

**NEPHI CITY POLICY
SEWER LATERAL CONSTRUCTION STANDARDS**

28 June 2016

The purpose of this document is to set forth and describe the requirements and standards for sewer laterals installed for structures outside of subdivisions, including connections to sewer mains.

The owner of the structure has the responsibility for the installation and future maintenance of these items. Sewer lateral installation is to be accomplished by an appropriately-licensed contractor.

At least 24 hours before any construction takes place on or within a public right-of-way, a street cut permit must be obtained from the Nephi City Streets Superintendent by the contractor performing the sewer work, and a pre-construction meeting must be held with the streets superintendent during his regular working hours.

The sewer line contractor will post with Nephi City a trench restoration bond, in a form acceptable to Nephi City, a trench restoration bond in the amount of \$1,500.00.

Street Cut and Restoration

1. Asphalt must be saw-cut before excavation takes place. Asphalt must be cut back 1 foot on each side of the trench before asphalt restoration.
2. Any over-excavation of the trench will have to be compacted back to the standard described in number 3 below.
3. Trench restoration, including the pipe zone, will be according to the current edition of the APWA Manual of Standard Specifications.
4. No excavated material or imported backfill may be stored on asphalt surfaces, and such material must be stored along the frontage of the property being served and not on the frontage of adjacent properties.
5. The final layer before asphalt will be 6 inches of approved road base, compacted and tested to the standard described in number 3 above. The asphalt patch will be 4 inches of compacted, approved hot mix asphalt. Any damage done to surrounding asphalt during construction must also be repaired.
6. The trench, including compacted road base to the elevation of the existing asphalt, must be maintained until the asphalt patch is installed. The trench is to be patched with asphalt within 28 calendar days of the initial excavation. If the contractor has not installed an asphalt patch, approved by Nephi City, within the 28 days, the contractor will forfeit the trench restoration bond.
7. The owner's contractor is responsible for construction safety and for traffic safety and signing. The signing plan is to be approved at the pre-construction meeting.

8. The trench on the public right-of-way may not be left open overnight.
9. The trench restoration bond will be returned to the contractor after the streets superintendent's final approval of the job, including the final hot-mix asphalt patch.

Any trench maintenance work ordered by the streets superintendent and not performed by the contractor within 24 hours will be performed by Nephi City and billed to the contractor. The amount of any unpaid billings for trench maintenance will be subtracted by the city from the trench restoration bond.

The contractor may choose to release the bond to Nephi City and not perform the hot-mix asphalt patch.

Sewer Piping and Connection to Sewer Main

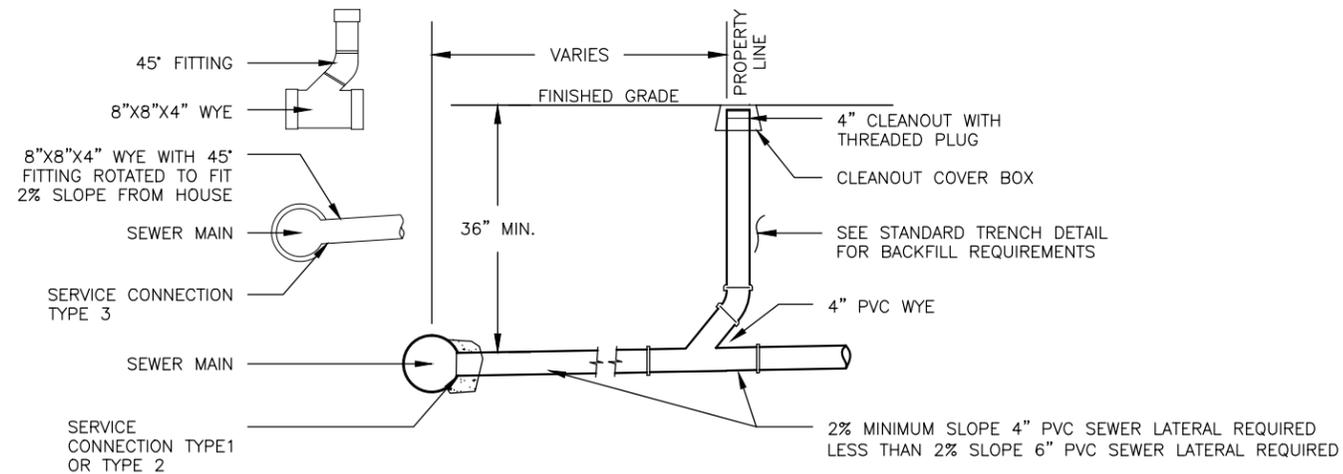
1. The Nephi City Water and Sewer Superintendent, or his designee, must be present when the contractor taps the sewer main and lays the first length of lateral pipe.
2. For connection to a PVC main line, a straight tap into the main will be made, with a gasket and lateral inserted.
3. For connection to a concrete or clay tile main line, the lateral pipe will be inserted into a section or the main line pipe where the contractor has broken out a circular opening. The lateral pipe is inserted no farther than to the inside of the main line pipe wall. The connection is then secured by concrete.
4. All materials used and construction methods employed must be approved by the superintendent at the pre-construction meeting.

