

CHAPTER 1 - GENERAL REQUIREMENTS

1.1 PURPOSE OF DOCUMENTS

The purpose of these Standard Specifications and Standard Drawings is to govern any work done or improvements installed within Public right-of-ways or public easements. Construction work shall comply with Springville City Codes, specifically Title 11 Development Code and Title 14 Subdivision Code. Developers/Contractors should thoroughly read and understand these specifications and standards before constructing public improvements.

Anything not specified in these specifications shall be governed by the most current revision of the Utah APWA specifications. If conflicts arise, the Developer/Contractor shall notify the City Engineer or his representative for final direction.

The Developer/Contractor shall contact Public Works/City Engineering at the Springville City Offices, 110 South Main Street, Springville, Utah 84663 for all matters dealing with construction work within a City right-of-way or with any work connecting onto a City utility. SPECIAL PERMITS AND BONDING ARE REQUIRED FOR ALL SUCH WORK.

1.2 ENCROACHMENT PERMIT, FEES AND BONDING REQUIRED

It shall be unlawful to do any construction within the public right-of-way, within a public easement, or perform any work on public infrastructure in the City of Springville without an Encroachment Permit from the City to do so. The City of Springville and all utility companies are bound by these standard specifications. No work shall be started until a permit is secured. In order to obtain an Encroachment Permit, the Developer's/Contractor's authorized signature is required. If a contract to do such work for the City has been finalized, the contract fulfills this permit requirement.

1.2.1 Forward:

- 1) Statement of Intent: The purpose of this section is to describe Springville City Ordinance #10-8 and policies for issuing permits to work in the public right-of-way. These permits control excavation and construction operations. It is also implemented to cover special requirements for work in general, maintenance, private construction, and additions to utility systems in the public right-of-way. Nothing in this document will be construed as taking precedence over Ordinance #10-8.
 - a. Application: All conditions in this specification apply to all construction and maintenance work performed in the public right-of-way.
 - b. Revisions: This specification is subject to revision. The latest revision will always apply.
 - c. For the purpose of this specification, certain words and phrases are defined as in Springville City Ordinance #10-8 unless it shall be apparent from the context that different meaning is intended.

1.2.2 Policies:

- 1) Policy for Permit Required for Work in the Public Right-of-Way: It shall be unlawful to: interrupt or alter vehicular and pedestrian traffic, construct, reconstruct, or alter any opening, excavation, tunnel, sidewalk, curb gutter, driveway, street, or to perform any other work of any kind to the public right-of-way which will result in physical alteration thereof unless such person shall first have obtained a permit for the performance of such work and said work shall be performed in conformity with the terms and provisions of Springville City Standard Specifications and Ordinance #10-8 and of the permit or permits issued hereunder, accept as hereinafter specifically provided.
- 2) Policy for Permit Required for Occupation of Street with Building Material: It shall be unlawful for any person to occupy or use any portion of a public right-of-way for the storage of construction or landscaping material and/or equipment without first making application for and receiving a permit from the City. The permit may set forth such restrictions as required by ordinance or by the City Engineer. No fence construction pursuant to these ordinances and no building material shall remain in place in

any public right-of-way after the ending date of the permit, unless said permit is extended by the City Engineer.

- 3) Policy for Permit Required for Scaffold, Barricades Over/or in the Public Right-of-Way: It shall be unlawful for any person to erect, maintain, or use any scaffold, fence or any other temporary structure over or in the public right-of-way without first obtaining a permit for that purpose and paying the fee for such permit.
- 4) Policy for Permit of Water Service Line Replacement: Replacement of water line service from meter located in the public right-of-way requires a permit.
- 5) Policy for Required License and Bond: Persons desiring to perform work in the City's public right-of-way shall be properly licensed in the State of Utah and post a performance bond on a form provided by the City. A single bond may be posted by a permittee to guarantee performance for one or more permits if approved by the City Engineer and agreed to, in writing, by the bonding company. Refer to ordinance #10-8 and consolidated fee schedule.

Note: The City Engineer will review the license type to ensure it is applicable to the work being performed.

Exception: A license shall not be required by the City when the permittee is a property owner performing work in an area which abuts only his property of residence and the work does not exceed 500 square feet of drive approach, or 100 linear feet of sidewalk, or installing a sprinkler system.

- 6) Policy for Applications for Permits: Any person desiring to perform any work of any kind described in Ordinance #10-8, shall be subject to this specification and shall make application for a permit. Such application shall be filed with the Public Works/City Engineering Department on the form provided by the City. Any work involving installation or alteration of a permanent facility or structure in the public right-of-way will require the filing of engineered plans, traffic plans, and specifications showing the proposed work in sufficient detail to permit determination of such relationship and compliance, and the application shall not be deemed approved until such engineered and traffic plans or sketches are filed and approved. The City Engineer may deny issuance of permits to contractors, utility companies, or other permit Applicants who have shown by past performance that in the opinion of the City Engineer they will not consistently conform to this specification, Springville City standard specifications, or the requirements of ordinance #10-8. City Engineer may also require construction drawings and specifications for any permit application.
- 7) Policy for Requirement of Traffic Plan: Prior to City issuing a permit, a traffic plan must be submitted by the permittee for review and approval by City traffic personnel. Traffic plan is to be in conformance with current "MUTCD" and approved prior to excavation, construction, or any occupation of the Public right-of-way.
- 8) Policy for Commencement of Work: It is unlawful for any person to commence work in the public right-of-way until the City has approved the application and until a permit has been issued for such work, except as specifically provided to the contrary in this specification. Duration of the permit shall be set at the time of issuance of the permit. If work is not completed in forty-five (45) calendar days, the permit will expire. An extension may be applied for and must be issued prior to commencement of any further work.
- 9) Policy for Assessing Permit Fees: The City shall charge and the Permittee shall pay upon issuance of the permit, fees for costs associated with the work performed under the permit as outlined in the Fee Schedule adopted by the City Council. Such costs could include costs for reviewing the project and issuing the permit, inspections of the project, deterioration of the Public Right-of-Way, or diminution of the useful life of the Public Right-of-Way, and other costs to the City associated with the work to be done under the permit. All costs shall be assessed in a non-discriminatory manner.

- a. City Engineer may waive permit fees as outlined in this specification.
- b. Additional charges to cover the reasonable costs and expenses of any required engineering review, inspection, and work site restoration associated with each undertaking may be charged by the City to each permittee, in addition to the permit fee.

10) Policy for determining when “Permit Waivers” can be granted: Working in the public right-of-way without a permit violates Ordinance #10-8, unless the permit is waived by the City Engineer. Notwithstanding the waivers granted below, all persons working in the public right-of-way shall properly protect travelers thereon by compliance to the current Manual of Uniform Traffic Control Devices (MUTCD).

