

DEPARTMENT OF TRANSPORTATION

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August 25, 2003

04-Mrn-1-13.0, 17.6
04-1S0224
ACSTP-35L0(004)E

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in MARIN COUNTY NEAR STINSON BEACH AT 2.0 KM SOUTH OF PANORAMIC HIGHWAY AND AT 3.5 KM NORTH OF MUIR WOODS ROAD.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on September 3, 2003.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions, and the Proposal and Contract.

Project Plan Sheets 1, 23, 24, 25, 29, 30 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 30A, 30B, 30C are added. Half-sized copies of the added sheets are attached for addition to the project plans.

Project Plan Sheet 26 is deleted.

In the Notice to Contractors and Special Provisions book, Standard Plans T7, T10, T17, ES-1A, ES-1B and ES-7B are added to the List and T11 is deleted.

In the Special Provisions, Section 10-1-.01, "ORDER OF WORK," the first sentence of the tenth paragraph is replaced with the following:

"At the end of each working day if a difference in excess of 0.046-meter exists between the elevation of the existing pavement and the elevation of excavations within 2.4 m right of the traveled way, material shall be placed and compacted against the vertical cuts adjacent to the traveled way."

In the Special Provisions, Section 10-1.10, "CONSTRUCTION AREA TRAFFIC CONTROL DEVICES," the eighth paragraph is replaced with the following:

"Full compensation for providing self-certification for crashworthiness of Category 1 traffic control devices and for providing a list of Category 2 devices used on the project and labeling Category 2 devices as specified shall be considered as included in the prices paid for the various contract items of work requiring the use of the Category 1 or Category 2 traffic control devices and no additional compensation will be allowed therefor."

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In the Special Provisions, Section 10-1.12, "MAINTAINING TRAFFIC," the fifth paragraph is revised as follows:

"On Route 1, a portable changeable message sign shall be placed for lane closures in advance of the first warning sign as shown on the plans. Where advance warning signs in both directions are required, a portable changeable message sign shall be placed in advance of the first warning sign, for each direction of travel."

In the Special Provisions, Section 10-1.12, "MAINTAINING TRAFFIC," Chart No. 1 is replaced as attached.

In the Special Provisions, Section 10-1.16, "BARRICADE," is deleted.

In the Special Provisions, Section 10-1.17, "CHANNELIZER," is deleted.

In the Special Provisions, Section 10-1.18, "PORTABLE CHANGEABLE MESSAGE SIGN," is replaced as attached.

In the Special Provisions, Section 10-1.18A, "TEMPORARY SIGNAL SYSTEM," is added after Section 10-1.18, "PORTABLE CHANGEABLE MESSAGE SIGN," as attached.

In the Special Provisions, Section 10-1.18B, "TEMPORARY SOLAR FLASHING BEACON SYSTEM," is added after Section 10-1.18A, "TEMPORARY SIGNAL SYSTEM," as attached.

In the Special Provisions, Section 10-1.23, "LIGHTWEIGHT EMBANKMENT MATERIAL (EPS BLOCK)," is replaced as attached.

In the Special Provisions, Section 10-1.24, "GEOMEMBRANE (GASOLINE RESISTANT)," is replaced as attached.

In the Proposal and Contract, the Engineer's Estimate Item 12 is revised, Items 48 and 49 are added and Items 8, 9 and 47 are deleted as attached.

To Proposal and Contract book holders:

Replace pages 3 and 5 of the Engineer's Estimate in the Proposal with the attached revised pages 3 and 5 of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

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This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it. A copy of this addendum and the modified wage rates are available for the contractor's use on the Internet Site:

http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief
Office of Plans, Specifications & Estimates
Office Engineer

Attachments

**Chart 1
Two-Lane Conventional Highway Lane Requirements**

Direction: Northbound/Southbound Locations 1 & 2: 04-Mrn-1-KP 12.9/13.12 & 17.65/17.68

| FROM HOUR TO HOUR | a.m. | | | | | | | | | | | | p.m. | | | | | | | | | | | |
|-------------------------------------|------|---|---|---|---|---|---|---|---|---|----|----|------|---|---|---|---|---|---|---|---|---|----|----|
| | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Mondays through Thursdays | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| Fridays | R | R | R | R | R | R | R | R | R | R | R | R | | | | | | | | | | | | |
| Saturdays | | | | | | | | | | | | | | | | | | | | | | | | |
| Sundays | | | | | | | | | | | | | | | | | | | | | | | | |
| Day before designated legal holiday | R | R | R | R | R | R | R | R | R | R | R | R | | | | | | | | | | | | |
| Designated legal holidays | | | | | | | | | | | | | | | | | | | | | | | | |

Legend:

- A minimum of one paved traffic lane, not less than 3.0 m wide, shall be open for use by public traffic. (Reversing Control).
- No closure allowed.

