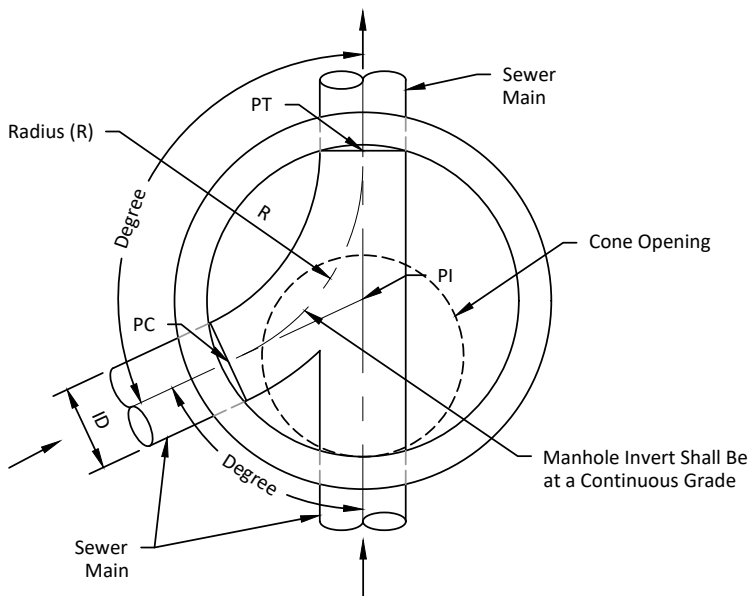
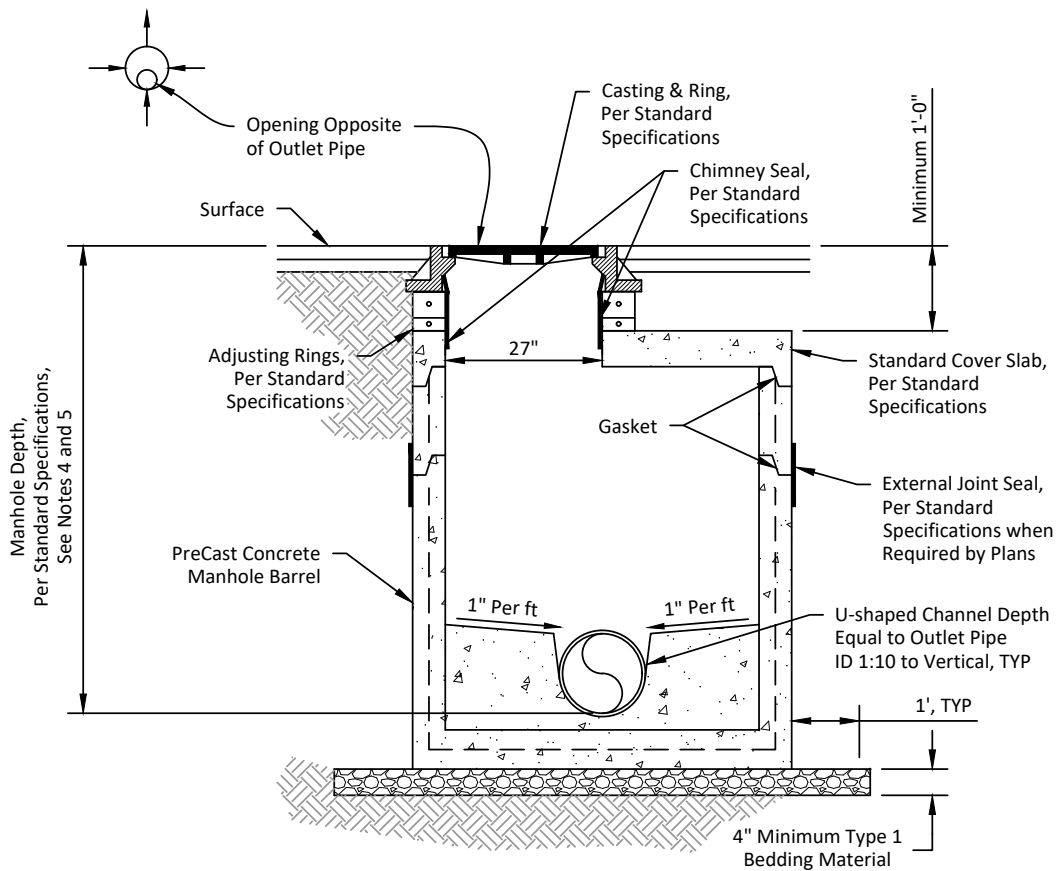


- Notes:**
1. PC'S & PT'S are to be within the manhole.
  2. All inverts to be U-shaped channel equal to pipe ID and shall be constructed with sweeps.
  3. Manhole pipe connector shall be Per Standard Specifications.
  4. A 2' cone height is allowed for manhole depths that are less than 6.0' from the finished surface to the invert elevation.
  5. Alternate designs for 60" manholes shall be approved by the Engineer.
  6. Standard manhole shall be used for installations with manhole depths that are 5.5' or greater.

**STANDARD MANHOLE DETAIL WITH MONOLITHIC BASE (48" & 60")**

DATE: 8-19-22

Sec. - Sht. 9-1



N.T.S.

**Notes:**

1. PC'S & PT'S are to be within the manhole.
2. All inverts to be U-shaped channel equal to pipe ID and shall be constructed with sweeps.
3. Manhole pipe connector shall be Per Standard Specifications.
4. Standard shallow manhole shall be used for installations with manhole depths less than 5.5'.
5. The use of shallow manholes require prior approval by the Public Works Director.

