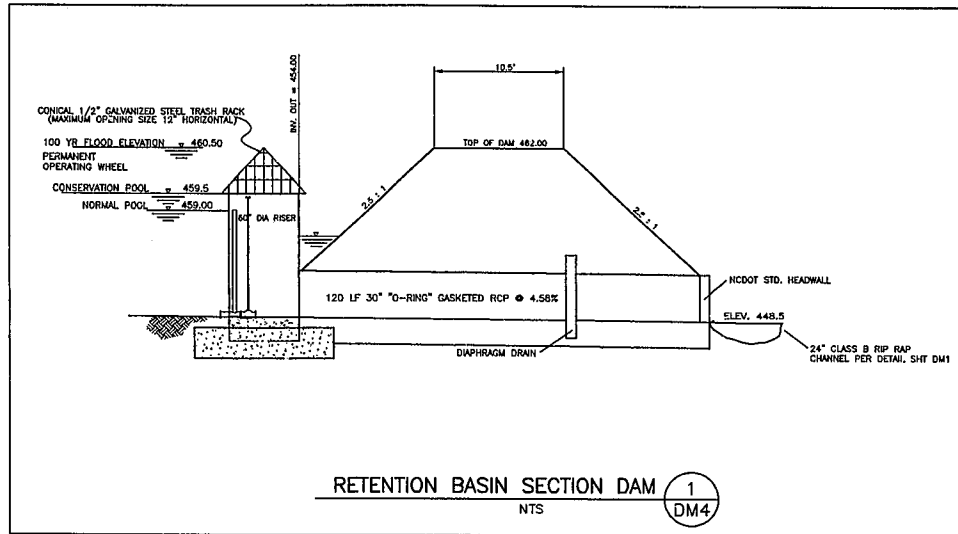


5' DIAMETER RISER & TRASH RACK (TOP VIEW)  
NTS

- NOTES:
- 1) RISER DIMENSIONS ARE BASED ON D&M CONCRETE PRODUCTS.
  - 2) ALL JOINTS TO BE GROUTED WITH NON-SHRINK GROUT.
  - 3) 6" DIP DRAIN WILL BE CLASS 50 WITH MECHANICAL JOINTS



RETENTION BASIN SECTION DAM 1  
NTS DM4



I DESIGN:  
All precast members shall be of size, shape, and module indicated on the drawings. All units shall be reinforced as shown on the drawings and/or shall be capable of supporting superimposed live loads as scheduled plus dead weight of precast and cast-in-place concrete. The Contractor shall add or modify placing of reinforcement as required to resist all stresses encountered during casting, tensioning, handling and erection of the units.

The precast manufacturer shall prepare design, analysis, and calculations prepared by a North Carolina registered structural Professional Engineer and bearing his seal for all units indicating that allowable stresses will not be exceeded during all phases of manufacture and construction. This analysis shall be submitted for approval when submitting shop drawings. This design shall be in accordance with ACI 318 and PCI MNL 116.

II MATERIALS:  
Reinforcing Steel shall conform to ASTM Designation A 615, latest edition. Bars shall be deformed and of Grade 60. Provide hot-dipped galvanized reinforcing.

Deformation on all deformed bars shall conform to ASTM Designation A 305, latest edition.

Concrete:  
All concrete shall be manufactured, transported and deposited in accordance with latest recommended practices of American Concrete Institute.

Portland Cement shall conform to ASTM Designation C 150, latest edition. Type I or Type III cement may be used.

Air entraining cement or other suitable admixtures may be used to increase workability of concrete. Calcium chloride or any admixture containing calcium chloride shall not be used.

Concrete shall be placed under vibration sufficient to obtain maximum density and smooth surfaces.

Joint Sealant:  
Joint sealant shall be "Ramnek" strips as manufactured by K.T. Snyder Co. or Concrete Sealants, Inc.

Metal Anchors, Inserts and Accessories:  
Provide all metal anchors, dowels, clamps, inserts, clip angles, anchor plates, shear ties, bolts, edge channels and other fastening devices and accessories necessary for proper installation of the precast units. Dowels and clamps shall be stainless steel and all other items shall be fabricated from steel or wrought iron with a hot-dipped galvanized coating applied after forming. Steel wire shall be zinc coated in accordance with ASTM Specification A 116 for Class 2 coating. All anchors, bolts, and attachments built into the concrete work and other anchorage items required for work of this section shall be supplied by this Contractor.

Neoprene Pads:  
1/4" inch thick virgin neoprene, 5-60 Shore A durometer.

