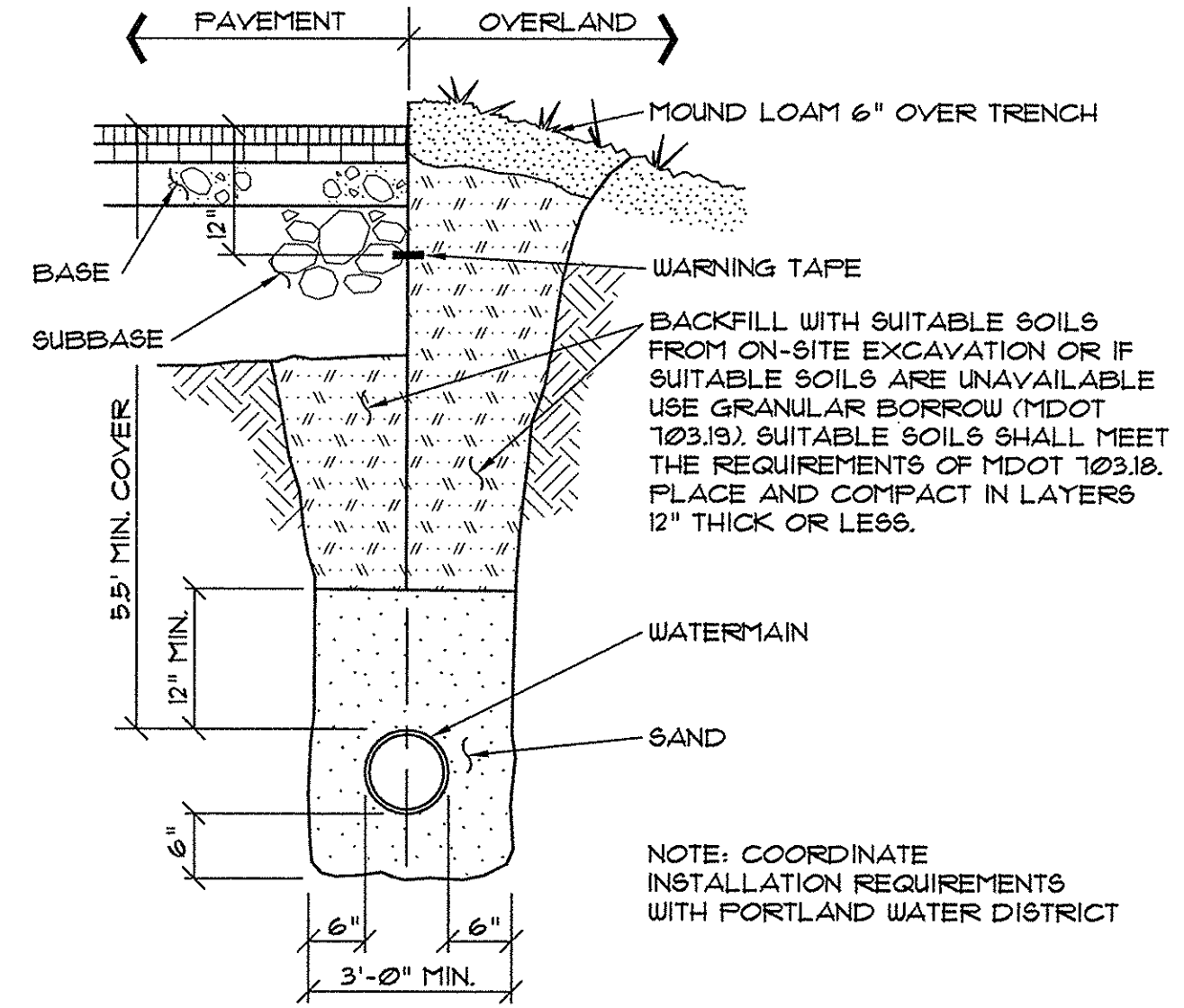
