

SPRINGFIELD WATER AND SEWER COMMISSION



STANDARD DETAILS

Version 4 – November 1, 2020

William E. Leonard, Commissioner
Vanessa Otero, Commissioner
Daniel Rodriguez, Commissioner

Springfield Water and Sewer Commission

Standard Detail Drawings

WATER DETAILS

1. (W-01.0) UTILITY SEPERATION DETAIL
2. (W-02.0) NON-PAVED AREA TRENCH DETAIL
3. (W-02.1) TRENCH BACKFILLING-METHOD 1 FOR LUDLOW ROADWAYS
4. (W-02.2) TRENCH BACKFILLING-METHOD 2 FOR LUDLOW ROADWAYS
5. (W-02.3) TRENCH BACKFILLING-METHOD FOR ARTERIAL STREETS IN SPRINGFIELD
6. (W-02.4) TRENCH BACKFILLING-METHOD FOR RESIDENTIAL STREETS IN SPRINGFIELD
7. (W-02.5) TEMPORARY TRENCH BACKFILLING METHOD FOR ALL STREETS IN SPRINGFIELD AND LUDLOW EXCEPT ARTERIAL STREETS IN SPRINGFIELD
8. (W-02.6) TEMPORARY TRENCH BACKFILLING METHOD FOR ARTERIAL STREETS IN SPRINGFIELD
9. (W-03.0) STANDARD AIR VALVE ASSEMBLY DETAIL
10. (W-03.1) AIR VALVE ONE PIECE ASSEMBLY DETAIL 1
11. (W-03.2) AIR VALVE ONE PIECE ASSEMBLY DETAIL 2
12. (W-04.0) END OF MAIN
13. (W-04.1) END OF MAIN DETAIL
14. (W-05.0) STANDARD TEE INSTALLATION
15. (W-05.1) ALTERNATE 1 TEE INSTALLATION
16. (W-06.0) REPAIR TO EXISTING WATER MAINS
17. (W-06.1) INSTALL VALVE OR FITTING AT A DEAD END OF A WATER MAIN



Springfield Water and Sewer Commission

Standard Detail Drawings

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| 18. | (W-06.2) | CUTTING-INTO EXISTING WATER MAIN TO REPLACE VALVE OR FITTING |
| 19. | (W-06.3) | CUTTING-INTO EXISTING WATER MAIN WITH BELL FACING VALVE |
| 20. | (W-06.4) | CUTTING-INTO EXISTING WATER MAIN WITH BELL FACING AWAY FROM VALVE |
| 21. | (W-06.5) | CUTTING-INTO EXISTING WATER MAIN WITH NO BELL FOUND |
| 22. | (W-06.6) | CONCRETE THRUST COLLAR |
| 23. | (W-06.7) | SOCKET CLAMP DETAIL |
| 24. | (W-06.8) | THREADED ROD DETAIL AND CONNECTION TO MJ DETAIL |
| 25. | (W-07.0) | STANDARD FIRE HYDRANT ASSEMBLY |
| 26. | (W-07.1) | ALTERNATE 1 FIRE HYDRANT ASSEMBLY |
| 27. | (W-07.2) | ALTERNATE 2 FIRE HYDRANT ASSEMBLY |
| 28. | (W-07.3) | RELOCATION OF FIRE HYDRANT ASSEMBLY (STRAIGHT BACK) |
| 29. | (W-08.0) | VALVE BOX |
| 30. | (W-08.1) | REPLACE, RAISE, OR RESET VALVE BOX |
| 31. | (W-08.2) | RAISE VALVE BOX WITH RISER |
| 32. | (W-09.0) | DUCTILE IRON TAPPING SLEEVE |
| 33. | (W-09.1) | STAINLESS STEEL TAPPING SLEEVE |
| 34. | (W-10.0) | FLUSHING DEVICE |
| 35. | (W-11.0) | NEW WATER SERVICE |
| 36. | (W-11.1) | REPLACEMENT WATER SERVICE |
| 37. | (W-11.2) | WATER METER SEALING DETAIL |
| 38. | (W-11.3) | PLASTIC METER PIT FOR 5/8" – 1" METERS |



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| 39. | (W-11.4) | PLASTIC METER PIT FOR 1-1/2" – 2" METERS |
| 40. | (W-11.5) | TYPICAL YARD HYDRANT |
| 41. | (W-12.0) | TYPICAL SERVICE BOX DETAIL IN PAVED AREAS |
| 42. | (W-12.1) | TYPICAL SERVICE BOX DETAIL IN NON-PAVED AREAS |
| 43. | (W-12.2) | REPLACE, RAISE, OR RESET SERVICE BOX DETAIL |
| 44. | (W-12.3) | RAISE SERVICE BOX WITH RISER DETAIL |
| 45. | (W-13.0) | METER VAULT PIPING |
| 46. | (W-13.1) | LARGE METER INSTALLATION |
| 47. | (W-13.2) | STANDARD METER PIT FOR DUCTILE IRON WATER SERVICE PIPE |
| 48. | (W-13.3) | OVERSIZE METER PIT FOR DUCTILE IRON WATER SERVICE PIPE |
| 49. | (W-13.4) | TYPICAL DUCTILE IRON WATER SERVICE DETAIL THROUGH FOUNDATION WALL |
| 50. | (W-13.5) | TYPICAL DUCTILE IRON WATER SERVICE DETAIL THROUGH CONCRETE FLOOR |
| 51. | (W-13.6) | 32 X 8-INCH FRAME ONLY |
| 52. | (W-13.7) | 32-INCH STANDARD WATER COVER |
| 53. | (W-13.8) | 24-INCH REPLACEMENT WATER COVER |
| 54. | (W-13.9) | 26-INCH REPLACEMENT WATER COVER |
| 55. | (W-13.10) | 32-INCH COMPOSITE LOCKING COVER |
| 56. | (W-13.11) | TYPICAL DUCTILE IRON FIRE SERVICE DETAIL THROUGH FOUNDATION WALL |
| 57. | (W-13.12) | TYPICAL DUCTILE IRON FIRE SERVICE DETAIL THROUGH CONCRETE FLOOR |
| 58. | (W-13.13) | TYPICAL DUCTILE IRON FIRE SERVICE DETAIL IN A HOT BOX |



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- 59. (W-13.14) TYPICAL DIP COMMERCIAL & INDUSTRIAL SERVICE DETAIL THROUGH FOUNDATION WALL
- 60. (W-13.15) TYPICAL DIP COMMERCIAL & INDUSTRIAL SERVICE DETAIL THROUGH CONCRETE FLOOR
- 61. (W-14.0) THRUST BLOCK BEHIND FITTING
- 62. (W-14.1) THRUST BLOCKS
- 63. (W-15.0) RELATION OF VERTICAL DATUMS TO SPRINGFIELD CITY BASE DETAIL
- 64. (W-16.0) RECORD SKETCH DETAIL
- 65. (W-16.1) WATER SERVICE CARD DETAIL
- 66. (W-17.0) SEASONAL WATER SERVICE DETAIL
- 67. (W-17.1) SEASONAL WATER SERVICE BASE DETAIL
- 68. (W-17.2) SEASONAL WATER SERVICE COVER DETAIL

SEWER DETAILS

- 69. (S-01.0) TRENCH DETAIL FOR SEWER PIPES
- 70. (S-02.0) PRECAST CONCRETE SEWER MANHOLE
- 71. (S-02.1) PRECAST CONCRETE SEWER PIPE CONNECTIONS
- 72. (S-02.2) END OF SEWER MAIN
- 73. (S-02.3) EXTERIOR DROP MANHOLE
- 74. (S-02.4) INTERIOR DROP MANHOLE
- 75. (S-02.51) 24-INCH X 4-INCH FRAME ONLY
- 76. (S-02.52) 24-INCH X 6-INCH FRAME ONLY
- 77. (S-02.53) 24-INCH X 8-INCH FRAME ONLY
- 78. (S-02.54) 26-INCH X 6-INCH FRAME ONLY
- 79. (S-02.55) 32-INCH X 6-INCH FRAME ONLY



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Standard Detail Drawings

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| 80. | (S-02.56) | 32-INCH X 8 INCH FRAME ONLY |
| 81. | (S-02.61) | 24-INCH STANDARD SEWER COVER |
| 82. | (S-02.62) | 32-INCH STANDARD SEWER COVER |
| 83. | (S-02.63) | 26-INCH REPLACEMENT SEWER COVER |
| 84. | (S-02.64) | 30-INCH REPLACEMENT SEWER COVER |
| 85. | (S-02.65) | 24-INCH COMPOSITE LOCKING COVER |
| 86. | (S-02.66) | 32-INCH COMPOSITE LOCKING COVER |
| 87. | (S-03.0) | UTILITY CROSSING DETAIL |
| 88. | (S-04.0) | EXISTING SEWER MAIN TO BUILDING CONNECTION |
| 89. | (S-04.1) | NEW SEWER MAIN TO BUILDING CONNECTION |
| 90. | (S-04.2) | CLEAN OUT WITH SWEEP |
| 91. | (S-04.3) | SEWER SERVICE CONNECTION WITH CHIMNEY GREATER THAN 12 FT DEEP |
| 92. | (S-04.4) | BUILDING CONNECTION TO SEWER MAIN WITH CONFLICTS |
| 93. | (S-05.0) | BUILDING AND MAINLINE SEWER REPAIR |
| 94. | (S-06.0) | WETWELL AND VALVE VAULT PRECAST |
| 95. | (S-08.0) | STANDARD EXTERNAL GREASE INTERCEPTOR |
| 96. | (S-09.1) | LOW PRESSURE SANITARY SERVICE/MAIN 2-1/2" VALVE BOX IN NON-PAVED AREAS |
| 97. | (S-09.2) | LOW PRESSURE SANITARY SEWER PIPE TRENCH DETAIL |
| 98. | (S-09.3) | LPSS SERVICE LATERAL DETAIL |
| 99. | (S-09.4) | LOW PRESSURE SANITARY SEWER MAIN INLINE FLUSHING STRUCTURE DETAIL |
| 100. | (S-09.5) | LOW PRESSURE SANITARY SEWER MAIN TERMINAL FLUSHING STRUCTURE DETAIL |



Springfield Water and Sewer Commission

Standard Detail Drawings

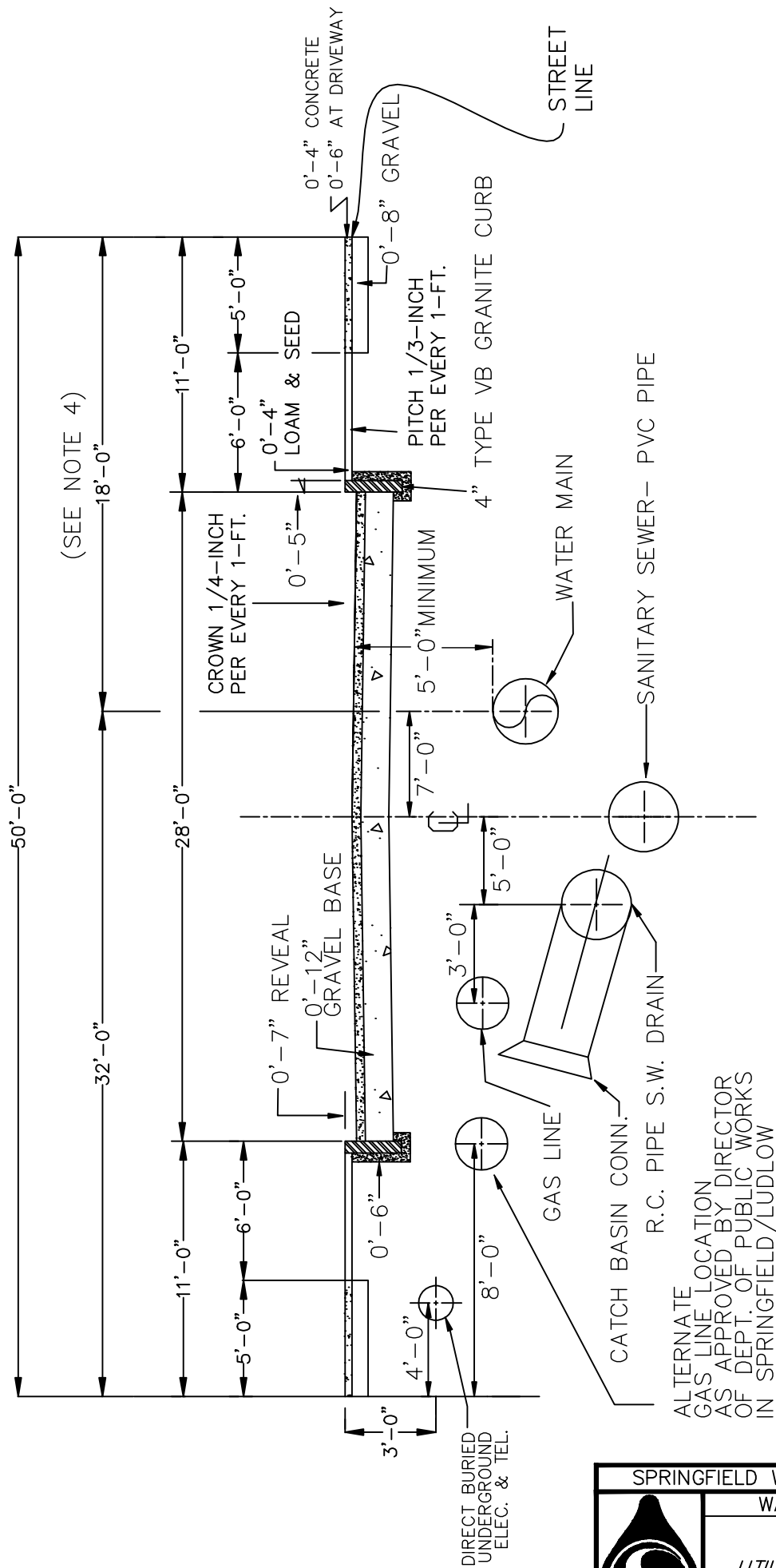
MAP DETAILS

- 101. (M-01.0) SPRINGFIELD WATER MAINS SERVICE AREA MAP
- 102. (M-02.0) LUDLOW WATER MAINS SERVICE AREA MAP
- 103. (M-03.0) WATER TRANSMISSION MAINS SERVICE AREA MAP COBBLE MOUNTAIN TO PROVIN MOUNTAIN
- 104. (M-03.1) WATER TRANSMISSION MAINS SERVICE AREA MAP PROVIN MOUNTAIN TO SPRINGFIELD
- 105. M-04.0) SPRINGFIELD SEWER MAINS SERVICE AREA MAP




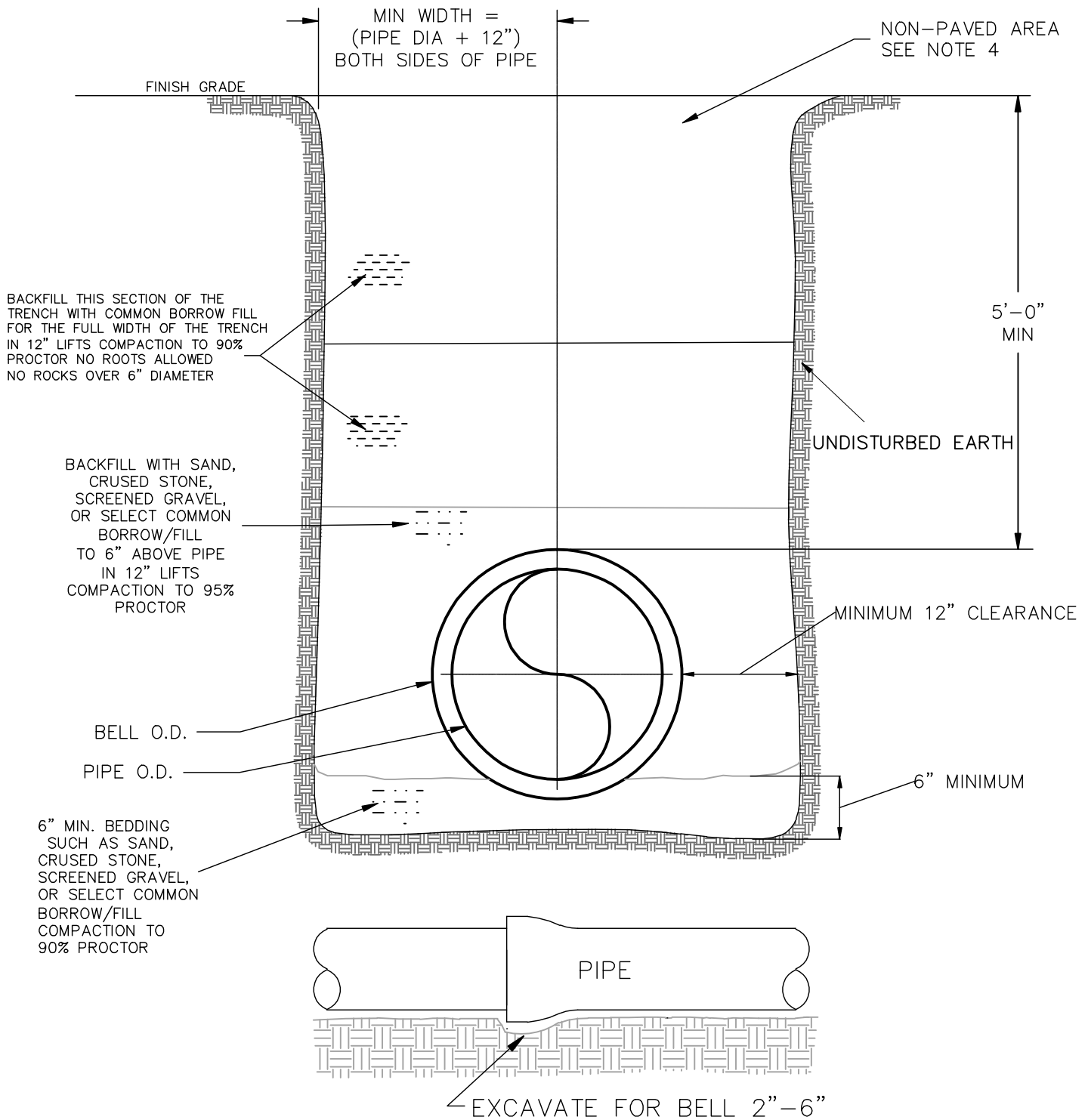
Springfield Water and Sewer Commission
Standard Detail Drawings





- NOTES:**
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
 2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
 3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
 4. ON 50-FOOT WIDE STREETS WATER MAINS SHALL BE INSTALLED 18-FOET FROM THE NORTH OR EAST STREET LINE, ALL OTHER WIDTHS REQUIRE ENGINEERING & TECHNICAL SERVICES APPROVAL.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-01.0	REV. DATE
	UTILITY SEPERATION DETAIL	4/1/08 MAB
SCALE: NTS		



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
5. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
6. FOR LOCATION OF WATER MAINS SEE DTAIL (W-01.0).

	EXISTING PAVEMENT		EXCAVATED AND REPLACED WITH BINDER COURSE
	STRUCTURAL GRAVEL		FLOWABLE FILL
	BEDDING SAND		COMMON BORROW
	MILLED AND REPLACED WITH TOP COURSE		TACK COAT
	UNDISTURBED EARTH		

SPRINGFIELD WATER AND SEWER COMMISSION

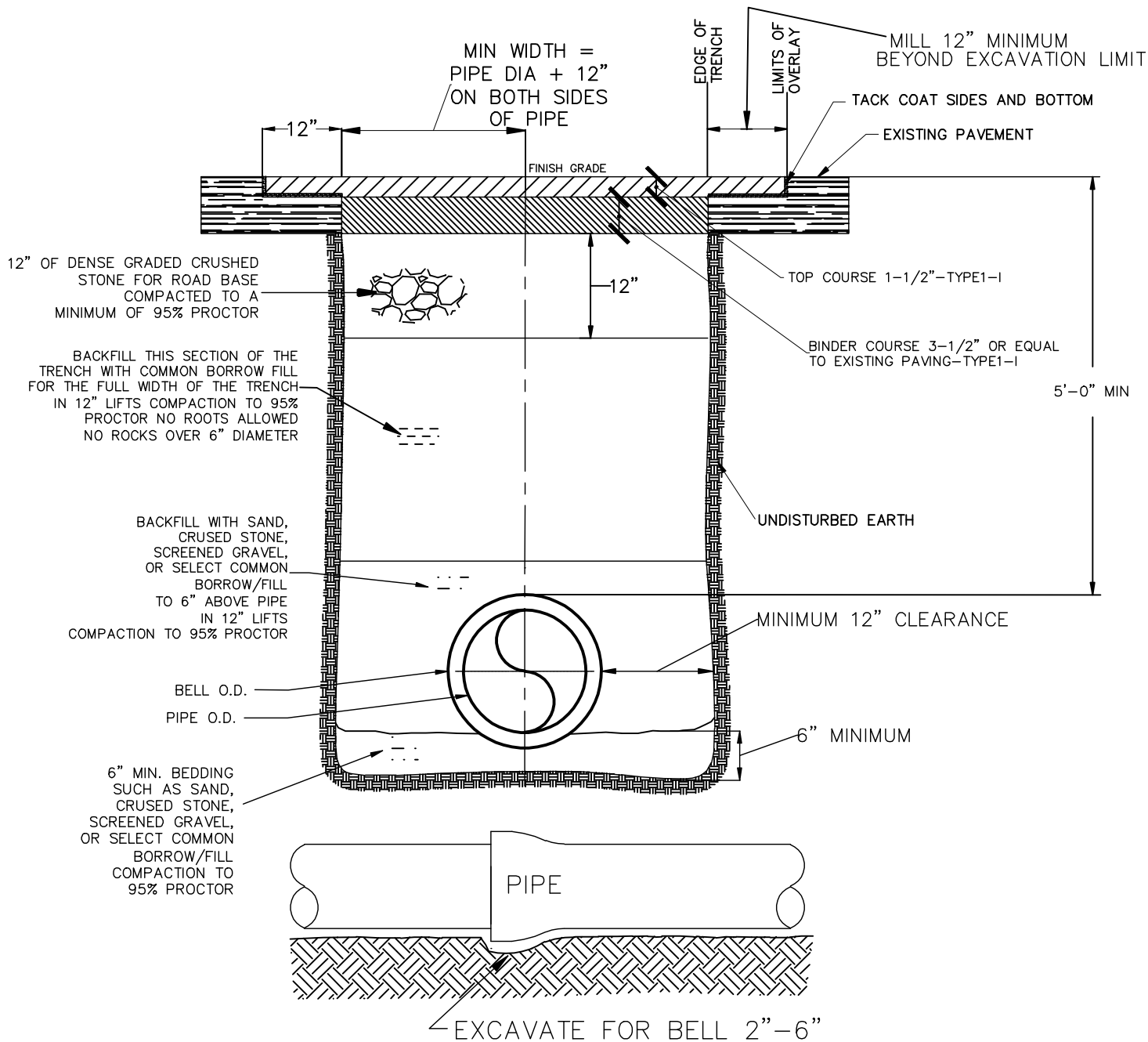


WATER DETAIL W-02.0

NON-PAVED AREA
TRENCH DETAIL

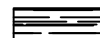
SCALE: NTS

REV. DATE
4/1/08 MAB



NOTES:

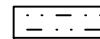
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- ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
- SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
- REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
- FOR LOCATION OF WATER MAINS SEE DETAIL (W-01.0).
- REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
- REPLACE WITH SAME DEPTH OF ASPHALT OR MINIMUM 5-INCHES.
- ALL MATERIALS USED TO MEET MASS. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- SAW CUT EDGE OF UTILITY PATCH IF NO MILLING IS REQUIRED.
- MILL TO REMOVE TOP COURSE.
- LEAVE 12-INCH MINIMUM LIP BETWEEN EDGE OF TOP AND EDGE OF BINDER COURSE.
- AFTER TRENCH WORK IS COMPLETED, FILL AROUND PIPE TO BOTTOM WITH GRADED GRAVEL FILL AND COMPACT IN 6-INCH LIFTS.
- REPLACE LAYERS OF BINDER AND DEEP BASE.
- TACK AREA OF MILLING 1 GALLON PER 25 SQUARE YARDS.
- REPLACE TOP COURSE.
- SEAL EDGES OF UTILITY PATCH WITH HOT POURED RUBERIZED ASPHALT SEALANT.



EXISTING PAVEMENT



DENSE GRADED
CRUSHED STONE



BEDDING SAND



MILLED AND
REPLACED WITH
TOP COURSE



EXCAVATED AND
REPLACED WITH
BINDER COURSE



COMMON BORROW



TACK COAT



UNDISTURBED
EARTH

SPRINGFIELD WATER AND SEWER COMMISSION



WATER DETAIL W-02.4

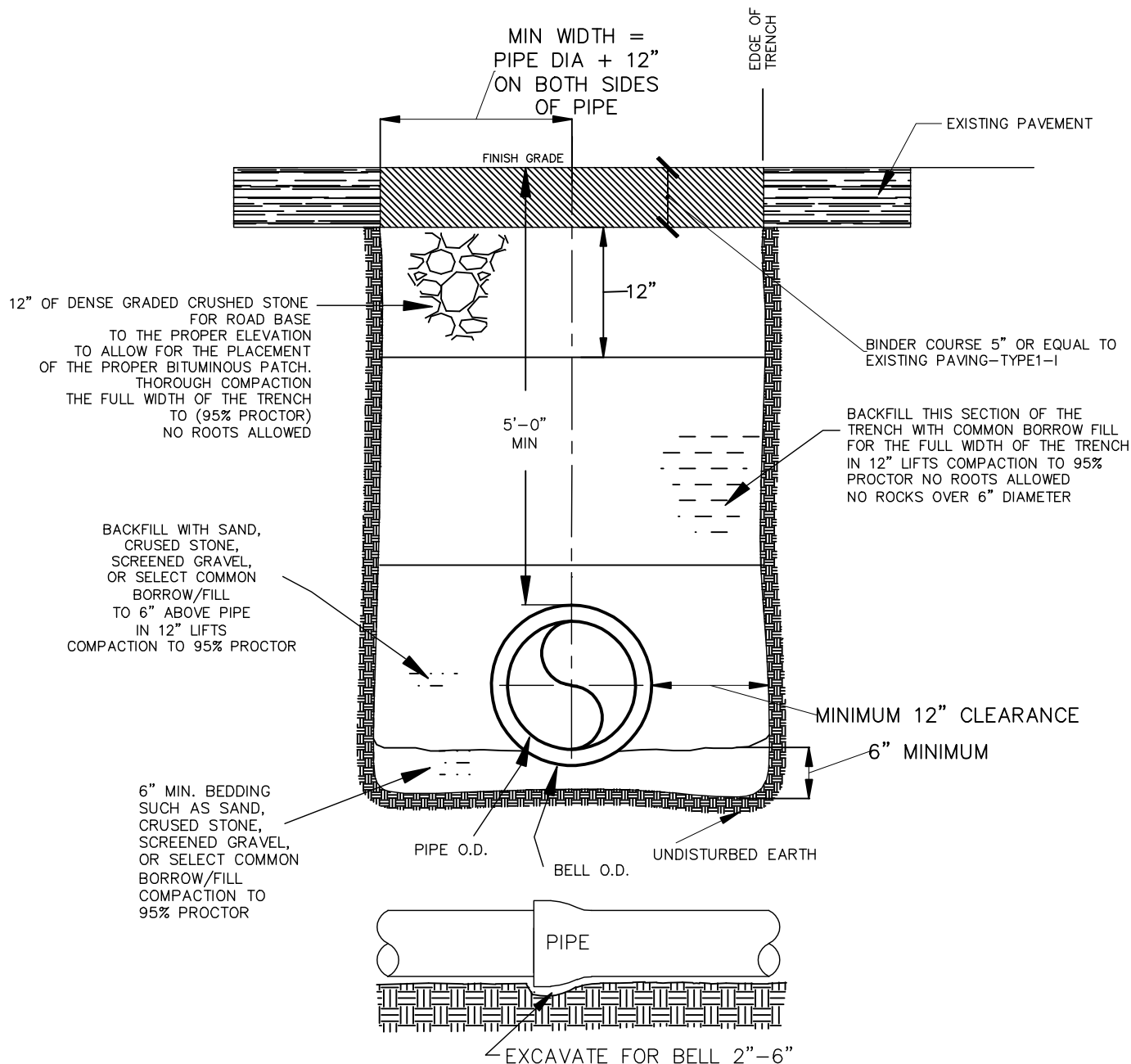
*TRENCH BACKFILLING-METHOD
FOR RESIDENTIAL STREETS
IN SPRINGFIELD*

SCALE: NTS

REV. DATE

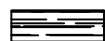
4/1/08 MAB

6/18/08 MAB



NOTES:

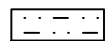
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. TO FINISH GRADE.
4. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
5. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
6. FOR LOCATION OF WATER MAINS SEE DETAIL (W-01.0).
7. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
8. REPLACE WITH SAME DEPTH OF ASPHALT OR MINIMUM 5-INCHES.
9. ALL MATERIALS USED TO MEET MASS. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
10. SAW CUT EDGE OF UTILITY PATCH IF NO MILLING IS REQUIRED.
11. MILL TO REMOVE TOP COURSE.
12. LEAVE 12-INCH MINIMUM LIP BETWEEN EDGE OF TOP AND EDGE OF BINDER COURSE.
13. AFTER TRENCH WORK IS COMPLETED, FILL AROUND PIPE TO BOTTOM WITH GRADED GRAVEL FILL AND COMPACT IN 6-INCH LIFTS.
14. REPLACE LAYERS OF BINDER AND DEEP BASE.
15. TACK AREA OF MILLING 1 GALLON PER 25 SQUARE YARDS.
16. REPLACE TOP COURSE.
17. SEAL EDGES OF UTILITY PATCH WITH HOT POURED RUBERIZED ASPHALT SEALANT.



EXISTING PAVEMENT



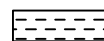
DENSE GRADED
CRUSHED STONE



BEDDING SAND



EXCAVATED AND
REPLACED WITH
BINDER COURSE



COMMON BORROW



UNDISTURBED
EARTH

SPRINGFIELD WATER AND SEWER COMMISSION



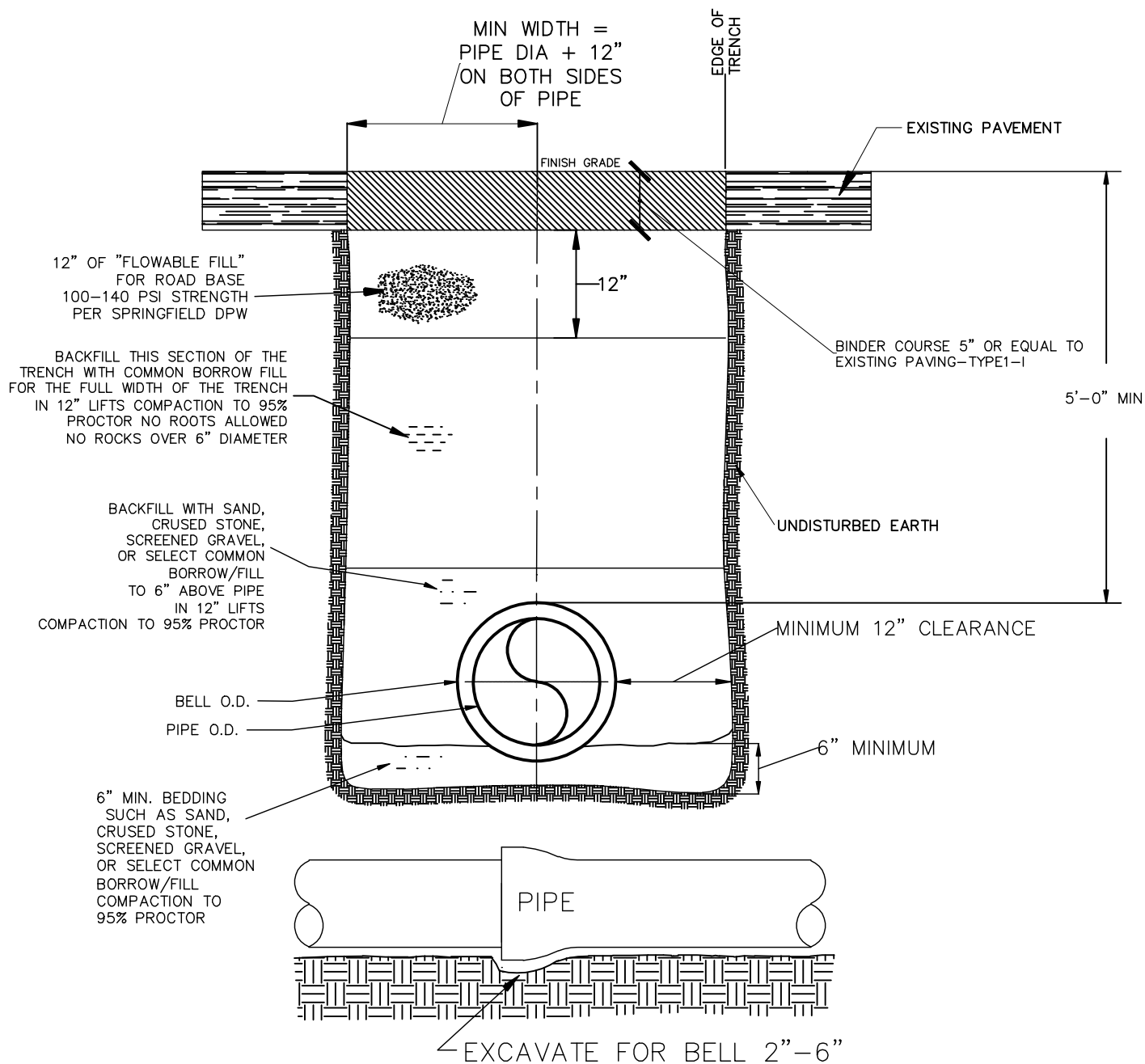
WATER DETAIL W-02.5

TEMPORARY TRENCH
BACKFILLING-METHOD
FOR ALL STREETS IN
SPRINGFIELD & LUDLOW
ACCEPT SPRINGFIELD ARTERIALS

SCALE: NTS

REV. DATE

6/18/08 MAB

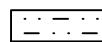


NOTES:

- ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
- ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
- SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
- REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
- FOR LOCATION OF WATER MAINS SEE DETAIL (W-01.0).
- REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
- REPLACE WITH SAME DEPTH OF ASPHALT OR MINIMUM 5-INCHES.
- ALL MATERIALS USED TO MEET MASS. STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
- SAW CUT EDGE OF UTILITY PATCH IF NO MILLING IS REQUIRED.
- MILL TO REMOVE TOP COURSE.
- LEAVE 12-INCH MINIMUM LIP BETWEEN EDGE OF TOP AND EDGE OF BINDER COURSE.
- AFTER TRENCH WORK IS COMPLETED, FILL AROUND PIPE TO BOTTOM WITH GRADED GRAVEL FILL AND COMPACT IN 6-INCH LIFTS.
- REPLACE LAYERS OF BINDER AND DEEP BASE.
- TACK AREA OF MILLING 1 GALLON PER 25 SQUARE YARDS.
- REPLACE TOP COURSE.
- SEAL EDGES OF UTILITY PATCH WITH HOT POURED RUBERIZED ASPHALT SEALANT.



EXISTING PAVEMENT



BEDDING SAND



UNDISTURBED EARTH



EXCAVATED AND
REPLACED WITH
BINDER COURSE



FLOWABLE FILL



COMMON BORROW

SPRINGFIELD WATER AND SEWER COMMISSION



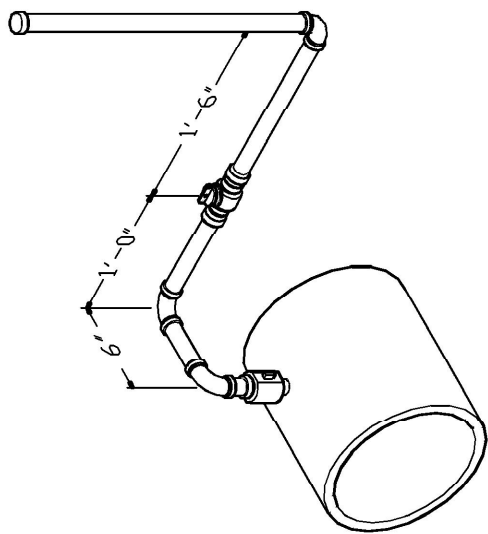
WATER DETAIL W-02.6

TEMPORARY TRENCH
BACKFILLING-METHOD
FOR ALL ARTERIAL
STREETS IN SPRINGFIELD

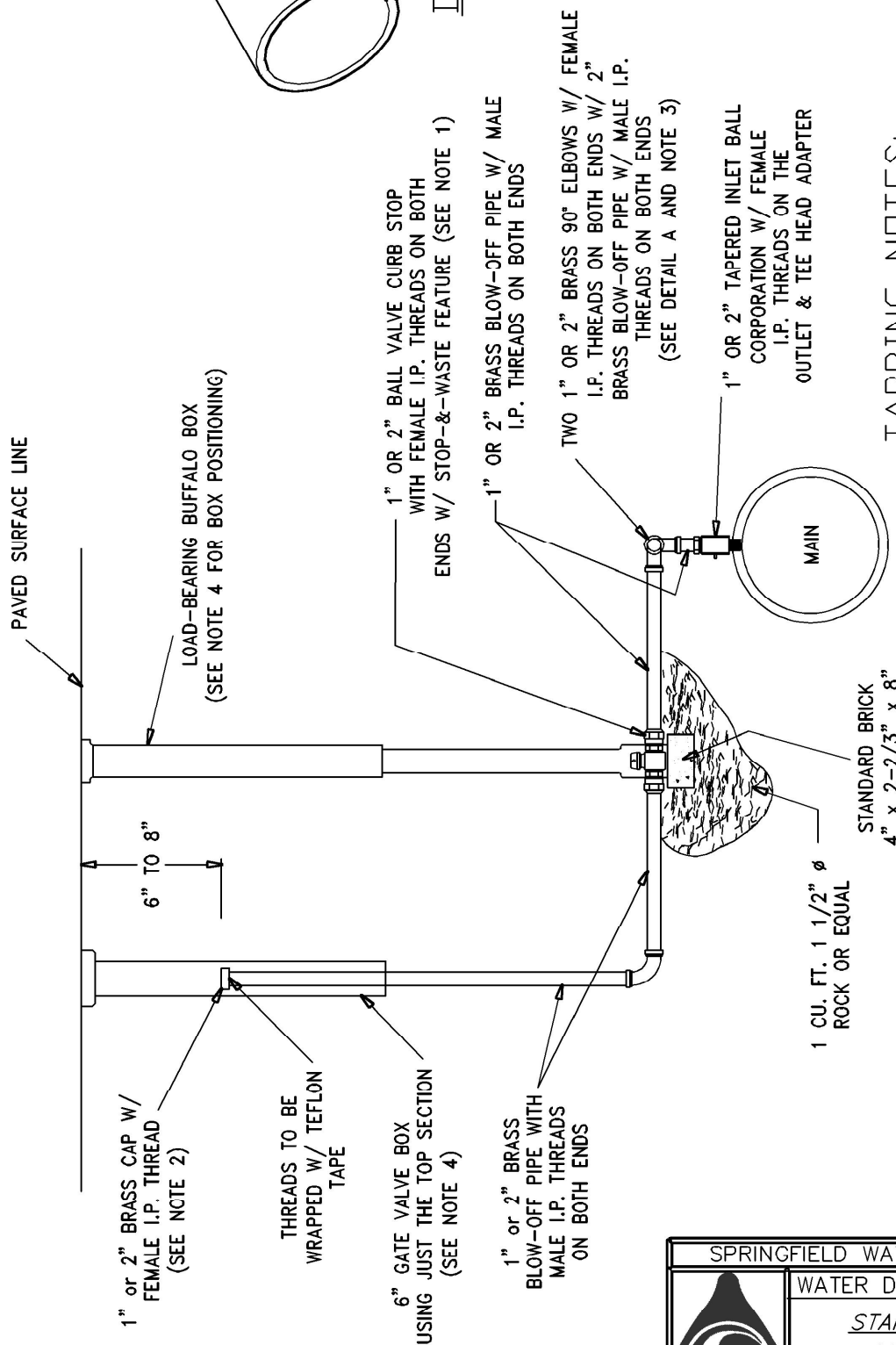
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REV. DATE

6/18/08 MAB




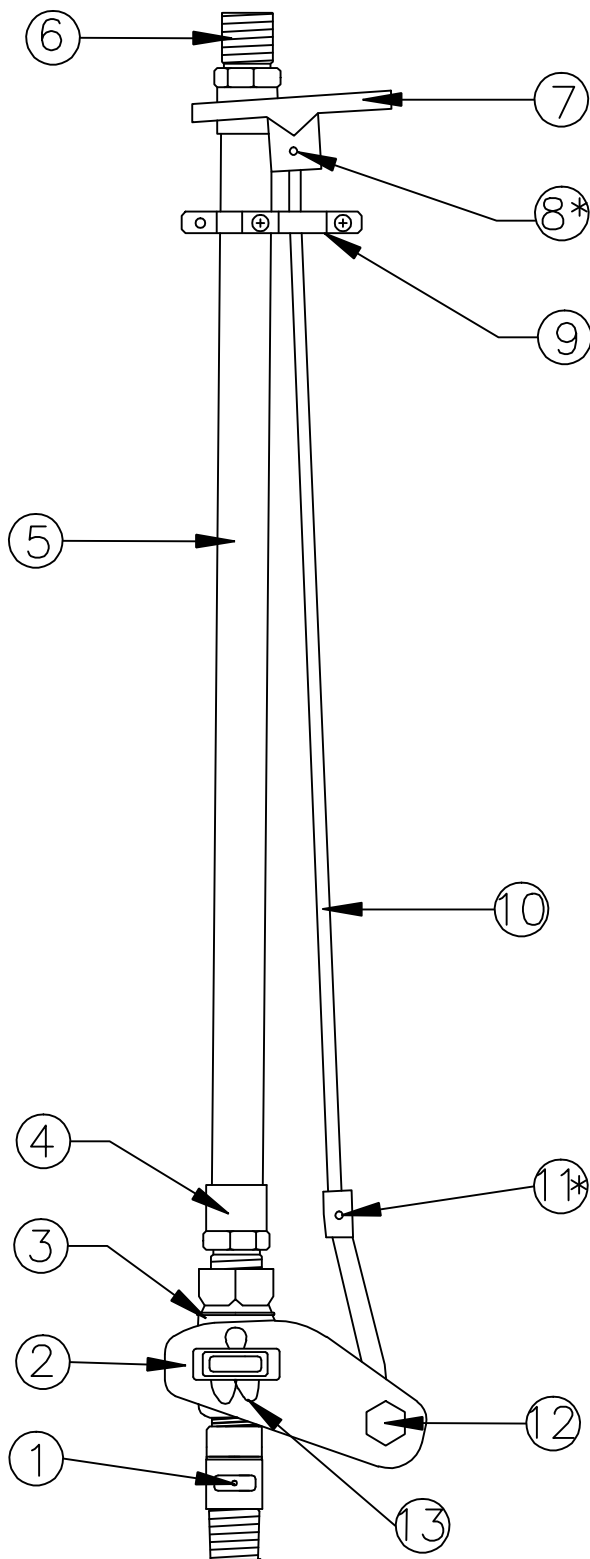
DETAIL A



TAPPING NOTES:
FOR 1"=USE DIRECT TAPPING
FOR 2"=MUST USE SWSC SADDLE

- NOTES:
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
 2. INSTALL STOP-&-WASTE W/ DRAIN HOLE ON THE DOWNSTREAM SIDE (AWAY FROM WATER MAIN).
 3. CAP IS TO BE INSTALLED HAND TIGHT.
 4. SWING ELBOWS ALLOW FOR PIPE MOVEMENT.
 5. VALVE BOX AND BUFFALO BOX ARE TO BE SET TO GRADE IN PAVEMENT AND BURIED 6" BELOW GRADE IN UNPAVED ROADS. RISER PIPE TO BE SET 2" BELOW VALVE BOX TOP IN UNPAVED ROADS.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-03.0	REV. DATE
	STANDARD AIR VALVE ASSEMBLY DETAIL	4/1/08 MAB
	SCALE: NTS	




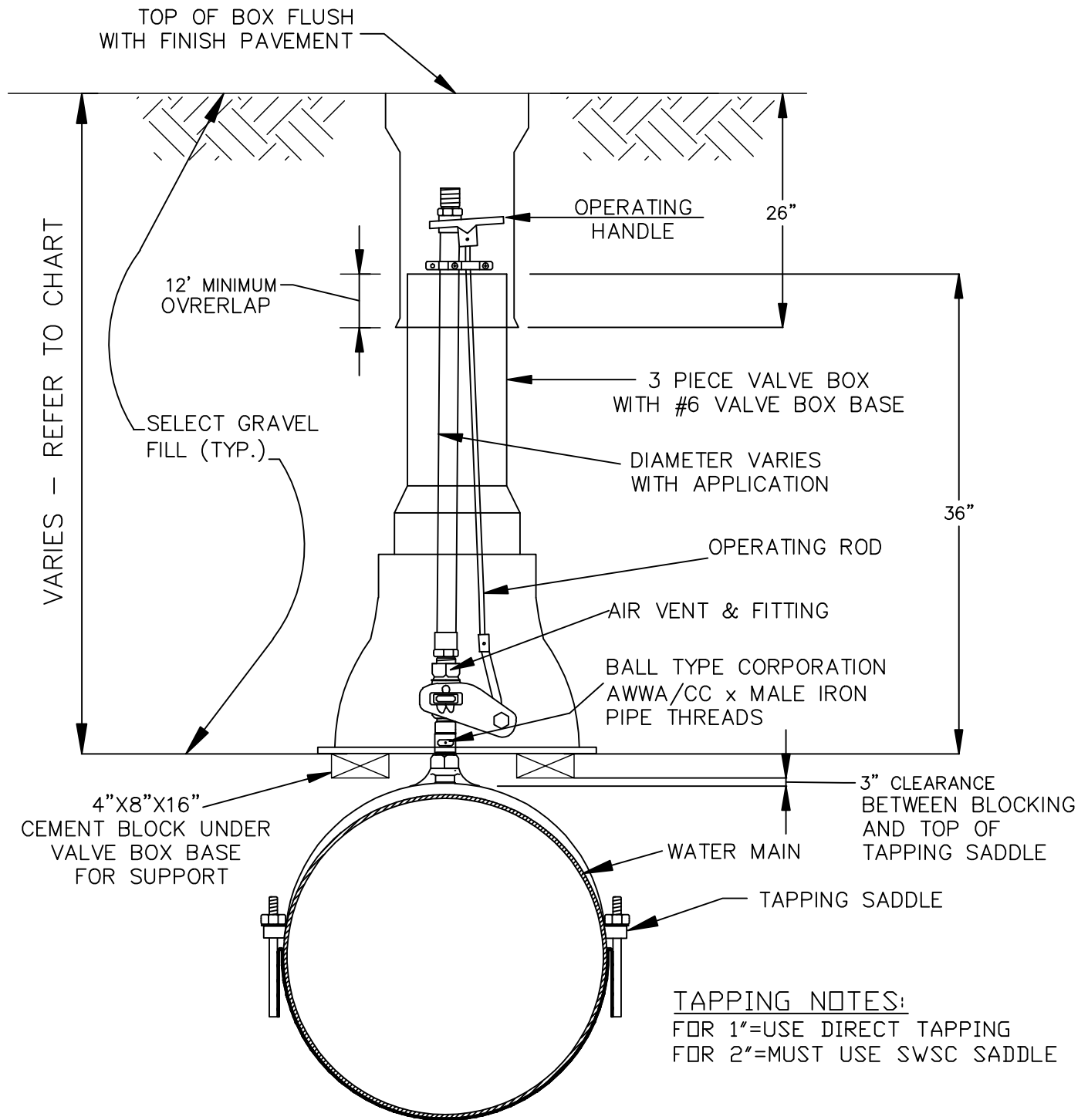
NO.	DESCRIPTION
1	BALL TYPE COPORATION: USE (Mueller B25008) OR APPROVED EQUAL. AWWA/CC X Male Iron Pipe (IP) Threads
2	LOWER OPERATING LEVER: Cast or Stamped Brass to Spec.
3	BALL TYPE CURB STOP: FOR 1" AIR VALVE: USE (FORD B11-444SW) OR APPROVED EQUAL. FOR 2" AIR VALVE: USE (FORD B11-777SW) OR APPROVED EQUAL. Female Iron Pipe (IP) Threads Both Ends and Stop and Waste on the Riser Side of Stop.
4	LOWER MALE ADAPTER: Copper (Domestic)
5	RISER: Copper Type L (Domestic)
6	UPPER MALE ADAPTER: Copper (Domestic)
7	T-HANDLE: Cast Brass
8*	OPERATING ROD T-HANDLE SECUREMENT: Stainless Steel Roll Pin
9	ROD TO RISER CONNECTION: Split Ring (By Size of Riser), Attached to 1/2" Split Ring by Coated 3/8"-16 x 1 1/4" Set Screw and Stainless Steel 3/8" Spacer Nut
10	OPERATING ROD: Brass Round (CDA 360, ASTM B-16)
11*	LOWER MECHANISM SECUREMENT: Stainless Steel Roll Pin
12	3/8" x 1/2" STAINLESS STEEL BOLT: With Nylock Safety Nut
13	LOWER LEVEL TO VALVE COTTER PIN: Marine Type Brass

NOTE:

* - VISUALLY OBSTRUCTED

*USE OF THIS DEVICE REQUIRES
APPROVAL BY THE SWSC PRIOR
TO INSTALLATION

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-03.1	REV. DATE
	<i>AIR VALVE</i>	4/1/08 MAB
	<i>ONE PIECE ASSEMBLY DETAIL</i>	
	SCALE: NTS	




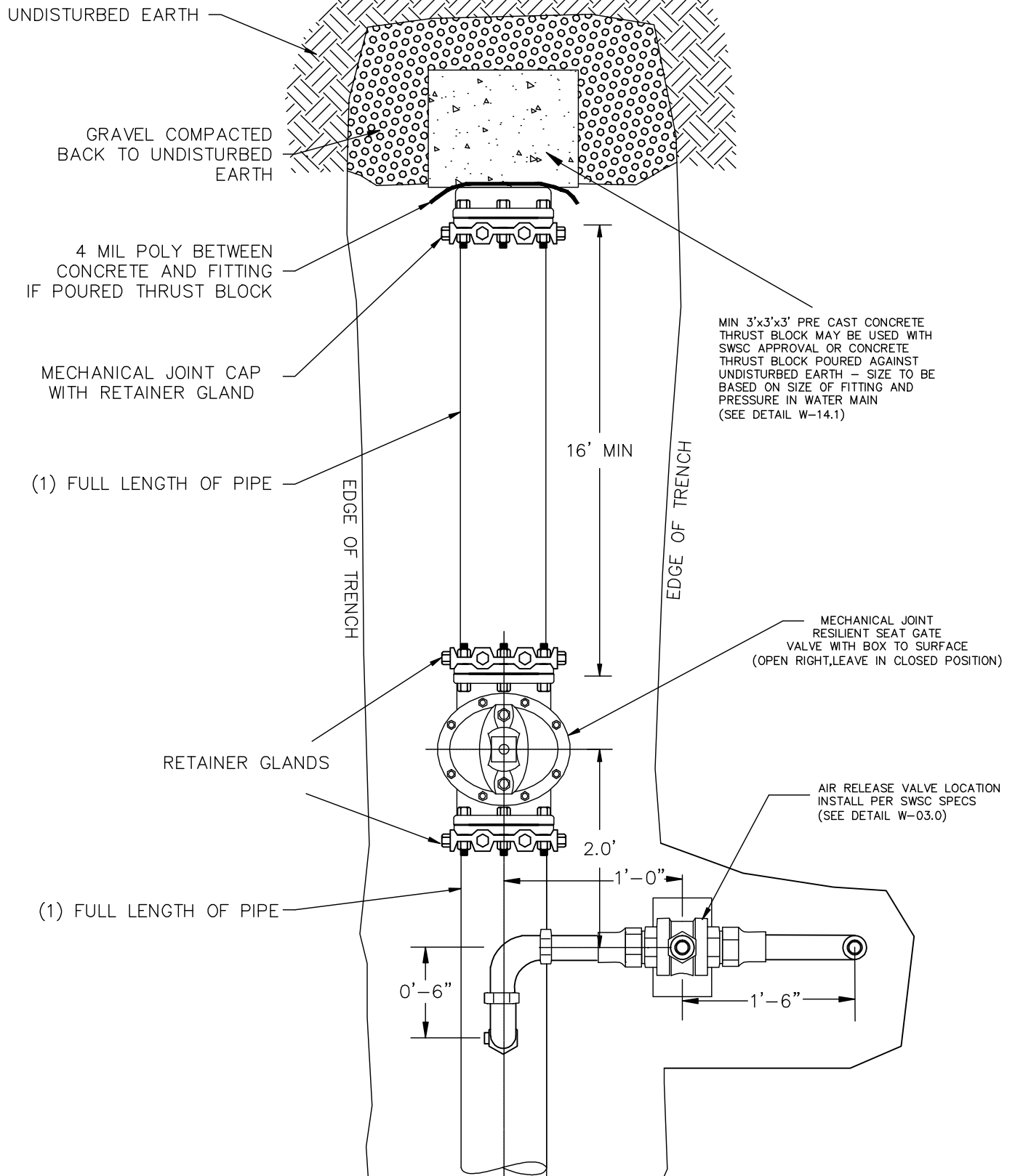
*USE OF THIS DEVICE REQUIRES APPROVAL BY THE SWSC PRIOR TO INSTALLATION

VALVE DIAMETER	PIPE LENGTH	REQUIRED COVER
1"	30"	4.0'
1"	36"	4.5'
1"	42"	5.0'
2"	30"	4.0'
2"	36"	4.5'
2"	42"	5.0'
CUSTOM	CUSTOM	AS REQUIRED BY ENGINEER

NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND OLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

