



4344 Swan Mountain Rd., Dillon, CO 80435  
970.668.4272 ph | 970.468.6393 fax  
www.SummitCountyCO.gov

## *Snake River Sewer Fund*

# Sewer Construction Specifications

### Construction Period

Underground sewer construction will be allowed only between May 1<sup>st</sup> and October 31<sup>st</sup>. Should favorable weather conditions precede May 1<sup>st</sup> or extend beyond October 31<sup>st</sup>, the Utility Director may grant a written waiver from this requirement.

### Sewer Main Construction Permit

Prior to construction, a full set of sewer construction drawings must be reviewed and approved by the Utility staff. Permission to commence sewer main construction will be granted after a pre-construction meeting is held and payment of the plan review and inspection fees has been collected.

### Manhole Mastic

Rubberneck or Conseal shall be applied per manufacturer's specifications on the lower manhole section before placing the next section on it.

### Manhole Damp-proofing

The entire exterior of each manhole shall be coated with a suitable foundation sealer (40 mils or 2 coats) or foundation grade Bituthene (or similar sheet membrane product).

### Manhole Wrap

Manholes located in snow removal areas must be wrapped with 3 Layers of 6-mil polyethylene film (Visqueen) to a depth of at least 6 feet from final grade before back filling.

### Manhole Grouting

Grouting inside manholes other than in the pipe channel is not permitted. For example, grouting or coating inside wall joints and grade rings to try to get manhole to pass vacuum test is not permitted.

### Manhole Bases

Factory pre-cast bases with core drilled pipe holes and rubber "boots" will be required for all manholes in our system. When tying in a new sewer line to an existing manhole, the manhole shall be field core drilled and rubber booted to accept the new pipe. All new manhole bases shall be placed on at least 6" of bedding material (3/4" clean).

## Manhole Core Drilling

New pipe must be a "straight parallel fit" through the core-drilled hole (not angled). New pipe invert must be at least 3 to 4 inches higher than existing channel bottom. The cored hole must be sized to accommodate a factory rubber boot for the size of pipe being used. A miss-cored hole will require a new manhole base to be installed.

## Pipe Bedding

All piping must be gasketed SDR 35 PVC and uniformly supported on a bed of  $\frac{3}{4}$ " **clean washed rock**. Bedding material must lie on undisturbed, totally compacted earth according to the following conditions:

**Clean Soil Conditions:** 4" below pipe; 6" above pipe

**Rocky Soil Conditions:** 6" below pipe; 8" – 12" above pipe

## Pipe Insulation

Piping requiring insulation must be "box" insulated per the attached diagram. Pipe insulation is required for piping less than 9 feet deep under snow removal areas and for piping less than 6 feet deep under non-snow removal areas.

## Testing

Immediately after construction is complete and **final grade is attained**, performance tests on the following items shall be provided by the Contractor:

**Piping:** Piping shall be low-pressure air tested or vacuum tested in conjunction with the manhole vacuum test if desired. **Note:** Any construction debris accumulated in new piping shall be removed and not permitted to enter pre-existing sewer lines.

**Manholes:** New manholes **and** pre-existing tie in manholes must be totally cleaned of all construction debris. Pipe penetrations and channels must be grouted. The manholes shall be vacuum tested @10 inches mercury for 2 minutes with the cover ring in place.

**Note:** In the event that a manhole fails the vacuum test, the Contractor will not be permitted to apply any coating(s) or grout to the inside of the manhole. For this reason, it is **strongly recommended that the Contractor "pre-test" the manhole(s) before backfilling.** The "tie-in" manhole must be pre-tested before core drilling and must perform at least as well upon final vacuum testing.

**Line Cleaning and Video Inspection** at the end of construction and again at the end of the one-year warranty period will be arranged by the staff of the Snake River Wastewater Utility.

## Manhole Final Grade

Manhole covers shall be brought to final grade using grade rings. In all cases, the distance from the top of the manhole frame to the top of the first step shall not exceed 24 inches. Final grade requirements are set forth below:

- **Non-traveled areas** (no snow removal requirements) – Manhole cover shall be 4 to 12 inches above finished grade.
- **Non-paved traveled areas** (snow removal area) – Manhole covers shall be 3 to 6 inches below finished grade.
- **Paved areas** (snow removal area) – Manhole covers shall be ½ to 1 inch below finished grade of pavement using a **2-inch pavement ring** placed between the cover and frame.

## Service Stubs

Service stubs to each lot shall be connected to the main using a factory “wye” fitting oriented in either the 10 o’clock or 2 o’clock position. Unless otherwise specified by the Utility Manager, all service line stubs shall be installed at the minimum 2% slope into the lot to be served. All service stubs shall terminate with the bell end of the pipe and plug.

## Service Stub Marker Posts

The ends of all service stubs shall be marked with a green painted 4”x4” wood post that extends from at least 2 feet above grade to all the way down to the end of the stub. In some cases, it may be necessary to extend the service stub beyond the lot line and into the lot at least 10 to 15 feet to prevent shallow underground utility installers from displacing the stub markers. It will be the developer’s responsibility to coordinate with shallow utility installers to protect the service stub markers throughout the utility infrastructure construction period.

## Notification

Contractor must notify Utility staff of when construction work is to begin and absolutely **MUST** notify the Utility when he plans on performing critical tasks such as core-drilling tie-in manholes and crossing existing sewer main(s) so an inspector can be present to observe such tasks.