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**09/99**

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## SECTION 01090

## SOURCES FOR REFERENCE PUBLICATIONS

09/99

## PART 1 GENERAL

## 1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the sponsoring organization, e.g.

ASTM B 564 Nickel Alloy Forgings. However, when the sponsoring organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

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Internet: [www.usda.gov/rus](http://www.usda.gov/rus)  
AOK6/99

## SCREEN MANUFACTURERS ASSOCIATION (SMA)

2850 South Ocean Boulevard, Suite 114  
Palm Beach, FL 33480-5535  
Ph: 561-533-0991  
Fax: 561-533-7466  
e-mail: [fscottfitzgerald@compuserve.com](mailto:fscottfitzgerald@compuserve.com)

SHEET METAL & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION  
(SMACNA)

4201 Lafayette Center Dr.,  
Chantilly, VA 20151-1209  
Ph: 703-803-2980  
Fax: 703-803-3732  
Internet: <http://www.smacna.org>  
AOK6/99

## SINGLE PLY ROOFING INSTITUTE (SPRI)

200 Reservoir St., Suite 309A  
Needham, MA 02494  
Ph: 781-444-0242  
Fax: 781-444-6111  
Internet: [www.spri.org](http://www.spri.org)  
AOK6/99

## SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

400 Commonwealth Dr.  
Warrendale, PA 15096-0001  
Ph: 724-776-4841  
Fax: 724-776-5760  
Internet: <http://www.sae.org>  
e-mail: [publications@sae.org](mailto:publications@sae.org)  
AOK6/99

## SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL (SBCCI)

900 Montclair Road  
Birmingham, AL 35213-1206  
Ph: 205-591-1853  
Fax: 205-591-0775  
AOK6/99

## SOUTHERN CYPRESS MANUFACTURERS ASSOCIATION (SCMA)

400 Penn Center Boulevard, Suite 530  
Pittsburgh, PA 15235  
Ph: 412-829-0770  
Fax: 412-829-0844

## SOUTHERN PINE INSPECTION BUREAU (SPIB)

4709 Scenic Highway  
Pensacola, FL 32504-9094  
Ph: 850-434-2611  
Fax: 850-433-5594  
e-mail: [spib@spib.org](mailto:spib@spib.org)  
AOK6/99

## THE SOCIETY FOR PROTECTIVE COATINGS (SSPC)

40 24th Street, 6th Floor  
Pittsburgh, PA 15222-4656  
Ph: 412-281-2331  
Fax: 412-281-9992  
Internet: [www.sspc.org](http://www.sspc.org)  
NOTE: SSPC documents, except as noted otherwise, are available only as a part of the 1995 Steel Structures Painting Manual, 7th Edition @ \$115.00.  
AOK6/99

## STEEL DECK INSTITUTE (SDI)

P.O. Box 25  
Fox River Grove, IL 60021-0025  
Ph: 847-462-1930  
Fax: 847-462-1940  
Internet: <http://www.sdi.org>

e-mail: janet@sdi.org  
AOK6/99

STEEL DOOR INSTITUTE (SDOI)

30200 Detroit Rd.  
Cleveland, OH 44145-1967  
Ph: 440-899-0010  
Fax: 440-892-1404  
AOK6/99

STEEL JOIST INSTITUTE (SJI)

3127 Tenth Ave., North Ext.  
Myrtle Beach, SC 29577-6760  
Ph: 803-626-1995  
Fax: 803-626-5565  
AOK6/99

STEEL TANK INSTITUTE (STI)

570 Oakwood Rd.  
Lake Zurich, IL 60047  
Ph: 847-438-8265  
Fax: 847-438-8766  
Internet: www.steeltank.com  
e-mail: technic@interaccess.com  
AOK6/99

STEEL WINDOW INSTITUTE (SWI)

1300 Sumner Ave.  
Cleveland, OH 44115-2851  
Ph: 216-241-7333  
Fax: 216-241-0105  
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TILE COUNCIL OF AMERICA (TCA)

P.O. Box 1787  
Clemson, SC 29633-1787  
Ph: 864-646-8453  
FAX: 864-646-2821

TRUSS PLATE INSTITUTE (TPI)

583 D'Onofrio Dr., Suite 200  
Madison, WI 53719  
Ph: 608-833-5900  
Fax: 608-833-4360

TUBULAR EXCHANGE MANUFACTURERS ASSOCIATION (TEMA)

25 N. Broadway

Tarrytown, NY 10591  
Ph: 914-332-0040  
Fax: 914-332-1541  
AOK6/99

## UNDERWRITERS LABORATORIES (UL)

333 Pfingsten Rd.  
Northbrook, IL 60062-2096  
Ph: 847-272-8800  
Fax: 847-272-8129  
Internet: <http://www.ul.com/>  
AOK6/99

Note: First price is for the standard only. Second price is for the standard including the Revision Subscription Service.

