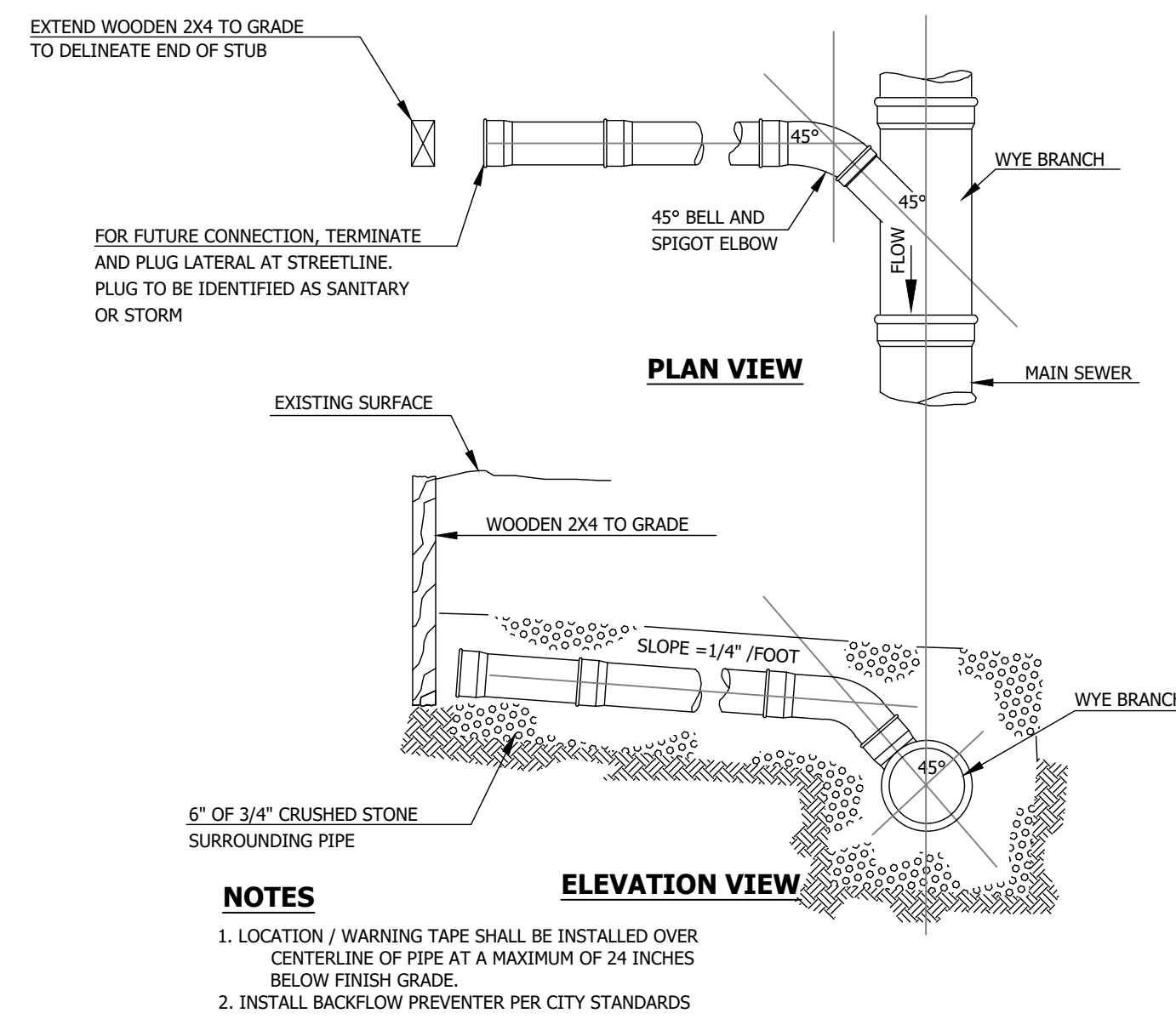
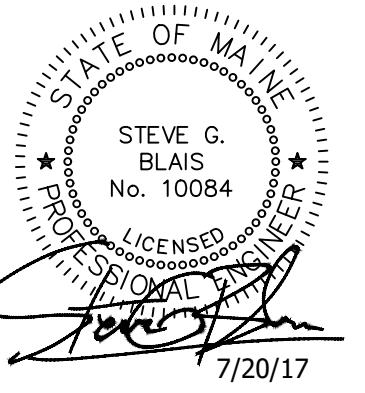
