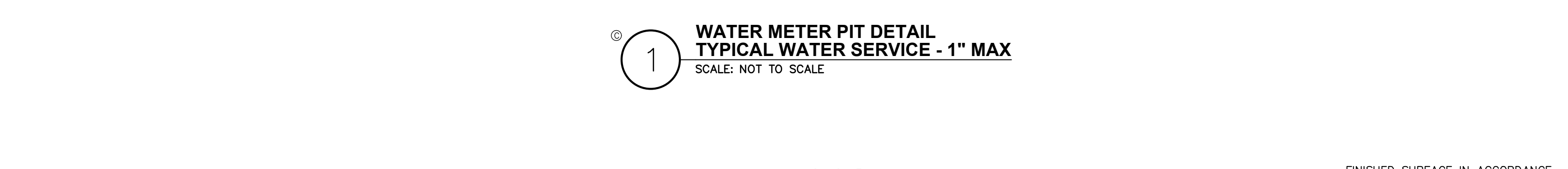
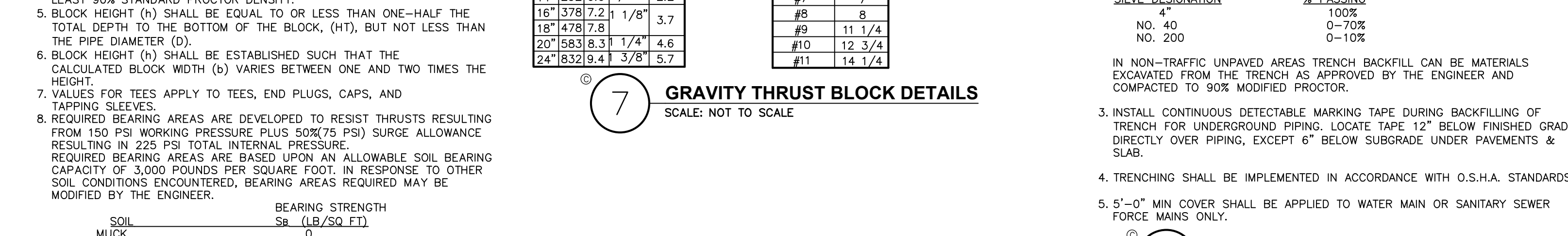
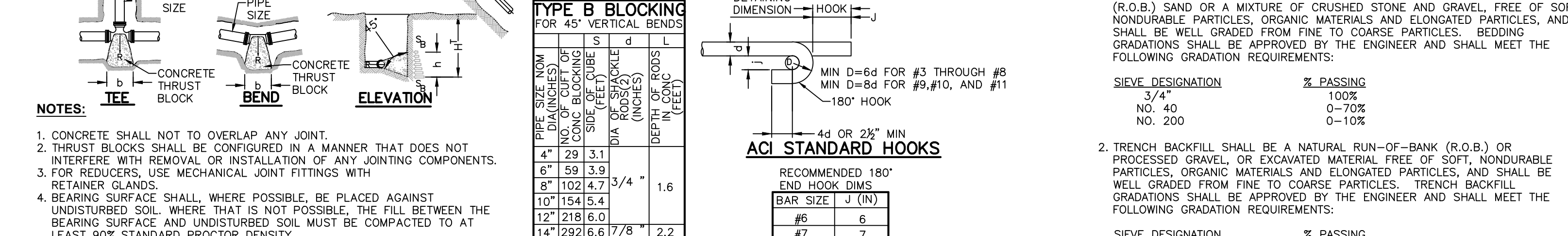
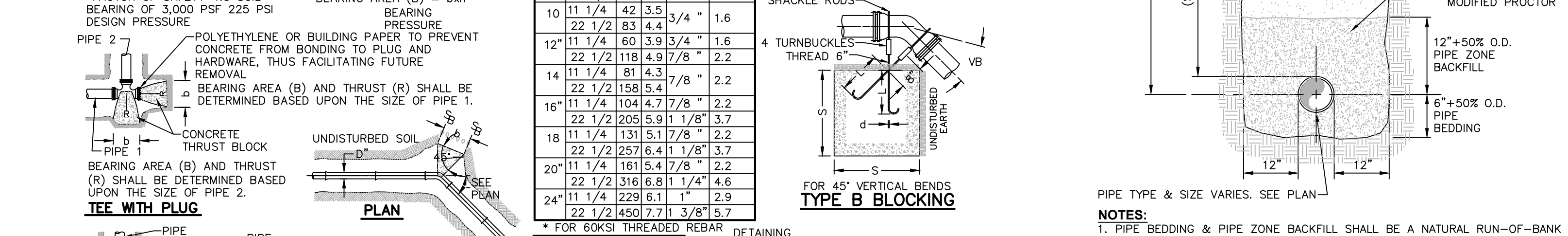


- NOTES**
1. WATER METER PIT AND ASSEMBLY SHALL BE SUBJECT TO REVIEW AND FINAL APPROVAL BY THE CITY OF BEACON WATER DEPARTMENT.
  2. WATER METER SHALL BE PROVIDED WITH A RADIO READ SYSTEM WITH BRONZE RESTRAINED JOINTS SHALL BE PROVIDED WITH AN ALUMINUM WARNING PLATE ATTACHED TO THE MANHOLE COVER. THE PLATE SHALL BE A MINIMUM OF 12"x12" AND SHALL BE ENGRAVED WITH THE FOLLOWING LANGUAGE: "WARNING: CONFIRMED SAG - ENTRY PROHIBITED WITHOUT AUTHORIZATION - CALL OWNER FOR APPROVAL TO ACCESS"
  3. AN ALUMINUM WARNING PLATE SHALL BE RIVETED OR OTHERWISE PERMANENTLY ATTACHED TO THE MANHOLE COVER. THE PLATE SHALL BE A MINIMUM OF 12"x12" AND SHALL BE ENGRAVED WITH THE FOLLOWING LANGUAGE: "WARNING: CONFIRMED SAG - ENTRY PROHIBITED WITHOUT AUTHORIZATION - CALL OWNER FOR APPROVAL TO ACCESS"
  4. PREPARED SURFACE (I.E., BOTTOM) OF EXCAVATION FOR PLACEMENT OF WATER METER PIT SHALL CONSIST OF A MINIMUM 12" DEPTH OF 3/4" CRUSHED STONE, LEVELED AND LAD OVER STABLE NATIVE SOIL.
  5. WHEN INSTALLING TURBO METERS WITH A STRAINER, A MINIMUM OF FIVE (5) PIPE DIAMETERS OF STRAIGHT RUN PIPE OR EQUIVALENT FULL OPEN COMPONENTS IS REQUIRED UPSTREAM OF THE METER INLET FLANGE. A MINIMUM OF THREE (3) PIPE DIAMETERS OF STRAIGHT PIPE OR EQUIVALENT IS REQUIRED DOWN STREAM OF THE METER - UNLESS SPECIFIED OTHERWISE BY THE MANUFACTURER IN THE IOM.
  6. DO NOT INSTALL ELBOWS, BENDS, NONCONCENTRIC REDUCERS, CHECK VALVES, BACK FLOW PREVENTORS AND/OR PRESSURE REDUCING DEVICES WITHIN TEN (10) PIPE DIAMETERS UPSTREAM OR FIVE (5) PIPE DIAMETERS DOWNSTREAM OF THE METER.
  7. VENTILATION SHALL CONFORM TO EXISTING LOCAL AND/OR STATE CODES AND AS PER SECTION 6.2.5 OF "RECOMMENDED STANDARDS FOR WATER WORKS - 2013" (TEN STATES STANDARDS).
  8. PRESSURE REDUCING VALVE SHALL BE A MODEL 40WR, 8" BY 8" VALVE OR EQUAL. OUTLET PRESSURE OF THE PRESSURE REDUCING VALVE SHALL BE SET TO 75 PSIG.