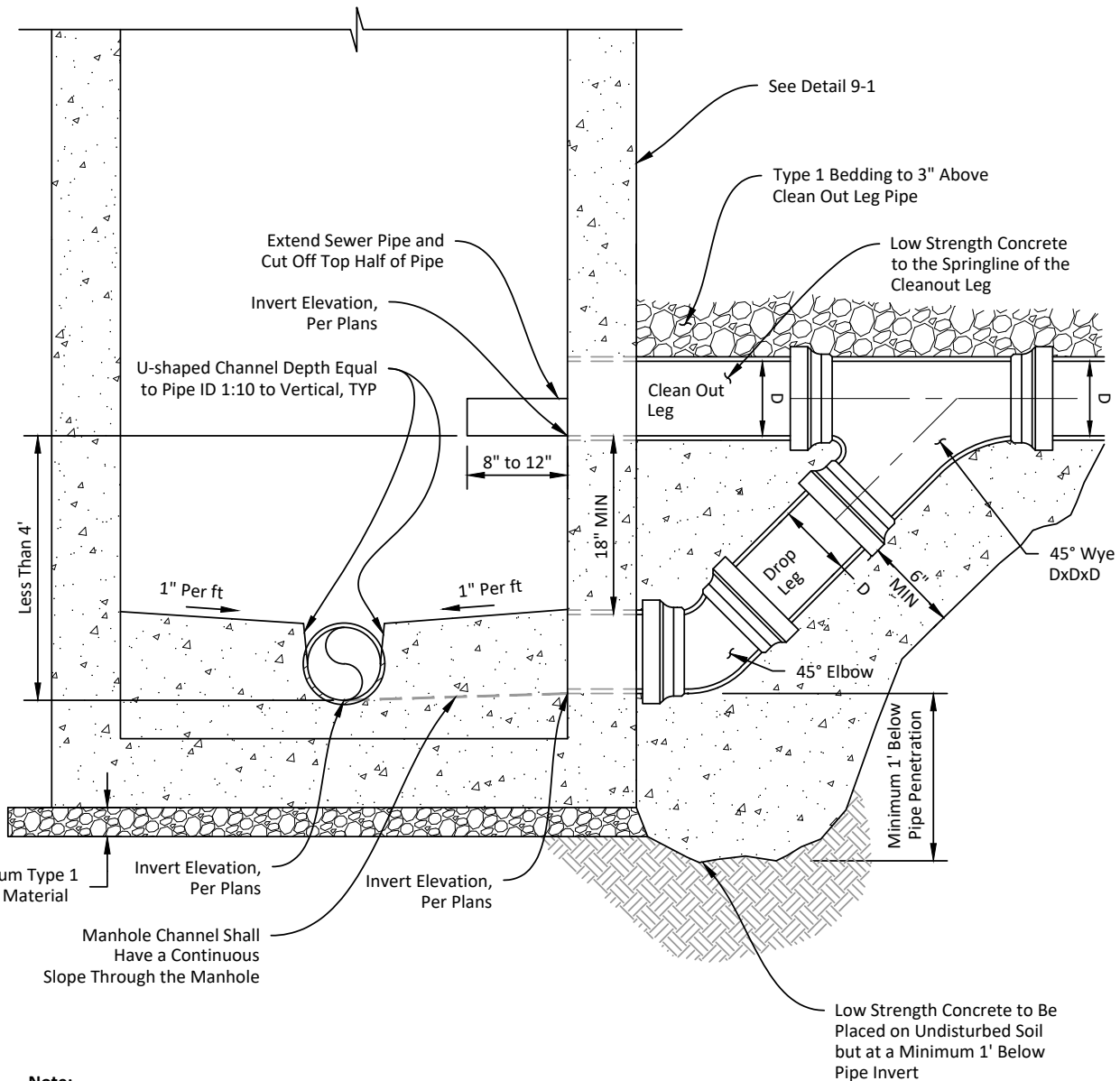
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

**STANDARD SHALLOW MANHOLE DETAIL  
WITH MONOLITHIC BASE (48", 60" & 72")**

DATE: 8-19-22

Sec. - Sht.  
9-2



**Note:**  
 The use of drop manholes requires prior approval by the Public Works Director.

N.T.S.

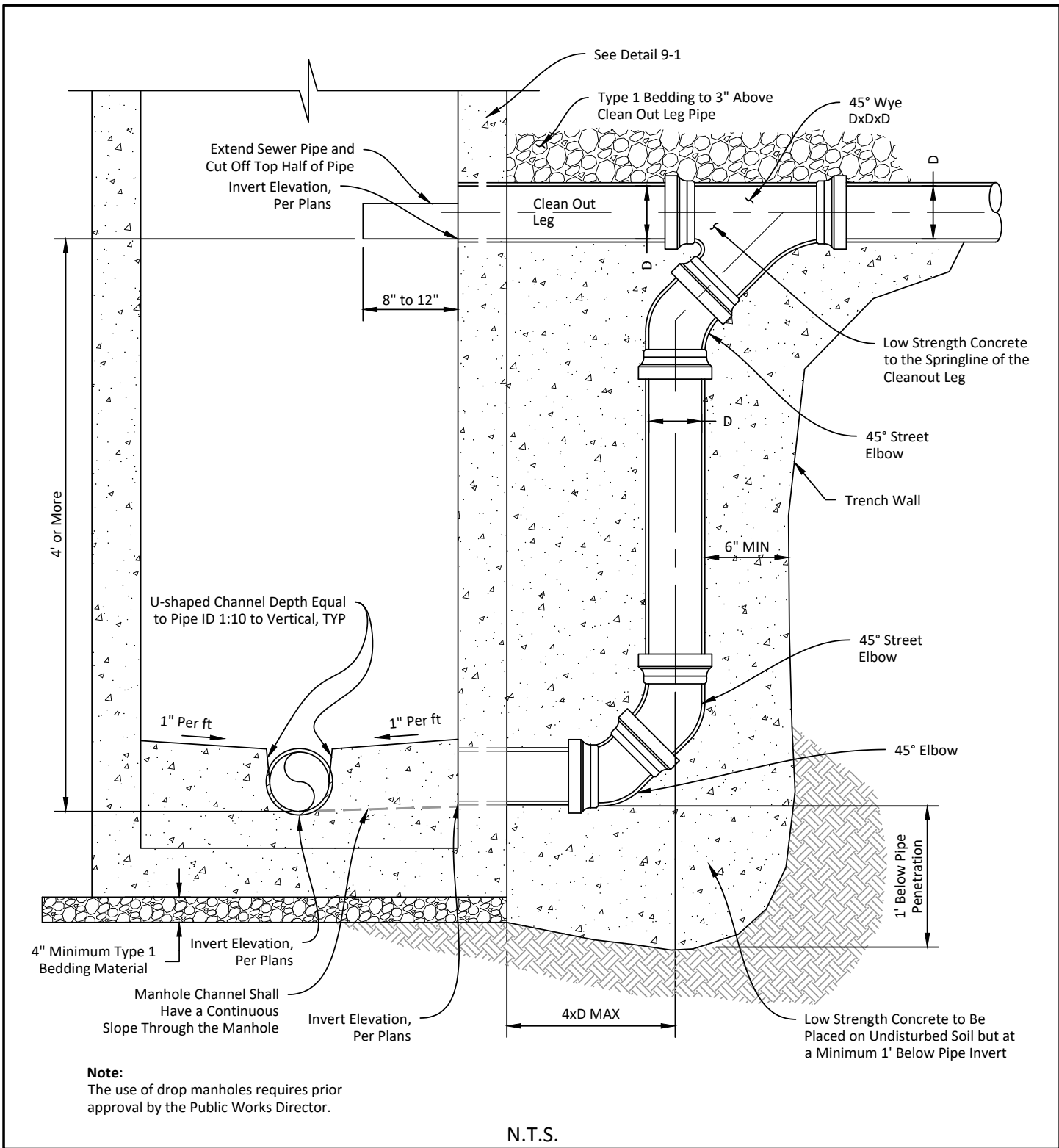
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

