

**CAST IN PLACE CONCRETE SPECIFICATIONS**

CONCRETE FOR THE SPILLWAY RISER BASE SHALL MEET THE FOLLOWING MINIMUM SPECIFICATIONS:

1. THE MAXIMUM ALLOWABLE SLUMP SHALL BE 4 INCHES. NO WATER SHALL BE ADDED TO THE MIXTURE AT THE SITE.
2. THE MINIMUM COMPRESSIVE STRENGTH SHALL BE 3,000 PSI AT 28 DAYS.
3. THE CONCRETE SHALL HAVE FROM 4 PERCENT TO 6 PERCENT ENTRAINED AIR BY VOLUME.

**STEEL REINFORCEMENT SPECIFICATIONS**

THESE SPECIFICATIONS REGARD THE STEEL REINFORCEMENT IN THE FOUNDATION FOR THE SPILLWAY RISER FOUNDATION.

1. ALL STEEL SHALL BE GRADE 60 MINIMUM (60 KSI YIELD STRENGTH)
2. ALL REINFORCEMENT BARS SHALL BE NO. 5
3. STEEL SHALL BE PLACED AS INDICATED ON THE DRAWINGS.
4. ALL STEEL REINFORCEMENT SHALL BE FREE FROM LOOSE OR FLAKY RUST, SOIL, OIL, GREASE, PAINT OR OTHER DELETERIOUS MATERIAL.
5. STEEL REINFORCEMENT AT THE SITE SHALL BE STORED ABOVE GROUND ON PLATFORMS, SKIDS OR OTHER SUPPORTS AND SHALL BE KEPT CLEAN AND PROTECTED FROM MECHANICAL INJURY AND CORROSION.
6. ALL STEEL SHALL BE SHAPED BY THE MANUFACTURER IN ACCORDANCE WITH THE PROJECT REINFORCEMENT BAR SCHEDULE. NO FIELD BENDING OF REINFORCEMENT BARS WILL BE ALLOWED.
7. ALL REINFORCEMENT STEEL SHALL BE PLACED IN ACCORDANCE WITH ALL REQUIREMENTS OF ACI 318-05
8. THE CONTRACTOR SHALL NOTIFY MGES WHEN STEEL IS PLACED AND 24 HOURS PRIOR TO PLACEMENT OF CONCRETE FOR FINAL INSPECTION OF THE STEEL.

**NON-SHRINK GROUT SPECIFICATIONS**

THE NON-SHRINK GROUT FOR THE SEALING ANNULAR SPACES IN THE SPILLWAY RISER BASE AT THE ENTRANCE OF THE SPILLWAY BARREL CONDUIT AND THE RESERVOIR DRAIN INTAKE CONDUIT SHALL BE EPOGROUT 768 OR AN ENGINEER APPROVED EQUIVALENT. THIS GROUT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-881 STANDARD SPECIFICATION.

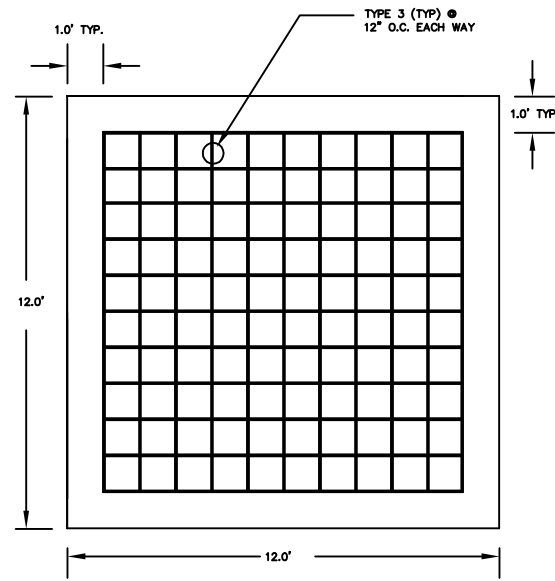
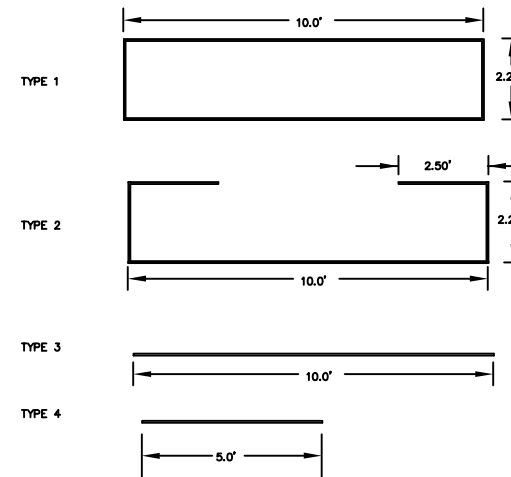
**CAST IN PLACE CONCRETE TESTING SPECIFICATIONS**

CONCRETE FOR THE SPILLWAY RISER BASE SHALL BE TESTED AT THE FOLLOWING FREQUENCIES AND IN ACCORDANCE WITH THE FOLLOWING ASTM STANDARD SPECIFICATIONS.