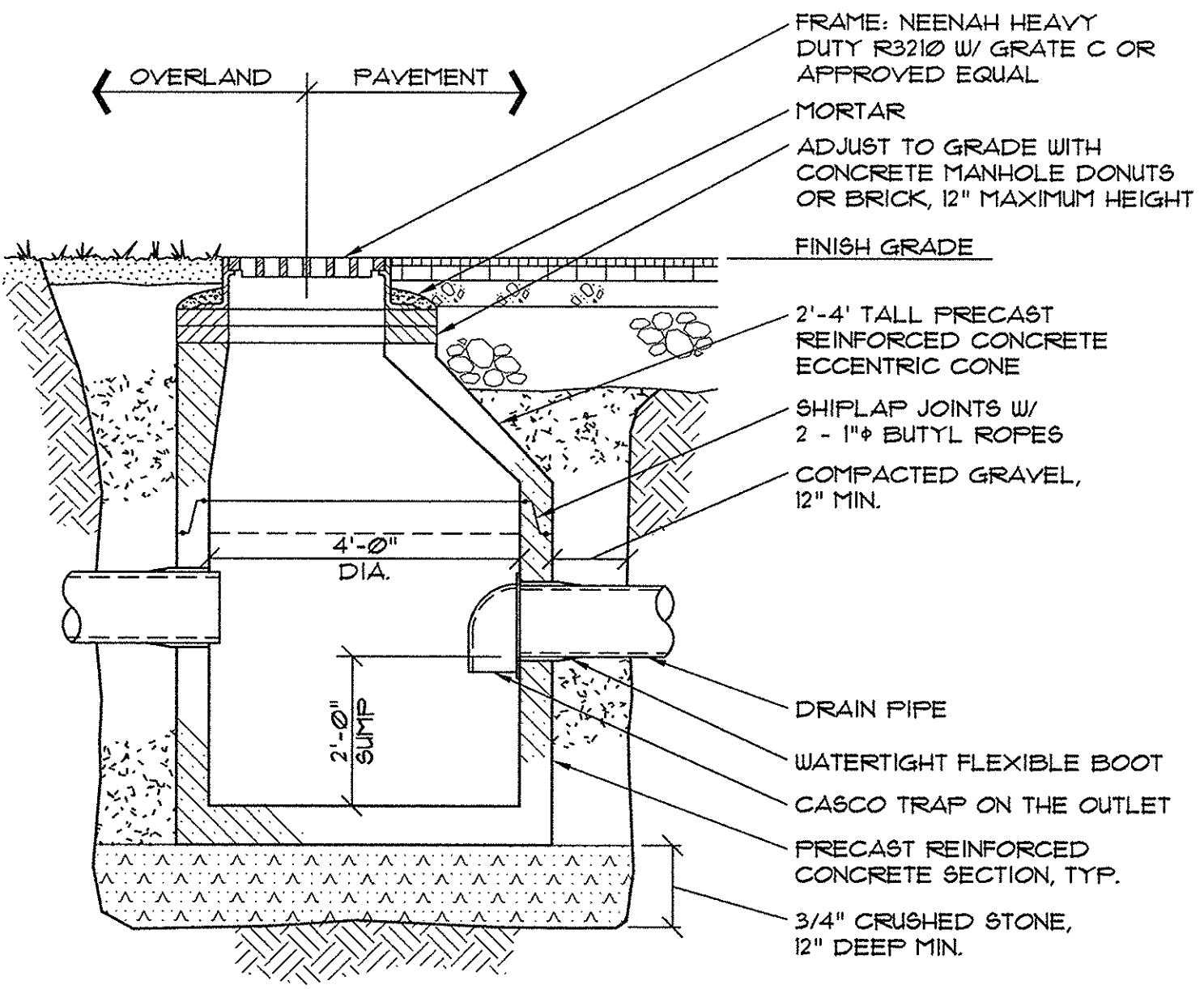


