

## TYPICAL SERVICE CONNECTION N.T.S.

TYPE K COPPER 7

SERVICE TAP

(3/4" AND 1" C.C. THREAD)

SERVICE SADDLE

(1-1/2" AND 2" C.C. THREAD)

CORPORATION STOP

COOSENECK

THREADS SHOWING

CORPORATION STOP (SEE SPECS.)

-GOOSENECK

-FLUSH TO

FINISH GRADE

-SERVICE BOX

W/ ROD

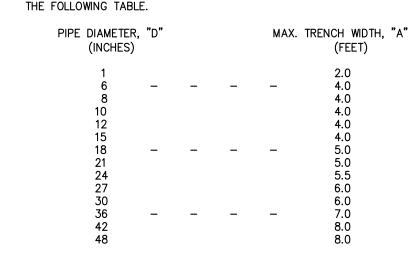
CURB STOP

SERVICE ON PRIVATE TO BE

ACCEPTABLE TO PWD

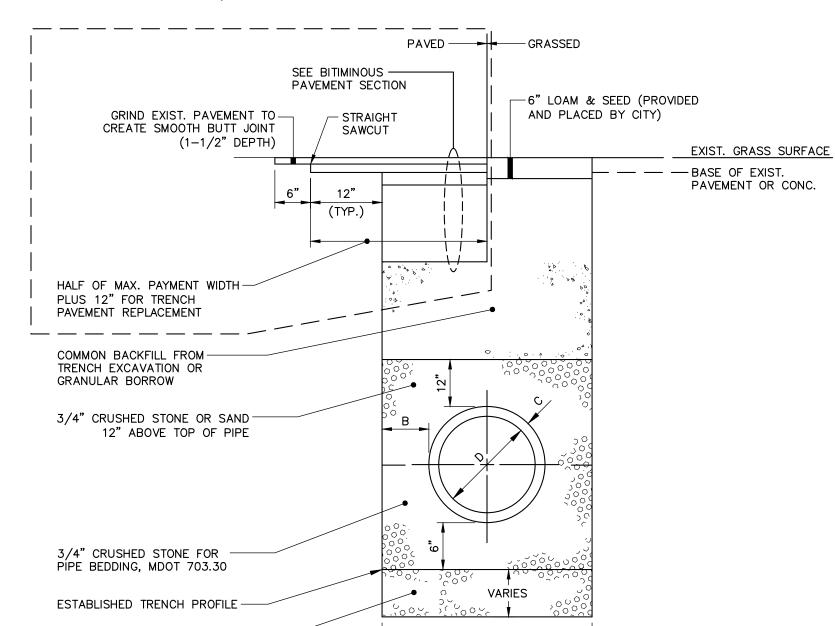
### PIPE INSTALLATION DETAIL - NOTES

- 1. ALTERNATIVE CONSTRUCTION METHODS OR PAYMENT METHODS SHALL BE APPROVED IN ADVANCE.
- 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.
- 3. 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 "B" SHALL BE AT LEAST 9".
- 4. DIMENSION "A" SHALL BE BASED ON PIPE DIAMETER, AS SET FORTH IN

