2 08.17.16 FINAL PLAN SUBMISSION TO CITY 09.01.15 FINAL BRICK SOUTH LEVEL III SITE PLAN APPLICATION V DATE DESCRIPTION REVISIONS LIC. #11994 BRICK NORTH AND SOUTH BUILDINGS A THE FOREFRONT AT THOMPSON'S POINT STORMWATER AND SANITARY SEWER DETAILS FILE NAME: 2982.05-BS DET FOREFRONT PARTNERS | , LP SHEET

KENNEDY

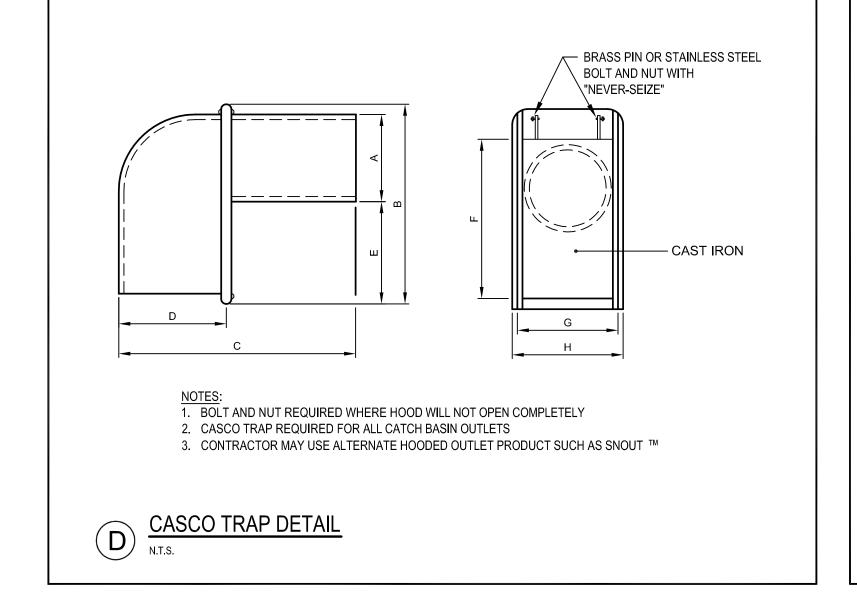
No. 11994 08.17.16

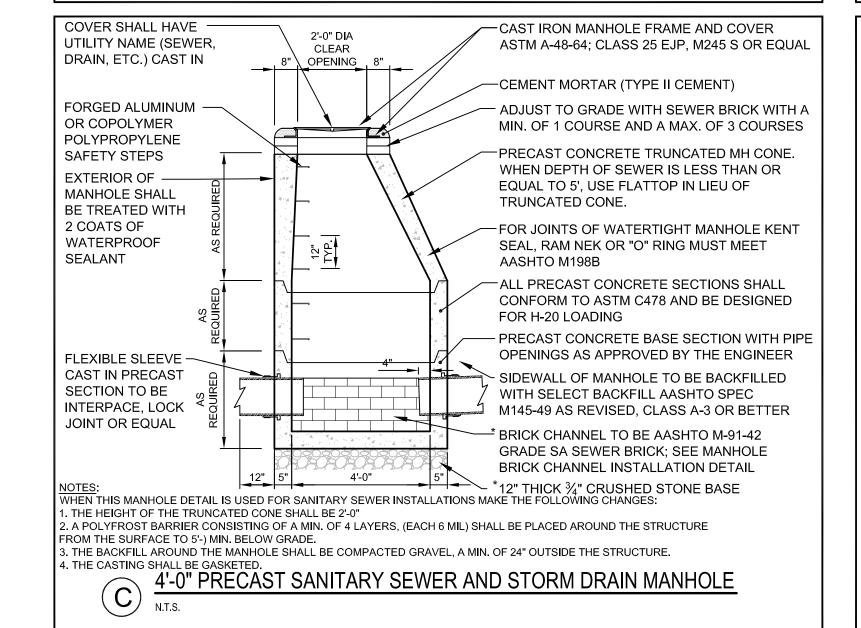
08.17.16 CENSE

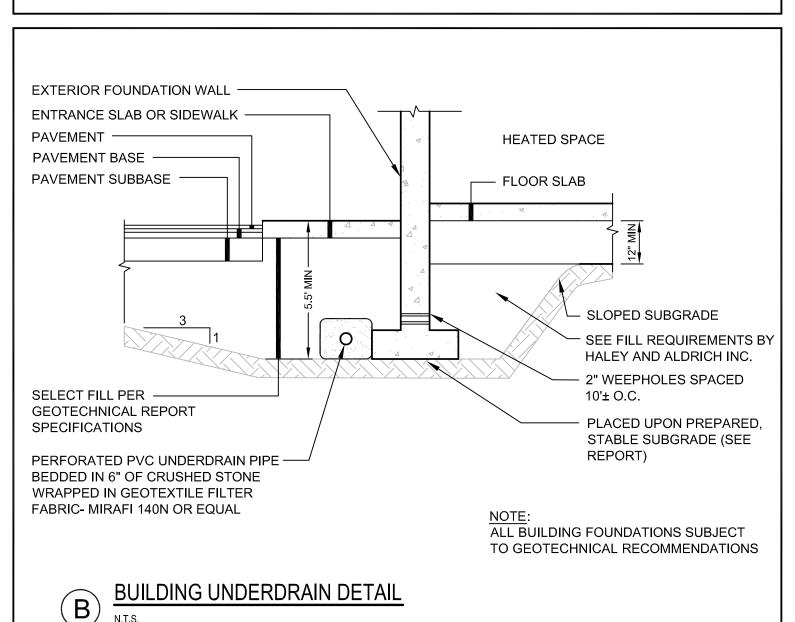
P.E. BO KENNEDY

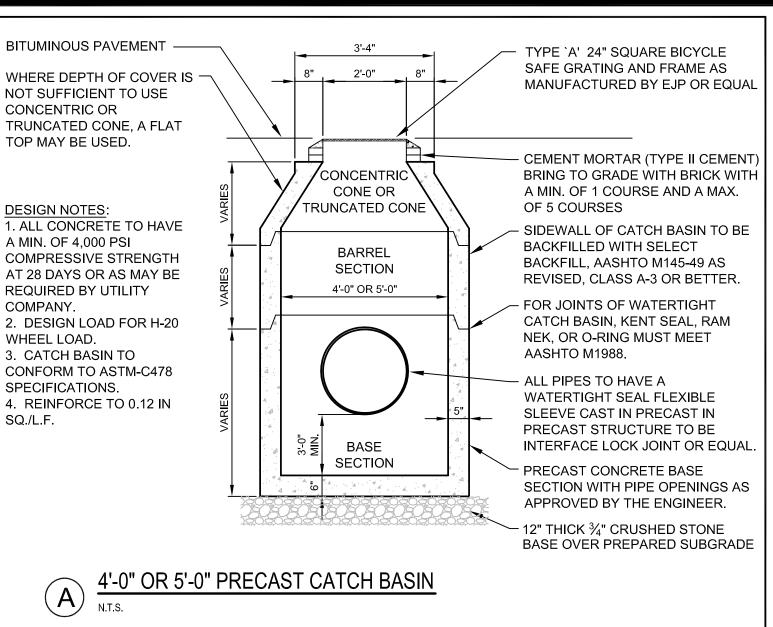
STANTEC CONSULTING SERVICES INC. 482 PAYNE ROAD **Stantec** SCARBOROUGH, ME 04074 WWW.STANTEC.COM APRIL 2015 DRAWN: DED ESIGNED: BEK SCALE: N.T.S. CHECKED: SRB JOB NO. 195350044

C-8.4









LARGE DIAMETER STORM DRAIN MANHOLE & CATCH BASIN WITH FLAT TOP