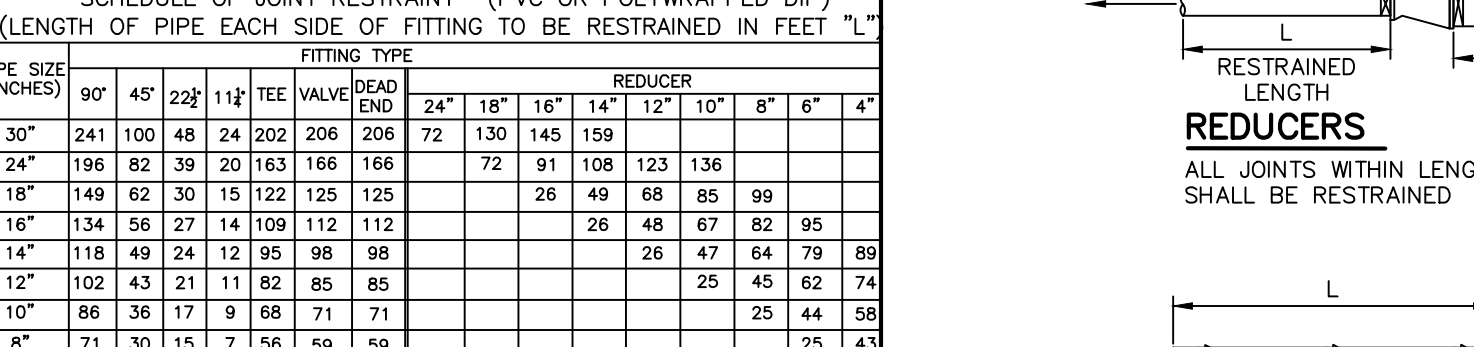
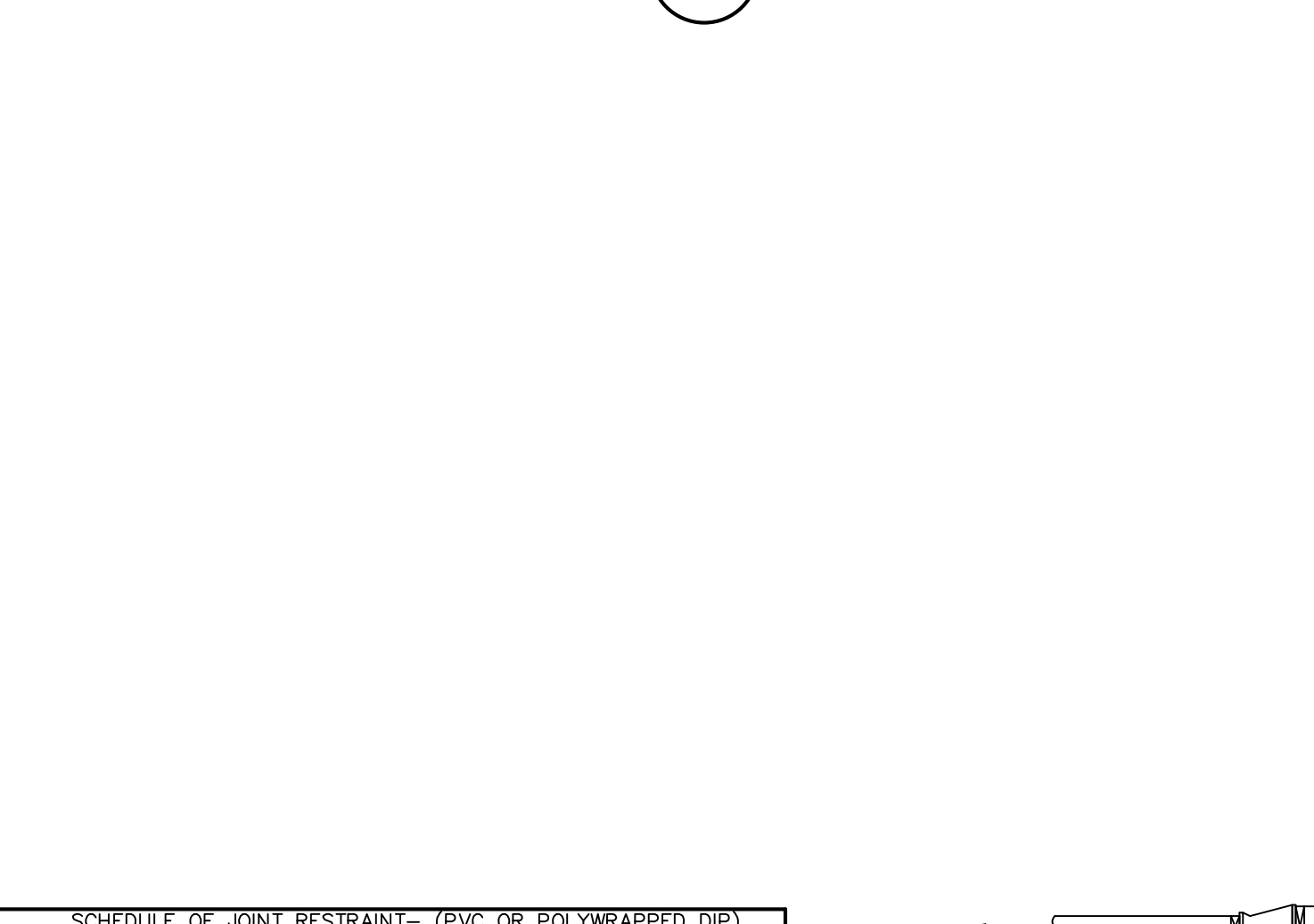
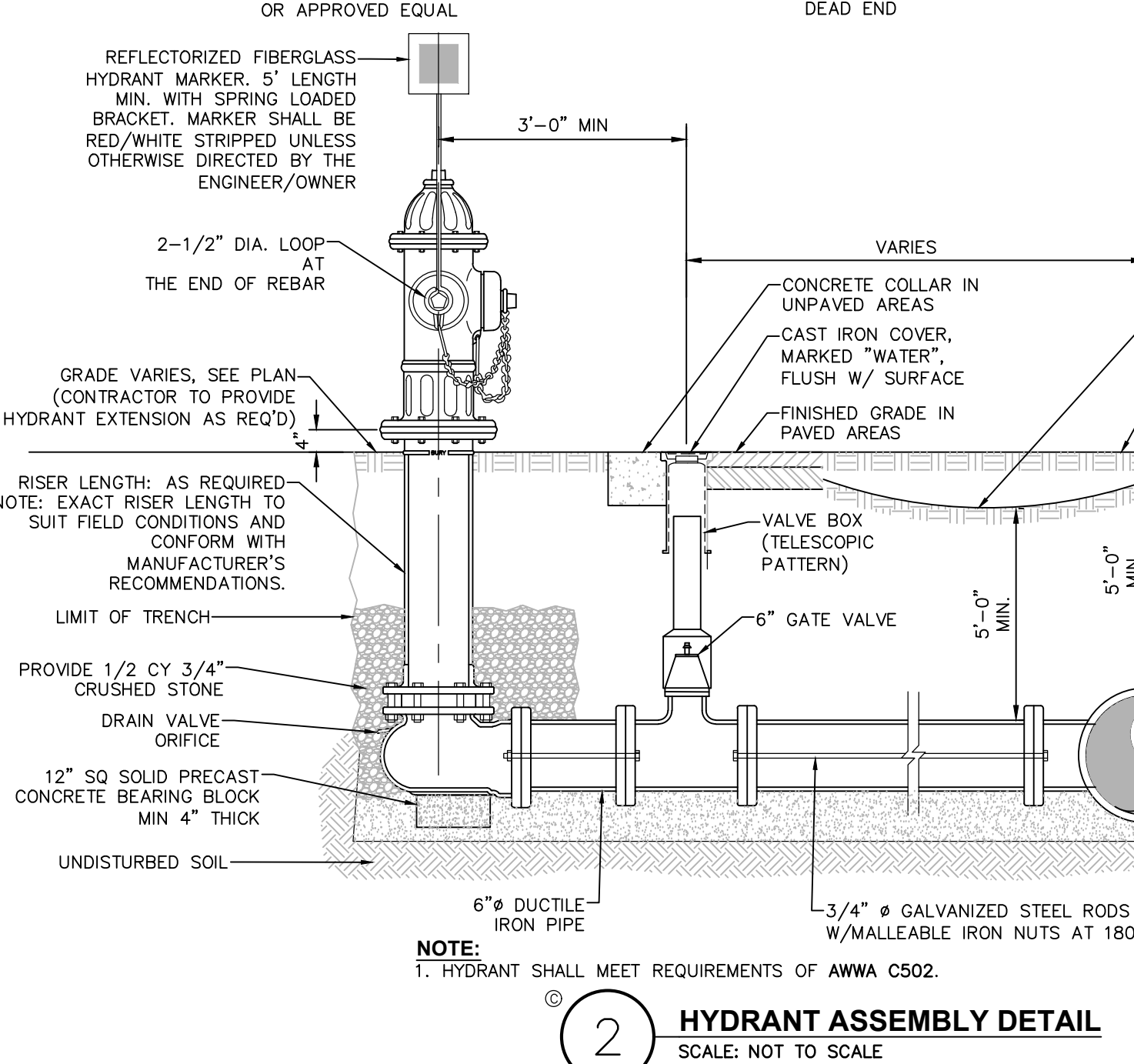
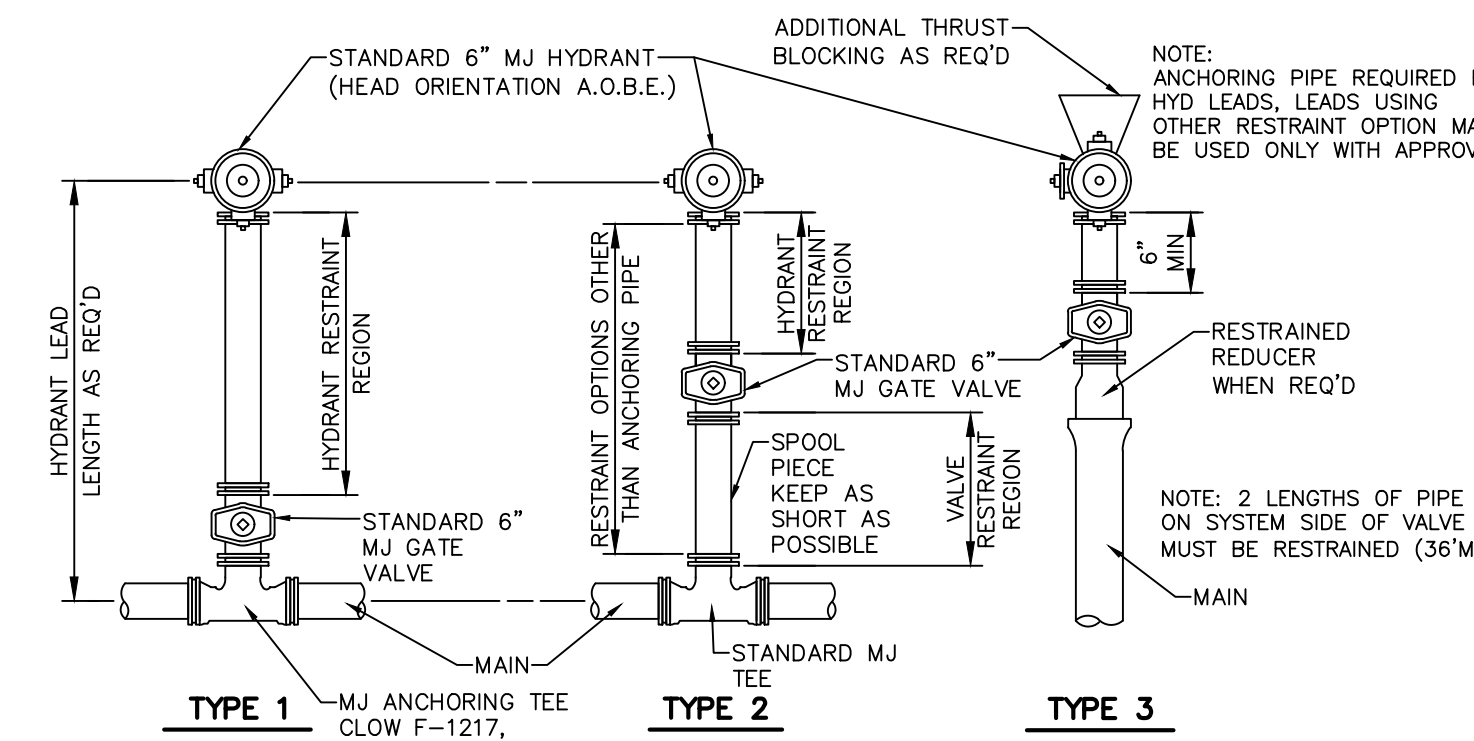
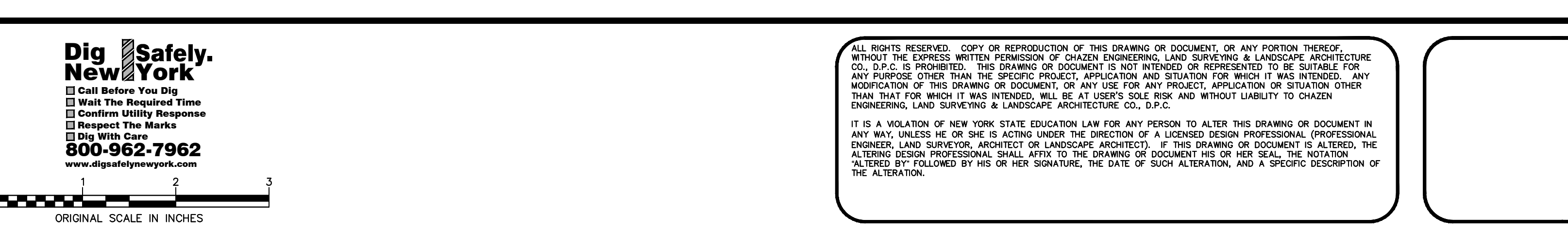
**REQUIRED BEARING AREAS - B (SQFT) FOR BEARING BLOCKS**

PIPE SIZE (INCHES)	TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	2.0	2.0	2.0	2.0	2.0
6	4.2	4.2	4.2	4.2	4.2
8	6.4	6.4	6.4	6.4	6.4
10	10.9	10.9	10.9	10.9	10.9
12	15.4	15.4	15.4	15.4	15.4
14	20.6	20.6	20.6	20.6	20.6
16	26.1	26.1	26.1	26.1	26.1
18	31.6	31.6	31.6	31.6	31.6
20	37.2	37.2	37.2	37.2	37.2
24	47.8	47.8	47.8	47.8	47.8
30	68.8	68.8	68.8	68.8	68.8
36	89.8	89.8	89.8	89.8	89.8



