

**APPENDIX A**  
**STANDARD DRAWINGS FOR**  
**SANITARY SEWER**

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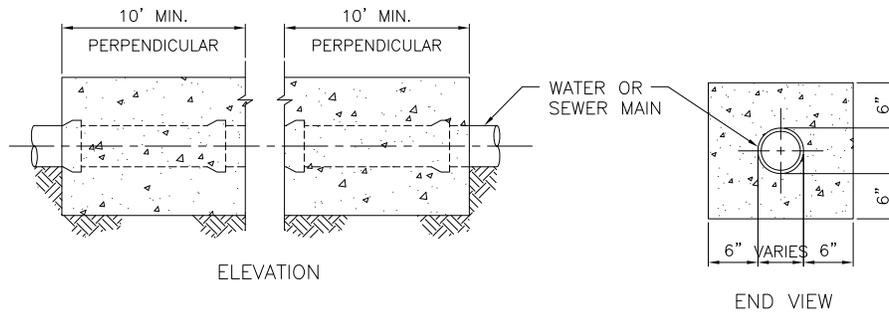
SS-125 Pipe Support Across Trenches  
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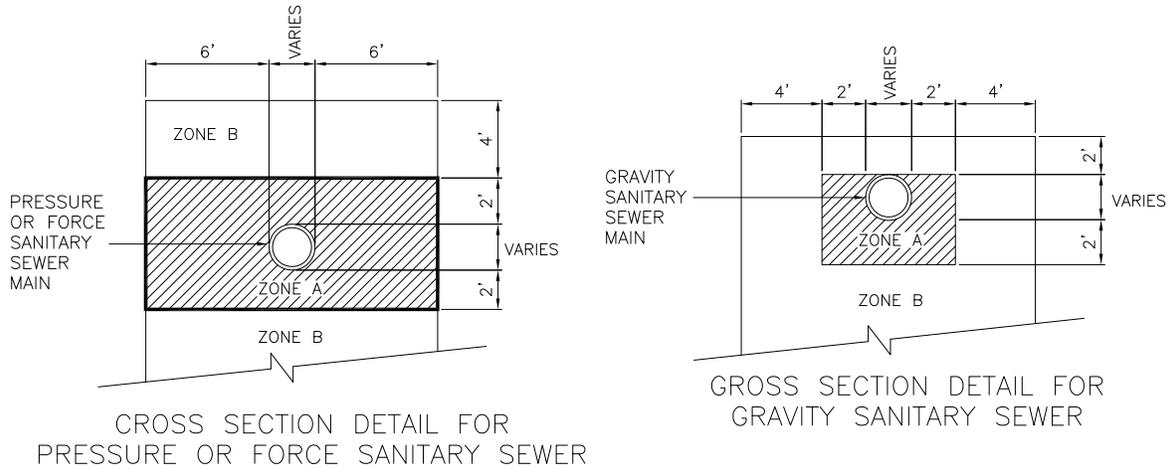
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NOTES:

1. SEPARATION DISTANCES AND/OR OTHER EXTRA PROTECTION SHALL BE REQUIRED TO PROTECT WATER MAINS FROM CONTAMINATION BY SANITARY SEWER MAINS.
2. THIS CRITERIA APPLIES TO PARALLEL MAINS AS WELL AS CROSSINGS.
3. SEE CROSS SECTION DETAIL FOR LIMITS OF SEPARATION/EXTRA PROTECTION. ALL DISTANCES ARE MEASURED PERPENDICULARLY FROM THE OUTSIDE OF THE PIPES.
  - A. NO WATER MAINS SHALL FALL WITHIN ZONE A.
  - B. EXTRA PROTECTION WILL BE REQUIRED WHEN THE WATER MAIN FALLS WITHIN ZONE B. EXTRA PROTECTION SHALL CONSIST OF CONSTRUCTING THE SANITARY SEWER MAIN WITH MECHANICAL JOINT OR RESTRAINED JOINT DUCTILE IRON PIPE FOR A DISTANCE ON TEN FEET ON EITHER SIDE OF THE WATER MAIN. THE DUCTILE IRON PIPE SHALL COMPLY WITH THE AGENCY'S REQUIREMENTS FOR SEWER INSTALLATION. IN THE CASE OF A CROSSING, THE NUMBER OF JOINTS SHALL BE HELD TO A MINIMUM WITH ONE FULL JOINT OF PIPE CENTERED OVER/UNDER THE OTHER. AN ALTERNATE PROTECTION MAY CONSIST OF ENCASING BOTH PIPES IN CONCRETE AS SHOWN HEREIN.
  - C. NO ADDITIONAL PROTECTION WILL BE REQUIRED OUTSIDE OF THE ZONE A AND B.
4. SEPARATION REQUIREMENTS FOR 4" OR 6" INDIVIDUAL HOUSE SERVICE CONNECTIONS SHALL COMPLY WITH THE AGENCY'S PLUMBING CODES.
5. RECLAIMED WATER SHALL BE CONSIDERED AS POTABLE WATER WHEN PLACED NEXT TO A SANITARY SEWER AND CONSIDERED A PRESSURE OR FORCE SANITARY SEWER MAIN, WHEN PLACED NEXT TO A POTABLE WATER MAIN.
6. CLASS "C" CONCRETE AS PER SECTION 725.



ENCASEMENT FOR PARALLEL PIPES



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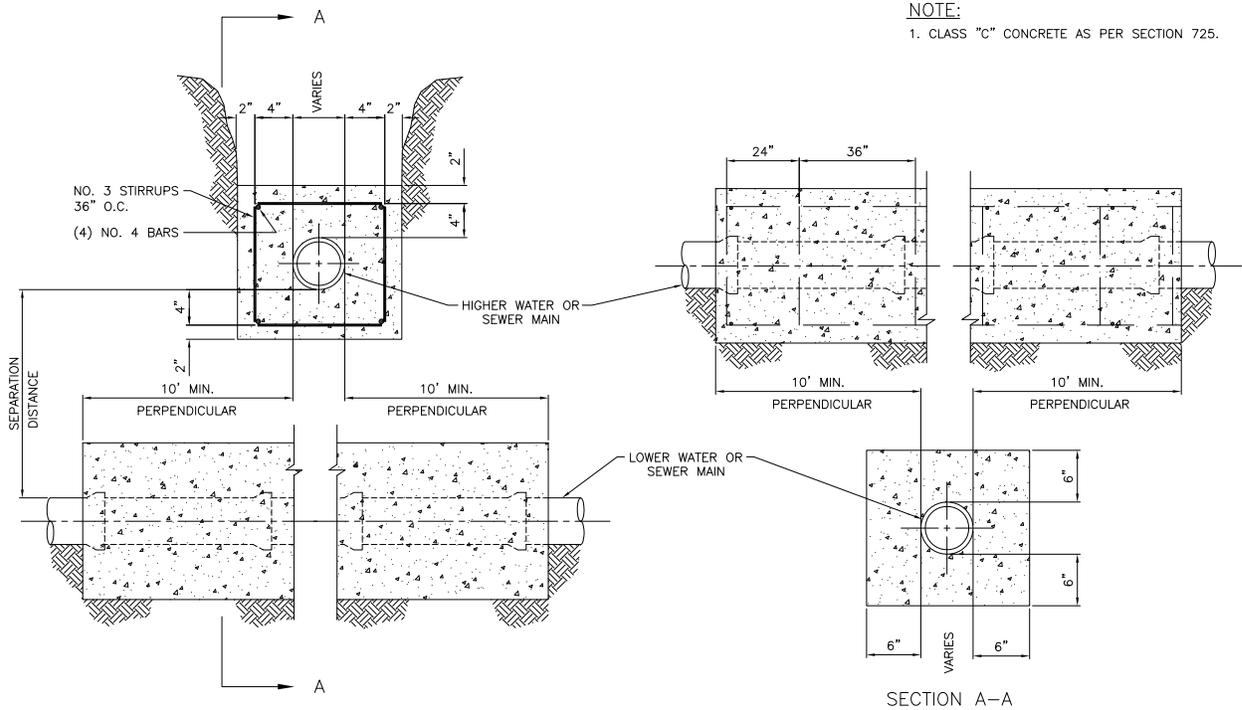
City of West Jordan, Utah



**WATER AND SANITARY SEWER  
SEPARATION/PROTECTION**

STANDARD DRAWING

**SS-005**



**NOTE:**

1. CLASS "C" CONCRETE AS PER SECTION 725.

ENCASEMENT FOR PIPE CROSSING

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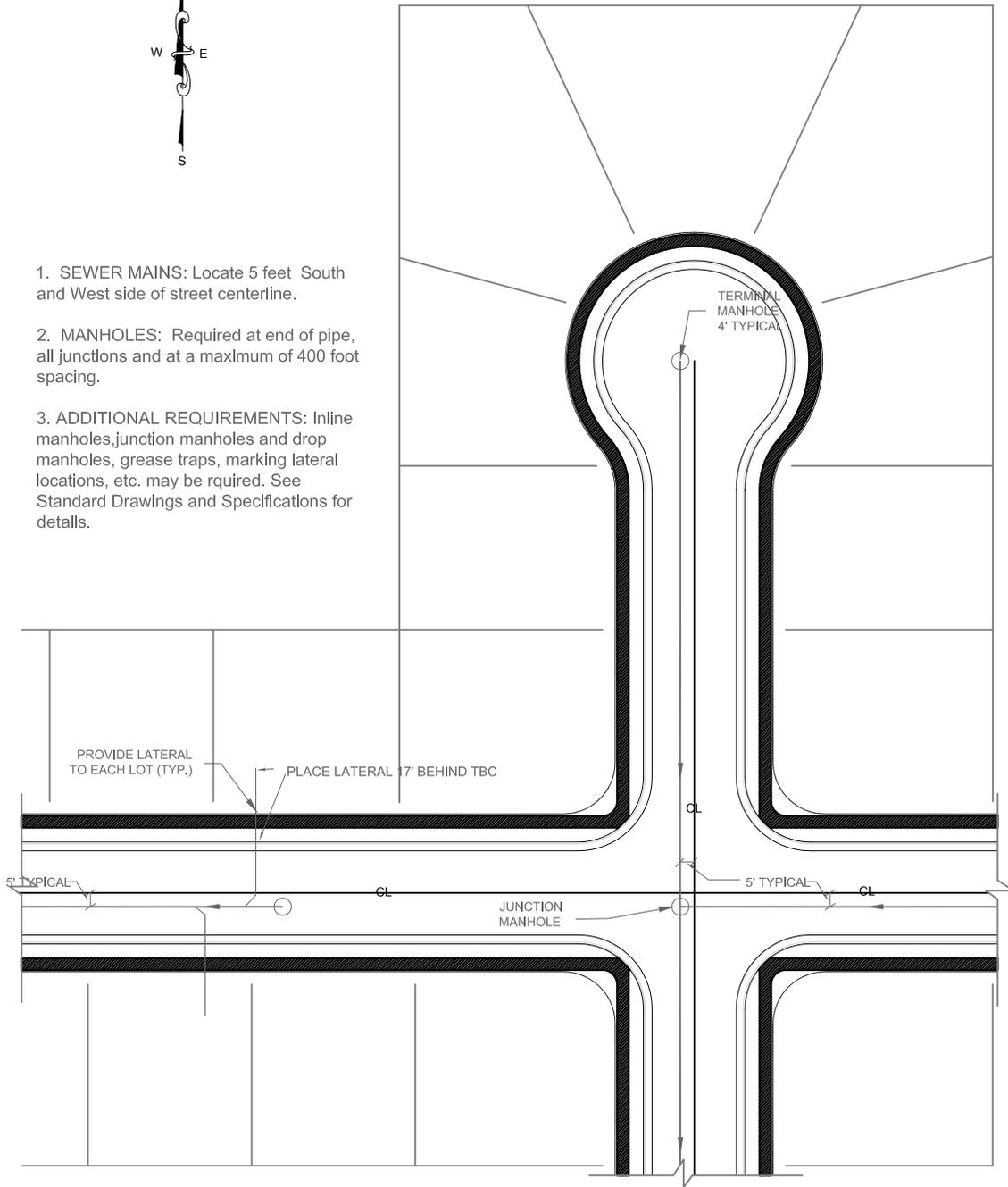
**WATER AND SANITARY SEWER  
SEPARATION/PROTECTION**

STANDARD DRAWING

**SS-010**



1. SEWER MAINS: Locate 5 feet South and West side of street centerline.
2. MANHOLES: Required at end of pipe, all junctions and at a maximum of 400 foot spacing.
3. ADDITIONAL REQUIREMENTS: Inline manholes, junction manholes and drop manholes, grease traps, marking lateral locations, etc. may be required. See Standard Drawings and Specifications for details.



