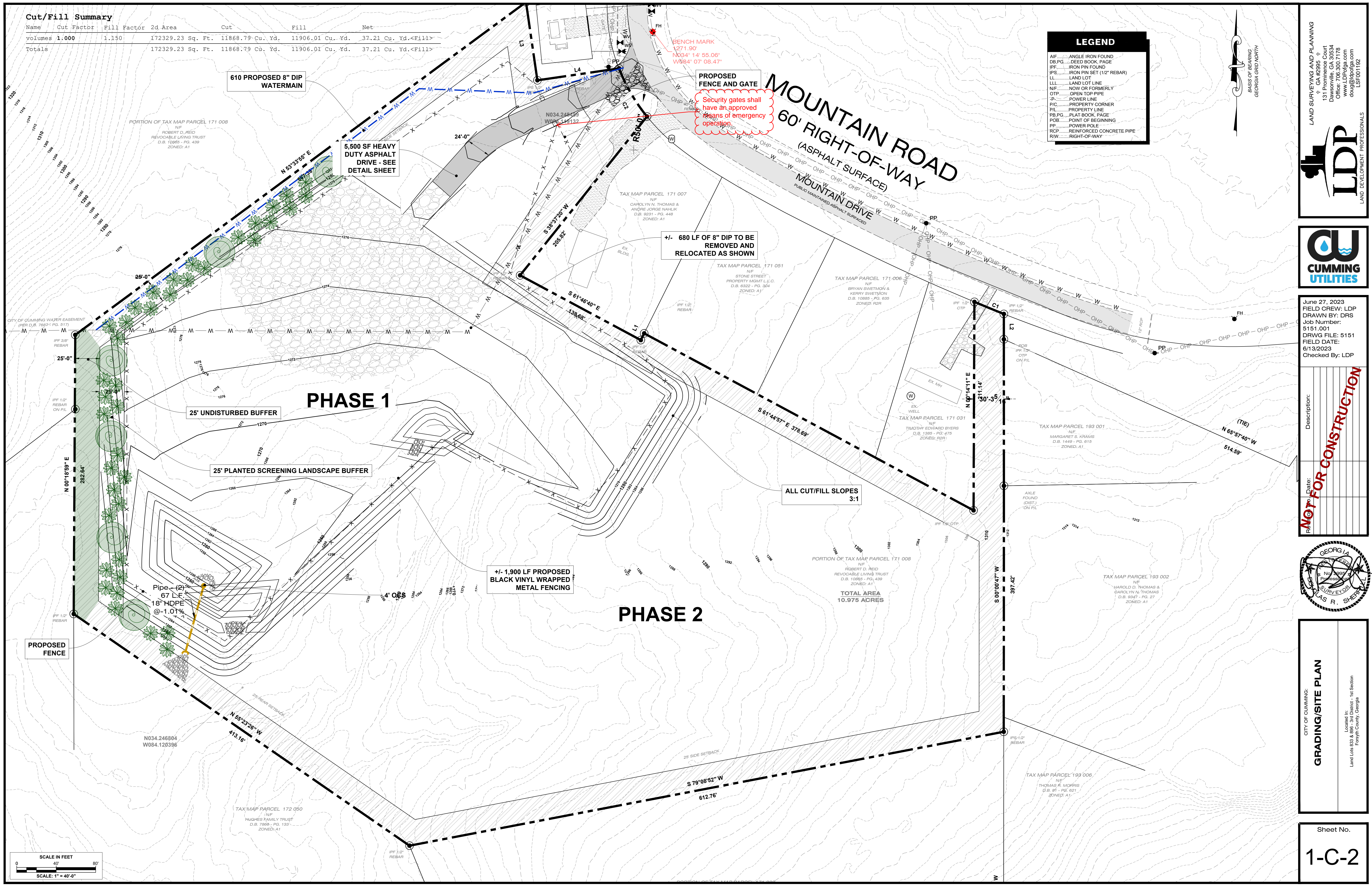


Cut/Fill Summary

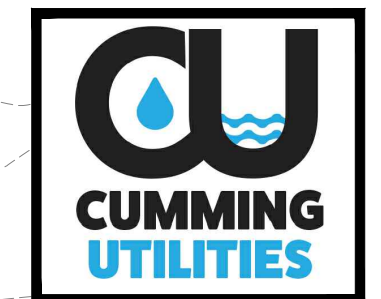
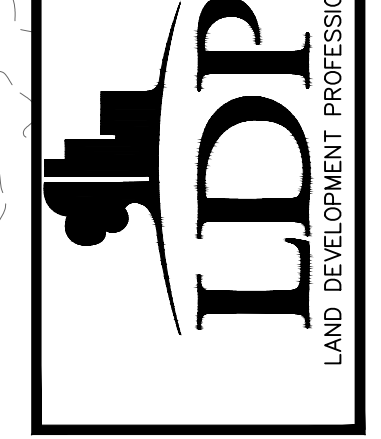
Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
volumes	1.000	1.150	172329.23 Sq. Ft.	11868.79 Cu. Yd.	11906.01 Cu. Yd.	37.21 Cu. Yd.<Fill>
Totals			172329.23 Sq. Ft.	11868.79 Cu. Yd.	11906.01 Cu. Yd.	37.21 Cu. Yd.<Fill>

LEGEND

- AI.....ANGLE IRON FOUND
- DB.PG.....DEED BOOK, PAGE
- IPF.....IRON PIN FOUND
- IPF.S.....IRON PIN SET (1/2" REBAR)
- LL.....LAND LOT
- LLL.....LAND LOT LINE
- NF.....NOW OR FORMERLY
- OTP.....OPEN TOP PIPE
- P.....POWER LINE
- P/C.....PROPERTY CORNER
- PL.....PROPERTY LINE
- PB.PG.....PLAT BOOK PAGE
- POB.....POINT OF BEGINNING
- PP.....POWER POLE
- RC.P.....REINFORCED CONCRETE PIPE
- R/W.....RIGHT-OF-WAY



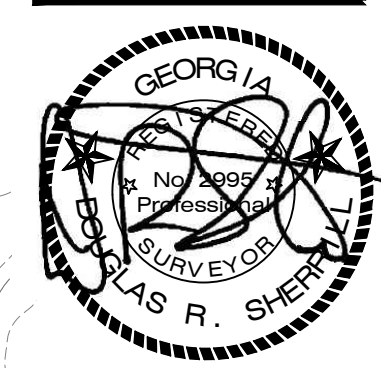
LAND SURVEYING AND PLANNING
 GA #2995
 131 Prominence Court
 Marietta, GA 30064
 Office: 706.300.7178
 www.LDPofga.com
 doug@ldpofga.com
 LSP001192



June 27, 2023
 FIELD CREW: LDP
 DRAWN BY: DRS
 Job Number:
 5151.001
 DRWG FILE: 5151
 FIELD DATE:
 6/13/2023
 Checked By: LDP

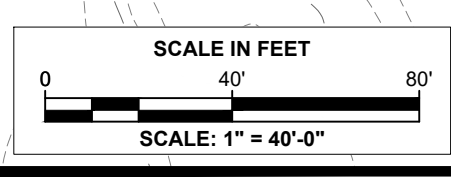
FOR CONSTRUCTION

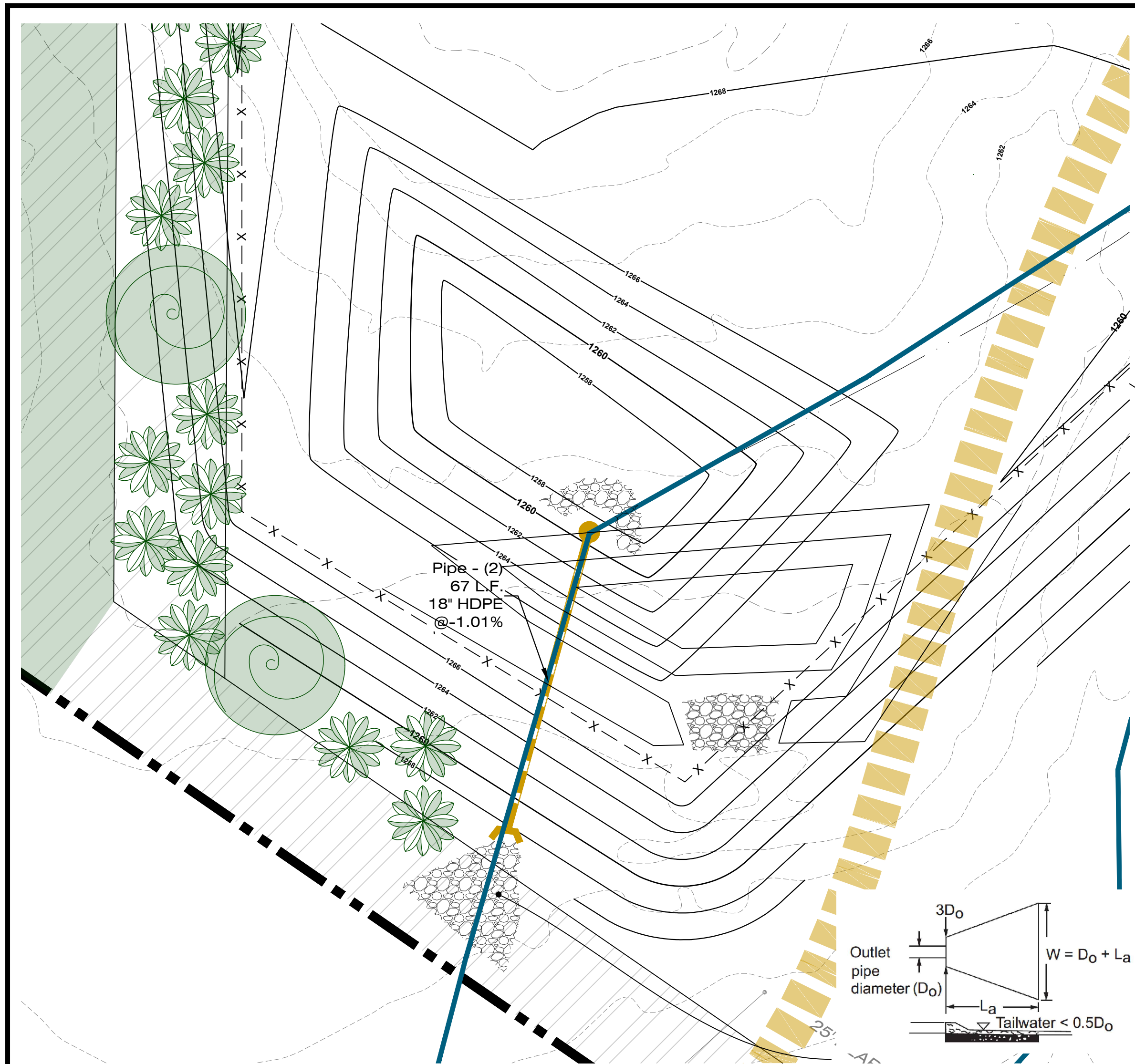
Date:	Description:



CITY OF CUMMING:
GRADING/SITE PLAN
 Located In:
 Land Lots 833 & 866 - 3rd District - Hill Station
 Forsyth County, Georgia

Sheet No.
1-C-2





4 FT SQ. PRECAST CONCRETE (INSIDE DIMENSIONS)
OUTLET CONTROL STRUCTURE WITH TOP AND COVER.

100' YEAR ELEVATION 1265.00
25' YEAR ELEVATION 1264.00

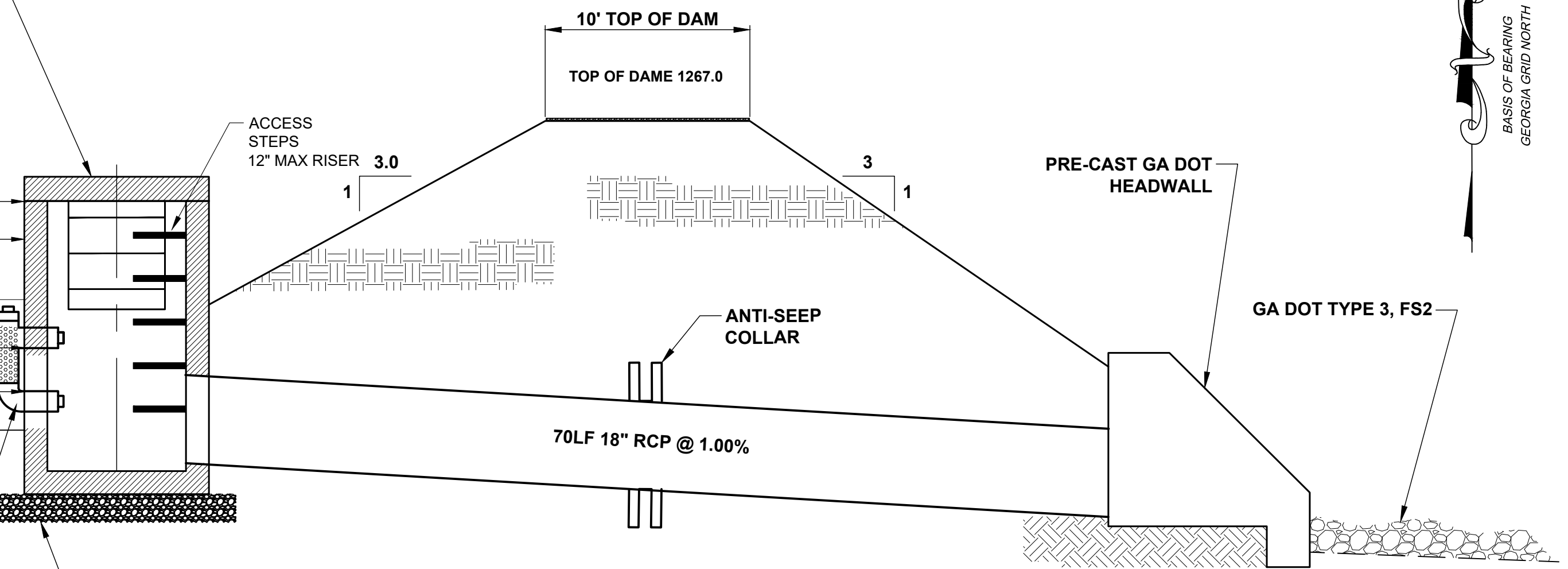
CHANNEL PROTECTION ELEVATION 1260.9'
WATER QUALITY ELEVATION 1258.50"