REMARKS:

- 1- Maximum length of one-way traffic control shall be 150 meters.
- 2- Public traffic should be stopped for periods not to exceed five minutes.

10-1.18 PORTABLE CHANGEABLE MESSAGE SIGN

Portable changeable message signs shall be furnished, placed, operated, and maintained during each lane closure at those locations approved by the Engineer or where designated by the Engineer in conformance with the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications and these special provisions.

Portable changeable message signs will be paid for on a lump sum price basis.

The contract lump sum price paid for portable changeable message sign shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all work involved in furnishing, placing, operating, maintaining, repairing, replacing, changing messages daily as directed by the Engineer, transporting from location to location, and removing the portable changeable message signs complete in place as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Attention is directed to "Maintaining Traffic" of these special provisions regarding the use of the portable changeable message signs.

10-1.18A TEMPORARY SIGNAL SYSTEM

The temporary signal system (TSS) shall consist of installing and maintaining temporary traffic signal and lighting for traffic control in conformance with the details shown on the plan entitled "Temporary Signal System," the provisions in "Maintaining Traffic" of these special provisions, the provisions in Section 86, "Signals, Lighting and Electrical Systems," of the Standard Specifications, and these special provisions.

The TSS shall be portable type and shall consist of two signal assemblies (master and slave) mounted on separate trailers. Each trailer mounted assembly shall be equipped with batteries, photovoltaic panels, 300 mm light emitting diode (LED) signal heads, solid state signal control conflict monitoring system, and communication system.

The batteries shall be the heavy duty type and provide over 12 days continuous operation without input from the solar photovoltaic panels. The photovoltaic panels shall have tilt and rotate adjustments to maximize solar energy collection.

The provisions in this section shall not relieve the Contractor from the responsibility to provide the additional devices or take the measures as may be necessary to conform to the provisions in Section 7-1.09, "Public Safety," of the Standard Specifications.

Other materials and equipment for a temporary signal system including, but not limited to signal heads, mast arms, luminaires, wood poles, conductors, and hardware shall be furnished by the Contractor.

Materials and equipment to be used in the temporary signal system shall be either new or used, suitable for the intended use.

Each signal face shall be oriented to be clearly visible to traffic approaching from the direction which the signal is intended to control.

OPERATION

Temporary signal system shall operate at nominal 120 V(ac). Lighting shall operate at 120 V(ac) and 200 W HPS.

The TSS shall have electro-hydraulic lift controls for the mast arm and signal arm.

The TSS shall be capable of operating under manual or automatic control and each unit shall be self contained.

The TSS shall have three manual modes of operation: Master green, slave green and all red. The control panel shall provide the user with visual status of the entire system and fault description. The TSS shall provide user selectable solid red which will be activated in default condition. The TSS shall have controls to operate in either in fixed time or vehicle detection mode.

Unless otherwise directed by the Engineer, the system shall be operated on a continuous 24-hour basis except for the periods when it is necessary to control traffic by flaggers.

Timing of the temporary signal system will be performed by the Contractor under the supervision of State forces. A minimum of two State employees shall be trained in the operation of the temporary traffic system.

MAINTAINING TEMPORARY SIGNAL SYSTEM

Maintaining the temporary signal system shall be the sole responsibility of the Contractor.

If components in the temporary signal system are damaged, displaced or cease to operate or function as specified, from any cause during the progress of the work, the Contractor shall immediately repair the components to the original condition or replace the components and shall restore the components to the original location. Components shall include signs, generator, portable lighting and signal equipment.

In the event the temporary signal system is out of operation, for any reason, the Contractor shall provide flaggers, at the Contractor's expense, to maintain traffic control until the traffic signals are returned to service.

CONDUCTORS AND WIRING

Conductors shall be the types specified in Section 86-2.08, "Conductors," of the Standard Specifications or shall be Type UF cable of the size and number of conductors shown on the plans. Minimum conductor size shall be No. 12.