**STANDARD DROP MANHOLE DETAIL  
 FOR INVERT CHANGES LESS THAN 4'**

DATE: 8-19-22

Sec. - Sht.  
 9-3



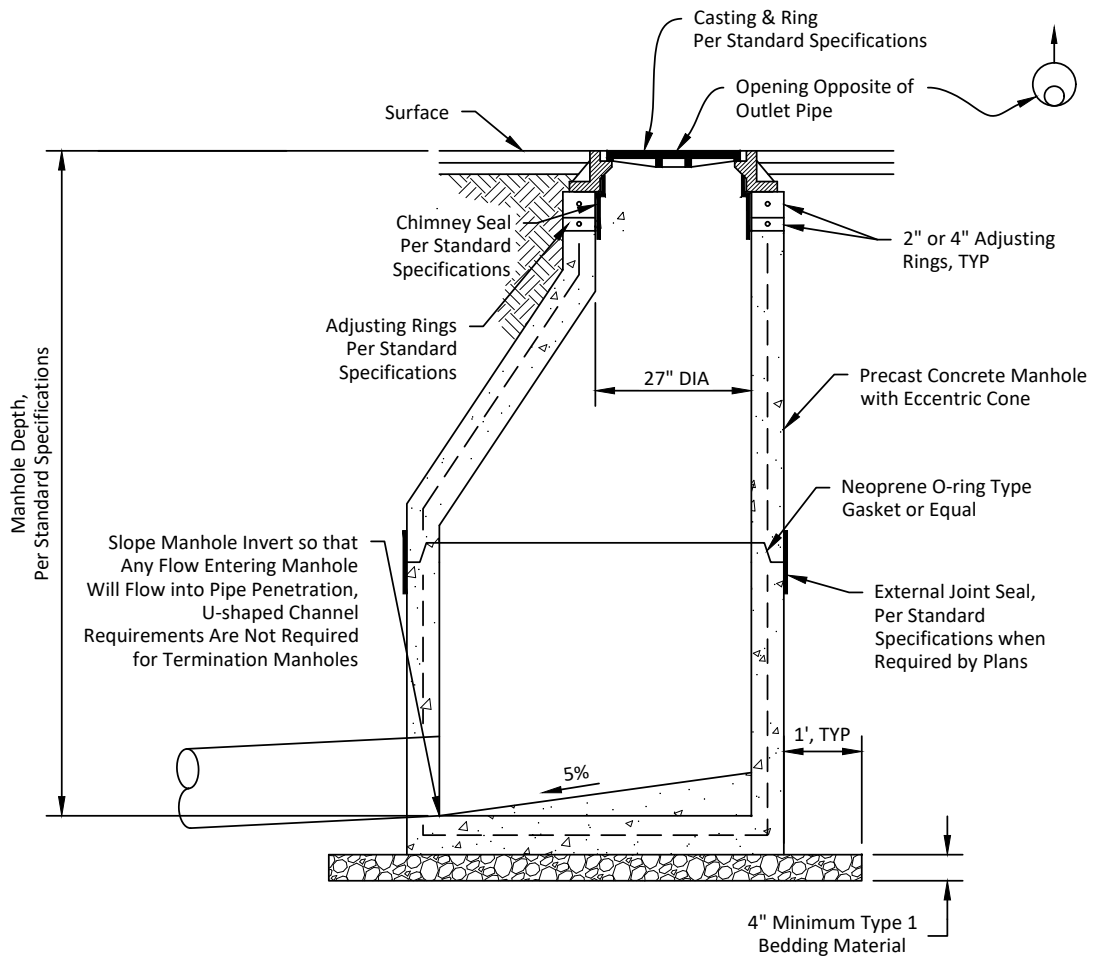
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

**STANDARD DROP MANHOLE DETAIL  
FOR INVERT CHANGES OF 4' OR MORE**

DATE: 8-19-22

Sec. - Sht.  
9-4



Note:  
 Manhole pipe connector shall be Per Standard Specifications.

N.T.S.

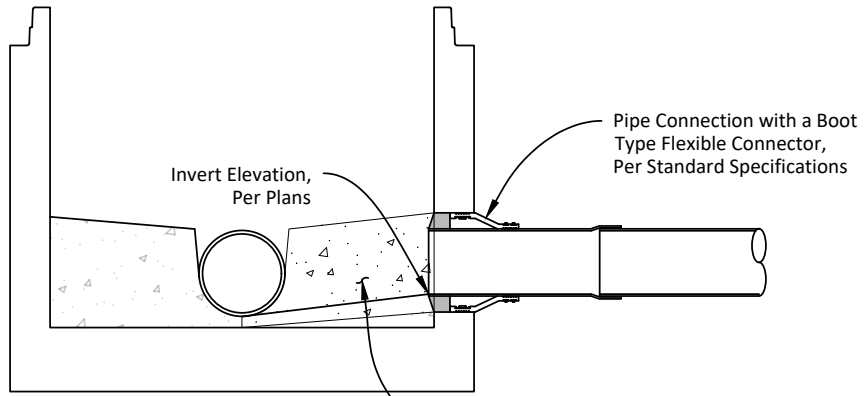
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

TERMINATION MANHOLE

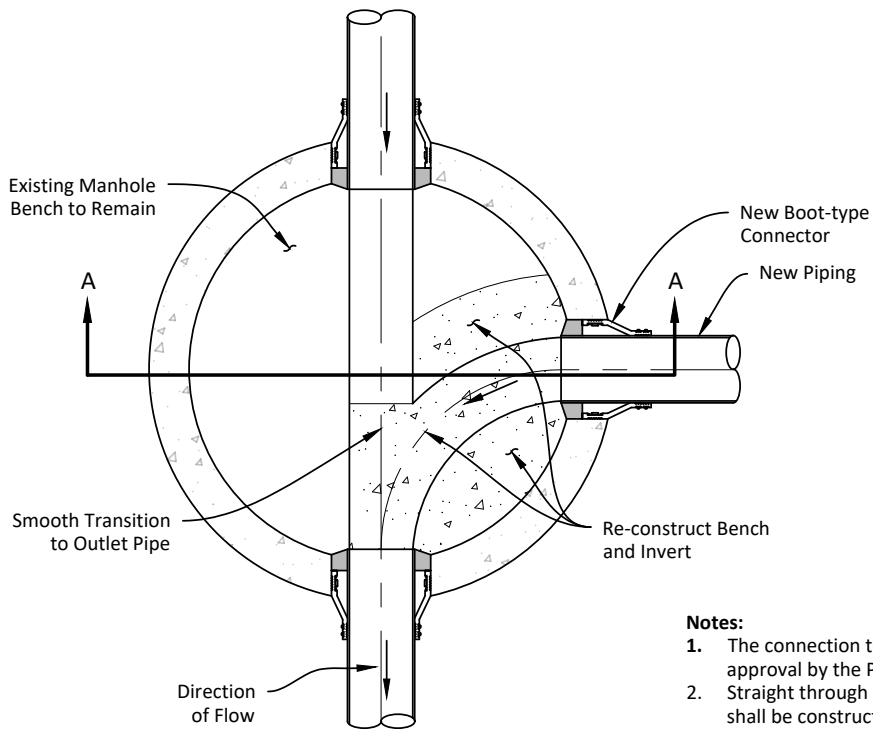
DATE: 8-19-22

Sec. - Sht.  
 9-5



SECTION A-A

Contractor Shall Remove Part of Existing Concrete Bench and Invert, and Construct New Bench and Invert to Facilitate Smooth Transition into Existing Inverts from New Pipe Penetration



