

**COUNTY OF TUOLUMNE**

**DEPARTMENT OF PUBLIC WORKS**

  

**GENERAL PERMIT CONDITIONS  
AND SPECIFICATIONS FOR**

  

**TRENCH CUTS AND  
STREET RESURFACING**

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## **Introduction**

The public Right-of-Way is a unique public resource held in trust for the benefit of the public. This physically limited resource requires proper management to maximize its efficiency, minimize the costs to taxpayers, and minimize the inconvenience to and negative effects on the public from the use of the public Right-of-Way by contractors and utility companies (“Permittees”).

Nationwide studies have concluded that excavations in paved streets degrade and shorten the life of the surface of roads, and this degradation increases the frequency and cost to the public of necessary resurfacing, maintenance, and repair. In addition, studies have concluded that pavement degradation occurs no matter how well the excavation is restored. The cutting of pavement and trenching in county roads permits water seepage into the street and weakens pavement support around the patch, allowing deterioration at an accelerated rate. Even if pavement restoration in the trench itself appears to be structurally adequate, excavations damage the strength and life of the pavement located adjacent to the trench where the excavation occurs. The potential for damage to the pavement is magnified when a street is subject to multiple excavations being surfaced or resurfaced. In addition to these concerns, trenches result in additional aesthetic and rideability impacts that can affect quality of life and result in a public nuisance.

Over the next several years, Tuolumne County plans to invest millions of dollars in comprehensive pavement repairs, rehabilitation, and restoration efforts throughout its jurisdiction. This includes Senate Bill 1 Road Maintenance and Rehabilitation Account (also known as “Gas Tax”) funding earmarked for countywide pavement restoration. These efforts are scheduled to begin in earnest in 2021. With the proposed investment of millions of dollars in public funds on various road projects, it is desirable to adopt a Policy that will help protect roads and safeguard the value of the public’s investment in the near future.

At the same time, many Permittees provide valuable services to the community including both wet (sewer, water) and dry (fiber optic, broadband, electrical, telecommunications) utilities. Tuolumne County residents and businesses rely on these Permittees to provide vital utility services. Many of the Permittees perform quality work and have adopted their own separate policies and procedures that provide construction and repair methods that meet or exceed the County’s expectations.

This proposed Policy is directed at all Permittees who perform excavation work within the public Right-of-Way. It includes standard requirements relating to public safety, preservation of public property, site maintenance, materials and equipment, trenching and compaction, and insurance. It also includes detailed road resurfacing requirements in an attempt to protect county roads and road infrastructure from the effects of trench installation. Many of the policies identified in this Policy are based on existing policies and are consistent with industry standards.

Focusing specifically on trench restoration, resurfacing and maintenance, this Policy also recognizes that a “one size fits all” approach may not be appropriate. Some roads in good or great shape would be significantly affected by construction efforts. For roads in poor shape, a properly restored trench may be in better condition than adjacent portions of road. This Policy includes key street resurfacing policies that reflect the following scenarios:

- For roads repaved or resurfaced within the last three (3) years or for roads with a Pavement Condition Index (PCI) above 80, trenching is generally prohibited except under certain circumstances.
- For roads in good or fair condition (PCI between 50 and 80), the Permittee is required to either repave a minimum travel lane width or resurface the entire road width to restore the road to a pre-construction condition or better.
- For roads in poor condition (PCI less than 50), no additional pavement restoration efforts will be required.

This Policy includes exceptions to the aforementioned trenching prohibitions, for emergencies endangering life or property, interruption of essential utility services, and service for buildings where no other reasonable means of providing service exists. The Policy also provides opportunities for alternative solutions that may benefit both the County and Permittee.

This Policy does not have the same requirements for excavation and trenching outside of the paved road area. Under most circumstances, Permittees are strongly encouraged to locate trenches in available shoulders or other unpaved areas. The Director of Public Works – at their discretion – may consider other options or alternatives to address road restoration concerns.

Many of the conditions and specifications included in the Policy have been adopted by numerous agencies throughout California and are now considered standard practice in the construction industry. Some of the conditions included in this Policy are also holdovers from previous conditions. Some proposed conditions, in fact, provide some improved leniency and flexibility in an effort to reduce Permittee costs. The County believes that these efforts will result in long term cost savings due to reduced ongoing maintenance efforts on behalf of the County or the Permittee.

While the general aim of this policy is to require accountability on behalf of the Permittees for the impacts that their activities have on public roads and infrastructure, there is also an expectation that Public Works must continue to be a willing and able partner with all affected Permittees. To that end, Public Works must continue to accurately share pending road maintenance and construction activities with our partners and allow opportunities for Permittees to complete work prior to these efforts. As part of these efforts, Public Works must continue to schedule regular Utility Coordination meetings with local utility providers, to share information about upcoming projects and activities, continue regular updates to the Capital Improvement Program to provide information on upcoming construction activities and schedules that could impact Permittees, and continue to coordinate and cooperate with Permittees whenever reasonably feasible when both parties have mutual interests.