POND BOTTOM
EL. 1257

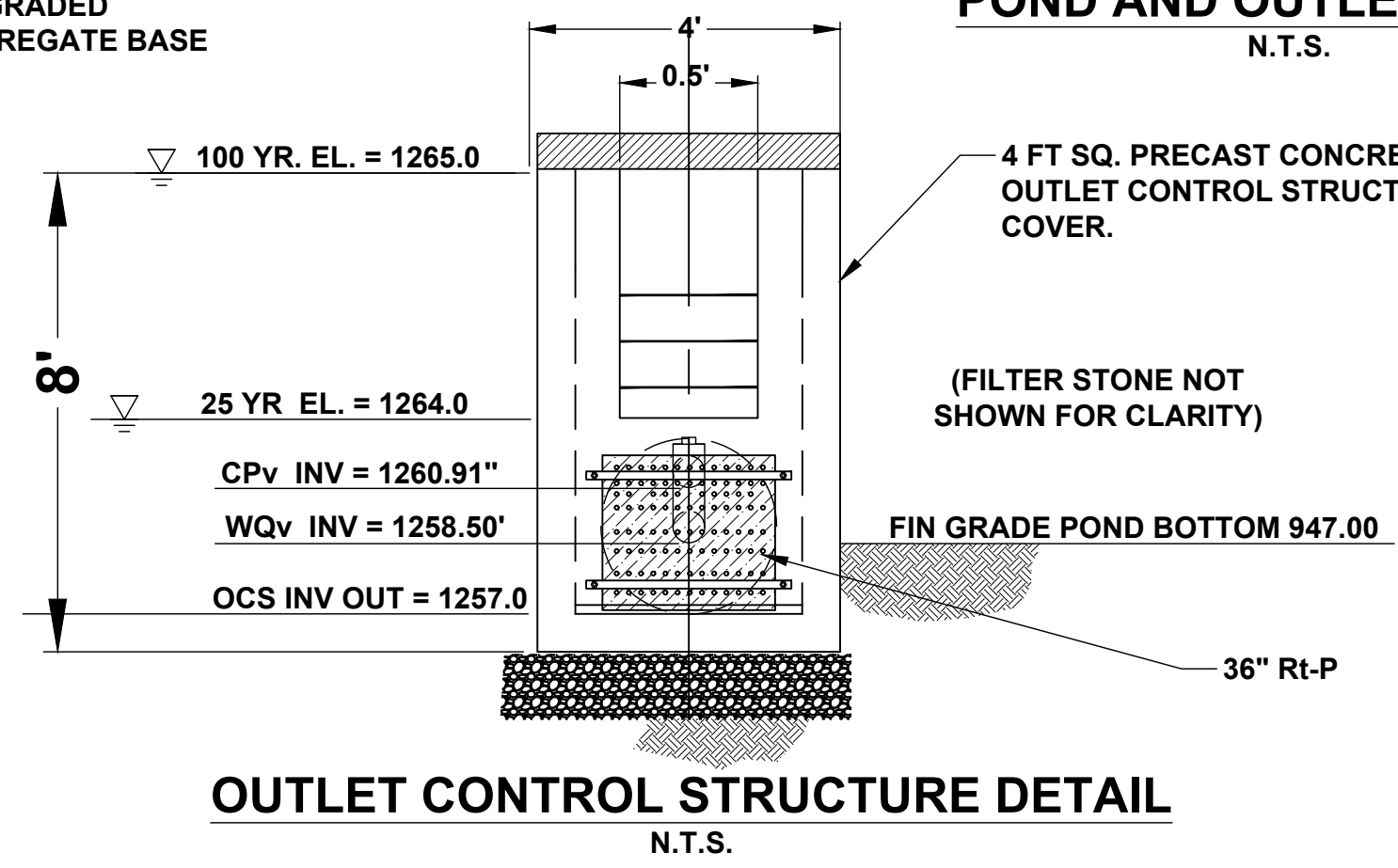
FILTER STONE WRAPPED
WITH NON-WOVEN
FILTER CLOTH

36" PERFORATED HALF-ROUND
CMP PERMANENTLY AFFIXED TO
STRUCTURE

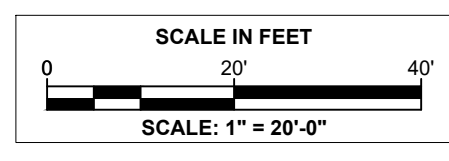
6" PVC SCH 80 PERFORATED PIPE
WITH ORIFICE DRILLED IN PLUG CAP
FOR WATER QUALITY AND CHANNEL
PROTECTION



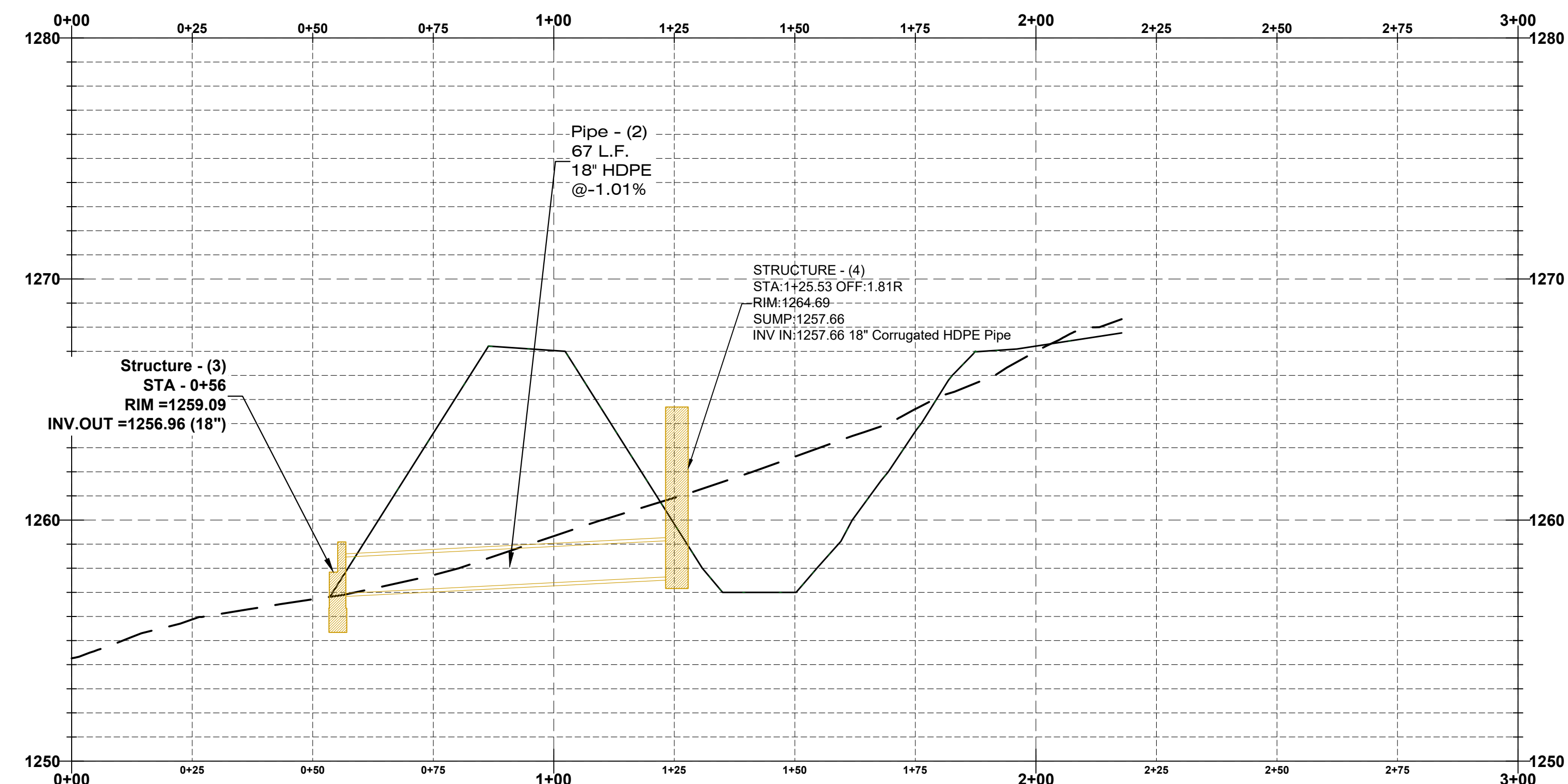
POND AND OUTLET DETAIL
N.T.S.



OUTLET CONTROL STRUCTURE DETAIL
N.T.S.



St	3Do	La	W	Do
	4.5'	11'	15.5'	2'



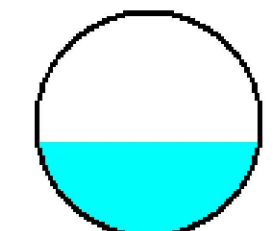
STORM SEWER A
STAT 0+00 - 3+00
SCALE: VERT 1"=8
HORIZ 1"=40

Inflow Area = 11.800 ac, 5.08% Impervious, Inflow Depth > 2.19" for 100-yr event
Inflow = 3.98 cfs @ 13.83 hrs, Volume= 2.156 af
Outflow = 3.98 cfs @ 13.82 hrs, Volume= 2.154 af, Atten= 0%, Lag= 0.0 min

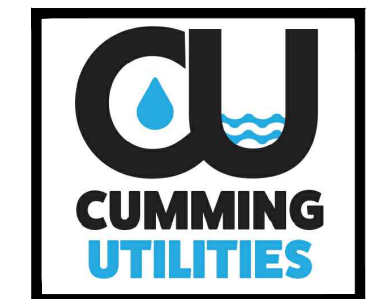
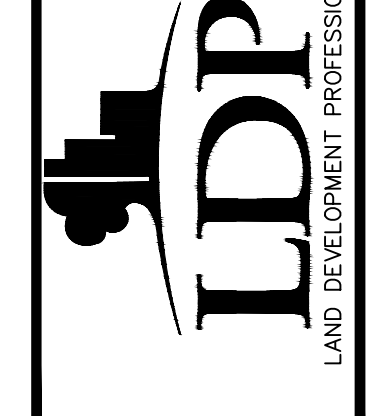
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max Velocity= 5.87 fps, Min. Travel Time= 0.2 min
Avg. Velocity= 5.51 fps, Avg. Travel Time= 0.2 min

Peak Storage= 47 cf @ 13.82 hrs
Average Depth at Peak Storage= 0.61', Surface Width= 1.47'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 11.38 cfs

18.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 70.0' Slope= 0.0100 '
Inlet Invert= 1,257.56', Outlet Invert= 1,256.96'

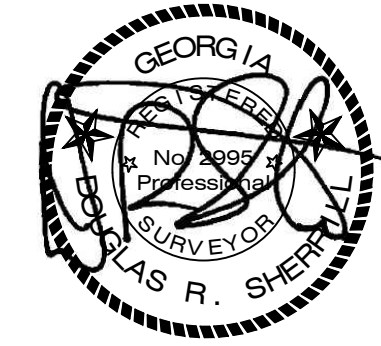


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LSFD01192



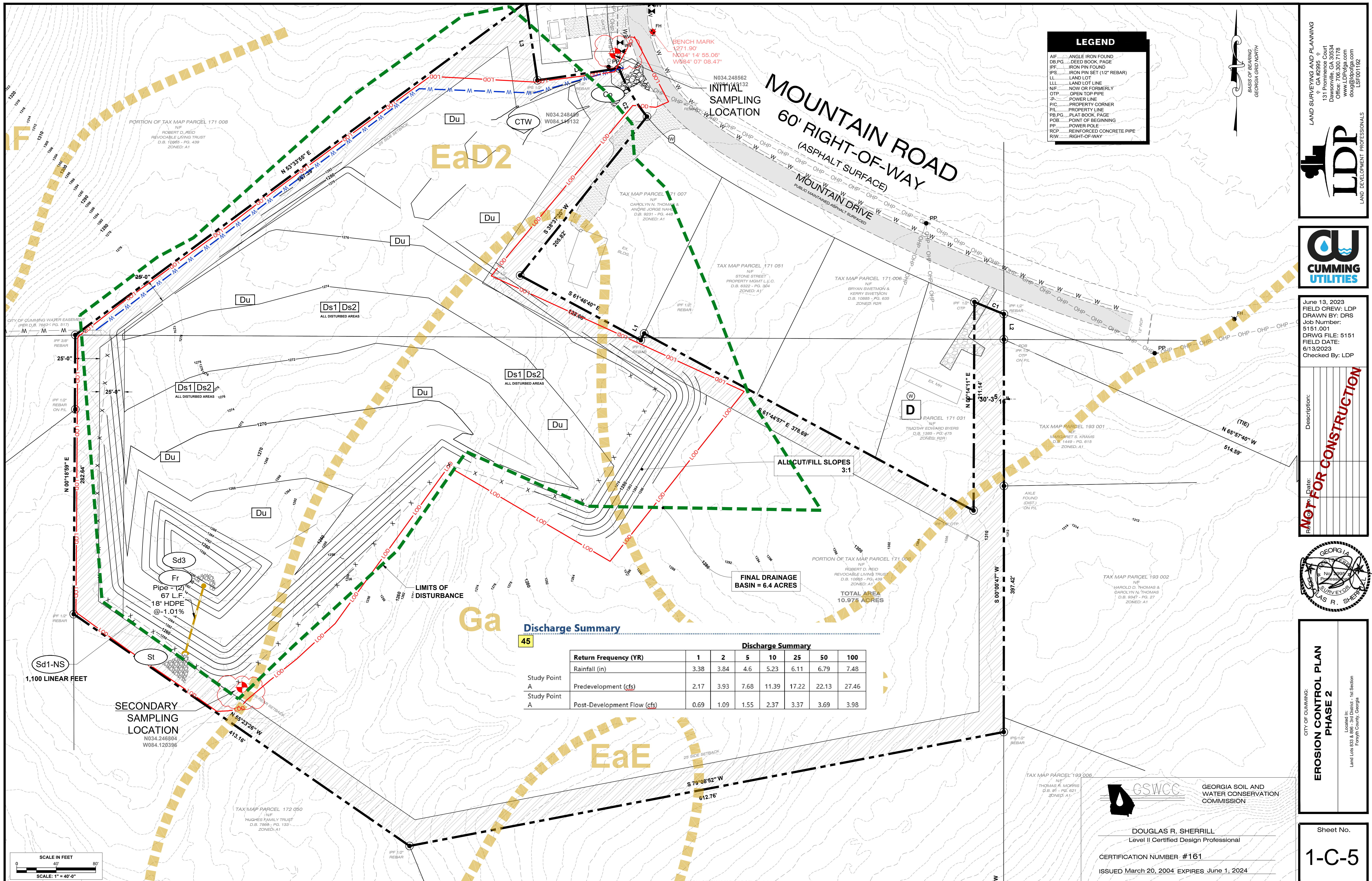
June 27, 2023
FIELD CREW: LDP
DRAWN BY: DRS
Job Number:
5151.001
DRWG FILE: 5151
FIELD DATE:
6/13/2023
Checked By: LDP