PLAN

Typical Straight Through Manhole

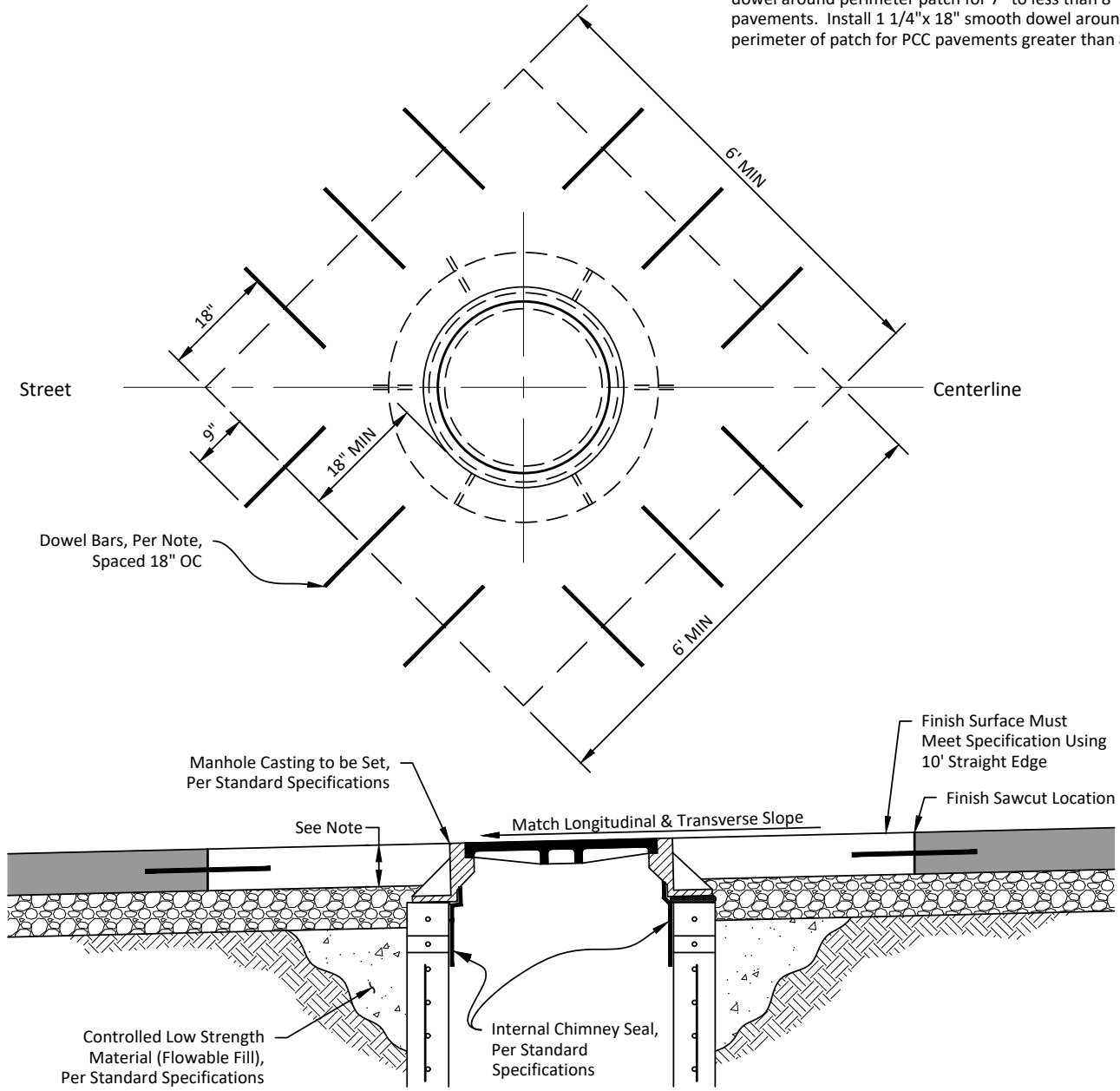
N.T.S.

**Notes:**

1. The connection to an existing manhole requires prior approval by the Public Works Director.
2. Straight through manhole shown. Other configurations shall be constructed in the same manner.
3. The wall of the existing manhole base shall be cored and a boot-type connection utilized.
4. The manhole bench and newly constructed invert shall be reconstructed Per Standard Specification and Detail.

**Notes:**

1. Depending on location, cross-slope of street, height adjustment requirements, etc.. The Engineer reserves the right to require a larger cut to assure that all transitions and tolerances as Per Standard Specifications will be met.
2. Blocks for shimming Per Standard Specifications.
3. 1/4" maximum surface deviation in 10 feet.
4. Patch Material - Patch material shall match the existing pavement material. (e.g. PCC pavement shall be patched with PCC and existing asphalt pavement with asphalt). See Detail for asphalt concrete pavement.
5. PCC Pavement Patch Minimum Depths - 6" PCC pavement minimum or match existing, whichever is greater.
6. Install 3/4"x18" smooth dowel around perimeter of patch for PCC pavements less than 7". Install 1"x18" smooth dowel around perimeter patch for 7" to less than 8" PCC pavements. Install 1 1/4"x 18" smooth dowel around perimeter of patch for PCC pavements greater than 8".