FABRICATION:  
All material, methods, and workmanship shall conform to the applicable provisions of the ACI Building Code, ACI 318.

Concrete shall be manufactured, transported, deposited, vibrated, finished and cured in accordance with the latest recommended practices of the American Concrete Institute.

Forms shall be straight and in true alignment. Concrete shall be cast against a metal surface. Forms shall be watertight and of such rigidity as to warrant sectional dimensions. Forms shall be cleaned between each casting and the parting compound used shall be a non-oil base material such as to insure against discoloration and keep surface imperfections to a minimum. All exposed surfaces shall have a smooth form finish free from honeycomb and spall. Dimensions shall be maintained within plus or minus, one-half inch (1/2").

III INSTALLATION:

INSPECTION:  
Before erecting precast, verify that structure and anchorage inserts not within acceptable tolerances to erect riser sections have been corrected.

Determine field conditions by actual measurement.

Erection of prestressed members shall constitute acceptance by the precast erector of anchorage placement. Any and all costs for corrections to the prestress assembly after acceptance shall be borne by the precast erector.

TOLERANCES:  
Install precast units without exceeding following tolerance limits:

Variation from Position in Plan: Plus or minus 1/2" maximum at any location.

Offsets in Alignment or Adjacent Members at Any Joint: 1/16" in any 10' run; 1/4" maximum.

PATCHING:  
Mix and place patching mixture to match color and texture of surrounding concrete and to minimize shrinkage.

Adhere patch to hardened concrete with bonding agent.

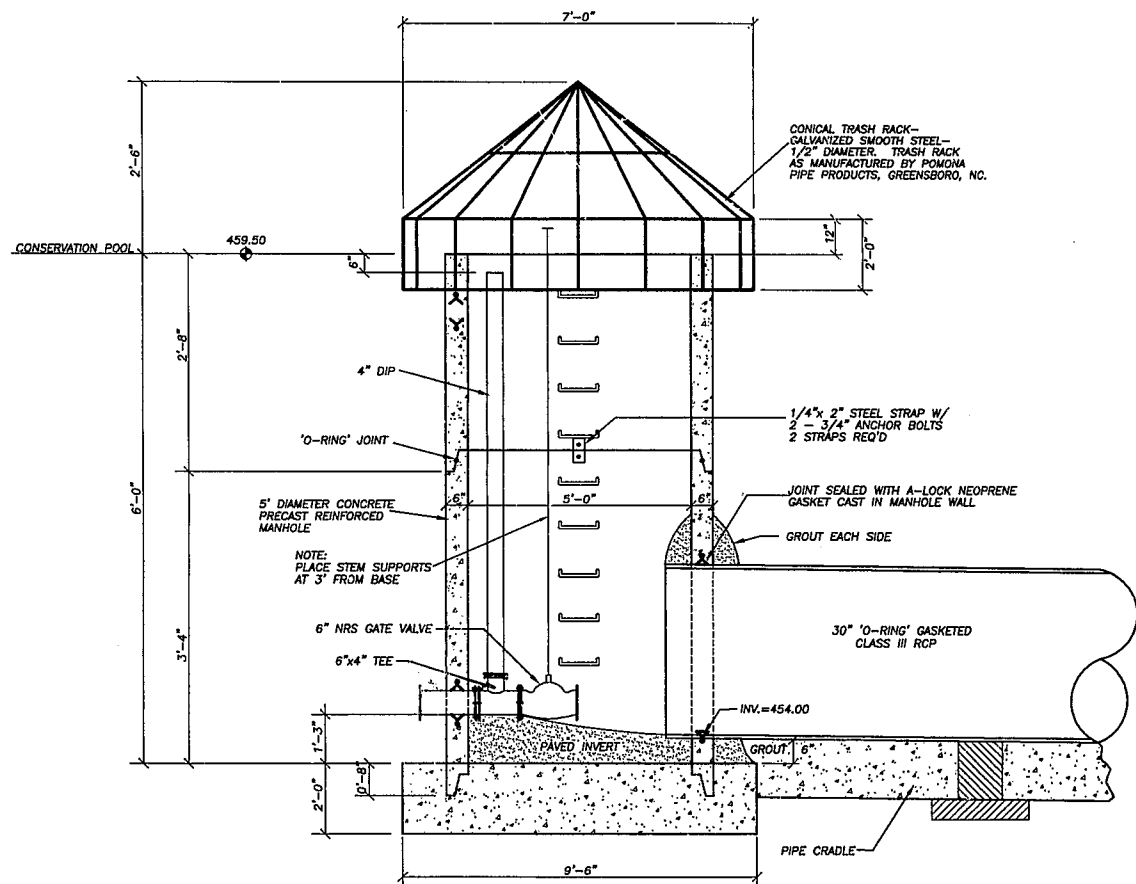
Replace defective precast panels if patching is not acceptable to Engineer.