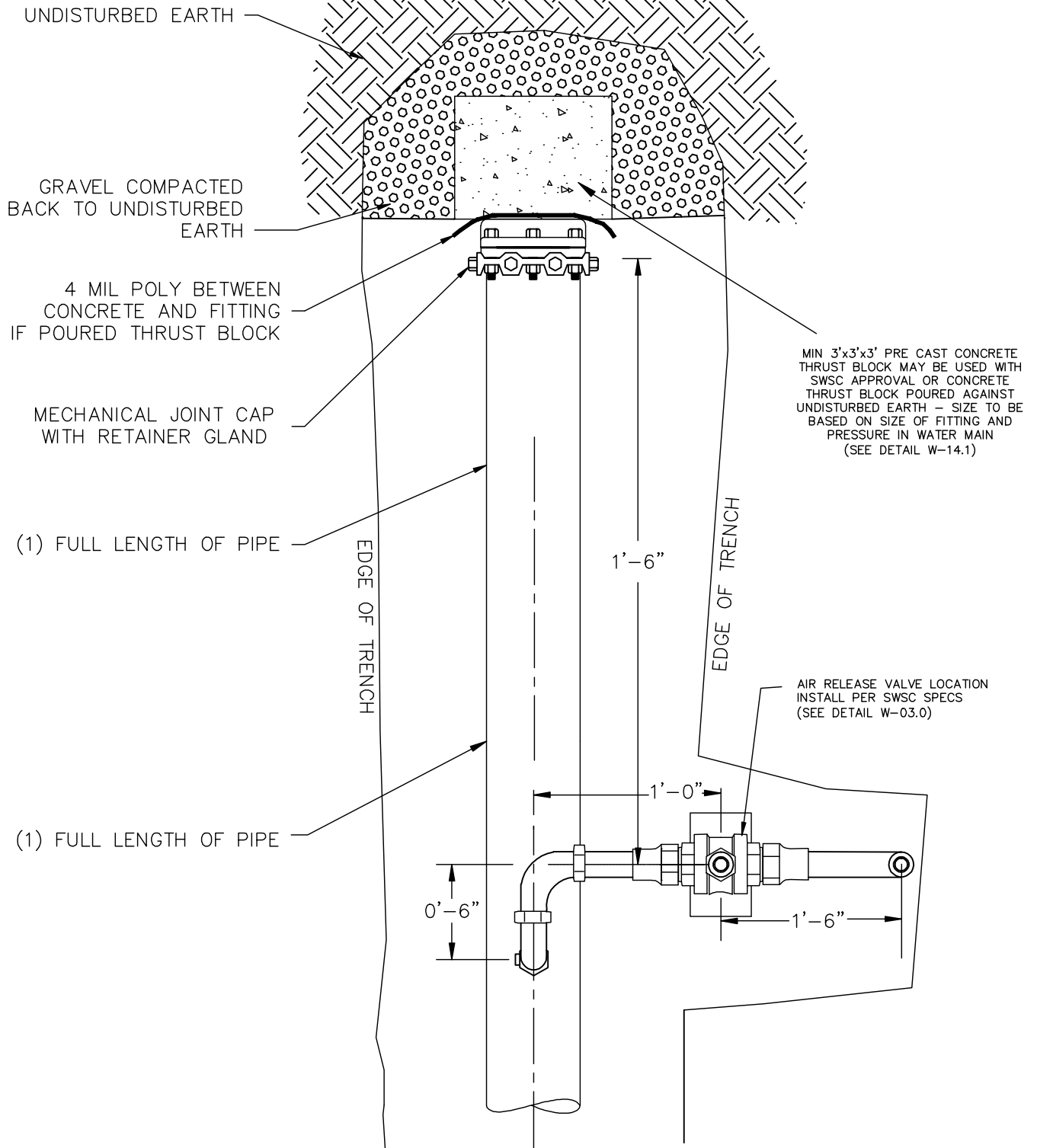
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-03.2	REV. DATE
	AIR VALVE	4/1/08 MAB
	ONE PIECE ASSEMBLY DETAIL	
SCALE: NTS		



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

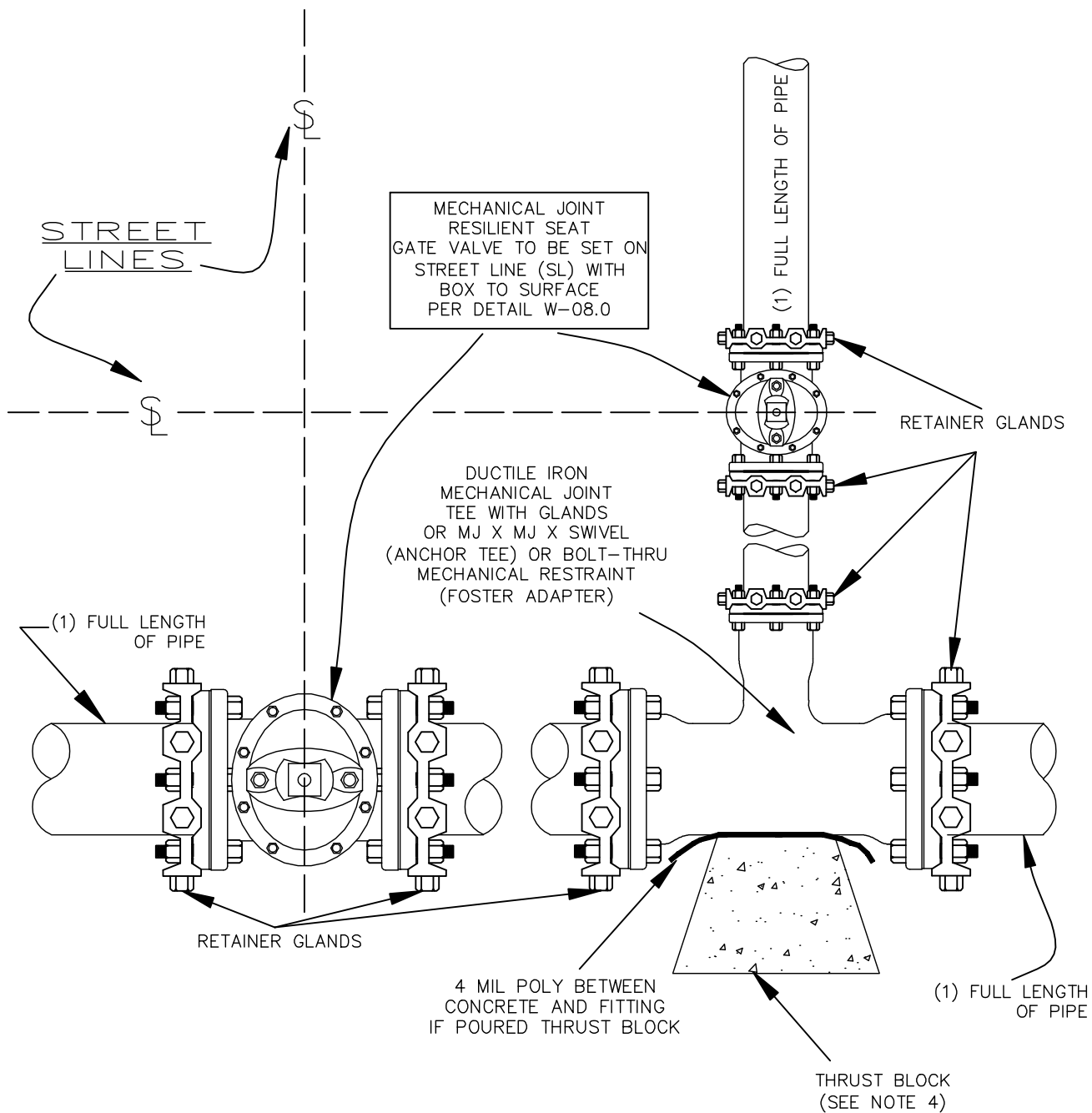
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-04.0	REV. DATE
	<i>END OF MAIN</i>	4/1/08 MAB
	SCALE: NTS	



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

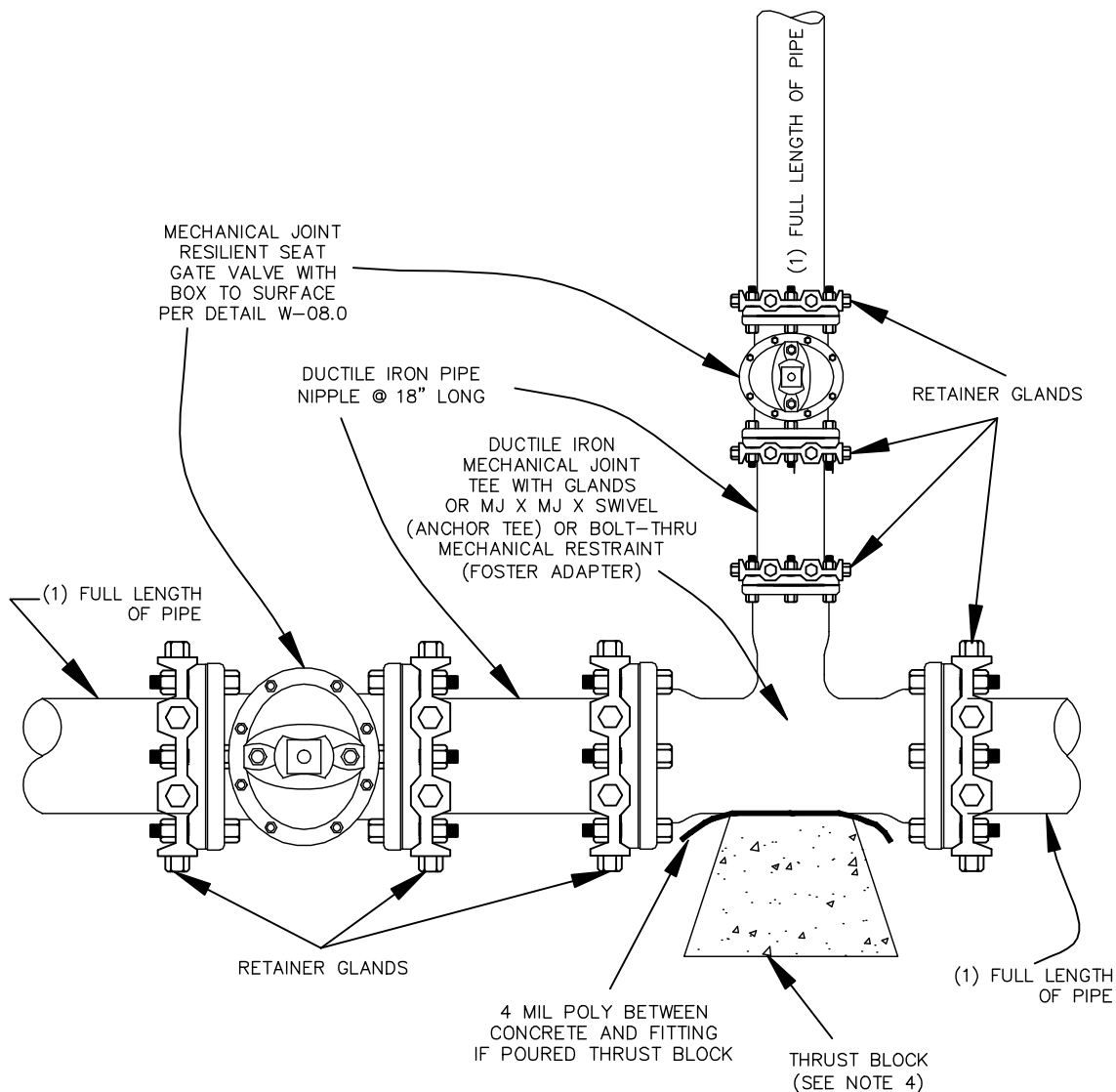
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-04.1	REV. DATE
	<i>END OF MAIN DETAIL</i>	4/1/08 MAB
	SCALE: NTS	



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. MIN 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH SWSC APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN SEE DETAIL (W-14.1).
5. THE MECHANICAL JOINTS OF THE PIPES BETWEEN THE VALVES AND THE FITTINGS SHALL BE RESTRAINED VIA RETAINER GLANDS. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS. (SEE DETAIL ABOVE).
6. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).


SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-05.0	REV. DATE
	<i>STANDARD TEE INSTALLATION</i>	4/1/08 MAB
	SCALE: NTS	

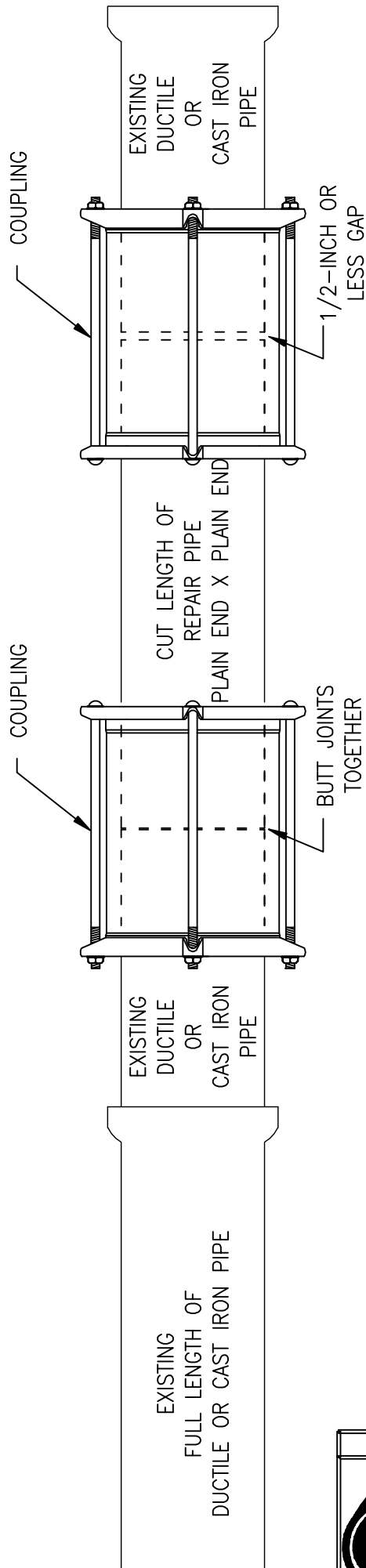


NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. MIN 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH SWSC APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN SEE DETAIL (W-14.1).
5. THE MECHANICAL JOINTS OF THE PIPES BETWEEN THE VALVES AND THE FITTINGS SHALL BE RESTRAINED VIA RETAINER GLANDS. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS. (SEE DETAIL ABOVE).
6. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).


**THIS DETAIL MUST
BE APPROVED FOR
USE BY THE
S.W.S.C BEFORE IT
CAN BE INSTALLED**

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-05.1	REV. DATE
	<u>ALTERNATE 1</u>	4/1/08 MAB
	<u>TEE INSTALLATION</u>	
	SCALE: NTS	

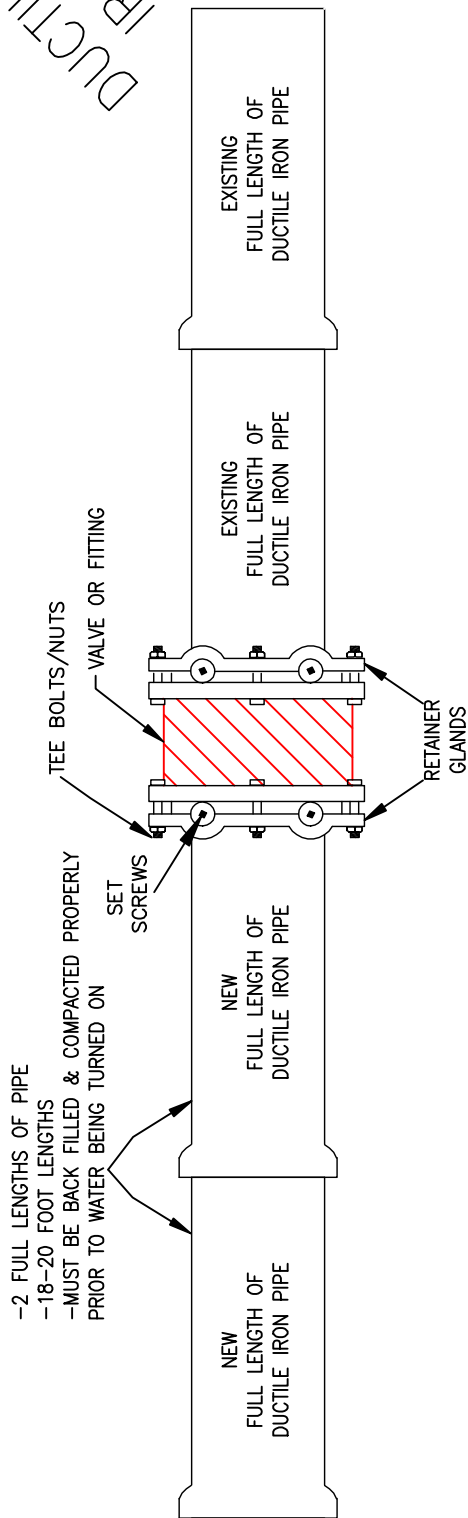


NOTES:

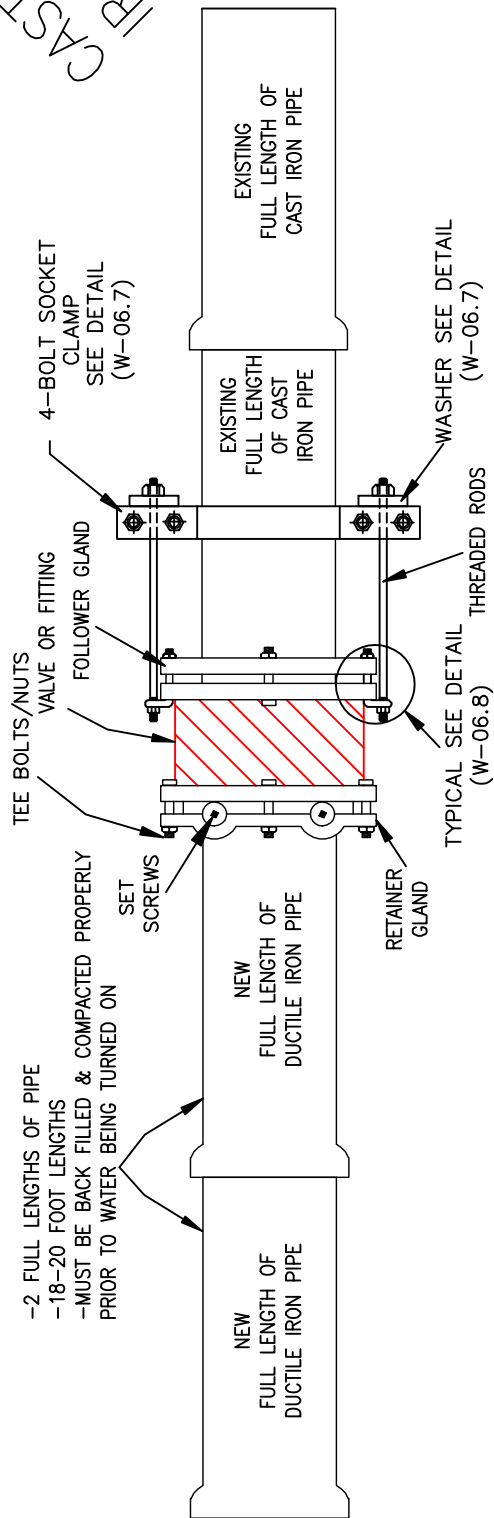
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. THESE METHODS SHALL BE USED UNLESS OTHERWISE APPROVED BY ENGINEERING AND TECHNICAL SERVICES DEPARTMENT.
5. WHEN REPAIRING NEAR A VALVE OR A FITTING USE AN APPROVED METHOD OR CALL ENGINEERING AND TECHNICAL SERVICES (ET&S).

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-06.0	REV. DATE
	REPAIR TO EXISTING WATER MAINS	4/1/08 MAB
SCALE: NTS		

DUCTILE
IRON



CAST
IRON



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I. IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I. EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-06.1

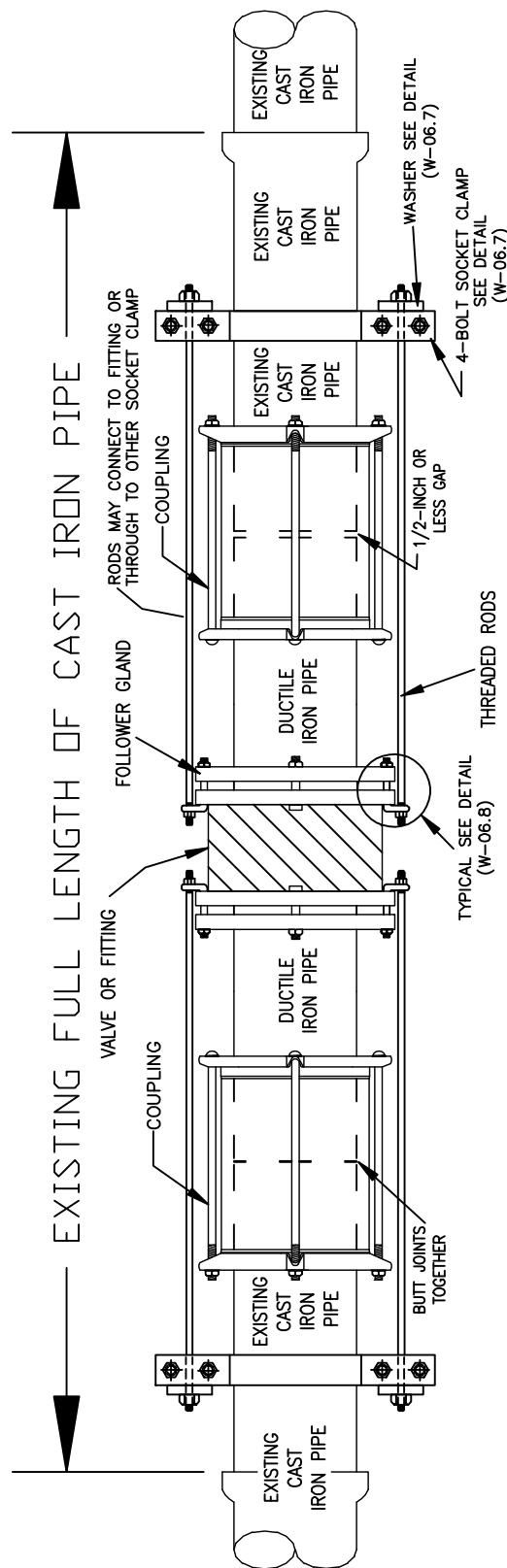
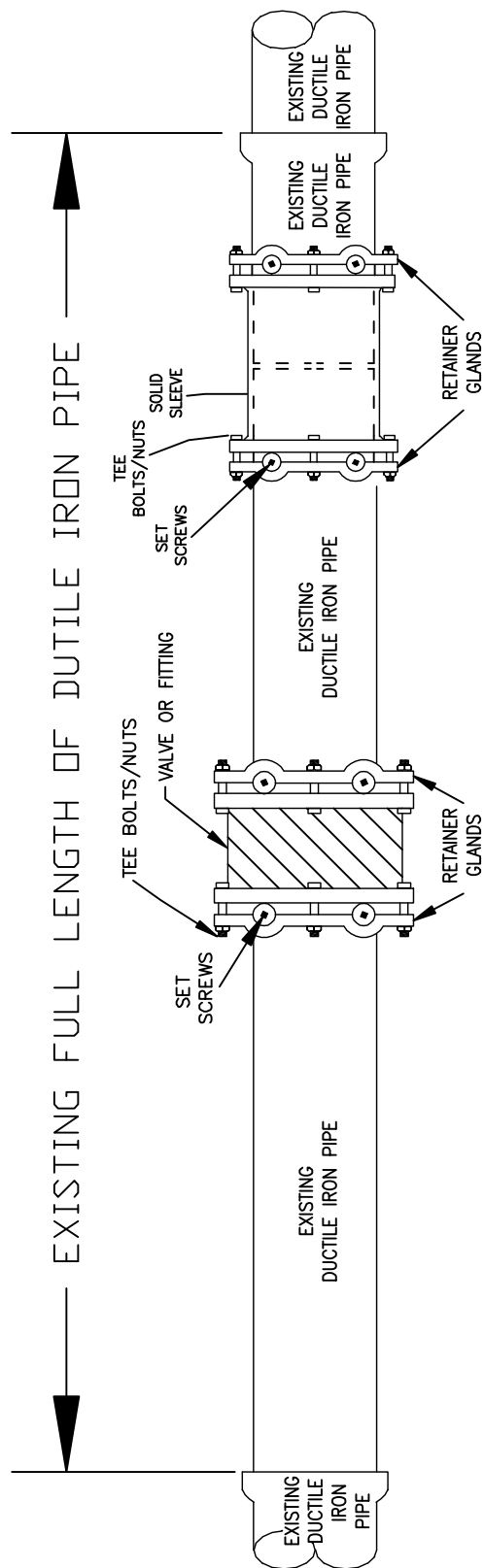
REV. DATE

4/1/08 MAB

INSTALL VALVE OR FITTING
AT A DEAD END
OF A WATER MAIN



SCALE: NTS



NOTES:

- ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
- NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I. IN MAIN.
- THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
- STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
- EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I. EACH.
- RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
- ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-06.2

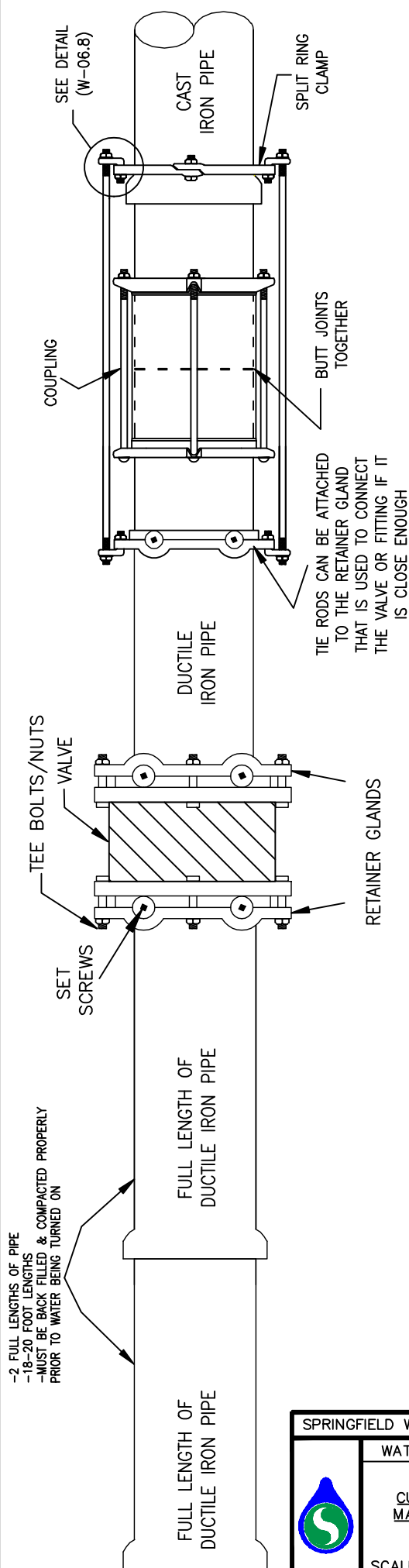
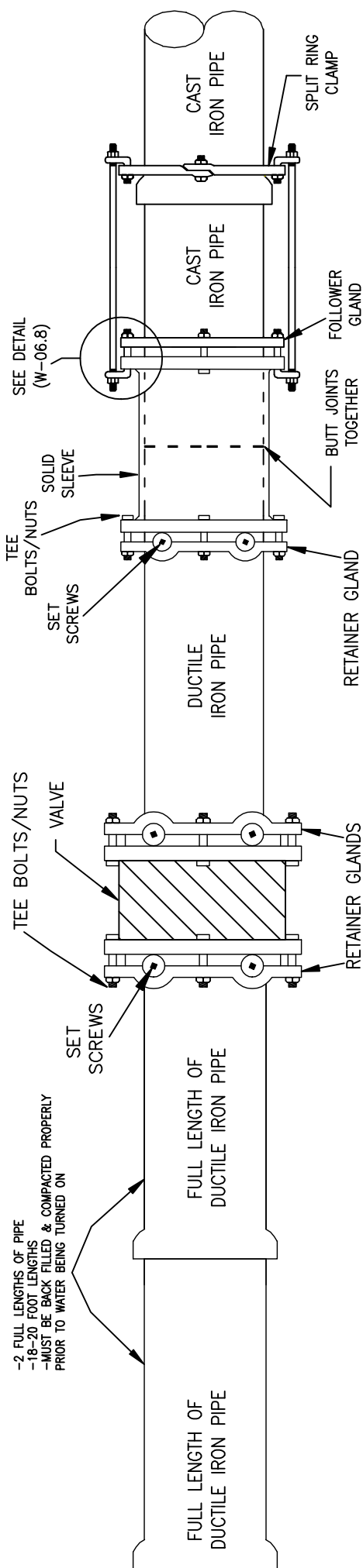
REV. DATE

4/1/08 MAB



CUTTING-INTO EXISTING
WATER MAIN TO REPLACE
VALVE OR FITTING

SCALE: NTS



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I. IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I. EACH.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I. EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-06.3

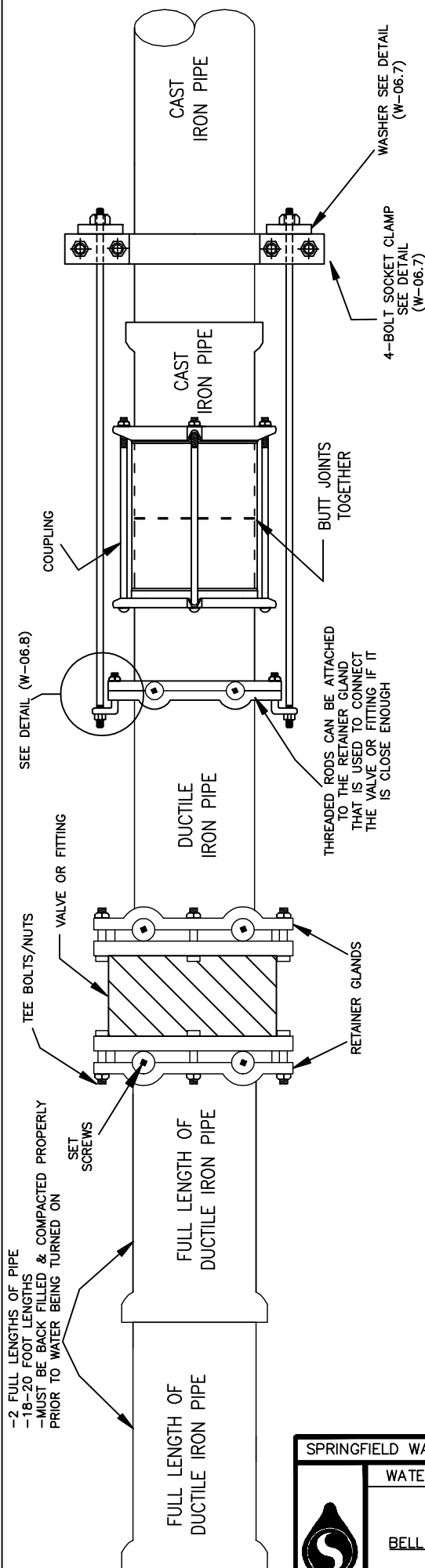
REV. DATE

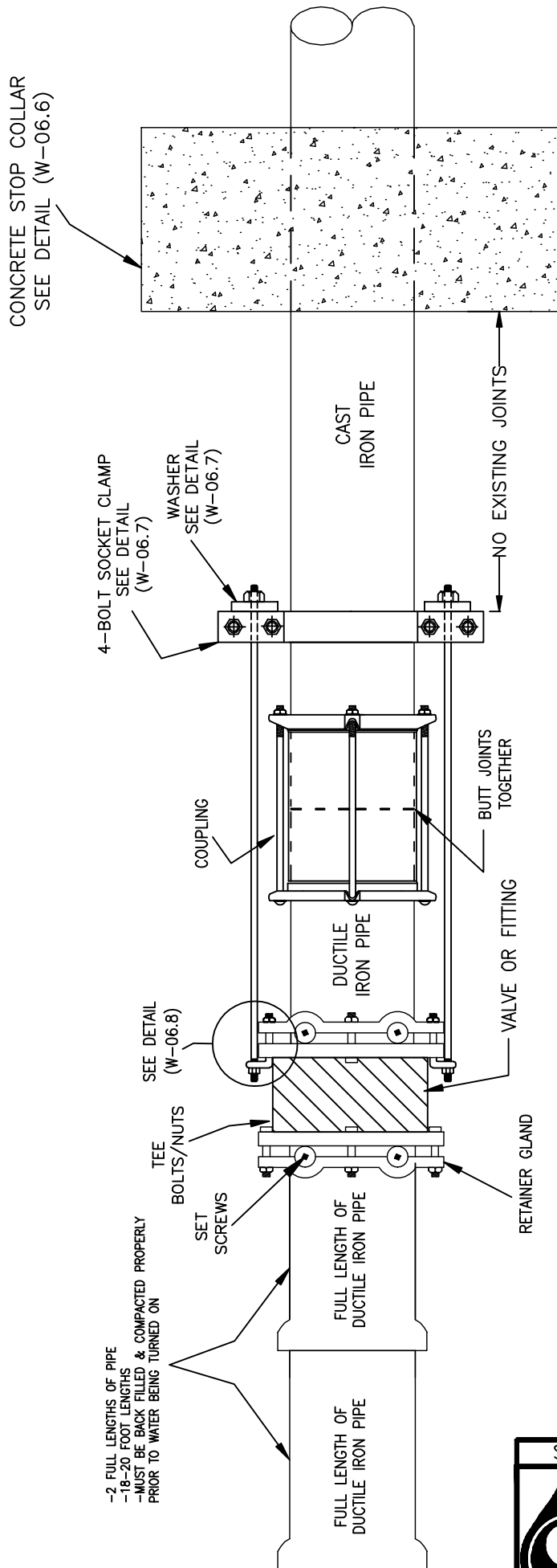
4/1/08 MAB

CUTTING INTO EXISTING WATER
MAIN WITH BELL FACING VALVE

SCALE: NTS






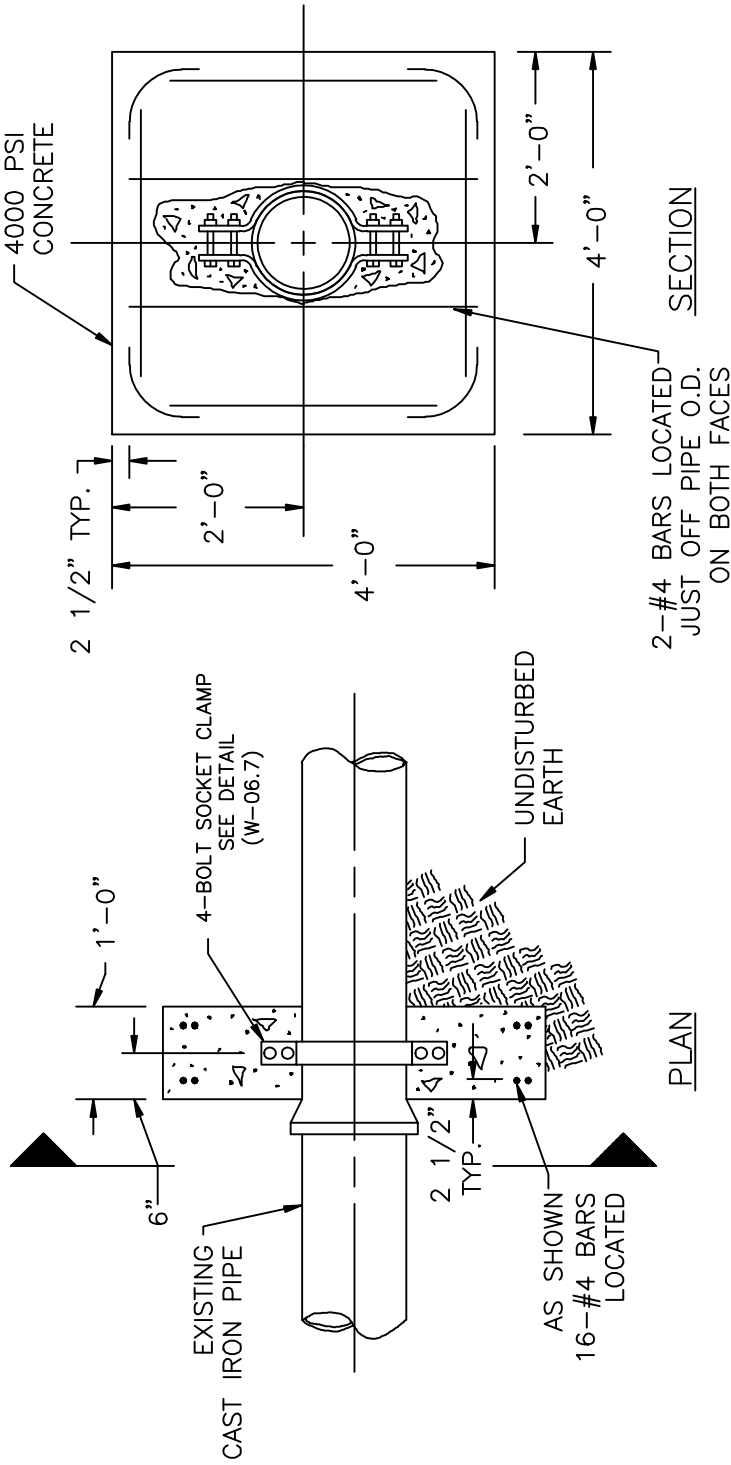


NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I. IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I. EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

SPRINGFIELD WATER AND SEWER COMMISSION	
	WATER DETAIL W-06.5
	CUTTING-INTO EXISTING WATER MAIN WITH NO BELL FOUND
	SCALE: NTS
	REV. DATE 4/1/08 MAB

CONCRETE THRUST COLLAR



SPECIAL NOTE:

1. IN LIEU OF CONCRETE STOP COLLAR THE CONTRACTOR MAY MECHANICALLY RESTRAIN (BY APPROVED METHOD) THREE (3) FULL PIPE LENGTHS FROM PROPOSED LOCATION OF STOP COLLAR.

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I. IN MAIN.
3. THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
4. STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
5. EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I. EACH.
6. RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
7. ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

SPRINGFIELD WATER AND SEWER COMMISSION



WATER DETAIL W-06.6

CONCRETE THRUST COLLAR

SCALE: NTS

REV. DATE

4/1/08 MAB

SOCKET CLAMP DATA CHART

Nominal Pipe Size (in inches)	Max Hydrostatic Test Pressure (in PSD)	Force (l) on Clamp (in lbs.)	Clamp (2 & 3) Inside Diameter (in inches)	Length of Clamp (2 & 3) (in inches)	Width of Clamp (2 & 3) (in inches)	Thickness of Clamp (2 & 3) (in inches)	Minimum Bolt Size (in inches)	Thickness of CI Clamp Washer (4) (in inches)	Size of CI Clamp Washer (4) (in inches)	Thickness of Steel Clamp Washer (4) (in inches)	Size of Steel Clamp Washer (4) (in inches)	Nominal Threaded Rod (7) Diameter (in inches)	Number of Nominal Threaded Rod (7)	Associated Hardware
4	250	4550	5	14 5/8	2	1/2	5/8 x 3 1/2	5/8	3 dia or 3 x 3	1/2	3 dia or 3 x 3	3/4	1	notes 2, 5, 6, 8, & 9
6	250	9340	7 1/8	16 7/8	2	1/2	5/8 x 3 1/2	5/8	3 dia or 3 x 3	1/2	3 dia or 3 x 3	3/4	1	notes 2, 5, 6, 8, & 9
8	250	16080	9 5/16	19 1/8	2 1/2	5/8	5/8 x 4	5/8	3 dia or 3 x 3	1/2	3 dia or 3 x 3	3/4	1	notes 2, 5, 6, 8, & 9
10	250	24180	11 1/2	21 3/8	2 1/2	5/8	3/4 x 4	5/8	3 dia or 3 x 3	1/2	3 dia or 3 x 3	3/4	1	notes 2, 5, 6, 8, & 9
12	250	34230	13 1/2	25 1/8	3	5/8	7/8 x 4 1/2	3/4	3-1/2 dia or 3-1/2 x 3-1/2	1/2	3 dia or 3 x 3	1	1	notes 2, 5, 6, 8, & 9
16	115	27760	17 7/8	31 3/8	4	3/4	1 x 4 1/2	1	4 dia or 4 x 4	1/2	3-1/2 dia or 3-1/2 x 3-1/2	1	2	notes 2, 5, 6, 8, & 9
1 At Max Hydrostatic Test Pressure														
2 All Socket Clamps and associated hardware shall meet the requirements of National Fire Protection Association 24														
3 Socket Clamps shall be as provided by PHD Manufacturing, Inc. Figure 590, Anvil Company, Figure 595, Cooper B-Line, Figure B3134, Carpenter and Patterson, Figure 158DB, or the equal product of another manufacturer.														
4 Socket Clamps Washers shall be as provided by PHD Manufacturing, Inc. Figure 594, Cooper B-Line, Figure B3134W, Carpenter and Patterson, Figure 258, or the equal product of another manufacturer.														
5 Bent Eye Bolts shall be constructed of high strength low alloy steel, per ASTM A588, grade B, Unified National Coarse (UNC) rolled thread														
6 Bent Eye Bolts shall be as provided by PHD Manufacturing, Inc. - Figure 598B, Star National Products - Figures 3/4" SST747 or 3/4" SST757, Dresser Piping Specialties, Inc. - Style 442, or the equal product of another manufacturer.														
7 Threaded Rods shall be constructed of 4140-alloy steel, per ASTM A193, grade B7, Unified National Coarse (UNC) rolled thread														
8 Washers for bent eye bolts shall be cadmium plated and constructed of case hardened C1006 steel, grade 2, Rockwell hardness B55														
9 Heavy hex nuts shall be constructed of medium carbon steel, ASTM A194, grade 2H, and Unified National Coarse (UNC) thread														



SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-06.7

SOCKET CLAMP DETAIL

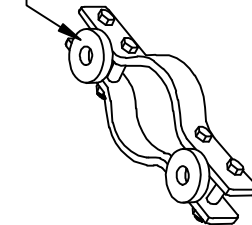
SCALE: NTS

REV. DATE
4/1/08 MAB
6/18/08 MAB

ALL 4 BOLTS ON SOCKET CLAMP MUST BE TIGHTENED WITH A TORQUE WRENCH.

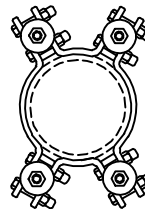
5/8" DIAMETER BOLTS = 65 FOOT-LBS
3/4" DIAMETER BOLTS = 75 FOOT-LBS

SOCKET CLAMP WASHER



AFTER FINAL ASSEMBLY ALL THE NUTS CONNECTED TO THE THREADED RODS MUST BE HAND TIGHTENED PLUS AN ADDITIONAL 1/2 TURN TO BE PROPERLY INSTALLED.

TYPICAL SINGLE 4-BOLT SOCKET CLAMP

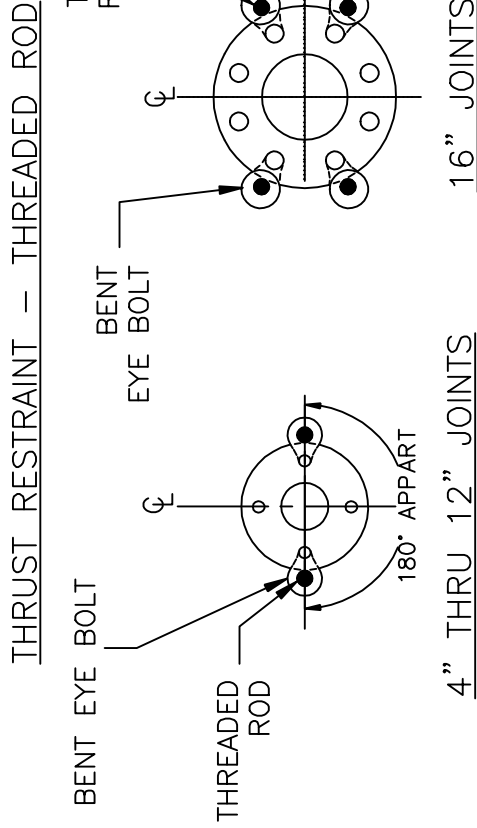
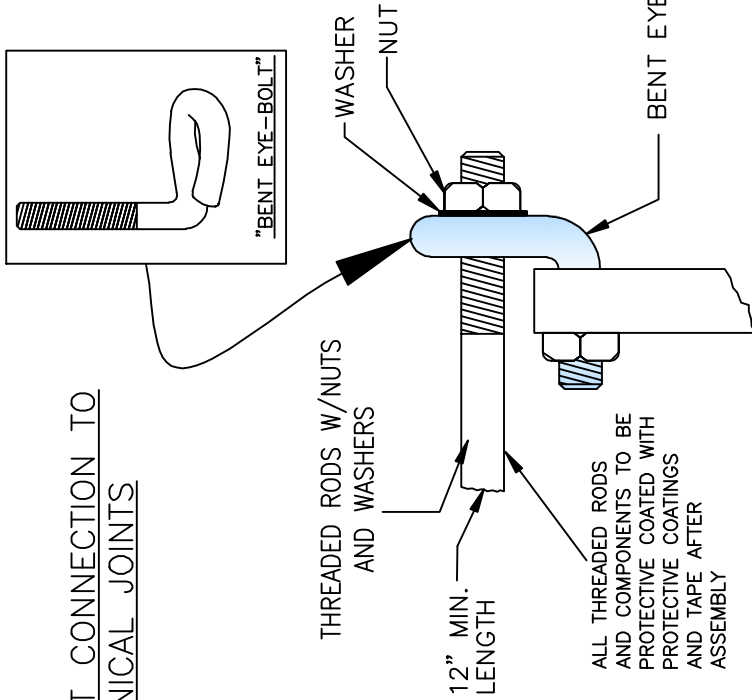


TYPICAL TWO 4-BOLT SOCKET CLAMP INSTALLATION

NOTES:

- ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
- NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I. IN MAIN.
- THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
- STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
- EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I. EACH.
- RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
- ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.

BENT EYE BOLT CONNECTION TO MECHANICAL JOINTS



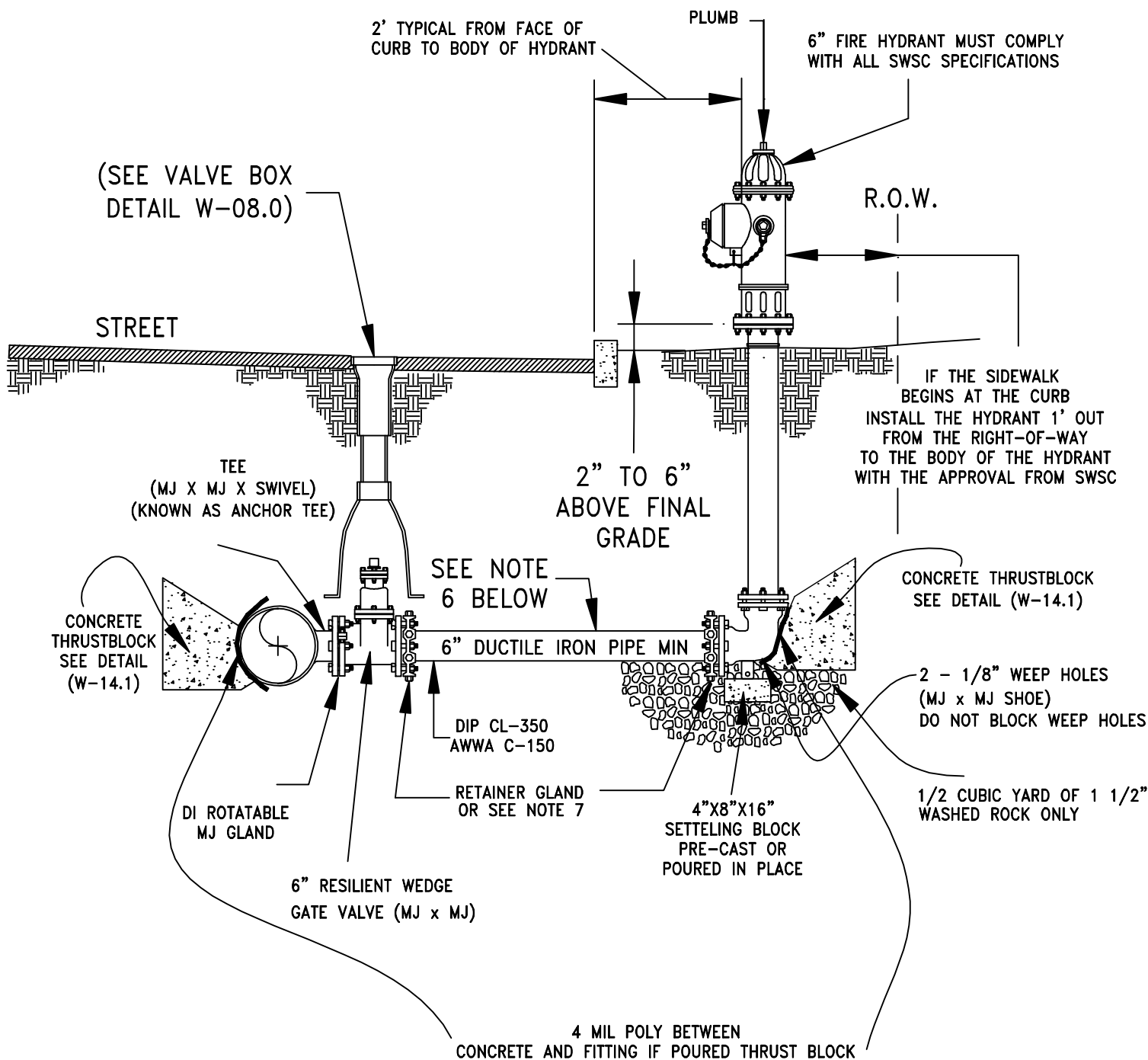
PIPE SIZE	No. THREADED RODS*
4" THRU 10"	2 - 3/4"φ
12"	2 - 1"φ
16"	4 - 1"φ
GREATER THAN 16"	APPROVAL BY ET&S

*STANDARD LENGTHS ARE 3', 6' & 12'
COUPLINGS MAY BE USED FOR LONGER LENGTHS.

SEE SOCKET CLAMP DATA CHART DETAIL (W-06.7)
FOR HARDWARE, MATERIAL, MANUFACTURERS AND BOLT TIGHTENING REQUIREMENTS

NOTES:

- ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
- NUMBER OF THREADED RODS IS BASED ON MAXIMUM PRESSURE OF 150 P.S.I. IN MAIN.
- THREADED RODS ARE TO BE FABRICATED FROM 4140 B-7 ALLOY STEEL.
- STEEL THREADED RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 105,000 P.S.I.
- EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 50,000 P.S.I. EACH.
- RESTRAINT FOR 20 INCHES AND LARGER PIPES MUST BE DESIGNED ON A CASE-BY-CASE BASIS AND APPROVED BY ENGINEERING & TECHNICAL SERVICES (ET&S).
- ALL COMPONENTS TO BE PROTECTIVE COATED WITH PROTECTIVE COATINGS AND TAPE.