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## 1. GENERAL

- 11 Authority to Enforce** – The authority to enforce this Policy shall be granted to the Director of Public Works of the County of Tuolumne or their designee. For the purposes of this Policy, this authority includes the Director of Public Works or employees of the Department of Public Works whose duties include administrative oversight or inspection of Utility Encroachment Permit and construction activities. Any deviation from the requirements outlined in this Policy shall be approved by the Director of Public Works.
- 12 Permittee** – For purposes of this Policy, Permittee shall mean the Utility Encroachment Permit applicant and/or the owner of the facilities, or any and all successors in interest to the facilities, for which the permit was issued under the provisions of this Policy.
- 13 Essential Utilities** – For the purposes of this Policy, an essential utility is one that provides an essential service to the public such as electricity, telephone and telecommunications, natural gas, propane, water, or wastewater services. Essential utilities shall be recognized and regulated public utilities.
- 14 Trench** – Trench work includes pavement removal and/or excavation of any nature. Trench repair requirements typically apply to all trench-related activity within the public right of way including installation of new trenches and utilities or maintenance of existing trenches and utilities unless otherwise specified in this Policy.
- 15 Standards and Specifications** – All work within the public Right-of-Way shall be performed in accordance with the current applicable County of Tuolumne and State of California standards and requirements outlined in this Policy.

The County recognizes that Permittees may have adopted standards that provide similar or better protections than provided in this Policy. Under those conditions, the County may choose to accept a proposed Permittee standard. The Director of Public Works reserves the right to approve Permittee standards under the following circumstances:

- The proposed standard has been adopted by the Permittee’s governing body and prepared by a licensed Civil Engineer in the State of California.
- The proposed standards provide adequate protections that perform equal to or better than the standards outlined in this Policy.
- The proposed standard does not result in increased future deficiencies or liabilities on behalf of the Permittee or County.
- The proposed standard does not otherwise create an undue or unreasonable burden on the County.
- Approval of Permittee standard does not relieve the Permittee of other applicable sections of this Policy.

The Director of Public Works reserves the right to summarily reject Permittee

standards if they do not meet or exceed these expectations.

- 16 Encroachment Permit** – Other than emergency repairs, there shall be no work performed in the public Right-of-Way (i.e. not on private property) until a Utility Encroachment Permit (Encroachment Permit or Permit) is issued. Permits for utility trenching, including utility service trenching, within the County Right-of-Way, shall be issued to the respective utility purveyor or a California licensed contractor acting on behalf of the utility purveyor, provided that the contractor meets all County requirements. A copy of this permit, a set of approved plans, and permits required by any other legally constituted authority shall be on site at all times while construction is in progress.

Application for the Encroachment Permit can be obtained from the Public Works office located on the 3<sup>rd</sup> floor of the A.N. Francisco Building, 48 Yaney Avenue, in Sonora. Encroachment Permit applications are also available for download on the County’s website at <https://www.tuolumnecounty.ca.gov>.

The Director of Public Works reserves the right to make any changes or additions to a Permit after issuance if such changes or additions are determined to be necessary for the protection of the roads or for the health and safety of the public.

- 17 Notification** – After securing an Encroachment Permit from the Public Works Department, Permittee shall notify Public Works at (209) 533-5601 a minimum of two full working days, excluding weekends and holidays, prior to starting a project and prior to each subsequent phase of construction. Before work is started, the Permittee shall furnish names and telephone numbers of persons on-call if the County requires emergency work at the jobsite. In addition, the Permittee shall notify Dig Alert/USA at (800) 227-2600 a minimum of two full working days prior to any excavation. In emergencies, immediately contact the County Public Works Department and the assigned County Inspector at (209) 533-5601. These requirements are not designed to limit or prohibit necessary Permittee activities during emergencies that threaten life and/or property. However, the Permittee shall notify Public Works as soon as feasibly possible when an emergency has occurred, and Permittees are required to comply with all other applicable sections of this Policy as practicable under the emergency circumstances.

- 18 Licensed Contractor** – All excavation, repair and restoration in County road Rights-of-Way shall be performed by a contractor with the appropriate license issued by the State of California Contractors License Board or by utility purveyor's regular employees.

- 19 Inspection** – All construction performed in relation to an Encroachment Permit shall be inspected by the County prior to and during installation, except as otherwise determined by the Director of Public Works. Construction performed without inspection may be subject to removal and replacement. If required, the County shall provide an inspector within a reasonable time period in accordance with this Policy and applicable utility encroachment permit general conditions. The entire cost of

removal and replacement shall be borne by the Permittee regardless of whether the installation removed was found to be defective.

- 1.10 Permittee Responsibility** – At a minimum, the Permittee shall comply with all general Encroachment Permit conditions and additional project specific conditions that may be added at the discretion of the Director of Public Works.

In addition to all conditions herein and included in the Encroachment Permit, the Permittee is responsible for safety requirements within the limits of the project. The Permittee or his employees shall abide by all the regulations of any legally constituted authority.

- 1.11 NPDES** – The Permittee is responsible for instituting Best Management Practices (BMP) to comply with National Pollutant Discharge Elimination System (NPDES) requirements when applicable.

- 1.12 SWPPP** – The Permittee is responsible for instituting Best Management Practices (BMP) to comply with Storm Water Pollution Prevention Plan (SWPPP) requirements, and in accordance with the State of California 2009-0009-DWQ Construction General Permit, filing a Notice of Intent (NOI) in the State Water Board’s SMARTS system, when applicable.

