

ORIGINAL

**CONSTRUCTION RESPONSIBILITY AND REIMBURSEMENT AGREEMENT
BETWEEN THE COUNTY OF EL DORADO AND THE EL DORADO IRRIGATION DISTRICT
FOR THE COACH LANE SEWER LINE REHABILITATION PROJECT
AGMT 11-53203**

The County of El Dorado, a political subdivision of the State of California (hereinafter referred to as "County"), and the El Dorado Irrigation District, a special district created pursuant to State law (hereinafter referred to as "EID"), hereby agree to the following Construction Responsibility and Reimbursement Agreement (hereinafter referred to as "Agreement") terms set forth below.

The Coach Lane EID Sewer Line Rehabilitation Project (the "Project") begins at the intersection of Coach Lane and Rodeo Road and ends approximately 100 feet east of the intersection of Coach Lane and Cameron Park Drive. The existing gravity sewer pipeline is 6 inches in diameter, has various sections of asbestos cement and PVC pipe and is experiencing cracks, holes, and pipe corrosion. In order to reduce service incidences and increase reliability, it is proposed to replace the failing sections of pipe. The project consists of replacing approximately 1,700 feet of the existing pipe and manholes with new 8" and 10" PVC pipe. The Project takes place primarily in the westbound and center turning lanes of Coach Lane.

Coach Lane is a County roadway located in a heavily used commercial area of Cameron Park. The project includes traffic control, driveway access to be maintained for the businesses, day and evening construction hours, and brief sewer service outages.

As a requirement of the Project, EID has applied for and obtained an encroachment permit (the "Permit") from El Dorado County. A copy of the Permit is attached hereto as Exhibit A and incorporated herein by reference. In the event of a conflict between this Agreement and the Permit, the terms of the Permit shall take precedence.

EID is required, as a condition of the Permit, to perform a complete grind, place petromat and apply a two inch asphalt concrete (AC) overlay of the entire width of Coach Lane in the project area. EID's construction bid package separated the complete road width grind and two inch AC overlay into two bid items, one for the westbound and center turning lanes, and one for the east-bound lane.

The County has agreed to reimburse EID for the costs of the aforementioned work in the east-bound lane under the terms and conditions of this Agreement.

A. LIABILITY FOR WORK

Costs shall be allocated between EID and County as follows:

1. As a condition of the Permit, EID has included the following work (hereinafter referred to as the "Overlay Work") in its construction bid package, award documents, and construction contract for the Project:

2" - AC Overlay by the Unit Price per Square Foot. Includes all labor, equipment and materials for grinding, removing and cleaning existing AC

pavement, installing a layer of petromat and a 2" asphalt concrete overlay for the remaining southern portion of the street section for the entire length of the pipeline project, re-striping, and additional traffic control implementation, all per El Dorado County Department of Transportation Standard Specifications.

Except as provided in Sections C-1 and C-2 hereinafter, County and EID agree that County shall be responsible for \$39,960 (Thirty-Nine Thousand Nine Hundred Sixty Dollars) of the actual costs associated with the Overlay Work, inclusive of any "extra work" that is not foreseen at the time the Project was bid and is not anticipated in the bid documents, but must necessarily be performed in order to address conflicts, changed or differing conditions, or otherwise necessary in order to complete the Overlay Work.

2. Upon completion of the Overlay Work, EID shall submit an invoice to County with supporting documentation and the amount of costs then due and owing. County shall make payment of the amount indicated in paragraph one above within thirty (30) calendar days of receiving the invoice, unless the invoice is challenged in accordance with subsection (3) herein below, in which case County shall make payment of that portion of the invoice which is not in dispute within thirty (30) calendar days of receiving the invoice.
3. In the event that County challenges any portion of, or any line item shown on, the invoice from EID, then County shall notify EID of such challenge, the basis therefore, and provide adequate justification for the challenge, within ten (10) calendar days of receiving said invoice. If the payment of, or adjustment to, any amount challenged by County cannot be resolved by the parties within thirty (30) calendar days of notification to EID of the challenged amount, then both parties mutually agree to resolve the dispute in accordance with the dispute resolution provisions set forth in EID's construction contract.
4. While the project is active, the contractor shall provide EID with weekly updates for Progress Schedule General (Critical Path Method). EID will supply County with a copy of these weekly updated schedules

B. Work to be Done

1. Except as provided in Section B-6 below, County is solely responsible for its installed facilities after construction and its acceptance of the facilities.
2. County shall provide one or more inspectors for all work involving, pertaining to, or affecting County facilities to verify construction is completed in accordance with County standards and applicable County standard drawings and technical specifications. In accordance with the Permit, EID shall remain responsible for payment of the actual cost of County inspection, including material testing.
3. EID shall provide County with a set of as-built drawings.
4. EID shall be solely responsible for all items of contract administration for EID's Project, such as surveying and contractor correspondence, except as specified in Sections A-1 and D-2 herein.

5. All Overlay Work, inclusive of all extra work performed, shall be in conformance with all applicable Caltrans and El Dorado County Department of Transportation standards, the Permit, and the plans, details, and specifications for the Project.
6. EID's contractor shall provide written guarantee of all of its work for one (1) year from acceptance by EID. The guarantee shall inure to both County's and EID's benefit.
7. EID shall require that the selected contractor add County, and its officials, employees, agents, and representatives as an additional insured on contractor's general liability insurance policy for the Project.

C. Duty of Cooperation

1. County shall fully cooperate with EID in the timely response to all inquiries, notices, and contractual claims asserted by EID's contractors and subcontractors as they pertain to the Overlay Work. Further, County shall fully cooperate and assist EID in the resolution and/or settlement of all claims from EID's contractor and subcontractors as it relates to the Overlay Work. EID shall be solely responsible for any amounts paid by EID to EID's contractor as a result of the settlement or resolution of said claims.
2. Each party shall notify the other party immediately in writing of any anticipated claim or damage related to activities performed under this Agreement. The parties shall cooperate with each other in the investigation and disposition of any claim arising out of the activities under this Agreement, providing that nothing shall require either party to disclose any documents, records or communications that are protected under the attorney-client privilege.

D. General Provisions.

1. EID's construction contract for the Project shall require the contractor to indemnify and hold harmless and defend, including attorneys fees and expenses, County, its officials, agents, employees, and representatives from and against any and all claims, liability, losses, and/or causes of action which arise or are claimed to arise from the negligence or willful misconduct of the contractor, its subcontractor(s), or the agents, servants or employees of any of them.
2. Except as otherwise provided herein, EID shall be solely responsible for payment of all Project costs, including, but not limited to, mobilization, flagging, traffic control, water and dust pollution control measures, and construction management.
3. EID shall maintain all books, documents, papers, accounting records, and other evidence pertaining to direct construction costs incurred by EID related to the Overlay Work, and shall make such materials available for inspection at EID's offices at reasonable times during this Agreement, the Project construction contract period, and for three (3) years from the date of final payment. In order to provide complete information for an audit, the Project billings must show separate detailed and itemized line items of work performed by EID's contractor.
4. All notices to be given by the parties hereto shall be in writing and served by depositing same in the United States Post Office, postage prepaid and return receipt requested. Notices to County shall be in duplicate and addressed as follows:

To County:

County of El Dorado
Department of Transportation
2441 Headington Drive
Placerville, CA 95667
Attn.: John Kahling,
Deputy Director - Engineering,
Construction Division

With a Copy to:

County of El Dorado
Department of Transportation
2850 Fairlane Court
Placerville, CA 95667
Attn.: Janel Gifford,
Office Engineer

or to such other location as County directs in writing.

Notices to EID shall be in duplicate and shall be addressed as follows:

To EID:

El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667
Attn.: Brian Mueller,
Director of Engineering

With a Copy to:

El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667
Attn.: Elizabeth Wells,
Engineering Manager


or to such other location as EID directs in writing.

5. The County Officer or employee with responsibility for administering this Agreement is John Kahling, Deputy Director - Engineering, Construction Division, Department of Transportation, or successor.
6. The EID Officer or employee with responsibility for administering this Agreement is Elizabeth Wells, Engineering Manager, El Dorado Irrigation District, or successor.
7. The parties to this Agreement represent that the undersigned individuals executing this Agreement on their respective behalf are fully authorized to do so by law or other appropriate instrument and to bind upon said parties to the obligations set forth herein.
8. This Agreement and the attached Exhibits contain all of the terms of agreement between County and EID. All modifications or amendments to this Agreement must be in writing and signed by both parties.
9. Any dispute resolution action arising out of this Agreement, including, but not limited to, litigation, mediation, or arbitration, shall be brought in El Dorado County, California, and shall be resolved in accordance with the laws of the State of California.
10. If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions will continue in full force and effect without being impaired or invalidated in any way.
11. The waiver by either party of any requirements, condition or provision of this Agreement shall not be deemed a waiver of any subsequent breach of that or any other requirement, condition or provision of this Agreement.