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED PLUMB & LOCATED ACCORDING TO PROJECT PLANS.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE HYDRANT & THE VALVE.
6. THE MECHANICAL JOINTS OF THE FIRE HYDRANT ASSEMBLY SHALL BE RESTRAINED VIA RETAINER GLAND. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS.
7. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

SPRINGFIELD WATER AND SEWER COMMISSION



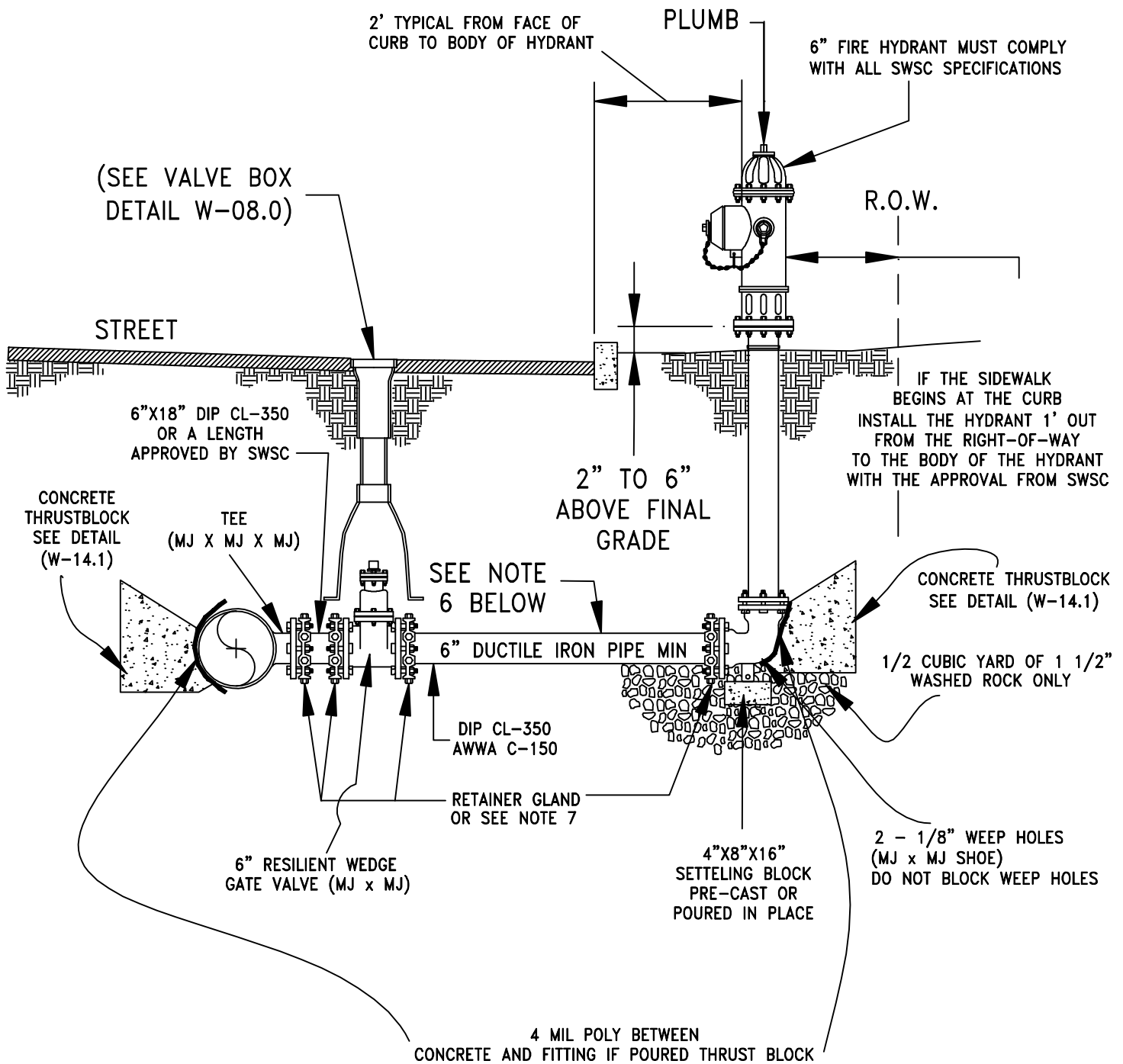
WATER DETAIL W-07.0

*STANDARD
FIRE HYDRANT ASSEMBLY*

SCALE: NTS

REV. DATE

4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED PLUMB & LOCATED ACCORDING TO PROJECT PLANS.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE HYDRANT & THE VALVE.
6. THE MECHANICAL JOINTS OF THE FIRE HYDRANT ASSEMBLY SHALL BE RESTRAINED VIA RETAINER GLAND. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS.
7. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

**THIS DETAIL MUST
BE APPROVED FOR
USE BY THE
S.W.S.C BEFORE IT
CAN BE INSTALLED**

SPRINGFIELD WATER AND SEWER COMMISSION

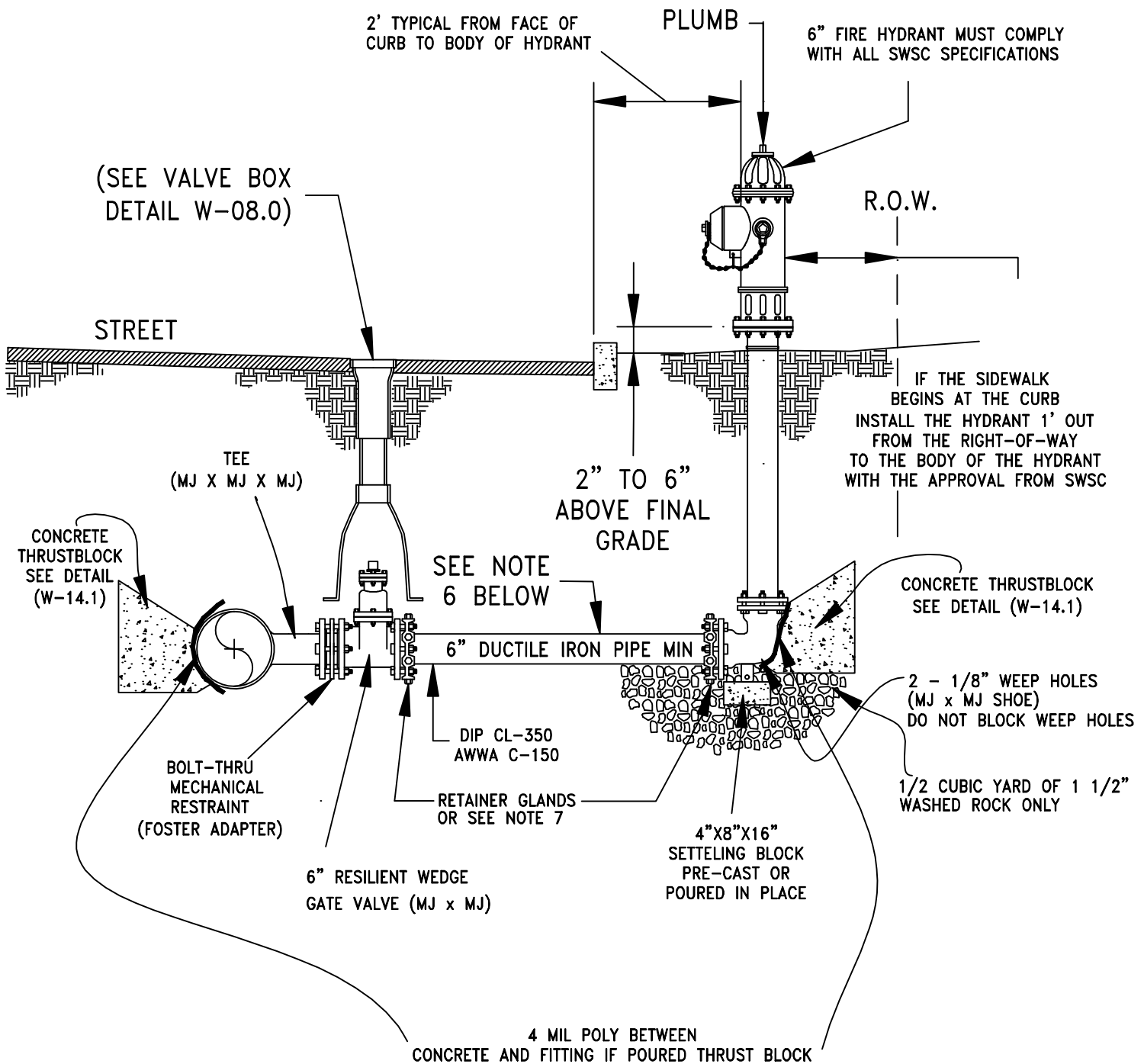


WATER DETAIL W-07.1

*ALTERNATE 1
FIRE HYDRANT ASSEMBLY*

SCALE: NTS

REV. DATE
4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED PLUMB & LOCATED ACCORDING TO PROJECT PLANS.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE HYDRANT & THE VALVE.
6. THE MECHANICAL JOINTS OF THE FIRE HYDRANT ASSEMBLY SHALL BE RESTRAINED VIA RETAINER GLAND. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS.
7. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

**THIS DETAIL MUST
BE APPROVED FOR
USE BY THE
S.W.S.C BEFORE IT
CAN BE INSTALLED**

SPRINGFIELD WATER AND SEWER COMMISSION



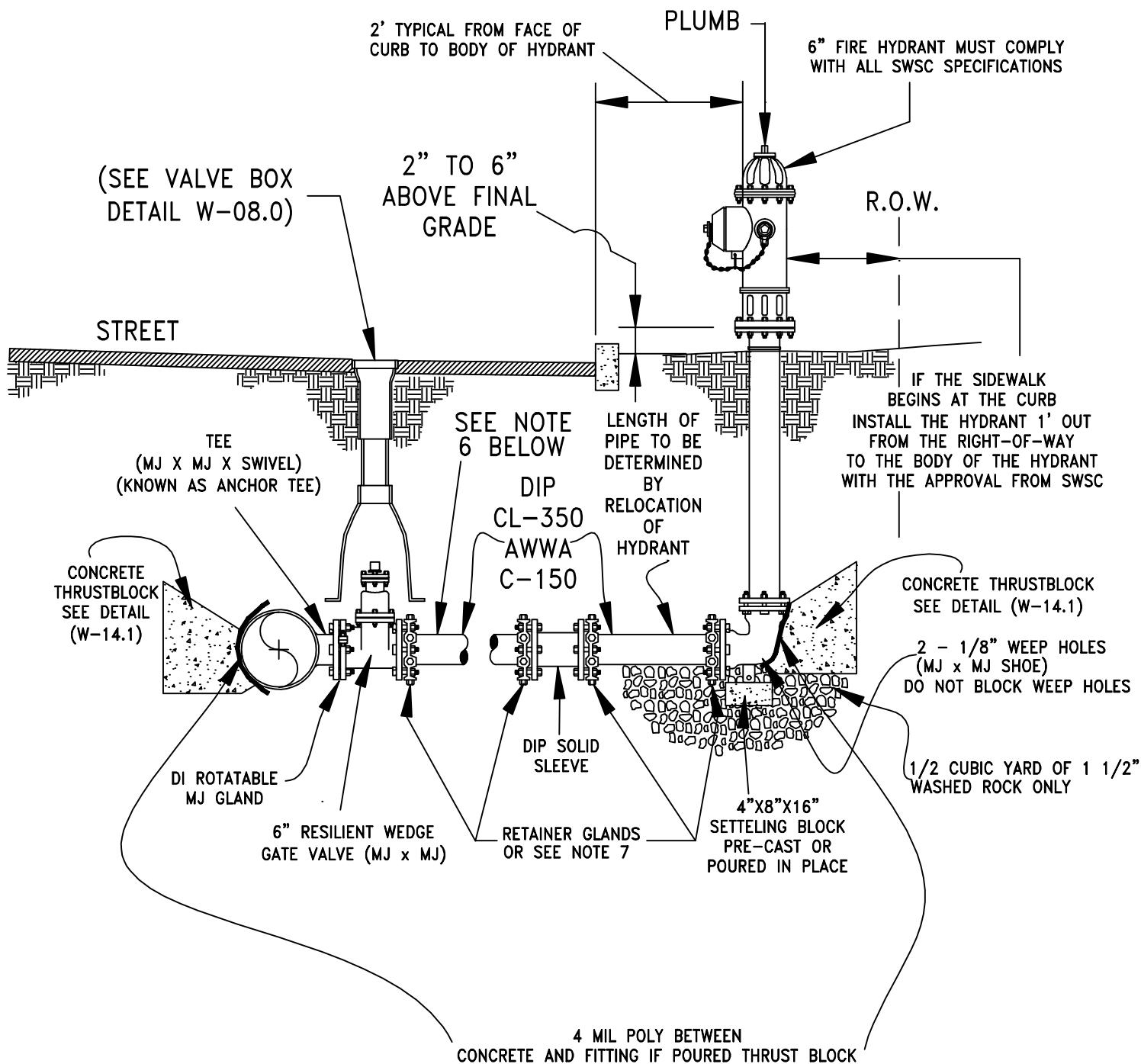
WATER DETAIL W-07.2

ALTERNATE 2
FIRE HYDRANT ASSEMBLY

SCALE: NTS

REV. DATE

4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED PLUMB & LOCATED ACCORDING TO PROJECT PLANS.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE HYDRANT & THE VALVE.
6. THE MECHANICAL JOINTS OF THE FIRE HYDRANT ASSEMBLY SHALL BE RESTRAINED VIA RETAINER GLAND. IF MORE THAN ONE SECTION IS USED, RETAINER GLAND RESTRAINTS SHALL BE USED AT ALL CONNECTIONS.
7. FOR RESTRAINT METHODS OTHER THAN RETAINER GLAND SEE DETAILS (W-06.1 THRU W-06.6).

SPRINGFIELD WATER AND SEWER COMMISSION



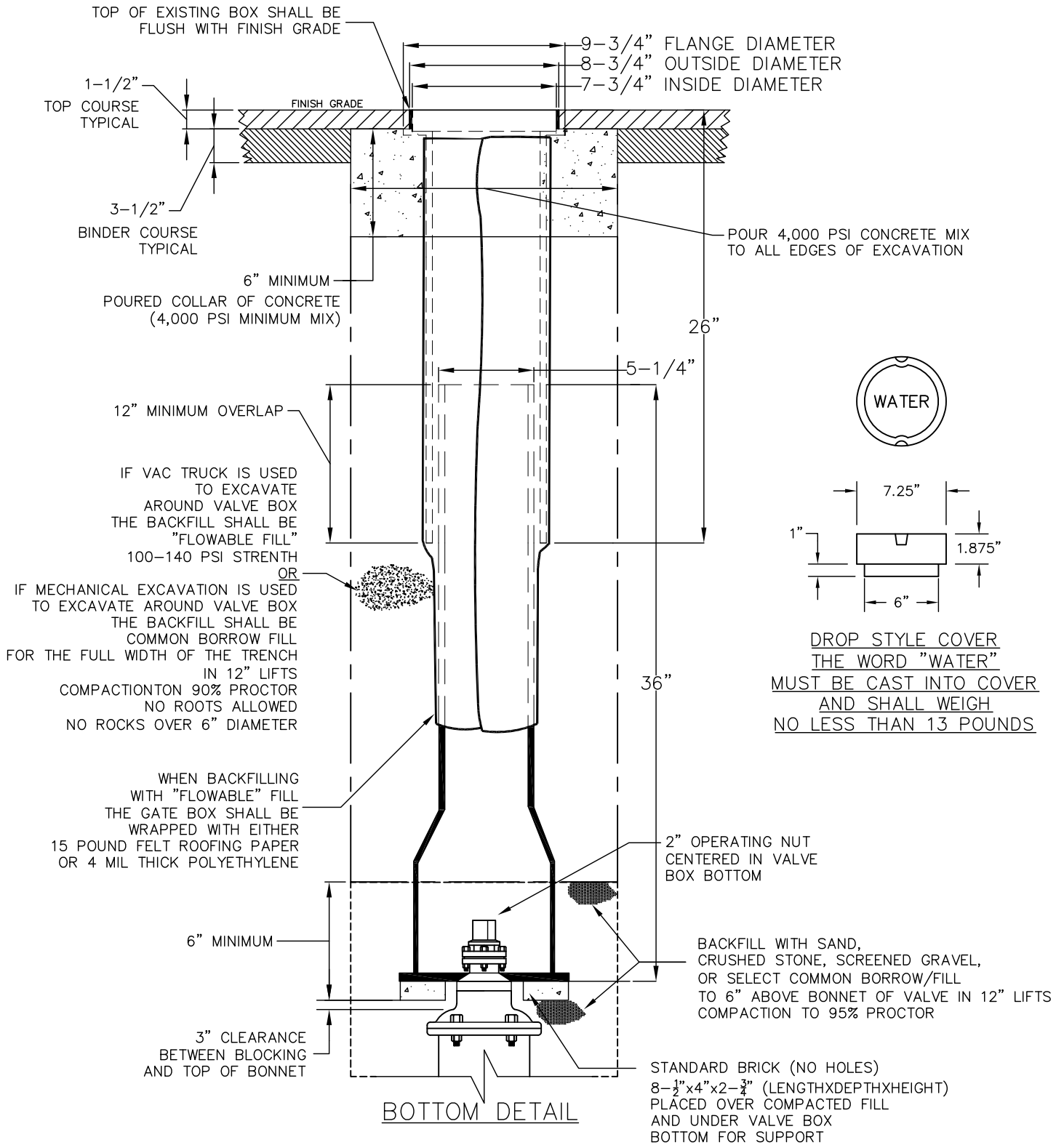
WATER DETAIL W-07.3

*RELOCATION OF
FIRE HYDRANT ASSEMBLY
(STRAIGHT BACK)*

SCALE: NTS

REV. DATE

4/1/08 MAB



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

SPRINGFIELD WATER AND SEWER COMMISSION



WATER DETAIL W-08.1

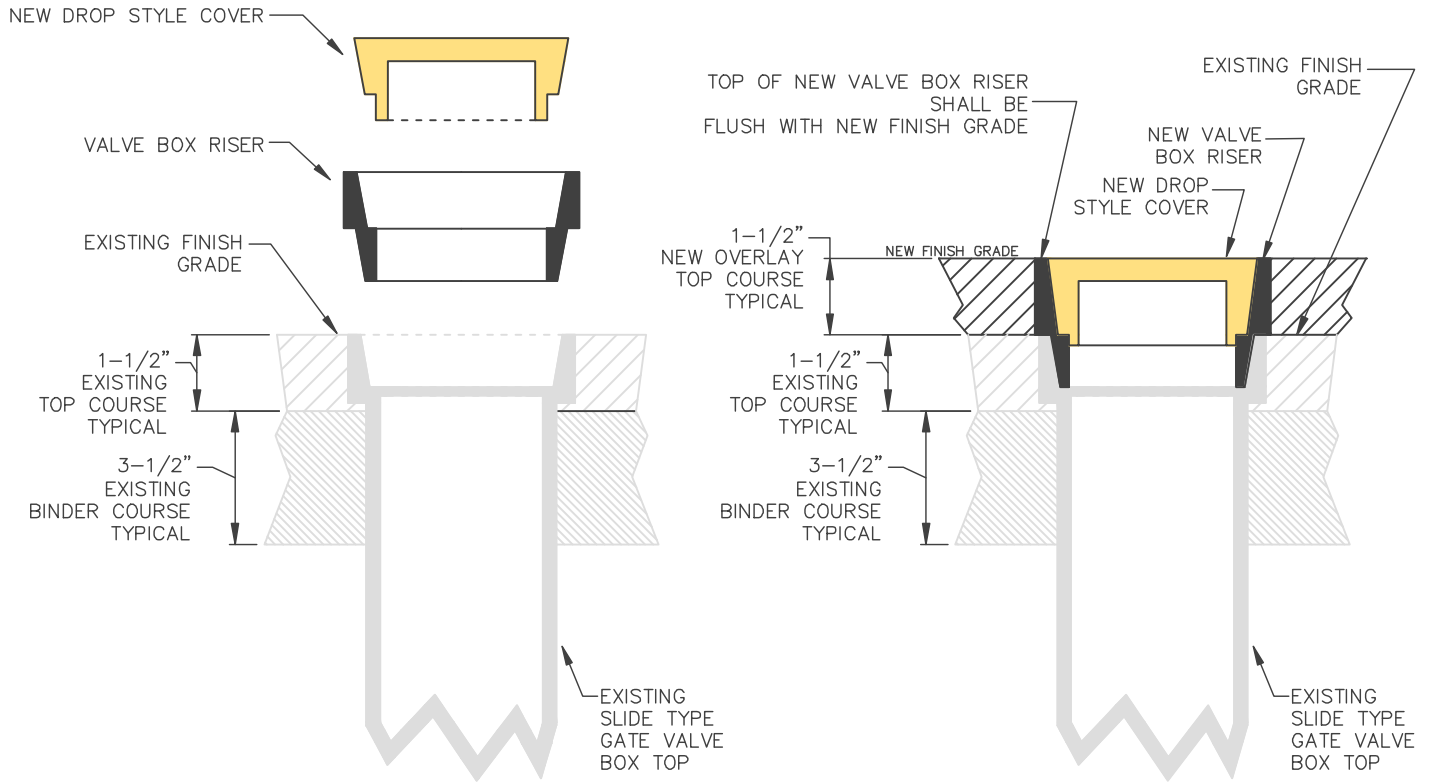
REPLACE, RAISE OR
RESET VALVE BOX

SCALE: NTS

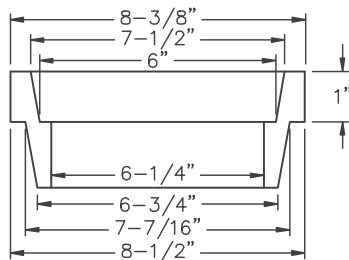
REV. DATE

4/1/09 MAB

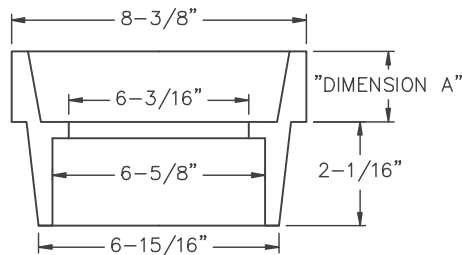
1/10/19 DJP



VALVE BOX RISER INSTALLED



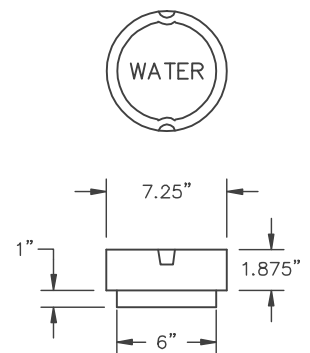
1"
VALVE BOX RISER



1-1/2"–6"
STANDARD VALVE BOX RISER

RISER HEIGHT
INCREASE
DIMENSION "A"

1"
1-1/2"
2"
3"
4"
6"



NEW DROP STYLE COVER
THE WORD "WATER"
MUST BE CAST INTO COVER
AND SHALL WEIGH
NO LESS THAN 13 POUNDS

NOTE: THESE RISERS WILL WORK SATISFACTORILY WITH MOST 5-1/4" VALVE BOXES.

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

SPRINGFIELD WATER AND SEWER COMMISSION



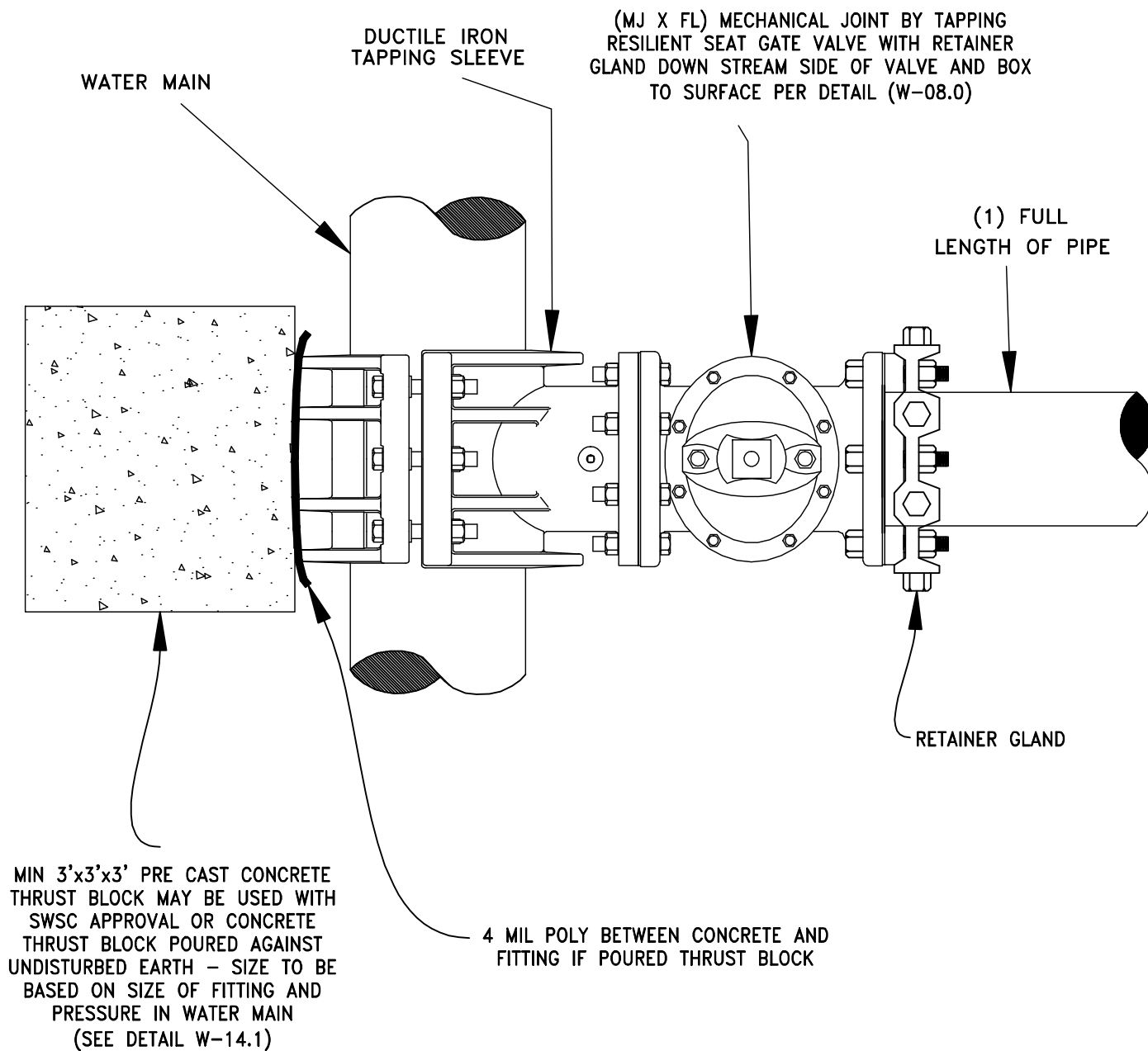
WATER DETAIL W-08.2

RAISE VALVE BOX WITH RISER

SCALE: NTS


REV. DATE

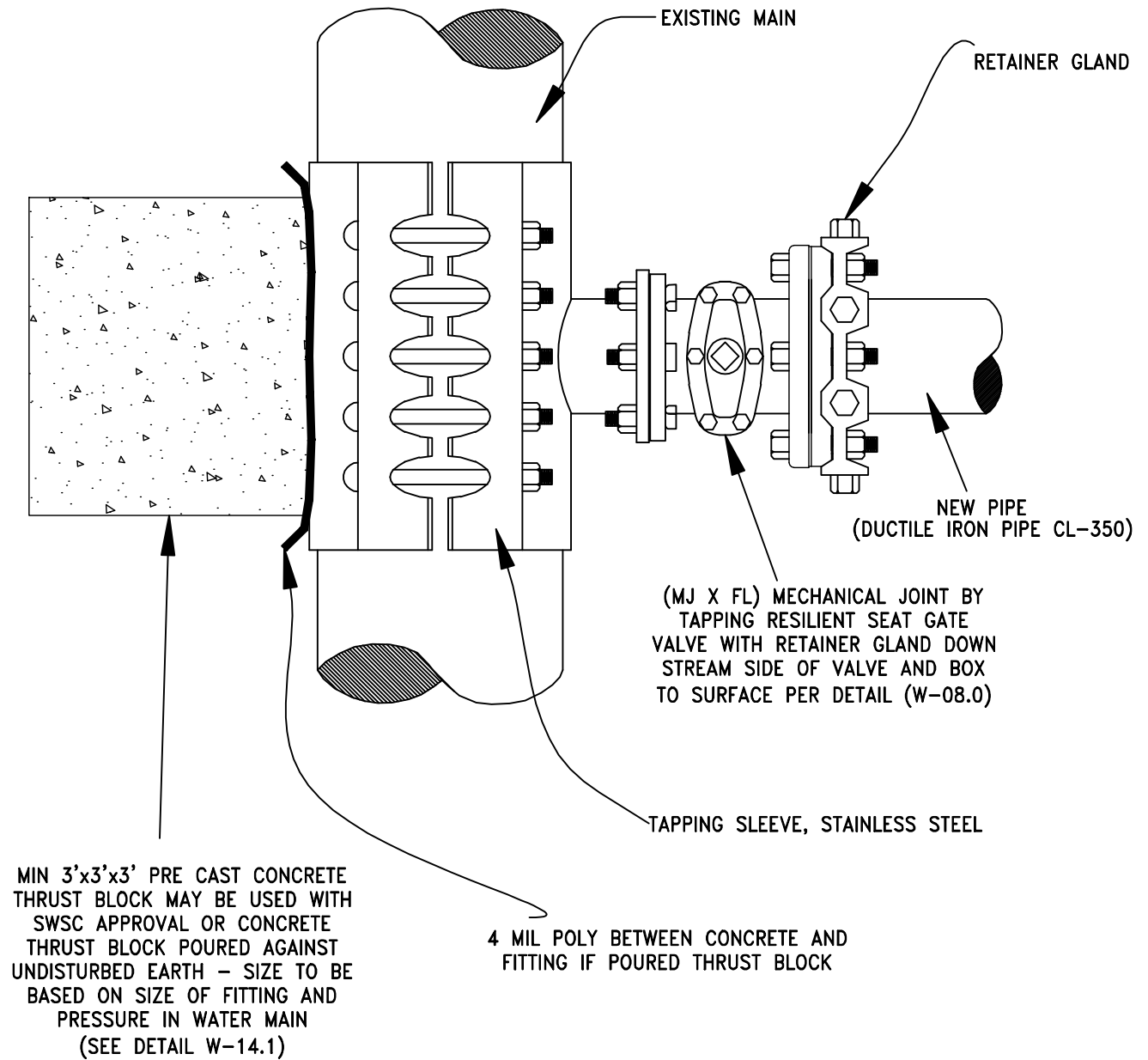
4/1/09 MAB



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

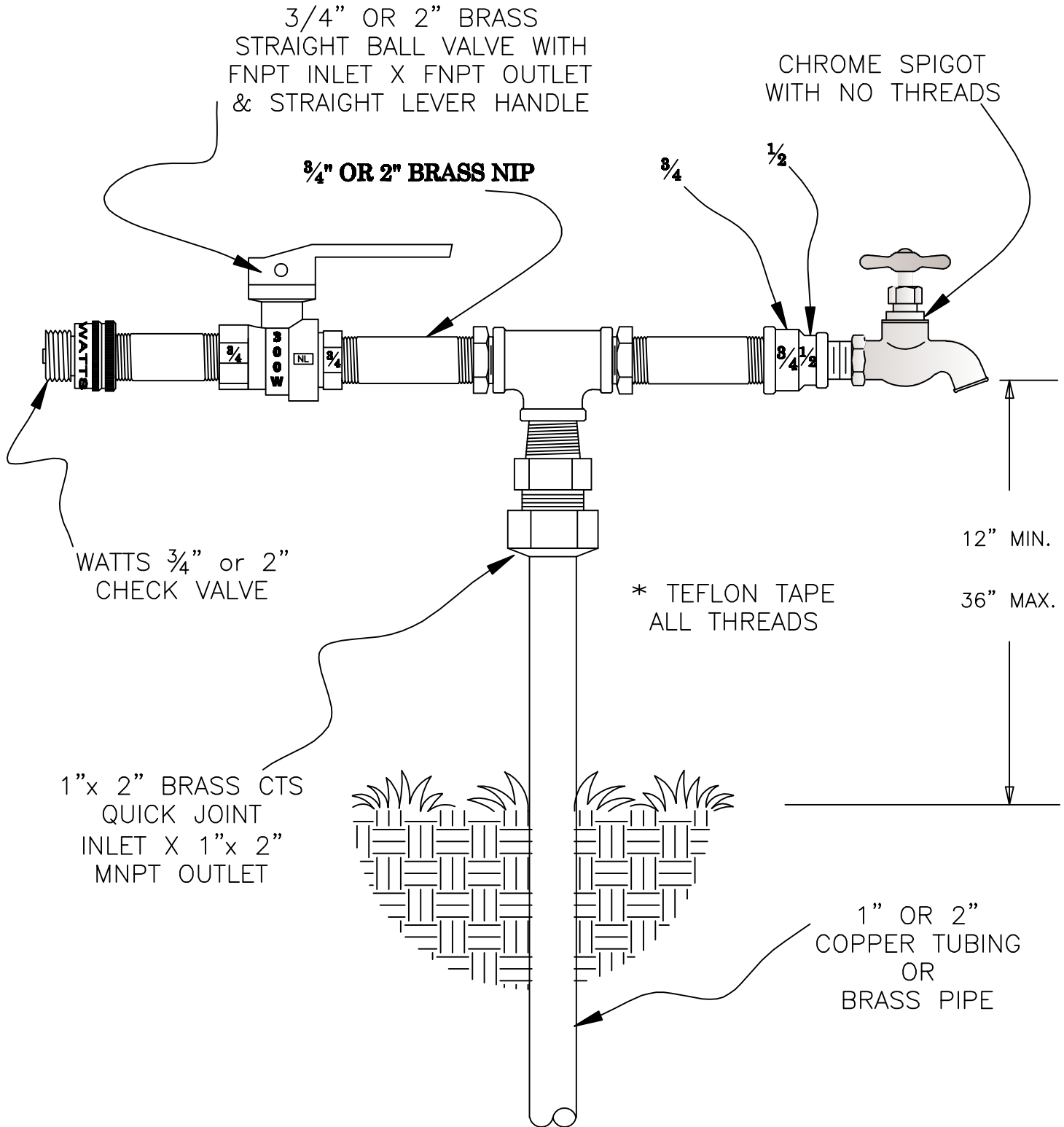
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-09.0	REV. DATE
	<i>DUCTILE IRON TAPPING SLEEVE</i>	4/1/08 MAB
	SCALE: NTS	



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

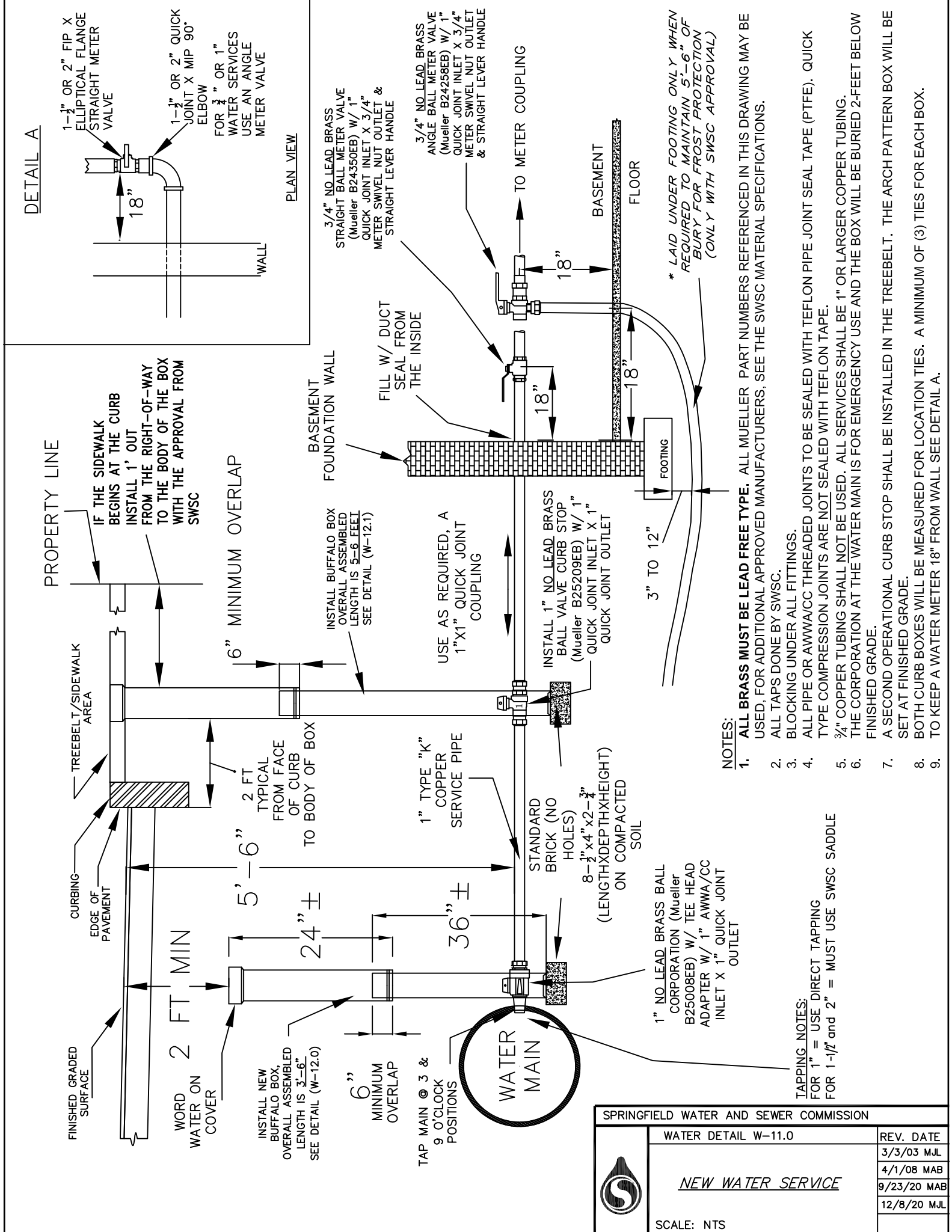
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-09.1	REV. DATE
	<u>STAINLESS STEEL</u>	4/1/08 MAB
	<u>TAPPING SLEEVE</u>	
	SCALE: NTS	



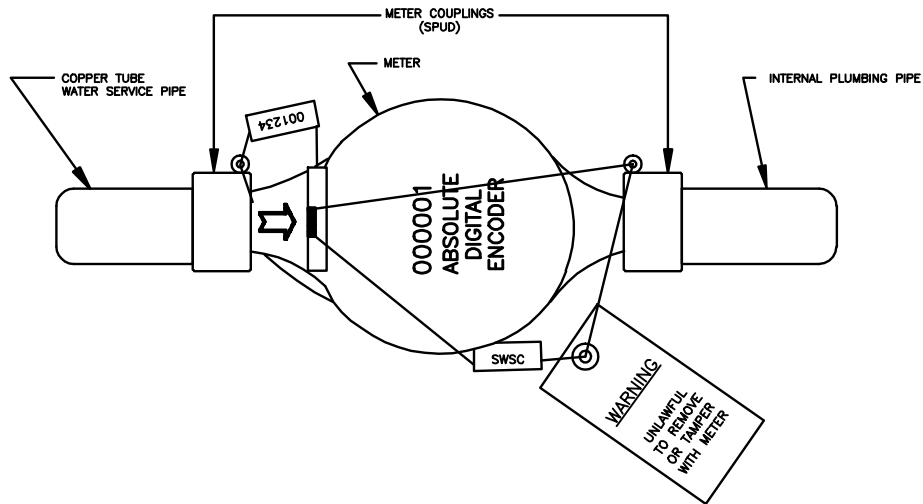
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.

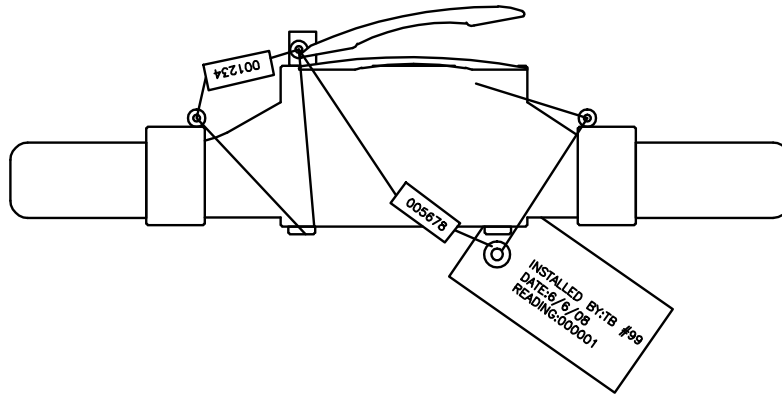
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-10.0	REV. DATE
	<p><i>FLUSHING DEVICE</i></p> <p>SCALE: NTS</p>	4/1/08 MAB
		6/18/08 MAB



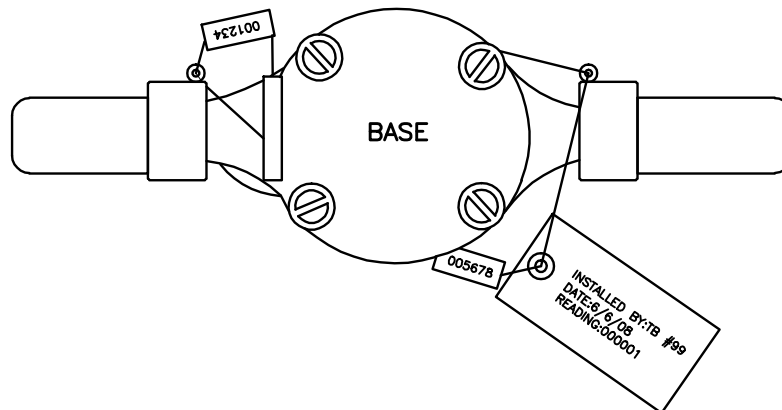
"TOP VIEW"



"SIDE VIEW"




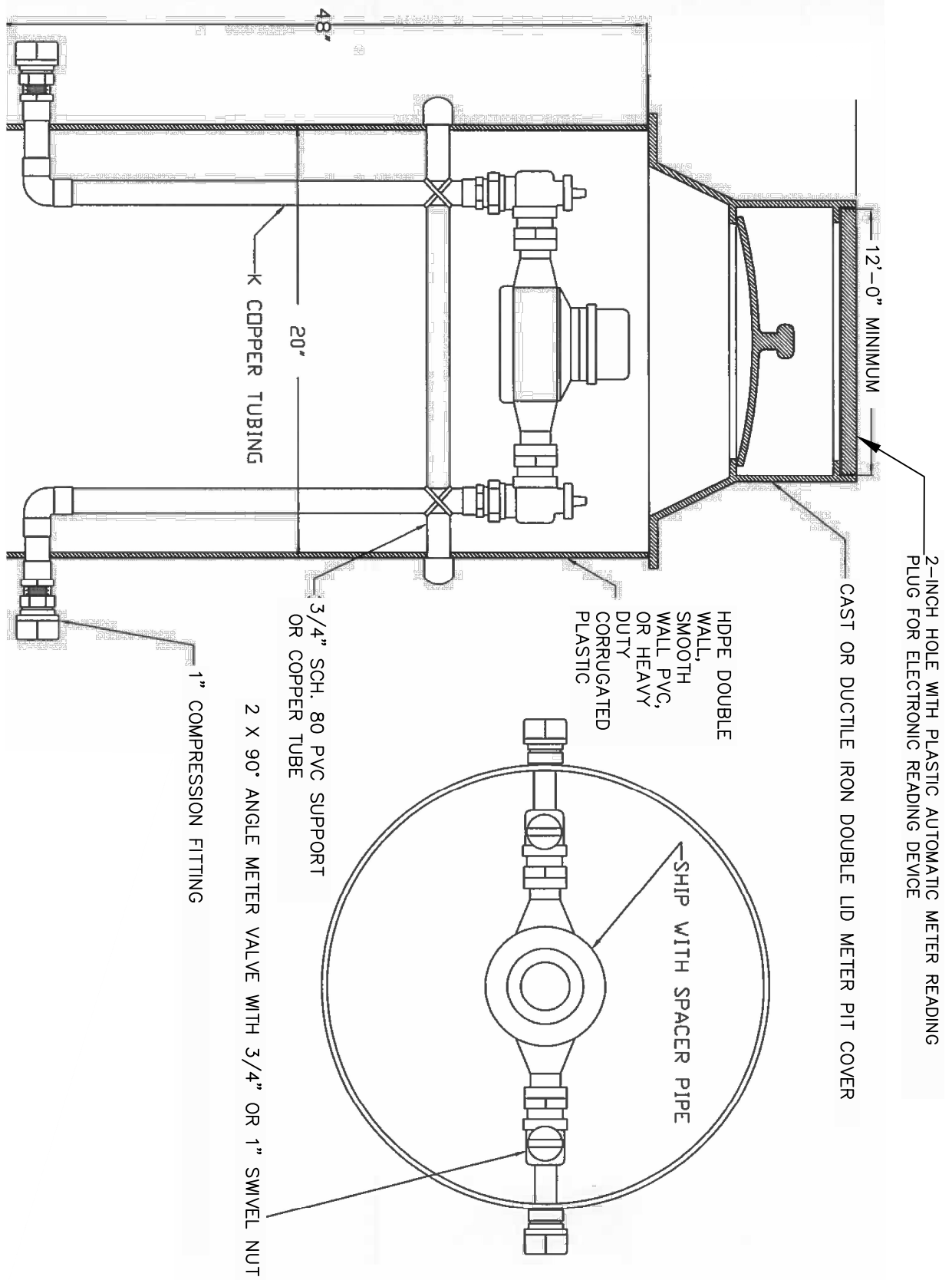
"BOTTOM VIEW"




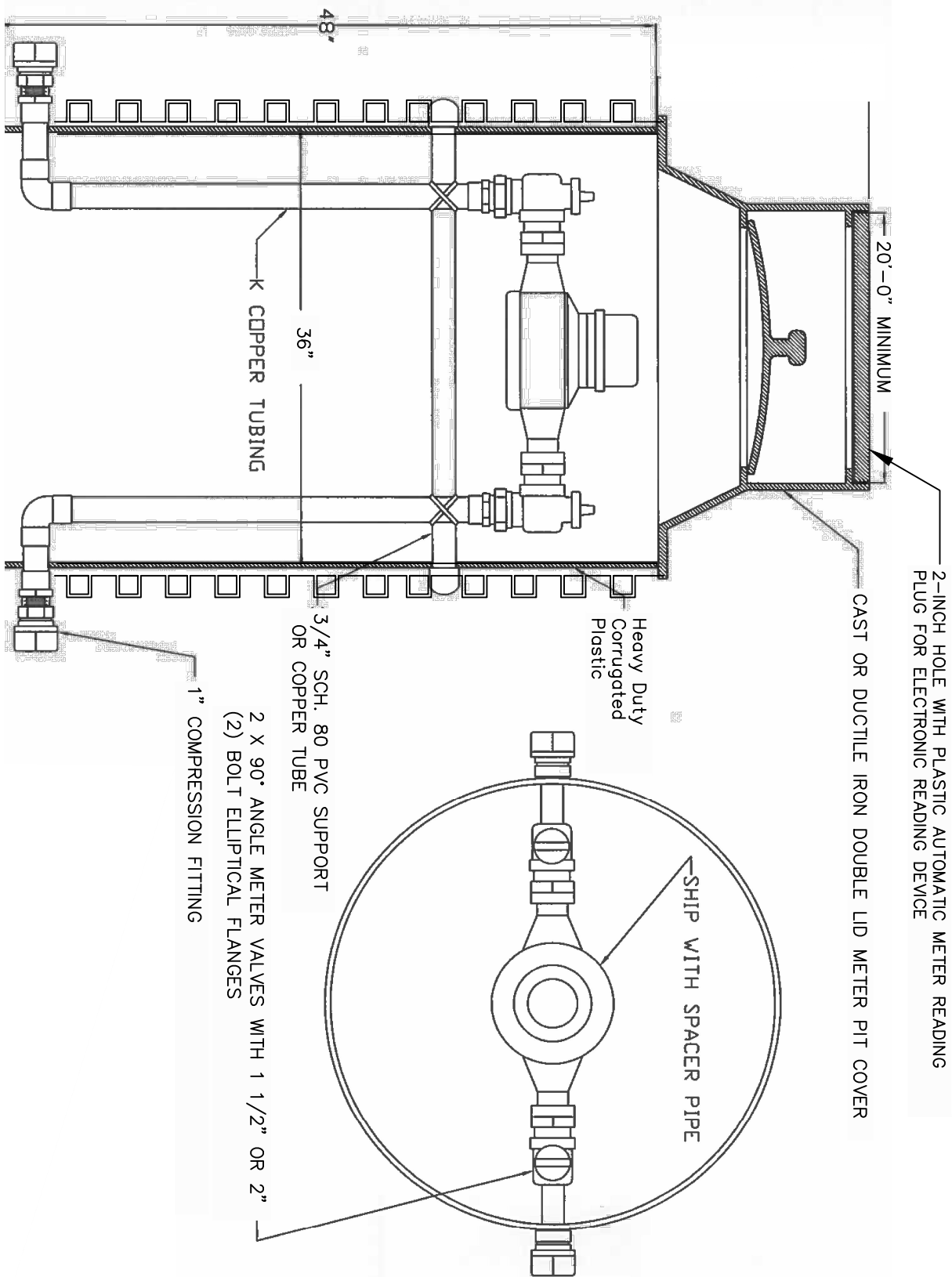
NOTES:


- METERS SHALL BE SEALED BY COMMISSION INSTALLERS & METER READERS ONLY.**

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-11.2	REV. DATE
	<u>WATER METER</u>	6/18/08 MAB
	<u>SEALING DETAIL</u>	
	SCALE: NTS	



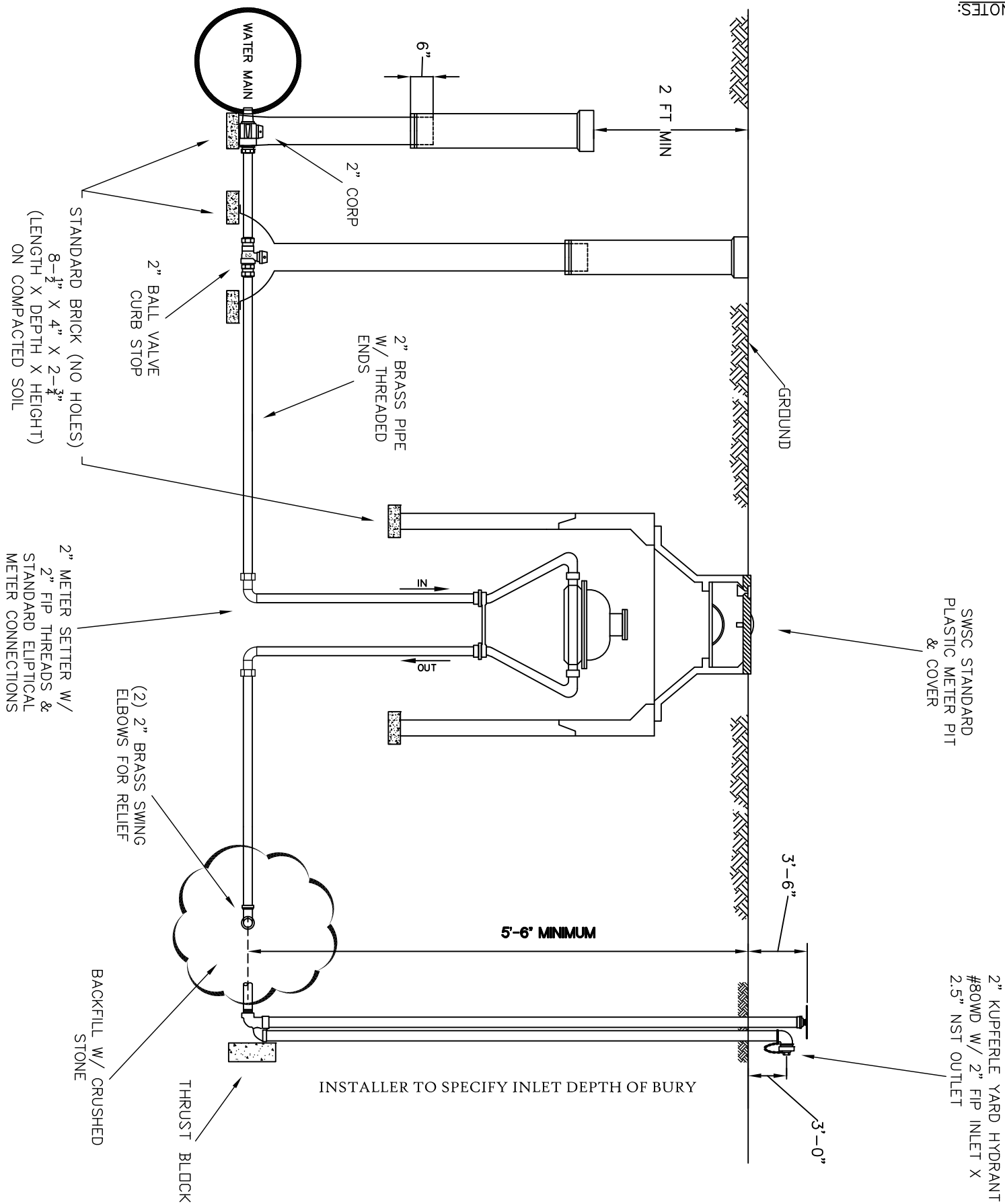
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-11.3	REV. DATE
	PLASTIC METER PIT FOR 5"-1" METERS	9/18/18 DJP
	SCALE: NTS	7/30/20 LMB



SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-11.4	REV. DATE
	PLASTIC METER PIT FOR 1 1/2"-2" METERS	9/18/18 DJP
	SCALE: NTS	7/30/20 LMB

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL 2-INCH PIPING SHALL BE THREADED BRASS.
3. VALVE BOX AND METER PIT SHALL BE SUPPORTED USING BLOCKS.

NOTES:



SPRINGFIELD WATER AND SEWER COMMISSION

WATER DETAIL W-11.5

REV. DATE

TYPICAL YARD HYDRANT

SCALE: NTS

10/27/20 MJL

BITUMINOUS OR CONCRETE
PAVEMENT SURFACE (TYP)

TREEBELT OR NON-PAVED
SURFACES (TYP)

24" BELOW
GRADE

4-3/4" OUTSIDE DIAMETER
4-1/8" INSIDE DIAMETER

6"
MINIMUM
OVERLAP

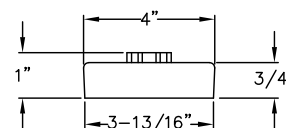
3-1/2"
OUTSIDE
DIAMETER

3-1/8"
INSIDE
DIAMETER

3-3/4"
2-7/8"

(1) STANDARD BRICK (NO HOLES)
8-1/2"x4"x2-3/8" (LENGTHXDEPTHXHEIGHT)
PLACED UNDER CORPORATION OR
CURBSTOP
AND VALVE BOX BOTTOM FOR SUPPORT

SLIDE TYPE
BUFFALO SERVICE BOX



SERVICE BOX COVER
WITH BRASS PENTAGON HEAD NUT
AND THE WORD "WATER" CAST INTO COVER

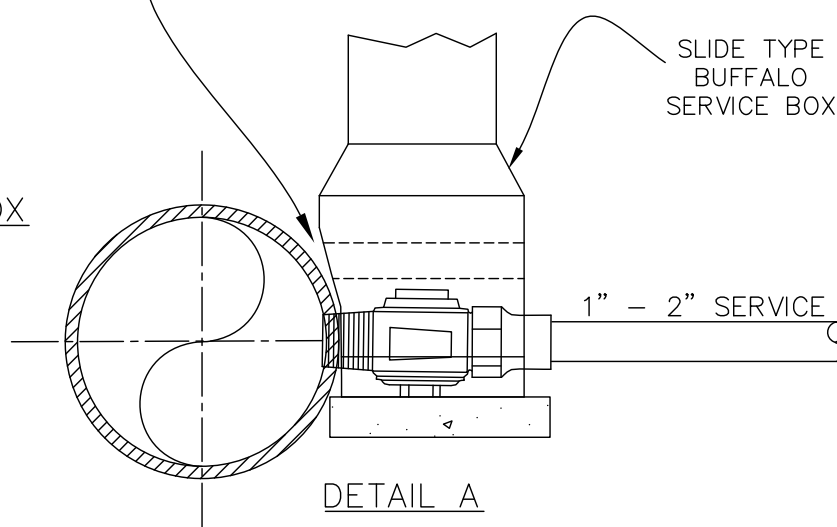
STANDARD SERVICE BOX SEE SWSC TECHNICAL
SPECIFICATIONS

THE ARCH PATTERN BASE SHALL ACCOMMODATE
3/4 TO 2-INCH BALL TYPE CORPORATIONS AND
BALL TYPE CURB STOPS.