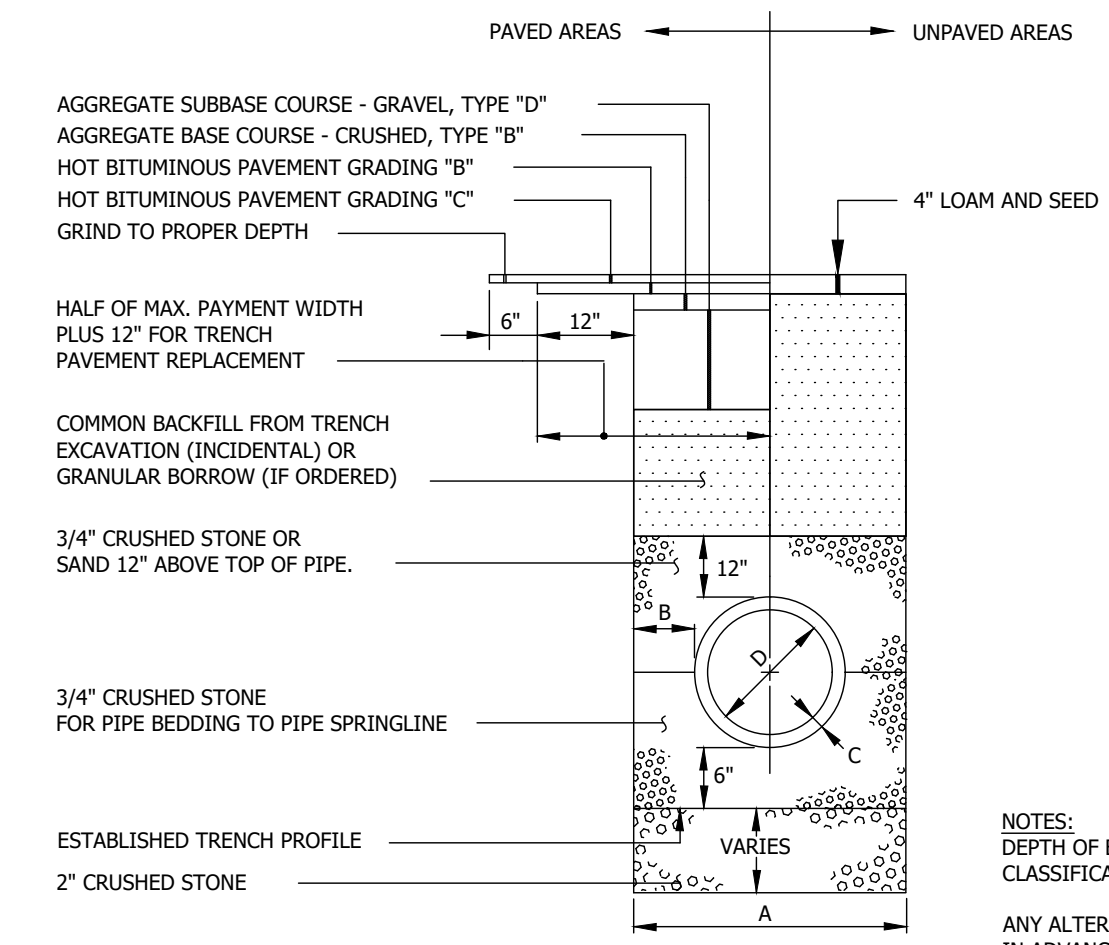


