

# TOWN OF APPLE VALLEY TRENCHING STANDARDS

## GENERAL REQUIREMENTS

1. All excavations within the Town Right-of-Way require an excavation permit from the Engineering Department.
2. Notify Underground Service Alert at least 2 working days prior to start of work at (619) 245-4411 or 1-800-422-4133
3. All excavations shall be made, protected and supported as required for safety as prescribed by CAL OSHA.
4. **MAINTENANCE OF TRENCHES** - Permittee shall perform continuing maintenance to all trenches during course of utility construction and shall maintain the trench for the life of the utility in accordance with County Code Section 51.0210.
5. **MAINTENANCE OF UNDERGROUND FACILITIES** - Permittee shall exercise reasonable care to maintain any landscaping, trees, or tree root systems within the road right-of-way and to immediately repair and make good any injury to any portion of said landscaping, trees, or tree root system which occurs as a result of the work done under this permit.
6. **MANHOLE AND VALVE CAN ADJUSTMENTS** - Manholes shall not be constructed to final grade until final paving has been completed. When manholes are adjusted to pavement grades, concrete rings shall be flush with adjacent pavement surface and sewer manholes shall meet the requirements of the Apple Valley Water District. In graded earth shoulders or earth flowline areas, asphalt concrete shall be placed to a minimum 2 feet around the manhole and paved out at 45 degrees to the edge of existing pavement if the edge of the manhole is located within 2 (two) feet of the pavement edge.
7. **CHANGES OR ADDITIONS TO PERMIT** - The Town Engineer reserves the right to make any changes or additions to a permit after issuance if such changes or additions are believed necessary for the protection of the roads, or for the safety and convenience of the public. It is further agreed that if any part of the installation interferes with the present use of roads by the general public, and needs adjusting to match the grade of the roadway or is in conflict with future improvement projects, it will be removed or relocated as designated by the Town Engineer at the expense of the Permittee or his successor in interest.
8. **PRESERVATION OF PROPERTY** - The permittee's legal relationship and responsibilities shall be as specified in Section 7 of the Standard Specifications of the State of California, in particular Section 7-1.11, "Preservation of Property", and section 7.1-2 "Responsibility for Damage."
9. **RIGHT OF WAY CLEANUP** - Any surplus material resulting from excavation and backfill operations shall be removed from the right of way. All paved surfaces

shall be broomed clean of earth and other objectionable materials immediately after backfill and compaction. Existing gutter line and drainage ditches shall be replaced to their original standard or better. All excess material shall be removed prior to paving. Water trucks shall be used, as required, to control dust conditions. If de-watering operations are required and pumps are forcing water on Town roads, it shall be the responsibility of the permittee (contractor) to control this water and to provide barricades and/or traffic control safety devices when necessary and as approved by the Town Engineer.

10. **CLOSING STREETS** - No street shall be closed. A minimum of one lane of traffic shall be maintained at all times to provide limited access for the adjoining property owners and emergency vehicles. In the event it is felt by the permittee that he must close a street for any length of time. The permittee shall contact the Town Engineer to obtain the necessary permission. Allow five working days for processing the road closure request.

11. **FAILURE TO COMPLY WITH TOWN SPECIFICATIONS** - Should Permittee and/or its Contractor fail to comply with any provisions of this permit, the Town Engineer or his representative shall notify Permittee in writing (or telephone in emergency cases) to discontinue further excavations within Town's street right of way until the discrepancy(ies) have been resolved to the satisfaction of the Town Engineer. Failure to perform the work may result in revocation of permits and/or the Town may arrange for the work and bill the Permittee for the costs.

12. **APPROVAL IN SCOPE ONLY** - The engineering designs for any plans which are a part of this permit are only approved by the Town in scope and not in detail.

13. **PERMIT EXPIRATION** - The encroachment permit shall expire within six (6) months from the date of issuance if otherwise not specified. If the permit is allowed to expire, without an extension having been granted, for whatever reason, a new permit with appropriate fees shall be applied for prior to the start of any work.