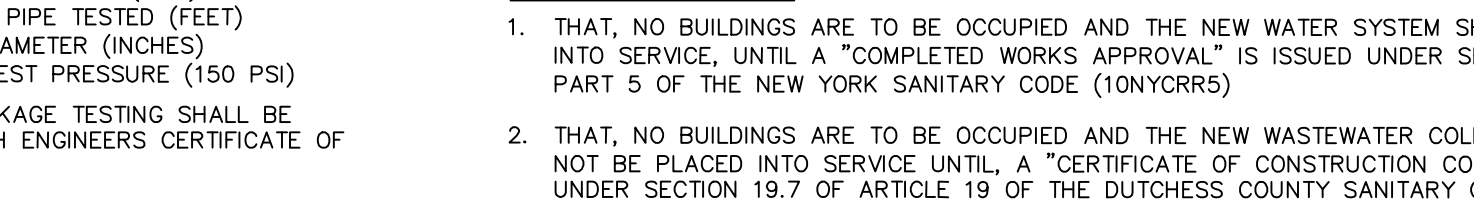
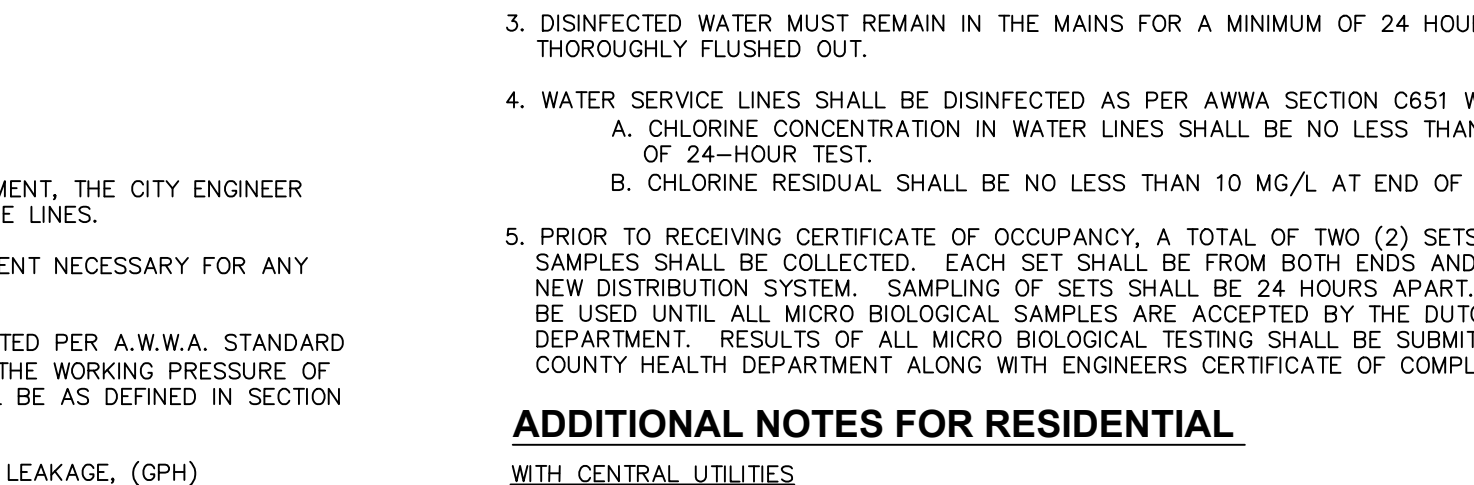
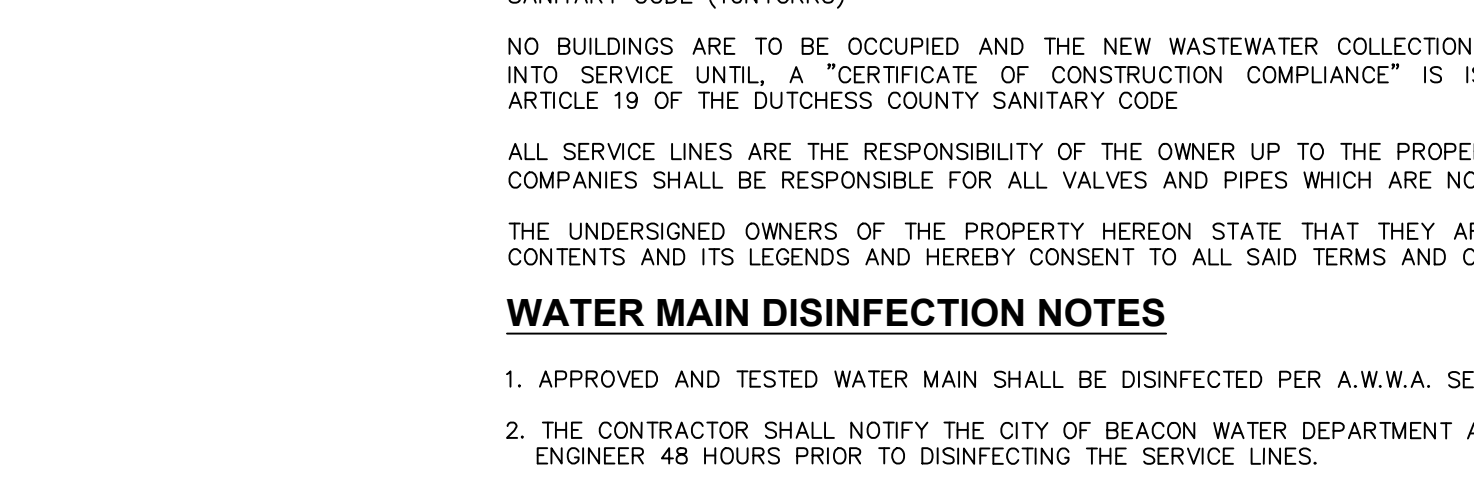
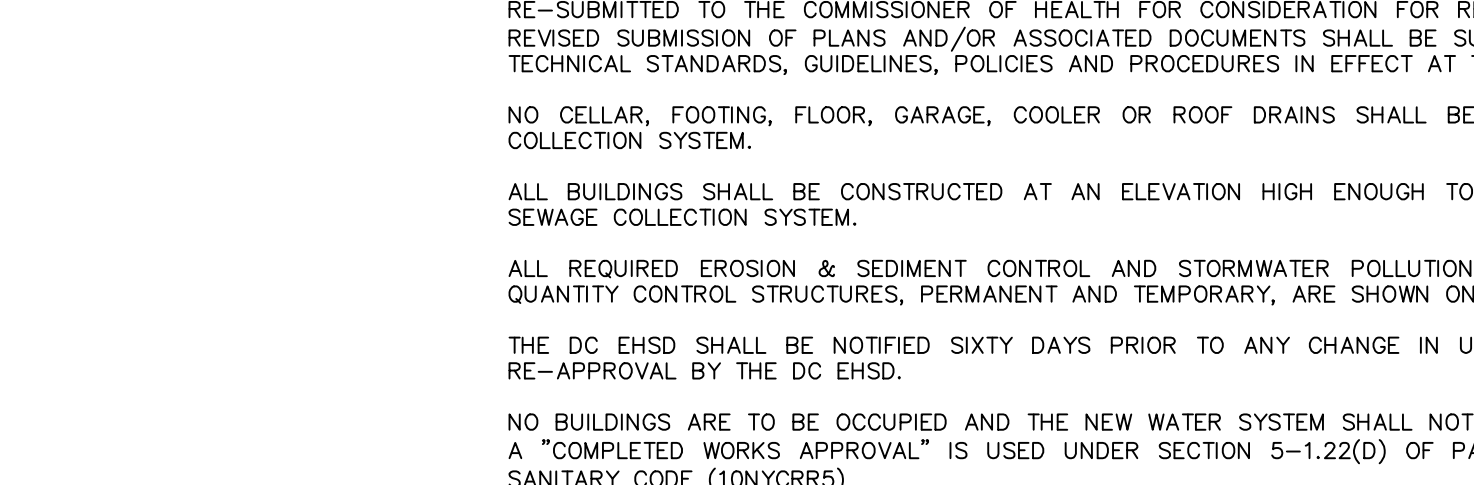