Pipe zone backfill

1. **BACKFILL:** Do not use sewer rock or recycled RAP aggregate in the pipe zone without ENGINEER's written approval.
 - A. Granular Fill below Pipe Spring Line.
 - 1) Sand bedding, unless specified otherwise by pipe manufacturer. When using concrete, provide at least Class 2,000 per APWA Section 03 30 04.
 - 2) Install and compact backfill material per pipe manufacturer recommendations.
 - 3) Water jetting is not allowed in backfilling operation.
 - 4) Submission of quality control compaction test result data developed for haunching areas may be requested by ENGINEER at any time.
CONTRACTOR is to provide results of tests immediately upon request.
 - B. Granular Fill above Pipe Spring Line.
 - 1) Sand Bedding, unless specified otherwise by pipe manufacturer, Place in lifts not exceeding 8 inches before compaction.
 - 2) Water jetting is not allowed in backfilling operation.
 - 3) Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater unless pipe manufacturer requires more stringent installation.
2. **PIPE ZONE WIDTH:** Provide width recommended by pipe manufacturer. Width of pipe zone is measured at the pipe spring line and includes any necessary sheathing. In trench box applications, follow manufacturer's recommendations.
3. **PIPE LOCATION:** Install pipe in center of trench or no closer than 6 inches from wall of pipe to wall of trench.
4. **PEA GRAVEL:** Pea gravel is not allowed in any part of the pipe zone.
5. **FOUNDATION STABILIZATION:** Use granular backfill borrow of APWA Section 31 05 13. Installation of stabilization-separation geotextile per APWA Section 31 05 19 will be required to separate backfill material and native subgrade materials if sewer rock cannot provide a working surface or to prevent soils migration.

Trench backfill

1. **BACKFILL:** Above the pipe zone.
 - A. **Granular Fill.** Limit maximum particle size 6 inches. Place fill per APWA Section 31 23 24. Compact to a modified proctor density of 95 percent or greater. Maximum lift thickness is 8 inches before compaction. Do not use clay without ENGINEER's review and acceptance. Water jetting is NOT allowed in backfilling operation.
 - B. **Flowable Fill.** Provide and place controlled low strength material per APWA Section 31 05 15. Cure the fill before placing surface restorations.
2. **LANDSCAPED RESTORATION:** Provide landscaped surfaces with topsoil. Rake to match existing grade. Replace vegetation to match pre-construction conditions. See APWA Section 32 92 00 or APWA Section 32 93 13 requirements.
3. **PAVEMENT RESTORATION:** Do not install asphalt or concrete surfacing until trench compaction is accepted by ENGINEER.
4. **PEA GRAVEL:** Pea gravel is not allowed in any part of the trench.