CLEANING:  
After installation clean soiled precast concrete surfaces with detergent and water, using fiber brush and sponge, and rinse thoroughly with clean water.

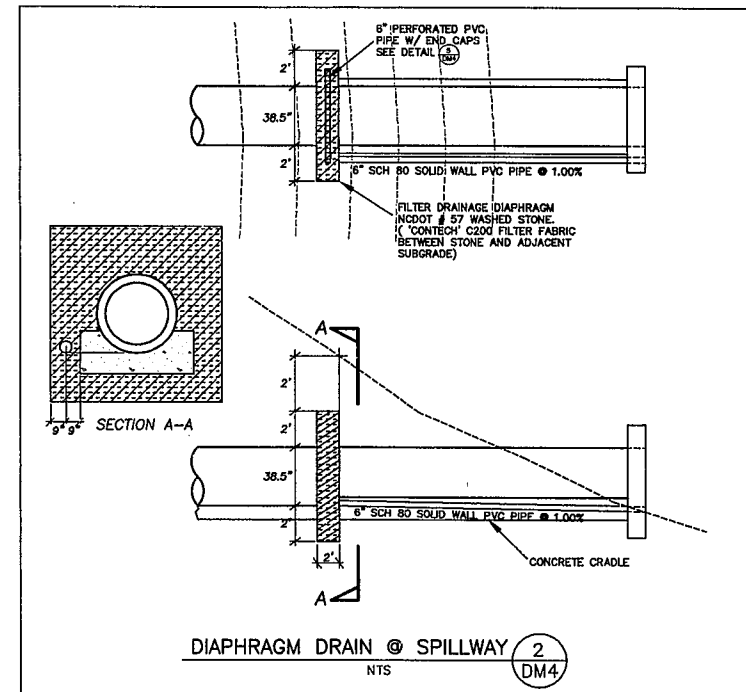
Use acid only to clean particularly stubborn stains after more conservative methods have been tried unsuccessfully.

Use extreme care to prevent damage to precast concrete surfaces and to adjacent materials.

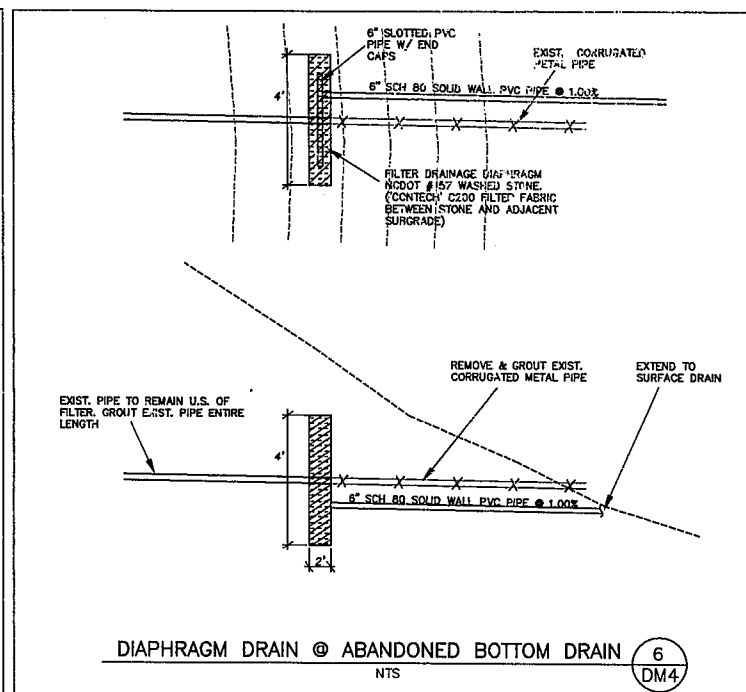
Rinse thoroughly with clean water immediately after using cleaner.