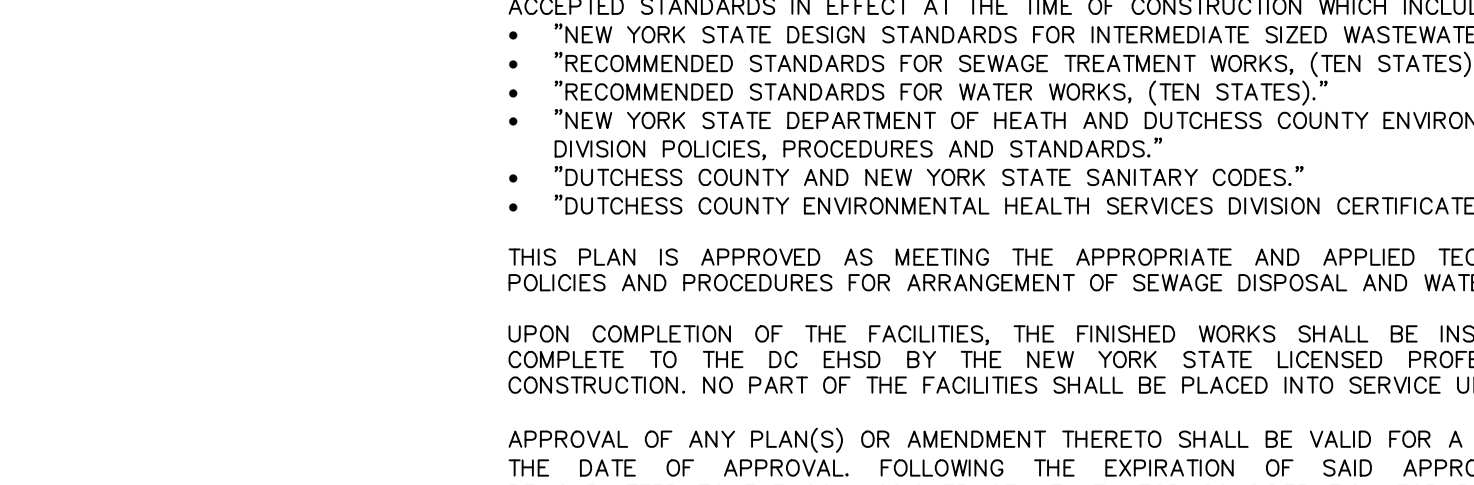
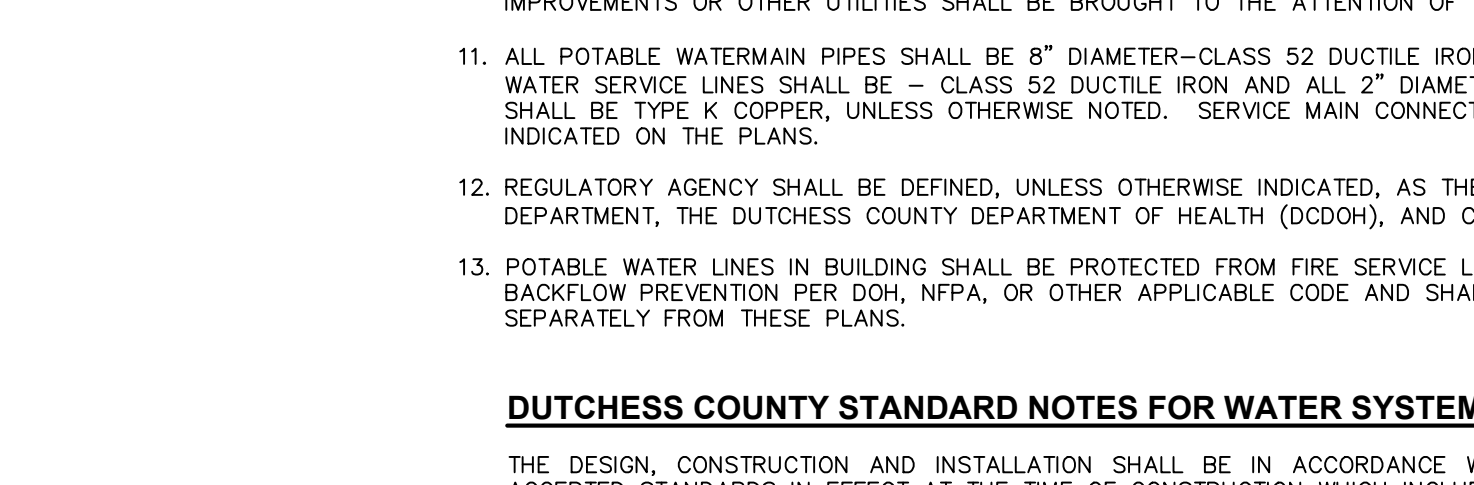
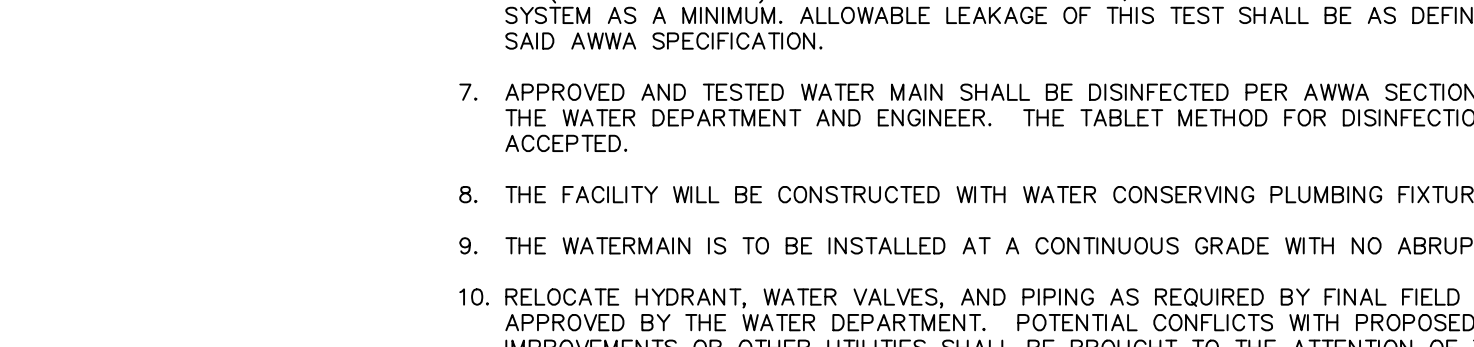
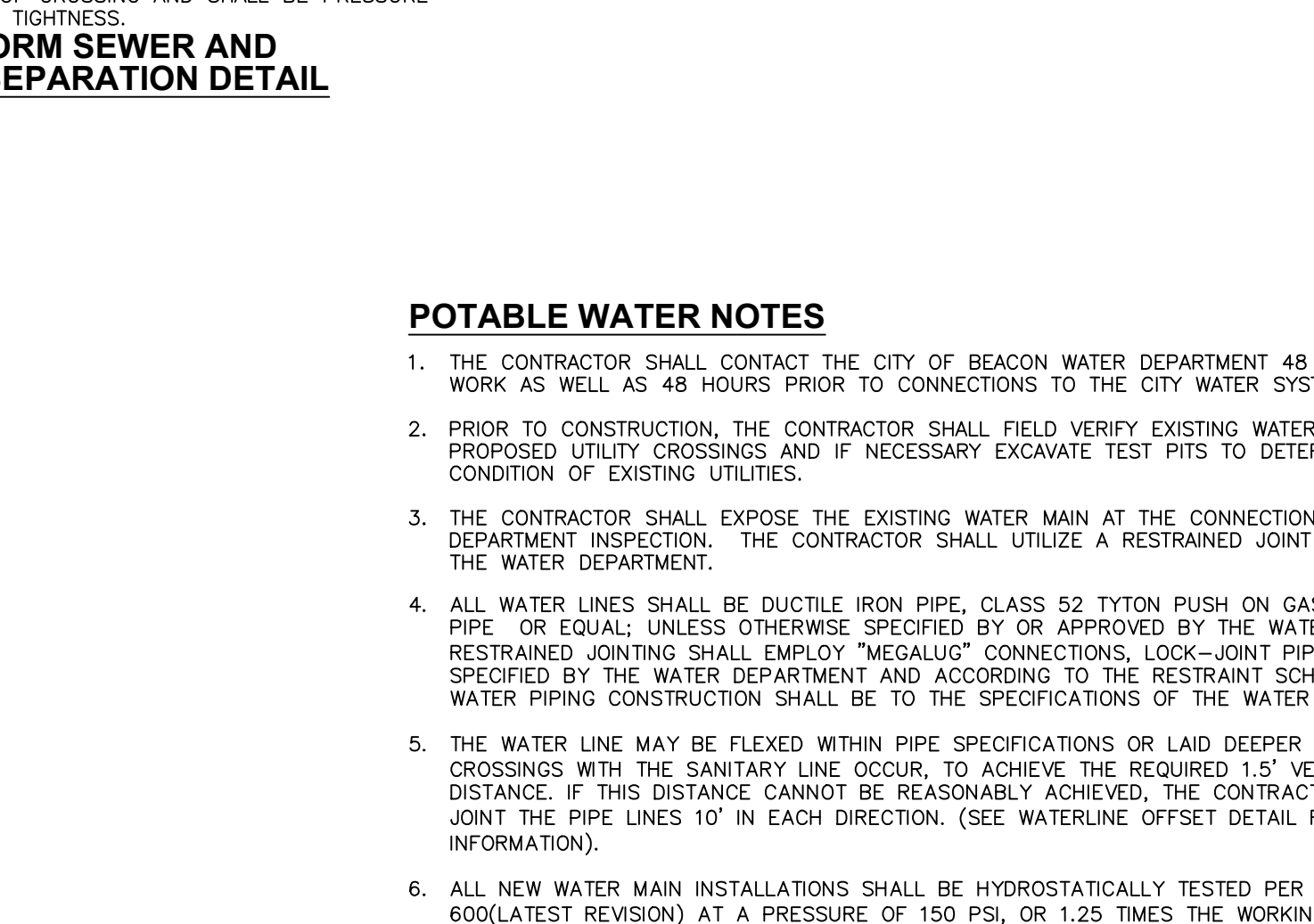
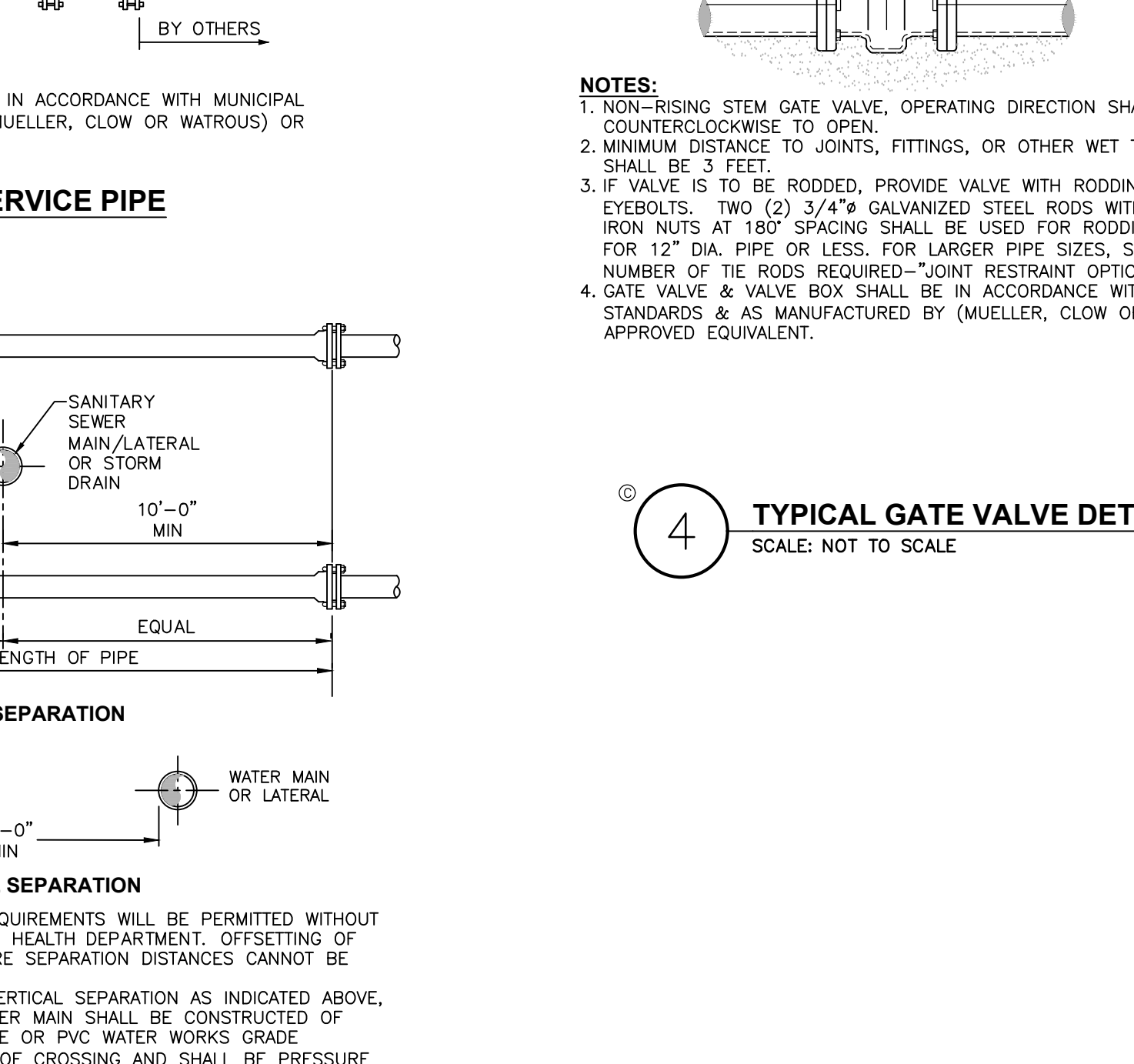
