Width (Feet)	
	250.00	= Average Pond Length (Feet)	
A =	1150.50	= Top of Dam Elevation	
b =	15.00	= Width of Spillway (Feet)	
Hp =	0.50	= Depth of Flow over Spillway (Feet)	
SPE =	1148.50	= Emergency Spillway Crest Elevation	Rip-Rap Lining Required
F =	1.50	= Freeboard	
V_pElev =	1146.00	= Pond Storage Elevation	
V_oElev =	1142.50	= Pond Clean Out Elevation	
B =	1140.00	= Lowest Elevation of Pipe at Riser	
C =	1134.00	= Lowest Elevation at Outlet Pipe	
H =	13.50	= Head on Spillway	
h =	1.20	= Head over Riser Crest (Ft.)	
D_p =	24	= Diameter of Pipe Conduit (Inches)	CMP = Pipe Material
D_r =	36	= Diameter of Riser (Inches)	0.024 = Manning's Number
D_t =	54	= Diameter of Trash Rack (Inches)	
B_t =	18	= Concrete Riser Base Thickness (usually 18")	
Rb =	48	= Length in inches of Rebar in Anti Flotation Block	
FbH =	18	= Height in inches of Anti Flotation Block (inches)	
FbLW =	60	= Length and Width in inches of Anti Flotation Block (inches)	
T =	8	= Top of Dam Width (feet)	
Z_u =	3.00	= Upstream Side Slope (X:1)	
Z_d =	3.00	= Downstream Side Slope (X:1)	
L =	83	= Total Length of Pipe (L.F.)	7.23% = Pipe Slope

Stage Storage Volume Summary

	Contour Elevation	Surface Area (SF)	Volume (CF)	Cum. Vol. (CF)
	1140.00	3,160	0	0
	1142.00	6,304	9,464	9,464
V_oElev =	1142.50	6,873	3,294	12,758
	1144.00	8,654	11,645	24,404
V_pElev =	1146.00	11,302	31,806	44,565

V_rProv. =	12,758	>	V_rReq. =	12,213
V_tProv. =	44,565	>	V_tReq. =	37,193

DESIGN VALUES DETERMINED BY THIS SHEET REPRESENT THE MINIMUM REQUIREMENTS FOR A TEMPORARY SEDIMENT BASIN.

Volume Calculations:

1. Compute minimum required storage volume (V_s).
   V_s = **134** cy/ acre * 10.28 acres = 1,378 cy 37,193 cf
2. Compute volume of basin at clean-out (V_o).
   V_o = **44** cy/ acre * 10.28 acres = 452 cy 12,213 cf
3. Determine elevation corresponding to minimum required storage volume, V_p.
   Minimum riser crest elevation = 1145.35 feet (determined by stage/storage relationship)
4. Determine elevation corresponding to clean-out volume, V_o
   Clean-out elevation = 1142.12 feet (determined by stage/storage relationship)
   Note: *Clean-out elevation shall be clearly marked on the riser or marked by a post near the riser*
5. Compute Length of riser.
   Riser length = Minimum elevation of riser crest - Lowest elevation of pipe at riser
   Riser length = 1145.35 feet - 1140.00 feet
   Riser length = 5.35 feet

Stormwater Runoff Calculations:

6. Compute peak discharge from a 2-yr, 24-hr storm event. (Q = CIA) C = 0.45
   Q_2 = 0.79 cfs I (2yr. Storm) = 0.17 in/hr
7. Compute peak discharge from a 25-yr, 24-hr storm event. C = 0.45
   Q_{25} = 1.25 cfs I (25yr. Storm) = 0.27 in/hr

Surface Area/Configuration Design:

8. Compute minimum basin surface area (Sa_{min})
   Sa_{min} = 0.01 ac/cfs * Q_2 cfs
   Sa_{min} = 0.01 ac/cfs * 0.79 cfs
   Sa_{min} = 0.01 ac * **43560** sf/ac = 342.56 sf
9. Check available area at elevation of riser crest.
   Available Area = 11,302 sf (determined by stage/storage relationship)
   Available Area > Sa_{min}? YES
10. Compute required length at elevation of riser crest.
   Average Width = 91.00 ft
   Required Length = 2 * average width
   Required Length = 2 * 91.00 ft = 182.00 ft
   Required length = 182.00
   Available Length = 250.00 ft
   2:1 L:W ratio satisfied? YES

Principal Spillway (ps) Design Calculations:

11. Determine maximum principal spillway capacity.
   Q_{max} = Q_2 = 0.79 cfs
12. Compute the vertical distance between the centerline of the outlet pipe and the emergency spillway crest (H).
   H = 13.50 ft
13. Compute the total pipe length of the principal spillway, L, using Figure 6-29.3.
   L = [A-(B+C)/ 2][Zu+Zd]+T+E
   A = 1150.50 ft Top Of Dam Elevation
   B = 1140.00 ft Lowest Elevation of Pipe At Riser
   C = 1134.00 ft Lowest Elevation of Pipe At Outlet
   E = **1.00** ft Extended length of pipe beyond toe of dam
   T = **12.00** ft Top Width of Dam
   Zu = 3.00 :1 Upstream Side Slope
   Zd = 3.00 :1 Downstream Side Slope
   L_c = 94.00 ft Calculated Length of Principal Spillway
   L_{pipe} = 83.00 ft Actual Length of Principal Spillway
14. Determine diameter of principal spillway (D_{pc}) and flow through the principal spillway (Q) from Table 6-29.1 using Hand Q_{max}.
   D_{pc} = 24.00 in Q = 41.30 cfs (value directly from table)
15. Compute actual flow through the principal spillway, using Table 6-29.1 to determine the correction factor for pipe length, L.
   Qps = Q * correction factor
   Factor = 0.89
   Q_{ps} = 36.76
16. Compute riser diameter (D_r).
   D_r = 1.5 * D_{pc}
   D_r >= **1.50** * 24.00 in
   D_r >= 36.00 in
   D_r = 36.00 in
17. Compute trash rack diameter (D_t).
   D_t = 1.4 * D_r
   D_t >= **1.40** * 36.00 in
   D_t >= 50.40 in
   D_t = 54.00 in
18. Determine the minimum distance between the riser crest and the emergency spillway crest, h, using Table 6-29.2, D_r, and Q_{ps}.
   h = 1.20 feet

Concrete Riser Base Design:

19. Determine the volume of concrete per vertical foot of riser height needed, from Table 6-22.3 to prevent floatation.
   Required volume of concrete per vertical foot: = 6.18 cf/v.f.
20. Compute total volume of concrete required.
   Total volume of concrete required = Required volume per vertical foot * Riser length
   Total volume of concrete required = 6.18 cf/v.f. * 5.35 ft
   Total volume of concrete required = 33.07 cf
21. Assume base thickness, B (usually 18")
   B = 18.00 in = 1.50 ft
22. Compute required surface area.
   Required surface area = Total volume required/ B
   Required surface area = 33.07 cf / 1.50 ft
   Required surface area = 22.05 sf
23. Compute riser base length (l) and width (w) (assume square base).
   l = w = (required surface area)$^{1/2}$
   l = w = 4.70 ft = 56.34 in
   l = w = 60.00 in

Anti-Seep Collar Design:

24. Determine if anti-seep collar is required. If yes to any of the following conditions, a collar is required:
   Y The settled height of the dam is greater than 15 feet.
   N The principal spillway diameter (D_{pc}) is smooth pipe larger than 8".
   Y The principal spillway diameter (D_{pc}) is corrugated metal pipe larger than 12".
25. Determine size of anti-seep collar required.
   N **18-inch projection** (for heads (H) less than or equal to 10 feet.)
   Y **24-inch projection** (for heads (H) greater than 10 feet).

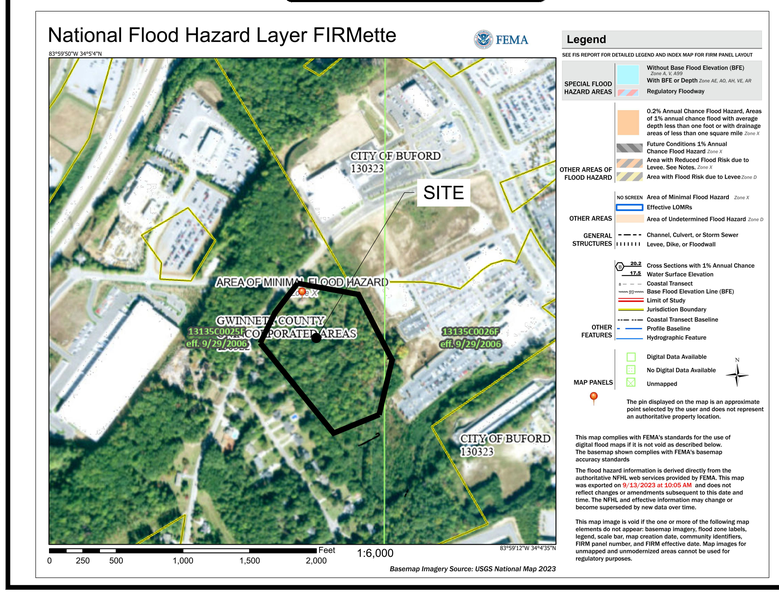
Emergency Spillway (es) Design Calculations:

