

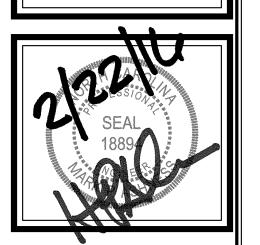


301 GLENWOOD AVE. 220 RALEIGH,NC 27603 PHONE: 919-367-8790

www.cegroupinc.com

License # C-1739

FAX: 919-322-0032



NO

WQ

WITH ASTM D698.

CRUSHED STONE

SELF-PROPELLED ROLLERS.

ADEQUATE CURING TIME HAS ELAPSED.

DOMED TRASH RACK NO.6 REBAR W/ MAX. 12"

AWAY FROM DAM.

HORIZONTAL OPENING, MOUNTED

WITH HINGES AND HOLD DOWN

CLASP WITHIN THE INSIDE LIP OF

PRE-CAST BOX. LID SHOULD OPEN

5' x 5' CONCRETE RISER

w/6" THICK SOLID WALLS

MIN WEIGHT - 11,750 LBS.

1" x 1" NOTCH CAST IN

BOX FOR ANTI-VORTEX

#3 OR #4 REBAR <

DAM EMBANKMENT CONSTRUCTION NOTES

1. CONTROLLED FILL, AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, IN THE DAM EMBANKMENT SHALL

BE PLACED IN 6-INCH LOOSE LAYERS (3-INC LOOSE LAYERS WITHIN 3-FEET OF EITHER SIDE OF THE

PRINCIPAL SPILLWAY PIPE TO A DEPTH OF 2-FEET OVER THE PIPE) AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE

2. ALL VISIBLE ORGANIC DEBRIS SUCH AS ROOTS AND LIMBS SHALL BE REMOVED FROM THE FILL MATERIAL

EXCEEDING 5% BY WEIGHT SHALL NOT BE USED. STONES GREATER THAN 3-INCH (IN ANY DIRECTION)

4. ANY FILL LAYER THAT IS SMOOTH DRUM ROLLED TO REDUCE MOISTURE PENETRATION DURING A STORM

6. FOUNDATION AREAS MAY REQUIRE UNDERCUTTING OF COMPRESSIBLE AND/OR UNSUITABLE SOILS IN ADDITION TO THAT INDICATED ON THE PLANS. ALL SUCH UNDERCUTTING SHALL BE PERFORMED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND SHALL BE MONITORED AND DOCUMENTED. IN NO CASE SHALL THERE BE AN ATTEMPT TO STABILIZE ANY PORTIONS OF THE FOUNDATION SOILS WITH

7. TREATMENT OF SEEPAGE AREAS, SUBGRADE PREPARATION, FOUNDATION DEWATERING AND ROCK

FOUNDATION PREPARATION (I.E., TREATMENT WITH SLUSH GROUTING, DENTAL CONCRETE, ETC.) MAY

8. FILL ADJACENT TO THE RISER AND PRINCIPAL SPILLWAY PIPE SHALL BE PLACED SO THAT LIFTS ARE AT

9. EARTHWORK COMPACTION WITHIN 3-FEET OF ANY STRUCTURES SHALL BE ACCOMPLISHED BY MEANS OF HAND TAMPERS, MANUALLY DIRECTED POWER TAMPERS OR PLATE COMPACTORS OR MINIATURE

10. COMPACTION BY MEANS OF DROP WEIGHTS FROM A CRANE OR HOIST SHALL NOT BE PERMITTED. 11. HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO PASS OVER CAST-IN-PLACE STRUCTURES UNTIL

12. TO RE-ESTABLISH VEGETATION AFTER CONSTRUCTION, A 2- TO 3-INCH LAYER OF TOPSOIL SHALL BE PLACED ON THE DISTURBED EMBANKMENT SURFACE AND THE AREA SEEDED AND MULCHED OR

BE REQUIRED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER, ALL SUCH ACTIVITIES SHALL BE

PRIOR TO COMPACTION TO THE REQUIRED DENSITY. SOILS WITH ORGANIC MATTER CONTENT

3. FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO SPECIFIED

REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS.

CLOSELY MONITORED AND DOCUMENTED BY THE GEOTECHNICAL ENGINEER.

EVENT SHALL BE PROPERLY SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT SOIL LIFT.

5. SURFACE WATER AND STREAM FLOW SHALL BE CONTINUOUSLY CONTROLLED THROUGHOUT

SHALL BE REMOVED FROM THE FILL PRIOR TO COMPACTION.

CONSTRUCTION AND THE PLACEMENT OF CONTROLLED FILL

THE SAME LEVEL ON BOTH SIDES OF THE STRUCTURES.

CONTENT OF + OR - TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE

MANHOLE STEP DETAIL

PLATE

WATERPROOF

MASTIC (TYP.)

4 INV. 298.00

RISER DETAIL

INV. 298.00

INSIDE DIMENSION

CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR OUTLET STRUCTURE AND TRASH RACK FOR APPROVAL.

DAM EMBANKMENT IS TO BE SEEDED IMMEDIATELY AFTER DAM CONSTRUCTION IS COMPLETE.

STORMWATER MANAGEMENT STRUCTURE IS TO BE UTILIZED AS A TEMPORARY EROSION CONTROL DEVICE INITIALLY. ONCE CONSTRUCTION IS COMPLETED AND UPSTREAM SURFACES HAVE BEEN PERMANENTLY STABILIZED, CONTRACTOR IS TO REMOVE ALL SEDIMENT FROM BASIN AND CONVERT TO PERMANENT WATER QUALITY STRUCTURE. THIS INCLUDES INSTALLING THE PROPOSED PLANTINGS ALONG THE LITTORAL SHELF.

DRAWDOWN PIPE IS NOT TO BE INSTALLED UNTIL ALL UPSTREAM SURFACES HAVE BEEN PERMANENTLY

7,500 S.F. 338,919 S.F. (7.12%)

RELEASED FOR CONSTRUCTION

PLANTING NOTES:

LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT MATERIAL FROM LOCAL SOURCE TO ENSURE SURVIVABILITY. CONTRACTOR TO PROVIDE SOURCE OF PLANT MATERIAL AND LOCATION FOR APPROVAL PRIOR TO INSTALLATION OF MATERIAL.

LOCAL WETLAND NURSERY MELLOW MARSH FARM NURSERY - SILER CITY, NC

A MINIMUM TWO-YEAR WARRANTY PERIOD SHALL BE PROVIDED FOR PLANT SURVIVAL AND REPLACEMENT. AT THE END OF THE PLANT LIST FIRST YEAR AND AGAIN AT THE END OF THE 2ND YEAR ALL PLANTS THAT DO NOT SURVIVE MUST BE REPLACED.

_	QUAN.							
SYM.		BOTANICAL NAME	COMMON NAME	HT.	ROOT	REMARKS		
WETLAND PLANTINGS								
SA	71	HIBISCUS COCCINEUS 'ALBA'	WHITE ROSE MALLOW	-	4" cont.	3' O.C. Shallow Land		
CF	38	LOBELIA CARDINALIS	CARDINAL FLOWER	-	4" cont.	3' O.C. Shallow Land		
NP	39	SACCHARUM BALDWINII	NARROW PLUMEGRASS	-	4" cont.	3' O.C. Shallow Land		
DP	92	SAGITTARIA LATIFOLIA	DUCK POTATO	-	4" cont.	3' O.C. Shallow Water		
LT	101	SAURURUS CERNUUS	LIZARD TAIL	-	4" cont.	3' O.C. Shallow Water		
PW	90	PONTEDERIA CORDATA	PICKERELWEED	-	4" cont.	3' O.C. Shallow Water		







STORMATER MANAGEMENT CERTIFICATION

I Mark Ashness certify that the stormwater management facilities and practices will control and treat the runoff from the 1 year 1-hour storm event for the total drainage area of the structure, that the designs and plans are sufficient to comply with the applicable standards and policies found in the NC DENR Stormwater BMP Design Manual, and that the designs and plans ensure compliance with the County's Stormwater Ordinance.