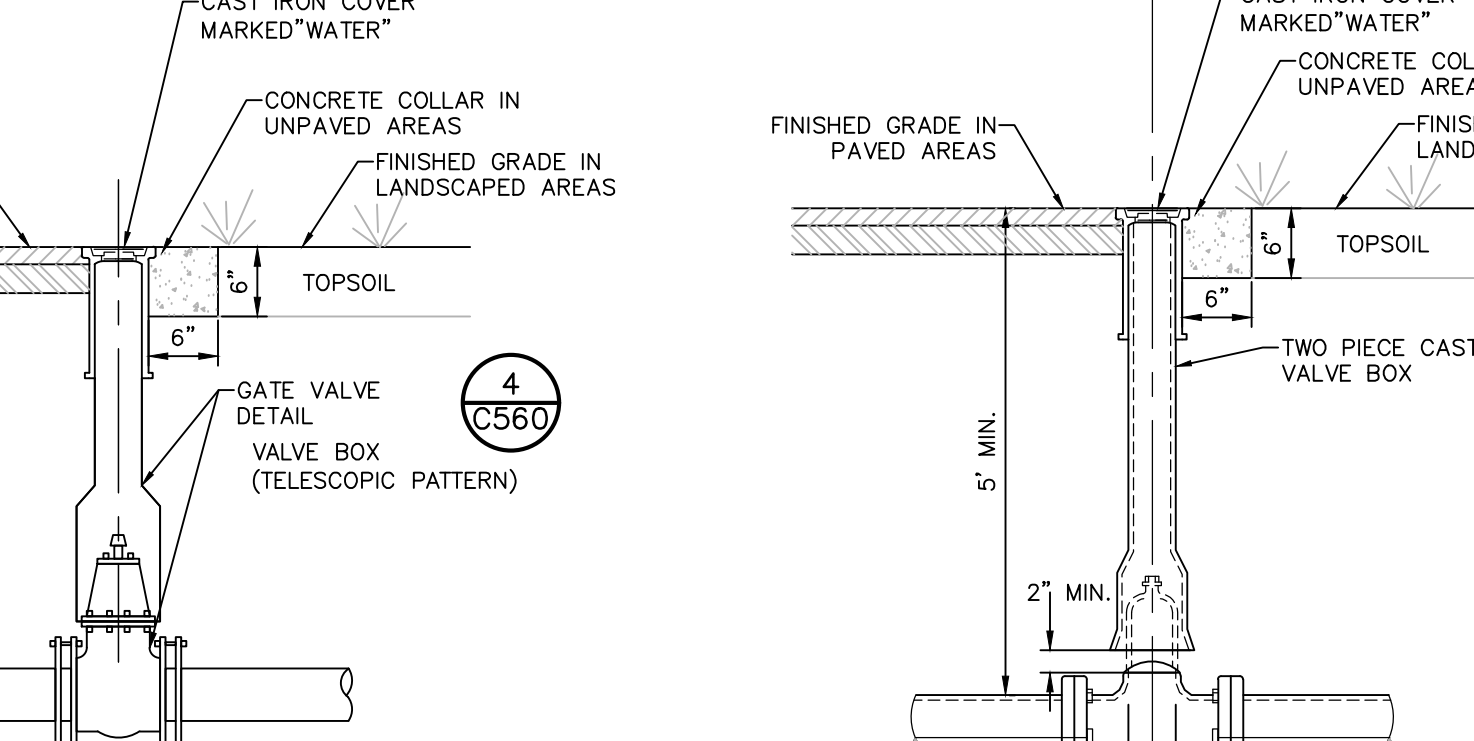
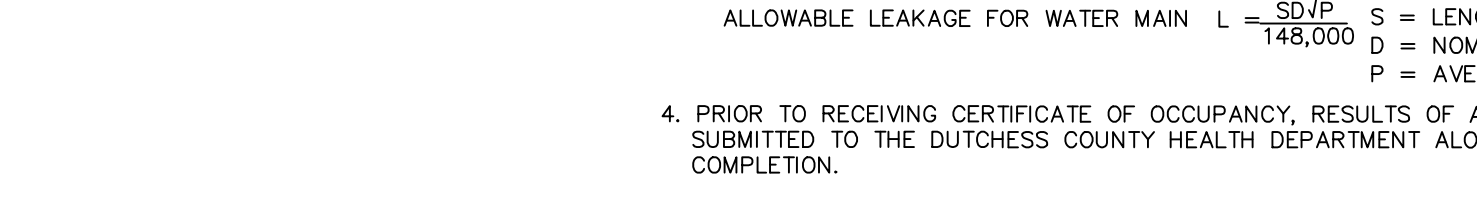
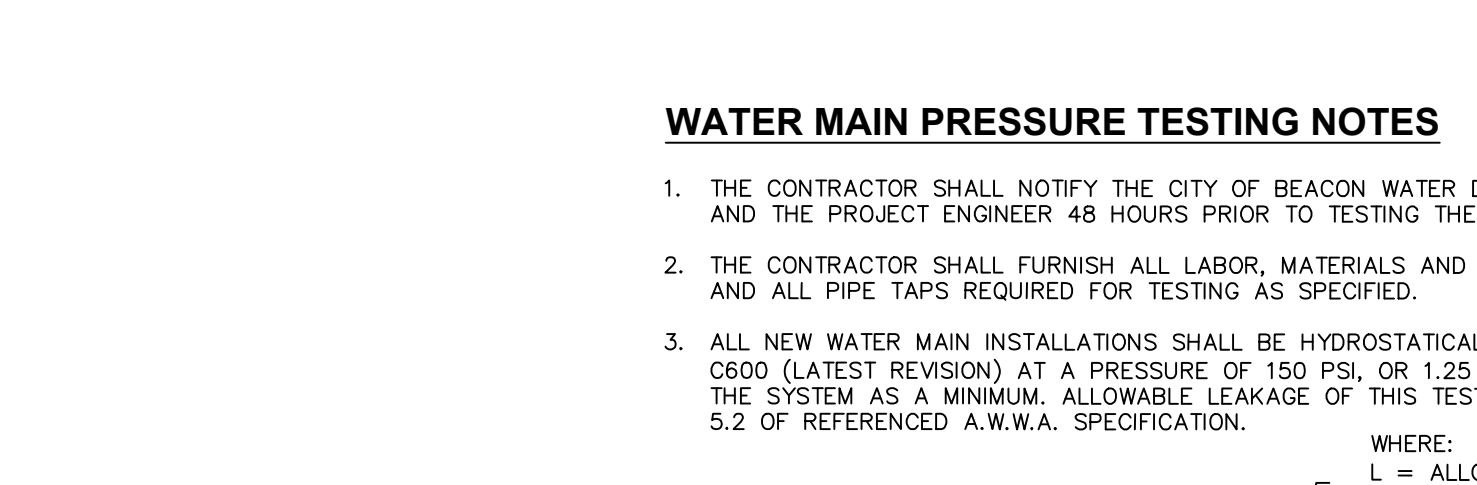
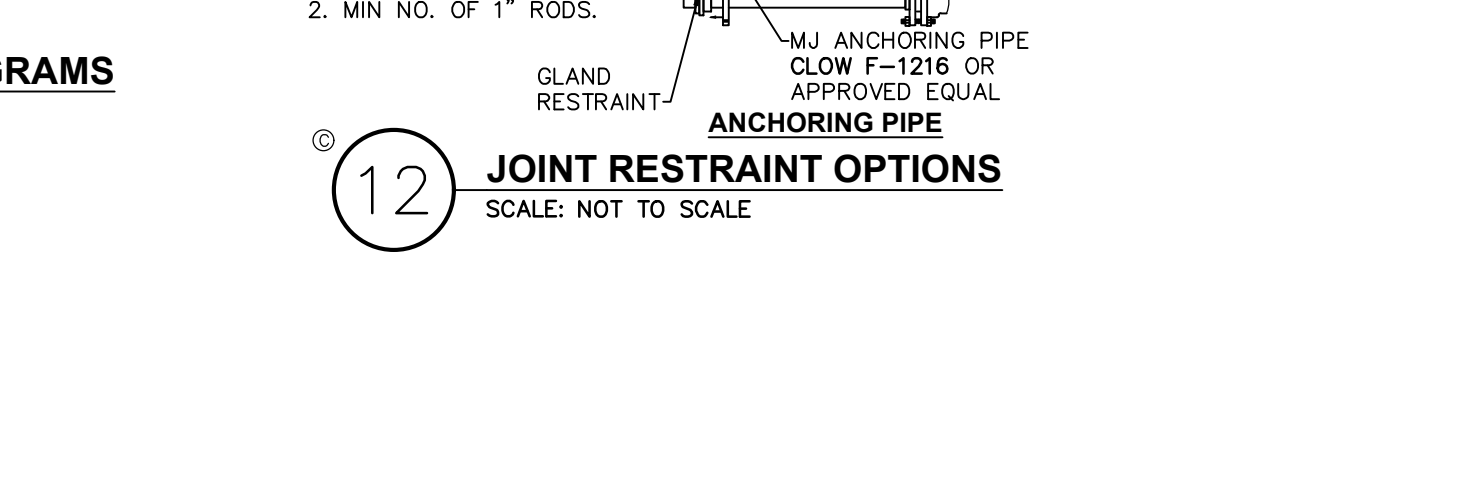
