

TYPICAL SEWER MANHOLE SECTION
N.T.S.

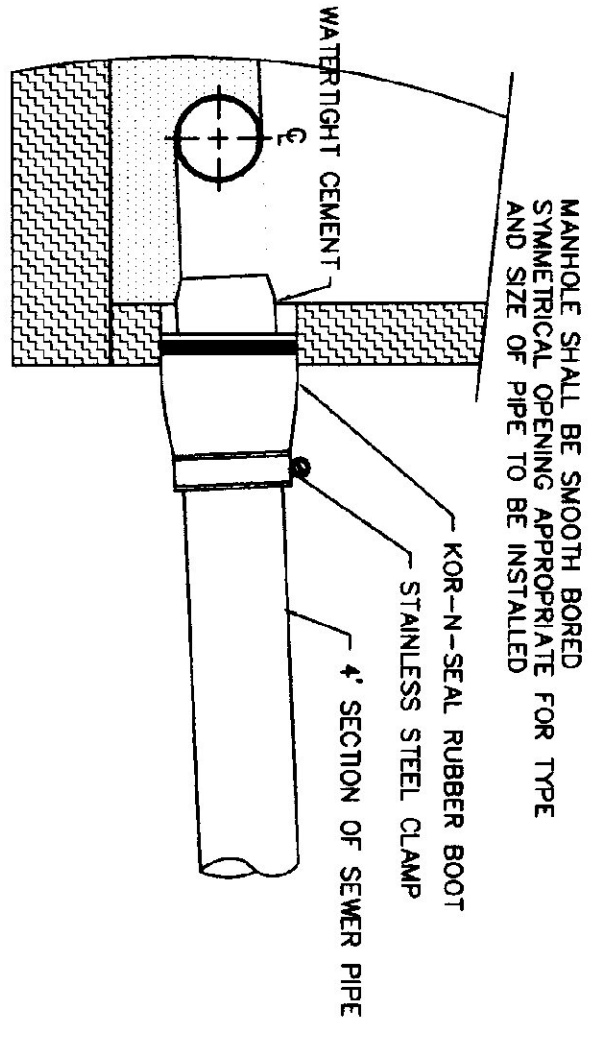
- NOTES:
- 1) MANHOLE EXTENSIONS TO BE COATED TWICE AT THE FACTORY, WITH FINISHING SEAL COATING. CONTRACTOR SHALL RECOAT WHERE NECESSARY. SEALING IS PROHIBITED ON DAMAGED AND ALL JOINTS SHALL BE COATED.
 - 2) COVER SHALL HAVE "SEWER" CAST IN IT.
 - 3) CRUSHED STONE BASE SHALL EXTEND 12" BELOW THE STRUCTURE LINTS. A SECTION OF FABRIC UP THE SIDES AND OVER THE TOP OF THE CRUSHED STONE.