A “permit waiver” does not preclude the requirement of a traffic control plan approved by the City Engineer when traffic must be routed around or through construction sites. Waivers can be granted by the City Engineer when any of the following conditions occur:

- a. When routine maintenance work which is being done by City, State, County or public utility company personnel and work does not involve excavations in the City's public right-of-way, i.e., crack sealing, street resurfacing, snow plowing, sanding, salting, sweeping, garbage collection, storm drain cleaning, leaf pick up, above-grade work, street striping etc.
- b. Landscaping and Landscaping Maintenance.
- c. When work involves the installation of a sprinkling system, provided such work does not require the excavation of park strip area in excess of twenty-four (24) inches and provided such work does not result in usage of heavy equipment or cause damage to the public facilities and landscaping in the public right-of-way outside of the work area. Heavy equipment in this regulation means any tools other than hand tools and a power trencher as described in landscaping definitions.
- d. When minor adjustment to utility meter, valves, or manholes in the park strip area is required and provided that said adjustment does not result in:
 - i. excavation in the park strip area in excess of twenty-four (24) inches in depth or fifteen (15) square feet in area;
 - ii. Any alterations or damage to the public or private facilities.
 - iii. the use of heavy equipment,
- e. When a permittee allows other contractor or utility companies to perform work in the said permitted trench limits.
- f. When authorized materials are stored in the public right-of-way in compliance to the provisions of the Manual of Uniform Traffic Control Devices (MUTCD).

11) Policy for Issuing “No Fee” Permits: City Engineer reserves the right to issue “no fee” permits for work in the public right-of-way. A “no-fee” permit does not preclude the requirement of a traffic control plan approved by the City Engineer, nor does the fee waiver preclude notification for inspection forty-eight (48) hours in advance. The City Engineer may waive permit fees or penalties or portions thereof when he/she determines that such permit fee or penalty:

- a. Pertains to construction or rehabilitation of housing for persons whose income is below the median income level for the City; or
- b. Pertains to an encroachment on the Public Right-of-Way involving a beautification project which furthers specific goals and objectives set forth in the City’s strategic plan, master plans, or other official documents, including decorative street lighting, building facade lighting, flower and planter boxes, and landscaping.

12) Policy for Revoking "Permit Waivers" or “No Fee Permits”: "Permit Waivers" and “No Fee Permits” may be revoked by the City Engineer if the work is unsafe, defective or requires action or supplemental inspection by the City Engineer. Prior to revocation, the City Engineer will serve written notice defining the problems encountered and the time the permittee has to correct the problem, except for the

case of immediate safety, where a stop work order will be issued by the City Engineer. If the work is not satisfactorily corrected, in the time specified, the "permit waiver" will be revoked and the permittee will be required to secure a "Fee Permit" before proceeding with the work.

- 13) Policy for Completion of Work by City and Liability for Costs: If the work is unduly delayed by the permittee, or if the public interest or safety so demands, the City retains the authority to restore the public right-of-way to active use by providing backfill, road base, asphalt paving, concrete, etc. as deemed necessary by the City Engineer. The City shall do the work only after written notice has been given to the permittee and the permittee fails to respond to the City Engineer's request within the time frame outlined, except when public safety is jeopardized. The time, material, and equipment cost of such work incurred by the City shall be paid by the permittee or his bond.
- 14) Policy for Extending Permit Construction Time Limits: Subject to City Engineer's approval, permits which have expired may be extended up to 30 days from expiration date by submitting to the City Engineer acceptable reasoning for the delay. Extending time limits beyond normal working hours requires prior approval by City Engineer.
- 15) Policy When Construction Practices and Material do not Meet City Specifications: If the City Engineer determines construction practices and/or materials, i.e., backfill, road base, asphalt and/or concrete, do not meet City specifications, the City Engineer may:
 - a. Suspend or revoke the permit;
 - b. Issue a stop work order;
 - c. Order removal and replacement of faulty work;
 - d. Require an extended warranty period;
 - e. Negotiate a cash settlement to be applied toward future maintenance costs; and/or
 - f. Make demand upon the permittee's bond to correct faulty work.

Note: Settlement of trench backfill, road base, asphalt and/or concrete will be incontrovertible evidence of inadequate compaction of fill material.

- 16) Policy for Work in the Public Right-of-Way without a Permit: A stop work order may be issued by the City Engineer directed to any person or persons doing or causing any work to be done in the public right-of-way without a permit. Any person found to be doing any work in the public right-of-way without having obtained a permit, as provided in this specification, shall be required to pay a permit fee as well as penalties outlined in the fee schedule.
- 17) Policy for Other Highway Permits: Holders of Permits for work on highways owned or under the jurisdiction of other government entities, but located within the city limits, shall not be required to obtain permits from the City under the provisions of this ordinance, unless the work extends beyond the back side of the curb, or beyond any other designated jurisdictional boundary. **Any City permit shall not be construed to permit or allow work on another jurisdiction roadway within the City.**

1.2.3 General Conditions:

- 1) Right-of-way Improvement Drawings: Right-of-way improvement drawings shall conform with all respects to the City Engineers Design and Platting Standard Regulations. The City Engineer requires one (1) drawing showing proposed changes to curb, gutter, sidewalk, street pavement, or drainage facilities. A drawing and calculation for Surface and Storm Water Runoff must be included.
- 2) Utility Drawing Requirements: Whenever the work involves the extension, placement, or the relocation of a utility facility one (1) copy of the drawing shall be submitted to the City Engineer which details the location and type of proposed facility. Work involving maintenance of existing facility does not require