- 1.13 Failure To Comply** – For anyone failing to obtain all necessary permits of any legally constituted authority or failing to comply with the provisions of the Encroachment Permit, the Director of Public Works may order to stop work, wholly or in part, until the discrepancies have been resolved. Written approval from the Director of Public Works shall be required before work resumes. Failure to comply may result in revocation of permits and/or other actions in accordance with Section 12.04.080, “Violation: Enforcement” of the Tuolumne County Ordinance Code. The Director of Public Works reserves the right to pursue additional actions that may include (but are not limited to) a formal report issued to the California State License Board (CLSB).

- 1.14 Performance Period** – Within two years from the time the County approves and accepts the Permittee’s completed work for work performed under a blanket encroachment permit, or from the time the County accepts and closes out the encroachment permit for work performed under an individual utility encroachment permit, the County and/or Permittee shall inspect the work to ensure the pavement has not failed<sup>1</sup>. If the trench fails within the performance period, the Permittee will be required to make the necessary repairs as directed by the Director of Public Works.

The Permittee agrees to conduct repairs immediately after receiving notification from the County if the damage represents an immediate threat to public safety. For other non-emergency minor maintenance issues, repairs shall be completed within ten (10)

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<sup>1</sup>Settlement of replaced road surface of 1/2 inch or more within a 6-foot straight edge shall constitute evidence of improperly compacted backfill material. If test results do not meet these standards, the contractor shall be responsible for repairs or replacement to meet these standards. Subsequent settlement of 3/8 inch or greater with a 6-foot straight edge will be cause for repair in the case of settlement, or replacement in the case of unsatisfactory workmanship. Trench settlement that results in water ponding or other drainage issues may also be considered inadequate despite meeting the aforementioned requirements.

business days unless otherwise agreed upon by the Permittee and County. All such repair or restoration work shall be subject to an additional warranty period of two (2) years from the date of the completion of such repair.

**1.15 Trench Failure and Repair** – If the trench fails after the two-year Performance Period, one of two scenarios are possible:

- If the Permittee did not follow the requirements outlined in this Policy, the Permittee will be required to make the necessary repairs as directed by the Director of Public Works.
- If the Permittee has submitted all compaction testing documentation, and if the failure is attributable to the excavation, repaving the excavation, or resulting from a failure of the utility service, the Permittee shall coordinate the proposed trench repair method and schedule repairs with the Director of Public Works.

If Permittee and County disagree on responsibility for trench failures and repairs, the parties will agree to a neutral third-party geotechnical engineering analysis prepared by a Geotechnical Engineer identified in the County's on-call consultant services list and agreed upon by both parties. The County will initially fund the costs for the third-party analysis. The County, Permittee, and Geotechnical Engineer shall all meet and agree upon a testing method and procedures prior to start of work. Work may require test borings, compaction testing, and other procedures to identify fault. Following an analysis, the Geotechnical Engineer will provide documentation identifying the cause of the failure.

If the Permittee is determined to be at fault, the Permittee shall be responsible for repairs in accordance with this Policy and other applicable codes and procedures. The Permittee shall also be responsible for all Geotechnical Engineering service costs as well as additional county administration and inspection costs necessary to carry out this service. Reimbursement by the Permittee to the County shall occur through the blanket utility encroachment permit or another method approved by both parties.

If the County is held at fault, the Permittee shall not be held liable for the damage. All costs for the Geotechnical Engineering services, repairs, or administrative and inspection services shall be borne by the County.

If the Geotechnical Engineer finds fault with both parties, each party shall agree on a pro rata share of the costs of the Geotechnical Engineer and repair costs as identified by the Geotechnical Engineer. The party found greater at fault shall be responsible for conducting the repairs. If both parties are found equally at fault, the County will bear the responsibility to conduct repairs.

If the County is responsible for a pro rata share of repairs conducted by the Permittee, the Permittee shall prepare a cost estimate of the work to be performed (if work performed by Permittee) that includes three written quotes from qualified third-party contractors or another cost estimating procedure



approved by the Director of Public Works. Both parties shall agree upon the scope of work and cost estimate before work may proceed. The County and Permittee may enter into a Memorandum of Understanding, contract, or other form of agreement in accordance with the Tuolumne County Purchasing Guidelines and the Ordinance Code. Failure of the Permittee to follow these procedures shall result in loss of their rights to claim reimbursement.

**1.16 Permittee Acknowledgment** – By acceptance of a Permit, the Permittee agrees that whenever future construction, reconstruction, or maintenance work upon the road may require removal or relocation, the Director of Public Works shall give the Permittee a written demand specifying the place of relocation, or that the installations or encroachment must be removed from the Right-of-Way, and specifying a reasonable time within which the encroachment must be removed or relocated. If the Permittee fails to comply with said instructions, the County may cause the removal or relocation of the encroachment at the expense of the Permittee in accordance with Ordinance Code Sections 12.04 and 1.10.

**1.17 Exceptions** – Exceptions to this Policy are as follows:

- Emergencies that endanger life and/or property.
- Interruption of an Essential Utility service.
- Service for buildings where no other reasonable means of providing service exists.
- Where boring is not feasible due to technical engineering reasons.