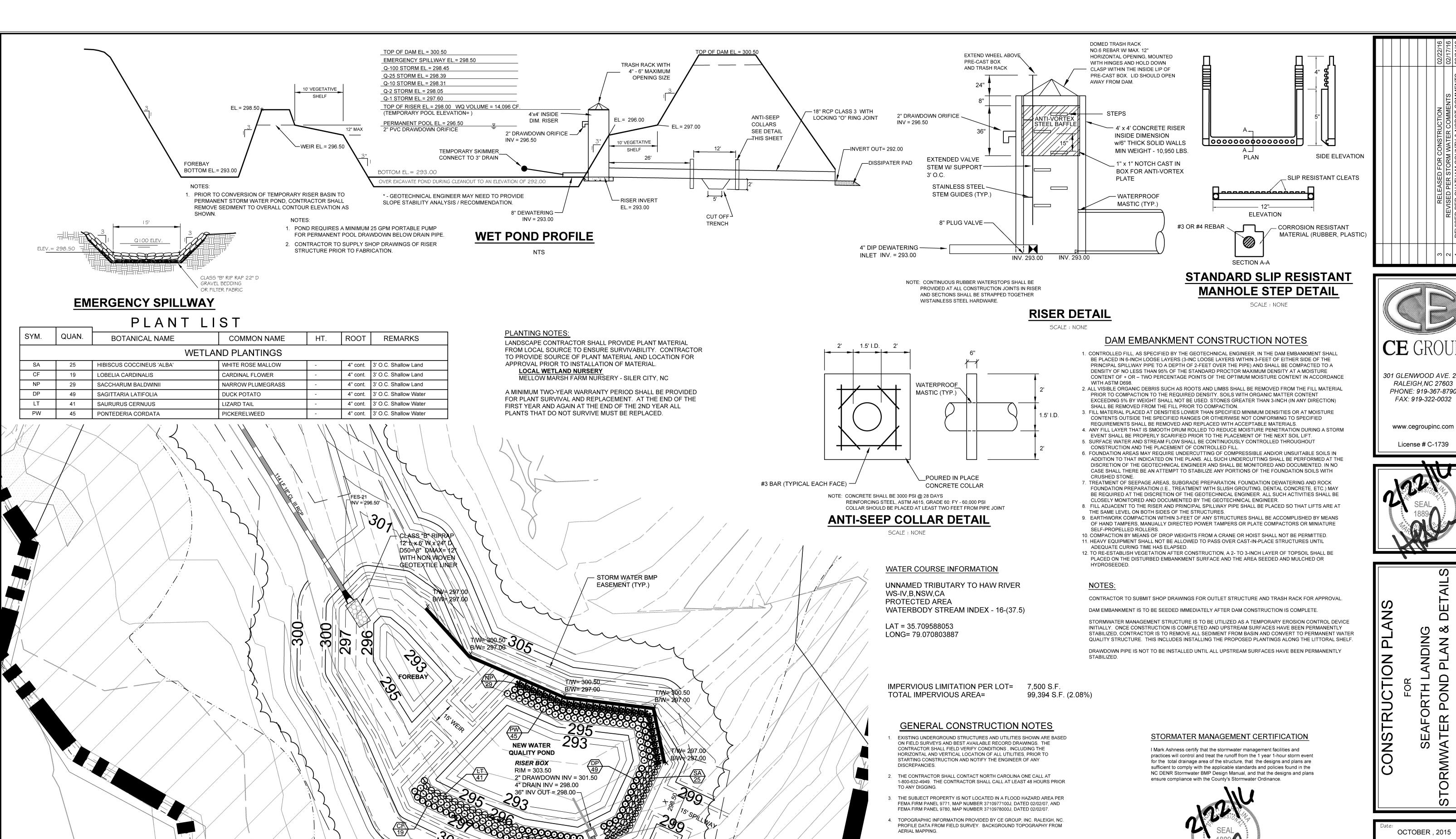
OCTOBER, 2015 1" = 20'

JPD hecked: MPA roject No.

120-23

omputer Dwg. Name 120-23 19 - 20 Storm Ponds

Sheet No:



∠FES.#23 1NV= 292.00

- CLASS/"B" RIPRAP`

9' L x 4.5' W x 24" D

D50= 8" DMAX= 12"

/WITH NON WOVEN

GEOTEXTILE LINER

-10' VEGETATIVE

STORM WATER BMP

ÆASEMENT (TYP.)

5. FOR TYPICAL STREET SECTIONS, SEE SHEET 21

SCALE: 1" = 20' (Horiz.)

6. ALL STREETS ARE PUBLIC.

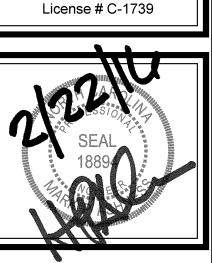




BEFORE YOU DIG CALL THE NC ONE CALL CENTER 1-800-632-4949 IT'S THE LAW!

FINAL DESIGN **RELEASED** FOR CONSTRUCTION roject No. 120-23 omputer Dwg. Name

301 GLENWOOD AVE. 220 RALEIGH,NC 27603 PHONE: 919-367-8790 FAX: 919-322-0032

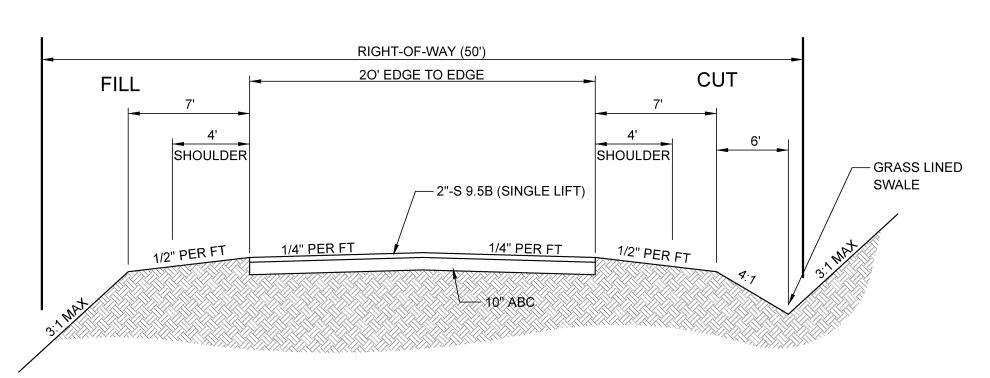


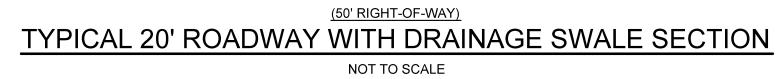
OCTOBER, 2015 1" = 20' JPD

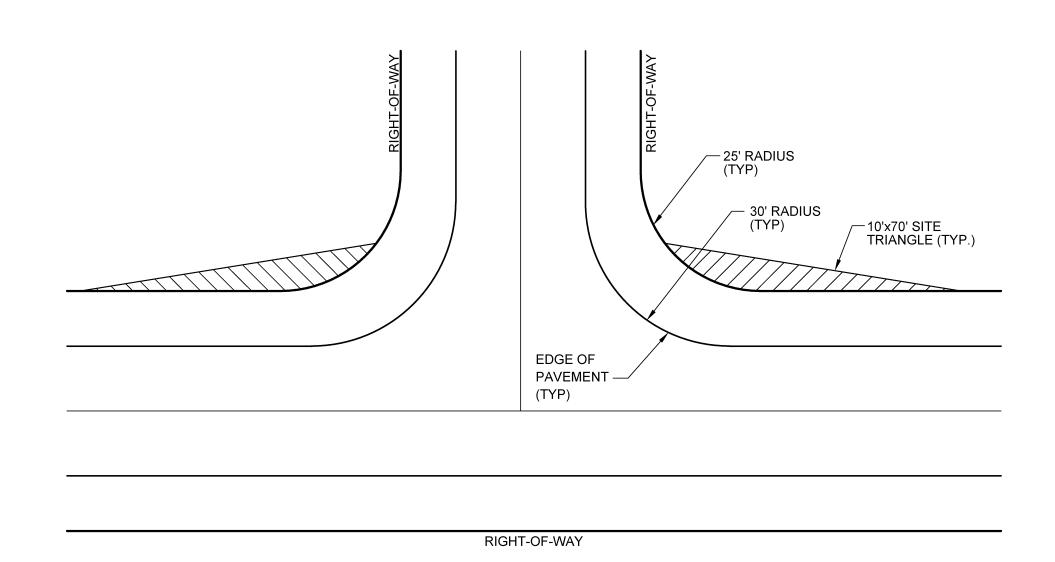
hecked:

120-23 19 - 20 Storm Ponds

iheet No:

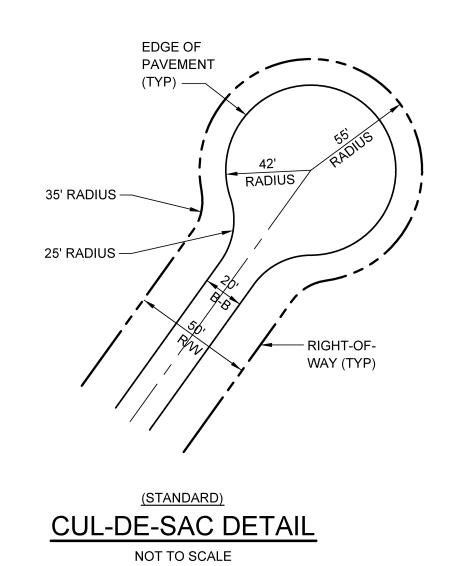


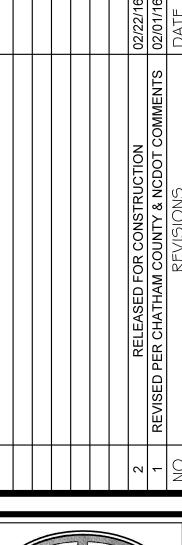




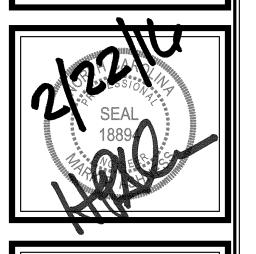
TYPICAL INTERSECTION DETAIL

NOT TO SCALE









License # C-1739

CONSTRUCTION PLANS
FOR
SEAFORTH LANDING
ROADWAY DETAILS
CHATHAM COUNTY, NORTH CAROLINA

Date:
OCTOBER, 2015

Scale:
N/A

Drawn:
JPD

Checked:
MPA

Project No.
120-23

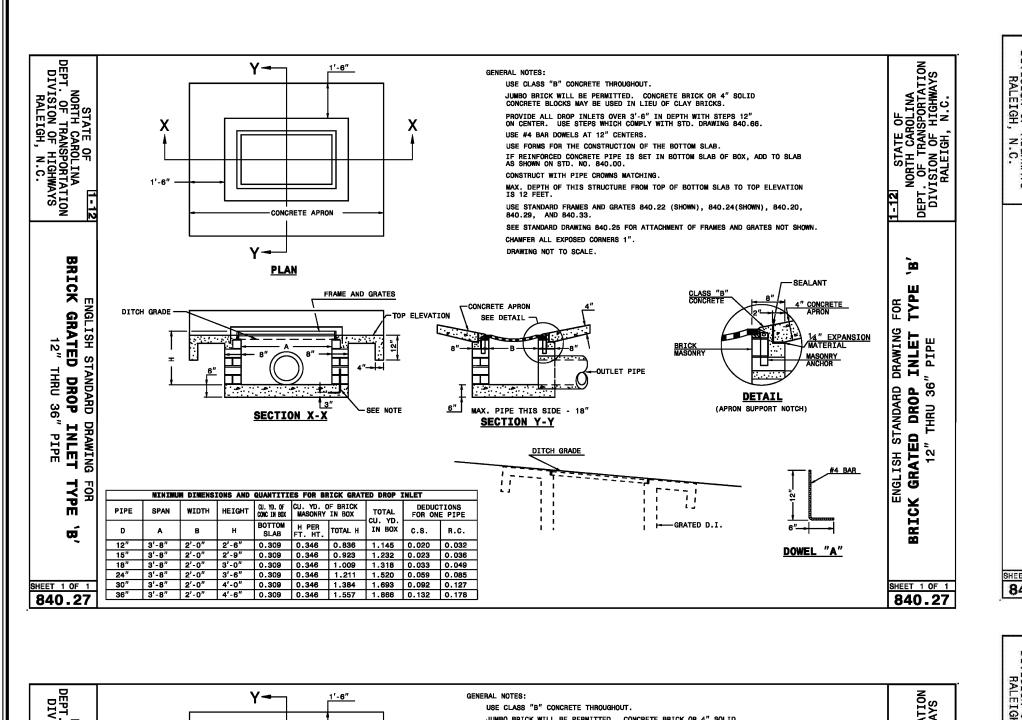
STOP!
BEFORE YOU DIG CALL
THE NC ONE CALL CENTER
1-800-632-4949
IT'S THE LAW!

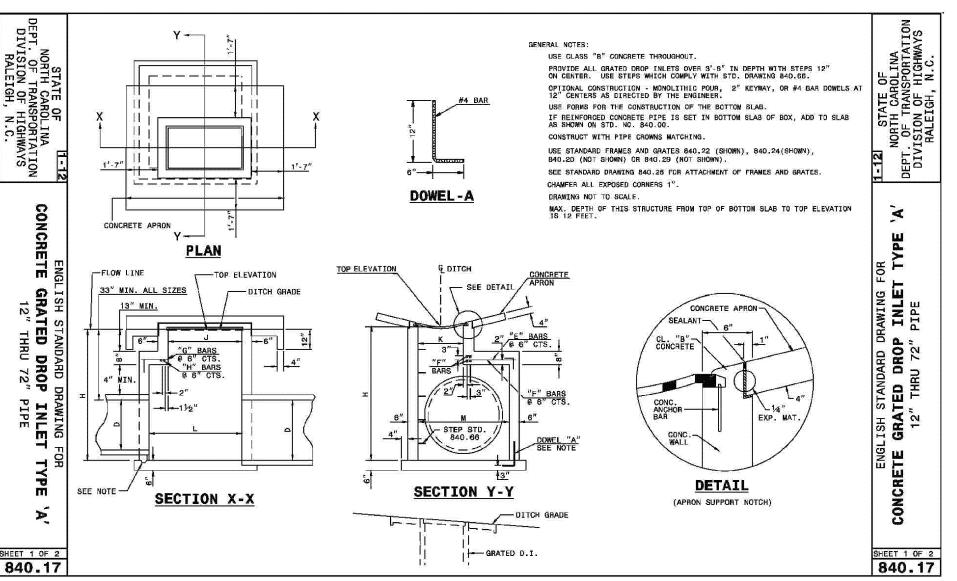
FINAL DESIGN
RELEASED
FOR CONSTRUCTION

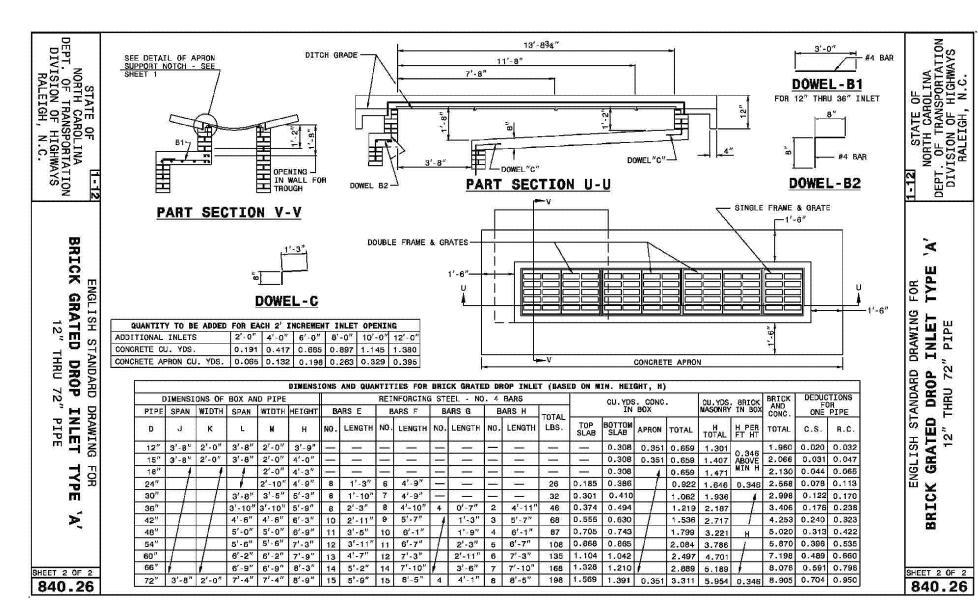
Sheet No:

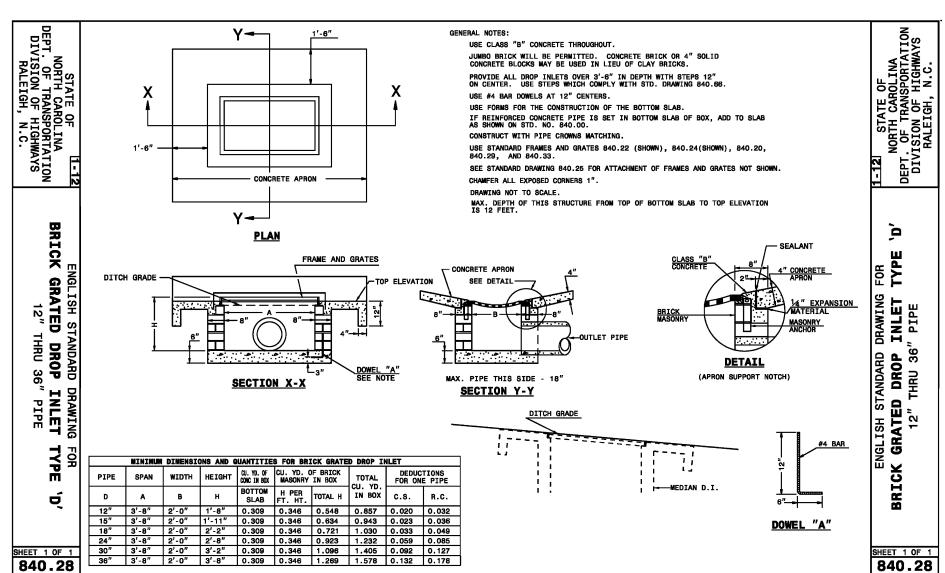
21

Computer Dwg. Name 120-23 21 Roadway Details









GRATE ELEVATION Y-Y

SEE STD. DWG. 840.25 FOR FRAME ANCHORAGE.

