

Seeded Preparation:

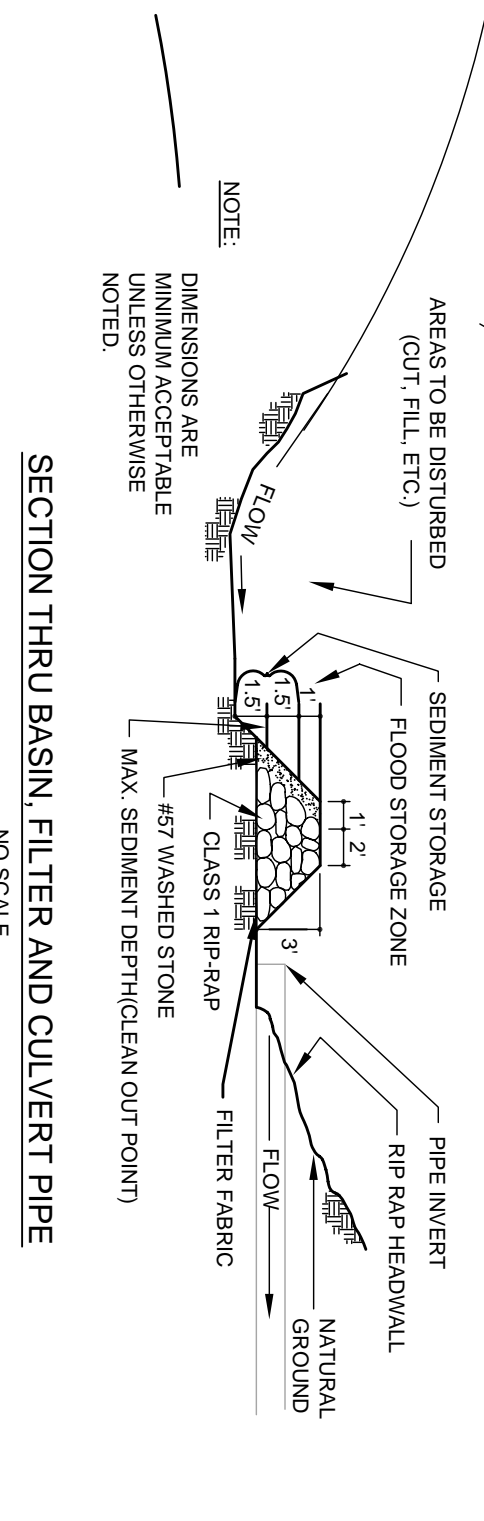
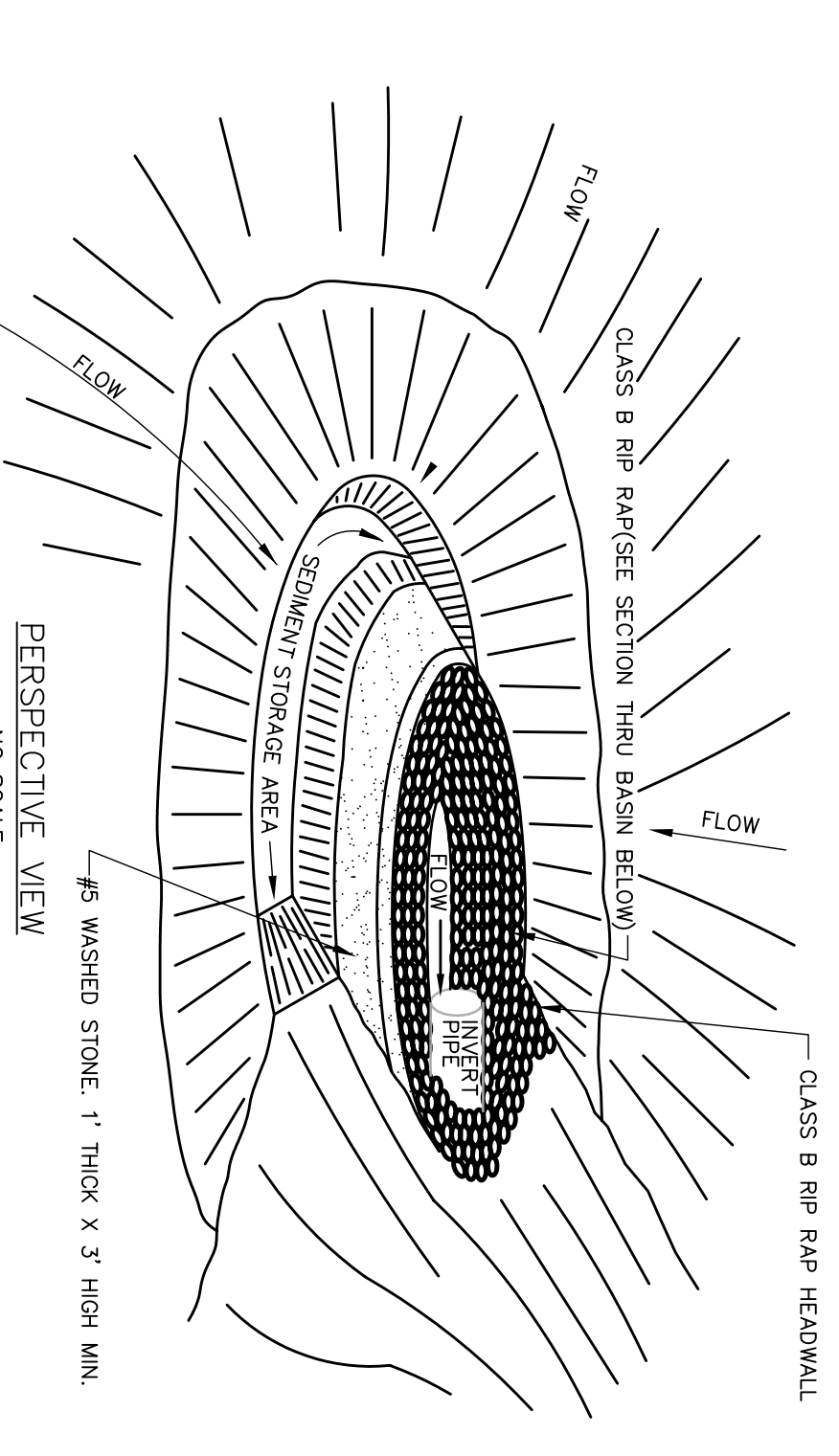
1. Chisel compacted areas and spread exposed trees deep over adverse conditions, if available.
 2. Remove all loose rock, wood, and other obstructions leaving surface reasonable smooth and uniform.
 3. Seed at a minimum of 100 lbs per acre. Seed may be applied in one or two passes, depending on soil conditions.
 4. Apply appropriate nitrogen and superphosphate uniformly and not less than 1/2 inch deep.
 5. Seed shall be applied in a pattern that will provide a uniform cover over the entire area.
 6. Seed on a heavily eroded area and cover seed lightly with seeding equipment (drag, harrow, roller, etc.)
 7. Seed shall be applied in a pattern that will provide a uniform cover over the entire area.
 8. Impact all seeded areas and make necessary repairs for seedling with the planting season, if possible. If later should be over 90 days after seeding, seed shall be re-applied to all areas where seedlings are not visible.
 9. Contact ETS Environmental Engineers for maintenance treatment and evaluation after permanent cover is established.
- Medium Agricultural Lime/stone: 2 tons/acre (3 conditions in dry year)
 Superphosphate: 500 lbs/acre - 20% analysis
 Nitrogen: 500 lbs/acre - 20% analysis
 Annual Rainfall: 40-50 inches

Seeding Schedule

Date	Type	Planting Notes
Aug 15 - Nov 1	Tall Fescue	200 lbs/acre
Nov 1 - Mar 1	Tall Fescue & Kentucky Blue	300 lbs/acre
Mar 1 - Apr 15	Tall Fescue	300 lbs/acre
Apr 15 - Jun 30	Hard Fescue/Bermudagrass	300 lbs/acre
Jul 1 - Aug 15	Tall Fescue AND Bermudagrass Sudan Hybrid ***	200 lbs/acre 200 lbs/acre

Date	Remarks
Mar 1 - Jun 1	Soil Test (Landscape Inoculant) use the following instructions:
Mar 1 - Apr 15	Add Tall Fescue
Mar 1 - Jun 30	Or and John Common Bermudagrass
Jun 1 - Sept 1	Tall Fescue AND Bermudagrass Hybrid or Sudan Hybrid ***
Sept 1 - Mar 1	Soil Test (Landscape Inoculant - unacidified)
Nov 1 - Mar 1	Apply Annual Fertilizer

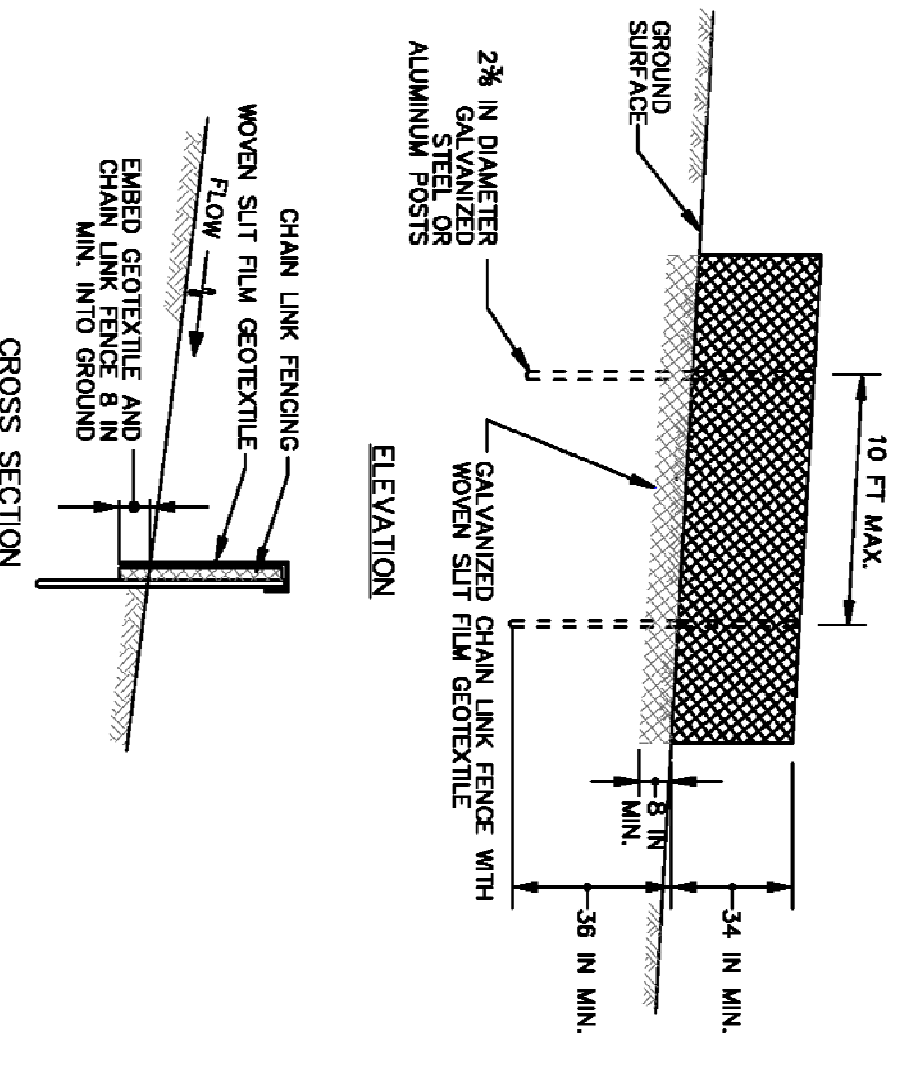
*****TEMPORARY: Seeded according to optimum season for defined permanent vegetation. Do not allow temporary cover to grow over 12" in height before mowing, otherwise future may be hindered.



SECTION THRU BASIN, FILTER AND CULVERT PIPE

MAINTENANCE:
 INSPECT ROCK FILTER PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL PACKING.
 CHECK THE STRUCTURE FOR DAMAGE. ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY.
 AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND-COVER SURFACE STABILIZATION!