Conductors to be placed outside of paved areas shall be placed by one of the following methods:

- A. Direct burial method with Type UF cable installed at a minimum depth of 300 mm below grade.
- B. Suspended from wood poles with a minimum clearance at any point of 3 m.

BONDING AND GROUNDING

Electrical equipment shall be mechanically and electrically secure to form a continuous system effectively grounded by the grounding conductor.

Generator neutral grounding shall conform to the provisions for multiple service points in Section 86-2.10, "Bonding and Grounding," of the Standard Specifications.

SERVICE

A battery and photovoltaic system shall be used to power the temporary signal system.
A generator system shall be used to power the temporary portable lighting.
An additional generator shall be used as a back up at each of the temporary signal trailer locations.
The back up generator may be use to energize the temporary signal system or the portable lighting.

GENERATOR

Generators shall be 120-V, 60 Hz, 2.5 kW minimum, continuous duty type. Generators may be powered by gasoline, LPG or diesel engines operating at approximately 1800 revolutions per minute. Engines shall be provided with automatic oil feed. Generator system shall be equipped to provide automatic start-stop operation, with 12-V starting system. Generator output circuit shall have overcurrent protection with a maximum setting of 25 A or as shown on the plans.

Fuel storage shall be sufficient for periods of time during which the generator system will be operated unattended.
Engines shall be equipped with approved spark arresters.

SALVAGING SIGNAL SYSTEM

Other materials and equipment shall become the property of the Contractor and shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Materials Outside the Highway Right of Way," of the Standard Specifications. Pole holes shall be backfilled.

PAYMENT

The contract lump sum price paid for temporary signal system shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing, maintaining, and removing the temporary traffic signal, and lighting system, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.18B TEMPORARY SOLAR FLASHING BEACON SYSTEM

Temporary solar flashing beacon (TSFB) system shall be constructed as units and shall consist of installing, maintaining, and removing TSFB system in conformance with the details shown on the plans, the provisions in "Maintaining Traffic" of these special provisions, the provisions in Section 86, "Signals, Lighting and Electrical Systems," of the Standard Specifications, and these special provisions.

TSFB system shall be installed as shown on the plans.

The provisions in this section shall not relieve the Contractor from the responsibility to provide additional devices or take measures as may be necessary to conform to the provisions in Section 7-1.09, "Public Safety," of the Standard Specifications.

Materials and equipment to be used in the TSFB system shall be either new or used suitable for the intended use.

Sign panels to be installed on the TSFB system shall be stationary mounted construction area signs conforming to the provisions in "Construction Area Signs" of these special provisions.

SYSTEM DETAILS

Flashing beacon light source shall be a 300 mm yellow light-emitting diode (LED) assembly (25 W nominal).

Photovoltaic panels, voltage regulation and battery system shall be sized to provide for 12 days of continuous operation without sunlight for charging.

SUBMITTALS

The Contractor shall submit the proposed TSFB system to the Engineer for approval prior to installation. The TSFB system proposal shall include specifications for the 300 mm yellow LED beacon, photovoltaic panels, voltage regulator, flasher unit, terminal, fuses and batteries. Mounting details for the photovoltaic panels, 300 mm signal heads, NEMA 4 battery and control enclosure, shall be submitted as part of the proposal.

OPERATION

The TSFB system shall operate at nominal 12 V(dc) from batteries charged by photovoltaic panels.

Unless otherwise directed by the Engineer, the system shall be operated on a continuous 24-hour basis.

BATTERY SYSTEM

Battery system shall consist of 4 batteries with a cumulative minimum rated capacity of 240 A·h.

Individual batteries shall be 12 V, 65 A·h maximum, and shall be easily replaced and commercially available as "off the shelf" items.

Batteries shall be a deep cycle, sealed prismatic lead-calcium based AGM/VRLA (Absorbed Glass Mat/Valve Regulated Lead Acid) or equal.

Batteries shall be certified by the manufacturer to operate over an ambient air temperature range of -25°C to +74°C.

Batteries shall be provided with appropriate interconnection wiring and corrosion-resistance mounting trays and brackets appropriate for cabinet installation.

Batteries shall indicate maximum recharge data and recharging cycle.

Battery interconnect wiring shall be via modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. Harness shall be equipped with mating power-pole style connectors for batteries and a single, insulated plug-in style connection to the charger. Harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.

Battery terminals shall be covered and insulated so as to prevent accidental shorting.

MAINTAINING TSFB SYSTEM

Maintaining the TSFB system shall be the sole responsibility of the Contractor.

