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DESIGNER

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CONSULTANT



PROFESSIONAL SEAL



SUBMITAL

03.12.2021

CONSTRUCTION DOCUMENTS

REVISIONS

KEY PLAN

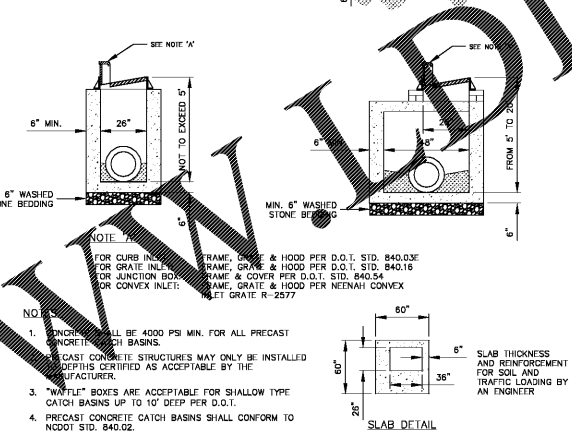
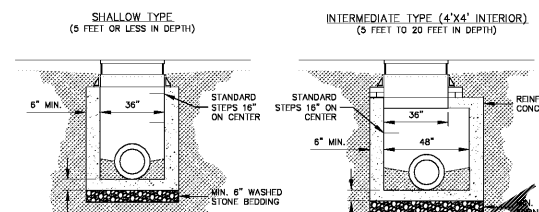
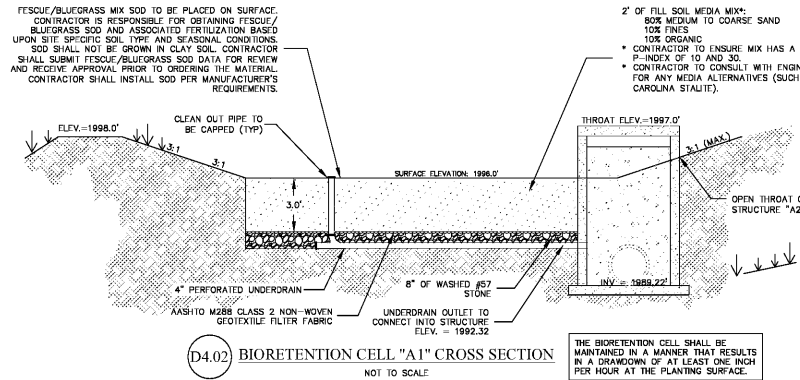
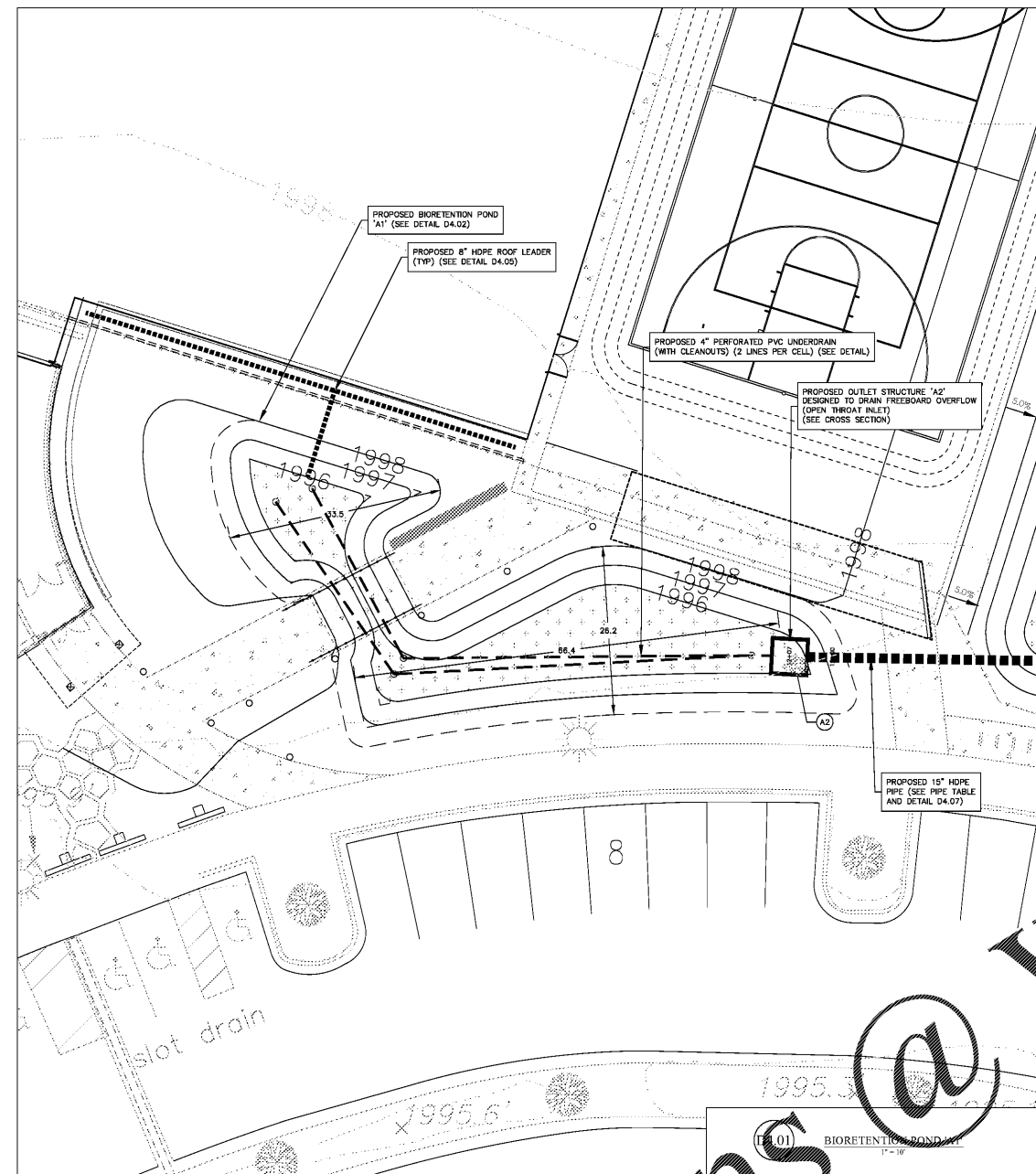
9 SHEET