ALL CONCRETE TO HAVE A MIN. 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS 2. DESIGN FOR H-20 WHEEL LOADING 3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS

BASE DETAIL OPTION 2 4. REINFORCE TO .12 IN. SQ./L.F.

TO APPROVAL OF THE ENGINEER. MANHOLE OR CATCH — BASIN RISER #5 AT 12" EF, EW ----12" THICK ¾" CRUSHED STONE BASE OVER PREPARED SUBGRADE

BY THE CONTRACTOR DEMONSTRATING OPTION 1 CAN BE USED AT THIS SITE. APPROVAL IS SUBJECT

APPROVED BY OWNER. — PRECAST REINFORCED CONCRETE BARREL SECTIONS. PRECAST SUPPLIER APPROVED BY OWNER. PROVIDE 2'-0" SUMP FOR CATCH BASINS AND 8" FOR BRICK CHANNEL IN MANHOLES WATERTIGHT PIPE SEAL FOR BASE CONSTRUCTION SEE BASE DETAIL PRECAST BASE SECTION ----12" THICK ¾" CRUSHED STONE BASE OVER PREPARED SUBGRADE BOTTOM THICKNESS T —— **BASE DETAIL OPTION 1** THE CONTRACTOR SHALL USE BASE OPTION 2 UNLESS ANTIFLOATATION COMPUTATIONS ARE PROVIDED