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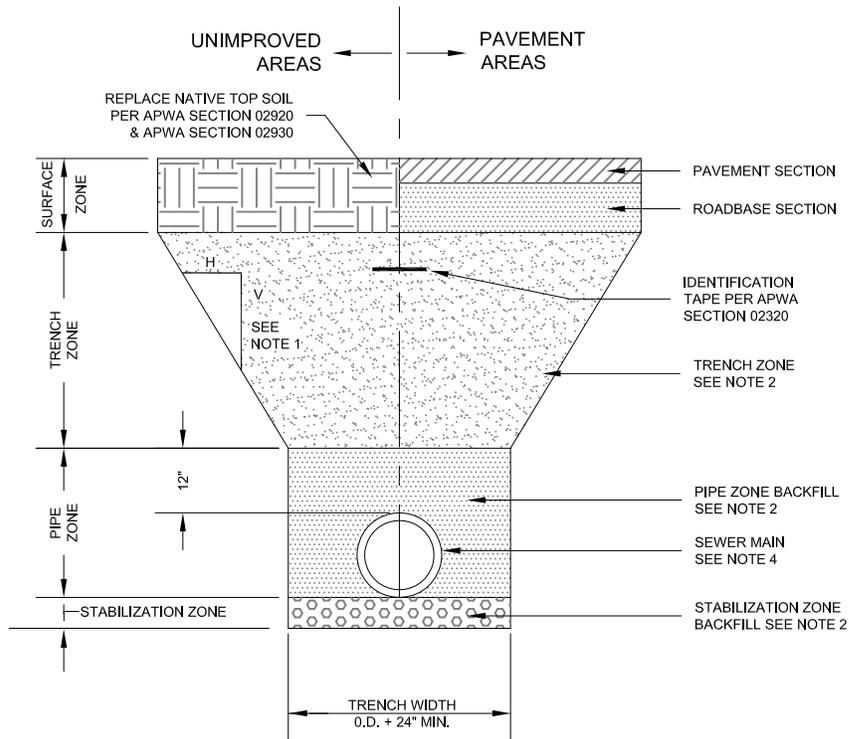
City of West Jordan, Utah



# RESIDENTIAL INSTALLATION

STANDARD DRAWING

SS-015



1. EXCAVATION: Trench excavation per APWA Section 02315. Excavation protection shall be provided in accordance with OSHA and UOSH safety standards and with APWA 02250.
2. BACKFILL: Backfill operations shall comply with APWA 02320 "Backfilling Trenches". Backfill materials shall comply with APWA 02055 "Common Fill" and 02060 "Select Fill" with material selection as follows:

|                    | UNIMPROVED AREAS   | PAVEMENT AREAS  |
|--------------------|--|---|
| STABILIZATION ZONE | 2" Minus Sewer Rock  | 2" Minus Sewer Rock   |
| PIPE ZONE          | Untreated Base Course Grade 3/4                                    | Untreated Base Course Grade 3/4                                       |
| TRENCH ZONE        | Granular Backfill Borrow   | Granular Backfill Borrow  |
| SURFACE ZONE       | Native Top Soil<br>Replace Vegetation to preconstruction condition | Untreated Base Course Grade 3/4<br>Pavement restoration per RD SPEC'S |

3. COMPACTION: Compaction of backfill materials shall comply with APWA 02324. Submission of quality assurance test data may be requested by ENGINEER at any time. CONTRACTOR is to provide results of tests immediately upon request.
4. INSTALLATION OF PIPE: Install pipe per APWA 02535 "Sanitary Sewerage Systems". Install pipe on stable foundation with uniform bearing.
5. PAVEMENT RESTORATION: Do not install pavement or roadbase section until trench compaction is accepted by ENGINEER.

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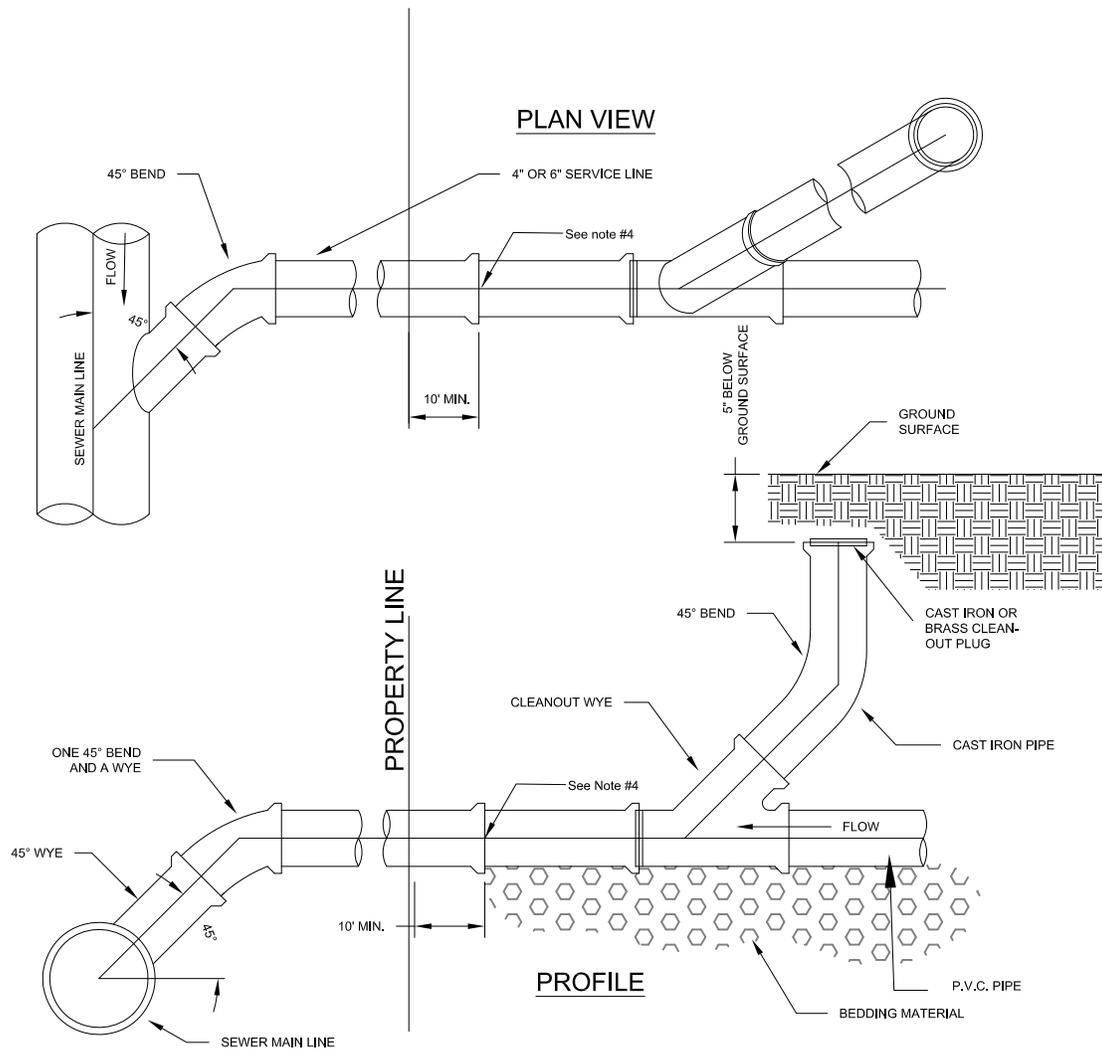
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## PIPE TRENCH

STANDARD DRAWING

SS-020



**NOTES**

1. **INSPECTION:**
  - A. Prior to installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings.
  - B. Prior to backfilling sewer lateral, secure inspection of installation by ENGINEER.
2. **INSTALLATION:**
  - A. Provide West Jordan City Utilities Department approved wye or tee with appropriate donut.
  - B. Tape wrap pipe as required by soil conditions.
  - C. Core out plug in sewer main. Do not break into sewer main to make connection.
3. **BACKFILL:** Install and compact all backfill material per APWA Section 02320.
4. **LOCATION:** Contractor to mark end of lateral w/ 2x4 and record location.

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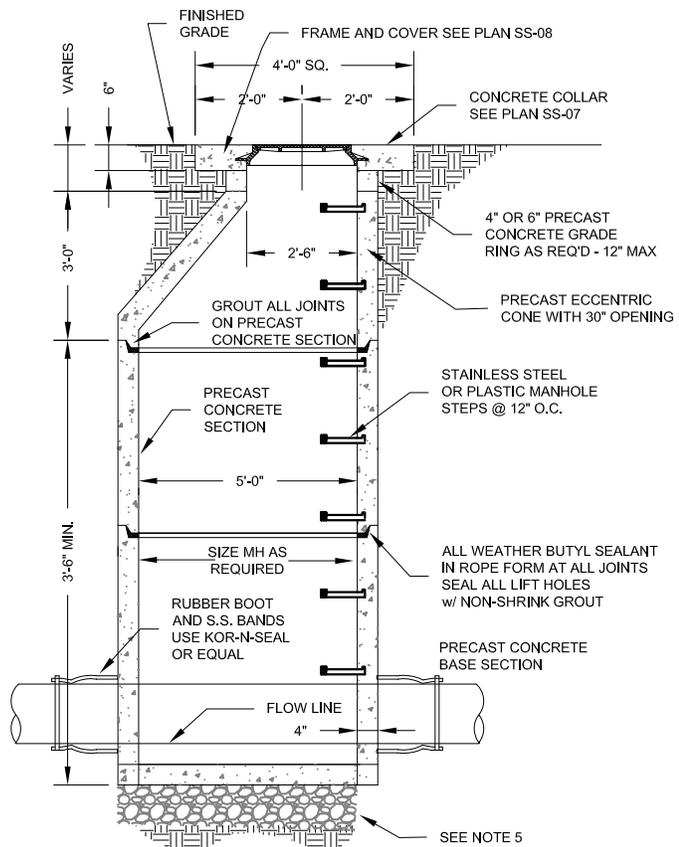
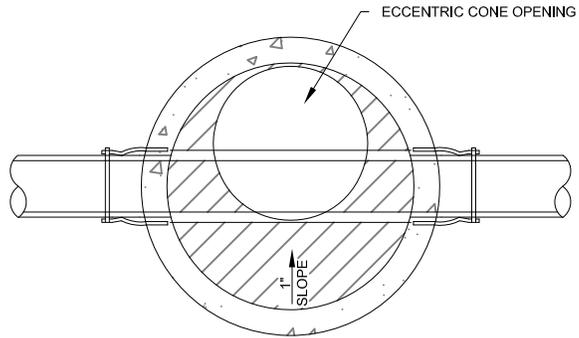


**SERVICE LATERAL**

STANDARD DRAWING

**SS-025**

1. **SELECT FILL:** Use of untreated base course grade 1 or grade 3/4 per APWA Section 02060. Use of sewer rock or recycled aggregate requires ENGINEER's written approval.
2. **BACKFILL:** Install and compact all backfill material per APWA Section 02321.
3. **CONCRETE:** Class 4,000 per APWA Section 03304 for both precast and cast in place applications. Apply a sealing/curing compound per APWA Section 03390.
4. **REDUCING RISER:** When a depth of manhole from pipe invert to finish grade exceeds 6'-7", use a reducing riser section.
5. **FOUNDATION:** Foundation to rest on 6" of 1½" maximum graded rock or on firm undisturbed soil when directed by ENGINEER and indicated by soils report.
6. **JOINTS:** Place flexible gasket type sealant in manhole joints.
7. **BASE OF MANHOLE:** Pour in one continuous operation.
8. **FINISH:** Provide smooth and neat finishes on the interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.



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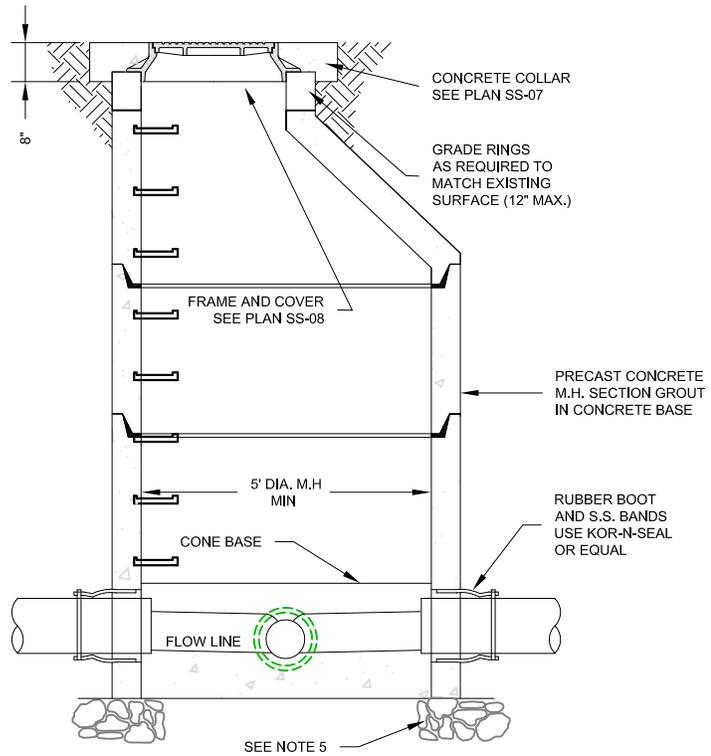
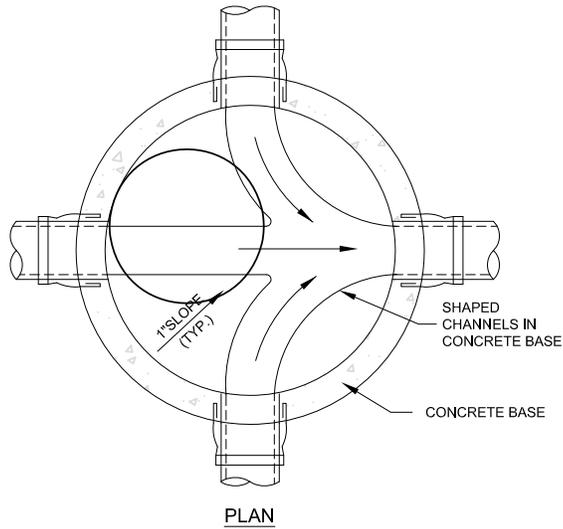


## IN-LINE MANHOLE

STANDARD DRAWING

SS-030

1. **SELECT FILL:** Use of untreated base course grade 1 or grade  $\frac{3}{4}$  per APWA Section 02060. Use of sewer rock or recycled aggregate requires ENGINEER's written approval.
2. **BACKFILL:** Install and compact all backfill material per APWA Section 02321.
3. **CONCRETE:** Class 4,000 per APWA Section 03304 for both precast and cast in place applications. Apply a sealing/curing compound per APWA Section 03390.
4. **REDUCING RISER:** When a depth of manhole from pipe invert to finish grade exceeds 6'-7", use a reducing riser section.
5. **FOUNDATION:** Foundation to rest on 6" of 1½" maximum graded rock or on firm undisturbed soil when directed by ENGINEER and indicated by soils report.
6. **JOINTS:** Place flexible gasket type sealant in manhole joints.
7. **BASE OF MANHOLE:** Pour in one continuous operation.
8. **FINISH:** Provide smooth and neat finishes on the interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.



