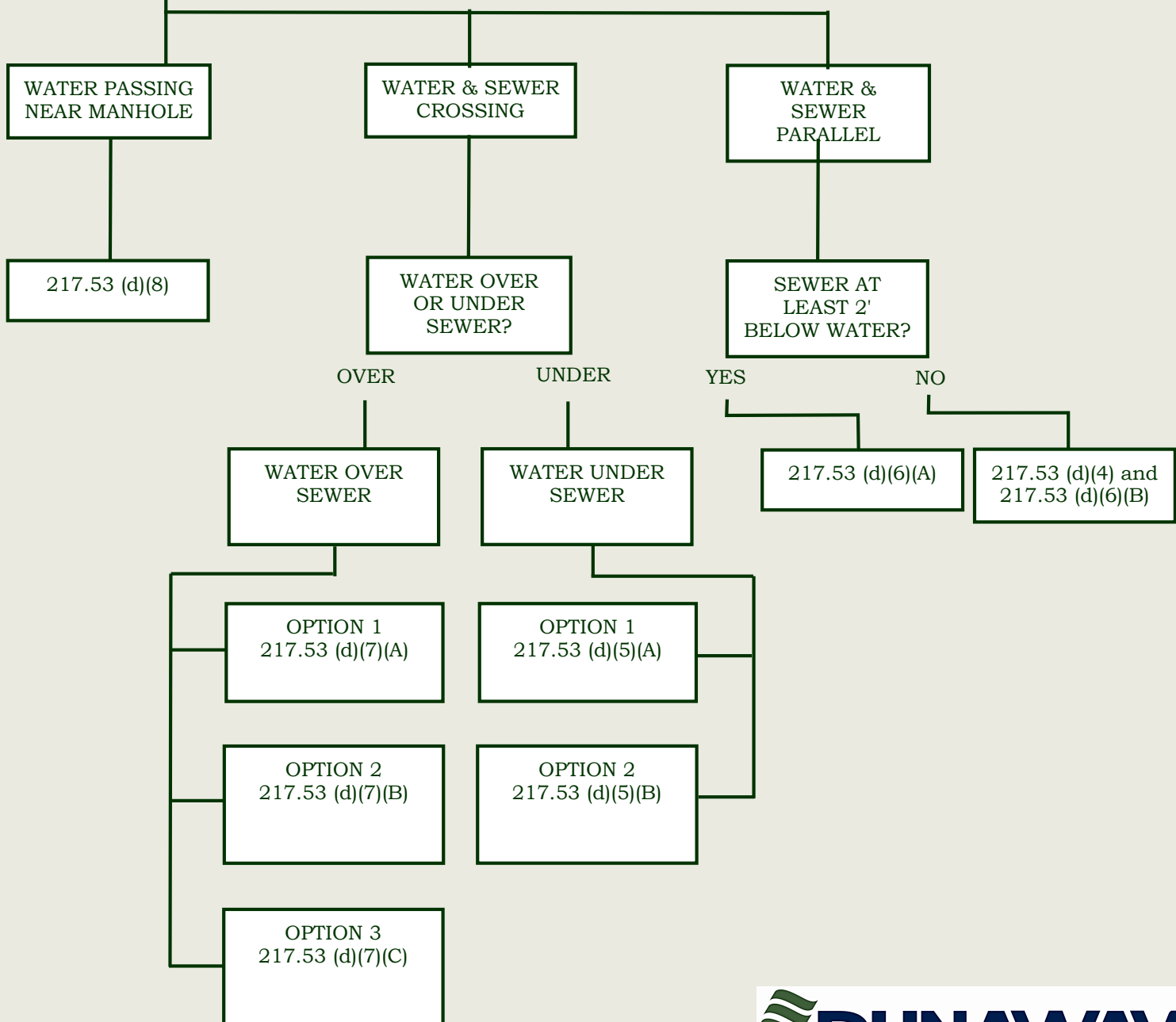
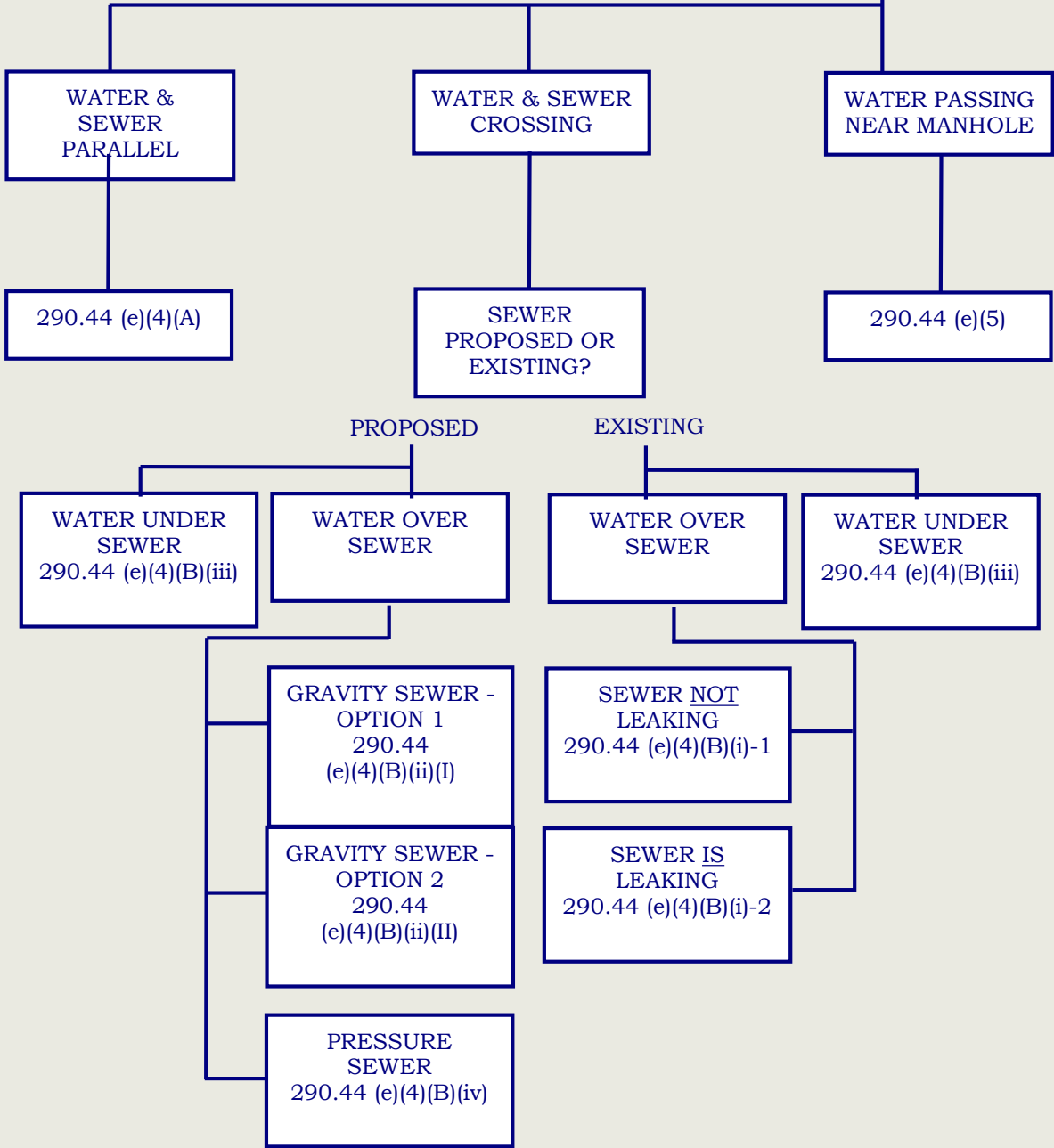


# TCEQ WATER/WASTEWATER SEPARATION REQUIREMENTS EXCEPTIONS FLOW CHART

WATER PROPOSED OR EXISTING?

