

UTILITY NOTES

- ALL INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH THE AFFECTED UTILITY'S STANDARDS.
- INSTALL AND TEST SEWER AND STORM DRAIN SYSTEMS IN ACCORDANCE WITH THE CITY'S ORDINANCES. TESTING SANITARY SEWER PIPE AND MANHOLES IS REQUIRED.
PIPE: LOW PRESSURE AIR (BPSIG) FOR 5 MINUTES.
STRUCTURES: VACUUM TEST, XX MM LG FOR XX MINUTES PRIOR TO BUILDING INVERT OR CHIMNEY.
- INSTALL ALL PIPES WITH THE BELLS UPGRADIENT.
- WATER MAIN TO HAVE A MINIMUM 5.5' OF COVER WHERE THE WATER MAIN CROSSES OTHER UTILITIES IT MAY NEED TO BE DEEPER.
- PRECAST CATCH BASIN COMPONENTS TO COMPLY WITH ASTM C418.
- IDENTIFICATION TAPE TO BE INSTALLED ABOVE ALL NEW UNDERGROUND UTILITIES AND ABOVE ANY EXISTING UTILITIES THAT MAY BE EXPOSED BY THIS CONSTRUCTION.

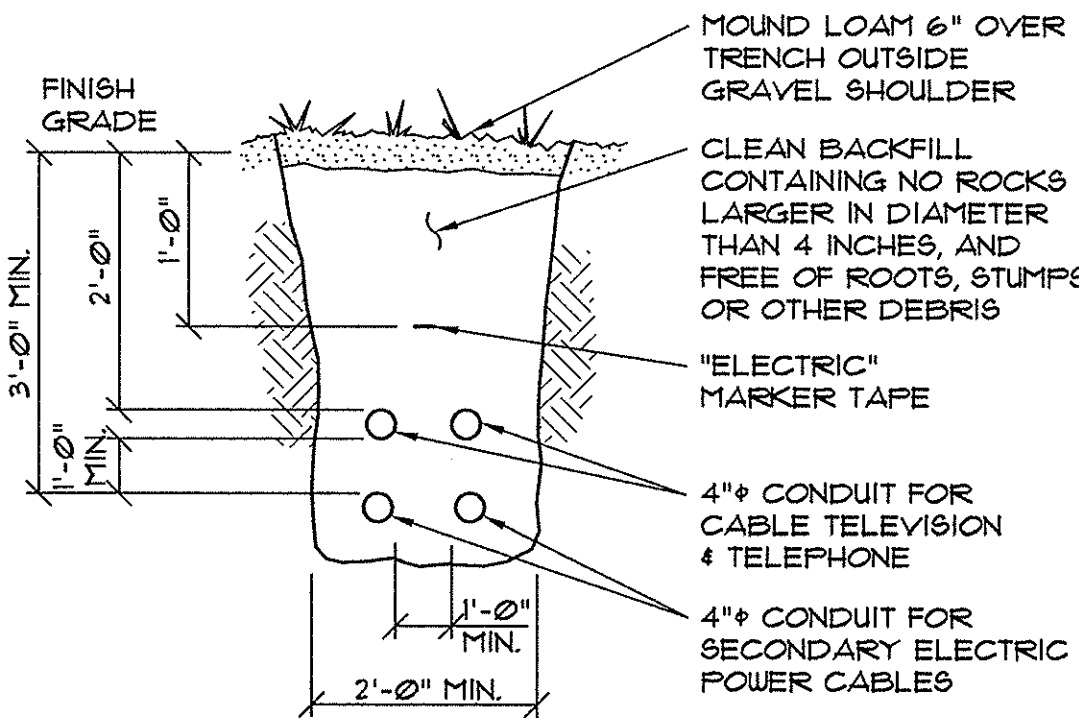
DETECTABLE UNDERGROUND MARKING TAPE TO BE PERMANENT, BRIGHT-COLORED, CONTINUOUS-PRINTED FLUOROPOLYMER TAPE, INTENDED FOR DIRECT-BURIAL SERVICE NOT LESS THAN 3" WIDE x 5 MILS THICK. PROVIDE TAPE WITH BLACK PRINTING IDENTIFYING THE UTILITY. DETECTABLE WARNING TAPE REQUIRED OVER ALL WATER, SEWER, DRAINAGE, OR GAS UTILITIES. TAPE TO BE TERRA TAPE BY REEF INDUSTRIES, INC., www.reefindustries.com, OR EQUAL.

AFWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES

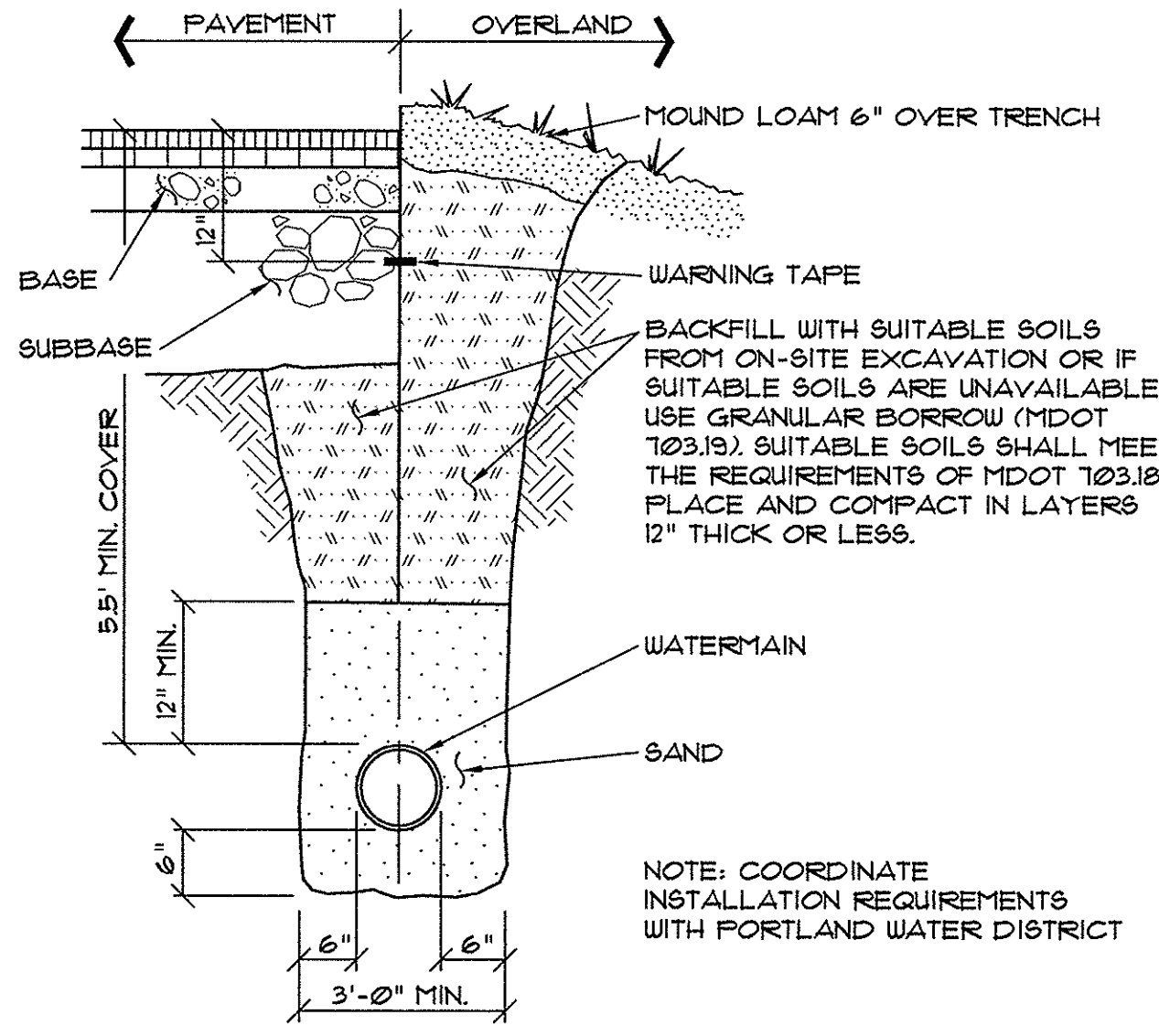
7. MATERIALS: SEE PLANS FOR SIZES

STORM DRAIN: TYPICAL: WITHIN ROW OF STATE ROAD:	PE N12, SMOOTH WALL REINFORCED CONCRETE PIPE
UNDERDRAIN: MEETING AASHTO H-20 LOADING	PERFORATED PE N12
SANITARY SEWER: MEETING ASTM D3034 W/ A REMOVABLE GASKET MEETING ASTM D3212	PVC, SDR 35
WATER SERVICE:	CTS 200 PSI, PE
FOUNDATION DRAIN: MEETING AASHTO H-20 LOADING COORD. WITH STRUCTURAL FOR CONNECTION WITHIN 8' OF FOUNDATION	PERFORATED PE N12