FRAME ELEVATION Y-Y

GRATE SECTION X-X

FRAME SECTION X-X

1'-11"

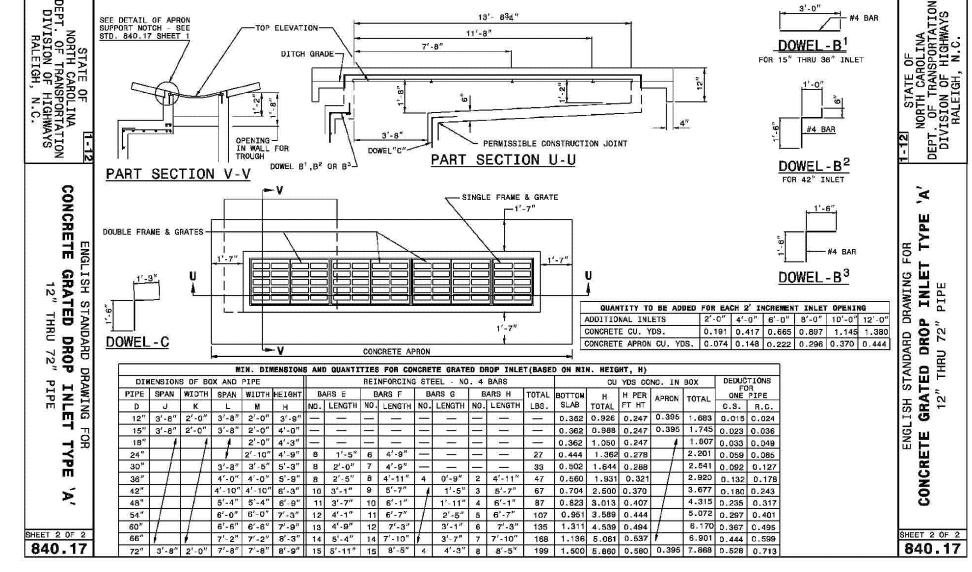
GRATE ELEVATION X-X

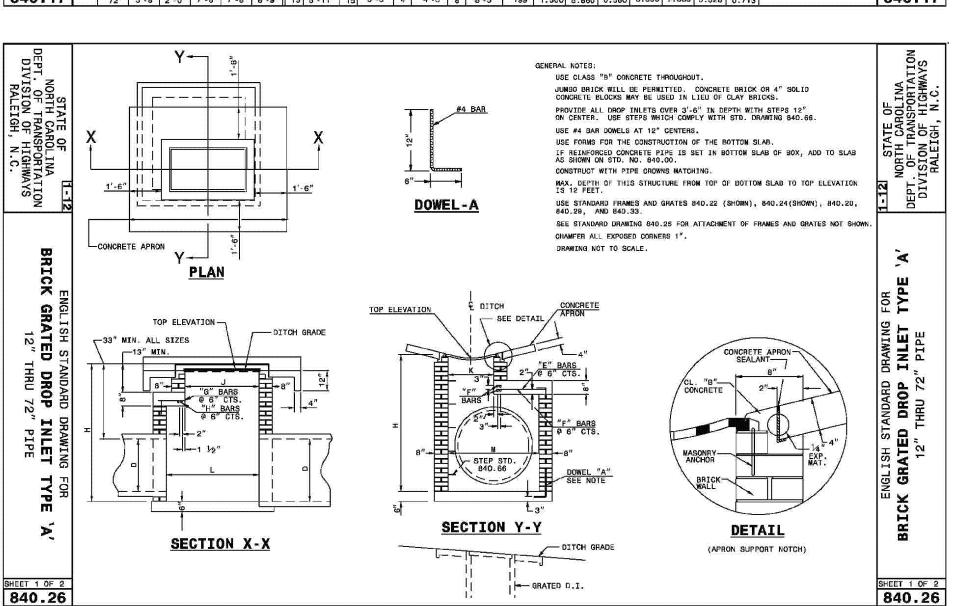
FRAME ELEVATION X-X

SHEET 1 OF 1 840.29

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

SHEET 1 OF 1 840.29





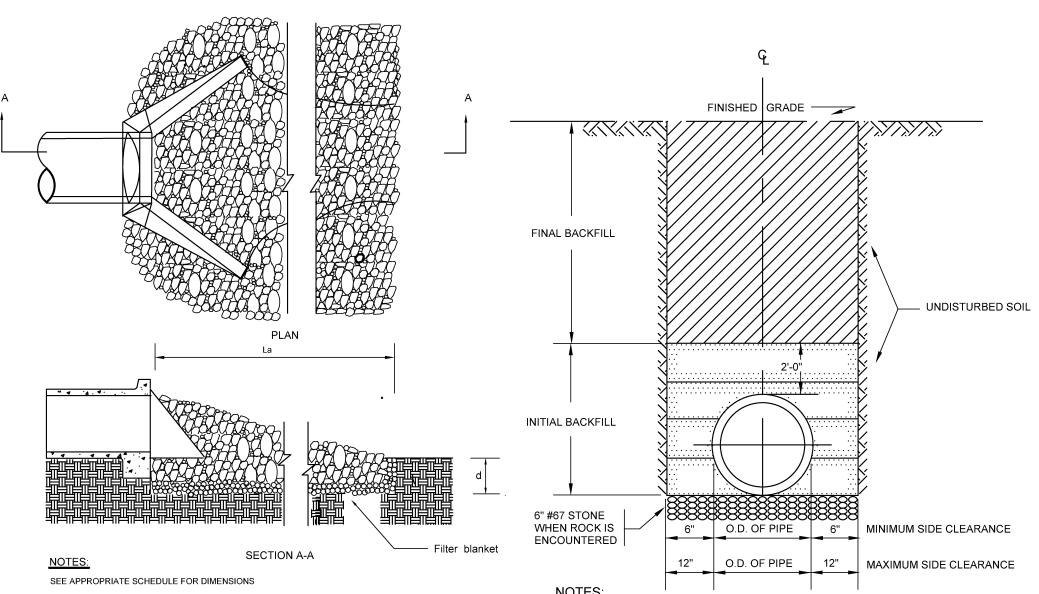
STOP!

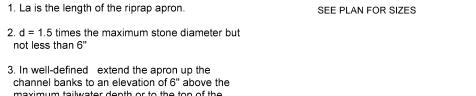
BEFORE YOU DIG CALL

THE NC ONE CALL CENTER

1-800-632-4949

IT'S THE LAW!





maximum tailwater depth or to the top of the bank which ever is less. 4. A filter blanket or filter fabric should be

installed between the riprap and soil foundation.

OUTLET PROTECTION FOR DEFINED CHANNEL

NOT TO SCALE 43" MINIMUM

STANDARD MANHOLE RING AND COVER (PER DETAIL 07000.05) MAY BE CAST IN SLAB OR SECURED TO TOP OVER STEPS

CONCRETE SLAB

. EITHER SOLID BRICK, SOLID BLOCK, OR PRECAST CONCRETE MAY BE USED. STANDARD STEPS REQUIRED, 16 INCHES ON CENTER, WHERE DEPTH EXCEEDS 3 FEET. USE MINIMUM 3000 P.S.I. CONCRETE MIX. . INSIDE DIMENSION FOR 24 INCH PIPE AND GREATER USE PIPE DIAMETER PLUS 12 INCHES. . WHERE DEPTH EXCEEDS 3 FEET, MANHOLE RING AND COVER TO BE LOCATED OVER STEPS. 6. LETTERING FOR MANHOLE COVER PER DETAIL 07000.03.

1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN

4. BACKFILL SHALL BE TAMPED IN 6" LAYERS IN TRAFFIC AREAS, 12" IN NON TRAFFIC AREAS.

TRENCH BOTTOM DIMENSIONS

& BACKFILLING REQUIREMENTS

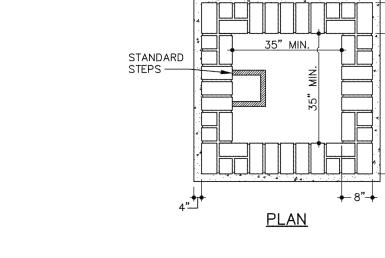
FOR D.I.P., V.C.P., & R.C.P.

NOT TO SCALE

2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.

FROM THE INSIDE FACE OF THE SHORING AND BRACING.

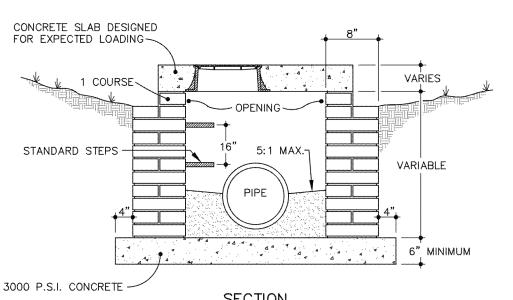
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.