12. County and EID understand and agree that this Agreement creates rights and obligations solely between County and EID and is not intended to benefit any other party. No provision of this Agreement shall in any way inure to the benefit of any third-person so as to constitute any such third-person as a third-party beneficiary of this Agreement or any of its items or conditions, or otherwise give rise to any cause of action in any person not a party hereto.

13. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.


Contract Administrator Concurrence:

By: 

John Kahling, P.E.
Deputy Director - Engineering
Construction Division
Department of Transportation

Dated: 05/20/11

Reviewed & Approved:


By: 

EID General Counsel's Office

Dated: 5/20/11


IN WITNESS WHEREOF, the parties have executed this Agreement on the dates indicated below, the latest of which shall be deemed to be the effective date of this Agreement.

-- COUNTY OF EL DORADO --

By: 
James W. Ware, P.E.
Director of Transportation
"COUNTY"

Dated: 5/20/11

-- EL DORADO IRRIGATION DISTRICT --

By: 
Jim Abercrombie
General Manager
"EID"

Dated: 5-23-11

El Dorado County Code – Chapter 12 EXHIBIT A
APPLICATION FOR PERMIT TO ENCROACH ON COUNTY HIGHWAY

Your Job # 10016 Permit # _____ Work Order # _____

Applicant/Permittee: El Dorado Irrigation District

Address: 2890 Mosquito Road, Placerville Email: tsullivan@eid.org

Contact Person: Tim Sullivan Phone: (530) 642-4177

Applicant hereby applies for a permit to perform the following encroachment(s):

****IS THERE A TRAFFIC SIGNAL WITHIN 500 FEET OF THIS PROJECT**** (CIRCLE ONE) **YES** NO

LOCATION & DESCRIPTION OF ENCROACHMENT: Replacement of gravity sewer line from Rodeo Road to 100' east of Coach Lane at Cameron Park Drive Int.

Submit application to:
El Dorado County
Department of Transportation
2850 Fairlane Ct, Placerville, CA 95667
(530) 621- 5941 or 621- 5943 Fax: **621- 2030**

Submit Application Fee of **\$68.00** with this form.
Time & materials for inspection labor costs plus vehicle usage charges will be billed. A deposit may be required.

For, and in consideration of, the granting of said permit, the applicant promises and agrees to comply with all provisions as set forth in the El Dorado County Road Encroachment Code, Ch. 12, the encroachment permit conditions, and as stated below:

INDEMNITY: To the fullest extent of the law, the Permittee shall defend, indemnify and hold the County harmless against and from any and all claims, suits, losses, damages and liability for damages, including attorneys fees and other costs of defense brought for or on account of injuries to or death of any person, including but not limited to, workers and the public, or on account of injuries to or death of County employees, or damage to property, or any economic consequential or special damages which are claimed or which shall in any way arise out of or be connected with Permittee's work, operations or performance hereunder, regardless of the existence or degree of fault or negligence on the part of the County, the Permittee, the Contractor, subcontractors or employee of any of these, except the active, or sole, negligence of the County, its officers and employees, where expressly prescribed by statute.

The duty to indemnify and hold harmless the County specifically includes the duties to defend set forth in Section 2778 of the Civil Code. The insurance obligations of the Permittee, and/or Contractor are separate, independent obligations under the Permit, and the provision of this defense and indemnity are not intended to modify nor should they be construed as modifying or in any way limiting, the insurance obligations set forth in the Permit documents.

GENERAL INSURANCE REQUIREMENTS:

The Permittee shall provide proof of a policy of insurance satisfactory to El Dorado County and documentation evidencing that the Permittee maintains insurance that meets the following requirements:

1. Full Workers' Compensation and Employers' Liability Insurance covering all employees of the Permittee as required by law in the State of California.
2. Commercial General Liability (CGL) Insurance of not less than Two Million Dollars (\$2,000,000.00) combined single limit per occurrence for bodily injury and property damage, including but not limited to endorsements for the following coverage: Premises, personal injury, operations, products and completed operations, blanket contractual, and independent contractors liability. This insurance can consist of a minimum One Million Dollars (\$1,000,000.00) primary layer of CGL and the balance as an excess/umbrella layer, but only if the County is provided with written confirmation that the excess/umbrella layer "follows the form" of the CGL policy.
3. Automobile Liability Insurance of not less than \$1,000,000.00 is required in the event motor vehicles are used by the Permittee in performance of the permit.
4. In the event Permittee is a licensed professional and is performing professional services under this contract, professional liability is required with a limit of liability of not less than One Million Dollars (\$1,000,000.00) per occurrence.

5. Explosion, Collapse and Underground coverage is required when the scope of work includes XCU exposures. For the purpose of this permit, XCU coverage is required.

PROOF OF INSURANCE REQUIREMENTS:

1. Permittee shall furnish proof of coverage satisfactory to El Dorado County as evidence that the insurance required herein is being maintained. The insurance will be issued by an insurance company acceptable to the Risk Manager, or be provided through partial or total self-insurance likewise acceptable to the Risk Manager. Before beginning work the Permittee shall provide the name, address and telephone number of the nearest claims adjusting office of the company which has issued his liability insurance.
2. The County of El Dorado, it's officers, officials, employees and volunteers are included as additional insured, but only insofar as the operations under this agreement are concerned. This provision shall apply to General Liability only. Proof that the County is named additional insured shall be made by providing a certified copy, or other acceptable evidence, of an endorsement to Permittee's insurance policy naming the County additional insured.
3. In the event Permittee cannot provide an occurrence policy, Permittee shall provide insurance covering claims made as a result of performance of this Permit for not less than three (3) years following completion of performance of this permit.
4. Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects to the County, its officers, officials, employees and volunteers; or the Permittee shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

INSURANCE NOTIFICATION REQUIREMENTS:

1. The insurance required herein shall provide that no cancellation or material change in any policy shall become effective except upon thirty (30) days prior written notice to: The County of El Dorado, Attention: Department of Transportation, Subdivision Unit, 2850 Fairlane Ct. – Placerville, CA 95667.
2. Permittee agrees that the insurance required herein shall be in effect at all times during the term of this permit. In the event said insurance coverage expires at any time or times during the term of this contract, Permittee agrees to provide at least thirty (30) days prior to said expiration date, a new certificate of insurance evidencing insurance coverage as provided for herein for not less than the remainder of the term of the contract, or for a period of not less than one (1) year (for an occurrence policy) or three (3) years (for a claims made policy). New certificates of insurance are subject to the approval of the Risk Manager.

ADDITIONAL STANDARDS: Certificate shall meet such additional standards as may be determined by the Transportation Department either independently or in consultation with the Risk Manager, as essential for protection of the County.

COMMENCEMENT OF PERFORMANCE: Permittee shall not commence performance of this Permit unless and until compliance with each and every requirement of the insurance provisions is achieved.

MATERIAL BREACH: Failure of Permittee to maintain the insurance required herein, or to comply with any of the requirements of the insurance provisions, shall constitute a material breach of the entire Permit.

REPORTING PROVISIONS: Any failure to comply with the reporting provisions of the policies shall not affect coverage provided to the County, its officers, officials, employee or volunteers.

PRIMARY COVERAGE: The Permittee's insurance coverage shall be primary insurance as respects the County, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the County, it's officers, officials, employees or volunteers shall be in excess of the Permittee's insurance and shall not contribute with it.


PREMIUM PAYMENTS: The insurance companies shall have no recourse against the County of El Dorado, it's officers, agents, employees or any of them for payments of any premiums or assessments under any policy issued by any insurance company.

PERMITTEE'S OBLIGATIONS: Permittee's indemnity and other obligations shall not be limited by the insurance required herein and shall survive the expiration of this Permit.

PERMITEE AGREES TO THE FOLLOWING:

1. This permit does not grant permission to work across property lines. It is the applicant's responsibility to determine property lines and work with them.
2. The permittee shall be responsible for obtaining all other necessary permits and permissions from affected property owners, public agencies, and others.

I HAVE READ AND AGREE TO ALL THE ABOVE CONDITIONS:



Permittee Signature (If L.P. or Corporation, signature must be attested by Corporate Secretary with a Certified Resolution)

DATE 10/1/10

ATTACHMENT NO. 1

EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION
ATTACHMENT TO PERMIT NO. _____
WORK ORDER NO. _____

1. THE PERMIT

The work shall be performed in conformance with the supplied sketch, the El Dorado County Encroachment Ordinance and Standards, the special conditions of this encroachment permit, and Caltrans Standard Specifications. There will be no changes in the work without written permission from the County. The Encroachment Permit or a copy thereof shall be kept at the site of the work and must be shown to any representative of El Dorado County Department of Transportation (DOT) or any law enforcement officer on demand. **WORK SHALL BE SUSPENDED IF PERMIT IS NOT AT JOB SITE AS PROVIDED.**

2. JOINT TRENCH COORDINATION

Joint trench applicants shall cooperate with the other joint trench utilities (Comcast, PG&E, and AT&T) to share trench space in order that additional street cuts will not be necessary for the next few years. Documentation of this coordination is required.