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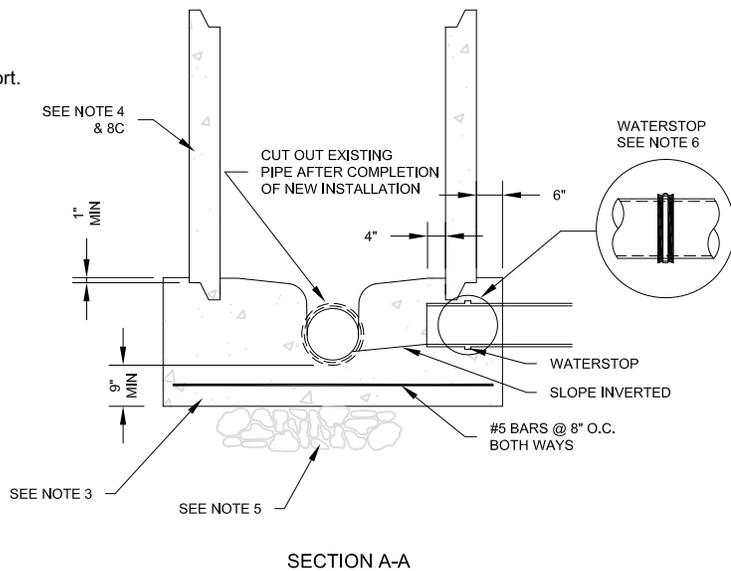
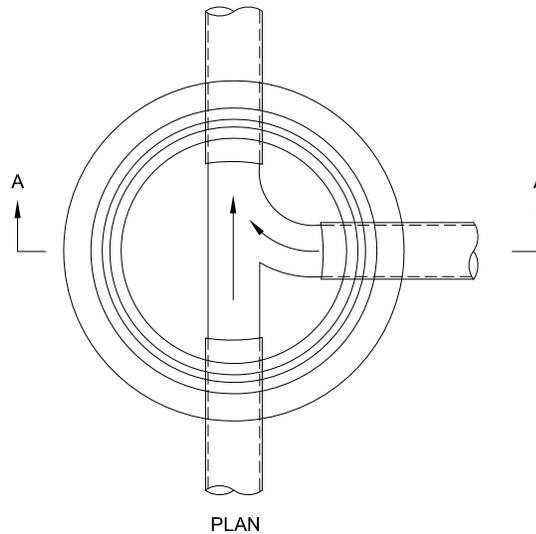


# JUNCTION MANHOLE

STANDARD DRAWING

SS-035

1. **SELECT FILL:** Use of untreated base course grade 1 or grade 3/4 per APWA Section 02060. Use of sewer rock or recycled aggregate requires ENGINEER's written approval.
2. **BACKFILL:** Install and compact all backfill material per APWA Section 02321.
3. **CONCRETE:** Class 4,000 per APWA Section 03304 for both precast and cast in place applications. Apply a sealing/curing compound per APWA Section 03390.
4. **MANHOLE SECTION:** Use a steel reinforced concrete manhole section conforming to ASTM C-478 cast into base.
5. **FOUNDATION:** Foundation to rest on 6" of 1½" maximum graded rock or on firm undisturbed soil when directed by ENGINEER and indicated by soils report.
6. **WATERSTOP:** Shall be 1/2" 300 series nonmagnetic stainless steel conforming to ASTM A167 and rubber gasket meeting ASTM C-443.
7. **JOINTS:** Place flexible gasket type sealant in manhole joints.
8. **BASE OF MANHOLE:**
  - A. This manhole base is to be used for a connection to an existing line or as an alternate to a precast manhole base.
  - B. Invert shall be smooth and "U" shaped and match the spring line of the pipe.
  - C. The first precast manhole section shall be cast into the base. The remainder of the manhole construction shall conform to plan SS-03.



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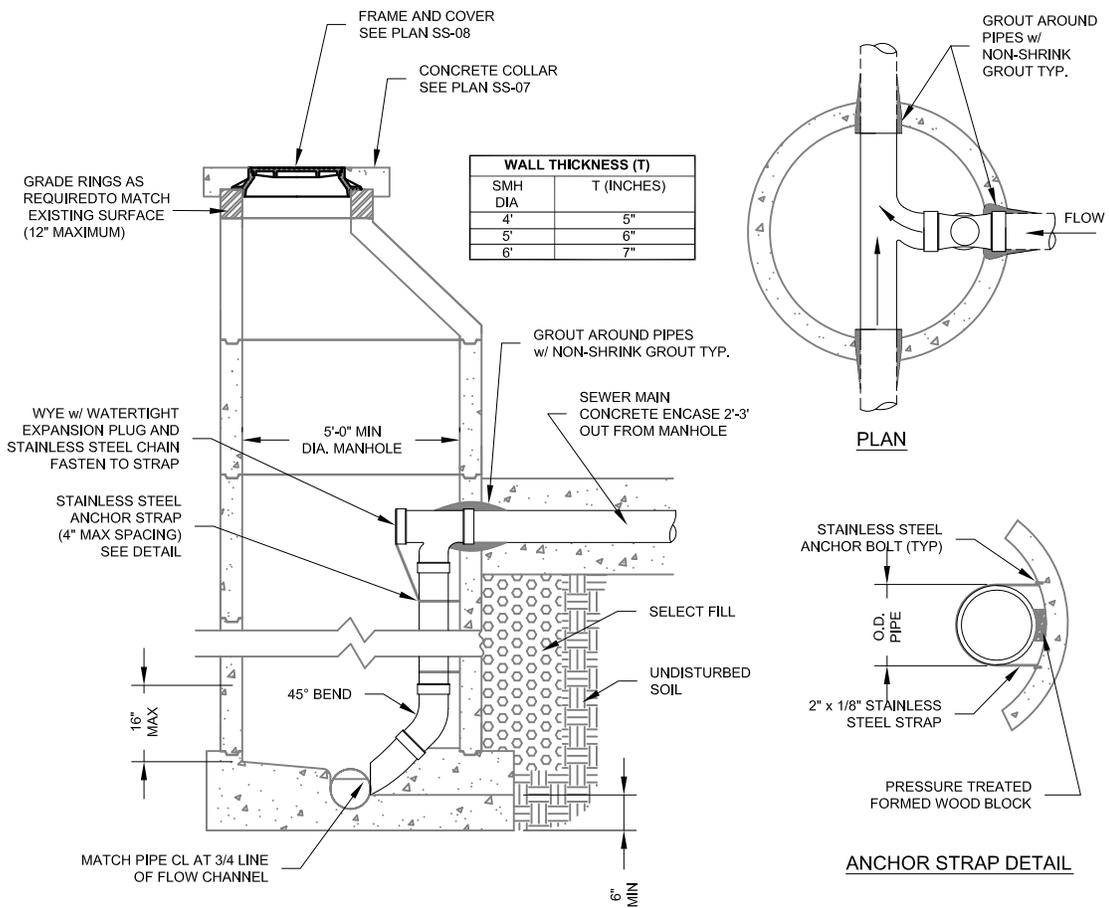
City of West Jordan, Utah



# CAST IN PLACE MANHOLE BASE

STANDARD DRAWING

SS-040



1. SELECT FILL: Use of untreated base course grade 1 or grade 3/4 per APWA Section 02060. Use of sewer rock or recycled aggregate requires ENGINEER's written approval.
2. BACKFILL: Install and compact all backfill material per APWA Section 02321.
3. CONCRETE: Class 4,000 per APWA Section 03304 for both precast and cast in place Applications. Apply a sealing/curing compound per APWA Section 03390.
4. FOUNDATION: Foundation to rest on 6" of 1 1/2" maximum graded rock or on firm undisturbed soil when directed by ENGINEER and indicated by soils report.
5. JOINTS: Place flexible gasket type sealant in manhole joints.
6. FINISH: Provide smooth and neat finishes on the interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.

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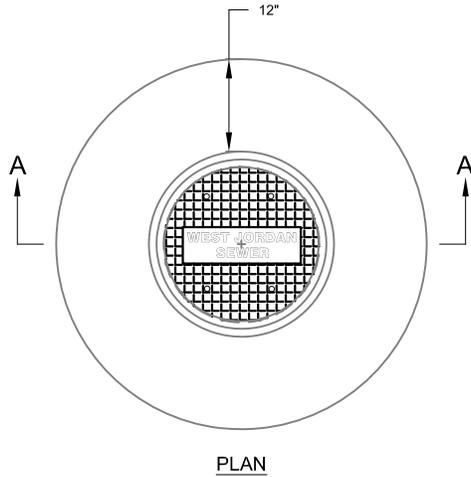
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## DROP MANHOLE

STANDARD DRAWING

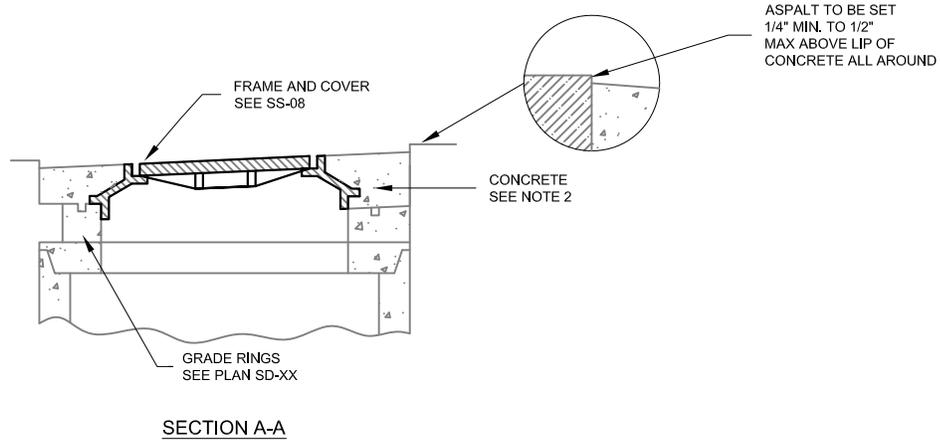
SS-045



1. ADJUST TO GRADE: Adjust incidental structure to grade per APWA Section 02990.

1. CONCRETE: class 4,000 per APWA Section 03304. apply a sealing/curing compound per APWA Section 03390 or use an acceptable alternate curing method.

2. JOINTS: Provide a neat straight joint between existing and new asphalt concrete surfaces. Provide concentric circle or straight edge cut. Clean edges of all dirt, oil and loose debris.



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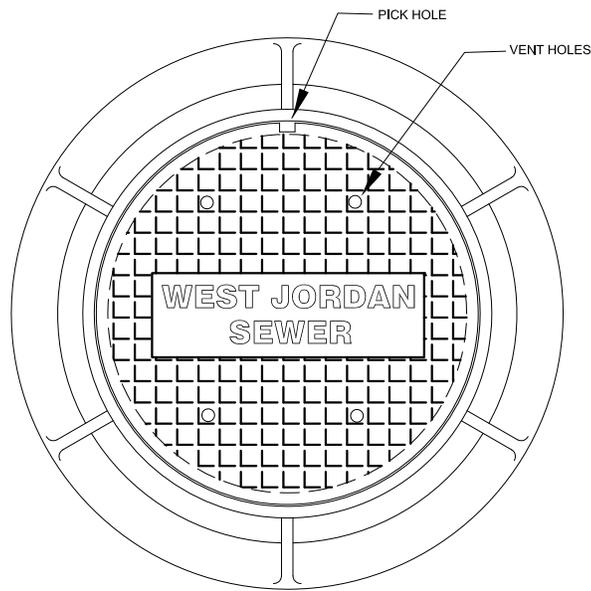
City of West Jordan, Utah



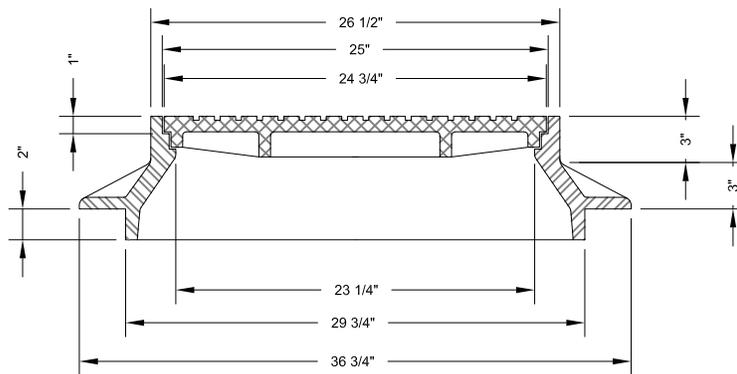
# CONCRETE COVER COLLAR

STANDARD DRAWING

SS-050



1. CASTINGS: Grey Iron class 30 minimum per ASTM A 48.
2. COATINGS: Except machined surfaces, coat all metal parts with asphaltum paint.
3. INSCRIPTIONS: Cast the words "WEST JORDAN" and "SEWER" on the cover flush with the surface finish.
4. HEAT NUMBER: Place foundry and heat number on the inside of the frame and on the bottom of the cover.
5. FIT: Give the frame and cover a machine finish so the cover will not rock.
6. LOCKING: Provide covers for manholes located in easements, rights of way, alleys parking lots, and all other places except paved streets, with allen socket set screw locking devices. Drill and tap two holes to a depth of 1 inch at 90 degrees to pry and install 3/4" x 3/4" Inch allen socket set screws.
7. MANHOLE STRUCTURES: See Plan SS-03, SS-04, SS-05, SS-12, SS-13, SS-14, AND SS-15
8. VENTILATION: Standard is for vented manhole except as needed for problems.



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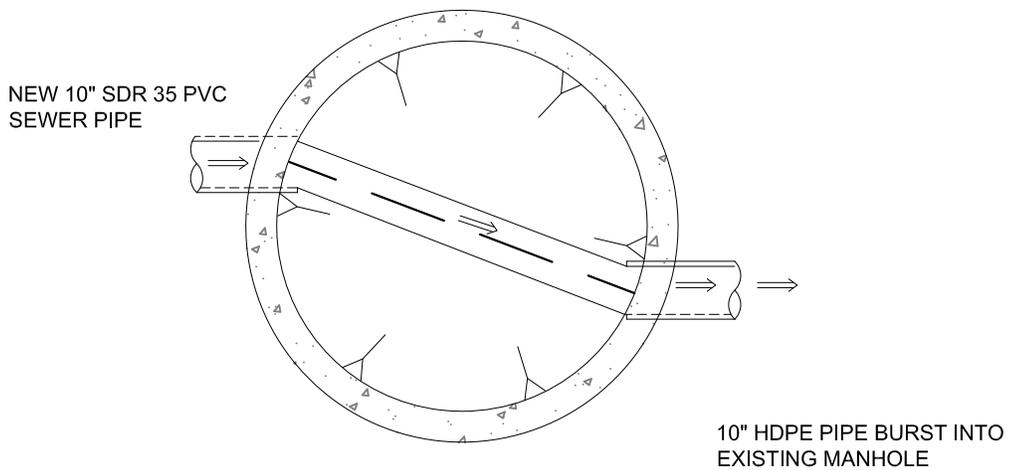


# FRAME AND COVER

STANDARD DRAWING

SS-055

HAND FORM CHANNEL BETWEEN  
PIPES  
2' SEPARATION CENTER TO CENTER  
ON PIPES  
ANGLE BETWEEN PIPES = 20.5°



REPLACE EXISTING MH w/  
6' CAST IN PLACE  
MANHOLE  
FORM TO FIT PIPES.