TYPE `A' 24" SQUARE BICYCLE

SAFE GRATING AND FRAME AS

MANUFACTURED BY EJP OR EQUAL

- PRECAST REINFORCED CONCRETE

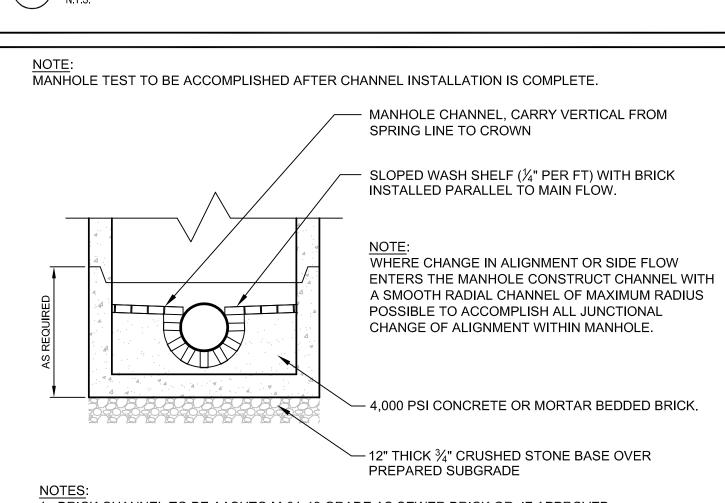
COVER. PRECAST SUPPLIER

STORM AND SANITARY MANHOLE CHANNEL DETAIL

CEMENT MORTAR —

8' 8" 8"

WHERE CHANGE IN ALIGNMENT OR SIDE FLOW $\overline{}$ POSSIBLE TO ACCOMPLISH ALL JUNCTIONAL CHANGE OF ALIGNMENT WITHIN MANHOLE. - 12" THICK ¾" CRUSHED STONE BASE OVER PREPARED SUBGRADE I. BRICK CHANNEL TO BE AASHTO M-91-42 GRADE AS SEWER BRICK OR, IF APPROVED BY ENGINEER, A PREFABRICATED FIBERLINER 2000 CHANNEL, AS MANUFACTURED BY GDT, INC. ESSEX, CT OR EQUAL MAY BE USED. 2. SLOPE CHANNEL DOWN FROM INLET TO OUTLET. 3. TOOL ALL JOINTS IN CHANNEL AND ON TABLE.



PIPE CONNECTION TO PRECAST CONCRETE SANITARY SEWER AND STORM DRAINAGE STRUCTURE

ALL CONNECTORS WHICH ARE CAPPED AWAITING PIPE INSTALLATION AT A LATER DATE MUST BE RESTRAINED.

FOR THE CONNECTOR SHALL COMPLY TO ASTM C443 AND ASTM C923 AND CONSIST OF EPDM AND ELASTOMERS KNOWN TO BE RESISTANT TO OZONE, WEATHER ELEMENTS, CHEMICALS, INCLUDING ACIDS, ALKALIS, ANIMAL AND VEGETABLE FATS, OILS AND PETROLEUM PRODUCTS FROM SPILLS. ALL STAINLESS STEEL ELEMENTS OF THE CONNECTOR SHALL BE TOTALLY NON-MAGNETIC SERIES 304 STAINLESS, EXCLUDING THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND AROUND THE PIPE WHICH SHALL BE SERIES 305 STAINLESS. THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND SHALL BE TORQUED BY A BREAK-AWAY TORQUE WRENCH AVAILABLE FROM THE PRECAST MANHOLE SUPPLIER, AND SET AT 60/70 in/lbs.. THE CONNECTOR SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER. THE CONNECTOR SHALL BE OF A SIZE SPECIFICALLY DESIGNED FOR THE PIPE MATERIAL AND SIZE BEING UTILIZED ON THE PROJECT.

FLEXIBLE PIPE CONNECTOR CATCH BASIN WALL STORM DRAIN OR SEWER PIPE — - POSITION PIPE FLUSH WITH INNER WALL — KORBAND PIPE CLAMPS, TYP

A FLEXIBLE PIPE TO MANHOLE CONNECTOR SHALL BE EMPLOYED IN THE CONNECTION OF ALL PIPE TO MANHOLE JUNCTIONS.

THE CONNECTOR SHALL BE THE SOLE ELEMENT RELIED ON TO ASSURE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO MANHOLE.