STORM DRAINAGE DETAILS

C941

DESIGN: DS
DRAWN: DS
REVIEW: CSR

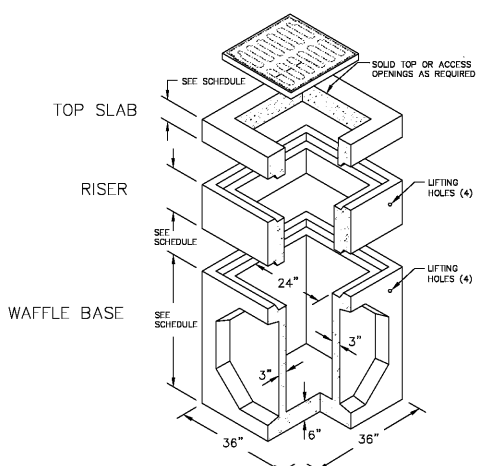
GN 7904-A



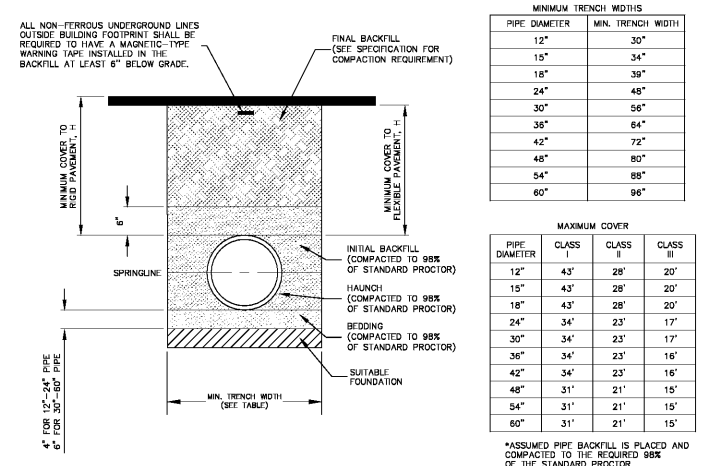
D4.03 PRECAST CONCRETE CATCH BASIN DETAILS FOR GRATE INLETS, CURB INLETS, AND JUNCTION BOXES
NOT TO SCALE

STANDARD SCHEDULE

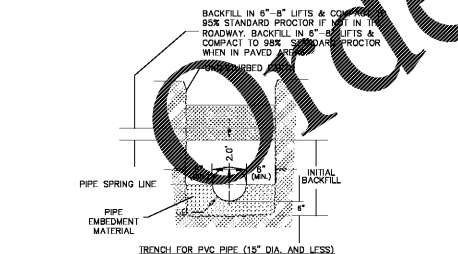
TOP SUB	8.0 HEIGHT W./AIR	6"	8"
SSER	0.87	1.33	2.87
SOLID BASE	0.87	3.0	3.5
	W./AIR	1.934	2.161