## UNI-BELL PVC PIPE ASSOCIATION (UBPPA)

2655 Villa Creek Dr., Suite 155  
Dallas, TX 75234  
Ph: 214-243-3902  
Fax: 214-243-3907

## U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY (USAEHA)

Waste Disposal Engineering Division  
Aberdeen Proving Ground, MD 21010-5422  
Ph: 410-671-3652  
AOK6/99

## WATER ENVIRONMENT FEDERATION (WEF)

601 Wythe St.  
Alexandria, VA 22314-1994  
Ph: 703-684-2452  
Fax: 703-684-2492  
Internet: [www.wef.org](http://www.wef.org)  
AOK6/99

## WATER QUALITY ASSOCIATION (WQA)

4151 Naperville Rd.  
Lisle, IL 60532  
Ph: 630-505-0160  
Fax: 630-505-9637  
AOK6/99

## WEST COAST LUMBER INSPECTION BUREAU (WCLIB)

P.O. Box 23145  
Portland, OR 97281  
Ph: 503-639-0651  
Fax: 503-684-8928

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WESTERN WOOD PRESERVERS INSTITUTE (WWPI)

7017 N.E. Highway 99 # 108  
Vancouver, WA 98666  
Ph: 360-693-9958  
Fax: 360-693-9967  
AOK6/99

WESTERN WOOD PRODUCTS ASSOCIATION (WWPA)

Yeon Bldg.  
522 SW 5th Ave.  
Suite 500  
Portland, OR 97204-2122  
Ph: 503-224-3930  
Fax: 503-224-3934  
AOK6/99

WOOD MOULDING AND MILLWORK PRODUCERS ASSOCIATION (WMMPA)

507 First Street  
Woodland, CA 95695  
Ph: 916-661-9591  
Fax: 916-661-9586  
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## SECTION 01200

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## SECTION 01200

## GENERAL REQUIREMENTS

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

## ASME INTERNATIONAL (ASME)

- ASME B18.2.1 (1996) Square and Hex Bolts and Screws  
(Inch Series)
- ASME B18.2.2 (1987; R 1993) Square and Hex Nuts (Inch  
Series}

## AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- ASTM F 547 (1977; R 1995) Definitions of Terms  
Relating to Nail For Use with Wood and  
Wood-Based Materials

## NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

- NIST PS 20 (1994; Addenda Jan. 1997) American  
Softwood Lumber Standards

## COMMERCIAL ITEM DESCRIPTIONS (CID)

- CID A-A-2336 (Rev A) Primer Coating (Alkyd, Exterior  
Wood, White and Tints)
- CID A-A-2962 (Rev A) Enamel, Alkyd

## DEPARTMENT OF COMMERCE (DOC)

- DOC PS 1 (1996) Voluntary Product Standard -  
Construction and Industrial Plywood

## 1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01330 SUBMITTAL PROCEDURES:

SD-04 Drawings

As-Built Drawings; GA.

Record of construction as installed and completed within 14 days of acceptance of the project by the Government.

#### SD-09 Reports

Utilities to be relocated or Protected; FIO. LA County Sewer Project; FIO.  
Underground Service Alert; FIO. Street Closures; FIO.

Submit notification 14 days prior to starting work on any area requiring coordination.

Spill Reporting; FIO.

Submit notification of spills immediately after spillage.

BNSF Roadmaster; FIO.

Submit notification at least 30 days in advance of starting work on railroad property.

Bicycle Trail Detour; FIO.

Post signs at least 14 days in advance of closure.

Accident Reporting; FIO.

Submit summary of worker's compensation claims.

Insurance Policies; FIO.

Copy of all policies in force.

### 1.3 PROJECT FACILITIES

The Contractor shall construct and/or erect the following project facilities:

#### 1.3.1 Construction Signs

The signs shall be erected as soon as possible and within 15 days after commencement of work under this contract.

##### 1.3.1.1 Project Signs

Five Project Signs at locations designated by the Contracting Officer.