A.) FOR 1-INCH BALL TYPE CORPORATIONS AND
BALL TYPE CURB STOPS THE ARCH SHALL BE AT
LEAST 5-INCHES TALL WITH A 3-INCH BY 3-INCH ARCH
& CENTERED OVER 1-INCH BALL TYPE CORPORATION.

B.) FOR 1-1/2-INCH TO 2-INCH BALL TYPE
CORPORATIONS AND BALL TYPE CURB STOPS THE ARCH
SHALL BE AT LEAST 7-INCHES TALL WITH A 4-INCH BY
4-INCH ARCH.

APPROXIMATELY 1/2" TO BE REMOVED FROM SIDE OF
BASE CLOSEST TO WATER MAIN IN ORDER TO CONFIRM
THE BASE IS OVER THE 1-1/2"-2" BALL TYPE CURB
STOPS (SEE DETAIL A).



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

SPRINGFIELD WATER AND SEWER COMMISSION



WATER DETAIL W-12.0

TYPICAL SERVICE BOX DETAIL
IN PAVED AREAS

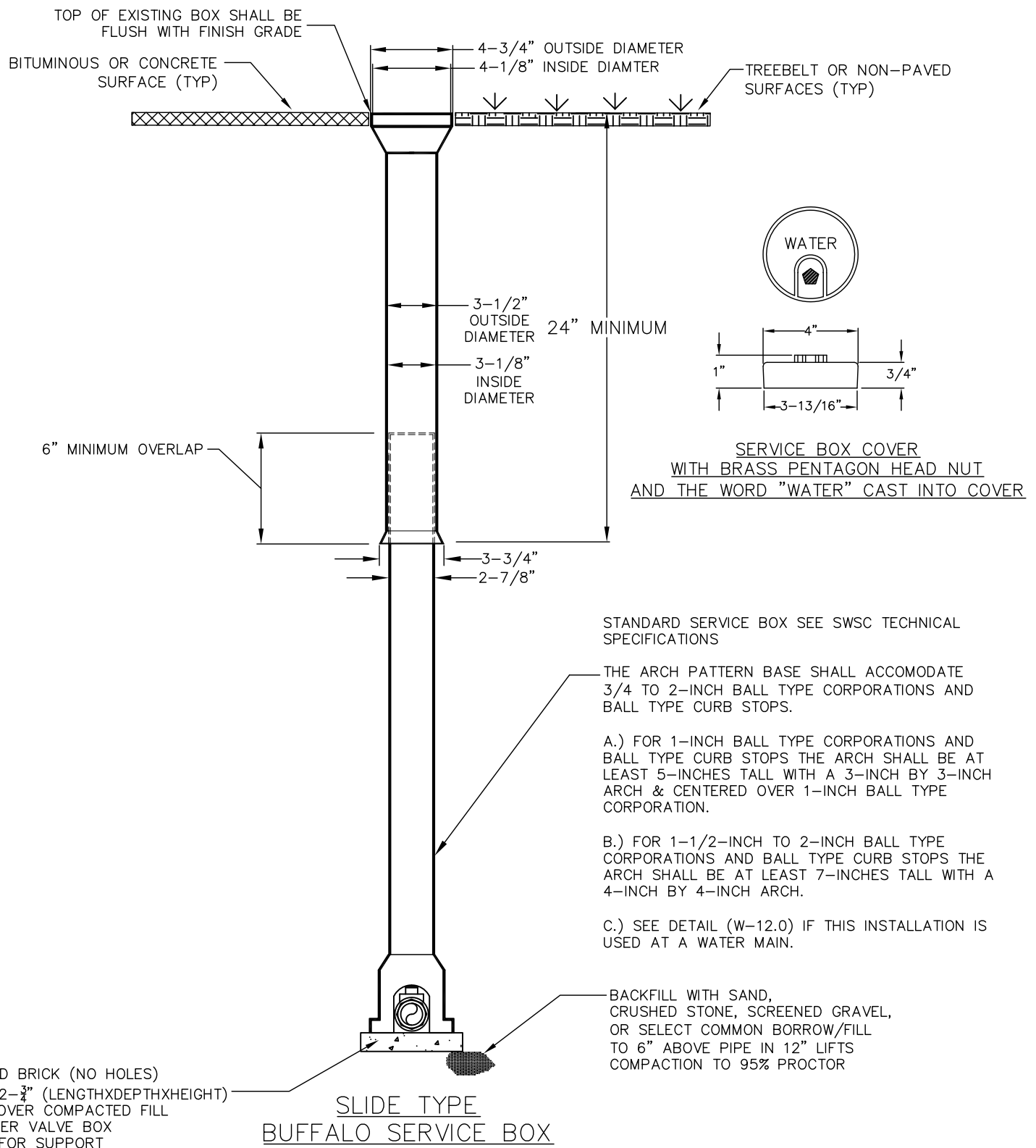
SCALE: NTS

REV. DATE

4/1/08 MAB


4/1/09 MAB

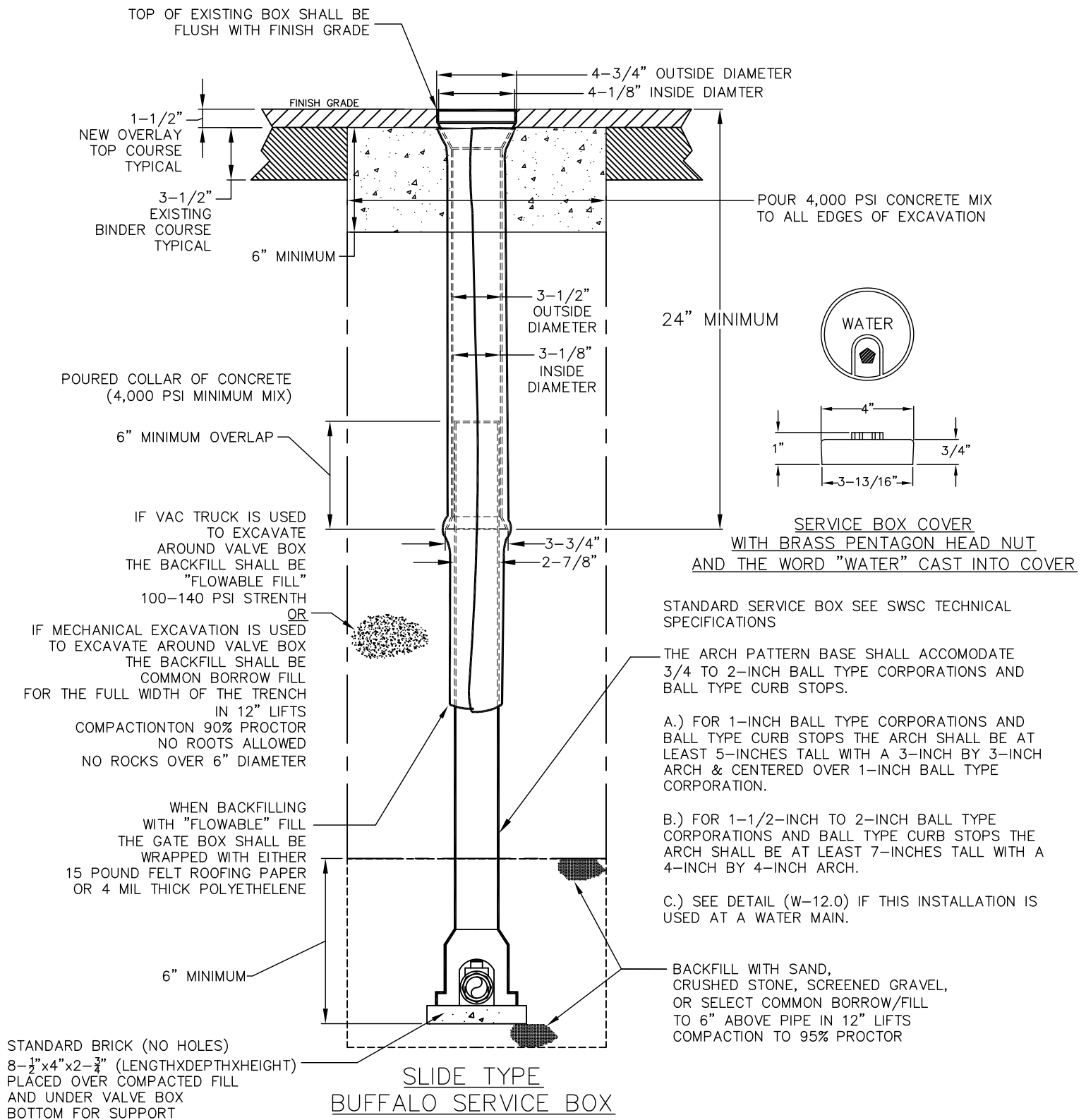
1/9/19 DJP



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. IF BACKFILLING WITH "FLOWABLE" FILL WRAP THE SERVICE BOX WITH 15 POUND FELT ROOFING PAPER OR 4 MIL THICK POLYETHYLENE IN ACCORDANCE WITH DETAIL W-12.2.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-12.1	REV. DATE
	TYPICAL SERVICE BOX DETAIL	4/1/08 MAB
	IN NON-PAVED AREAS	4/1/09 MAB
	SCALE: NTS	4/1/10 MAB
		1/9/19 DJP



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

SPRINGFIELD WATER AND SEWER COMMISSION



WATER DETAIL W-12.2

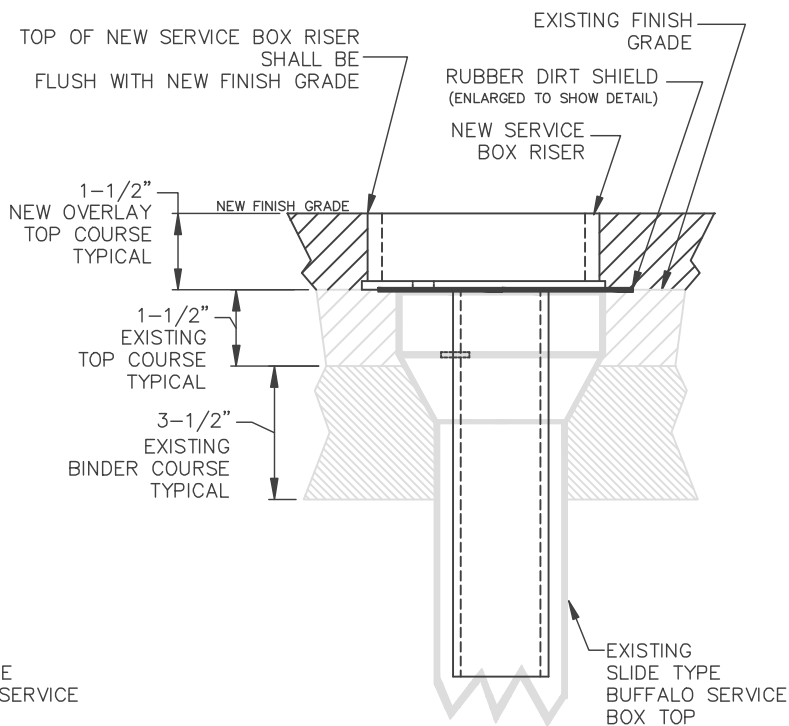
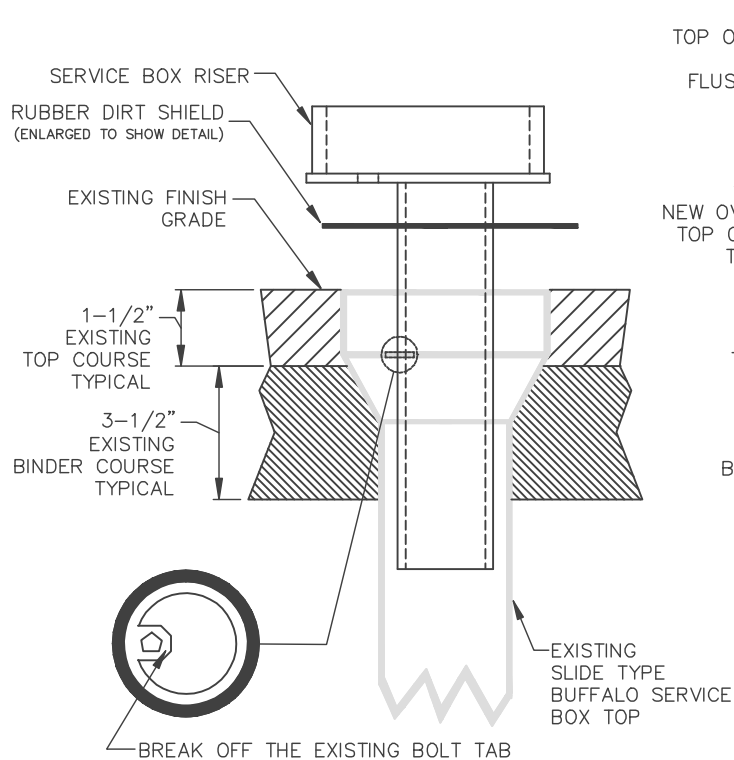
REPLACE, RAISE OR RESET
SERVICE BOX

SCALE: NTS

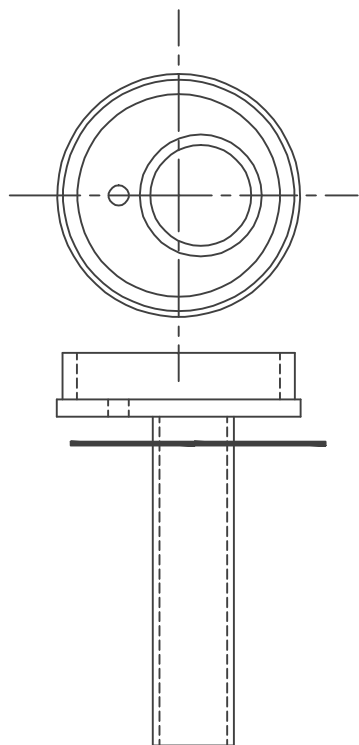
REV. DATE

4/1/09 MAB

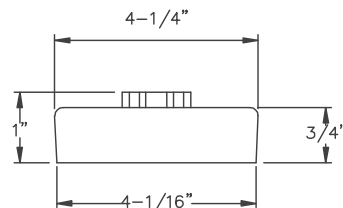
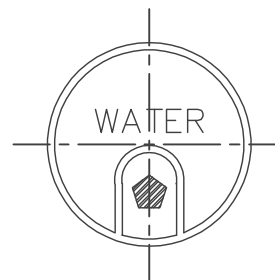
1/9/19 DJP



SERVICE BOX RISER INSTALLED




SERVICE BOX RISER

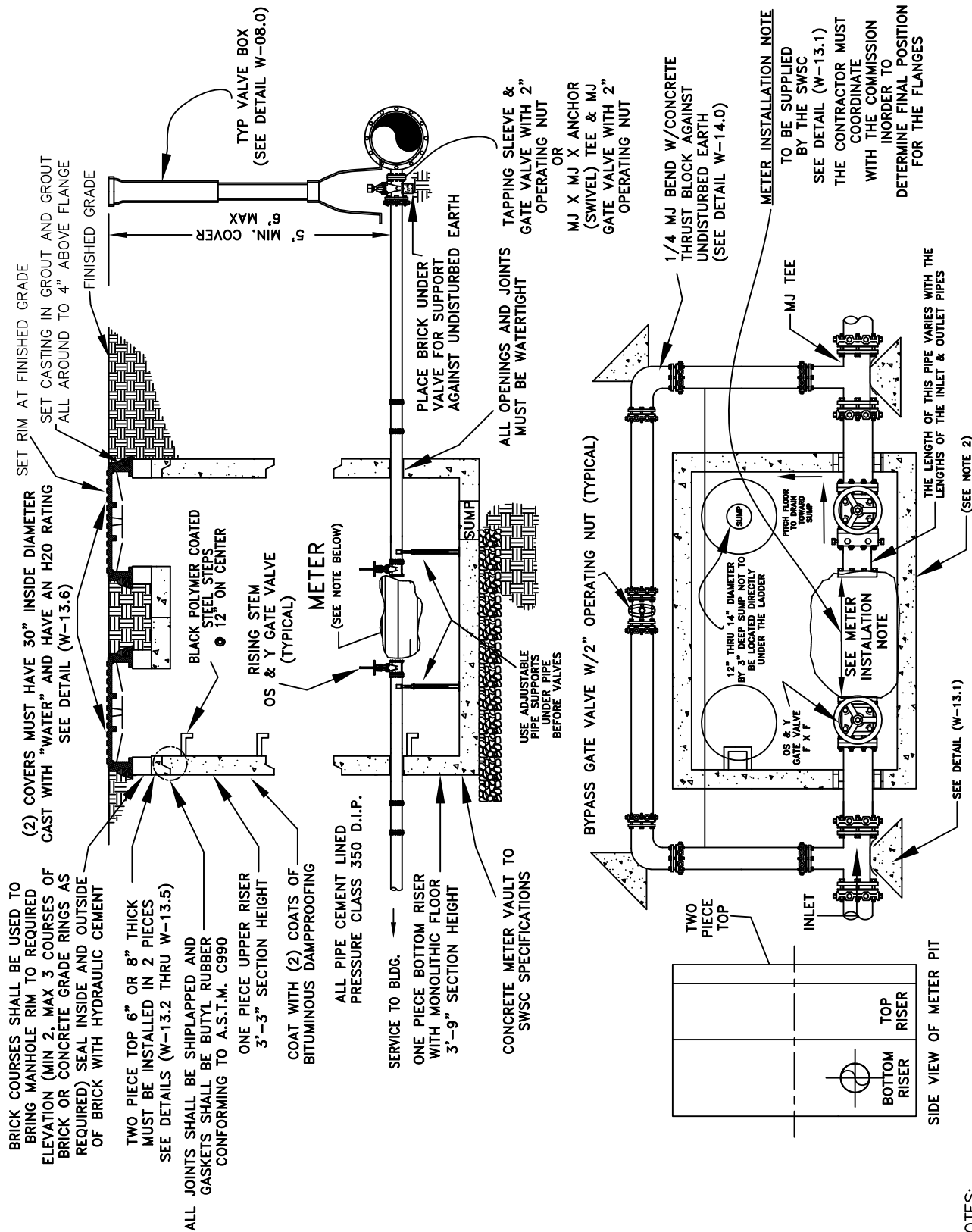


SERVICE BOX RISER COVER
WITH BRASS PENTAGON HEAD NUT
AND THE WORD "WATER" CAST INTO COVER

NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.

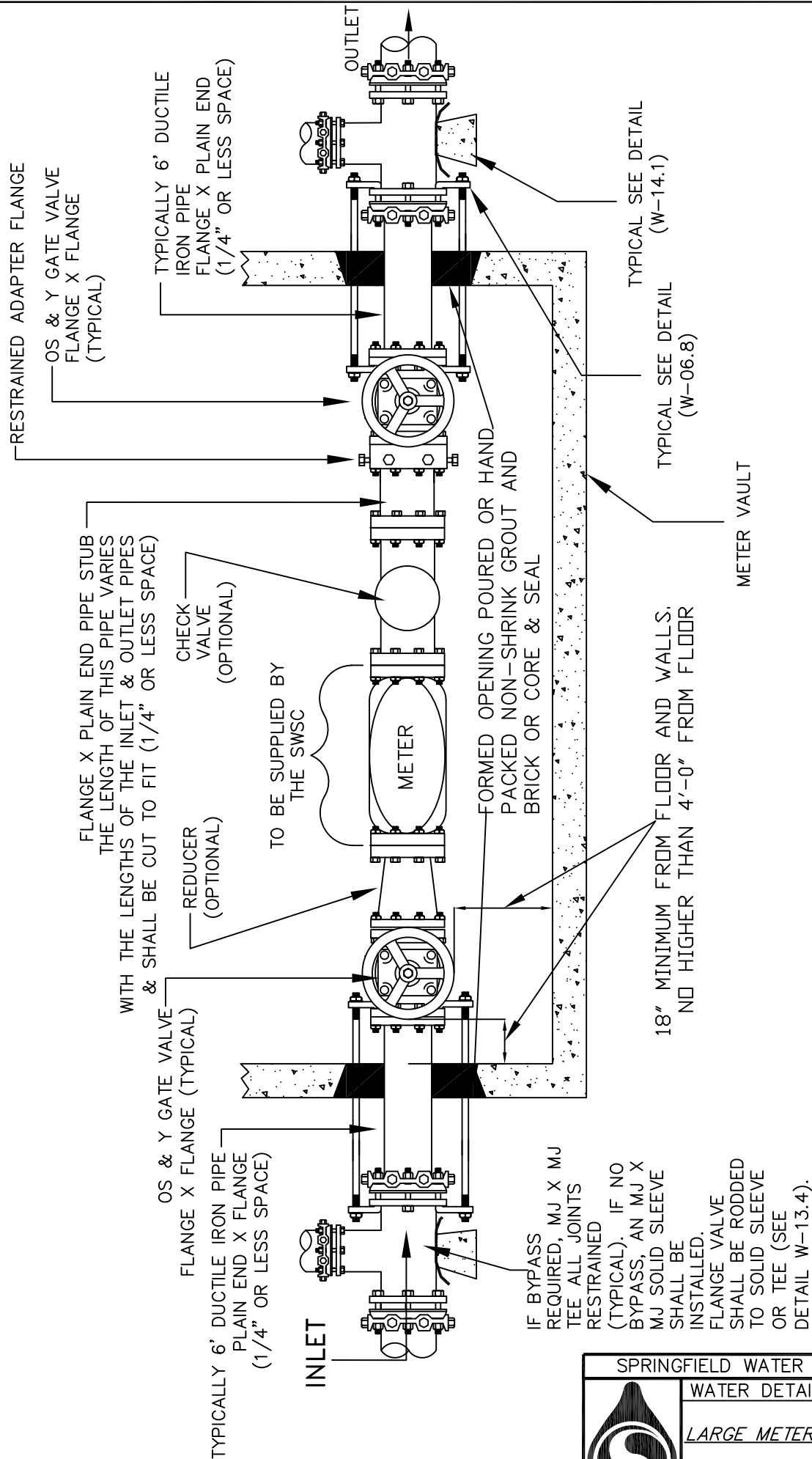
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-12.3	REV. DATE
	RAISE SERVICE BOX WITH RISER	4/1/09 MAB
	SCALE: NTS	



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. VAULT TOP, WALLS & FLOOR THICKNESS SHALL BE IN ACCORDANCE WITH DETAILS (W-13.2 THRU W-13.3).
3. ALL MATERIALS INCLUDING THE CONE REDUCER (OPTIONAL, IF REQUIRED BY THE SWSC), AND CHECK VALVE (OPTIONAL, IF REQUIRED BY THE SWSC) SHALL BE SUPPLIED BY THE CONTRACTOR.
4. ALL VALVES IN THE VAULT MUST HAVE HAND WHEELS. BYPASS VALVES MUST LOCKABLE OR CHAINABLE.
5. BYPASS PIPE CAN RUN ON OUTSIDE OF THE VAULT WITH A SHUT OFF VALVE.
6. ALL BURIED JOINTS SHALL BE MECHANICALLY RESTRAINED OR LOCKING GASKET. JOINTS IN VAULT OR BUILDING SHALL BE FLANGED.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.0	REV. DATE
	METER VAULT PIPING	9/18/18 DJP
	SCALE: NTS	



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL MATERIALS INCLUDING THE CONE REDUCER (OPTIONAL, IF REQUIRED BY THE SWSC), AND CHECK VALVE (OPTIONAL, IF REQUIRED BY THE SWSC) SHALL BE SUPPLIED BY THE CONTRACTOR.
3. EACH OS&Y SHALL BE BOLTED TO THE INLET AND OUTLET FLANGE OF THE F X PE PIPES.
4. THE OS&Y VALVE SHALL BE RESTRAINED TO THE SOLID SLEEVE OR TEE AND SECURED FROM ANY MOVEMENT.
5. EACH EXTERIOR BEND AND TEE MUST HAVE THRUST BLOCKS.
6. THE INLET AND OUTLET OPENINGS ARE TO BE SEALED AND WATER TIGHT AND FLUSH WITH THE INTERIOR AND EXTERIOR WALLS.
7. METER WILL BE SUPPLIED BY THE SWSC, CONTRACTOR TO CONFIRM WITH THE SWSC THE SPACE TO BE LEFT FOR THE METER CALL CUSTOMER FIELD SERVICES METER DIVISION AT (413-787-6207)

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.1	REV. DATE
	LARGE METER INSTALLATION	9/18/18 DJP
	SCALE: NTS	

OUTSIDE DIMENSIONS

L= 11'-0"

W= 7'-0"

H= 7'-6"

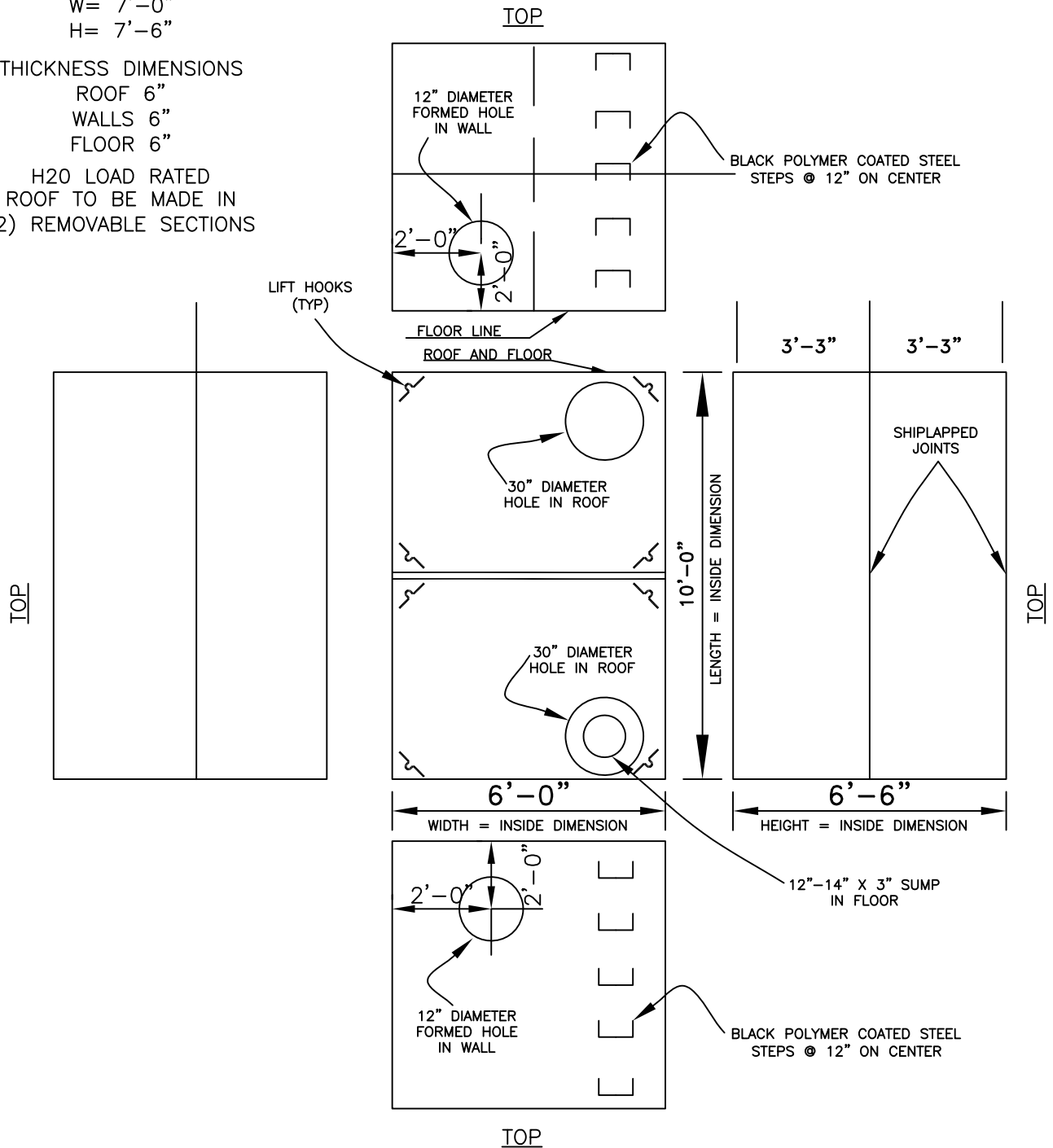
THICKNESS DIMENSIONS

ROOF 6"

WALLS 6"

FLOOR 6"

H2O LOAD RATED
ROOF TO BE MADE IN
(2) REMOVABLE SECTIONS



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. VAULT TOP, WALLS & FLOOR THICKNESS SHALL BE IN ACCORDANCE WITH DETAILS (W-13.2 - W-13.5).
3. FORMED HOLES SHALL BE TAPERED TOWARD THE INSIDE OF VAULT.
4. ALL JOINTS SHALL BE SHIPLAPPED AND GASKETS SHALL BE BUTYL RUBBER CONFORMING TO A.S.T.M. C990.

SPRINGFIELD WATER AND SEWER COMMISSION



WATER DETAIL W-13.2

STANDARD METER VAULT FOR
DUCTILE IRON WATER SERVICE
PIPE

SCALE: NTS

REV. DATE

9/18/18 DJP

OUTSIDE DIMENSIONS

L= 12'-2"

W= 9'-0"

H= 7'-8"

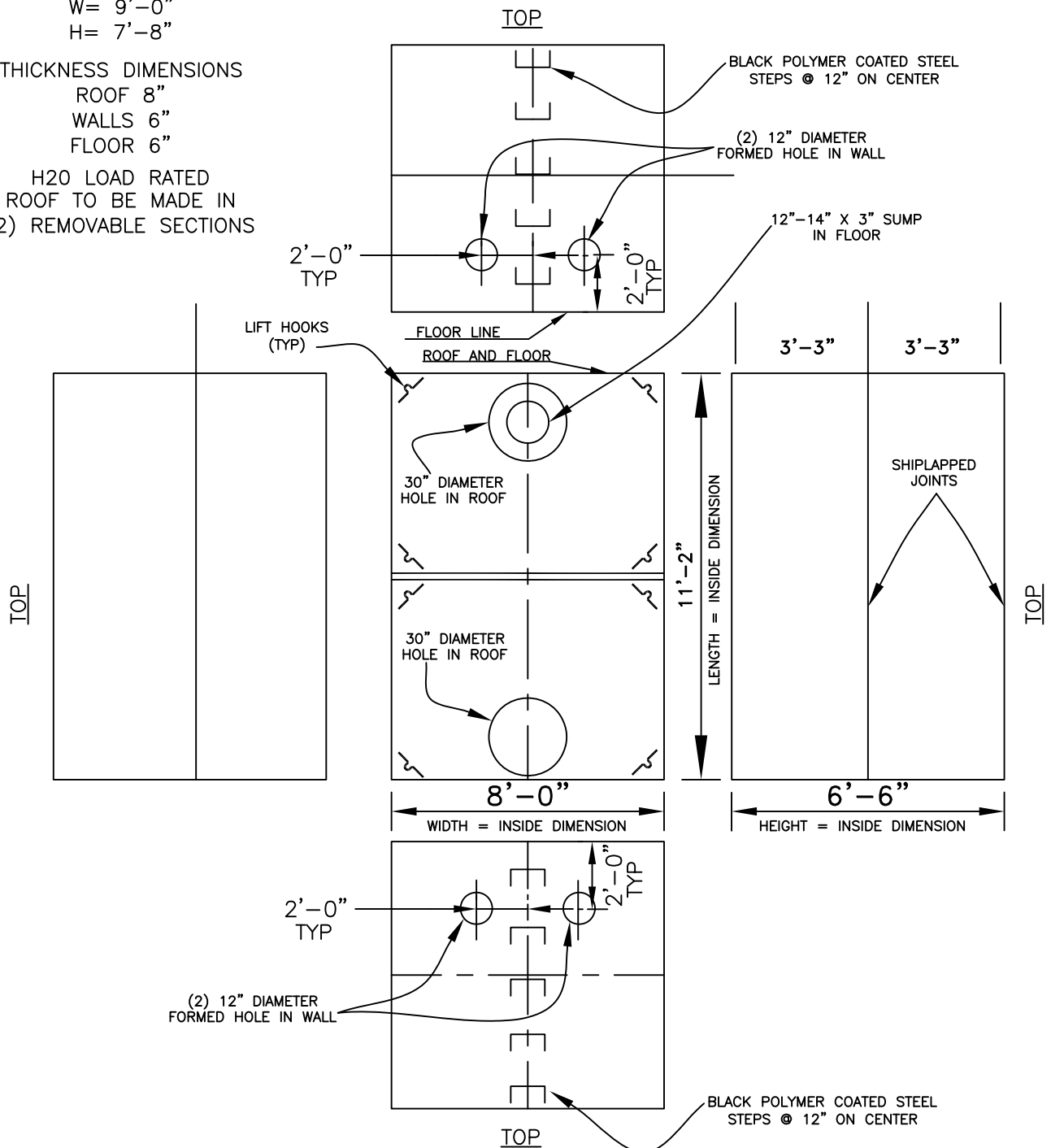
THICKNESS DIMENSIONS

ROOF 8"

WALLS 6"

FLOOR 6"

H2O LOAD RATED
ROOF TO BE MADE IN
(2) REMOVABLE SECTIONS



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. VAULT TOP, WALLS & FLOOR THICKNESS SHALL BE IN ACCORDANCE WITH DETAILS (W-13.2 - W-13.5).
3. FORMED HOLES SHALL BE TAPERED TOWARD THE INSIDE OF VAULT.
4. ALL JOINTS SHALL BE SHIPLAPPED AND GASKETS SHALL BE BUTYL RUBBER CONFORMING TO A.S.T.M. C990.

SPRINGFIELD WATER AND SEWER COMMISSION



WATER DETAIL W-13.3

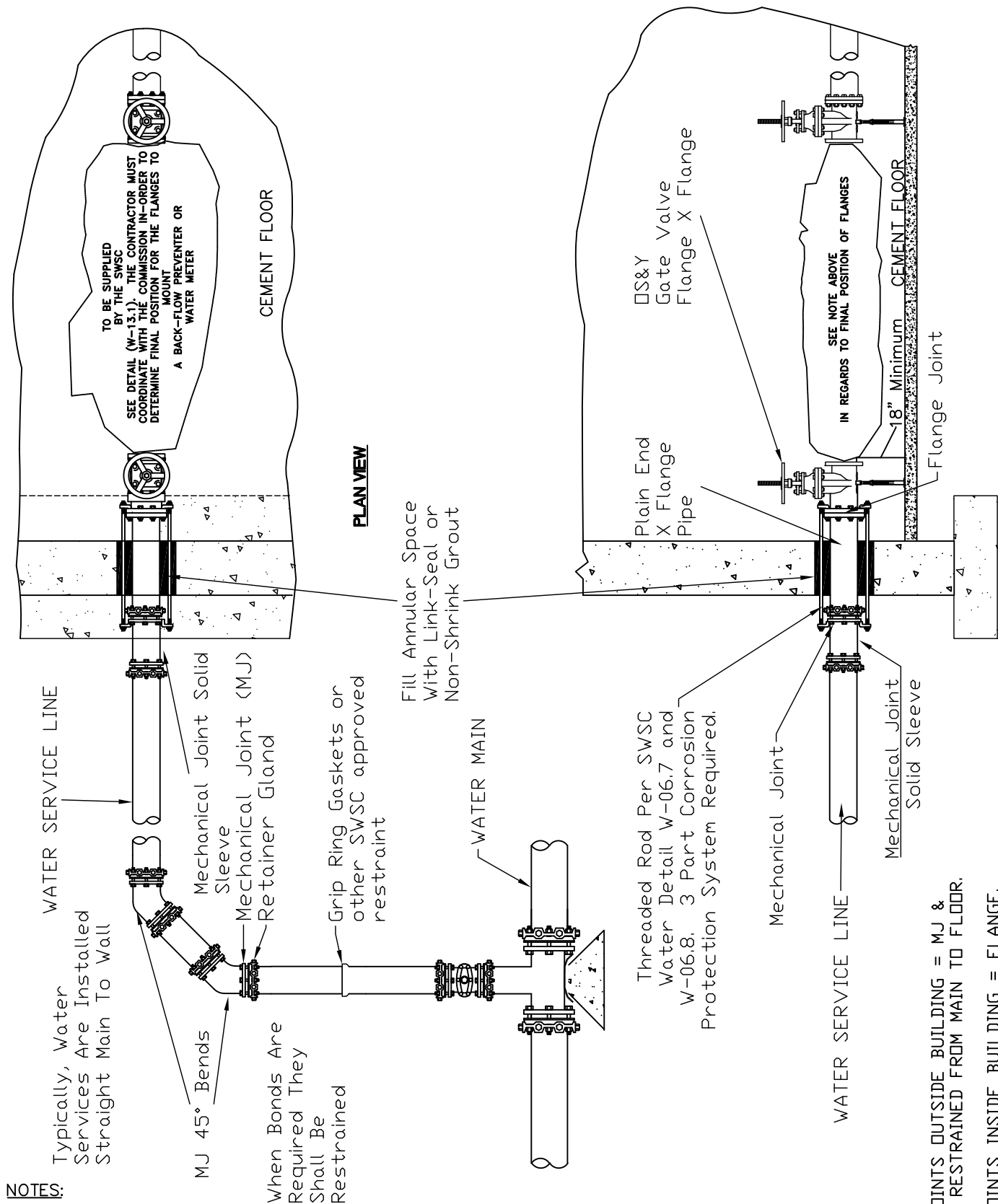
*OVERSIZED METER VAULT FOR
DUCTILE IRON WATER SERVICE
PIPE*

SCALE: NTS

REV. DATE


4/1/08 MAB

1/8/19 DJP



NOTES:

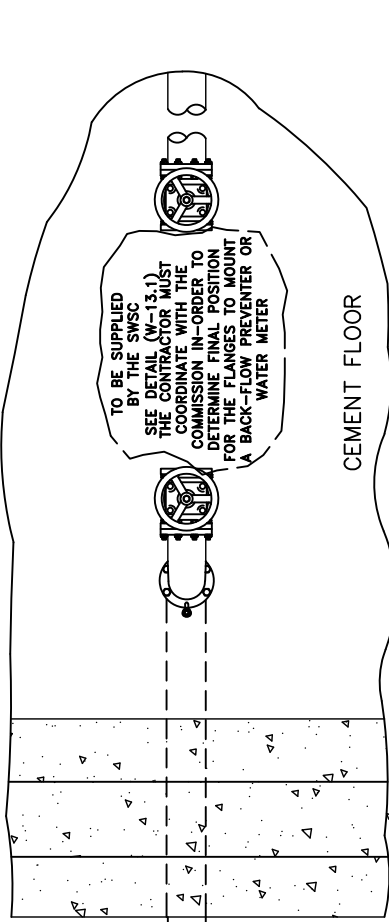
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL PIPING UP TO THE FIRST OS&Y MUST BE INSTALLED BEFORE TESTING.
2. FLANGES THAT CONNECT METER MUST BE SUPPLIED BY THE CONTRACTOR.
3. ALL VALVES IN THE BASEMENT/MECHANICAL ROOM MUST BE OS&Y, HAVE HAND WHEELS AND MUST LOCKABLE OR CHAIN-ABLE. NO PORT ALLOWED ON OS&Y EITHER SIDE OF THE METER.
4. ALL PIPES SHALL BE FULLY RESTRAINED FROM 1ST OS+Y VALVE FOR 80- FEET.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.4	REV. DATE
	TYPICAL DUCTILE IRON	1/8/19 DJP
	WATER SERVICE DETAIL	
	THROUGH FOUNDATION WALL	
	SCALE: NTS	

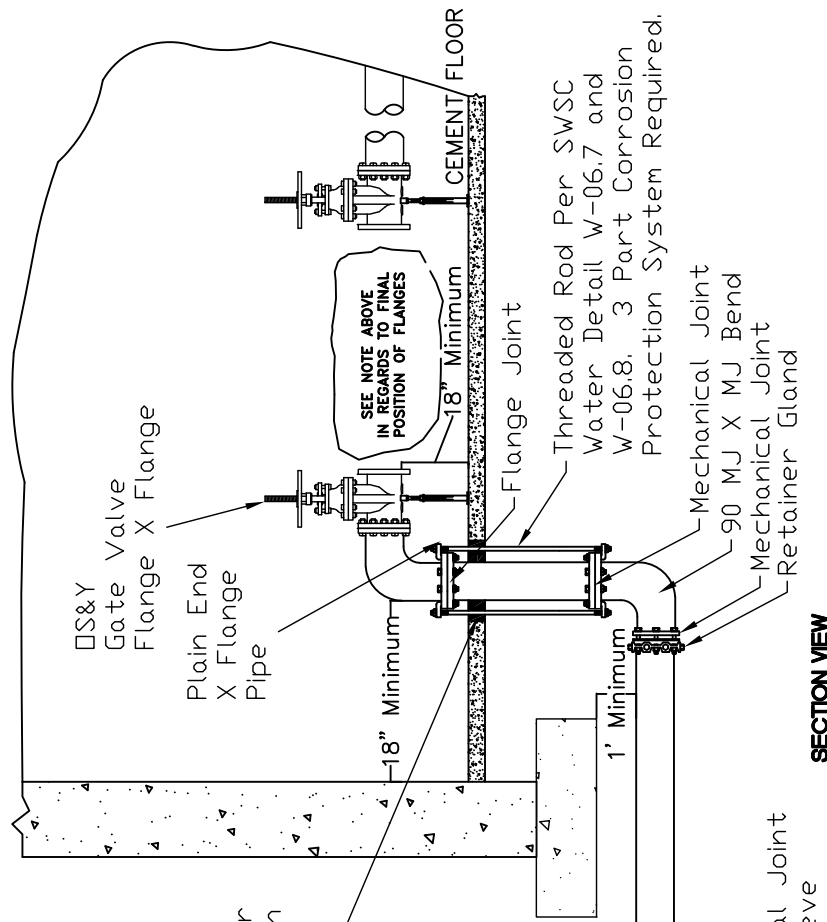
Typically, Water Services Are Installed Straight Main To Wall

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL PIPING UP TO THE FIRST OS&Y MUST BE INSTALLED BEFORE TESTING.
2. FLANGES THAT CONNECT METER MUST BE SUPPLIED BY THE CONTRACTOR.
3. ALL VALVES IN THE BASEMENT/MECHANICAL ROOM MUST BE OS&Y, HAVE HAND WHEELS AND MUST LOCKABLE OR CHAIN-ABLE. NO PORT ALLOWED ON OS&Y EITHER SIDE OF THE METER.
4. ALL PIPES SHALL BE FULLY RESTRAINED FROM 1ST OS+Y VALVE FOR 80- FEET.



PLAN VIEW




SECTION VIEW

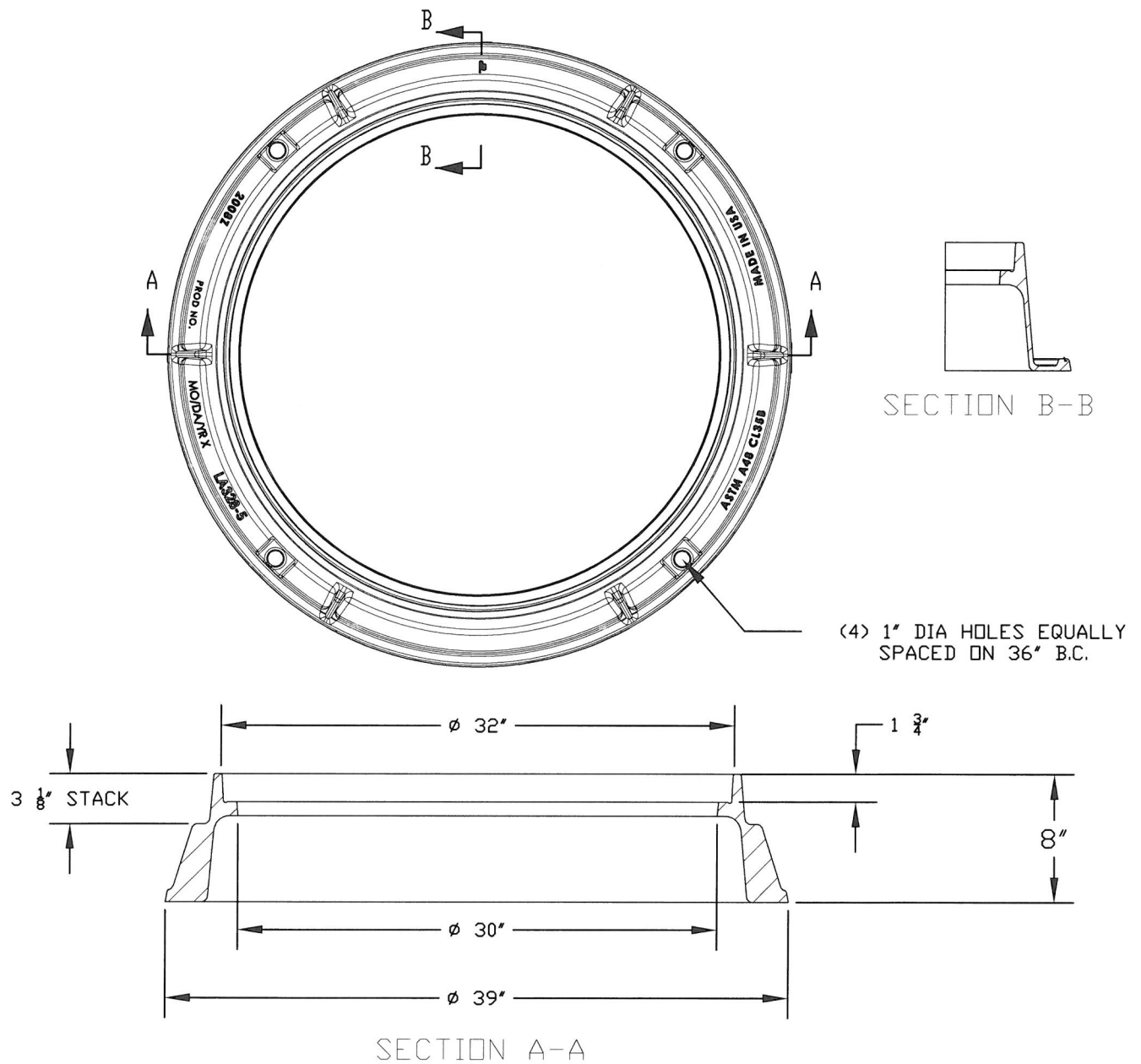
WATER SERVICE LINE

ALL JOINTS OUTSIDE BUILDING = MJ & FULLY RESTRAINED FROM MAIN TO FLOOR.

ALL JOINTS INSIDE BUILDING = FLANGE.


FIRST FITTING INSIDE BUILDING TO BE RODDED TO FITTING OUTSIDE BUILDING.