REV.	DESCRIPTION	DATE
1.	REVISED PER CITY COMMENTS	1/17/17
2.	REVISED PER CITY COMMENTS	3/8/17
3.	REVISED PER CITY COMMENTS	4/4/17
4.	REVISED PER CITY COMMENTS	7/10/17



**1 TYPICAL LATERAL WYE CONNECTION**  
NOT TO SCALE

- NOTES**
1. LOCATION / WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
  2. INSTALL BACKFLOW PREVENTER PER CITY STANDARDS



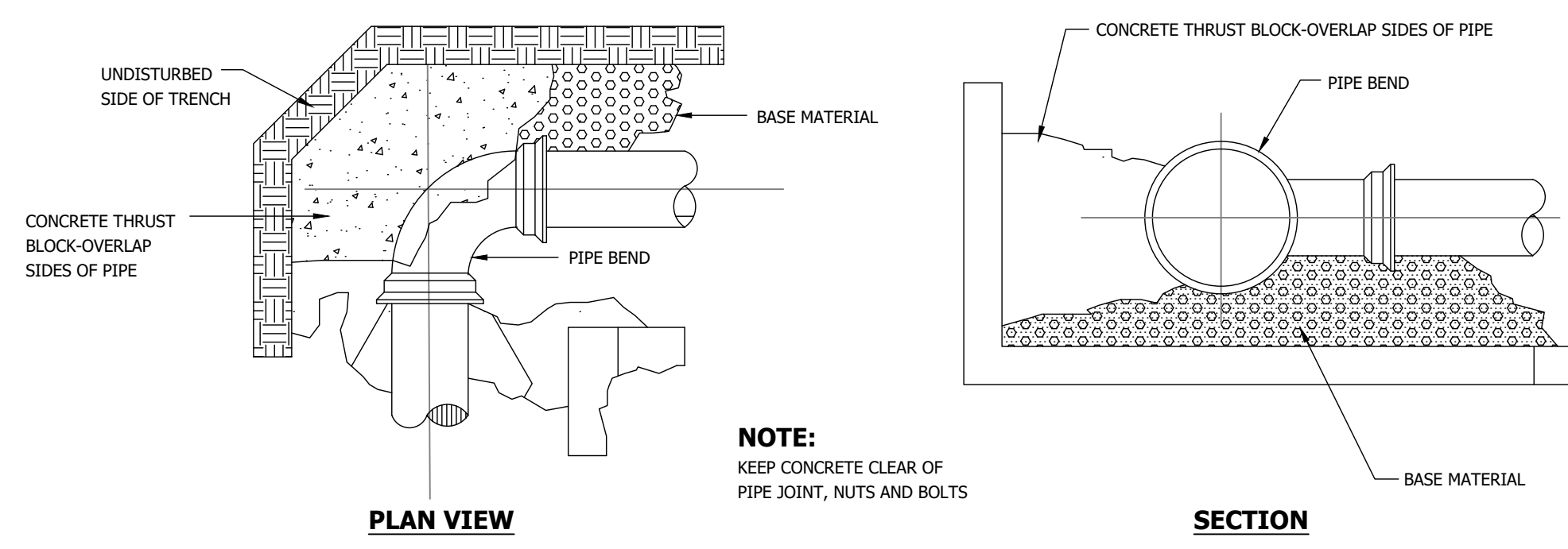
**2 TYPICAL PIPE TRENCH INSTALLATION**  
NOT TO SCALE

**NOTES**

1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2. 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 HAUNCHES OF THE PIPE; BUT IN ALL CASES DIMENSION B SHALL BE AT LEAST 9\".
3. 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