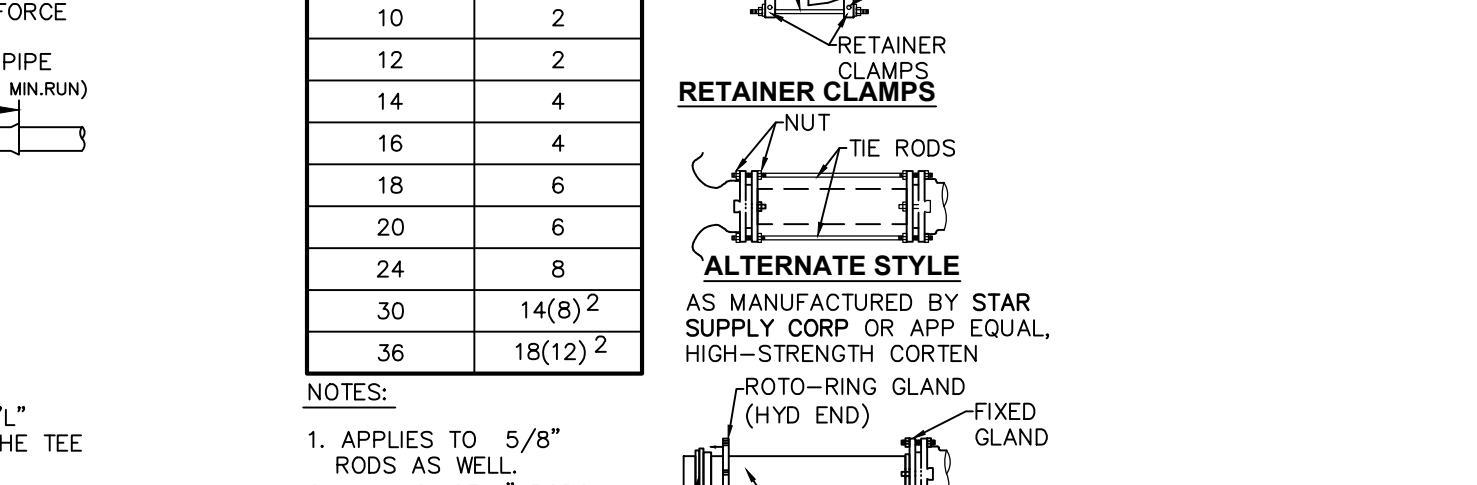
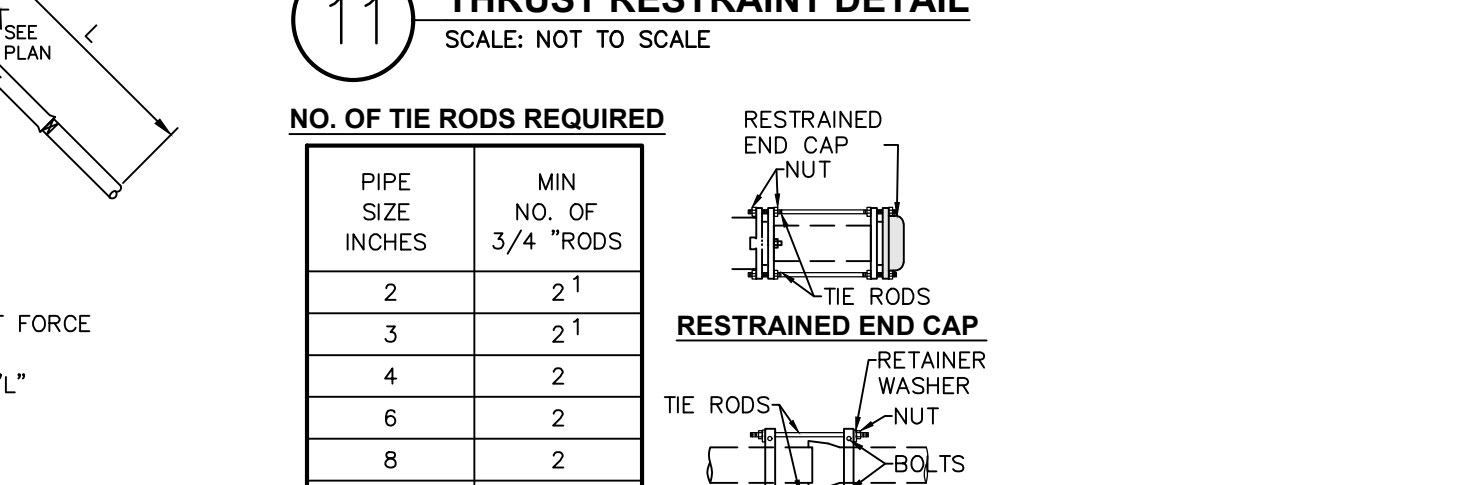
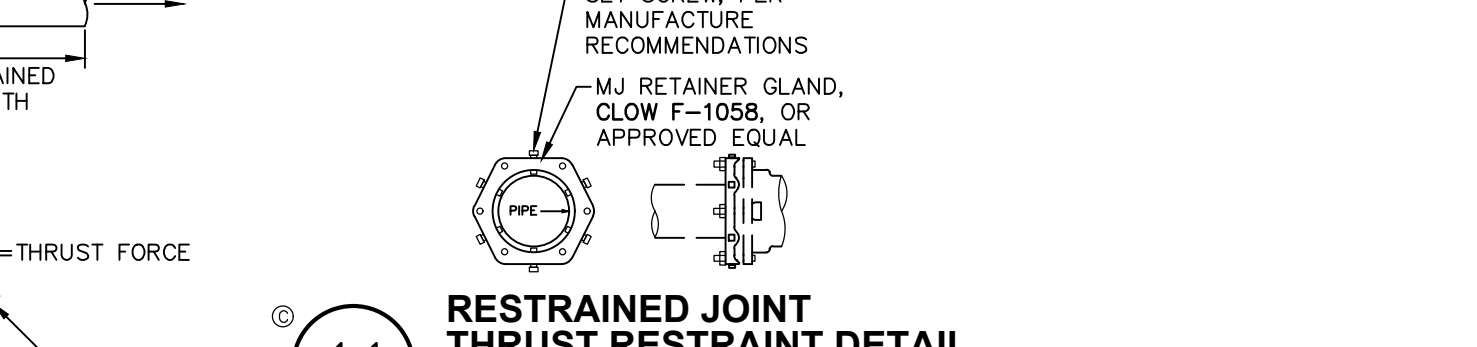
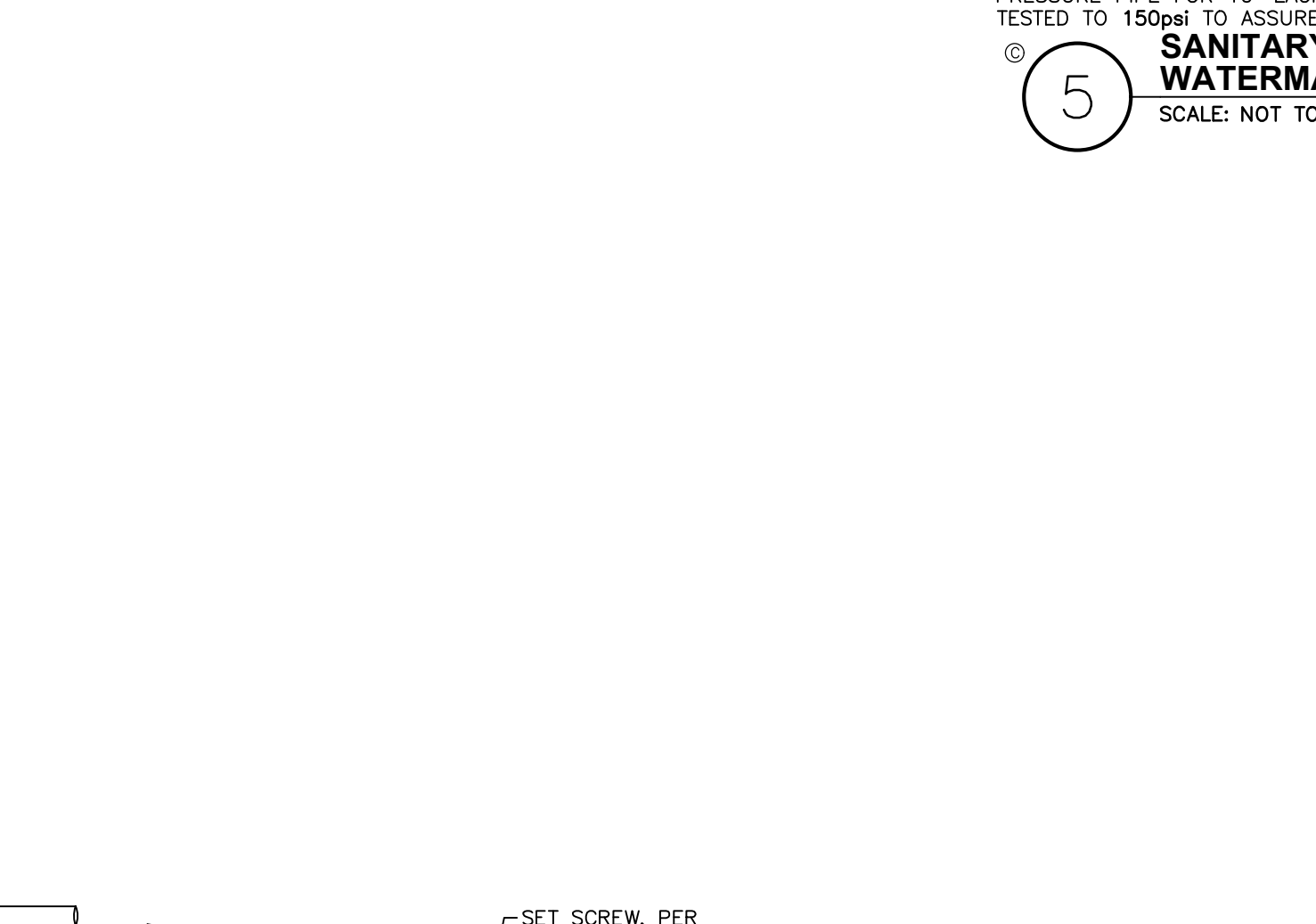