##### 1.3.1.2 Warning Signs

Warning Signs facing approaching traffic on all roads crossing under overhead power transmission lines.

##### 1.3.1.3 Hard Hat Signs

Six hard hat signs at locations directed.

#### 1.3.2 Bulletin Board at the Contractor's office

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

#### 1.3.3 Sanitary Facilities

The Contractor shall provide and maintain within the construction area minimum field-type sanitary facilities approved by the Contracting Officer.

### PART 2 PRODUCTS

#### 2.1 CONSTRUCTION SIGNS

##### 2.1.1 Materials

##### 2.1.1.1 Lumber

Lumber shall conform to NIST PS 20, and shall be seasoned Douglas Fir, S4S, Grade D or better except that posts, braces and spacers shall be construction Grade (WCLB).

##### 2.1.1.2 Plywood

Plywood shall conform to DOC PS 1, grade A-C, Group 1, exterior type.

##### 2.1.1.3 Bolts, Nuts and Nails

Bolts shall conform to ASME B18.2.1, nuts shall conform to ASME B18.2.2, and nails shall conform to ASTM F 547.

##### 2.1.1.4 Paints and Oils

Paints shall conform to CID A-A-2336 for primer and CID A-A-2962 for finish paint and lettering.

### PART 3 EXECUTION

#### 3.1 CONSTRUCTION OF SIGNS

##### 3.1.1 Project and Hard Hat Signs

Project and hard hat signs shall be constructed as detailed on Figures 1, 2

and 3 attached at the end of this section. Decals and safety signs will be furnished by the Contracting Officer.

### 3.1.2 Warning Signs

Warning Signs shall be constructed of plywood not less than 1/2-inch thick and shall be securely bolted to the supports with the bottom of the sign face 3 feet above the ground. The sign face shall be 2 x 4 feet, all letters shall be 4 inches in height, and the wording shall be: "WARNING: OVERHEAD TRANSMISSION LINES."

### 3.2 PAINTING SIGNS

All exposed surfaces and edges of plywood shall be given one coat of linseed oil and be wiped prior to applying primer. All exposed surfaces of signs and supports shall be given one coat of primer and 2 finish coats of white paint. Except as otherwise indicated, lettering on all signs shall be black and sized as indicated.

### 3.3 SCRAP MATERIAL

Materials indicated to be removed and not indicated to be salvaged, stored or reinstalled are designated as scrap and shall become the property of the Contractor and be removed from the site of work. The Contractor by signing this contract hereby acknowledges that he made due allowance for value, if any, of such scrap in the contract price.

### 3.4 SALVAGE MATERIALS

All materials removed and indicated to be either stored or reinstalled are designated as salvaged materials. Any salvaged materials which are excess upon completion of the work and are not indicated to be stored shall become the property of the Contractor.

### 3.5 ARCHAEOLOGICAL FINDINGS DURING CONSTRUCTION

Should the Contractor or any of his employees in the performance of this contract find or uncover any archaeological remains, he shall notify the Project Engineer immediately. Such notifications will be a brief statement in writing giving the location and nature of the findings. Should the discovery site require archaeological studies resulting in delays and/or additional work, the Contractor will be compensated by an equitable adjustment under the CONTRACT CLAUSES of the contract.

### 3.6 PUBLIC UTILITIES, NOTICES, AND RESTRICTIONS

#### 3.6.1 General

The approximate location of all railroads, pipe lines, power and communication lines, and other utilities known to exist within the limits of the work are indicated on the drawings. The sizes, locations, and names of owners of such utilities are given from available information, but their accuracy is not guaranteed. Except as otherwise indicated on the drawings, all existing utilities will be left in place and the Contractor shall

conduct his operations in such a manner that the utilities will be protected from damage at all times, or arrangements shall be made by the Contractor for their relocation at the Contractor's own expense. The Contractor shall be responsible for any damage to utilities known to exist and shall reimburse the owner for such damage caused by his operations.

### 3.6.2 Relocation or Removal

Utilities to be relocated or removed not as part of this contract are designated "To be Relocated by Others" or "To be Removed by Others," respectively. Utilities shown on the plans and not so designated will be left in place and be subject to the clause of the contract: PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES, AND IMPROVEMENTS of the CONTRACT CLAUSES. The Contractor may make arrangements with the owner for the temporary relocation and restoration of utilities not designated to be relocated, or for additional work in excess of the work needed to relocate utilities designated for relocation at no additional cost to the Government.

