

DUTCHESS COUNTY DEPARTMENT OF HEALTH STANDARD NOTES:

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:

- "STANDARDS FOR WASTE TREATMENT WORKS, INSTITUTIONAL AND COMMERCIAL SEWERAGE FACILITIES"
- "RECOMMENDED STANDARDS FOR SEWAGE TREATMENT WORKS (TEN STATES)"
- "WASTE TREATMENT HANDBOOK, INDIVIDUAL HOUSEHOLD SYSTEMS, NEW YORK STATE DEPARTMENT OF HEALTH."
- "RURAL WATER SUPPLY, NEW YORK STATE DEPARTMENT OF HEALTH."
- "PLANNING THE SUBDIVISION AS PART OF THE TOTAL ENVIRONMENT, NEW YORK STATE DEPARTMENT OF HEALTH."
- "NEW YORK STATE DEPARTMENT OF HEALTH AND DUTCHESS COUNTY DEPARTMENT OF HEALTH, PROCEDURES AND STANDARDS."
- "DUTCHESS COUNTY DEPARTMENT OF HEALTH SANITARY CODE, ARTICLE XI AND XIX."
- "DUTCHESS COUNTY DEPARTMENT OF HEALTH 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 TREATMENT AND WATER SUPPLY FACILITIES.

APPROVALS OF ANY PLAN(S) OR AMENDMENT THERETO SHALL BE VALID FOR A PERIOD OF FIVE (5) YEARS FROM THE DATE OF APPROVAL. FOLLOWING THE EXPIRATION OF SAID APPROVAL, THE PLAN(S) SHALL BE RE-SUBMITTED TO THE COMMISSIONER OF HEALTH FOR CONSIDERATION FOR RE-APPROVAL. RE-SUBMISSION OR REVISED SUBMISSION OF PLANS AND/OR ASSOCIATED DOCUMENTS SHALL BE SUBJECT TO COMPLIANCE WITH THE TECHNICAL STANDARDS, GUIDELINES, POLICIES AND PROCEDURES IN EFFECT AT THE TIME OF THE RE-SUBMISSION.

ALL PROPOSED WATER SERVICE LINES ON THIS PLAN ARE ACCESSIBLE FOR INSTALLATION AND PLACEMENT.

UPON COMPLETION OF THE FACILITIES, THE FINISHED WORKS SHALL BE INSPECTED, TESTED, AND CERTIFIED COMPLETE TO THE DUTCHESS COUNTY HEALTH DEPARTMENT BY THE NEW YORK STATE LICENSED PROFESSIONAL ENGINEER SUPERVISING CONSTRUCTION. NO PART OF THE FACILITIES SHALL BE PLACED INTO SERVICE UNTIL ACCEPTED BY THE DUTCHESS COUNTY HEALTH DEPARTMENT.

ADDITIONAL NOTES FOR RESIDENTIAL PROJECTS WITH CENTRAL UTILITIES

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 5-1.22(d) OF PART 5 OF THE NEW YORK STATE SANITARY CODE (10NYCRRS).

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.

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:

- "RECOMMENDED STANDARDS FOR WATER WORKS (TEN STATES)"
- "RURAL WATER SUPPLY, NEW YORK STATE DEPARTMENT OF HEALTH."
- "NEW YORK STATE DEPARTMENT OF HEALTH AND DUTCHESS COUNTY DEPARTMENT OF HEALTH POLICIES, PROCEDURES AND STANDARDS."
- "DUTCHESS COUNTY DEPARTMENT OF HEALTH SANITARY CODE, ARTICLE XI AND V."
- "DUTCHESS COUNTY DEPARTMENT OF HEALTH 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 TREATMENT AND WATER SUPPLY FACILITIES.

UPON COMPLETION OF THE FACILITIES, THE FINISHED WORKS SHALL BE INSPECTED, TESTED, AND CERTIFIED COMPLETE TO THE DUTCHESS COUNTY HEALTH DEPARTMENT BY THE NEW YORK STATE LICENSED PROFESSIONAL ENGINEER SUPERVISING CONSTRUCTION. NO PART OF THE FACILITIES SHALL BE PLACED INTO SERVICE UNTIL ACCEPTED BY THE DUTCHESS COUNTY HEALTH DEPARTMENT.