PROPOSED (CHAPTER 290)

EXISTING (CHAPTER 217)



**NEW SEWER PARALLEL TO EX WATER <9' SEPARATION - NOT 2' UNDER WATER**  
217.53 (d)(4) and 217.53 (d)(6)(B)



**APPLIES IF NEW SEWER IS:**

- <9' from Ex Water, and
- Above or less than 2' below Ex Water

**CASING PIPE:**

- 150 PSI MIN
- MIN 2 NOMINAL DIA > SEWER PIPE
- SEAL BOTH ENDS - CEMENT GROUT, OR MANUFACTURED SEAL
- SPACERS - MAX 5' INTERVALS

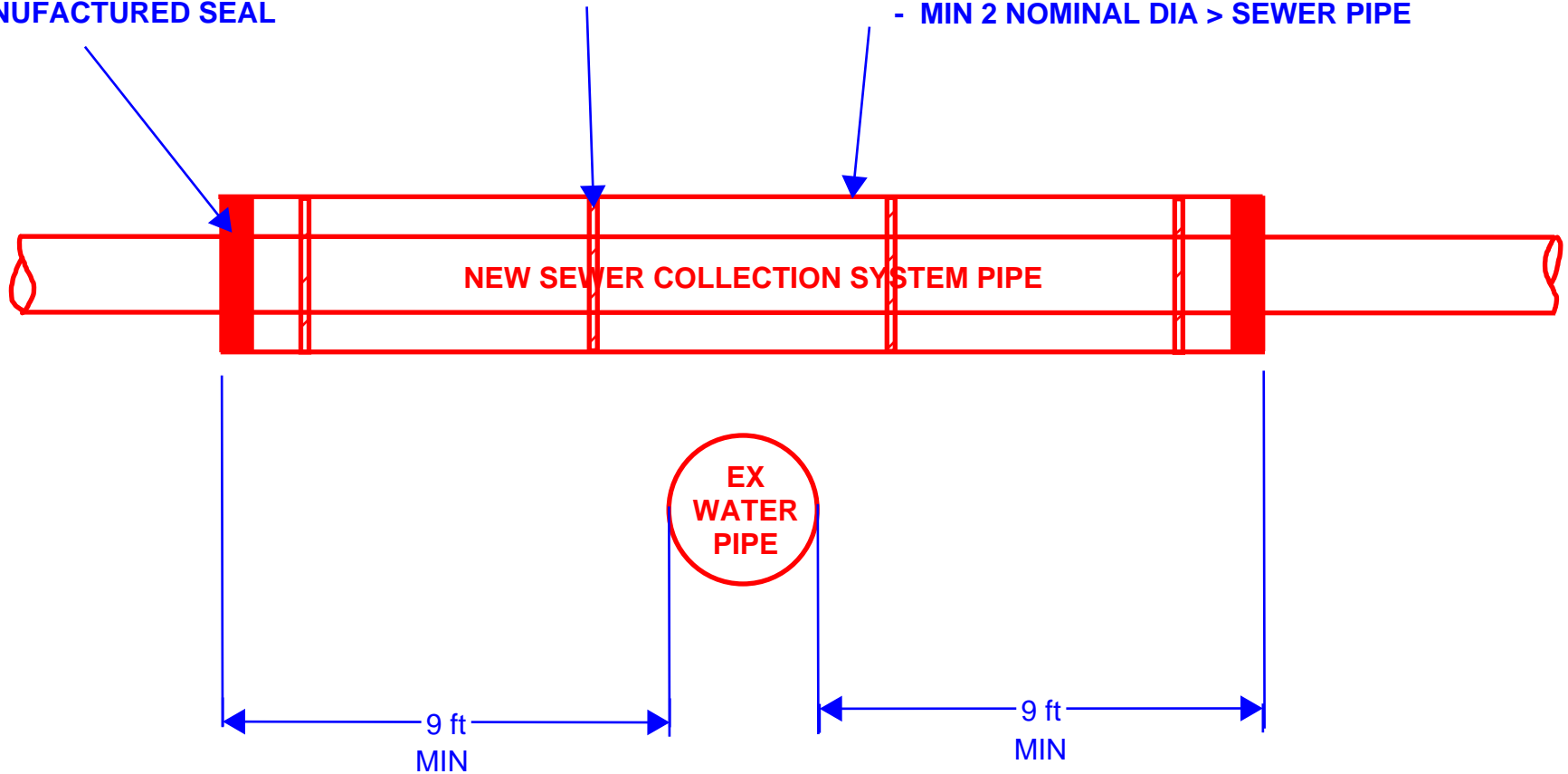
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**NEW SEWER CROSSING OVER EX WATER <9' SEPARATION - CASING PIPE OPTION**  
**217.53 (d)(5)(A)**

**SEAL BOTH ENDS:**  
- CEMENT GROUT, OR  
- MANUFACTURED SEAL

**SPACERS:**  
- MAX 5' INTERVALS

**CASING PIPE:**  
- 150 PSI MIN  
- MIN 2 NOMINAL DIA > SEWER PIPE

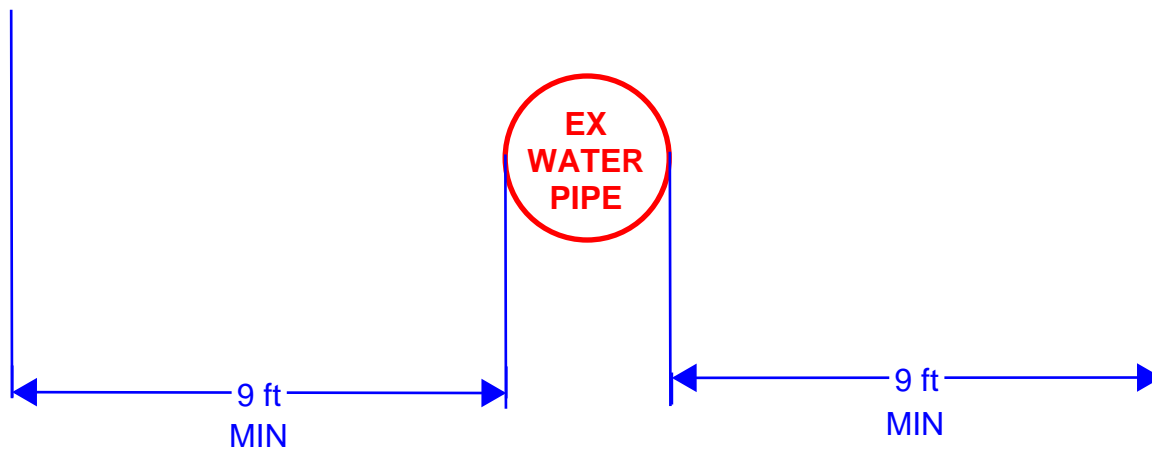


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**NEW SEWER CROSSING OVER EX WATER <9' SEPARATION - PRESSURE PIPE OPTION**  
**217.53 (d)(5)(B)**