### 3.6.3 Utilities Not Shown

If the Contractor encounters, within the construction limits of the entire project, utilities not shown on the plans and not visible as of the date of this contract and if such utilities will interfere with construction operations, he shall immediately notify the Contracting Officer in writing to enable a determination by the Contracting Officer as to the necessity for removal or relocation. If such utilities are left in place, removed or relocated, as directed by the Contracting Officer, the Contractor shall be entitled to an equitable adjustment for any additional work or delay.

### 3.6.4 Coordination

The Contractor shall consult and cooperate with the owner of utilities that are to be relocated or removed by others to establish a mutual performance schedule and to enable coordination of such work with the construction work. These consultations shall be held as soon as possible after award of the contract or sufficiently in advance of anticipated interference with construction operations to provide required time for the removal or relocation of affected utilities.

### 3.6.5 Notices

#### 3.6.5.1 Utilities To be Relocated or Protected

Unless otherwise specified, the Contractor shall notify the Contracting Officer, in writing, 14 calendar days prior to starting work on any utility to be protected. On each protection, notification shall include dates on which the Contractor plans excavation, and construction work, as applicable.

#### 3.6.5.2 Los Angeles County Sewer Project

Notify the Los Angeles County Sanitation District 14 calendar days prior to any work to coordinate construction activities with the proposed sewerline project. The point of contact for the sewer project is Fanny Potes at (562) 699-7411. extension 1636.

### 3.6.5.3 Underground Service Alert

Notify Underground Service Alert at: (800) 227-2600 a minimum of two working days prior to any on-site work.

### 3.6.5.4 Police, Highway Patrol, and Fire Department

Police, Highway Patrol, and Fire Department shall be notified by the Contractor whenever a street is to be closed to traffic. If the closing is to be of long duration, a single notification to each department on the last working day before closing will be sufficient. A single notification shall then be made at the time the street is again opened to traffic. If the closing is to be of short duration or if different sections of the streets are to be closed at different times, notifications shall be made on a day-to-day basis.

### 3.6.5.5 Existing Bench Marks and R/W Markers

The Contractor shall notify the Contracting Officer, in writing, 7 days in advance of the time he proposes to remove any bench mark or right-of-way marker.

### 3.6.5.6 Spill Reporting

The Contractor shall notify the Contracting Officer immediately after all spills, regardless of quantity, including all personnel exposures. The Contractor shall submit a written notification not later than 7 calendar days after the initial notification. The written notification shall include the following:

- a. Item spilled, leaked or released in an unauthorized manner (Identification, Quantity and Manifest Numbers).
- b. Whether the amount spilled, leaked or released in an unauthorized manner is EPA reportable and, if reported, a copy of the report.
- c. Exact location of the spill, leak or unauthorized release.
- d. Nature of exposure to personnel.
- e. Containment procedures initiated.
- f. Anticipated cleanup and disposal procedures.
- g. Disposal location of spill, leak or unauthorized release residue.

### 3.6.6 Restrictions

#### 3.6.6.1 Representatives of Other Agencies

Personnel representing owners and agencies may be present for various portions of the work. However, the Contractor will be responsible only to the Contracting Officer.

### 3.6.6.2 Existing Roadways

The Contractor will not be permitted to cross existing paved roadways and residential roadways with construction equipment except at approved marked crossings. The Contractor shall maintain the crossings in accordance with applicable state, county, and city regulations.

### 3.6.6.3 Working Hours

The Contractor shall restrict all construction activities, including warming equipment, to the following schedule:

Monday through Friday	7 a.m. to 7:00 p.m.
Saturday	9 a.m. to 6:00 p.m.

Access to the job site will be allowed 30 minutes prior to starting time unless otherwise approved by the Contracting Officer. No work will be permitted on Sundays or Federal Holidays.

### 3.6.6.4 BNSF work restrictions

BNSF will not allow on-site construction work within the BNSF Right-of-way during the time from October 1 through December 31, except that minimal work may be permitted with approval by BNSF NOC in Fort Worth, telephone number (817) 234-2334.

### 3.6.6.5 Restrictions for work within the channel

During the period 15 October to 15 April (flood season), no channel construction will be allowed within the channel and the channel construction must be restored to be able to sustain flows that approach the tops of the levees without sacrificing the integrity of the flood control channel.

During the dry season of 15 April to 15 November, the Contractor shall provide a contiguous width of 50 feet for flow conveyance.