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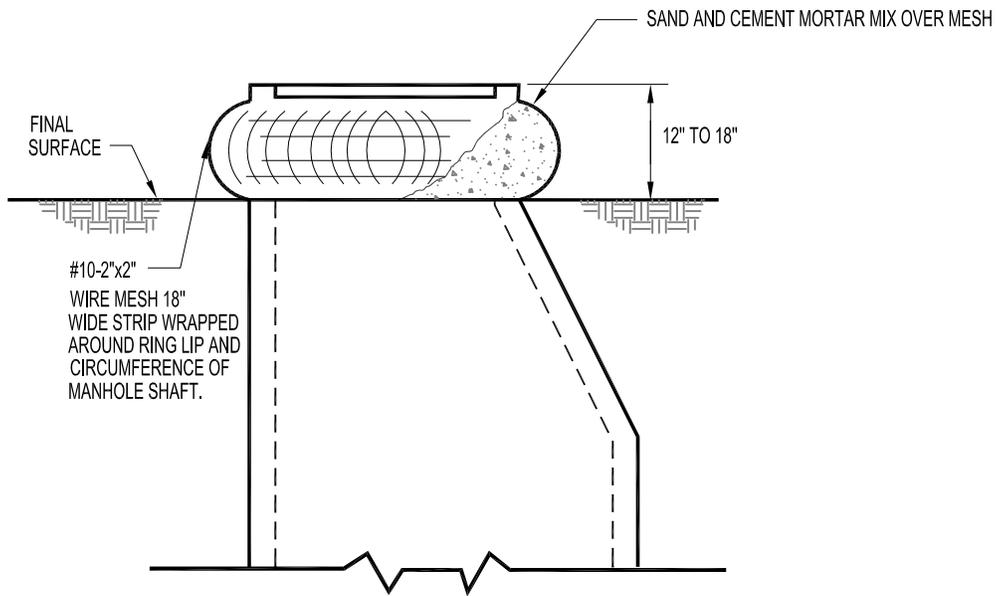


CAST IN PLACE 6-FT MANHOLE

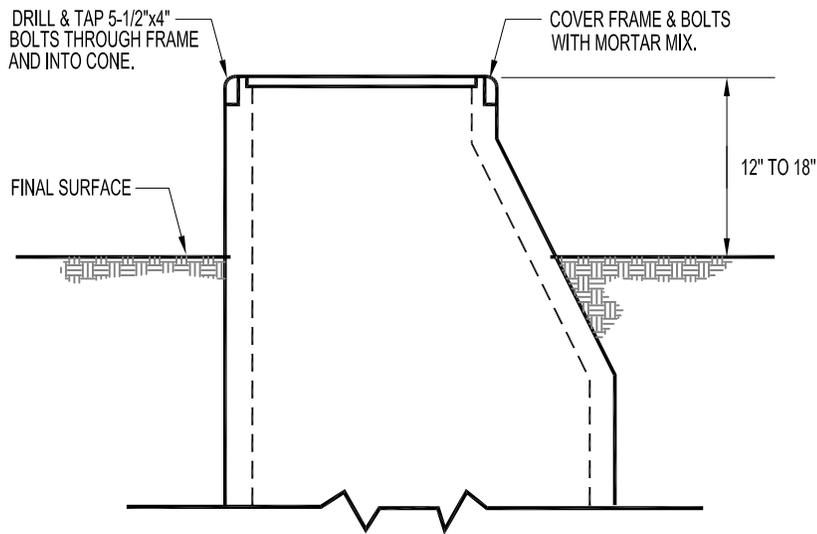
STANDARD DRAWING

SS-060





CASE I CONSTRUCTION WITH GRADE RINGS



CASE II CONSTRUCTION WITHOUT GRADE RINGS

NOTES:

1. SEE PLATE 17 FOR APPLICABLE NOTES & DESIGNATION

DRAWING DATE MARCH 25, 2009

City of West Jordan, Utah



**MANHOLE SECURING DETAIL  
UNDEVELOPED AREAS**

STANDARD DRAWING

**SS-070**

NOTES:

1. MOUNTABLE CURB SHALL BE A STANDARD 15-INCH WIDE UDOT TYPE 'F' CURB. DOWELS MAY BE REPLACED BY EPOXY IF APPROVED BY THE CITY ENGINEER.
2. TINTED/TEXTURED CONCRETE SHALL BE A MINIMUM OF 6 INCHES THICK BOMANTILE OR APPROVED EQUIVALENT. COLOR AND TEXTURE MUST BE PRE APPROVED BY THE COMMUNITY DEVELOPMENT DIRECTOR AND SHALL BE CONSISTENT OR COMPLIMENTARY THROUGHOUT NEIGHBORHOODS. 6-INCH HAND PLACED GROUTED COBBLES MAY BE USED IN PLACE OF TEXTURED CONCRETE, WITH PRIOR APPROVAL
3. THE LANDSCAPED AREA SHALL INCLUDE 3 TREES, EQUALLY SPACED, FROM THE CITY'S APPROVED STREET TREE LIST AND PLANTED PER APWA STD.DWG. 681. IF ONE OF THE CORNER PROPERTY OWNERS SIGNS AN ADOPTION AGREEMENT TO MAINTAIN LANDSCAPING, THE REMAINDER OF THE LANDSCAPED AREA MAY BE PLANTED WITH LOW GROWING, LOW MAINTENANCE SHRUBS OR GROUND COVERS. OTHERWISE, THE TEXTURED CONCRETE WILL BE EXTENDED TO COVER THE ENTIRE ISLAND, WITH THE EXCEPTION OF TRR WELLS.
4. A STANDARD RESIDENTIAL SECONDARY WATER SERVICE SHALL BE INSTALLED TO THE ISLAND PER STD. DWG. SJC 1401. A 1-INCH SLEEVE WITH A PULL CORD SHALL BE RUN FROM THE ISLAND TO EACH CORNER LOT FOR THE PURPOSED OF CONNECTING TO A HOME IRRIGATION CONTROLLER. IF THE ISLAND HAS BEEN ADOPTED, A LOW PRESSURE DRIP IRRIGATION SYSTEM SHALL BE INSTALLED.
5. A 2-GANG WET LOCATION ELECTRICAL BOX WITH GFCI SHALL BE INSTALLED IN THE ISLAND TO FACILITATE MAINTENANCE, HOLIDAY LIGHTING, AND OTHER PURPOSES. RISER CONDUIT, BOX, AND COVER SHALL BE METAL. BOX SHALL BE CONNECTED TO A 1-INCH DIAMETER BY 4 FOOT CAPPED PIPE FOR STABILITY. WIRING SHALL CONNECT TO STREET LIGHT SYSTEM.
6. 20 ONE-WAY YELLOW REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED ON THE MOUNTABLE CURB OF THE ISLAND, ORIENTED AS SHOWN, USING EPOXY. 2 TWO-WAY CLEAR/RED AND 2 ONE-WAY CLEAR REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED ON THE TO OF THE HIGH-BACK CURB ON EACH CORNER, POSITIONED AND ORIENTED AS SHOWN.
7. A 24-INCH LONG DEEP ROOT BARRIER SHALL BE INSTALLED ADJACENT TO THE TINTED CONCRETE (OR AROUND TREE WELL WHERE ISLAND IS ALL CONCRETE) AROUND THE FULL PERIMETER OF THE LANDSCAPED AREA.
8. 2 12" x 18" CHEVRON ALIGNMENT SIGNS (W1-8) SHALL BE INSTALLED FACING EACH LEG OF THE INTERSECTION, PLACED AND ORIENTED AS SHOWN.

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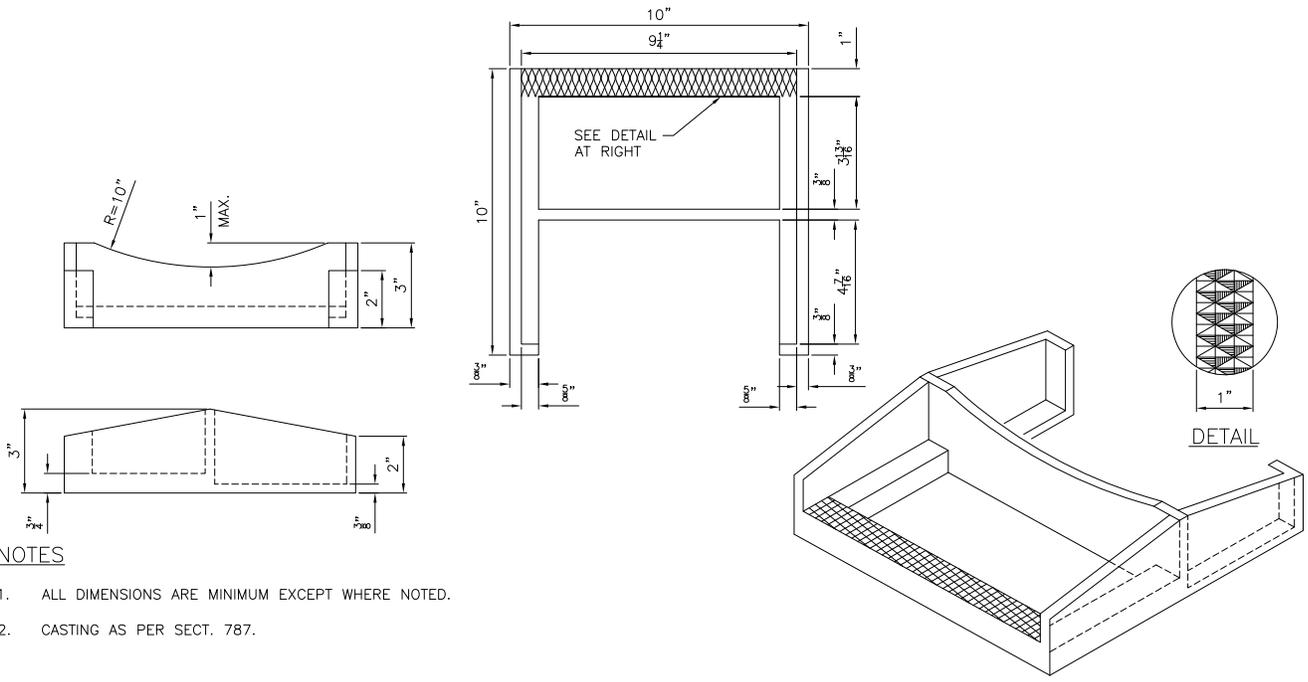
City of West Jordan, Utah



**MANHOLE SECURING DETAIL  
UNDEVELOPED AREAS**

STANDARD DRAWING

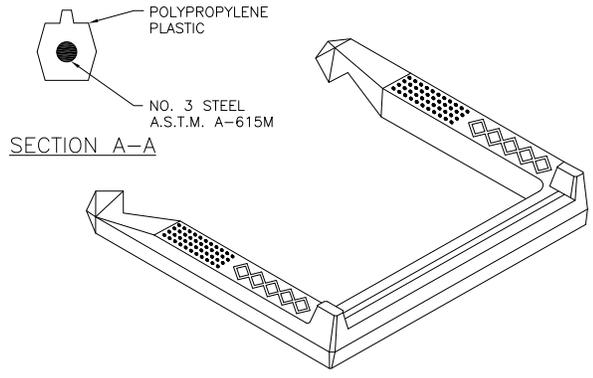
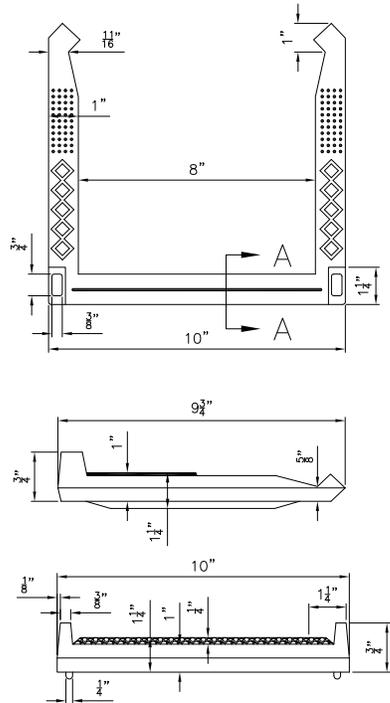
**SS-070**



**NOTES**

1. ALL DIMENSIONS ARE MINIMUM EXCEPT WHERE NOTED.
2. CASTING AS PER SECT. 787.

CAST IRON MANHOLE STEP



**NOTES**

1. STEPS SHALL BE PLACED INTO WET CONCRETE WALL DURING MANUFACTURE OR MORTARED INTO HOLES AFTER CONCRETE HAS SET.
2. POLYPROPYLENE MUST MEET REQUIREMENTS OF A.S.T.M. 2146, TYPE II, GRADE 16906.