**MANUFACTURER APPROVED ADAPTERS:**  
**- BOTH ENDS**

- 150 PRESSURE CLASS PIPE SEGMENT:**
- Typically, ASTM D2241, DR-26 (160 psi); or
  - AWWA C900 or C905, DR-25 (165 psi)
  - **DO NOT SPECIFY ASTM 3034 OR ASTM F679 SDR-26**
  - CORROSION RESISTANT, NON BRITTLE
  - JOINTS SEAL AT ATMOSPHERIC PRESSURE

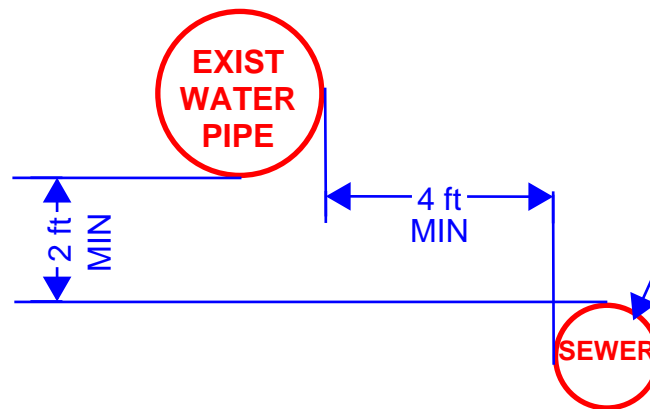


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**NEW SEWER PARALLEL TO EX WATER <9' SEPARATION - AT LEAST 2' UNDER WATER**  
217.53 (d)(6)(A)



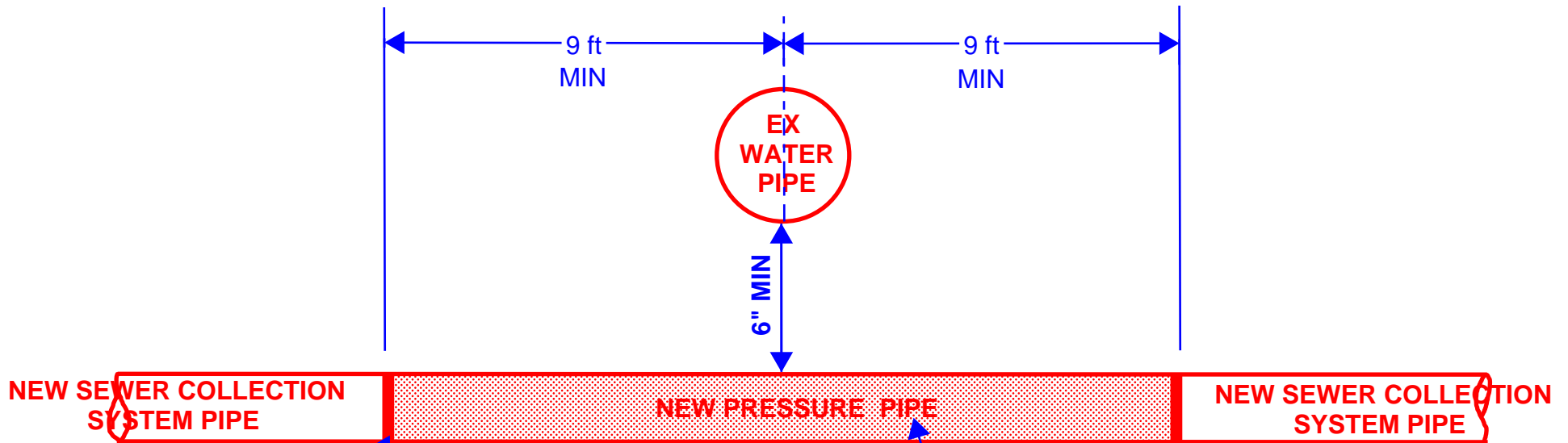
**APPLIES IF NEW OR EX SEWER IS:**  
- <9' from Ex Water



**150 PRESSURE CLASS PIPE:**  
- Typically, ASTM D2241, DR-26 (160 psi); or  
- AWWA C900 or C905, DR-25 (165 psi)  
- **DO NOT SPECIFY ASTM 3034 OR  
ASTM F679 SDR-26**  
- **CORROSION RESISTANT, NON BRITTLE**  
- **JOINTS SEAL AT ATMOSPHERIC PRESSURE**

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**NEW SEWER CROSSING UNDER EX WATER <9' SEPARATION - PRESSURE PIPE OPTION**  
**217.53 (d)(7)(A)**

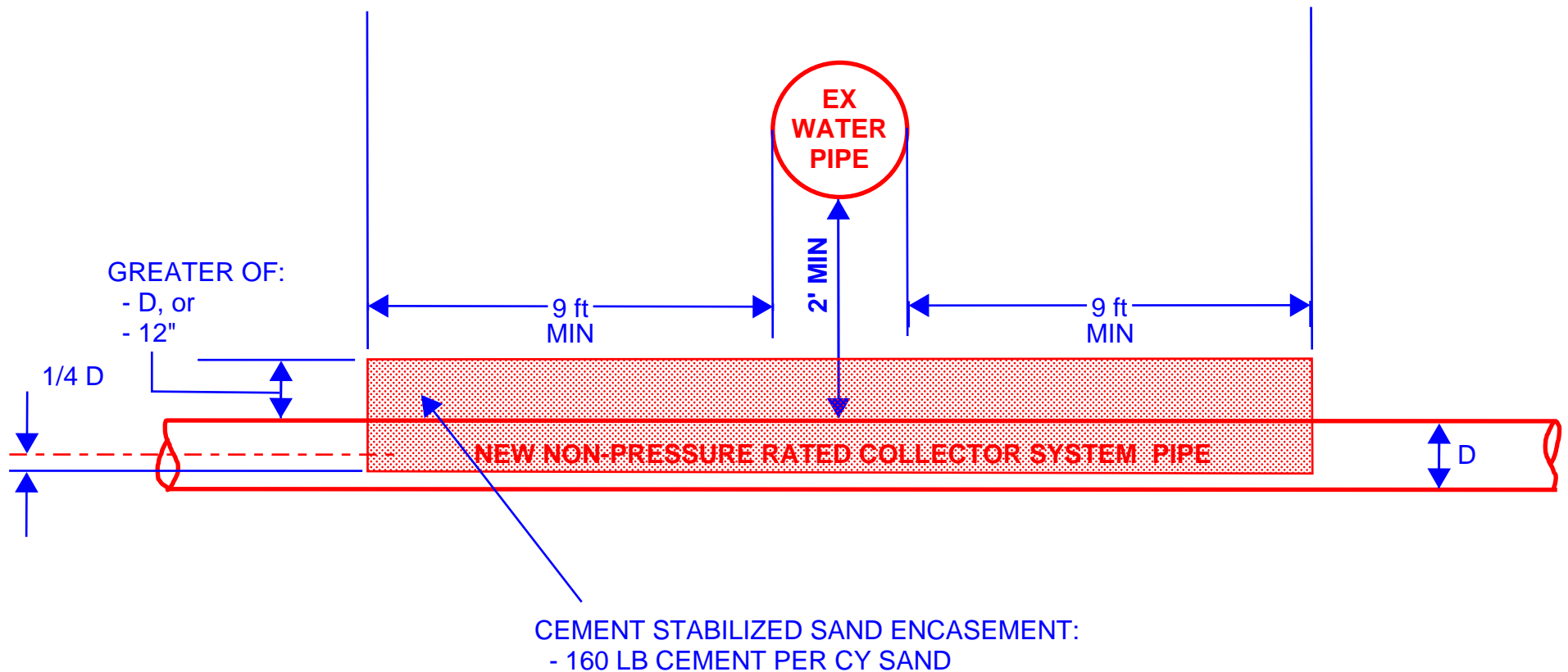


- MANUFACTURER APPROVED ADAPTERS:**
- BOTH ENDS
  - JTS SEAL AT ATMOSPHERIC PRESSURE

- 150 PRESSURE CLASS PIPE SEGMENT:**
- CENTERED ON WATER PIPE
  - Typically, ASTM D2241, DR-26 (160 psi); or
  - AWWA C900 or C905, DR-25 (165 psi)
  - **DO NOT SPECIFY ASTM 3034 OR ASTM F679 SDR-26**
  - CORROSION RESISTANT, NON BRITTLE
  - JOINTS SEAL AT ATMOSPHERIC PRESSURE