Description:
Date:
NOT FOR CONSTRUCTION



CITY OF CUMMING:
DETENTION POND DETAILS
Located In:
Land Lots 833 & 896 - 3rd District - 1st Station
Forsyth County, Georgia

Sheet No.
1-C-3



LEGEND

- AI.....ANGLE IRON FOUND
- DB,PG.....DEED BOOK, PAGE
- IP.....IRON PIN FOUND
- IP8.....IRON PIN SET (1/2" REBAR)
- LL.....LAND LOT
- LLL.....LAND LOT LINE
- NF.....NOW OR FORMERLY
- OTP.....OPEN TOP PIPE
- P.....POWER LINE
- P/C.....PROPERTY CORNER
- PL.....PROPERTY LINE
- PLB,PG.....PLAT BOOK, PAGE
- POB.....POINT OF BEGINNING
- PP.....POWER POLE
- RCP.....REINFORCED CONCRETE PIPE
- R/W.....RIGHT-OF-WAY

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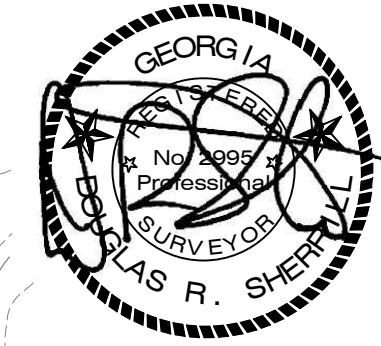
LDP
 LAND DEVELOPMENT PROFESSIONALS

CUMMING UTILITIES

June 13, 2023
 FIELD CREW: LDP
 DRAWN BY: DRS
 Job Number: 5151.001
 DRWG FILE: 5151
 FIELD DATE: 6/13/2023
 Checked By: LDP

REVISIONS

NO.	DATE	DESCRIPTION
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CITY OF CUMMING:
**EROSION CONTROL PLAN
 PHASE 2**

Located In:
 Land Lots 833 & 866 - 3rd District - 1st Station
 Forsyth County, Georgia

Sheet No.
1-C-5

Discharge Summary

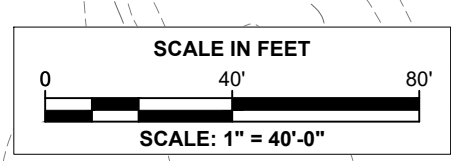
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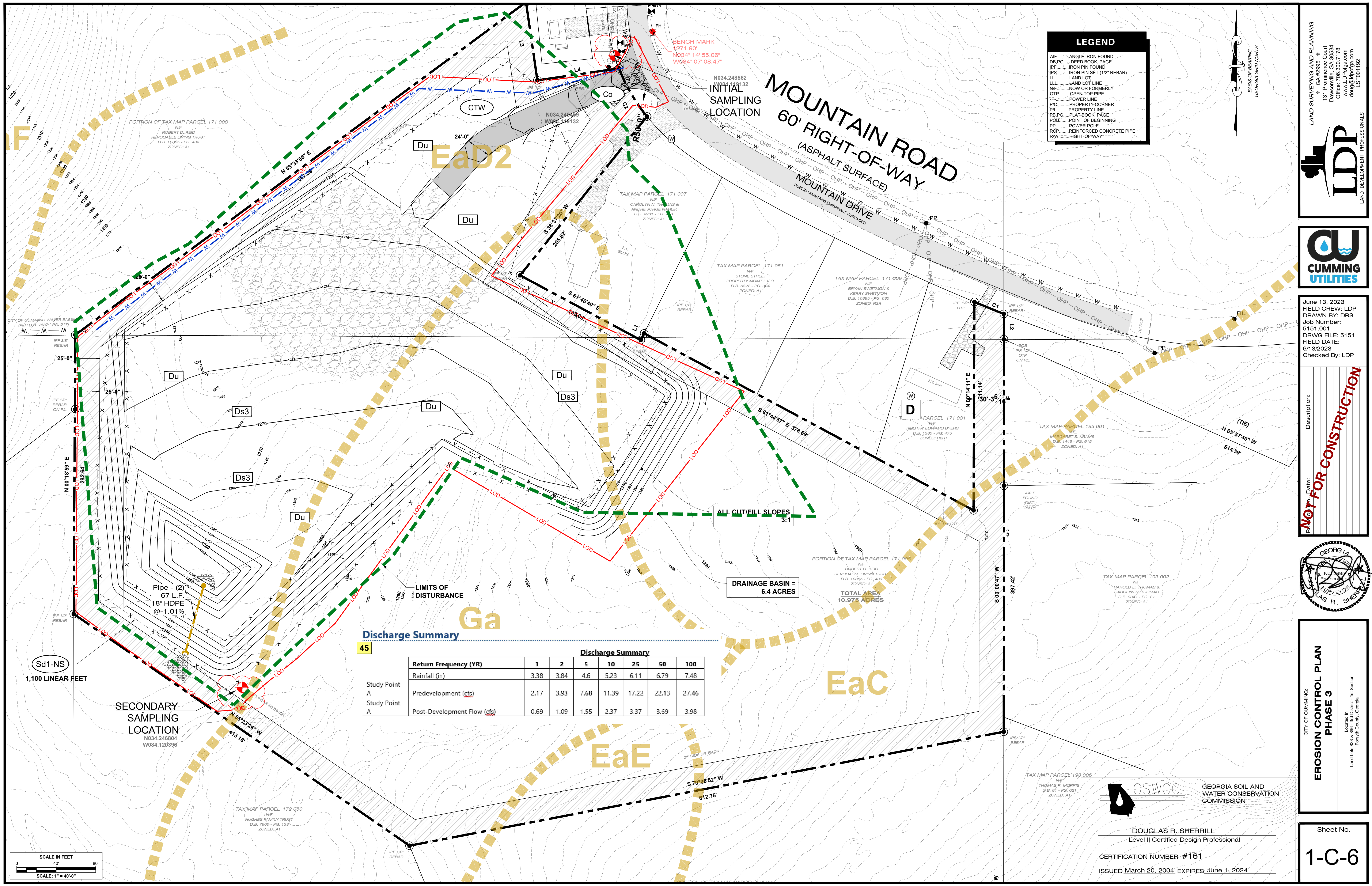
Return Frequency (YR)	Discharge Summary						
	1	2	5	10	25	50	100
Rainfall (in)	3.38	3.84	4.6	5.23	6.11	6.79	7.48
Study Point A Predevelopment (cfs)	2.17	3.93	7.68	11.39	17.22	22.13	27.46
Study Point A Post-Development Flow (cfs)	0.69	1.09	1.55	2.37	3.37	3.69	3.98

GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

DOUGLAS R. SHERRILL
 Level II Certified Design Professional

CERTIFICATION NUMBER #161
 ISSUED March 20, 2004 EXPIRES June 1, 2024



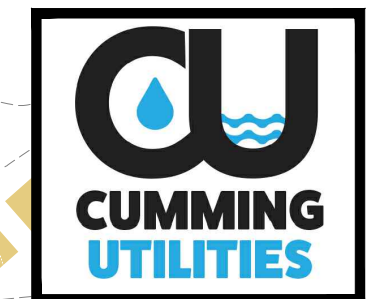


LEGEND

- ▲ ANGLE IRON FOUND
- DB.PG. DEED BOOK PAGE
- IPF IRON PIN FOUND
- IPF IRON PIN SET (1/2" REBAR)
- LL LAND LOT
- LLL LAND LOT LINE
- NF NOW OR FORMERLY
- OTP OPEN TOP PIPE
- P POWER LINE
- P/C PROPERTY CORNER
- PL PROPERTY LINE
- PB.PG. PLAT BOOK PAGE
- POB POINT OF BEGINNING
- PP POWER POLE
- RCP REINFORCED CONCRETE PIPE
- R/W RIGHT-OF-WAY

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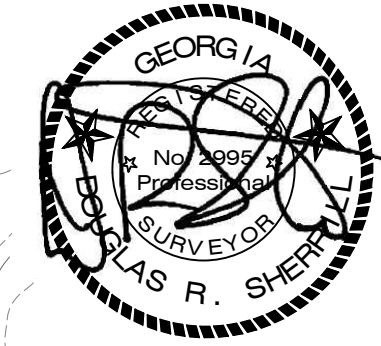
LDP
 LAND DEVELOPMENT PROFESSIONALS



June 13, 2023
 FIELD CREW: LDP
 DRAWN BY: DRS
 Job Number: 5151.001
 DRWG FILE: 5151
 FIELD DATE: 6/13/2023
 Checked By: LDP

NOT FOR CONSTRUCTION

Date:	Description:



CITY OF CUMMING:
**EROSION CONTROL PLAN
 PHASE 3**

Located In:
 Land Lots 833 & 866 - 3rd District - 1st Station
 Forsyth County, Georgia

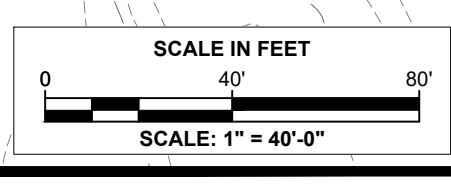
Sheet No.
1-C-6

Discharge Summary

45

Return Frequency (YR)	1	2	5	10	25	50	100
Rainfall (in)	3.38	3.84	4.6	5.23	6.11	6.79	7.48
Predevelopment (cfs)	2.17	3.93	7.68	11.39	17.22	22.13	27.46
Study Point A Post-Development Flow (cfs)	0.69	1.09	1.55	2.37	3.37	3.69	3.98

SECONDARY SAMPLING LOCATION
 N034.246804
 W084.120396



GSWCC GEORGIA SOIL AND WATER CONSERVATION COMMISSION

DOUGLAS R. SHERRILL
 Level II Certified Design Professional

CERTIFICATION NUMBER #161
 ISSUED March 20, 2004 EXPIRES June 1, 2024

Plan #	Y/N	Description
1	Y	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.
2	Y	Level of certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and level number must be on each sheet pertaining to ESAPC plan or the Plan will not be reviewed.)
3	Y	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.)
4	Y	The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.
5	Y	Provide the name, address, email address, and phone number of primary permittee.
6	Y	Note trail and disturbed areas of the project or phase under construction.
7	Y	Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
8	Y	Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
9	Y	Description of the nature of construction activity and existing site conditions.
10	Y	Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
11	Y	Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
12	Y	Design professional's certification statement and signature that the site was visited prior to development of the ESAPC Plan as stated on Part IV page 19 of the permit.
13	Y	Design professional's certification statement and signature that the permittee's ESAPC 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.
14	Y	Clearly state the statement that "The design professional who prepared the ESAPC 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.5.5 page 25 of the permit.
15	Y	Clearly state 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 undisturbed 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."
16	Y	Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
17	Y	Clearly state the statement that "Amendments/revisions to the ESAPC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."
18	Y	Clearly state the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit."
19	Y	Clearly state the 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."
20	Y	Clearly state the statement that "Erosion control measures will be maintained at all times. 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."
21	Y	Clearly state the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
22	Y	Any construction activity which discharges storm water into an Impaired Stream Segment or within 1 mile linear upstream and within the same watershed as, any portion of a State 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.
23	Y	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 ESAPC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan.
24	Y	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.
25	Y	Provide BMPs for the remediation of all petroleum spills and leaks.
26	Y	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.
27	Y	Description of practices to provide cover for building materials and building products on site.
28	Y	Description of the practices that will be used to reduce the pollutants in storm water discharges.
29	Y	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).
30	Y	Provide complete requirements of inspections and record keeping by the primary permittee.
31	Y	Provide complete requirements of Sampling Frequency and Reporting of sampling results.
32	Y	Provide complete details for Retention of Records as per Part IV.F. of the permit.
33	Y	Description of analytical methods to be used to collect and analyze the samples from each location.
34	Y	Appendix B rationale for NTU values at all outfall sampling points where applicable.
35	Y	Delimit all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged.
36	Y	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.
37	Y	Graphic scale and North arrow.
38	Y	Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following: Map Scale Contour Intervals ft. 1 inch = 100ft or larger scale Flat 0 - 2% Rolling 2 - 8% Steep 8% + 0.5 or 1 or 2 2.5 or 10
39	Y	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.
40	Y	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.
41	Y	Delimitation 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.
42	Y	Delimitation of on-site wetlands and all state waters located on and within 200 feet of the project site.
43	Y	Delimitation and acreage of contributing drainage basins on the project site.
44	Y	Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions.
45	Y	An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
46	Y	Storm drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/delimitate all storm water discharge points.
47	Y	Soil series for the project site and their delineation.
48	Y	The limits of disturbance for each phase of construction.
49	Y	Provide a minimum of 57 cubic yards of sediment storage per acre drained using a temporary sediment basin, eroded stream bed, and/or excavated detention basins 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 obtainable 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 57 cubic yards of storage is not obtainable must also be given. Notwithstanding the Manual included for structure 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.
50	Y	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.
51	Y	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.
52	Y	Provide vegetation 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.

