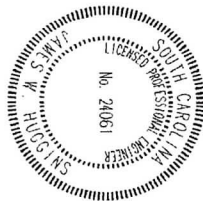


Bunker Hill Lake EROSION CONTROL REPORT

EROSION CONTROLS FOR SITE PREP ONLY



Prepared By.

James W Huggins P.E.
1937 E Palmetto St
Florence S.C. 29506
(843) 678-9338

5 of 34

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 stump 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 shall flow into the French drain system and will pipe to the collection system to the west. 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 lake 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' long, 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
80*	17.593	0	0	0

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

Rainfall Data - Return Period 24 Hour Storm Event (inches)

County	1	2	5	10	25	50	100
Florence	3.3	4.0	5.2	6.0	6.8	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).

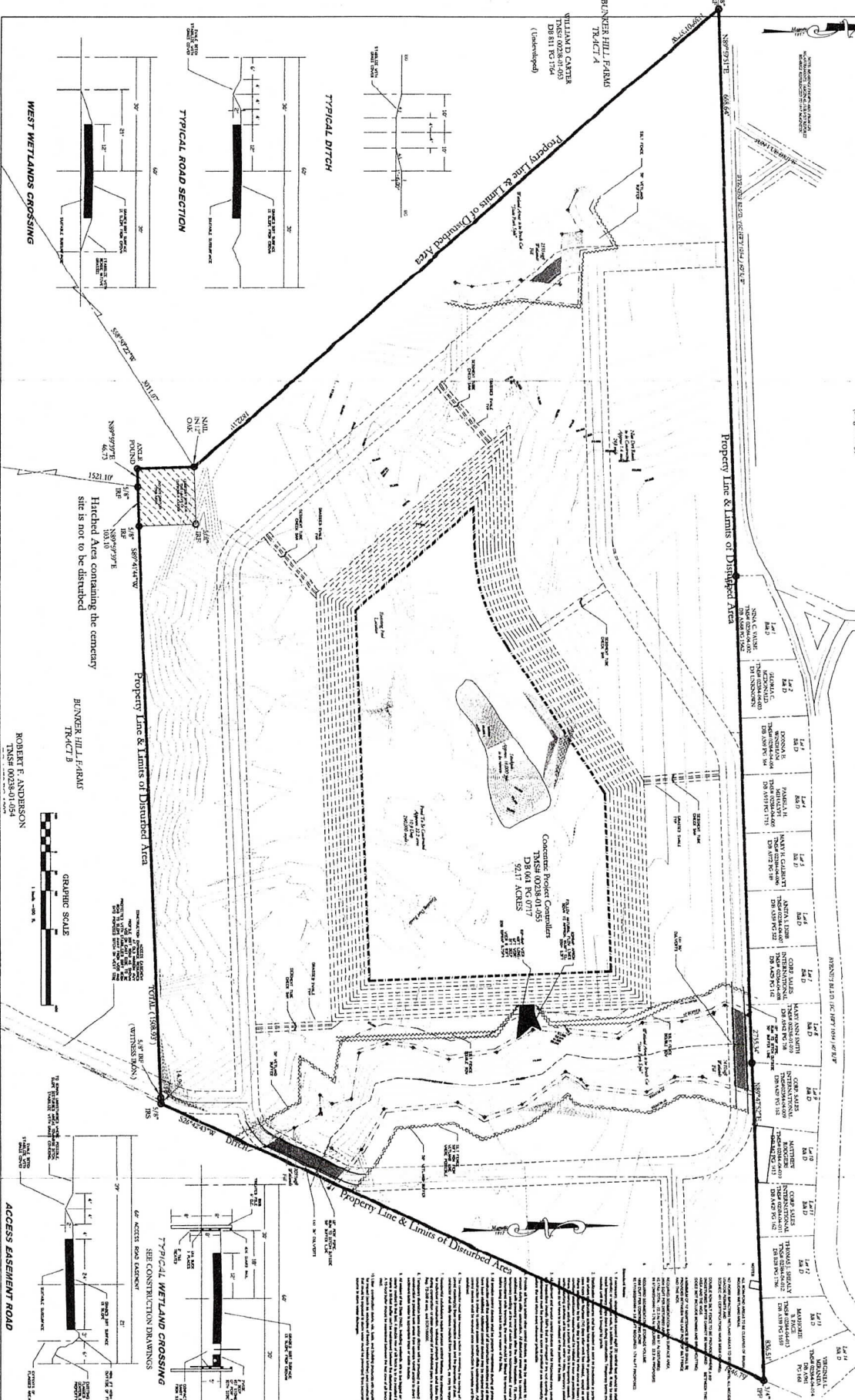
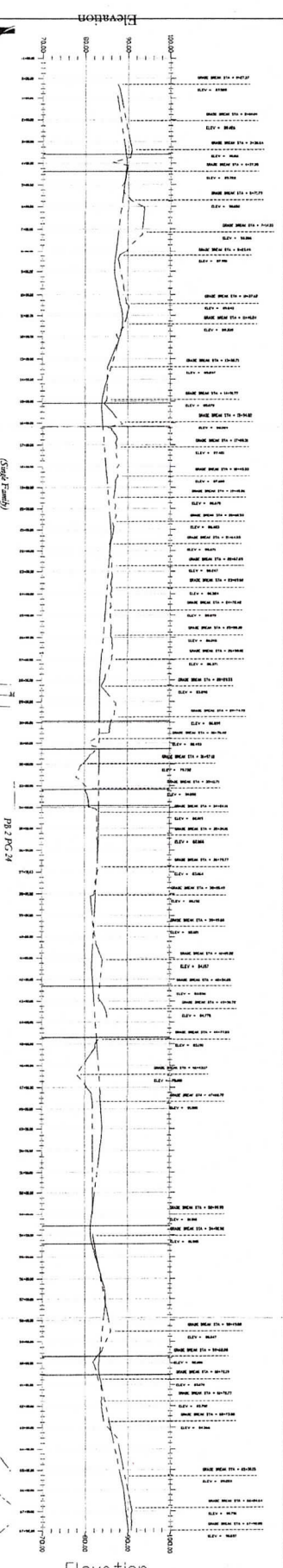
Sedimentology

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.