If an exception is granted by the Director of Public Works, trenching and restoration efforts shall continue to be governed by this Policy. All reasonable efforts must be made by the Permittee to restore the road to its original condition.

**1.18 Appeals** – The Permittee aggrieved by the refusal of an Encroachment Permit for failure to meet the conditions outlined in this Policy may appeal to the Board of Supervisors in accordance with Ordinance Code Sections 12.04 and 1.10.

## **2. PUBLIC CONVENIENCE AND SAFETY**

**2.1 Traffic and Access** – The Permittee's operation shall cause no unnecessary inconvenience to the public. Unless otherwise approved by the County, the access rights of the public, including adequate bicycle, pedestrian, snow removal, and vehicular access shall be maintained at all times. No road shall be closed without authorization from the Director of Public Works.

An authorized road closure will allow the detour of *through* traffic only. The Permittee shall provide a smooth dust-controlled route that allows unimpeded access for emergency vehicles and residents at all times.

To apply for a road closure authorization, submit the following to the Department of Public Works:

- Written request for the closure with the time schedule included.
- Justification for the road closure authorization.
- Diagram identifying detour route, sign type designation and sign locations.
- A minimum of ten (10) working days is required to process the application.

Road closures and other projects that have a significant impact on traffic may require additional public outreach and notification including (but not limited to):

- Deployment of Changeable Message Signs (CMS) at key locations to inform the public of the road closure, at least one (1) calendar week prior to the start of work.
- Mailing or delivering project information pamphlets or letters to residents affected by the road closure, at least one (1) calendar week prior to the start of work.
- The issuance of a press release informing the public of the road closure at least one (1) calendar week prior to the start of work.

If any part of an installation interferes with the present use of roads by the general public or is in conflict with future or current County improvement projects, that part of the installation shall be removed or relocated in accordance with Sections 12.04 and 1.10 of the Tuolumne County Ordinance Code.

- 22 Traffic Control** – Traffic control shall conform to the current California Manual of Uniform Traffic Control Devices (CA MUTCD).
- 23 Working Hours** – Except for emergency repairs, no work shall be performed within County road Rights-of-Way on weekends, County holidays, before 7 AM or after 6 PM, unless expressly authorized by the Director of Public Works.
- 24 Roadside Clearance** – No above ground utility facility will be allowed in a ditch line or within three feet of the road or road shoulder unless otherwise approved in writing by the Director of Public Works.
- 25 Dewatering Operations** – Release of, or the directing of water onto County roads shall be authorized only by the Director of Public Works, and shall include traffic control, clean up, and erosion control and in accordance with this Policy. If erosion occurs, grading shall be as required to restore site conditions to a condition at or better than the original condition. Discharges shall comply with the National Pollutant Discharge Elimination System, and with Federal law, State law and local ordinance.

### 3. PRESERVATION OF PROPERTY

- 3.1 Protection of Property** – The Permittee shall be responsible for the protection of public and private property adjacent to the work and shall exercise due caution to avoid damage to such property.

The Permittee shall repair or replace all existing improvements or landscaping damaged within the Right-of-Way that were not designated for removal on the approved plans. Such repairs and replacements shall match the original in finish and dimension. Trees, lawns and shrubbery that are not designated for removal on the plans shall be protected from damage or injury. If damaged or removed because of the Permittee's operations, they shall be restored or replaced in as nearly the original condition and location as is reasonably possible as approved by Public Works personnel. The Permittee shall give seven (7) days' notice to occupants or owners of adjacent property to allow them to salvage or relocate plants, trees, fences, sprinklers and other improvements within the Right-of-Way that are designated for removal on the plans and would be destroyed because of the work. A copy of such notice to occupants or owners of adjacent property, or evidence of posting the work site shall be furnished to the Director of Public Works prior to issuance of a Permit.

**32 County Facilities** – Prior to construction, the Permittee may be asked to assess the condition of County facilities within project limits. Photographs, video, and/or written field notes are all acceptable methods of adequate documentation. Any damages to County facilities during construction shall immediately be brought to the attention of the County. The Permittee shall not be responsible for damage caused by others within a project area unless that damage was caused as a result of Permittee activities. Prior to final acceptance of the project, the County will inspect the work to ensure that all County facilities are in the same or better condition as determined by the Director of Public Works. If the County identifies any deficiencies as a result of Permittee activity, the condition assessment documentation shall provide a record of prior condition. Failure to provide condition assessment data could result in Permittee liability.

**33 Survey Monuments** – The Permittee shall locate, protect or tie-out all survey monuments that may be disturbed or destroyed. Survey monuments shall be located, referenced, and a Corner Record filed with the County Surveyor prior to the start of construction. Following completion of the work, the monuments shall be reset in the surface of the new construction, a suitable monument box placed thereon, or permanent witness monuments set as determined by the Director of Public Works and a Corner Record filed with the County Surveyor prior to final project notice of completion issued by the Department of Public Works. All work shall be performed under the direction of a licensed Land Surveyor or registered Civil Engineer authorized to practice Land Surveying, at no expense to the County.