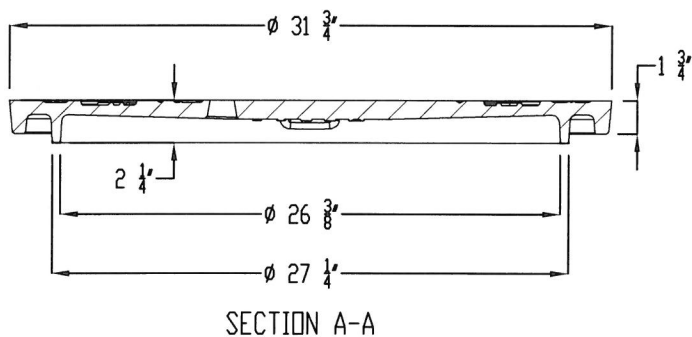
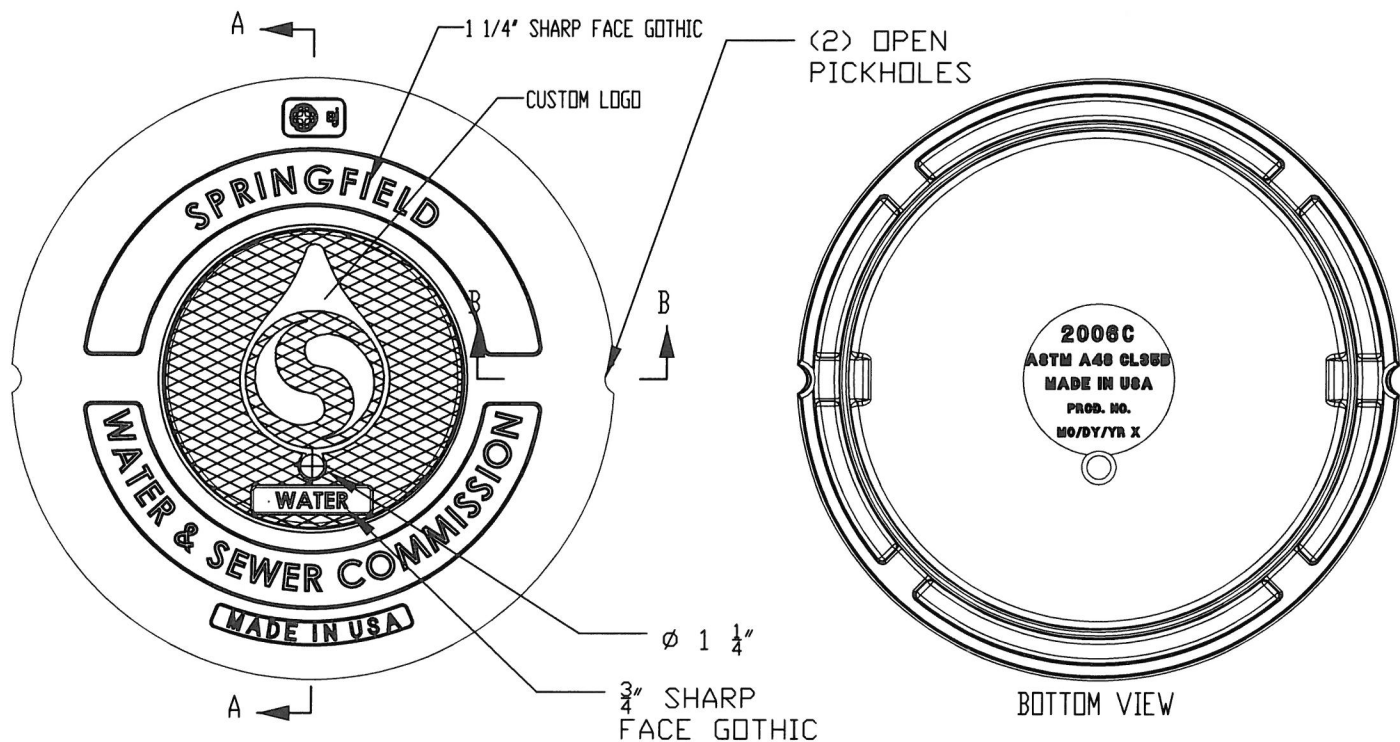
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.5	REV. DATE
	TYPICAL DUCTILE IRON	3/22/17 LMB
	WATER SERVICE DETAIL	1/8/19 DJP
	THROUGH CONCRETE FLOOR	
	SCALE: NTS	



NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT


SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.6	REV. DATE
	<u>32-inch by 8-inch</u>	4/16/19 DJP
	<u>Frame Only</u>	
	SCALE: NTS	

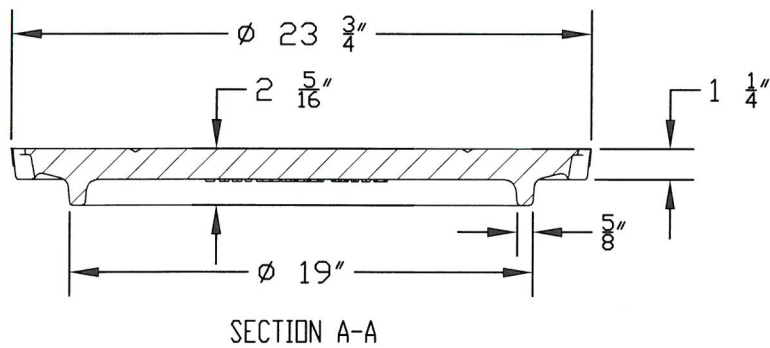
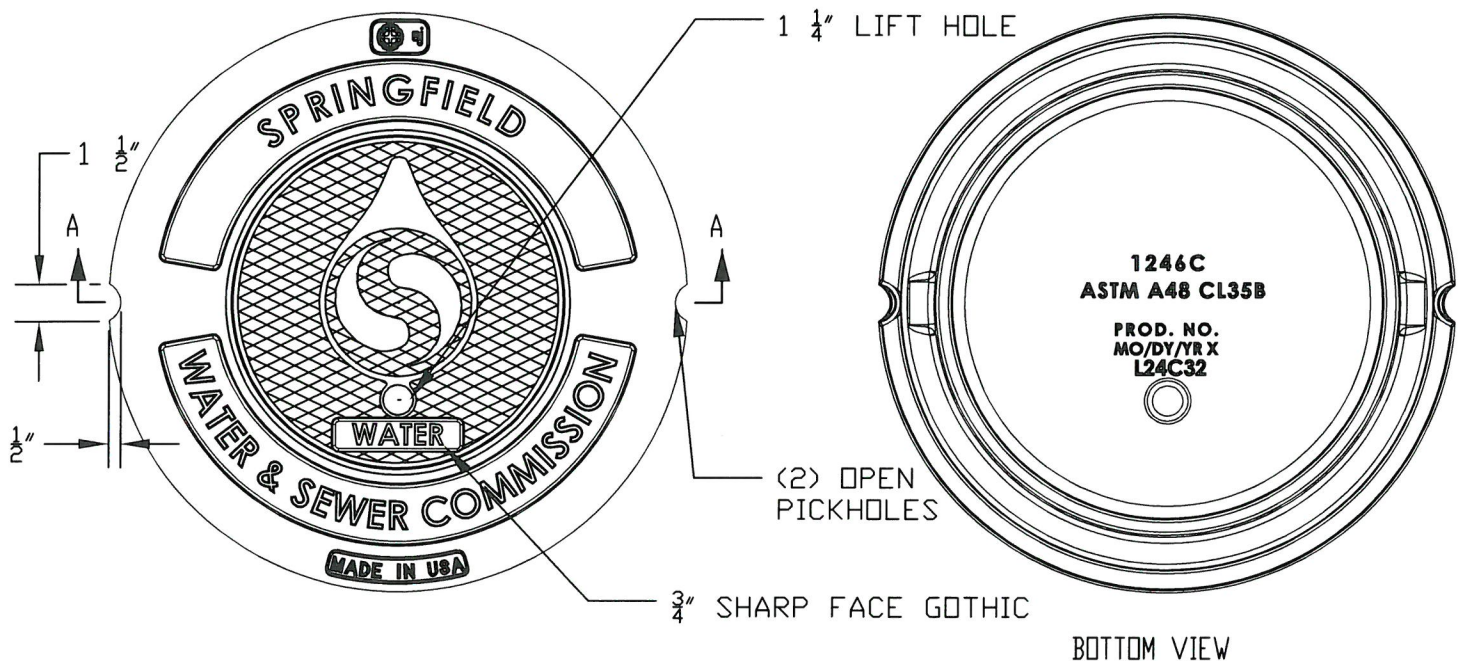


SECTION B-B
SCALE 1 : 8

NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

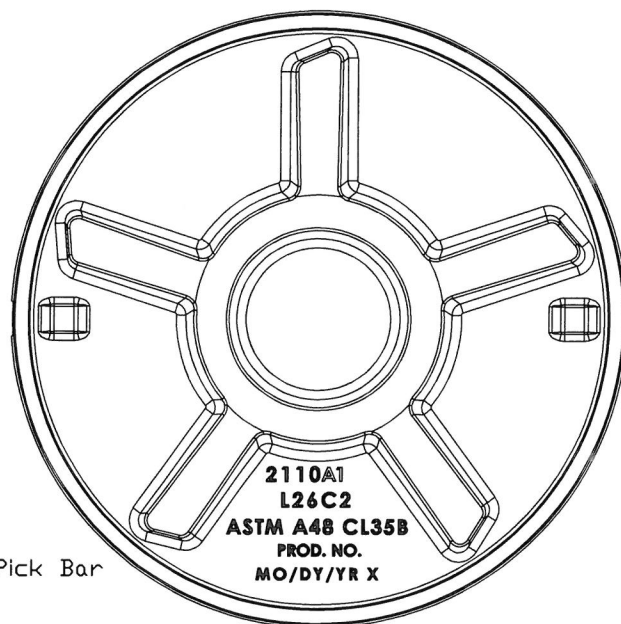
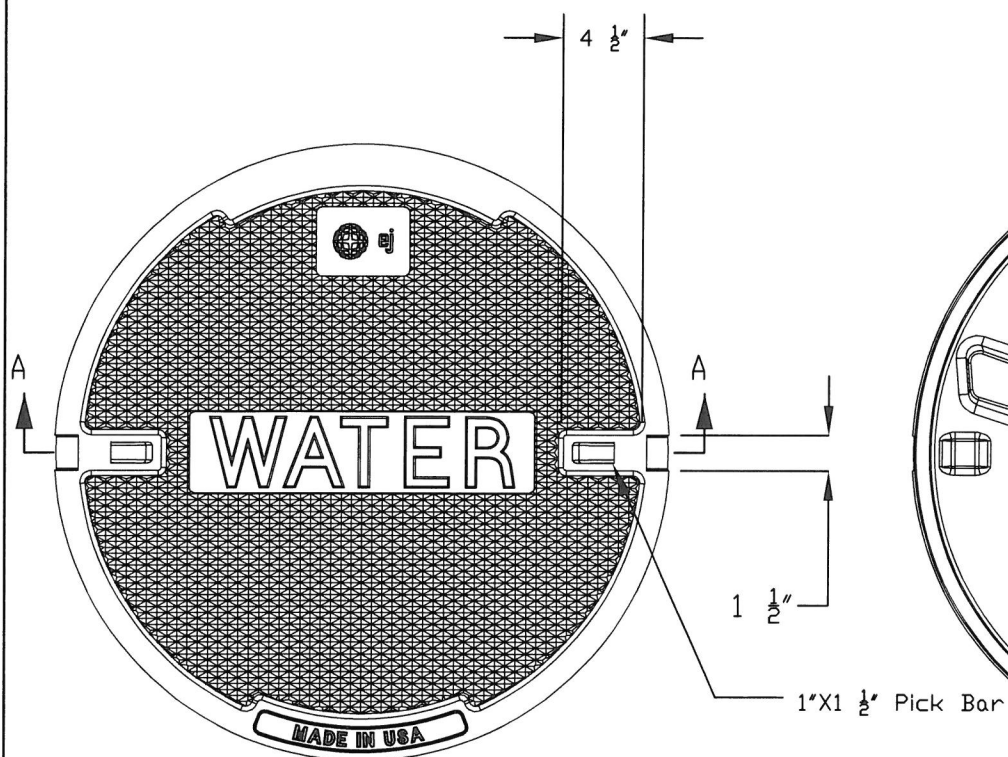
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.7	REV. DATE
	32-inch Standard Water Cover	4/16/19 DJP
	SCALE: NTS	



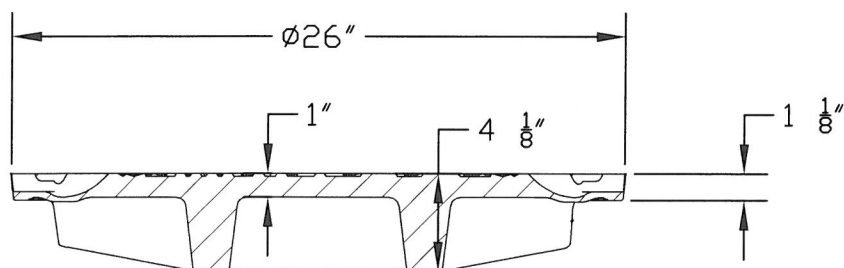
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ " PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.8	REV. DATE
	24-inch Replacement Water Cover	4/16/19 DJP
	SCALE: NTS	




BOTTOM VIEW

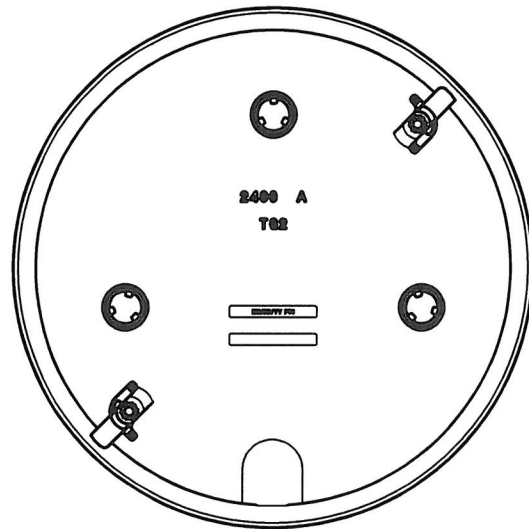
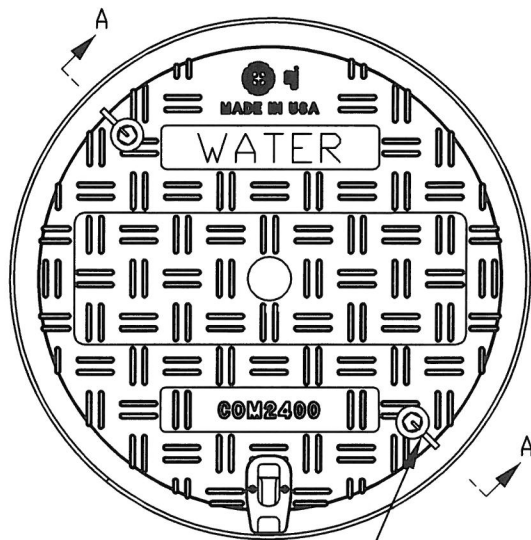


SECTION A-A

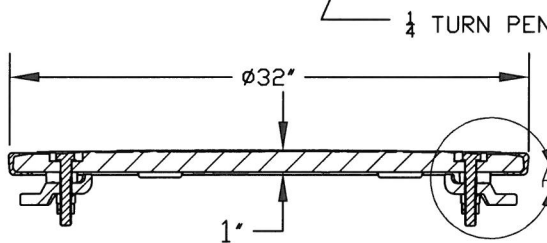
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

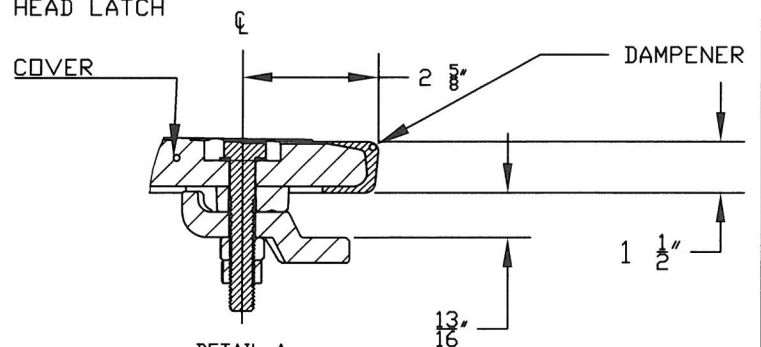
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.9	REV. DATE
	26-inch Replacement Water Cover	4/16/19 DJP
	SCALE: NTS	



BOTTOM VIEW




SECTION A-A



DETAIL A
SCALE 1:3

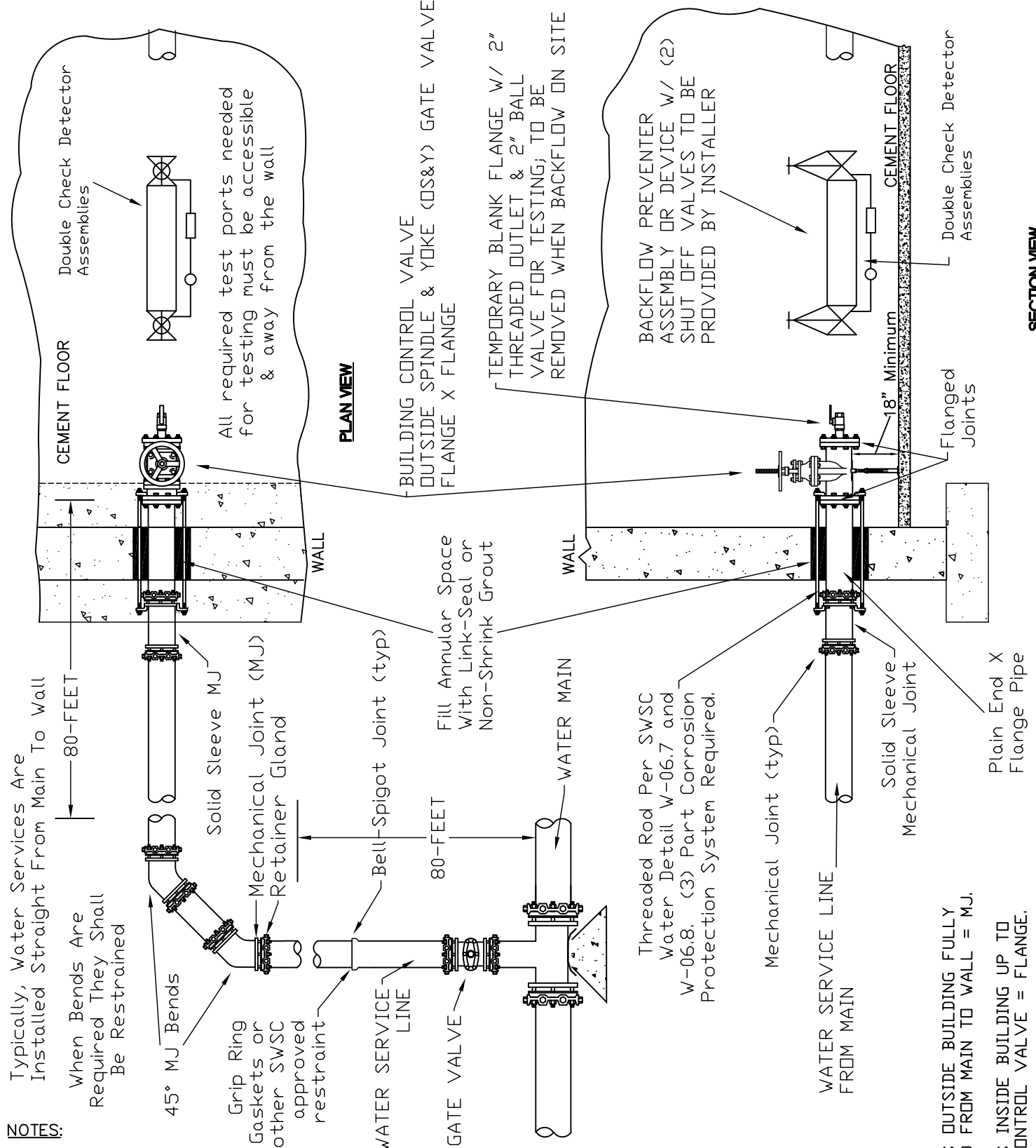
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. COVER SHALL BE MADE FROM FIBER REINFORCED POLYMER (FRP) ASTM C1028
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT


SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.11	REV. DATE
	32" Composite Locking Cover	4/19/19 DJP
	SCALE: NTS	

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL PIPING UP TO THE 1ST OS&Y MUST BE INSTALLED BEFORE TESTING.
3. BACKFLOW PREVENTION DEVICE OR ASSEMBLY SHALL BE INSTALLED ONTO OS&Y BUILDING CONTROL VALVE.
4. ALL VALVES AFTER THE BUILDING CONTROL VALVE MAY BE OS&Y GATE VALVE OR BUTTERFLY VALVE W/ TAMPER SWITCH. MUST BE LOCKABLE OR CHAINABLE.
5. ANY COMBINATION OF FLANGE ON GROOVED CONNECTIONS AFTER BUILDING CONTROL VALVE ARE ALLOWED.
6. ALL PIPING FROM 1ST FLANGED JOINT TO MAIN OUTSIDE AND FROM MAIN TOWARDS BUILDING, SHALL BE FULLY RESTRAINED FOR 80- FEET.

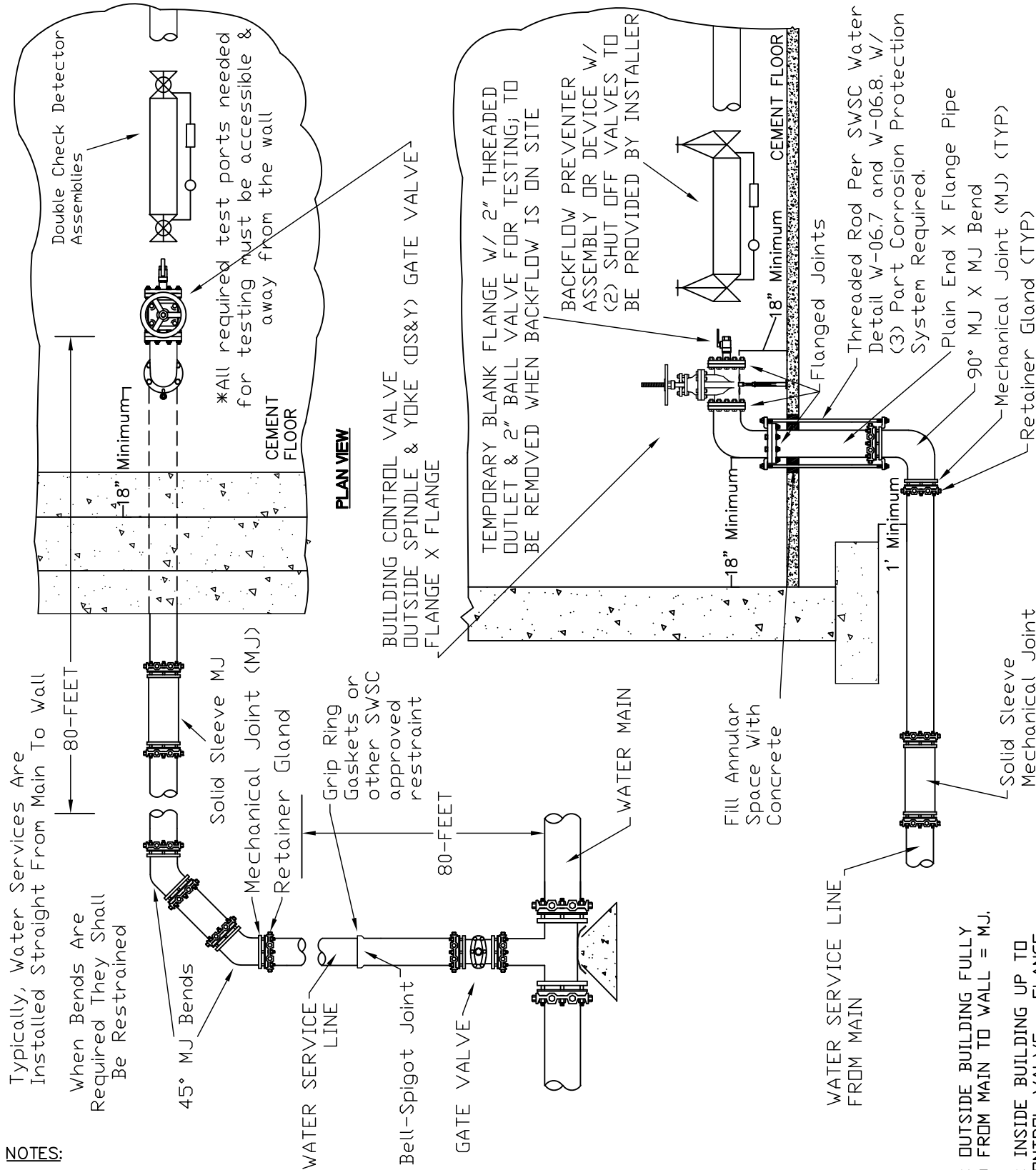


- NOTES:
- ALL JOINTS OUTSIDE BUILDING FULLY RESTRAINED FROM MAIN TO WALL = MJ.
 - ALL JOINTS INSIDE BUILDING UP TO BUILDING CONTROL VALVE = FLANGE.
 - 1ST FLANGED JOINT INSIDE BUILDING TO BE RODDED TO LAST JOINT OUTSIDE BUILDING.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.11	
	TYPICAL DUCTILE IRON	
	FIRE SERVICE DETAIL	
	THROUGH FOUNDATION WALL	
	SCALE: NTS	
	REV. DATE	1/8/19 DJP
		10/6/20 MAB
		10/13/20 MJL


NOTES:

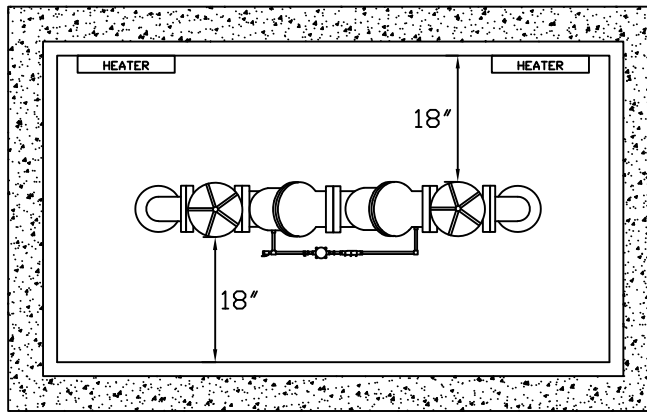
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL PIPING UP TO THE 1ST OS&Y MUST BE INSTALLED BEFORE TESTING.
3. BACKFLOW PREVENTION DEVICE OR ASSEMBLY SHALL BE INSTALLED ONTO OS&Y BUILDING CONTROL VALVE.
4. ALL VALVES AFTER THE BUILDING CONTROL VALVE MAY BE OS&Y GATE VALVE OR BUTTERFLY VALVE W/ TAMPER SWITCH. MUST BE LOCKABLE OR CHAINABLE.
5. ANY COMBINATION OF FLANGE ON GROOVED CONNECTIONS AFTER BUILDING CONTROL VALVE ARE ALLOWED.
6. ALL PIPING FROM 1ST FLANGED JOINT TO MAIN OUTSIDE AND FROM MAIN TOWARDS BUILDING, SHALL BE FULLY RESTRAINED FOR 80- FEET.



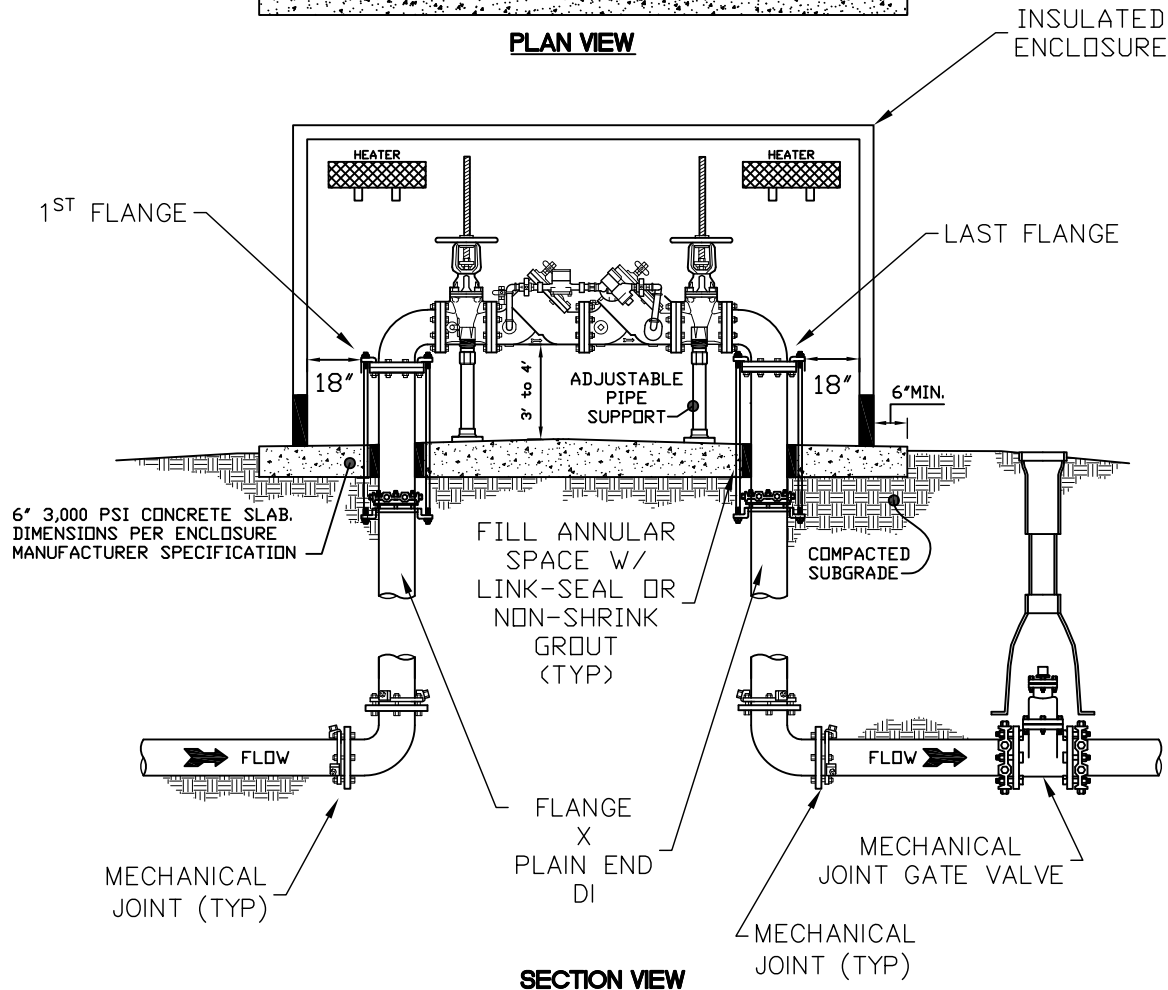
NOTES:

1. ALL JOINTS OUTSIDE BUILDING FULLY RESTRAINED FROM MAIN TO WALL = MJ.
2. ALL JOINTS INSIDE BUILDING UP TO BUILDING CONTROL VALVE = FLANGE.
3. 1ST FLANGED JOINT INSIDE BUILDING TO BE RODDED TO LAST JOINT OUTSIDE BUILDING.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.12	
	TYPICAL DUCTILE IRON	
	FIRE SERVICE DETAIL	
	THROUGH CONCRETE FLOOR	
	SCALE: NTS	
	REV. DATE	3/22/17 LMB
		1/8/19 DJP
		10/13/20 MJL




PLAN VIEW

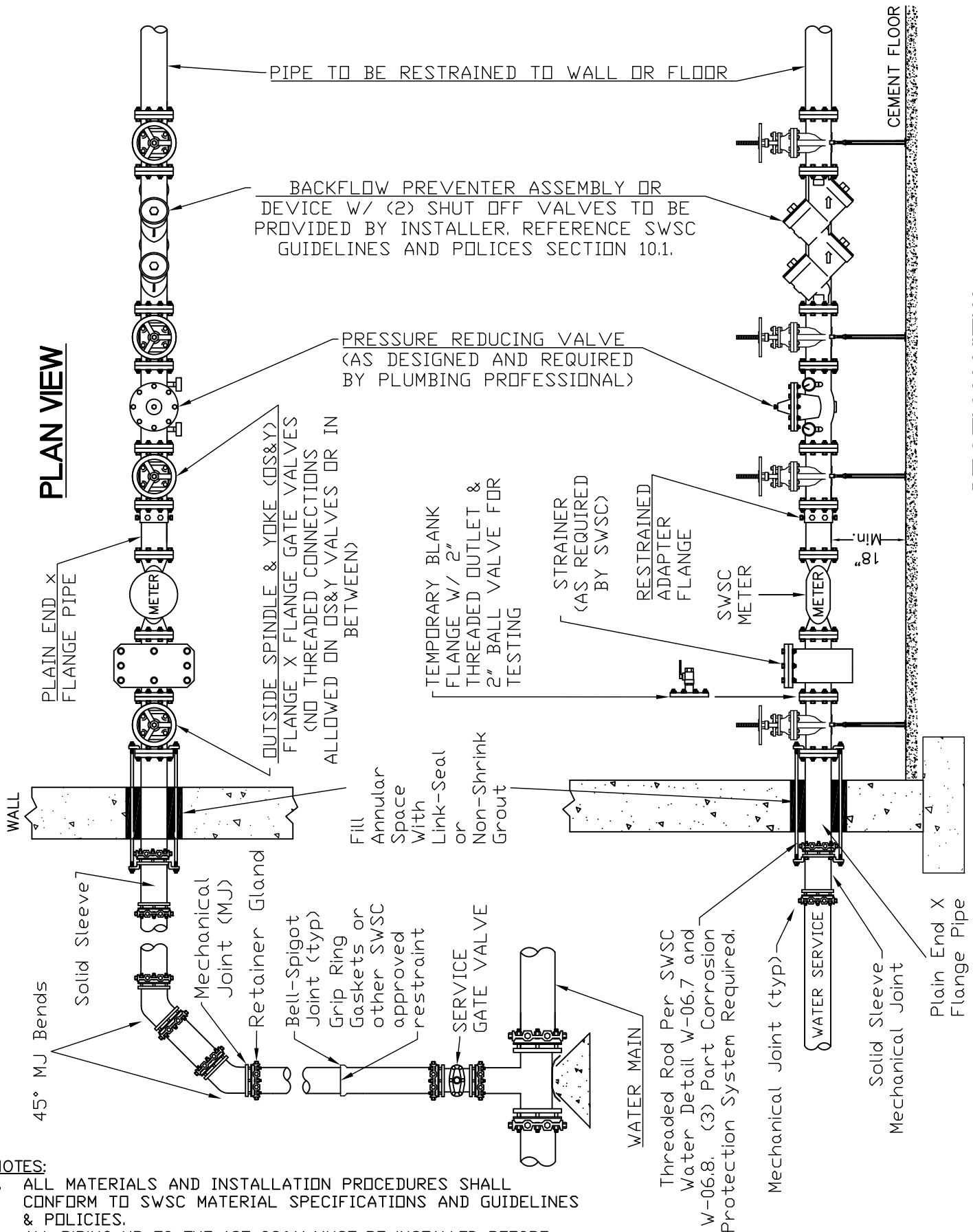


SECTION VIEW

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL PIPING UP TO THE 1ST FLANGE MUST BE INSTALLED BEFORE TESTING.
3. BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED ONTO 1ST FLANGE.
4. ALL VALVES AFTER THE 1ST FLANGE MAY BE OS&Y GATE VALVE OR BUTTERFLY VALVE W/ TAMPER SWITCH. MUST BE LOCKABLE OR CHAINABLE.
5. ANY COMBINATION OF FLANGE ON GROOVED CONNECTIONS BETWEEN 1ST FLANGE AND LAST FLANGE ARE ALLOWED.
6. ALL PIPING FROM 1ST FLANGED JOINT TO MAIN OUTSIDE AND FROM MAIN TOWARDS BUILDING, SHALL BE FULLY RESTRAINED FOR 80- FEET.
7. ALL JOINTS OUTSIDE HOT BOX FULLY RESTRAINED FROM MAIN TO WALL = MJ.
8. 1ST & LAST FLANGED JOINT IN HOT BOX TO BE FLANGED.
9. 1ST & LAST FLANGED JOINT INSIDE HOT BOX TO BE RODDED TO NEXT JOINTS OUTSIDE HOT BOX.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.13	REV. DATE
	<i>TYPICAL DUCTILE IRON</i>	10/28/20 MJL
	<i>FIRE SERVICE DETAIL</i>	10/29/20 DS
	<i>IN A HOT BOX</i>	
	SCALE: NTS	



NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICIES.
2. ALL PIPING UP TO THE 1ST OS&Y MUST BE INSTALLED BEFORE TESTING.
3. ALL JOINTS OUTSIDE BUILDING SHALL BE FULLY RESTRAINED FOR A MINIMUM OF 80FT OR TO THE WATER MAIN, WHICH EVER COMES FIRST.
4. JOINTS INSIDE BUILDING SHALL BE FLANGE X FLANGE. ONLY ONE ADAPTER FLANGE SHALL BE INSTALLED AS SHOWN ON DETAIL.
5. NO THREADED CONNECTIONS ALLOWED INSIDE BUILDING UP TO THE 2ND OS&Y

SPRINGFIELD WATER AND SEWER COMMISSION

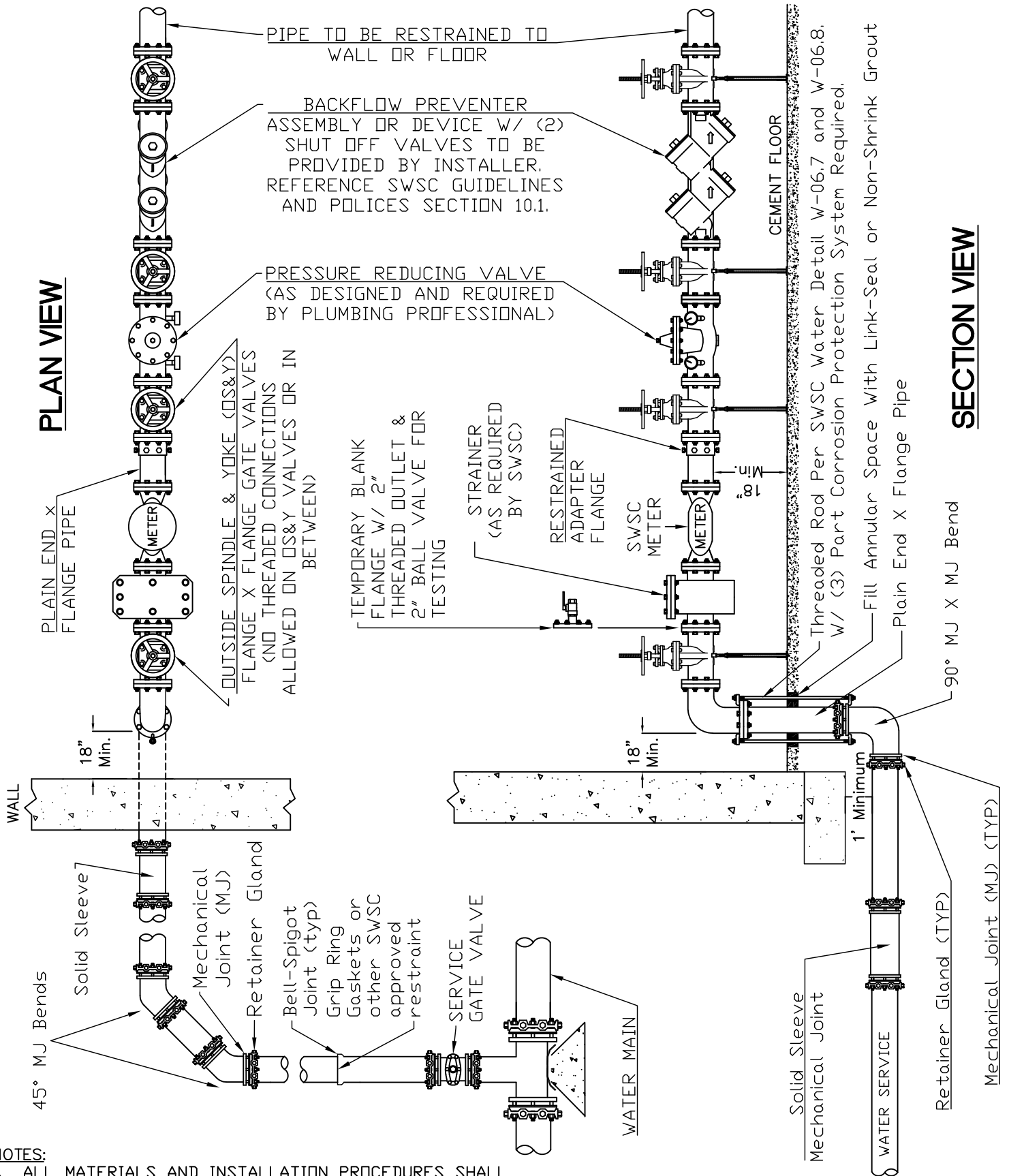


WATER DETAIL W-13.14

TYPICAL DIP COMMERCIAL & INDUSTRIAL SERVICE DETAIL THROUGH FOUNDATION WALL


SCALE: NTS

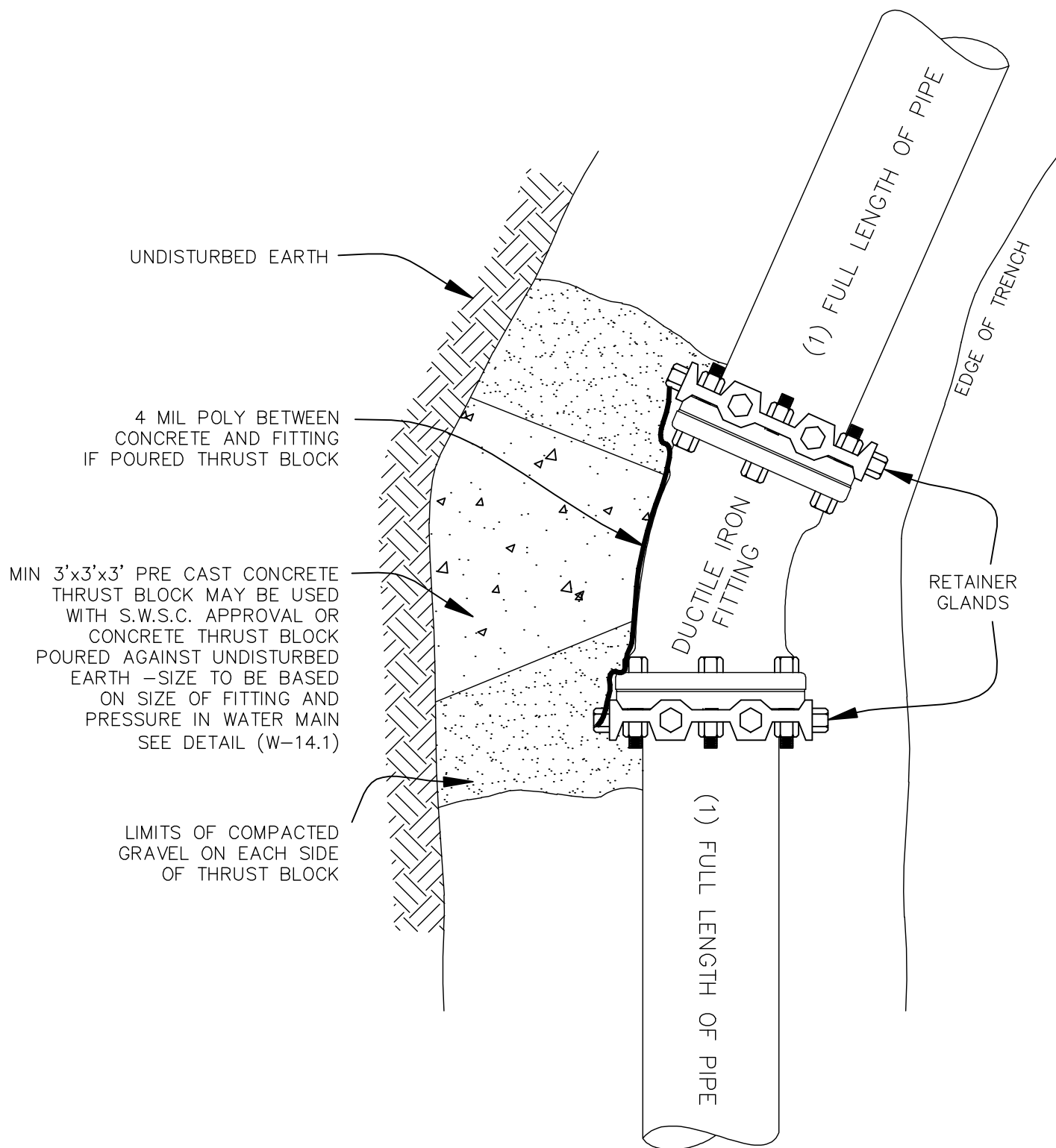
REV. DATE
10/28/20 DS



NOTES:


1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND GUIDELINES & POLICES.
2. ALL PIPING UP TO THE 1ST OS&Y MUST BE INSTALLED BEFORE TESTING.
3. ALL JOINTS OUTSIDE BUILDING SHALL BE FULLY RESTRAINED FOR A MINIMUM OF 80FT OR TO THE WATER MAIN, WHICH EVER COMES FIRST.
4. JOINTS INSIDE BUILDING SHALL BE FLANGE X FLANGE. ONLY ONE ADAPTER FLANGE SHALL BE INSTALLED AS SHOWN ON DETAIL.
5. NO THREADED CONNECTIONS ALLOWED INSIDE BUILDING UP TO THE 2ND OS&Y

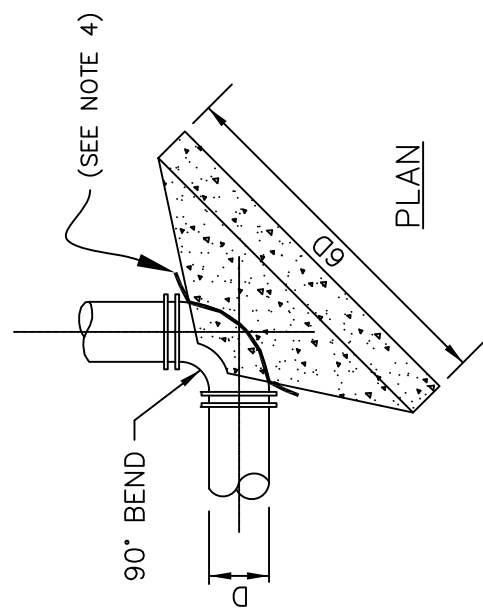
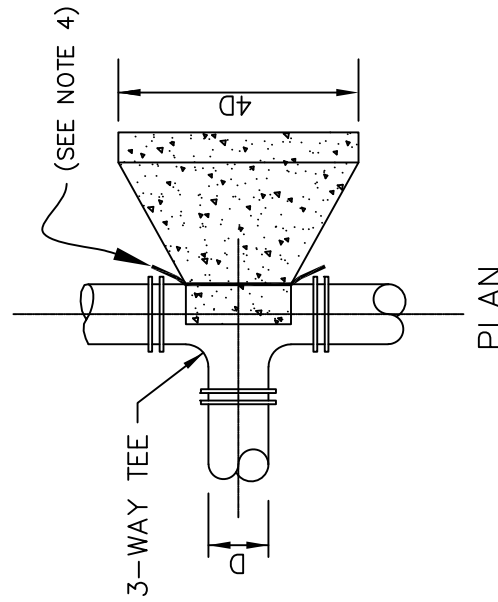
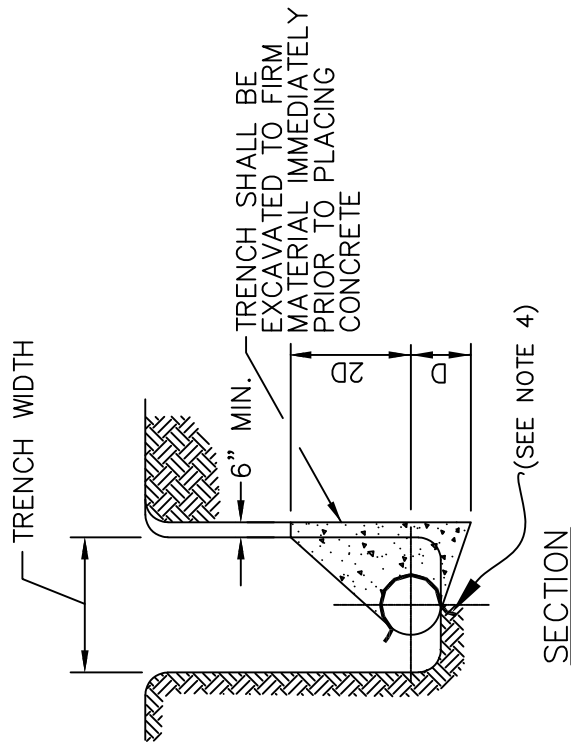
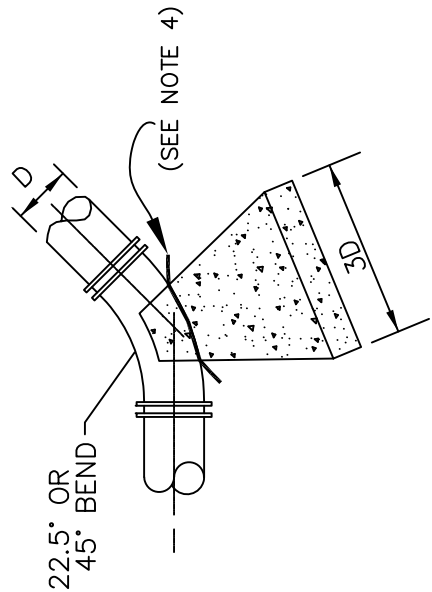
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-13.15	REV. DATE
	TYPICAL DIP COMMERCIAL & INDUSTRIAL SERVICE DETAIL THROUGH CONCRETE FLOOR	10/29/20 DS
	SCALE: NTS	



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-14.0	REV. DATE
	THRUST BLOCK BEHIND FITTINGS	4/1/08 MAB
	SCALE: NTS	



NOTES:

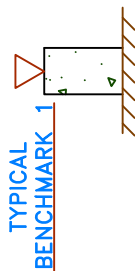
1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. SEE DETAIL W-02.0, W-02.1, W-02.2, W-02.3 OR W-02.4 FOR TRENCH DETAILS.
4. 4 MIL POLY BETWEEN CONCRETE AND FITTING IF POURED THRUST BLOCK.
5. ANCHORS BASED ON MAXIMUM ALLOWABLE WATER PRESSURE OF 125 PSI SHOULD ONLY BE USED WHEN SOIL CONDITIONS ARE STABLE

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-14.1	REV. DATE
	<i>THRUST BLOCKS</i>	4/1/08 MAB
	SCALE: NTS	11/21/19 JFC

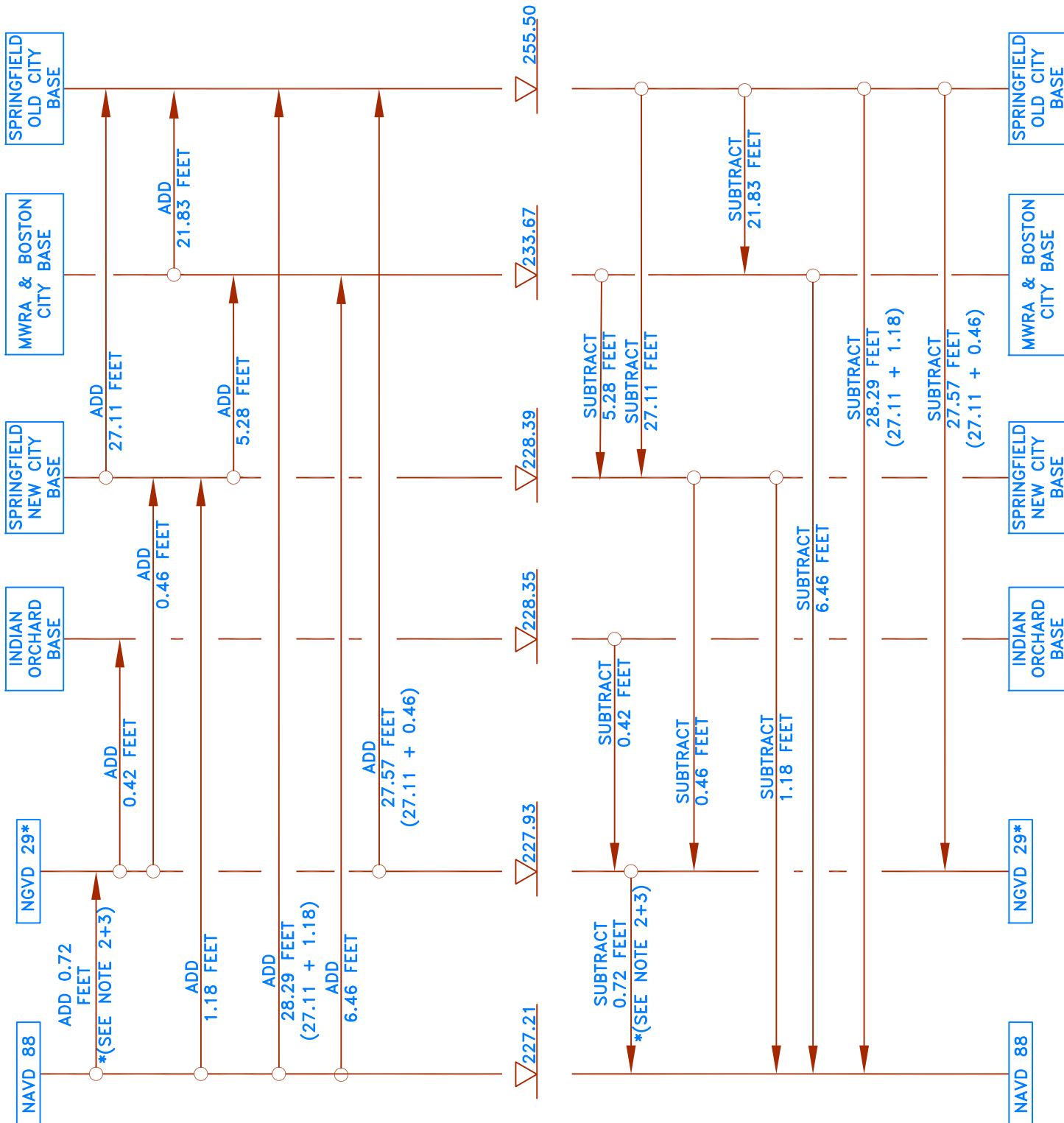
NOTES:


1. NOT FOR SURVEY, CONFIRM ALL ELEVATIONS, DATUMS, BASES, AND CONVERSIONS PRIOR TO SURVEY WORK
2. * NGVD 29 IS NOT ALWAYS THE SAME ELEVATION, NGVD 29 IS DEPENDENT ON LOCATION IN SPRINGFIELD, LUDLOW, WESTFIELD, ETC. THE ELEVATION OF NGVD 29 CAN BE 0.65 - 0.72. ROUND TO THE HUNDREDTHS UPON CONVERSION COMPLETION
- 3.

