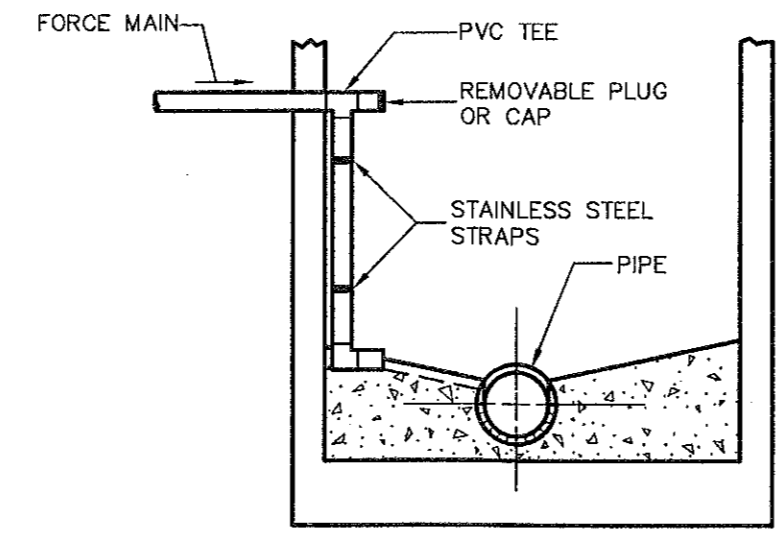
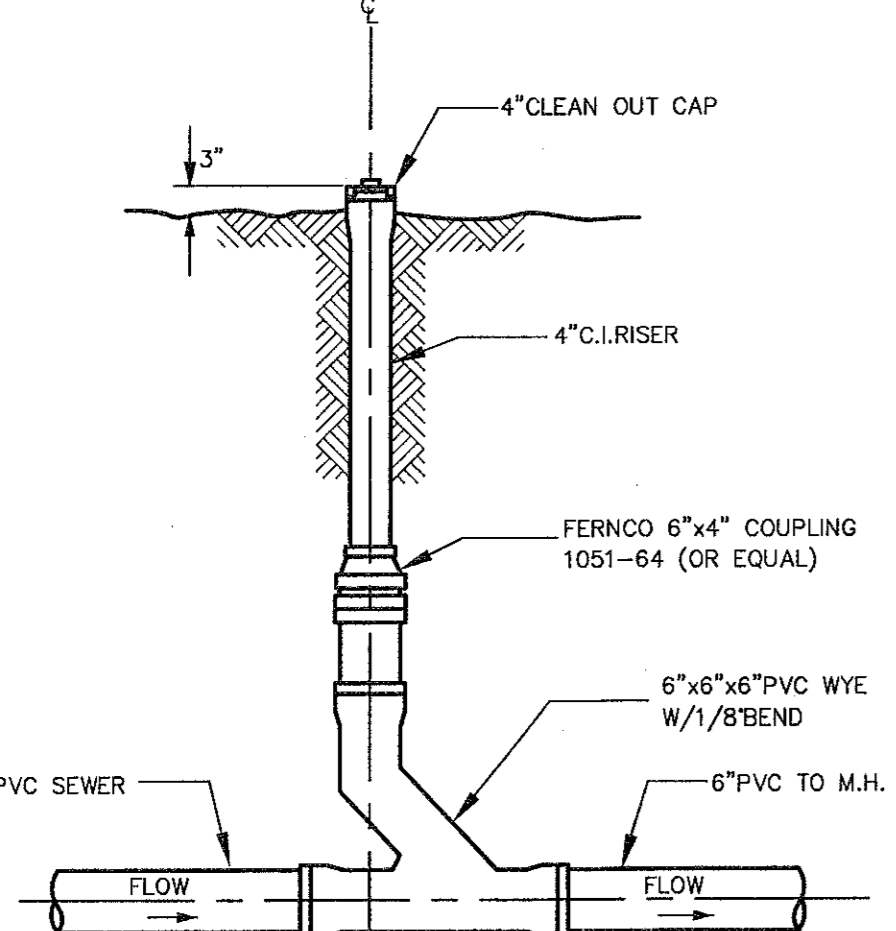