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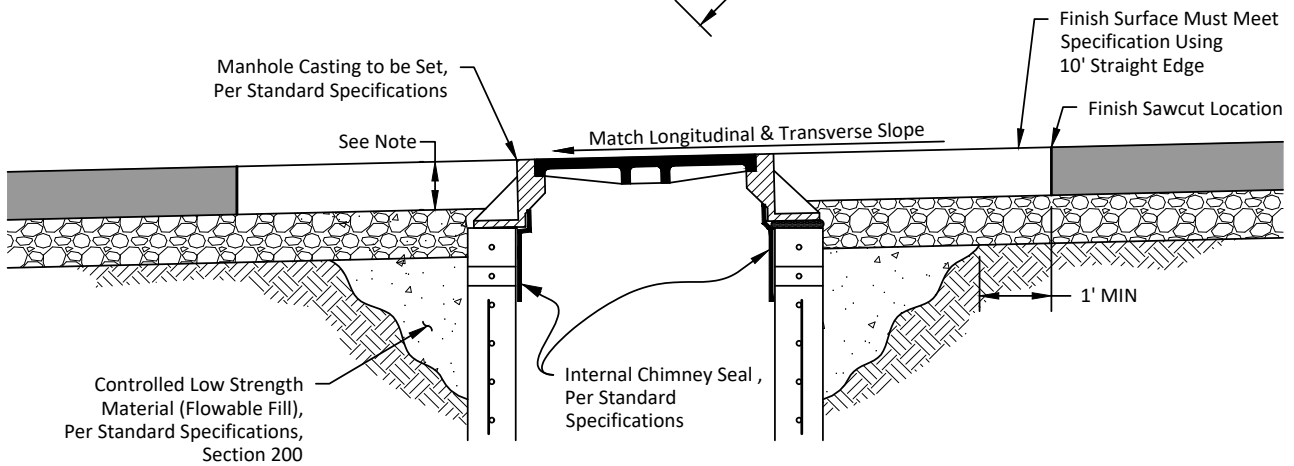
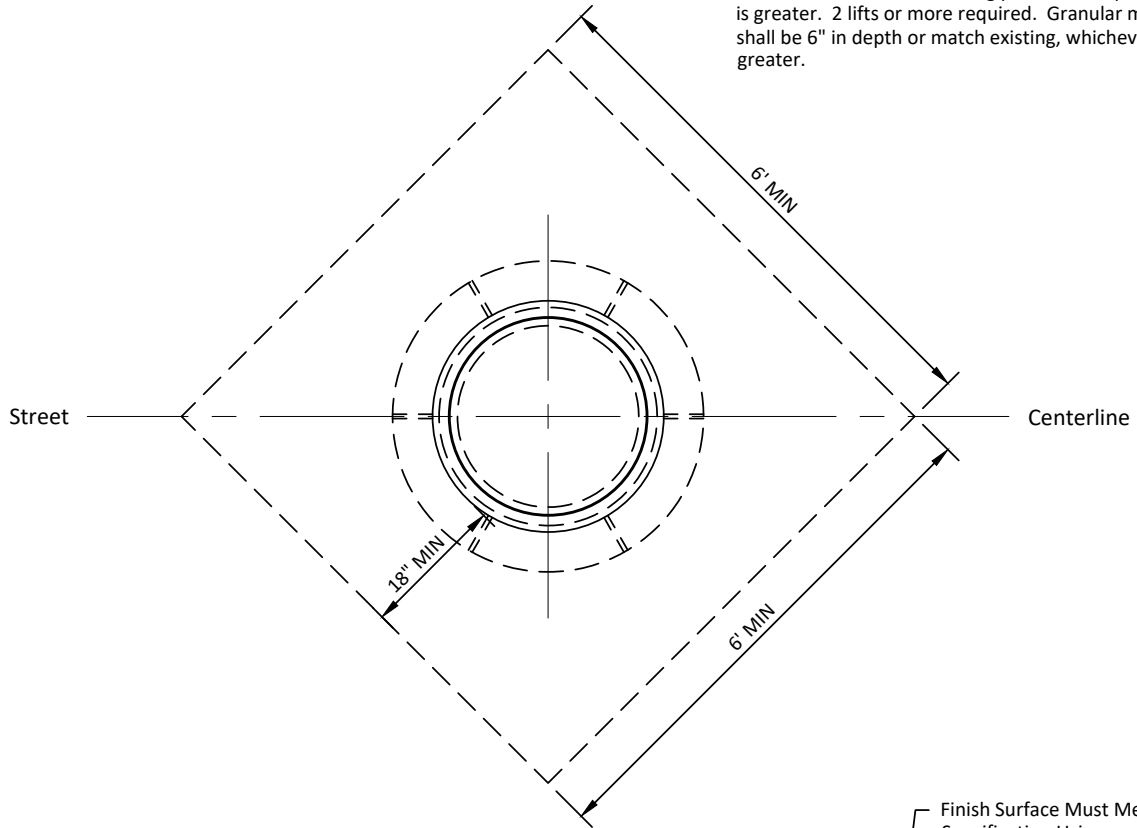
**MANHOLE ADJUSTMENT AND  
PATCH DETAIL PCC PAVEMENT**

DATE: 8-19-22

Sec. - Sht.  
9-7

**Notes:**

1. Depending on location, cross-slope of street, height adjustment requirements, etc.. The Engineer reserves the right to require a larger cut to assure that all transitions and tolerances as Per Standard Specifications will be met.
2. Blocks for shimming Per Standard Specifications.
3. 1/4" maximum surface deviation in 10 feet.
4. Patch Material - Patch material shall match the existing pavement material. (e.g. PCC pavement shall be patched with PCC and existing asphalt pavement with asphalt). See Detail for asphalt concrete pavement.
5. Asphalt Concrete Pavement Patch Minimum Depth - 5" minimum or match existing pavement depth whichever is greater. 2 lifts or more required. Granular material shall be 6" in depth or match existing, whichever is greater.



N.T.S.

CITY OF RAPID CITY

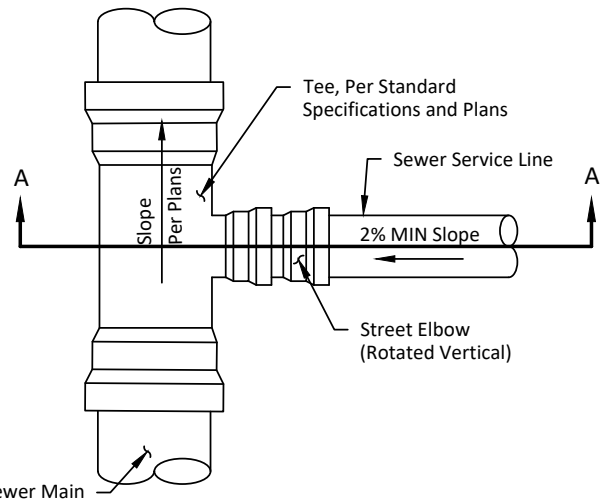
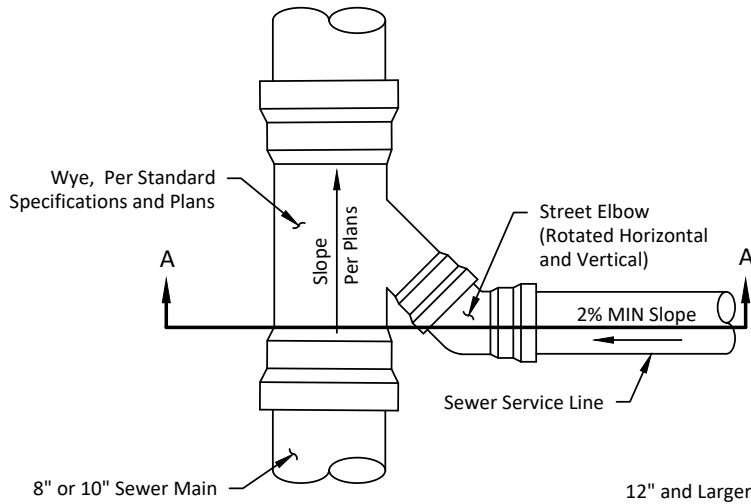
PUBLIC WORKS DEPARTMENT