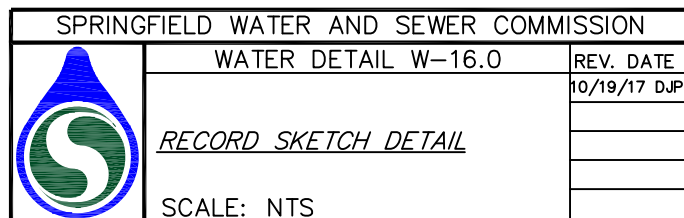
DIRECTION OF
CONVERSION



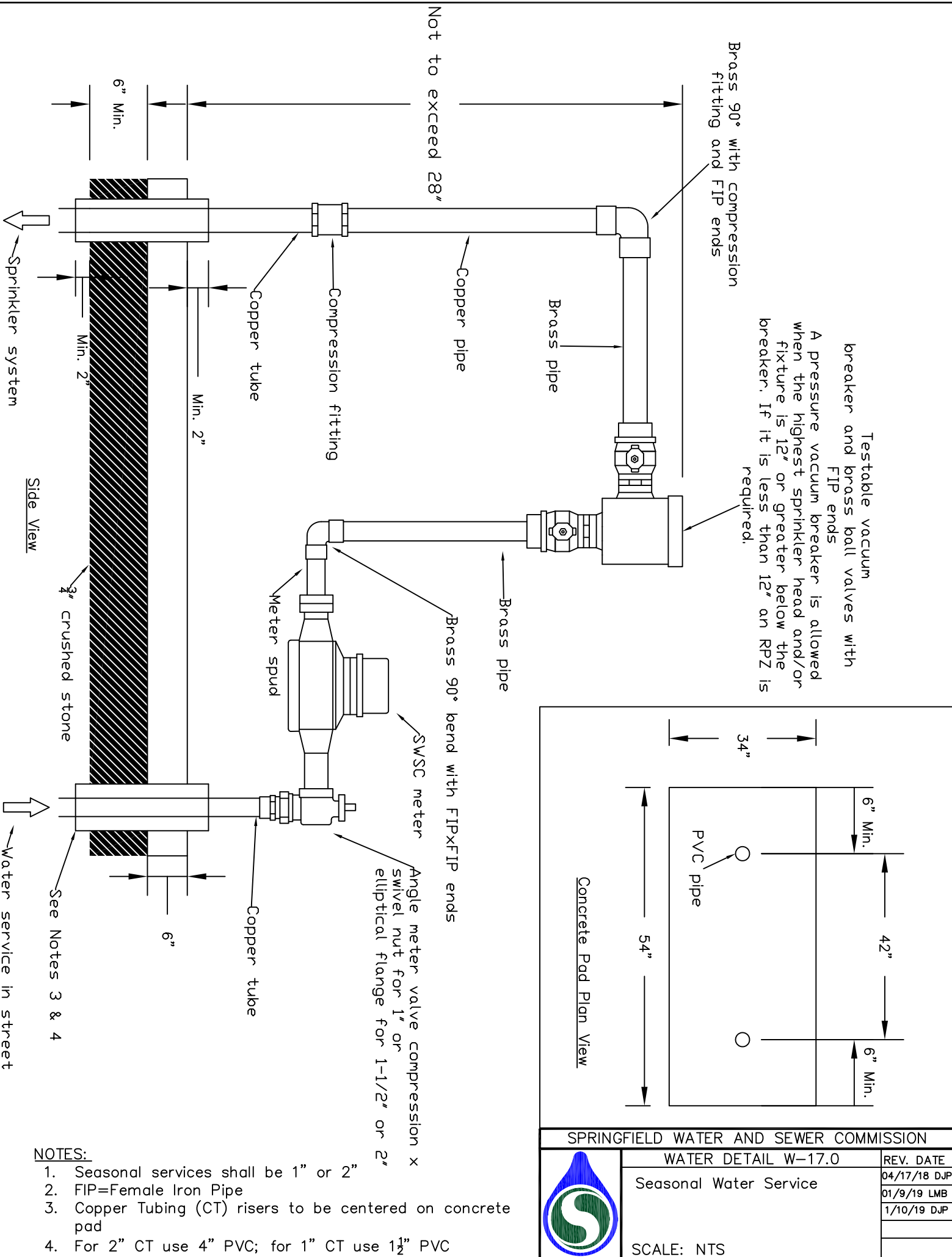
DIRECTION OF
CONVERSION



SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-15.0	REV. DATE
	RELATION OF VERTICAL DATUMS	_/_/17 MAB
	TO SPRINGFIELD CITY BASE(S)	1/9/19 DJP
	SCALE: NTS	




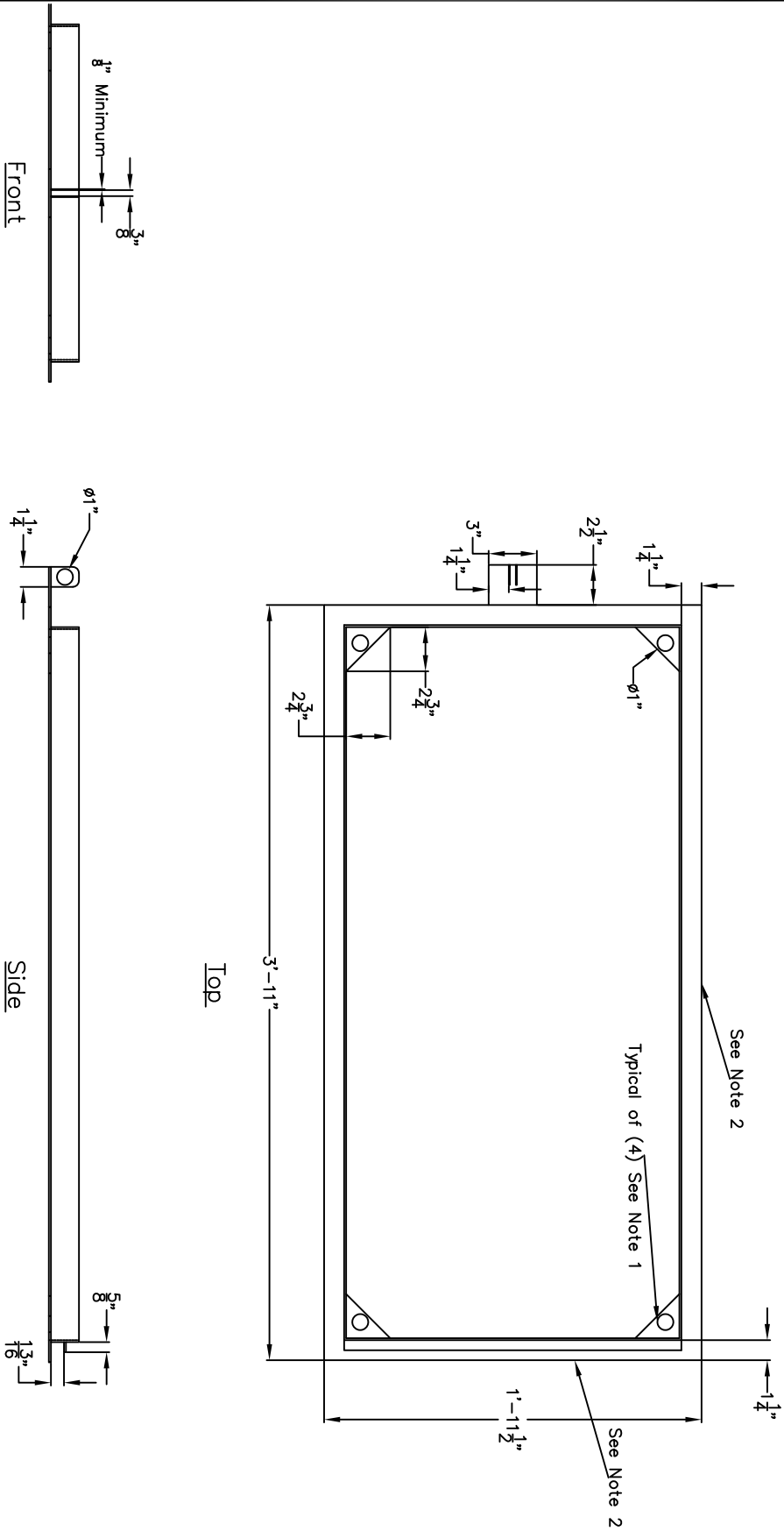
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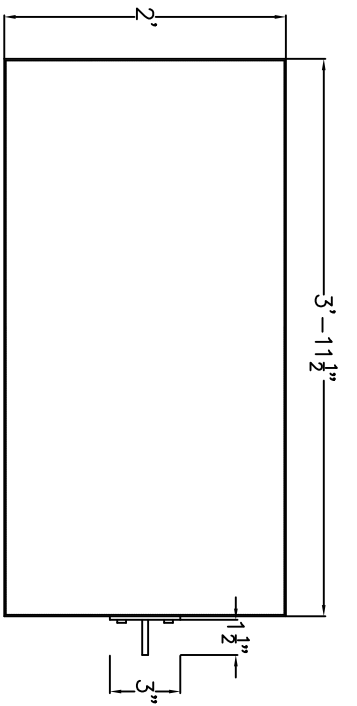
NOTES:

1. Seasonal services shall be 1" or 2"
2. FIP=Female Iron Pipe
3. Copper Tubing (CT) risers to be centered on concrete pad
4. For 2" CT use 4" PVC; for 1" CT use 1½" PVC

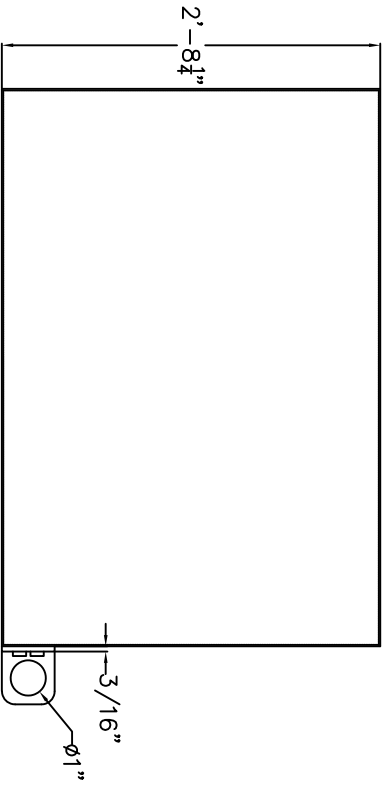
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-17.0	
	Seasonal Water Service	
	SCALE: NTS	
	REV. DATE	
		04/17/18 DJP
		01/9/19 LMB
		1/10/19 DJP



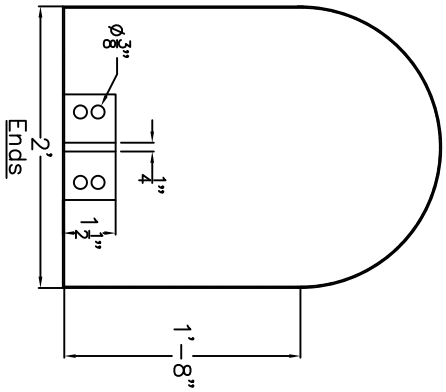
SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-17.1	REV. DATE
	Seasonal Water Service Base	04/17/18 DJP
		01/9/19 LMB
		1/10/19 DJP
	SCALE: NTS	



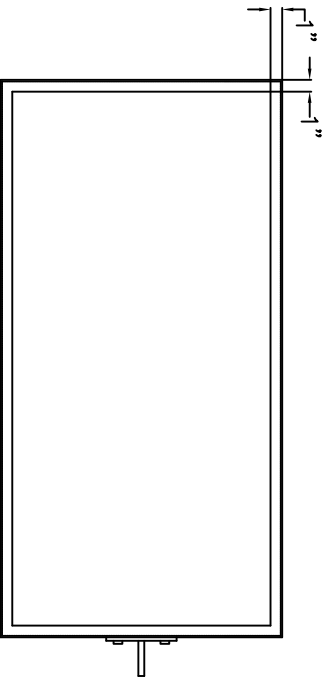
Top



Front



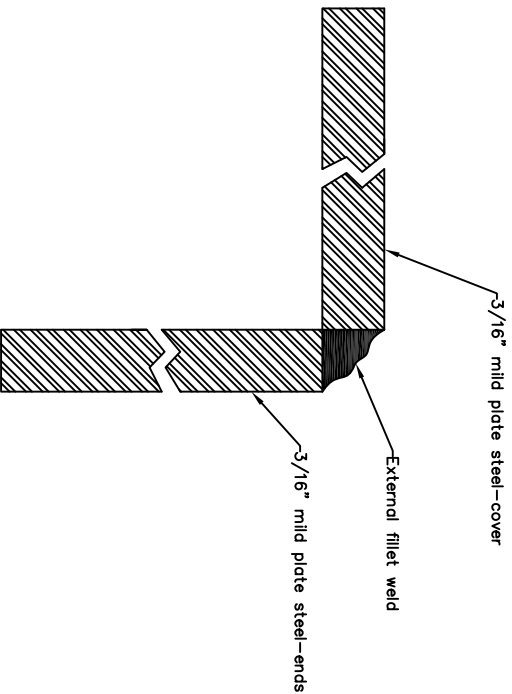
Ends




Bottom

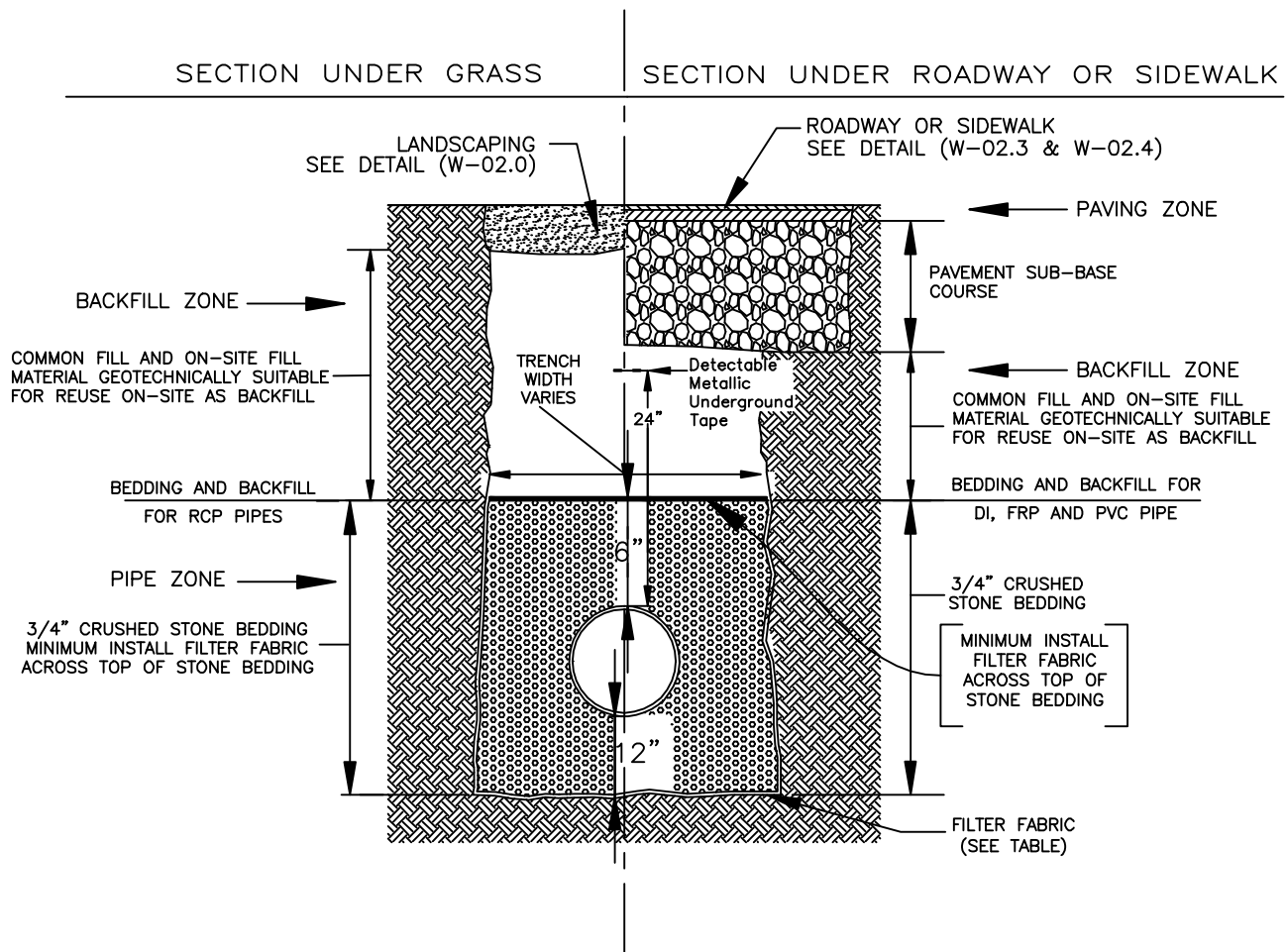
NOTES:

1. Plate steel shall be mild steel $\frac{3}{16}$ " thick
2. Coating shall be Forest Green epoxy 6 mils thick
3. Four $\frac{5}{8}$ "x $\frac{1}{4}$ " galvanized bolts with $\frac{5}{16}$ " flat washers, $\frac{5}{8}$ " lock washers, & $\frac{5}{8}$ " nuts



Weld
Detail

SPRINGFIELD WATER AND SEWER COMMISSION		
	WATER DETAIL W-17.2	REV. DATE
	Seasonal Water Service Cover	1/10/19 DJP
SCALE: NTS		



TOTAL STONE BEDDING WRAP
FILTER FABRIC REQUIREMENT

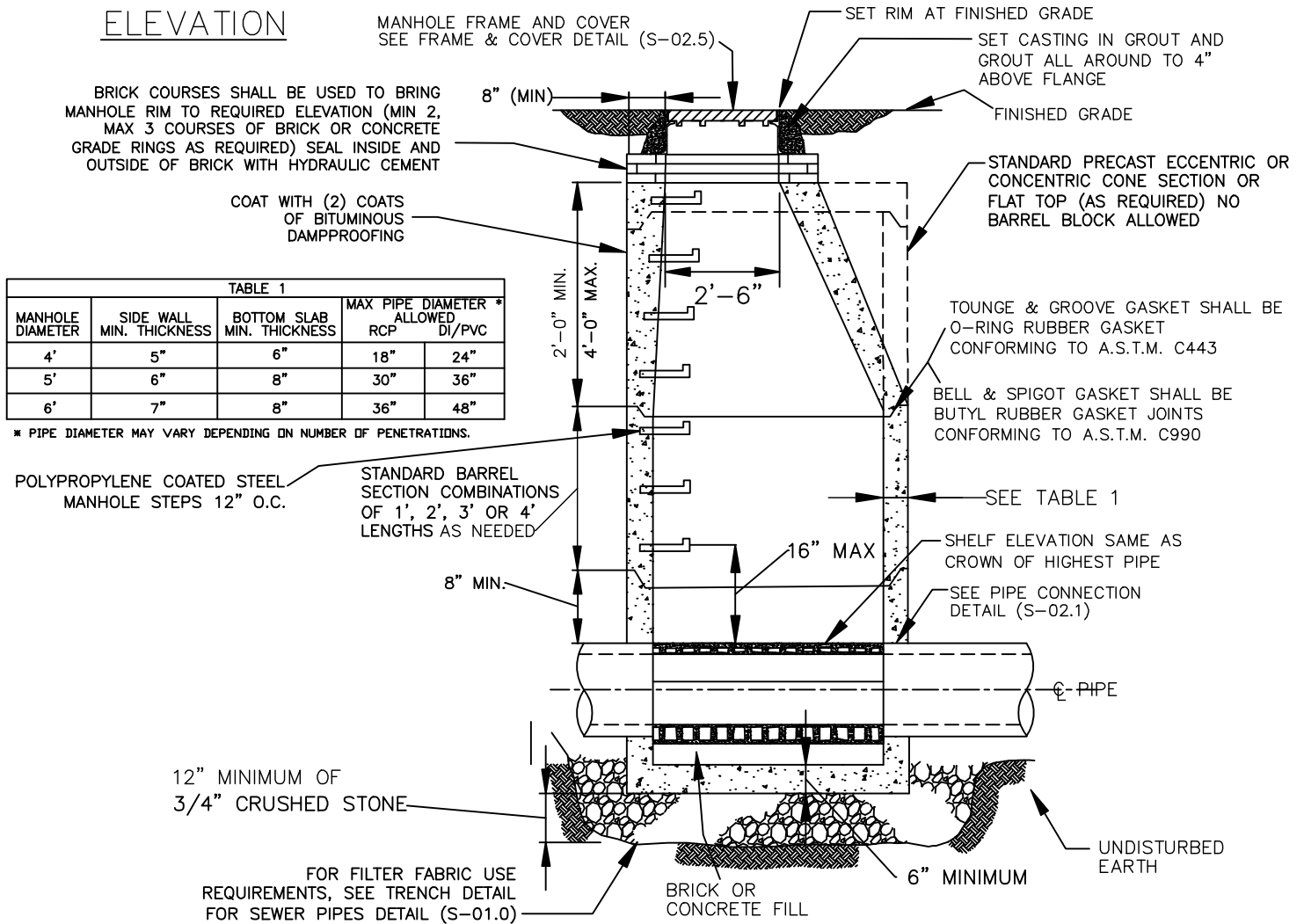
	SOIL TYPE	
	SILT OR CLAY	GRANULAR SOIL
ABOVE GROUND WATER	FILTER FABRIC NOT REQUIRED	FILTER FABRIC NOT REQUIRED
BELOW GROUND WATER	FILTER FABRIC REQUIRED	FILTER FABRIC NOT REQUIRED
2' OVERLAP MINIMUM OF FILTER FABRIC AT TOP OF BEDDING		

NOTES:

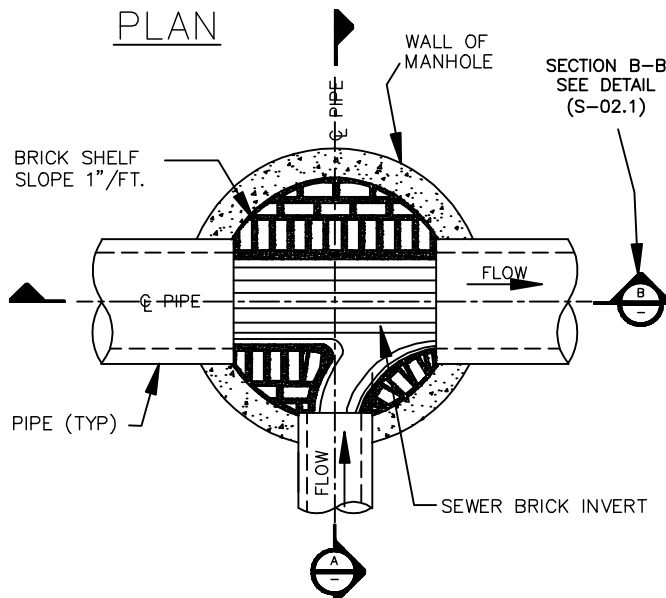
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-01.0	REV. DATE
	TRENCH DETAIL FOR SEWER PIPES	4/1/08 MAB
	SCALE: NTS	

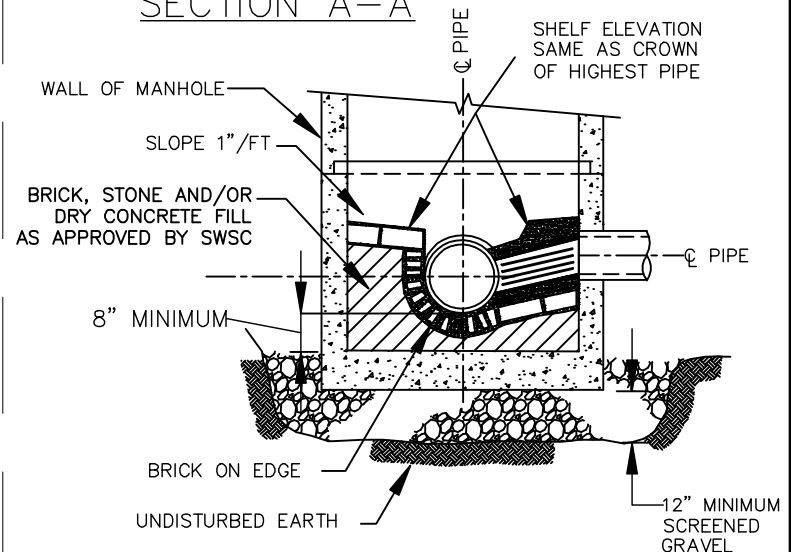
ELEVATION



PLAN



SECTION A-A



NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
5. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
6. PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
7. ALL BRICK SHALL BE HARD NON-POROUS CLAY.
8. ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
9. REINFORCING PER ASTM A615 FOR WIRE FABRIC.
10. DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.

SPRINGFIELD WATER AND SEWER COMMISSION



SEWER DETAIL S-02.0

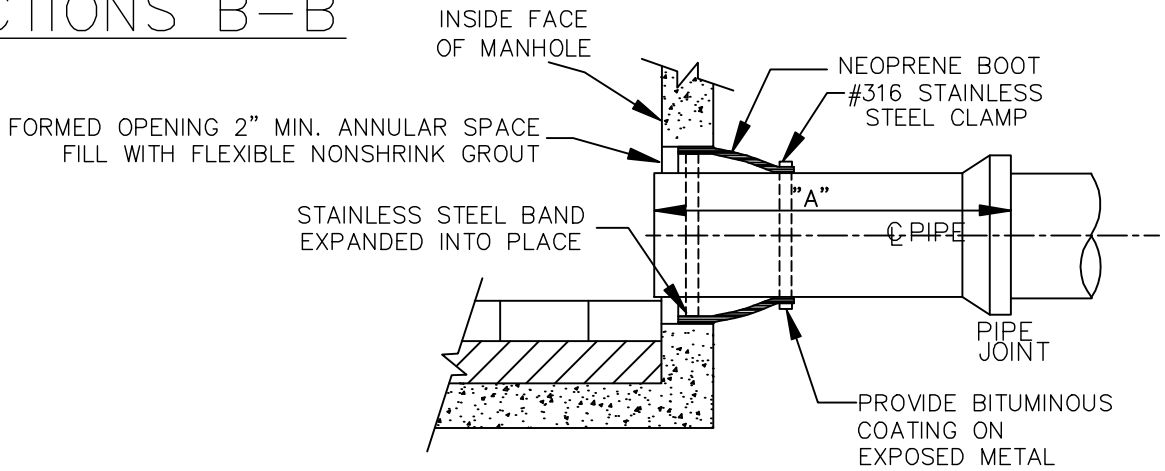
PRE-CAST CONCRETE SEWER MANHOLE

SCALE: NTS

REV. DATE

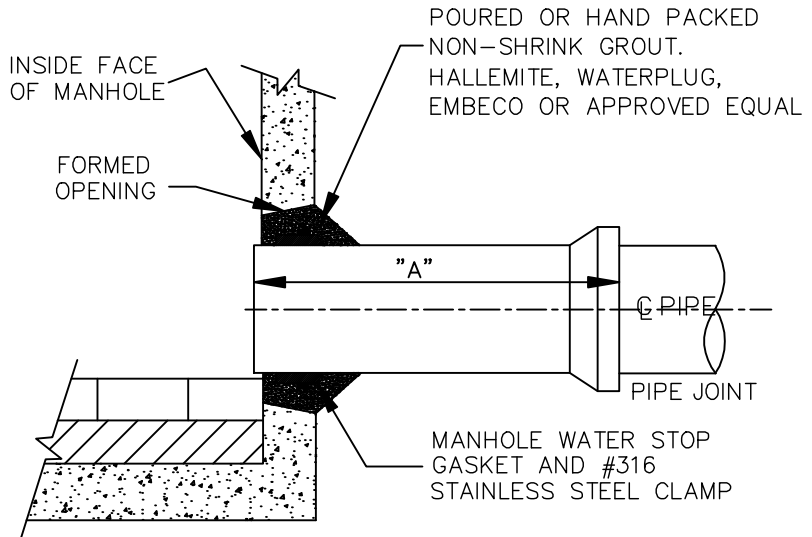
4/1/08 MAB

SECTIONS B-B



FLEXIBLE MANHOLE SEAL

MAXIMUM STUB LENGTH		
PIPE MATERIAL	"A"	"A"
	(MAX.)	(MIN.)
RC	4'-0"	2'-0"
PVC	3'-3"	2'-0"
DI	4'-6"	2'-0"




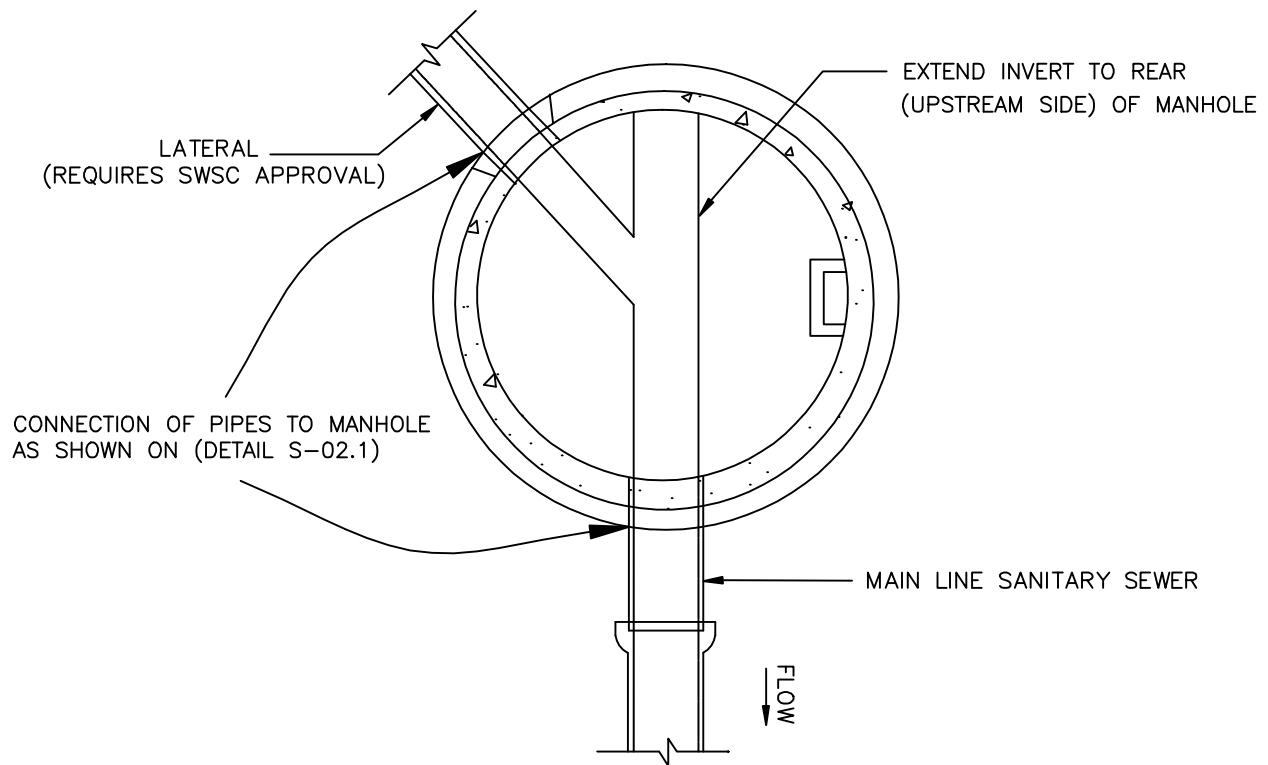
HYDRAULIC CEMENT SEAL*

*THIS METHOD REQUIRES SWSC APPROVAL

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND MATERIAL SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
5. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
6. PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
7. ALL BRICK SHALL BE HARD NON-POROUS CLAY.
8. ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
9. REINFORCING PER ASTM A615 FOR WIRE FABRIC.
10. DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82 C913-71


SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.1	REV. DATE
	PRE-CAST CONCRETE SEWER PIPE CONNECTIONS	4/1/08 MAB
	SCALE: NTS	



END MANHOLE

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND MATERIAL SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.2	REV. DATE
	<u>END OF SEWER MAIN</u>	4/1/08 MAB
	SCALE: NTS	

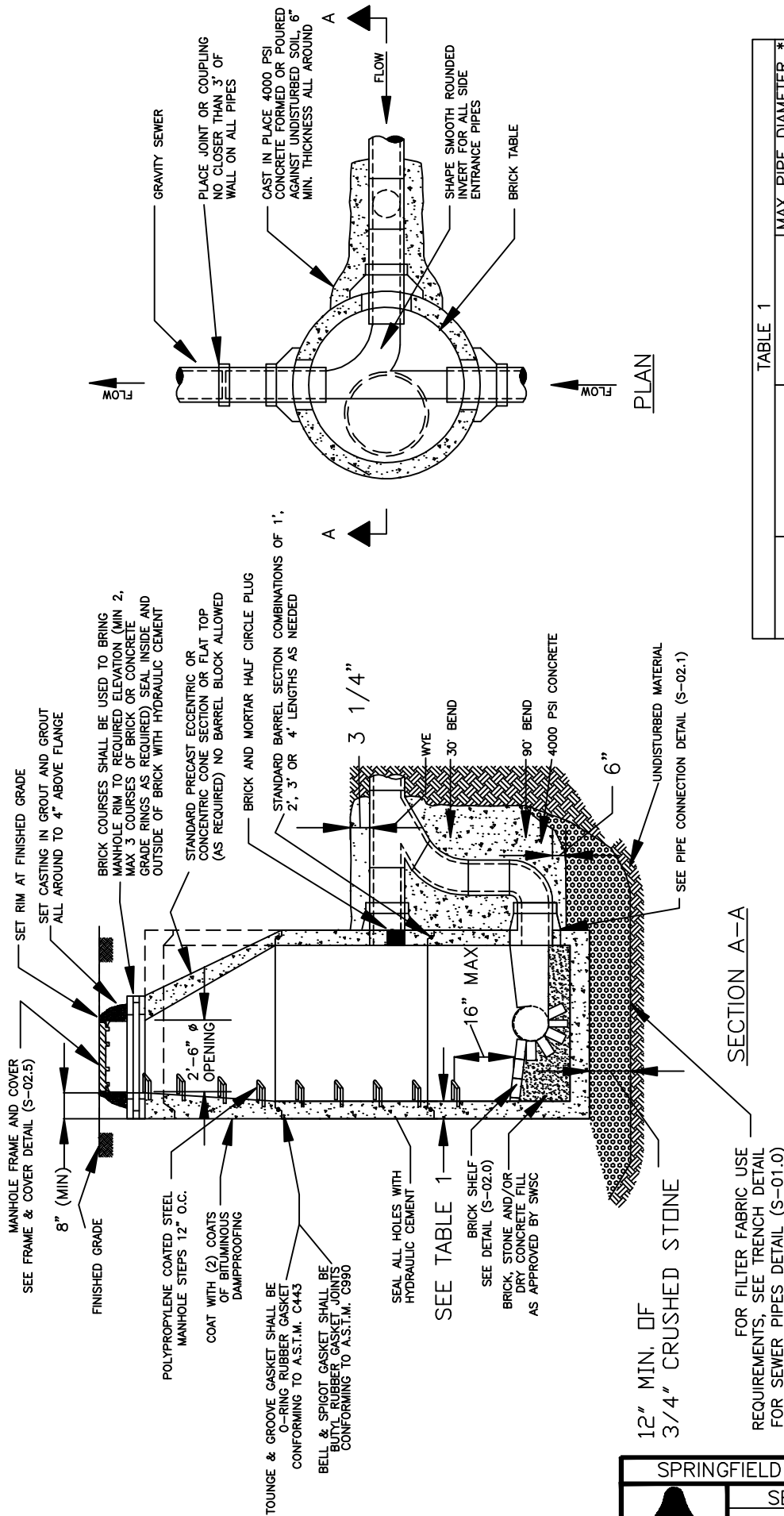



TABLE 1

MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS	MAX PIPE DIAMETER * ALLOWED RCP DI/PVC
4'	5"	6"	18"
5'	6"	8"	24"
6'	7"	8"	30"
			36"
			48"

* PIPE DIAMETER MAY VARY DEPENDING ON NUMBER OF PENETRATIONS.

- NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
 2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
 3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
 4. REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
 5. DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
 6. PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
 7. ALL BRICK SHALL BE HARD NON-POROUS CLAY.
 8. ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
 9. REINFORCING PER ASTM A615 FOR WIRE FABRIC.
 10. DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.



SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-02.3

EXTERIOR DROP MANHOLE

SCALE: NTS

REV. DATE
1/1/08 MAB

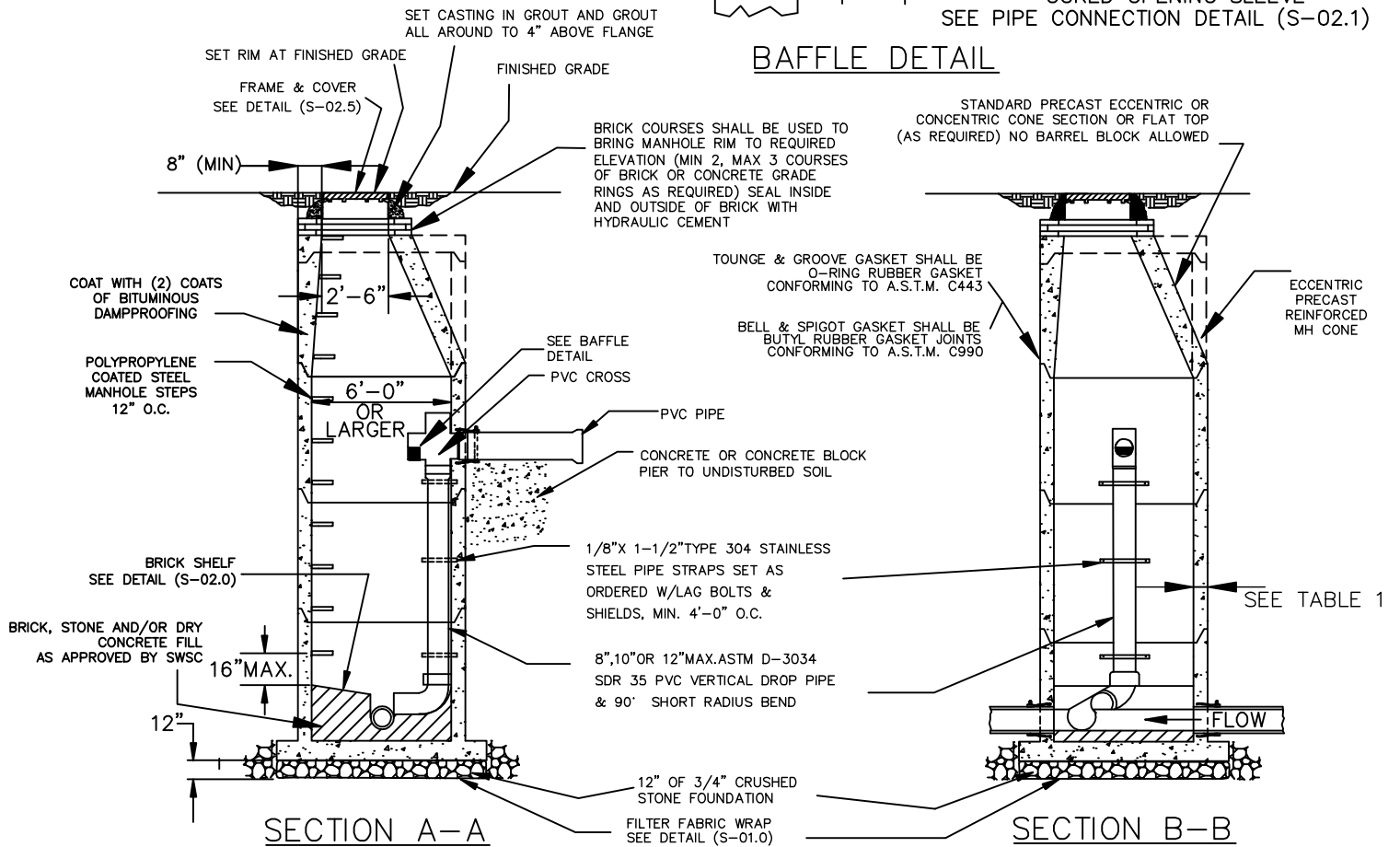
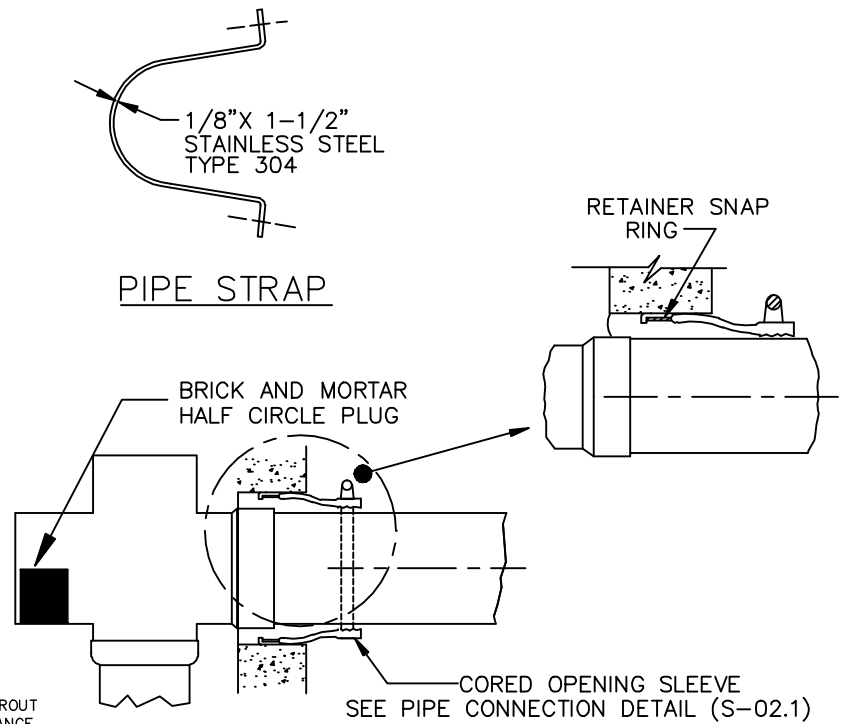
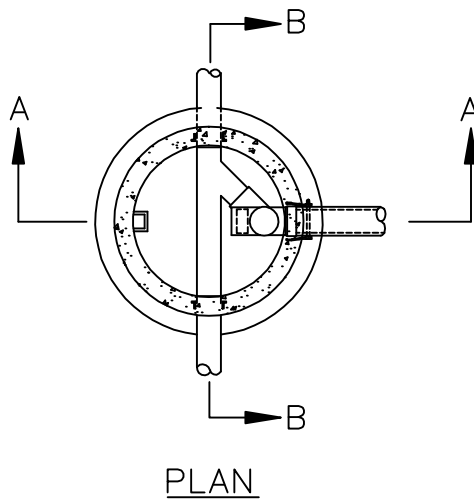


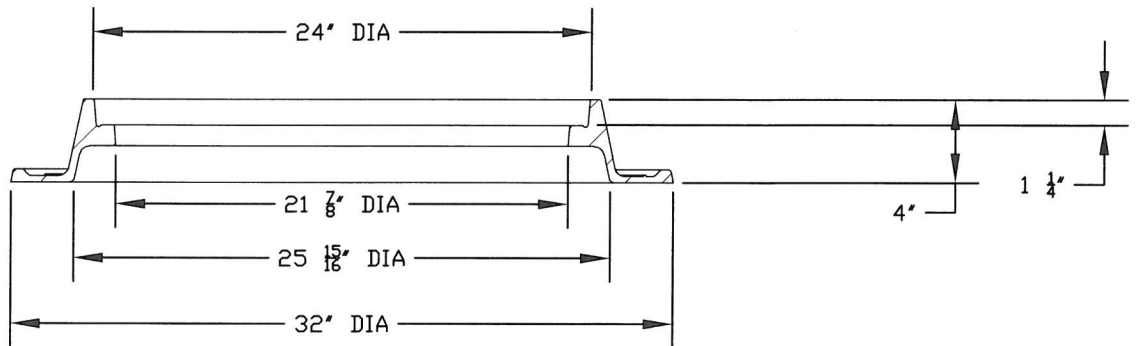
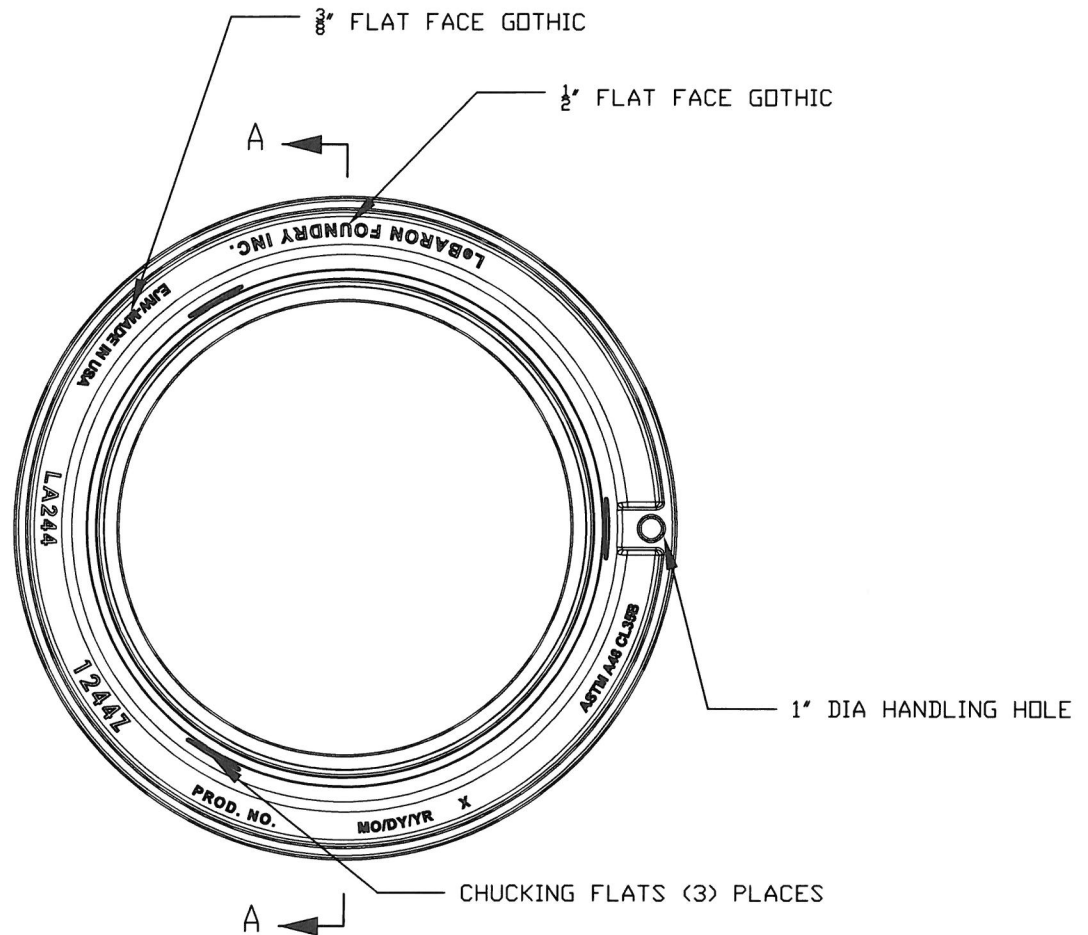
TABLE 1				
MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS	MAX PIPE DIAMETER * ALLOWED RCP DI/PVC	
6'	7"	8"	18"	24"
6'	7"	8"	30"	36"
6'	7"	8"	36"	48"

NOTES:

- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
- ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
- IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
- REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
- DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
- PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
- ALL BRICK SHALL BE HARD NON-POROUS CLAY.
- ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
- REINFORCING PER ASTM A615 FOR WIRE FABRIC.
- DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.

* PIPE DIAMETER MAY VARY DEPENDING ON NUMBER OF PENETRATIONS.


SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.4	REV. DATE
	INTERIOR DROP MANHOLE	4/1/08 MAB
	SCALE: NTS	6/18/08 MAB

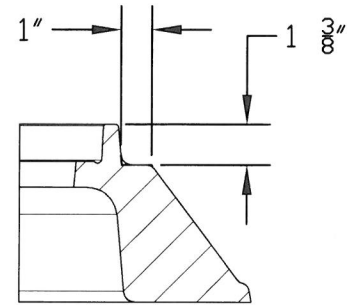
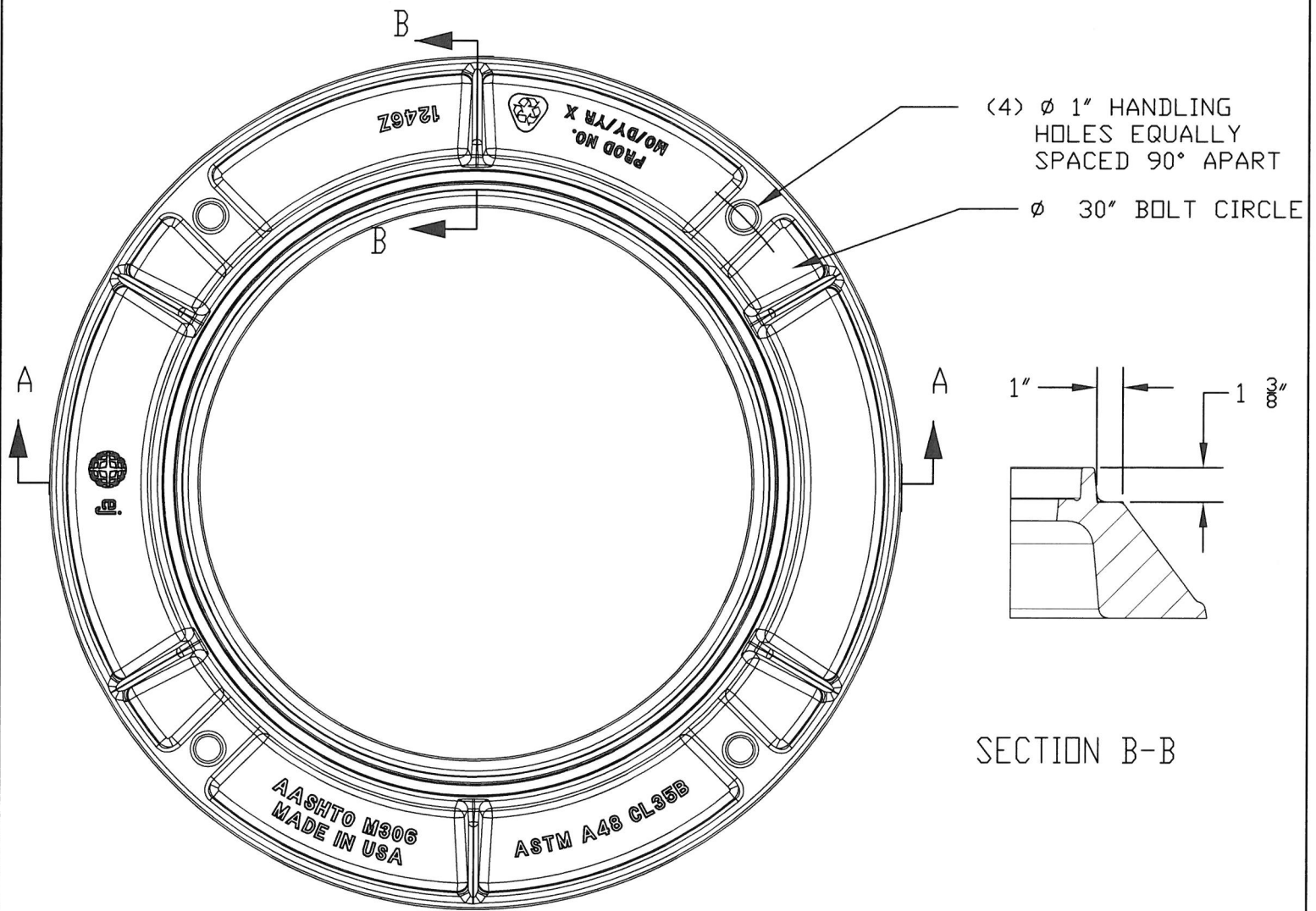


SECTION A-A
SCALE 1:10

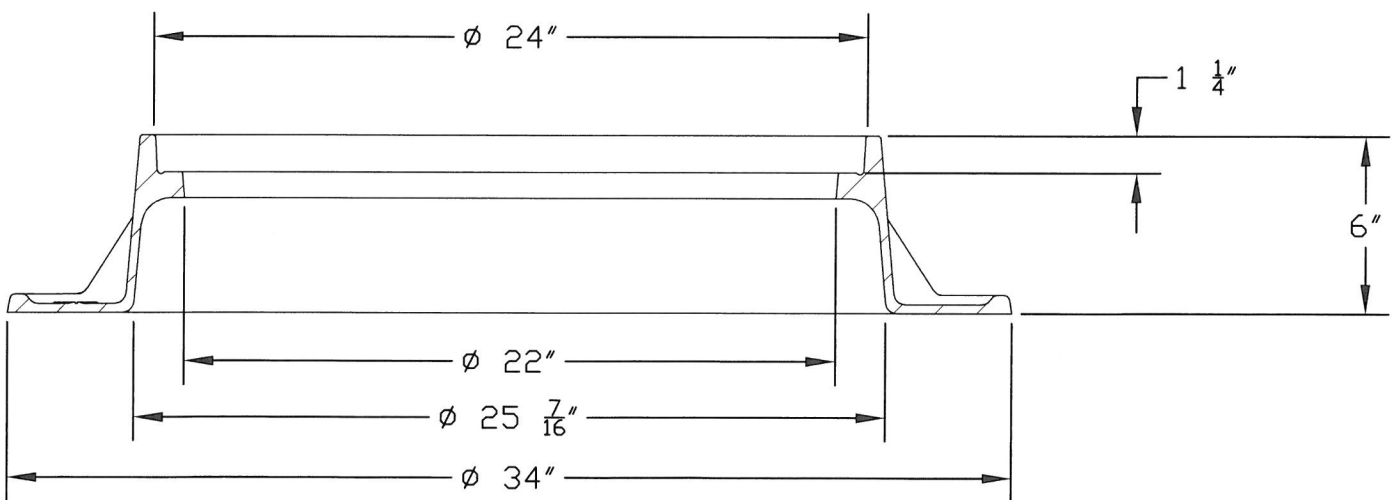
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.51	REV. DATE
	24-inch by 4-inch	4/16/19 DJP
	Frame Only	
	SCALE: NTS	




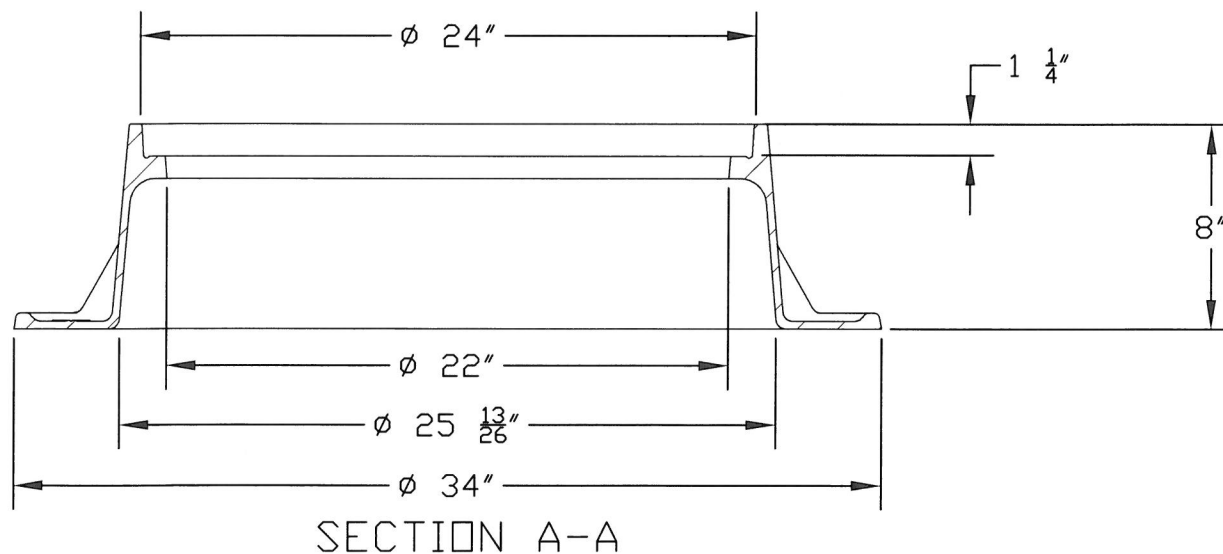
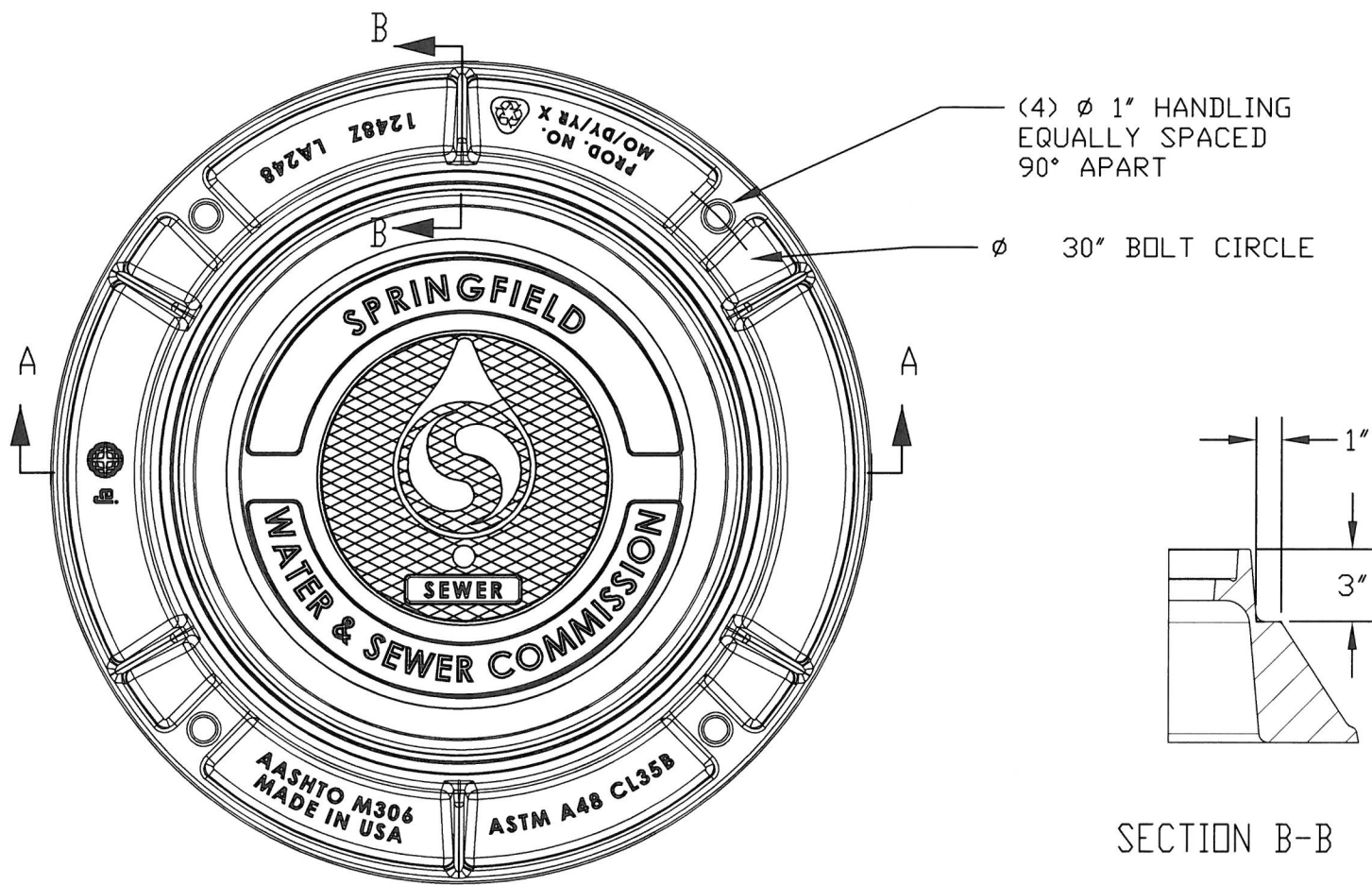
SECTION B-B