- NOTES:**
- INSTALLATION SHALL NOT ALLOW INTER-TWINGING OF CABLES.
  - DIRECT BURY ELECTRICAL CABLES MAY BE USED IF ALLOWED BY CENTRAL MAINE POWER.
  - CONFIRM CONDUIT SIZES WITH INDIVIDUAL UTILITY COMPANIES PRIOR TO INSTALLATION.
  - COORDINATE FINAL LAYOUT WITH INDIVIDUAL UTILITY COMPANIES.

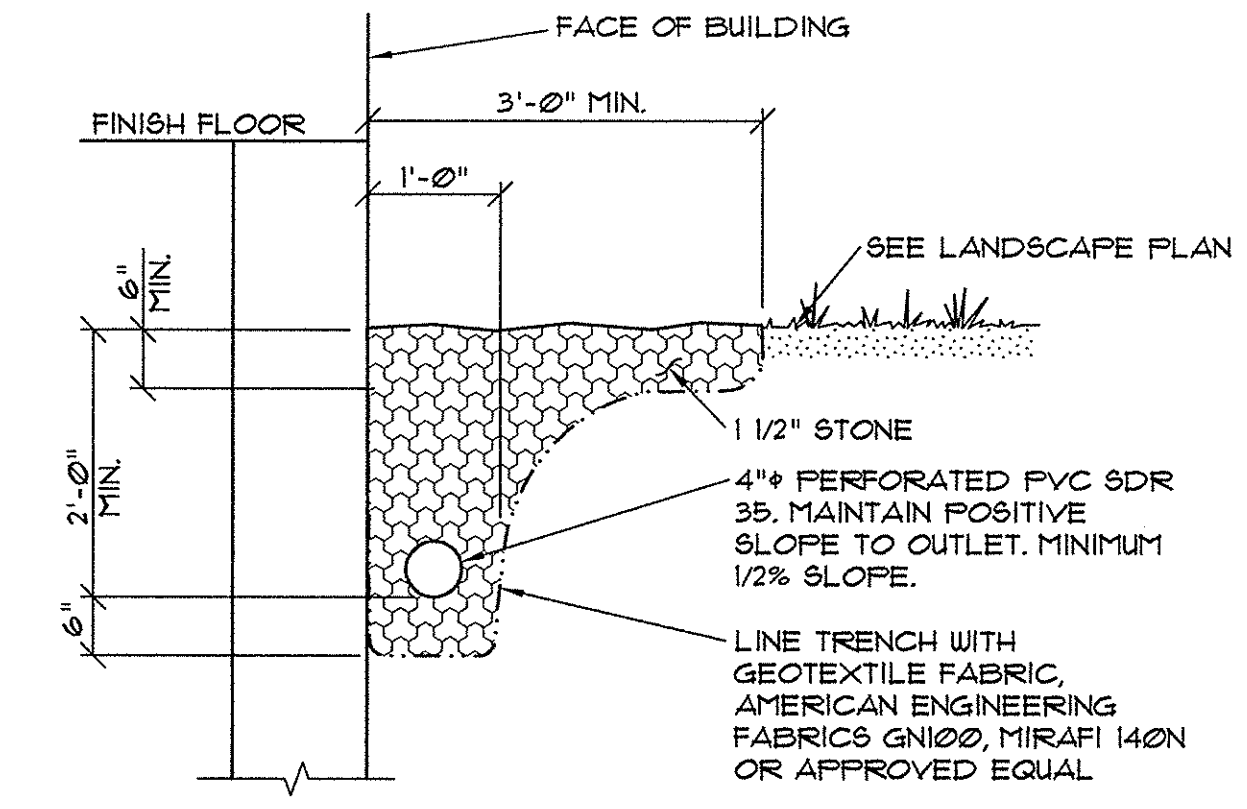
**6 CABLE TRENCH SECTION**  
NOT TO SCALE