FINAL DESIGN

RELEASED

FOR CONSTRUCTION



STANDARD THROATED INLET (TI) WITH CONCRETE SLAB

NOT TO SCALE



OR

301 GLENWOOD AVE. 220

RALEIGH,NC 27603

PHONE: 919-367-8790

FAX: 919-322-0032

www.cegroupinc.com

License # C-1739

OCTOBER, 2015 N/A JPD Checked: MPA Project No. 120-23 omputer Dwg. Name 20-23 22 Storm Details

Sheet No:

DISTURBANCE LIMITATIONS FOR VARIOUS SLOPE CONDITIONS

All land-disturbing activity for which an erosion and sedimentation control plan has not been approved prior to December 2, 2008 that requires a plan or a residential lot disturbance permit must meet the following slope standards.

(1) Steep slopes

(a) No land-disturbing activity in excess of 5,000 square feet shall occur on any steep slope, except to the extent it is necessary and otherwise permitted by state law to be used for septic system needs, or for roadway crossings or utilities, where no practicable alternative exists; provided, however, that this limitation shall not apply to subdivision lots which have sketch, preliminary or final approval prior to December 2, 2008.

(b) All land-disturbing activity that will be permitted within areas of steep slopes as defined by this chapter and identified on the county GIS map must include the following standards on the erosion and sedimentation control plan and all site work must conform to these standards.

- 1. Erosion and sedimentation control devices. The person conducting the land-disturbing activity shall provide erosion and sedimentation control devices and practices that are sufficient to retain the sediment generated by the land-disturbing activity within the limits of disturbance during construction. All devices and practices must be designed in accordance with this chapter.
- 2. Ground cover. The person conducting the land-disturbing activity shall provide temporary or permanent ground cover sufficient to restrain erosion within seven calendar days following completion of any phase of grading or any period of inactivity. The provisions for ground cover must be provided regardless of weather conditions, weekends, holidays, equipment malfunction and/or any extenuating circumstance.
- 3. Phasing. Land-disturbing activities must be phased so that no more than one acre of land will be disturbed on steep slopes at any time.
- 4. Scale and contours. The scale of the erosion and sedimentation control plan must not exceed one inch equals 30 feet and must produce a legible document. Existing and proposed grades shall be depicted at contour intervals of two feet.
- 5. Inspections. All land-disturbing activity conducted on steep slopes must be visually inspected by the financially-responsible person as specified in § 164.12(I). Copies of the inspections must be provided to the county erosion and sedimentation control staff. Any erosion observed during these inspections must be immediately repaired and stabilized with temporary or permanent stabilization.
- (2) Moderate slopes. All land-disturbing activity that will be conducted within areas of moderate slopes as defined by this chapter and identified on the county GIS map must include the following standards on the erosion and sedimentation control plan, and all site work must conform to these standards.
- (a) Erosion and sedimentation control devices. The person conducting the land-disturbing activity shall provide erosion and sedimentation control devices and practices that are sufficient to retain the sediment generated by the land-disturbing activity within the limits of disturbance during construction. All devices and practices must be designed in accordance with this chapter.
- (b) Ground cover. The person conducting the land-disturbing activity shall provide temporary or permanent ground cover sufficient to restrain erosion within ten calendar days following completion of any phase of grading or any period of inactivity. The provisions for ground cover must be provided regardless of weather conditions, weekends, holidays, equipment malfunction and/or any extenuating circumstance.
- (c) Phasing. Land-disturbing activities must be phased so that no more than ten acres of land will be disturbed on moderate slopes at any time.
- (d) Scale and contours. The scale of the erosion and sedimentation control plan must not exceed one inch equals 50 feet and must produce a legible document. Existing and proposed grades shall be depicted at contour intervals of two feet.
- (e) Inspections. All land-disturbing activity conducted on moderate slopes must be visually inspected by the financially-responsible person as specified in § 164.12(I). Copies of the inspections must be provided to the county erosion and sedimentation control staff. Any erosion observed during these inspections must be immediately repaired and stabilized with temporary or permanent stabilization.
- (3) Gradual slopes. All land-disturbing activity that will be conducted within areas of gradual slopes as defined by this chapter and identified on the county GIS map must include the following standards on the erosion and sedimentation control plan, and all site work must conform to these
- (a) Erosion and sedimentation control devices. The person conducting the land-disturbing activity shall provide erosion and sedimentation control devices and practices that are sufficient to retain the sediment generated by the land-disturbing activity within the limits of disturbance during construction. All devices and practices must be designed in accordance with this chapter.
- (b) Ground cover. The person conducting the land-disturbing activity shall provide temporary or permanent ground cover sufficient to restrain erosion within 15 calendar days following completion of any phase of grading or any period of inactivity. The provisions for ground cover must be provided regardless of weather conditions, weekends, holidays, equipment malfunction and/or any extenuating circumstance
- (c) Phasing. Land-disturbing activities must be phased so that no more than 15 acres of land will be disturbed on gradual slopes at any time.
- (d) Scale and contours. The scale of the erosion and sedimentation control plan must not exceed one inch equals 50 feet and must produce a legible document. Existing and proposed grades shall be depicted at contour intervals of two feet.
- (e) Inspections. All land-disturbing activity conducted on gradual slopes must be visually inspected by the financially-responsible person as specified in § 164.12(I). Copies of the inspections must be provided to the county erosion and sedimentation control staff. Any erosion observed during these inspections must be immediately repaired and stabilized with temporary or permanent stabilization.
- (4) Steep slopes variance. (a) A property owner may apply to the Board of Commissioners for a variance from the requirements of division (B)(1) above. (b) In order for the Board of Commissioners to grant the variance the applicant has the burden of proving the following:
- 1. The proposed land-disturbing activity on the steep slopes will not result in: a. Significantly increased velocity of flow, deposit of sediment or erosion;
- b. Significant threats to water quality;
- c. The removal of significant wildlife or plant habitat; or
- d. A public nuisance. 2. The provisions of this section's steep slope requirements leave the owner no legally reasonable
- use of the property; and 3. A failure to grant the variance would result in hardship.

Instailation NOTE: Sediment fence captures sediment by backing up water to allow deposition. It is relatively ineffective for filtration because it clogs too rapidly. The sedimentation pool behind the fence is very effective and may reduce the need for expensive sediment basins and traps.

> To use sediment fence effectively, provide access to the locations where sediment accumulates and provide reinforced, stabilized outlets for emergency overflow (Figure 6.62c).

Sediment fence is most effective when used in conjunction with other practices such as perimeter dikes or diversions.

Location Locate the fence at least 10 ft from the toe of steep slopes to provide sediment storage and access for cleanout (Figure 6.62b). The fence line should be nearly level through most of its length to impound a broad, temporary pool. Stabilized outlets are required for bypass flow,

unless fence is designed to retain all runoff from the 10-yr storm (Figure

The fence line may run slightly off level (grade less than 1%) if it terminates in a level section with a stabilized outlet, diversion, basin, or sediment trap. There must be no gullying along the fence or at the ends. Sediment fence should not be used as a diversion.

Construction Dig a trench approximately 8 inches deep and 4 inches wide, or a V-trench,

in the line of the fence as shown in Figure 6.62d. Drive posts securely, at least 18 inches into the ground, on the downslope side of the trench. Space posts a maximum of 8 ft if fence is supported by wire, 6 ft if extra-strength fabric is used without support wire. Adjust spacing to place posts at low points along the fenceline.

Fasten support wire fence to upslope side of posts, extending 6 inches into the trench as shown in Figure 6.62d.

Attach continuous length of fabric to upslope side of fence posts. Avoid joints, particularly at low points in the fence line. Where joints are necessary, fasten fabric securely to support posts and overlap to the next

Seedbed Preparation:

- 1. Chisel compacted areas and spread topsoil three inches deep over adverse soil conditions, if available.
- 2. Rip the entire area to six inches deep.
- 3. Remove all loose rock, roots, and other obstructions leaving surface reasonable smooth and uniform.
- 4. Apply agricultural lime, fertilizer and superphosphate uniformly and mix with soil (see mixture). 5. Continue tillage until a well-pulverized, firm reasonably uniform seedbed is prepared four to six inches deep. 6. Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.
- 7. Mulch immediately after seeding and anchor mulch. 8. Inspect all seeded areas and make necessary repairs for reseedings within the planting season, if possible. If stand should be over 60% damaged, reestablish following the original lime, fertilizer and seeding rates. 9. Consult EFS Environmental Engineers on maintenance treatment and fertilization after permanent cover is established.