- a drawing. A drawing showing all existing utility lateral locations, sidewalk, edge of oil, and side lot lines is required on the permit form for any new laterals.
- 3) Permit and Drawings at Job Site: When the work is in progress, the permittee shall have at the work site a copy of the permit, traffic control plan and City approved drawings.
 - 4) Preconstruction Meeting: When trench length will equal or exceed fifty (50) linear feet or as determined by City Engineer, the permittee is required to schedule and attend a preconstruction meeting with City personnel prior to construction.
 - 5) Emergency Work: Maintenance of pipelines or facilities in the public right-of-way may proceed without a permit when emergency circumstances demand the work be done immediately provided a permit could not reasonably have been obtained beforehand. In the event that emergency work is commenced on or within any Public Right-of-Way of the City during regular business hours, the City Engineer shall be notified within one-half hour from the time the work is commenced. The person commencing and conducting such work shall take all necessary safety precautions for the protection of the public and the direction and control of traffic, and shall insure that work is accomplished according to City Engineering Regulations, the Manual on Uniform Traffic Control Devices (MUTCD) and other applicable laws, regulations, or generally recognized practices in the industry.
 - 6) Notification: It will be the responsibility of the permittee to notify Public Works, public utilities and businesses and residents affected by the work. Permittee shall coordinate work around school zones, garbage collection, postal service, and residents' homes. Except as otherwise allowed in emergency or road closure situations, Public Works will be notified by the permittee forty-eight (48) hours, prior to commencing work. The following information will be provided by phone: permit number, name, and telephone number of permittee, date/time work is to commence and cease, and location of work. For road closures permittee will be required to notify Fire Department and Police Department at least 48 hours in advance of all closures. Requirements and notifications shall be in accordance with Section 1.5.2.
 - 7) Resurfacing Time Limits:
 - a. Arterial or collector street pavement surfaces must be replaced within three (3) calendar days of excavation or on the same day in which backfill is completed. All other streets must be resurfaced within seven calendar days from beginning of excavation or on the same day in which backfill is completed. If work is expected to exceed the above duration, the permittee shall submit a detailed construction schedule for approval. The schedule will address means and methods to minimize traffic disruption and complete the construction as soon as reasonably possible. Work shall not proceed until the schedule is approved by the City Engineer and shall cease if the schedule is not maintained. In the event that the construction schedule or resurfacing time limit is exhausted and the work site is hazardous to citizens or impeding traffic, the City will take the necessary steps to make the work site safe and impose penalties daily, as outlined in the fee schedule.
 - b. Submittal: Upon the City's request, the permittee shall provide certification from an approved material testing laboratory that the materials to be installed under permit are within the City's specification. Only City approved materials shall be used in the work.
 - 8) Testing: Laboratory testing for materials, compliance, densities, and strength are the responsibility of the permittee. Testing service must be in accordance with Springville City standard specifications; Section 1.20. The City Engineer may require additional inspection or material testing as needed. At the City Engineer's discretion, testing requirements may be reduced based upon frequency of work performed in the City and successful testing performance in the past. All materials shall be tested for conformance to Springville City Standards, Specifications, and Drawings. Should it be necessary for the City to perform compliance testing, the City shall back charge the permittee for additional testing

- performed should any testing reveal noncompliance with City specifications. The back charge rate shall be the cost of time and equipment to conduct the testing. The City Engineer shall not back charge permittee if the testing confirms compliance with the City specifications.
- 9) Preconstruction Photographs/Video of Existing Public Right-of-Way Improvements: Prior to commencing the permit work, the permittee is encouraged to secure video tape or photographs which positively identify the condition and existing damages to the public right-of-way improvements such as curbing, sidewalk, landscaping and asphalt surfaces etc.
 - 10) Maintenance of Drainage Channels: Existing drainage channels such as pipes, gutters, or ditches shall be kept free of dirt, construction materials, or other debris such that natural flow will not be interrupted. When it is necessary to block or otherwise impede flow of the drainage channel, a proposed method of maintaining the flow must be submitted for approval by the City Engineer prior to a blockage of the channel. Permittee shall not allow dirt or other debris from his work to enter the City's storm drain system. Failure to comply may result in a penalty equal to cost incurred to correct or prevent damage. State and Federal penalties may be imposed as well.
 - 11) Failure to Comply; Default in Performance: Any permit may be revoked or suspended and a stop work order issued by the City Engineer, after notice to the permittee for:
 - a. Violation of any condition of the permit, the bond, or of any provisions of Springville City Ordinance
 - b. Violation of any provision of any other ordinance of the City or law relating to the work; or
 - c. Existence of any condition or the doing of any act which does constitute, may constitute, or cause a condition endangering life or property.

A suspension or revocation by the City Engineer, and a stop work order, shall take effect immediately upon entry thereof by the City Engineer and notice to the Person performing the work in the Public Right-of-Way. Notice to the Person performing the work shall be accomplished when the City Engineer has posted a stop work order at the location of the work. Subsequent to posting a stop work order, written notice will be mailed, return receipt requested, to the address indicated by the Permittee on the permit.

Whenever the City Engineer finds that a default has occurred in the performance or any term or condition of the permit, written notice thereof may be given to the principal and to the surety on the bond. Such notice shall state the work to be done, the estimated cost thereof, and the period of time deemed by the City Engineer to be reasonably necessary for the completion of the work.

In the event that the surety (or principal), within a reasonable time following the giving of such notice (taking into consideration the exigencies of the situation, the nature of the work, the requirements of public safety and for the protection of Persons and property) fails either to commence and cause the required work to be performed with due diligence, or to indemnify the City for the cost of doing the work, as set forth in the notice, the City may perform the work, at the discretion of the City Engineer, with City forces or contract forces or both, and suit may be commenced by the City against the Permittee (contractor) and bonding company and such other Persons as may be liable, to recover the entire amount due to the City, including attorney fees, on account thereof, in the event cash has been deposited, and suit brought for the balance due, if any.

1.2.4 Protection of Public During Construction:

- 1) Conformance to Existing Laws: The permittee shall be responsible for being fully informed of all Federal, State, and local laws, ordinances, rules and regulation which, in any manner, affect the work, and at all times shall observe and comply with such laws, ordinances, rules and regulations.
- 2) Traffic Interruption: Construction operations will be conducted in a manner that will minimize interference or interruption of roadway traffic, except during emergency conditions, or. Construction

operations such as excavation, backfill, and pavement restoration on arterial/major collector streets shall be discouraged during peak traffic hours of **7:00 to 9:00 a.m. and 3:00 to 6:00 p.m.** unless authorized in writing by the City Engineer. Permittee shall notify all local Emergency Response Services in the City forty-eight (48) hours in advance of all road closures.