### 3.6.6.6 Notification and Coordination of work with BNSF

The Contractor must notify BNSF's Roadmaster at least 30 days in advance of performing work. The Contractor shall coordinate with BNSF to determine all work that BNSF will perform as required for this project, including but not limited to relocations, connections, and new track construction, and include the BNSF work in the Contractor's construction schedule. The Contractor shall maintain the structural integrity of all BNSF tracks and facilities during the entire construction period in accordance with BNSF's operational requirements.

The Contractor shall not interfere with the safe and efficient operation of BNSF's tracks and facilities. Should the Contractor interfere with any portion of BNSF rail road operations without prior approval or knowledge of such activity from BNSF, the Contractor will be held liable for any damages BNSF incurs and held liable for any resulting work stoppages or delays.

### 3.6.6.7 BNSF Personal Protective Equipment (PPE)

The Contractor, including all subcontractors and suppliers, must wear current BNSF Personal Protective Equipment (PPE) meeting applicable OSHA and ANSI specifications, consisting of 1) safety glasses, permanently affixed side shields, no yellow lenses; 2) hard hats with high visibility orange cover; 3) safety shoes with hardened toe; 4) high visibility reflective orange vests. Protective welding masks, gloves, and other hearing protection, fall protection and respirators will be worn as required by state and federal regulations.

### 3.6.7 Bicycle Trail

#### 3.6.7.1 Bicycle Trail Availability

The bicycle trail shall not be closed. The bicycle trail may have to be temporarily rerouted during Bridge and Invert construction activities. Signage with the limits, date and time of closure shall be posted along the trail in both directions two (2) weeks prior to the actual temporary rerouting of the trail. Signage shall contain the period and extent of the temporary rerouting. The Contractor shall notify Ryan Romo, Los Angeles County Department of Public Works at (626) 458-3941 at least one (1) month prior to bicycle trail temporary rerouting and immediately after the signs have been placed. The bike path must be adequately barricaded at each end of the bike path temporary reroute closure limits. Additional signage warning of construction area, and location maps provided by L.A. County Department of Public Works Planning Division, shall be posted at the intermediate access gates and at each end of the temporary reroute closure.

### 3.7 PUBLIC SAFETY

Attention is directed to the CONTRACT CLAUSE: PERMITS AND RESPONSIBILITIES. The Contractor shall furnish, install, maintain and remove temporary fencing, barricades, and/or guards, as required, to provide protection in the interest of public safety and in conformance with applicable Federal, State, and local laws and ordinances and in accordance with BNSF safety standards. As a minimum, this will include an 8-foot chain-link fence which completely encloses each and every part of the project which the Contractor worked in or is working on. The plan of this temporary fencing shall be furnished to the Contracting Officer for approval and the fence erected prior to commencement of any work. Whenever the Contractor's operations create a condition hazardous to the public, he shall furnish at his own expense and without cost to the Government, such flagmen and guards as are necessary to give adequate warning to the public of any dangerous conditions to be encountered and he shall furnish, erect, or maintain such fences, barricades, lights, signs and other devices as are necessary to prevent accidents and avoid damage or injury to the public. Flagmen and guards, while on duty and assigned to give warning and safety devices, shall conform to applicable city, county, state, and BNSF requirements. Should the Contractor appear to be neglectful or negligent in furnishing adequate warning and protection measures, the Contracting Officer may direct attention to the existence of a hazard and the necessary warning and protective measures shall be furnished and installed by the

Contractor without additional cost to the Government. Should the Contracting Officer point out the inadequacy of warning and protective measures, such action of the Contracting Officer shall not relieve the Contractor from any responsibility for public safety or abrogate his obligation to furnish and pay for those devices. The installation of any general illumination shall not relieve the Contractor of his responsibility for furnishing and maintaining any protective facility.

### 3.7.1 OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) STANDARDS, OTHER SAFETY REQUIREMENTS

The OCCUPATIONAL SAFETY and HEALTH ACT (OSHA) STANDARDS for CONSTRUCTION (Title 29, Code of Federal Regulations Part 1926 as revised from time to time) and the Corps of Engineers General Safety and Health Requirements Manual, EM 385-1-1, and BNSF Personal Protective Equipment meeting applicable OSHA and ANSI Specifications are all applicable to this contract. The most stringent requirement of the above mentioned standards will be applicable.