26. Compute minimum capacity of emergency spillway (Q_{es}).
   Q_{es} = Q_{25} - Q_{ps}
   Q_{es} = -35.51 cfs
27. Determine stage (H_p), bottom width (b), velocity (V_s), and minimum exit slope (S) using Table 6-29.4 and Q_{es}.
   H_p = 0.50 ft
   b = 15.00 ft
   V = 2.70 fps
   S = 3.80 %
28. Actual entrance channel slope.
   S_e = 33.30 %
29. Actual exit channel slope.
   S_x = 33.30 %
   Is S_x Steeper than S (from Table 6-29.4)? YES
   If Yes, calculate new exit velocity (V_x)
   V_x = V * (S_x/ S)$^{0.3}$ fps
   V_x = 2.70 fps *(33.30 % / 3.80 %)^0.3
   V_x = 5.18 fps
   Note: Refer to Channel Stabilization (Ch) to determine the proper lining for the emergency spillway.
   N **Grass** (< 5 fps) Y **Rip-Rap** (5-10 fps) N **Concrete** (>10 fps)

Elevation Design Calculations:

30. **Riser Crest Elevation =** 1146.00 ft
31. Compute minimum emergency spillway crest elevation.
   Minimum emergency spillway crest elevation = Riser crest elevation + h
   Minimum emergency spillway crest elevation = 1146.00 ft + 1.20 ft
   Minimum emergency spillway crest elevation = 1147.20 ft
   Actual emergency spillway crest elevation = 1148.50 ft
32. Determine design high water elevation.
   Design high water elevation = Minimum emergency spillway crest elevation + Stage elevation (H_p)
   Design high water elevation = 1147.70 ft
33. Determine elevation of top of dam
   Elevation of top of dam = Design high water elevation + 1 ft (at least) freeboard
   Elevation of top of dam = 1147.70 ft + **1.30** ft
   Elevation of top of dam (min) = 1149.00
   Elevation of top of dam (actual) = 1150.50

NATIONAL FLOOD HAZARD MAP
13135C0016G EFF. 3/4/2013



DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION

DATE OF INSPECTION _____.

I CERTIFY THE SITE WAS IN COMPLIANCE WITH THE ES&PC PLAN ON THE DATE OF INSPECTION.

_____

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION #59016

INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ES&PC PLAN. _____

_____

_____

_____

_____

_____

THESE DEFICIENCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTED SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.

APPENDIX B
NEPHELOMETRIC TURBIDITY UNIT (NTU) TABLES

COLD WATER (TROUT STREAM)

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

WARM WATER (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 FACILITY OR COMMON DEVELOPMENT. 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.C.4.

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	CXG PLANS SUBMITTAL	SD	SD	TM
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CLEARING AND GRADING PLANS FOR
1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

PROJECT NUMBER
3934-2301

SHEET TITLE
EROSION CONTROL DETAILS

SHEET NUMBER
C-605

File Location: s:\sed\projects\gs\3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-erosion

Plot Date: Monday, May 6, 2024 4:58:31 PM

DEFINITION

A TEMPORARY COVER OF PLANT RESIDUES APPLIED TO THE SOIL SURFACE FOR A PERIOD OF SIX MONTHS OR LESS WHEN SEEDING IS NOT PRACTICAL.

PURPOSE

- REDUCE RUNOFF, EROSION, AND SEDIMENTATION
- REDUCE DUST - CONSERVE MOISTURE
- PREVENT SURFACE COMPACTION AND CRUSTING
- CONTROL UNDESIRABLE VEGETATION

INSTALLATION

- INSTALL ALL OTHER REQUIRED BMPs FIRST.
- GRADE SITE, IF POSSIBLE, TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
- LOOSEN COMPACTED SOIL, IF POSSIBLE, TO A DEPTH OF THREE INCHES.
- APPLY STRAW OR HAY UNIFORMLY, AS SHOWN IN TABLE 1, BY HAND OR MECHANICAL EQUIPMENT, AND ANCHOR BY PRESSING INTO SOIL OR USING NETTING.
- MULCH ON SLOPES GREATER THAN 3% SHOULD BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1) OR OTHER SUITABLE TACKIFIER.
- WOOD WASTE ON SLOPES FLATTER THAN 3:1 DO NOT NEED ANCHORING.
- MULCH SHALL BE APPLIED TO ALL DISTURBED AREAS LEFT INACTIVE FOR FOURTEEN DAYS.

MULCHING APPLICATION REQUIREMENTS

MATERIAL	RATE	DEPTH
STRAW OR HAY	-	2" TO 4"
WOOD WASTE, CHIPS, SAWDUST, BARK	-	2" TO 3"
POLYETHYLENE FILM	SECURE WITH SOIL, ANCHORS, WEIGHTS	—
GEOTEXTILES, JUTE MATTING, NETTING, ETC..	SEE MANUFACTURE'S RECOMMENDATIONS	—

TABLE 1

MAINTENANCE

- ADD MULCH AS NEEDED TO MAINTAIN THE SUGGESTED DEPTH.
- IF ORGANIC MULCH IS TO BE LEFT AND INCORPORATED INTO THE SOIL, APPLY 20-30 POUNDS OF NITROGEN IN ADDITION TO THE FERTILIZER REQUIRED FOR VEGETATION.

Ds1 DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

DEFINITION

THE ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS FOR SEASONAL PROTECTION ON DISTURBED OR DENUDED AREAS.

PURPOSE

- REDUCE RUNOFF & SEDIMENT DAMAGE OF DOWN STREAM RESOURCES
- PROTECT THE SOIL SURFACE FROM EROSION - IMPROVE AESTHETICS
- IMPROVE TILTH, INFILTRATION, AND AERATION AS WELL AS ORGANIC MATTER FOR PERMANENT PLANTINGS.

INSTALLATION

- APPLY MULCH OR TEMPORARY GRASSING TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE.
- APPLICABLE TO ROUGH GRADED AREAS THAT WILL BE EXPOSED FOR LESS THAN 6 MONTHS.
- COORDINATE WITH PERMANENT MEASURES TO ENSURE ECONOMICAL AND EFFECTIVE STABILIZATION.
- TAKE NOTE OF WHICH SPECIES ARE NOT APPROPRIATE FOR COMPANION CROP PLANTINGS.
- WHEN THE SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH CUT SLOPES, SCARIFY THE SOIL IN ORDER TO PROVIDE A PLACE FOR THE SEED TO LODGE AND GERMINATE.
- APPLY AGRICULTURAL LIME AT THE RATE DETERMINED BY SOIL TEST PH.
- APPLY LIME BEFORE LAND PREPARATION AND INCORPORATE WITH A DISK, RIPPER, OR CHISEL.
- ON STEEP SLOPES, APPLY FERTILIZER HYDRAULICALLY.
- SELECT GRASS OR GRASS-LEGUME MIXTURES BASED ON THE AREA AND SEASON OF THE YEAR.
- APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTI-PACKER-SEEDER, OR HYDRAULIC SEEDER.
- THE APPROPRIATE DEPTH OF PLANTING IS 10X THE SEED DIAMETER.
- APPLY IRRIGATION AT A RATE THAT WILL NOT CAUSE RUNOFF AND EROSION. THOROUGHLY WET THE SOIL TO INSURE GERMINATION OF THE SEED.

MAINTENANCE

- RE-SEED AREAS WHERE AN ADEQUATE STAND OF TEMPORARY VEGETATION FAILS TO EMERGE.
- IF OPTIMUM CONDITIONS FOR TEMPORARY VEGETATION IS LACKING, MULCH CAN BE USED A SINGULAR EROSION CONTROL DEVICE.

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.

SOME TEMPORARY PLANT SPECIES, SEEDING RATES AND PLANTING DATES

SPECIES	RATES PER 1000 SQ. FT.	RATES PER ACRE	PLATING DATES BY REGION M-L	P	C
BARLEY ALONE BARLEY IN MIXTURES	3.3 LBS. 0.6 LBS.	3 BU. 0.5 BU.	9/1-10/31	9/15-11/15	10/1-12/31
LESPEDEZA, ANNUAL LESPEDEZA IN MIXTURES	0.9 LBS. 0.2 LBS.	40 LBS. 10 LBS.	3/1-3/31	3/1-3/31	2/1-2/28
LOVEGRASS, WEEPING LOVEGRASS IN MIXTURES	0.1 LBS. 0.05 LBS.	4 LBS. 2 LBS.	4/1-5/31	4/1-5/31	3/1-5/31
MILLET, BROWNTOP MILLET IN MIXTURES	0.9 LBS. 0.2 LBS.	40 LBS. 10 LBS.	4/15-6/15	4/15-6/30	4/15-6/15
MILLET, PEARL	1.1 LBS.	50 LBS.	5/15-7/15	5/15-7/31	4/15-8/15
OATS ALONE OATS IN MIXTURES	2.99 LBS. 0.7 LBS.	4 BU. 1 BU.	9/15-11/15	9/15-11/15	9/15-11/15
RYE (GRAIN) ALONE RYE IN MIXTURES	3.9 LBS. 0.6 LBS.	3 BU. 0.5 BU.	8/15-10/31	9/15-11/30	10/1-12/31
RYEGRASS	0.9 LBS.	40 LBS.	8/15-11/15	9/1-12/15	9/15-12/31
SUDANGRASS	1.4 LBS.	60 LBS.	5/1-7/31	5/1-7/31	4/1-7/31
TRITICALE ALONE TRITICALE WITH MIXTURES	3.3 LBS. 0.6 LBS.	3 BU. 0.5 BU.	N/A	N/A	10/15-11/30
WHEAT ALONE WHEAT WITH MIXTURES	4.1 LBS. 0.7 LBS.	3 BU. 0.5 BU.	9/15-11/30	10/1-12/15	10/15-12/31

TABLE 1

1. UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES.
2. SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND LOCAL CONDITIONS.
3. FOR MAJOR LAND RESOURCE AREAS (MLRAs), SEE INSTRUCTIONS FOR TACKIFIERS AND BINDERS.
4. SEEDING RATES ARE BASED ON PURE LIVE SEED (PLS).