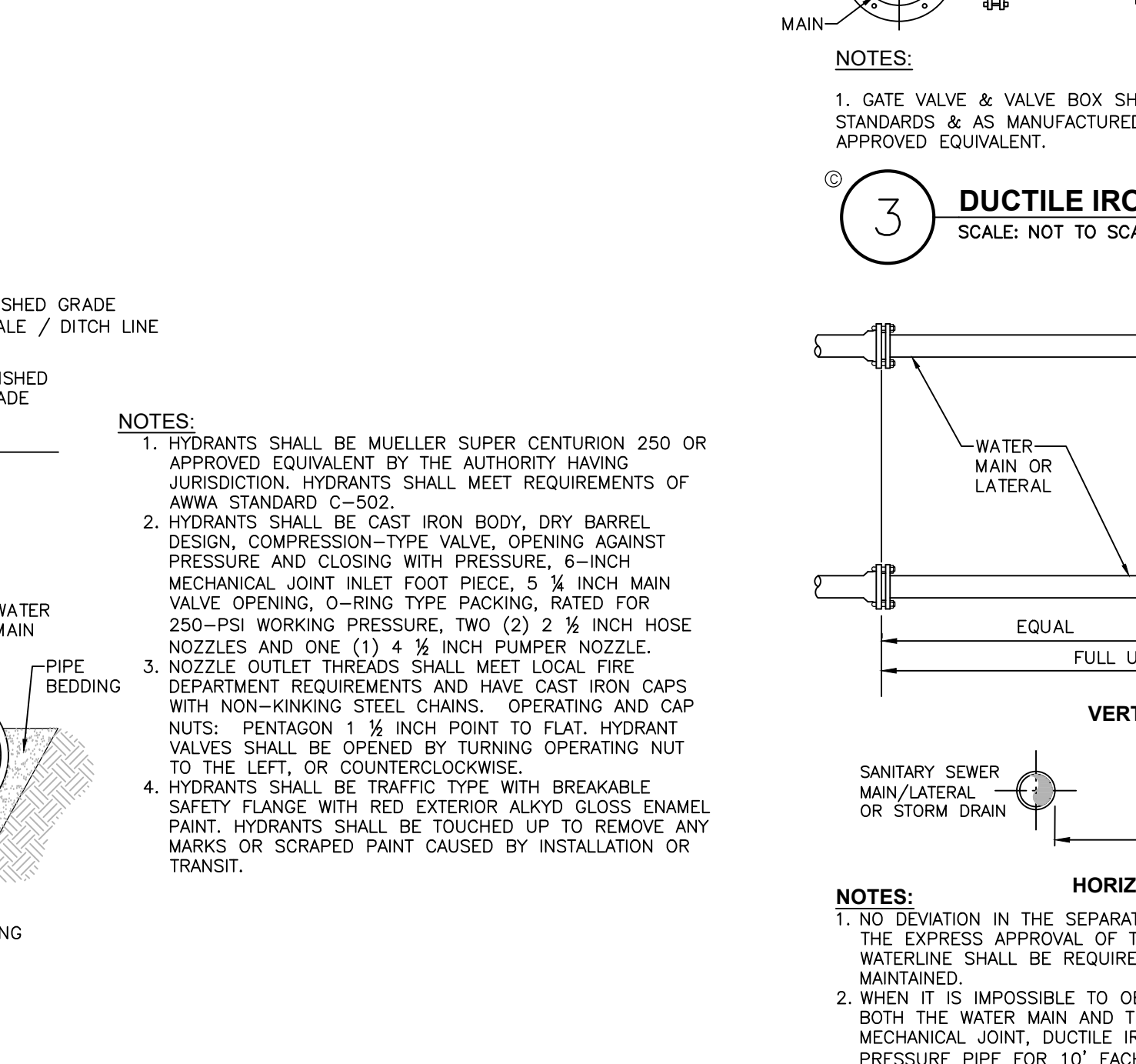
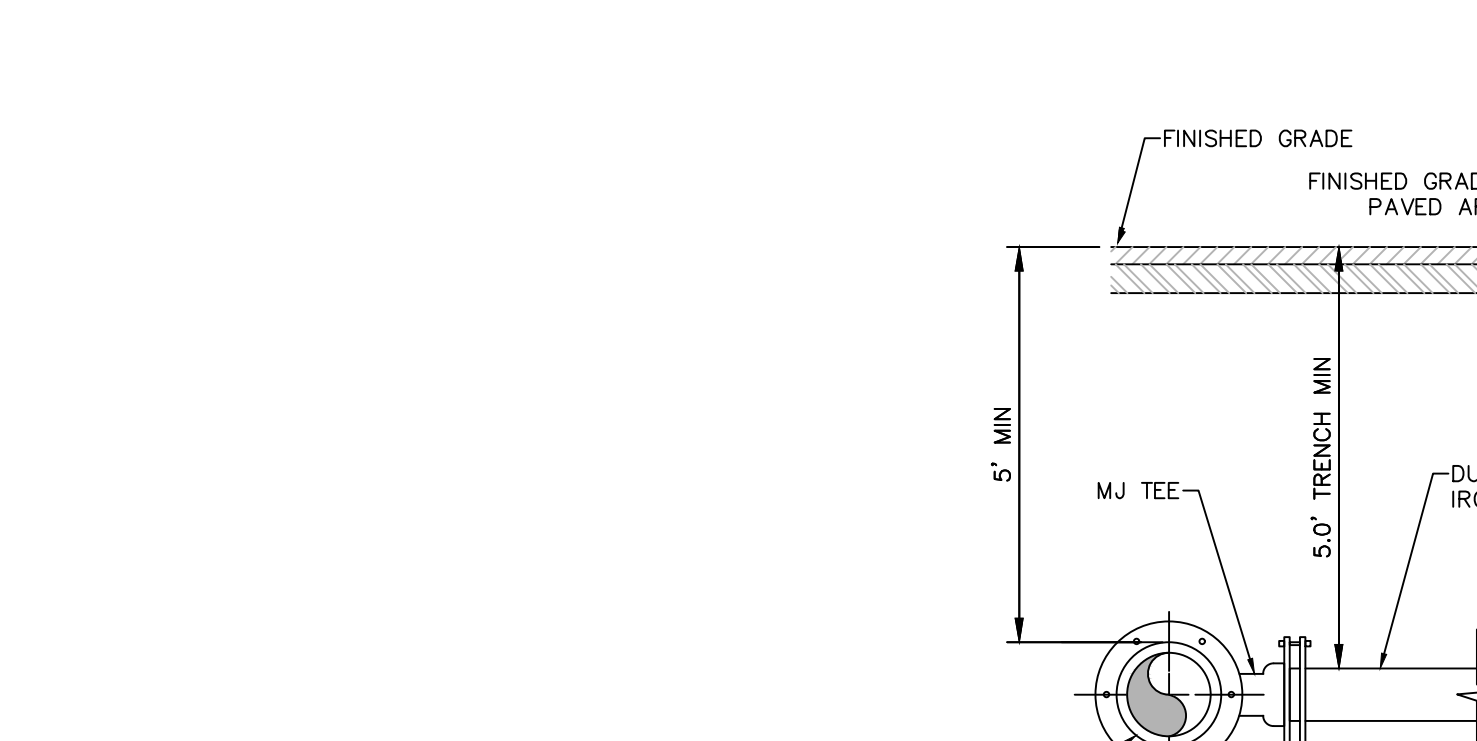
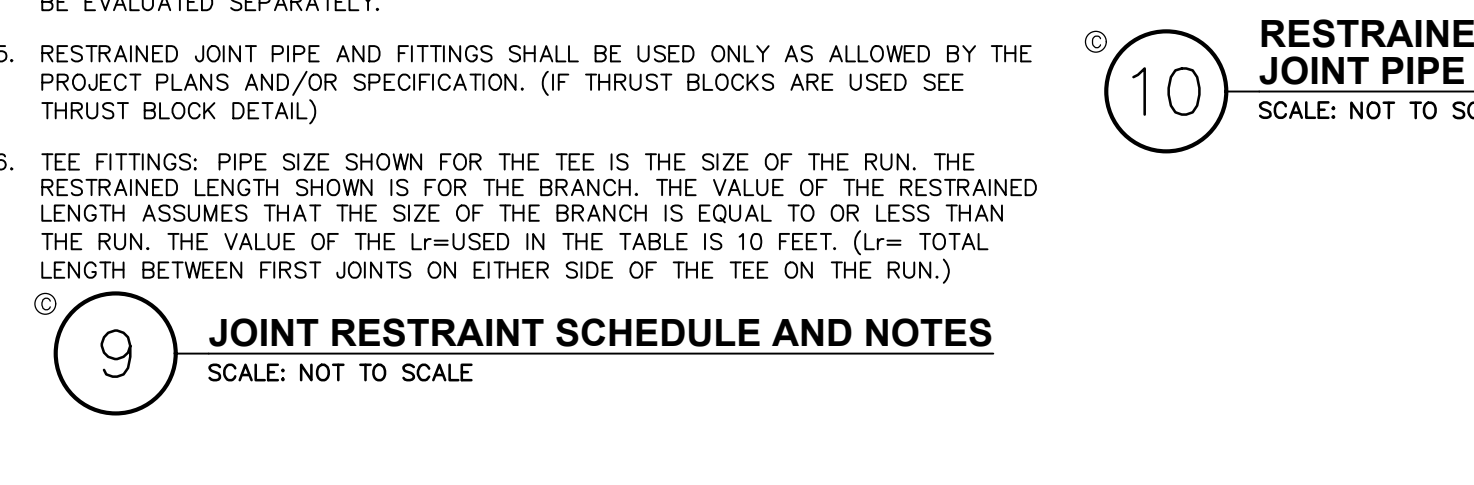
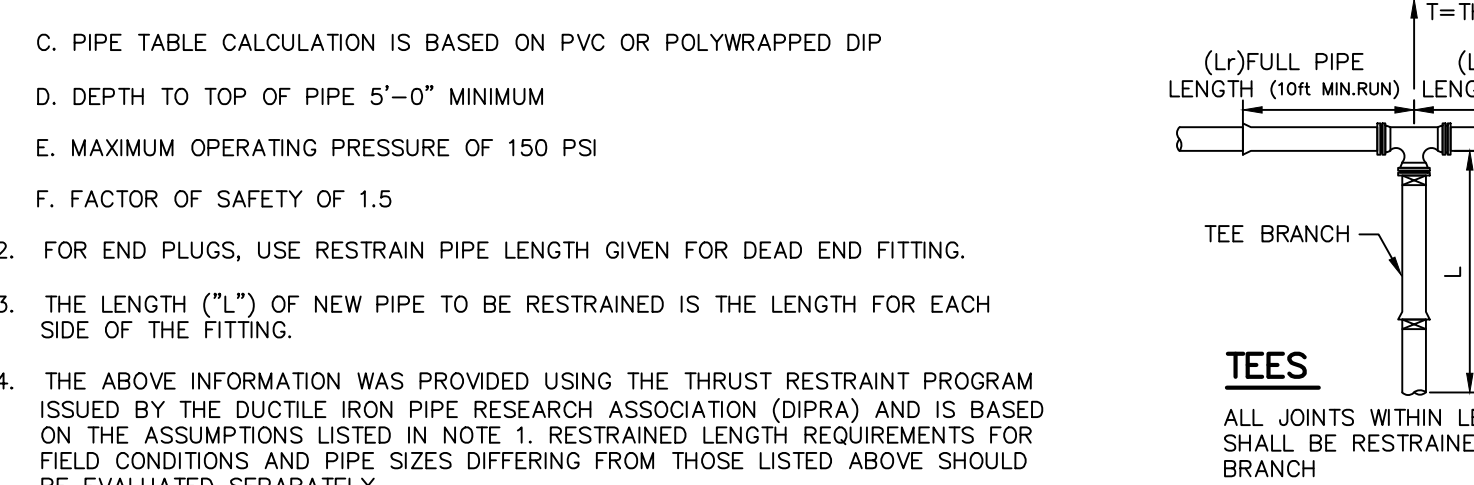
**BEARING STRENGTH**