CURB STOPS		
DIA	MANUFACTURER	
	FORD	MUELLER
1 1/4"	B11-555	N/A
1 1/2"	B11-866	B-20283
2"	B11-777	B-20283

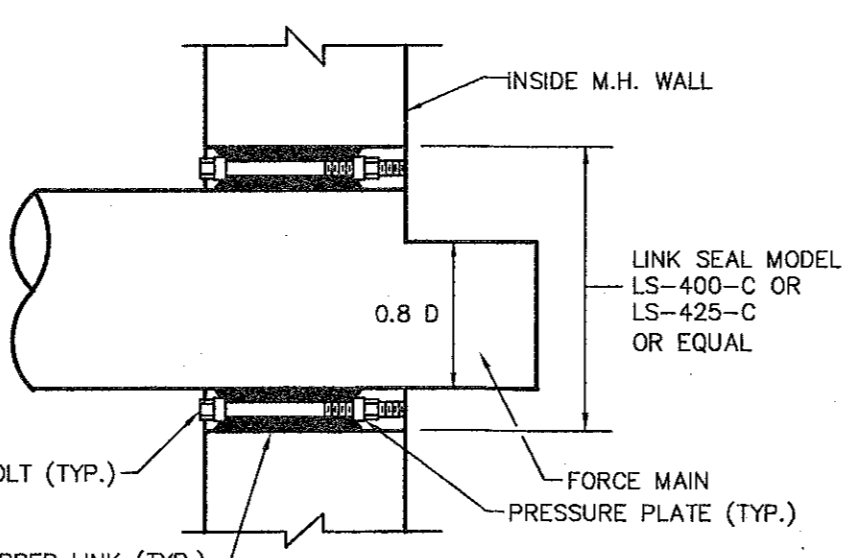


1 GRINDER PUMP SERVICE LINE CONNECTION DETAIL
SCALE: NONE
CROSS REFERENCE: NONE

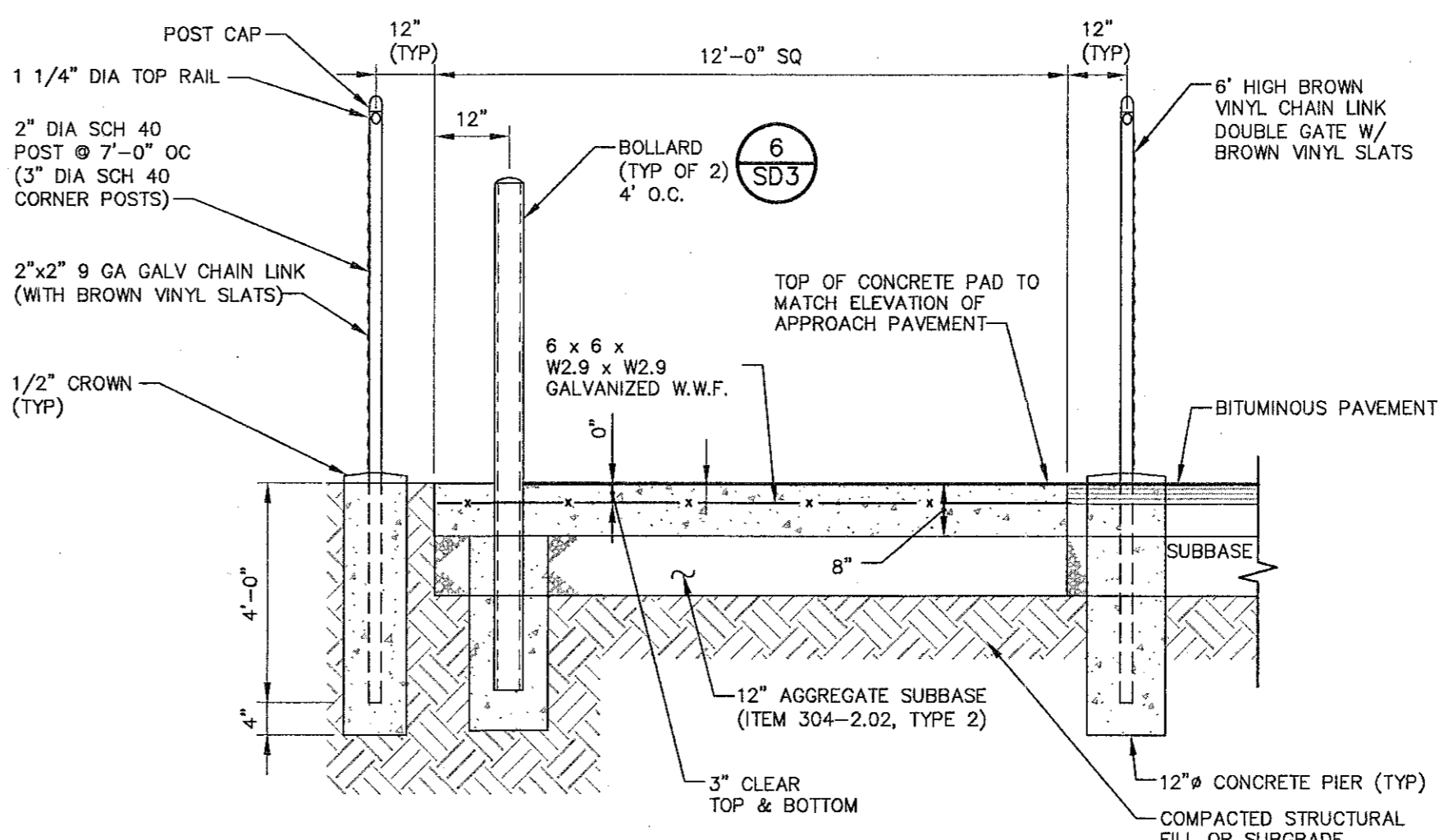
2 FORCEMAIN CONNECTION TO MANHOLE
SCALE: NONE
CROSS REFERENCE:



3 CLEAN OUT DETAIL
SCALE: NONE
CROSS REFERENCE:

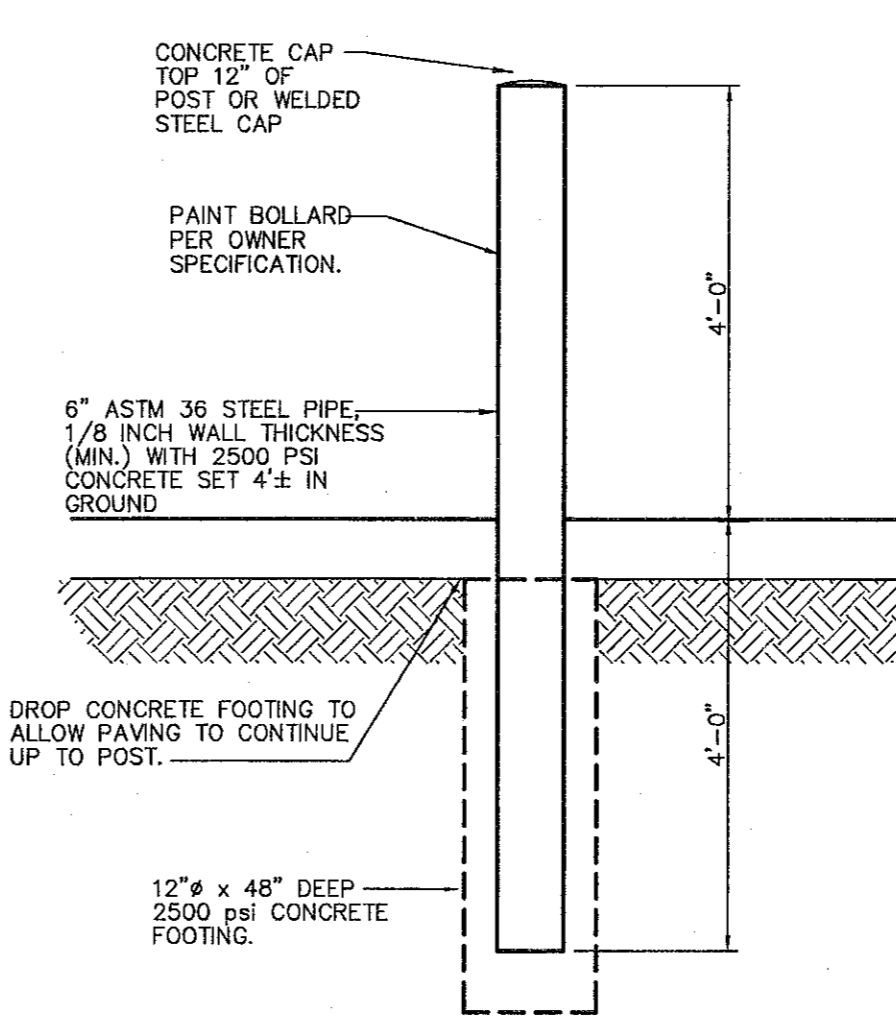


4 FORCE MAIN CONNECTION
SCALE: NONE
CROSS REFERENCE:

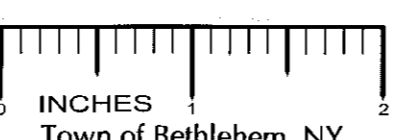


NOTE:
1. ITEM NUMBERS, REFER TO NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
2. ALL CONCRETE FOR DUMPSTER PADS SHALL BE 4000 PSI @ 28 DAYS WITH BROOM FINISH.

5 DUMPSTER PAD
SCALE: NONE
CROSS REFERENCE:



6 PIPE BOLLARD
SCALE: NONE
CROSS REFERENCE:



FORCE MAIN TESTING

1. THE COMPLETE SEWAGE FORCE MAIN INCLUDING VALVES, FITTINGS CONNECTIONS TO PUMPS AND OTHER PIPELINE SYSTEMS SHALL BE TESTED FOR LEAKAGE.
2. THE SYSTEM SHALL BE PRESSURIZED TO 1.5 TIMES THE PIPE WORKING PRESSURE OR 100 PSI, WHICHEVER IS GREATER, AT THE POINT OF TESTING. AFTER THIS PRESSURE, ±5 PSI, HAS BEEN MAINTAINED SUCCESSFULLY FOR ONE HOUR, THE LEAKAGE TEST SHALL BE PERFORMED FOR A PERIOD OF NO LESS THAN 2 HOURS. HYDRAULIC TESTS SHALL BE PERFORMED AND SUCCESSFUL TEST RESULTS DERIVED IN ACCORDANCE WITH AWWA C 600, SECTION 4. IF THE LEAKAGE IN THE SYSTEM EXCEEDS THE SPECIFIED AMOUNT, MAKE ANY REPAIRS OR REPLACEMENTS NECESSARY TO REDUCE THE LEAKAGE TO THE REQUIRED LIMITS AND RETEST THE SYSTEM.

GENERAL NOTES

- EXCAVATION, TRENCHING, SHEETING AND SHORING REQUIREMENTS:
- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY OF ALL SHEETING AND SHORING USED AND FOR ALL DAMAGE RESULTING FROM ITS FAILURE OR FROM PLACING, MAINTAINING AND REMOVING IT.
 - B. REQUIREMENTS OF REGULATORY AGENCIES:
 1. SUBPART 23-4, "EXCAVATION OPERATIONS", OF NEW YORK STATE DEPARTMENT OF LABOR INDUSTRIAL CODE RULE 23.
 2. SUBPART P, "EXCAVATIONS" OF UNITED STATES DEPARTMENT OF LABOR OSHA REGULATIONS FOR CONSTRUCTION.
 3. THE MORE STRINGENT REQUIREMENT IN EACH OF THE ABOVE CODES SHALL APPLY. THESE REQUIREMENTS ARE MINIMUM REQUIREMENTS AND SHALL BE INCREASED IF NECESSARY TO PROVIDE SAFE WORKING CONDITIONS.
 4. ALL MUNICIPAL, COUNTY, STATE, OR FEDERAL ORDINANCES, REGULATIONS, OR LAWS AND ALL NECESSARY PERMITS AND APPROVALS OBTAINED BY THE CONTRACTOR SHALL BE OBSERVED.