FERTILIZER REQUIREMENTS FOR TEMPORARY VEGETATION

SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS./ACRE)	N TOP DRESSING RATE (LBS./ACRE)
COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 --- 30
COOL SEASON GRASSES & LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 1000 400	0-50 --- ---
TEMPORARY COVER CROPS SEEDED ALONE	FIRST	10-10-10	500	30
WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

TABLE 2

Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT 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 THE 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 ON 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.

FOR MULCH APPLICATION AND OTHER INFORMATION, REFER TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.

Ds1 Ds3 MULCHING

DEFINITION

CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS AND DEMOLITION SITES.

PURPOSE

PREVENT THE MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES THAT MAY BE HARMFUL TO 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 DMAGE AMY OCCUR WITHOUT TREATMENT.

METHODS 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 SUCH AS CURASOL OR TERRATACK 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 WHICH 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 WHICH 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.

Du DUST CONTROL ON DISTURBED AREAS

NTS

DEFINITION

THE PLANTING OF PERENNIAL VEGETATION SUCH AS TREES, SHRUBS, VINES, GRASSES, OR LEGUMES ON EXPOSED AREAS FOR FINAL PERMANENT STABILIZATION.

PURPOSE

- PROTECT THE SOIL SURFACE FROM EROSION
- REDUCE DAMAGE FROM SEDIMENT & RUNOFF TO DOWN-STREAM AREAS
- IMPROVE WILDLIFE HABITAT AND VISUAL RESOURCES
- IMPROVE AESTHETICS

INSTALLATION

- USE CONVENTIONAL PLANTING METHODS WHERE POSSIBLE.
- FINAL STABILIZATION MEANS THAT 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 LANDSCAPING MATERIALS IN PLANNED LANSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES.
- SELECT PLANTS SPECIES BASED ON SITE AND SOIL CONDITIONS, PLANNED USE AND MAINTENANCE OF THE AREA, TIME OF YEAR, METHOD OF PLANTING, AND THE NEEDS OF THE LAND USER. (REFER TO TABLE 1)
- APPLY AGRICULTURAL LIME AT A RATE OF 1-2 TONS/ ACRE UNLESS SOIL TESTS INDICATE OTHERWISE. PLEASE REFER TO TABLE 2 FOR INITIAL FERTILIZATION, NITROGEN, TOP DRESSING, AND MAINTENANCE FERTILIZER REQUIREMENTS FOR EACH SPECIES.
- APPLY SEED HYDRAULICALLY. IF USING CONVENTIONAL METHODS, USE A CULTI-PACKER SEEDER, DRILL, ROTARY SEEDER, OR BY HAND.
- COVER THE SEED LIGHTLY WITH 1/8 " -1/4 " OF SOIL FOR SMALL SEED AND 1/2 " -1 " OF SOIL FOR LARGE SEED WHEN USING A CULTIPACKER.
- CHECK SEED TAGS FOR % GERMINATION & % PURITY IN ORDER TO CALCULATE PURE LIVE SEED (PLS), WHICH IS THE PERCENTAGE OF THE SEEDS THAT ARE PURE AND WILL GERMINATE.
- MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. PLEASE REFER TO DS1 FOR APPLICATION RATES AND ANCHORING METHODS FOR DIFFERENT MATERIALS.
- IRRIGATE WHEN THE SOIL IS DRY AND AT A RATE THAT WILL NOT CAUSE RUNOFF.

MAINTENANCE

RE-SEED AREAS WHERE AN ADEQUATE STAND OF VEGETATION FAILS TO EMERGE OR WHERE A POOR STAND EXISTS.

- MAINTAIN AT LEAST 6 " OF TOP GROWTH UNDER ANY USE AND MANAGEMENT.
- EXCLUDE TRAFFIC UNTIL THE PLANTS ARE WELL ESTABLISHED.
- PLEASE REFER TO TABLE 2 FOR SECOND YEAR AND MAINTENANCE FERTILIZER RATES.
- APPLY ONE TON OF AGRICULTURAL LIME EVERY 4-6 YEARS OR AS INDICATED BY SOIL TESTS.
- MOW BERMUDA GRASS, BAHIA GRASS, AND TALL FESCUE AS DESIRED.
- MOW SERICEA LESPEDEZA ONLY AFTER FROST TO ENSURE THAT THE SEEDS ARE MATURE.

Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING)

SOME PERMANENT PLANT SPECIES, SEEDING RATES, AND PLANTING DATES

SPECIES	RATES PER ACRE	RATES PER 1,000 SQ. FT.	PLANTING DATES BY REGION M-L	P	C	REMARKS
BAHIA, PENSACOLA ALONE OR WITH TEMPORARY COVER WITH OTHER PERENNIALS	60 LBS. 30 LBS.	1.4 LBS. 0.7 LB.	---	4/1-5/31	3/1-5/31	LOW GROWING; SOD PRODUCING; WILL SPREAD INTO BERMUDA LAWNS
BAHIA, WILMINGTON ALONE OR WITH TEMPORARY COVER WITH OTHER PERENNIALS	60 LBS. 30 LBS.	1.4 LBS. 0.7 LB.	3/15-5/31	3/1-5/31	---	SAME AS ABOVE
BERMUDA, COMMON (HULLED SEED) ALONE WITH OTHER PERENNIALS	10 LBS. 6 LBS.	0.2 LB. 0.1 LB.	---	4/1-5/31	3/15-5/31	QUICK COVER; LOW GROWING; SOD FORMING; NEEDS FULL SUN
BERMUDA SPRIGS COMMON LAWN AND FORAGE HYBRIDS	40 CU. FT. SOD PLUGS 3'X3'	0.9 CU. FT.	4/15-6/15	4/1-6/15	4/1-5/31	1 CU. FT.=650 SPRIGS; 1 BU.=1.25 CU. FT. OR 800 SPRIGS
CENTIPEDE	BLOCK SOD ONLY	BLOCK SOD ONLY	-	11/1-5/31	11/1-5/31	DROUGHT TOLERANT, FULL SUN OR PARTIAL SHADE
CROWN VETCH WITH WINTER ANNUALS OR COOL SEASON GRASSES	15 LBS.	0.3 LB.	9/1-10/15	9/1-10/15	---	MIX WITH 30 LBS. TALL FESCUE OR 15 LBS. RYE; INOCULATE SEED; PLANT ONLY NORTH OF ATLANTA
FESCUE, TALL ALONE WITH OTHER PERENNIALS	50 LBS. 30 LBS.	1.1 LBS. 0.7 LB.	3/1-4/15 OR 8/15-10/15	9/1-10/15	---	CAN BE MIXED WITH PERENNIALS LESPEDEZAS OR CROWN VETCH; NOT FOR DROUGHTY SOILS OR HEAVY USE AREAS
LESPEDEZA, SERICEA SCARIFIED	60 LBS.	1.4 LBS.	4/1-5/31	3/15-5/31	4/1-5/15	WIDELY ADAPTED AND LOW MAINTENANCE; TAKES 2-3 YEARS TO ESTABLISH; INOCULATE SEED WITH EL INOCULANT; MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, BAHIA, OR TALL FESCUE

TABLE 1

SOME PERMANENT PLANT SPECIES, SEEDING RATES, AND PLANTING DATES

SPECIES	RATES PER ACRE	RATES PER 1,000 SQ. FT.	PLANTING DATES BY REGION M-L	P	C	REMARKS
LESPEDEZA, SERICEA (CONT.) UNSCARIFIED SEED-BEARING HAY	70 LBS. 3 TONS	1.7 LBS. 138 LBS.	9/1-2/28 10/1-1/31	9/1-2/28 10/1-1/31	9/1-2/28 10/15-1/15	MIX WITH TALL FESCUE OR WINTER ANNUALS CUT WHEN SEED IS MATURE BUT BEFORE IT SHATTERS; ADD TALL FESCUE OR WINTER ANNUALS
LESPEDEZA, AMBRO VIRGATA OR APPALOW SCARIFIED UNSCARIFIED	60 LBS. 75 LBS.	1.4 LBS. 1.7 LBS.	4/1-5/31 9/1-2/28	3/15-5/31 9/1-2/28	3/1-5/15 9/1-2/28	SPREADING GROWTH WITH HEIGHT OF 18"-24"; GOOD IN URBAN AREAS; SLOW TO DEVELOP GOOD STANDS; MIX WITH WEEPING LOVEGRASS, COMMON BERMUDA, BAHIA TALL FESCUE OR WINTER ANNUALS; DO NOT MIX WITH SERICEA LESPEDEZA; INOCULATE SEED WITH EL INOCULATE
LESPEDEZA, SHRUB (LESPEDEZA, BICOLOR OR LESPEDEZA THUMBERGII) PLANTS	3'X3' SPACING		10/1-3/31	11/1-3/15	11/15-2/28	PLANT IN SMALL CLUMPS FOR WILDLIFE FOOD AND COVER
LOVEGRASS, WEEPING ALONE WITH OTHER PERENNIALS	4 LBS. 2 LBS.	0.1 LB. 0.05 LB.	4/1-5/31	3/15-5/31	3/1-5/31	QUICK COVER; DROUGHT TOLERANT; GROWS WELL WITH SERICEA LESPEDEZA ON ROAD-BANKS AND OTHER STEEP SLOPES; SHORT LIVED
MAIDENCANE SPRIGS	2'X3' SPACING		2/1-3/31	2/1-3/31	2/1-3/31	FOR VERY WET SITES SUCH AS RIVERBANKS AND SHORELINES; DIG SPRIGS LOCALLY

TABLE 1 (CONT.)