ADDITIONAL NOTES FOR DISTRIBUTION SYSTEMS

ALL SERVICE LINES ARE THE RESPONSIBILITY OF THE HOMEOWNER UP TO THE PROPERTY LINE. THE WATER COMPANY SHALL BE RESPONSIBLE FOR ALL VALVES AND PIPES WHICH ARE NOT ON THE HOMEOWNER'S PROPERTY.

WATER NOTES:

1. THE WATER MAIN SHALL BE INSTALLED, PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C600 (SEE NOTES BELOW).
2. THE DUTCHESS COUNTY DEPARTMENT OF HEALTH, CITY OF BEACON WATER SUPERINTENDENT, AND THE CERTIFYING PROFESSIONAL ENGINEER SHALL BE NOTIFIED PRIOR TO COMMENCEMENT OF THE WATER MAIN INSTALLATION.
3. THE WATER MAIN SHALL BE DISINFECTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C651 (SEE NOTES BELOW).
4. WATER MAIN MATERIAL SHALL BE CLASS 52 CEMENT LINED DUCTILE IRON PIPE WITH MECHANICAL JOINTS AND SHALL MEET THE REQUIREMENTS OF AWWA C150 AND ANSI A21.50.
5. MEGALUG RESTRAINING SYSTEMS SHALL BE USED AT ALL FITTINGS, VALVES AND HYDRANTS.
6. GATE VALVES SHALL BE MUELLER RESILIENT WEDGE, NON-RISING STEM, MECHANICAL JOINT.
7. HYDRANTS SHALL BE A-423 MUELLER CENTURION, WITH A MUELLER GATE VALVE BEFORE THE HYDRANT.
8. DOMESTIC SERVICE LINES SHALL BE 1" K COPPER UNLESS OTHERWISE NOTED ON THE PLAN. ALL 8" WATER MAINS SHALL BE CLASS 52 8" DIP.

WATER MAIN PRESSURE & LEAKAGE TESTING

GENERAL: ALL PIPING SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF AWWA C600, EXCEPT AS ADDED OR AMENDED BELOW:

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR ANY AND ALL REQUIRED PIPE TAPS FOR TESTING, AND AS NECESSARY FOR TESTING AS SPECIFIED. EQUIPMENT WILL BE SUCH THAT THE ENGINEER MAY INSTALL HIS OWN PRESSURE GAUGE.
2. A PRESSURE TEST AND LEAKAGE TEST ARE REQUIRED FOR ALL PIPE.
3. TESTING TO BE PERFORMED ONLY AFTER PARTIAL OR COMPLETE BACKFILL AND RESTRAINT BLOCKING (USING HIGH EARLY CEMENT) HAS HAD 36 HOURS TO CURE OR BLOCKING USING STANDARD CEMENT HAS HAD 7 DAYS TO CURE.
4. THE MAIN SHALL BE PARTIALLY BACKFILLED OR BRACED AGAINST MOVEMENT DURING THE TEST. ALL AIR MUST BE BLED OUT OF THE SECTION TO BE TESTED. IF NECESSARY, CONTRACTOR SHALL INSTALL CORPORATION STOPS AT THE HIGH POINTS, FOR BLOW-OFFS. AFTER ALL AIR HAS BEEN EXPELLED, THE CORPORATION COCKS SHALL BE CLOSED AND THE PRESSURE TEST APPLIED. AFTER EXAMINATION OF EXPOSED PARTS OF THE SYSTEM, THE TEST PRESSURE SHALL BE INCREASED TO 1 1/2 TIMES THE NORMAL PRESSURE, BASED UPON THE ELEVATION OF THE LOWEST POINT IN THE LINE OR SECTION UNDER THE TEST, BUT SUCH PRESSURE SHALL NOT BE LESS THAN 150 PSI NOR MORE THAN 200 PSI, AND EXPOSED PARTS AGAIN EXAMINED. THE MINIMUM DURATION OF THE LEAKAGE TEST SHALL BE TWO (2) HOURS.
5. ALLOWABLE SYSTEM LEAKAGE AS SPECIFIED IN THE REFERENCED STANDARDS. IF LEAKAGE IN SYSTEM IS GREATER THAN ALLOWABLE, CONTRACTOR WILL LOCATE AND REPAIR SYSTEM AT HIS EXPENSE AND RETEST, CONTINUE TO TEST AND REPAIR THE SYSTEM UNTIL LEAKAGE IS WITHIN ACCEPTABLE LIMITS.
6. NO DUCTILE IRON PIPE INSTALLATION WILL BE ACCEPTED IF THE LEAKAGE IS GREATER THAN THAT DETERMINED BY THE FOLLOWING FORMULA:

$$L = \frac{SD}{P} \times 148,000$$

WHERE

L = LEAKAGE IN GALLONS PER HOUR

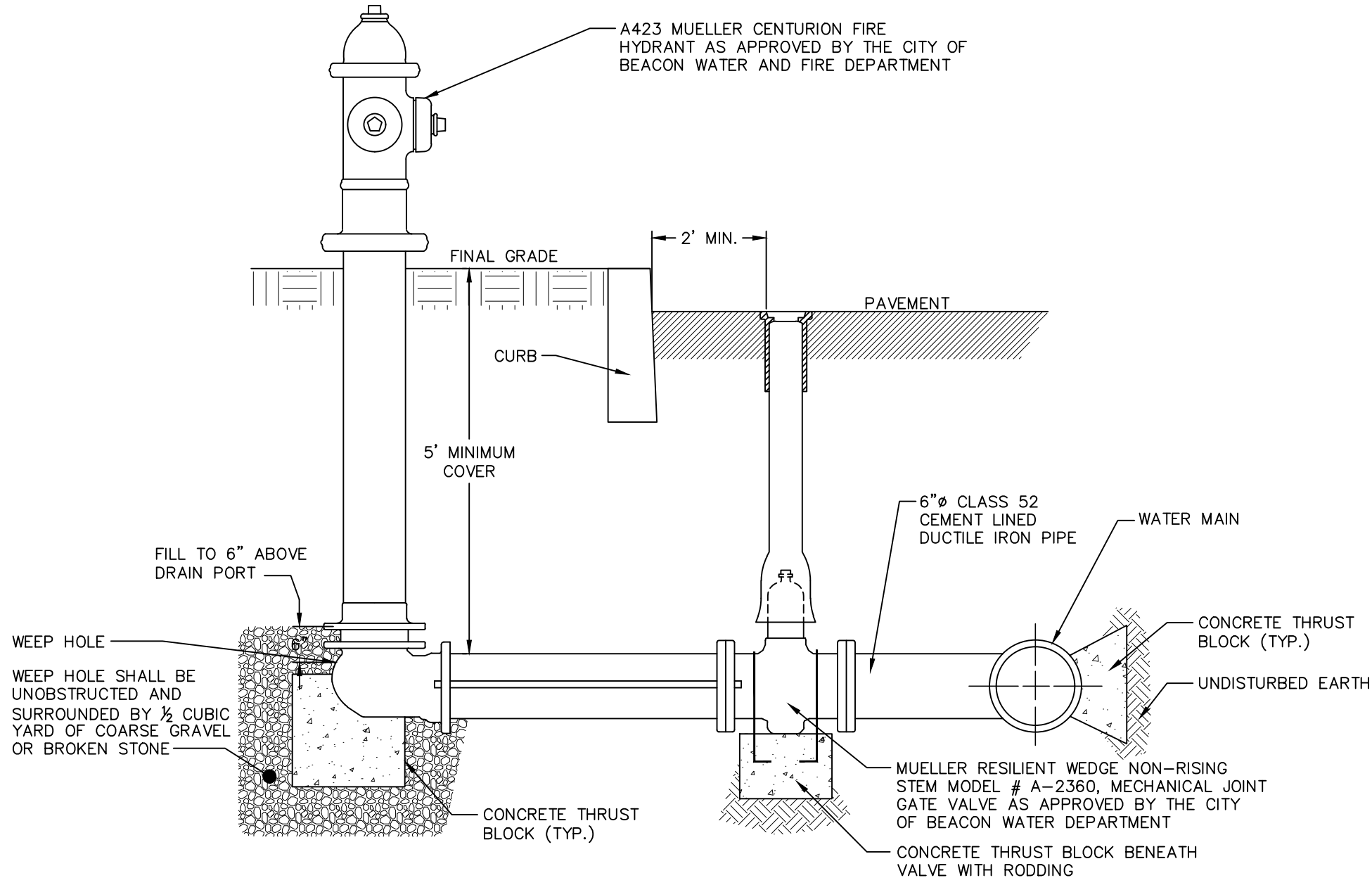
S = LENGTH OF PIPE TESTED, IN FEET

D = NOMINAL DIAMETER OF PIPE IN INCHES

P = AVERAGE TEST PRESSURE DURING LEAKAGE TEST, IN PSI (GAUGE)