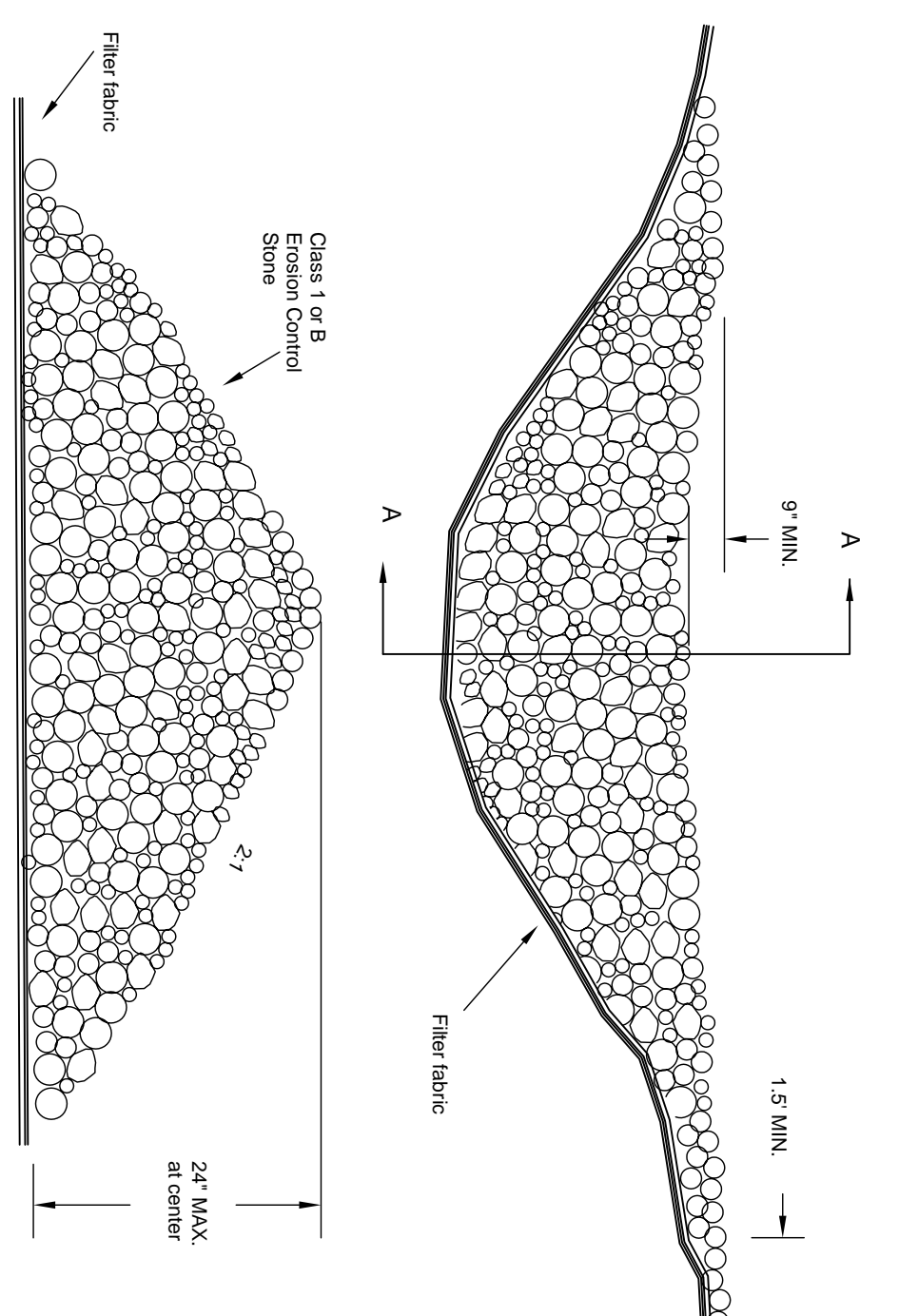
GRAVEL & RIPRAP HORSESHOE INLET BASIN



CONSTRUCTION SPECIFICATIONS

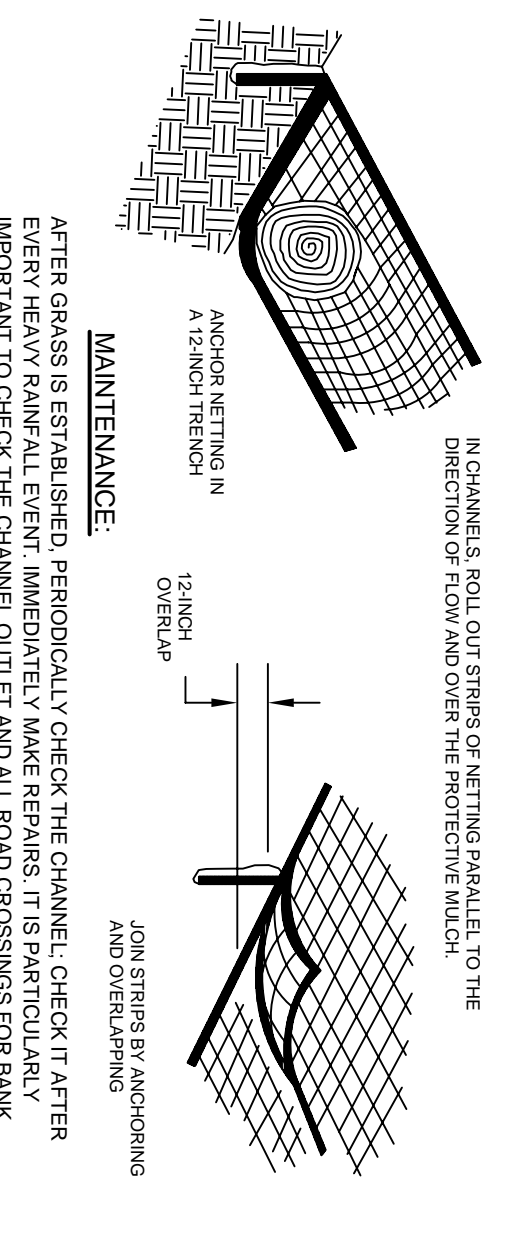
1. INSTALL 2 1/2" DIAMETER GALVANIZED STEEL POSTS OF 0.068 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN A GAUGE OR HEAVY GALVANIZED CHAIN LINK FENCE (2 1/2" INCH MAXIMUM OPENING) 1/2 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 6 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEEDMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SLIT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RAINFALL FROM COMING AROUND THE ENDS OF THE SUPER SLIT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT CHAIN LINK FENCING AND GEOTEXTILE.

SUPER SLIT FENCE

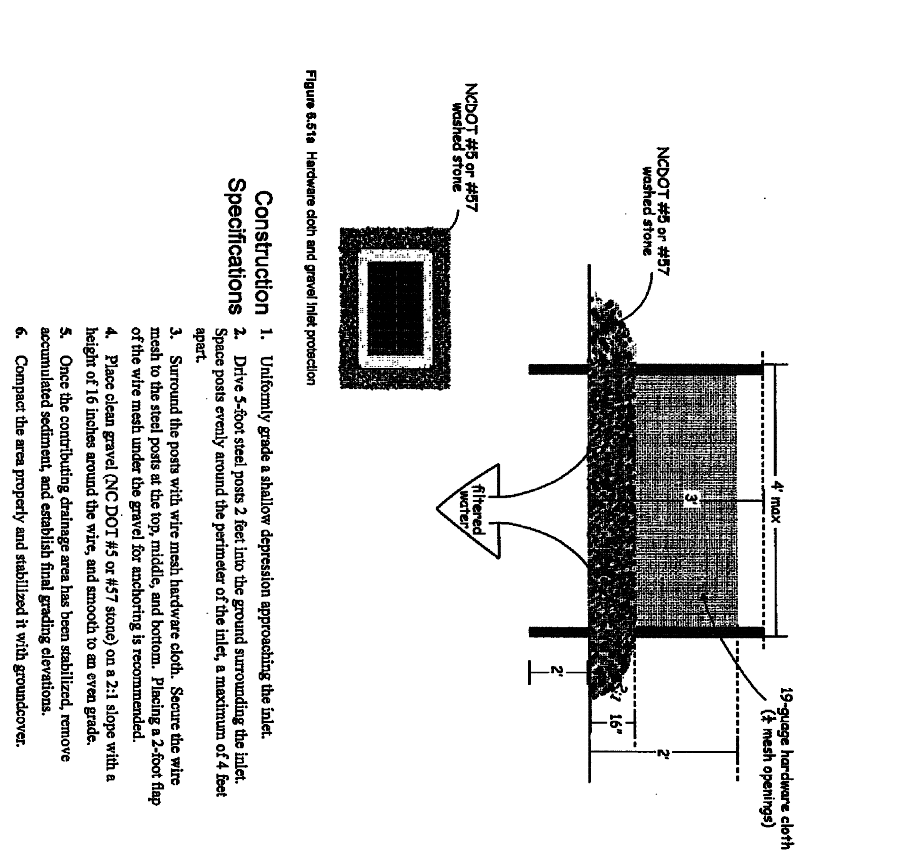


Stone should be placed over the channel banks to keep water from cutting around the dam.
MAINTENANCE:
 INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT 1/2 INCH OR GREATER RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED.

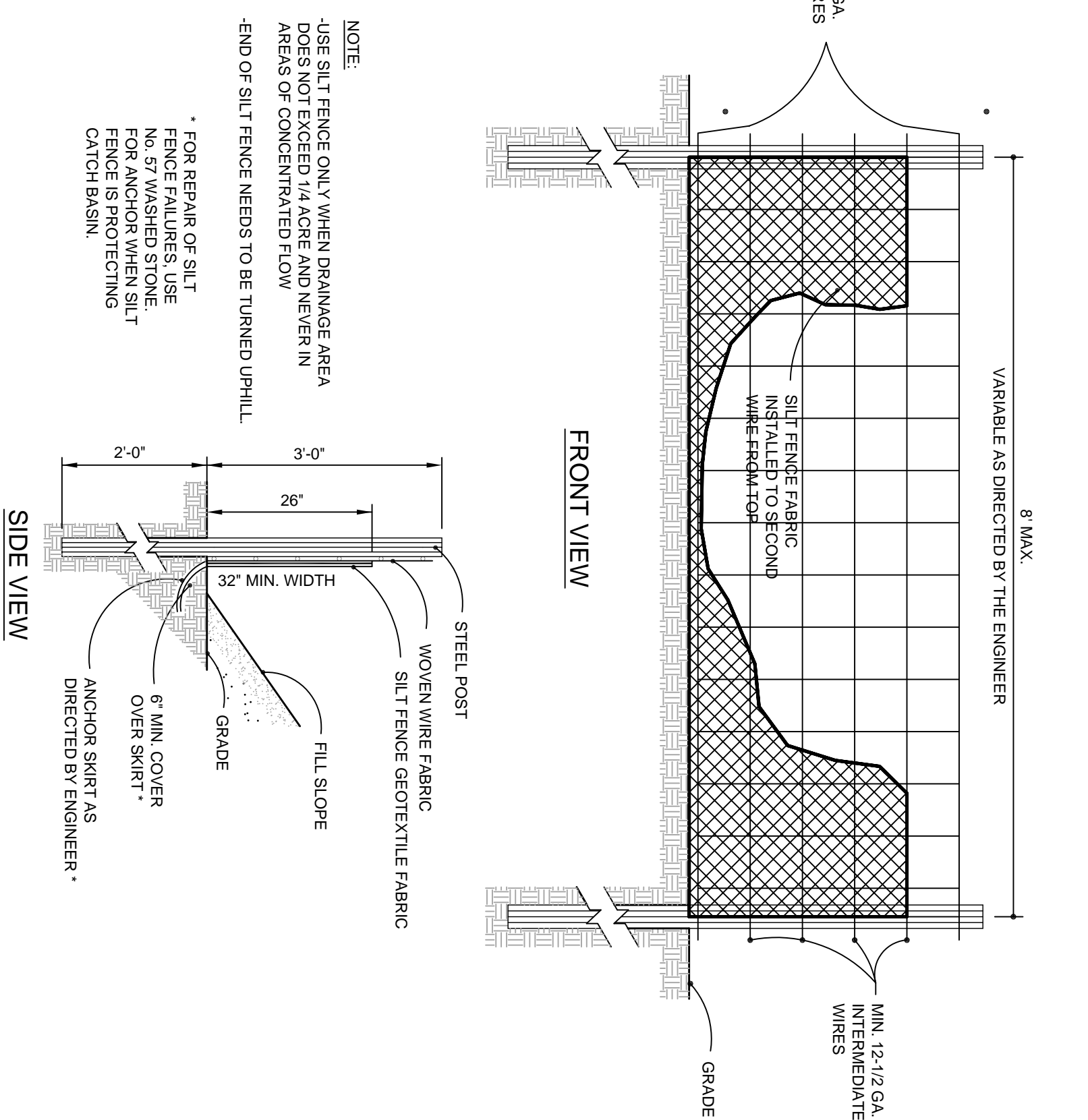
STONE CHECK DAM



TEMPORARY INLET PROTECTION

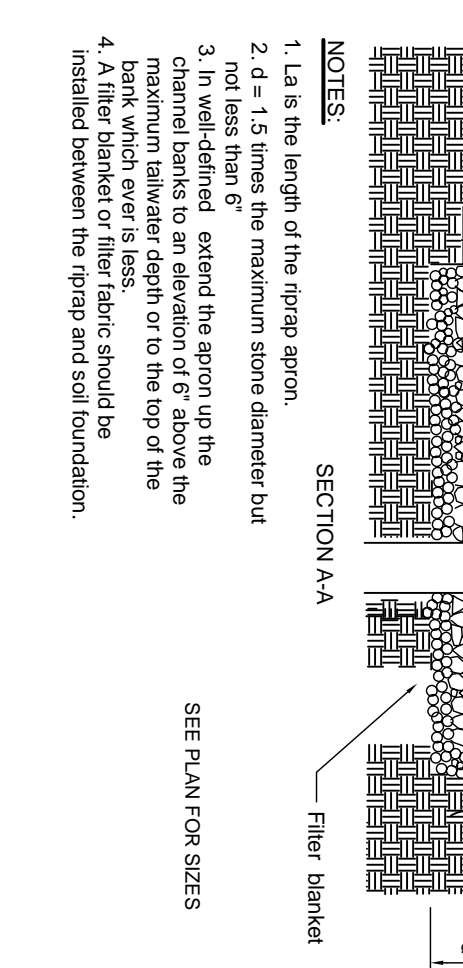
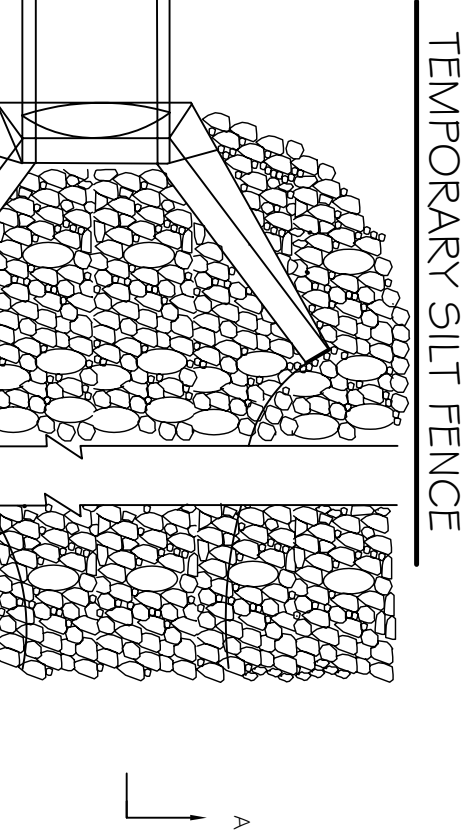


TEMPORARY CHANNEL LINING



TEMPORARY SILT FENCE

MAINTENANCE:
 INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
 SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
 REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR FURTHER DEPOSIT. REMOVE DEBRIS FROM THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
 REMOVE ALL TENDING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE FENCE BACK TO ITS ORIGINAL DESIGN CONDITION AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



OUTLET PROTECTION FOR DEFINED CHANNEL

NOTES:
 1. La is the length of the riprap apron.
 2. d = 1.5 times the maximum stone diameter but not less than 6"
 3. In well-defined extend the apron up the maximum batter (steepest slope) or to the top of the bank which ever is less.
 4. A filter fabric should be placed between the apron and the channel bottom.