### TRENCH REPAIR REQUIREMENTS

1. **PAVEMENT CUT** - Existing pavement to be removed shall be sawcut unless written permission to do otherwise is given by the Town Engineer, to rectangular sections and in accordance with the attached Standard Drawing entitled "UTILITY TRENCH STANDARD DETAIL NO. 1". Damaged pavement adjacent to the trench shall also be sawcut and removed, in rectangular sections, beyond the limits of damage. Trenches less than six inches (6") in width shall not be required to construct as shown in the "UTILITY TRENCH STANDARD DETAIL NO. 1", the portion of the top of the "T" section lying outside the vertical plane of the trench walls.

2. **BACKFILL** - Backfill shall be in accordance with the current edition of the Standard Specifications for Public Works Construction (Green Book) except as follows:

- A. BACKFILL & COVER - Shall be as per Apple Valley Utility Trench Standard No. 1.
- B. BEDDING - Minimum sand equivalent of 20 for backfill material is required to 6 inches above spring line and specific utility requirement may also apply.
- C. WATER DENSIFICATION - Water densification (Ponding and Jetting) of the upper 4 feet of backfill will not be allowed. At greater depths, this method will be permitted when, as determined by the Town Engineer, the backfill material is of such character that it will be self-draining when compacted and the foundation materials will not soften, or be otherwise damaged by the applied water. This method will not be considered unless both the backfill materials and foundation materials have a sand equivalent of at least 20. Requests and reports of tests representing foundation soils (and backfill material if imported) will be required before this method can be considered.
- D. BACKFILL MATERIAL - Native material will be allowed for backfill provided backfill is placed in 6" - 12" lifts and compacted mechanically.
- E. For the purposes of this requirement, lateral trench backfill method shall conform to these same trench repair standards.

- 3. TEST REPORTS - Shall be submitted using the Town's standard format. Tests shall be taken by a licensed engineer or testing laboratory at random locations selected by the testing firm and/or the Town Engineer. Test reports shall be submitted to the Engineering Department. Compaction tests shall be in accordance with California Tests No. 216, Sandcone, or No. 231, Nuclear (ASTM D-1556 and D-1557-70) and a minimum of 20% of all test shall be by sand cone method. Sand Equivalent tests shall be in accordance with California Test No. 217. Final acceptance of the permit shall not be given until test reports are accepted and approved by the Town Engineer.

Frequency of Tests

- A. Compaction Tests -
  - 1. Longitudinal Trenches - A complete series of compaction tests shall be taken for each 4 foot thickness of backfill placed above the utility zone. Each series shall consist of tests taken at approximate maximum intervals of 250 feet.
  - 2. Lateral Trenches - Compaction tests shall be taken on 50% of the laterals, one test for each 4 feet of depth of the lateral.
- B. Sand Equivalent Tests - When water densification is requested, sand equivalent tests shall be obtained at approximate maximum intervals of 1000 feet representing foundation soils and backfill material of different than native soils. Additional tests may be necessary to define limits of material with sand equivalents greater or less than 20. Note: A sand equivalent of

20 or greater will not necessarily be sufficient justification to allow water densification. To avoid delays and inconvenience to the public, approval to use water densification must be obtained before beginning excavation.

4. BASE MATERIAL - Where base material has been removed, it shall be replaced with Class II Aggregate Base to same thickness as that removed but not less than 6 inches thick.

5. INTIAL PAVEMENT REPAIR - Immediately upon completion of backfill, but in no case later than the day following excavation, the Permittee shall cap the compacted trench by the following method:

A. TEMPORARY PAVEMENT REPAIR - A minimum of three inches (3") of AC cold mix shall be placed flush with existing pavement to provide a smooth riding surface. This pavement shall be maintained on a regular basis by placing additional material as required to provide a smooth ride. The top portion of this pavement shall be removed and the backfill regraded to the specified depth prior to the placement of the permanent pavement repairs.

All trenches shall be backfilled and pavement in place on Saturdays, Sundays and Holidays in accordance with Section A above.