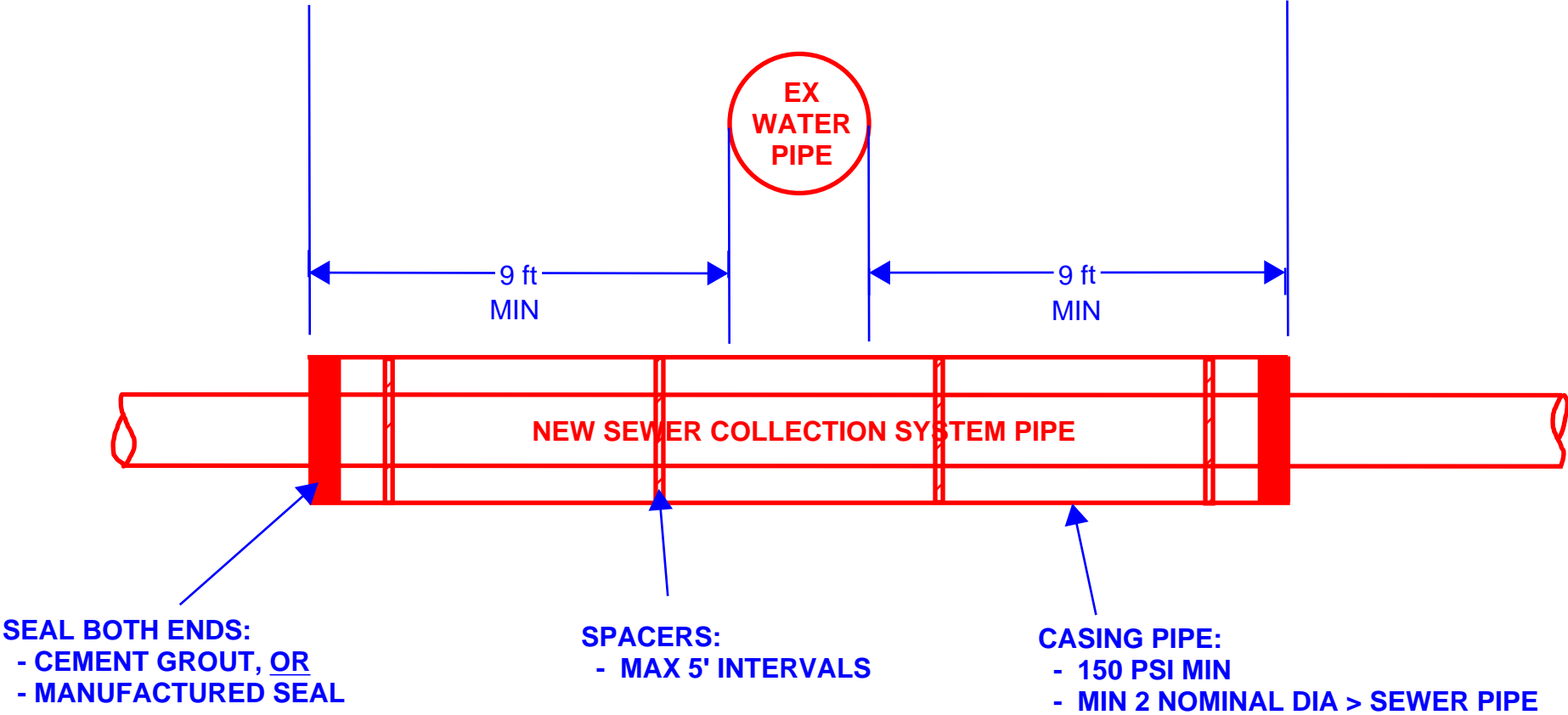
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**NEW SEWER CROSSING UNDER EX WATER <9' SEPARATION - NON-PRESSURE PIPE OPTION**  
**217.53 (d)(7)(B)**



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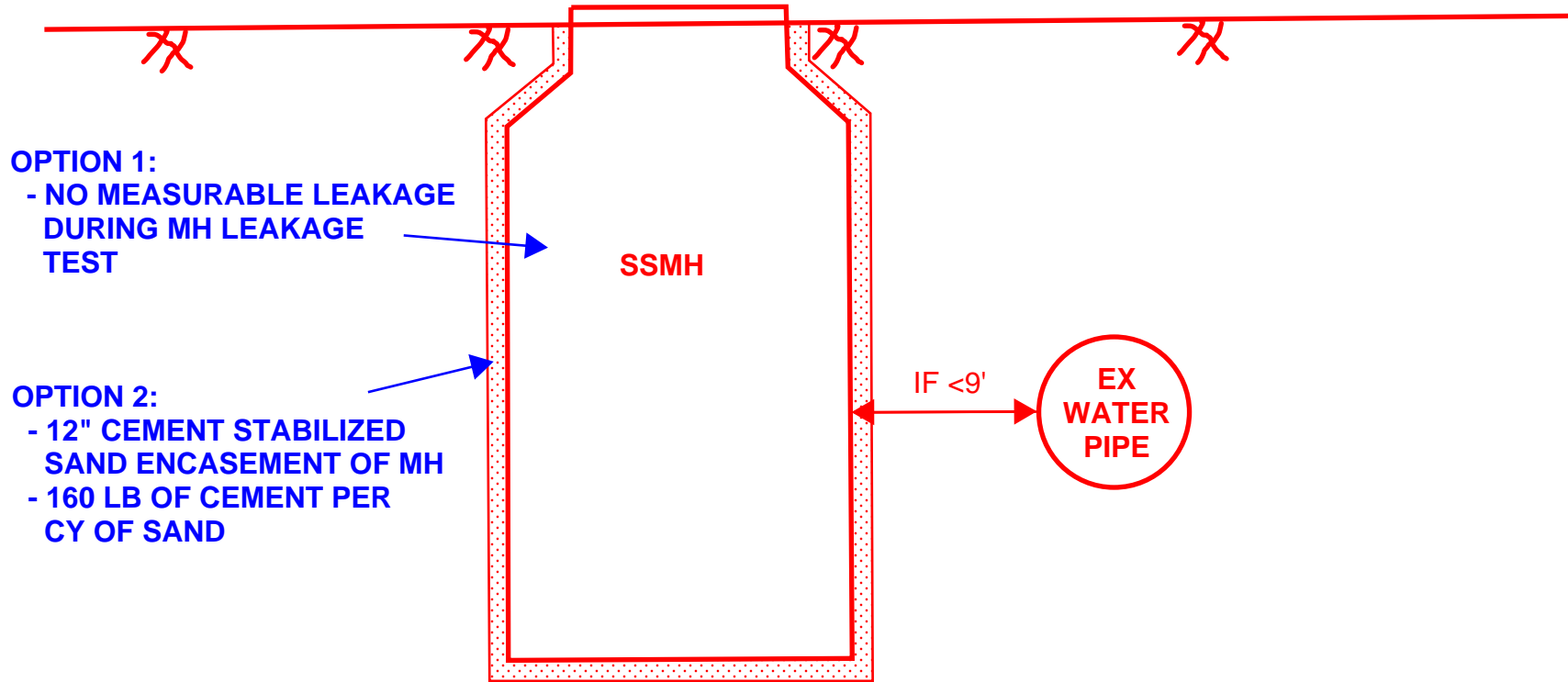
**NEW SEWER CROSSING UNDER EX WATER <9' SEPARATION - CASING PIPE OPTION**  
**217.53 (d)(7)(C)**