3. NOTIFICATION

The Permittee shall notify the Department of Transportation 24 hours prior to the following:

- A. Initial start of work (530) 621-5909 or (916) 919-0366.
- B. Restarting work when work has been interrupted (530) 621-5909 or (916) 919-0366.
- C. Any paving. This is so final compaction tests can be scheduled (530) 621-5909 or (916) 919-0366.
- D. Any work within 500' of a signalized intersection requires 96-business hours notice (530) 621-5941 or (530) 621-5943.

4. INSPECTION AND APPROVAL BY DOT

All work shall be subject to inspection and approval by DOT. The permittee shall notify DOT when the work has been completed.

5. PUBLIC CONVENIENCE AND SIGNING

The Permittee, or Permittee's contractor, shall place warning signs and devices and take other safety measures as necessary, including flagmen, to warn persons of the excavation, obstruction and equipment operations to prevent injury to persons or damage to property. The use of flagmen, barricades and construction signing shall conform to the California Manual of Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2003 Edition, as amended for use in California) September 26, 2006, and, to Caltrans Standard Plans T-11, T-12, and T-13 that are attached.

Traffic control measures and working hours will be assessed on a case-by-case basis. In worst case areas with heavy traffic, no work will be allowed during commute times (in some areas that can be from 6:00 AM to 9:00 AM and from 3:00 PM to 9:00 PM). In addition, two through lanes and left turn lanes may be required to be open for use at all times. A traffic control plan may be required before starting work. **If, after work starts, traffic control measures are not satisfactory for existing traffic conditions, then revisions will be necessary.**

The fact that rain or other causes, either within or beyond the control of the Contractor, may force delay of the work that shall in no way relieve the Permittee of his responsibility for maintaining traffic through the project and providing local access as specified herein. At all times there shall be kept on the job such material, force, and equipment as may be necessary to keep roads, shoulders and driveways within the project open to traffic and in good repair, and shall expedite the passage of traffic using such force and equipment as may be necessary.

The approach end of temporary railing (Type K) installed in accordance with the requirements in this section Public Safety and in Section 7-1.09, Public Safety, of the Standard Specifications shall be offset a minimum of 4.6m (15 feet) from the edge of the traffic lane open to public traffic. The temporary railing shall be installed on a skew toward the edge of the traffic lane of not more than 0.3m (one foot) transversely to 3m (10 feet) longitudinally with respect to the edge of the traffic lane. If the 4.6m (15 foot) minimum offset cannot be achieved, the temporary railing shall be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules shall be installed at the approach end of the temporary railing.

Whenever work is performed or vehicles/equipment are operated in the following work areas, the Contractor shall close the adjacent traffic lane unless otherwise provided in these specifications or on the Plans:

<u>Approach speed of public traffic Km/hr (Posted Limit in Miles per Hour)</u>	<u>Work Areas</u>
Over 72 kph (45 mph)	Within 1.8m (6 feet) of traffic lane but not on a traffic lane.
55 to 72 kph (35 to 45 mph)	Within 0.9m (3 feet) of traffic lane but not on a traffic lane.

The lane closure provisions of this section shall not apply if permanent or temporary railing or barrier protects the work area.

When traffic cones or delineators are used to delineate a temporary edge of traffic lane, the line of cones or delineators shall be considered to be the edge of traffic lane; however, the Contractor shall not reduce the width of an existing lane to less than 3m (10 feet) without written approval from the Engineer.

The work shall be done in an expeditious manner so as to cause as little inconvenience to the traveling public as possible. The Permittee, or Permittee's contractor, shall be responsible for maintaining a free and clear travel way for any and all emergency vehicles. Driveways may only be closed after giving residents 24 hours notice in advance of the closure. Driveways may only be

closed during normal work periods. Driveways shall be open for use at night and during other periods when work is not in progress. Road closures, if allowed, require Board of Supervisor approval.

6. EARTHWORK

- A. No blasting shall be permitted within the County right of way without written authorization from DOT.
- B. Where an excavation consists of trenching parallel to the centerline of the road, the total length of open trench shall not exceed 500 feet at any time. All open trenches crossing the travel way or running parallel within six feet of edge of pavement must be backfilled and temporarily patched at the end of each work day. All other open excavations shall be back filled or protected with chain link fence and covered at the end of each work day. Plating shall be required over open trenches in private driveways during working hours.
- A. The cable or pipe shall have a minimum separation of one foot from drainage culverts and other utilities. Compaction must immediately follow the laying of the utility and not more than 1,000 feet shall be backfilled that has not passed compaction before proceeding ahead.
- B. Excavations under the pavement are to be backfilled with controlled low strength material (CLSM), two sack slurry, AB compacted to 95%, or 3" minus per Section 19-3.06 of the State Standard Specifications compacted to 95%.
- C. Backfill within County right of way, off pavement, shall be compacted to 90% or greater.
- D. Backfill within County right of way, in the drivable shoulder area, shall be compacted to 95% or greater.
- E. Controlled low strength material shall consist of a workable mixture of aggregate, cementitious materials and water, and shall conform to the provisions in Section 19-3, Structure Excavation and Backfill, of the Standard Specifications and these special provisions.

When controlled low strength material is used for structure backfill, the width of the excavation shown on the plans may be reduced so that the clear distance between the outside of the pipe and the side of the excavation, on each side of the pipe, is a minimum of 12". This minimum may be reduced to 6" when either the height of cover is less than or equal to 20 feet or the pipe diameter or span is less than 3.5 feet.

Controlled low strength material in new construction shall not be permanently placed higher than the basement soil. For trenches in existing pavements, permanent placement shall be no higher than the bottom of any existing pavement permeable drainage layer. If a drainage layer does not exist, permanent placement in existing pavements shall be no higher than 25 mm below the bottom of the existing asphalt concrete, or no higher than the top of base below the existing Portland cement concrete pavements. The minimum height that controlled low strength material shall be placed, relative to the pipe invert, is 0.5D (D=Diameter) for rigid pipe and 0.7D for flexible pipe.

When controlled low strength material is proposed for use, the Contractor shall submit a mix

design and test data to the Engineer for approval prior to excavating the trench for which controlled low strength material is proposed for use. The test data shall demonstrate that the mix design provides:

1. For pipes having a height of cover of 20 feet or less, a 28-day compressive strength between 345 and 690 kPa (50-100 psi) is required; for height of cover greater than 20 feet, a minimum 28-day compressive strength of 690 kPa is required. Compressive strength shall be determined by ASTM Designation: D4832, Preparation and Testing of Soil-Cement Slurry Test Cylinders.
 2. When controlled low strength material is used as structure backfill for pipe culverts, the sections of pipe culvert in contact with the controlled low strength material shall meet the requirements of Chapter 850 of the Highway Design Manual using the minimum resistivity, pH, chloride content, and sulfate content of the hardened controlled low strength material. Minimum resistivity and pH shall be determined by California Test 422 and the sulfate content shall be determined by California Test 417.
 3. Cement shall be any type of Portland cement conforming to the provisions of ASTM Designation: C 150; or any type of blended hydraulic cement conforming to either ASTM Designation: C 595M or the physical requirements of ASTM Designation: C 1157M. Testing of cement will not be required.
 4. Admixtures may be used in conformance with Section 90-4, Admixtures, of the Standard Specifications. Chemical admixtures containing chlorides as Cl in excess of one percent by mass of admixture, as determined by California Test 415, shall not be used.
- G. Unpaved shoulders shall be returned to a firm, stable conditions, and the disturbed area surfaced with a layer of AB or crushed rock.
- H. Structural backfill for all manholes in streets shall conform to Section 19-3.06 of the State Specs. for grading, S.E., and compaction (95%). The backfill shall be checked for compliance and compaction tests taken every 2-3 feet vertically.

See Sections 37 and 94 of the State Standard Specifications for additional requirements.

7. TEMPORARY STEEL PLATE BRIDGING - WITH A NON-SKID SURFACE

When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a work day, steel plate bridging with a non-skid surface and shoring may be required to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

- A. Steel plates may only be utilized when parallel or perpendicular to the travel way. Directional turns of vehicles on the plates is to be avoided.
- B. Steel Plates used for bridging must extend a minimum of 300 mm (12") beyond the edges of the trench.
- C. Steel plate bridging shall be installed to operate with minimum noise.
- D. An engineer needs to demonstrate that the shoring system can handle soil type and

surcharge loading to support bridging and traffic loads. Use Caltrans Permits Manual – Section 600, Utilities Permits and in particular Section 629 “Trenching and Shoring” and the California Trenching and Shoring Manual as guides for your design.

- E. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates, if plate installation by Method (2) [below] is used.
- F. Bridging shall be secured against displacement by using adjustable cleats, shims or other devices and plates shall be tack welded together.
- G. Signing and warning devices will be required. Flashing barricades, “Bump” signs, and reflective cones may be needed depending on the location of project.