SOME PERMANENT PLANT SPECIES, SEEDING RATES, AND PLANTING DATES

SPECIES	RATES PER ACRE	RATES PER 1,000 SQ. FT.	PLANTING DATES BY REGION M-L	P	C	REMARKS
PANICGRASS, ATLANTIC COASTAL	20 LBS.	0.5 LB.	---	3/1-4/30	3/1-4/30	GROWS WELL ON COASTAL SAND DUNES; MIX WITH SERICEA LESPEDEZA BUT NOT ON SAND DUNES
REED CANARY GRASS WITH OTHER PERENNIALS	50 LBS. 30 LBS.	1.1 LBS. 0.7 LBS.	8/15-10/15	9/1-10/15	---	GROWS SIMILAR TO TALL FESCUE; FOR WET SITES
SUNFLOWER, AZTEC MAXIMILLIAN	10 LBS.	0.2 LB.	4/15-5/31	4/15-5/31	4/1-5/31	MIX WITH WEEPING LOVEGRASS OR OTHER LOW GROWING GRASSES OR LEGUMES

TABLE 1 (CONT.)

1. RATES ARE FOR BROADCASTED SEED. IF A SEED DRILL IS USED, REDUCE THE RATES BY ONE-HALF.
2. PLS IS AN ABBREVIATION FOR PURE LIVE SEED. REFER TO GLOSSARY FOR AN EXPLANATION OF THIS TERM.
3. THE RESOURCE AREAS ARE DEFINED IN THE GLOSSARY. SEE PAGE 60 FOR RESOURCE AREA.
4. SEEDING RATES ARE BASED ON PURE LIVE SEEDS (PLS).

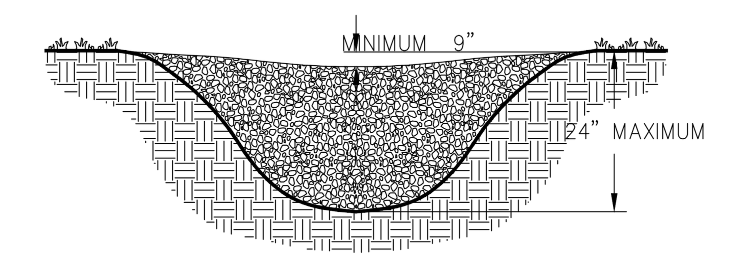
FERTILIZER REQUIREMENTS FOR PERMANENT VEGETATION

TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS./ACRE)	N TOP DRESSING RATE (LBS./ACRE)
COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 --- 30
COOL SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 1000 400	0-50 --- ---
WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30
WARM SEASON GRASSES AND LEGUMES	FIRST SECOND MAINTENANCE	6-12-12 0-10-10 0-10-10	1500 1000 400	50 --- ---

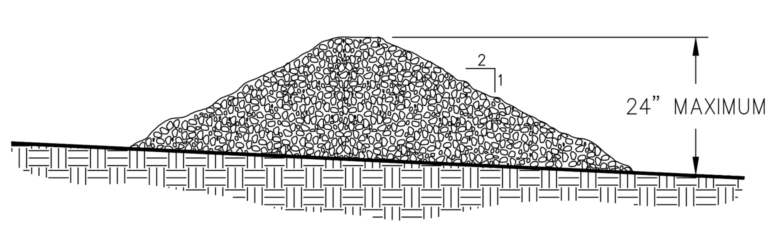
TABLE 2

STONE CHECK DAM

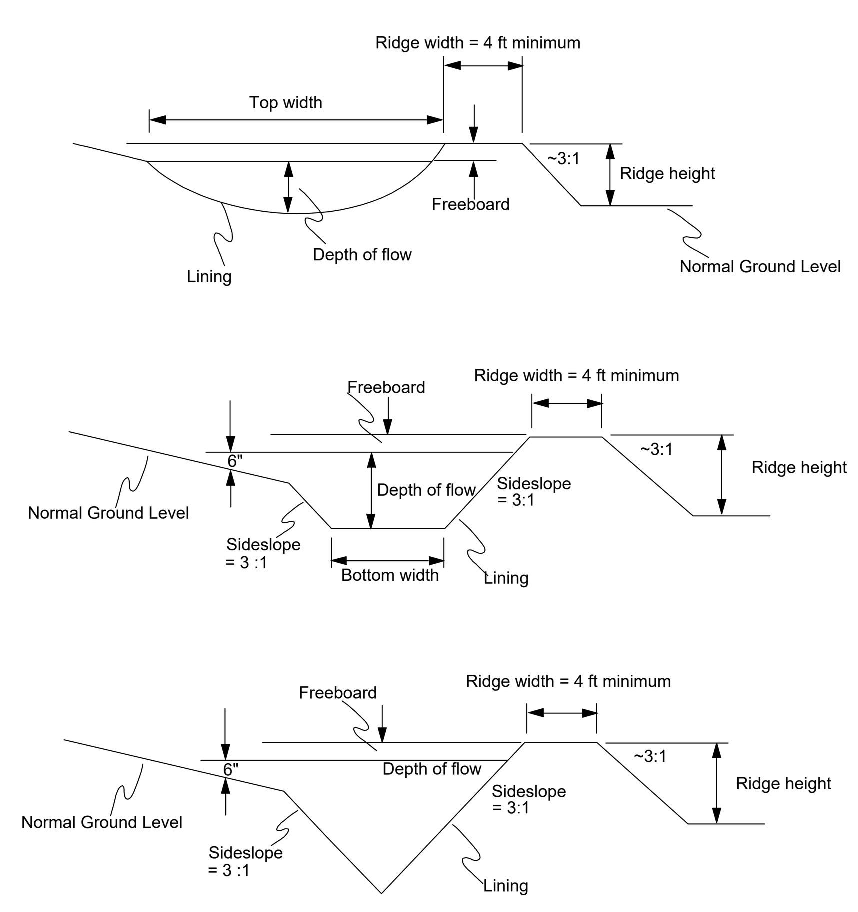
CROSS SECTION



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).



DEFINITION

A ridge of compacted soil, constructed above, across or below a slope.

CONDITIONS

Diversions are applicable when:
1. Runoff from higher areas is or has potential for damaging property, causing erosion, contributing to pollution, flooding, interfering with or preventing the establishment of vegetation on lower areas.
2. Surface and/or shallow subsurface flow is damaging sloping upland.
3. The length of slope needs to be reduced so that soil loss will be reduced to a minimum. This standard applies to temporary and permanent diversions in developments involving land-disturbing activities.

SPECIFICATIONS

1. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the diversion.
2. The diversion shall be excavated or shaped to line, grade, and cross section as required to meet the criteria specified herein and free of irregularities which will impede normal flow.
3. All fills shall be machine compacted as needed to prevent unequal settlement that would cause damage in the completed diversion.
4. All earth removed and not needed in construction shall be spread or disposed of so that it will not interfere with the functioning of the diversion.
5. Diversion channel shall be stabilized in accordance with specification Ch – Channel Stabilization.