32

- RETENTION OF RECORDS.**
- 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 COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
 - A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
 - THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
 - A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
 - A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
 - A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
 - DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.
 - EACH SECONDARY 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 COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
 - A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT OR THE APPLICABLE PORTION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN FOR THEIR ACTIVITIES AT THE CONSTRUCTION SITE REQUIRED BY THIS PERMIT;
 - A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.B. OF THIS PERMIT; AND
 - A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT.
 - EACH TERTIARY 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 COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
 - A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
 - THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
 - A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
 - A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.C. OF THIS PERMIT;
 - A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
 - DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.C.(2). OF THIS PERMIT.
 - COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING RECORDS (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 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.

36

- EROSION CONTROL ALL PHASES**
- PHASE 1**
DRAINAGE BASIN A CONSISTS OF 5.7 ACRES REQUIRING 381.9 CYRDS OF SEDIMENT STORAGE. ALL SEDIMENT STORAGE IS PROVIDED IN TWO SEDIMENT PONDS AS SHOWN ON PHASE 1 EROSION PLAN. PERIMETER SILT FENCE WILL ADD ADDITIONAL SEDIMENT STORAGE. AN APPROPRIATELY SIZED SKIMMER SHALL BE USED IN EACH SEDIMENT STORAGE PONDS.
- PHASE 2**
THE SEDIMENT STORAGE IS PROVIDED BY A SD3 AS SHOWN ON SHEET 1-C-7. CLEAN OUT ELEVATION SHALL BE CLEARLY MARKED ON A STAKE INSIDE THE SD3. AN APPROPRIATELY SIZED SKIMMER SHALL BE USED IN THE SEDIMENT STORAGE POND. THE OUTLET FROM THE SD3 SHALL HAVE ENERGY DISSIPATER IN THE FORM OF ST RIPRAP.
- PHASE 3**
THE SEDIMENT STORAGE IS PROVIDED BY SD3 AND PERMANENT STABILIZATION AS SHOWN ON PLANS.

Nephelometric Turbidity Unit (NTU)
Tables
APPENDIX B
Warm Water
(Supporting Warm Water Fisheries)
Surface Water Drainage Area
(Square Miles)

34

Site Size (Acres)	0-4.995-9.99	10-24.99	25-49.99	50-99.99	100-249.99	250-499.99	750
1.00-10	75	150	200	400	750	750	750
10.01-25	50	100	100	200	300	500	750
25.01-50	50	50	100	100	200	300	750
50.01-100	50	50	50	100	100	150	300
100.01+	50	50	50	50	50	100	200

CLEAR AND GRUB TO LIMITS OF DISTURBANCE.
ALL SEDIMENT STORAGE IS AS SHOWN ON PLANS.

Soil Map—Forsyth County, Georgia

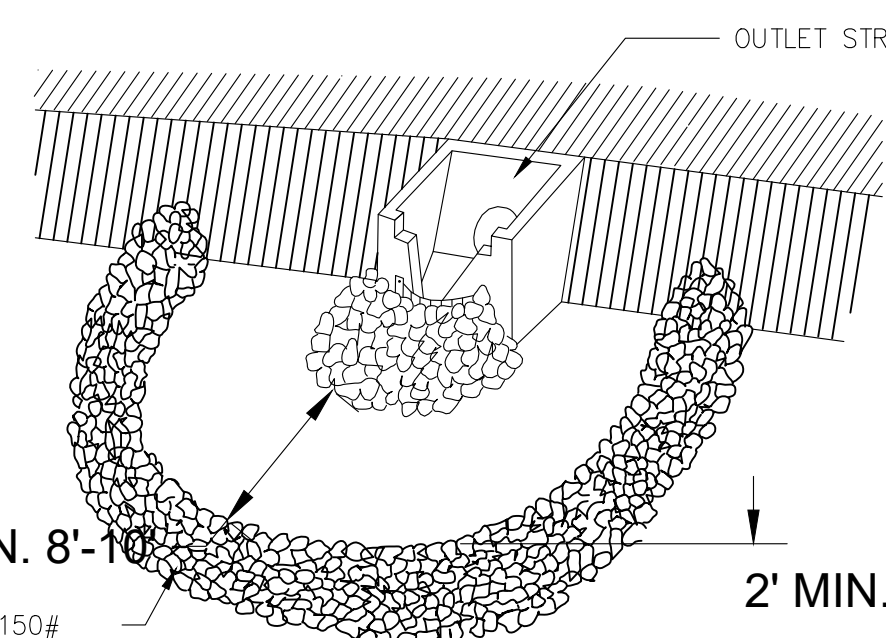
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ab	Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded	0.9	1.6%
AdB2	Appling sandy clay loam, eroded very gently sloping phase	0.0	0.0%
CaB3	Cecil clay loam, severely eroded very gently sloping phase	0.5	0.9%
CaD3	Cecil clay loam, severely eroded sloping phase	1.0	1.7%
CcB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	2.4	4.3%
EaC	Edgemont stony sandy loam, gently sloping phase	10.4	18.4%
EaD2	Edgemont stony sandy loam, eroded sloping phase	16.1	28.4%
EaE	Edgemont stony sandy loam, moderately steep phase	15.0	26.6%
EaE2	Edgemont stony sandy loam, eroded moderately steep phase	0.2	0.3%
EaF	Edgemont stony sandy loam, steep phase	0.6	1.1%
Ga	Gullied land, acid materials	8.3	14.7%
Sb	Severely gullied land	1.1	2.0%
Totals for Area of Interest		56.6	100.0%

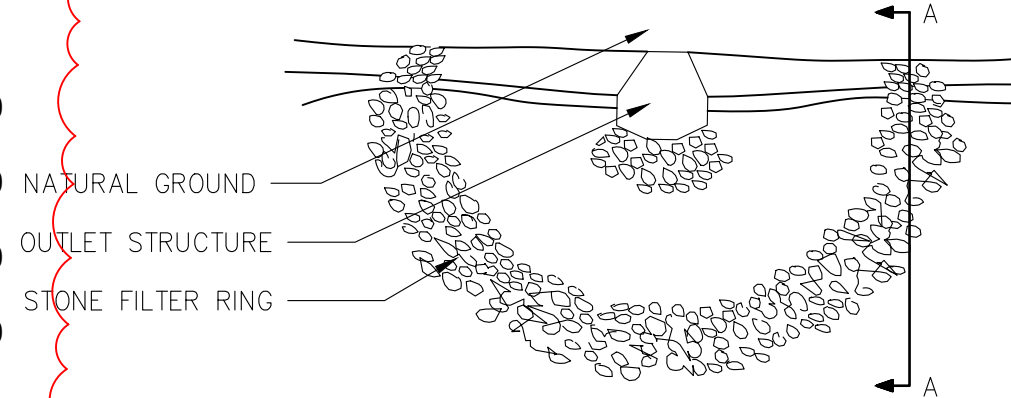


STONE FILTER RING

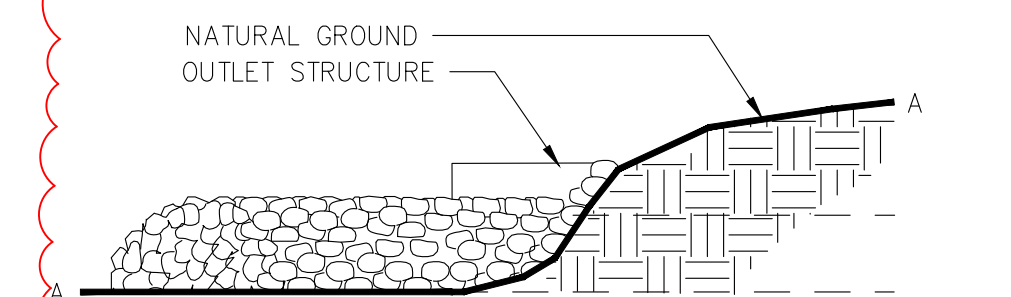
PERSPECTIVE VIEW



PLAN VIEW (NOT TO SCALE)

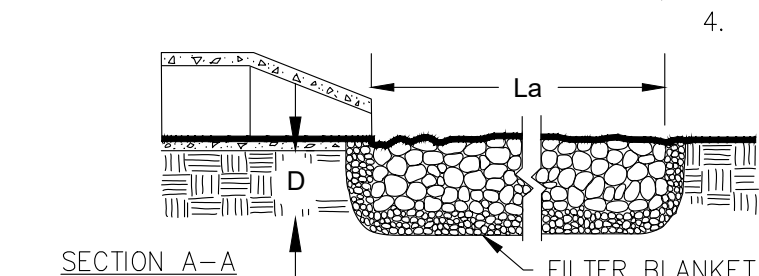
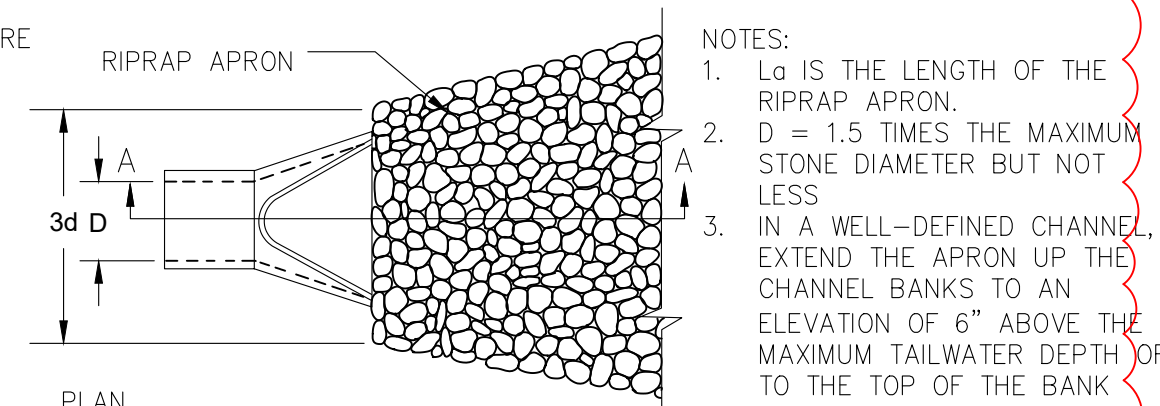


CROSS SECTION (NOT TO SCALE)

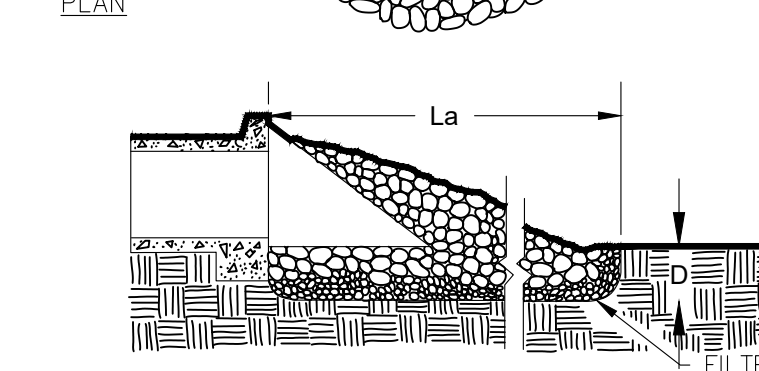
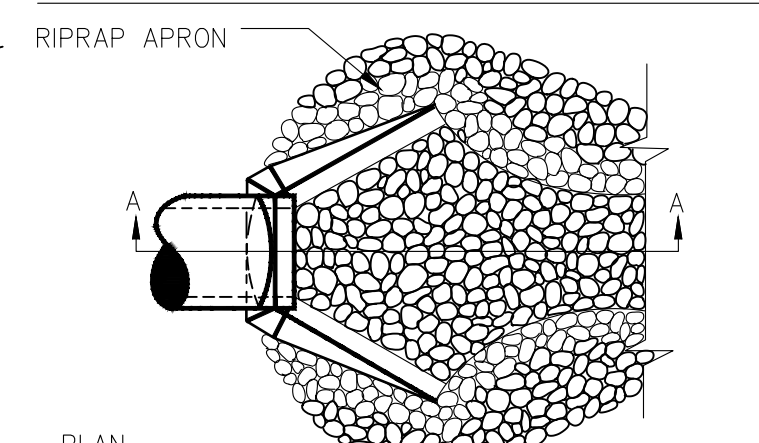


RIPRAP OUTLET PROTECTION

PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL



PIPE OUTLET TO WELL DEFINED CHANNEL



Dust Control on Disturbed Areas



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

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

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

METHOD AND MATERIALS

A. Temporary Methods

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

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

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

Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency

measure that should be used before wind erosion starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.