6. FINISH PAVING - Where asphalt paving has been removed, permanent, finish paving shall be replaced with a minimum, 4 inch thickness of Type C AR4000 1/2" maximum hot mixed asphalt concrete within 30 days after completion of backfill. Damaged or cracked pavement adjacent to the trench shall be sawcut and removed in rectangular shapes. Existing pavement shall be cleaned and a "back coat" shall be uniformly applied. Hot mix asphalt concrete shall be placed in 2" lifts to provide a smooth riding surface. Compaction shall be by any suitable means to provide uniform densification.

A. TRENCHES IN PAVEMENT LESS THAN 2 YEARS OLD - Trench lines in pavement less than two (2) years old shall be repaired as described above with the addition of the following requirements:

Seal coating, a 50/50 fog seal shall be applied to patched area. This seal coat must extend at least one foot (1') laterally and five feet (5') longitudinally beyond edges of trench excavation and/or pavement damaged by trenching. The seal coat shall be placed parallel to the centerline and shall cover the entire travel lane width but not less than 12 feet wide and have a minimum longitudinally distance of One Hundred Feet (100').

#### PUBLIC CONVENIENCE REOUREMENTS

1. The Permittee shall conduct operations so as to offer the least possible obstruction and inconvenience to the public and he shall have under construction no greater length or amount of work than Permittee can prosecute properly with due regard to the rights of the public.

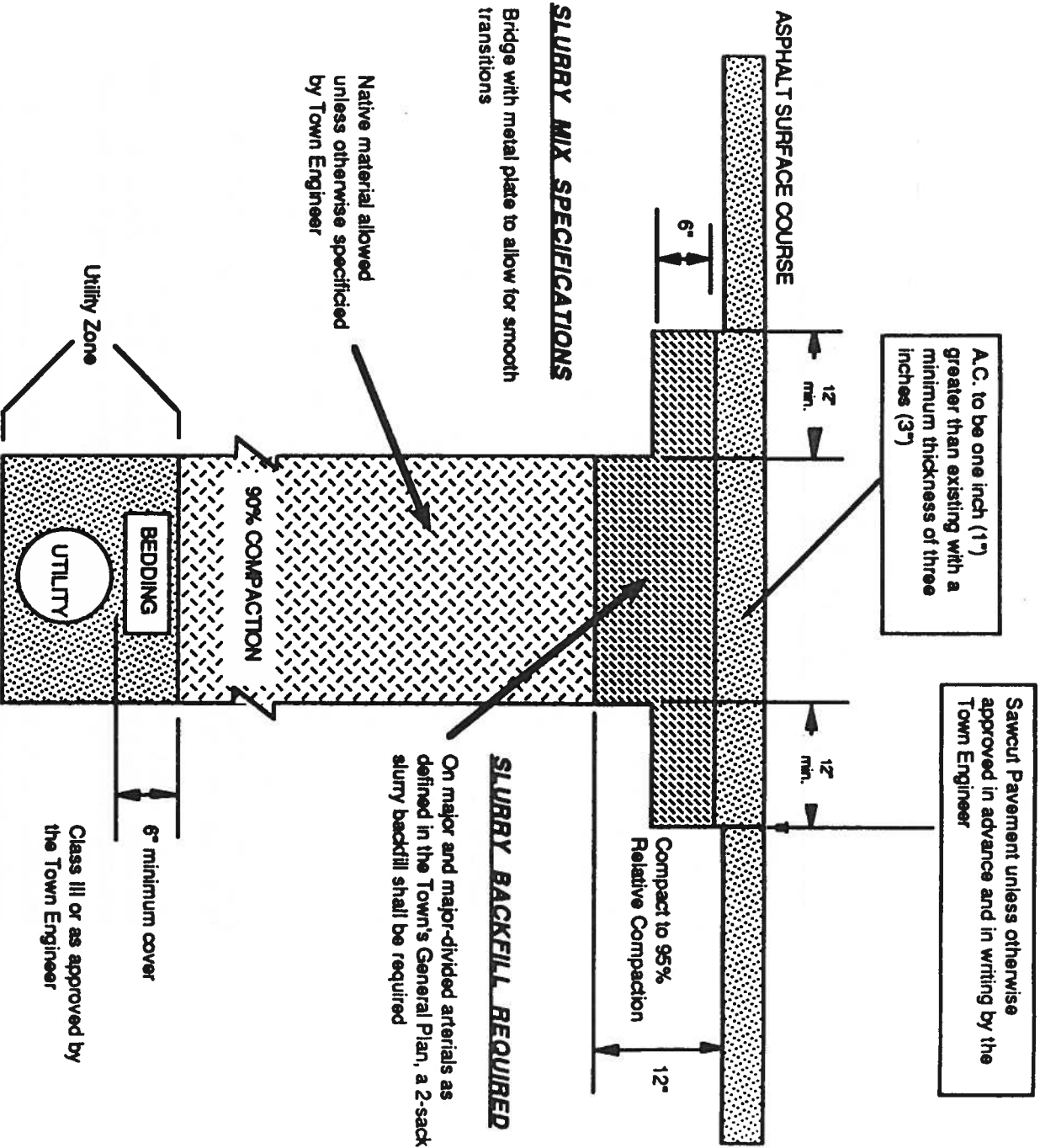
2. Unless otherwise provided in the Special Provisions, all public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible. Where possible, such traffic shall be routed on new or existing paved surfaces.
3. Water or dust palliative shall be applied as required for the alleviation or prevention of dust nuisance.
4. In order to expedite the passage of public traffic through or around the work, the Permittee shall install signs, lights, flares, barricades, and other facilities for the sole convenience and direction of public traffic. Also, if needed, the Permittee shall furnish competent flagmen whose sole duties shall consist of directing the movement of public traffic through or around the work.