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

NO.	REVISIONS	DATE

CE GROUP

301 GLENWOOD AVE 220
 RALEIGH, NC 27602
 PHONE: 919-387-8780
 FAX: 919-322-0022

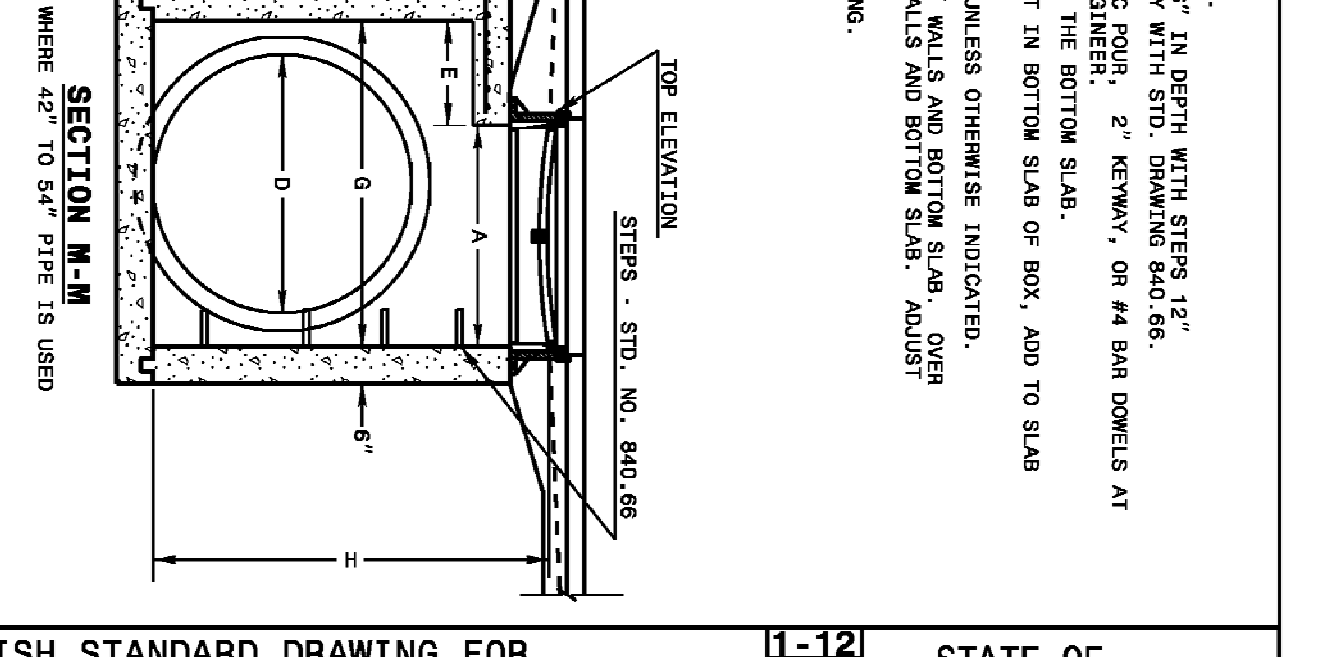
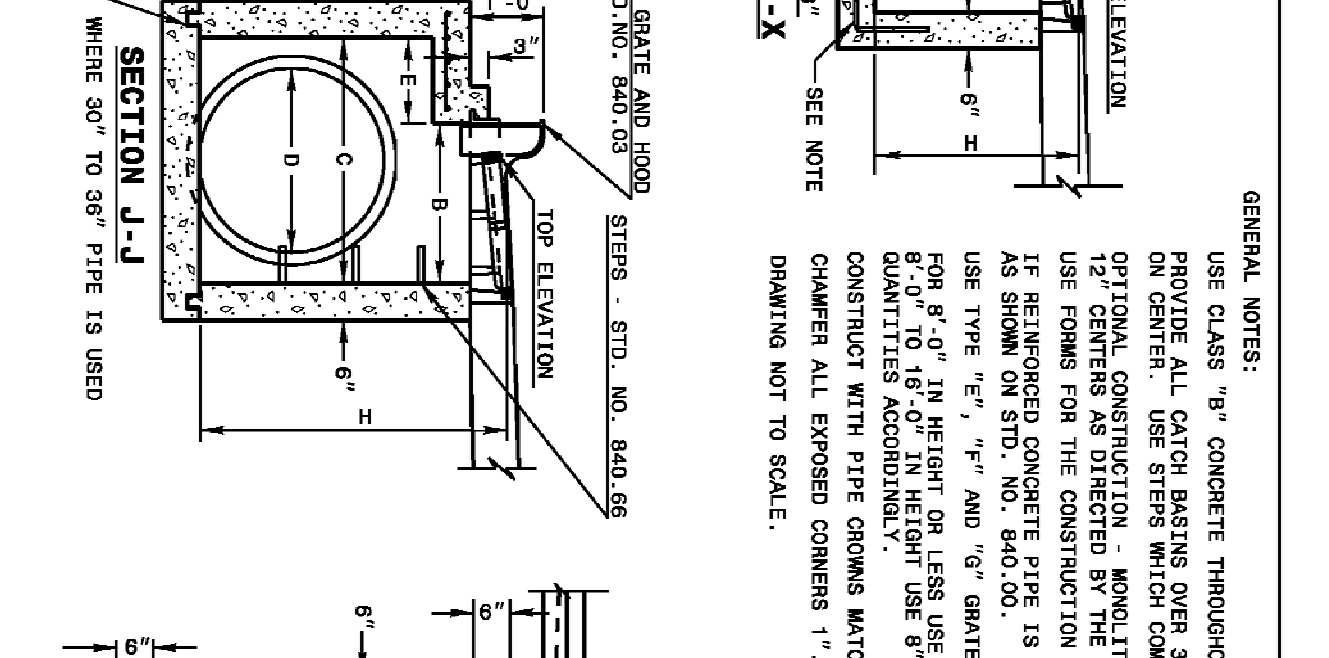
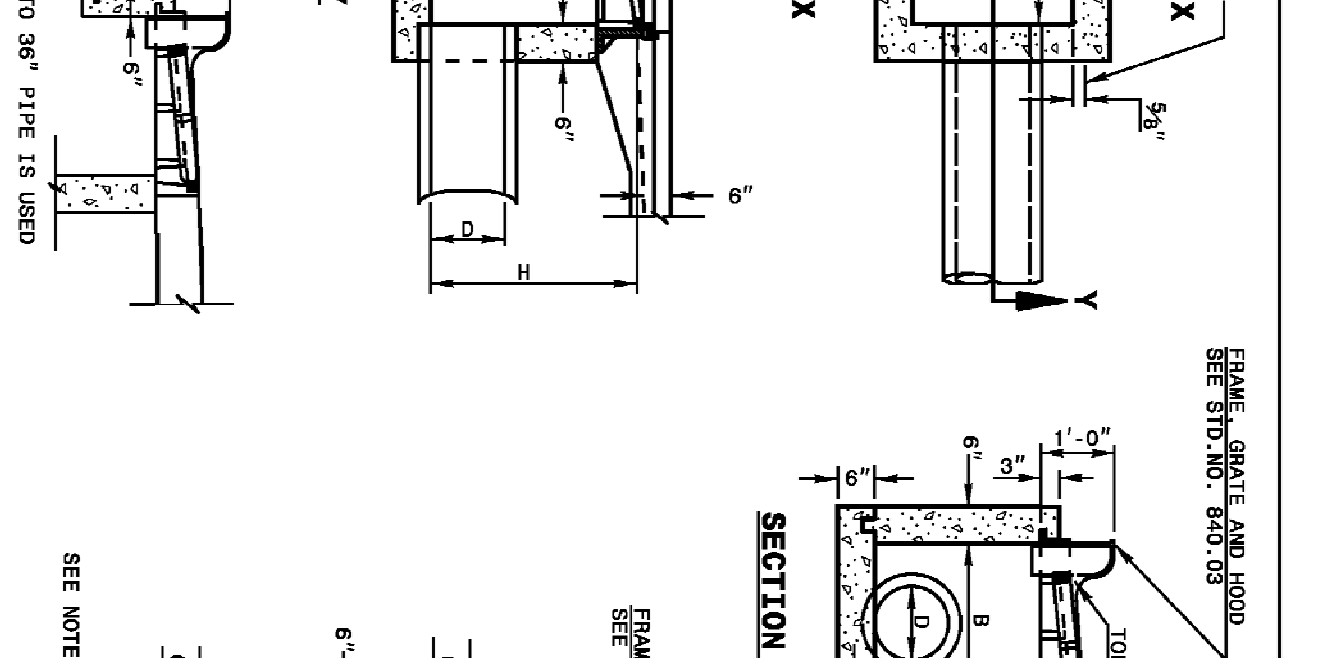
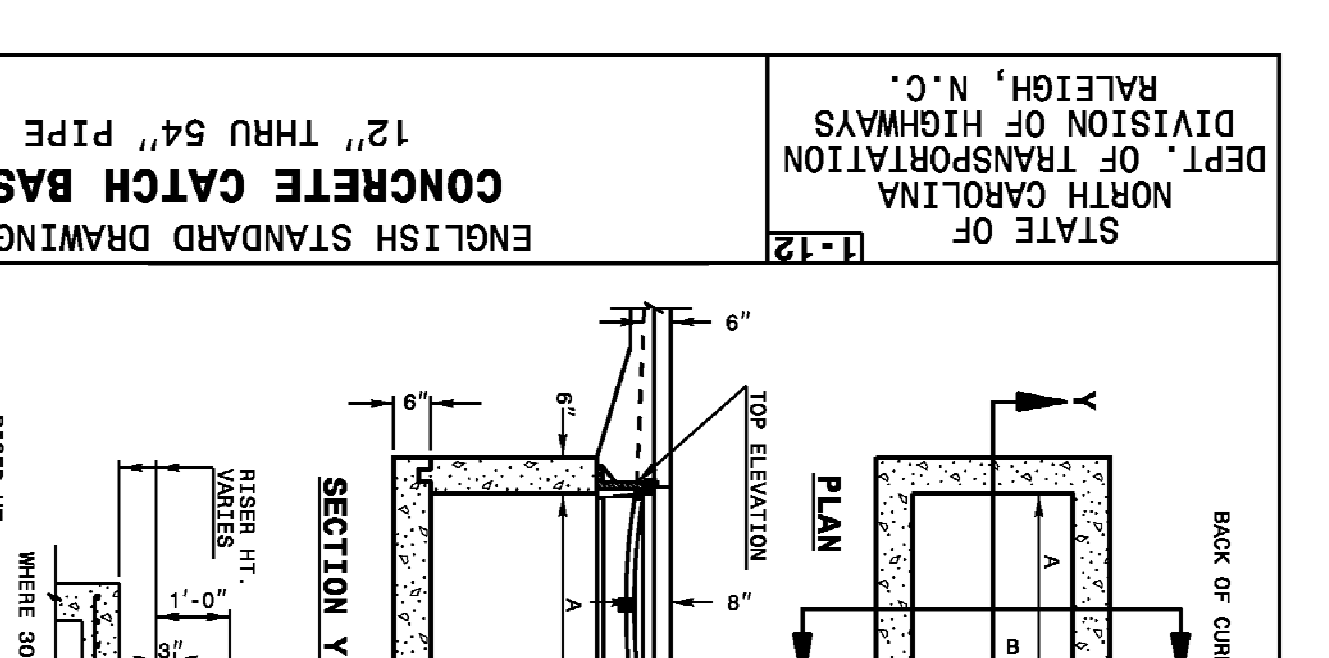
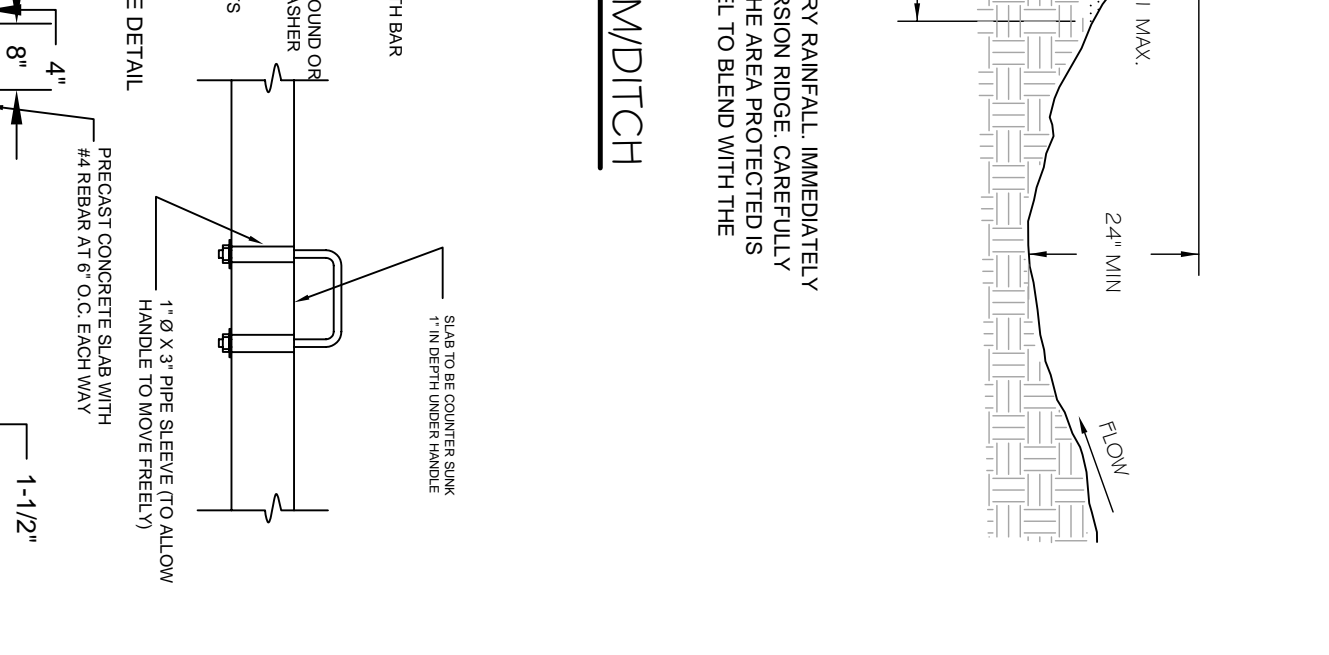
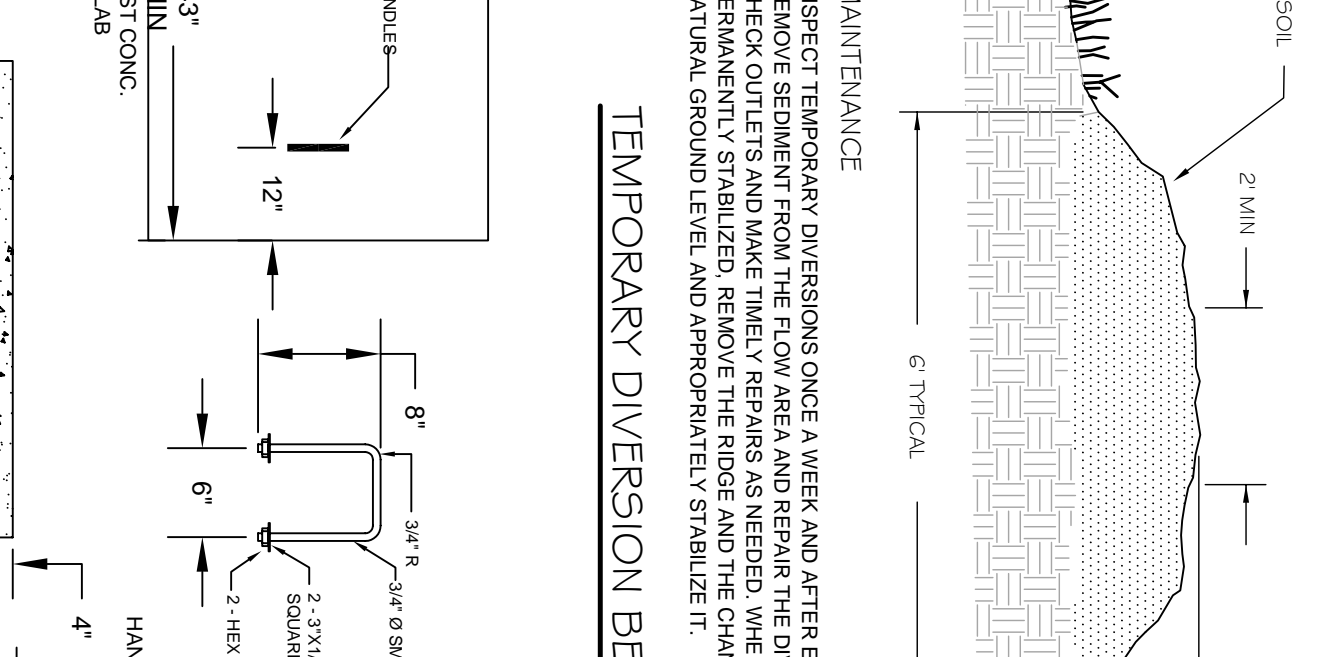
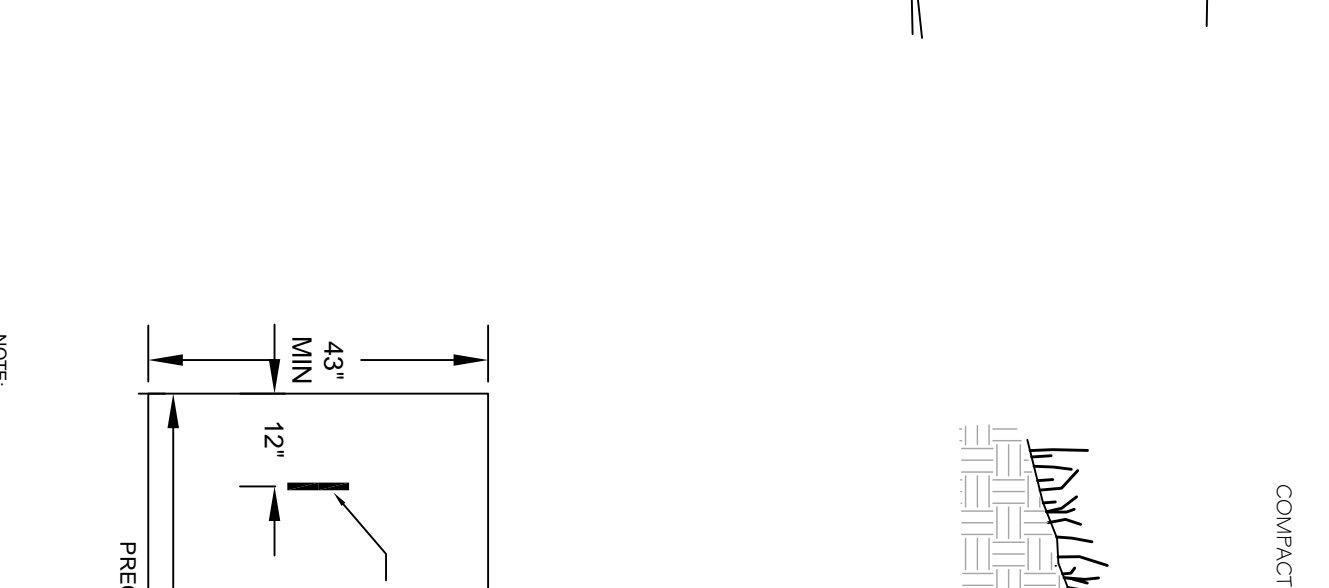
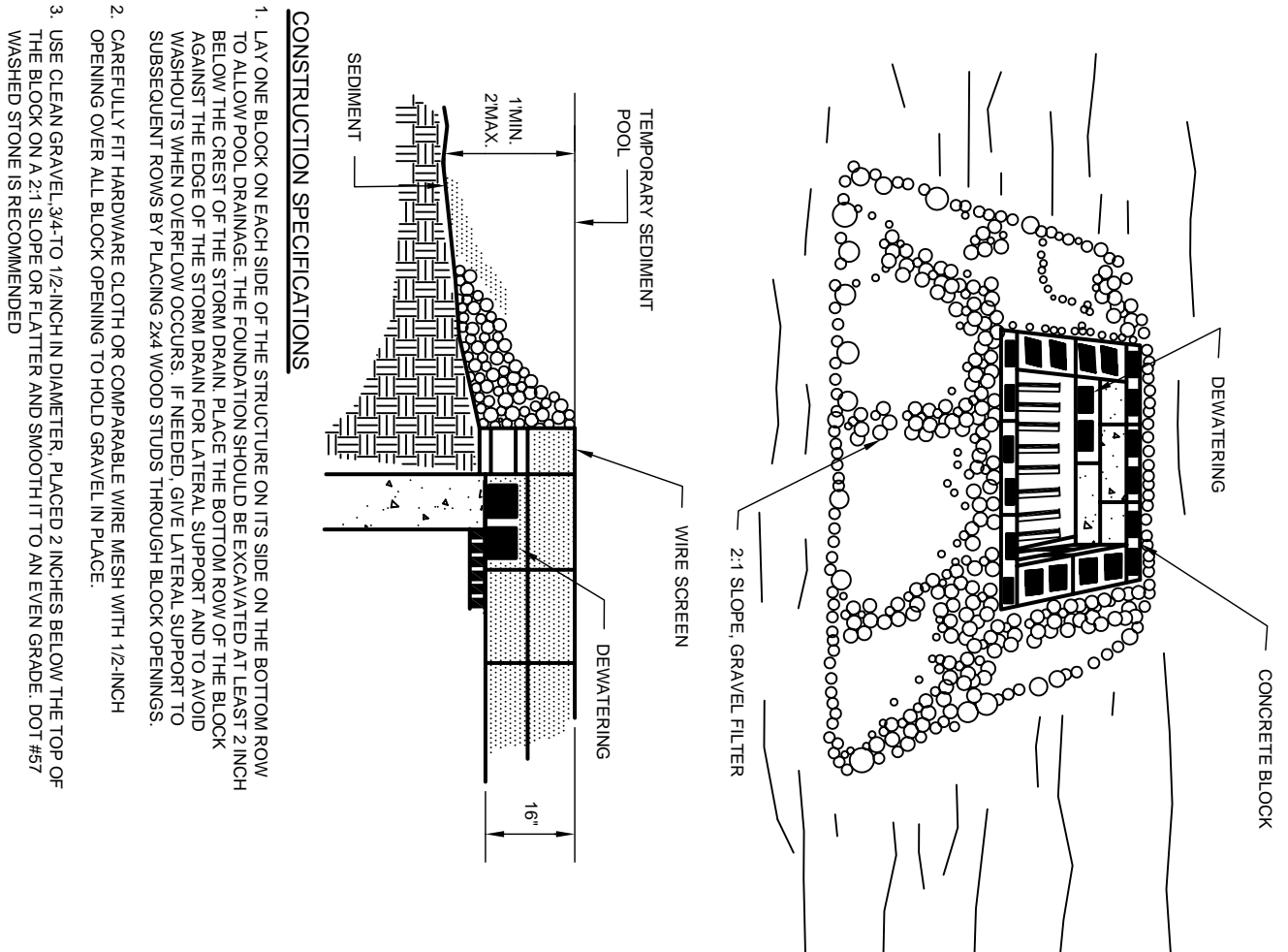
www.cegroupinc.com
 Lic# 98 # C-1739