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ " PER FOOT

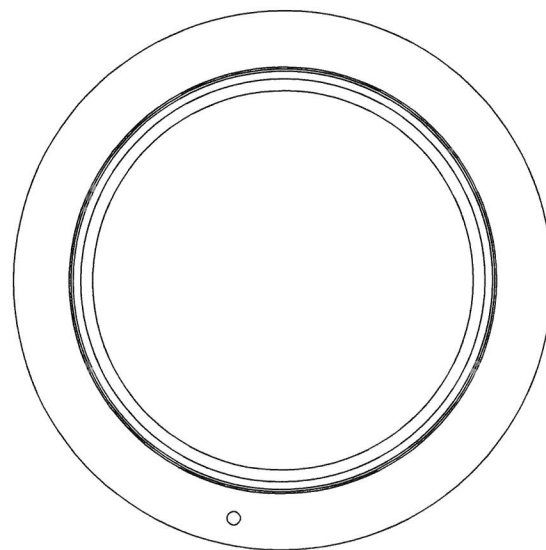
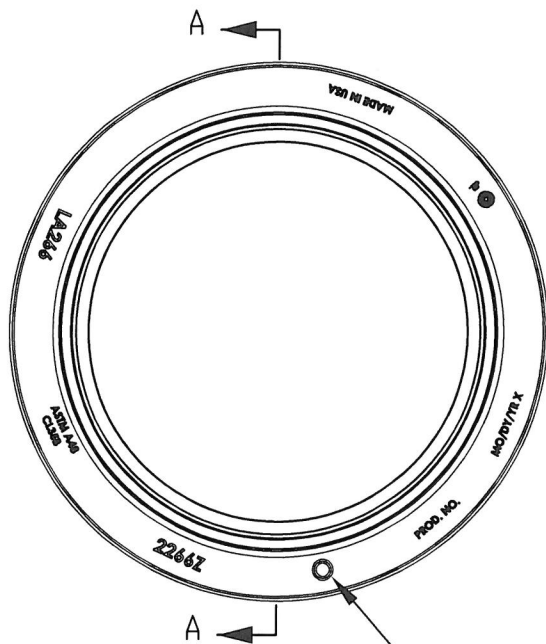
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.52	REV. DATE
	24-inch by 6-inch Frame Only	4/16/19 DJP
SCALE: NTS		



NOTES:

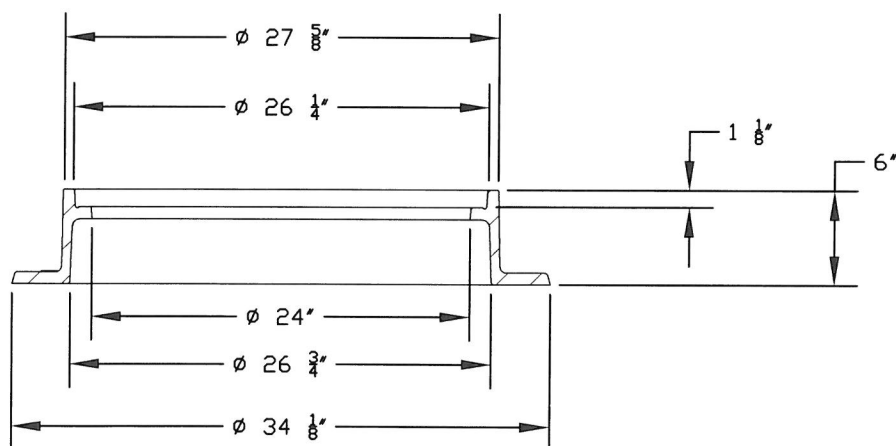
1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.53	REV. DATE
	24-inch by 8-inch Frame Only	4/16/19 DJP
	SCALE: NTS	



BOTTOM VIEW


Ø 7/8" HANDLING HOLE

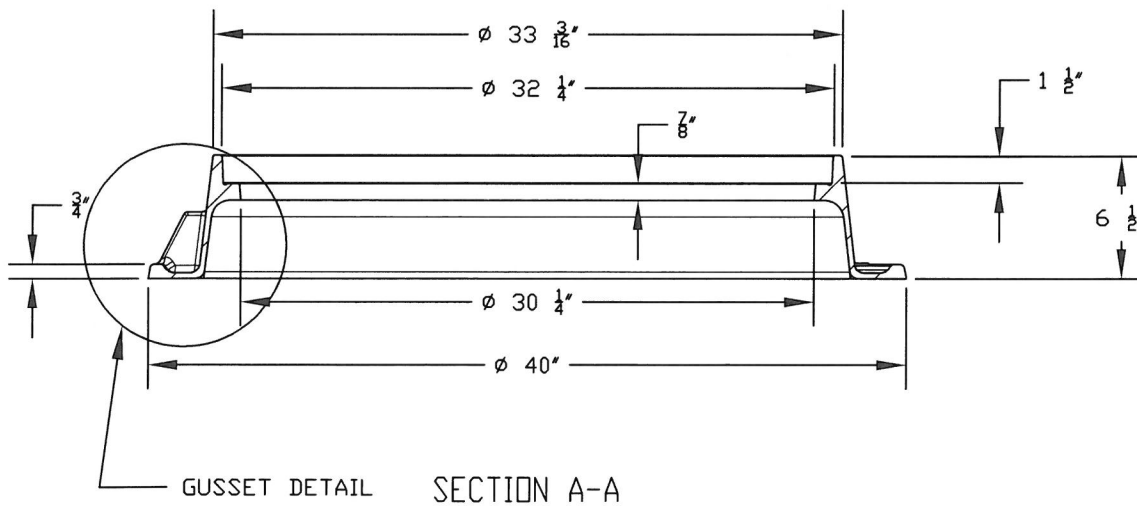
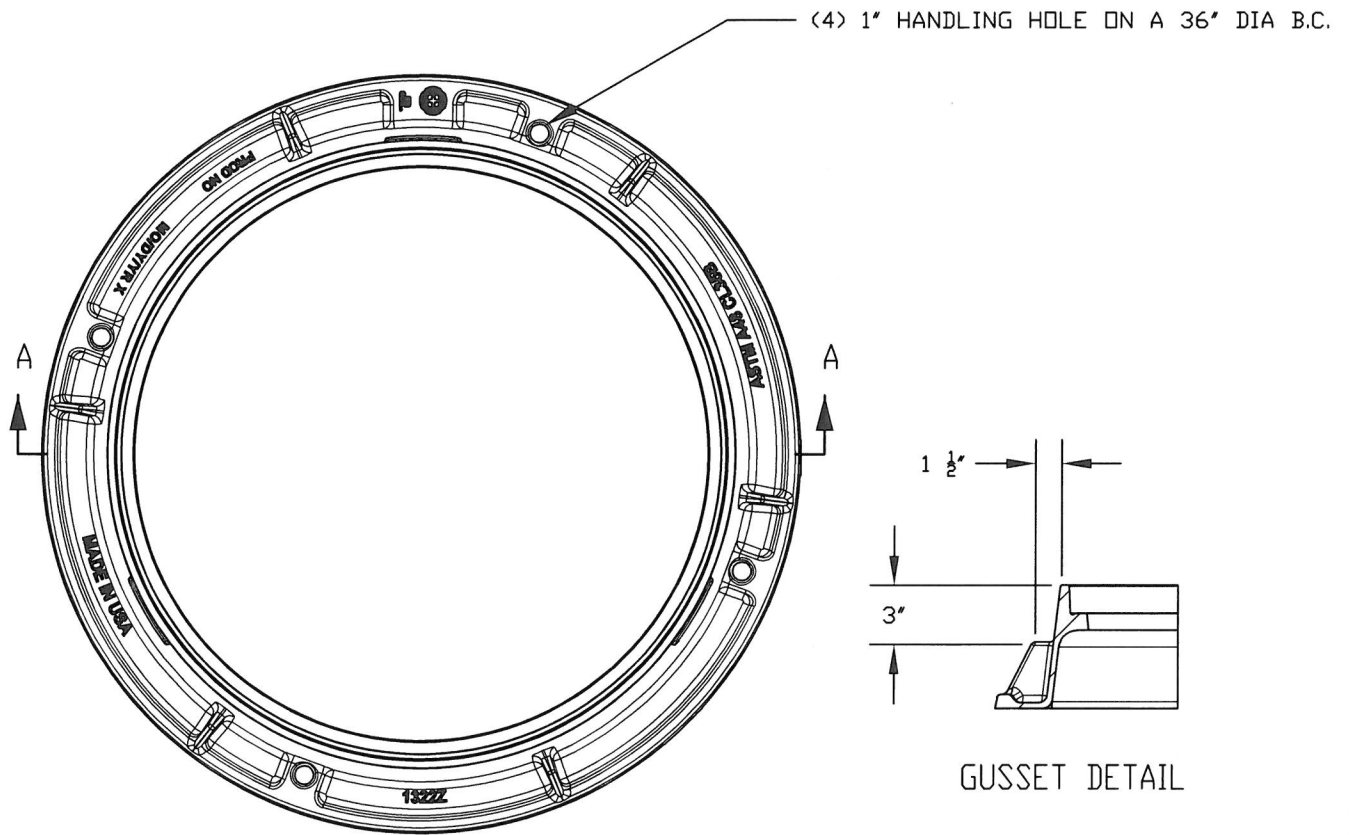


SECTION A-A

NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

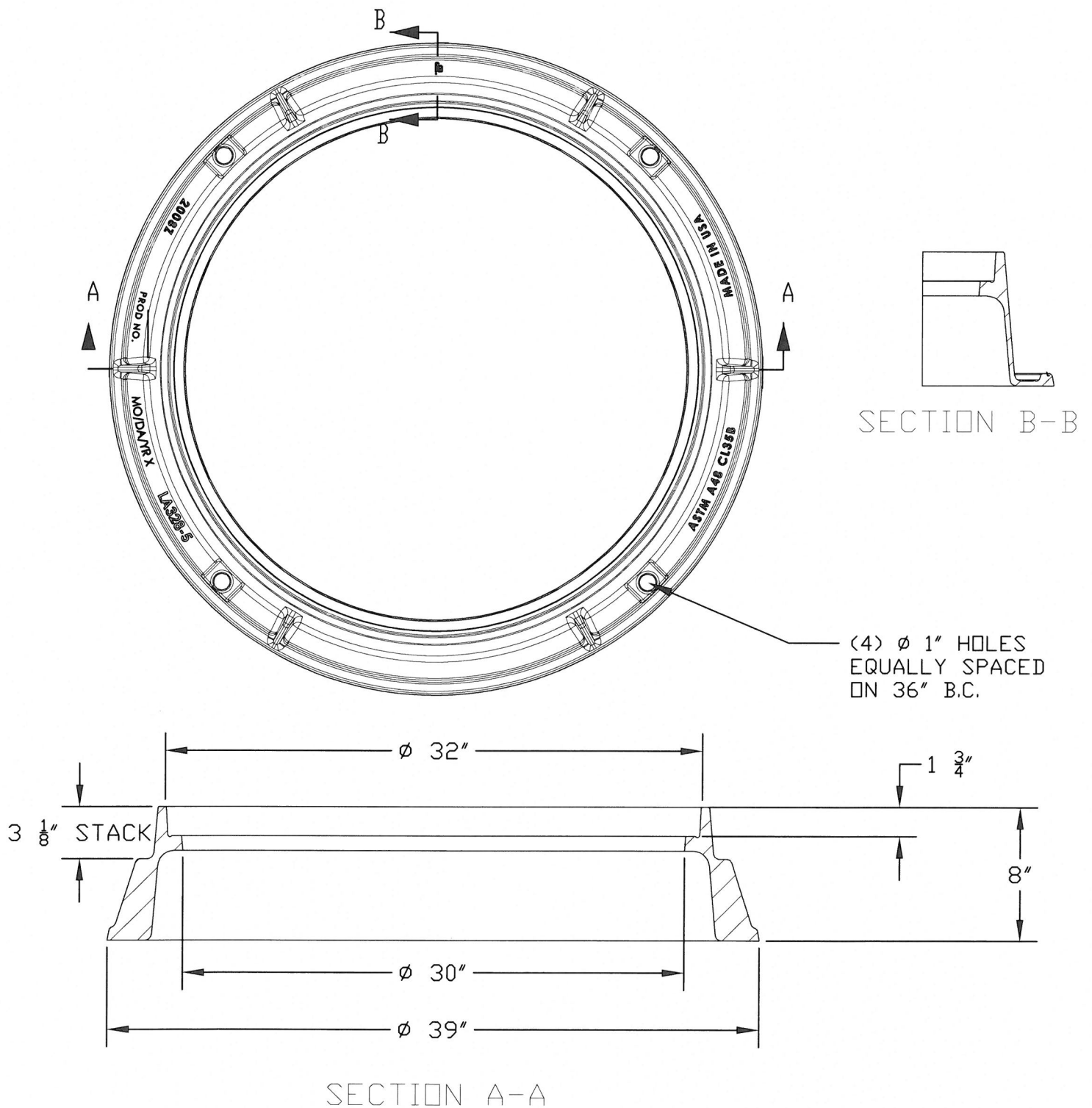
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.54	REV. DATE
	26-inch by 6-inch Frame Only	4/16/19 DJP
	SCALE: NTS	



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

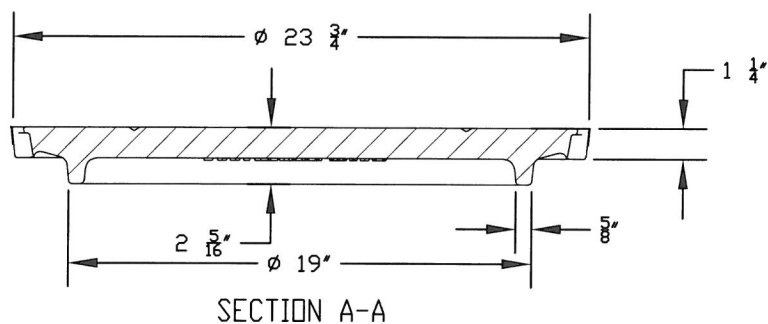
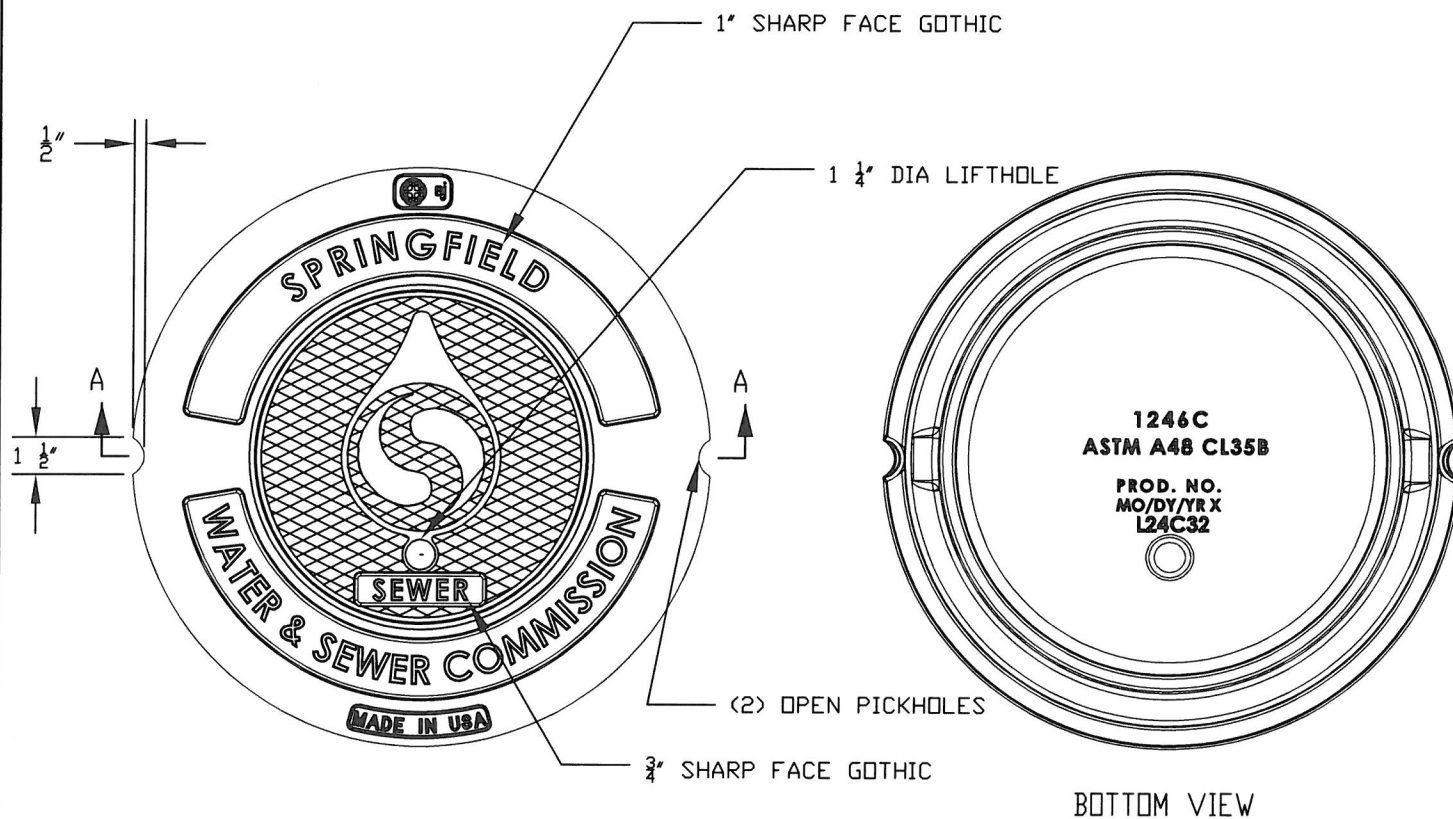
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.55	REV. DATE
	32-inch by 6-inch Frame Only	4/16/19 DJP
	SCALE: NTS	



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

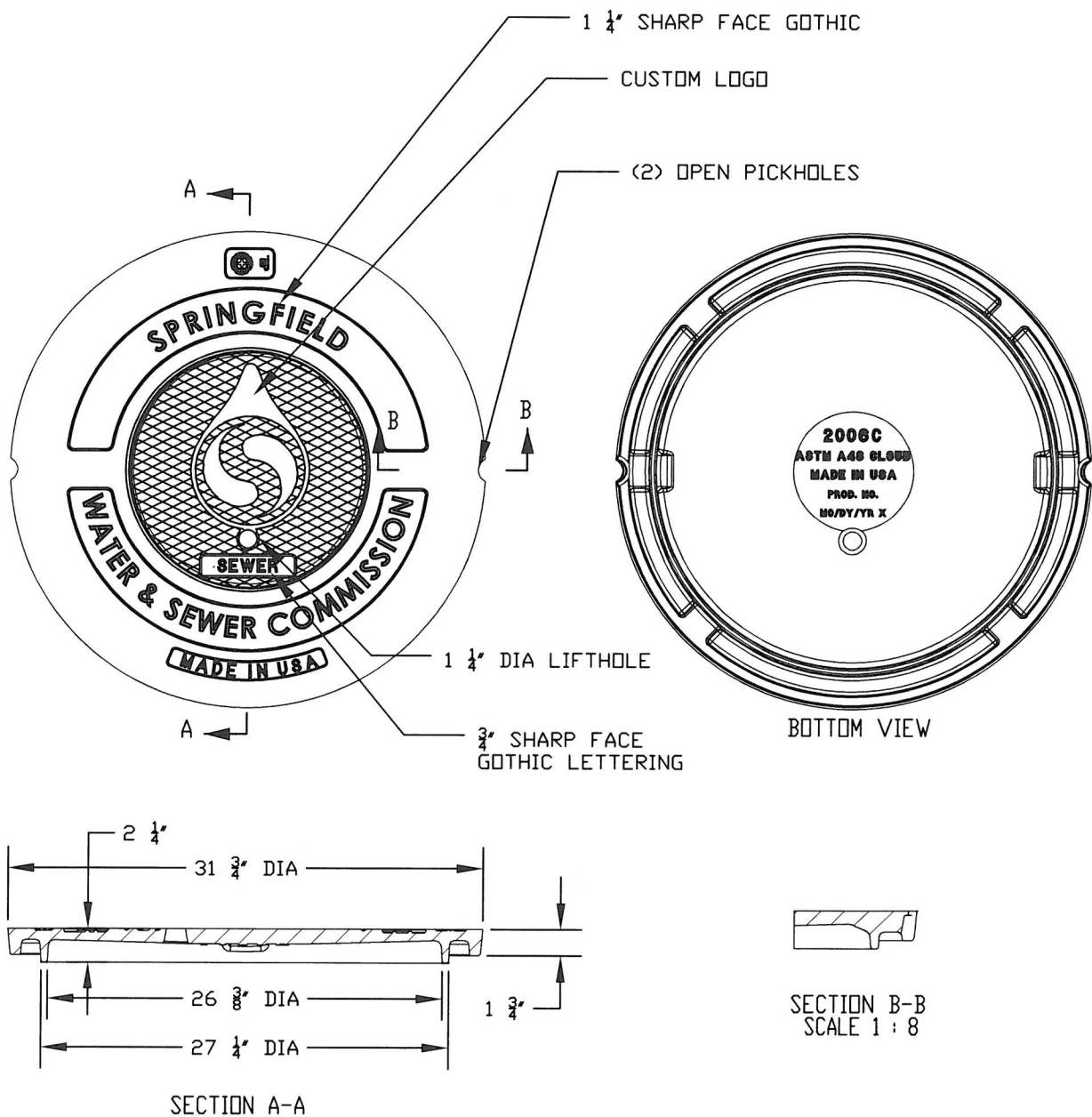
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.56	REV. DATE
	32-inch by 8-inch Frame Only	4/16/19 DJP
	SCALE: NTS	



NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

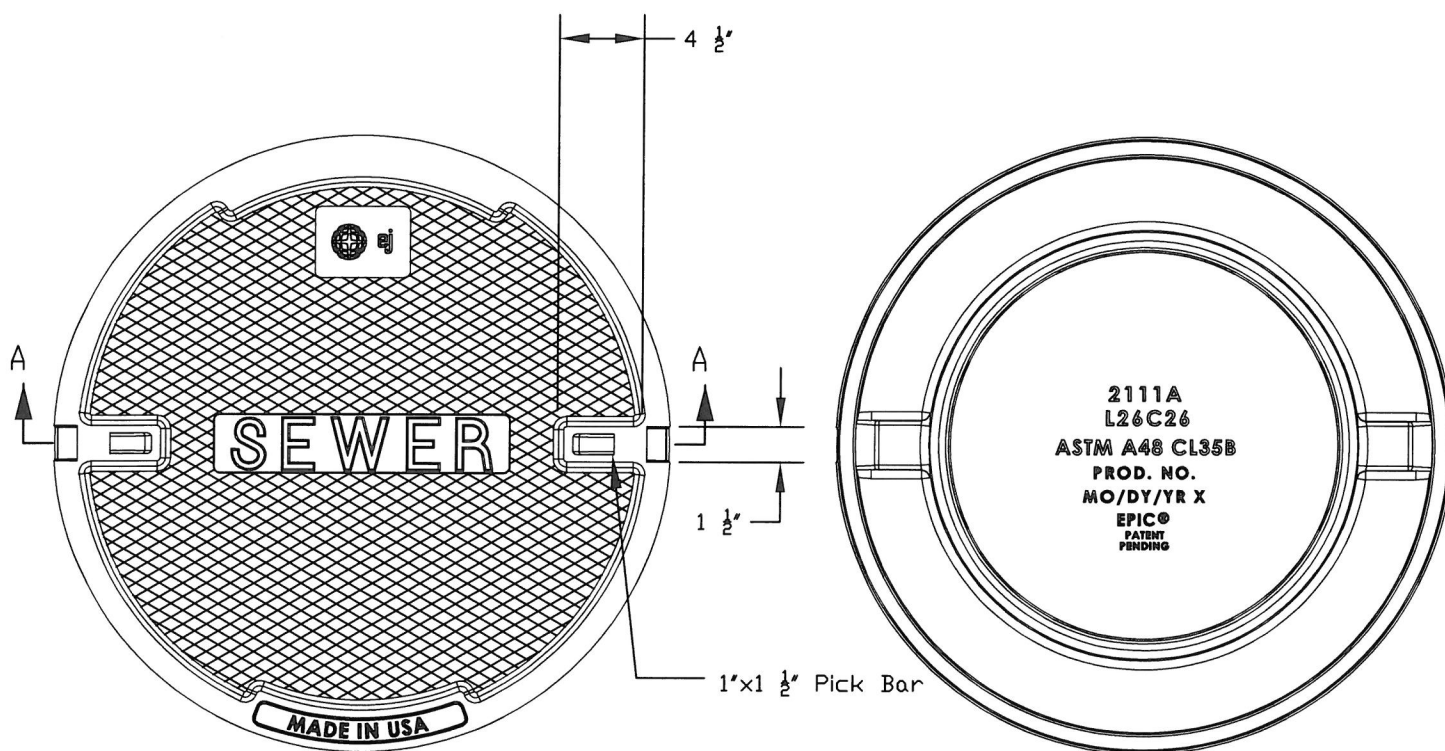
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.61	REV. DATE
	24-inch Standard Sewer Cover	4/16/19 DJP
	SCALE: NTS	



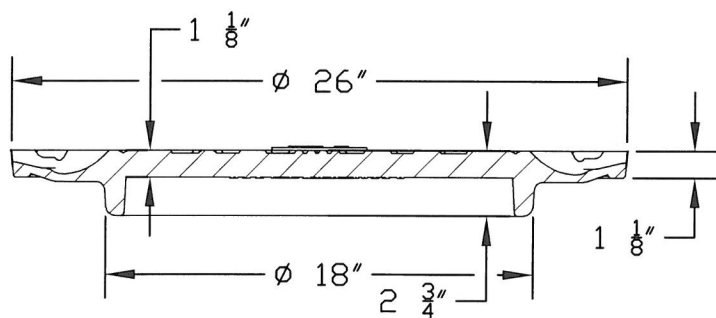
NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.62	REV. DATE
	32-inch Standard Sewer Cover	4/16/19 DJP
	SCALE: NTS	




BOTTOM VIEW

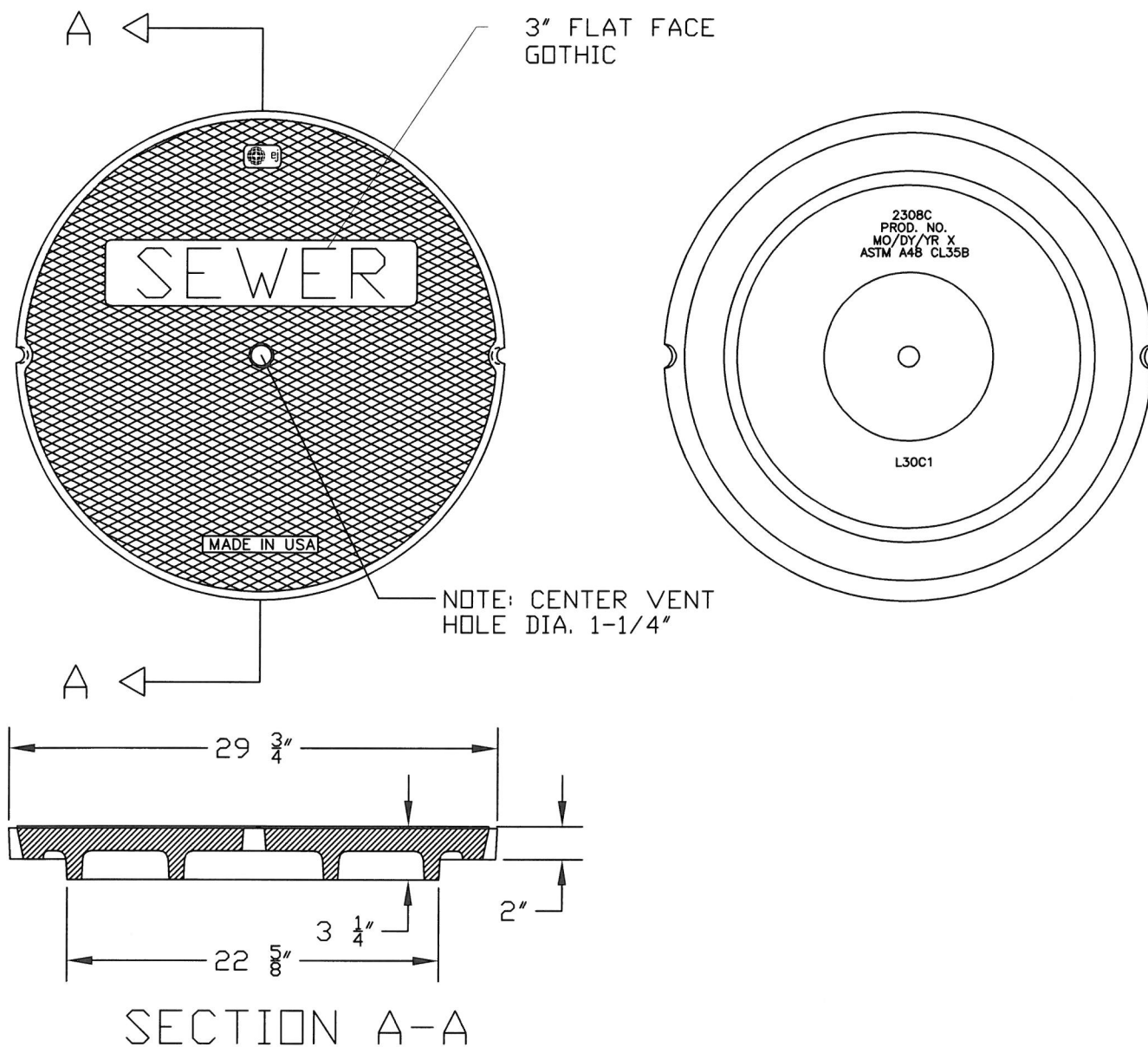


SECTION A-A

NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

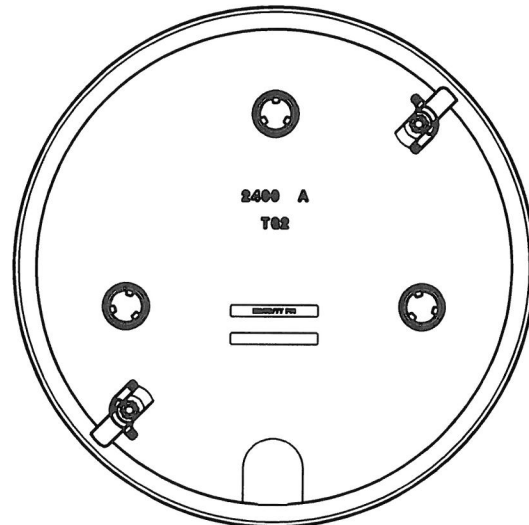
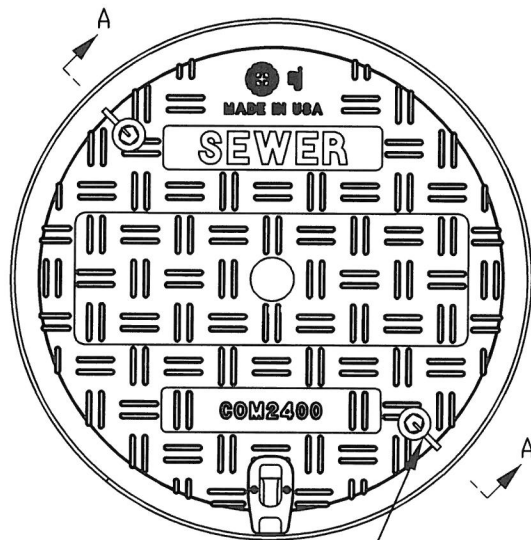
SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.63	REV. DATE
	26-inch Replacement Sewer Cover	4/16/19 DJP
	SCALE: NTS	



NOTES:

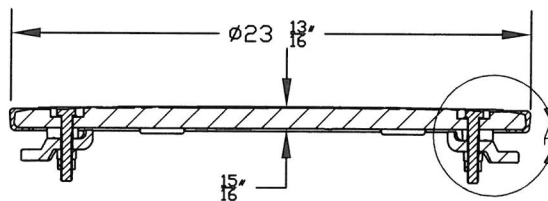
1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. FRAME & COVER SHALL BE MADE FROM ASTM A48 CLASS 35B GRAY CAST IRON.
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ " PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.64	REV. DATE
	30-inch Replacement Sewer Cover	4/16/19 DJP
	SCALE: NTS	

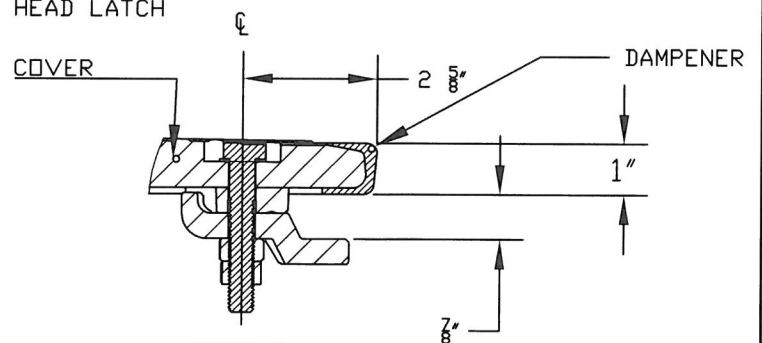


BOTTOM VIEW

1/4 TURN PENTA HEAD LATCH



SECTION A-A



DETAIL A
SCALE 1:3

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. COVER SHALL BE MADE FROM FIBER REINFORCED POLYMER (FRP) ASTM C1028
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION



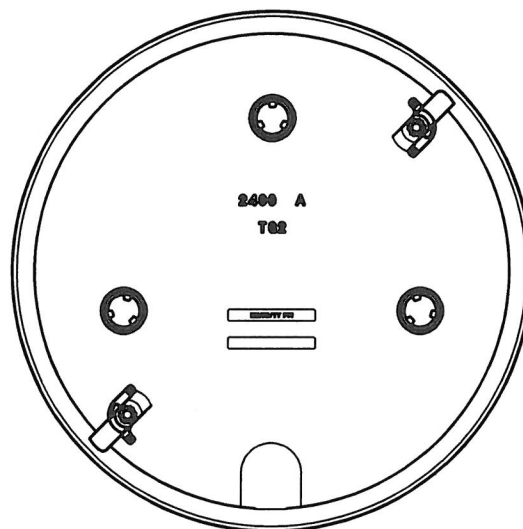
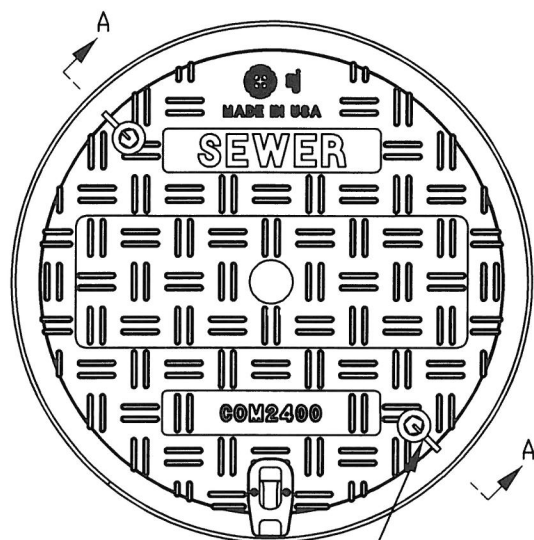
SEWER DETAIL S-02.65

24" Composite Locking
Cover

SCALE: NTS

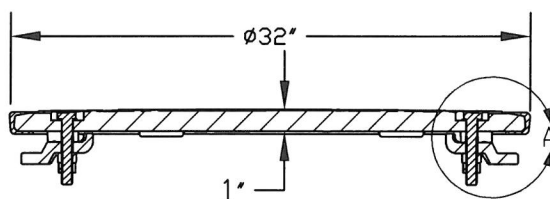
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4/19/19 DJP

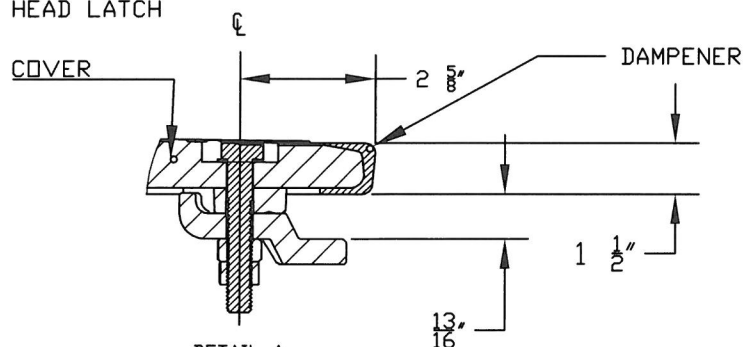


BOTTOM VIEW

1/4 TURN PENTA HEAD LATCH




SECTION A-A

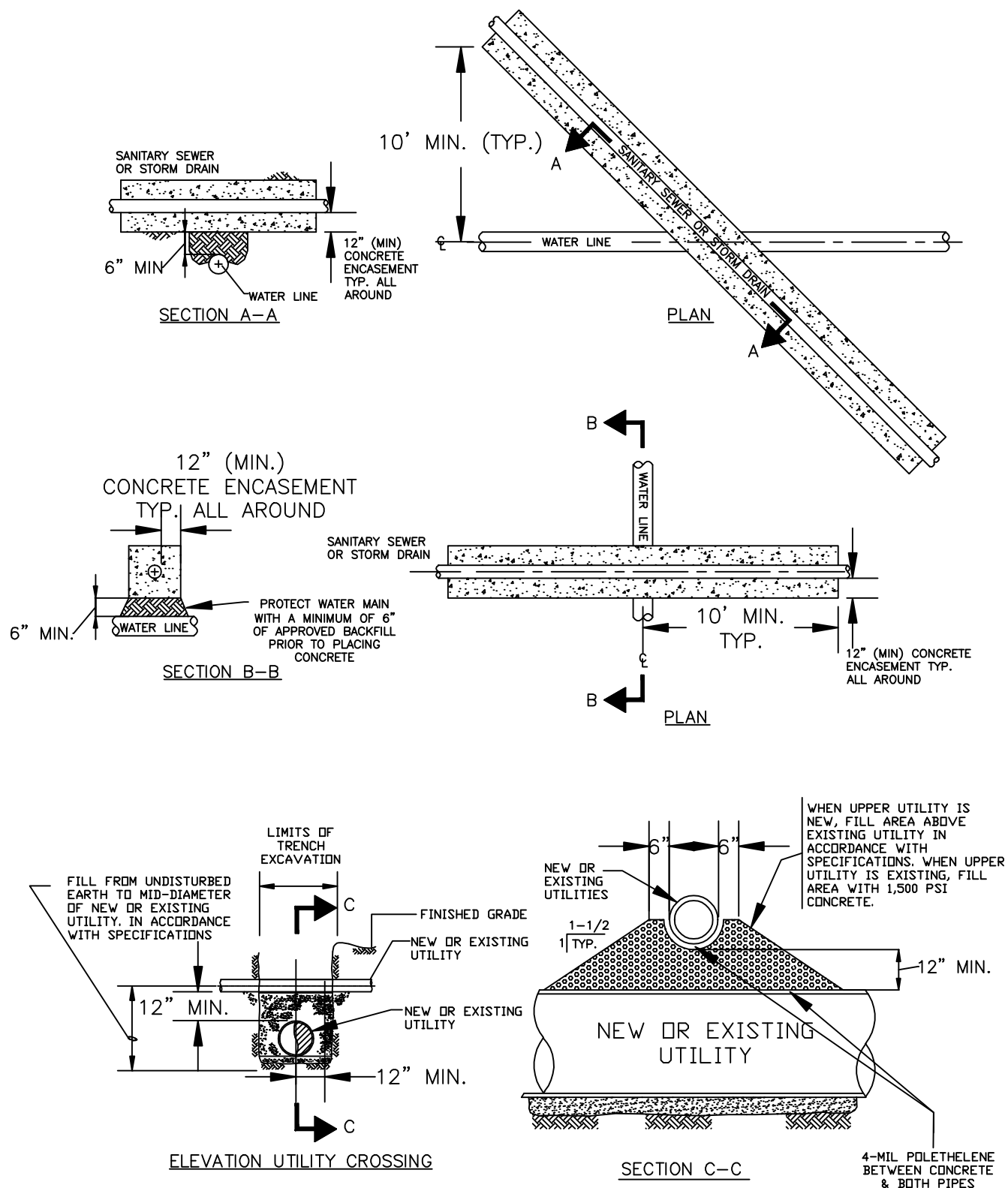


DETAIL A
SCALE 1/3

NOTES:


1. ALL MATERIALS WILL CONFORM TO SWSC SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. COVER SHALL BE MADE FROM FIBER REINFORCED POLYMER (FRP) ASTM C1028
3. DIMENSIONS ARE IN INCHES-FRACTIONAL $\pm \frac{1}{16}$ ON ALL DIMENSIONS UP TO 12" AND AN ADDITIONAL $\pm \frac{1}{16}$ PER FOOT

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-02.66	REV. DATE
	32-inch Composite Locking Cover	4/19/19 DJP
	SCALE: NTS	

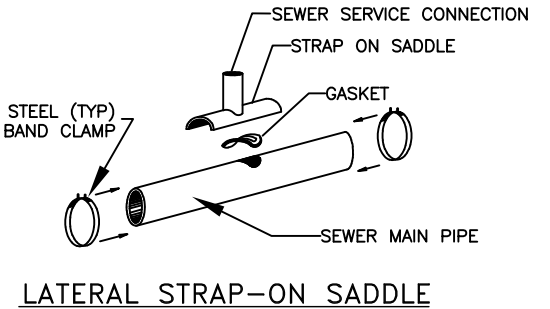
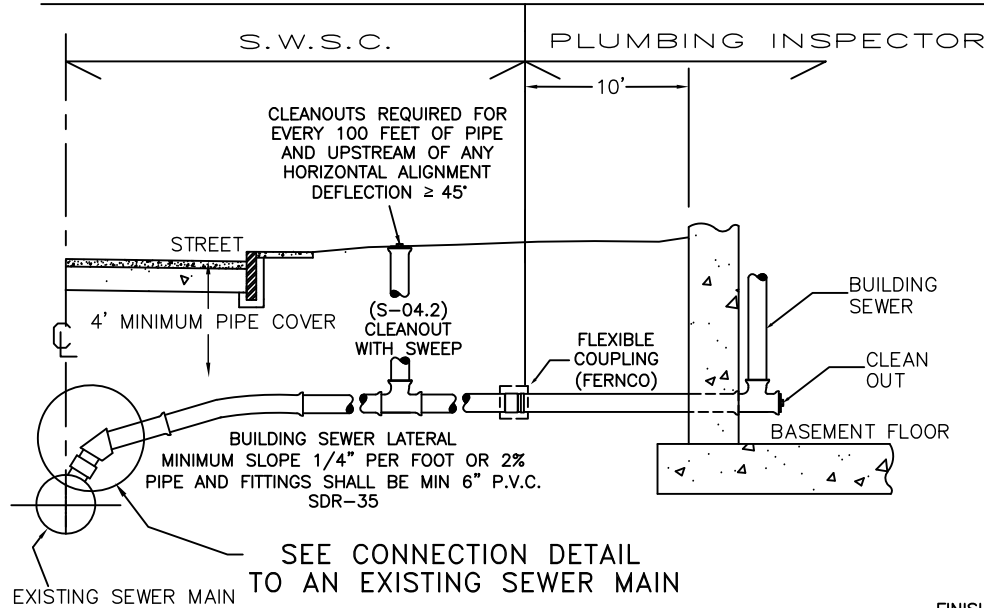


NOTES:

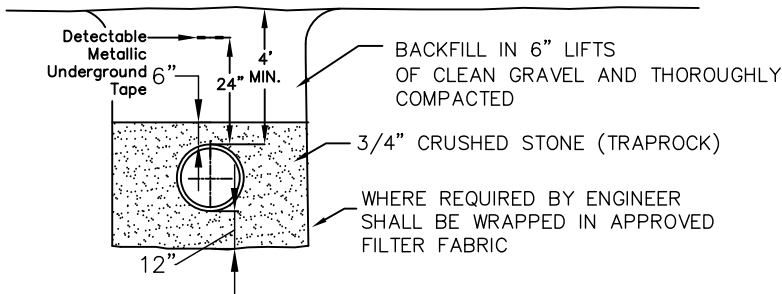
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
- ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
- IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
- IF DEPTH OF COVER ABOVE CONCRETE ENCASEMENT IS GREATER THAN 5'-0" REINFORCEMENT STEEL SHALL BE USED.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-03.0	REV. DATE
	<u>UTILITY CROSSING DETAIL</u>	4/1/08 MAB
		6/18/08 MAB
SCALE: NTS		

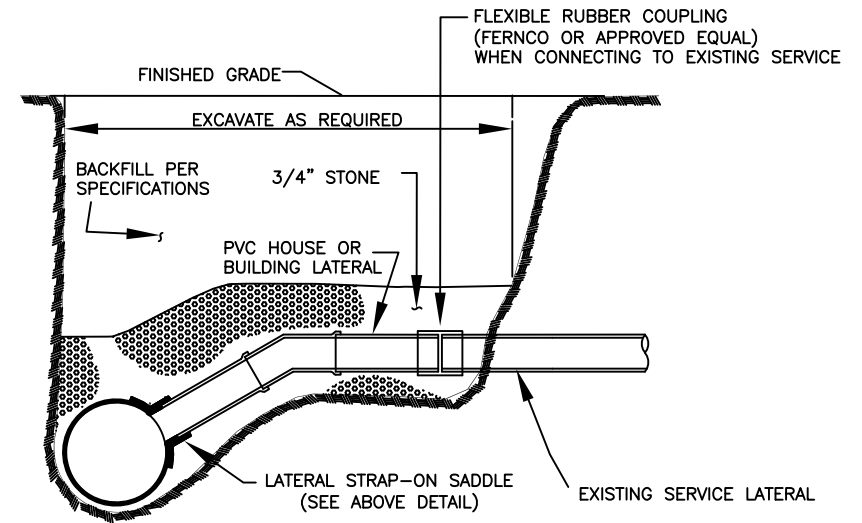
INSPECTION JURISDICTION



BUILDING SEWER




REFERENCE TRENCH DETAIL S-01.0



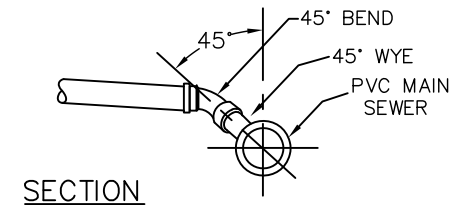
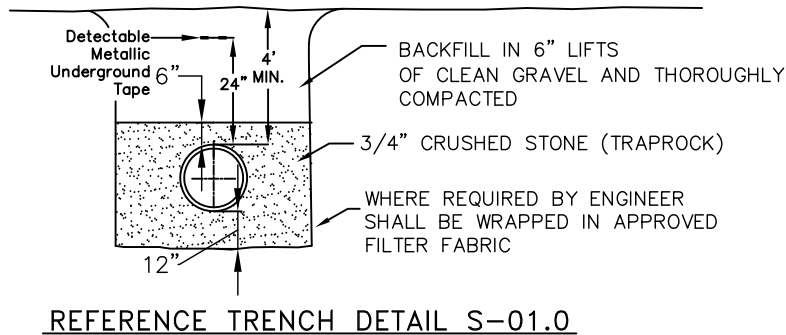
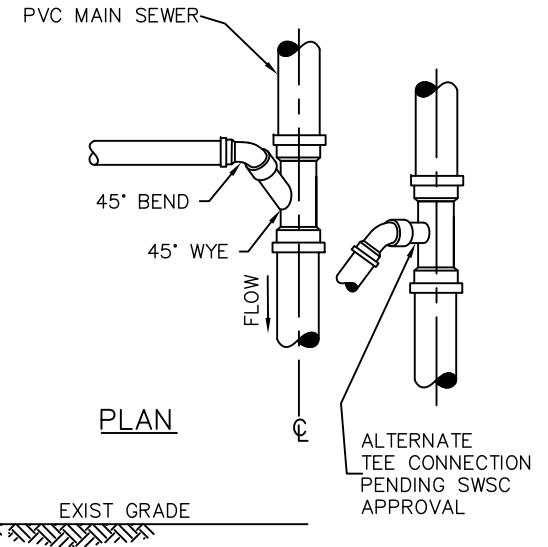
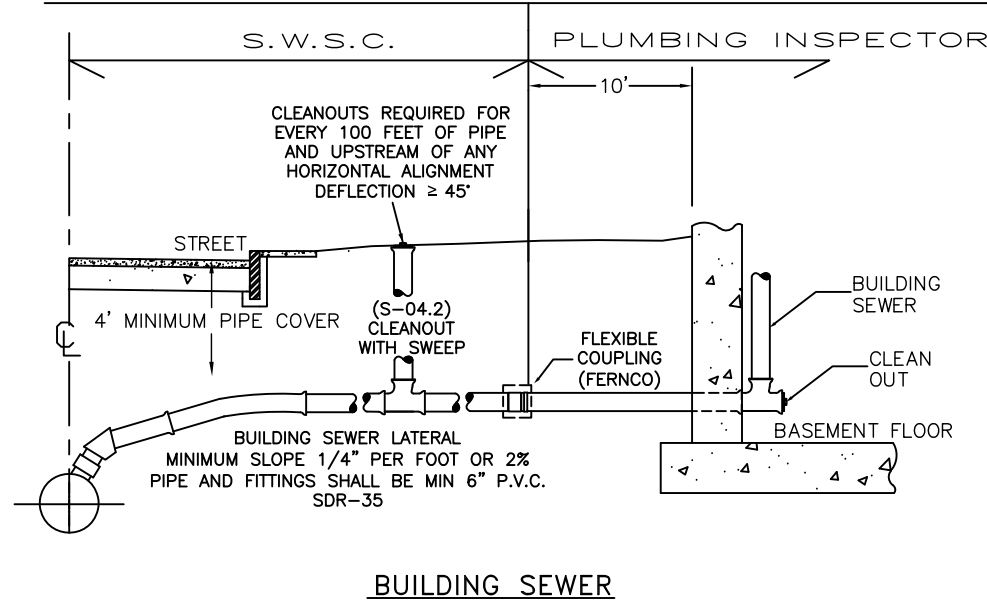
CONNECTION TO AN EXISTING SEWER LATERAL

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6\"/>

	SPRINGFIELD WATER AND SEWER COMMISSION	
	SEWER DETAIL S-04.0	REV. DATE
	EXISTING SEWER MAIN TO BUILDING CONNECTION	4/1/08 MAB
	SCALE: NTS	10/6/20 DS


INSPECTION JURISDICTION



LATERAL CONNECTION TO A NEW SEWER MAIN

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.

	SPRINGFIELD WATER AND SEWER COMMISSION	
	SEWER DETAIL S-04.1	NEW SEWER MAIN
	TO BUILDING CONNECTION	
	SCALE: NTS	

REV. DATE	4/1/08 MAB
10/6/20 DS	

DETAIL FOR CLEAN OUTS IN EASEMENTS

STAINLESS STEEL CLOSURE

PAVING

6" MIN.

1/2" ALL AROUND

EARTH

4"

6"

CONCRETE

2 LAYERS OF 30lb. FELT ALL AROUND OR FIBER PACKING

VARIABLE

12"

12"

VARIES

RISER, SIZE PER PLAN

3'-0" MIN.

PVC SDR-35 LONG SWEEP 45° BEND

SIZE 45° WYE PER PLAN

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.
5. CLEAN OUT PIPE DIAMETER SHALL BE THE SAME AS THE SEWER LINE AT THE WYE.