MANHOLE LEAKAGE TESTING PROCEDURES

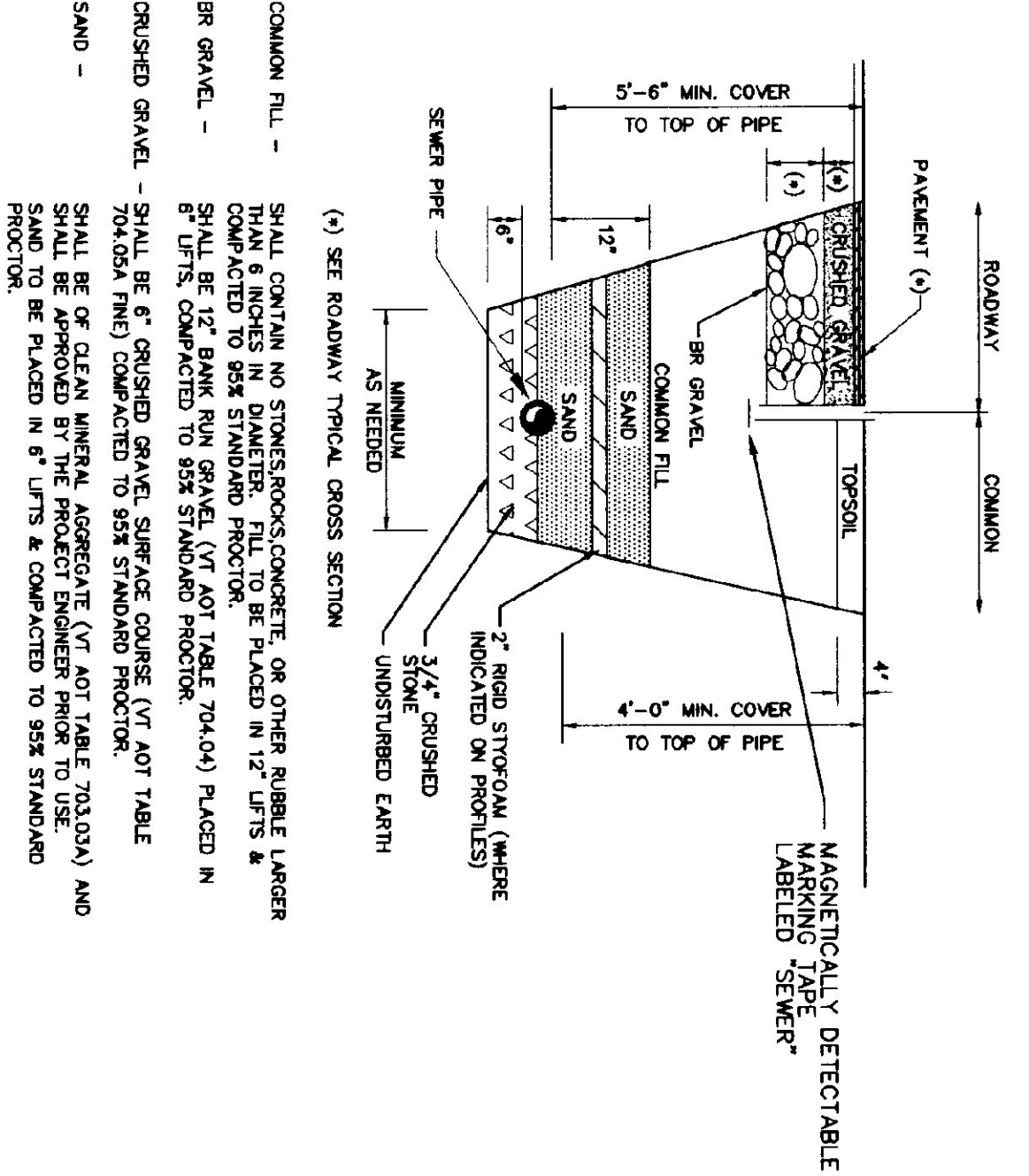
ALL MANHOLES SHALL BE TESTED FOR LEAKAGE. LEAKAGE TESTING OF GRAVITY SEWERS SHALL BE CONDUCTED IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:

AFTER THE MANHOLE HAS BEEN ASSEMBLED, IN PLACE ALL LIFTING HOLES AND EXTERIOR JOINTS SHALL BE FILLED AND POINTED WITH AN APPROVED NON-SHRINKING MORTAR. ALL JOINTS SHALL BE CHECKED FOR PROPER POINTING. ALL JOINTS SHALL BE SUITABLY PLUGGED, AND THE FLODS PLACED TO PREVENT BLOWOUT.