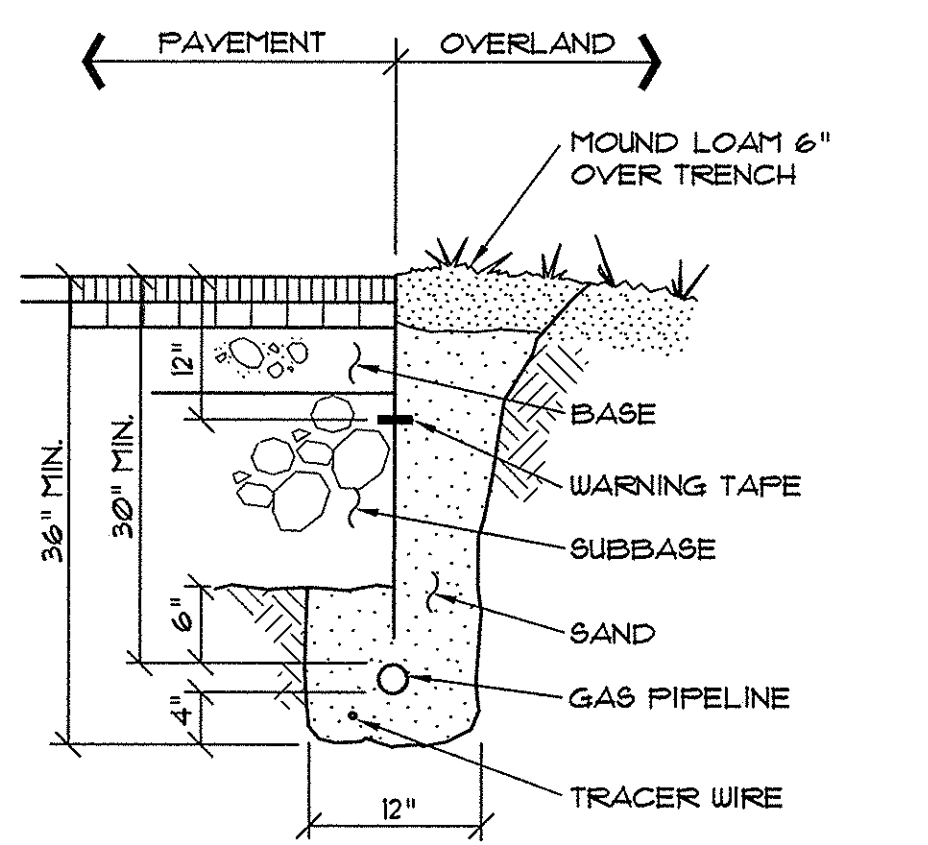
- NOTES:**
- INSTALLATION SHALL NOT ALLOW INTER-TWING OF CABLES.
 - DIRECT BURY ELECTRICAL CABLES MAY BE USED IF ALLOWED BY CENTRAL MAINE POWER.
 - CONFIRM CONDUIT SIZES WITH INDIVIDUAL UTILITY COMPANIES PRIOR TO INSTALLATION.
 - COORDINATE FINAL LAYOUT WITH INDIVIDUAL UTILITY COMPANIES.