- 3) Manual of Uniform Traffic Control Devices: All provisions of the current "MUTCD" shall be adhered to. This manual provides regulations concerning traffic control, construction barricades, road closures, public and private access, and traffic control signing. Traffic control devices, as required by the "MUTCD", must be in place before traffic disturbance or excavation begins. The devices shall be maintained throughout the construction period and not removed until all equipment and materials are removed, excavation is backfilled, and temporary or permanent surface is installed. Traffic Engineer may require certified traffic control personnel during set up and tear-down of all traffic control devices. Lighted early warning arrow boards will be required on all major arterial and collector streets. The permittee shall not obstruct the view of any traffic control devices. All disturbed traffic control devices shall be immediately replaced, cleaned or repaired as directed by the City.
- 4) Public Access: Permittee shall provide free and unobstructed access to all pedestrian crosswalks, handicap access ramps, driveways, mailboxes, trash receptacles, fire hydrants, water gates, valves, manholes, drainage or other public service structures and property that may be required for emergency use. Permittee shall not remove such public service facilities and property or relocate same without proper coordination with the authorities charged with control and maintenance of same. Barricades in conformance with "MUTCD" or covered walkways for the protection of the general public shall be provided whenever any work or storage of materials is being done.
- 5) Private Access: Temporary, all-weather roadways, driveways, walks, ADA access ramps and private rights-of-way for vehicles and pedestrians shall be constructed and continuously maintained by the permittee when public facilities are disturbed or when required by this specification or the permit.
- 6) Contractor Information: When personnel and equipment are not on-site, permittee shall clearly post on barricades in letters two (2) inches high, emergency information consisting of the name and emergency telephone number of permittee, bearing such information, be placed at every job site and maintained until the work is complete and formally accepted by the City. Copies of the permit shall be available from the City Engineer and be open to public inspection during office hours.
- 7) Right-of-Way Excavation in Winter: Excavation of City right-of-way during winter months (herein as defined as October 15 to April 15) will be allowed only if the work is a new service connection, required maintenance, emergency, or otherwise approved by the City Engineer. Permanent repair of City right-of-way excavated in the winter may be delayed for 60 days or 90 days with an approved extension but in no case later than twenty (20) days from the re-opening of the hot mix plant, provided the Permittee installs and maintains a temporary asphalt surface until such time as the permanent surfacing is accomplished. Permittee must submit information concerning the source, availability and type of patching material prior to obtaining a permit. Warranty will not commence until the temporary asphalt patching has been removed and a permanent surface is installed per Chapter 4, Division 1, Sub-Section G.

1.2.5 Excavation Operation:

- 1) Refer to Springville Standard Specifications, Division 2 - Trench Excavation and Backfill, for all excavation requirements.
- 2) Locating and Protecting Existing Utilities: The permittee shall notify Blue Stakes (1-800-662-4111) at least two (2) working days prior to commencing work, and use extreme caution to avoid conflict, contact or damage to existing utilities such as water lines, storm drain lines, power lines, gas lines, street lights, fiber optic lines, telephone lines, television lines, sewer lines, poles and appurtenances during the course of construction.

- 3) Protection of Paved Surfaces Outside of Excavation Area: In order to avoid unnecessary damage to paved surfaces, backhoes, outriggers, track equipment or any other construction equipment that may prove damaging to asphalt are required to use rubber cleats or paving pads when operating on or crossing said surfaces.
- 4) Jacking or Boring of Buried Conduits: Jacking or boring of service line laterals under paved surfaces is preferred to trench excavation and may be required in some City Streets as designated by City Engineer. If open excavation for service laterals is requested in a street which was paved or resurfaced within the last three (3) years, an engineering evaluation and explanation of why jacking is not feasible shall be presented to the City Engineer. City Engineer shall approve or disapprove the application based on the merits of the arguments presented.
- 5) Cutting Pavement: All pavements shall be cut in neat vertical straight lines prior to excavation. All excavations within thirty (30) inches of any structure, concrete, or edge of existing pavement surface shall remove and replace permanent surfacing to the concrete or structure. If more than 50% of the permanent surfacing of a traveled lane is impacted by the excavation, the entire lane width will be required to be saw cut, removed, and replaced as per City standards. Trenching or excavation is not permissible within eighteen (18) inches of any concrete or structure, unless permitted by the City Engineer. Any surface or underlying pavement outside the trench which is undermined or damaged by the trenching operation shall be removed to a neat, straight line, and replaced. In some areas where native, clean sands are present the City Engineer may require that trenching exceeding five (5) feet in depth be required to remove and replace surfacing for a minimum of two (2) times the depth unless direct contact shoring is provided to fully support the trench walls for full depth of the excavation.
- 6) Open Trench: All open trenching within the Public Right-of-Way shall be barricaded and covered in conformance with the Manual on Uniform Traffic Control Devices (MUTCD). No open trenching deeper than one and one half (1-1/2) inches will be allowed overnight. Any disturbed surfacing will be stable, compacted or temporarily surfaced at the end of each day. In certain circumstances the City Engineer may allow deeper trenches left overnight with proper protection, but in no case more than five (5) feet deep.

1.2.6 Backfilling Operation:

- 1) Refer to Chapter 2 - Trench Excavation and Backfill, for all backfilling requirements.
- 2) Compaction Equipment: The permittee shall not commence backfilling until approved compaction equipment is on-site. Should backfilling commence without having approved equipment on-site, the City Engineer may require the permittee to remove and replace the backfill materials and/or revoke the permit. Compaction equipment shall be capable of providing required compaction as outlined in Springville City Specifications.

1.2.7 Resurfacing:

- 1) Refer to Chapter 11 - Restoration of Surface Improvements, for all resurfacing requirements.
- 2) Pavement Restoration:
 - a. Excavations are prohibited in a street which has been paved, milled and overlaid, or reconstructed within the past three (3) years. In emergency situations which endanger life or property or that interrupt essential utility services excavations will require authorization by the City Engineer.
 - b. Trenching running parallel to the street (longitudinal) will require a 2” minimum mill and overlay to the adjacent lane line from the saw cut edge of the “T” patch trench repair for the purpose of locating the edge of the patch out of the wheel path. If the edge of the new “T”

- patch trench repair can be located in the central 5 feet of the lane (measured 2.5 feet either side of the centerline of lane), the 2” mill and overlay requirement may be waived at the discretion of the City Engineer. Longitudinal excavations of a street which has been paved, overlaid, or reconstructed within the past three (3) years requires authorization by the City Engineer and a half street 2” minimum mill and overlay to the center line of roadway from the saw cut edge of the “T” patch trench repair.
- c. Trenching running transverse (non-longitudinal, as determined by the City Engineer or his authorized representative) to the street will require a “T” patch restoration as shown in the Standard Drawings. Transverse excavations of a street which has been paved, overlaid, or reconstructed within the past three (3) years requires authorization by the City Engineer and a “T” patch restoration a minimum 2.5-feet beyond the trench limits (initial cut). The 2.5-foot “T” patch shall extend on all sides of the excavation and will be constructed in the same manner as the standard “T” patch shown in the Standard Drawings. The edge of the “T” patch trench repair running parallel to the centerline of road shall be extended to the nearest lane line as to locate the joint out of the wheel path.
 - d. Just prior to the conclusion of the one (1) year warranty period crack seal shall be applied along the perimeter of the trench patch including along lip of gutter if required by the City.
- 3) Restoration of Right-of-Way Improvements: All improvements and appurtenances impacted or damaged by the permittee shall be restored or replaced to an acceptable condition, equal in size, line and grade by the permittee. All restoration shall comply with Springville City Standard Specifications. Application for exceptions must be in writing and approved by the City Engineer.
- 4) Temporary Surfaces: Temporary asphalt surfacing will be utilized from October 15 through April 15. City Engineer may allow permanent surfacing in certain circumstances when weather permits and acceptable materials are available. Temporary surfacing shall be replaced as soon as conditions are suitable for permanent resurfacing but no later than twenty (20) days after re-opening of hot mix asphalt plants. If the permit expires before permanent surfacing is installed, a permit extension or a new permit will be required. Any expired permits with temporary surfacing in place later than May 15 will be assessed penalties, be required to obtain an additional permit, and will be required to replace the temporary surfacing within the time frame outlined. During the time temporary surfacing is in place, the surfacing shall be maintained by the permittee in good condition such that it does not create a tripping hazard or disrupt pedestrian or vehicular traffic. If the temporary surfacing is removed or destroyed, the surfacing shall be replaced and the surrounding area cleaned by the permittee. Temporary surfacing shall comply with the following:
- a. Temporary bituminous resurfacing three (3) inches thick shall be placed and maintained wherever excavation is made through street pavement or driveways. At major streets, intersections and other critical locations, a greater thickness may be required. In sidewalk areas, the temporary bituminous resurfacing shall be at least three (3) inches thick. When asphalt placement cannot be installed, minimum one (1) inch thick plating shall be temporarily installed over the excavation plus one (1) ft. minimum overlap on all sides and secured in place by tack welding or underpinning so as to eliminate displacement of the plates. The bituminous mixture used for temporary trench resurfacing may be furnished from stockpiles or directly from the plant mixer and may be laid hot or cold, at the option of the permittee. Asphalt millings are not allowed.