WESTFALL SUBDIVISION
 PHASE 2C CONSTRUCTION PLANS
 EROSION CONTROL DETAILS

WILLIAMS TOWNSHIP
 CHATHAM COUNTY, NORTH CAROLINA

Date:	APRIL 12, 2013
Scale:	N/A
Drawn:	ACS
Checked:	ALF
Project No.:	800-12
Computer: Dwg. Name:	80012 Area C - 12 EC Details.dwg
Sheet No.:	12 of 1

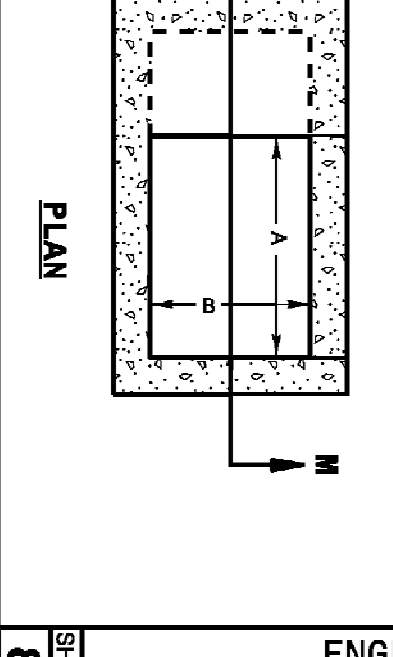
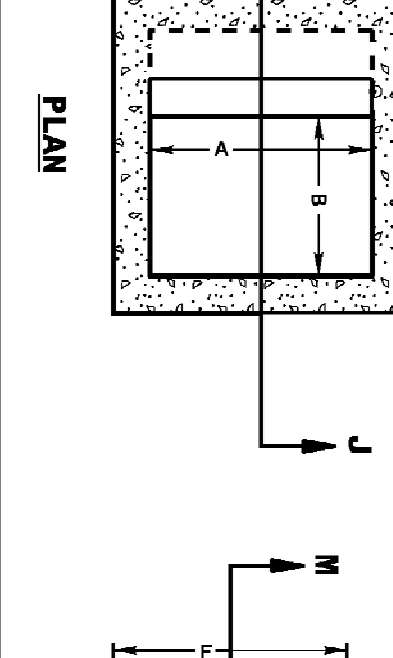
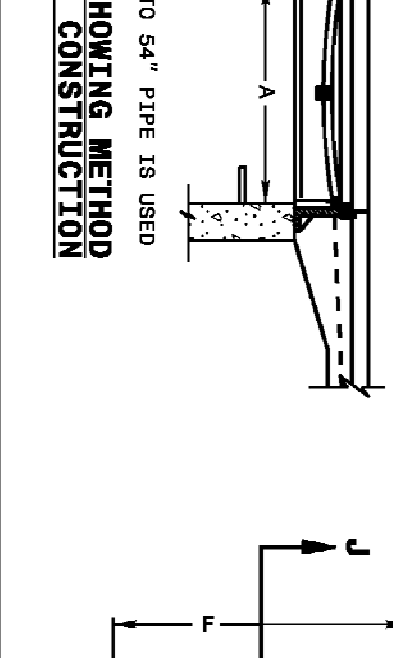
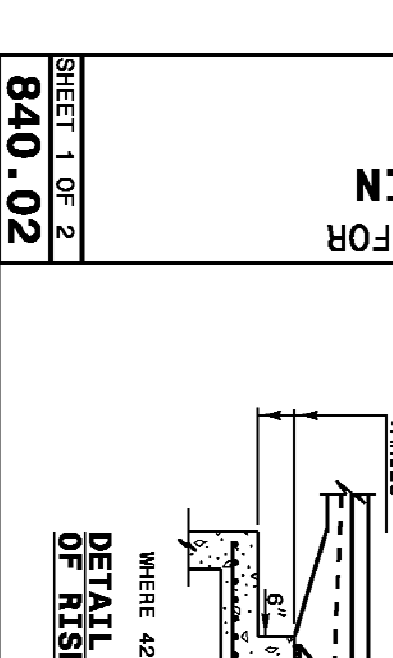
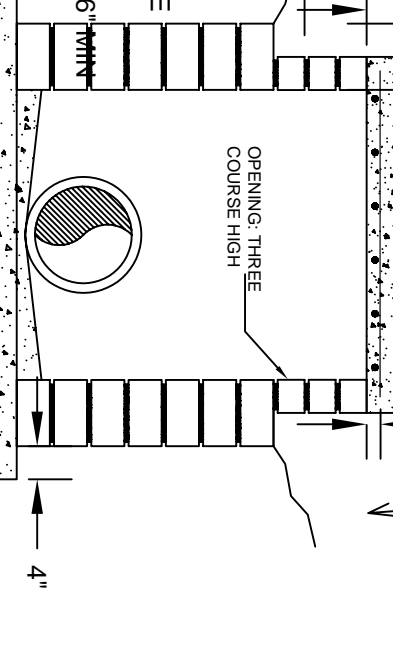
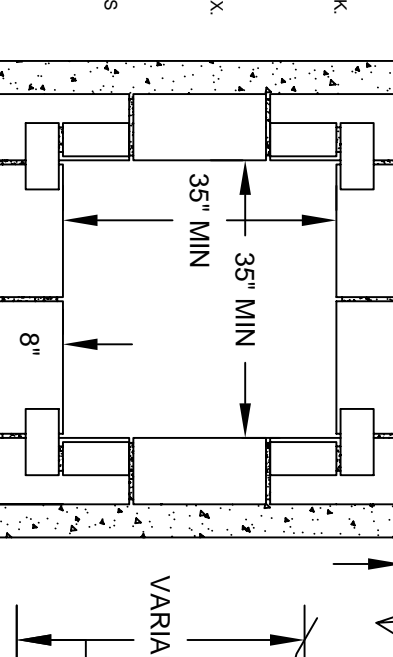
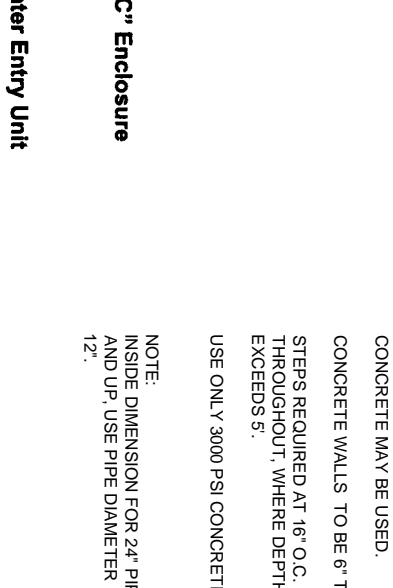
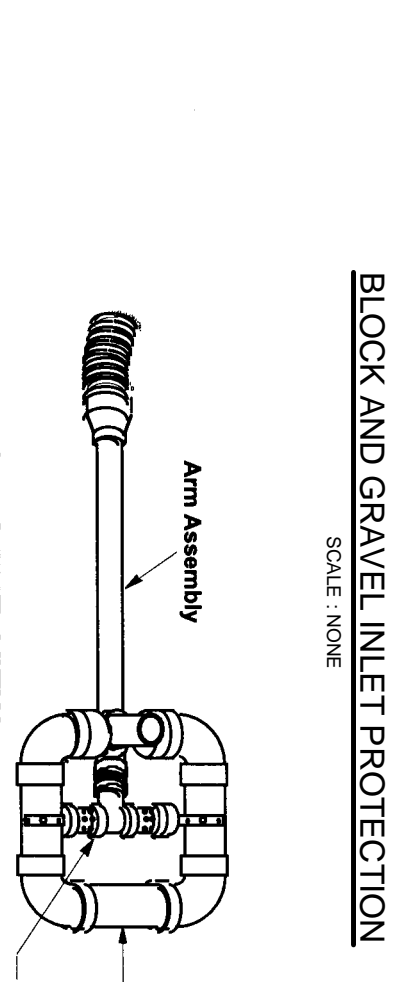


CONSTRUCTION SPECIFICATIONS

- LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE ON THE BOTTOM ROW TO ALLOW ROOM FOR THE FOUNDATION SHOULD BE EVALUATED AT LEAST 12" INCH TO THE END OF THE STORM DRAIN FOR ALL TYPES OF SUPER AND TO ALLOW VARIATIONS WHEN OVERFLOW OCCURS. F REEDED LOBE LATERAL SUPPORT TO BE PROVIDED FROM STORM DRAIN THROUGH EACH SECTION.
- OPENING OVER ALL BLOCK OPENING TO CHARGE GRAVEL INLET.
- USE CLEAN GRAVEL #24 TO 30 MESH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 21 SLOPE OR FLATTER AND SMOOTH TO AN EVEN GRADE 100 # 27 WASHED STONE IS RECOMMENDED.