WATERMAIN DISINFECTION & TESTING

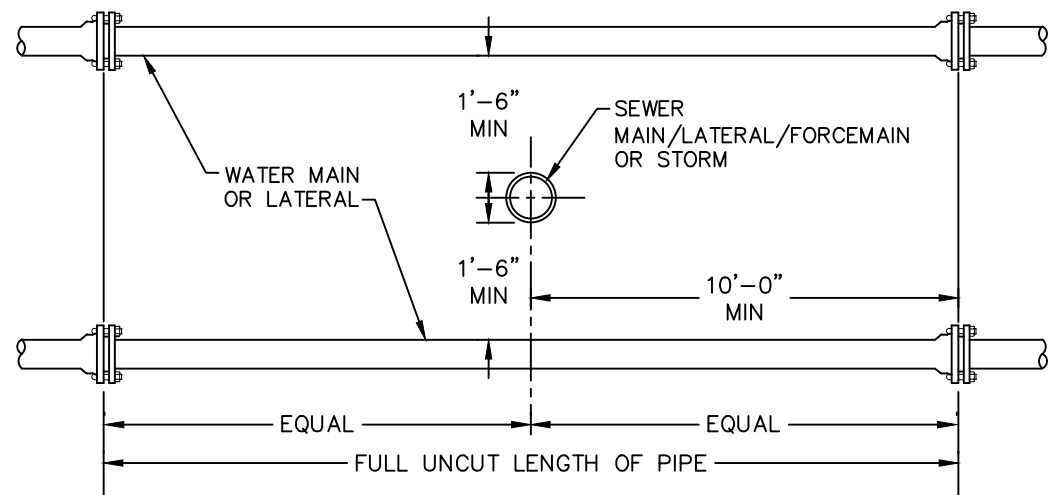
1. THE CONTRACTOR SHALL NOTIFY THE CITY OF BEACON WATER DEPARTMENT PRIOR TO TESTING AND SHALL ALSO COORDINATE HIS ACTIONS WITH THE CITY ENGINEER SO AS TO AVOID UNDUE DISTURBANCE OF THE WATER SUPPLY TO ANY EXISTING USERS.
2. THE CONTRACTOR SHALL INFORM THE DESIGN ENGINEER'S AND CITY ENGINEER'S OFFICE A MINIMUM OF 24 HOURS PRIOR TO TESTING SUCH THAT WITNESSING CAN TAKE PLACE AND PROPER CERTIFICATIONS CAN BE ISSUED.
3. ALL NEWLY INSTALLED WATER MAINS SHALL BE FLUSHED AT A MINIMUM VELOCITY OF 2.5 FT/SECOND BEFORE AND AFTER DISINFECTION.
4. ALL WATER LINES SHALL BE DISINFECTED USING THE PROCEDURES DESCRIBED IN THE LATEST EDITION OF AWWA C651 SPECIFICATIONS FOR DISINFECTION OF WATER LINES (WITH THE EXCEPTION OF THE TABLE METHOD). WATER ENTERING THE NEW MAIN SHALL RECEIVE A DOSE OF CHLORINE FED AT A CONSTANT RATE SUCH THAT THE WATER WHAT THE WATER WILL HAVE NOT LESS THAN 25 MG/L FREE CHLORINE. CHLORINE APPLICATION SHALL NOT CEASE UNTIL THE ENTIRE MAIN IS FILLED WITH HEAVILY CHLORINATED WATER.
5. DISINFECTED WATER SHALL REMAIN IN THE NEWLY INSTALLED WATER LINE FOR A MINIMUM OF 24 HOURS. AFTER THIS RETENTION PERIOD, THE HEAVILY CHLORINATED WATER SHALL BE FLUSHED FROM THE MAIN UNTIL CHLORINE MEASUREMENTS SHOW A CONCENTRATION IN THE WATER LEAVING THE MAIN HAS NO HIGHER THAN THAT GENERALLY PREVAILING IN THE SYSTEM. AT SUCH TIME, BACTERIOLOGICAL SAMPLING FOR SUBMITTAL TO STATE HEALTH LABORATORIES SHALL BE PERFORMED BY THE CONTRACTOR.
6. WATER SAMPLES SHALL BE TESTED FOR TOTAL COLIFORM, TPC (HETEROTROPHIC PLATE COUNT), TURBIDITY & COLOR.
7. CONTRACTOR WILL CONTINUE FLUSHING AND DISINFECTION OPERATION UNTIL ACCEPTABLE BACTERIOLOGICAL RESULTS ARE OBTAINED. TWO (2) SUCCESSIVE SAMPLES ARE TO BE TAKEN AT TWENTY-FOUR (24) HOUR INTERVALS.
8. THE ENVIRONMENT INTO WHICH THE HEAVILY CHLORINATED WATER IS TO BE DISCHARGED SHALL BE INSPECTED, AND IF THERE IS ANY LIKELIHOOD THAT THE CHLORINATED DISCHARGE WILL CAUSE DAMAGE, THEN A REDUCING AGENT SHALL BE APPLIED TO THE WATER TO BE WASTED TO THOROUGHLY NEUTRALIZE THE CHLORINE RESIDUAL IN THE WATER. PERMITS MAY BE REQUIRED. THE CITY ENGINEER SHALL BE NOTIFIED PRIOR TO DISPOSAL OF HIGHLY CHLORINATED WATER.