#### **4. PROJECT SITE MAINTENANCE**

**4.1 Surplus Materials** - There shall be no equipment or materials stored or stockpiled in road Rights-of-Way except as approved by the Director of Public Works. Surplus soil, debris, rocks or building materials stored on site during Permit work shall be protected by appropriate signing and barriers, shall be contained, and shall not be placed in such a manner that might result in the blockage of any drainage structure at either the inlet or outlet. At the completion of the Permit work, the previous drainage patterns must be restored.

- 4.2 Cleanup and Dust Control** – Throughout all phases of construction, including suspension of work, the Permittee shall keep the work site clean and free from rubbish and debris. The Permittee shall regularly clean and sweep or use other means necessary to abate dust nuisance and reduce the possibility of debris being carried by runoff into a storm drain, stream or natural drainage course or lake. All soil and construction material shall be removed from the roadway prior to that portion of the road being made available to traffic. BMPs shall be used at all times. When power sweeping is required, a self-contained sweeper that picks up and contains the material shall be used. The use of water resulting in mud on roads or drainage facilities will not be allowed as a substitute for sweeping or other cleaning methods.
- 4.3 Haul Routes** – Haul route approval shall be obtained before beginning work. Approval will be issued within five (5) working days after filing of complete plans, fees and application to Public Works. Plans for haul routes shall specify the deposition site, and evidence shall be provided of all approvals for the deposition site. Care shall be exercised to prevent spillage on, or damage to County roads. Any such spillage or damage shall be removed or repaired immediately. If soil deposited in the public Right-of-Way is not cleaned immediately, the Director of Public Works may require immediate sweeping, the cost of which shall be borne by the Permittee. Dust control and traffic control shall be provided for all hauling operations.
- 4.4 Emergency Response for Unsafe Jobsite Conditions** – The County, at its sole discretion, may elect to perform emergency work at the jobsite as necessary for the protection of the roads or for the health and safety of the public. The cost of all such emergency work at the jobsite shall be borne by the Permittee.

## **5. MATERIALS AND EQUIPMENT**

- 5.1 Traffic Markings and Striping** – Pavement traffic markings and striping shall be painted with two (2) coats on the roadway surface with all-weather, waterborne paint, which conforms to the most current version of the Caltrans Standard Plans and Specifications, unless otherwise approved by the Director of Public Works. All damaged or removed pavement markers shall be replaced in kind. Visual uniformity, as determined by the Director of Public Works, may require that adjacent markings and all markings within an intersection be repainted by the Permittee, at no cost to the County.
- 5.2 Hot Mix Asphalt (HMA)** –HMA paving shall be placed in accordance with Caltrans State Standard Specifications, Section 39. The HMA mix formula shall be prepared by an approved certified independent laboratory under the supervision of a certified asphalt technician. Finish course shall be Type B, 1/2- inch maximum medium PG 64- 16 conforming to Caltrans State Standard Specifications Section 92. HMA shall not be applied when the ambient temperature is lower than 50°F/10°C. The Permittee may also utilize paving asphalt that best matches the specification of existing asphalt. Exceptions shall be approved in writing by the Director of Public Works. Asphalt dike shall be Type A, 3/8-inch maximum. All paving shall be done in accordance with County plans and specifications, and generally accepted best practices.

**53 Backfill Material**– Bedding backfill material shall be specified by utility to a depth of 12 inches above the top of the pipe. Material for backfill from 12 inches above the top of the pipe to subgrade shall be:

- Class II Aggregate Base (AB): For trenches within the roadway and up to three (3) feet beyond the edge of pavement, or equal as approved by the Director of Public Works; or
- Native material: For trenches outside of roadway and greater than three (3) feet beyond the edge of pavement. Select native material shall be free from organic matter, debris, and rock larger than four (4) inches, and shall generally conform to the following gradation:

<u>Sieve Size</u>	<u>% Passing</u>
4"	100
3"	95-100
#4	50-100
#200	0-50

Native material may be used for trench excavations that are within the roadway and up to three (3) feet beyond the edge of pavement with written approval from the Director of Public Works. Native material shall be backfilled and compacted in lifts not exceeding 12 inches in depth and subject to compaction efforts and compaction testing; or

- Two-Sack Concrete Slurry Mixture: For trenches within the roadway and up to three (3) feet beyond the edge of pavement, or equal as approved by the Director of Public Works. Potholes in paved areas shall be backfilled with two-sack slurry above the pipe blanket.

Warning tape and tracer wire shall be required when applicable.

**54 Track Equipment** – Track equipment and outriggers used on paved surfaces shall be equipped with street pads and be operated so as not to mar the surface or cause additional damage to any County facility. If pavement is marred or damaged as a result of the equipment, it shall be repaired in accordance with these conditions and specifications.

**55 Grading Equipment** – Grading of soil or gravel roads or soil or gravel shoulders may be accomplished by any means that will provide a smooth, compacted and uniform surface that varies less than 0.1-foot in 10-feet for line or grade up to 300-feet. Projects greater than 300-feet in length will require that grading be performed with approved motor grader equipment.

**56 Paving Equipment** – Paving six (6) feet wide or wider in a driving lane shall be accomplished by use of a self-propelled vibrating screed paving machine and may be subject to additional requirements. Shoulder paving and miscellaneous paving shall

be installed as approved by the Public Works Inspector.