EACH MANHOLE SHALL BE CHECKED FOR INFILTRATION BY FILLING WITH WATER TO THE TOP OF THE CONE SECTION. A STABILIZATION PERIOD OF ONE HOUR SHALL BE PROVIDED TO THE TOP OF THE CONE. IF NECESSARY, AND THE WATER SHALL BE REPLENISHED TO THE TOP OF THE CONE. AT THE END OF THE TEST PERIOD, THE MANHOLE SHALL BE REFILLED TO THE TOP OF THE CONE. MEASURING THE VOLUME OF WATER ADDED THIS MANHOLE SHALL BE THE LEAKAGE FOR EACH MANHOLE. ALL NOT EXCEED ONE GALLON PER VERTICAL FOOT FOR A 24 HOUR PERIOD FOR INFILTRATION, AND THERE SHALL BE NO VISIBLE INFILTRATION.



KORE-N-SEAL MANHOLE SECTION
N.T.S.



GRAVITY SEWER TRENCH DETAIL
N.T.S.

NOTE:

CONTRACTOR SHALL NOTIFY MR. BRUCE ROUNDS, BRANDON PUBLIC WORKS SUPERINTENDENT, (802) 247-3635, AT LEAST 24 HOURS PRIOR TO CONSTRUCTING SEWER SERVICE. PIPE AND TRENCH SHALL REMAIN OPEN UNTIL INSPECTED BY TOWN AND PERMISSION GRANTED TO BACKFILL. FAILURE TO COMPLY WITH THIS REQUIREMENT WILL OBLIGATE CONTRACTOR TO RE-EXCAVATE THE LINE FOR INSPECTION. COST FOR SUCH RE-EXCAVATION AND ANY POSSIBLE DAMAGE/REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