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

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

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

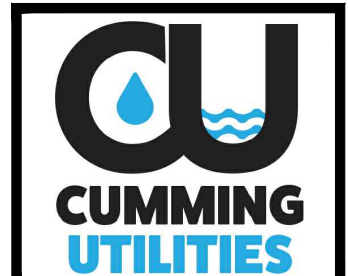
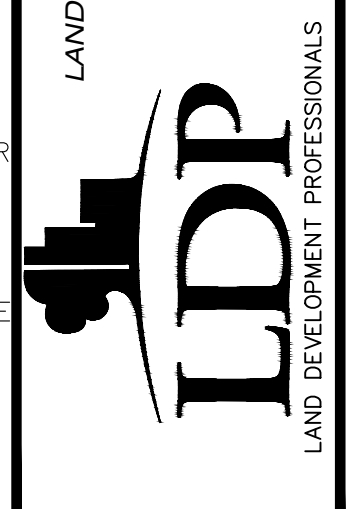
B. Permanent Methods

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

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

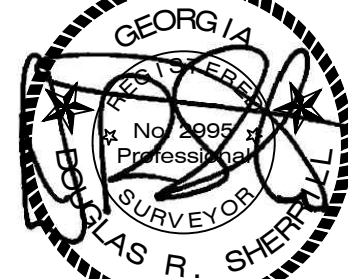
Stone. Cover surface with crushed stone or coarse gravel. See specification Cr-Construction Road Stabilization.

LAND SURVEYING AND PLANNING
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June 13, 2023
FIELD CREW: LDP
DRAWN BY: DRS
Job Number:
5151.001
DWG FILE: 5151
FIELD DATE:
6/13/2023
Checked By: LDP

Description:
Date:
NOT FOR CONSTRUCTION



CITY OF CUMMING:
EROSION CONTROL CHECKLIST AND NOTES
Located In: 111 Station
Forsyth County, Georgia
Land Lots 833 & 866 - 3rd District - 111 Station

Sheet No.
1-C-7

4 24- HOUR CONTACT
JON HEARD
100 MAIN STREET
CUMMING, GEORGIA 30040
770-781-2020
JON.HEARD@CITYOFCUMMING.NET

5 PRIMARY PERMITEE
JON HEARD
100 MAIN STREET
CUMMING, GEORGIA 30040
770-781-2020
JON.HEARD@CITYOFCUMMING.NET

27 ALL WEATHER SENSITIVE MATERIALS WILL BE COVERED BY TARP ON BUILDING SITE.

28 ALL POLLUTANTS THAT OCCUR AFTER CONSTRUCTION IS CONCLUDED WILL BE CONTROLLED BY BMPs SHOWN ON PLAN WHICH CONSISTS OF A STORMWATER POND WITH WATER QUALITY STORAGE. THE STORMWATER POLLUTION POTENTIAL SOURCES EXPECTED ON THE SITE ARE DISTURBED AREAS LEFT UNCOVERED. DURING THE CONSTRUCTION PROCESS, BMPs HAVE BEEN DESIGNED TO COVER ALL DISTURBED AREA, AND CHANNEL WATER THROUGH VEGETATED SWALE TO THE STORMWATER DETENTION POND.

29 SEE COVER SHEET

30 4. INSPECTIONS.

a. PRIMARY PERMITEE.

(1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITEE'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 PERMITEE'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 PERMITEE) 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 PERMITEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE PRIMARY PERMITEE 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 PERMITEE'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 WATERS). 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 PERMITEE 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 PERMITEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THEIR SITES 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 WATERS). 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 WATERS).

(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. THE PRIMARY PERMITEE MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV.D.4.B.(5). WHEN A SECONDARY PERMITEE NOTICES THE PRIMARY PERMITEE OF ANY PLAN DEFICIENCIES.

(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 THE 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 AN INCIDENT, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

b. SECONDARY PERMITEE.

(1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A SECONDARY PERMITEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE SECONDARY PERMITEE SHALL INSPECT: (A) ALL AREAS USED BY THE SECONDARY PERMITEE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; AND (B) ALL LOCATIONS AT THE SECONDARY PERMITEE SITE WHERE THAT PERMITEE'S 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. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITEES.

(2). CERTIFIED PERSONNEL (PROVIDED BY THE UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITEES) SHALL INSPECT THE FOLLOWING EACH DAY ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT THE CONSTRUCTION SITE: (A) AREAS OF THE CONSTRUCTION SITE DISTURBED BY THE UTILITY COMPANIES AND UTILITY CONTRACTORS THAT HAVE NOT UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION; (B) AREAS USED BY THE UTILITY COMPANIES AND UTILITY CONTRACTORS FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE UTILITY COMPANIES AND UTILITY CONTRACTORS' CONSTRUCTION ACTIVITIES 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 WATERS). THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS WHEN THEY ARE SECONDARY PERMITEES PERFORMING SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

(3). CERTIFIED PERSONNEL (PROVIDED BY THE SECONDARY PERMITEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN 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 SECONDARY PERMITEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE SECONDARY PERMITEE 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 SECONDARY PERMITEE'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 WATERS). 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 PERMITEE MUST COMPLY WITH PART IV.D.4.B.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITEES.

(4). CERTIFIED PERSONNEL (PROVIDED BY THE SECONDARY PERMITEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THEIR SITES 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 WATERS). 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 WATERS). THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITEES.

(5). BASED ON THE RESULTS OF EACH INSPECTION, THE SECONDARY PERMITEE MUST NOTIFY THE PRIMARY PERMITEE WITHIN 24-HOURS OF ANY SUSPECTED BMP DESIGN DEFICIENCIES. THE PRIMARY PERMITEE MUST EVALUATE WHETHER THESE DEFICIENCIES EXIST WITHIN 48- HOURS OF SUCH NOTICE, AND IF THESE DEFICIENCIES ARE FOUND TO EXIST MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV.C. OF THIS PERMIT TO ADDRESS THOSE DEFICIENT BMPs WITHIN SEVEN (7) DAYS OF BEING NOTIFIED BY THE SECONDARY PERMITEE. WHEN THE PLAN IS AMENDED, THE PRIMARY PERMITEE MUST NOTIFY AND PROVIDE A COPY OF THE AMENDMENT TO ALL AFFECTED SECONDARY PERMITEES WITHIN THIS SEVEN (7) DAY PERIOD. THE SECONDARY PERMITEES MUST IMPLEMENT ANY NEW PLAN REQUIREMENTS AFFECTING THEIR SITES WITHIN 48-HOURS OF NOTIFICATION BY THE PRIMARY PERMITEE.

(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.B.(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 HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE 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. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITEES PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

c. TERTIARY PERMITEE.

(1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A TERTIARY PERMITEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE TERTIARY PERMITEE SHALL INSPECT: (A) ALL AREAS USED BY THE TERTIARY PERMITEE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; AND (B) ALL LOCATIONS AT THE TERTIARY PERMITEE SITE WHERE THAT PERMITEE'S 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. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

(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 TERTIARY PERMITEE) SHALL INSPECT AT LEAST THE FOLLOWING ONCE EVERY SEVEN 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 TERTIARY PERMITEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE TERTIARY PERMITEE 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 TERTIARY PERMITEE'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 WATERS). 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 PERMITEE MUST COMPLY WITH PART IV.D.4.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

30 (4). CERTIFIED PERSONNEL (PROVIDED BY THE TERTIARY PERMITEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THEIR SITES 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 WATERS). 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 WATERS). THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

(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 THE 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.C.(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 HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE 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. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

31 SAMPLING REQUIREMENTS.

THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATERS OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS SECTION IS APPLICABLE TO PRIMARY PERMITEES WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (1) ACRE AND TERTIARY PERMITEES WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES. THIS SECTION IS NOT APPLICABLE TO SECONDARY PERMITEES. 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 COMMON DEVELOPMENT; (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES AS SHOWN ON A USGS TOPOGRAPHIC MAP, AND ALL OTHER PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORMWATER IS DISCHARGED AND (B) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS. WHEN THE PERMITEE 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 WATERS 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 PERMITEE 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., TROUGH 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 PERMITEE 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 USED, THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IMMEDIATELY AFTER COLLECTION. RISING STAGE SAMPLING OR RISING STAGE SAMPLING AVAILABLE BY 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 PERMITEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (1) ACRE AND TERTIARY PERMITEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES 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). PERMITEES 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.

d. SAMPLING FREQUENCY.

(1). THE PRIMARY PERMITEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (1) ACRE AND TERTIARY PERMITEE WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITEE SHALL SAMPLE AT THE BEGINNING OF ANY STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL WITHIN 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 PERMITEE'S CONTROL, THE PERMITEE 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 PERMITEE 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 PERMITEE, IN ACCORDANCE WITH PART IV.D.4.A.(6), OR THE TERTIARY PERMITEE, IN ACCORDANCE WITH PART IV.D.4.C.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITEE 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 PERMITEE 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.

7. NON-STORMWATER DISCHARGES. EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NONSTORMWATER LISTED IN PART III.2. OF THIS PERMIT THAT ARE COMBINED WITH STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE IDENTIFIED IN THE PLAN. THE PLAN SHALL IDENTIFY AND ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE.

32 REPORTING.

1. THE APPLICABLE PERMITEES 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 PERMITEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FORMAL 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 PERMITEES SHALL RETURN 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.

6 TOTAL PROJECT AREA: 10.95 ACRES - DISTURBED AREA 5.3 ACRES

7 1. GPS LOCATION BEGINNING N 34.409559 - W 84.425807

9 EXISTING PROPERTY CURRENTLY UNDEVELOPED WOODLAND WITH SHRUBS. PROJECT CONSISTS OF A GRADED AREA TO BE A PIPE LAYDOWN YARD WITH ACCOMPANYING STORMWATER AND ACCESS DRIVE

11 THE PROJECT RECEIVING WATERS ARE AN UNNAMED TRIBUTARY TO BALDRIDGE CREEK

12 CERTIFICATION STATEMENTS:

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

13 "I CERTIFY THAT THE PERMITEE'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 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 NO. GAR 100003.

"I CERTIFY THAT THE PERMITEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGEMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 1000003 THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER.

14 THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER CONTROL BMPs, AND SEDIMENT BASINS WITHIN 7 DAYS AFTER INSTALLATION.

15 NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITH 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.

16 NO BUFFER ENCROACHMENT PROPOSED ON THIS PROJECT.

17 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.

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

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

GEORGIA UNIFORM CODING SYSTEM

FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES

GEORGIA SOIL AND WATER CONSERVATION COMMISSION STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNGRAIN STRUCTURE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNGRAIN STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			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			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			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			A buoyant device that releases/draws water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM			Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING			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.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)			Planting vegetation on dunes that are denuded artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			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)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SOODING)			A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Cc	FLOCCULANTS AND COAGULANTS			Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION			A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKLERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