### 3.7.2 Accident Reporting

In accordance with EM 385-1-1, the Contractor shall submit a written summary of worker's compensation claims which have been filed by workers in connection with work on the project. The summary shall be submitted at the time when the work is approximately 50 percent complete and at project completion. The summary shall include all subcontractors. The Contractor's and subcontractor's compensation insurance carrier shall certify that the summaries are "correct and true".

## 3.8 PERMITS

### 3.8.1 General

Reference is made to the clause of the contract entitled "Permits and Responsibilities," which obligates the Contractor to obtain all required licenses and permits, including, but not necessarily limited to the following specified hereinbelow.

### 3.8.2 Burlington Northern Santa Fe Railroad

Before entering upon the premises of the BNSF Railroad for or in connection with performance of the contract work, the Contractor will be required by the railroad to enter into an agreement. Such agreement will probably include provisions requiring the Contractor to (a) indemnify the railroad for any claims which result from performance of the contract work on or use of railroad premises by the Contractor; pay for services of any inspectors, flagmen, or watchmen furnished by the railroad during performance of the contract work on or use of the premises of the railroad by the Contractor; and conform with any other conditions relative to use and occupancy, and the performance of work on railroad premises. The Contractor shall submit to the Contracting Officer a true copy of any agreements entered into. No separate or additional payment will be made by the Government to the Contractor for costs incurred by the Contractor as result of compliance with these provisions. An example of a BNSF agreement called "Exhibit C-1"

and "Exhibit C" are provided at the end of this section. The contractor shall contact Mr. Roy Ketring (909-386-4470) of BNSF to coordinate the completion agreement for this contract. No work shall commence until the Contractor executes this agreement.

### 3.8.3 National Pollutant Discharge Elimination System (NPDES) Permit

The project requires an NPDES permit from the California State Water Resources Control Board, Division of Water Quality. The general permit requires development and implementation of Storm Water Pollution Prevention Plan (SWPPP), which shall be maintained on-site throughout the construction period. A copy of a plan will be furnished to the Contractor by the Government. The Contractor shall maintain a current copy of the plan on-site, and shall comply with all provisions of the plan. Modifications to the plan as necessary to reflect Contractor's construction methods shall be submitted by the Contractor to the Government for approval.

### 3.8.4 Unsafe or Hazardous Conduct of Work, or Cancellation of Required Insurance

If the Contractor performs work in a manner that BNSF deems to be hazardous to its property, its facilities, or to the safe and expeditious movement of its railroad traffic, or if the insurance described in form C-1 or if the insurance required per another portion of these Specifications is canceled during the course of the contract, then the work shall be stopped until the acts of omissions of the Contractor have been fully rectified.

## 3.9 REQUIRED INSURANCE

Contractor shall maintain insurance in full force and effect throughout the term of this contract. Insurance shall be in force the first day of the term of this contract. The policy or policies of insurance maintained by the Contractor shall provide the limits and coverages as set forth herein below.

Each insurance policy required by this Contract shall contain the following clauses:

- a. "This insurance shall not be canceled, limited in scope of coverage or non renewed until after thirty (30) days written notice has been given to Los Angeles County, Department of Public Works, 900 S. Fremont Avenue, P.O. Box 1460, Alhambra, CA 91802.
- b. "All rights of subrogation are hereby waived against the County of Los Angeles, and the members of the Board of Supervisors and elective or appointive officers or employees, when acting within the scope of their employment or appointment, and County Districts and their Board or Commissions which are governed by the County Board of Supervisors."
- c. "As respects operation of the named insured performed on behalf of the Government, the following are added as additional insured:

The County of Los Angeles  
The City of Montebello

The City of Pico Rivera  
Burlington Northern Santa Fe Railroad

## LIABILITY INSURANCE

<u>Coverage</u>	<u>Minimum Limits</u>
Comprehensive General Liability including Completed Operations, Broad Form Property Damage Endorsement, and Comprehensive Automobile Liability	\$2,000,000.00 combined single limit per occurrence, with an aggregate limit of \$4,000,000 for the term of policy.
Worker's Compensation	Statutory
Railroad Protective Insurance	Naming BNSF as an additional insured with a minimum combined single limit and aggregate limit in accordance with the agreement between the BNSF Railroad and the Contractor.

Each liability and worker's compensation insurance policy required by this contract shall contain clause numbers 3.10 (a.) and (c.) above, and the following clause:

"It is agreed that any insurance maintained by the County of Los Angeles will apply in excess of, and not contribute with, insurance provided by this policy."