SEWER DETAIL S-04.2

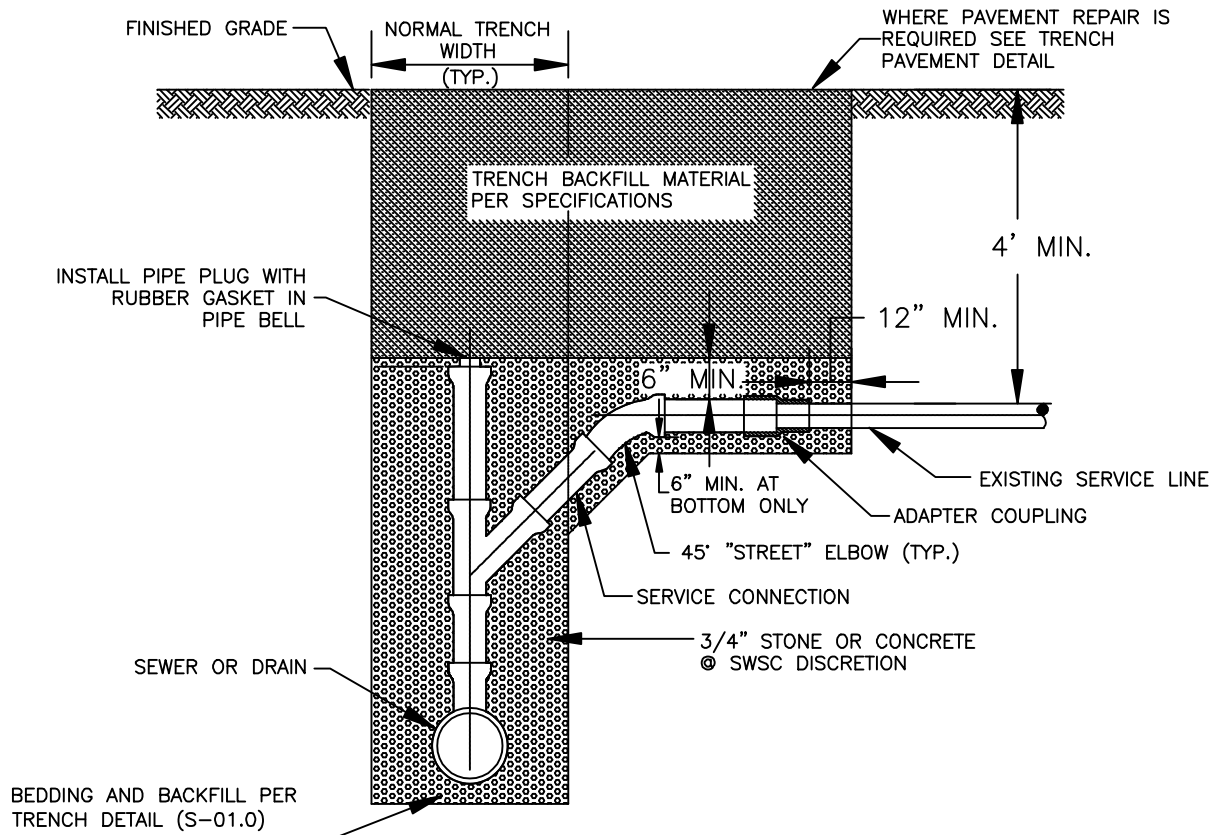
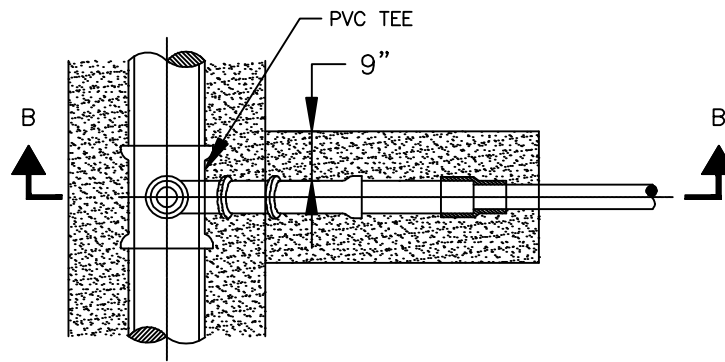
CLEAN OUT WITH SWEEP

SCALE: NTS

REV. DATE

4/1/08 MAB

10/06/20 DS



SEWER OR DRAIN SERVICE CONNECTION WITH CHIMNEY GREATER THAN 12' DEEP

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND MATERIAL SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.
5. CLEAN OUT PIPE DIAMETER SHALL BE THE SAME AS THE SEWER LINE AT THE WYE.

SPRINGFIELD WATER AND SEWER COMMISSION



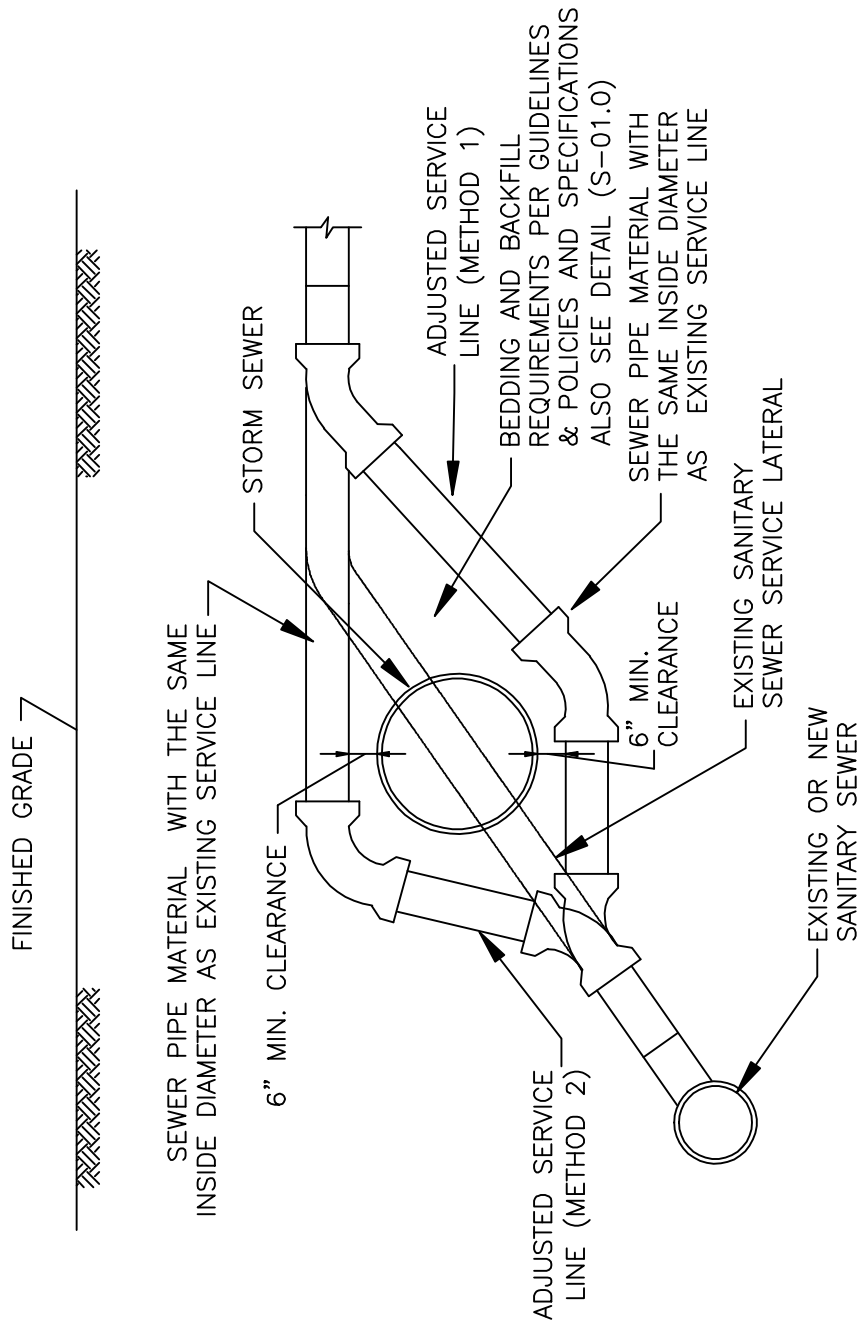
SEWER DETAIL S-04.3

*SEWER SERVICE CONNECTION
WITH CHIMNEY >12' DEEP*


SCALE: NTS

REV. DATE

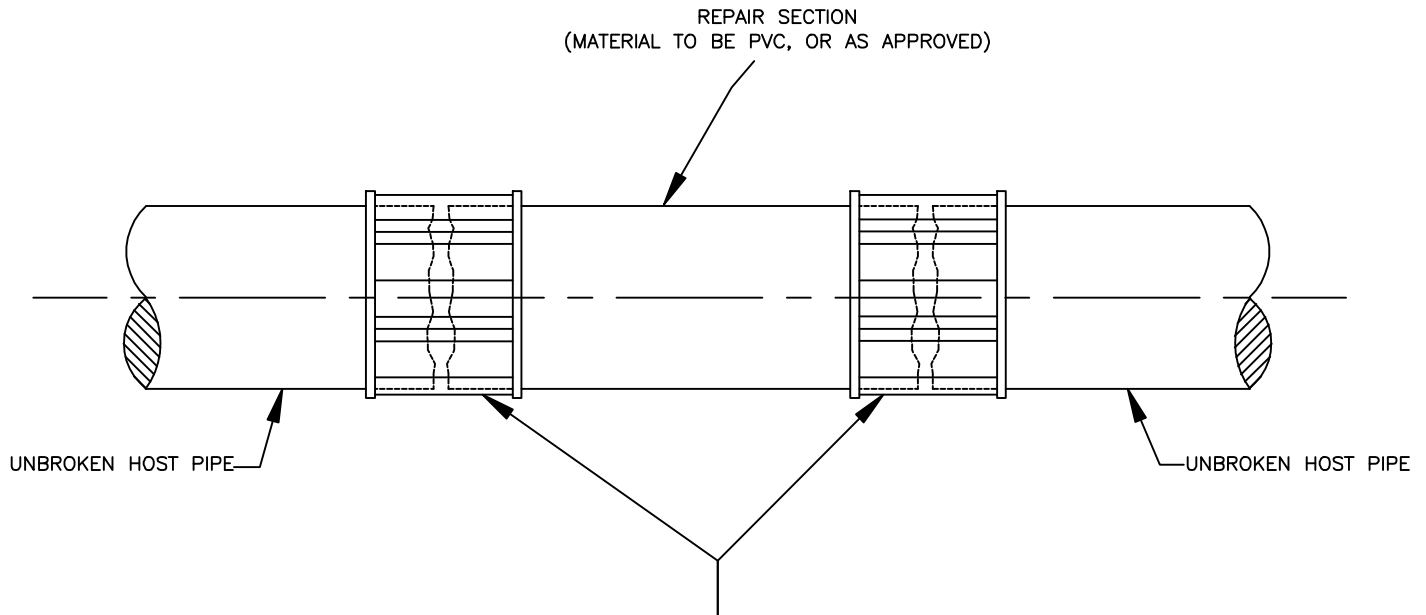
4/1/08 MAB



- NOTES:**
1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND MATERIAL SPECIFICATIONS.
 2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
 3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
 4. ALL SERVICE LINES SHALL BE PVC SDR-35 AND MUST BE A MINIMUM OF 6" DIAMETER, NO EXCEPTIONS.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-04.4	REV. DATE
	BUILDING CONNECTION TO SEWER MAIN WITH CONFLICTS	4/1/08 MAB
	SCALE: NTS	

TYPICAL REPAIR




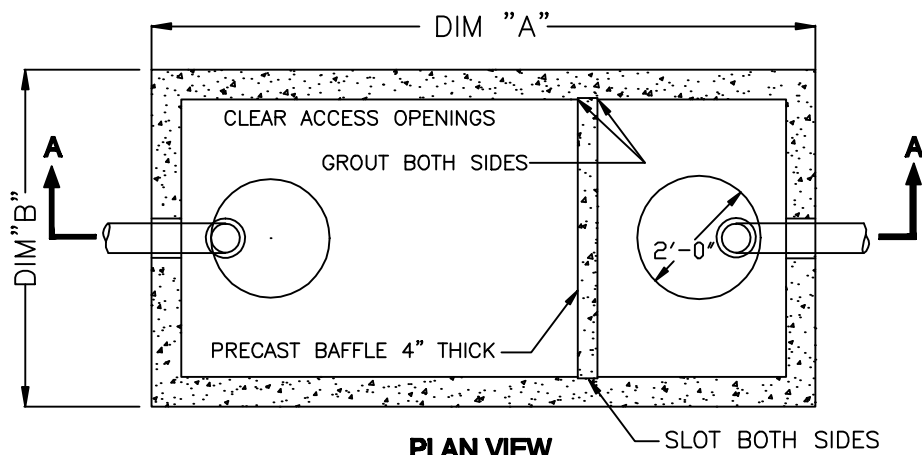
PVC SLIP COUPLINGS, RUBBER COUPLINGS (FERNCO OR APPROVED EQUAL)

BRICK OR EGG SHAPED SEWER REPAIR MAY HAVE ADDITIONAL REQUIREMENTS BY SWSC

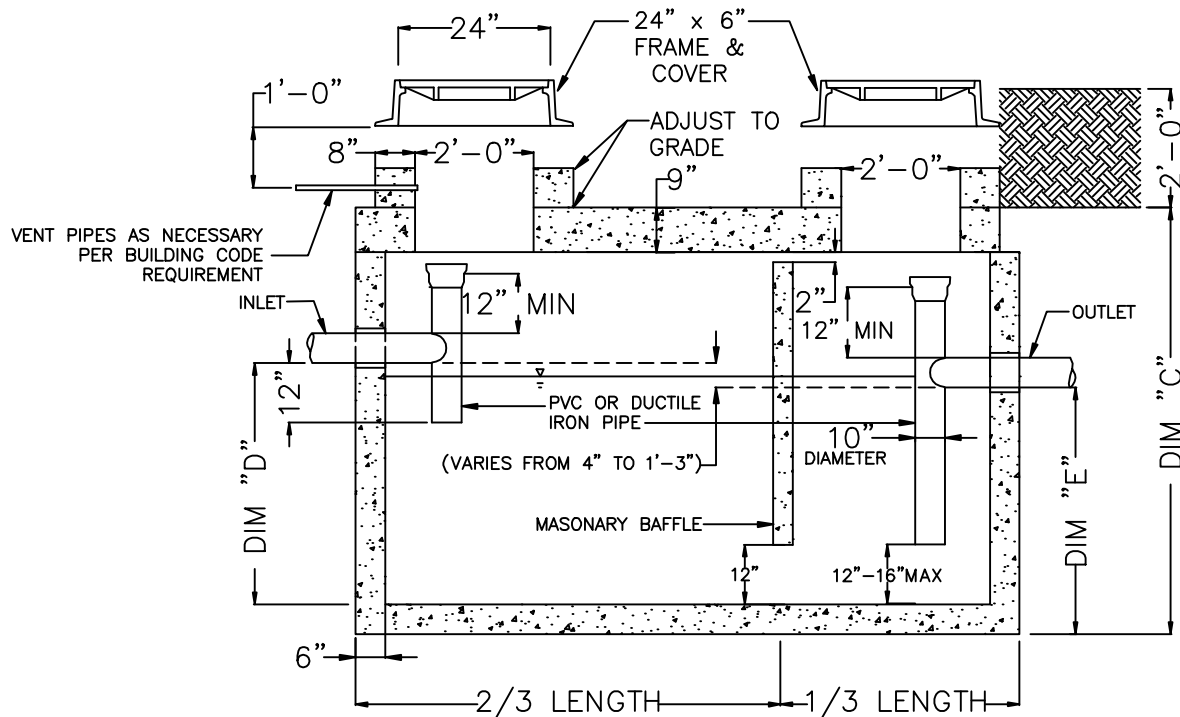
NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. SEWER REPAIR SECTION MATERIAL SHALL BE THE SAME MATERIAL AS THE HOST PIPE, OR AS APPROVED BY SWSC.
5. REPAIR SECTION SHALL BE SIZED TO BUTT AGAINST THE HOST PIPES.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-05.0	REV. DATE
	<i>BUILDING AND MAINLINE</i>	4/1/08 MAB
	<i>SEWER REPAIR</i>	
	SCALE: NTS	



PLAN VIEW



SECTION A-A

SIZING CHART					
GALLON CAPACITY	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
750	7'-0"	4'-8"	7'-0"	4'-3"	3'-11"
1000	9'-0"	5'-0"	7'-2"	4'-2"	3'-10"
1250	9'-0"	5'-0"	7'-2"	5'-2"	4'-10"
1500	11'-2"	5'-8"	7'-2"	4'-4"	4'-0"
1750	11'-2"	5'-8"	7'-2"	4'-11"	4'-7"
2000	12'-8"	6'-8"	8'-0"	4'-7"	3'-10"
2500	12'-8"	6'-8"	8'-0"	5'-6"	4'-9"
2750	12'-8"	6'-8"	8'-0"	6'-0"	5'-3"
3000	15'-7"	9'-7"	8'-6.5"	5'-0"	3'-9"
4000	15'-7"	9'-7"	8'-6.5"	6'-3"	5'-0"
5000	19'-11"	9'-11"	8'-11"	6'-2"	4'-9"
6000	19'-11"	9'-11"	10'-5"	7'-2"	5'-9"

GENERAL CONSTRUCTION NOTES:

1. CONCRETE : 28 DAY F'c= 4500 psi
2. REBAR : ASTM A615 GRADE 60.
3. MESH : ASTM A-185 GRADE 65
4. DESIGN : AC1318-83 BUILDING CODE
ASTM C-857 MINIMUM STRUCTURAL DESIGN
LOADING FOR UNDERGROUND PRECAST
CONCRETE UTILITY STRUCTURES
5. LOADS : H-20 LOADING.
6. FILL w/CLEAN WATER PRIOR TO START UP OF SYSTEM.
7. CONTRACTOR TO SUPPLY AND INSTALL ALL PIPING AND
SANITARY TEES ,4 CLEAN OUTS, FOR CLEANING TOWARD
TRAP AND FOR CLEANING AWAY FROM TRAP ON BOTH THE
INLET AND OUTLET / ALT. DUAL SWEEP CLEANOUTS.
8. GRAY WATER ONLY, BLACK WATER SHALL BE CARRIED BY
SEPARATE SEWER.
9. TRAP SIZE WILL BE BASED ON 15 GPD PER SEAT OR
OTHER APPROVED SIZING CRITERIA.
10. LARGER SIZES MAY BE REQUIRED AS PER REVIEW OF
FACILITY.
11. MUST BE PRESSURE TESTED PER ASTM C163-06.
12. BALLAST/BOUYANCY CALCULATIONS REQUIRED IF AVERAGE
HIGH GROUND WATER TABLE IS ENCOUNTERED.

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO
SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. ALL SEWER SERVICE PIPE SHOULD HAVE A MINIMUM DEPTH OF 4'
FROM TOP OF PIPE TO FINISH GRADE.
3. IF 4' OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
4. SEWER REPAIR SECTION MATERIAL SHALL BE THE SAME MATERIAL AS
THE HOST PIPE, OR AS APPROVED BY SWSC.
5. REPAIR SECTION SHALL BE SIZED TO BUTT AGAINST THE HOST PIPES.

SPRINGFIELD WATER AND SEWER COMMISSION



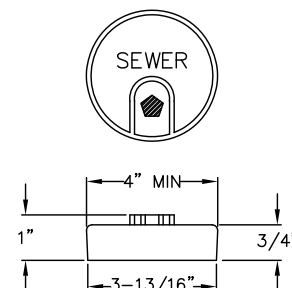
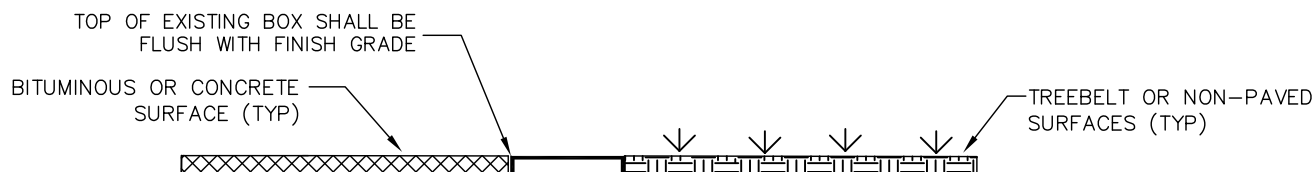
SEWER DETAIL S-08.0

**STANDARD EXTERNAL
GREASE INTERCEPTOR**

SCALE: NTS

REV. DATE

4/1/09 MAB



SERVICE BOX COVER
WITH BRASS PENTAGON HEAD NUT
AND THE WORD "SEWER" CAST INTO COVER

6" MINIMUM OVERLAP

BACKFILL WITH SAND,
 CRUSHED STONE, SCREENED GRAVEL,
 OR SELECT COMMON BORROW/FILL

MINIMUM 2 1/2" I.D.

2 1/2" SLIDING BUFFALO STYLE VALVE BOX SHALL BE
 HEAVY CAST IRON EXTENSION (ADJUSTABLE) TYPE
 WITH 3 1/2" X 4 7/8" ARCHED BASE

MINIMUM TOTAL BOX WEIGHT SHALL BE 41 lbs FOR
 48-66 INCH EXTENSION

UTILIZE ENLARGED BASE WITH 4 1/8" X 4 7/8" ARCH
 FOR 3" LPSS MAINS (ADD 9lbs MIN TO TOTAL BOX
 WEIGHT WHEN USING ENLARGED BASE)

THE ARCH PATTERN BASE SHALL ACCOMMODATE
 BALL TYPE CORPORATIONS AND BALL TYPE CURB
 STOPS SIZED TO MATCH LPSS MAIN AND SERVICE
 LATERALS.

THE BUFFALO STYLE SERVICE BOX SHALL HAVE A
 HEAVY COAT OF ASPHALT-BASE PAINT.

BACKFILL WITH THOROUGHLY COMPACTED
 SAND TO 6" ABOVE PIPE IN MAX 12" LIFTS
 COMPACTION TO 95% PROCTOR

STANDARD BRICK
 4"x2-3/4"x8" NO HOLES
 PLACED OVER COMPACTED FILL
 AND UNDER VALVE BOX
 BOTTOM FOR SUPPORT

SLIDE TYPE
BUFFALO VALVE BOX

NOTES:

1. ALL MATERIALS WILL CONFORM TO SWSC MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES WILL CONFORM TO SWSC GUIDELINES AND POLICIES.
2. LPSS DEPTH SHALL BE 6 INCHES BELOW THE AVERAGE FROST DEPTH (48 INCHES) FOR A TOTAL OF 54 INCHES. PIPE SHALLOWER THAN 54 INCHES SHALL BE INSULATED.
3. SEE DETAIL S-09.3 FOR TRENCH DETAILS
4. IF BACKFILLING WITH "FLOWABLE" FILL WRAP THE SERVICE BOX WITH 15 POUND FELT ROOFING PAPER OR 4 MIL THICK POLYETHYLENE.

SPRINGFIELD WATER AND SEWER COMMISSION



SEWER DETAIL S-09.1

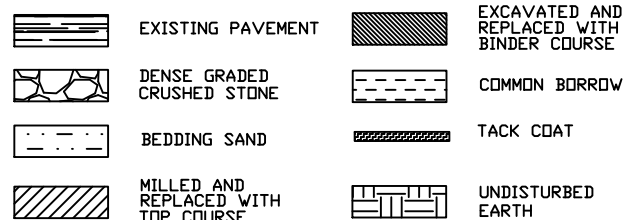
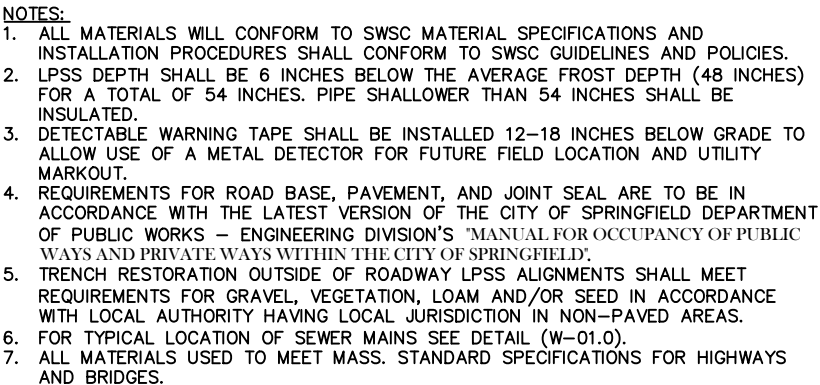
LOW PRESSURE SANITARY
SERVICE / MAIN 2 1/2" VALVE
BOX IN NON-PAVED AREAS

SCALE: NTS

REV. DATE

1/18/19 DS

10/28/20 DS



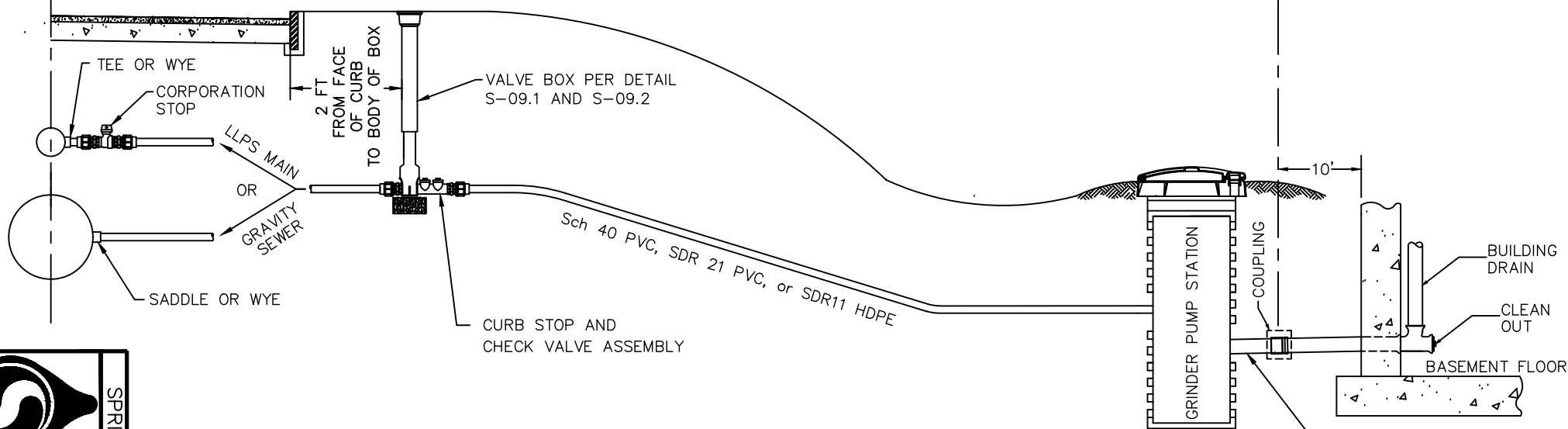
S.W.S.C. INSPECTOR

PUBLIC RIGHT-OF-WAY

IF THE SIDEWALK
BEGINS AT THE CURB
INSTALL VALVE BOX 1' OUT
FROM THE RIGHT-OF-WAY
TO THE BODY OF THE BOX
WITH THE APPROVAL FROM
SWSC

GRINDER PUMP BASIN NOTES:

1. TOP OF GRINDER PUMP BASIN MUST BE A MINIMUM OF 4 INCHES ABOVE SURROUNDING GRADE.
2. SURROUNDING GRADE MUST SLOPE AWAY FROM GRINDER PUMP BASIN.
3. EPDM INLET GROMMET TO ACCEPT PVC GRAVITY SEWER PIPE FROM BUILDING.
4. SEE TRENCH DETAIL S-02.1 FOR PVC GRAVITY SEWER
5. BALLAST/ANTI-FLOATATION SLAB IS REQUIRED IF BASIN IS BELOW THE GROUND WATER TABLE. SLAB SHALL BE SIZED BY DESIGN ENGINEER.



GRAVITY SERVICE MUST BE MIN. 6-INCH
MINIMUM SLOPE 1/4" PER FOOT OR 2%
ALL FITTINGS TO BE LONG SWEEPS
PIPE AND FITTINGS SHALL BE P.V.C. SDR-35
SEE TRENCH DETAIL S-01.0

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
2. LPSS PIPE SHALL BE INSTALLED PER TRENCH DETAIL S-09.3
3. ALL SEWER MAIN AND SERVICE PIPE SHALL HAVE A MINIMUM DEPTH OF 4' FROM TOP OF PIPE TO FINISH GRADE.
4. FINAL DETERMINATION OF THE TYPE OF PIPE AND SIZE OF PIPE TO BE USED IS THE RESPONSIBILITY OF THE PROJECT OWNER'S CONSULTING ENGINEER (P.E. IN MASSACHUSETTS) OR THE SEWAGE GRINDER PUMP STATION'S MANUFACTURER.
5. LPSS DEPTH SHALL BE 6 INCHES BELOW THE AVERAGE FROST DEPTH (48 INCHES) FOR A TOTAL OF 54 INCHES. PIPE SHALLOWER THAN 54 INCHES SHALL BE INSULATED.
6. ALL MATERAILS USED FOR THE PRESSURE PORTION OF THE SYSTEM MUST BE PRESSURE RATED FOR AT MINIMUM 160 PSI OPERATING PRESSURE AND SUITABLE FOR THE WASTEWATER ENVIRONMENT AND RESISTANT TO CORROSION.

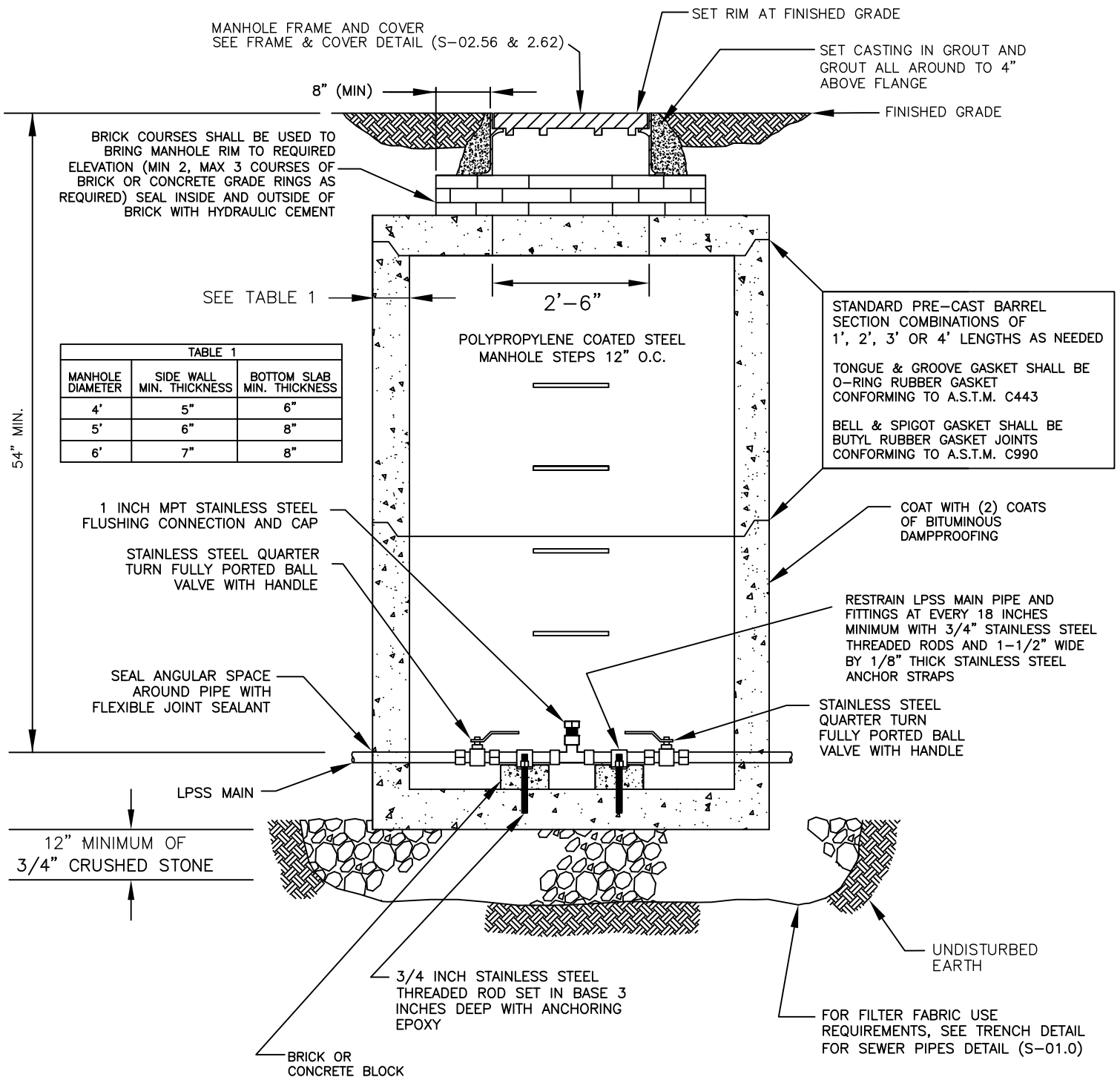
SPRINGFIELD WATER AND SEWER COMMISSION

SEWER DETAIL S-09.3

LPSS SERVICE LATERAL


REV. DATE
1/22/19 DS

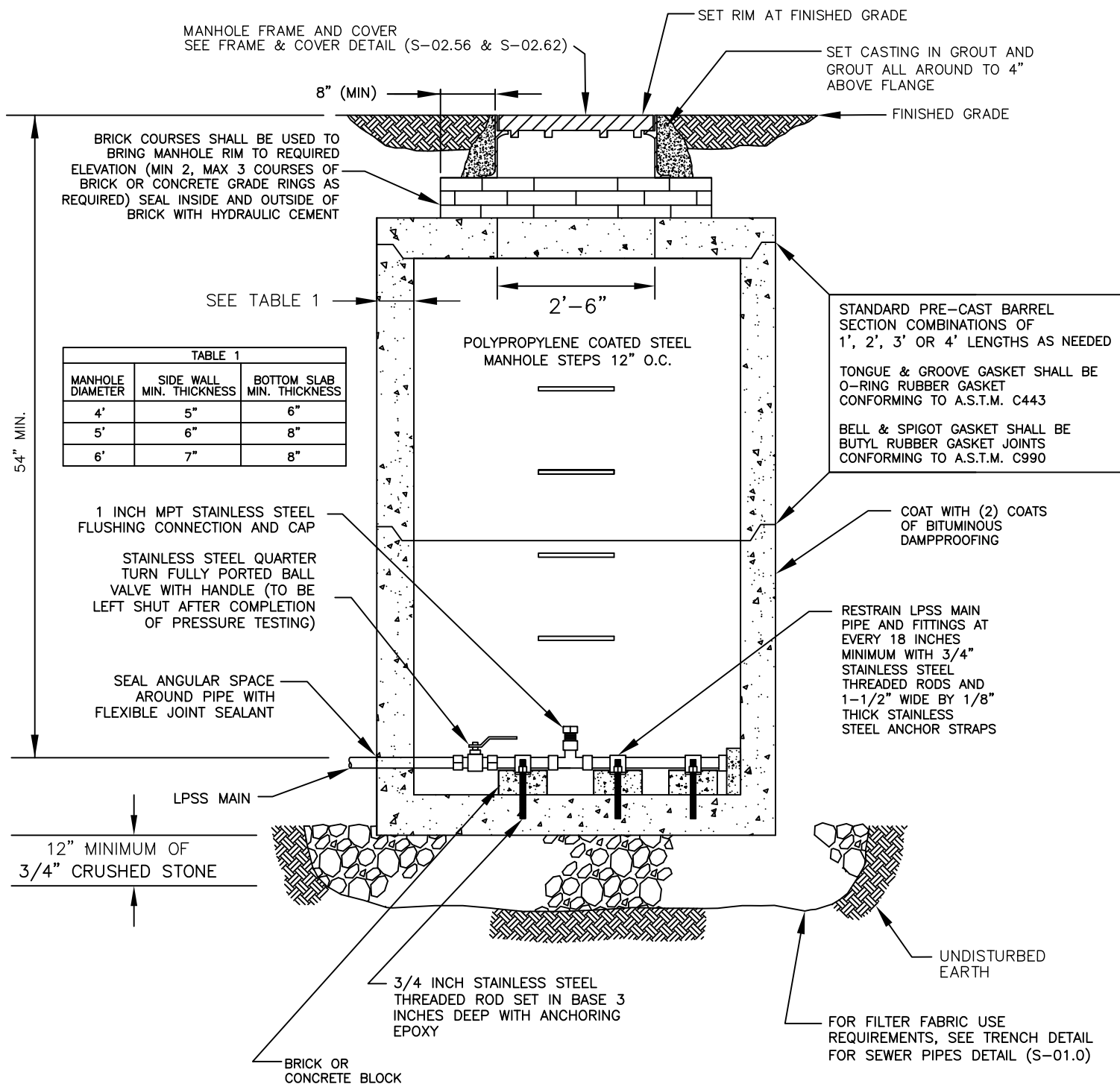
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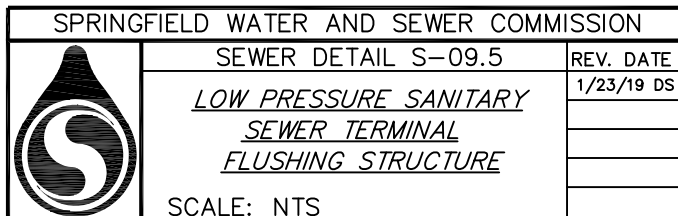
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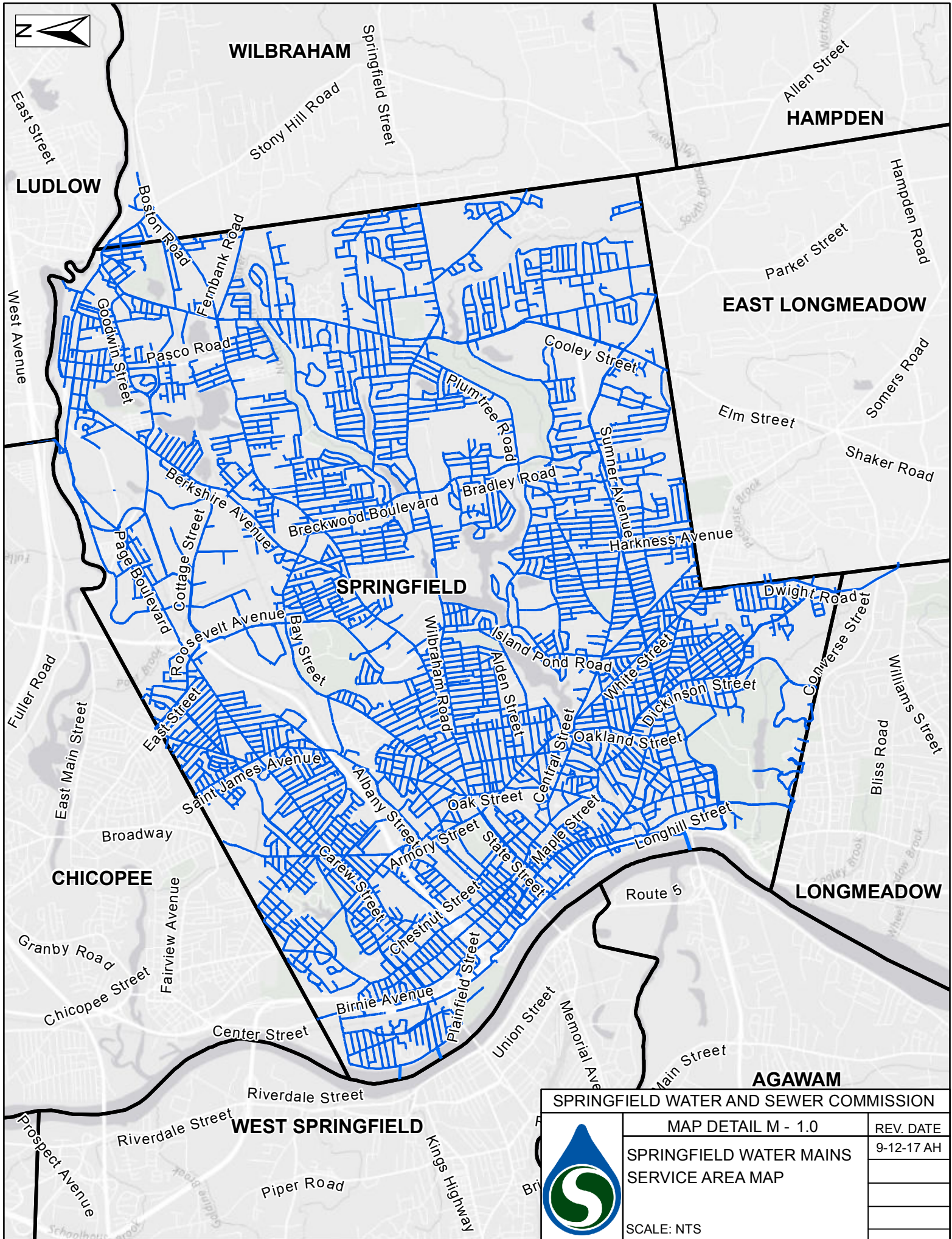
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL CONFORM TO SWSC GUIDELINES & POLICIES AND SPECIFICATIONS.
- LPSS MAIN PIPE SHOULD HAVE A MINIMUM DEPTH OF 54 INCH FROM TOP OF PIPE TO FINISH GRADE.
- IF 54 INCHES OF COVER IS NOT POSSIBLE PIPE SHALL BE INSULATED.
- PRE-CAST REINFORCED CONCRETE MANHOLE SECTIONS CONFORMING TO A.S.T.M.C478.
- DESIGN PRECAST SECTIONS WITH FRAME AND COVER FOR AASHTO H-20 LOADING.
- PRE-CAST CONCRETE SHALL BE 5,000 PSI @ 28 DAYS.
- ALL BRICK SHALL BE HARD NON-POROUS CLAY.
- ADMIXTURES, AIR & PLASTICIZERS PER ASTM C233-82.
- REINFORCING PER ASTM A615 FOR WIRE FABRIC.
- DESIGN LOADING PER AASHTO HS20-44, ACI 318-83; ASTM C478-82, C890-82, C913-71.
- 90 DEGREE BEND FITTINGS ARE NOT ACCEPTABLE. 45 DEGREE BENDS AT INLET AND OUTLET OF MANHOLE SHALL BE INSTALLED WHERE A 90 DEGREE ALIGNMENT CHANGE IS REQUIRED.

SPRINGFIELD WATER AND SEWER COMMISSION		
	SEWER DETAIL S-09.4	REV. DATE
	LOW PRESSURE SANITARY	1/23/19 DS
	SEWER MAIN	
	INLINE FLUSHING STRUCTURE	
	SCALE: NTS	



NOTES:







Springfield
Reservoir

Boston Road

Higher Brook

LUDLOW

East Street
Chapin Street

Road Street

Center Street

Fuller Street

West Street

Cady Street

Holyoke Street

West Avenue

Russell Street

Parker Street


Goodwin Street

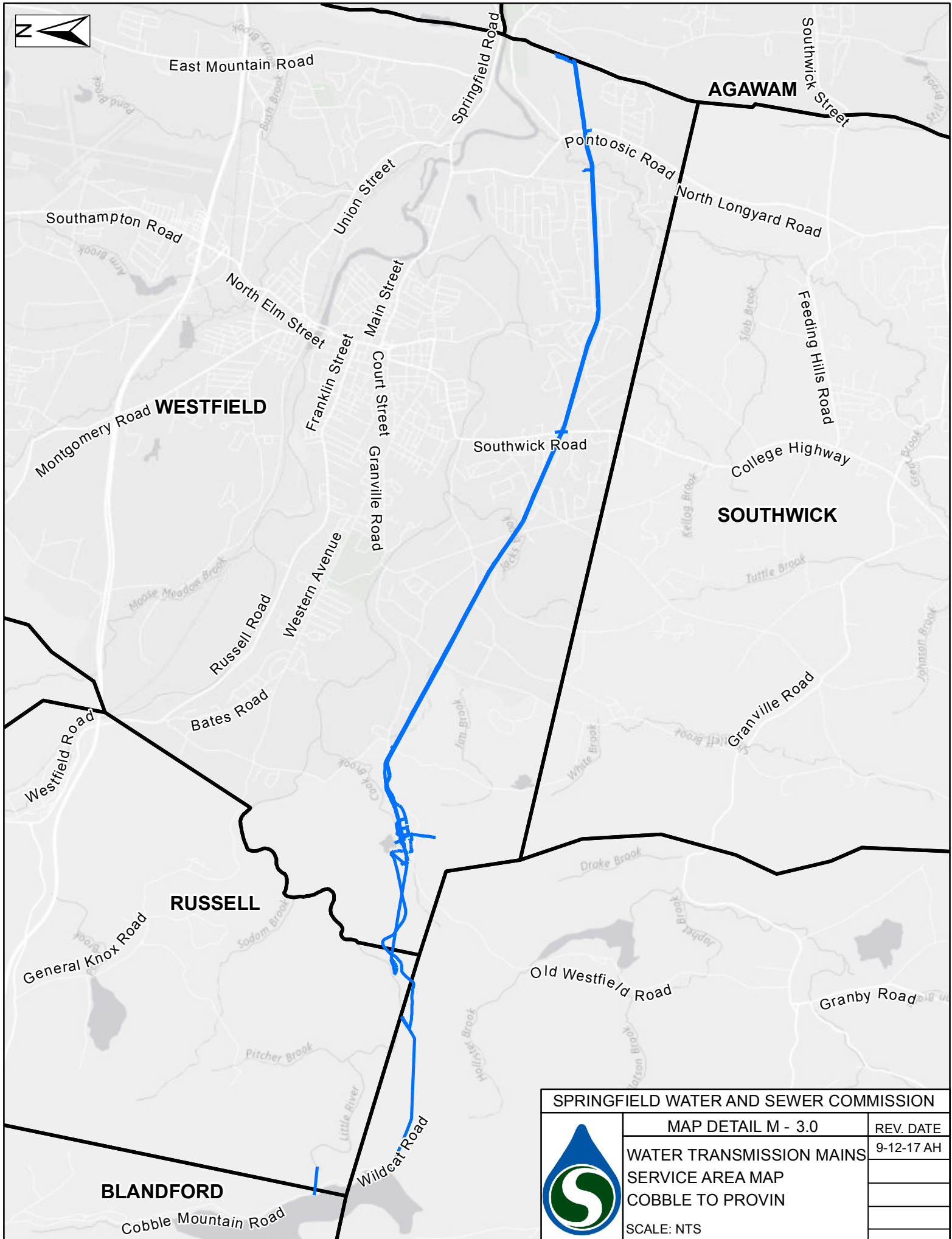
SPRINGFIELD

Worcester

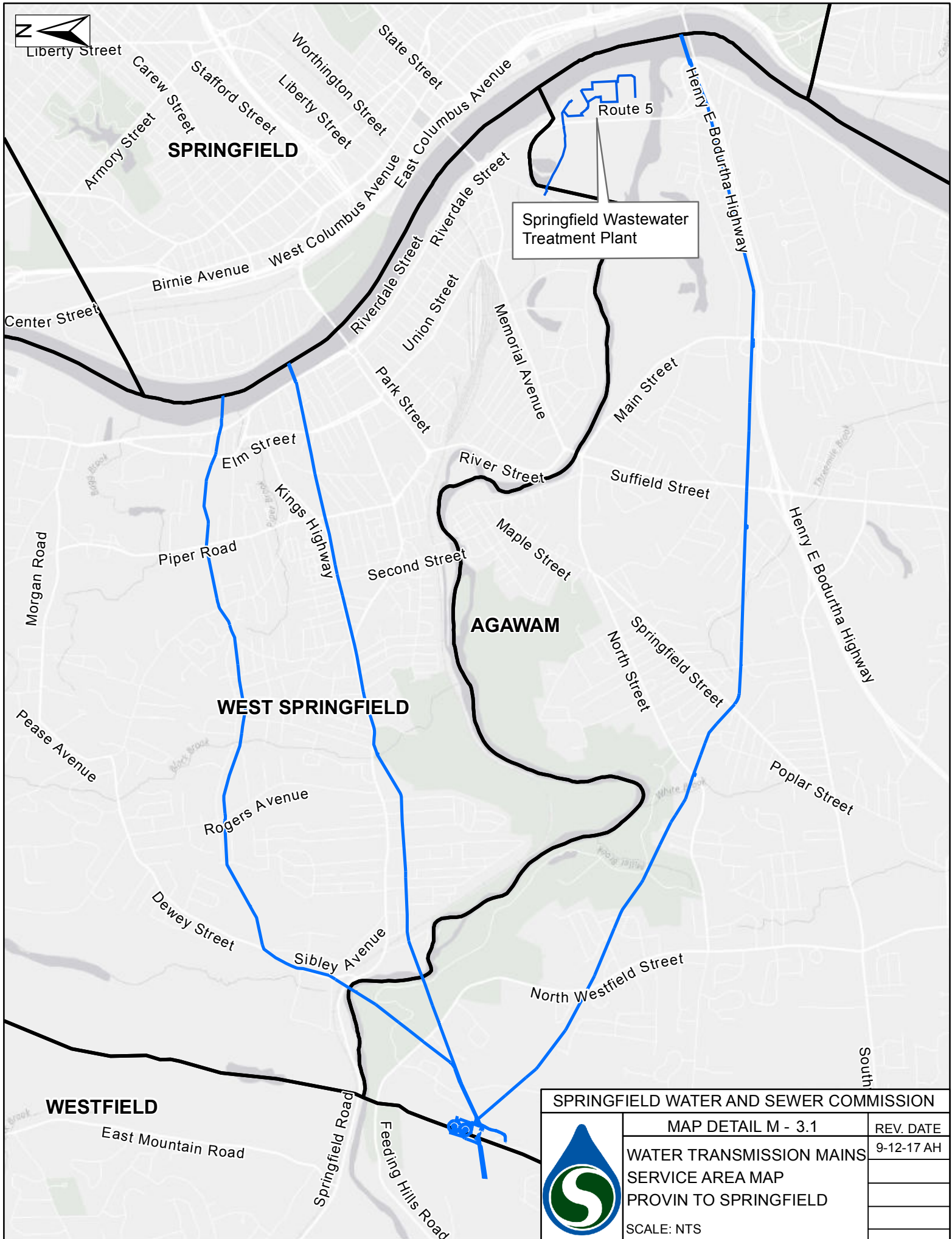
CHICOPEE

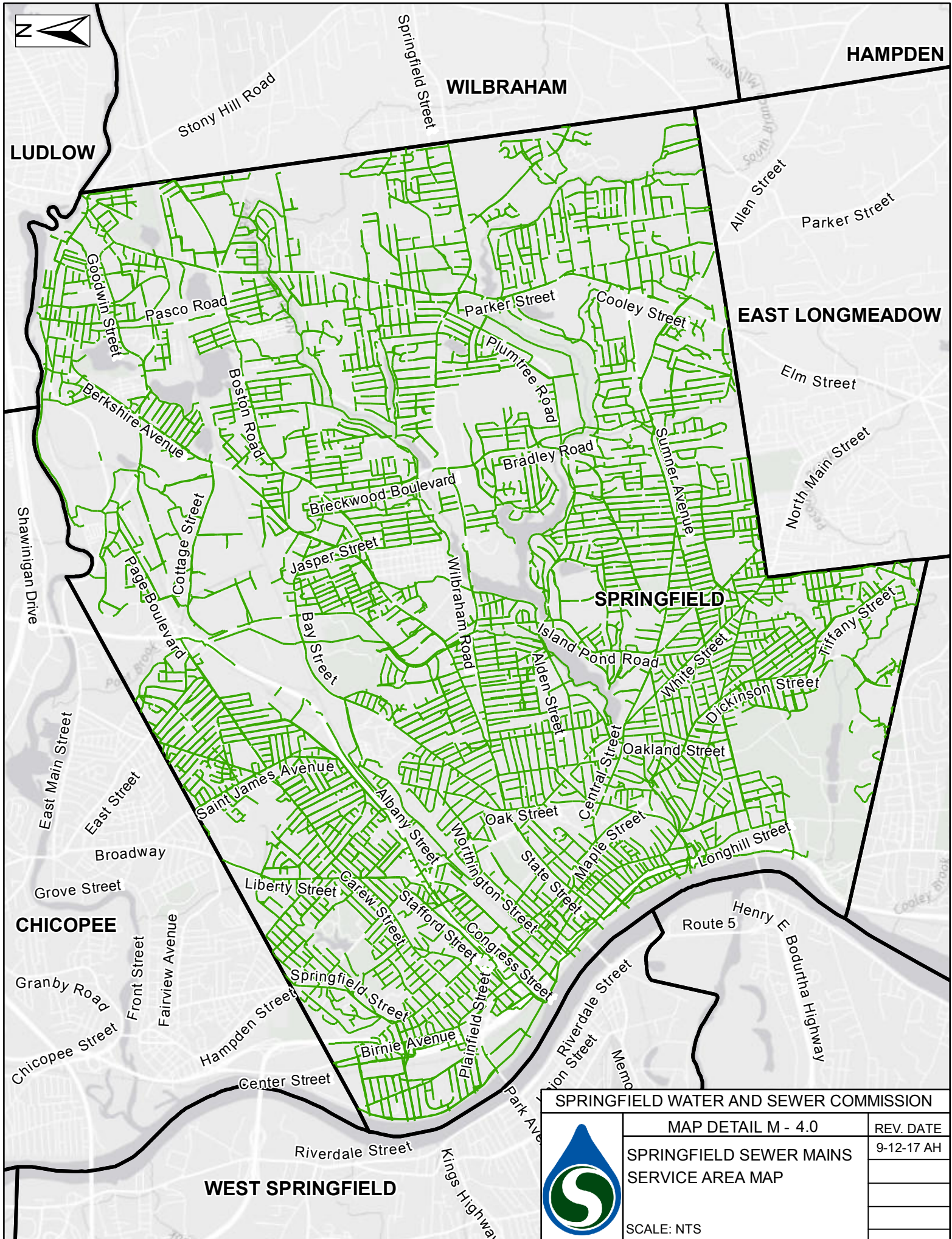
Burns

SPRINGFIELD WATER AND SEWER COMMISSION		
	MAP DETAIL M - 2.0	REV. DATE
	LUDLOW WATER MAINS SERVICE AREA MAP	9-12-17 AH
	SCALE: NTS	



SPRINGFIELD WATER AND SEWER COMMISSION		
	MAP DETAIL M - 3.0	REV. DATE
	WATER TRANSMISSION MAINS	9-12-17 AH
	SERVICE AREA MAP	
	COBBLE TO PROVIN	
	SCALE: NTS	





LUDLOW

WILBRAHAM


HAMPDEN

EAST LONGMEADOW

SPRINGFIELD

CHICOPEE

WEST SPRINGFIELD

SPRINGFIELD WATER AND SEWER COMMISSION		
	MAP DETAIL M - 4.0	REV. DATE
	SPRINGFIELD SEWER MAINS	9-12-17 AH
	SERVICE AREA MAP	
	SCALE: NTS	