As required by the County, steel plate bridging and shoring shall be installed using either Method (1) or (2) [below]:

Method 1 [For speeds more than 70 Km/hr (45 mph)]: The pavement shall be cold planed to a depth equal to the thickness of the plate and to a width and length equal to the dimensions of the plate.

Method 2 [For speeds 70 Km/hr (45 mph) or less]:

Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of two dowels pre-drilled into the corners of the plate and drilled 50 mm (2") into the pavement. Subsequent plates are butted to each other's. Fine graded asphalt concrete shall be compacted to form ramps, maximum slope 8.5% with a minimum 300 mm (12") taper to cover all edges of the steel plates. When steel plates are removed, the dowel holes in the pavement shall be backfilled with either graded fines of asphalt concrete mix, concrete slurry, or an equivalent slurry satisfactory to the County representative.

The contractor shall be responsible for maintenance of the steel plates, shoring, and asphalt concrete ramps. Unless specifically noted in the provisions of the permit, steel plate bridging should not exceed four (4) consecutive working days in any given week. Backfilling of excavations shall be covered with a minimum 75 mm (3") temporary layer of cold asphalt concrete.

Trench shall be a 12” tee cut, backfilled and paved to a smooth surface immediately after plates are removed. T-grind is acceptable.

The following table shows the required minimal thickness of steel plate bridging required for a given trench width:

TRENCH WIDTH	MINIMUM PLATE THICKNESS
0.3m (1.0')	13 mm (1/2")
0.45 m (1.5')	19 mm (3/4")
0.6 m (2.0')	22 mm (7/8")

0.9 m (3.0')	25 mm (1")
1.2 m (4.0')	32 mm (1 1/4")

Note: For spans greater than four (4) feet, a structural design shall be prepared by a registered civil engineer.

Steel plate bridging shall be steel plate designed for HS20-44 truck loading per Caltrans Bridge Design Specifications Manual. The permittee shall maintain on the steel plate a non-skid surface having a minimum coefficient of friction equivalent to 0.35, as determined by California Test Method 342. If a different test method is used, the permittee may utilize standard test plates with known coefficients of friction available from each Caltrans District Materials Engineer to correlate skid resistance results to California Test Method 342.

Construction signs mounted on 4 X 4 posts shall be used in advance of steel plate bridging.

8. ROADWAY SURFACING AND BASE MATERIALS

When the permit authorizes installation by the open cut method, surfacing and base materials and thickness thereof shall be as specified in the permit.

Temporary repairs to pavements shall be made and maintained upon completion of backfill until permanent repairs are made. Permanent repairs to pavements shall be made within one week of completion of backfill. **Before final trench paving, trenches shall be maintained to a smooth surface with hot mix asphalt concrete on collector roadways and cold mix on minor roadways.** Temporary pavement patches shall be placed and maintained in a smooth riding plane, free of humps or depressions suitable for pedestrian, bicycle, and vehicle traffic.

Pavement: All A.C. Binder will be PG 64-16 (except for AC dike which is to be PG 70-10). All AC Aggregate size and grading will match existing pavement aggregate size and grading, unless otherwise directed by County D.O.T. Thickness of new pavement shall match existing pavement or be a minimum of three inches thick whichever is greater.

Any damage to existing adjacent pavements caused by construction activity will require repair or AC overlay as determined by DOT.

Finish pavement surfacing shall have a straight uniform appearance without numerous jogs and shall be level with the adjacent paving. If the resultant new surfacing is too high it shall be ground and then AC slurried. If it is too low it shall be removed and repaved.

All Driveways and public street intersections shall be restored to their original or better condition. Paved driveways shall have a minimum 4" AB and 2 1/2" AC. Unpaved driveways shall have a minimum 6" AB compacted to 95%.

The paved trench and adjacent pavement surface shall be either slurry or chip sealed. Binder shall be CRS-2H asphaltic emulsion, applied at 0.28-gal. for chip per square yard* when the atmosphere temperature is above 65 degrees F. Chips shall be 1/4" x No.10, applied damp to the binder before it sets or "breaks". Rubber tire rolling shall begin immediately after spreading. On large jobs a standard pneumatic-tired roller shall be used. Loose chips shall be swept off the pavement early next day or within 24 hrs - **Mandatory** * Quantities could vary 0.05 gal/sq. yd.

or more depending on variables.

All areas where apparent water pumping or seepage exists due to disruption of subsurface conditions encountered during excavating in the County right of way shall be addressed and corrected by means of an approved subsurface drainage system.

9. CARE OF DRAINAGE

Roadside ditches, cross culverts and other drainage facilities pertinent to the County roads shall be protected from damage. Those facilities disturbed or damaged shall be returned to their original condition or replaced to the satisfaction of the County inspector.

Trenches entering ditches shall have a minimum cover of 18" from top of pipe to bottom of the lowest ditch draining the road. Trenches entering ditches with a longitudinal grade of 5% or better shall be paved with 6" AB and 2" AC. Aggregate base shall be compacted to 95% or better.

10. OBSTRUCTIONS

Obstructions shall be placed outside of the roadway cross section (pavement, shoulder and roadside ditch) ten feet clear from the edge of pavement, and shall not obstruct corner sight distances or interfere with drainage. Air release valves, splice boxes, etc. shall be placed underground in vaults or manholes.

Valves, blow-off, or any other structure or obstruction shall not be placed in roadside ditch. If they are located between edge of pavement (EP) and ditch, they shall be recessed 3/8" directly adjacent with EP and surrounded with 5' of A.C. Valve boxes shall have a concrete collar placed beneath the final 3" of asphalt concrete.

Service pedestals/risers shall be taken to the property line or taken to just beyond top of cuts and toe of fills, whichever is further from centerline (If slopes are 3:1 or flatter, take to property line).

Utility poles placed in the County right of way shall comply with Standard Plan 120.

11. CLEAN-UP OF RIGHT OF WAY

Upon completion of the work, all debris and material shall be entirely removed and the right of way left in a presentable condition as before work started.

12. LOCATOR WIRE

All runs of non-metallic pipe shall have No. 12 gauge, solid insulated soft-drawn copper wire taped along the top of the pipe. The wire shall be stubbed up inside each valve box and dead end blow-off assembly.

13. HORIZONTAL DIRECTIONAL DRILLING

A. The permittee shall ensure that all drilling fluids are disposed of in a manner acceptable to the appropriate local, state, or federal regulatory agencies.

- B. Restoration of damage to any highway or non-highway facility caused by escaping (frac-out) drilling fluid, or the directional drilling operation, shall be the responsibility of the permittee.
- C. The permittee shall, prior to and upon completion of the directional drill, establish a Survey Grid Line and provide monitoring as outlined in their submitted detailed monitoring plan. Subsurface monitoring points shall be utilized to provide early indications of settlement as large voids may not materialize during drilling due to pavement bridging.
- D. Should pavement heaving or settlement occur, saw cutting and replacement of the asphalt would be the responsibility of the permittee. To prevent future settlement, should the drilling operation be unsuccessful, the permittee shall ensure the backfill of any void(s) with grout or backfilled by other means.
- E. Construction Plan Requirements (to be submitted by contractor):
1. Pipe size and depth (minimum 4' deep for pipes 6" and less)
 2. Location and pitch of entry and exit pits (including test pits or boreholes undertaken during the soil investigation)
 3. Working areas and their approximate size
 4. Proposed pipe fabrication and layout areas
 5. County right-of-way lines, property lines, easement lines
 6. All existing utilities (both horizontal and vertical)
 7. Construction method including diameter of pilot hole, number and size of pre-reams
 8. No materials are to be placed on pavement. Spoils will be loaded directly into trucks.
- F. Prior to beginning project
1. Call "811" to locate underground utilities.
 2. Location of all "USA" identified lines pot holed if within 10' of proposed project line to verify depth of all lines.
 3. Visually check surrounding area for other possible underground utilities not marked (storm drain manholes, fire hydrants, pedestals within the vicinity)
 4. Pre-job meeting, construction schedule, and traffic control plan are required.
 5. Need Certificate of Insurance from contractor prior to any work in County R.O.W.
- G. Drilling Fluid Management Plan (to be submitted by contractor)
1. Submit mix design of drilling fluid
 2. Method of slurry containment
 3. Method of recycling drilling fluid and spoils (if applicable).
 4. Method of transporting drilling fluid and spoils off site.
- H. Safety
1. The drilling unit must be equipped with an electrical strike safety package. The package should include warning sound alarm, grounding mats (if required for that specific rig), and protective gear.
 2. Drilling unit and bore pit hole shall be fenced. All potholes, entry pits, and exit pits are to

be barricaded. An additional condition may occur if the bore pit is closer than 12 feet from the travel lane, K-Rail shall be placed with a 10:1 longitudinal taper. If the leading end of the rail is within 15 feet of the travel way, crash cushions shall be placed.

- I. Notice of Completion Form: Upon completion, send copy of Notice of Completion form (attached) and a Record Drawing profile of job showing location, depth, pitch and length of bore to this office. Clean-up operation must include the site is in the same condition that it was before the job started: clean streets, green grass, no rocks, fluid and/or grease on the ground.