SOIL	BEARING STRENGTH (LB/SQ FT)
SOFT CLAY	1,000
MEDIUM CLAY	1,500
SANDY SILT	3,000
SAND	4,000
SANDY SAND	6,000
HARD CLAY	9,000



**SCHEDULE OF JOINT RESTRAINT - (PIPE OR POLYWRAPPED PIPE)**

PIPE SIZE (INCHES)	RESTRAINED LENGTH	RESTRAINED LENGTH
30"	24	100
24"	18	75
18"	12	50
12"	6	25
8"	3	12
6"	2	8
4"	1	4



- POTABLE WATER NOTES**
1. THE CONTRACTOR SHALL CONTACT THE CITY OF BEACON WATER DEPARTMENT 48 HOURS BEFORE STARTING WORK AS WELL AS 48 HOURS PRIOR TO CONNECTIONS TO THE CITY WATER SYSTEM.
  2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY EXISTING WATER CONNECTION AND ALL PROPOSED UTILITY CROSSINGS AND IF NECESSARY EXCAVATE TEST PITS TO DETERMINE DEPTH AND CONDITION OF EXISTING UTILITIES.
  3. THE CONTRACTOR SHALL EXPOSE THE EXISTING WATER MAIN AT THE CONNECTION JOINT FOR WATER DEPARTMENT INSPECTION. THE CONTRACTOR SHALL UTILIZE A JOINTED JOINT METHOD AS APPROVED BY THE WATER DEPARTMENT.
  4. ALL WATER LINES SHALL BE DUCTILE IRON PIPE, CLASS 52 37TON PITCH ON GASKETED JOINT BY U.S. PIPE OR EQUAL, UNLESS OTHERWISE SPECIFIED BY THE WATER DEPARTMENT. RESTRAINED JOINTS SHALL BE OF THE "MECHANICAL" CONNECTIONS, LOCK-JOINT PIPE OR AS ALTERNATIVELY SPECIFIED BY THE WATER DEPARTMENT AND ACCORDING TO THE RESTRAINT SCHEDULE HEREIN. ALL WATER PIPING CONSTRUCTION SHALL BE TO THE SPECIFICATIONS OF THE WATER DEPARTMENT.
  5. THE WATER LINE MAY BE FLEWD WITH PIPE SPECIFICATIONS OR LAD DEEPER IN AREAS WHERE CROSSINGS WITH THE SANITARY LINE OCCUR. TO ACHIEVE THE REQUIRED 1.5" VERTICAL SEPARATION DISTANCE IF THIS DISTANCE CANNOT BE REASONABLY ACHIEVED, THE CONTRACTOR SHALL CUT AND JOINT THE PIPE LINES 10' IN EACH DIRECTION (SEE WATERLINE OFFSET DETAIL FOR FURTHER INFORMATION).
  6. ALL NEW WATER MAIN INSTALLATIONS SHALL BE HYDROSTATICALLY TESTED PER AWWA STANDARD C 900 (LATEST REVISION) AT A PRESSURE OF 150 PSI, OR 1.25 TIMES THE WORKING PRESSURE OF THE SYSTEM AS A MINIMUM, ALLOWABLE LEAKAGE OF THIS TEST SHALL BE AS DEFINED IN SECTION 5.2 OF SAO AWWA SPECIFICATION.
  7. APPROVED AND TESTED WATER MAIN SHALL BE DISINFECTED PER AWWA SECTION 651, AS DIRECTED BY THE WATER DEPARTMENT AND ENGINEER. THE TABLET METHOD FOR DISINFECTION SHALL NOT BE ACCEPTED.
  8. THE FACILITY WILL BE CONSTRUCTED WITH WATER CONSERVING PLUMBING FIXTURES.
  9. THE WATERMAIN IS TO BE INSTALLED AT A CONTINUOUS GRADE WITH NO ABUPT HIGH OR LOW POINTS.
  10. RELOCATE HYDRANT, WATER VALVES, AND PIPING AS REQUIRED BY FINAL FIELD CONDITIONS AND AS APPROVED BY THE WATER DEPARTMENT. POTENTIAL CONFLICTS WITH PROPOSED DRAINAGE IMPROVEMENTS OR OTHER UTILITIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
  11. ALL POTABLE WATERMAIN PIPES SHALL BE 8" DIAMETER-CLASS 52 DUCTILE IRON PIPE. ALL 4" DIAMETER WATER SERVICE LINES SHALL BE - CLASS 52 DUCTILE IRON AND ALL 2" DIAMETER WATER SERVICE LINES SHALL BE 1.5" DIA. DUCTILE IRON PIPE UNLESS OTHERWISE NOTED. SERVICE CONNECTIONS SHALL BE AS INDICATED ON THE PLANS.
  12. REGULATORY AGENCY SHALL BE DEFINED, UNLESS OTHERWISE INDICATED, AS THE CITY OF BEACON WATER DEPARTMENT, THE NEW YORK STATE DEPARTMENT OF HEALTH (DOH), AND CITY ENGINEER.

- DUTCHESS COUNTY STANDARD NOTES FOR WATER SYSTEMS:**
- THE DESIGN, CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN AND GENERALLY ACCEPTED STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION WHICH INCLUDE:
- "NEW YORK STATE DESIGN STANDARDS FOR INTERMEDIATE SIZED WASTEWATER TREATMENT SYSTEMS", NYSDC
  - "RECOMMENDED STANDARDS FOR SEWAGE TREATMENT WORKS", (TEN STATES)
  - "NEW YORK STATE DESIGN STANDARDS FOR WATER WORKS", (TEN STATES)
  - "NEW YORK STATE DEPARTMENT OF HEALTH AND DUTCHESS COUNTY ENVIRONMENTAL HEALTH SERVICES DESIGN POLICIES, PROCEDURES AND STANDARDS"
  - "DUTCHESS COUNTY NEW YORK STATE SANITARY CODES"
  - "DUTCHESS COUNTY ENVIRONMENTAL HEALTH SERVICES DIVISION CERTIFICATE OF APPROVAL LETTER"
- THIS PLAN IS APPROVED AS MEETING THE APPROPRIATE AND APPLIED TECHNICAL STANDARDS, GUIDELINES, POLICIES AND PROCEDURES FOR ARRANGEMENT OF SEWAGE DISPOSAL AND WATER SUPPLY FACILITIES.
- UPON COMPLETION OF THE FACILITIES, THE FINISHED WORKS SHALL BE INSPECTED, TESTED, AND CERTIFIED COMPLIANT WITH THE DESIGN AND APPROVED PLANS BY THE FOLLOWING: THE COMMISSIONER OF HEALTH (DOH), THE CITY ENGINEER, THE NEW YORK STATE LICENSED PROFESSIONAL ENGINEER SUPERVISING CONSTRUCTION, NO PART OF THE FACILITIES SHALL BE PLACED INTO SERVICE UNTIL ACCEPTED BY THE DOH DIS.
- APPROVAL OF ANY PLANS) OR AMENDMENT THEREO SHALL BE VALID FOR A PERIOD OF FIVE (5) YEARS FROM THE DATE OF APPROVAL. THE CITY OF BEACON WATER DEPARTMENT SHALL BE NOTIFIED 30 DAYS PRIOR TO ANY CHANGE IN USE, USE CHANGES MAY REQUIRE RE-APPROVAL BY THE DOH DIS.
- NO BUILDINGS ARE TO BE OCCUPIED AND THE NEW WASTEWATER COLLECTION SYSTEM SHALL NOT BE PLACED INTO SERVICE UNTIL A "COMPLETED WORKS APPROVAL" IS ISSUED UNDER SECTION 5-1.2(2)(D) OF PART 5 OF THE NEW YORK STATE SANITARY CODE (10NYCSRCS).
- NO BUILDINGS ARE TO BE OCCUPIED AND THE NEW WASTEWATER COLLECTION SYSTEM SHALL NOT BE PLACED INTO SERVICE UNTIL A "CERTIFICATE OF CONSTRUCTION COMPLIANCE" IS ISSUED UNDER SECTION 19.7 OF ARTICLE 19 OF THE DUTCHESS COUNTY SANITARY CODE.
- ALL SERVICE LINES ARE THE RESPONSIBILITY OF THE OWNER UP TO THE PROPERTY LINE. THE WATER AND SEWER COMPANIES SHALL BE RESPONSIBLE FOR ALL VALVES AND PIPES WHICH ARE NOT ON THE OWNER'S PROPERTY.
- THE UNDERSIGNED OWNERS OF THE PROPERTY HERON STATE THAT THEY ARE FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGEND AND HEREBY CONSENT TO ALL SAID TERMS AND CONDITIONS STATED HEREIN.

- WATER MAIN DISINFECTION NOTES**
1. APPROVED AND TESTED WATER MAIN SHALL BE DISINFECTED PER A.W.W.A. SECTION 651.
  2. THE CONTRACTOR SHALL NOTIFY THE CITY OF BEACON WATER DEPARTMENT AND THE PROJECT ENGINEER 48 HOURS PRIOR TO DISINFECTING THE SERVICE LINES.
  3. DISINFECTED WATER MUST REMAIN IN THE MAINS FOR A MINIMUM OF 24 HOURS BEFORE BEING THOROUGHLY FLUSHED OUT.
  4. WATER SERVICE LINES SHALL BE DISINFECTED AS PER AWWA SECTION 653 WHERE:
    - A. CHLORINE CONCENTRATION IN WATER LINES SHALL BE NO LESS THAN 50 MG/L AT START OF 24-HOUR TEST.
    - B. CHLORINE RESIDUAL SHALL BE NO LESS THAN 10 MG/L AT END OF TEST.
  5. PRIOR TO RECEIVING CERTIFICATE OF OCCUPANCY, A TOTAL OF TWO (2) SETS OF MICRO BIOLOGICAL SAMPLES SHALL BE COLLECTED. EACH SET SHALL BE FROM BOTH ENDS AND THE MIDDLE OF THE NEW DISTRIBUTION SYSTEM. SAMPLING OF SETS SHALL BE 24 HOURS APART. ALL LINES SHALL NOT BE USED UNTIL ALL MICRO BIOLOGICAL TESTING HAS BEEN ACCEPTED BY THE DUTCHESS COUNTY HEALTH DEPARTMENT. RESULTS OF ALL MICRO BIOLOGICAL TESTING SHALL BE SUBMITTED TO THE DUTCHESS COUNTY HEALTH DEPARTMENT ALONG WITH ENGINEERS CERTIFICATE OF COMPLETION.

- ADDITIONAL NOTES FOR RESIDENTIAL**
- WITH CENTRAL UTILITIES
1. THAT, NO BUILDINGS ARE TO BE OCCUPIED AND THE NEW WATER SYSTEM SHALL NOT BE PLACED INTO SERVICE UNTIL A "COMPLETED WORKS APPROVAL" IS ISSUED UNDER SECTION 5-1.2(2)(D) OF PART 5 OF THE NEW YORK STATE SANITARY CODE (10NYCSRCS)
  2. THAT, NO BUILDINGS ARE TO BE OCCUPIED AND THE NEW WASTEWATER COLLECTION SYSTEM SHALL NOT BE PLACED INTO SERVICE UNTIL A "CERTIFICATE OF CONSTRUCTION COMPLIANCE" IS ISSUED UNDER SECTION 19.7 OF ARTICLE 19 OF THE DUTCHESS COUNTY SANITARY CODE.

- WATER MAIN PRESSURE TESTING NOTES**
1. THE CONTRACTOR SHALL NOTIFY THE CITY OF BEACON WATER DEPARTMENT, THE CITY ENGINEER AND THE PROJECT ENGINEER 48 HOURS PRIOR TO TESTING THE SERVICE LINES.
  2. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR ANY AND ALL PIPE TAPS REQUIRED FOR TESTING AS SPECIFIED.
  3. ALL NEW WATER MAIN INSTALLATIONS SHALL BE HYDROSTATICALLY TESTED PER A.W.W.A. STANDARD C600 (LATEST REVISION) AT A PRESSURE OF 150 PSI, OR 1.25 TIMES THE WORKING PRESSURE OF THE SYSTEM AS A MINIMUM, ALLOWABLE LEAKAGE OF THIS TEST SHALL BE AS DEFINED IN SECTION 5.2 OF REFERENCED A.W.W.A. SPECIFICATION.
- WHERE:
- L = ALLOWABLE LEAKAGE (GPM)
  - D = LENGTH OF PIPE TESTED (FEET)
  - P = NOMINAL DIAMETER (INCHES)
  - P = AVERAGE TEST PRESSURE (150 PSI)
4. PRIOR TO RECEIVING CERTIFICATE OF OCCUPANCY, RESULTS OF ALL LEAKAGE TESTING SHALL BE SUBMITTED TO THE DUTCHESS COUNTY HEALTH DEPARTMENT ALONG WITH ENGINEERS CERTIFICATE OF COMPLETION.

248 TIRONDA AVE, BEACON, N.Y.

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sheet no.: 1

**C560**

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Land Surveys, Planning, Environmental & Safety Professionals, Landscape Architects

**WATER SYSTEM DETAILS & NOTES**

CITY OF BEACON, DUTCHESS COUNTY, NEW YORK