## 6. TRENCHING

- 61 Cal OSHA** – All excavations shall conform to the requirements of the State of California Division of Occupational Safety and Health as applicable. The Permittee for a street-cut permit shall possess a permit to excavate from the Division of Industrial Safety, Department of Industrial Relations, State of California, and shall submit a copy of said permit with the street cut permit application as applicable.
- 62 Depth of Installation** – Underground installations of wet utilities shall have a minimum cover below finished grade of 36 inches, per applicable standards.
- 63 Separation of Utilities** – Adequate separation shall be maintained between new or replaced underground main lines from existing sewer lines, water lines and drainage culverts. The alignment of new main installations or replacement of existing mains shall be shown in the permit application. Unless specifically authorized by the Director of Public Works:
- The minimum separation for new or replaced main lines running parallel shall be three (3) feet from outside of pipe to outside of pipe.
  - The minimum separation for new or replaced main line crossings shall be one (1) foot clear from outside of pipe to outside of pipe.

County requirements do not supersede State requirements.

- 64 Pavement Removal** – Paving shall be cut for removal and excavated in a manner that does not disturb the adjacent pavement. Paving shall be sawcut for permanent repair as specified in these conditions and specifications. Cold planning, chopping the existing asphalt with an excavator bucket, or jackhammering the existing asphalt will not be allowed in lieu of saw-cutting. Trenching within the wheel path shall be prohibited unless no other options or alternatives exist.
- 65 Open Trench** – The maximum length of open trench (excavation or backfill not resurfaced) allowed during construction within the paved surface or shoulder shall be the distance of construction that can be reasonably installed in a single day. Contractor's personnel shall protect the traveling public from any open trenches at all times. Where pavement has been removed, a minimum of two (2) inches of temporary paving or sufficient temporary paving to match the grade of the travel way (as applicable) shall be placed before that area is made available to traffic. Before leaving the project and at the end of each day, all areas of pavement removal, including sidewalk, drainage courses and driveway approaches, shall be backfilled, compacted and surfaced with temporary asphalt. Upon approval of the Director of Public Works, appropriate areas of the trench may be protected by plate bridging or protective fencing.
- 66 Trench/Plate Bridging** – Plate bridging in the traveled way shall be completed in

accordance with Caltrans Standard Plans and Specifications and approved by the Director of Public Works prior to start of work. Plates placed on roads with gradients or on slope shall be pinned, to prevent plates from sliding under traffic. Pins should be installed in such a way as to not put tires of vehicles at risk.

- 67 Protective Fencing** – When protective fencing is used to secure an area, it shall be constructed of six (6) foot high, pipe framed chain link panels or equal material, secured into position and placed in a manner that there are no gaps larger than three (3) inches. Fencing shall be placed a minimum of four (4) feet from the nearest driving lane and shall be protected by appropriate signing and barriers per Section 2.2, Traffic Control.
- 68 Inclement Weather** – Other than emergency repairs or as directed by the Director of Public Works, there shall be no excavation within the traveled way of County roads during periods of rain, snow, or heavy wind.
- 69 Manhole Construction** – Manholes shall remain below the grading plane until final paving has been completed, and then set flush with the surface. In areas that require snow removal, the manhole frame shall be permanently set not less than 0.25 inches nor more than 0.5 inches below pavement surface. In graded earth shoulders or earth flowline areas, manholes are to be protected in place.
- 610 Buried Cable Installation** – Direct burial of cables will not be permitted within paved road surfaces. Direct burial may be permitted within three (3) feet of the paved travel way and shall not be allowed on the fill side of a mountainous roadway.
- 611 Lateral Trench Installation** – Unless otherwise approved by the Director of Public Works, lateral trench installation for new utilities is allowed at a minimum interval of 150 feet. If multiple lateral trenches are installed for new construction within 150 feet minimum intervals, the entire section between the first and last crosscut shall be repaired in accordance with Table 8.1. Exceptions or modifications to this policy may be approved by the Director of Public Works for existing essential utilities on a case by case basis.

## 7. COMPACTION

- 71 Relative Compaction (RC)** – Asphalt concrete shall be placed in layers not to exceed 0.20 feet and be a minimum of 95% RC. Aggregates placed beneath paved surfaces and within three (3) feet of the edge of pavement shall be compacted to achieve a minimum 95% RC per ASTM D1557 or Caltrans Test Methods CTM 216 and CTM 231. Soils placed beyond three (3) feet of the edge of pavement shall be compacted to achieve a minimum of 90% RC per ASTM D1557 or Caltrans Test Methods CTM 216 and CTM 231.
- 72 Mechanical Compaction** – Backfill shall be placed in horizontal layers of thickness compatible to the material being placed and the type of equipment being used as specified by the Permittee’s soils engineer and in accordance with the Caltrans Standard Specifications. Each layer shall be evenly spread then tamped or rolled until

the specified relative compaction is attained.