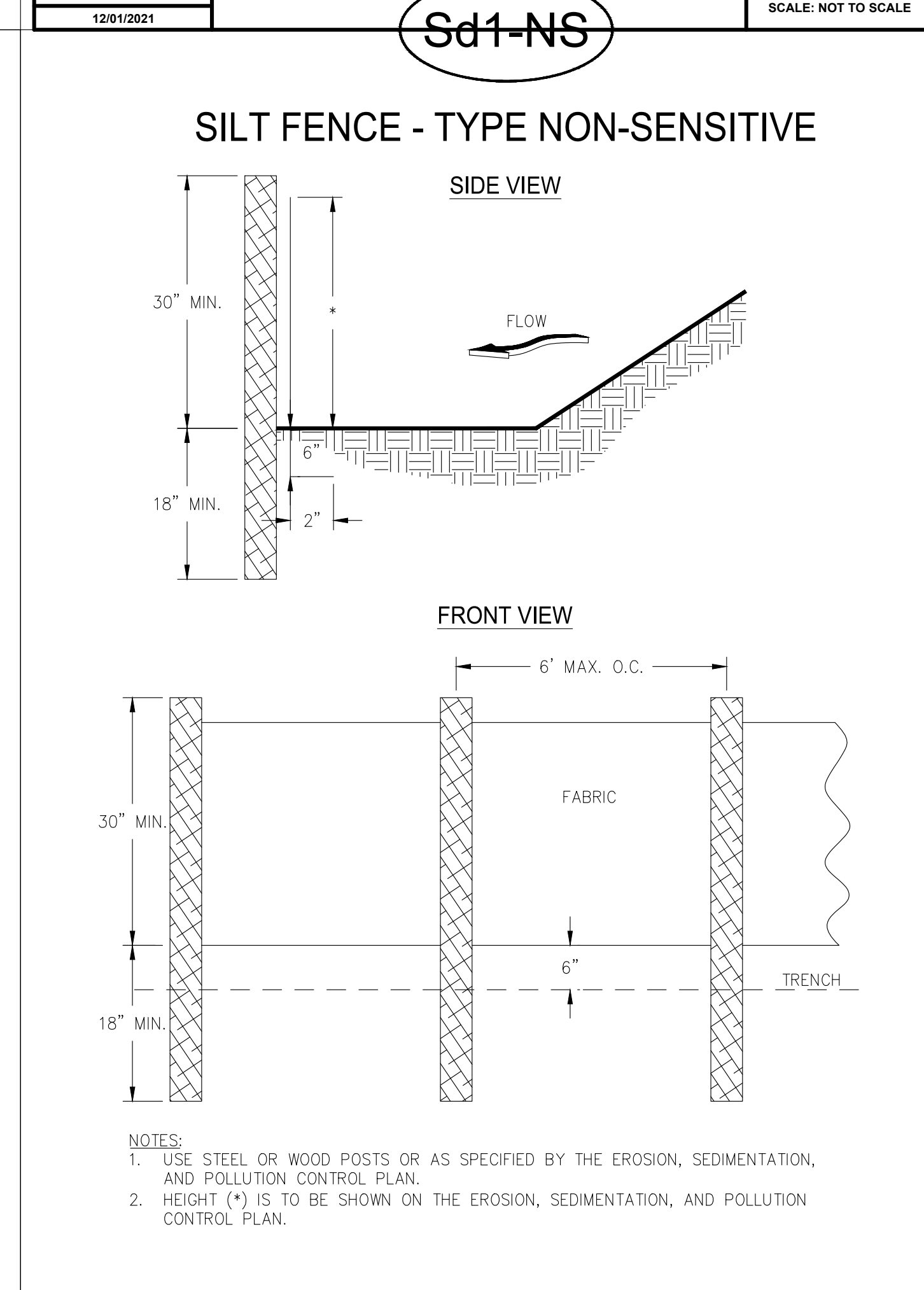
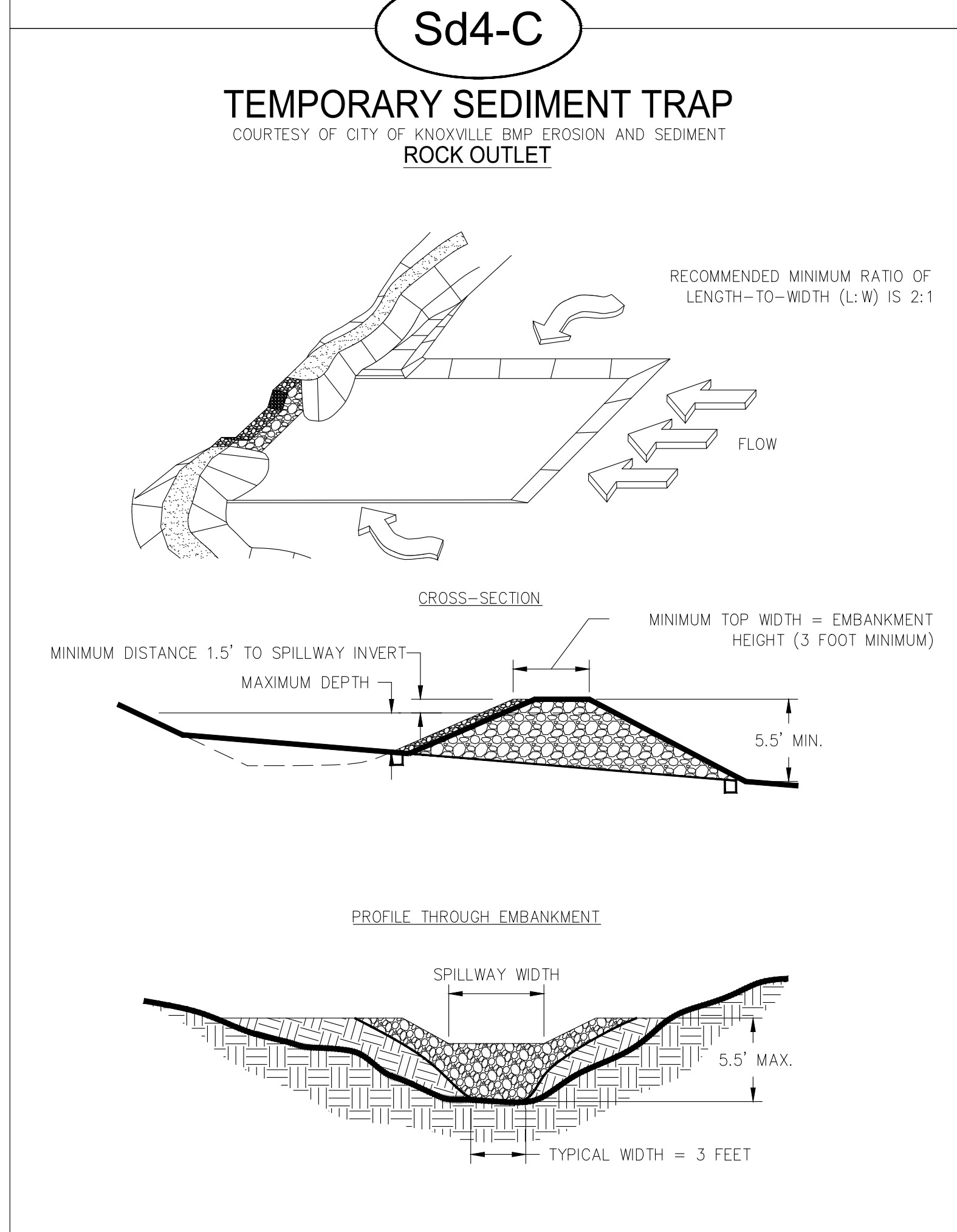
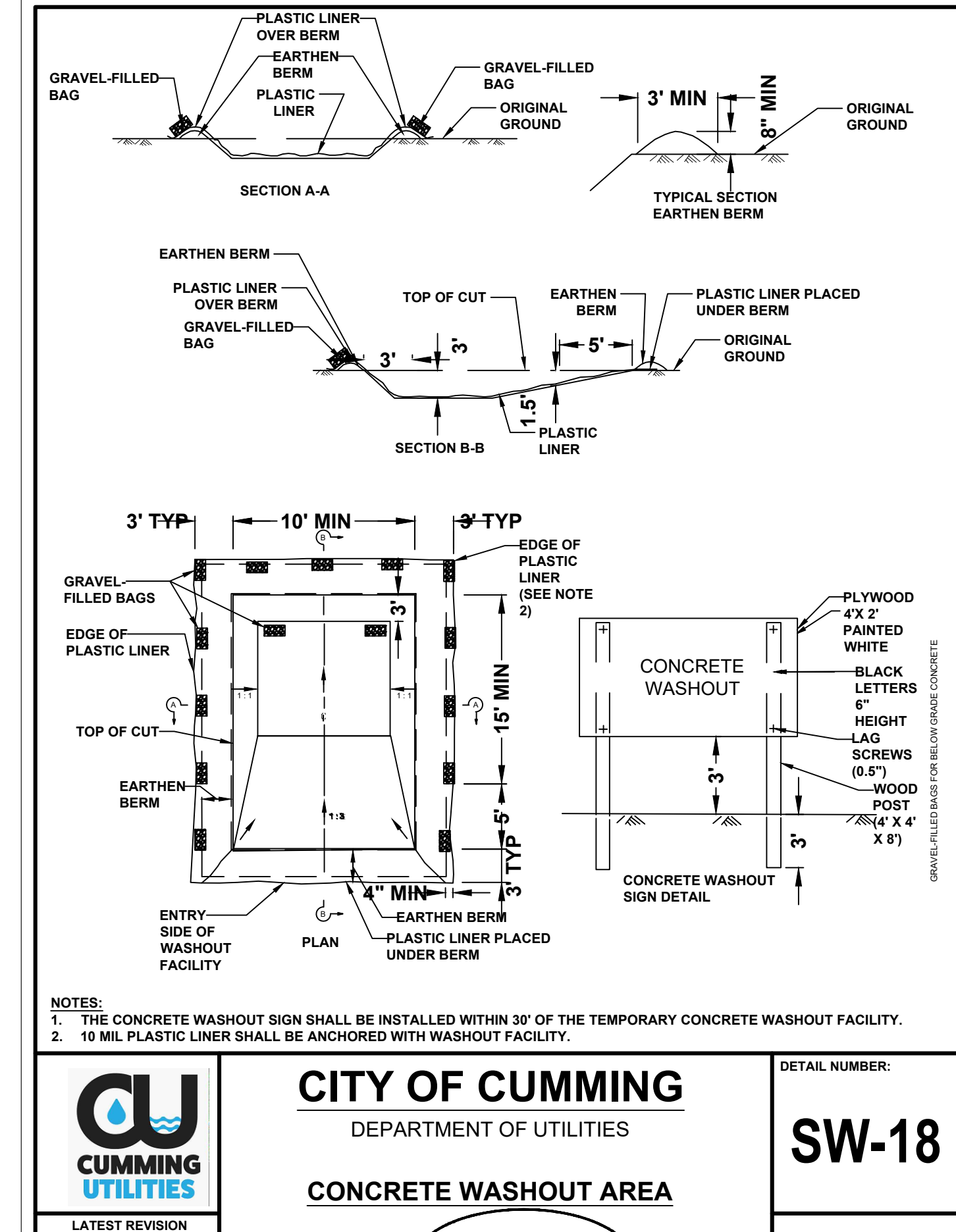
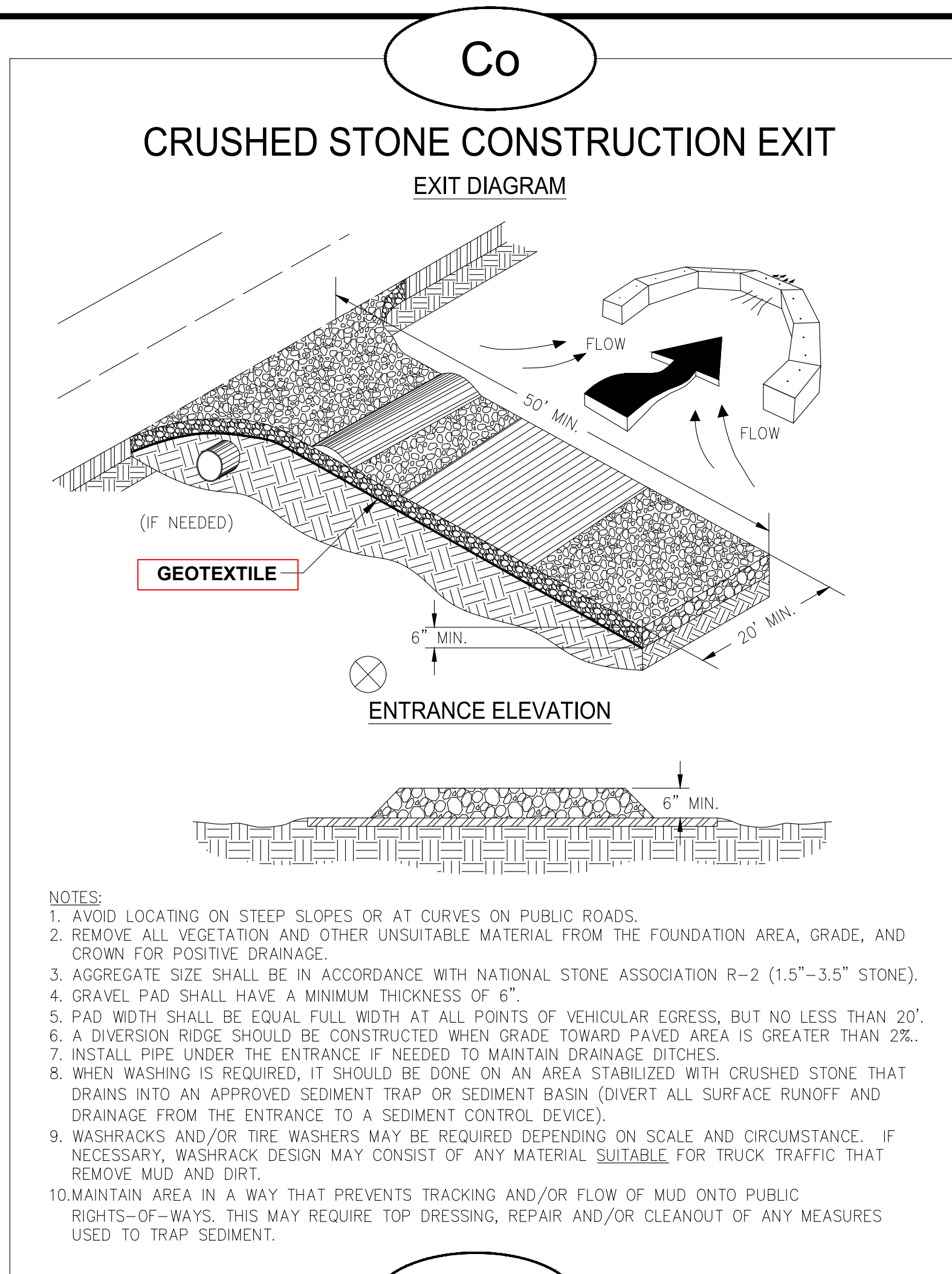


Table 6-5.2 - Permanent Cover
PLANTS, PLANTING RATES, AND PLANTING DATES FOR PERMANENT COVER