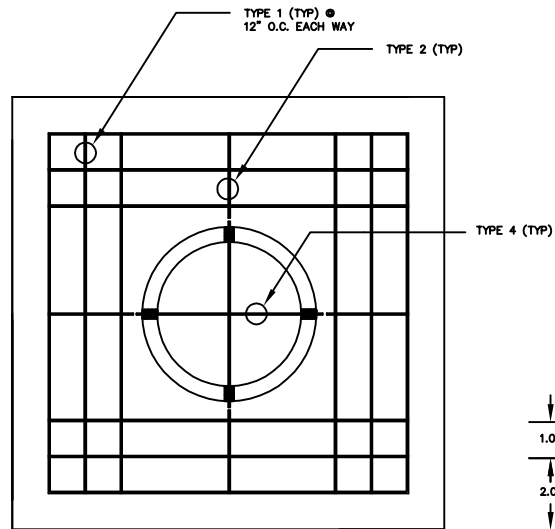
1. ONE SET OF FOUR TEST CYLINDERS SHALL BE CAST FROM EACH SEPARATE POUR FOR THE CAST-IN-PLACE RISER BASE. THESE CYLINDERS SHALL BE CAST IN ACCORDANCE WITH ASTM C-39 "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH CYLINDRICAL CONCRETE SPECIMENS".
2. THE SLUMP OF ALL CONCRETE DELIVERED TO THE SITE SHALL BE TESTED IN ACCORDANCE WITH ASTM C-143 "STANDARD TEST METHOD FOR SLUMP OF HYDRAULIC CEMENT CONCRETE".
3. THE ENTRAINED AIR CONTENT OF EACH EACH LOAD OF CONCRETE DELIVERED TO THE SITE SHALL BE TESTED IN ACCORDANCE WITH ASTM C-231 AIR CONTENT OF FRESHLY MIXED CONCRETE BY THE PRESSURE METHOD".
4. THE CONCRETE TEST CYLINDERS SHALL BE TRANSPORTED TO A LAB 24 HOURS AFTER CASTING. ONE CYLINDER SHALL BE TESTED AT 7 DAYS AND TWO SHALL BE TESTED AT 28 DAYS TO VERIFY THAT THE CONCRETE MEETS THE REQUIRED MINIMUM COMPRESSIVE STRENGTH. ONE CYLINDER SHALL BE STORED FOR COMPRESSIVE STRENGTH TESTING AT 56 DAYS IN THE EVENT OF A BREAK BELOW 3000 PSI AT 28 DAYS.

REINFORCING BAR SCHEDULE			
TYPE	NO. BARS	LENGTH	TOTAL LENGTH
1	12	24.5'	294'
2	2	19.5'	39'
3	30	10.0'	300'
4	2	5.0'	10'
TOTAL LENGTH NO. 5 REBAR			643'

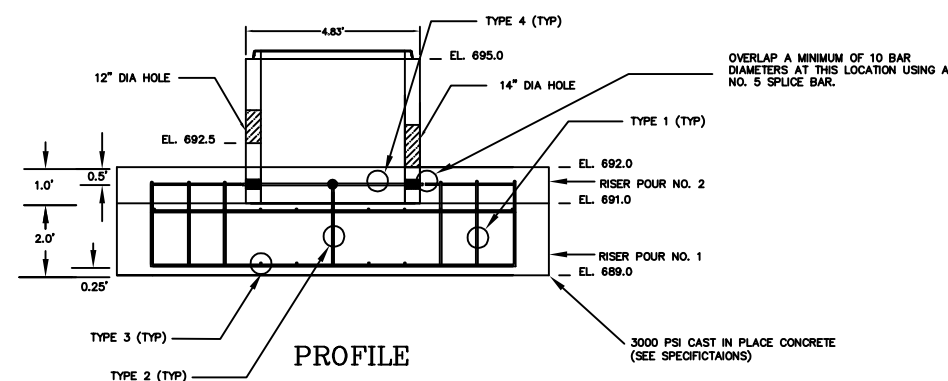
**REINFORCEMENT BAR SHAPES**  
1 inch = 2 ft.



PLAN - POUR NO. 1



PLAN - POUR NO. 2



PROFILE

**DETAILS - RISER FOOTING**  
1 inch = 2 ft.

- NOTES**
1. AN ENGINEER FROM MGES SHALL INSPECT AND APPROVE THE SUBGRADE FOR THE SPILLWAY RISER FOUNDATION PRIOR TO PLACEMENT OF STEEL OR CONCRETE IN THIS AREA.
  2. MINIMUM ALLOWABLE SOIL BEARING CAPACITY FOR SPILLWAY RISER BASE SHALL BE 2500 PSF. THIS SHALL BE VERIFIED BY AN INDEPENDENT GEOTECHNICAL TESTING FIRM PRIOR TO THE PLACEMENT OF STEEL FOR THE RISER FOOTING.
  3. AN ENGINEER FROM MGES SHALL INSPECT AND APPROVE REINFORCEMENT STEEL IN SPILLWAY RISER BASE PRIOR TO PLACEMENT OF CONCRETE IN THIS AREA.

DATE	DESCRIPTION
07/02/07	PLAN SUBMISSION TO INCENR. DAM SAFETY

**MEADE GUNNELL**  
INCORPORATED  
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1000 W. GARDNER STREET  
COLUMBIA, N.C. 28001  
704-685-7200 704-685-7201 (fax)

DATE
07-02-2007

ALEX PORTER DAM - PROPOSED  
DAVIDSON, NORTH CAROLINA

DETAILS - RISER FOOTINGS

JOB NUMBER	SHEET NUMBER
890.20	APD-107