14. EROSION, SEDIMENT AND DUST CONTROL

County, State and Federal air and water quality regulations shall be strictly adhered to.

Fugitive and asbestos dust shall be mitigated in accordance with the County's Rule 223-1 Fugitive Dust-Construction Activities and/or Rule 223-2 Fugitive Dust-Asbestos Hazard Mitigation.

The Permittee shall be responsible for checking and following the most current procedures and regulations of the El Dorado Air Quality Management District (AQMD) prior to beginning project. These are available at: www.co.el-dorado.ca.us/emd/apcd/index.html

Fugitive Dust and/or Asbestos Dust Mitigation Plans if required by AQMD's Construction Project Applicability Flow Chart must be approved by AQMD and submitted to DOT prior to beginning project.

If no Fugitive Dust Plan is required by the AQMD's Construction Project Applicability Flow Chart the project must still comply with the provisions of El Dorado County Rule 223-1.

Permittee shall comply with the provisions of the August 2004 "Storm Water Management Plan (SWMP) for Western El Dorado County", approved by the California Regional Water Control Board (CRWCB) and adopted by the County Board of Supervisors on October 12, 2004. In addition, compliance is required with the Clear Water Act, the Statewide General Permit, the County Grading, Erosion and Sediment Control Ordinance, and the County's SWMP.

Adequate erosion control (Best Management Practices) shall be implemented to prevent sediments and other pollutants from impacting water quality. Adequate erosion and sediment control measures are to be in place prior to any storm event, and in place and in operable condition by October 15. Site inspections must be conducted by the permittee before and after each storm event to identify areas that contribute to erosion and sediment problems or any other pollutant discharges. During each inspection, determine if additional control practices are needed and implement those practices as soon as possible. Maintenance and repair of control measures shall be routinely conducted.

The Permittee shall be responsible for fines, penalties and damages, whether proposed, assessed, or levied against the Permittee or the Department or the Contractor, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Act, by governmental agencies or as a result of citizen suits. Penalties shall also include payments made or costs incurred in settlement for alleged violations of the Permits, the "Storm Water Management Plan for Western El Dorado County" (SWMP), or applicable laws, regulations or requirements. Costs

incurred could include sums spent instead of penalties, in mitigation or to remediate or correct violations.

Complete revegetation and stabilization of all disturbed soils, both within and outside of County rights-of-way, will be accomplished with specified amounts and types of vegetative species, mulch, and fertilizer material.

15. SAFETY AND HEALTH PROVISIONS

In addition to other specifications, definitions and provisions the Permittee is also hereby categorized and designated as the following types of employer for this project.

- **Exposing Employer** – the employer whose employees are exposed to a hazard
- **Creating Employer** – the employer who actually is creating a hazard
- **Controlling Employer** – the employer who is responsible and who has the authority for ensuring that a hazardous condition is corrected
- **Correcting Employer** – the employer who has the responsibility for actually correcting a hazard

The Contractor's Safety Officer(s) shall be certified as a competent person for controlling this project's workplace safety. A Contractor's Safety Officer shall be on the site, at a minimum, each and every day that work is in progress or periodically when work is not active and shall have the authority to correct any safety violation. In addition, the Contractor is required to develop a Safety Program specifically for this project, which will be available on site, at all time, and updated periodically during the project.

16. RELOCATION OF ENCROACHMENT OR FACILITIES - (Section 1463, Streets and Highways Code)

In the event the future improvement of the highway necessitates the relocation of this encroachment, the Permittee (public agency or a public utility having lawful authority to occupy the highways) will relocate the same at its sole expense. In said event, the Road Commissioner shall serve on the Permittee his written demand specifying the place of relocation, and specifying a reasonable time within which the work of relocation must be commenced. The Permittee must commence such relocation within the time specified in said demand and thereafter diligently prosecuted the same to completion.

17. TREES

Any underground work within the drip line of any trees on County right of way or easement shall conform to the following requirements:

- A. No trees shall be removed unless specifically authorized by the County encroachment inspector.
- B. No roots over two inches in diameter shall be cut.
- C. Hand trenching and tunneling will be required when excavation exposes roots two inches in diameter or larger.
- D. Roots two inches in diameter or larger which are exposed to the air shall be kept moist.
- E. Roots two inches in diameter or larger which are accidentally damaged shall be treated with

material approved by the County encroachment inspector.

- F. If roots two inches in diameter or larger are cut or broken, the tree shall be trimmed to compensate for the decreased root system. Such trimming shall be done to the satisfaction of the County encroachment inspector.
- G. Manholes or boring pits shall not be installed within 20 feet of any tree trunk.

18. TREE REMOVALS AND TRIMMING

- A. Job plans should be submitted for tree removal/trimming contracts that are not for routine maintenance.
- B. The County is to be notified 24 hours in advance of any tree trimming or removal. Notification is to include the name of the tree contractor.
- C. Trees are not to be felled on County roads. Stumps that are a hazard for public traffic and snow removal operations will be ground to six inches below grade. A DOT inspector should be contacted for final disposition. Other stumps are to be cut flush with ground.
- D. All wood over six inches in diameter is to be cut into manageable lengths, free of limbs and brush, and neatly stacked in the road right of way. The stacks are to be placed within the right of way where it will not create a hazard or interfere with sight distance. This wood is for public use and is not to be removed by employees of Utilities or tree contractors. Logs and limbs, which are property of adjacent property owner, should be removed right away. An effort should be made to drag these logs into the property and away from the edge or shoulder of the roadway. Any logs that are a traffic hazard are to be moved to a safe location.
- E. Logs, limbs, poles etc., are to be removed from drainage ditches before the day's work is complete.

19. INSPECTION FEE

The Permittee shall pay to the Department the actual cost of the County inspection, including material testing. The actual cost will depend upon the length of the job and the problems encountered. Charges for inspection services will be billed at 30-day intervals and upon completion of the project.

20. INDEMNITY

To the fullest extent of the law, the Permittee shall defend, indemnify and hold the County harmless against and from any and all claims, suits, losses, damages and liability for damages, including attorneys fees and other costs of defense brought for or on account of injuries to or death of any person, including but not limited to, workers and the public, or on account of injuries to or death of County employees, or damage to property, or any economic consequential or special damages which are claimed or which shall in any way arise out of or be connected with Permittee's work, operations or performance hereunder, regardless of the existence or degree of fault or negligence on the part of the County, the Permittee, the Contractor, subcontractors or employee of any of these, except the active, or sole, negligence of the County, its officers and employees, where expressly prescribed by statute.

The duty to indemnify and hold harmless the County specifically includes the duties to defend set forth in Section 2778 of the Civil Code. The insurance obligations of the Permittee, and/or

Contractor are separate, independent obligations under the Permit, and the provision of this defense and indemnity are not intended to modify nor should they be construed as modifying or in any way limiting, the insurance obligations set forth in the Permit documents.

21. INSURANCE

GENERAL INSURANCE REQUIREMENTS

The Permittee or, its contractor shall provide proof of a policy of insurance satisfactory to El Dorado County and documentation evidencing that the Permittee maintains insurance that meets the following requirements:

1. Full Workers Compensation and Employers Liability Insurance covering all employees of the Permittee as required by law in the State of California.
2. Commercial General Liability (CGL) Insurance of not less than Two Million Dollars (\$2,000,000.00) combined single limit per occurrence for bodily injury and property damage, including but not limited to endorsements for the following coverage: Premises, personal injury, operations, products and completed operations, blanket contractual, and independent contractors' liability. This insurance can consist of a minimum One Million Dollars (\$1,000,000.00) primary layer of CGL and the balance as an excess/umbrella layer, but only if the County is provided with written confirmation that the excess/umbrella layer "follows the form" of the CGL policy.
3. Automobile Liability Insurance of not less than \$1,000,000.00 is required in the event motor vehicles are used by the Permittee in performance of the permit.
4. In the event Permittee is a licensed professional and is performing professional services under this contract, professional liability is required with a limit of liability of not less than One Million Dollars (\$1,000,000.00) per occurrence.
5. Explosion, Collapse and Underground coverage is required when the scope of work includes XCU exposures. For the purpose of this permit, XCU coverage is required.