The procuring of such required policies of insurance shall not be construed to limit Contractor's liability hereunder not to fulfill the indemnification provisions and requirements of this Contract.

Contractor agrees to indemnify and save harmless agency, its officers, and employees from and against any and all claims, demands, losses, defense costs, or liability of any kind or nature which Agency, its officers, agents and employees may sustain or incur or which may be imposed upon them for injury to or death of persons, or damage to property as a result of, arising out of, or in any manner connected with Contractors performance under the terms of this contract, excepting only liability arising out of the sole negligence of agency.

## 3.10 GRAFFITI REMOVAL

The Contractor shall remove or cover all graffiti found in the work area within 48 hours of findings.

## 3.11 AS-BUILT DRAWINGS

## 3.11.1 General

The Contractor shall prepare and furnish the as-built drawings for the project. The as-built drawings shall be a record of the construction as installed and completed by the Contractor. They shall include all the information shown on the contract set of drawings and a record of all deviations, modifications, or changes from those drawings, however minor, which were incorporated in the work, all additional work not appearing on the contract drawings, and all changes which are made after final inspection of the contract work. In event the Contractor accomplishes additional work which changes the as-built conditions of the facility after submission of the as-built drawings, the Contractor shall furnish revised and/or additional drawings as required to depict as-built conditions. The requirements for these additional drawings will be the same as for the as-built drawings included in the original submission. The drawings shall show the following information, but not be limited thereto:

- (a) The location and description of any utility lines or other installations of any kind or description known to exist within the construction area. The location includes dimensions to permanent features.
- (b) The location and dimensions of any changes within the structures.
- (c) Correct grade or alignment of railroad, channels, structures or utilities if any changes were made from contract plans.
- (d) Correct elevations if changes were made in site grading.
- (e) Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, dimensions of equipment foundations, etc.
- (f) All changes or modifications which result from the final inspection.

### 3.11.2 Preliminary As-Built Drawings

The Contractor shall maintain one (1) set of full size, blueline prints marked up in red to show the as-built conditions. This set of as-built prints shall be kept current and available at the job site at all times. All changes from what is shown on the contract plans, whether it be from changes requested by the Contracting Officer or resulting from additional information which might be uncovered in the course of construction, shall be accurately and neatly recorded as they occur by means of details and notes. The marked-up as-built prints will be jointly inspected for accuracy and completeness by the Contracting Officer and Contractor prior to submission of each monthly pay estimate. Information to be included on these preliminary drawings shall conform to the requirements as stated above. Any and all as-built modifications shall be reflected on all sheets affected by the modifications.

### 3.11.3 Review Submittal

Not later than 14 calendar days after acceptance of the project by the Government, the Contractor shall deliver to the Contracting Officer one (1) full size set of blue-line drawings marked up to depict the as-built conditions. If upon review, the drawings are found to contain errors and/or omissions, they shall be returned to the Contractor for corrections.

#### 3.11.4 Computer Drawing Files (CADD)

##### 3.11.4.1 General

The Contractor shall develop the final computer file as-built drawings from the approved preliminary drawings. The computer files shall be delivered in MicroStation file format DGN, a Computer-Aided Design and Drafting (CADD) program. Drawings shall be prepared in general accordance with the Los Angeles District manual "Standards Manual for U.S. Army Corps of Engineers Computer-Aided Design and Drafting (CADD) Systems".

##### 3.11.4.2 Original contract CADD files

The Government will provide all the computerized drawing files used to produce the advertised contract drawings on CD-ROM.

##### 3.11.4.3 Delivery

Prior to finalizing the plans, two sets of drawings shall initially be provided to the Contracting Officer for review and approval. The Contracting Officer shall complete his review within ten (10) working days. Upon final approval, the Contractor shall furnish two (2) full size sets and two (2) half size sets of the final as-built plans on reproducible mylars, and the computerized project files in MicroStation file format DGN on CD ROM. All project files, whether revised or not, shall be provided to the Contracting Officer.

#### 3.12 NOTICE OF PARTNERSHIP

The Government intends to encourage the foundation of a cohesive partnership with the Contractor and its subcontractors. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are effective and efficient contract performance and intended to achieve completion within budget, on schedule, and in accordance with plans and specifications. This partnership would be bilateral in makeup, and participation will be totally voluntary. Any cost associated with effectuating this partnership will be agreed to by both parties and will be shared equally with no change in contract price. To implement this partnership initiative, it is anticipated that within 60 days of Notice to Proceed the Contractor's on-site project manager and the Government's Resident Engineer would attend a one or two day partnership development seminar/team building workshop together with the Contractor's key on-site staff and key Government personnel. Follow-up workshops of 1 to 2 days duration would be held periodically throughout the duration of the contract as agreed to by the Contractor and Government.