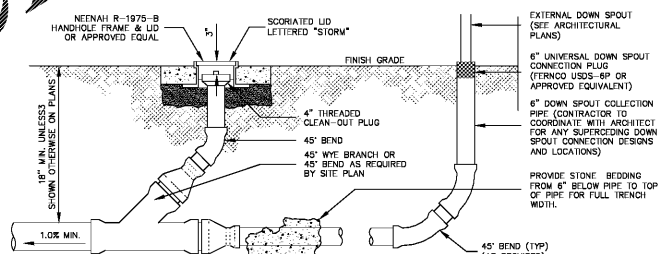
D4.06 2' X 2' YARD INLET
NOT TO SCALE



D4.07 HDPE TRENCH INSTALLATION DETAIL
NOT TO SCALE



D4.04 TRENCH FOR PVC PIPE
NOT TO SCALE



D4.05 DOWN SPOUT COLLECTION PIPE AND CLEANOUT
NOT TO SCALE

- NOTES:
- PVC PIPES REQUIRE CLASS I PIPE EMBEDMENT MATERIALS.
 - WHEN TRENCH IS SUBJECT TO INUNDATION, EMBEDMENT MATERIALS MUST EXTEND TO TOP OF PIPE.
 - NO BOULDERS OR STONES IN EXCESS OF 4" WILL BE USED IN INITIAL BACKFILL.
 - THIS DETAIL IS VALID FOR PVC SEWER PIPE INSTALLED AT DEPTHS OF UP TO 20 FEET.
 - PVC PIPE NOT ALLOWED WITH LESS THAN 3"-0" COVER.

- NOTES:
- CLEAN-OUT PIPE AND FITTINGS SHALL BE SAME MATERIAL AS THE DOWNSPOUT COLLECTION PIPE. SEE PLAN FOR PIPE SIZES. CLEAN-OUT WYE TO BE SAME DIAMETER AS LATERAL, RISER, PIPE AND THREADED PLUG TO BE 4".
 - WHERE CLEAN-OUTS ARE LOCATED IN SIDEWALKS OR PAVEMENT, CAST HANDHOLE LID IN PLACE AND COVER WITH FINISH GRADE.
 - CONTRACTOR TO COORDINATE WITH ARCHITECT FOR ANY SUPERSEDING EXISTING DOWN SPOUT COLLECTION SYSTEM CONNECTION DESIGNS AND LOCATIONS.

- NOTES:
- CONCRETE: 28 DAY COMPRESSIVE STRENGTH (f'_c) = 4,000 psi
 - STEEL REINFORCEMENT: ASTM A-615, GRADE 60
 - WAFLE BOXES MEET N.C.D.O.I. APPROVAL TO 10' DEPTH
 - SOLID BOXES MEET H-20 LOADING TO 15' DEPTH
 - SOLID BOXES APPROVED FOR N.C.D.O.I. STANDARDS: 840.01, 840.02, 840.04, 840.05, 840.11, 840.12, 840.14, 840.15, 840.17, 840.18, 840.19, 840.25, 840.27, 840.28, 840.31, 840.32, 840.41, 840.45

- NOTES:
- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", AND THE PROJECT SPECIFICATIONS.
 - MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL WHEN REQUIRED.
 - FOUNDATION: WHERE THE TRENCH IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL, AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
 - BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4"(100 mm) FOR 12"-24" (100 mm - 600 mm); 6"(150 mm) FOR 30"-60" (750 mm - 900 mm).
 - HANDLING/INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 - MINIMUM COVER: MINIMUM COVER, II, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, II, IS 12" UP TO 48" DIAMETER PIPE, AND 24" OF COVER FOR 54"-80" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF PIPE. MINIMUM COVER, III, IS 12" UP TO TOP OF ROAD PAVEMENT; HEAVY CONSTRUCTION LOADS WILL REQUIRE ADDITIONAL COVER TO PROTECT THE PIPE. CONTRACTOR TO VERIFY THAT CONSTRUCTION LOADS WILL NOT DAMAGE INSTALLED PIPES AND PROTECTIVE PIPES IF REQUIRED.
 - MAXIMUM COVER: MAXIMUM COVER SHALL BE MEASURED FROM THE FINISHED SURFACE OF THE GROUND TO THE TOP OF THE PIPE, AND SHALL BE LESS THAN THE MAXIMUM VALUES SHOWN IN THE CHART WITHIN THIS DETAIL.

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