7 CABLE TRENCH SECTION
NOT TO SCALE

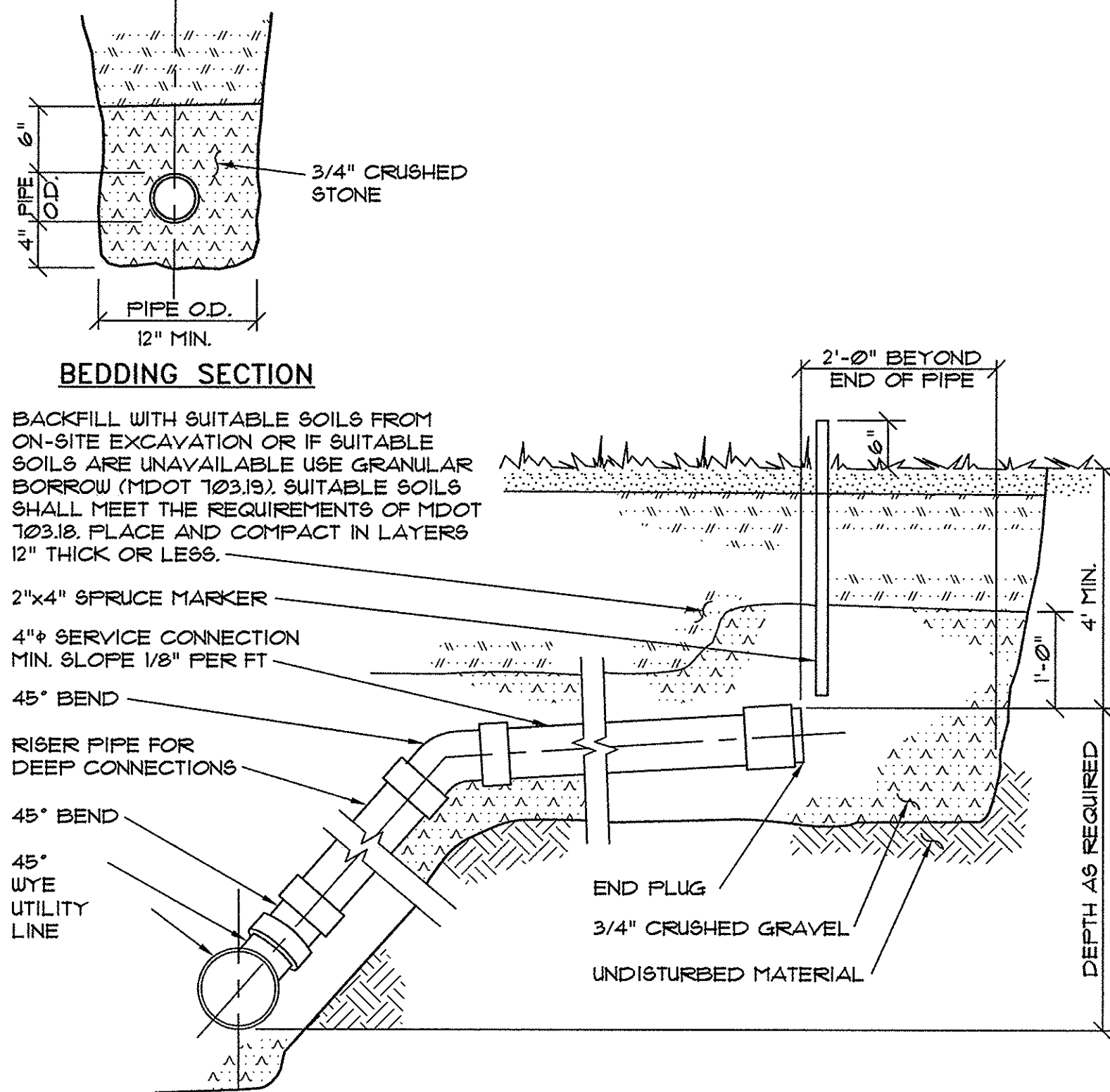


NOTE: COORDINATE INSTALLATION REQUIREMENTS WITH PORTLAND WATER DISTRICT

4 TYPICAL WATER MAIN SECTION
NOT TO SCALE



8 GAS PIPING TRENCH SECTION
NOT TO SCALE



5 HOUSE SERVICE CONNECTION
NOT TO SCALE

CONSTRUCTION	USE
<ul style="list-style-type: none"> 1" HMA MDOT 93mm 2" HMA MDOT 192mm 4" COMPACTED AGGREGATE BASE, MDOT 103.06(a) TYPE A 15" COMPACTED AGGREGATE SUBBASE, MDOT 103.06(b) TYPE D COMPACTED SUBGRADE 	<p>BITUMINOUS PAVEMENT</p> <p>DRIVEWAY</p> <p>SEE PAVEMENT DRAIN SYSTEM</p>
<ul style="list-style-type: none"> 4" TOPSOIL, NO STONES OVER 3/4" DIA. GRANULAR MATERIAL IN FILL AREAS COMPACTED SUBGRADE 	<p>GRASS</p> <p>ALL DISTURBED AREAS</p>

- NOTES:**
- HMA = HOT MIX ASPHALT.
MDOT = MAINE DEPARTMENT OF TRANSPORTATION.
 - ALL COURSE THICKNESS AFTER FINAL COMPACTION.