POLYPROPYLENE MANHOLE STEP

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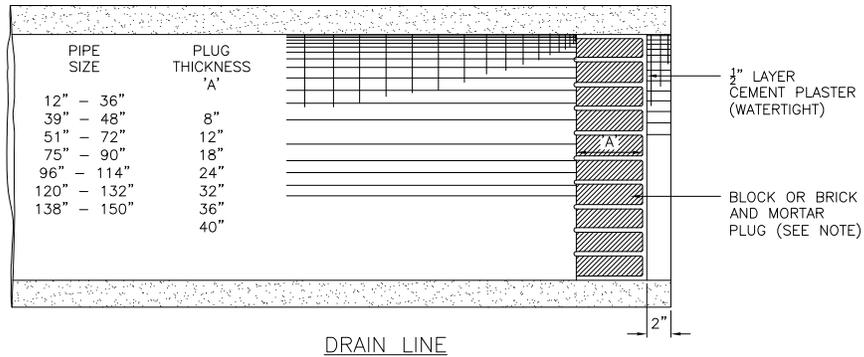
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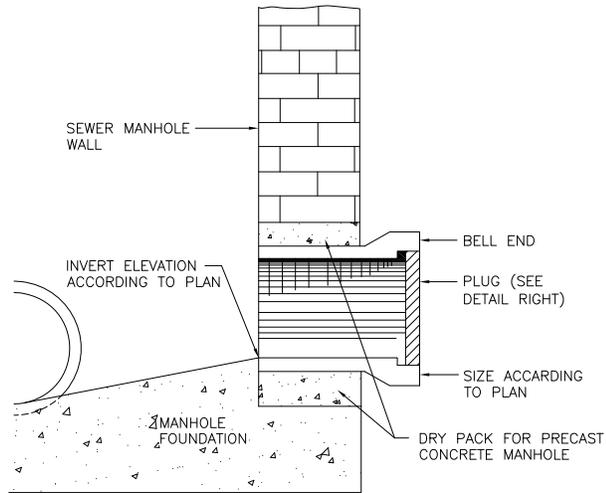
**MANHOLE STEPS**

STANDARD DRAWING

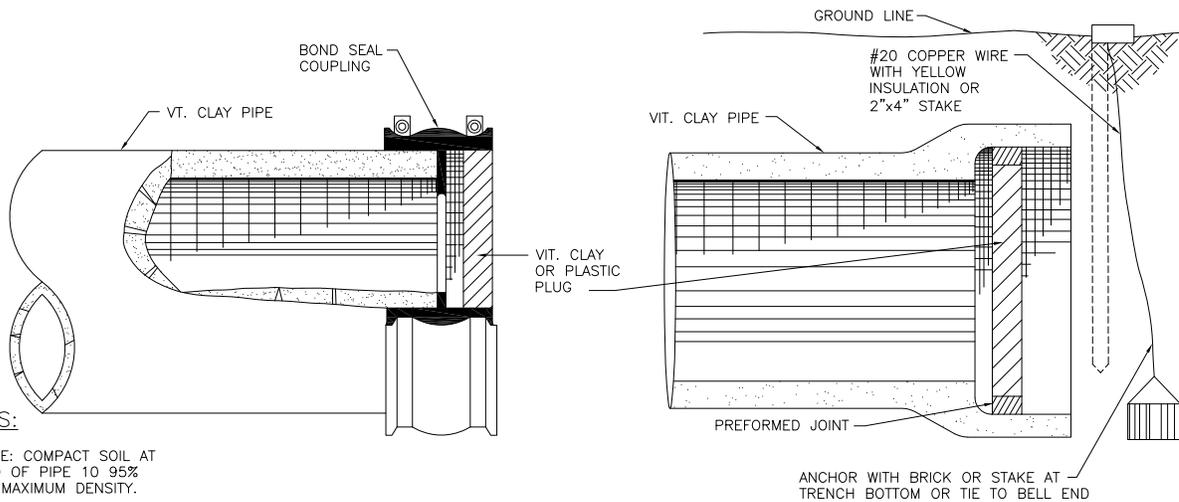
**SS-075**



DRAIN LINE



TYPICAL STUB OUT



NOTES:

- NOTE: COMPACT SOIL AT END OF PIPE TO 95% OF MAXIMUM DENSITY.
- IF DEPTH OF COVER IS LESS THAN 5' OR GREATER THAN 10' INCREASE PLUG THICKNESS A MIN. OF 4"

SEWER LINE

DRAWING DATE MARCH 25, 2009

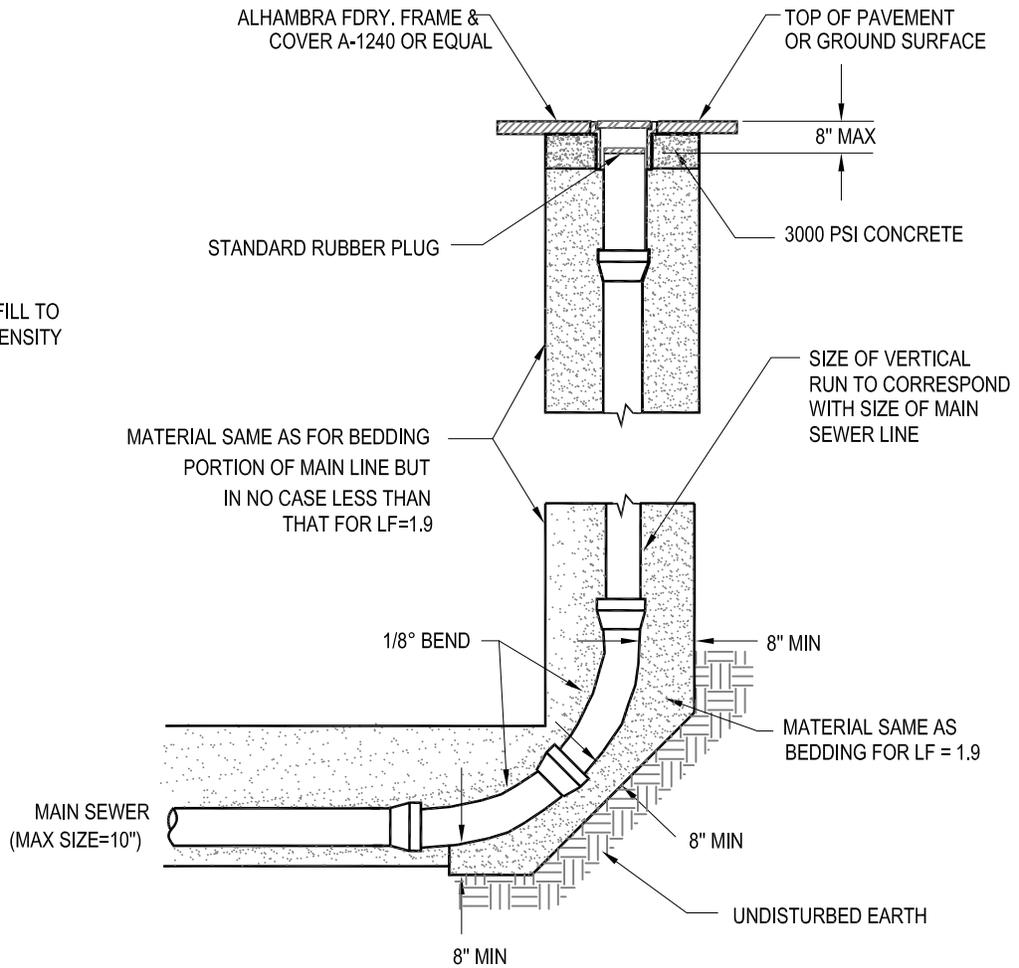
City of West Jordan, Utah



STUB OUT AND PLUGS

STANDARD DRAWING

SS-080



## STANDARD "END OF MAIN" CLEANOUT

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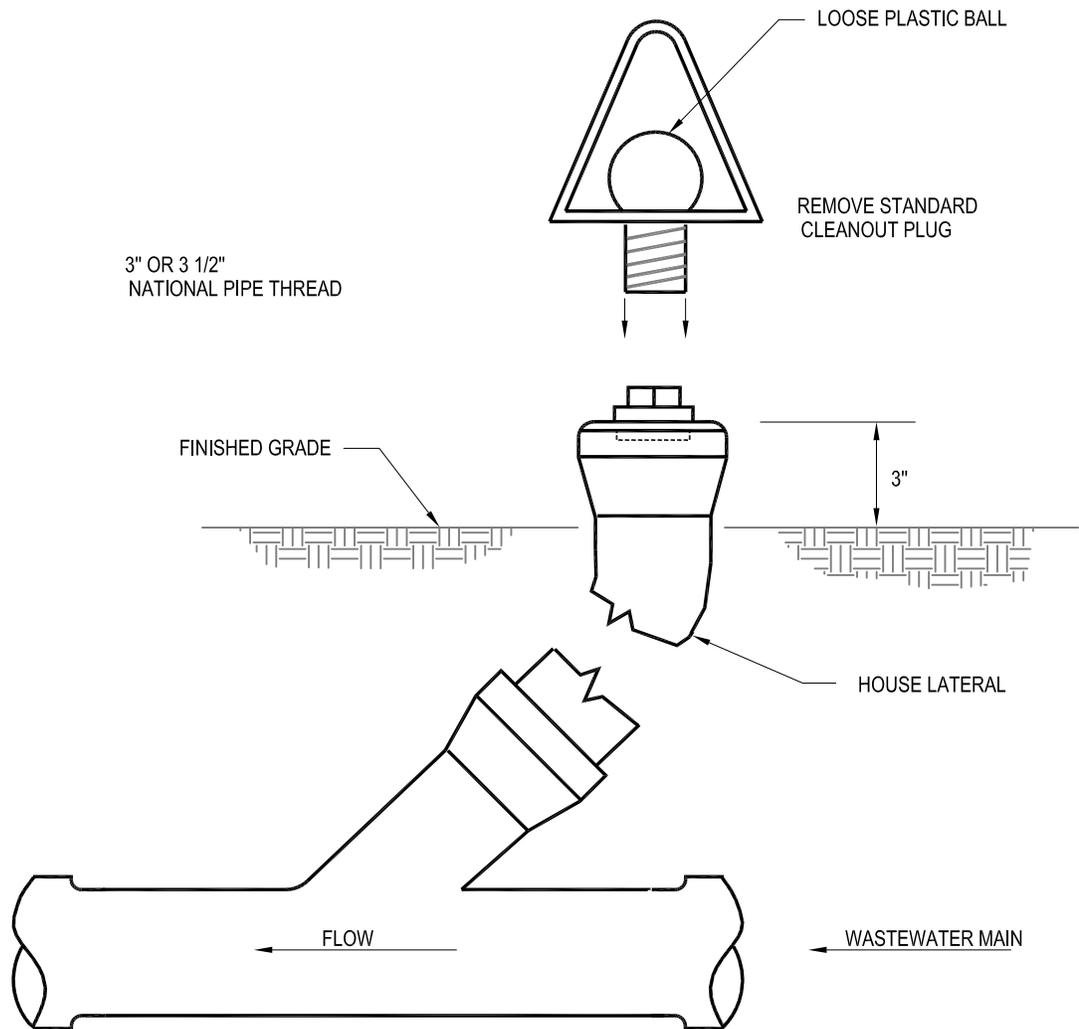
City of West Jordan, Utah



# CLEANOUT

STANDARD DRAWING

SS-081



NOTES:

1. OVERFLOW SYSTEM SIMILAR TO THE TYPE DETAILED ABOVE IS REQUIRED WHEN THERE IS A POSSIBILITY OF REVERSE FLOW IN SERVICE LATERALS SERVING LOW LOTS IN HILLY AREAS OR IN BUILDINGS WITH PLUMBING FIXTURES BELOW THE UPSTREAM SEWER MANHOLE RIM. (I.E. PAD ELEVATION BELOW UPSTREAM MANHOLE LID). WHEN AN EXISTING LATERAL IS BEING REPAIRED OR ALTERED AND THE ABOVE CONDITIONS EXISTS, AN OVERFLOW SYSTEM SHALL THEN BE INSTALLED.
2. A BACKWATER CHECK VALVE SHALL ONLY BE USED WHERE A BELOW GROUND INSTALLATION IS DESIRABLE AND APPROVED BY THE BUILDING DEPARTMENT.

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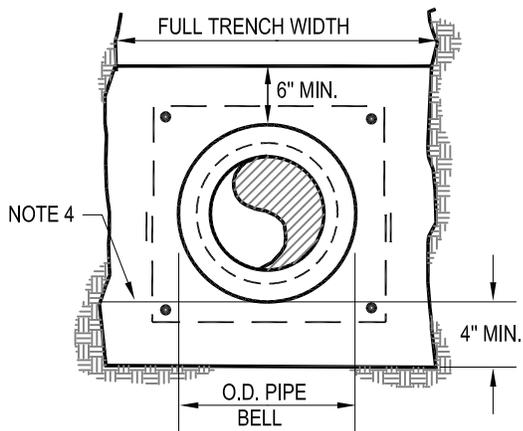
City of West Jordan, Utah



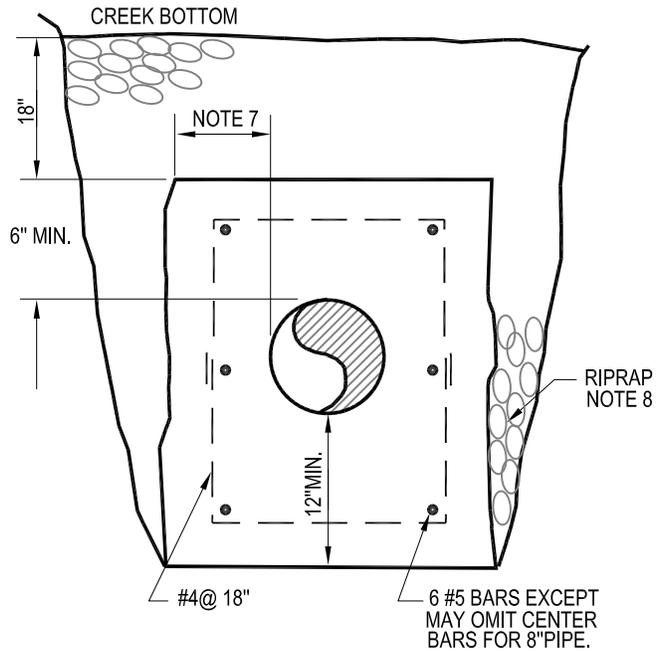
## BACKWATER OVERFLOW DEVICE

STANDARD DRAWING

SS-082



NOTE 4

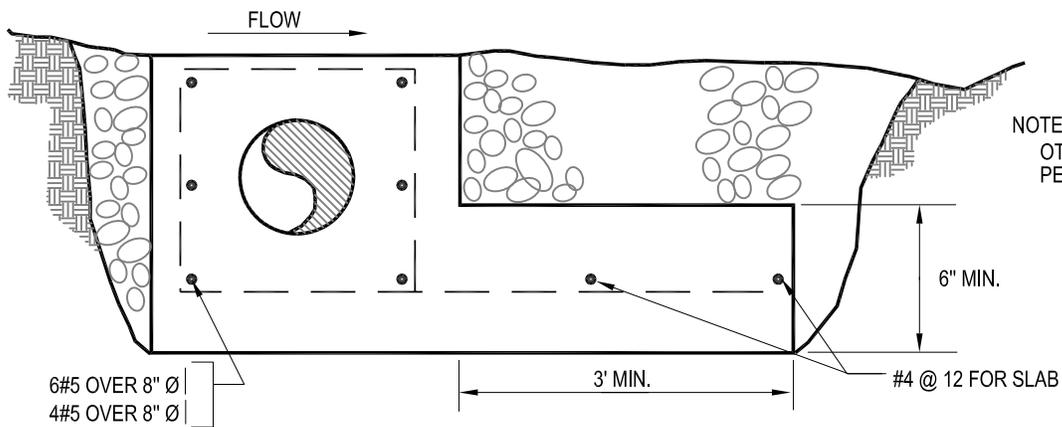


NOTES:

1. ALL REBARS #4; STIRRUPS @24"
2. ALL REBARS USE 3" CLEAR.
3. WRAP PIPE WITH 15#/100 SF ROOFING PAPER OR AS APPROVED (NOT REQUIRED PLASTIC PIPE).
4. OPTIONAL CONSTRUCTION JOINT.
5. EACH JOINT TO BE TIED DOWN TO PREVENT FLOATING.
6. CONCRETE TO BE VIBRATED.
7. 6" MIN. TYP. BOTH SIDES
8. 6" MIN. RIPRAP CHOCKED WITH SAND AS REQUIRED.
9. DEPTH OF CONCRETE SHALL BE TO FIRM FOUNDATION.
10. OTHER DETAILS AS SHOWN FOR TYPE A.

TYPE A ENCASEMENTS

TYPE B-FOR DRAINAGE COURSE



NOTE:  
OTHER DETAILS  
PER TYPE B

TYPE C-DRAINAGE COURSE

DRAWING DATE MARCH 25, 2009

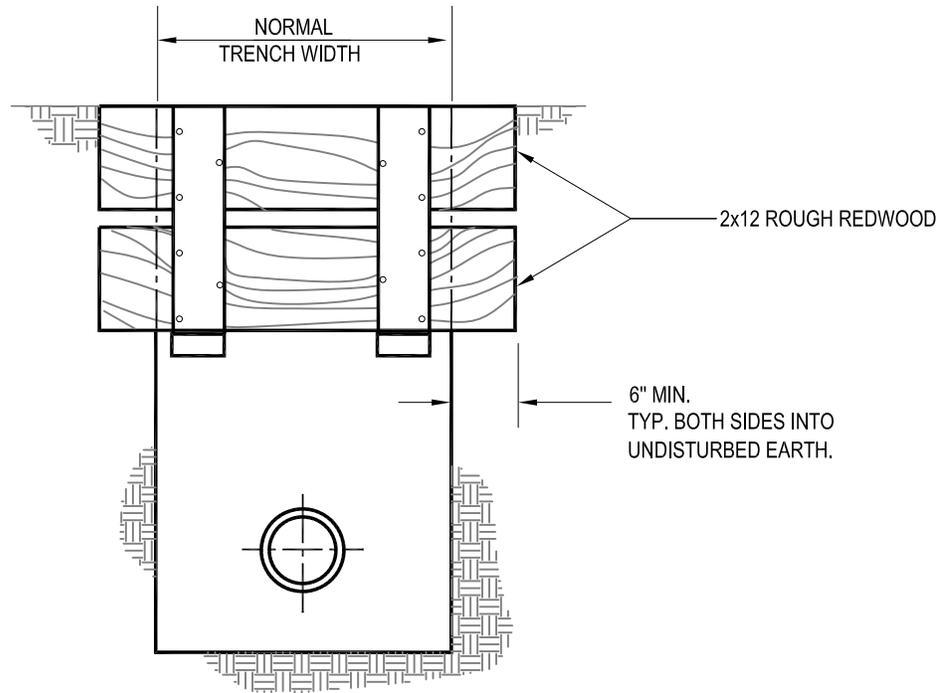
City of West Jordan, Utah



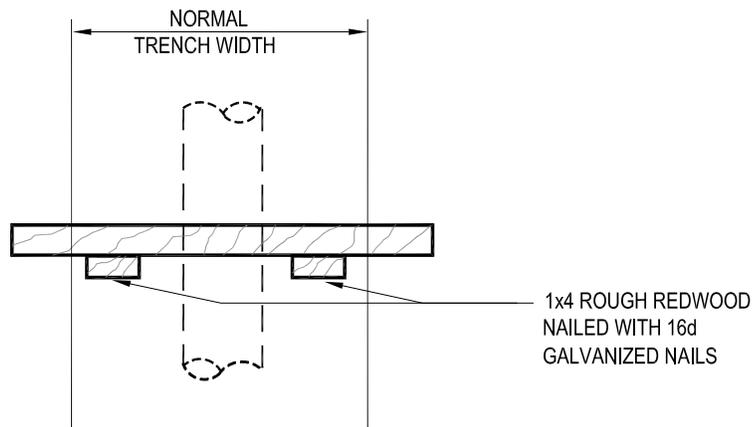
PIPE ENCASEMENTS

STANDARD DRAWING

SS-085



SECTION VIEW



PLAN VIEW

NOTES:

1. THIS DETAIL SHALL BE USED WHERE FINISHED GROUND SLOPE EXCEEDS 30 PERCENT (1.7 HORIZ. TO 1 VERT.) OR AS REQUIRED BY THE PUBLIC WORKS DEPARTMENT.
2. CHECK DAM TO BE SPACED AT 20 FEET MAXIMUM, OR AT LEAST TWO PER ANY ONE SLOPE EQUALLY SPACED WHICHEVER YIELDS THE GREATER NUMBER.

DRAWING DATE MARCH 25, 2009

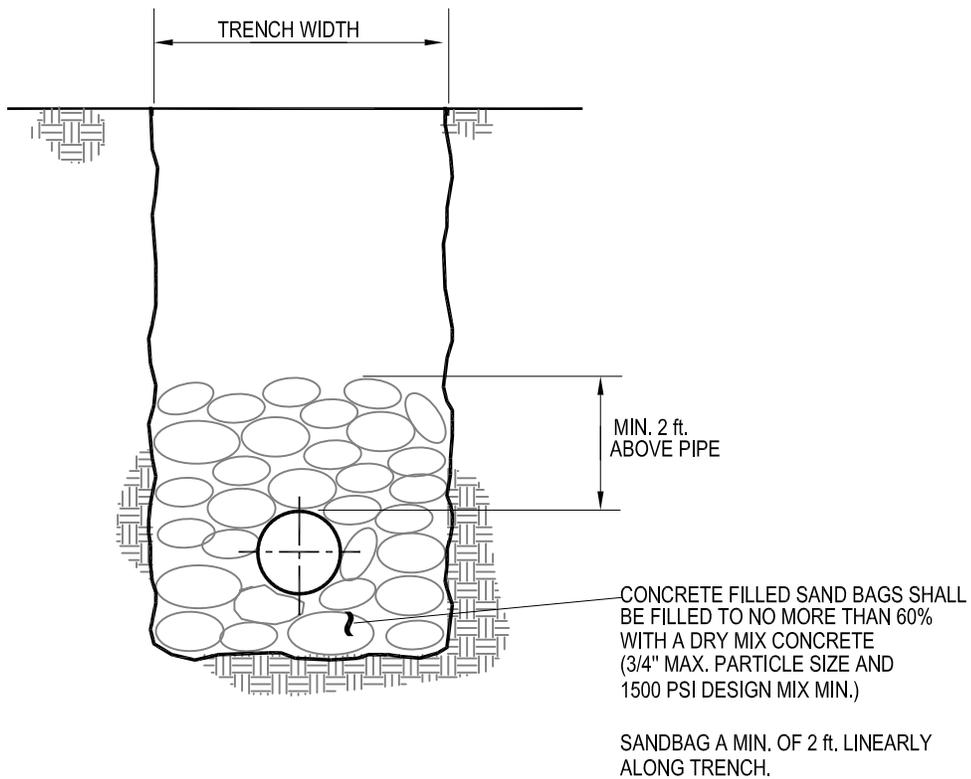
City of West Jordan, Utah



**REDWOOD CHECK DAM FOR STEEP SLOPES**

STANDARD DRAWING

**SS-090**



NOTES:

1. THIS DETAIL SHALL BE USED WHERE FINISHED SLOPE EXCEEDS 35% (1.43 HORIZONTAL TO 1 VERTICAL) OR AS REQUIRED BY THE PUBLIC WORKS DEPARTMENT. ITS USAGE DOES NOT ALTER THE REQUIREMENT FOR THE REDWOOD CHECK DAM WHERE APPLICABLE.
2. CONCRETE FILLED SAND BAGS ARE TO BE TIGHTLY PACKED AROUND AND UNDER PIPE IN ONE ROW WHICH ARE NEARLY VERTICAL. SPACING TO BE AT 20 FEET MAXIMUM OR AT LEAST TWO PER SLOPE EQUALLY SPACED WHICHEVER YIELDS THE GREATER NUMBER.

DRAWING DATE MARCH 25, 2009

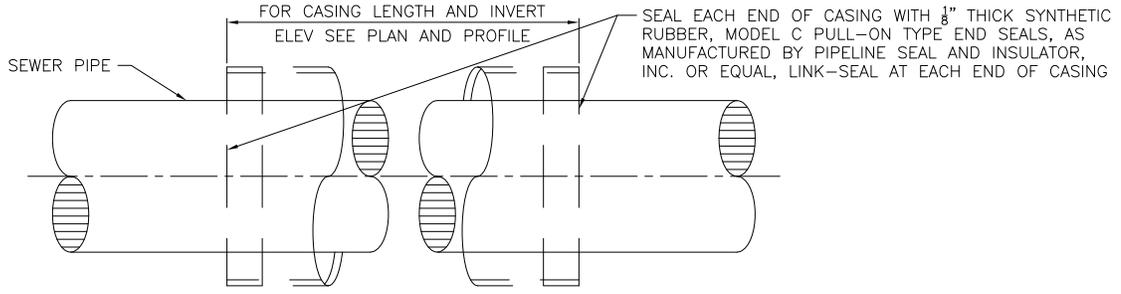
City of West Jordan, Utah



## CONCRETE FILLED SAND BAG TRENCH DETAIL FOR STEEP SLOPES

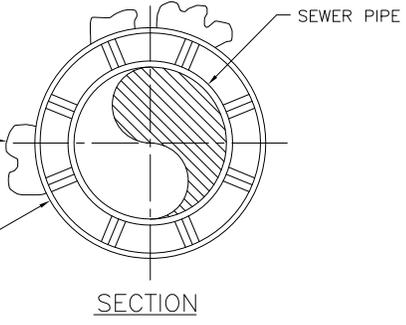
STANDARD DRAWING

SS-095



ANY VOIDS CREATED BY BORING, JACKING, OR TUNNELING SHALL BE FILLED BY PRESSURE GROUTING.

CASING SPACERS MANUFACTURED BY PIPELINE SEAL AND INSULATOR, INC. MODEL S12G-2 SPACED EVERY 5' TO CENTER THE PIPE INSIDE THE CASING. PIPE THROUGHOUT THE LENGTH OF THE CASING SHALL BE AT A CONTINUOUS GRADE AS SHOWN IN DRAWINGS.



| MINIMUM WALL THICKNESS OF CASINGS |                |
|-----------------------------------|----------------|
| DIAMETER                          | WALL THICKNESS |
| 12" AND UNDER                     | 0.188"         |
| 14"-18"                           | 0.312"         |
| 20"-22"                           | 0.375"         |
| 24"-26"                           | 0.438"         |
| 28"-32"                           | 0.500"         |
| 34"-42"                           | 0.562"         |

LARGER CASINGS AS DIRECTED BY THE DISTRICT ENGINEER.

NOTES:

1. CASING PIPES SHALL BE REQUIRED AS INDICATED ON THE DRAWINGS AND/OR WHERE REQUIRED BY THE DISTRICT INSPECTOR OR ENGINEER.
2. THE CASING PIPE SHALL BE SIZED TWICE DIAMETER OF CARRIER PIPE.
3. CARRIER PIPE SHALL BE TESTED BEFORE SEALING THE ENDS OF THE CASING.
4. SPACERS SHALL BE SECURELY ATTACHED TO CARRIER PIPE PER MANUFACTURER'S REQUIREMENTS.
5. CASING PIPE SHALL BE WELDED STEEL, ASTM A53, GRADE B OR APPROVED EQUIVALENT.