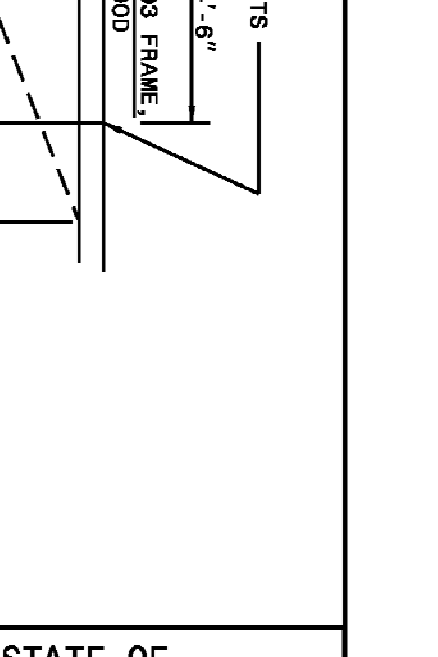
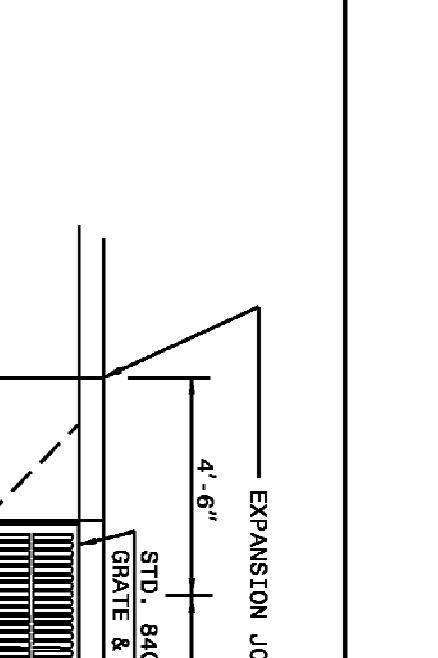
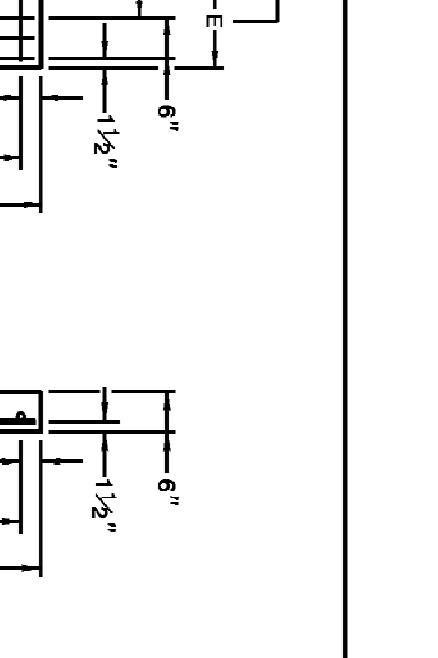
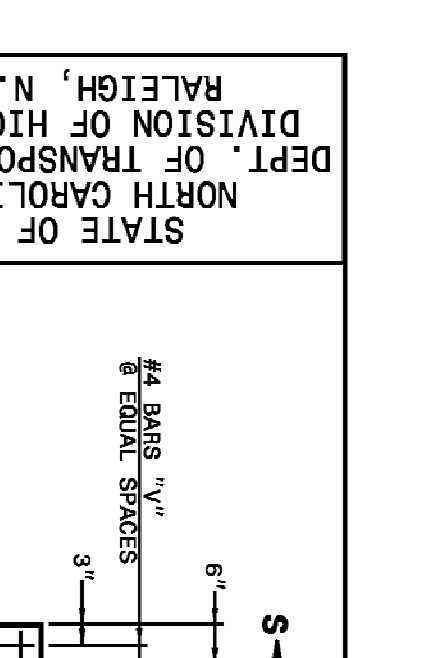
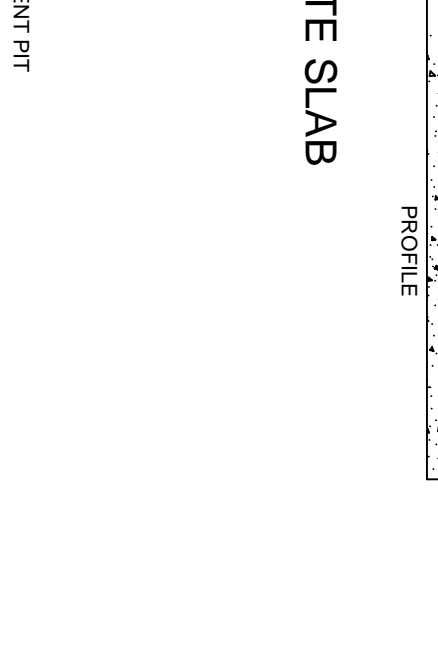
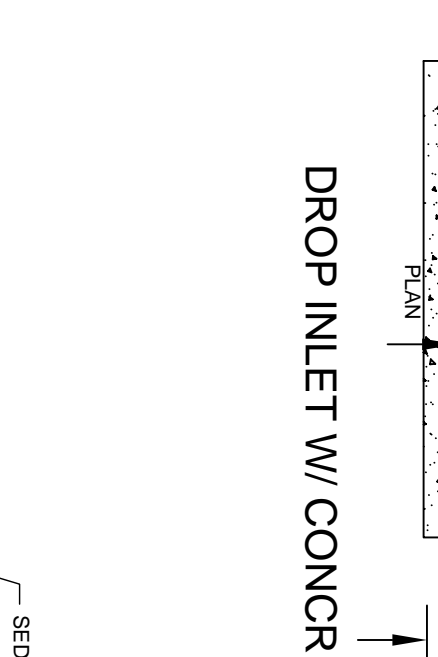
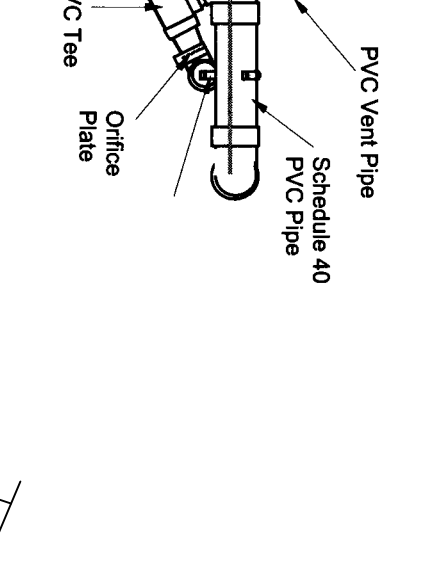
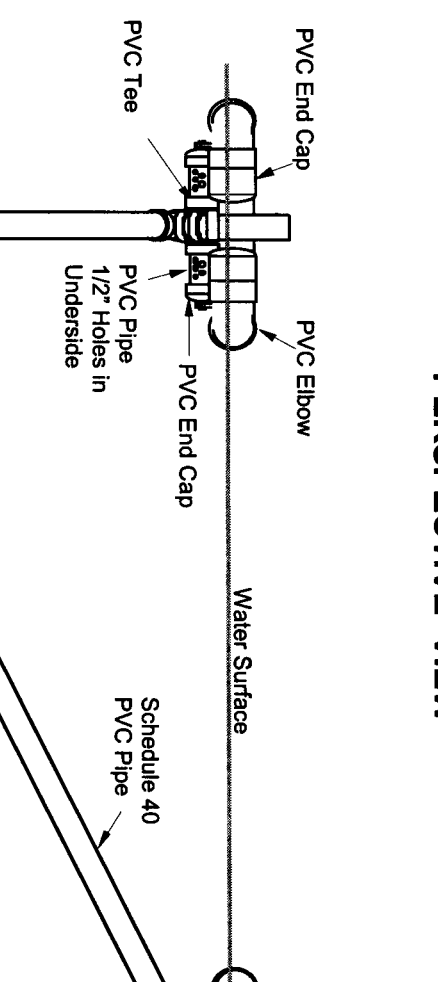
BLOCK AND GRAVEL INLET PROTECTION

SCALE: NONE



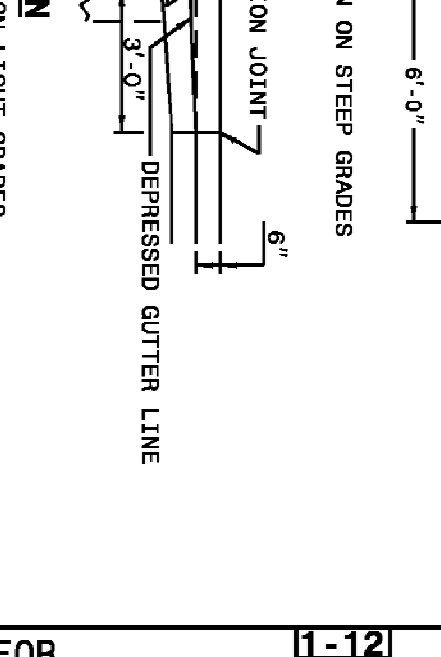
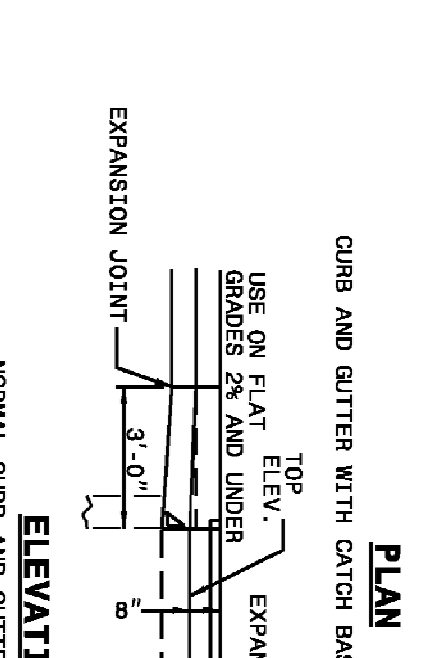
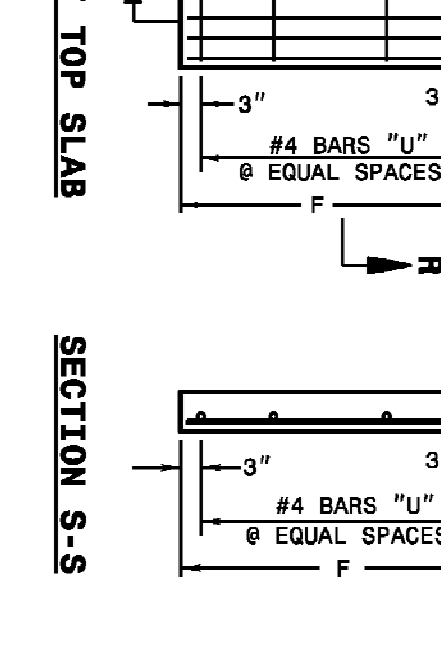
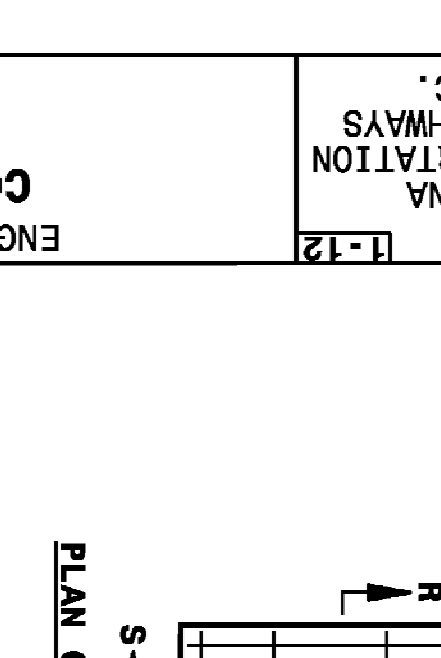
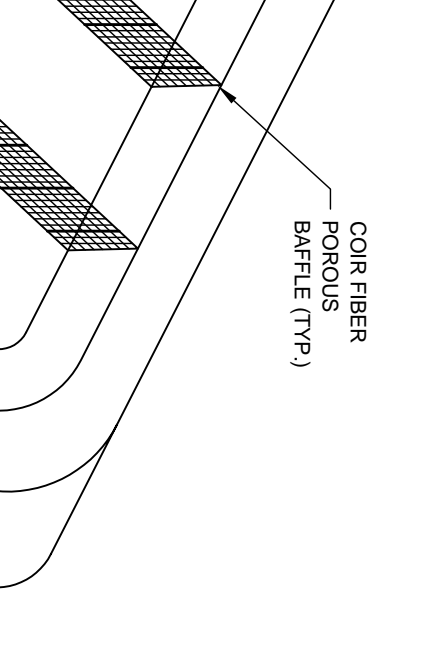
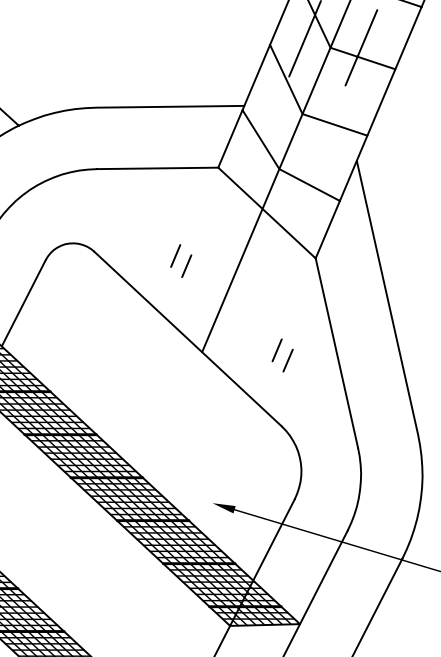
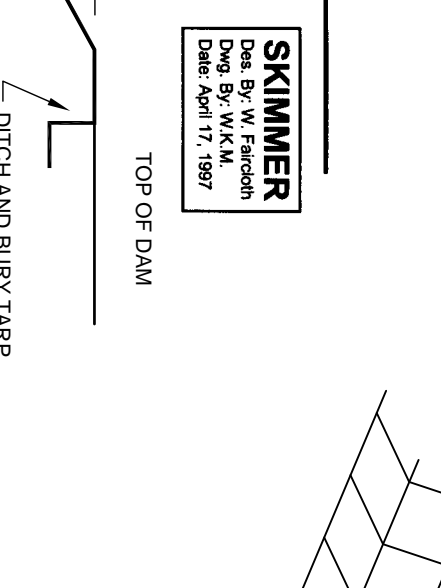
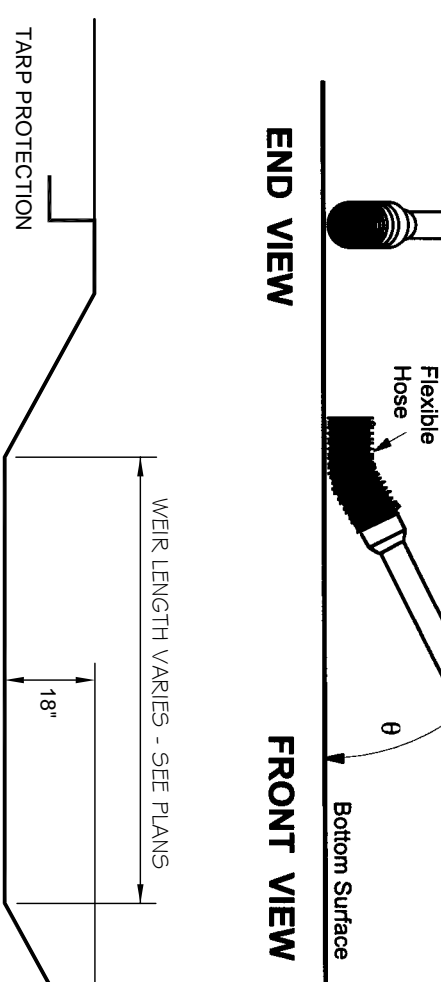
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