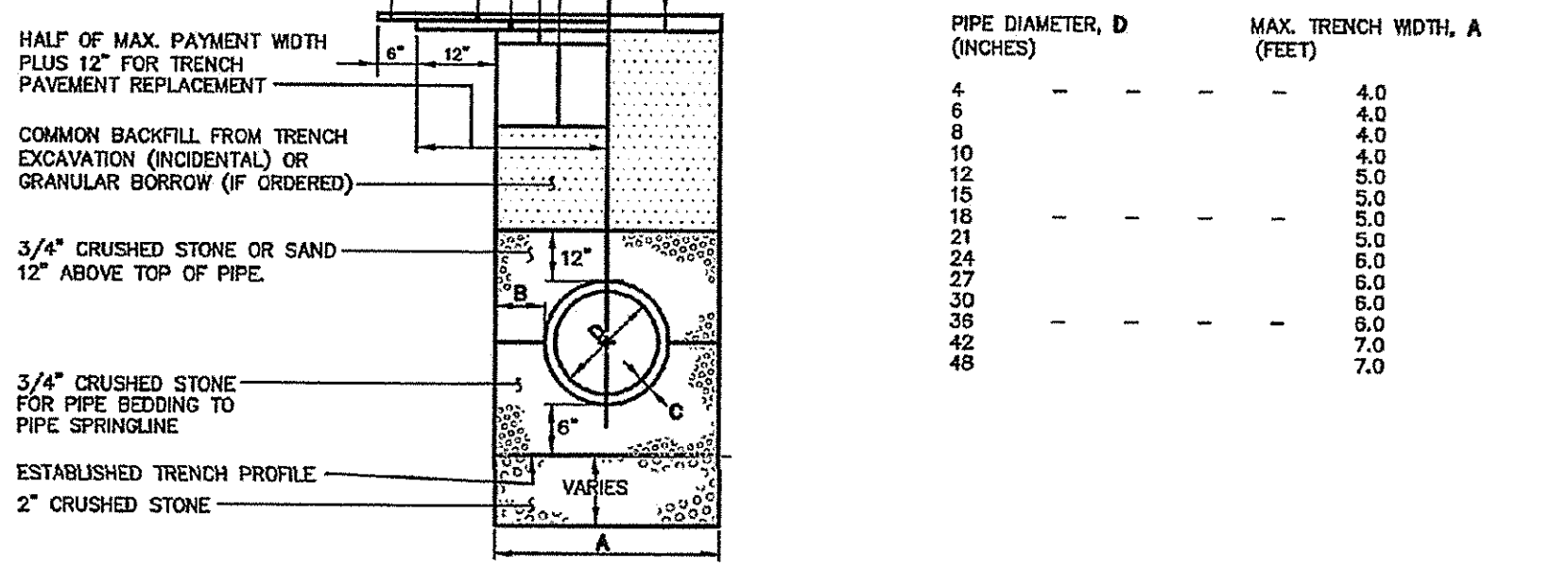
6 SCHEDULE OF SURFACE FINISHES
NOT TO SCALE