GRAVITY SEWER TESTING PROCEDURES

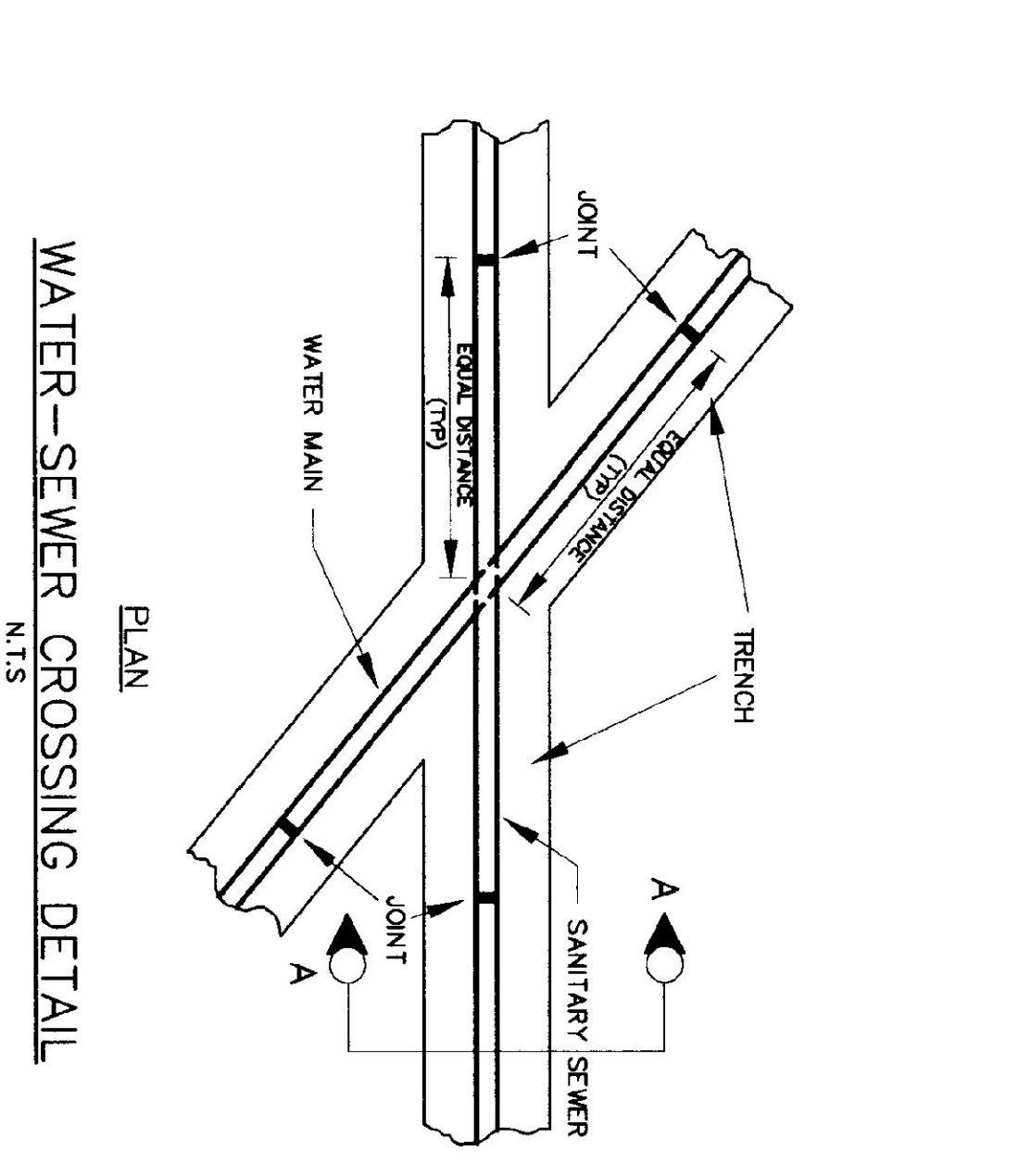
- LEAKAGE TESTS: WHEN TESTED, THE LEAKAGE INWARD AND OUTWARD OF A GRAVITY SEWER INCLUDING MANHOLES SHALL NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER FOOT OF SEWER PER INCH OF PIPE SIZE. LEAKAGE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH ONE OF THE FOLLOWING PROCEDURES:
1. AIR TESTING
 - A. PROCEDURES
 1. DETERMINE THE TEST TIME FOR THE SECTION OF LINE TO BE TESTED USING TABLE III.
 2. PLUG ALL OPENINGS IN THE TEST SECTION.
 3. ADD AIR UNTIL THE INTERNAL PRESSURE OF THE LINE IS RAISED TO 3.5 PSIG. THE PRESSURE SHALL BE MAINTAINED FOR 15 MINUTES. AFTER THIS PERIOD, THE PRESSURE WILL NORMALLY DROP AS THE AIR TEMPERATURE STABILIZES. THIS USUALLY TAKES 2 TO 5 MINUTES, DEPENDING ON THE PIPE SIZE. THE PRESSURE MAY BE REDUCED TO 3.5 PSIG BEFORE STARTING THE TEST.
 4. WHEN THE PRESSURE HAS STABILIZED AND IS AT OR ABOVE THE STARTING TEST PRESSURE OF 3.5 PSIG ABOVE THE PIPE, START THE TEST. IF THE PRESSURE DROPS TO 3.5 PSIG ABOVE THE PIPE, STOP THE TEST. IF THE PRESSURE TO HAVE FAILED THE TEST. IF THE PRESSURE DROPS TO 3.5 PSIG ABOVE THE PIPE, STOP THE TEST. IF THE PRESSURE TO HAVE FAILED THE TEST.
 2. TEST TIME
 1. TABLE III SHOWS THE REQUIRED TEST TIME, T, IN MINUTES/100 FEET OF PIPE FOR EACH NOMINAL PIPE SIZE. TEST TIMES ARE FOR 1.0 PSIG PRESSURE DROP FROM 3.5 TO 2.5 PSIG.
 2. IF THE SECTION OF LINE TO BE TESTED INCLUDES MORE THAN ONE PIPE SIZE, CALCULATE THE TEST TIME FOR EACH SIZE AND ADD THE TEST TIMES TO ARRIVE AT THE TOTAL TEST TIME FOR THE SECTION.