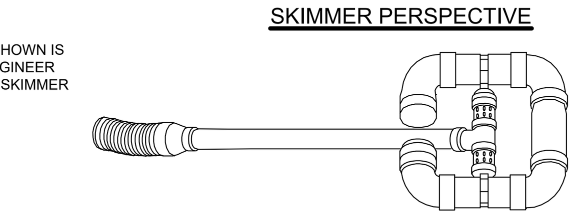
Di DIVERSION

NTS

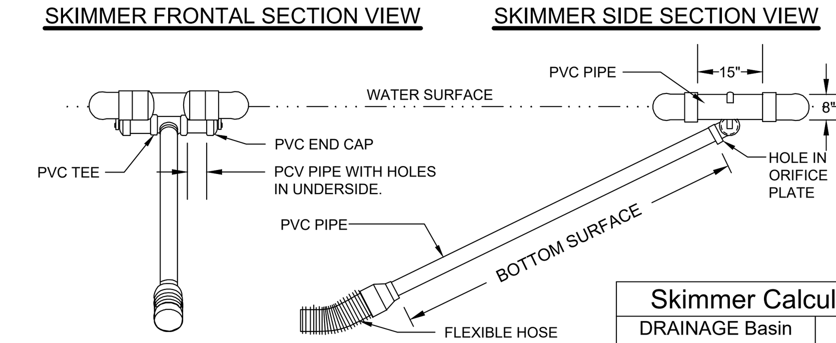
TEMPORARY SEDIMENT POND SUPPLEMENT

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

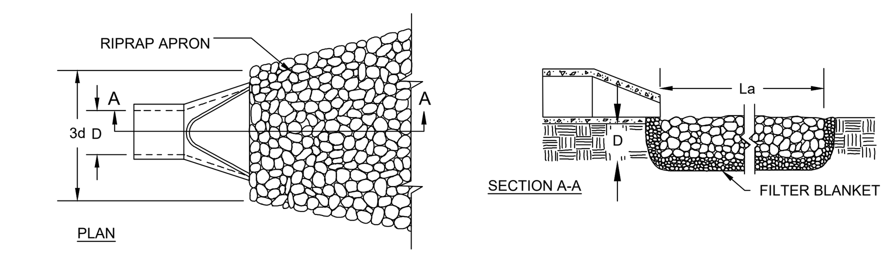


Skimmer Calculations	
DRAINAGE Basin (Acres)	10.75
Volume Required for Storage (cu-yd)	38,894
Volume Provided (cu-yd)	67,558
Clean Out Volume (cu-yd)	21,292
Clean Out Elevation	1134.0
Time to Drain (hrs)	48
Skimmer Size (in)	6" Orifice Dia. = 2.4"
Manufacturer Name	Faircloth Skimmer

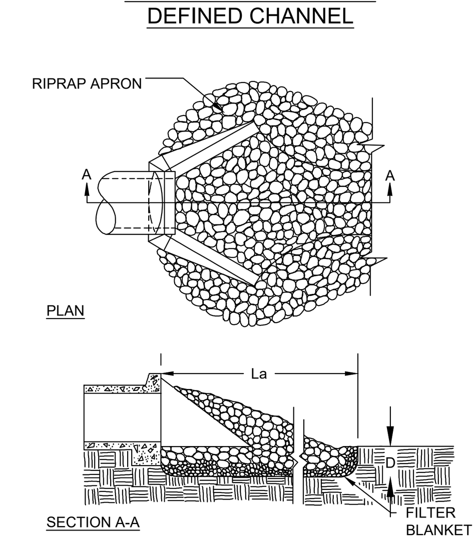
Sk SKIMMER OUTLET DETAIL

NTS

PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL



PIPE OUTLET TO WELL DEFINED CHANNEL



NOTES:
1. La IS THE LENGTH OF THE RIPRAP APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 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.

St RIPRAP OUTLET PROTECTION

NTS

ST - Outlet Protection

	Structure Name	Pipe Size, D_o	Pipe Material	Design Flow Rate, Q_{25}	Design Velocity, V_{25}	Tailwater Depth, TW	Tailwater Condition	Apron Length, L_a	Apron Width at HW, W_1	Apron Width Downstream, W_2	Avg. Stone Diameter, d_{50}	Maximum Stone Diameter	Minimum Depth of Stone, D
		in	REA	cfs	fps	ft		ft	ft	ft	ft	ft	ft
St-1	A-1	36.0	RCP	43.00	6.08	0.50	Minimum	20	9	23	0.60	0.90	1.35

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

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	C&G PLANS SUBMITTAL	SD	SD	TM
2	03/12/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM
3	05/06/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM

Civil Engineering By LJA:
Tyler Marchman, GA PE040989
Cell: 770-855-2430
tylerm@allianceco.com

GEORGIA REGISTERED NO. 040989 PROFESSIONAL 5-6-24 ENGINEER TYLER SCOTT MARCHMAN

GASWCC LEVEL II
CERTIFICATION #59016
EXPIRATION DATE: 11/17/2025

LJA ENGINEERING
299 S. MAIN STREET
ALPHARETTA, GA 30009
770-225-4730

BOGAN ENTERPRISES, LLC
11555 MEDLOCK BRIDGE RD.
SUITE #190
JOHNS CREEK, GA 30097
paulkhansari@gmail.com

CLEARING AND GRADING PLANS FOR 1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

PROJECT NUMBER
3934-2301

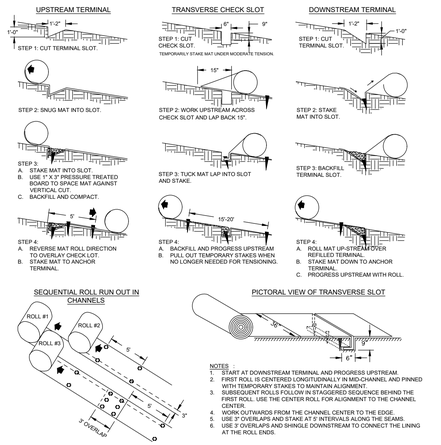
SHEET TITLE
EROSION CONTROL DETAILS

SHEET NUMBER
C-606

File Location: s:\sed\projects\ga3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-erosion

Plot Date: Monday, May 6, 2024 4:08:58 PM

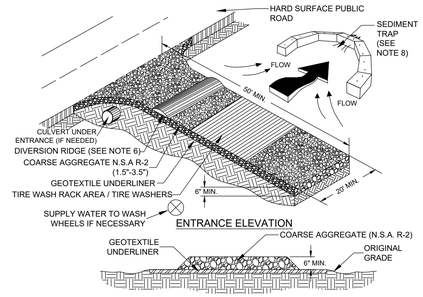
BLANKET AND MATTING CROSS-SECTIONS



NOTES:
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
5. USE 3' OVERLAPS AND STAKE AT 3' INTERVALS ALONG THE SEAMS.
6. USE 3' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.

Ss TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)
NTS

EXIT DIAGRAM

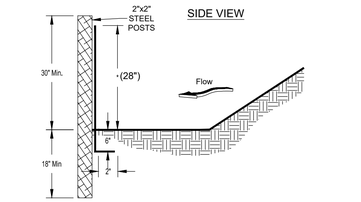


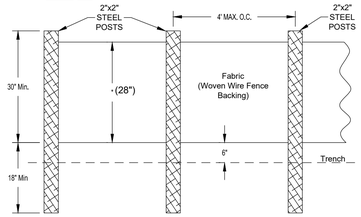
ENTRANCE ELEVATION

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 R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE 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. MAINTAIN AREA IN A 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.

Co CRUSHED STONE CONSTRUCTION EXIT
NTS

SIDE VIEW





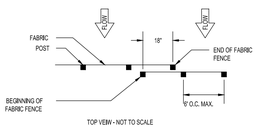
FRONT VIEW

NOTES:
1. Use steel 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.

Sd1-S SILT FENCE - TYPE SENSITIVE
NTS

Sd1 FASTENERS FOR SILT FENCES

OVERLAP AT FABRIC ENDS



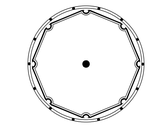
TOP VIEW - NOT TO SCALE

FRONT VIEWS - NOT TO SCALE

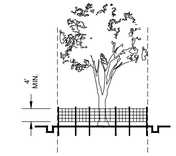
NOTES :
1. THE FABRIC AND WIRE SHOULD BE SECURELY FASTENED TO POSTS AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS FABRIC BARRIER AROUND THE INLET.

"SNOW" FENCE

PLAN



CROSS-SECTION



NOTES:
1. USE TRENCHER (I.E. DITCH WHICH) TO CUT A 4"-5" W X 18" D TRENCH ALONG DRIP LINE (LIMIT OF CLEARING) AND BACKFILL WITH SAND AND LIGHTLY COMPACT.
2. SPACE STAKES AT INTERVALS SUFFICIENT TO MAINTAIN ALL FENCING OUT OF DRIP LINE OR AS SHOWN BY ENGINEER (SET STAKES NO GREATER THAN 6 FEET ON CENTER-REBAR IS NOT TO BE USED FOR STAKES).
3. MAINTAIN FENCE BY REPAIRING AND/OR REPLACING DAMAGED FENCE. DO NOT REMOVE FENCING PRIOR TO LANDSCAPING OPERATIONS.
4. DO NOT STORE OR STACK MATERIALS, EQUIPMENT, OR VEHICLES WITHIN FENCED AREA.
5. FENCE SHALL BE ORANGE VINYL "SNOW FENCE" 4' HIGH MINIMUM.

Tr TREE PROTECTION
NTS

Topsoiling (Tp)

DEFINITION
Stripping off the more fertile top soil, storing it, then spreading it over the disturbed area after completion of construction activities.

PURPOSE
To provide a suitable soil medium for vegetative growth on areas where other measures will not produce or maintain a desirable stand.

CONDITIONS
This practice is recommended for sites of 2:1 or flatter slopes where:

1. The texture of the exposed subsoil or parent material is not suitable to produce adequate vegetative growth.
2. The soil material is so shallow that the rooting zone is not deep enough to support plants with continuing supplies of moisture and food.
3. The soil to be vegetated contains material toxic to plant growth.

