

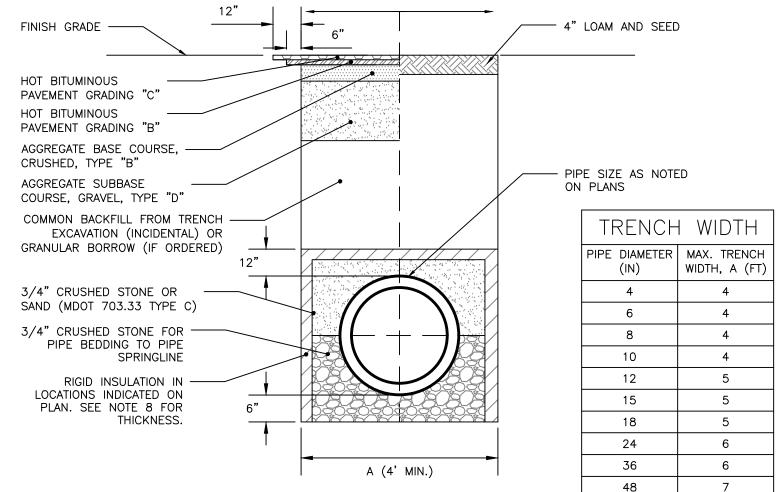
- 1. ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.

 2. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE
- 3. BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 4. WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF.SD) SHALL BE ORIENTED UP.
 5. ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS-46 RATING OR OR IN ACCORDANCE WITH CITY OF
- PORTLAND TECHNICAL MANUAL , SECTION 2 SANITARY SEWER AND STORM DRAIN PART 2.5.2 6. 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.

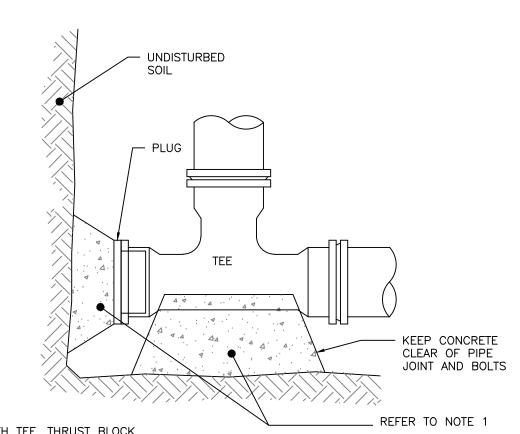
 7. THIS DETAIL SHALL BE APPLIED ONLY TO PIPE TRENCHES WITHIN OF THE CITY OF PORTLAND ROW.STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.

UNPAVED AREAS

PAVED AREAS



CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL NOT TO SCALE

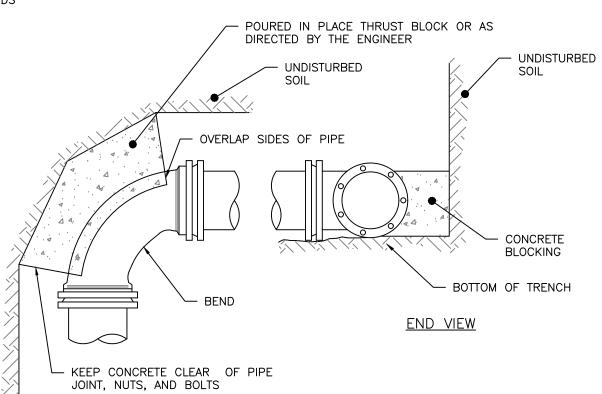


NOTES:

1. IF DEAD END WITH TEE, THRUST BLOCK
WOULD BE REQUIRED OR AS DIRECTED
BY THE ENGINEER

2. SEE THRUST/RETAINER GLAND SCHEDULE
FOR TYPE OF BLOCKING TO BE USED ON
BENDS

END SECTION



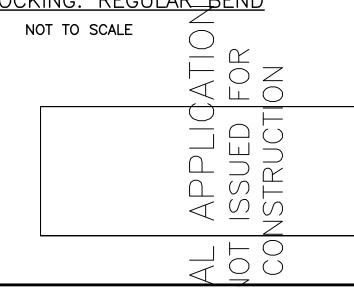
TOP VIEW

2'-0" (MIN) (4" DIA OR LESS)

WATER SERVICE TRENCH SECTION DETAIL

NOT TO SCALE

THRUST BLOCKING: REGULAR_BEND

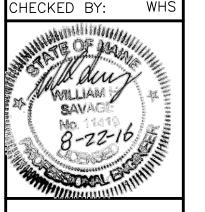


PRELIMINARY APP FINAL APP REVISION **DETAILS** UTILITY

FILE: CIVIL_106

JN: 106

JN: 1067
SCALE: NTS
DESIGNED BY: WHS
DRAWN BY: OJD



C-42

UTILITY TRENCH:
PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE
NOT TO SCALE

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT

2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS

RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH

SCHEDULE 40 PVC

SCHEDULE 40 PVC ELECTRICAL GRADE COMMUNICATION

IF REQUIRED

6" OF 3/4" CRUSHED STONE (MDOT - 703.22 TYPE C) SURROUNDING PIPE

SEWER TEE/WYE CONNECTION DETAIL

NOT TO SCALE

SPARE

2-4"

2-4"

LINES SHALL BE MAINTAINED.

D 2-4" SCHEDULE 40 PVC