Mixture
Agricultural Limestone: 2 tons/acre (3 tons/acre in clay soils)

1,000 lbs/acre - 10-10-10 Fertilizer: 500 lbs/acre - 20% analysis Superphosphate

2 tons/acre - small grain straw Asphalt Emulsion at 300 gals/acre

Seeding Schedule

PERMANENT						
Date	Туре	Planting Rate				
Aug 15 - Nov 1	Tall Fescue	300 lbs/acre				
Nov 1 - Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre				
Mar 1 - Apr 15	Tall Fescue	300 lbs/acre				
Apr 15 - Jun 30	Hulled Common Bermudagrass	25 lbs/acre				
Jul 1 - Aug 15	Tall Fescue AND Browntop Millet or Sorghum - Sudan Hybrids ***	125 lbs/acre (Tall Fescue); 35 lbs/acre (Browntop Millet); 30 lbs/acre (Sorghum - Sudan Hybrids)				

TEMPORARY

Mar 1 - Jun 1	Sericea Lespedeza (scarified) and use the following combinations:	50 lbs/acre (Sericea Lespedeza);
Mar 1 - Apr 15	Add Tall Fescue	120 lbs/acre
Mar 1 - Jun 30	Or add Julled Common Bermudagrass	25 lbs/acre
Jun 1 - Sept 1	Tall Fescue AND Browntop Mullet or Sorghum - Sudan Hybrids ***	120 lbs/acre (Tall Fescue); 35 lbs/acre (Browntop Mullet); 30 lbs/acre (Sorghum - Sudan Hybrids)
Sept 1 - Mar 1	Sericea Lespedeza (unhulled - unscarified) AND Tall Fescue	70 lbs/acre (Sericea Lespedeza); 120 lbs/acre (Tall Fescue)
Nov 1 - Mar 1	And Abruzzi Rye	25 lbs/acre

Consult EFS Environmental Engineer for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those which do well under location conditions; other seeding rate combinations are possible.

*** TEMPORARY: Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12" in height before mowing, otherwise fescue may be shaded out.

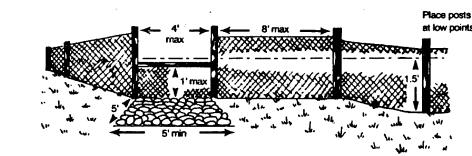
FLOW # 5 WASHED STONE a. GRAVEL PAD TO BE 20' x 50' AND 6" THICK MINIMUM b. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED. c. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES. d. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE COARSE AGGREGATE SILL BE NECESSARY; KEEP SOME HANDY. NOTES: APPLICABLE AT ALL POINTS OF e. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP INGRESS & EGRESS UNTIL SITE IS IMMEDIATELY. STABILIZED, FREQUENT CHECKS OF THE DEVICE AND TIMELY W (SPILLWAY) MAINTENANCE MUST BE PROVIDED. MIN 2/3 STREAM WIDTH TEMPORARY CONSTRUCTION ENTRANCE I' MIN. BELOW LOWEST COMPACTED SOIL -BANK LEVEL (MIN) SECTION A-A ------ 6' TYPICAL -----SPILLWAY CREST . # 5 WASHED STONE TEMPORARY DIVERSION BERM/SWALE RIP RAP -COARSE AGGREGATE -SECTION B-B TEMPORARY STONE CHECK DAM * USE FOR VEHICLE CROSSINGS ONLY

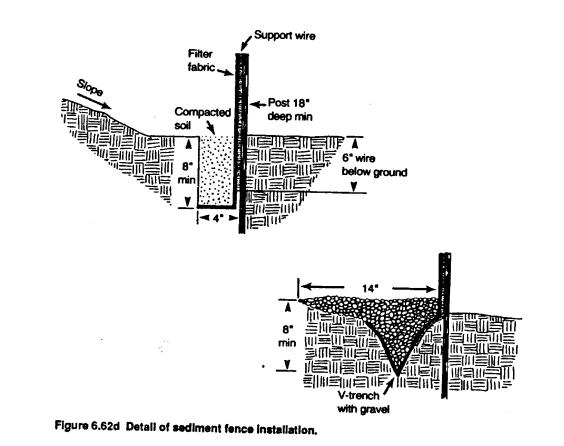
TEMPORARY GRAVEL DIVERSION DIKE

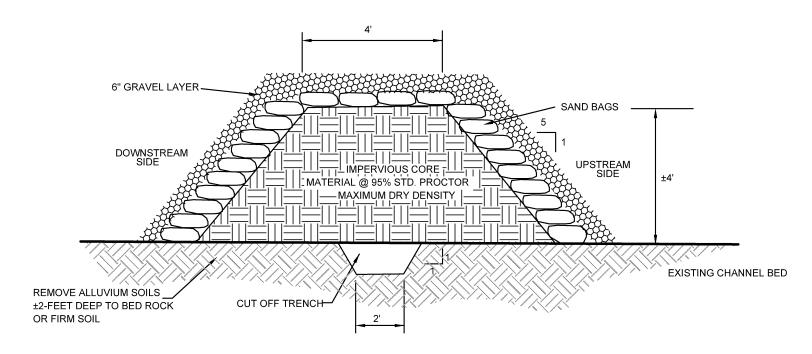
CONSTRUCTION SEQUENCE

- 1. OBTAIN GRADING PERMIT / FINAL APPROVAL FROM CHATHAM COUNTY ENVIRONMENTAL HEALTH.
- 2. CONTACT THE CHATHAM COUNTY EROSION CONTROL SECTION AT 919-545-8343 TO SET UP A PRE-CONSTRUCTION MEETING PRIOR TO ANY LAND DISTURBANCE WORK PERFORMED.
- INSTALL, IN ORDER OF THIS SEQUENCE: DELINEATE THE PROPOSED TREELINE/DISTURBED LIMIT LINE AND INSTALL ALL PROPOSED SILT FENCING THROUGHOUT THE ENTIRE PROJECT AREA ALONG WITH TEMPORARY CONSTRUCTION
- CONTRACTOR SHALL FIRST INSTALL CLEAN WATER SWALE LOCATED ADJACENT TO ENTRANCE (LAKES EDGE LANE AND SEAFORTH ROAD). CONTRACTOR SHALL INSTALL ONLY WHEN FORECAST REFLECTS 3-4 DAY OF DRY WEATHER. CONSTRUCT SWALE STARTING FROM DOWNSTREAM END AND STABILIZE WORK WITH RIP RAP AT THE END OF EACH DAY. ONCE CLEAN WATER SWALE IS INSTALLED AND STABILIZED CONTRACTOR TO INSTALL THE PERMANENT RISER BASIN AND TEMPORARY SKIMMER BASINS. CLEAR ONLY AS NECESSARY TO ACCESS THESE AREAS AND TO CONSTRUCT THESE DEVICES. ONCE THE PREVIOUS MEASURES ARE INSTALLED, CLEAR ONLY AS REQUIRED TO INSTALL TEMPORARY DIVERSION BERMS/ DITCHES AND GRAVEL DIVERSION DIKES TO THESE SEDIMENT TRAPS / RISER BASINS/ SKIMMER BASINS AND OTHER TEMPORARY MEASURES AS SHOWN ON THE APPROVED PLAN, PAY SPECIFIC ATTENTION TO OFF-LINE DITCH / BERM #11 (SEE SHEET 12). THE CONTRACTOR SHALL STABILIZE ALL DIVERSIONS, RISER BASINS, AND SKIMMER BASINS IMMEDIATELY UPON THEIR CONSTRUCTION.
- ALL MEASURES SHALL BE INSTALLED AND INSPECTED FOR COMPLIANCE PRIOR TO COMMENCEMENT OF ANY PROPOSED R.O.W. CLEARING/GRUBBING AND EXCAVATION. 4. CALL FOR AN INSPECTION FOR COMPLIANCE PRIOR TO ANY ADDITIONAL CLEARING. OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY ENVIRONMENTAL INSPECTOR
- ONCE CERTIFICATE OF COMPLIANCE IS OBTAINED BEGIN CLEARING AND GRUBBING (STAGE 1 SEE SHEETS 11-14).
- ONCE COMPLETE ALONG WITH CLEARING AND GRUBBING OF DISTURBED AREAS AS SHOWN ON APPROVED PLAN; BEGIN EXCAVATION OF ROADWAYS AND INSTALLATION OF SUBSURFACE DRAINAGE AND UTILITIES. INSTALL ADDITIONAL INLET PROTECTION DEVICES AS REQUIRED AND/OR SHOWN. ONCE SUBSURFACE DRAINAGE IS INSTALLED AND OPERATIONAL, TEMPORARY SKIMMER BASIN CAN BE REMOVED AND THE SLOPES STABILIZED. SEED AND MULCH ALL DENUDED
- 7. REQUEST FINAL APPROVAL BY ENVIRONMENTAL INSPECTOR, IF THE INSPECTOR IS SATISFIED WITH UPSTREAM PERMANENT GROUND COVER, BEGIN REMOVING TEMPORARY EROSION CONTROL MEASURES. REMOVE THE SEDIMENT TRAPS AND ALL UNSTABLE SEDIMENT. AFTER STABILIZATION HAS OCCURRED REMOVE SEDIMENT FROM RISER BASIN/WATER QUALITY POND AND CONVERT TO PERMANENT STRUCTURE.

*CONTRACTOR TO REESTABLISH TEMPORARY DIVERSION SWALES AT THE END OF EACH DAY TO ENSURE DRAINAGE TO THE APPROPRIATE STRUCTURE.