TABLE III. MINIMUM TEST TIME FOR VARIOUS PIPE SIZES

NOMINAL PIPE SIZE IN.	TEST TIME MIN./100 FT.	NOMINAL PIPE SIZE IN.	TEST TIME MIN./100 FT.
3	0.2	21	3.0
4	0.2	24	3.0
6	0.7	27	4.2
8	1.2	30	4.8
10	1.5	33	5.4
12	2.1	36	6.0
14	2.4	39	6.6
16	2.4	42	7.2

2) WATER TESTING

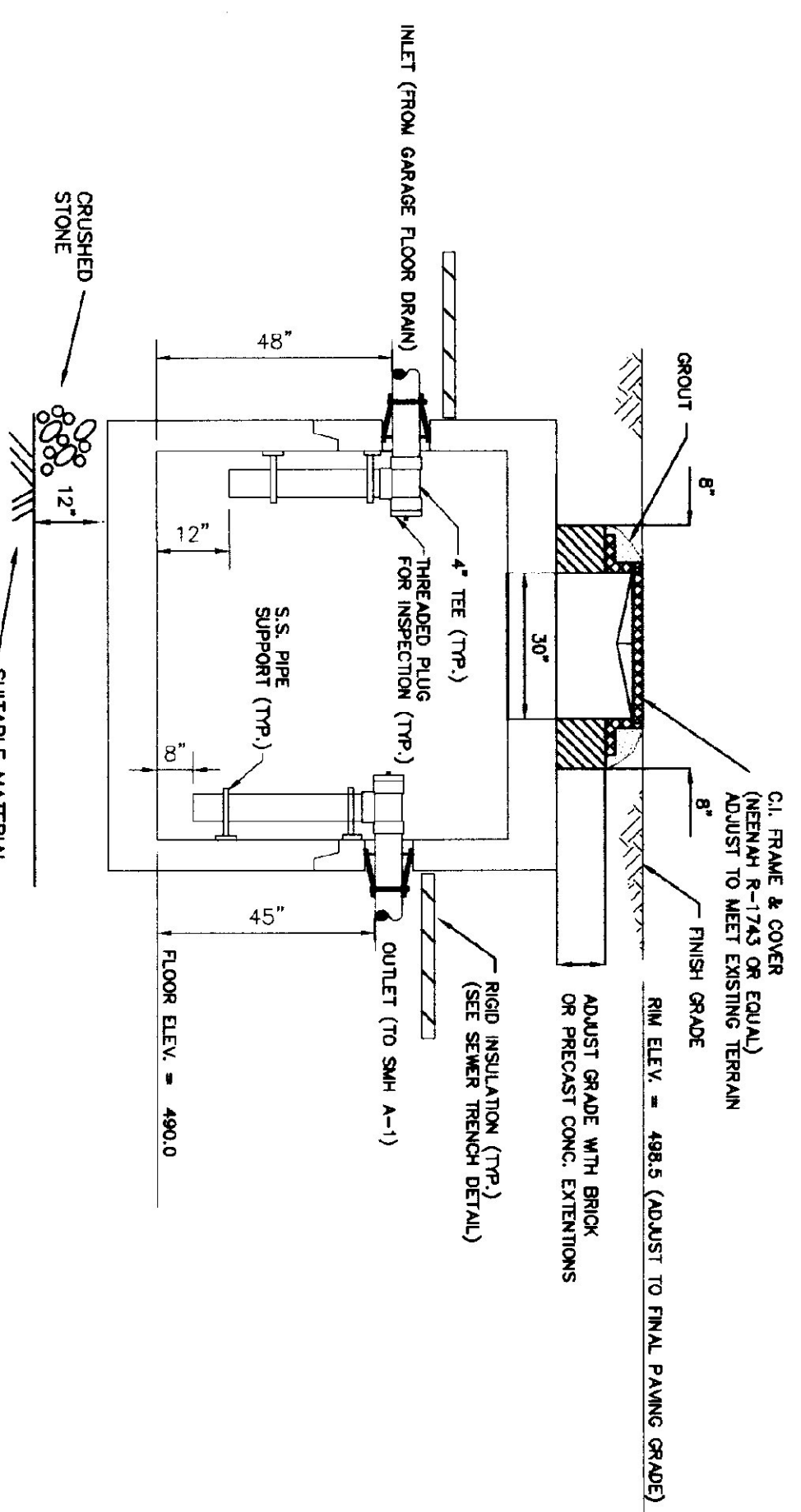
WATER TESTING OF GRAVITY SEWERS SHALL BE CONDUCTED IN ACCORDANCE WITH APPENDIX 1-A OF THE CURRENT EDITION OF THE VERMONT ENVIRONMENTAL PROTECTION RULES (CHAPTER 1).