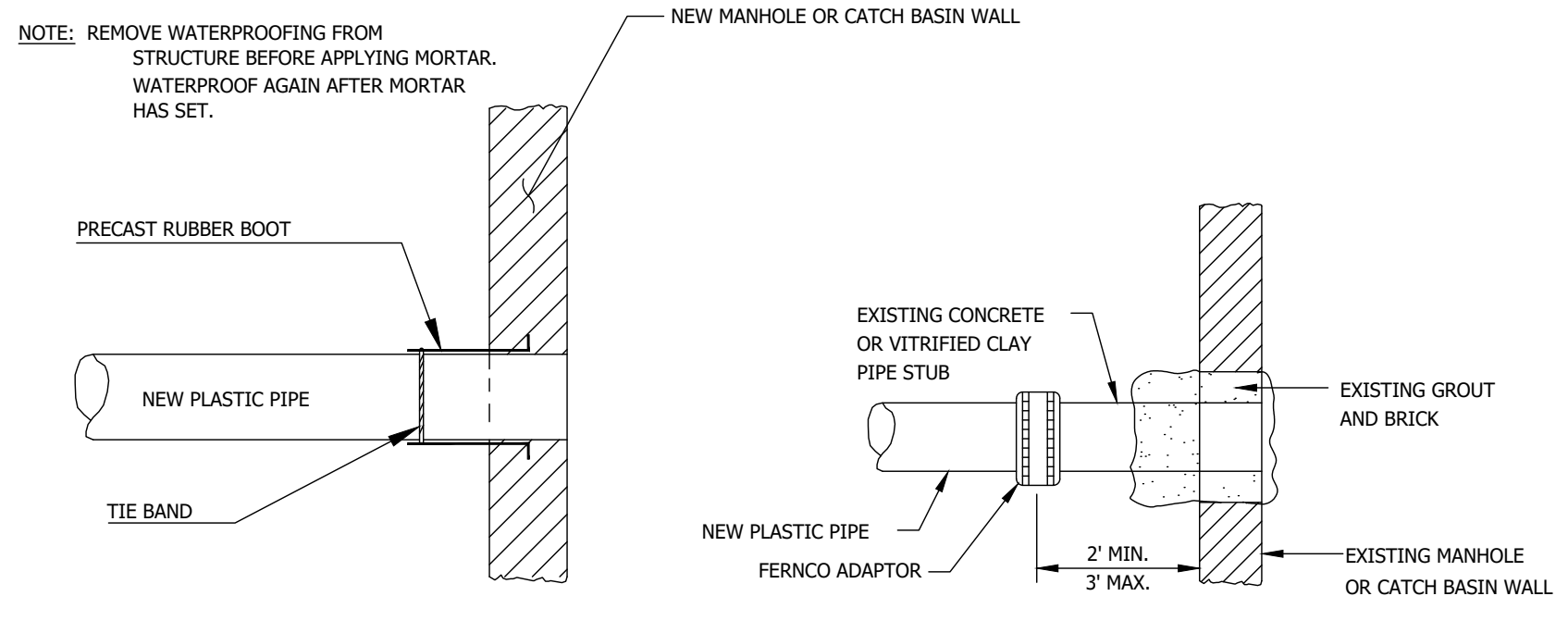
**NOTES:**  
DEPTH OF BITUMINOUS PAVEMENT AND AGGREGATE COURSES SHALL BE DETERMINED BY STREET CLASSIFICATION.  
ANY ALTERNATE TRENCHING OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES.