PROOF OF INSURANCE REQUIREMENTS

1. Permittee shall furnish proof of coverage satisfactory to El Dorado County as evidence that the insurance required herein is being maintained. The insurance will be issued by an insurance company acceptable to the Risk Manager, or be provided through partial or total self-insurance likewise acceptable to the Risk Manager. Before beginning work the Permittee shall provide the name, address, and telephone number of the nearest claims adjusting office of the company which has issued his liability insurance.
2. The County of El Dorado, its officers, officials, employees, and volunteers are included as additional insured, but only insofar as the operations under this agreement are concerned. This provision shall apply to General Liability only. Proof that the County is named additional insured shall be made by providing a certified copy, of other acceptable evidence, of an

- endorsement to Permittee's insurance policy naming the County additional insured.
3. In the event Permittee cannot provide an occurrence policy, Permittee shall provide insurance covering claims made as a result of performance of this Permit for not less than three (3) years following completion of performance of this Permit.
 4. Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects to the County, its officers, officials, employees and volunteers; or the Permittee shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

INSURANCE NOTIFICATION REQUIREMENTS

1. The insurance required herein shall provide that no cancellation or material change in any policy shall become effective except upon thirty (30) days prior written notice to the County of El Dorado, Project Manager at the office of the Department of Transportation, 2850 Fairlane Court, Placerville, CA 95667.
2. Permittee agrees that the insurance required herein shall be in effect at all times during the term of this permit. In the event said insurance coverage expires at any time or times during the term of this contract, Permittee agrees to provide at least thirty (30) days prior to said expiration date, a new certificate of insurance evidencing insurance coverage as provided for herein for not less than the remainder of the term of the contract, or for a period of not less than one (1) year for an occurrence policy or three (3) years for a claims made policy. New certificates of insurance are subject to the approval of the Risk Manager.

22. APPEAL PROCESS

Mechanism for appeal process of DOT encroachment permit requirements should include the following layers of appeal review, with at least one more site review made by DOT official to insure consistent application of proper engineering judgment.

Supervising Civil Engineer, Kris Payne, P.E.
Director of Transportation, James W. Ware, P.E.

The governing board of each utility agency has the right to appeal to the Board of Supervisors.

No public utility will commence work encroaching upon the county roadway unless it will comply with the encroachment permit conditions. If the public utility does not agree with the encroachment conditions, it can exercise its appeal rights. No work will begin until there is mutual meeting of minds as evidenced by the encroachment permit conditions.

23. BLASTING

Project blasting shall conform to Sections 7-1.10, "Use of Explosives", and 19-2.03, "Blasting" of the Standard Specifications, and to the following:

1. The Contractor shall make and document a pre-blast survey of properties and improvements located within 100 yards of the blasting site. Pre-blast surveys shall be made no more than 45 days in advance of the planned commencement or resumption of blasting operations. The pre-blast surveys shall, as a minimum, contain the following:
 - a. The names of the property owner and occupants, the address of the property, the date and time of the inspection.
 - b. The name of the person making the inspection.
 - c. A complete description of the structure(s) or other improvement(s).
 - d. A detailed interior inspection with each interior room (including attic and basement spaces) designated and described. All existing conditions of the walls, ceilings and floors such as cracks, holes and separations shall be noted.
 - e. A detailed exterior inspection fully describing the existing conditions of all foundations, walls, roofs, doors and windows and porches.
 - f. A detailed listing, inspection and documentation of existing conditions of garages, outbuildings, sidewalks and driveways.
 - g. A survey of any wells or other private water supplies including total depth and existing water surface levels.

A resurvey of all locations will be required whenever blasting operations are either terminated or suspended for a period in excess of 45 calendar days.

The documentation may consist of either a written report, or a video tape with voice narration. The video tape, if used, must include the date and time displayed on the image.

Copies of the pre-blast inspection reports or video tape documentation shall be given to the Engineer at the time that the blasting plan is submitted.

2. The Contractor shall control project blasting so that vibration, flying rock and air noise do not cause damage to nearby structures, undue annoyance to nearby residents, or danger to employees on the project.
3. The contractor shall submit a plan to the Engineer blasting, including the methods that will be employed to prohibit the generation of visible dust as a result of blasting. No blasting operation, including drilling, shall start until the Engineer has reviewed and this Blasting Control Plan in accordance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Cal Trans Standard Specifications. The Contractor shall allow not less than 2 weeks for the Engineer to complete the review of the Plan. In the event that additional Blasting Control Plans are required, the Contractor shall provide at least 2 weeks for the review of each additional plan. Should the Engineer fail to complete his review within the time allowance and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of this delay in blasting plan review, the delay will be considered a right of way delay as specified in Section 8-1.09, "Right of Way Delays", of the Cal Trans Standard Specifications. Review of the

Contractor's blasting control plan or blasting procedures shall not relieve the Contractor of any of his responsibility under the contract for assuring the complete safety of his operations or for the successful completion of the work in conformity with the requirements of the plans and specifications.

4. The blasting control plan shall provide for limiting the maximum peak particle velocity of any one of the 3 mutually perpendicular components of ground motion in the vertical and horizontal directions, or their resultants, to 50 mm/sec at the nearest structures. It shall provide for limiting air noise levels to 125 dBC, and for controlling fly rock.
5. All property owners included in the pre-blast survey shall be notified at least 48 hours in advance of each blast. The Contractor shall submit to the Engineer a plan for notifying all affected property owners when submitting the Blasting Control Plan.
6. The plan shall indicate the type and method of instrumentation proposed to determine the ground motion particle velocity and air noise. At the Contractor's option, shot designs may be based upon a scaled distance following the chart below. The scaled distance is the ratio of distance in meters from the blast site to the site to be protected to the square root of the maximum explosive weight used for each delay of 9 milliseconds or more.

Distance to site to be protected	Scaled distance factor
0 to 91 meters	22.57 m/kg ^{1/2}
91 to 1524 meters	24.94 m/kg ^{1/2}
1525 or more meters	29.4 m/kg ^{1/2}

The Contractor shall keep accurate records of each blast.

Blasting records shall be available to the Engineer at all times and shall contain the following data as a minimum.

1. Blasting identification by numerical and chronological sequence.
2. Location (referenced to stationing), date and time of blast.
3. Type of material blasted.
4. Number of holes, burden and spacing.
5. Diameter and depth of holes.
6. Height or length of stemming.
7. Types of explosives used.
8. Types of caps used and delay periods used.
9. Total amount of explosives used.
10. Maximum amount of explosives per delay period of 9 milliseconds or greater.
11. Powder factor (kilograms of explosive per cubic meter of material blasted).
12. Method of firing and type of circuit.
13. Weather conditions (including wind direction).
14. Direction and distance to nearest structure of concern.
15. Type and method of instrumentation.
16. Location and placement of instruments.
17. Instrumentation records and calculations for determination of ground motion particle velocity or for charge size based on scaled distance.

18. Measures taken to limit air noise and fly rock.
19. Any unusual circumstances or occurrences during blast.
20. Name of Contractor.
21. Name and signature of responsible blaster.

Blasting guards in sufficient numbers to assure that people, property and improvements will not be endangered shall be stationed around the blasting area during blasting operations.

Blasting operations may be suspended by the Engineer for any of the following:

1. Safety precautions taken are inadequate.
2. Ground motion particle velocity or air noise exceeds the limits specified.
3. Blasting Control Plans have not been approved.
4. Required records are not being kept.

Suspension of blasting operations shall in no way relieve the Contractor of his responsibilities under the terms of this contract. Blasting operations shall not resume until modifications have been made to correct the conditions that resulted in the suspension.

Blasting complaints shall be accurately recorded by the Contractor as to complainant, address, date, time, nature of the complainant, name of person receiving the complain, the complaint investigation conducted, and the disposition of the complaint. Complaint records shall be available to the Engineer at all times.

Full compensation for per-blast survey in accordance with the plans, these Special Provisions, and as directed by the Engineer including all labor, materials, tools, equipment, and incidentals shall be considered as included in the contract lump sum price paid for "Pre-blast Survey" and no additional compensation will be allowed therefore.

Blasting that necessitates the closure of major collector roads shall be performed only Saturday or Sunday mornings between 6:00 a.m. and 8:00 a.m. The Contractor will be required to submit a traffic control plan to the Engineer for approval. All Cal-OSHA requirements will be strictly enforced, including but not limited to a pre-blast on site meeting with Cal-OSHA representatives and approval of an alternate Explosive Loading Area Safety Plan.

Visible dust shall not be permitted as a result of blasting. Significant stemming of core holes may have to be utilized to eliminate dust from blasting. Dust control for blasting shall be included in the unit price per cubic meter paid for Roadway Excavation. The payment method described in the section "Dust Control" located elsewhere in these special provisions shall not apply for preventing the generation of dust caused by blasting.