**5 TYPICAL WATER MAIN SECTION**  
NOT TO SCALE



**4 TYPICAL CATCH BASIN SECTION**  
NOT TO SCALE



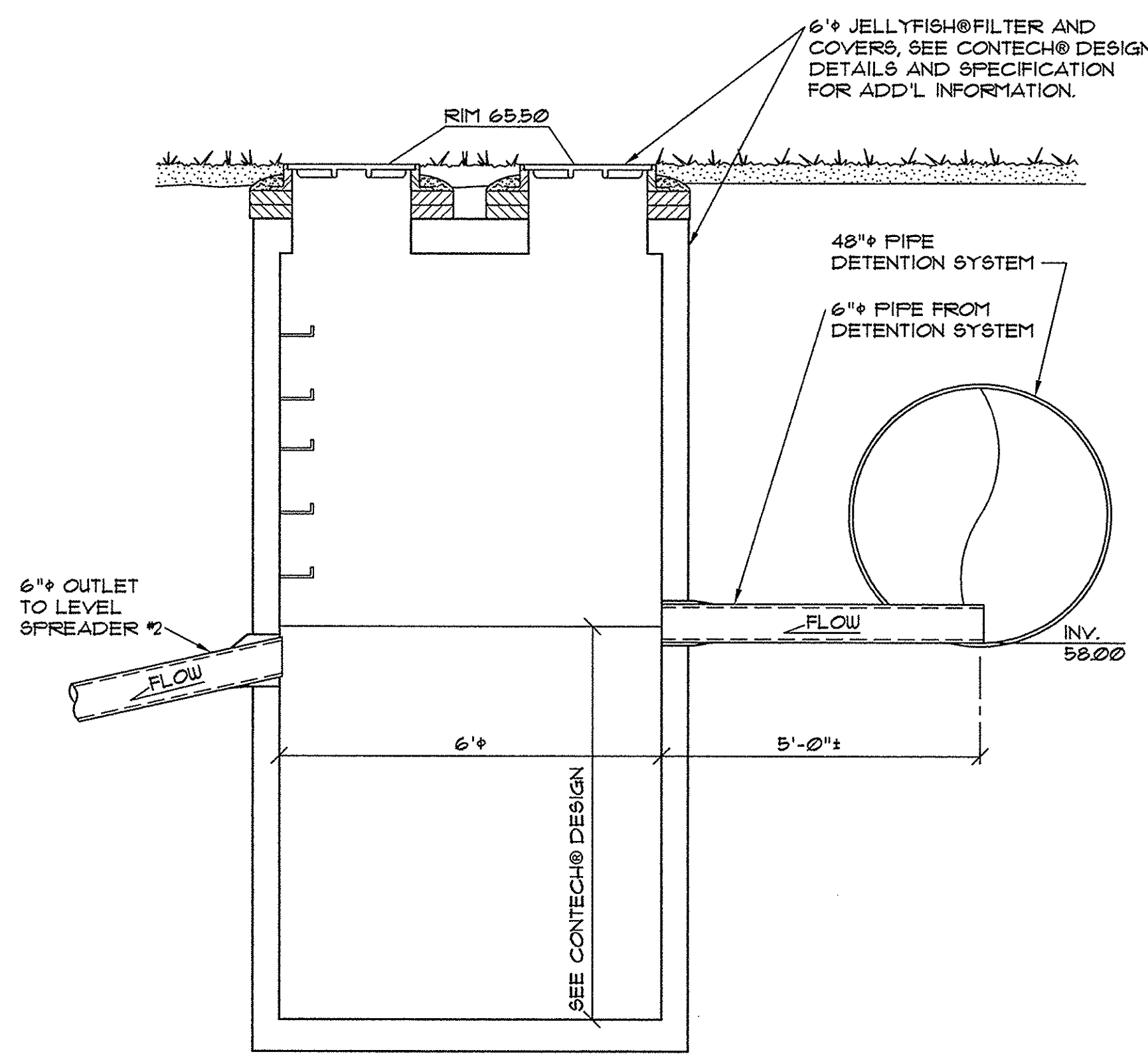
**12 STONE DRIPSTRIP SECTION**  
NOT TO SCALE

- GENERAL NOTES FOR MANHOLES AND CATCH BASINS**
- ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
  - MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
  - PRECAST REINFORCED CONE BARREL MANHOLES MANUFACTURED PER ASTM SPEC. C-478.
  - ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE LOCATED 9" FROM THE CENTER OF THE COVER.
  - ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER/RAIN MANHOLE COVERS SHALL HAVE "RAIN" CAST INTO THE COVER.
  - ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVED EQUAL.
  - SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
  - ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
  - CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL.
  - CATCH BASIN SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
  - EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
  - ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP. SEE FIGURE II-09.