CONSTRUCTION SPECIFICATIONS
Materials
Topsoil should be friable and loamy, free of debris, objectionable weeds and stones and contain no toxic substance that may be harmful to plant growth. A pH range of 5.0-7.5 is acceptable. Soluble salts should not exceed 500 ppm.

Testing
Field exploration should be made to determine whether the quantity and quality of surface soil justifies stripping.

Stripping
Stripping should be confined to the immediate construction area.

A 4 to 6 inch stripping depth is common, but may vary depending on the particular soil.

Topsoil pH
If pH value is less than 6.0, lime shall be applied and incorporated with the topsoil to adjust the pH to 6.5 or higher. Topsoils containing soluble salts greater than 500 parts per million shall not be used.

Stockpiles
The location of topsoil stockpiles should not obstruct natural drainage or cause off-site environmental damage.

Stabilization
Stockpiles shall be contained by sediment barriers to prevent sedimentation on adjacent areas. Stockpiles shall be stabilized in accordance with specifications **Ds1 and Ds2 - Disturbed Area Stabilization (With Mulching) and (With Temporary Grassing)**, respectively, or **Tac-Tackifiers.**

Site Preparation
(Where topsoil is to be added)

Topsoiling - When topsoiling, maintain needed erosion control practices such as diversions, grade stabilization structures, berms, dikes, level spreaders, waterways, sediment basins, etc.

Grading - Grades on the areas to be topsoiled that have been previously established shall be maintained.

Liming - Soil tests should be used to determine the pH of the soil. Where the pH of the subsoil is 5.0 or less or composed of heavy clays, agricultural limestone shall be spread at the rate of 100 pounds per 1,000 square feet. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedure.

Bonding - Use one of the following methods to insure bonding of topsoil and subsoil:

1. Tilling. After the areas to be topsoiled have been brought to grade, and immediately prior to dumping and spreading the topsoil, the subgrade shall be loosened by discing or scarifying to a depth of at least 3 inches to permit bonding of the topsoil to the subsoil.
2. Tracking. Passing a bulldozer over the entire surface area of the slope to leave horizontal depressions.

Applying Topsoil
1. Topsoil should be handled only when it is dry enough to work without damaging soil structure.
2. A uniform application of 5 inches (unsettled) is recommended, but may be adjusted at the discretion of the design professional.

Table 6-37.1. Cubic Yards Of Topsoil Required For Application To Various Depths

Depth (Inches)	Per 1,000 Square Feet	Per Acre
1	3.1	134
2	6.2	268
3	9.3	403
4	12.4	537
5	15.5	672
6	18.6	806

GSWCC 2016 Edition 6-223

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	CJG PLANS SUBMITTAL	SD	SD	TM
2	03/12/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM
3	05/06/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM

Civil Engineering By LJA:
Tyler Marchman, GA PE040989
Cell: 770-855-2430
tylerm@allianceco.com

GEORGIA REGISTERED PROFESSIONAL ENGINEER NO. 040989 TYLER SCOTT MARCHMAN 5-6-24

GASWCC LEVEL II
CERTIFICATION #59016
EXPIRATION DATE: 11/17/2025

LJA ENGINEERING
299 S. MAIN STREET
ALPHARETTA, GA 30009
770-225-4730

BOGAN ENTERPRISES, LLC
11555 MEDLOCK BRIDGE RD.
SUITE #190
JOHNS CREEK, GA 30097
paulkhansari@gmail.com

CLEARING AND GRADING PLANS FOR 1781 PLUNKETTS ROAD

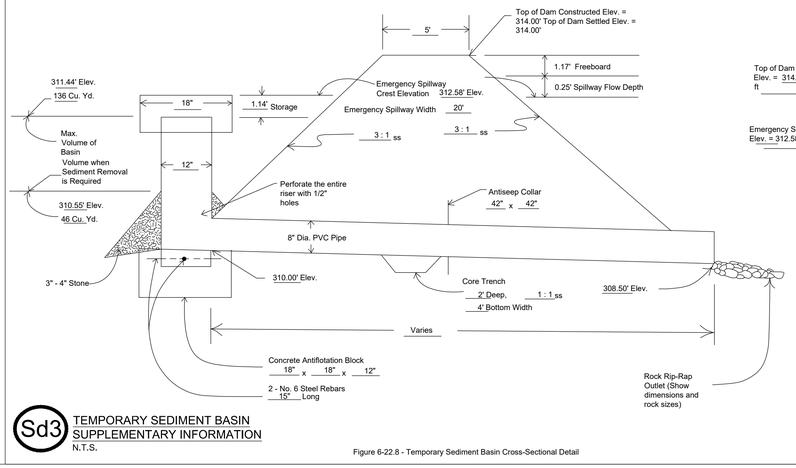
1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

PROJECT NUMBER
3934-2301

SHEET TITLE
EROSION CONTROL DETAILS

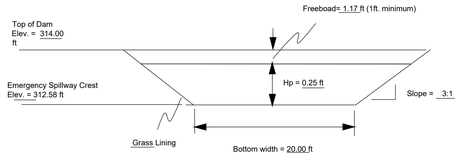
SHEET NUMBER
C-607

File Location: s:\sed\projects\ga\3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-erosion

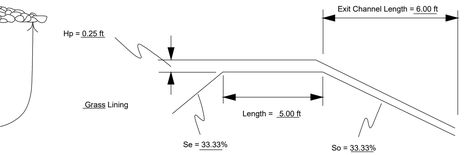


Sd3 TEMPORARY SEDIMENT BASIN SUPPLEMENTARY INFORMATION
N.T.S.

Figure 6-22.8 - Temporary Sediment Basin Cross-Sectional Detail

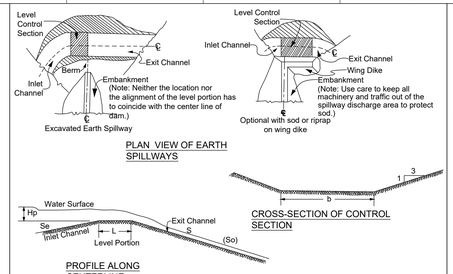


Cross-Sectional Detail of Emergency Spillway



Profile Along Centerline of Emergency Spillway

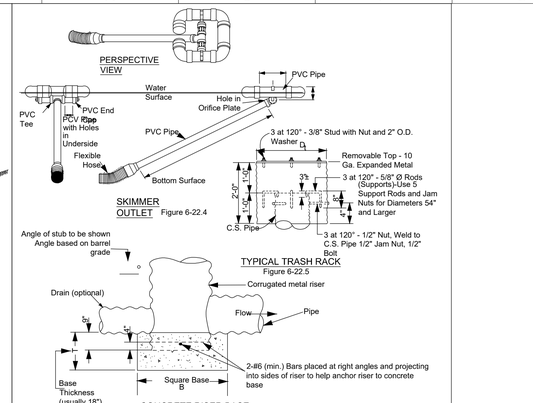
Figure 6-22.9 - Cross-Sectional Detail of Emergency Spillway



LEGEND:
Hp= Difference in Elevation between Crest of Earth Spillway at the Control Section and Water Surface in resevoir, in feet.
b = Bottom Width of Earth Spillway at the Control Section, in feet. (Table 6-22.4)
Q = Total Discharge, in cfs.
V = Velocity, in feet per second, that will exist in Channel below Control Section, at Design Q, if constructed to slope (S) that is shown (Table 6-22.4)
S = Flattest Slope (S), in %, allowable for Channel below Control Section. (Table 6-22.4)
Se = Entry Slope
So = Exit Slope

NOTES:
1. For Q, V, S relationship see the chart on the following page.
2. For a given Hp, a decrease in the exit slope as given in the table decreases spillway discharge, but increasing the exit slope from S does not increase discharge. If an exit slope (So) is steeper than S is used, then velocity (Vo) in the exit channel will increase according to the following relationship: $Vo = V(So/S)^{0.3}$ Figure 6-22.7

Sd3 TEMPORARY SEDIMENT BASIN SPILLWAY DETAILS
N.T.S.



Sd3 TEMPORARY SEDIMENT BASIN RISER DETAILS
N.T.S.

DEFINITION

A basin created by the construction of a barrier or dam across a concentrated flow area or by excavating a basin or by a combination of both. A sediment basin typically consists of a dam, a pipe outlet, and an emergency spillway. The size of the structure will depend upon the location, size of the drainage area, soil type, and rainfall pattern.

CONDITIONS

This practice applies to critical areas where physical site conditions, construction schedules, or other restrictions preclude the installation or establishment of erosion control practices to satisfactorily reduce runoff, erosion, and sedimentation. The structure may be used in combination with other practices and should remain in effect until the sediment-producing area is permanently stabilized.

This standard applies to the installation of temporary (to be removed within 18 months) sediment basins on sites where: (1) failure of the structure would not result in loss of life or interruption of use or service of public utilities, and (2) the drainage area does not exceed 150 acres.

SPECIFICATIONS

Site Preparation

Areas under the embankment and under structural works shall be cleared, grubbed, and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed and disposed of by approved methods. In order to facilitate clean-out or restoration, the pool area (measured at the top of the pipe spillway) will be cleared of all brush and trees.