TESTING GRAVITY SEWER SYSTEM

1. CONTRACTOR SHALL INSPECT, TEST, ETC. THE INSTALLATIONS AS REQUIRED BY TOWN OF BETHLEHEM WHEN WORK IS READY FOR TESTING AND INSPECTION. ALL TESTS, INSPECTIONS ETC. SHALL BE PERFORMED AND EVIDENCE OF COMPLIANCE SHALL BE FORWARDED TO OWNER/ENGINEER AND TOWN OF BETHLEHEM PRIOR TO ACCEPTANCE.
2. CONTRACTOR SHALL TEST AND INSPECT FOR ALIGNMENT AND INFILTRATION AND EXFILTRATION OF ALL SANITARY SEWERS AND RELATED UTILITY STRUCTURES. INFILTRATION OR EXFILTRATION OF SANITARY SEWER SYSTEM SHALL NOT EXCEED 0.60 GAL./INCH OF INTERNAL PIPE DIA. METER PER 100' OF PIPELINE PER HOUR WITH A MAXIMUM HYDROSTATIC HEAD AT THE CENTER OF THE PIPE OF 25 FT. OR AS REQUIRED BY TOWN OF BETHLEHEM. WHEN INFILTRATION OR EXFILTRATION OCCURS IN EXCESS OF ALLOWABLE AMOUNT, DEFECTS SHALL BE LOCATED AND REPAIRED.
3. INFILTRATION LEAKAGE TESTS SHALL BE RUN ON EACH SINGLE MANHOLE-TO-MANHOLE SECTION, OR REACH, INDEPENDENTLY OF ALL OTHER MANHOLE-TO-MANHOLE SECTIONS. A PIPELINE SECTION UNDER TEST SHALL INCLUDE ALL PIPE AND FITTINGS BETWEEN THE TWO MANHOLES PLUS THE UPSTREAM MANHOLE.
4. EACH MANHOLE-TO-MANHOLE SECTION SHALL BE REJECTED OR ACCEPTED BASED ONLY ON RESULTS OF ITS OWN INDEPENDENT SECTION TEST AND NOT ON RESULTS OF ANY OTHER SECTION. THE ONLY EXCEPTION ALLOWED: ACCEPTING SEVERAL CONSECUTIVE MANHOLE-TO-MANHOLE SECTIONS BASED ON ONE COMBINED INFILTRATION TEST INDICATING ZERO INFILTRATION.
5. INFILTRATION TESTS SHALL BE MADE BY INSTALLING FLOW MEASURING DEVICE IN DOWN-STREAM MANHOLE OF SECTION BEING TESTED. TEST DURATION SHALL BE 24 HRS, OR FOR SHORTER PERIOD PROVIDED A STEADY STATE FLOW CONDITION HAS BEEN ACHIEVED IN THE TEST PERIOD, AND RESULTS PROJECTED TO A 24 HR PERIOD.
6. EXFILTRATION TESTS SHALL BE RUN ON EACH SINGLE MANHOLE-TO-MANHOLE SECTION, OR REACH, INDEPENDENTLY OF ALL OTHER MANHOLE-TO-MANHOLE SECTIONS. A PIPELINE SECTION UNDER TEST SHALL INCLUDE ALL PIPE AND FITTINGS BETWEEN THE TWO MANHOLES PLUS THE UPSTREAM MANHOLE.