DRAWING DATE MARCH 25, 2009

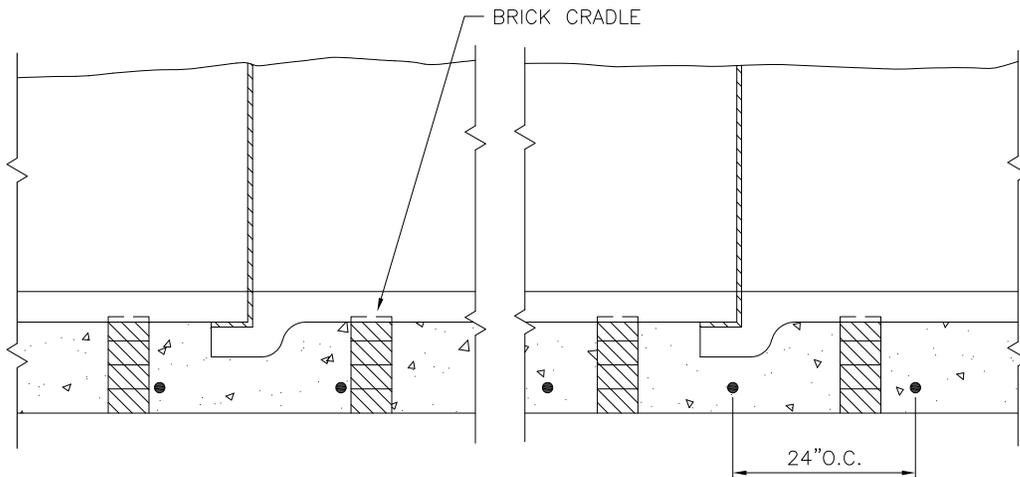
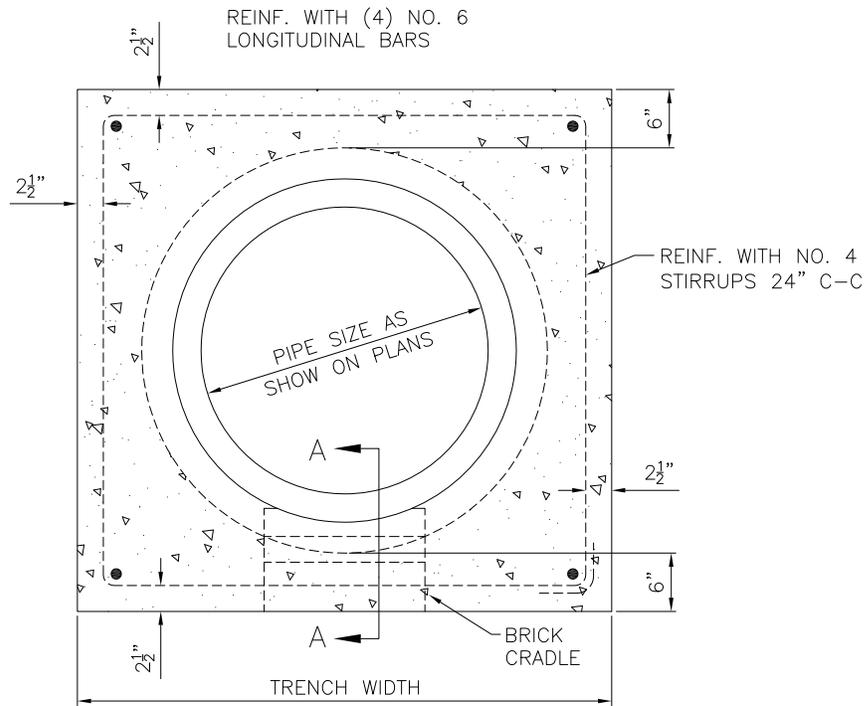
City of West Jordan, Utah



**STEEL CASING FOR SEWER PIPE**

STANDARD DRAWING

**SS-100**



SECTION A-A

NOTES:

1. LAY PIPE TO LINE AND GRADE ON BRICK CRADLE
2. PLACE CLASS "C" CONCRETE PER SECT. 725 AND IN SUCH A MANNER AS NOT FLOAT THE PIPE.

DRAWING DATE MARCH 25, 2009

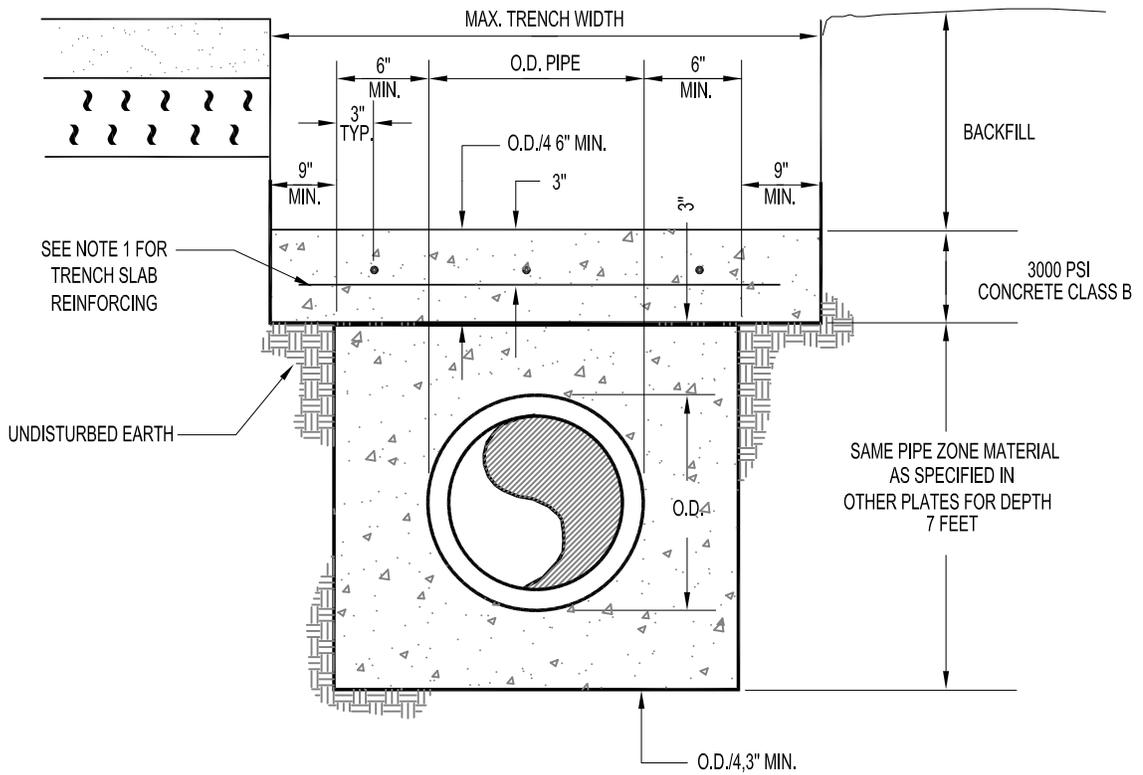
City of West Jordan, Utah



ENCASED PIPE FOR CANAL CROSSING

STANDARD DRAWING

SS-105



**NOTES**

1. LONGITUDINAL TRENCH SLAB REINFORCING 3-#4 BARS PLACED AS SHOWN.  
TRANSVERSE SLAB REINFORCING, 1-#4 BARS EVERY 24" OF SLAB LENGTH.
2. CONCRETE TO BE VIBRATED.
3. THE MINIMUM DISTANCE BETWEEN TOP OF SLAB AND BOTTOM OF SUBGRADE (IF PAVED) OR FINISHED SURFACE (IF NOT PAVED) SHALL BE 6" AND 12" RESPECTIVELY.
4. THIS DETAIL MAY BE USED FOR SHALLOW TRENCHES IF APPROVED.

DRAWING DATE MARCH 25, 2009

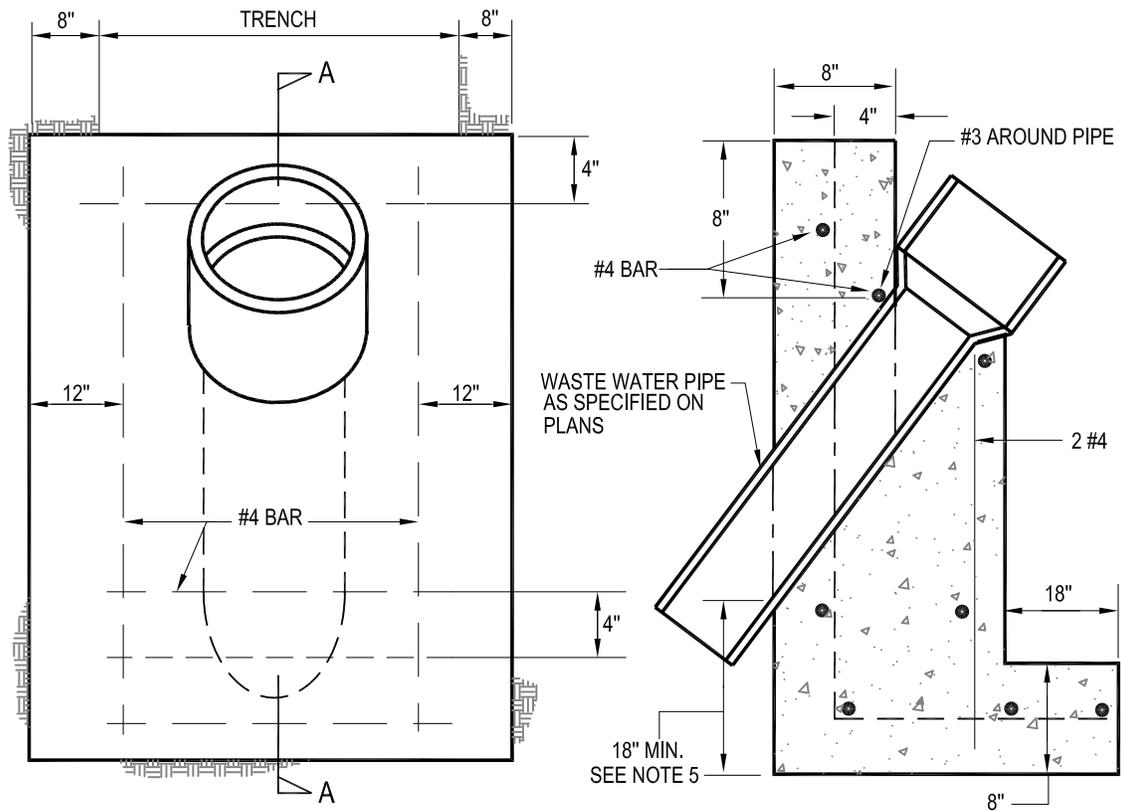
City of West Jordan, Utah



**REINFORCED CONCRETE TRENCH SLAB**

STANDARD DRAWING

**SS-110**



ELEVATION

SECTION A-A

NOTES:

1. THIS DETAIL SHALL BE USED WHERE CALCULATIONS SHOW ADDITIONAL RESISTANCE TO SLIDING IS REQUIRED, AND WHERE SPECIFICALLY APPROVED. IT SHALL NOT BE USED FOR SLOPES LESS 45° (1 HORIZ. TO 1 VERT.) OR FOR PLASTIC PIPES.
2. WHERE REQUIRED PLACE ANCHOR BLOCK EVERY 50 FEET (MAXIMUM).
3. THIS DETAIL APPLIES TO 4" THROUGH 12" PIPE SIZES. LARGER SIZE PIPES REQUIRE SPECIAL DESIGN.
4. CONCRETE TO BE CLASS A (SEE SECTION 3).
5. DEPTH OF CONCRETE 18" MIN. OR AS REQUIRED TO REACH SOLID FOUNDATION.

DRAWING DATE MARCH 25, 2009

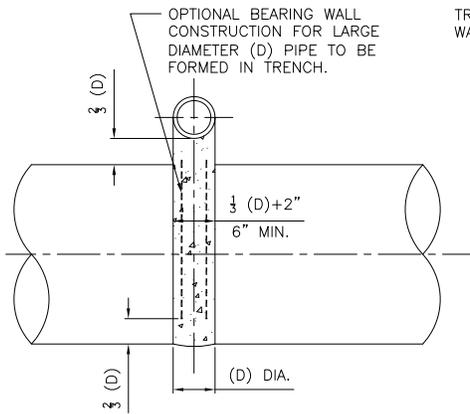
City of West Jordan, Utah



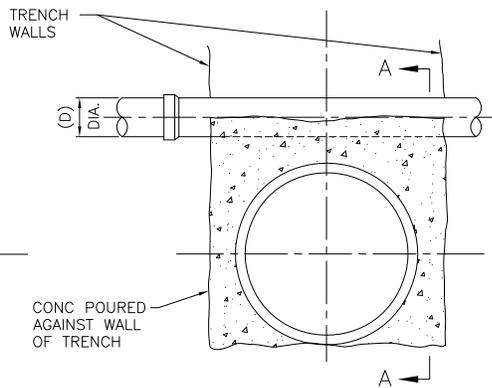
**ANCHOR BLOCK**

STANDARD DRAWING

**SS-115**



SECTION A-A

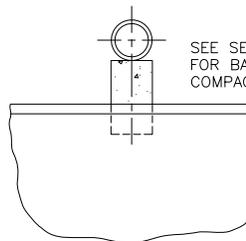


PIPE CONDUIT

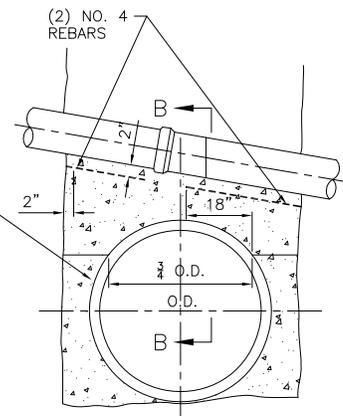
TYPE 'A'

NOTES:

1. TYPE 'A' PIPE SUPPORT MAY BE USED FOR ANY TYPE CROSSING CONDITION.
2. TYPE 'C' PIPE SUPPORT MAY BE USED FOR CROSSING PIPES WITH A BELL DIAMETER OF 18" OR LESS IF SUFFICIENT CLEARANCE OVER STORM SEWER IS AVAILABLE AND TOTAL SPAN IS LESS THAN 34'
3. INTERMEDIATE PIPE SUPPORT SHALL BE USED IN CONJUNCTION WITH TYPE 'C' PIPE SUPPORT IF TOTAL SPAN EXCEEDS MAX. 'W' IN TABLE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL SUPPORTS BOTH PERMANENT AND TEMPORARY. TEMPORARY SUPPORTS SHALL NOT BE A SEPARATE PAY ITEM.
5. PERMANENT PIPE SUPPORTS MAY BE DECREASED FROM PLAN QUANTITIES OR EXTENDED TO INCLUDE SOME LISTED BELOW AS TEMPORARY SUPPORTS IF CONDITIONS WARRANT THESE CHANGES AT THE TIME OF CONSTRUCTION. DECISION SHALL BE MAKE BY THE ENGINEER.
6. WHEN TYPE 'A' PIPE SUPPORT IS USED AND WHENEVER SO DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PIERCE THE WALL WITH SUITABLE OPENINGS TO PREVENT UNEQUAL PRESSURE RESULTING FROM FLOODING OF THE BACKFILL. THE VOLUME OF THE PIERCED OPENING SHALL NOT EXCEED 1/2 THE VOLUME OF THE SUPPORTING WALL.
7. USE TYPE 'B' PIPE SUPPORT INSTEAD OF THE 'C' WHEN CLEARANCE IS LESS THAN 'Y' IN TABLE, BETWEEN PIPES.
8. CLASS 'A' CONCRETE AS PER SECT. 725 UNLESS OTHERWISE NOTED.