CONSTRUCTION UNIT:
2441 Headington Road
Placerville CA 95667
Phone: (530) 642-4988
Fax: (530) 642-4936

James W. Ware P.E.
Director of Transportation

Internet Web Site:
<http://co.el-dorado.ca.us/dot>

MAIN OFFICE:
2850 Fairlane Court
Placerville CA 95667
Phone: (530) 621-5941
Fax: (530) 621-2030



NOTICE OF COMPLETION

Permittee: _____

Location: _____

Permit Number: _____

Work Order Number: _____

**This will inform you that all work authorized by the
above numbered permit was completed on:**

Date: _____ Signature: _____

UPON COMPLETION OF WORK AUTHORIZED, ABOVE
PERMITTEE SHALL PROVIDE INFORMATION INDICATED AND
RETURN TO:

**El Dorado County - Department of Transportation
(Land Development & Discretionary Review Unit)**

Sheri Woodford
2850 Fairlane Ct.
Placerville, CA 95667
(530) 621-5941 - Fax (530) 621-2030

NOTES:

1. POLES MAY BE LOCATED AT THE TOE OF FILLS WHICH ARE MORE THAN 4 FEET IN HEIGHT. POLES SHOULD EXTEND TO NATIVE GROUND WHERE PRACTICAL.
2. POLES MAY BE LOCATED ON CUT OR FILL SLOPES WHEN THE ELEVATION OF THEIR BASE IS 4 FEET ABOVE OR BELOW THE EDGE OF ROADWAY.
3. POLES SHOULD BE LOCATED AS FAR AS PRACTICAL FROM THE ROADWAY AND BEYOND THE SHOULDER & DITCH AREA, BUT MUST BE AT LEAST 6 FEET FROM THE EDGE OF ROADWAY, AND 18 FEET PREFERRED.
4. POLES MAY BE LOCATED CLOSER TO THE ROADWAY IF MOTORISTS ARE PROTECTED FROM POLES BY METAL BEAR GUARD RAILING.
5. POLES AND GUYS MAY NOT BE LOCATED ON THE ROADWAY OR IN THE ROADSIDE DITCH OR DRIVEABLE SHOULDER.
6. NO POLES WILL BE LOCATED WITHIN ANY RADIUS PORTION OF A DRIVEWAY CONNECTION OR ROADWAY.

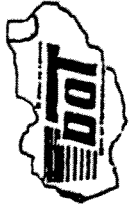
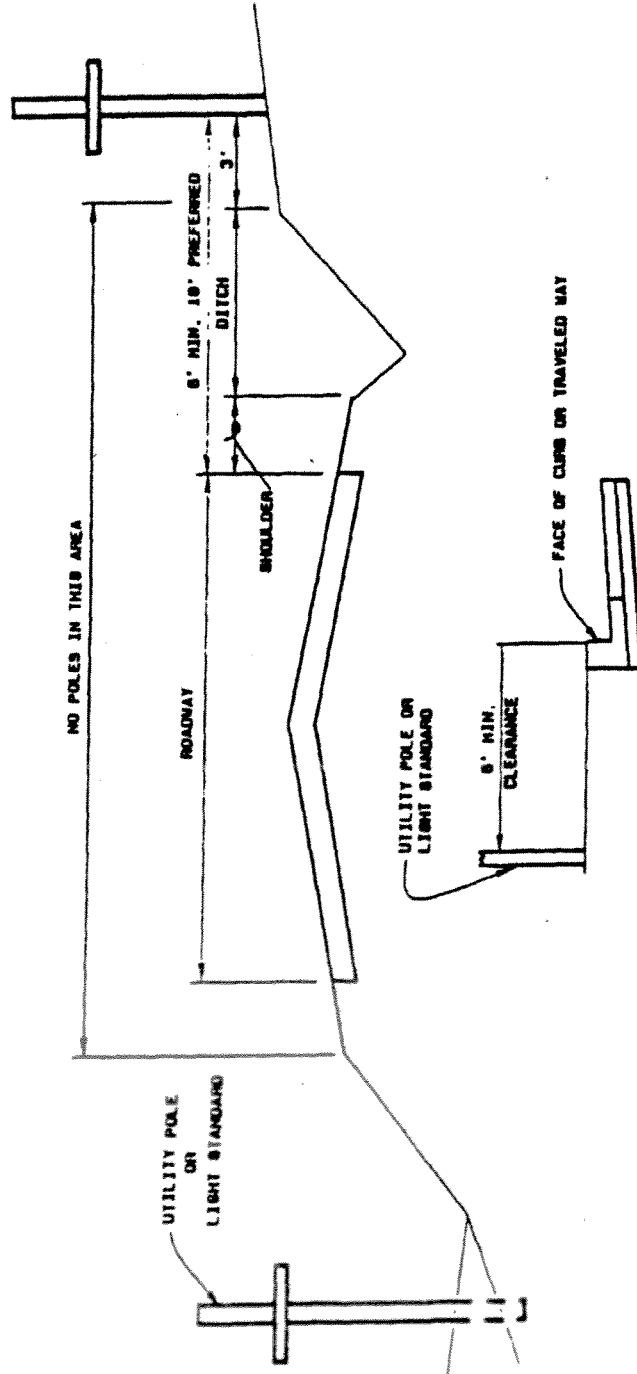
NOT TO SCALE

STD. PLAN

120

UTILITY POLE LOCATIONS

R/V
WHEN APPLICABLE



EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS

APPROVED: *Scott Chubb*
DIRECTOR OF TRANSPORTATION
David P. Payne C3327
SENIOR CIVIL ENGINEER P.E. NO.

GENERATED	REVISIONS	APPROVED
NOV. 12/30/89		
DESIGNED: TMA		
DRAWN: JM/SM/BE		
CHECKED: SKP		

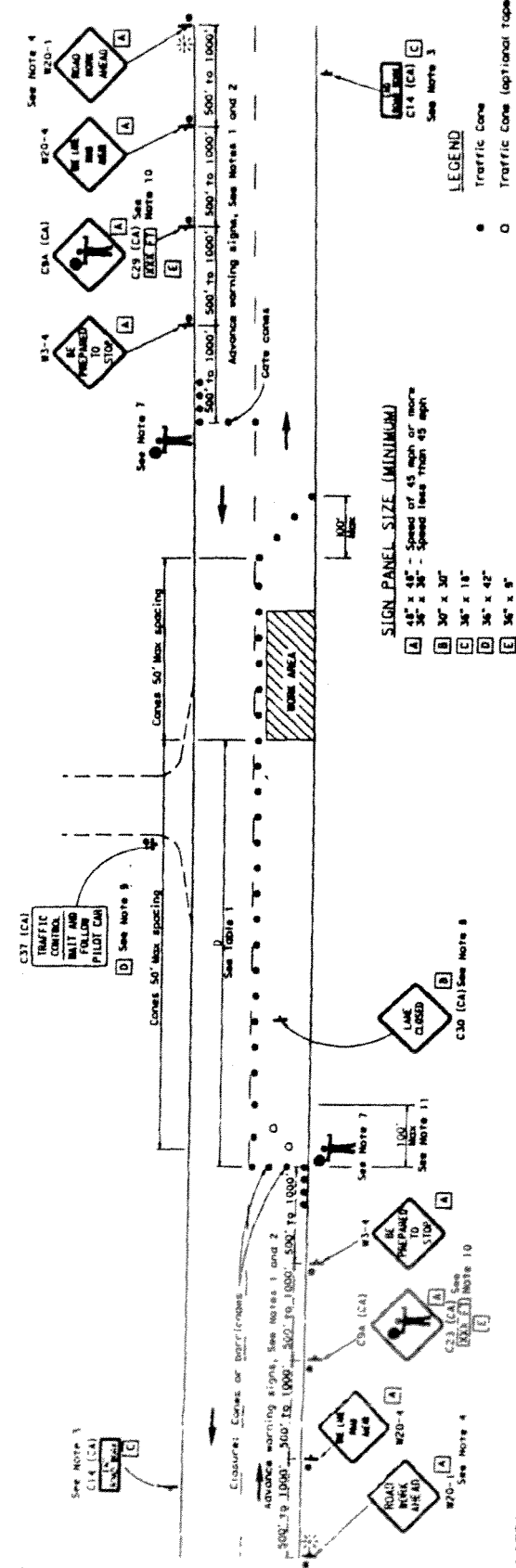
DATE: COUNTY: PROJECT: SHEET: OF: SCALE: 1"=40'

DESIGNED BY: CHECKED BY: DATE: 05/11/2006

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



NOTE 1: Where approach speeds are low, advance warning signs may be placed at 300' spacing, and closer in urban areas.

NOTE 2: Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime in size and spacing shall be at least 18" x 18" in color. Flashing beacons shall face rearward. Locations indicated for lane closure during hours of operation.

NOTE 3: A C14 (CA) "NO ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.

NOTE 4: If the W20-1 sign would follow within 2000' of a streetlight, sign for the first advance warning sign. WILES, use a W20-4 sign.

NOTE 5: All cones used for lane closures during the hours of operation shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.

NOTE 6: Portable delineators, placed at one-half the spacing between traffic cones, may be used instead of cones for daytime closures only.

NOTE 7: Additional advance flaggers may be required. Flagger throughout extended work areas. They are optional if the work area is visible from the flagger station.

NOTE 8: When a pilot car is used, place a C37 (CA) "TRAFFIC CONTROL - PILOT CAR" sign at all intersections within or at all times. Sign shall be clean and visible at all times.

NOTE 9: An optional C29 (CA) sign may be placed below the C30 (CA) sign.

NOTE 10: Traffic cones or barricades may be placed on the optional taper as shown, barricades shall be type 4, B or III.