Species	Broadcast Rates 2/ - PLS 3/		Resource Area 3	Planting Dates by Resource Areas Planting Dates												Remarks
	Per Acre	Per 1000 sq. ft.		J	F	M	A	M	J	J	A	S	O	N	D	
BAHIA, PENSACOLA (Paspalum notatum)	60 lbs.	1.4 lbs.	P C													166,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with companion crop. Will spread into bermuda pastures and lawns. Mix with Sericea lespedeza or weeping lovegrass.
alone or with temporary cover																
with other perennials	30 lbs.	0.7 lbs.														
BAHIA, WILMINGTON (Paspalum notatum)	60 lbs.	1.4 lbs.	M-L P													Same as above
alone or with temporary cover																
with other perennials	30 lbs.	0.7 lbs.														
BERMUDA, COMMON (Cynodon dactylon)	10 lbs.	0.2 lbs.	P C													1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fields.
alone				J	F	M	A	M	J	J	A	S	O	N	D	
with other perennials	6 lbs.	0.1 lbs.														
BERMUDA, COMMON (Cynodon dactylon)	10 lbs.	0.2 lbs.	P C													Unhulled seed
alone																
with temporary cover	10 lbs.	0.2 lbs.														Plant with winter annuals.
with other perennials	6 lbs.	0.1 lbs.		J	F	M	A	M	J	J	A	S	O	N	D	Plant with tall fescue.
BERMUDA SPRIGS (Cynodon dactylon)	40 cu. ft.	0.9 cu. ft.	M-L													A cubic foot contains approximately 550 sprigs. A bushel contains 1.25 cubic feet or approximately 800 sprigs.
alone																
with other perennials	30 lbs.	0.7 lbs.														
CENTIPEDE (Eremochloa ophiuroides)	Block sod only		P C													Drought tolerant. Full sun or partial shade. Effective adjacent to concrete and in concentrated flow areas. Irrigation is needed until fully established. Do not plant near pastures. Winterhardy as far north as Athens and Atlanta.
alone				J	F	M	A	M	J	J	A	S	O	N	D	
with other perennials	15 lbs.	0.3 lbs.														
CROWNVETECH (Coronilla varia)	15 lbs.	0.3 lbs.	M-L P													100,000 seed per pound. Dense growth. Drought tolerant and fire resistant. Attractive rose, pink, and white blossoms spring to late fall. Mix with 30 pounds of Tall fescue or 15 pounds of rye. Inoculate seed with M inoculant. Use from North Atlanta and Northward.
alone																
with other perennials	30 lbs.	0.7 lbs.														
FESCUE, TALL (Festuca arundinacea)	50 lbs.	1.1 lbs.	M-L P													227,000 seed per pound. Use alone only on better sites. Not for droughty soils. Mix with perennial lespedezas or crownvetch. Apply topdressing in spring following fall plantings. Not for heavy use areas or athletic fields.
alone																
with other perennials	30 lbs.	0.7 lbs.														
KUDZU (Pueraria thurbergiana)	3' - 7' apart		ALL													Rapid and vigorous growth. Excellent in gully erosion control. Will climb. Good livestock forage.
plants or crowns																
LESPEDEZA, SERICEA (Lespedeza cuneata)	60 lbs.	1.4 lbs.	M-L P C													350,000 seed per pound. Widely adapted. Low maintenance. Mix with weeping lovegrass, common bermuda, bahia, or tall fescue. Takes 2 to 3 years to become fully established. Excellent on roadbanks. Inoculate seed with EL inoculant.
scarified				J	F	M	A	M	J	J	A	S	O	N	D	
unscarified	75 lbs.	1.7 lbs.														Mix with Tall fescue or winter annuals.
seed-bearing hay	3 tons	138 lbs.														Mix with Tall fescue or winter annuals.
LESPEDEZA Ambro virgata (Lespedeza virgata DC) or Appaloow (Lespedeza cuneata [Dumont] G. Don)	60 lbs.	1.4 lbs.	M-L P C													300,000 seed per pound. Height of growth is 18 to 24 inches. Spreading-type growth has bronze coloration. Mix with Weeping lovegrass, Common bermuda, bahia, tall fescue or winter annuals. Do not mix with Sericea lespedeza. Slow to develop solid stands. Inoculate seed with EL inoculant.
scarified				J	F	M	A	M	J	J	A	S	O	N	D	
unscarified	75 lbs.	1.7 lbs.														
LESPEDEZA, SHRUBM (Lespedeza bicolor) (Lespedeza thurbergii)	3' x 3'		M-L P C													Provide wildlife food and cover.
plants																
LOVEGRASS, WEEPING (Eragrostis curvula)	4 lbs.	0.1 lbs.	M-L P C													1,500,000 seed per pound. Quick cover. Drought tolerant. Grows well with Sericea lespedeza on roadbanks.
alone				J	F	M	A	M	J	J	A	S	O	N	D	
with other perennials	2 lbs.	0.05 lbs.														
MAIDENCANE (Panicum hemitomon)	2' x 3' spacing		all													For very wet sites. May clog channels. Dig sprigs from local sources. Use along river banks and shorelines.
sprigs																
REED CANARY GRASS (Phalaris arundinacea)	50 lbs.	1.1 lbs.	M-L P													Grows similar to tall fescue.
alone with other				J	F	M	A	M	J	J	A	S	O	N	D	
perennials	30 lbs.	0.7 lbs.														
SUNFLOWER, 'AZTEC' MAXIMILLIAM (Helianthus maximilianii)																227,000 seed per pound. Mix with weeping lovegrass or other low-growing grasses or legumes.

Table 6-4.1 - Temporary Cover or Companion Crops 1/
PLANT, PLANTING RATES, AND PLANTING DATED FOR TEMPORARY COVER OR COMPANION CROPS 1/

Species	Broadcast Rates 2/ - PLS 3/		Resource Area 4/	Planting Dates by Resource Areas Planting Dates												Remarks
	Per Acre	Per 1000 sq. ft.		J	F	M	A	M	J <th>J</th> <th>A</th> <th>S</th> <th>O</th> <th>N</th> <th>D</th>	J	A	S	O	N	D	
BARLEY (Hordeum vulgare)	3 bu (144 lbs)	3.3 lb.	M-L P													14,000 seed per pound. Winterhardy. Use on productive soils.
alone																
in mixture	1/2 bu. (24 lbs.)	0.6 lb.														
LESPEDEZA, ANNUAL (Lespedeza striata)	40 lbs.	0.9 lb. in	M-L P C													200,000 seed per pound. May volunteer for several years. Use inoculant EL.
alone																
in mixture	10 lbs.	0.2 lb.														
LOVEGRASS, WEEPING (Eragrostis curvula)	40 lbs.	0.1 lb.	M-L P C													1,500,000 seed per pound. May last for several years. Mix with Sericea lespedeza.
alone																
in mixture	2 lbs.	0.05 lb.														
MILLET, BROWNTOP (Panicum fasciculatum)	40 lbs.	0.9 lb.	M-L P													137,000 seed per pound. Quick dense cover. Will provide too much competition in mixtures if seeded at high rates.
alone																
in mixture	10 lbs.	0.2 lb.														
MILLET, PEARL (Pennisetum glaucum)	50 lbs.	1.1 lbs.	M-L P C													88,000 seed per pound. Quick dense cover. May reach 5 in height. Not recommended for mixtures.
alone																
OATS (Avena sativa)	4 bu (128 lbs)	2.9 lb.	M-L P C													13,000 seed per pound. Use on productive soils. Not as winterhardy as rye or barley.
alone in																
in mixture	1 bu (32 lbs)	0.7 lb.														
RYE (Secale cereale)	3 bu (96 lbs)	3.9 lb.	M-L P C													18,000 seed per pound. Quick cover. Drought tolerant and winterhardy.
alone																
in mixture	1/2 bu (28 lbs)	0.6 lb.														
RYEGRASS, ANNUAL (Lolium temulentum)	40 lbs.	0.9 lbs	M-L P													227,000 seed per pound. Dense cover. Very competitive and is not to be used in mixtures.
alone																
SUDANGRASS (Sorghum Sudanese)	60 lbs.	1.4 lb.	M-L P C													55,000 seed per pound. Good on droughty sites. Not recommended for mixtures.
alone																
TRITICALE (X-triticosecalle)	3 bu (144 lbs)	3.3 lb.	C													Use on lower part of Southern Coastal Plain and in Atlantic Coastal Flatwoods only.
alone																
in mixtures	1/2 bu (24 lbs)	0.6 lb.														
WHEAT (Triticum Aestivum)	3 bu (90 lbs)	4.1 lb.	M-L P C													15,000 seed per pound.
alone																
in mixtures	1/2 bu (30 lbs)	0.7 lb.														

1. Temporary cover crops are very competitive and will crown out perennials if seeded too heavily.
2. Reduce seeding rates by 50% when drilled.
3. PLS is an abbreviation for Pure Live Seed.
4. M-L represents the Mountain, Blue Ridge, and Ridges and Valleys MLRAs
P represents the Southern Piedmont MLRA
C represents the Southern Coastal Plain, Sand Hills, Black Lands, and Atlantic Coast Flatwoods ML (See Figure 6-4.1, p. 6-40).

Lime and Fertilizer Rates and Analysis
Agricultural lime is required at the rate (2) two tons per acre. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agricultural lime shall be within the specifications of the Georgia Department of Agriculture.

Lime spread by conventional equipment shall be "ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve. Agricultural lime spread by hydraulic seeding equipment shall be "finely ground limestone." Finely ground limestone is calcitic or dolomitic limestone ground so that 98 percent of the material will pass through a 20- mesh sieve and not less than 70 percent will pass through a 100-mesh sieve.

It is desirable to use dolomitic limestone in the Sand Hills, Southern Coastal Plain and Atlantic Coast Flatwoods MLRAs. (See Figure 6-4.1)
Agricultural lime is generally not required where only trees are planted.

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

Fertilize low fertility soils prior to or during planting at the rate of 500-700 lbs per acre of 10-10-10 fertilizer or equivalent to 12-16 lbs/1000sqft

Finely ground limestone will be mixed with water and applied immediately after mulching is completed or in combination with the top dressing.

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

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

GaSWCC (Amended - 2000)

Lime and Fertilizer Application

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

Disturbed Area Stabilization (With Mulching Only)

DEFINITION

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

PURPOSE

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

REQUIREMENT FOR REGULATORY COMPLIANCE

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

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

SPECIFICATIONS

Mulching Without Seeding

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

Site Preparation

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

Mulching Materials

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

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

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

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

Apply polyethylene film on exposed areas.

Anchoring Mulch

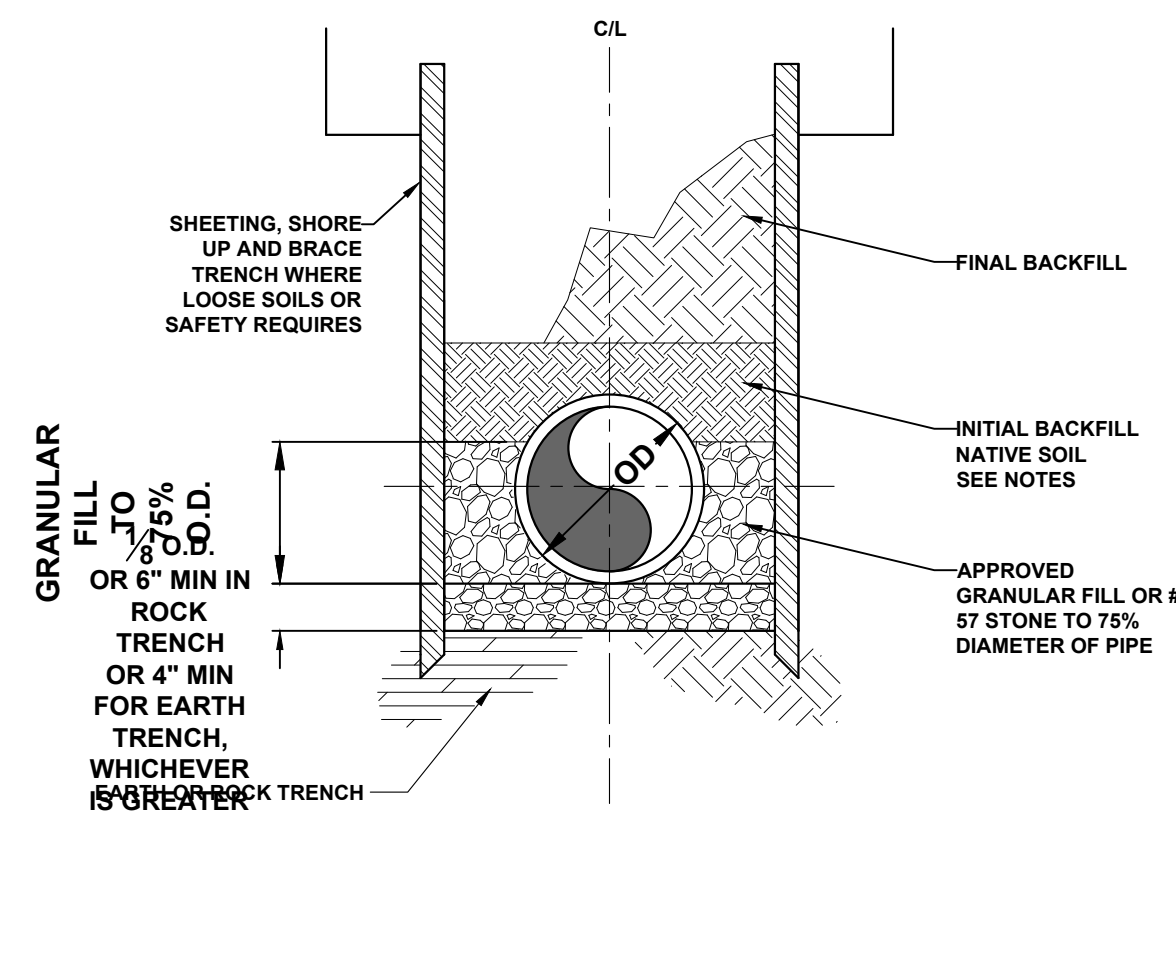
Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application. Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification Tackifiers. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.

Netting of the appropriate size shall be used to anchor wood waste. Openings of the net- ting shall not be larger than the average size of the wood waste chips.

Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

Disturbed Area Stabilization (With Temporary Seeding)

DEFINITION

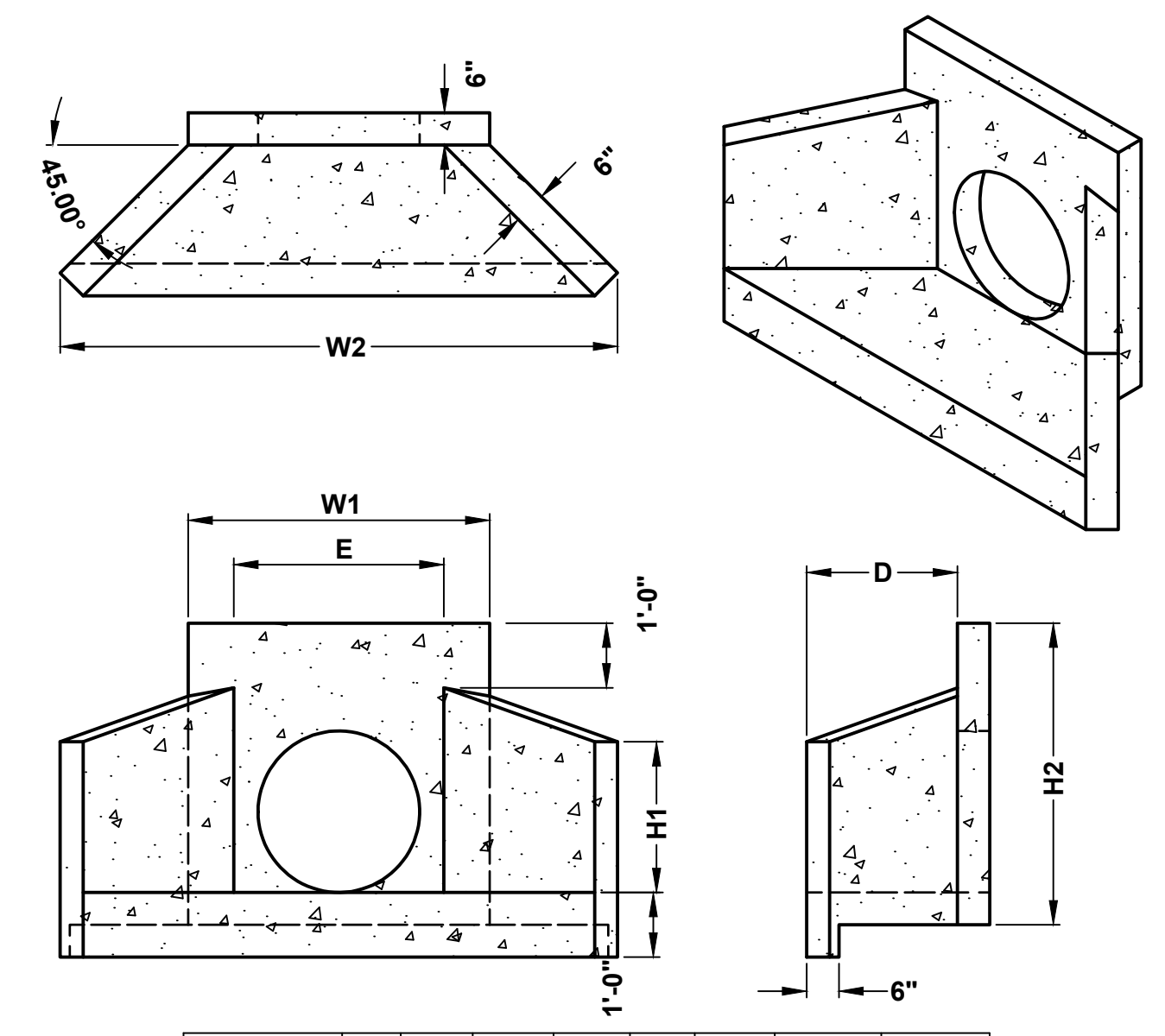


- NOTES:
- TRENCH WIDTH MINIMUMS PER DETAIL S-16B.
 - BACKFILL SHALL BE PLACED IN MAXIMUM 4-6 INCH LIFTS, TAMPED OR COMPACTED IN ACCORDANCE WITH AWWA C600 (CURRENT EDITION).
 - NATIVE OR LOOSE SOILS ARE THOSE EXCAVATED FROM THE TRENCH, FREE OF LARGE ROCKS (GREATER THAN 2-INCHES), FOREIGN MATERIALS, AND FROZEN EARTH.
 - GRANULAR OR SELECT FILL MATERIAL SHALL BE COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T-99.
 - AT SHALLOW DEPTHS OF LESS THAN 3FT COVER, INITIAL BACK TO BE COMPACTED AT A MINIMUM OF 95% PROCTOR DENSITY.
 - WHERE TRENCH IS EXPOSED ROCK, 6-8 INCHES MIN. CUSHION REQUIRED BETWEEN PIPE & ROCK.
 - FINAL BACKFILL SHALL BE FREE OF LARGE ROCKS, ORGANIC MATERIAL, AND DEBRIS.

CITY OF CUMMING
DEPARTMENT OF UTILITIES
STANDARD EMBANKMENT BEDDING
DETAIL FOR HDPE STORMWATER PIPE

DETAIL NUMBER: **SW-17B**

LATEST REVISION 12/01/2021 SCALE: NOT TO SCALE



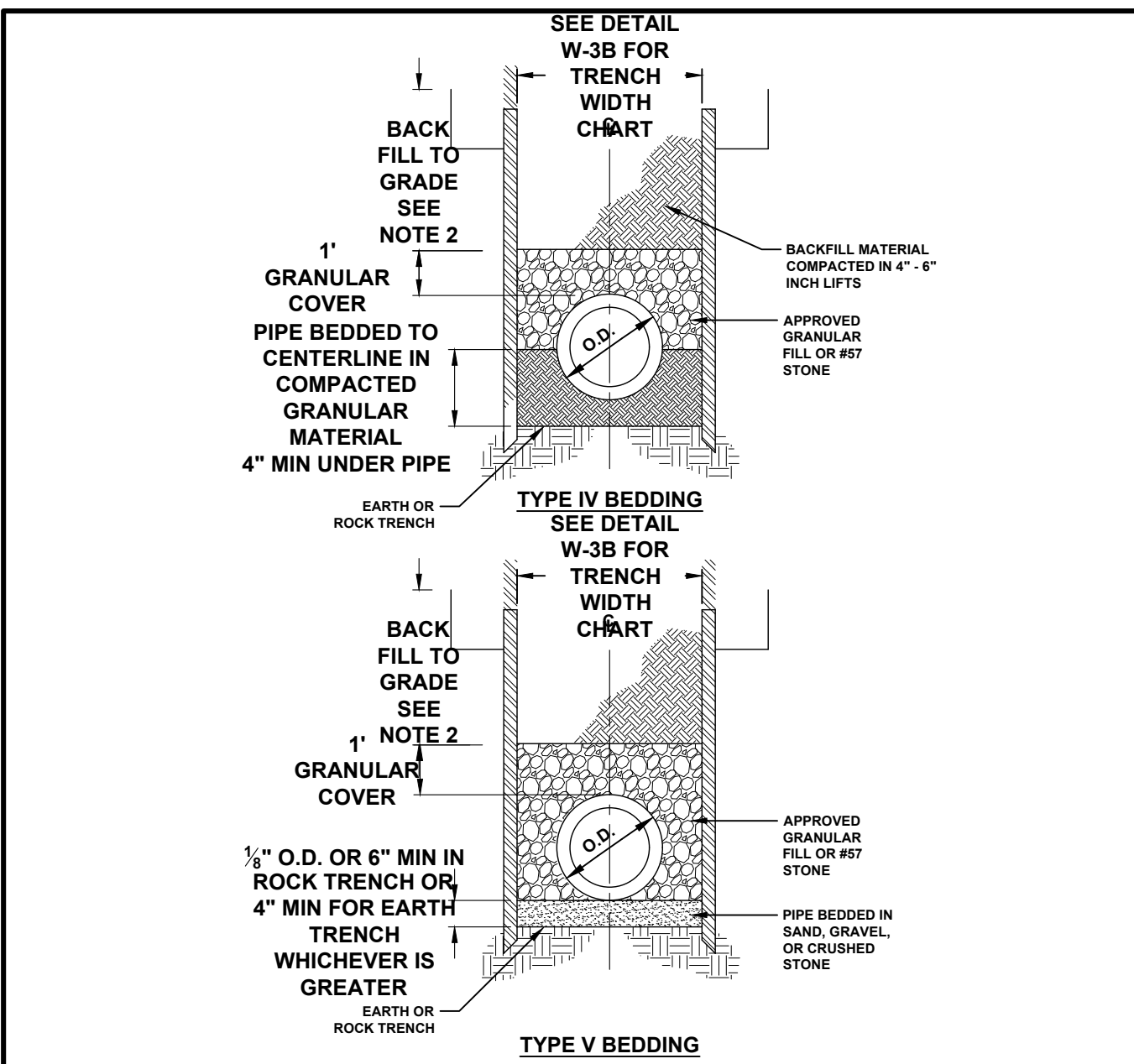
HEADWALL SIZE	W1	W2	H1	H2	D	E	TONS	BLOCKS
18"	3'-2"	4'-9"	1'-3"	3'-2"	1'-2"	1'-9"	0.92	1
24"	4'-2"	8'-2"	2'-0"	4'-2"	1'-8"	2'-9"	1.73	3
30", 36"	4'-8"	8'-8"	2'-4"	4'-8"	2'-4"	3'-3"	1.92	3
42", 48"	5'-8"	10'-11"	3'-6"	5'-9"	3'-0"	4'-3"	3.33	4
54", 60"	6'-5"	12'-6"	4'-0"	6'-5"	3'-5"	5'-0"	3.77	7
66", 72"	8'-0"	13'-5"	5'-7"	8'-0"	3'-0"	7'-0"	5.30	9
78", 84", 90", 96"	10'-2"	15'-10"	4'-0"	9'-0"	3'-4"	8'-4"	7.31	11

MATERIALS:
CONCRETE: 4,000 PSI, TYPE III CEMENT

CITY OF CUMMING
DEPARTMENT OF UTILITIES
PRECAST CONCRETE HEADWALLS

DETAIL NUMBER: **SW-6**

LATEST REVISION 12/01/2021 SCALE: NOT TO SCALE



- NOTES:
- TRENCH WIDTH MINIMUMS PER DETAIL W-2B.
 - BACKFILL SHALL BE PLACED IN MAXIMUM 4-6 INCH LIFTS, TAMPED OR COMPACTED IN ACCORDANCE WITH AWWA C600 (CURRENT EDITION).
 - NATIVE OR LOOSE SOILS ARE THOSE EXCAVATED FROM THE TRENCH, FREE OF LARGE ROCKS (GREATER THAN 2-INCHES), FOREIGN MATERIALS, AND FROZEN EARTH.
 - GRANULAR OR SELECT FILL MATERIAL SHALL BE COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T-99.
 - TYPE "V" AND "IV" BEDDING REQUIRED FOR ALL WATER MAIN INSTALLATION.
 - WHERE TRENCH IS EXPOSED ROCK, 6-8 INCHES MIN. CUSHION REQUIRED BETWEEN PIPE & ROCK.
 - TYPE I, II, AND III LAYING CONDITIONS SHALL NOT BE ALLOWED FOR WATER MAINS.
 - TYPE "V" BEDDING REQUIRED AT ROADWAY CROSSINGS AND RESTRAINED JOINT LOCATIONS

CITY OF CUMMING
DEPARTMENT OF UTILITIES
BEDDING DETAIL
WATER MAINS

DETAIL NUMBER: **W-3A**

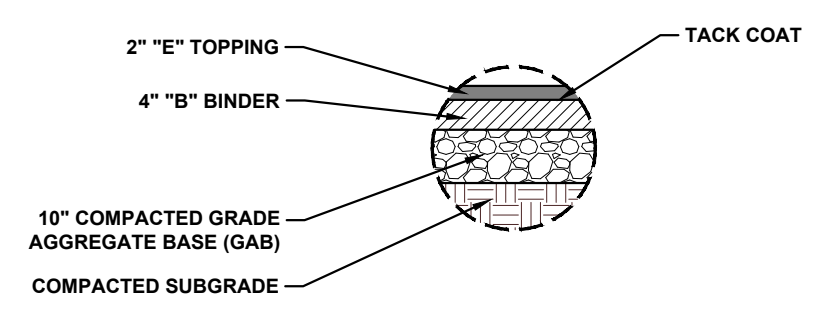
LATEST REVISION 11/02/2022 SCALE: NOT TO SCALE

PIPE SIZE (NOMINAL)	A		B		C		D				
	SIDE CLEARANCE - INCH		DITCH WDT - INCH		SHORING WIDTH (ADDITIONAL - INCH)		CUT REPAIR WIDTH - FEET				
	SOIL	ROCK	SOIL	ROCK	MJ	SJ	SOIL		ROCK		
							MJ	SJ	MJ	SJ	
3/4"-2"	2	6	NA	8	NA	14	AS APPROVED	NA	3.00	NA	3.17
4"	9	12	25	23	27	25	AS APPROVED	4.08	3.92	4.25	4.08
6"	9	12	28	28	30	30	AS APPROVED	4.33	4.33	4.50	4.50
8"	9	12	32	30	34	32	AS APPROVED	4.67	4.50	4.83	4.67
10"	9	12	34	32	36	34	AS APPROVED	4.83	4.67	5.00	4.83
12"	9	12	36	34	38	36	AS APPROVED	5.00	4.83	5.17	5.00
14"	9	14	39	36	41	38	AS APPROVED	5.25	5.00	5.42	5.17
16"	9	14	42	38	44	40	AS APPROVED	5.50	5.17	5.67	5.33
20"	9	14	45	44	47	46	AS APPROVED	5.75	5.67	5.92	5.83
24"	9	14	50	48	52	50	AS APPROVED	6.17	6.00	6.33	6.17
30"	9	18	58	54	60	56	AS APPROVED	6.83	6.50	7.00	6.67
36"	9	18	64	61	66	63	AS APPROVED	7.33	7.08	7.50	7.25
42"	9	18	72	64	74	66	AS APPROVED	8.00	7.33	8.17	7.50
48"	9	18	78	73	80	75	AS APPROVED	8.50	8.08	9.34	8.25

CITY OF CUMMING
DEPARTMENT OF UTILITIES
ALLOWABLE TRENCH WIDTH
CHART

DETAIL NUMBER: **W-3B**

LATEST REVISION 12/01/2021 SCALE: NOT TO SCALE



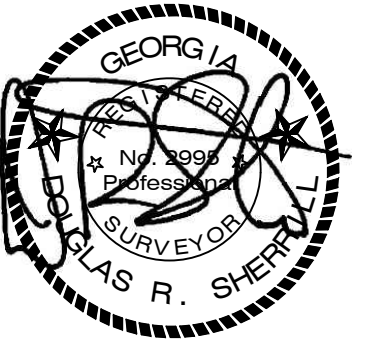
LAND SURVEYING AND PLANNING
GA #2995
131 Prominence Court
Dunwoody, GA 30328
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www.LDPofga.com
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LSF001192

LDP
LAND DEVELOPMENT PROFESSIONALS

CUMMING UTILITIES

June 13, 2023
FIELD CREW: LDP
DRAWN BY: DRS
Job Number:
5151.001
DRWG FILE: 5151
FIELD DATE:
6/13/2023
Checked By: LDP

Revision No.	Date:	Description:



CITY OF CUMMING:
MISC DETAILS
Located In:
Land Lots 833 & 896 - 3rd District - 1st Station
Forsyth County, Georgia