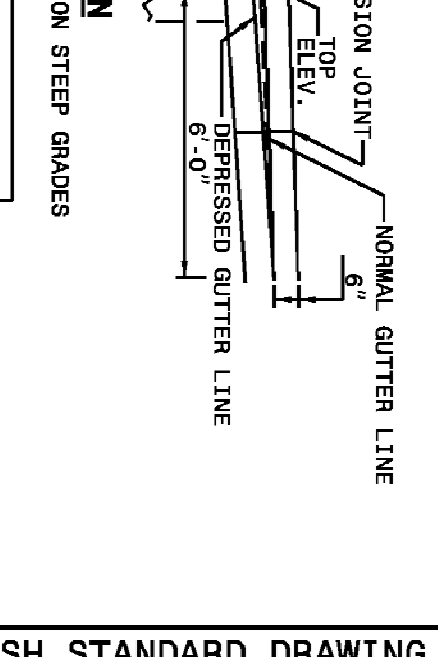
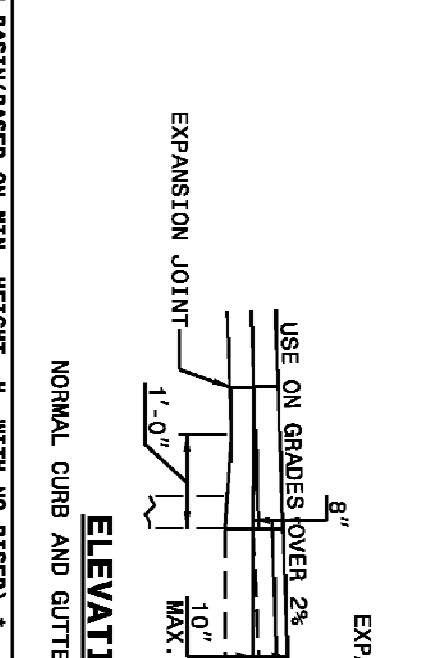
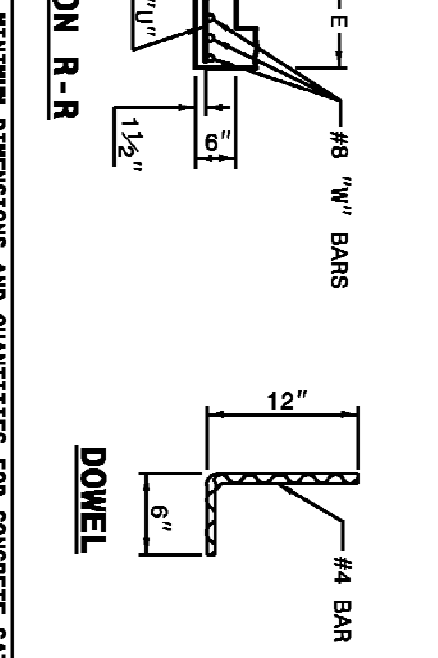
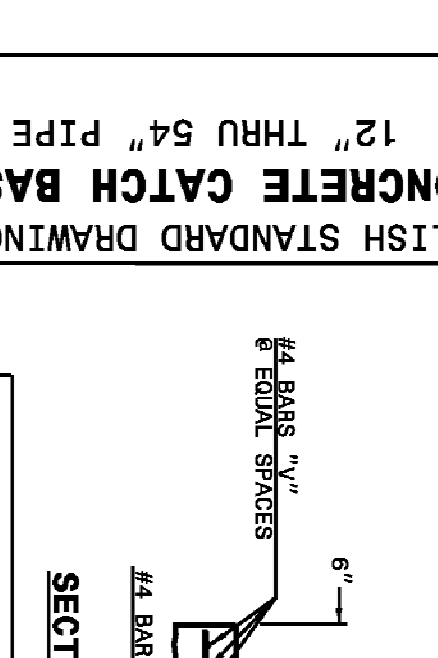
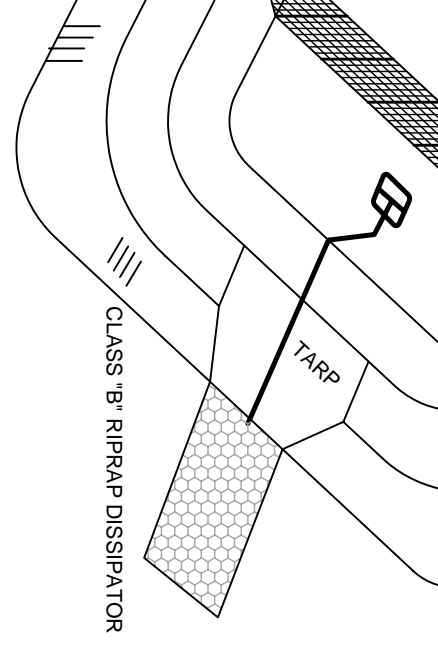
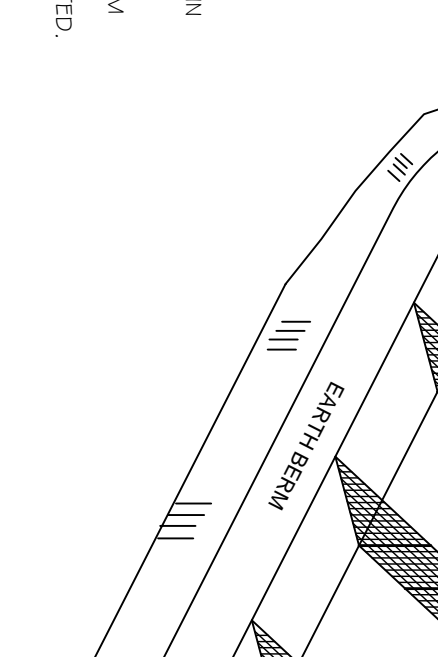
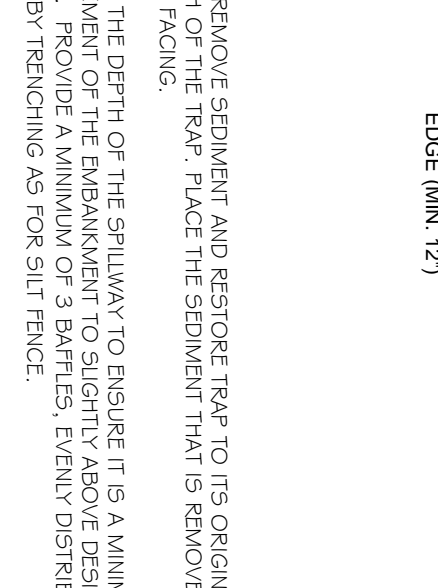
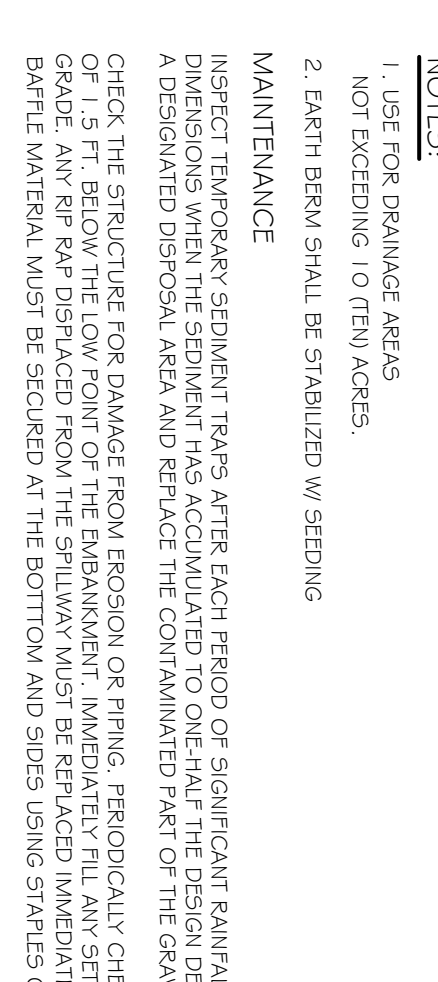
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



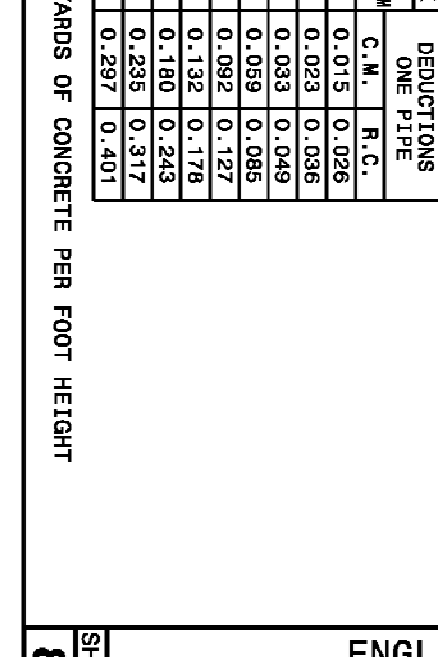
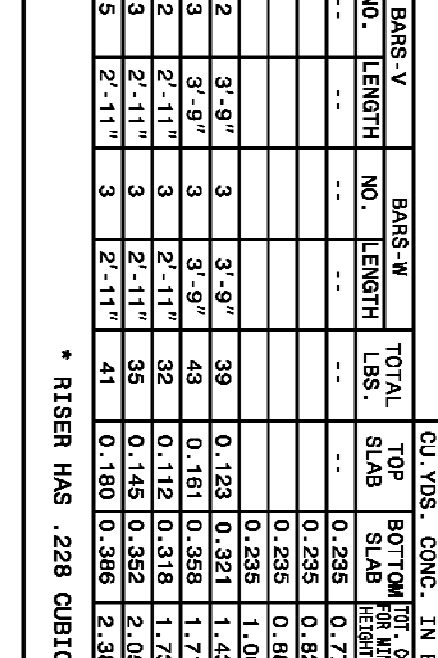
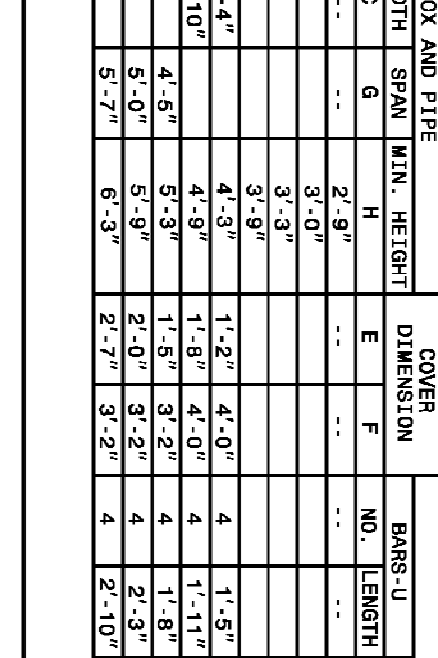
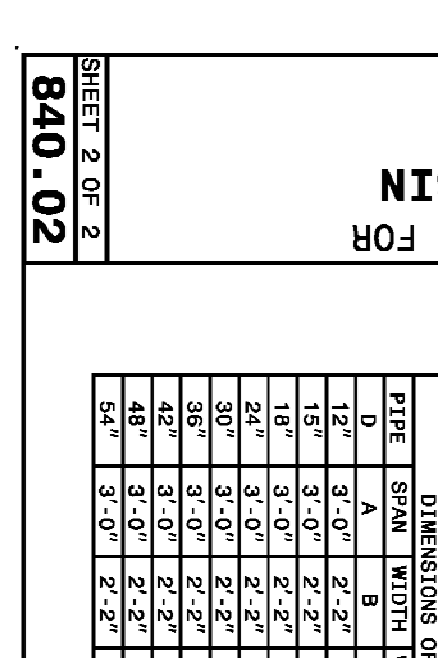
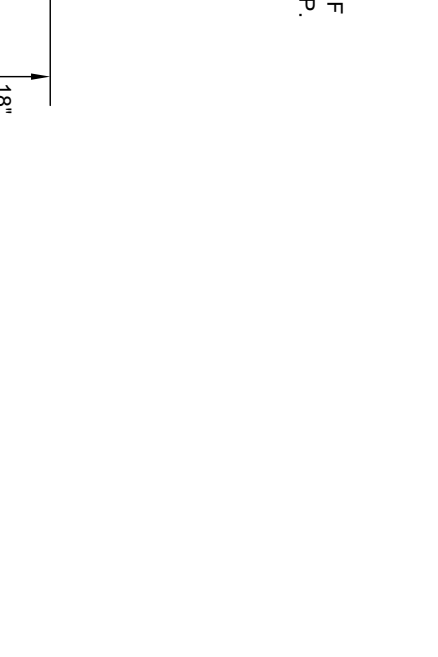
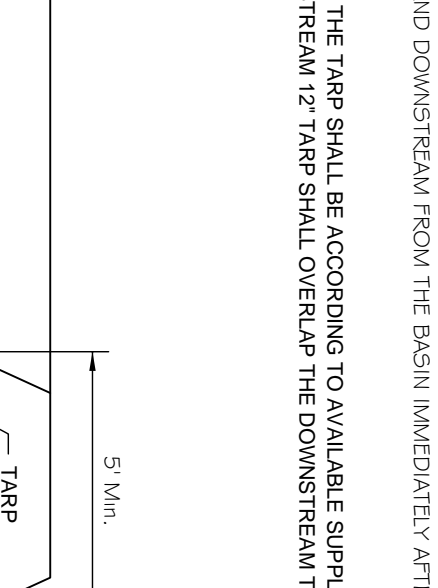
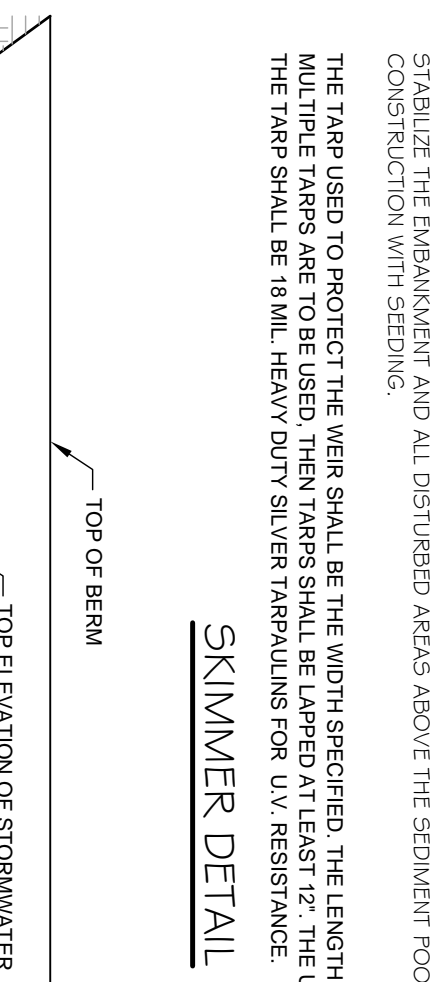
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