Cut-off Trench

A cut-off trench will be excavated along the centerline of earth fill embankments. The minimum depth shall be 2 feet. The cut-off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be 4 feet, but wide enough to permit operation of compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for the embankment. The trench shall be drained during the backfilling and compaction operations.

Embankment

The fill material shall be taken from approved areas shown on the plans. It shall be clean mineral soil free of roots, woody vegetation, oversized stones, rocks or other objectionable material. Relatively pervious materials such as sand or gravel (Unified Soil Classes GW, GP, SW & SP) shall be placed in the downstream section of the embankment. Areas on which fills are to be placed shall be scarified prior to placement of fill. The fill material shall contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Fill material shall be placed in six-inch to eight-inch thick continuous layers over the entire length of the fill. Compaction shall be obtained by routing and hauling the construction equipment over the fill so that the entire surface of the fill is traversed by at least one wheel or tread track of the equipment or by the use of a compactor. The embankment shall be constructed to an elevation 5 percent higher than the design height to allow for settlement.

Principal Spillway

The riser shall be securely attached to the pipe or pipe stub by welding the full circumference making a watertight structural connection. The pipe stub must be attached to the riser at the same percent (angle) of grade as the outlet conduit. The connection between the riser and the riser base shall be watertight. All connections between pipe sections must be achieved by approved watertight band assemblies. The pipe and riser shall be placed on a firm, smooth foundation of impervious soil as the embankment is constructed. Breaching the embankment is unacceptable. Pervious materials such as sand, gravel, or crushed stone shall not be used as backfill around the pipe or anti-seep collar. The fill material around the pipe spillway shall be placed in four inch layers and compacted under and around the pipe to at least the same density as the adjacent embankment. Care must be taken not to raise the pipe from firm contact with its foundation when compacting under the pipe haunches. A minimum depth of two feet of hand compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment.

Emergency Spillway

The emergency spillway shall be installed in undisturbed ground. The achievement of planned elevations, grades, design width, entrance and exit channel slopes are critical to the successful operation of the emergency spillway and must be constructed within a tolerance of ± 0.2 feet. If the emergency spillway requires erosion protection other than vegetation, the lining shall not compromise the capacity of the emergency spillway, e.g. the emergency spillway shall be over-excavated so that the lining will be flush with the slope surface.

Vegetative Treatment

Stabilize the embankment and all other disturbed areas in accordance with the appropriate permanent vegetative measure, Ds3, immediately following construction. In no case shall the embankment remain unstabilized for more than seven (7) days. Refer to specifications Ds2, Ds3, and Ds4 - Disturbed Area Stabilization (Temporary Seeding, Permanent Vegetation and Sodding) respectively.
Erosion and Pollution Control Construction operations will be carried out in such a manner that erosion and water pollution will be minimized. State and local law concerning pollution abatement shall be complied with.

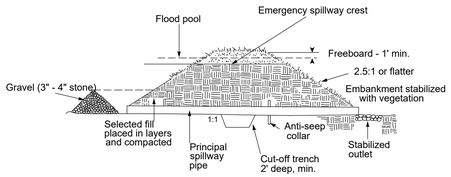
Safety

State and local requirements shall be met concerning fencing and signs warning the public of hazards of soft sediment and floodwater.

FINAL DISPOSAL

When temporary structures have served their intended purpose and the contributing drainage area has been properly stabilized, the embankment and resulting sediment deposits are to be leveled or otherwise disposed of in accordance with approved sediment control plan. The proposed use of a sediment basin site will often dictate final disposition of the basin and any sediment contained therein. If the site is scheduled for future construction, then the embankment and trapped sediment must be removed, safely disposed of, and backfilled with a structural fill. When the basin area is to remain open space, the pond may be pumped dry, graded and backfilled.

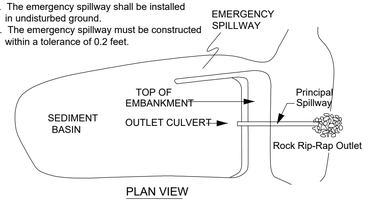
Sd3 TEMPORARY SEDIMENT BASIN
N.T.S.



CROSS SECTION

Fill Height	Minimum Top Width
less than 10 ft	8.0 ft
10 feet to 15 ft	10.0 ft

NOTES:
1. The emergency spillway shall be installed in undisturbed ground.
2. The emergency spillway must be constructed within a tolerance of 0.2 feet.



PLAN VIEW

BASIC COMPONENTS OF A TEMPORARY SEDIMENT BASIN

Figure 6-22.1

DEFINITION

A basin created by the construction of a barrier or dam across a concentrated flow area or by excavating a basin or by a combination of both. A sediment basin typically consists of a dam, a pipe outlet, and an emergency spillway. The size of the structure will depend upon the location, size of the drainage area, soil type, and rainfall pattern.

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This practice applies to critical areas where physical site conditions, construction schedules, or other restrictions preclude the installation or establishment of erosion control practices to satisfactorily reduce runoff, erosion, and sedimentation. The structure may be used in combination with other practices and should remain in effect until the sediment-producing area is permanently stabilized.

This standard applies to the installation of temporary (to be removed within 18 months) sediment basins on sites where: (1) failure of the structure would not result in loss of life or interruption of use or service of public utilities, and (2) the drainage area does not exceed 150 acres.

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Areas under the embankment and under structural works shall be cleared, grubbed, and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed and disposed of by approved methods. In order to facilitate clean-out or restoration, the pool area (measured at the top of the pipe spillway) will be cleared of all brush and trees.

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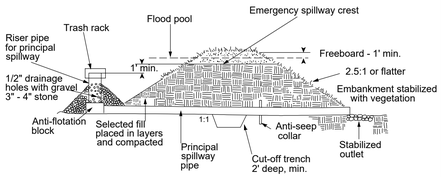
Sd3 TEMPORARY SEDIMENT BASIN
N.T.S.



CROSS SECTION

Fill Height	Minimum Top Width
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NOTES:
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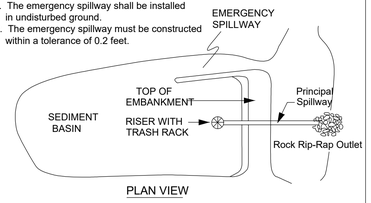
2. The emergency spillway must be constructed within a tolerance of 0.2 feet.



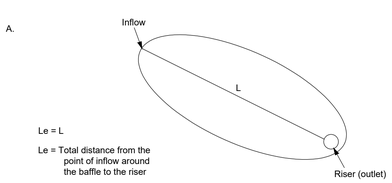
PLAN VIEW

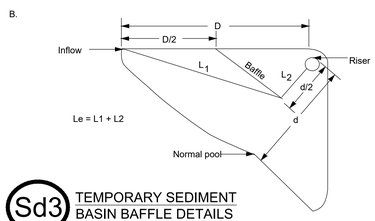
BASIC COMPONENTS OF A TEMPORARY SEDIMENT BASIN

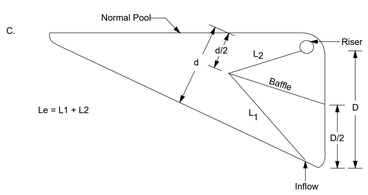
Figure 6-22.1

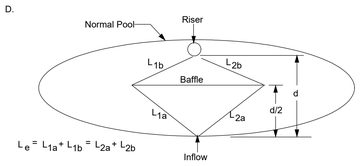
SEDIMENT BASIN BAFFLES

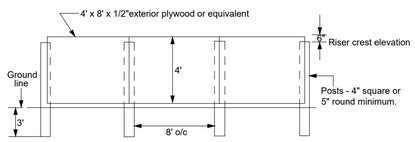
Examples: Plan Views - not to scale











Sd3 TEMPORARY SEDIMENT BASIN BAFFLE DETAILS
N.T.S.

Figure 6-22.2 Temporary Sediment Basin Baffle Details

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	11/15/23	CX0 PLANS SUBMITTAL	SD	SD	TM
2	03/12/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM
3	05/06/24	REVISED PER CITY OF BUFORD COMMENTS	SR	SD	TM

Civil Engineering By LJA:
Tyler Marchman, GA PE040989
Cell: 770-855-2430
tylerm@allianceco.com

GEORGIA REGISTERED NO. 040989 PROFESSIONAL ENGINEER TYLER SCOTT MARCHMAN 5-6-24

GASWCC LEVEL II
CERTIFICATION #59016
EXPIRATION DATE: 11/17/2025

LJA ENGINEERING
299 S. MAIN STREET
ALPHARETTA, GA 30009
770-225-4730

BOGAN ENTERPRISES, LLC
11555 MEDLOCK BRIDGE RD.
SUITE #190
JOHNS CREEK, GA 30097
paulkhansari@gmail.com

CLEARING AND GRADING PLANS FOR 1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

PROJECT NUMBER
3934-2301

SHEET TITLE
EROSION CONTROL DETAILS

SHEET NUMBER
C-608

GEORGIA811 Utilities Protection Center, Inc.
Know what's below. Call before you dig.