#### PUBLIC SAFETY REQUIREMENTS

1. Should the Permittee appear to be neglectful in furnishing, installing, and maintaining warning devices and taking protective measures as above provided, the Town may direct attention to the existence of a hazard and the necessary warning devices shall be furnished, installed, and maintained and protective measures taken by the Permittee at his expense.
2. Where necessary for Public Safety and Convenience, Permittee shall, at his/her or Permittee expense, provide and maintain suitable drainage of the roadway and erect such temporary structures as are necessary. The suspension of the work from any cause whatever, shall not relieve the Permittee of his responsibility to provide for the safety and convenience of public traffic and local residents.
3. If Permittee fails to provide traffic controls and other safety devices, as required for the protection of the traveling public, Town will provide such safety devices and charge any costs against Permittee's cash deposit. Permittee may also be billed for any additional costs for repairs or for providing safety devices if costs exceed the amount of the cash deposit.
4. Permittee shall furnish names and telephone numbers of persons to contact in case immediate repairs are needed. If a responsible person is not available at this number, Town may make immediately repairs and deduct the costs from the cash deposit.
5. Should any traffic striping and/or pavement markings be damaged or removed by reason of Permittees operations, they shall be restored or replaced at Permittee's expense. Traffic stripes and/or pavement markings shall be restored or replaced by application of thermoplastic material.
6. Permittee shall protect all survey monuments in place and shall be required to replace at his/her expense any that become damaged or removed during the course of his/her work.

# UTILITY TRENCH STANDARD

TOWN OF APPLE VALLEY  
ENGINEERING DEPARTMENT



**NOTE:** This standard shall apply to all trenches in existing pavement; trenches shall have the top 18" compacted to 95% relative compaction if they are located within an area which will ultimately be paved over when the street is widened to the General Plan designated width. Trenches located outside the ultimate pavement width shall only be required to compact to 90% relative compaction.

UTILITY TRENCH  
STANDARD  
DETAIL NO. 1

TOWN OF APPLE VALLEY ENGINEERING DEPARTMENT

APPROVED: \_\_\_\_\_

DATE \_\_\_\_\_