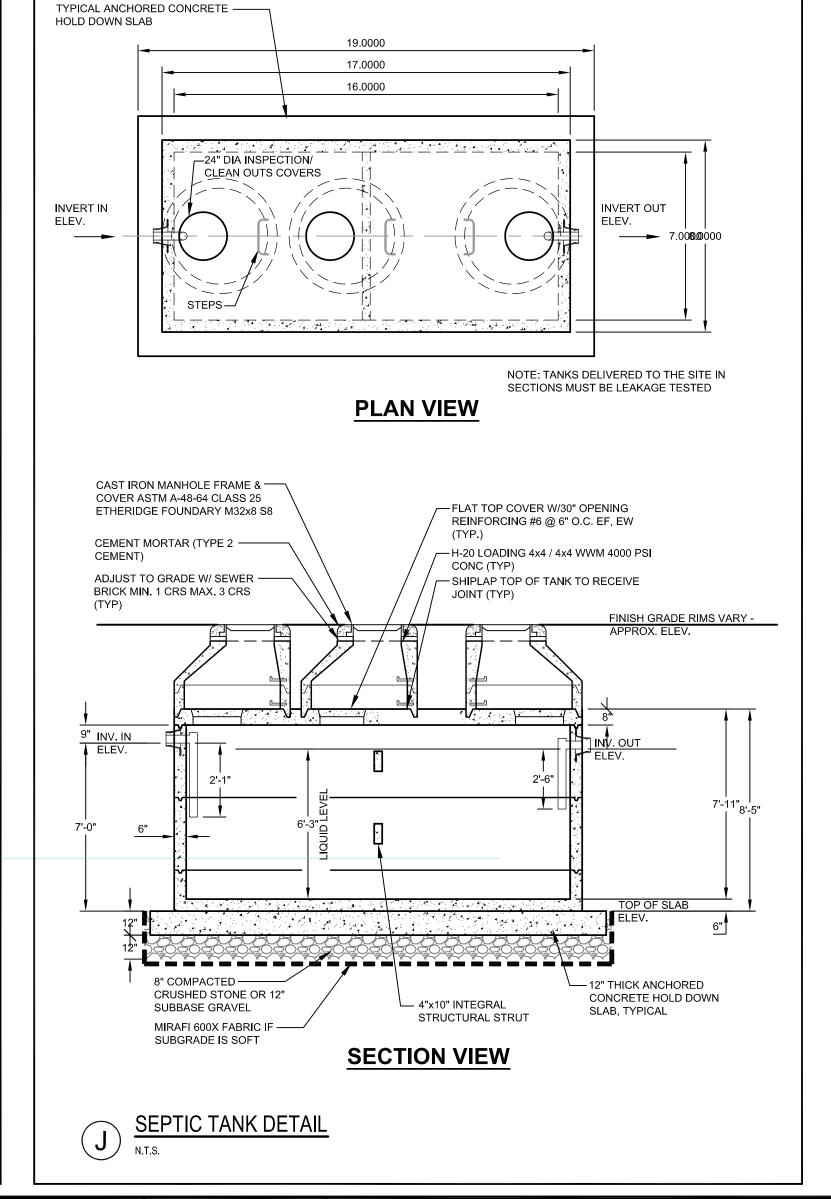
NO ADHESIVES OR LUBRICANTS SHALL BE EMPLOYED IN THE INSTALLATION OF THE CONNECTOR TO THE MANHOLE. THE RUBBER

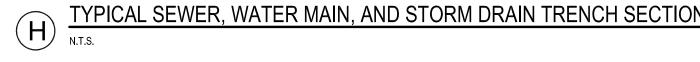
THE CONNECTOR SHALL BE KOR-N-SEAL AS MANUFACTURED BY NPC SYSTEMS, INC., OF MILFORD, NH OR EQUAL.