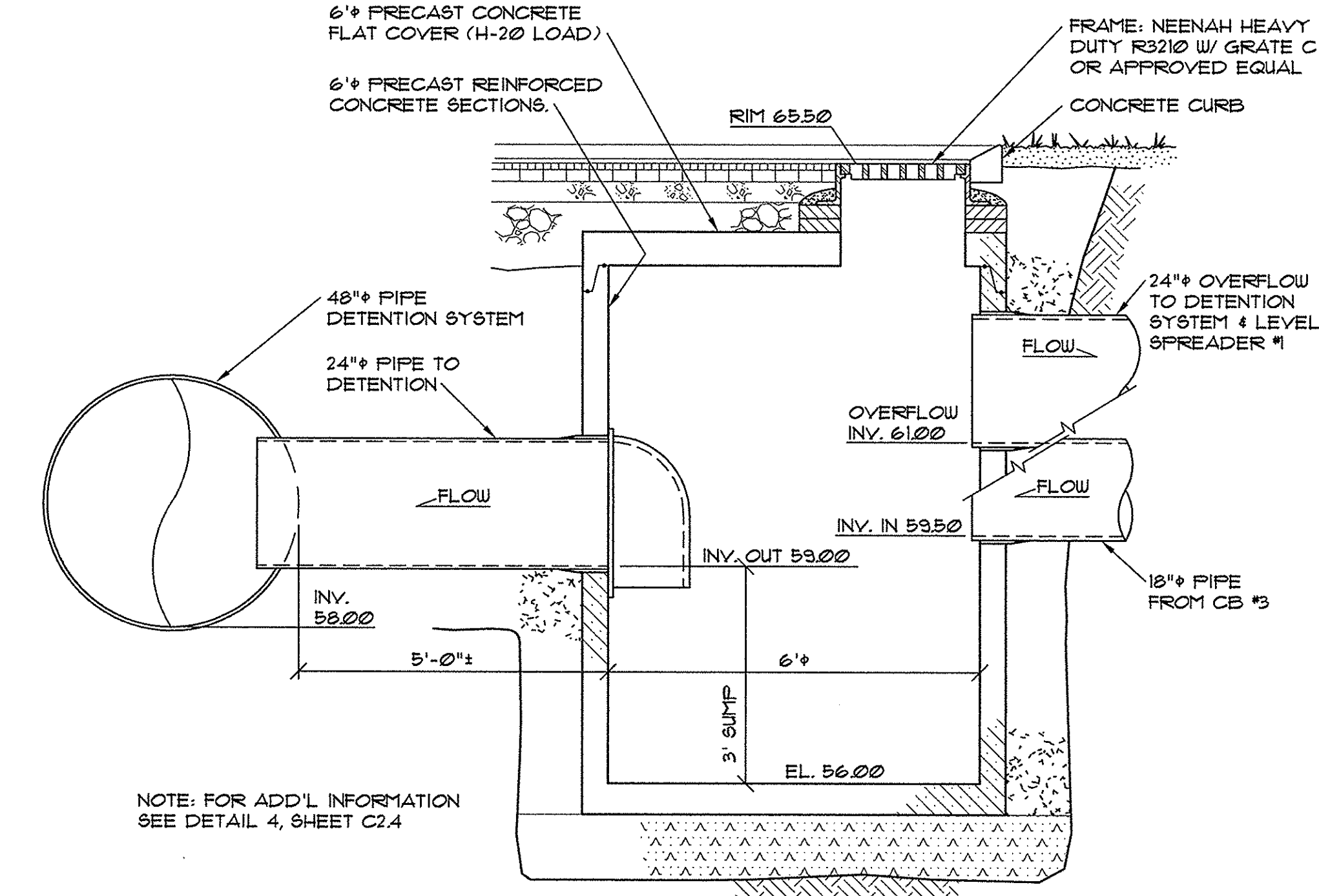
**1 GENERAL NOTES FOR MANHOLES & CATCH BASINS (II-4)**  
NOT TO SCALE

- NOTES:**
- ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
  - IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.
  - DIMENSION B SHALL BE SUFFICIENT TO ALLOW CRUSHED STONE BEDDING TO BE PLACED AND COMPACTED UNDER THE MANHOLES OF THE PIPE, BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9".
  - DIMENSION A IS THE MAXIMUM WIDTH ALLOWED FOR CALCULATING PAY QUANTITIES UNDER GRANULAR BORROW, CRUSHED STONE, STRUCTURAL EARTH EXCAVATION, AND STRUCTURAL ROCK EXCAVATION. DIMENSION A SHALL BE BASED ON PIPE DIAMETER D, AS SET FORTH IN THE FOLLOWING TABLE.