If components in the TSFB system are damaged, displaced or cease to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair the components to the original condition or replace the components and shall restore the components to the original location or to an alternate location designated by the Engineer.

BONDING AND GROUNDING

The TSFB system shall be mechanically and electrically secure to form a continuous system effectively grounded by the cable grounding conductor.

PAYMENT

Full compensation for relocating the TSFB system during the progress of the work, regardless of the number of times the TSFB system is required, shall be considered as included in the contract lump sum price paid for temporary signal system and no separate payment will be made therefor.

Full compensation for furnishing, installing, maintaining, and disposing of construction area signs for the TSFB system shall be considered as included in the contract lump sum price paid for construction area signs and no additional compensation will be allowed therefor.

Full compensation for temporary solar flashing beacon system shall be considered as included in the contract lump sum price paid for temporary signal system and no separate payment will be made therefor.

10-1.23 LIGHTWEIGHT EMBANKMENT MATERIAL (EPS BLOCK)

Lightweight embankment material (EPS block) shall be expanded polystyrene (EPS) material. Lightweight embankment material (EPS block) shall be fabricated as blocks. Manufacturer's standard size blocks will be acceptable. Special-size blocks will be required at the edges of the lightweight embankment material section to fill the volume shown on the plans.

Lightweight embankment material (EPS block) shall have the following physical properties:

| Physical Property | ASTM Designation | Acceptance Value |
|--|------------------|--|
| Density | C 303 | 24 kg/m ³ Minimum 32 kg/m ³ Maximum |
| Compressive Strength (at 5% deformation) | D 1621 | 100 kPa Minimum |
| Flexural Strength | C 203 | 300 kPa Minimum |
| Tensile Strength | D 1623 | 130 kPa Minimum |
| Water Absorption | C 272 | 2.0% Maximum by Volume |

A certificate of compliance from the manufacturer of the lightweight embankment material (EPS block) shall be furnished in accordance with the provisions of Section 6-1.07 "Certificates of Compliance" of the Standard Specifications. Shop drawings showing special size blocks and the layout of lightweight embankment material (EPS block) blocks in each layer shall be submitted to the Engineer for approval prior to fabrication of the blocks. The long axis of blocks in adjacent layers shall be rotated horizontally 90 degrees and the edges of blocks in adjacent layers shall be offset approximately 1.2 m to minimize continuous joints.

The Contractor shall prevent damage to the lightweight embankment material (EPS block) during delivery, storage, and construction. Lightweight embankment material (EPS block) shall be protected from petroleum products, ultraviolet light, and/or mechanical damage. Any lightweight embankment material (EPS block) damaged by the Contractor's equipment or operations shall be replaced by the Contractor at his expense. It shall be the Contractor's responsibility to ensure that the EPS blocks are not exposed to hydrocarbons contamination during the life of the contract.

Between stages, and as shown on the plans, the lightweight embankment material (EPS block) shall be protected with temporary geomembrane (Type A-gasoline resistant) and weighted down with sufficient sand bags to keep it in place. Temporary geomembrane shall conform to the provisions in the Section "Geomembrane (Type A-Gasoline Resistant)" elsewhere in these special provisions. Sand bags shall conform to the provisions in Section 19-3.025B, "Sand Bedding," of the Standard Specifications. The sacks for sand bags shall be made of at least 280 gram burlap or an equivalent strength woven geotextile and shall be approximately 500-mm x 910-mm measured inside the seams when the sack is laid flat. The capacity of each sack shall be approximately 0.04 cubic meters. The sacks shall be filled with approximately 0.03 cubic meters of sand loosely placed so as to leave room for folding at the top. The fold shall be just enough to retain the sand at the time of placing.

Lightweight embankment material (EPS block) shall be placed to the lines and grades shown on the plans and as directed by the Engineer. Surfaces to receive lightweight embankment material (EPS block) shall be finished such that there is no more than a 15 mm variation in vertical grade over any 3 m interval, and are within 60 mm of the grade shown on the contract plans. The surface of a layer of lightweight embankment material (EPS block) blocks on which additional blocks are to be placed shall be plane, with no more than a 15 mm variation in vertical grade over any 3 m interval. All blocks shall fit accurately against adjacent blocks, without voids wider than 15 mm at any vertical joint. The finished surface of the lightweight embankment material (EPS block) fill shall be constructed to a tolerance of plus or minus 100 mm from the grade shown on the contract plans. Lightweight embankment material (EPS block) shall not be less than 150 mm in thickness. This may require saw cutting the lower blocks to achieve a minimum 150 mm thickness for the top most EPS blocks in order to meet roadway superelevations and grades. All excess EPS block cuttings and debris resulting from saw cutting and other construction related activity shall be contained, collected, and hauled offsite for disposal by the contractor.