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NEW SEWER MH - EX WATER <9' SEPARATION  
217.53 (d)(8)

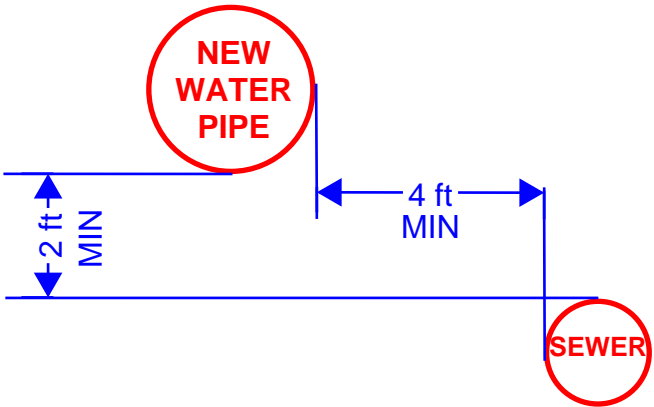


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**NEW WATER PARALLEL TO EX OR NEW SEWER <9' SEPARATION**  
**290.44 (e)(4)(A)**



**APPLIES IF NEW OR EX SEWER IS:**  
**- <9' from Ex Water**

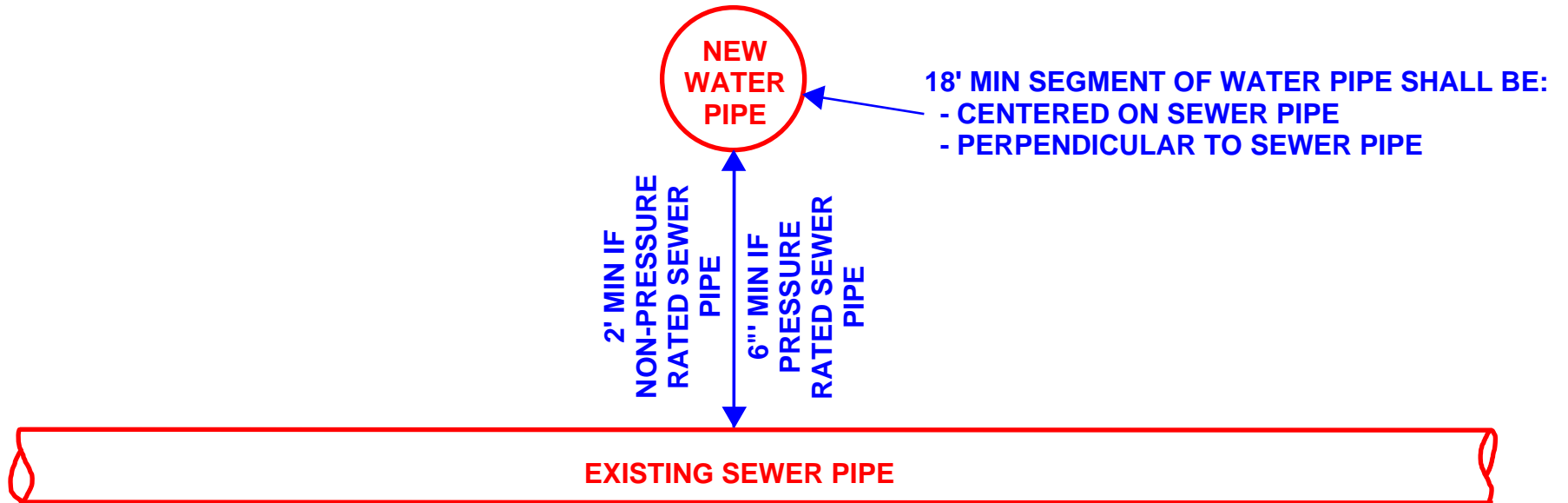


- 1. IF EX SEWER (GRAVITY OR FORCE) IS NOT LEAKING, EX SEWER CAN REMAIN. INSTALL NEW WATER AT SEPARATIONS SHOWN.**
- 2. IF EX SEWER (GRAVITY OR FORCE) IS LEAKING, REPLACE SEWER WITH 150 PSI PRESSURE RATED PIPE. INSTALL NEW WATER AT SEPARATIONS SHOWN.**
- 3. IF INSTALLING NEW SEWER (GRAVITY OR FORCE), IT SHALL BE 150 PSI PRESSURE RATED PIPE. INSTALL NEW WATER AT SEPARATIONS SHOWN.**

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**NEW WATER CROSSING OVER EX SEWER <9' SEPARATION - SEWER NOT LEAKING**  
290.44 (e)(4)(B)(i)-1