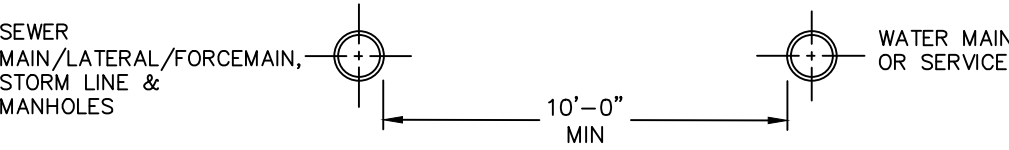
NOTES:

1. THE GATE VALVE SHALL BE LOCATED THIRTY SIX (36) INCHES FROM THE HYDRANT CENTER LINE.
2. 1/2" STEEL TIE RODS TO BE PROVIDED BETWEEN THE GATE VALVE AND THE HYDRANT.

HYDRANT DETAIL
NOT TO SCALE



VERTICAL SEPARATION

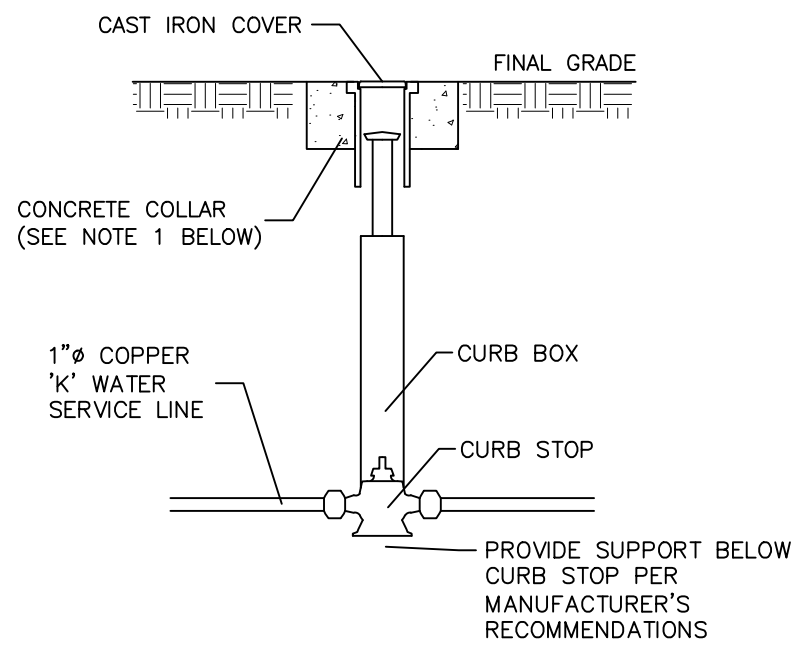


HORIZONTAL SEPARATION

NOTE:

1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE DUTCHESS COUNTY DEPARTMENT OF HEALTH AND THE CITY OF BEACON. CONCRETE ENCASEMENT OF WATERLINE OR OFFSETTING OF WATERLINE SHALL BE REQUIRED WHERE SEPARATION DISTANCES CANNOT BE MAINTAINED.