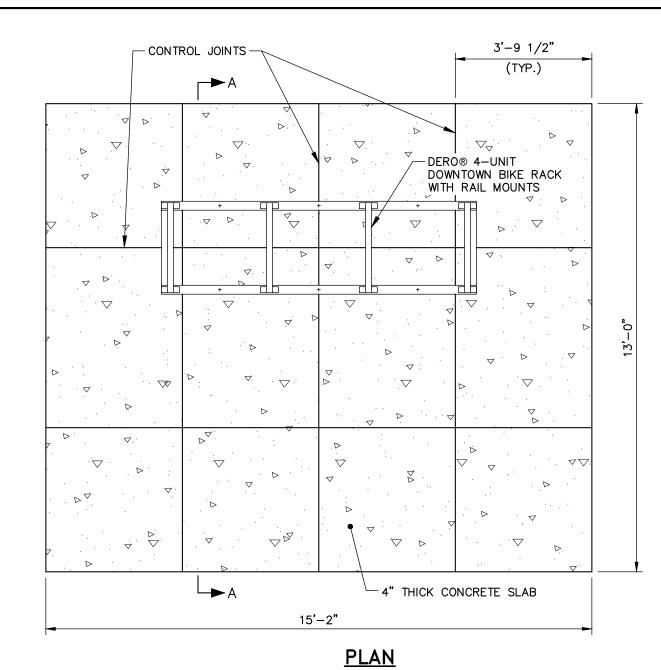


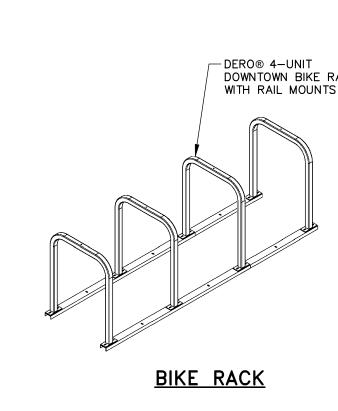
ANY ALTERNATE TRENCHING SHALL BE APPROVED IN ADVANCE BY THE CITY OF PORTLAND, DEPARTMENT OF PUBLIC SERVICES.

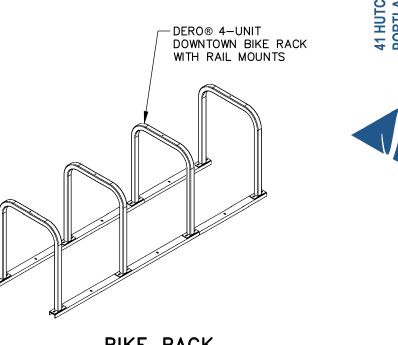
2" CRUSHED STONE -

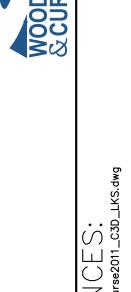


PIPE INSTALLATION DETAIL









S S S S S K 109

POLYETHYLENE WELDED ON COVER SHROUD ASSEMBLY

PORTLAND, ION AND FACII MENT DEPARTI

SHEET # C003 PLAN NUMBER

HDPE LID-E/ONE EQUALIZER-1 1/2" 12.5MM HMA HOT BITUMINOUS-PAVEMENT SURFACE COURSE 2 1/2" 19.0MM HMA HOT BITUMINOUS PAVEMENT BINDER COURSE 3" MDOT TYPE B AGGREGATE BASE -18" MDOT TYPE D AGGREGATE SUBBASE QUICK DISCONNECT -ASSEMBLY PVC SLIDE FACE COMPACTED COMMON BORROW OR EXISTING GRADE DISCHARGE FTG 1 1/4" FEMALE NPT, SS ALARM

-4" THICK CONCRETE SLAB

 $-6x6 - W2.0 \times W2.0$ 

REINFORCEMENT

-10" OF COMPACTED GRAVEL BASE

SECTION A-A

1. PROVIDE A DERO® 4-UNIT DOWNTOWN BIKE RACK WITH RAIL MOUNTS. BIKE

2. CONCRETE SLAB SHALL BE 4 INCHES THICK (MIN.) PLACED ON A 10 INCH THICK COMPACTED GRAVEL BASE. USE 4,500 PSI (MIN.) CONCRETE MIX. USE EDGING

3. DRILL CONCRETE SLAB AND ATTACH BIKE RACK RAILS WITH  $\frac{7}{6}$ "x4" GALV. WEDGE

DERO 3-UNIT DOWNTOWN BIKE RACK

AND CONCRETE PAD DETAIL

TOOL TO RADIUS EDGES AND SCORE JOINTS AS SHOWN. FINISH CONCRETE WITH A

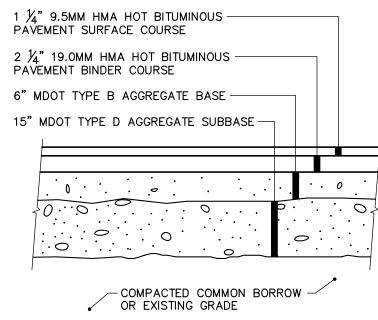
RACKS AND RAILS SHALL BE HOT-DIP GALVANIZED.

ANCHOR BOLTS PER MANUFACTURER'S INSTRUCTIONS.