1.2.8 Environmental Control:

- 1) Dust and Debris: Permittee shall control dust and debris at the work site, adjacent neighborhoods, and right-of-ways at all times. If necessary, wet down dusty areas with water and provide containers for debris. The City Engineer may issue a stop work order if dust and debris is not controlled. Immediate stop work order with penalties may be issued for tracking mud, soil or debris into a public right-of-way or for washing any contaminant or debris into any storm drain, ditch, channel, pipe or gutter, etc. To

rescind the stop work order, the City Engineer may require facilities to be installed such to prevent further tracking of soil or debris into any public right-of-way.

- 2) Noise: Construction activities shall be limited to normal working hours between 7:00 a.m. and 7:00 p.m. unless otherwise approved or restricted by the City.
- 3) Clean up: Permittee shall remove all equipment, material, barricades and similar items from the right-of-way. Areas used for storage of excavated material shall be smoothed and returned to their original contour. Vacuum sweeping or hand sweeping is required when the City determines current cleaning method is ineffective or inadequate.
- 4) A land disturbance permit will be required of the a permittee for construction activities disturbing more than 10,000 square feet of land or activities that may affect sensitive areas (including lakes, streams, river sand wetlands) as determined by the City Engineer or his authorized representative.

1.2.9 Guarantees:

- 1) Street Maintenance: After completion of the work, the permittee shall exercise reasonable care in inspecting and repairing any injury or damage to public and private facilities resulting from work done under the permit. The obligation of permittee to repair work done under the permit shall continue for a period of one (1) year following completion of said work, or in the event of repairs thereto, **one (1) year from the date of the repairs.**
 - a. Upon notice from Public Works, the permittee shall repair damage to public or private facilities resulting from damages or failure of work done under the permit. All repairs are to be done in conformance with the Springville City Standard Specifications or the utility owner as outlined by the City Engineer, at the sole cost of the permittee.
 - b. In the event acceptable arrangements are not made by permittee within seven (7) working days after notice, Public Works may cause such repairs to be made and charge all costs including legal fees, penalties, time, equipment and material related costs to the permittee. By acceptance of the permit, the permittee agrees to comply with the above. The City will notify the permittee of costs prior to ordering or utilizing permittee’s bond with the City.
- 2) Liability Insurance: Permittee shall be responsible for any and all claims and liabilities for damages caused by any of the work permitted or caused by permittee’s failure to perform his obligations under the permit. In the event such claim for damages is made against or imposed upon the City, or any department, officer, or employee thereof, permittee shall, and by acceptance of the permit agrees to defend, indemnify and hold them harmless from such claim or liability in accordance with City Ordinance #10-8 “Excavation Permit.” The permittee agrees to take out such general liability insurance in the amount listed below:

General Liability Insurance*

MINIMUM COVERAGE	MINIMUM AMOUNT
Per Occurrence	\$1,000,000.00
Aggregate	\$2,000,000.00

*The City may increase or decrease the minimum insurance limits based on the potential liability of the project.

Before a permit is issued, the Applicant shall furnish to the City evidence that such Applicant has a comprehensive general liability and property damage policy that includes contractual liability coverage endorsed with the limits and provisions or with such alternative limits and provisions as may be approved by the City.

- 3) **Bonds:** The bond amount shall be a minimum of **\$10,000.00** and shall remain in full force and effect for a period of one year from the date the work is completed. A single bond may be posted by a permittee to guarantee performance for one or more permits if approved by the City Engineer and agreed to, in writing, by the bonding company. The minimum bond amount shall be increased based on the number of permits issued to each permittee over the past three year period, as per the following chart, subject to review and approval of the City Engineer:

<u>Number of Permits in Past 3 Years</u>	<u>Required Bond Amount</u>
1-10	\$10,000.00
11-20	\$15,000.00
21-50	\$20,000.00
51 or greater	\$25,000.00

The City may require an additional bond upon determination by the City Engineer that the scope of the work exceeds the minimum bond amount, in which case, the total bond amount will be equal to 125% of the scope of the work as estimated by the City Engineer. Conditions, Requirements and Warranty shall comply with Ordinance #10-8.

1.3 CONTRACTOR AND CONSTRUCTION PLAN APPROVAL

Before a Contractor performs any work within the City, the City shall approve the Contractor. Approval is granted for a period of one (1) year upon submission of the following:

- 1) Proof of a current Utah State Contractor’s License. Work will be restricted to that authorized by the license.
- 2) Proof of comprehensive general liability insurance. Bodily injury insurance will be in an amount of not less than one million dollars (\$1,000,000.00) for any one occurrence. Property damage insurance will be in an amount of not less than one million dollars (\$1,000,000.00) for any one occurrence and shall include underground exposure. Combined liability insurance will be in an amount of not less than two million dollars (\$2,000,000.00) for any one occurrence.
- 3) The performance bond owing to the City will be in effect for a period of one (1) year or one (1) year after the completion of work performed by the contractor, whichever is greater.
- 4) Submission of an approved Land Disturbance Permit with the City.

The City Engineer / Public Works Representative shall approve construction plans before any work begins. Developers/Contractors proceeding with work without such approvals shall have the project shut down until such approvals are obtained. Repeated offenses may result in the Contractor losing his pre-qualification to perform work in the City.