Sliding of lightweight embankment material (EPS block) blocks along horizontal joints shall be prevented by timber fasteners placed evenly with a minimum of one fastener at the top and one fastener at the bottom of each EPS block or by gluing. Timber fasteners shall have 16 prongs approximately 25 mm on-center which penetrate a minimum of 12 mm into the foam block above and below or as approved by the Engineer. Timber fasteners shall be placed a minimum of 250 mm from block edges. Glue shall be as recommended by the manufacturer of the lightweight embankment material (EPS block). Glue joints shall be capable of developing a minimum of 85 kPa of shear strength when tested in accordance with ASTM Designation D 732 test procedures. EPS blocks, while wrapped with geomembrane, shall not be exposed to temperature greater than 32.2°C.

MEASUREMENT.--Lightweight embankment material (EPS block) will be measured by the cubic meter of material placed as shown on the plans or as directed by the Engineer. No additional compensation will be made for material placed outside these limits.

PAYMENT.--The contract price paid per cubic meter for lightweight embankment material (EPS block) shall include full compensation for furnishing all labor, materials (including sand bags), equipment, tools, disposal of EPS cuttings and debris, and incidentals necessary to construct the lightweight embankment material (EPS block), complete in place, as shown on the plans, as specified in these special provisions and as directed by the Engineer.

10-1.24 GEOMEMBRANE (GASOLINE RESISTANT)

Geomembrane (gasoline resistant) shall consist of reinforced or unreinforced tri-polymer membrane consisting of polyvinyl chloride (PVC), ethylene interpolymer alloy, and polyurethane or a comparable polymer combination. The geomembrane shall be suitable for the containment of spilled liquid hydrocarbons, including gasoline, diesel fuel, kerosene, hydraulic fluid, methanol, ethanol, mineral spirits, and naphtha. The geomembrane shall be sufficiently flexible to cover and closely conform to 90 degree edges and corners of lightweight fill (EPS block) subgrade material at ambient temperatures as low as 7°C without application of heat.

Geomembrane (gasoline resistant) shall have the following physical properties, specified as minimum or maximum, not average roll properties:

| Physical Property | ASTM Designation | Acceptance Value |
|---|------------------|---|
| Unleaded Gasoline Permeability | D 814 | 122 g/m ² Maximum per 24 hours |
| Thickness | D 751 * | 0.71 mm Minimum |
| Grab Tensile Strength (25 mm grip, 100 mm x 200 mm sample) | D 751 * | 2.67 kN Minimum in each direction |
| Tensile Strength | D 751 | 130 kPa Minimum |
| Elongation at break | D 751 * | 20 Percent Minimum |
| Toughness (Percent elongation times Grab Tensile Strength **) | N/A | 62 kN Minimum |
| Puncture Resistance (ball tip) | D 751 *** | 356 kN Minimum |
| Cold Crack Resistance (25 mm mandrel, 4 hours) | D 2136 * | Pass at -17°C |

* or ASTM test method appropriate for specific polymer

** for example, 3 kN x 30% = 90 kN

*** or FTMS 101C, Method 2065

All factory-produced seams shall have a minimum bonded width of 30 mm, and shall have a minimum shear strength of 1.42 kN when tested in accordance with ASTM D 751 (Modified per NSF Standard No. 54). Failure shall occur in the base geomembrane material.

A certificate of compliance from the manufacturer of the geomembrane shall be furnished in accordance with the provisions of Section 6-1.07, "Certificates of Compliance" of the Standard Specifications.

INSTALLATION.--Geomembrane (gasoline resistant) shall be placed directly on the surface of the lightweight fill (EPS block) fill, which shall be clean and free of sharp objects. Field seams shall be bonded with an electrically-heated hot-wedge device as recommended by the manufacturer. Hot air extrusion welding devices or solvent bonding chemicals shall not be used. The temperature of the bonded geomembrane shall not exceed 74°C immediately before contacting the lightweight fill (EPS block) fill. Before installation of geomembrane, the Contractor shall demonstrate to the Engineer that the equipment, techniques, and personnel proposed for the bonding of field seams can produce vapor-tight seams under similar weather and work conditions near the job site. Field seams shall be inspected and, when ordered by the Engineer, shall be tested and pass the Vacuum Box Test. Construction equipment shall not be operated directly on the geomembrane. Any material damaged by the Contractor's equipment or operations shall be replaced or repaired to the satisfaction of the Engineer by the Contractor at his expense.