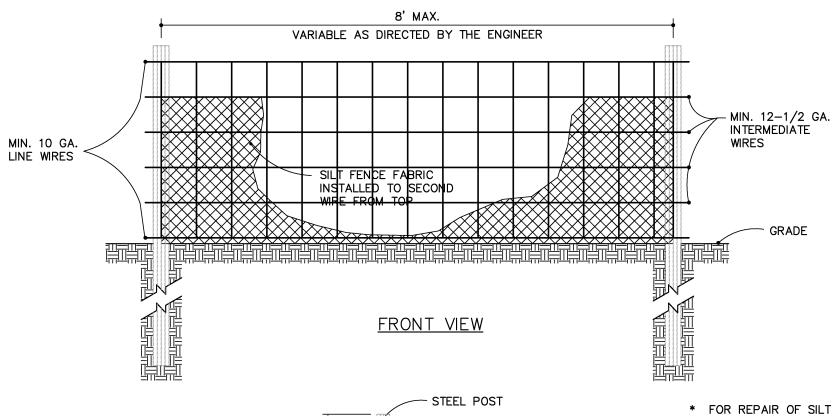


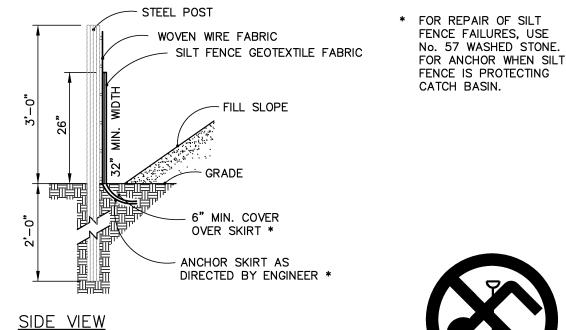


- I. WORK IN CREEK SHALL BE PLANNED TO MINIMUZE THE NUMBER OF DAYS OF DISTURBANCE. 2. THE CONTRACTOR IS TO OBSERVE THE LOCAL
- WEATHER FORECASTS AND NOT BEGIN WORK IN THE CREEK UNLESS AT LEAST THREE DAYS WITHOUT RAIN IS ANTICIPATED. 3. ALL DISTURBED CREEK BED AND BANKS ARE TO BE

STABILIZED PRIOR TO THE END OF EACH WORK DAY.

TEMPORARY COFFER DAM





-USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW

-END OF SILT FENCE NEEDS TO BE TURNED UPHILL.

STANDARD TEMPORARY SILT FENCE



THE NC ONE CALL CENTER 1-800-632-4949 IT'S THE LAW!

RELEASED FOR CONSTRUCTION

roject No. 120-23 omputer Dwg. Name 20-23 23 EC Details heet No:

OCTOBER, 2015

N/A

JPD

MPA

Checked:

301 GLENWOOD AVE. 220

RALEIGH,NC 27603

PHONE: 919-367-8790

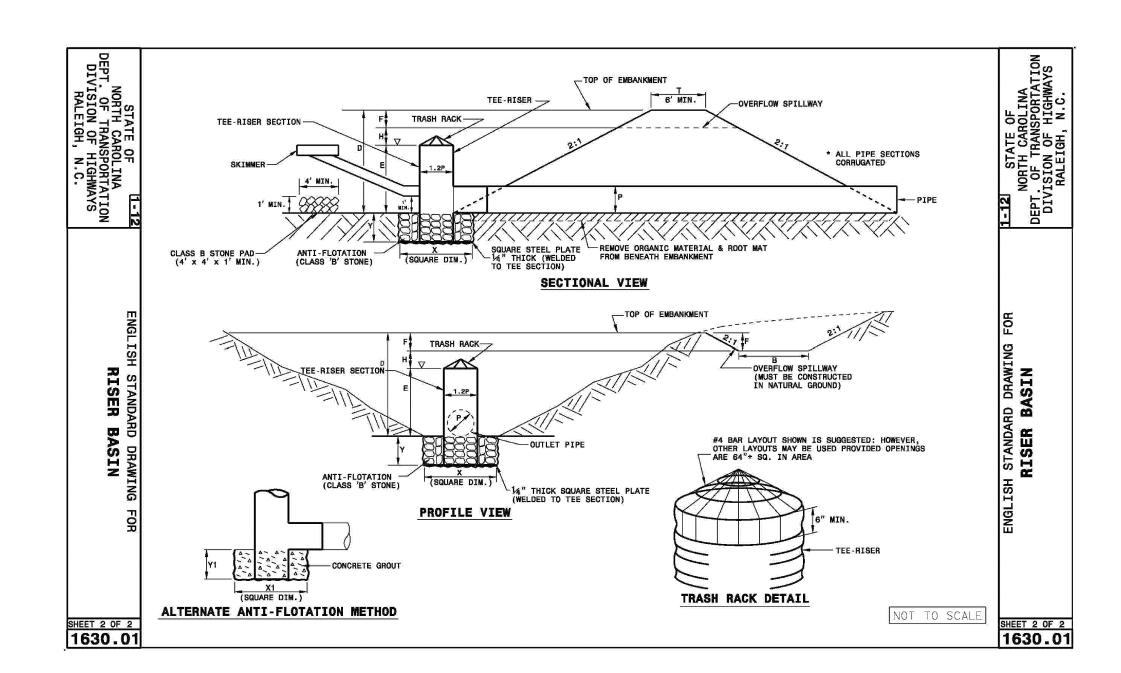
FAX: 919-322-0032

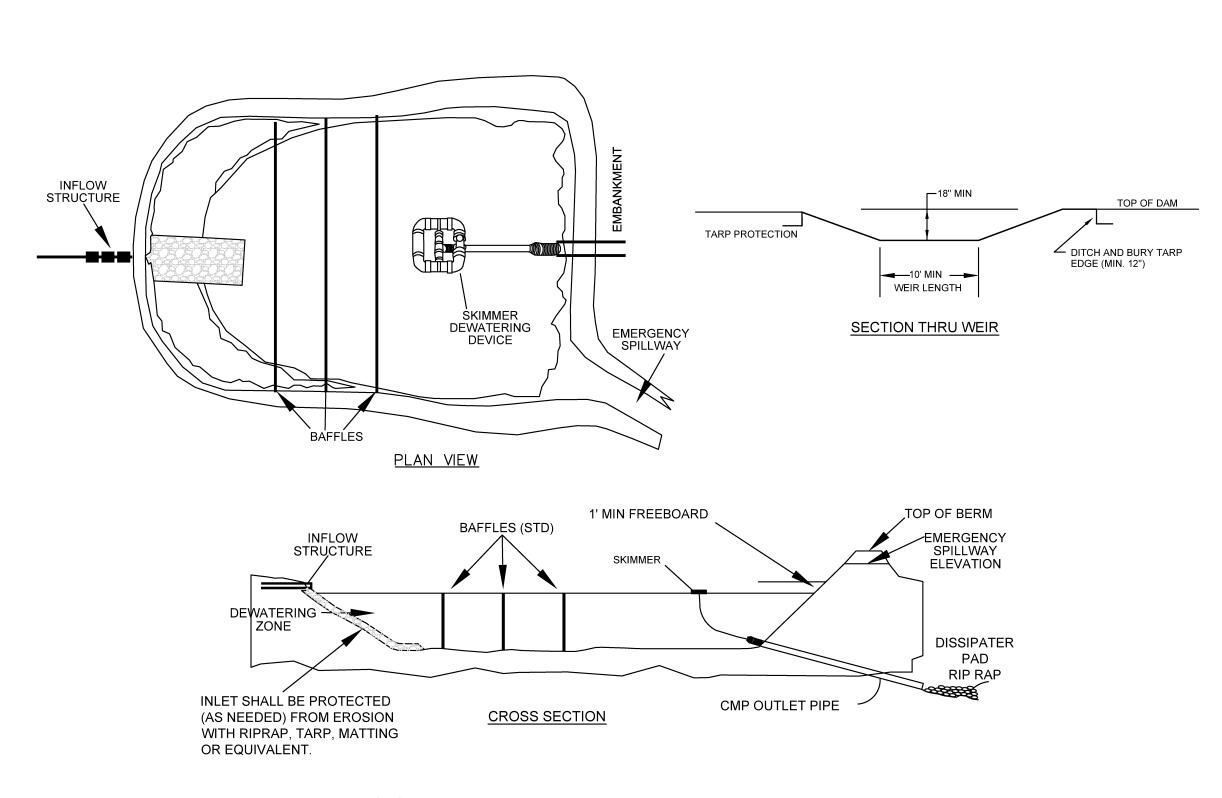
www.cegroupinc.com

License # C-1739

⋖ ₹

REINFORCED SILT FENCE OUTLET

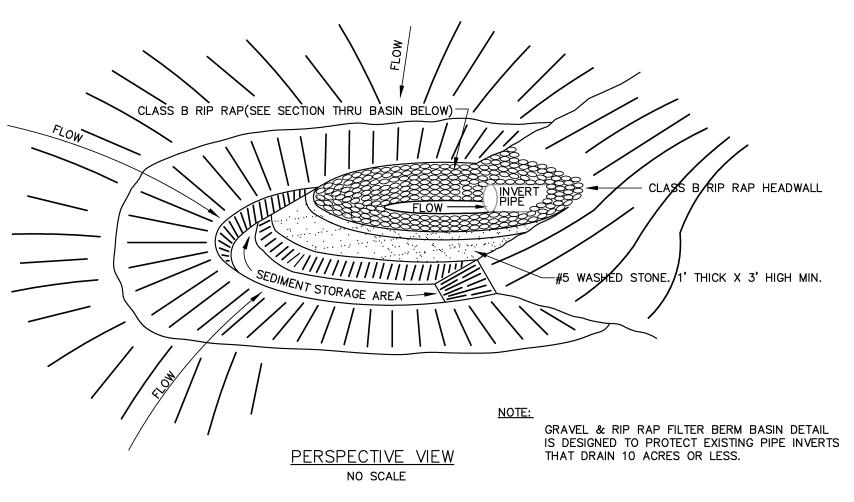


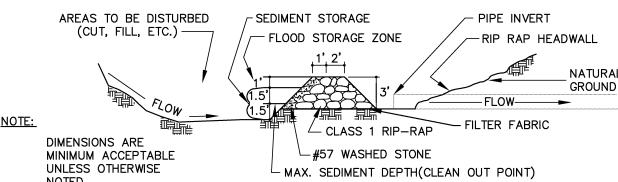


1) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL. 2) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPAULINS OR EQUIVALENT FOR U.V. RESISTANCE.

3) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE. 4) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE. 5) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE. 6) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE. 7) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

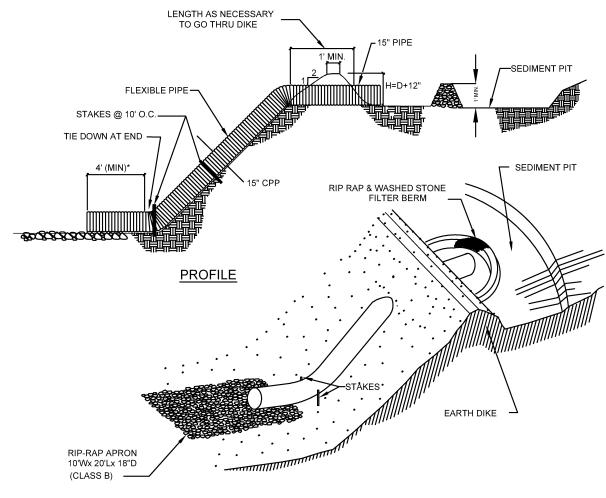
TEMPORARY SKIMMER SEDIMENT BASIN NOT TO SCALE





SECTION THRU BASIN, FILTER AND CULVERT PIPE NO SCALE

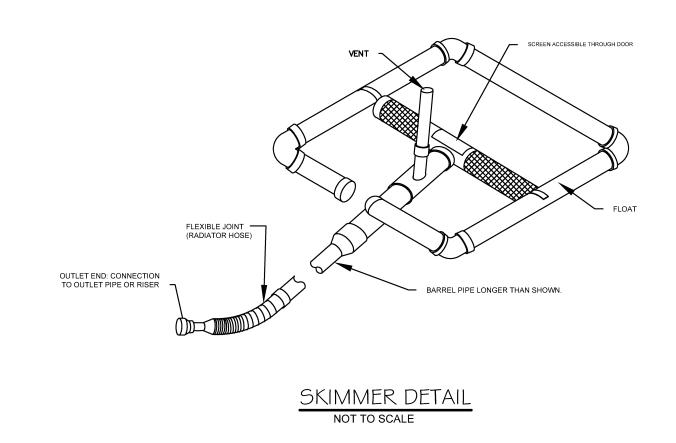
GRAVEL & RIPRAP HORSESHOE INLET BASIN NOT TO SCALE



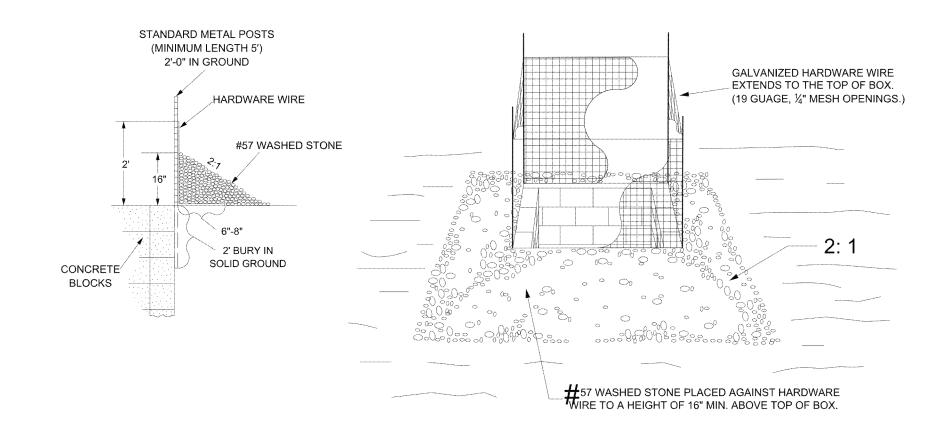
CONSTRUCTION SPECIFICATIONS:

- 1. THE TOP OF THE EARTH DIKE OVER THE INLET PIPE AND THOSE DIKES CARRYING WATER TO THE PIPE SHALL BE AT LEAST 1 FOOT HIGHER AT ALL POINTS THAN THE TOP OF THE INLET PIPE.
- 2. THE PIPE SHALL BE FLEXIBLE WITH WATER TIGHT CONNECTING BANDS. FLEXIBLE PIPE SHOULD BE STAKED ON EITHER SIDE.
- 3. A RIP RAP APRON SHALL BE PROVIDED AT THE OUTLET, IF EMPTYING INTO A DISTURBED AREA.
- 4. THE SOIL AROUND AND UNDER THE INLET PIPE AND ENTRANCE SECTION SHALL BE HAND TAMPED IN 4" LIFTS TO THE TOP OF THE EARTH DIKE.
- 5. FOLLOW-UP INSPECTION AND ANY NEEDED MAINTENANCE SHALL BE PERFORMED AFTER EACH STORM.

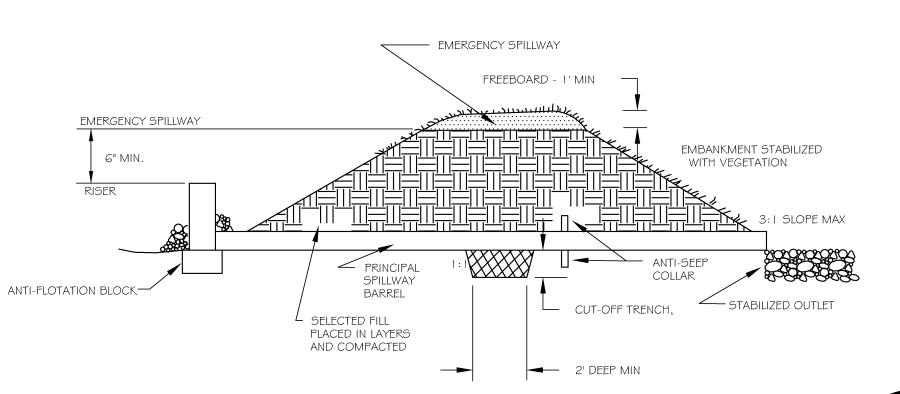
TEMPORARY SLOPE DRAIN NOT TO SCALE



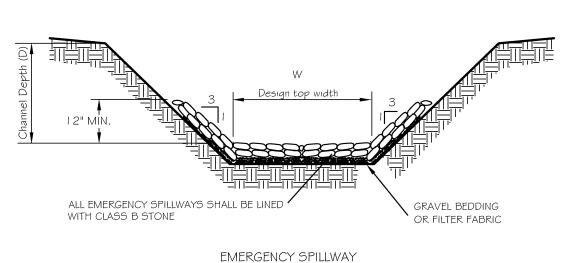
SECTION VIEW



CATCH BASIN INLET PROTECTION



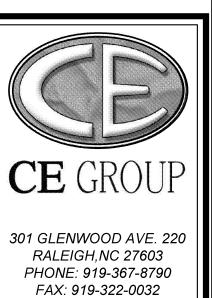
TEMPORARY RISER BASIN DETAIL NOT TO SCALE



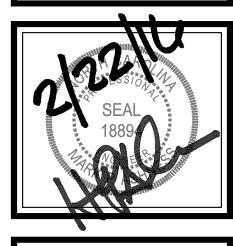
EMERGENCY SPILLWAY



RELEASED



www.cegroupinc.com License # C-1739



OCTOBER, 2015 N/A JPD

Checked: MPA Project No. 120-23 Computer Dwg. Name l 20-23 24 EC Details

sheet No:

FOR CONSTRUCTION