7. EXFILTRATION TESTS SHALL BE MADE BY MEASURING THE DROP IN WATER ELEVATION IN UPSTREAM MANHOLE 24 HRS AFTER INITIAL WATER IS RECORDED. INITIAL WATER LEVEL IN UPSTREAM MANHOLE SHALL BE 2 FEET HIGHER THAN EITHER THE TOP OF PIPE OR GROUNDWATER ELEVATION AT UPSTREAM MANHOLE. ANY MANHOLE-TO-MANHOLE SECTION UNDERGOING AN INFILTRATION TEST SHALL HAVE THE NEXT ADJACENT SECTION, BOTH UPSTREAM AND DOWNSTREAM, DRY AND NOT UNDER TEST. THIS PROCEDURE MINIMIZES HYDROSTATIC PRESSURE PLACED ON STOPPERS, PLUGS AND END CAPS.
8. LOW PRESSURE AIR TESTING MAY BE ALLOWED IN LIEU OF EXFILTRATION TESTS ONLY. WHEN SO ALLOWED, TEST SHALL BE PERFORMED UNDER DIRECTION OF ENGINEER ACCORDING TO ASTM C828. ALTHOUGH ASTM DOCUMENT TITLE IS SPECIFIC FOR VITRIFIED CLAY PIPE, 4 TO 12 INCHES IN DIAMETER, THE SAME GENERAL PROCEDURES MAY BE USED FOR ANY OTHER PIPE MATERIAL, AND IS NOT LIMITED TO A MAXIMUM DIAMETER OF 12 INCHES.
9. AN AIR TEST SHALL NOT BE RUN UNTIL SECTION OF LINE TO BE TESTED HAS BEEN CLEANED OF ALL FOREIGN MATERIAL BY FLUSHING AND HAS BEEN VISUALLY INSPECTED AND APPROVED BY ENGINEER. CERTAIN PIPE MATERIALS PRODUCE MORE CONSISTENT WHEN INTERIOR OF PIPE IS WETTED PRIOR TO TESTING.
10. LOW PRESSURE AIR TESTING MUST BE DONE IN SINGLE MANHOLE-TO-MANHOLE SECTIONS, OR REACHES, AFTER THEY HAVE BEEN COMPLETELY BACKFILLED. A MANHOLE SECTION UNDER TEST SHALL INCLUDE ALL PIPE AND FITTINGS BETWEEN MANHOLES WILL NOT BE AIR TESTED, BUT SHALL BE EXFILTRATION TESTED. INDEPENDENT OF ANY PIPE LINE TESTING, SECTION OF LINE TO BE TESTED SHALL BE SEALED AT BOTH MANHOLES BY PLUGS OR STOPPERS. ONE OF THESE PLUGS OR STOPPERS MUST BE EQUIPPED TO FILL LINE WITH AIR FROM A COMPRESSOR OR PUMP AND ALLOW IT TO BLEED OFF WHEN TEST IS ENDED. THERE MUST ALSO BE A PRESSURE GAUGE (INDEPENDENT OF ANY OR MUST COMPRESSOR OR PUMP) WHICH REMAINS CONNECTED TO TEST SECTION AND IS CAPABLE OF MEASURING ITS INTERNAL AIR PRESSURE WHEN IT IS SEALED OFF FROM THE AIR SUPPLY.

