Bunker Hill Lake EROSION CONTROL REPORT

EROSION CONTROLS FOR SITE PREP ONLY



Prepared By.

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Project Description

The project consists of 92.17 acres. The site contains (2) delineated wetland areas; (1) to the West and (1) to the East (see wetland report attached). The wetlands to the East also contain Polk swamp creek. The creek flows from S to N. It flows across Old Marion Hwy through (3) 36" culverts and across Burns Blvd through (3) 36" culverts. The flood elevations are AE80 to the South and AE79 to the North. All land in this project gently slopes towards the east wetlands and into the creek.

The Proposed site prep is to construct a dirt road around the site, construct (3) wetland crossings (pending approval of USACOE), construct approximately 22.2 acres of lake, and to cut, clear and sturnp as necessary.

Erosion Control Narrative

Stormwater runoff will flow towards either the lake or the ditch line along the proposed roadway. The water running towards the lake has sufficient overland sheet flow to allow for sediments to drop out of flow. Waters collected in the ditch line will contain flows from land outside of the loop road as well as all flow from the roadway itself. The roadway shall be crowned in the center with a 1% slope to the sides where it will flow across 4' of grassed shoulder and into the ditch (which shall be stabilized as necessary). The ditch line flows into the lake via (4) ditch swales with Sediment Tube check dams as necessary to collect sediments prior to entering the lake. Waters collected in the ditch lines East of the wetlands will flow through the pipes in the French drain system along the roadway crossing the wetlands and discharge into the collection system on the west side of the wetlands. Waters from the roadway crossing the wetlands will pipe to the collection system to the wetlands shall be protected with a silt fence located 50' from the flagged wetland line. Where the 50' is not possible, a double row of silt fence is required with a minimum of 10' buffer from the wetland line.

The take is to act as the sedimentation pond, it will utilized in the stormwater controls, and will be utilized as an amenity to the subdivision.

The lake shall have a rip-rap weir placed on the NE side of the pond to allow for overflow conditions. The rip-rap shall be 40'lonf, 6' across, 2'deep, 4-6" in size with the weir elevation at 83ft.

Sedimentation Pond

Elevation (ft)	Area (Ac)	Δ-Vol (Ac-ft)	Σ-Vol (Ac-ft)	Discharge CFS
85	22.213	21.730	99.305	47.664
84	21.247	20.775	77.575	16.852
83	20.302	19.840	56.800	0
82	19.378	18.926	36.960	0
81	18.475	18.034	18.034	0
*0	17.593	0	0	0

 $80\mathrm{ft}$ elevation is the design surface elevation. The pond depth will be a minimum of 5ft to a maximum of 12ft.

Jounty	_	2	5	10	25	50	100
lorence	د.	4.0	5.2	6.0	8.6	7.8	8 8

2 yr storm event Full volume = 92.17(4.0)/12 = 30.73 Ac-ft Raises lake level from 80ft to 881.67ft

25 yr storm event Full volume = 92.17(6.8)/12 = 52.23 Ac-ft Raises lake level from 80ft to 82.8ft

10 yr storm event Full volume = 92.17(6.0)/12 = 46.10 Ac-ft Raises lake level from 80ft to 81.5ft

100 yr storm event Full volume = 92.17(8.8)/12 = 67.59 Ac-ft Raises lake level from 80ft to 83.5ft

Q values for preconstruction and postconstruction are irrelevant since no water is discharged for the 25 year event or less (ie. Q25 = 0).