**MANHOLE ADJUSTMENT AND PATCH DETAIL  
ASPHALT CONCRETE PAVEMENT**

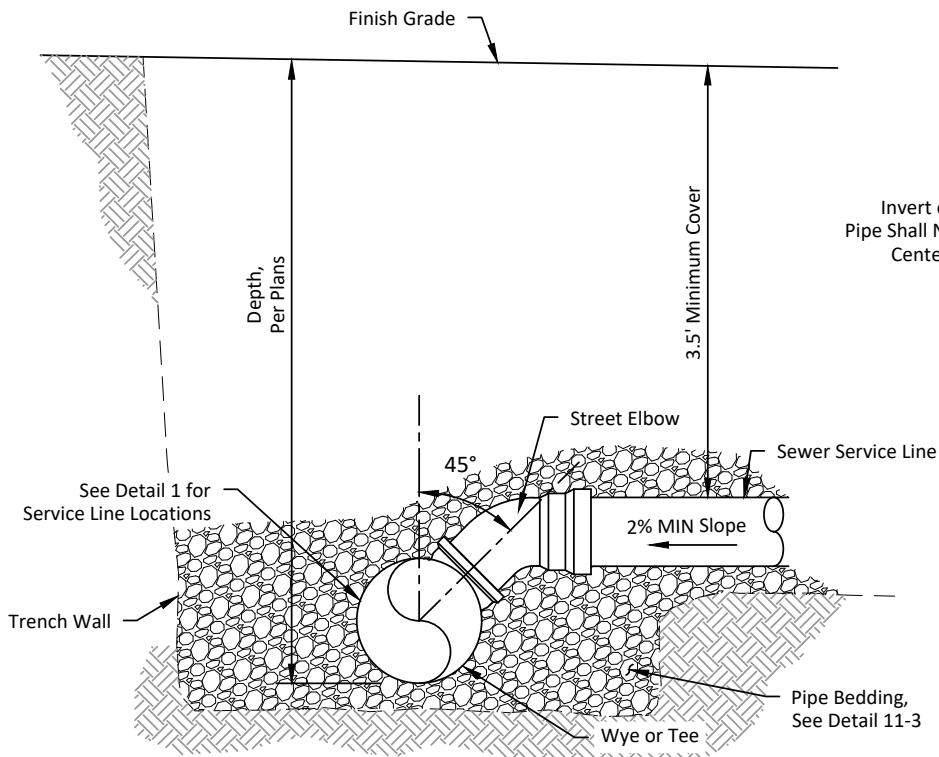
DATE: 8-19-22

Sec. - Sht.  
9-8



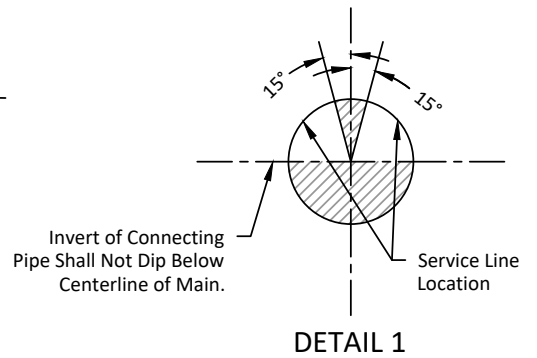


PLAN



SECTION A-A

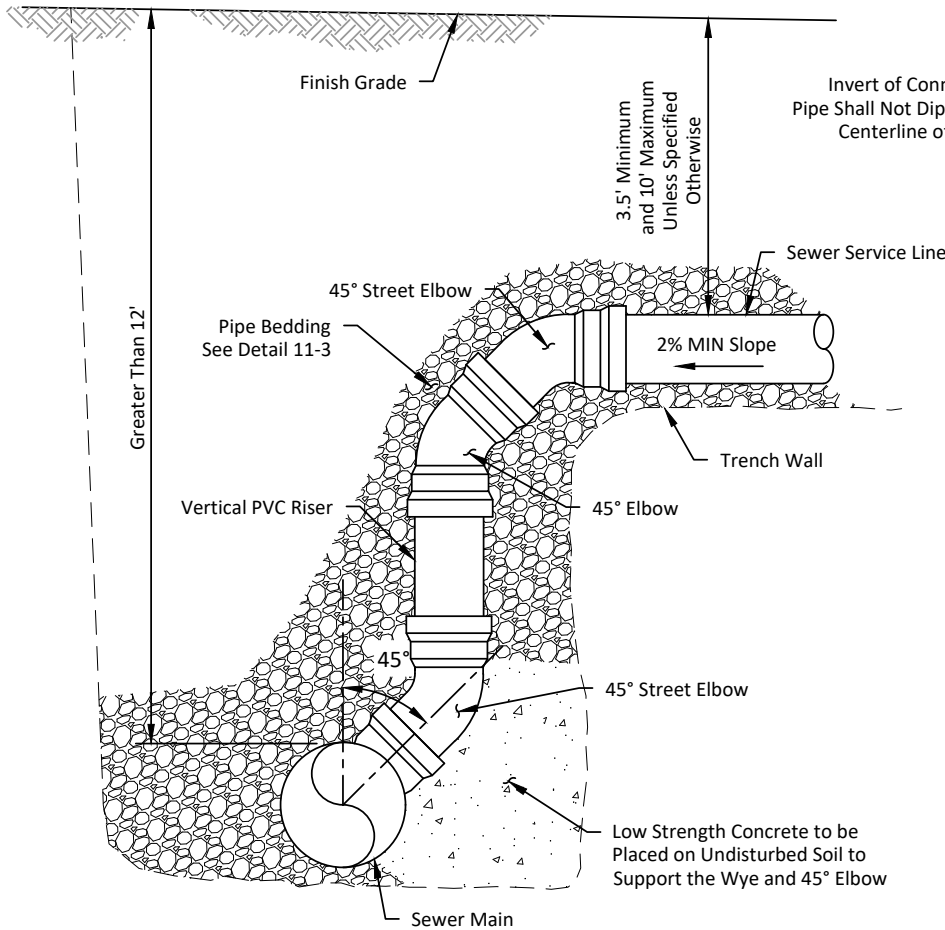
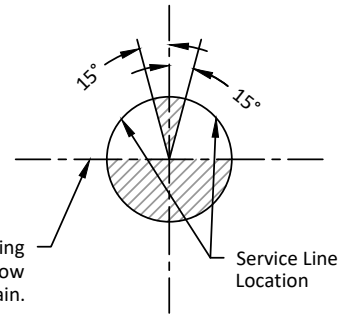
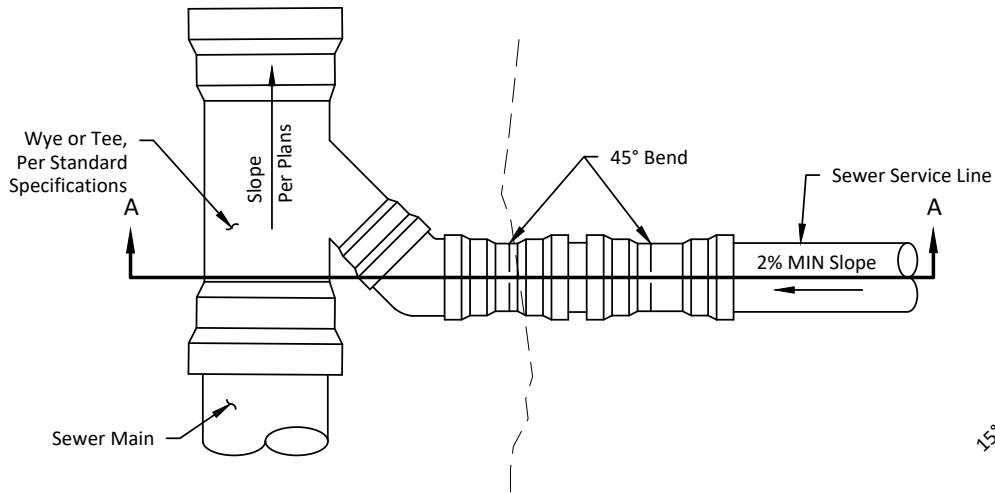
N.T.S.