LEGEND

- Traffic Cone
- Traffic Cone (optional taper)
- ↑ Temporary Sign
- Direction of Travel
- ⊛ Portable Flashing Beacon
- ⚡ Flagger

TABLE 1

Approach Speed	Minimum D	Downgrade
45 mph	30	33
35	25	27
25 and below	15	15

SIGN PANEL SIZE (MINIMUM)

A	48" x 48"	Speed of 45 mph or more
B	36" x 36"	Speed less than 45 mph
C	36" x 18"	
D	36" x 42"	
E	36" x 9"	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

T13

LEGEND

- Traffic Cone
- ↑ Temporary Sign
- Direction of Travel
- Fluorescent Arrow Sign (FAS)
- FAS Support or Trailer
- ☀ Portable Flashing Beacon

TABLE 1

Approach Speed	Minimum Spacing of cones along taper
20 and below	80
25	125
30	180
35	245
40	320
45	440
Over 50	600

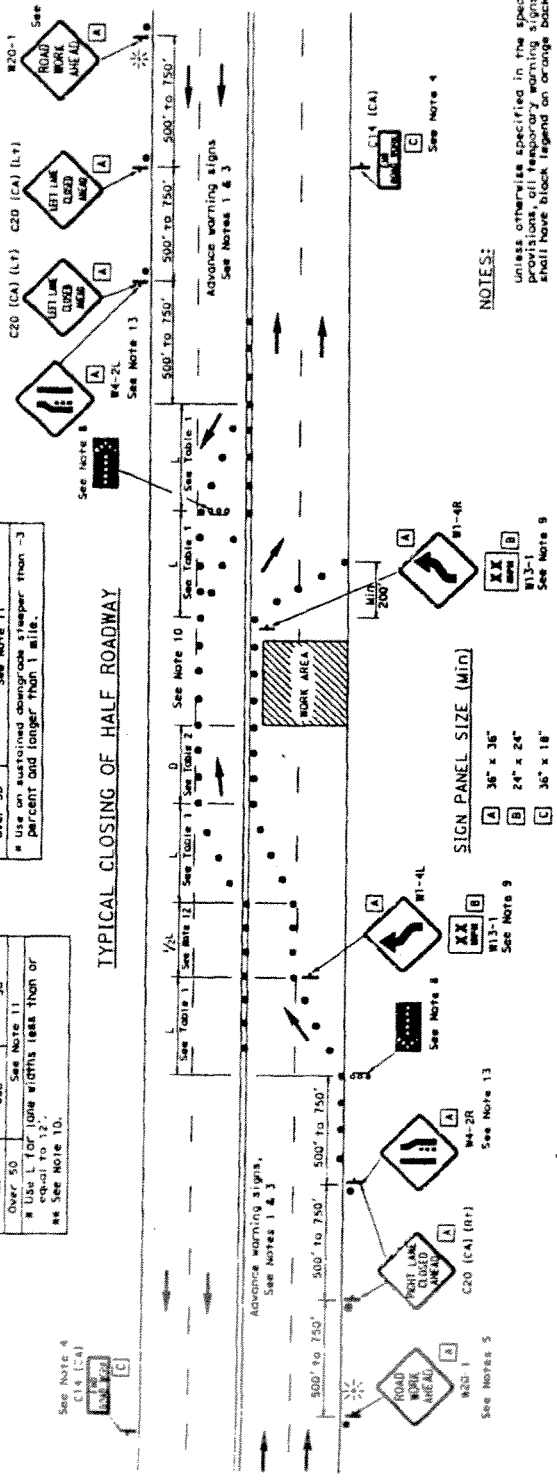
* Use L for lane widths less than or equal to 12'.
** See Note 10.

TABLE 2

Approach Speed	Minimum D	Downgrade
25 and below	155	185
30	200	215
35	250	271
40	305	315
45	360	378
Over 50	425	446

* Use on unclassified downgrade steeper than 3 percent and longer than 1 mile.
** See Note 11.

TYPICAL CLOSING OF HALF ROADWAY




NOTES:

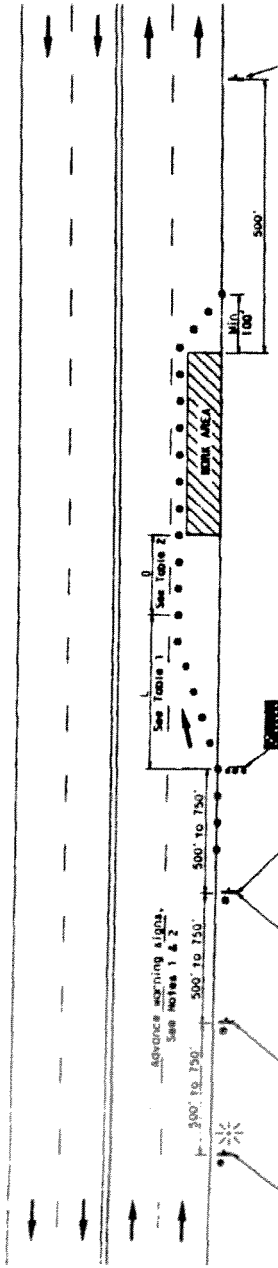
Unless otherwise specified in the special provisions, temporary warning signs shall have black legend on orange background. California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

1. Where approach speeds are low, advance warning signs may be placed at 300' spacing and placed closer in urban areas.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices during the closure unless otherwise directed by the Engineer.
3. Each advance warning sign in each direction shall be equipped with at least two flashing red arrows. The sign shall be at least 16" x 16" in size and shall be fluorescent red-orange in color. Flashing arrows shall be placed at the locations indicated for lane closure during hours of darkness.
4. C14 (CA) "NO ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work zone is obvious, or ends within a larger project's limits.
5. If the W20-1 sign would follow within 200' of a station, W20-1 (CA) sign shall be used NEXT to W20-1 (CA) sign for the first advance warning sign.
6. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
7. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
8. Flashing arrow signs shall be either Type I or Type II.
9. Advisory speed sign will be determined by the Engineer. The W13-1 sign will not be required when advisory speed is more than the posted or maximum speed limit.
10. The maximum spacing between cones along a taper shall be 50' and along a taper shall be approximately as shown in Table 1.
11. For approach speeds over 50 mph, use the Traffic Control System for Lane Closure On Multilane Conventional Highways Plan for lane closure details and requirements.
12. Unless otherwise specified in the special provisions, the W13-1 sign shall be used when the two (L) lane closure tapers shall be used.
13. When specified in the special provisions, a W4-2 sign shall be used in conjunction with the C20 (CA) "RIGHT (LEFT) LANE CLOSED AHEAD" sign.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
FOR LANE CLOSURE ON
MULTILANE CONVENTIONAL
HIGHWAYS**
NO SCALE

DIST. COUNTY ROUTE STATE PROJECT SHEET NO. DATE

 MAY 1, 2008
 Jeffrey J. Cameron
 REGISTERED CIVIL ENGINEER
 No. 10000 State of California
 Expires 12/31/08
 State of California Department of Transportation
 12015 E. Colton Road, Suite 100, Colton, CA 95761
 Tel: 951-261-1600 Fax: 951-261-1601

TYPICAL LANE CLOSURE



NOTES:
 Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background. California codes are designated by (CA). Otherwise, Federal (FHWA) codes are shown.

LEGEND

- Traffic Cone
- ↑ Temporary Sign
- Direction of Travel
- ↔ Flashing Arrow Sign (FAS)
- ⊞ FAS Support or Trailer
- ⊛ Portable Flashing Beacon

SIGN PANEL SIZE (Min)
 A 36" x 36"
 B 36" x 18"

TABLE 2

Approach Speed mph	Minimum D		Downgrade Minimum D ft	
	ff	ff	ff	ff
25 and below	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
Over 50	50	425	466	474

* Use an additional downgrade taper when -3 percent and longer than 1 mile.
 See Note 9

TABLE 1

Approach Speed mph	L	Minimum spacing of cones along taper ft	See Max spacing of cones along taper
20 and below	80	20	20
25	125	25	25
30	180	30	30
35	245	35	35
40	320	40	40
45	540	45	45
Over 50	600	50	50

* Use L for lane widths less than or equal to 12'.
 See Note 8.

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300' spacing and placed closer in urban areas.
2. Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 18" x 18" in size and shall be fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure within a larger project's vicinity.
4. If the W20-1 sign would follow within 2000' of a STOP sign, or a C11 (CA) "ROAD WORK NEXT AHEAD" sign, or a C20 (CA) sign for the first advance warning sign.
5. All cones used for lane closure during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at or near the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Flashing arrow sign shall be either Type I or Type II.
8. The minimum spacing between cones along a tangent shall be 50' and along a taper shall be approximately as shown in Table 1.
9. For approach speeds over 50 mph, use the Traffic Control System for Lane Closure on all approaches to the work area. See the design details and requirements.
10. When specified in the special provisions, a "ROAD WORK AHEAD" sign shall be used in place of the C20 (CA) "ROAD WORK AHEAD" sign.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**TRAFFIC CONTROL SYSTEM
 FOR LANE CLOSURE ON
 MULTILANE CONVENTIONAL
 HIGHWAYS**

NO SCALE

T11