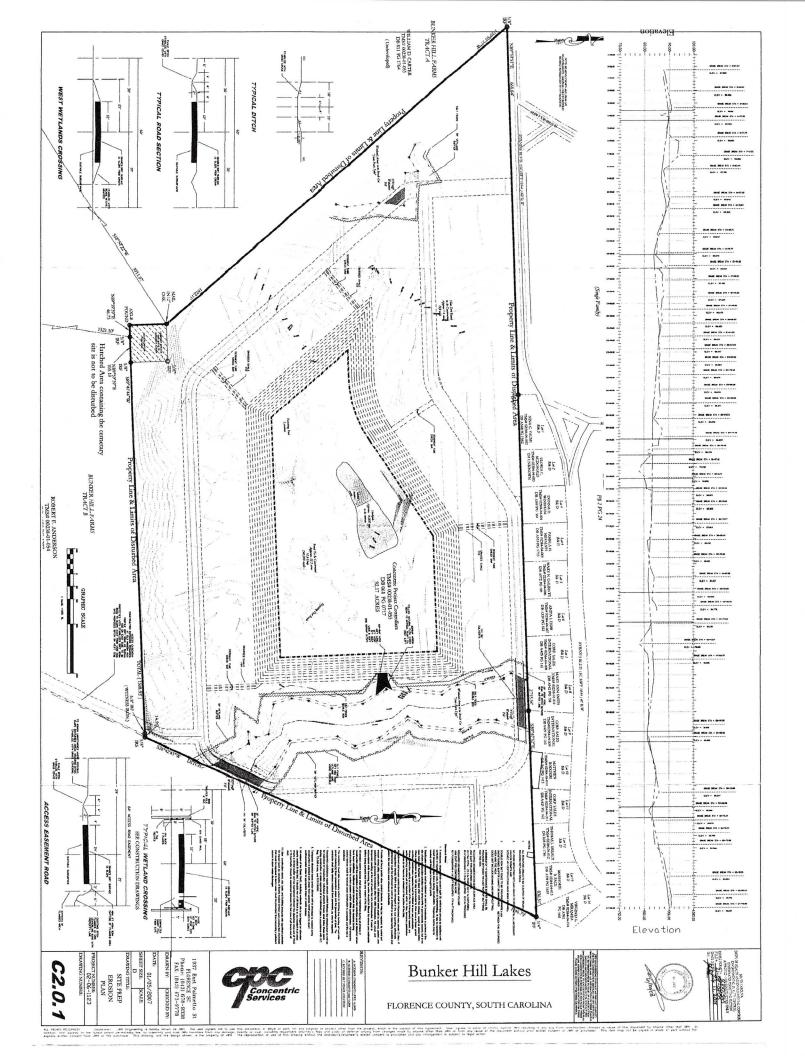
Sedimentology

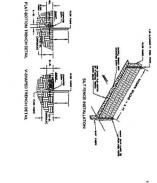
Required surface area is 1800 sqft per disturbed acre. Assuming 100% disturbed...

Sr = 1800(92,17)/43560 = 3.8 Ac. Proposed lake is 17.5 acres at 80ft elevation. This criteria is more than satisfied.

Required Volume is 3600 cuft per disturbed acre. Assuming 100% disturbed...

Vr = 3600(92.17)/43560 = 7.62 Acre-ft As the area of the lake at 75ft (5 ft depth) is 13.5 Acres, this criteria is more than satisfied.





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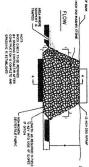
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- Receiv NPDES coverage from DHEC
 2- Pre-Construction meeting on site
 3- Pre-Construction meeting on site
 4- Notify DHEC EQC regional office or OCRM office 48 hrs prior to
 beginning land disturbing activities.
 4- Install Construction entrances.
- Clearing and grubbing only as necessary for installation of perimeter
- 6 Install perimeter controls Silt Fences
- 7 Clearing and grubbing only in areas for the pond.
 8 Installation of the pond (The took wet overflow must be 8 Installation on the pond (The took wet overflow must be 8 Installation of the pond (The took wet overflow must be completely installed as shown on the details prior to proceeding to the next step. Areas draining to this smucrue cannot be disturbed until the structure is completely installed.
 9 Clearing and grabbing of the six (Sediment and crossion control presents for these areas must already be installed).

- Rough Grading. Stabilize areas with natural vegetation and/or seeding as soon as possible.
 Note: The site is to be mass graded.
 Note: The site is to be mass graded.

 11 Removal of temporary sediment and erosion council measures after
- SWPP or registration equivalent to approve removal of the entire area draining to the structure is finally stabilized.
- temporary structures.