DETAIL 1

**Note:**

1. All fittings shall be gasketed.
2. Service lines shown on this detail shall be 4" or 6".



- Note:**
1. All fittings shall be gasketed.
  2. Service lines shown on this detail shall be 4" or 6".

N.T.S.

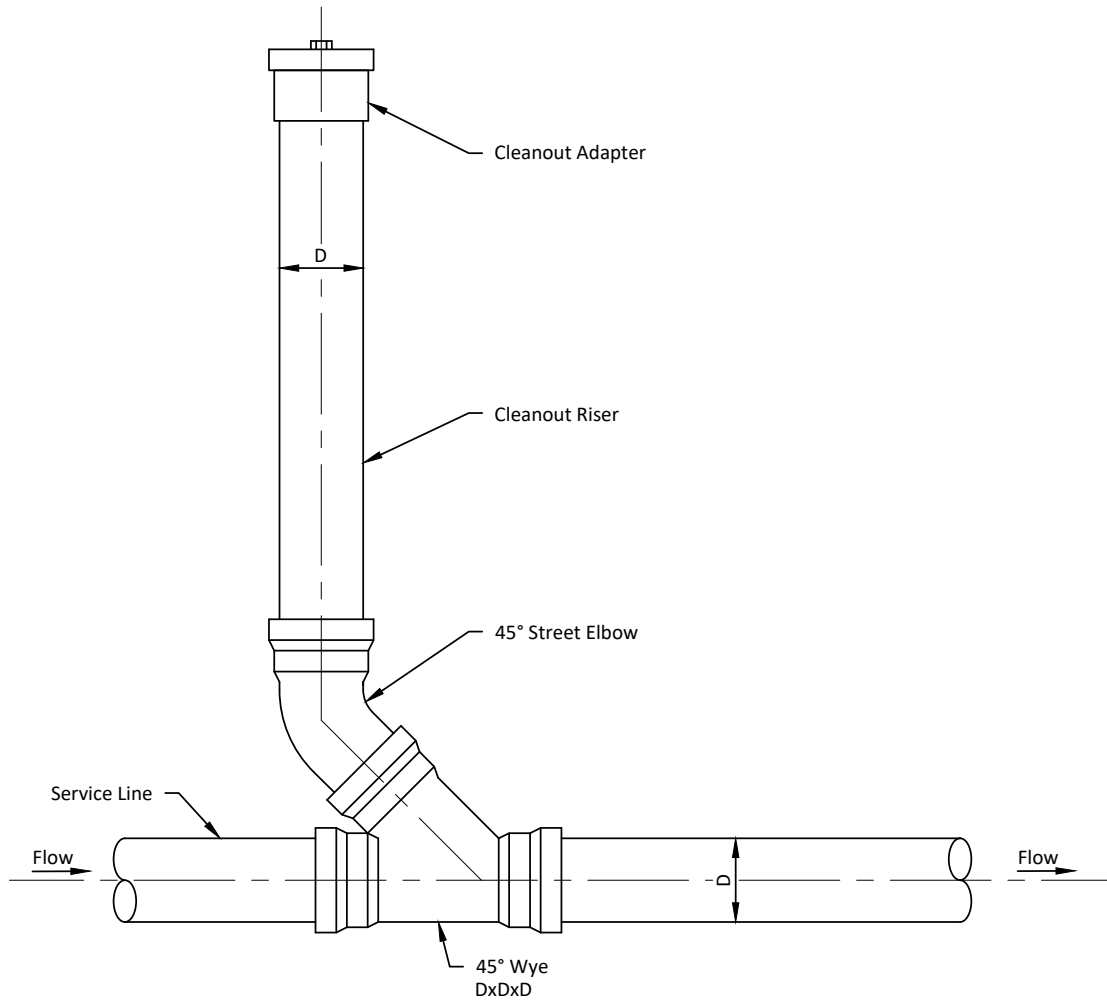
CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