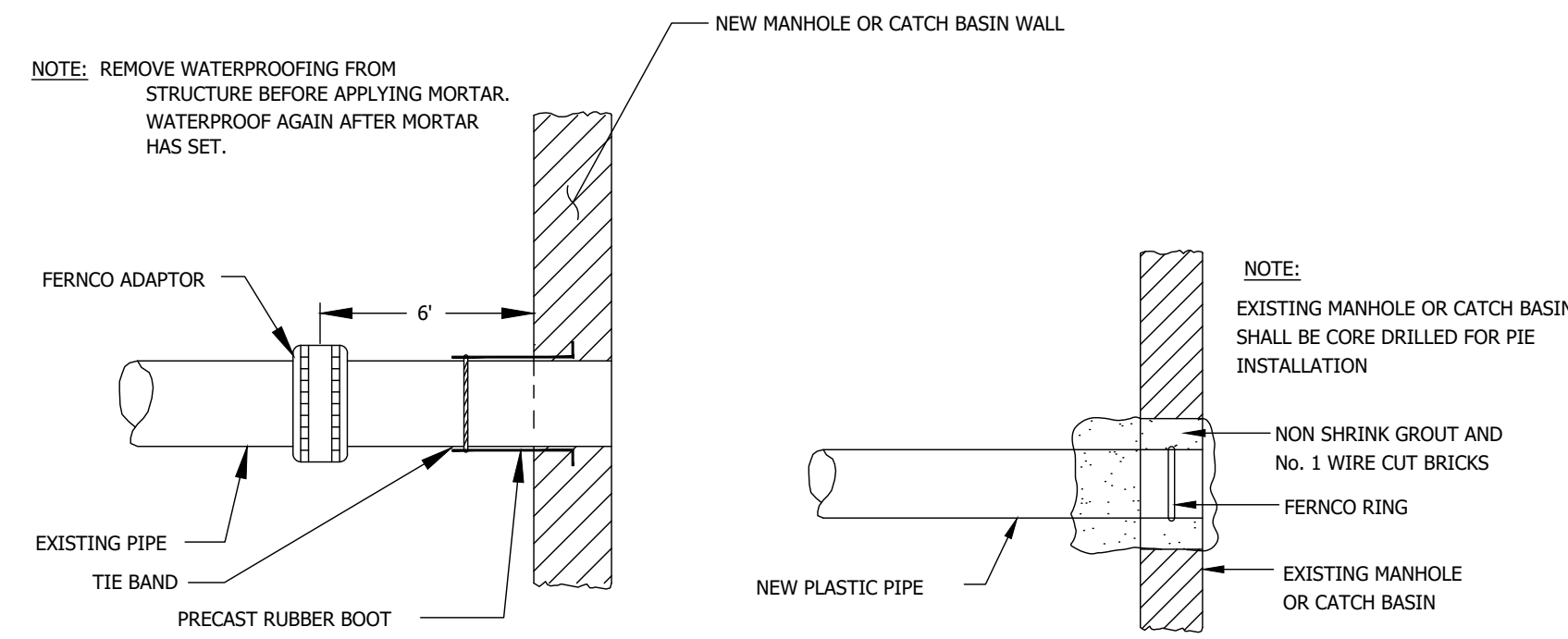
**THRUST/RETAINER SCHEDULE**

BEND	ANGLE	REQUIREMENT
1/4 BEND	(90°)	USE POURED-IN-PLACE THRUST BLOCK w/RETAINERS
1/8 BEND	(45°)	THRUST BLOCK w/RETAINERS
1/16 BEND	(22 1/2°)	THRUST BLOCK
1/32 BEND	(11 1/4°)	THRUST BLOCK