WATER LINE SEPARATION DETAIL
NOT TO SCALE



NOTES:

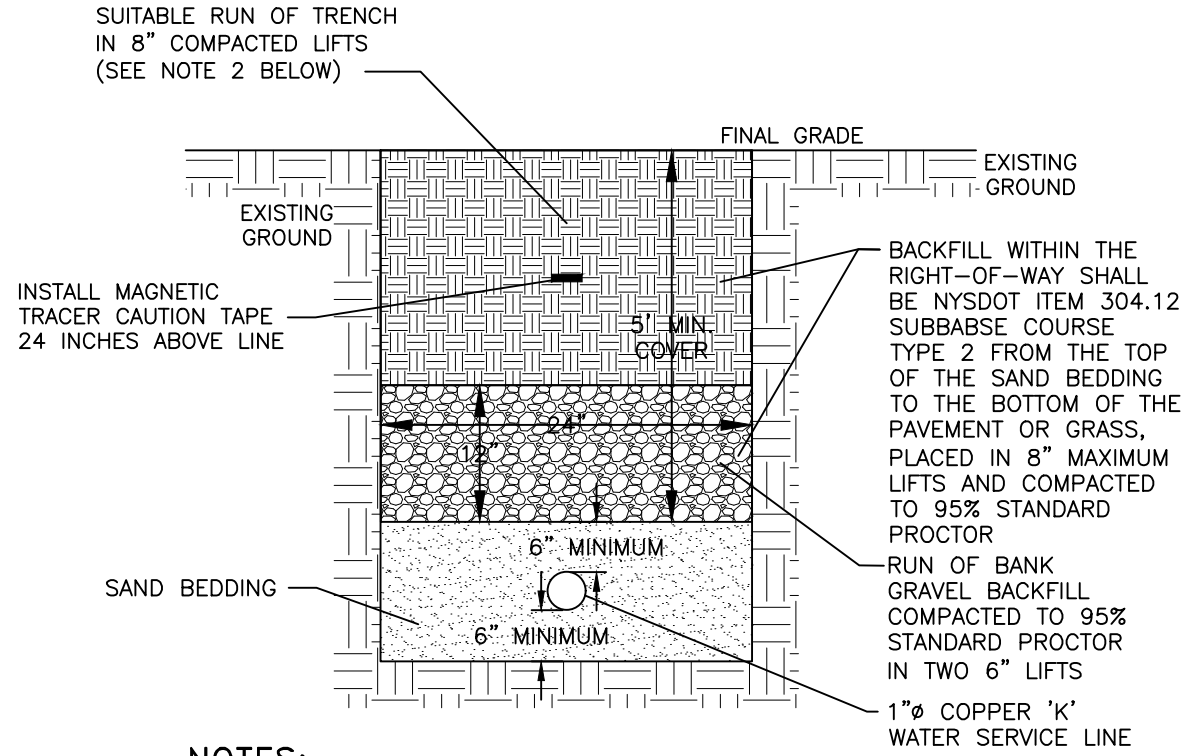
1. CONCRETE COLLAR TO BE PROVIDED IN AREAS THAT ARE NOT PAVED. THE COLLAR SHALL BE 6" FROM THE COVER AND SHALL EXTEND 6" BELOW FINAL GRADE.
2. CURB STOP TO BE COMPRESSION TYPE BY MUELLER.
3. AREA AROUND CURB BOX TO BE BACKFILLED WITH GRAVELLY MATERIAL.

WATER SHUT-OFF VALVE DETAIL
NOT TO SCALE

OWNER'S CONSENT:

THE UNDERSIGNED OWNER OF THE PROPERTY HEREON STATES THAT HE IS FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENTS TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON AND TO THE FILING OF THE PLAN IN THE OFFICE OF THE CLERK OF THE COUNTY OF DUTCHESS.