1.4 PRE-CONSTRUCTION MEETINGS

A pre-construction meeting with the Developer and the Contractor(s) involved in construction **within the public right-of-way** shall be held with the City Engineer / Public Works Representative prior to commencement of any work. The location of the meeting shall be at the Springville City Offices, 110 South Main Street, Springville, Utah 84663. The following items shall be furnished at the meeting:

- 1) A detailed outline showing the sequences of construction of principle items of work. The outline shall show the beginning and ending dates of the major items of work on the Project.
- 2) A list of names, titles, addresses, and telephone numbers of the Developer/Contractor's responsible personnel, indicating those who may be reached outside normal working hours.
- 3) A list of Sub-Contractors and Materials Suppliers to be involved with the project and the items of work they are going to perform or furnish materials for. The City will notify the Developer/Contractor of any concerns or pre-qualification deficiencies of the companies they plan to use.

Other items may be discussed at this pre-construction conference as determined by the Public Works Representative/ City Engineer. Official minutes of this meeting as prepared by the City Engineer / Public Works Representative shall become part of the project file for the project.

1.5 CONSTRUCTION OF PUBLIC IMPROVEMENTS

The Developer/Contractor shall perform in accordance with the approved construction documents and terms of the development agreement, and the Standard Specifications and Standard Drawings in effect at the date of City approval. The work shall be done in a timely manner.

1.5.1 Responsibility of the Developer:

The developer is responsible for the construction of the entire development, including all required off-site improvements, in accordance with the approved construction documents and development agreement until it is finalized and accepted by the City.

1.5.2 Construction Survey:

All improvements within the public right-of-way, including but not limited to utilities, placement of concrete, road surfacing, etc., shall be surveyed for location and elevation by a professional land surveyor licensed in the State of Utah or by someone under the direct supervision of a professional land surveyor licensed in the State of Utah.

All construction survey shall comply with the following requirements:

- 1) Stake Information - The stake shall include stationing, offset, and cut/fill information on the front of the stake (facing construction area) and the hub elevation on the back of the stake written legibly in permanent marker.
- 2) Concrete Curb and Gutter - Shall be staked at 50-foot intervals. Vertical curves shall be staked on 20-foot intervals. The offset shall not be greater than 5 feet, unless a greater distance is approved by the City Engineer.
- 3) Pressure Pipelines – Shall be staked at every fitting, bend, tee, etc., at all connections to existing pipelines, and as needed.
- 4) Gravity Pipelines – Shall be staked at all junction structures and as needed.
- 5)

1.5.3 Inspections:

All work within the public right-of-way shall be inspected by the Public Works Representative prior to the following:

- 1) Backfilling and compacting.
- 2) Placing concrete and asphalt
- 3) Placing any underground piping
- 4) Making any connection into a City utility line
- 5) Other work done in a public right of way or public easement.

1.5.4 Notification of Needed Inspections:

- 1) All inspections must be performed during regular working hours. Developer/Contractor is responsible to check with Public Works to verify seasonal inspection working hours.
- 2) Inspection performed during regular working hours must be requested a minimum of two (2) hours in advance.
- 3) Inspections requested after 3:30 p.m. must be requested by 1:00 p.m. on the day of the inspection.
- 4) Inspections needed on the weekend must be requested a minimum of 48 hours in advance.

- 5) All after-hours inspection requests are subject to approval.
- 6) A charge may be assessed for inspection call backs.
- 7) An additional charge will be assessed for inspections performed outside of the normal working hours in accordance with the City's adopted fee schedule.
- 8) Before burying any subsurface infrastructure (i.e. pipeline or fittings) Contractor shall contact the assigned Public Works Representative/Inspector to allow for inspection and GPS-survey of all items to document location. **Items buried without City approval will be re-excavated by the Contractor at no additional cost to the City.**

1.5.5 Definition of "City Engineer / Public Works Representative":

The term "City Engineer / Public Works Representative" as used in these specifications refers to the Public Works Director, Public Works Inspector, City Engineer, Engineering Division staff and others as designated by the City Engineer.

1.5.6 Conflict:

These Standard Specifications and Standard Drawings are the minimum requirements of the City of Springville. In the event that any provisions herein conflict with general industrial standards, or with other requirements specified by the City, the more stringent of the standards will apply.

1.5.7 Variance:

These Standards and Specifications were developed for use in the design and construction of public improvements, development activities and utility work within the public right-of-way. The intent of this document was to set a standard of design/construction for the Springville City that is consistent, effective, and efficient, and protects public safety.

It will at times be desirable and/or necessary to vary from the standards in this document to produce a good product. Deviations or variances from these standards may be considered; however, it shall be the responsibility of the applicant to demonstrate to the satisfaction of the City Engineer or his authorized representative the proposed variance meets or exceeds the minimum acceptable criteria and intent of the standard. Variances from these criteria shall be reviewed and approved on a case-by-case basis with the civil plan submittal.

When it becomes necessary or desirable to vary from the standards presented in this document, a variance may be requested from the City Engineer. Such a request shall be made in writing and will include:

1. The standard to be varied.
2. The proposed variation.
3. Justification for the variance.

Upon application, a specific variance to a substantive requirement of these standards may be granted, subject to the following criteria.

- 1) A variance may be granted when all of the following conditions are satisfied:
 - a. A literal application of the substantive requirement would result in an unreasonable hardship to the applicant that is not self-imposed or economic;
 - b. The alternative proposed by the applicant shall be adequate for the intended use and shall not substantially deviate from the performance that would be obtained by strict enforcement of the standards; and
 - c. The granting of the variance will not be detrimental to the public health, safety or welfare, nor injurious to adjoining or neighboring property.

1.5.7 Amendments:

Amendments to these standards may be requested by writing the City Engineer with details and justification for an amendment. The City Engineer will meet periodically to discuss proposed amendments and make recommendations to the City Council.

1.5.8 Acceptance of Improvements:

No work which may be defective in its construction or deficient in any of the requirements of these Standard Specifications will be accepted. The presence of the City Engineer / Public Works Representative shall not relieve the Contractor of the responsibility for the proper execution of the work in accordance with all requirements of these Standard Specifications and applicable Development Agreements. Compliance is a responsibility of the Contractor/Developer and said responsibility shall not be avoided by any act or omission on the part of the City Engineer / Public Works Representative.

1.6 ELECTRONIC AND RECORD DRAWINGS

Plat and improvement drawings shall be furnished electronically to the City in Adobe Acrobat Portable Document Format (*.pdf). These electronic files shall be provided to the City after final approval but before recording of the Plat.

Prior to construction of any improvements, the developer will pay an “as-built” fee as established in the City’s fee schedule. The purpose of this fee is to cover the costs of City staff surveying the “as-built” improvements and will take the place of the Developer/Contractor providing “record drawings.”