TEST SECTION SHALL THEN BE SLOWLY FILLED WITH AIR UP TO A MAX. PRESSURE OF 4 PSIG GREATER THAN AVERAGE BACK PRESSURE OF ANY GROUNDWATER THAT MAY BE SUBMERGING THE PIPE. PRESSURE SHALL THEN BE THROTTLED DOWN TO AND MAINTAINED AT 3.5 PSIG GREATER THAN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER FOR A MINIMUM OF 3 MINUTES TO ALLOW TEMPERATURE OF WARM ENTERING AIR TO EQUALIZE WITH THAT OF COOLER PIPE WALLS. DURING THIS TIME, ALL EXPOSED AIR CONNECTIONS AND END PLUGS OR STOPPERS SHOULD BE CHECKED FOR LEAKAGE WITH A LIQUID SOAP SOLUTION. IF ANY LEAKS ARE FOUND, OR IF PRESSURE CANNOT BE MAINTAINED FOR ANY REASON, AIR SHOULD BE BLED OFF AND NECESSARY REPAIRS MADE. WHEN LEAKAGE HAS BEEN STOPPED, AIR TEST SHALL BE STARTED AGAIN FROM BEGINNING, AS ABOVE. PRIOR TO TEST, CONTRACTOR SHOULD INSURE THAT ALL STOPPERS, PLUGS, AND END CAPS, PARTICULARLY AT END OF BUILDING SERVICES, ARE CORRECTLY INSTALLED AND ADEQUATELY BRACED TO WITHSTAND TEST PRESSURE.