Plot Date: Monday, May 6, 2024 4:09:24 PM

File Location: s:\aecprojects\ga\3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-erosion

Plot Date: Monday, January 8, 2024 12:59:23 PM

File Location: s:\aesf\projects\ga\3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-tree

TREE SURVEY NOTES

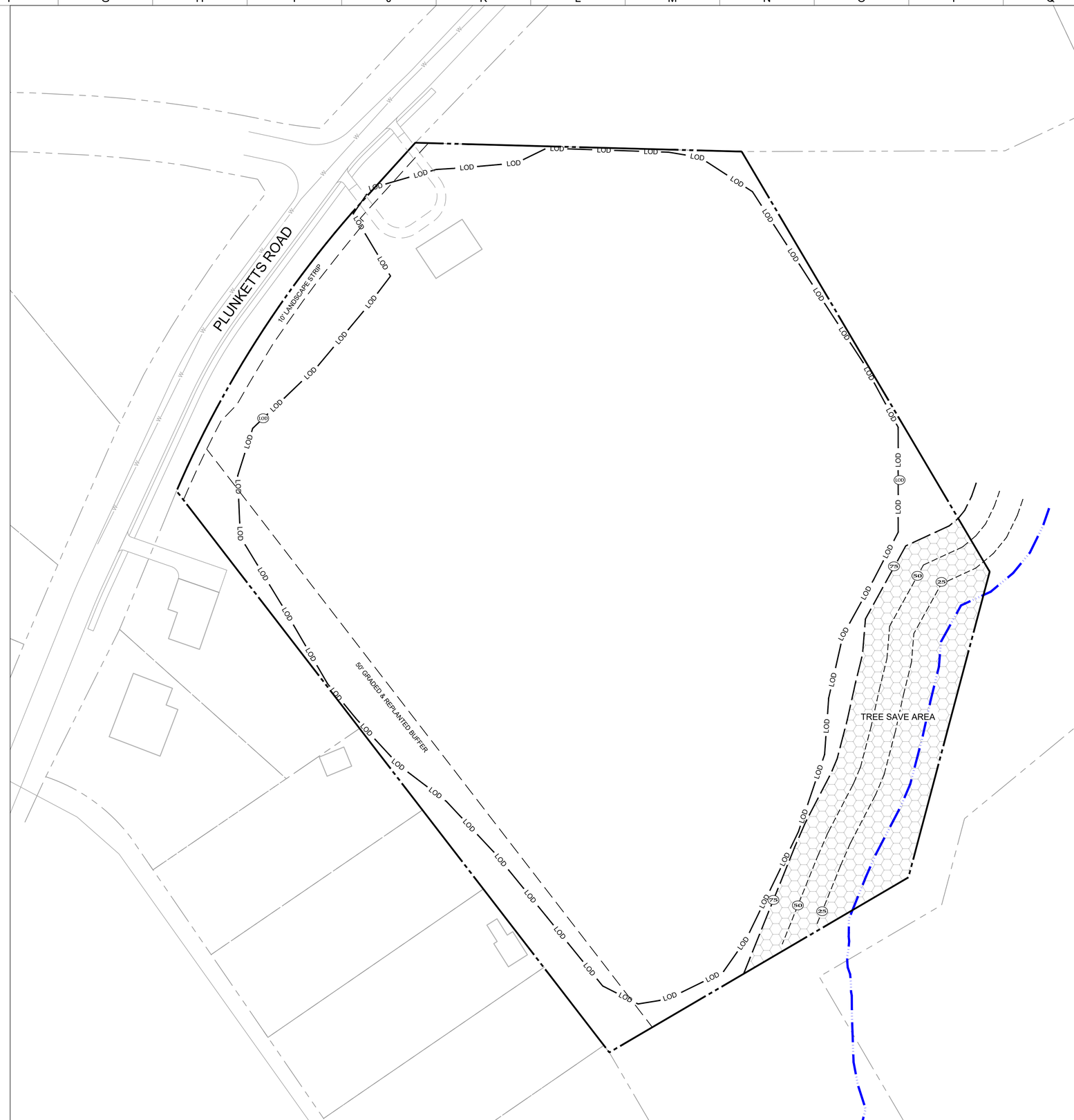
TREE SURVEY AND TREE SAMPLES,
OCTOBER 25, 2023, PROVIDED BY:
Van Moore Urban Forestry, Inc.
5962 Lake Lanier Heights Road
Buford, GA 30518
(770) 530-4114
mooreurbanforestry@charter.net

SITE SYMBOLS LEGEND

- LOD — LIMITS OF DISTURBANCE
- 25 — 25' STATE STREAM BUFFER
- 50 — 50' COUNTY STREAM BUFFER
- 75 — 75' IMPERVIOUS SETBACK

Tree Save Area Units

Number of Trees	Tree Size Dia.	Units	Total Number of Units
31	3	0.2	6.2
24	4	0.3	7.2
11	5	0.6	6.6
8	6	0.7	5.6
5	7	0.8	4
6	8	1	6
9	9	1.2	10.8
9	10	1.4	12.6
3	11	1.6	4.8
3	12	1.8	5.4
8	13	2	16
6	14	2.2	13.2
7	15	2.4	16.8
3	16	2.6	7.8
2	17	2.8	5.6
5	18	3	15
3	19	3.2	9.6
3	20	3.4	10.2
6	21	3.6	21.6
2	22	3.8	7.6
1	23	4	4
1	24	4.2	4.2
2	25	4.4	8.8
3	26	4.6	13.8
	Total		223.4



NO.	DATE	DESCRIPTION	BY	CHK.	APV.
1	11/15/23	CXG PLANS SUBMITTAL	SD	SD	TM

GEORGIA REGISTERED No. 1774 1/8/2024 LANDSCAPE ARCHITECT ROBERT L. WATKINS

LJA ENGINEERING
299 S. MAIN STREET
ALPHARETTA, GA 30009
770-225-4730

BOGAN ENTERPRISES, LLC
11555 MEDLOCK BRIDGE RD.
SUITE #190
JOHNS CREEK, GA 30097
paulkhansari@gmail.com

SITE CONSTRUCTION PLANS FOR 1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 ~ DISTRICT 7TH
PARCEL # 7218 003

NORTH

SCALE: 1"= 50'
0 50

PROJECT NUMBER
3934-2301

SHEET TITLE
TREE SURVEY

SHEET NUMBER
C-700

ORDINANCE REQUIREMENTS CHART			
TOTAL SITE ACREAGE	=	11.11	ACRES
REQUIRED ZONING BUFFER ACREAGE	MINUS	0.83	ACRES
NET ACREAGE	=	10.28	ACRES
(SDF)TREE DENSITY FACTOR	=	20	UNITS/ACRE
TOTAL TREE DENSITY UNITS REQUIRED (20 X 10.28)	**=**	**205.6**	UNITS/ACRE
(EDF) TREE SAVE AREA	=	223.40	TOTAL UNITS
(RDF) UNITS PLANTED	PLUS	-	TOTAL UNITS
TOTAL TREE DENSITY UNITS PROVIDED		**223.4**	TOTAL UNITS

SITE DENSITY NOTES:

1. TREES LOCATED/PLANTED IN ZONING BUFFER ARE EXCLUDED FROM DENSITY CREDITS
2. TREES LOCATED/PLANTED IN STREAM BUFFER ARE COUNTED TOWARD TREE SAVE AREA
3. TOTAL TDU REQUIREMENT EXCEEDED WITH EDF UNITS

Tree Save Area Units

Number of Trees	Tree Size Dia.	Units	Total Number of Units
31	3	0.2	6.2
24	4	0.3	7.2
11	5	0.6	6.6
8	6	0.7	5.6
5	7	0.8	4
6	8	1	6
9	9	1.2	10.8
9	10	1.4	12.6
3	11	1.6	4.8
3	12	1.8	5.4
8	13	2	16
6	14	2.2	13.2
7	15	2.4	16.8
3	16	2.6	7.8
2	17	2.8	5.6
5	18	3	15
3	19	3.2	9.6
3	20	3.4	10.2
6	21	3.6	21.6
2	22	3.8	7.6
1	23	4	4
1	24	4.2	4.2
2	25	4.4	8.8
3	26	4.6	13.8
	Total		223.4

NO.	DATE	DESCRIPTION	BY	CHK.	APV.
1	11/15/23	CJG PLANS SUBMITTAL	SD	SD	TM

GEORGIA REGISTERED No. 1774 1/8/2024 LANDSCAPE ARCHITECT ROBERT L. WATKINS

LJA ENGINEERING
299 S. MAIN STREET
ALPHARETTA, GA 30009
770-225-4730

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SUITE #190
JOHNS CREEK, GA 30097
paulkhansari@gmail.com

SITE CONSTRUCTION PLANS FOR 1781 PLUNKETTS ROAD

1781 PLUNKETTS ROAD, GWINNETT COUNTY, GA.
L.L. 218 – DISTRICT 7TH
PARCEL # 7218 003

PROJECT NUMBER
3934-2301

SHEET TITLE
TREE CALCULATIONS

SHEET NUMBER
C-701

Plot Date: Monday, January 8, 2024 12:59:24 PM
File Location: s:\sed\projects\pa\3934-2301 - 1781 plunkett road - buford\02-design\drawings\02-civil\plan sheets\3934-2301-tree