**73 Water Densification** – Currently not allowed.

**74 Compaction Testing Frequency and Location** – Trench backfill testing shall be at random 100-foot maximum intervals. After three (3) successful tests the intervals may be increased by 50-foot increments per successive successful tests up to a maximum interval of 250 feet. The Director of Public Works shall determine test locations. One test shall be performed for each four (4) feet of depth or fraction thereof starting at the top of the installation. Twenty percent (20%) of laterals and one hundred percent (100%) of manholes shall be tested independently of the main line. Failure of a compaction test will result in the entire area represented by that test being uniformly reworked and retested at a random location. Additionally, a failed test, at the discretion of the County, may result in more frequent compaction testing to a minimum of 100-foot intervals.

The use of two-sack slurry, if authorized by the Director of Public Works in lieu of compacted materials, shall be exempt from compaction testing requirements.

**75 Test Reports** – Tests shall be certified by a registered California Civil or Geotechnical engineer or testing laboratory in accordance with the State of California test requirements. Test reports shall be listed individually for each trench or for each type and phase of construction. The test report shall include an accurate description of the test location. **Compaction reports shall be submitted to the County’s inspector and approved prior to permanent paving.** If an alternate compaction method has been approved in accordance to these conditions and specifications, alternate test reports specified at time of permit issuance shall be submitted.

## **8. PAVEMENT**

**8.1 Temporary Pavement** – In accordance with Section 6.5, Open Trench, a surface layer of temporary asphalt (“cold patch” or “cutback”) compacted to two (2) inches thick shall be placed and maintained in a smooth and compacted condition at all locations where paving has been removed, before traffic is allowed to pass over. Temporary asphalt shall be removed for permanent repair. Temporary pavements shall be approved by the Director of Public Works.

Temporary pavement must be removed and replaced by permanent pavement within forty-five (45) days of initial installation, and temporary pavement must be maintained in a smooth and sound state until the time of installation of permanent pavement. Any necessary repairs to the temporary pavement must be made immediately, and costs borne by the Permittee.

**8.2 Trench Pavement Repair**– If required by Public Works, trench edges shall be sawcut with straight lines and cold planed to a depth of at least two (2) inches, a minimum of six (6) inches beyond sawcut edge, and shall be parallel and at right angles to the centerline of the road. For roads that have two (2) inches of asphalt paving or less,



alternate methods of t-cut trenching shall be discussed and approved by the Director of Public Works prior to construction.

Damaged paving adjacent to the trench edges shall be sawcut and removed in rectangular sections, and that area included in the paving repair per these conditions and specifications. If the edge of a trench repair is less than three (3) feet from the edge of pavement, the remaining strip of pavement between the trench and edge of pavement shall also be removed and included in the replacement paving.

The repaired section of asphalt shall match the thickness of the existing paving but not less than two (2) inches thick total, flush with the existing paving. For roads with considerable pavement thickness, the Permittee is allowed to install sufficient asphalt to meet or exceed the calculated structural section of the roadway (Traffic Index) in accordance with Chapter 610 "Pavement Engineering Considerations" of the latest Caltrans Highway Design Manual, and Section 11.12.020 of the Tuolumne County Ordinance Code, or as approved by the Director of Public Works. Prior to paving, areas to be joined with asphalt paving shall be cleaned of all soil and foreign material and tacked (100% coverage) with asphaltic emulsion binder.

Permanent paving shall be placed as soon as possible after compaction trench tests have been approved by the County and within forty-five (45) days of completion of the subsurface installation. Deviation from this schedule is only permitted with prior approval by the Director of Public Works.

Any damage to the roadway beyond the trench excavation as a result of negligence by the Permittee or his/her contractor shall be repaired to meet or exceed prior street conditions as determined by the Director of Public Works.

- 8.3 Overlay Paving or Resurfacing**— When a trench is 300 feet or longer, in addition to the permanent pavement requirements listed in Section 8.2, pavement restoration shall be required in accordance with Table 8.1 below. The specific requirement will be determined before the issuance of an Encroachment Permit for the proposed work. Should work start prior to the issuance of an encroachment permit or without prior approval, the Permittee shall not be relieved from the responsibility of restoring the street. Where there are existing surface coats on the existing paving, open graded paving, chip seal or any type of surfacing that has been removed as a result of construction activity, such surfacing and paving shall be replaced in-kind.

When trenching occurs in a road where the existing pavement/structural section has a PCI (Pavement Condition Index) of less than 50, the Permittee shall only be required to restore the trench in accordance with this Policy.

The Director of Public Works, at their discretion, will consider other options or alternatives that address these concerns. Permittees are strongly encouraged to locate trenches in available shoulders or other unpaved areas whenever possible.

- 8.4 Temporary Winter Repairs** – In the event that the Director of Public Works

determines that the finish paving should not be completed per the schedule above due to weather or other factors, the finish paving may be deferred up to three (3) months. The Director of Public Works shall be required to approve any temporary repairs that deviate from these conditions and specifications due to inclement weather. Under no circumstances shall the County allow conditions that are deemed to be unsafe. The Permittee may be required to post a bond or other security to ensure future project completion.