1.7 TEMPORARY SERVICES

Any temporary services and utilities such as telephone, electrical, water toilet facilities, etc., shall be the responsibility of the Developer/Contractor.

1.8 CODES AND STANDARDS

Where codes and standards are referred to they shall be current, approved copies. It shall be the duty of the supplier of any material on this work to submit evidence, if requested, that its material is in compliance with the applicable codes and standards.

1.9 STATE AND LOCAL LAWS

The Developer/Contractor shall conform to all applicable state and local laws in carrying out its obligations under the Contract.

This shall include, but is not limited to, compliance by the Developer/Contractor with the requirements of Chapter 30, of Title 34, of the Utah Code Annotated, 1953 as Amended. If the provisions of Section 34-30-1, of the Utah Code Annotated, 1953 as amended, are not complied with, this Contract shall be void.

1.10 COMPLIANCE WITH GOVERNMENTAL REGULATIONS

The Developer/Contractor's personnel, equipment, and operations shall comply fully with all applicable standards, regulations, and requirements of existing Federal, Utah State, and Local governmental agencies. This shall include, but not necessarily be limited to, the following:

1.10.1 United States Occupational Safety and Health Administration Regulations:

Title 29 of the Code of Federal Regulations, Part 1926 (29 CFR Part 1926), Safety and Health Regulations for Construction.

1.10.2 Utah State Industrial Commission Regulations:

The Utah Occupational Safety and Health Act (1973) and Employer-Employee Safe Practices for Excavations and Trenching Operations (Jan. 1, 1974), as published by the Utah State Industrial Commission, including any and all amendments or revisions effective prior to performance of the work.

1.10.3 City Ordinances:

The Developer/Contractor shall be required to comply with all Springville City Ordinances.

1.10.4 UDOT Requirements:

When crossing or working within Utah Department of Transportation rights-of-way the Developer/Contractor shall be responsible to obtain all necessary permits and comply with all appropriate UDOT regulations including applicable sections in "State of Utah Standard Specifications for Road and Bridge Construction," latest edition.

1.10.5 Permits:

The Developer/Contractor is responsible to obtain all required approvals and permits (including Land Disturbance Permit) applicable to this project. Developer/Contractor shall be subject to the conditions of all permits and agreements between the Owner and the permitting agencies.

1.11 FEDERAL, STATE, AND LOCAL INSPECTING AGENCIES

The site of construction is to be open at all reasonable times and places for periodic observation by accredited representatives of the Federal, State, and local agencies who have regulatory or supervisory authority over any part of the work proposed or regulated thereto.

1.12 PUBLIC SAFETY AND CONVENIENCE

The convenience of the general public and the protection of persons and property are of prime importance and shall be provided for by the Developer/Contractor during this project. The Developer/Contractor shall use every reasonable precaution to safeguard persons and property. Failure of the Owner or the City Engineer / Public Works Representative to notify the Developer/Contractor of any deficiencies in providing for public safety and convenience shall not relieve the Developer/Contractor from its responsibility. The Developer/Contractor shall be required to comply with the requirements of the **Manual on Uniform Traffic Control Devices (MUTCD)**.

1.12.1 Compliance with Rules and Regulations:

The Developer/Contractor shall comply with all rules and regulations of the City, County, and State authorities regarding the closing of public streets, or highways, to the use of public traffic. The Developer/Contractor shall, at all times, conduct its work so as to insure the least possible obstruction to traffic and normal commercial pursuits.

1.12.2 Road Closures and Obstructions:

No road shall be closed by the Developer/Contractor to the public except by express permission of the City Engineer / Public Works Representative. If conditions justify, the City Engineer / Public Works Representative may authorize the Developer/Contractor to close general traffic to not more than two (2)

City blocks at any given time. No such closure shall be made without authorization of the City Engineer / Public Works Representative. Closure of streets or highways shall be in conformance with the **MUTCD**.

1.12.3 Protection of the Traveling Public:

All obstructions within the public right-of-way shall be protected by signs, barricades, and lights where necessary for the safety of the traveling public in conformance with the **MUTCD**. Failure of the Owner or the City Engineer / Public Works Representative to notify the Developer/Contractor to maintain barricades, barriers, lights, flares, danger signals, or guards shall not relieve the Developer/Contractor from his responsibility. If flaggers and guards are required they shall be UDOT trained and shall hold current certification and shall be equipped with signs, flags, etc. as required by the Utah State Department of Transportation (UDOT) regulations.

1.13 CONFINEMENT OF WORK AND ACCESS TO RIGHT-OF-WAY AND EASEMENTS

The Developer/Contractor will be required to confine construction operations within the dedicated right-of-way for public thoroughfares or within areas for which construction easements have been obtained unless it has made special arrangements with the affected property owners in advance. The Developer/Contractor will be required to protect stored materials, lawn, trees, and other features located adjacent to the proposed construction site. During construction operations, the Developer/Contractor shall construct and maintain such facilities as may be required to provide access by all property owners to their property. No person shall be cut off from access to their residences or places of business for a period exceeding eight (8) hours, unless the Developer/Contractor has made special arrangements with the affected persons prior to commencing work in the area.

1.14 NOTIFICATION OF RESIDENTS

All property owners and residents adjacent to the streets or easements affected by the construction shall be notified by the Developer/Contractor at least forty-eight (48) hours in advance of time construction begins. The Developer/Contractor can satisfy this requirement by placing a written notice on the door of each residence or business reading "Notice of Construction Operation. (Developer/Contractor) will be working on the construction of street improvements on your street starting about _____." The Developer/Contractor shall provide a copy of the notification form at the pre-construction meeting and the method to be used (hang on door, etc.)

1.15 WEATHER CONDITIONS

In the event of temporary suspension of work, or during inclement weather, the Developer/Contractor will, and will cause its Sub-Developer/Contractors to, protect any project work or materials against damage from the weather. If, in the opinion of the City Engineer / Public Works Representative, any Project work or materials become damaged by reason of failure on the part of the Developer/Contractor or any of its Sub-Developer/Contractors to so protect its work, such work or materials shall be removed and replaced at the expense of the Developer/Contractor.

1.16 LAND MONUMENTS

The Developer/Contractor shall preserve existing City, County, State, and Federal land monuments whenever possible. When these monuments cannot be preserved, the Developer/Contractor shall notify the owner of the monument and the City Engineer / Public Works Representative at least two (2) weeks in advance of the proposed construction in order that the monument owner will have ample opportunity to reference these monuments to verify location of later replacement by the Developer/Contractor. Monuments shall be reestablished by a professional land surveyor licensed in the State of Utah. The cost of the replacement of these monuments shall be the responsibility of the Developer/Contractor. When a county monument is disturbed a "Utah County Monument Excavation Permit" must be obtained. Work may not proceed until the procedure and requirements outlined in the Permit have been followed and complied with.