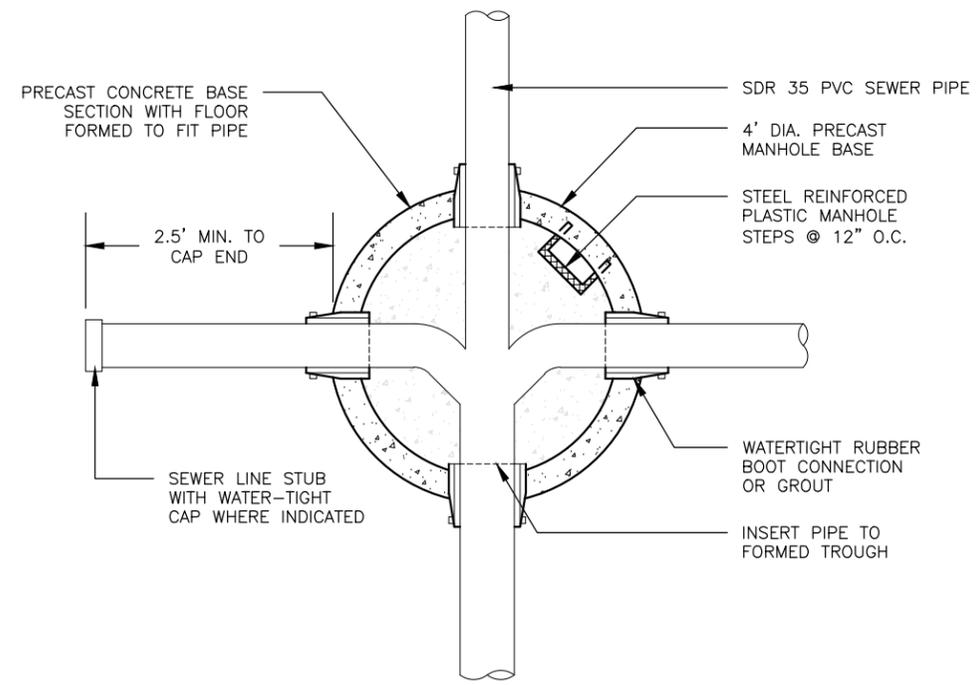


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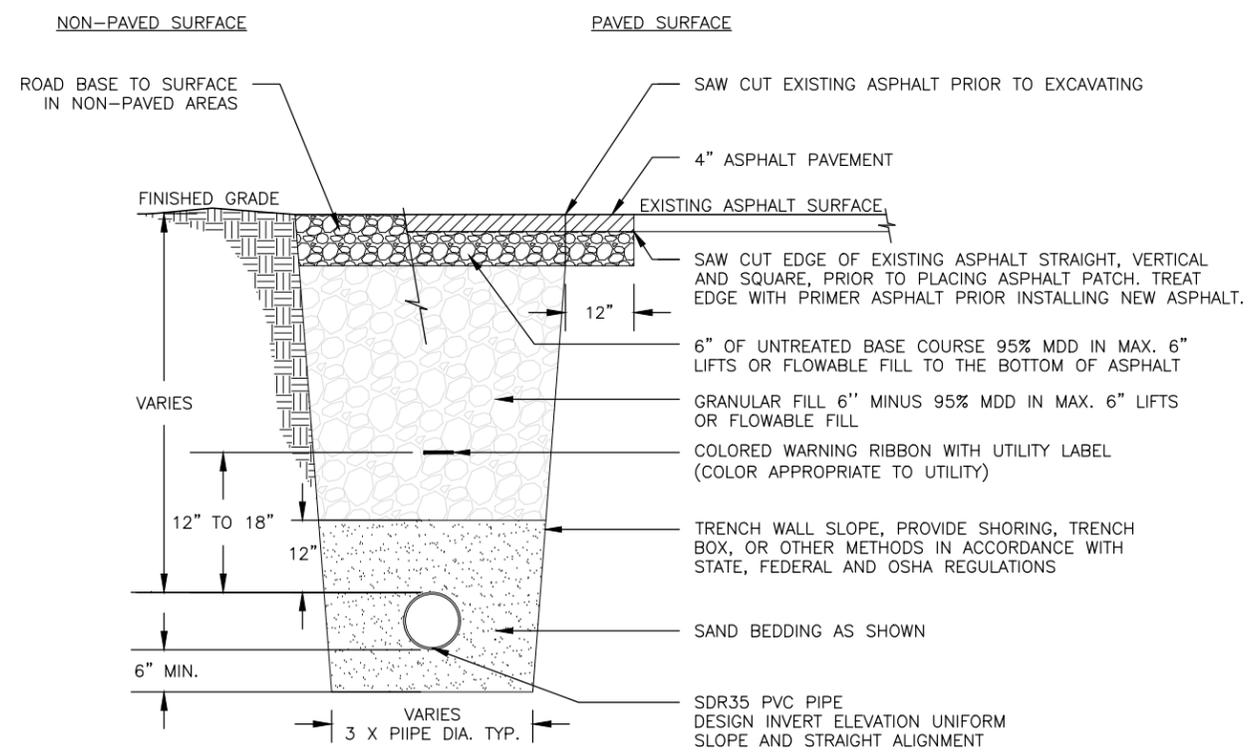
SERVICE CONNECTION TYPES:

1. FOR CONNECTION TO EXISTING PVC MAIN LINE, A STRAIGHT TAP INTO THE MAIN WILL BE MADE WITH A GASKET AND LATERAL INSERTED.
2. FOR CONNECTION TO EXISTING CONCRETE OR CLAY TILE MAIN LINE, THE LATERAL PIPE WILL BE INSERTED INTO A SECTION OF THE MAIN LINE PIPE WHERE THE CONTRACTOR HAS BROKEN OUT A CIRCULAR OPENING. THE LATERAL PIPE IS INSERTED NO FARTHER THAN TO THE INSIDE OF THE MAIN LINE PIPE WALL. THE CONNECTION IS THEN SECURED BY CONCRETE.
3. FOR CONNECTION ON NEW PVC LINE. INSTALL 8"x8"x4" WYE, ROTATED TO CREATE A 2% GRADE FROM THE RESIDENTIAL HOME

STANDARD SEWER LATERAL DETAIL
NOT TO SCALE



STANDARD SEWER MANHOLE PLAN VIEW
NOT TO SCALE



STANDARD TRENCH DETAIL
NOT TO SCALE

GENERAL SEWER UTILITY NOTES:

1. BACKFILL IN COMPACTED 6" LIFTS, FREE FROM ORGANIC MATERIAL & ROCKS LARGER THAN 6" COMPACTED TO 95% OF A T-180 UNDER TRAVELED AREAS. (NO PEA GRAVEL OR OTHER CLEAN ROCK MAY BE USED) IN NON-TRAVELED AREAS, COMPACTION MAY BE 95% OF A T-99 DENSITY WITH ± 2% OPTIMUM MOISTURE.
2. SAND APPROVED BY THE NEPHI CITY WILL BE USED FOR UTILITY LINE BEDDING, BUT MUST BE FREE OF LUMPS AND CHIPS. SAND 6" BELOW PIPE & 12" ABOVE OR AS APPROVED BY NEPHI CITY TO BE PLACED IN COMPACTED LIFTS NOT GREATER THAN 6 INCHES. COMPACTION WILL BE TO 95% OF A T-180 WITH ± 2% OPTIMUM MOISTURE OR AS APPROVED BY CITY INSPECTOR. BEDDING COMPACTION FROM THE CROWN OF THE PIPE DOWN MAY ONLY BE DONE WITH HAND-OPERATED COMPACTOR (JUMPING JACK OR PLATE COMPACTION).
3. MINIMUM GRADE FOR MAIN LINES MUST BE EQUAL TO OR GREATER THAN STATE REGULATIONS.
4. ALL SEWER SYSTEM MATERIALS ARE TO BE PRE-APPROVED BEFORE INSTALLATION.
5. GRADE FROM BUILDING TO MAIN LINES TO MEET INTERNATIONAL RESIDENTIAL CODE, OR APPROVED BY NEPHI CITY BUILDING INSPECTOR.
6. SEWER MAINS TO VIDEO TESTED AS DIRECTED BY THE CITY WATER AND SEWER SUPERINTENDENT.
7. SEWER MANHOLE BASES SHALL PROVIDE A .1' DROP DISTANCE ACROSS THE MANHOLE (MINIMUM).
8. MANHOLES SHALL HAVE A MINIMUM DEPTH OF 9'-0" UNLESS OTHERWISE APPROVED BY THE CITY.
9. SDR35 REQUIRED ON ALL NEW MAIN LINE INSTALLATION
10. ALL WORK MUST BE INSPECTED BY NEPHI CITY PRIOR TO BACKFILL

SHEET 202	ORIGINAL
	BY _____ DATE _____
	REVISIONS
	△ BY _____ DATE _____ △ BY _____ DATE _____ △ BY _____ DATE _____

SEWER DETAIL
STANDARD TRENCH
SEWER LATERAL

STANDARD DRAWING
NEPHI CITY CORPORATION