**Table 8.1 – Pavement Restoration Options**

Street Category	Options
A	<p><b>Option 1</b> - Trenching prohibited. Directional boring or jacking may be permitted.</p> <p><b>Option 2</b> - Grind and replace length of trench with 2” overlay over minimum travel lane width.</p> <p><b>Option 3</b> - 1 ½” overlay over entire road surface for length of trench with shoulder backing as appropriate.</p>
B	<p><b>Option 1</b> - Grind and replace length of trench with 2” overlay over minimum travel lane width.</p> <p><b>Option 2</b> - Type II or Type III Microsurface across entire road width for length of trench.</p> <p><b>Option 3</b> - Other approved resurfacing method to conform to current road conditions.</p> <p><b>Option 4</b> - Directional boring or jacking may be permitted.</p>
C	<p><b>Option 1</b> - Trench pavement repair (per Section 8.2) and crack seal trench. No additional pavement restoration required.</p>

**STREET CATEGORIES\***

**A**-Street newly constructed or repaved within 3 years of trench cut application date or PCI of 80 or greater.

**B**-Street in good or fair condition that have not been newly constructed or repaved within 3 years and PCI of less than 80 or greater than 50.

**C**-Street in poor condition, PCI 50 or less.

\*PCI – Per published PCI for County Roads at <https://www.tuolumnecounty.ca.gov>

**8.5 Excessive Pavement Removal** – Removal of six or more separate areas of pavement equal to 15% of the total area of a lane (excluding work done within the paved shoulder) by a Permittee within a continuous 300-foot length of street, shall require pavement restoration per Table 8.1 from the first cut to the last.

**8.6 Cumulative Pavement Removal** –When performing trenching work on various roads, the minimum 300-foot condition is applicable as an aggregate total along any individual road segment or adjacent roads. For example, if the Permittee trenches 200 feet at one location along Road A and then performs an additional 150 feet of trench work at another location along Road A, or adjacent Road B, pavement restoration per Table 8.1 shall apply. Lateral trenches fall under the requirements of Section 8.7.

**8.7 Lateral Trenching Projects** – The installation of multiple lateral trenches constructed as part of a service expansion project shall adhere to the conditions outlined in Table 8.1. Repairs of multiple lateral trenches within 150-foot intervals,

the entire section between the first and last crosscut shall be repaired in accordance with Table 8.1. The requirements of Table 8.1 may be waived or reduced by the Director of Public Works on a case by case basis for repairs of existing lateral trenches in excess of 150-foot intervals or the installation of a single new lateral trench for existing essential utilities.

- 8.8 Driveway Approaches** – Driveway approaches constructed of AC and damaged or affected by utility trenching operations shall be repaired to a condition at or better than the condition prior to trenching operations at the discretion of the Director of Public Works. The Permittee shall be required to conform the driveway approach to the existing roadway at their expense if applicable. Gravel or other unpaved driveway surfaced shall be restored to a condition at or better than their prior condition in accordance with this Policy.
- 8.9 Portland Cement Concrete** – Potholes or trenches in PCC shall be repaired by saw cutting and removed in full panels at the score lines or as directed by the Director of Public Works. A minimum section of five-feet by five-feet shall be removed and replaced in the absence of panels.
- 8.10 Paved Shoulders** – Any asphalt or concrete paved shoulders, outside of the established traveled lanes of a roadway, shall be considered as auxiliary lanes of said roadway. If trench repairs occur in a paved shoulder, the repair options of Table 8.1 shall apply, and the width of the paved shoulder shall be considered its own lane in that context.

## **9. BROADBAND**

- 9.1 Reserved**

## **10. INSURANCE REQUIREMENTS**

- 10.1 Insurance Requirements** - Before issuing the encroachment permit, the qualified licensed contractor shall provide the County with evidence of General Liability Insurance in the amount of at least \$1 million and provide an endorsement naming the COUNTY OF TUOLUMNE as additionally insured in accordance with the Encroachment Permit application requirements.
- 10.2 Warranty** – In accordance with Section 12.04 of the Tuolumne County Ordinance Code, the Permittee may be required to annually file an approved surety bond or other security in a sum fixed by the Director of Public Works as sufficient to reimburse the County for expenses to be incurred in restoring the right-of-way to its former condition.
- 10.3 Maintenance Bond** –The County, at its discretion, may require the posting of a Maintenance Bond or other Security. If applicable, the Permittee shall post a one-year maintenance bond or cash deposit in an amount specified by the Department. In no circumstance shall the Maintenance Bond or cash deposit be less than 10% of the cost of improvements or exceed 100% of the cost of improvements.

- 104 Hold Harmless** – The Permittee shall preserve and hold harmless the County and each officer and employee thereof, from any liability or responsibility for any accident, loss of damage to persons or property happening or occurring as a proximate result of Permittee’s negligence or the negligence of Permittee’s agents, servants, employees or contractors in the design or performance of any work undertaken under any permit granted to Permittee pursuant to the application.
- 105 Applicability** –These conditions and specifications are applicable to roads maintained by Tuolumne County, including roads maintained in County Service Areas (CSAs) or Permanent Road Divisions (PRDs). Nothing in these conditions or specifications prohibits their use on roads outside of the County’s maintenance responsibilities by third parties. The County shall not be responsible for complications or other issues arising from the use of these conditions and specifications by other jurisdictions, Community Service Districts (CSDs), or local road maintenance or homeowner associations. These entities may choose to utilize or adopt this Policy at their own risk.