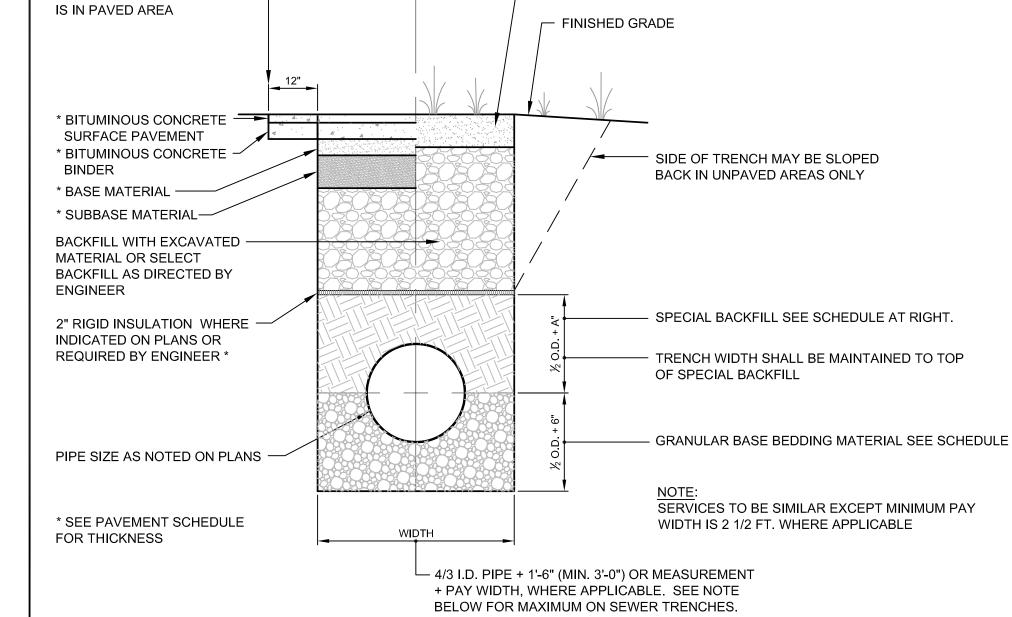
- CONCRETE MANHOLE /

KOR-N-SEAL OR EQUIVALENT -

Section 2 - Sanitary Sewer and Storm Drain City of Portland Technical Manual Adopted 7/19/10. Rev. 6/17/11 DESIGN NOTES: 1. CONCRETE 5000 PSI AT 28 DAYS. 2. H-20 LOADING 3. JOINTS SEALED WITH BUTYL RUBBER JOINT SEALANT (ASSHTO M-19) 4. ALL TEES/BAFFLES PROVIDED BY PRECAST. THIS STRUCTURE MUST DISCHARGE TO A CITY OF PORTLAND STANDARD MANHOLE WITH CHANNEL (CONTROL/SAMPLING MANHOLE). FORMULA FOR SIZING THE TRAP: CHAMBER "A" (2/3 OF TANK VOLUME) MUST BE EQUIVALENT TO THE AVERAGE DAILY PROCESS FLOW FROM THE FACILITY WITH NO SANITARY OR OTHER EXTRANEOUS WASTES FLOWING THROUGH IT. - 6" SDR-35 COUPLING CAST INTO BAFFLE The Art of the Art of A SECONDARY PLASTIC COVERS FOR ODOR CONTROL (ALL THREE OPENINGS) TOP VIEW 24"ø FRAME & GREASE TRAP COVER 6" SDR-35 PIPE -SANITARY SEWER AND STORM | FIGURE: CITY OF PORTLAND, MAINE DRAIN DESIGN STANDARDS AUGUST 2009 TECHNICAL STANDARDS MANUAL **EXTERNAL GREASE TRAP DESIGN** GREASE TRAP DETAIL N.T.S.







NON-PAVED AREAS

——— 4" LOAM, SEED AND MULCH

PAVED AREAS

SAW CUT WHERE TRENCH ——

	BLE TRENCH WIDTHS FOR EWERS
PIPE SIZE 10" OR LESS	MAXIMUM WIDTH
12 TO 15	4'-0"
18	4'-6"
24	5'-6"
30	6'-0"
36	6'-9"
42	7'-3"
48	8'-0"

SCHEDU	LE OF BASE BAC	CKFILL FOR SANIT	TARY INST	ALLATIONS
TYPE OF PIPE	BEDDING MATERIAL	SPECIAL BACKFILL	SPECIAL BACKFIL COVER	SELECT BACKFILL
			"A" (IN)	
PVC PRESSURE	3/4" CRUSHED STONE	3/4" CRUSHED STONE	6	GRANULAR AASHTO M145-49 A-3 OR BETTER
PVC GRAVITY	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6	GRANULAR AASHTO M145-49 A-3 OR BETTER
DUCTILE IRON	3/4" CRUSHED STONE	3/4" CRUSHED STONE	6	GRANULAR AASHTO M145-49 A-3 OR BETTER

SCHEDULE OF BASE BACKFILL FOR NON-SANITARY INSTALLATIONS						
TYPE OF PIPE	BEDDING MATERIAL	SPECIAL BACKFILL	SPECIAL BACKFIL COVER	SELECT BACKFILL		
			"A" (IN)			
CONCRETE	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	12	GRANULAR AASHTO M145-49 A-3 OR BETTER		
PVC OR CORRUGATED POLYETHYLENE	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6	GRANULAR AASHTO M145-49 A-3 OR BETTER		
СМР	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6	GRANULAR AASHTO M145-49 A-3 OR BETTER		
DUCTILE IRON	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	6	GRANULAR AASHTO M145-49 A-3 OR BETTER		