1.17 SOURCE OF MATERIALS

All materials furnished or incorporated in this project shall conform to the requirements of these Specifications.

The Developer/Contractor shall acquire the necessary rights, at its own expense, to take material from aggregate sources and to use properties for plant site, hauling roads, and other purposes.

The Developer/Contractor may select areas for disposal of surplus materials; however, the Developer/Contractor will be responsible for acquiring the necessary right, at its own expense, to use the property for such purpose.

1.18 OPERATION AND MAINTENANCE MANUALS

The Developer/Contractor shall furnish the City Engineer / Public Works Representative with two (2) sets of all operation and maintenance manuals, drawings, diagrams, etc., for all pumps, motors, control panels, valves, meters, etc., for use in the Operation and Maintenance Manual.

1.19 INTERFERING STRUCTURES, UTILITIES AND FACILITIES

The Developer/Contractor shall exercise all possible caution to prevent damage to existing structures and utilities, whether above ground or underground. While these structures and utilities may be shown on the improvements plans, the information has been compiled from the best available sources, its completeness and accuracy cannot be guaranteed, and it is presented simply as a guide to possible difficulties. The Developer/Contractor shall notify all utility offices concerned at least forty-eight (48) hours in advance of construction operations in which a utility agency's facility may be involved. Notification to Blue Stakes does not necessarily cover all buried lines. This shall include, but not be limited to: irrigation, water, telephone, electric, sewer, storm drain, gas, and cable television. The Developer/Contractor shall be responsible for any and all changes to, relocation of, or re-connection to public utility facilities encountered or interrupted during the execution of the work, and all costs relating thereto shall be at the Developer/Contractor's expense. The Developer/Contractor shall contract with and pay Public Utility Agencies for work required in connection with all utility interference's and handle all necessary notifications, scheduling, coordination and details.

It shall be the responsibility of the Developer/Contractor to relocate and expose all existing underground structures and utilities in such a manner as to prevent damage to the same. Any structure or utilities damaged by the Work shall be repaired or replaced at the Developer/Contractor's expense.

If the Developer/Contractor encounters existing structures that will prevent construction, it shall notify the City Engineer / Public Works Representative before continuing with the construction in order that the Developer's Engineer or City Engineer / Public Works Representative may make such field revisions as necessary to avoid conflict with the existing structures.

1.20 MATERIAL AND COMPACTION TESTING

During the course of the work, a UDOT certified Geotechnical Engineer/Testing Company shall perform such tests as are required to identify materials, and to determine the following: gradation, compaction characteristics, moisture, and density of all fills in place. The Geotechnical Engineer/Testing Company shall also perform all tests required by these specifications.

These tests will be used to verify that the construction conforms to the requirements of the specifications. Such tests are not intended to provide the Developer/Contractor with the information required by them for the proper execution of the work and their performance shall not relieve the Developer/Contractor of the necessity of completing the construction in accordance with these specifications and Standard Drawings. Copies of the tests shall be furnished to the City upon completion of each test. Developer/Contractor will get copies of the test results from the company performing the tests. Before final release of the bond, the UDOT certified Geotechnical Engineer/Testing Company

shall furnish the Public Works Representative/Engineer with a letter certifying that the test results have been in compliance with these Standard Specifications and Drawings and that the recommendations set forth in the geotechnical report were carried out. "Open tests" shall have been retested and/or the resolution thereof specifically addressed in the letter.

Within the public right-of-way the in-place density shall be a minimum of 95% of laboratory standard the maximum dry density as determined by AASHTO T-180 (Modified Proctor). In other areas the in-place density shall be a minimum of ninety percent (90%) of the maximum dry density as determined by AASHTO T-180 (Modified Proctor).

If the required relative density is not attained, Developer/Contractor will be required to make any adjustments in compaction equipment, thickness of layers, moisture content and compactive effort necessary to attain the specified minimum relative density.

1.20.1 Guarantee:

- 1) In addition to the Guarantee Provisions, as outlined in the General Conditions, the following applies:
 - a. Settlement of the fill material within the contract guarantee period is incontrovertible evidence of inadequate compaction of backfill.
 - b. Correct the deficient conditions, including the replacement and/or repair of the surfacing materials and damaged facilities.
 - c. The method of construction repair shall be proposed in writing by the contractor for approval by the Engineer prior to correcting the failed condition.

1.20.2 Test Schedule:

- 1) Gradation Analysis: As required if in the opinion of the Engineer the material varies from that as approved.
- 2) Proctor Analysis: As required if in the opinion of the Engineer the material varies from that as approved.
- 3) Density Testing: A minimum of two (2) tests are required.
 - a. Curb and gutter with grade: One (1) random test per lift per 200 lineal feet.
 - b. Sidewalk: One (1) random test per lift per 200 lineal feet.
 - c. Trenches: One (1) random test per lift per 200 lineal feet.
 - d. Roadways: One (1) random test per lift per 100 linear feet measuring along centerline.
 - e. Landscaped strips: No testing required.
 - f. Structural Backfill: Comply with Chapter 2 – Trench Excavation and Backfill.
 - g. Additional testing may be required by Engineer.

1.20.3 Duties of Contractor:

- 1) Furnish labor to assist testing agency in obtaining and handling samples at site or sources of materials.
- 2) Advise testing agency and Engineer 48 hours in advance of backfilling operations to allow for testing of pre-placement conditions, completion of quality tests, and for assignment of personnel.
- 3) Contractor shall bear all costs associated with all remedial or additional work required to bring the material into minimum conformance with the specified degree of compaction and moisture content required as a result of failed density testing.

1.21 TELEVISIONING OF GRAVITY FLOW PIPELINES

Prior to the City accepting newly-constructed gravity flow pipelines the Contractor/Developer shall provide the City with a video of the televising of the pipeline (performed in the presence of the Public Works Representative). The televising equipment used must record on the video a continuous distance from the point of beginning.

1.22 LOT CORNER AND SUBDIVISION MONUMENT

All lot corners shall be marked with an approved type of metal peg at least 5/8” in diameter and twenty-four inches in length with a surveyor’s plastic cap installed on the exposed end. All lot corners adjacent to street frontage shall be projected to curb and gutter and indicated by a copper rivet in the top of the concrete curb. Corner markers and subdivision monuments must be installed prior to issuance of any building permits. A minimum of two (2) subdivision monuments are required on each subdivision plat with a clear line of sight between any given two (2) monuments. Monuments shall be installed at all residential – collector/arterial intersections.