LIGHTLY BROOMED SURFACE.

# **BITUMINOUS PAVEMENT** <u>SECTION - RIVERSIDE STREET</u>

FINISH GRADE -



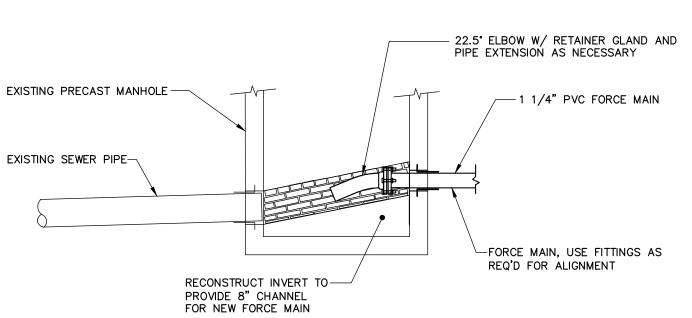
**BITUMINOUS PAVEMENT** SECTION - PARKING LOT

PROTECTIVE CABLE SHROUD (POLYETHYLENE) GRADE MUST SLOPE AWAY FROM STATION POWER/ALARM CABLE 6 CONDUCTOR W/GROUND (120-240V) -ELECTRICAL QUICK DISCONNECT (EQD) NEMA 6P - POLYETHYLENE MOLDED TANK (237 GALLON) - INLET PVC FLANGE TO ACCEPT 4.5" O.D. <sup>−</sup>1 ¼" FLEXIBLE DISCHARGE HOSE COMBINATION CHECK VALVE/ANTI-SIPHON VALVE FLAPPÉR TYPE (NORYL) -SEMI-POSITIVE DISPLACEMENT TYPE PUMP DIRECTLY DRIVEN BY A 1 HP MOTOR

- 1. PUMP SHALL BE MODEL WH231-92 BY E/ONE SEWER SYSTEMS OR APPROVED EQUAL.
- 2. GRADE SHALL BE SLOPED AWAY FROM PUMP STATION LID.
- 3. CONTRACTOR SHALL PROVIDE CONCRETE ANTI-FLOATATION DEVICE AS NECESSARY. ANTI-FLOATATION DESIGN SHALL BE COMPLETED AS RECOMMENDED BY MANUFACTURER AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER.

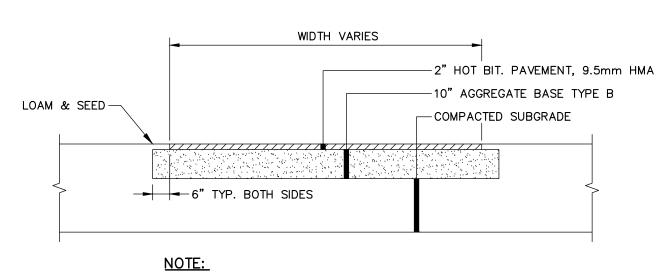
SEWER PUMP DETAIL

N.T.S.



- 1. THE EXISTING SANITARY SEWER MANHOLE AT THE INTERSECTION OF RIVERSIDE STREET AND EVERGREEN DRIVE SHALL BE CORE DRILLED TO MAKE THE NEW SEWER FORCEMAIN CONNECTION TO
- THE PUBLIC SEWER SYSTEM. 2. A 22.5 DEGREE BEND SHALL BE PROVIDED INSIDE THE MANHOLE AT THE FORCEMAIN TERMINUS TO DIRECT FLOW FROM THE FORCEMAIN DOWN AND INTO THE EXISTING SEWER LEAVING THE MANHOLE.
- 3. ALL CONSTRUCTION DETAILS OF THE FORCEMAIN CONNECTION TO THE MANHOLE SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE CITY OF PORTLAND WASTEWATER DIVISION. CONTACT JOHN EMERSON (318-1239) TO COORDINATE REVIEW AND APPROVAL OF THE PROPOSED CONNECTION DETAILS AND TO ARRANGE FOR INSPECTION OF THIS WORK.

# FORCE MAIN DISCHARGE MANHOLE



1. AGGREGATE TYPES PER MDOT SECTION 304.02

BITUMINOUS SIDEWALK DETAIL