**3 FORCE MAIN THRUST BLOCK PLACEMENT ON VERTICAL & HORIZONTAL BENDS**  
NOT TO SCALE

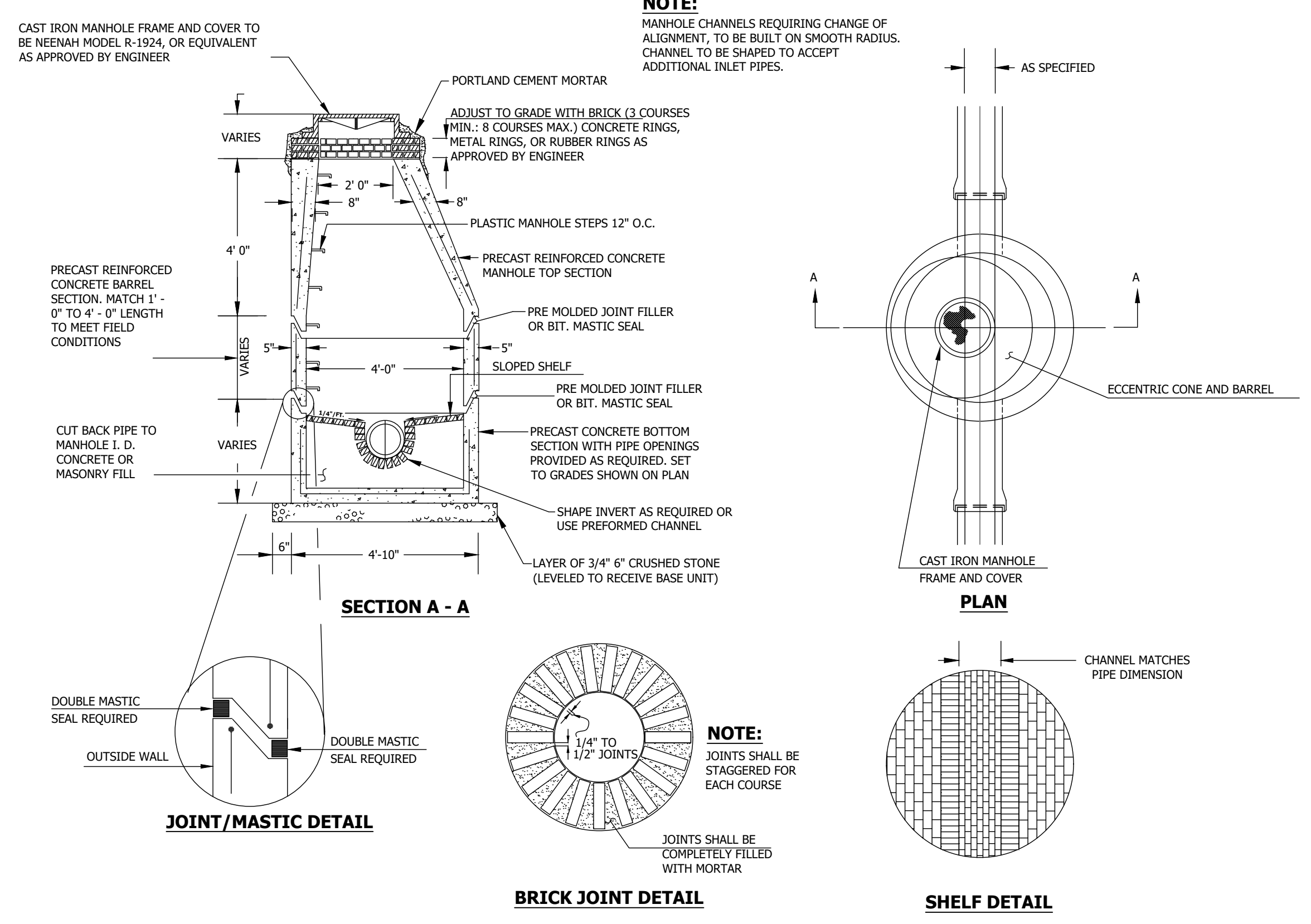


**METHOD 2 - NEW CONSTRUCTION**      **METHOD 4 - NEW PIPE TO EXISTING STRUCTURE STUB**



**METHOD 1 - EXISTING PIPE INTO NEW STRUCTURE**      **METHOD 3 - NEW PIPE INTO EXISTING STRUCTURE**

**5 PIPE CONNECTION DETAILS**  
NOT TO SCALE



**4 PRECAST CONCRETE MANHOLE TYPE "A"**  
NOT TO SCALE

**NOTE:**  
MANHOLE CHANNELS REQUIRING CHANGE OF ALIGNMENT, TO BE BUILT ON SMOOTH RADIUS. CHANNEL TO BE SHAPED TO ACCEPT ADDITIONAL INLET PIPES.

**NOTE:**  
JOINTS SHALL BE STAGGERED FOR EACH COURSE

**NOTE:**  
JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR

**SITE DETAILS III**  
**221 CONGRESS STREET**  
PORTLAND, MAINE 04101

DRAWINGS PREPARED FOR:  
HAY RUNNER, LLC  
265 MAIN STREET, SUITE 201  
BIDDEFORD, MAINE 04005

DRAWING:  
PROJECT:

ISSUED DATE: 7/10/17  
DESIGNED BY: JDY  
DRAWN BY: DRH  
CHECKED BY: SGB  
PROJECT NUMBER: 16123

ISSUED FOR:  
**CITY REVIEW**  
THIS DOCUMENT IS ISSUED FOR REVIEW PURPOSES ONLY AND NOT FOR CONSTRUCTION.

**C-303**