# DEEP SANITARY SERVICE CONNECTION

DATE: 8-19-22

Sec. - Sht.  
9-10

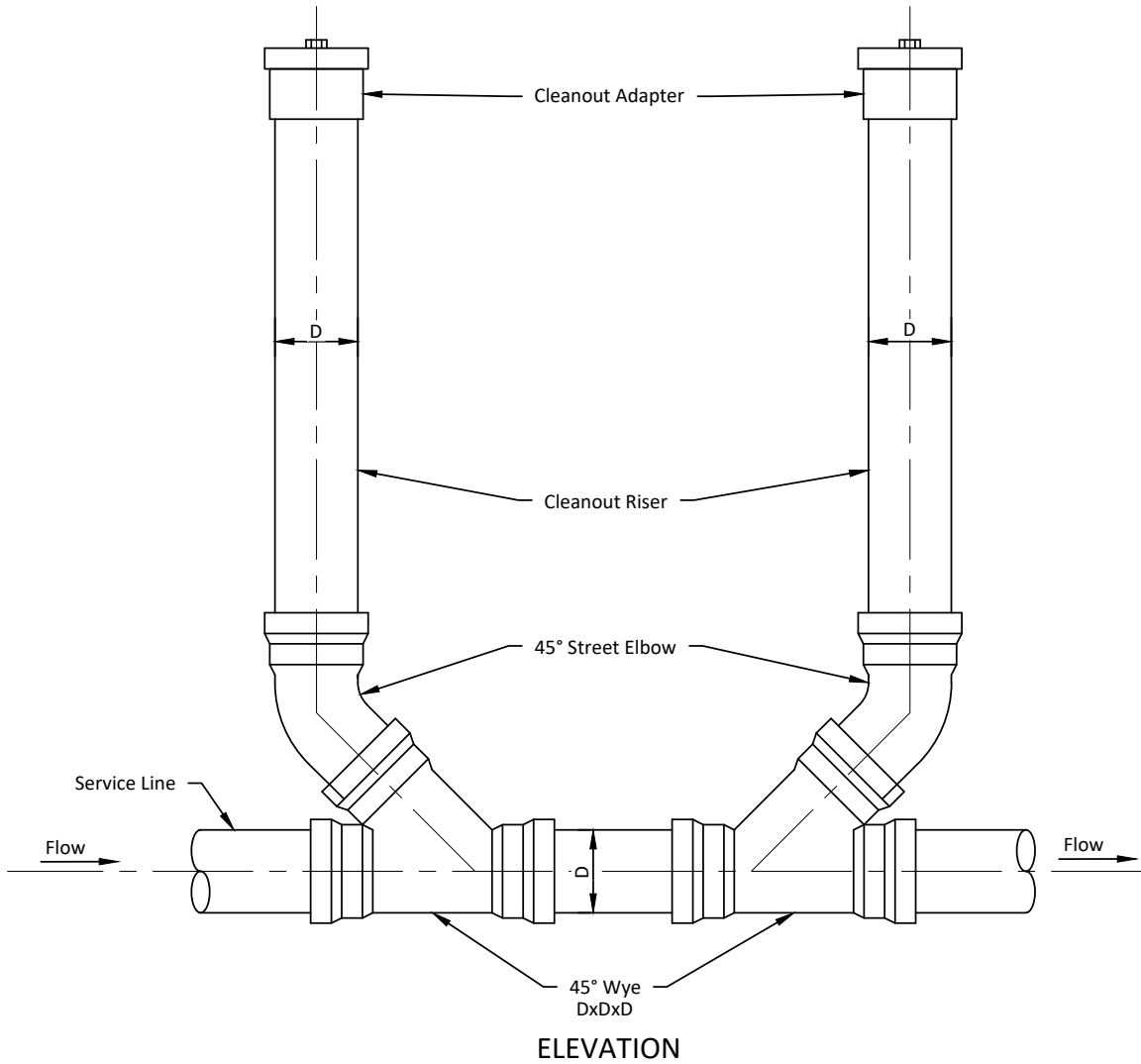


ELEVATION

- Notes:**
1. All fittings shall be gasketed.
  2. Cleanouts shall be the same diameter (D) as service line.
  3. Cleanouts shall be installed at all changes in horizontal alignment of greater than 45 degrees and at distances not to exceed 75 feet for 4 inch diameter pipe and 100 feet for 6 inch diameter pipe.
  4. Cleanouts shall be installed when the summation of the horizontal degree of change in a service line exceeds 135 degrees.
  5. Service lines shown on this detail shall be 4" or 6".

N.T.S.

**SANITARY SEWER SERVICE  
CLEANOUT DETAIL**



**Notes:**

1. All fittings shall be gasketed.
2. Cleanouts shall be the same diameter (D) as service line.
3. Cleanouts shall be installed at all changes in horizontal alignment of greater than 45 degrees and at distances not to exceed 75' for 4" diameter pipe and 100' for 6" diameter pipe.
4. Cleanouts shall be installed when the summation of the horizontal degree of change in a service line exceeds 135 degrees.
5. Service lines shown on this detail shall be 4" or 6".

N.T.S.

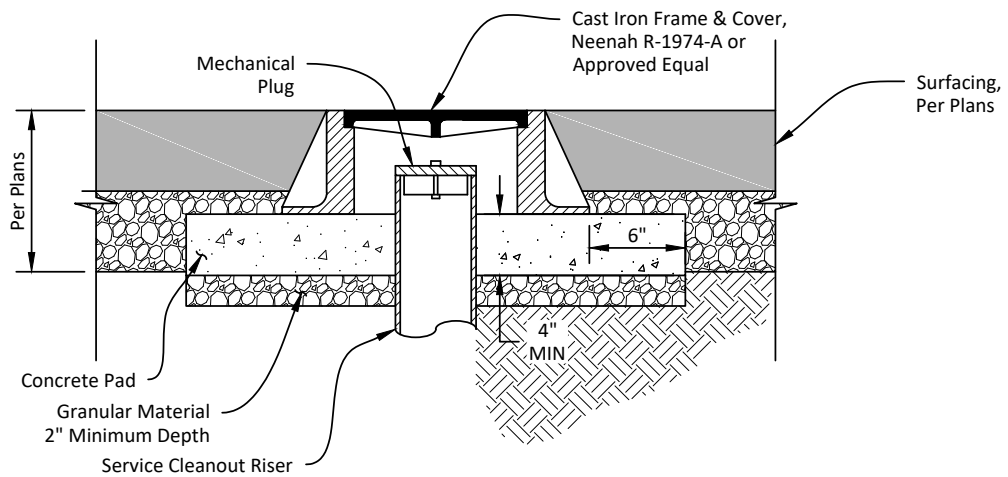
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PUBLIC WORKS DEPARTMENT

**SANITARY SEWER SERVICE  
DOUBLE CLEANOUT DETAIL**

DATE: 8-19-22

Sec. - Sht.  
9-12



**Note:**

1. This detail shall be used when sanitary sewer service cleanouts are located in concrete or asphalt surfaced areas, or as shown in plans.

N.T.S.

CITY OF RAPID CITY

PUBLIC WORKS DEPARTMENT

**SANITARY SEWER CLEANOUT  
IN TRAVEL SURFACE**

DATE: 8-19-22

Sec. - Sht.  
9-13