WATER-SEWER CROSSING DETAIL
N.T.S.

CROSSING NOTES:

SEWERS CROSSING WATER MAINS SHALL BE LAID BENEATH THE WATER MAIN WITH AT LEAST 18 INCHES VERTICAL CLEARANCE BETWEEN THE OUTSIDE OF THE SEWER AND THE OUTSIDE OF THE WATER MAIN. THE SEWER SHALL BE PROTECTED BY A 12\"/>



OIL SEPARATOR
N.T.S.

NOTES:

THE OIL SEPARATOR CHAMBER SHALL BE A FOUR (4) FOOT X SIX (6) FOOT (MINUS DIMENSIONS) ULTRALIGHT BOX MANUFACTURED BY SEWERSHIELD. THE CHAMBER SHALL BE CAPABLE OF WITHSTANDING 4-20 LBS. THE EXTERIOR OF THE UTILITY BOX SHALL RECEIVE TWO COATS OF ASPHALTIC SEAL COATING AT THE FACTORY.

JOINTS BETWEEN THE CONCRETE SECTIONS SHALL BE SEALED BY BUTYL MASTIC (AA-SHTO M-198). PIPE PENETRATIONS SHALL BE SEALED BY FLEXIBLE WATER TIGHT BOOTS.

INTERIOR PIPING SHALL BE PVC SCH-40. FITTINGS SHALL BE SOLVENT WELD TYPE. INTERIOR PIPING SHALL BE RESTRAINED WITH STAINLESS STEEL VERTICAL PIPE SUPPORTS.

THE OIL SEPARATOR CHAMBER SHALL BE FILLED WITH WATER AND SUBJECTED TO A 24 HOUR HYDROSTATIC LEAKAGE TEST. NO LEAKAGE WILL BE ALLOWED DURING THE TEST PERIOD. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A WATER TIGHT STRUCTURE.

SCALE: AS NOTED

NO.	REVISIONS	DATE
1.	PERMIT PLANS	MFD 2/28/97
2.	CONSTRUCTION PLANS	MFD 7/2/97
3.	CONSTRUCTION PLANS II	MFD 7/9/97

SEWER DETAILS
FOR
VERMONT AOT MAINTENANCE GARAGE
IN
BRANDON, VERMONT

BRUNO ASSOCIATES INC. P.C.
ENGINEERS, PLANNERS, SURVEYORS
PO BOX 387, THE MILL BUILDING
WOODSTOCK, VERMONT 05091
PHONE: (802) 457-3560 FAX: (802) 457-4853

FOR CONSTRUCTION

SHEET: 5 OF 23
PROJECT: 570041
DATE: 7/19/96
DRAWN: BTD
DESIGNED: ESC, DAN
CHECKED: AND
DATE: 7/19/96
VERMONT AOT
SEWER DETAILS
C4
5 OF 23
© 1997
BRUNO ASSOCIATES INC. P.C.
C:\Users\brunov\p1\4-V\DWG