CONCENTRIC SERVICES

Bunker Hill Lakes

FLORENCE COUNTY, SOUTH CAROLINA

1837 East Pamlico St
Florence, SC 29505
Phone: (843) 678-4338
Fax: (843) 678-2770

PROJECT NO. 1123

DRAWING NO. C2.0.1

DATE: 01/05/2007

SHEET SIZE: SCALE

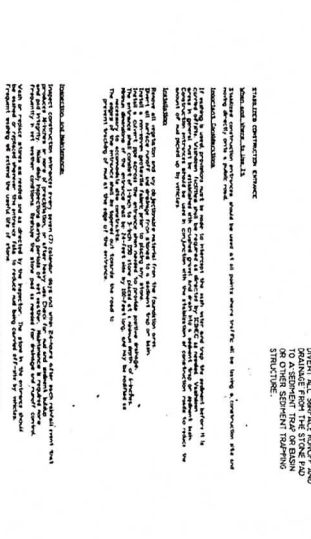
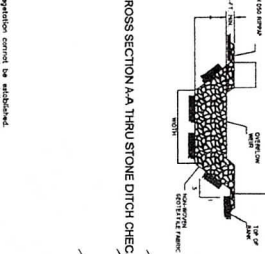
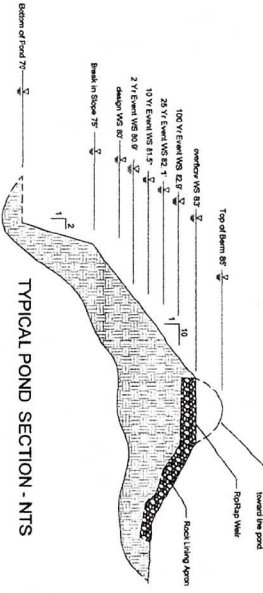
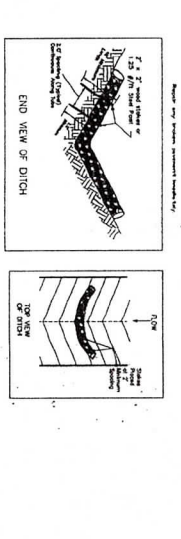
DRAWING TITLE: SITE PREP EROSION PLAN

DRAWING NUMBER: 1123

1837 East Pamlico St
Florence, SC 29505
Phone: (843) 678-4338
Fax: (843) 678-2770

PROJECT NO. 1123

DRAWING NO. C2.0.1

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TYPICAL POND SECTION - NTS

Bottom Line Pond

Fishtrap Wall

Rocky Living Apron

10

1

2

3

Break in Slope 75' - 2'

Top of Berm 60' - 2'

1. Receive NPDES coverage from DHEC.
 2. Get the Construction meeting on site
 3. Notify DHEC, BDC, regional office or OCRRM office 48 hrs prior to beginning land disturbing activities.
 4. Install Construction entrances.
 5. Clearing and grubbing only as necessary for installation of perimeter controls.
 6. Install perimeter controls - Silt Fence
 7. Clearing and grubbing only in areas for the pond.
 8. Installation of the Pond (The rock wall overflow must be completely installed as shown on the detail prior to proceeding to the next step. Areas draining to this structure cannot be disturbed until the structure is completely installed).
 9. Clearing and grubbing of the site (Sediment and erosion control measures for these areas must already be installed)
 10. Rough Grading. Stabilize areas with natural vegetation and/or seeding as soon as possible.
- Notes: The site is to be mass graded.
11. Removal of temporary sediment and erosion control measures after construction is complete.
 12. Maintenance of the structure is finally required.
- SWPP or registration equivalent to approve removal of temporary sediment control measures that continue until the site is permanently stabilized, and controls are removed.

- Bottom of Pond 27' - 5'

Typical Pond Section - NTS

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	April 10 - July 25
40lbs/ Acre 1/2 Tall Fescue (K3731)	40 lbs / Acre Bahia Grass
10lbs/ Acre Kys Grass	10 lbs / Acre Browning Millet
350 lbs / Acre Perennial 10-10-10	350 lbs / Acre Fertilizer 10-10-10
550 lbs / Acre Limestone	550 lbs / Acre Limestone
2 tons / Acre small grain straw*	2 tons / Acre small grain straw*

Temporary Seeding:

Sept 10 thru April 10	April 10 thru Sept 10
56 lbs/ Acre Ryegrass	40 lbs / Acre Browning Millet
350 lbs / Acre Fertilizer 10-10-10	350 lbs / Acre Fertilizer 10-10-10
550 lbs / Acre Limestone	550 lbs / Acre Limestone

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