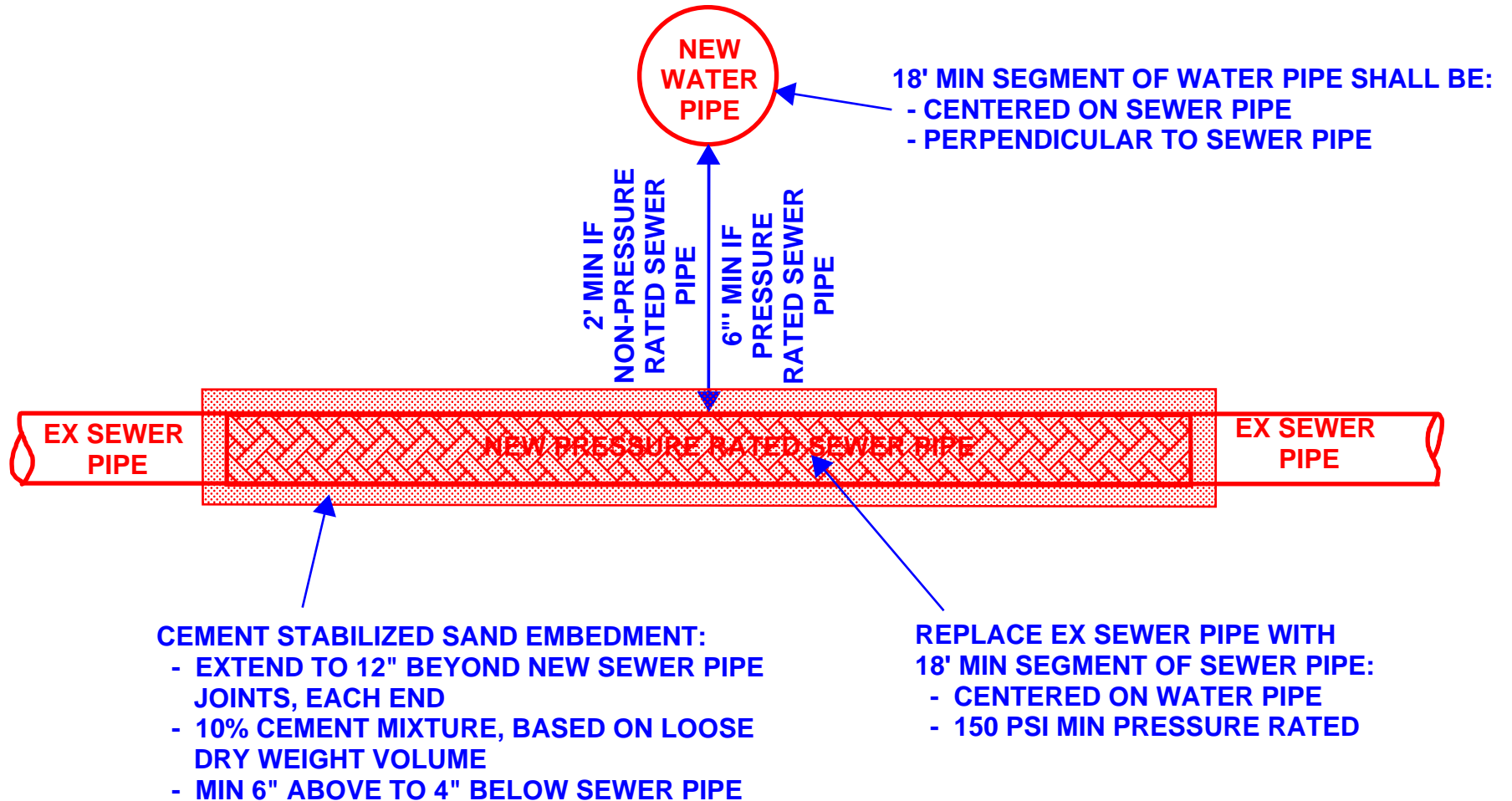
**APPLIES IF EX SEWER IS NOT LEAKING**



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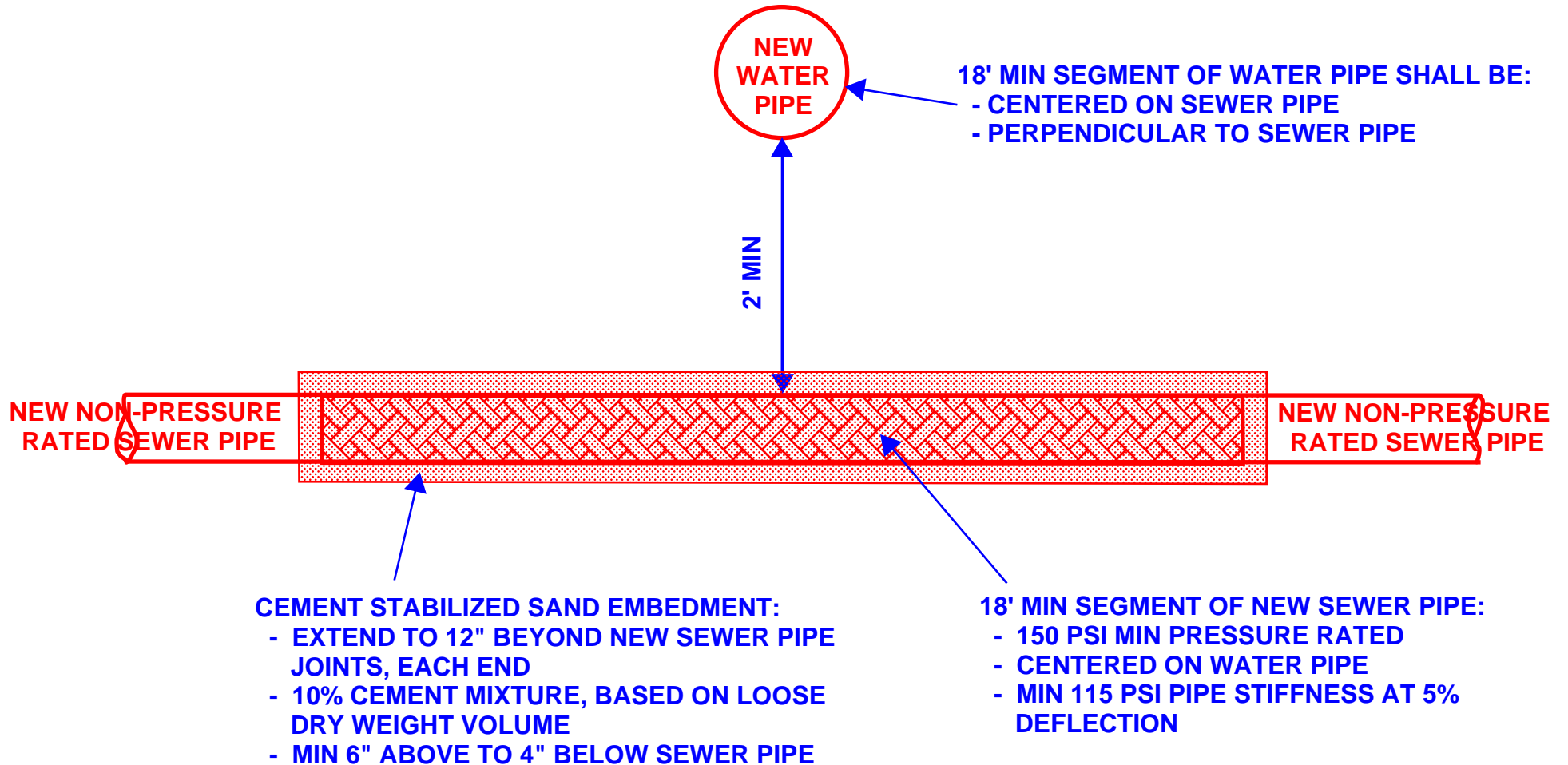
**NEW WATER CROSSING OVER EX SEWER <9' SEPARATION - SEWER IS LEAKING**  
290.44 (e)(4)(B)(i)-2