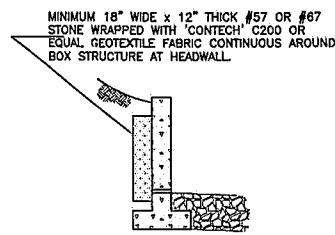
5' DIAMETER RISER & TRASH RACK SECTION A-A  
NTS



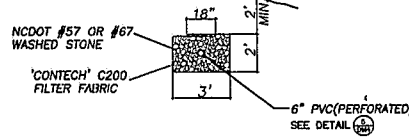
DIAPHRAGM DRAIN @ SPILLWAY 2  
NTS DM4



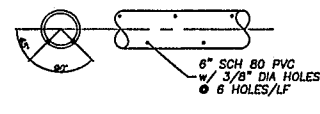
DIAPHRAGM DRAIN @ ABANDONED BOTTOM DRAIN 6  
NTS DM4



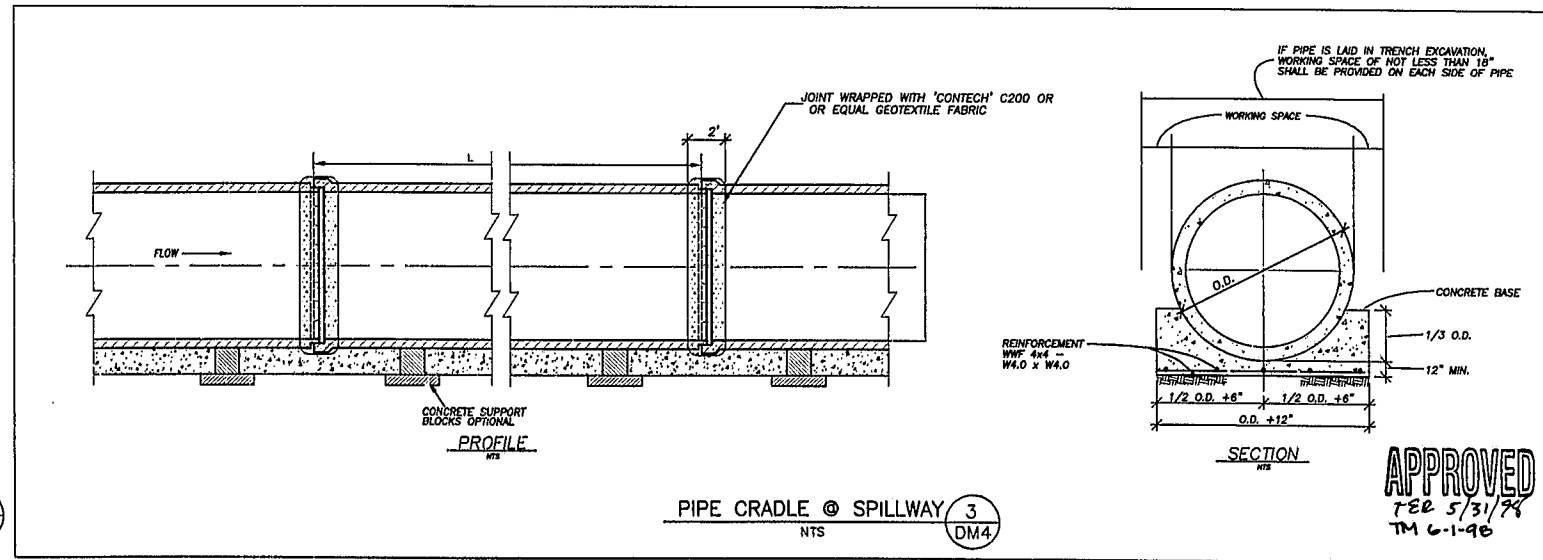
DETAIL AT HEADWALL 7  
NTS DM4



TOE DRAIN DETAIL 4  
NTS DM4



PERFORATED PIPE DETAIL 5  
NTS DM4



PIPE CRADLE @ SPILLWAY 3  
NTS DM4

APPROVED  
7/28 5/31/74  
TM 6-1-96

K:\CAD\91\071535\01\_DM4 Tue May 25 15:42:49 1998 WITHERS & RAVENEL ENGINEERING & SURVEYING, INC.

**WITHERS & RAVENEL Engineering & Surveying, Inc.**  
111 MacKenan Drive Cary, N.C. 27511  
919-469-3340 FAX 919-467-6008

Revisions			
No.	Description	Date	By
A	LOG FINAL REVIEW COMMENTS	3/13/98	SAF

DANBURY SUBDIVISION - DAM #2

RISER DETAILS

Designer: SFR	Scale: NTS	CAD File:
Drawn By: ATB	Date: 12/18/98	Sheet No. DM4
Checked By: SFR	Job No. 97155	of.