WHEN INTERNAL AIR PRESSURE HAS BEEN MAINTAINED AT 3.5 PSIG GREATER THAN THE AVERAGE BACK PRESSURE OF ANY GROUNDWATER FOR A MINIMUM OF 3 MINUTES, THE AIR SUPPLY SHALL BE PHYSICALLY DISCONNECTED LEAVING THE PRESSURIZED SYSTEM SEALED. THE INDEPENDENT PRESSURE GAUGE SHALL BE OBSERVED FOR AN INDICATION OF PRESSURE LOSS. IF A LOSS IS INDICATED, THE TIME IT TAKES FOR THE PRESSURE TO DROP ONE (1) PSIG SHALL BE MEASURED WITH A STOP WATCH.

11. LOW PRESSURE AIR TEST IS A COMPARISON OF THE MEASURED TIME NECESSARY FOR ONE (1) PSIG PRESSURE DROP TO OCCUR, AT ALL WITH MINIMUM ALLOWABLE TIME FOR THAT PRESSURE DROP TO OCCUR DETERMINED BY METHODS INDICATED IN ASTM C828. IF THE ONE (1) PSIG PRESSURE DROP OCCURS FASTER THAN ALLOWABLE TIME, SECTION IS UNACCEPTABLE.
12. WHERE AIR-TESTING IS TO BE USED FOR LINE ACCEPTANCE, CORROBORATIVE HYDROSTATIC TESTING SHALL BE PERFORMED ON SEWER INSTALLATION OF THE SAME PIPE SIZE, MATERIAL, AND CONDITIONS OF INSTALLATION. SEWER SECTIONS WHICH INDICATE RATES OF AIR LOSS PER UNIT OF SURFACE AREA WHICH MOST NEARLY APPROXIMATE RATE FOR PIPELINE ACCEPTANCE SHOULD BE SELECTED FOR CORROBORATIVE TESTS. AT LEAST 3 SECTIONS ARE TO BE SO TESTED. THE PURPOSE OF THESE CORROBORATIVE TESTS IS TO PERMIT A REASONABLE ASSUMPTION THAT, IF THESE 3 TEST SECTIONS MEET THE HYDROSTATIC TEST, THE BALANCE OF PROJECT ALSO MEETS OR EXCEEDS THESE REQUIREMENTS. IF AIR TEST IS NOT SUPPORTED BY ACCEPTABLE CORROBORATIVE HYDROSTATIC TESTS, COMPLETE HYDROSTATIC TESTING OF SEWER LINES SHALL BE REQUIRED.
13. WHERE FLEXIBLE PIPE IS USED, CONTRACTOR SHALL TEST ALL MANLINE PIPE FOR MAXIMUM ALLOWABLE DEFLECTION. 3% OF OUTSIDE DIAMETER DEFLECTION TESTS SHALL BE PERFORMED USING A CIRCULAR STEEL BALL OR SLED 1/16-INCH IN DIAMETER SMALLER THAN ALLOWABLE INSIDE DIAMETER OF FLEXIBLE PIPE WHEN DEFLECTED A MAXIMUM OF 3% OF OUTSIDE DIAMETER. DEFLECTION TESTING OF ANY PIPE SECTION SHALL BE DONE NO SOONER THAN 6 MONTHS AFTER DATE OF INSTALLATION OF PIPE SECTION UNLESS WRITTEN EXCEPTION PROVIDED BY ENGINEER. SHOULD TEST FAIL, CONTRACTOR SHALL LOCATE AND REPAIR DEFECT AND RE-TEST LINE AT NO ADDITIONAL COST.
14. SEWERS SHALL BE LAID WITH STRAIGHT ALIGNMENT BETWEEN MANHOLES. STRAIGHT ALIGNMENT SHALL BE CHECKED BY EITHER USING A LASER BEAM OR LAMPING. TESTING TO COMPLY WITH REQUIREMENTS OF TOWN OF BETHLEHEM.
15. MANHOLES, WHICH CANNOT BE PROPERLY AIR TESTED, SHOULD BE VISUALLY INSPECTED AND LEAKAGE TESTED USING INTERNAL OR EXTERNAL HYDROSTATIC PRESSURE. LEAKAGE TESTING TO COMPLY WITH REQUIREMENTS OF TOWN OF BETHLEHEM.
16. IN AREAS WHERE CONVENTIONAL TESTING IS IMPRACTICAL (I.E. AREAS DESIGNATED BY ENGINEER WHERE EXISTING SERVICES ARE TIED INTO NEW LINE IMMEDIATELY AND ANY BLOCKAGE COULD RESULT IN HEALTH PROBLEMS) NO LINES SHALL BE BACKFILLED UNTIL EACH PIPE SECTION AND CONNECTION IS INSPECTED AND APPROVED.
17. WHERE SEWERS ARE CONSTRUCTED OF PRESSURE-RATED PIPE AND INSTALLED WITH LESS THAN 18 INCHES VERTICAL SEPARATION FROM EXISTING OR PROPOSED WATER MAINS, SEWERS SHALL BE HYDROSTATICALLY TESTED AT 150 PSI TO ASSURE WATER TIGHTNESS. HYDROSTATIC ACCEPTANCE TESTS SHALL BE CONDUCTED AS SPECIFIED FOR TESTING WATER MAIN, EXCEPT THAT TESTING MAY BE PERFORMED WITH PIPE SECTION PARTIALLY BACK-FILLED.
18. IF THE ALLOWABLE RATE OF INFILTRATION, EXFILTRATION, OR AIR LEAKAGE IS EXCEEDED, CONTRACTOR SHALL LOCATE POINTS OF EXCESSIVE LEAKAGE AND SHALL PROMPTLY CORRECT, REPAIR, AND BRING SYSTEM UP TO THE STANDARD. COSTS OF ALL SUCH REPAIRS AND CORRECTIVE MEASURES, INCLUDING COSTS OF REPEATED TESTS SHALL BE BORNE BY CONTRACTOR. THE SEWER LINE SECTION (INCLUDING MANHOLES AND BUILDING SERVICES) UNDER TEST SHALL NOT BE ACCEPTED UNTIL THESE TEST CRITERIA ARE MET.