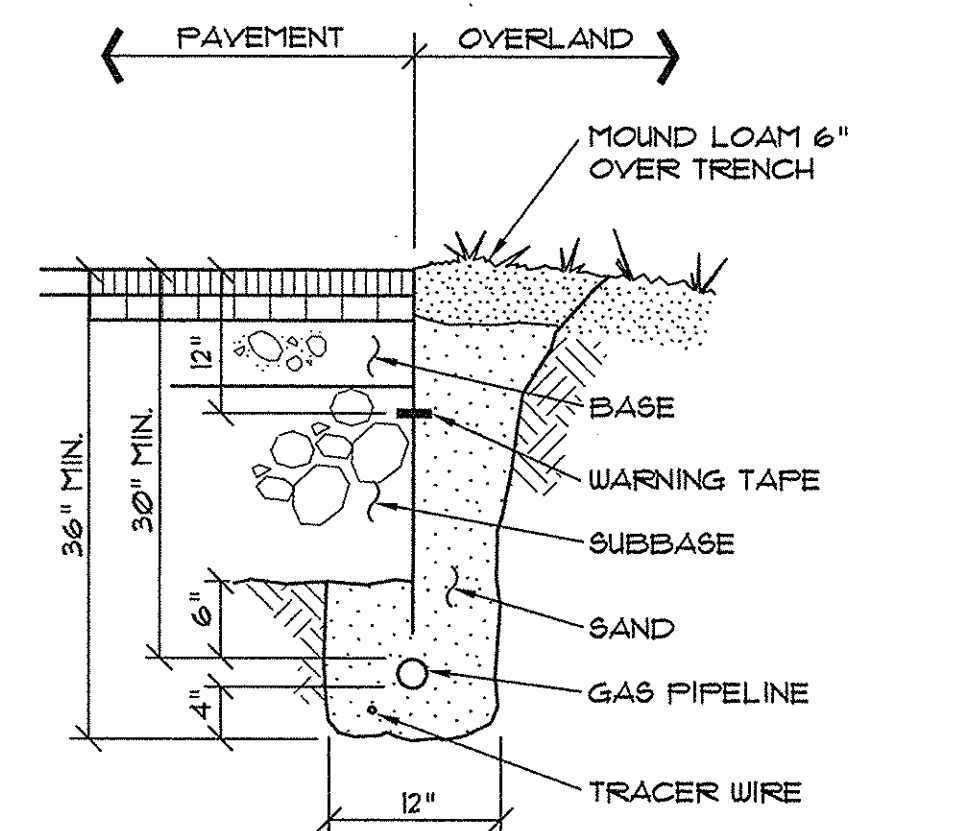
PIPE DIAMETER, D (INCHES)	MAX. TRENCH WIDTH, A (FEET)
4	4.0
6	4.0
8	4.0
10	4.0
12	5.0
15	5.0
18	5.0
21	5.0
24	6.0
27	6.0
30	6.0
36	6.0
42	7.0
48	7.0



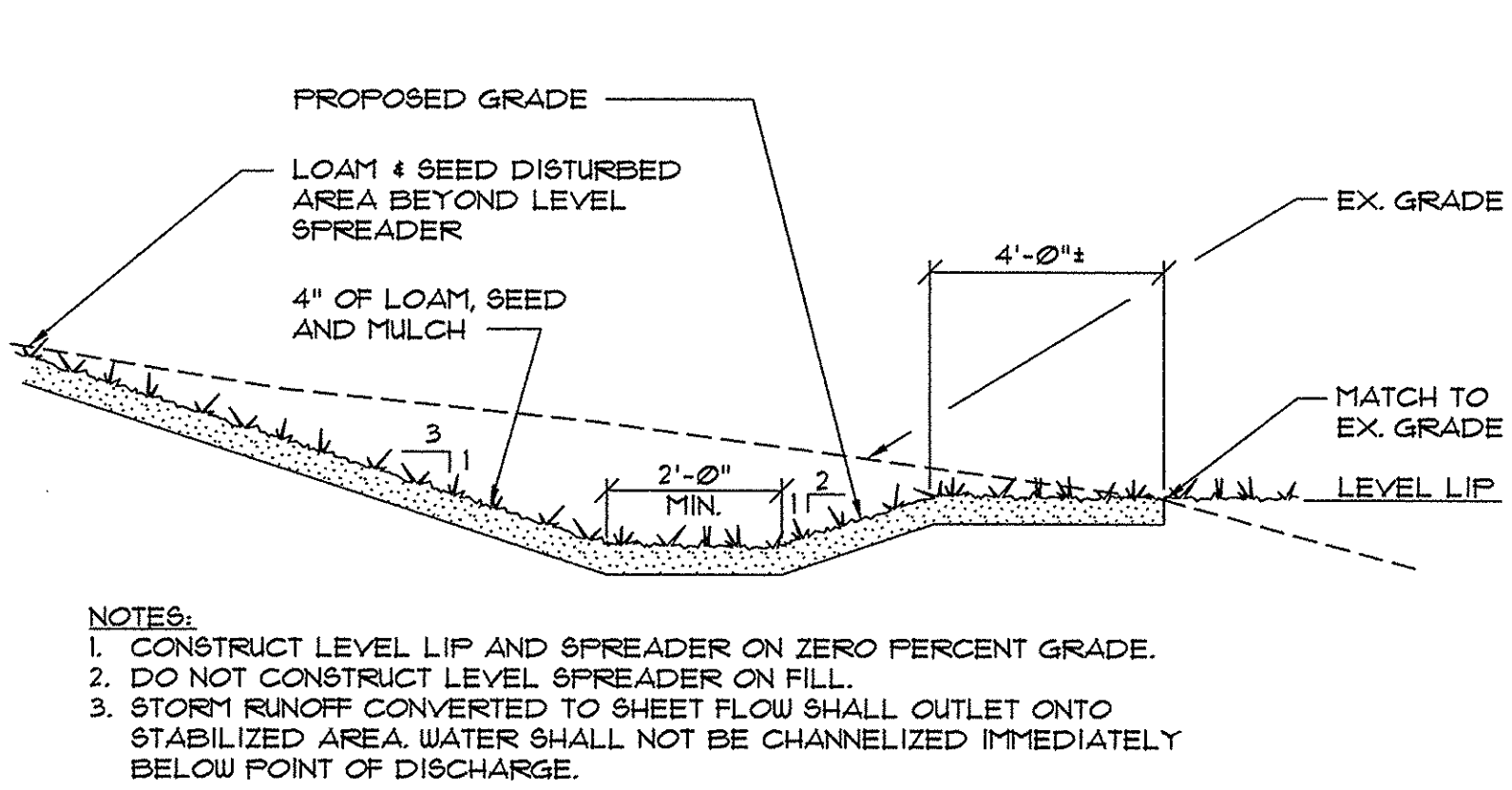
**8 JELLYFISH® FILTER DETAILS**  
NOT TO SCALE