**APPLIES IF EX SEWER IS LEAKING**



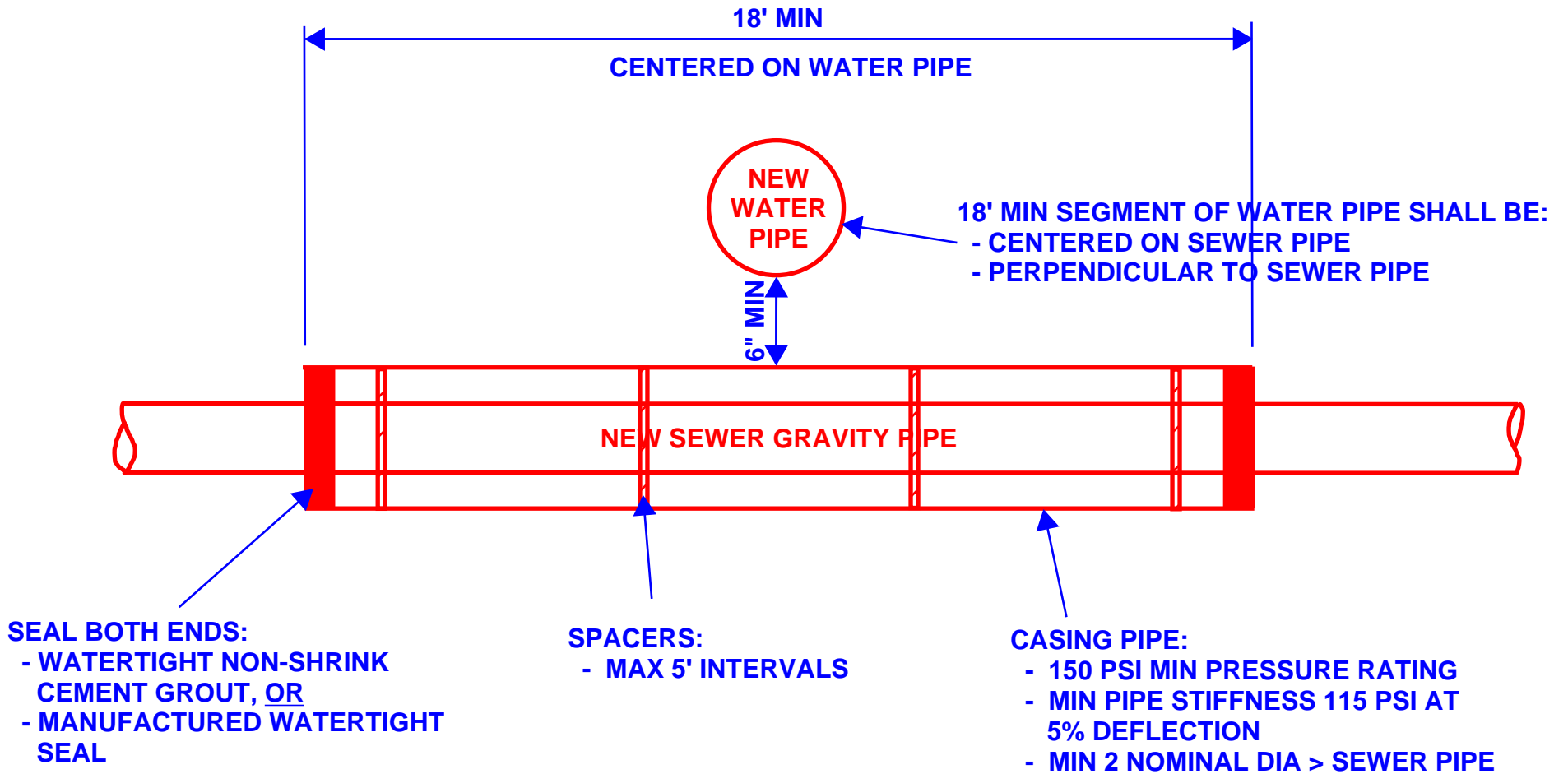
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**NEW WATER CROSSING OVER NEW NON-PRESSURE SEWER <9' SEPARATION - PRESSURE RATED PIPE OPTION**  
**290.44 (e)(4)(B)(ii)(I)**



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**NEW WATER CROSSING OVER NEW NON-PRESSURE SEWER <9' SEPARATION - CASING PIPE OPTION**  
**290.44 (e)(4)(B)(ii)(II)**

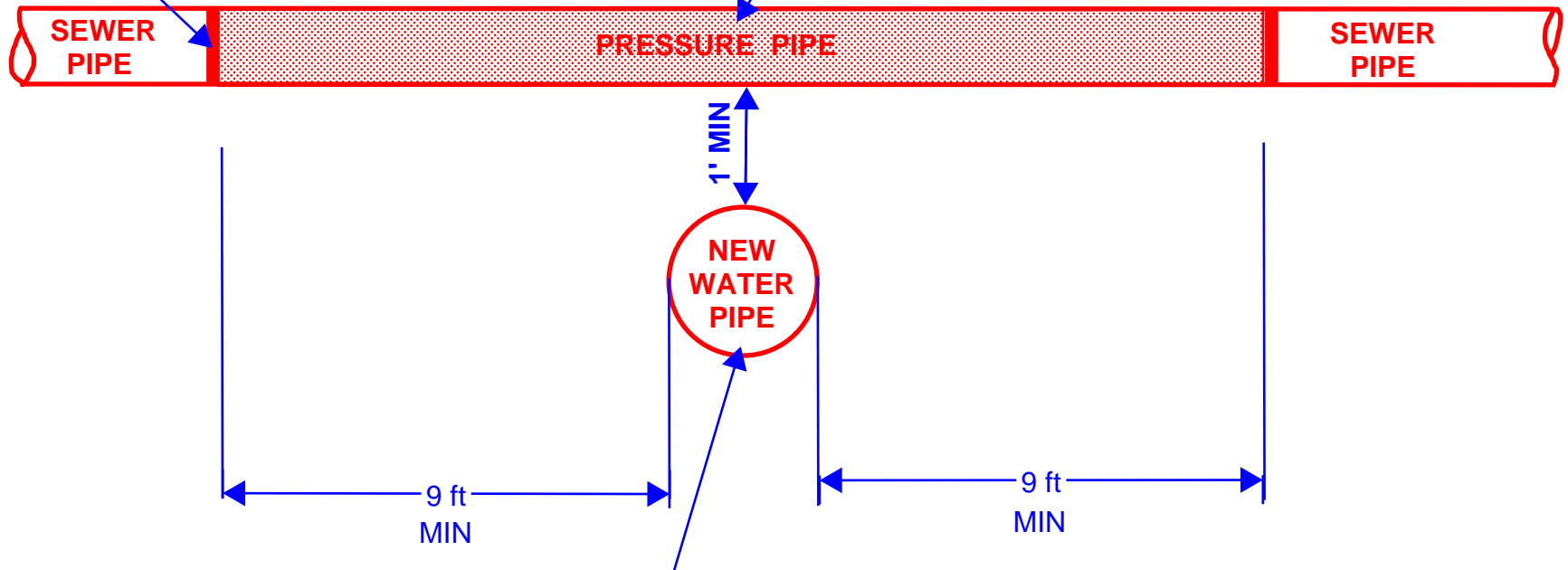


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**NEW WATER CROSSING UNDER EX OR NEW SEWER <9' SEPARATION**  
**290.44 (e)(4)(B)(iii)**