SECTION B-B



PIPE CONDUIT

TYPE 'B'

| PERMANENT   |  |
|---|--|
| PERMANENT   | TEMPORARY  |
| SEWER LINES   | CAST IRON PIPE<br>CONC. IRRIG. PIPE<br>BURIED TELCO.<br>GAS PIPES                          |
| OTHER UTILITIES AS NOTED ON THE PLANS OR AS REQUIRED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. | CONC. STORM DRAIN<br>CONC. BOX CULVERT<br>TRAFFIC CONTROL CONDUIT<br>WATER AND SEWER LINES |

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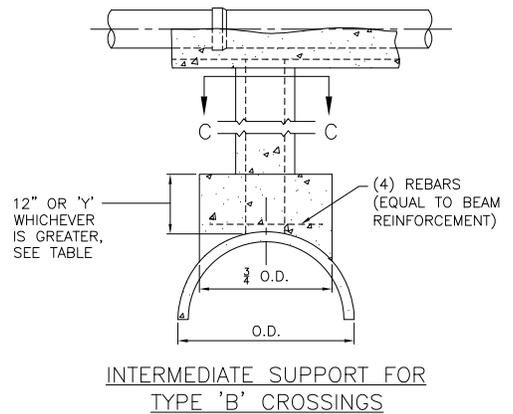
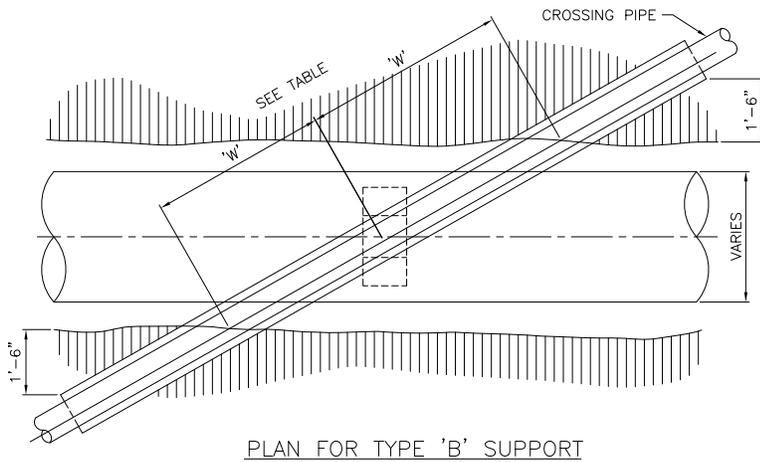
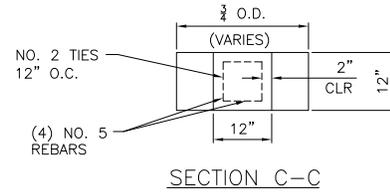
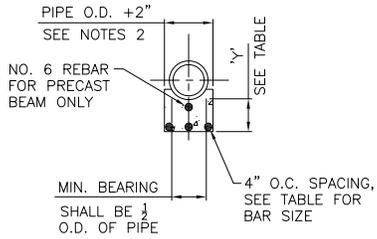
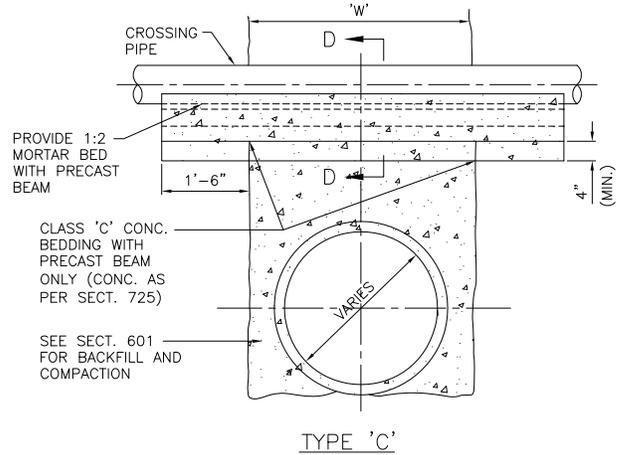


PIPE SUPPORT ACROSS TRENCHES

STANDARD DRAWING

SS-120

| 'W'   | TABLE                      |     |           |     |
|-------|----------------------------|-----|-----------|-----|
|       | DEPTH OF COVER ON SUPPORTS |     |           |     |
|       | 0' TO 8'                   |     | 8' TO 16' |     |
|       | BAR NO.                    | Y   | BAR NO.   | Y   |
| TO 6' | 5                          | 8"  | 6         | 11" |
| 7'    | 5                          | 9"  | 6         | 12" |
| 8'    | 5                          | 10" | 6         | 13" |
| 9'    | 6                          | 11" | 6         | 14" |
| 10'   | 6                          | 12" | 7         | 15" |
| 11'   | 6                          | 13" | 7         | 16" |
| 12'   | 6                          | 14" | 7         | 17" |
| 13'   | 7                          | 15" | 7         | 19" |
| 14'   | 7                          | 16" | 8         | 20" |
| 15'   | 7                          | 17" | 8         | 21" |
| 16'   | 7                          | 18" |           |     |
| 17'   | 8                          | 19" |           |     |



DRAWING DATE MARCH 25, 2009

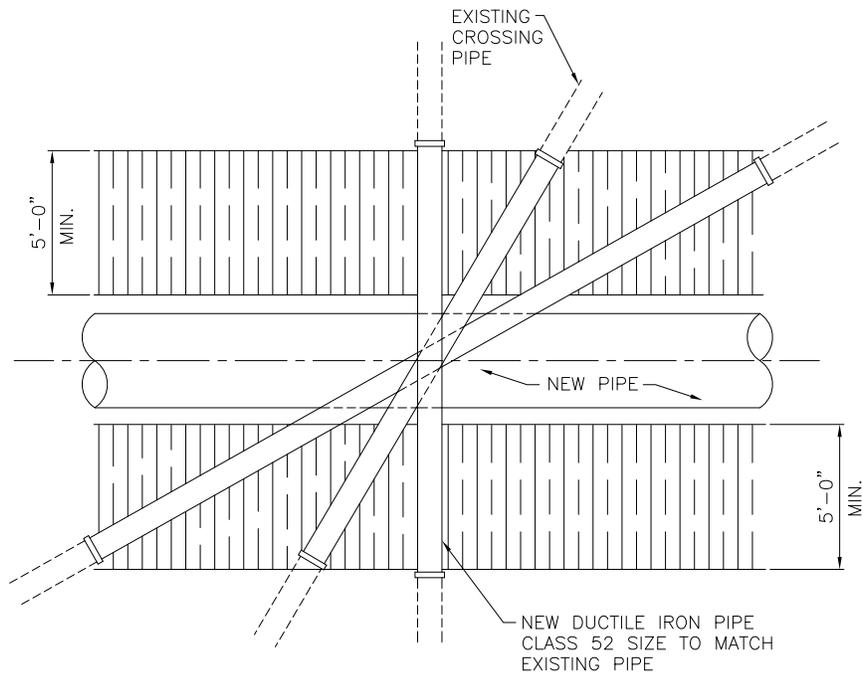
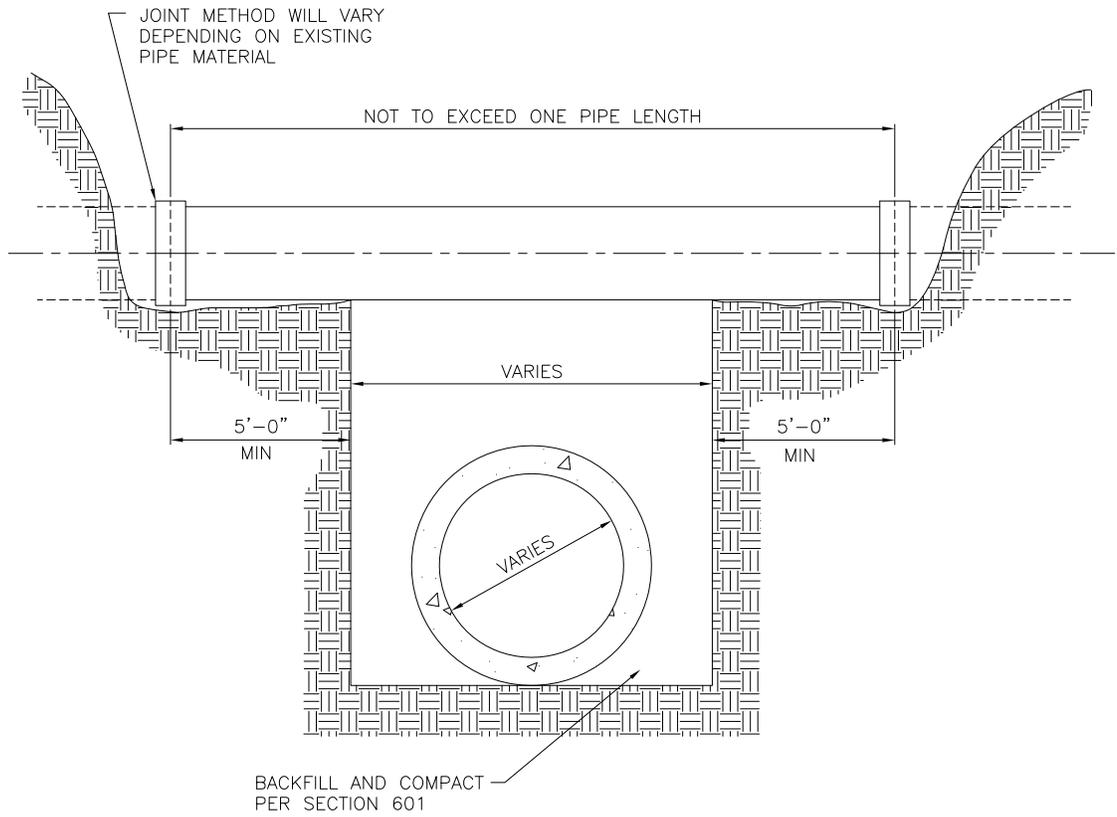
City of West Jordan, Utah



# PIPE SUPPORTS ACROSS TRENCHES

STANDARD DRAWING

SS-125



DRAWING DATE MARCH 25, 2009

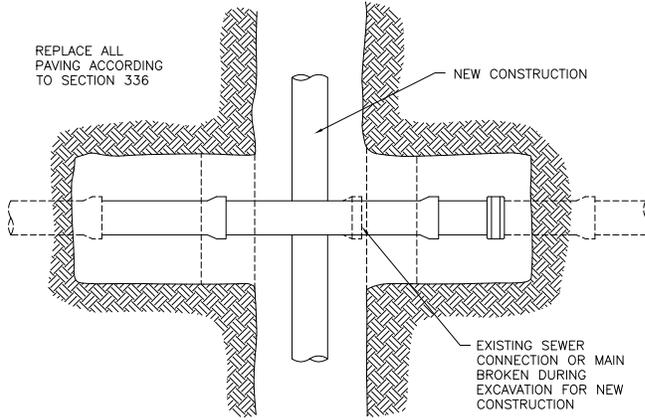
City of West Jordan, Utah



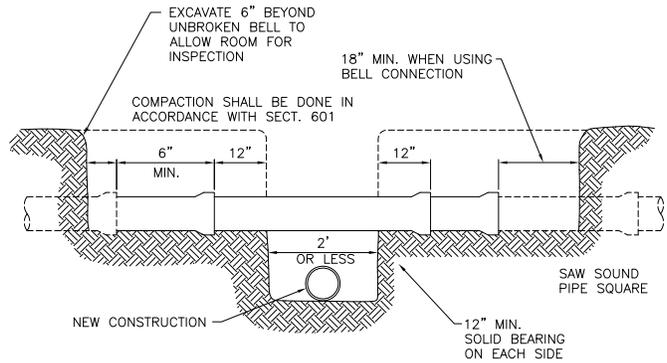
# ALTERNATE TO PIPE SUPPORT

STANDARD DRAWING

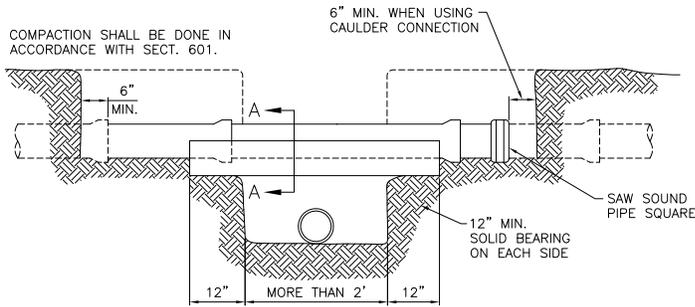
SS-130



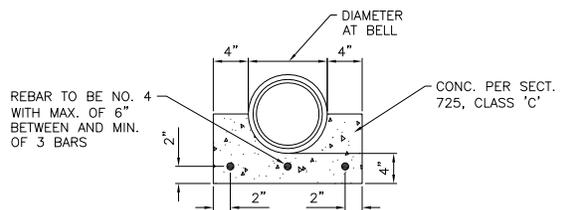
PLAN VIEW OF REPLACEMENT



REPLACEMENT WHEN NEW TRENCH 2' WIDE OR LESS



REPLACEMENT WHEN NEW TRENCH MORE THAN 2' WIDE



SECTION 'A-A'

NOTES:

- BROKEN PIPE SHALL BE REPLACED WITH A MINIMUM OF ONE FULL JOINT AND TWO SHORT LENGTHS WITH UNBROKEN BELLS. CONSTRUCTION AND JOINTS TO BE MADE AS PER SECTION 615.

DRAWING DATE MARCH 25, 2009

City of West Jordan, Utah



BROKEN SEWER LINE REPLACEMENT

STANDARD DRAWING

SS-135