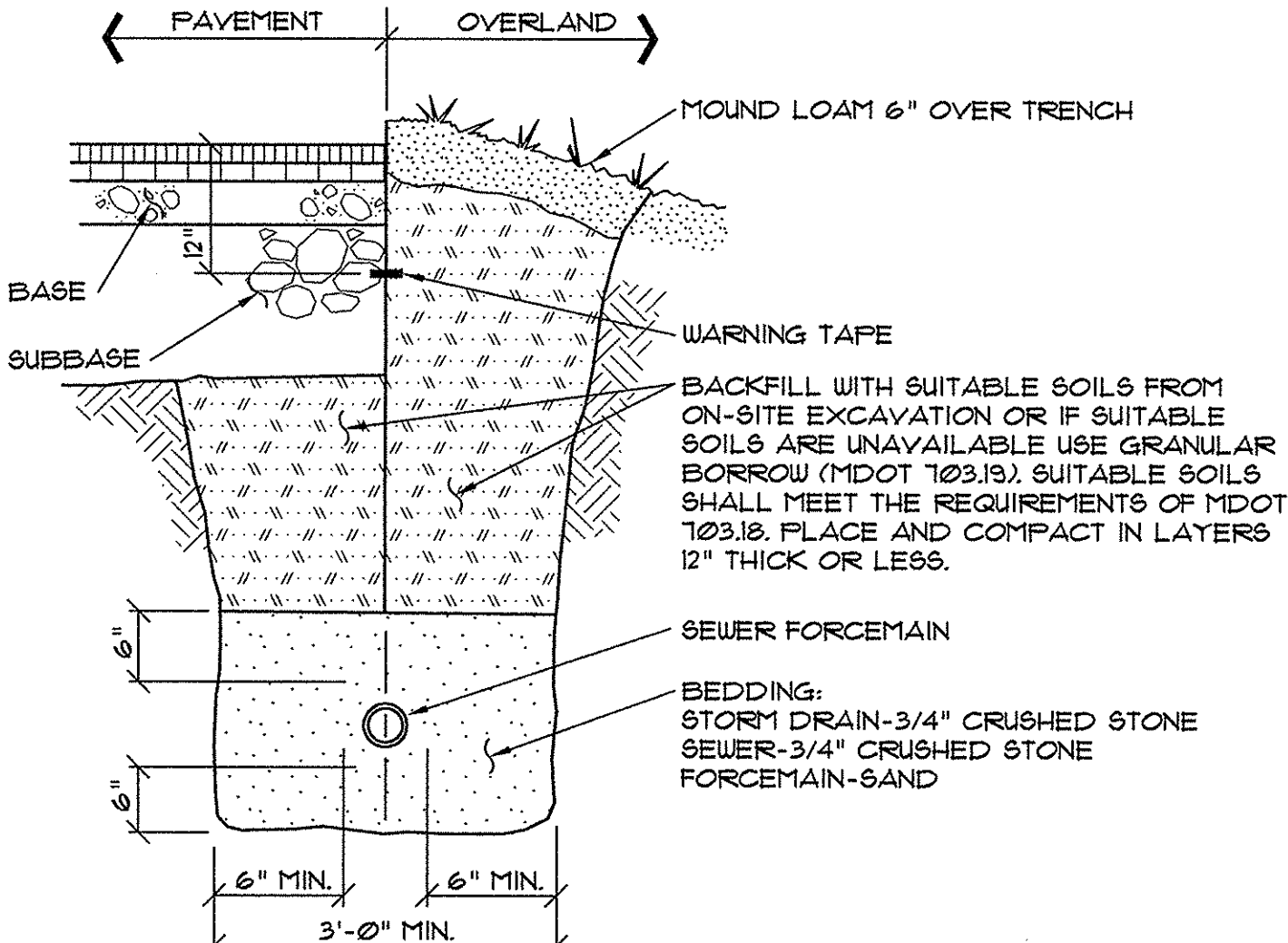
**7 OVERFLOW & CATCHBASIN #8 DETAIL**  
NOT TO SCALE