**MANUFACTURER APPROVED ADAPTERS:**  
**- BOTH ENDS**

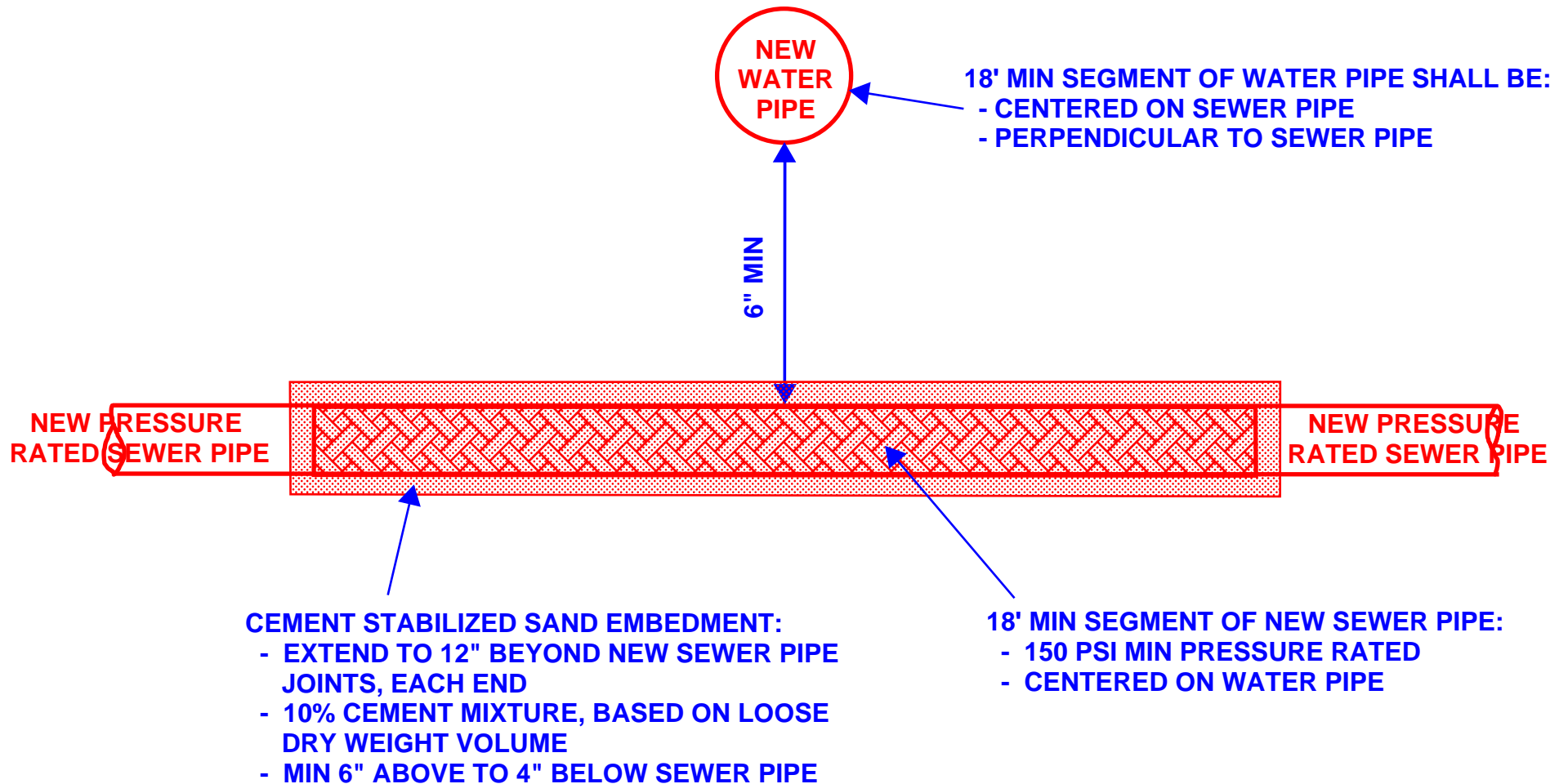
- 150 PRESSURE CLASS PIPE SEGMENT:**
- Typically, ASTM D2241, DR-26 (160 psi); or
  - AWWA C900 or C905, DR-25 (165 psi)
  - **DO NOT SPECIFY ASTM 3034 OR ASTM F679 SDR-26**
  - CORROSION RESISTANT, NON BRITTLE
  - JOINTS SEAL AT ATMOSPHERIC PRESSURE



- 18' MIN SEGMENT OF WATER PIPE SHALL BE:**
- CENTERED ON SEWER PIPE
  - PERPENDICULAR TO SEWER PIPE
  - EITHER OF THE FOLLOWING:
    - > CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS; OR
    - > ENCASED IN CEMENT STABILIZED SAND EMBEDMENT:
      - EXTEND TO 12" BEYOND NEW SEWER PIPE JOINTS, EACH END
      - 10% CEMENT MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME
      - MIN 6" ABOVE TO 4" BELOW SEWER PIPE

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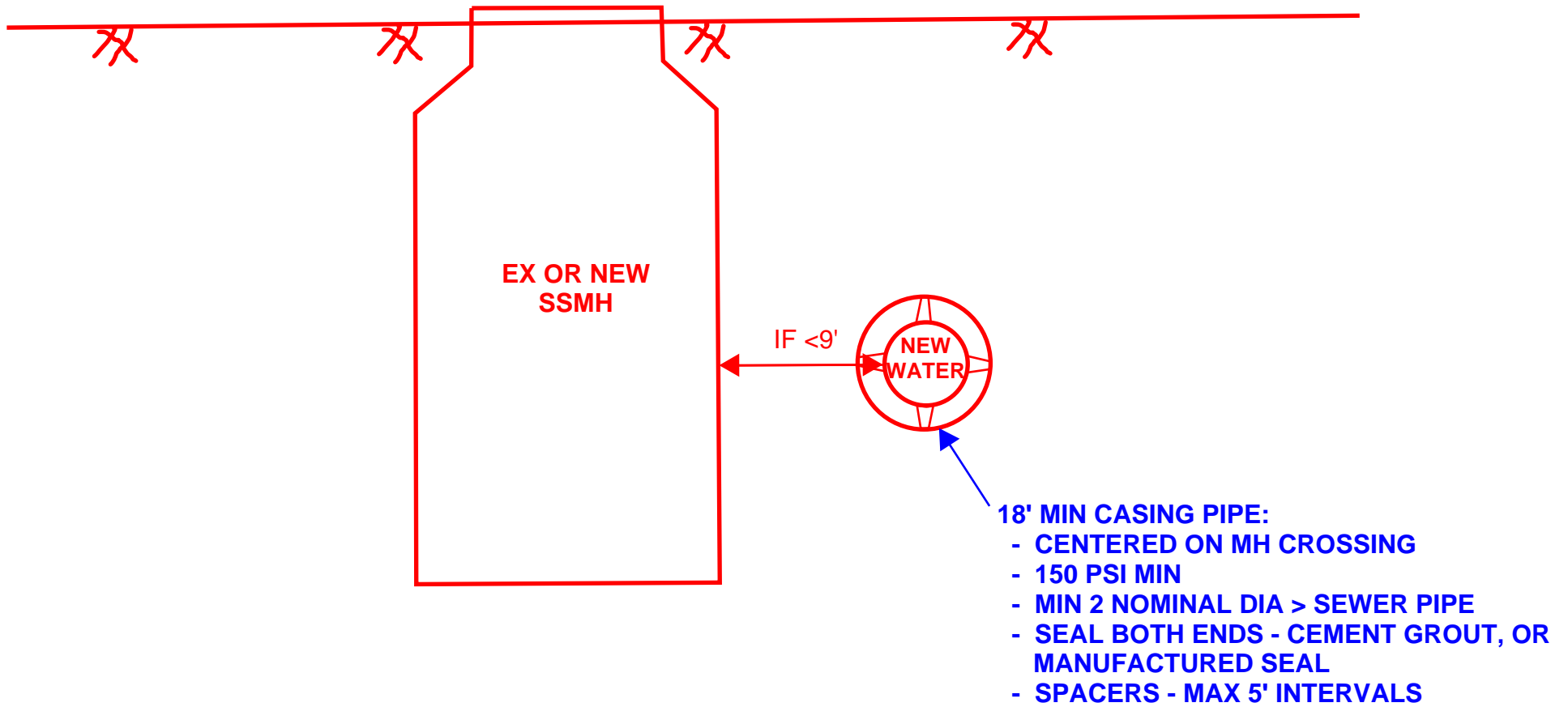
**NEW WATER CROSSING OVER NEW PRESSURE SEWER MAIN <9' SEPARATION**  
**290.44 (e)(4)(B)(iv)**



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**NEW WATER CROSSING EX OR NEW SEWER MH <9' SEPARATION**  
**290.44 (e)(5)**



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