MEASUREMENT.--Geomembrane (gasoline resistant) will be measured by the square meter of area covered as shown on the plans or as directed by the Engineer.

PAYMENT.--The contract price paid per square meter for geomembrane (gasoline resistant) shall include full compensation for furnishing all labor, materials, equipment, tools, and incidentals necessary to install the geomembrane as shown on the plans, as specified in these special provisions and as directed by the Engineer.

**ENGINEER'S ESTIMATE
04-1S0224**

| Item | Item Code | Item | Unit of Measure | Estimated Quantity | Unit Price | Item Total |
|--------|-----------|--|-----------------|--------------------|------------|------------|
| 1 | 031742 | TEMPORARY PERIMETER FENCE (TYPE WM 1.8) | M | 300 | | |
| 2 | 074017 | PREPARE WATER POLLUTION CONTROL PROGRAM | LS | LUMP SUM | LUMP SUM | |
| 3 | 074020 | WATER POLLUTION CONTROL | LS | LUMP SUM | LUMP SUM | |
| 4 | 031743 | TEMPORARY DRAINAGE INLET PROTECTION | EA | 5 | | |
| 5 | 074034 | TEMPORARY COVER | M2 | 500 | | |
| 6 (S) | 120090 | CONSTRUCTION AREA SIGNS | LS | LUMP SUM | LUMP SUM | |
| 7 (S) | 120100 | TRAFFIC CONTROL SYSTEM | LS | LUMP SUM | LUMP SUM | |
| 8 | BLANK | | | | | |
| 9 | BLANK | | | | | |
| 10 (S) | 128650 | PORTABLE CHANGEABLE MESSAGE SIGN | LS | LUMP SUM | LUMP SUM | |
| 11 (S) | 129000 | TEMPORARY RAILING (TYPE K) | M | 190 | | |
| 12 (S) | 129100 | TEMPORARY CRASH CUSHION MODULE | EA | 44 | | |
| 13 | 150771 | REMOVE ASPHALT CONCRETE DIKE | M | 210 | | |
| 14 | 153103 | COLD PLANE ASPHALT CONCRETE PAVEMENT | M2 | 1700 | | |
| 15 | 154100 | GRADE EXISTING CHANNEL | M | 70 | | |
| 16 | 190101 | ROADWAY EXCAVATION | M3 | 3300 | | |
| 17 (F) | 192049 | STRUCTURE EXCAVATION (SOLDIER PILE WALL) | M3 | 390 | | |
| 18 | 193001 | STRUCTURE BACKFILL | M3 | 50 | | |
| 19 (F) | 193029 | STRUCTURE BACKFILL (SOLDIER PILE WALL) | M3 | 40 | | |
| 20 (F) | 193119 | LEAN CONCRETE BACKFILL | M3 | 215 | | |

**ENGINEER'S ESTIMATE
04-1S0224**

| Item | Item Code | Item | Unit of Measure | Estimated Quantity | Unit Price | Item Total |
|------|-----------|---|-----------------|--------------------|------------|------------|
| 41 | 698162 | 450 MM ALTERNATIVE PIPE DOWNDRAIN | M | 25 | | |
| 42 | 721010 | ROCK SLOPE PROTECTION (BACKING NO. 1, METHOD B) | M3 | 47 | | |
| 43 | 721024 | ROCK SLOPE PROTECTION (1/4T, METHOD B) | M3 | 51 | | |
| 44 | 729010 | ROCK SLOPE PROTECTION FABRIC | M2 | 190 | | |
| 45 | 840561 | 100 MM THERMOPLASTIC TRAFFIC STRIPE | M | 1200 | | |
| 46 | 850111 | PAVEMENT MARKER (RETROREFLECTIVE) | EA | 84 | | |
| 47 | BLANK | | | | | |
| 48 | 128601 | TEMPORARY SIGNAL SYSTEM | LS | LUMP SUM | LUMP SUM | |
| 49 | 999990 | MOBILIZATION | LS | LUMP SUM | LUMP SUM | |

TOTAL BID: _____