**11 GAS PIPING TRENCH SECTION**  
NOT TO SCALE



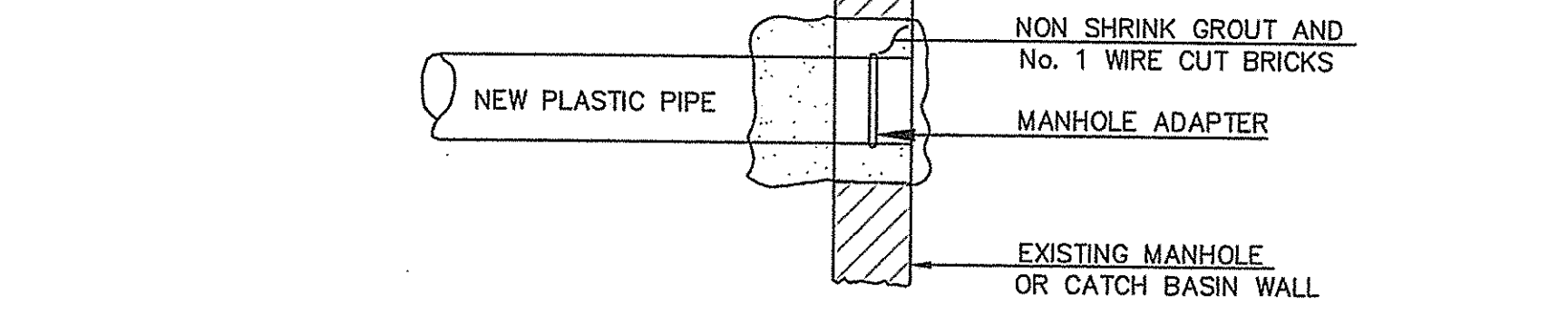
**10 LEVEL SPREADER SECTION**  
NOT TO SCALE



**9 TYPICAL TRENCH SECTION - ON SITE**  
NOT TO SCALE

**2 TYPICAL PIPE TRENCH INSTALLATION (II-12)**  
NOT TO SCALE

- NOTE:** EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION. IF PIPE DIAMETER IS SO LARGE THAT CORE DRILLING IS PROHIBITED, THE CONTRACTOR MAY SAW CUT THE STRUCTURE TO CREATE PIPE OPENING. THE NEW OPENING MUST THEN BE SEALED AND WATERTIGHT BOTH INSIDE AND OUTSIDE THE STRUCTURE.



**3 PLASTIC PIPE CONNECTION METHODS (II-14)**  
NOT TO SCALE

**PINKHAM & GREER CIVIL ENGINEERS**  
28 WILLOW AVE. PORTLAND, ME. 04103  
TEL. 633-7442 FAX. 633-7446

THOMAS G. GREER  
NO. 6206  
LICENSED PROFESSIONAL ENGINEER  
STATE OF MAINE  
6/12/16

NO.	DATE	DESCRIPTION
1	7/11/16	REV'D PER CITY REVIEW COMMENTS
2	8/25/16	REV'D PER CITY REVIEW COMMENTS

NORTHLAND ENTERPRISES, LLC  
17 SOUTH STREET  
PORTLAND, MAINE 04101

SCALE: AS SHOWN  
DATE: JUNE 17, 2016  
PROJECT: 13151

DRN BY: RJS  
DES BY: TSG  
CHK BY: TSG

1945 CONGRESS STREET  
ELKS LODGE, PORTLAND, MAINE

**C2.4**

MAPLOT 216-A-6 & 217-A-1