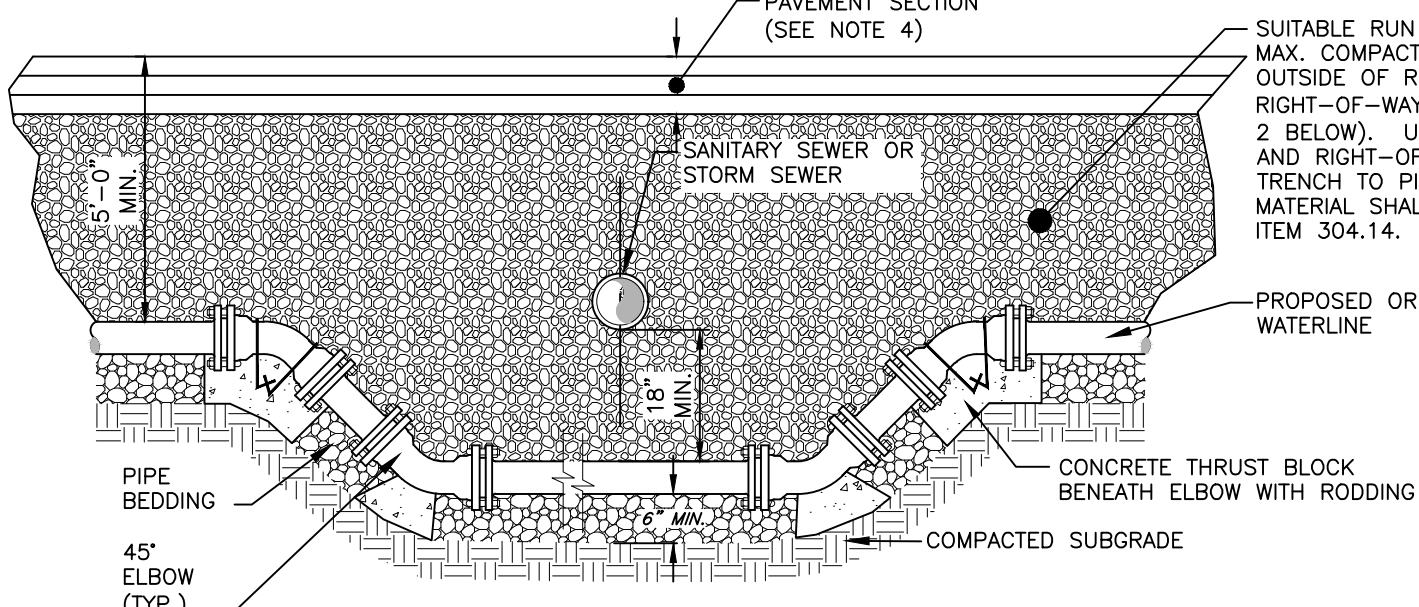
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NOTES:

1. EXCAVATION AND TRENCHING SHALL MEET ALL OSHA REQUIREMENTS.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.
3. WATER METER TO BE INSTALLED AS DIRECTED BY THE CITY OF BEACON WATER DEPARTMENT.

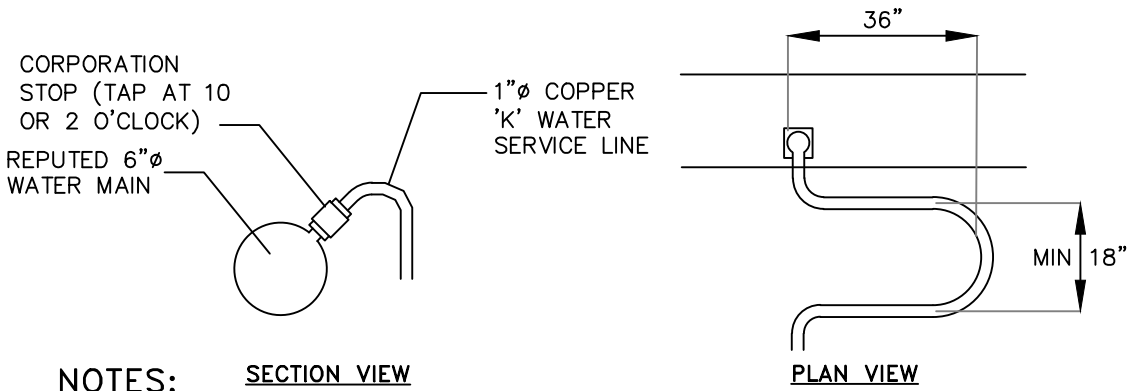
WATER SERVICE LINE TRENCH DETAIL
NOT TO SCALE