GENERAL NOTES FOR MANHOLES AND CATCH BASINS

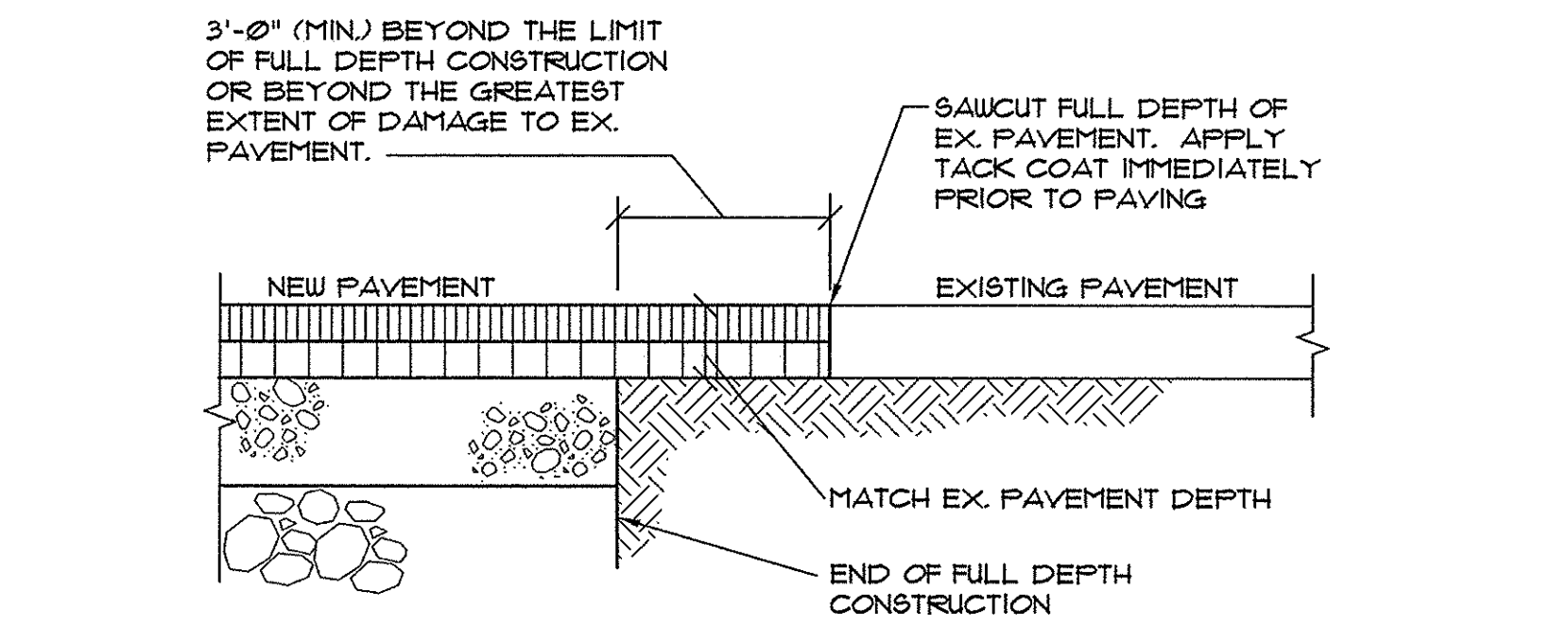
- ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 LBS. PER SQ. INCH AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
- MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
- PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
- ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE LOCATED 8" 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 DRSA OR APPROVED EQUAL.
- CASTINGS 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.

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

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

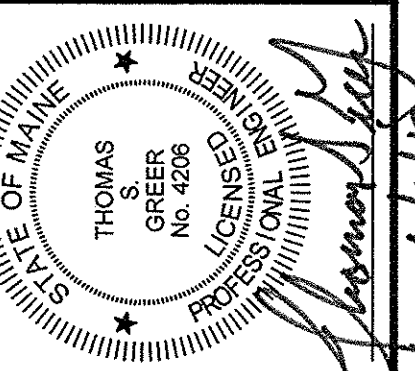


2 TYPICAL PIPE TRENCH INSTALLATION (II-12)
NOT TO SCALE



3 PAVEMENT CUTTING & MATCHING SECTION
NOT TO SCALE

PINKHAM & GREER
CIVIL ENGINEERS
28 WANNAN AVE. PORTLAND, ME. 04103
TEL: 207.781.5242 FAX: 207.781.4245



REV.	DATE	DESCRIPTION
1	4/16/17	REVISED FOR LEVEL 1 MINOR RESIDENTIAL APPLICATION

JOCELYNE DERASPE
PO BOX 10587
PORTLAND, ME. 04104

SCALE: AS SHOWN
DATE: MARCH 2, 2017
PROJECT: 18170

DRN BY: RJS
DESIGN BY: TSG
CHK BY: JSL

69 FALL BROOK STREET
PORTLAND, ME 04103

DETAILS

C3.2

MAPLOT 162/B5