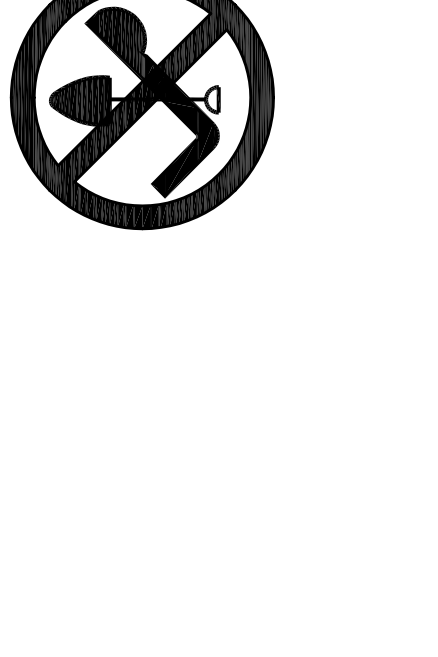
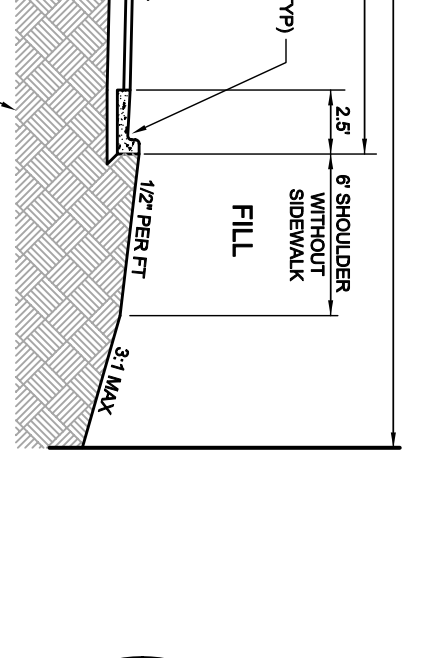
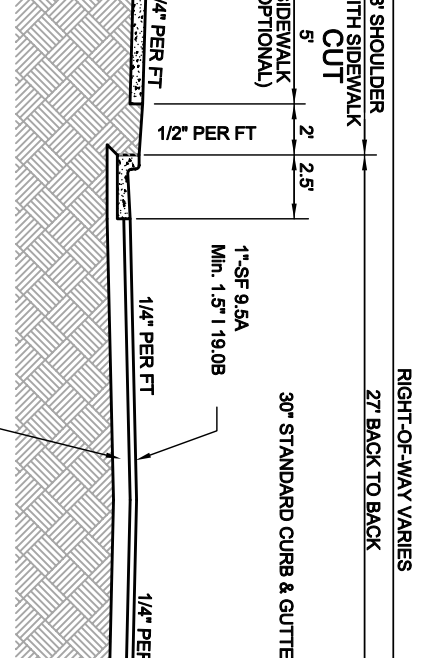
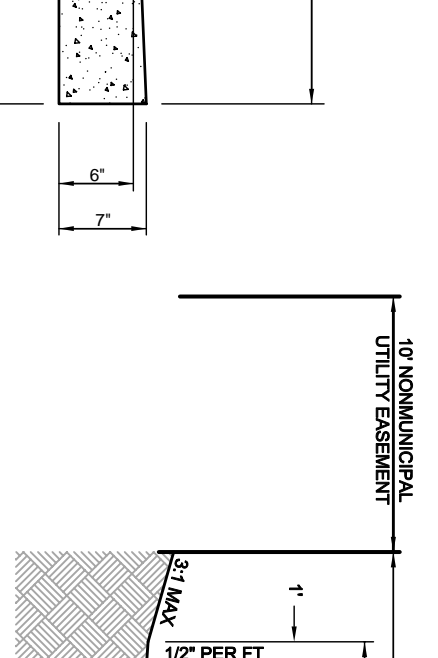
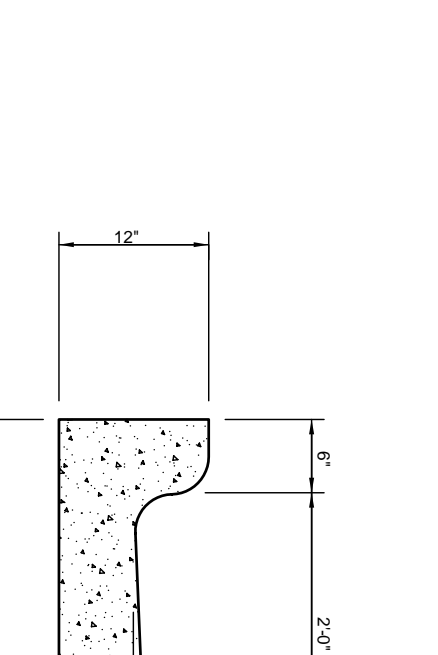
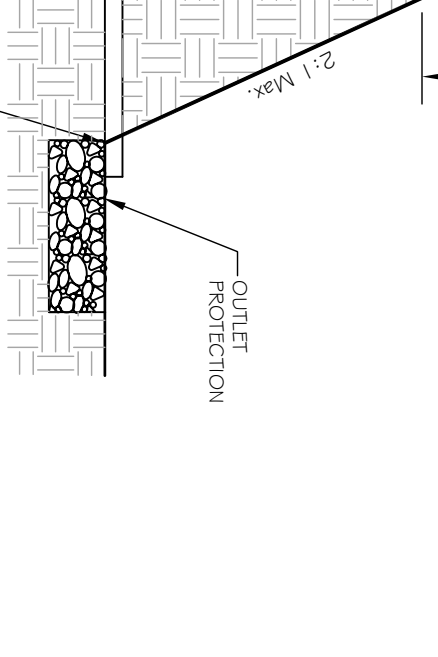
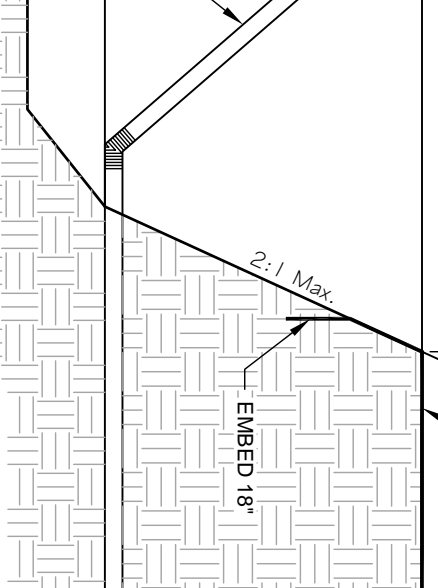
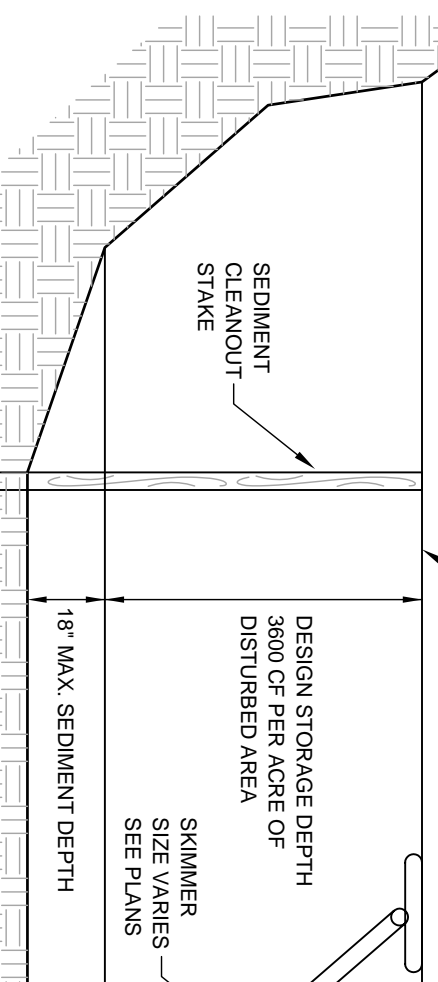
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



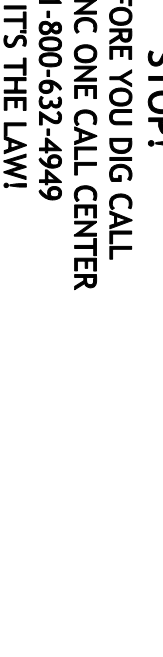
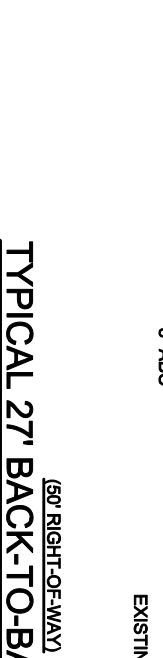
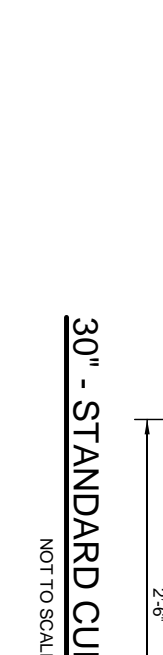
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



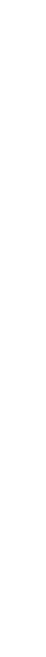
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



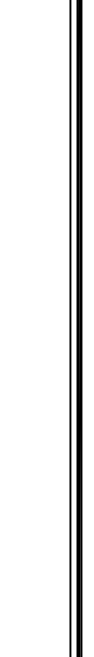
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



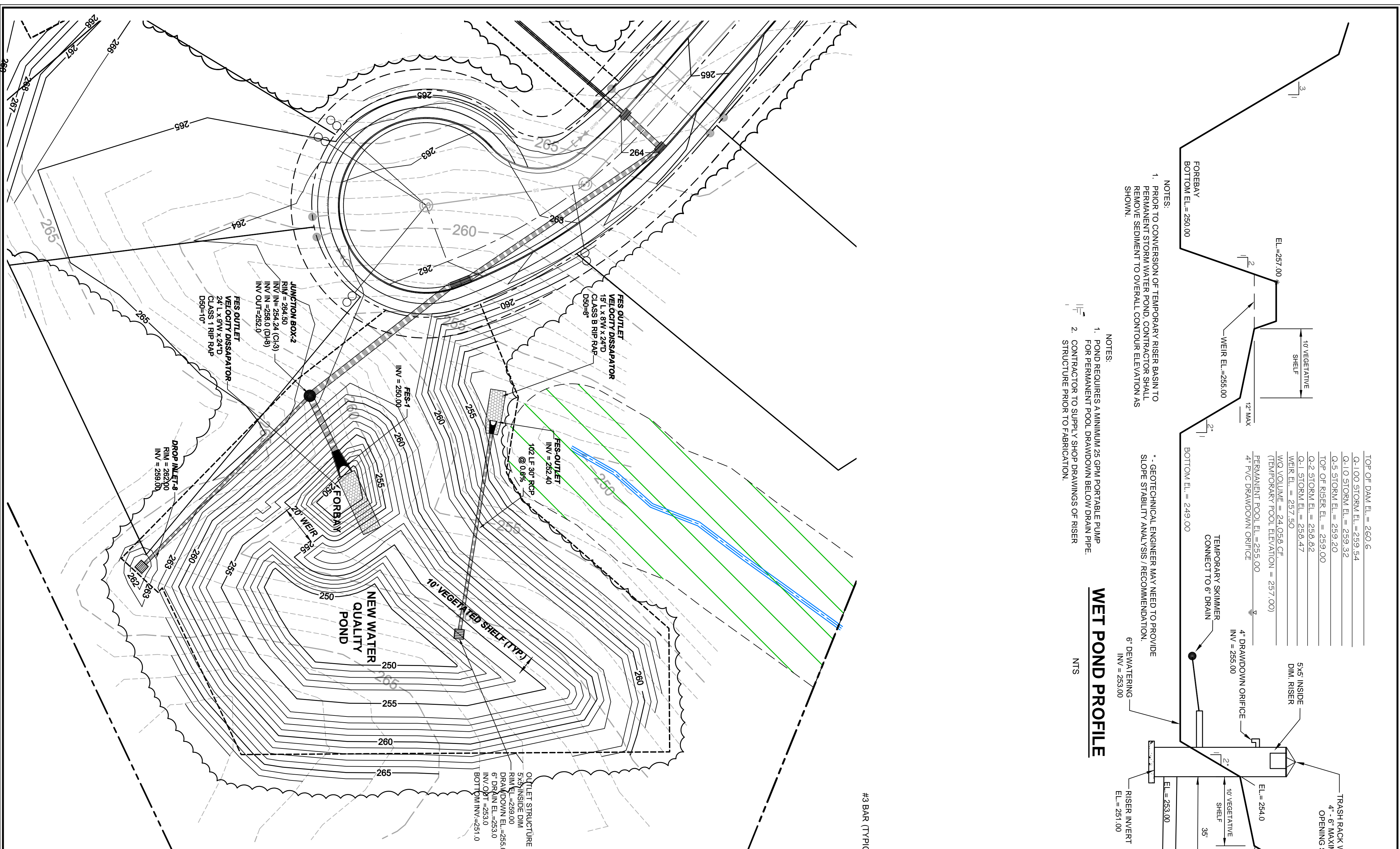
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE

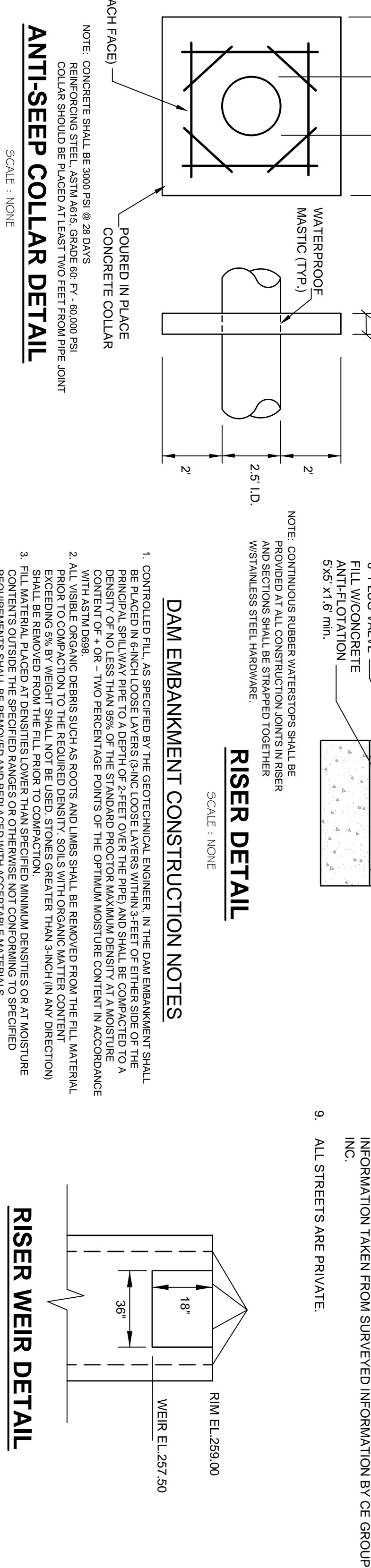


STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE



- ### GENERAL NOTES
- EXISTING UNDERGROUND STRUCTURES AND UTILITIES SHOWN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 - THE CONTRACTOR SHALL CONTACT NORTH CAROLINA ONE CALL AT 1-800-432-4849. THE CONTRACTOR SHALL CALL AT LEAST 48 HOURS PRIOR TO ANY DIGGING.
 - ALL WATER UTILITY CONSTRUCTION SHALL CONFORM TO THE CHATHAM COUNTY STANDARDS AND SPECIFICATIONS.
 - ALL WATER MAINS SHALL HAVE A MINIMUM OF 3.0' OF COVER AS MEASURED FROM FINISH GRADE AT THE LOCATION OF WHERE INSTALLED.
 - ALL SANITARY SEWER UTILITY CONSTRUCTION SHALL CONFORM TO AQUA OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
 - THE SUBJECT PROPERTY IS LOCATED IN A FLOOD HAZARD AREA PER FEMA FIRM PANEL 9794 MAP NUMBER 9710992R001, DATED FEBRUARY 2, 2007.
 - AQUA PERSONNEL SHALL BE NOTIFIED 48 HOURS BEFORE CONSTRUCTION IS TO BEGIN. ANY TESTING IS SCHEDULED, OR BEFORE ANY PIPE IS COVERED.
 - EXISTING OVERALL TOPOGRAPHIC INFORMATION TAKEN FROM ACCO TOWN OF CHATHAM CONDOMINIUM DEVELOPMENT SPECIFIC INFORMATION TAKEN FROM SURVEYED INFORMATION BY CE GROUP, INC.
 - ALL STREETS ARE PRIVATE.



- ### STANDARD SLIP RESISTANT MANHOLE STEP DETAIL
- SCALE: 1"=1'-0"
- WATER COURSE INFORMATION**
 HERNDON CREEK WS-1V, NSW
 WATERBODY STREAM INDEX - 16-41-1-(0.5)
 LAT = 35° 49' 16.41" N
 LONG = 79° 03' 32.67" W

STORMWATER MANAGEMENT CERTIFICATION

I, **Joseph Frazier**, certify that the stormwater management facilities and practices will control and treat the runoff from the proposed stormwater to meet the design standards for the receiving water body. The design and plans are in compliance with the County's Stormwater Ordinance.

STOP! BEFORE YOU DIG CALL THE NC ONE CALL CENTER 1-800-432-4949 ITS THE LAW!

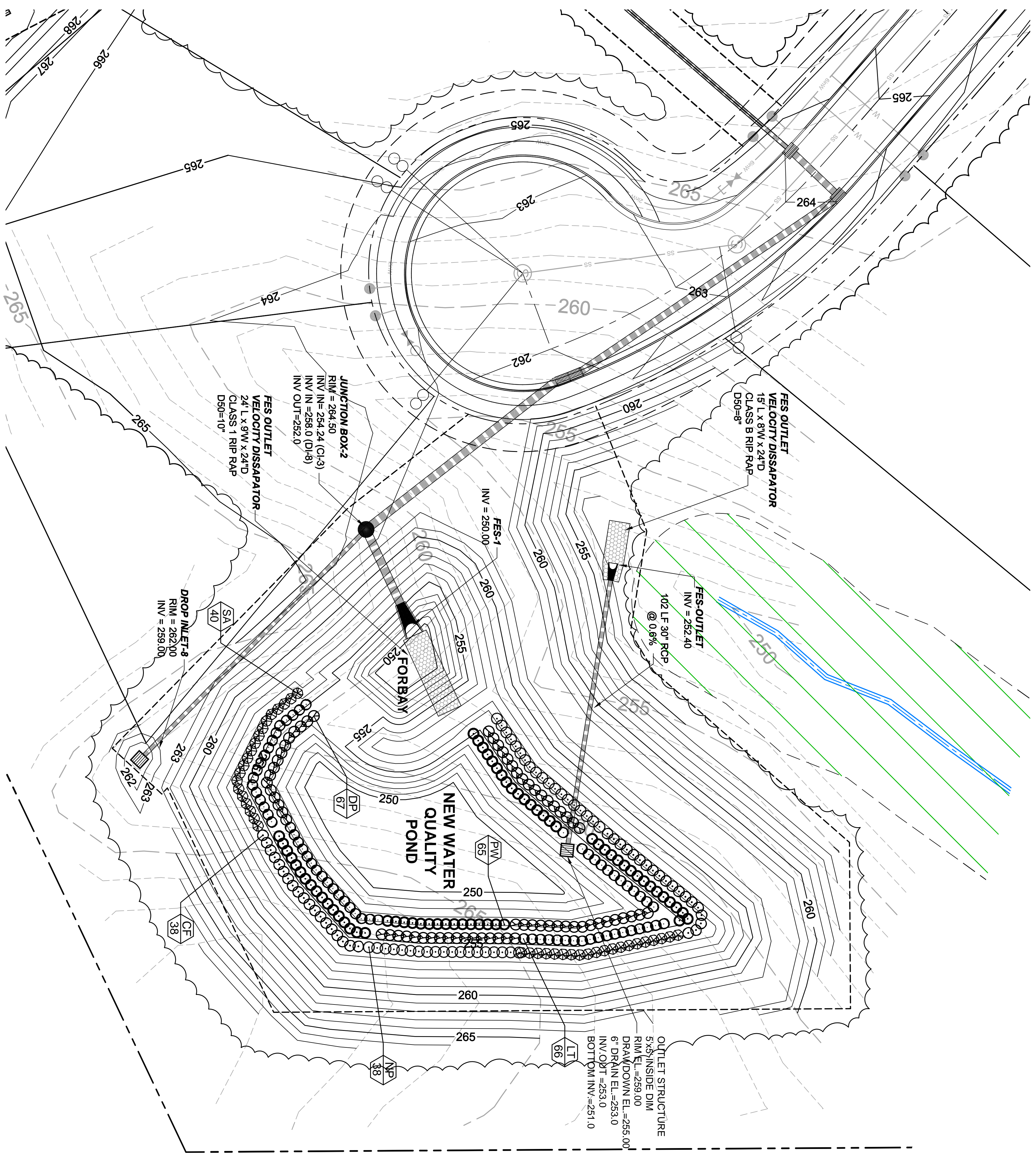
WESTFALL SUBDIVISION
PHASE 2A CONSTRUCTION PLANS
STORMWATER POND PLAN & DETAILS
 WILLIAMS TOWNSHIP
 CHATHAM COUNTY, NORTH CAROLINA

CE GROUP
 301 GLENWOOD AVE, 220
 RALEIGH, NC 27602
 PHONE: 919-867-9790
 FAX: 919-822-0032
 www.cegroupinc.com
 License # C-1739

REVISIONS

NO.	REVISIONS	DATE

Date: APRIL 30, 2013
 Scale: 1" = 30'
 Project No.: 800-12
 Checked: ALF
 Designer: ACS



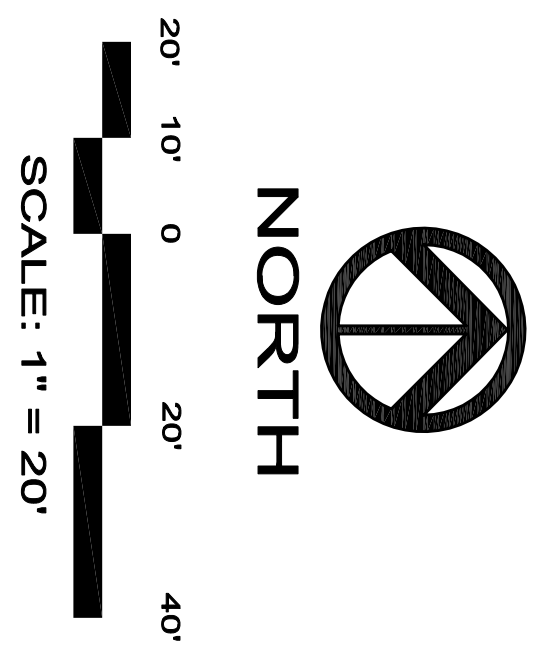
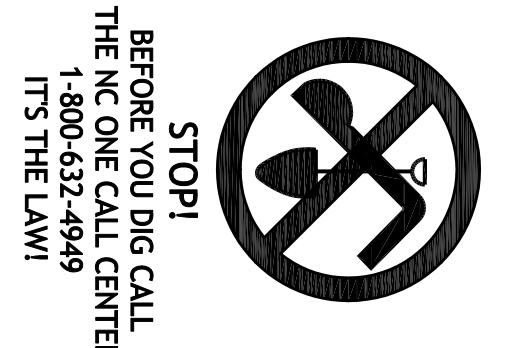
PLANT LIST

SYM.	QUAN.	BOTANICAL NAME	COMMON NAME	HT.	ROOT	REMARKS
WETLAND PLANTINGS						
SA	40	<i>Hibiscus coccineus</i> 'Aloha'	White Rose Hibiscus	-	3' O.C. Shallow Land	
CF	38	<i>Lobelia cardinalis</i>	Cardinal Flower	-	4' cont.	3' O.C. Shallow Land
NP	38	<i>Sagittaria latifolia</i>	Narrow Plumegrass	-	4' cont.	3' O.C. Shallow Land
DP	67	<i>Sagittaria latifolia</i>	Duck Potato	-	4' cont.	3' O.C. Shallow Water
LT	66	<i>Saururus cernuus</i>	Lizard Tail	-	4' cont.	3' O.C. Shallow Water
PW	65	<i>Potamogeton nodosus</i>	Prostrate Water	-	4' cont.	3' O.C. Shallow Water

PLANTING NOTES:
 LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT MATERIAL FROM LOCAL SOURCE TO ENSURE SURVIVABILITY. CONTRACTOR SHALL PROVIDE PLANT MATERIAL AND LOCATION FOR APPROVAL PRIOR TO INSTALLATION OF MATERIAL.
LOCAL WETLAND NURSERY
 MEADOW 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 FIRST YEAR AND AGAIN AT THE END OF THE 2ND YEAR ALL PLANTS THAT DO NOT SURVIVE MUST BE REPLACED.

GENERAL NOTES

- EXISTING UNDERGROUND STRUCTURES AND UTILITIES SHOWN ARE BASED ON FIELD SURVEYS AND BEST AVAILABLE RECORDED DRAWINGS. THE CONTRACTOR SHALL VERIFY CONDITIONS, INCLUDING THE DEPTH AND LOCATION OF ALL UTILITIES, PRIOR TO STARTING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL CONTACT NORTH CAROLINA ONE CALL AT 1-800-632-4949. THE CONTRACTOR SHALL CALL AT LEAST 48 HOURS PRIOR TO ANY DIGGING.
- ALL WATER UTILITY CONSTRUCTION SHALL CONFORM TO THE CHATHAM COUNTY STANDARDS AND SPECIFICATIONS.
- ALL WATER MAINS SHALL HAVE A MINIMUM OF 3.0' OF COVER AS MEASURED FROM FINISH GRADE AT THE LOCATION OF WHERE INSTALLED.
- ALL SANITARY SEWER UTILITY CONSTRUCTION SHALL CONFORM TO AQA OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
- THE SUBJECT PROPERTY IS LOCATED IN A FLOOD HAZARD AREA PER FEMA FIRM PANEL 9704 MAP NUMBER 970579400J DATED FEBRUARY 2, 2007.
- AQA PERSONNEL SHALL BE NOTIFIED 48 HOURS BEFORE CONSTRUCTION IS TO BEGIN. ANY TESTING OR BEFORE ANY PIPE IS COVERED.
- EXISTING OVERALL TOPOGRAPHIC INFORMATION TAKEN FROM NCCDOT LIDAR FOR CHATHAM COUNTY. ROADWAY CORRIDOR TOPOGRAPHIC INFORMATION TAKEN FROM SURVEYED INFORMATION BY CE GROUP, INC.
- ALL STREETS ARE PRIVATE.



Date: JULY 31, 2013
 Scale: 1" = 20'
 Drawn: ACS
 Checked: ALF
 Project No: 800-12
 Computer Desig. Name: 800-12 Area C - 14 Storm Pond Plan & Det
 Sheet No: 15 of 15

WESTFALL SUBDIVISION
 PHASE 2C CONSTRUCTION PLANS
 STORMWATER POND PLANTING PLAN
 WILLIAMS TOWNSHIP
 CHATHAM COUNTY, NORTH CAROLINA



CE GROUP

301 GLENWOOD AVE, 220
 RALEIGH, NC 27602
 PHONE: 919-367-9790
 FAX: 919-322-0032
 www.cegroupinc.com
 License # C-1739

NO.	REVISIONS	DATE