NOTES:

1. WHEN THE ELEVATION OF THE SANITARY OR STORM SEWER CAN NOT BE VARIED TO MEET THE ABOVE REQUIREMENTS, THE WATER SERVICE LINE OR MAIN SHALL BE RELOCATED TO PROVIDE THIS REQUIRED SEPARATION OR RECONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATERMAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR AWAY FROM THE SEWER AS POSSIBLE.
2. SUITABLE RUN OF TRENCH SHALL NOT INCLUDE FROZEN MATERIALS, DEBRIS, ORGANIC MATERIALS, ENLARGED PARTICLES, LARGE STONES OR OTHER UNSUITABLE MATERIALS. IF THE RUN OF TRENCH MATERIAL IS FOUND TO BE UNSUITABLE, A SUITABLE BACKFILL MATERIAL SHALL BE IMPORTED AND USED.
3. THE RELOCATED WATER MAIN/SERVICE LINE SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA, NYSDOH AND DCDOH STANDARDS.
4. PAVEMENT RESTORATION SHALL BE IN ACCORDANCE WITH THE PAVEMENT RESTORATION DETAIL.
5. ALL REPLACED WATERMAIN SHALL BE 12" CLASS 52 DUCTILE IRON.

WATER LINE OFFSET DETAIL
NOT TO SCALE



NOTES:

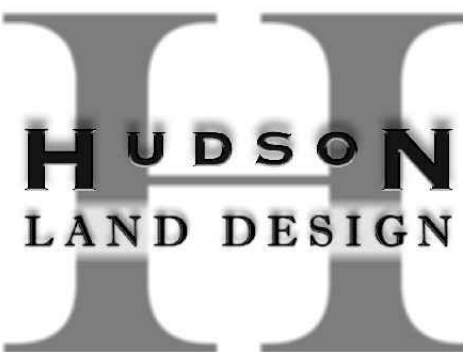
1. A MINIMUM 5' COVER SHALL BE PROVIDED ON THE WATER SERVICE LINE (CONDITIONED ON ACTUAL WATER MAIN DEPTH).
2. CORPORATION STOP TO BE COMPRESSION TYPE BY MUELLER.
3. WATER SERVICE LINE TO BE GOOSE NECKED DOWN FOLLOWING CORPORATION STOP, AND CURVED BACK AND FORTH THROUGH THE TRENCH LINE FOR A SHORT DISTANCE.
4. CORPORATION STOP TO BE INSTALLED IN THE UPPER HALF OF THE WATER MAIN AT THE POSITION OF 10 OR 2 O'CLOCK.

WATER SERVICE CONNECTION DETAIL
NOT TO SCALE

DRAWN BY: AG		CHECKED BY: DGK		JOB NO.: 2008-019	
REVISIONS:					
NO.	DATE	DESCRIPTION			BY

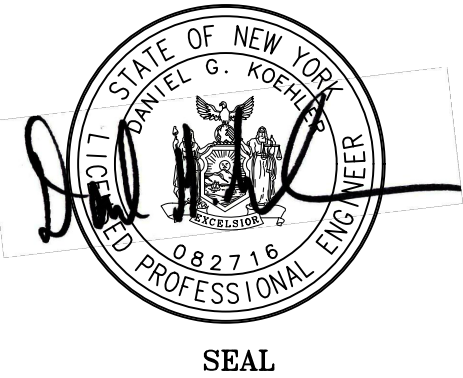
WATER DETAILS
JUDSON ST SUBDIVISION

JUDSON STREET & HOWLAND AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX PARCELS: 6054-17-265505; 6054-14-260488 & 250484
SCALE: AS SHOWN
APRIL 25, 2017



HUDSON LAND DESIGN
PROFESSIONAL ENGINEERING P.C.

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SEAL

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SHEET: 4 OF 6