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TOWN OF BETHLEHEM PLANNING BOARD APPROVAL

PLANNING BOARD
TOWN OF BETHLEHEM
ALBANY COUNTY, NEW YORK

This plat APPROVED subject to such conditions as are stated in Building Project Approval (BPA)

No. 37, dated 11-10-04
amendment #1

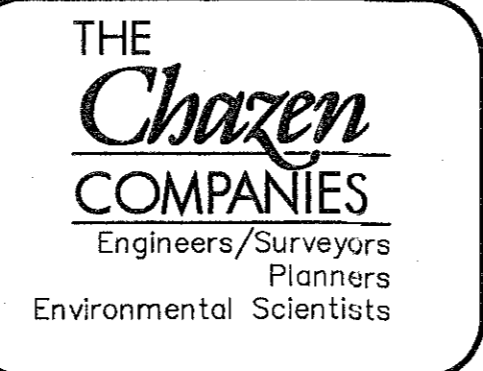
Barbara J. Mathews
CHAIRMAN

Date: MAR 30 2006



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Orange County Office: 253 Route 17E, Newburgh, New York 12550 Phone: (845) 567-1133

North Country Office: 110 Glen Street, Glens Falls, New York 12801 Phone: (518) 812-0913

rev.	date	description
5	11/12/04	REVISIONS PER TOWN COMMENTS DATED 11/4/04
4	9/7/04	REVISIONS PER TOWN COMMENTS DATED 8/12/04
3	1/04/02	REVISIONS PER TOWN COMMENTS DATED 12-14-01 & 12-21-01
2	11/10/01	REVISIONS PER TOWN COMMENTS DATED 9-12-01
1	8/01/01	REVISIONS PER TOWN COMMENTS DATED 7-19-01

PROPOSED AMENDMENT TO
PLANNED COMMERCIAL DISTRICT NO. 6
NEW SCOTLAND ROAD
COMMERCIAL BUSINESS PARK
SANITARY SEWER DETAILS
TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK

drawn	checked
JMB	JML
date	scale
7/8/04	AS NOTED
project no.	
30124.00	
sheet no.	
	SD3