 12 Maintenance of sediment control measures shall continue until the site is permenantly stabilized, and controls are removed.













TO S. BOR



TYPICAL DITCH CHECK SECTION

then and Where to Use It

not dish should be installed in steeph sloped sender, or in made where desquare vegetation cannot be established and dish checks should be used by in mail open chomets. Reck dish others should not be placed in waters of the commonwealth or USOS blue-line streams (unless approved by SCDHED or Federal authorities).

UNDERLINING NON-WOVEN GEOTEXTILE FABRIC

AVERAGE STONE DIAMETER OF 2 TO 3-INCHES WITH A 6-INCH MINHUM DEPTH

The body of the rock ofth check shall be composed of 12-inch 050 Riprop. ron-woven geotaxiae lobric shall be installed over the soil surface where the rock ditch check is to be placed.

The upstream face of the rook dillch check may be composed of 1—inch DSO washed stone. Rook silich checks should not exceed a height of 2—feet of the centerline of the channel. Rook dillch checks should have a minimum top file length of 2—feet.

Store should be placed over the channel banks to prevent water from cutting around the ditch check.

The maximum espaing between the dome should be each that the tox of the upstream check is at the same elevation as the top of the downstream check. The rock must be placed by hand or mechanical piacement (no dumping of rock to form dam) to achieve complets coverage of the ditch or swale and to ensure that the center of the check is lover than the edges.

get rook dish checks every seven (?) colendor days and within 24-hours other each rainfall small that produces §-inches more of prespitation, happed for sediment and debris occumulation, inspect dish check edges for existen and repor-mptly as required.

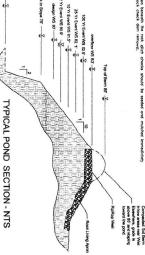
sedment should be removed when it reaches 1/3 the original check height.

In the cost of grass-liked diches and swote, rock dich checks should be removed when the gross host mostured sufficiently.

To protect the dich or swote unless the slope of the swote is greater than 4%.

Vitir construction is complete, oil atone should be removed by the grading contractor if vegetation will be used for permanent erosion control measures.





On all vegetated swales or ditches with side slopes (cut or fill) steeper than 3:1, add 2lb per acre of Weeping Love grass

seed to any mixture.

- All slopes steeper than 3:1 shall be hydroseeded.
- small grain straw mulch when needed.

Permanent Seeding -

Sept 20 thru Dec 20
40lbs/Acre Tall Fescue (KY31)
10lbs/Acre Rye Grain 350 lbs / Acre Fertilizer 10-10-10 550 lbs / Acre Limestone 2 tons / Acre small grain straw*

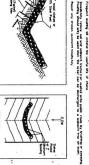
Sept 10 thru April 10 56 lbs/Acre Rye Grain 550 lbs / Acre Limestone 350 lbs / Acre Fertilizer 10-10-10

2 tons / Acre small grain straw*

Temporary Seeding -

April 10 - July 25
40 lbs / Acre Bahia Grass
10 lbs / Acre Brownop Millet
350 lbs / Acre Fertilizer 10-10-10
550 lbs / Acre Limestone 2 tons / Acre small grain straw*

April 10 thru Sept 10 40 lbs / Acre Browntop Millet 350 lbs / Acre Fertilizer 10-10-10 2 tons / Acre small grain straw*



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DIVERT ALL SAFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN OR OTHER SEDIMENT TRAPPING STRUCTURE. INSTALL A CILVERT PIPE ACROSS
THE ENTRANCE WHEN NEEDED TO
PROVIDE POSITIVE DRAINAGE.









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1937 East Palmetto St FLORENCE SC Phone: (843) 678-9338 FAX: (843) 673-9778

the shrind in terms and the first (2-bit) a 2-bit) or shed books (standard V) or Y section with a minimal weight of 125 per took) a minimal of 45-bits in height placed on 2-book sealors.











EDGES SHALL BE TAPERED OUT TOWARDS ROAD TO PREVENT TRACKING OF MID ON THE EDGES



02-06-1123

EROSION DETAILS