#### 3.13 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (ER 415-1-15, 31 OCT 89)

(a) This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the Contract Clause entitled: DEFAULT (FIXED PRICE CONSTRUCTION). In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipation for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

(b) The following schedule of monthly anticipated adverse weather delays will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY WORK DAYS BASED ON FIVE (5) DAY WORK WEEK

<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
10	10	2	1	0	0	1	1	3	3	5	5

Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in subparagraph (b), above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days. and issue a modification in accordance with the Contract Clause entitled: DEFAULT (FIXED PRICE CONSTRUCTION).

-- End of Section --

**EXHIBIT "C"**  
**CONTRACTOR REQUIREMENTS**  
**CALIFORNIA**

**1.01 General**

- **1.01.01** The Contractor shall cooperate with **THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY**, hereinafter referred to as "Railway" where work is over or under on or adjacent to Railway property and/or right-of-way, hereafter referred to as "Railway Property", during the construction of, \_\_\_\_\_  
\_\_\_\_\_
- **1.01.02** The Contractor shall execute and deliver to the Railway duplicate copies of the Exhibit "C-1" Agreement, in the form attached hereto, obligating the Contractor to provide and maintain in full force and effect the insurance called for under Section 2 of said Exhibit "C-1".
- **1.01.03** The Contractor shall plan, schedule and conduct all work activities so as not to interfere with the movement of any trains on Railway Property.
- **1.01.04** The Contractor's right to enter Railway's Property is subject to the absolute right of Railway to cause the Contractor's work on Railway's Property to cease if, in the opinion of Railway, Contractor's activities create a hazard to Railway's Property, employees, and/or operations.
- **1.01.05** The Contractor is responsible for determining and complying with all Federal, State and Local Governmental laws and regulations, including, but not limited to environmental, health and safety. The Contractor shall be responsible for and indemnify and save Railway harmless from all fines or penalties imposed or assessed by Federal, State and Local Governmental Agencies against the Railway which arise out of Contractor's work under this Agreement.
- **1.01.06** The Contractor shall notify the (Agency) \_\_\_\_\_ at \_\_\_\_\_ and Railway's Assistant Director Public Projects, telephone number (909) 386 4470 at least thirty (30) working days before commencing any work on Railway Property. Contractors notification to Railway, shall refer to Railroad's file \_\_\_\_\_
- **1.01.07** For any falsework above any tracks or any excavations located, whichever is greater, within twenty-five (25) feet of the nearest track or intersecting a slope from the plane of the top of rail on a 1 ½ horizontal to 1 vertical slope beginning at eleven (11) feet from centerline of the nearest track, both measured perpendicular to center line of track, the Contractor shall furnish the Railway five sets of working drawings showing details of construction affecting Railway Property and tracks. The working drawing shall include the proposed method of installation and removal of falsework, shoring or cribbing, not included in the contract plans and two sets of structural calculations of any falsework, shoring or cribbing. All calculations shall take into consideration railway surcharge loading and shall be designed to meet American Railway Engineering and Maintenance-of-Way Association (previously known as American Railway Engineering Association) Coopers E-80 live loading standard. All drawings and calculations shall be stamped by a registered professional engineer licensed to practice in the state the project is located. The Contractor shall not begin work until notified by the Railway that plans have been approved. The Contractor shall be required to use lifting devices such as, cranes and/or winches to place or to remove any falsework over Railway's tracks. In no case shall the Contractor be relieved of responsibility for results obtained by the implementation of said approved plans.
- **1.01.08** Subject to the movement of Railway's trains, Railway will cooperate with the Contractor such that the work may be handled and performed in an efficient manner. The Contractor shall have no claim whatsoever for any type of damages or for extra or additional compensation in the event his work is delayed by the Railway.

## 1.02 Agreement

- 1.02.01 No employee of the Contractor, its subcontractors, agents or invitees shall enter Railway Property without first having attended a BNSF Contractor Safety Orientation session. The Contractor shall ensure that at a minimum its on-site Project Supervisor(s) have attended a Safety Orientation conducted by the Railway, or its Representative, and that each of its employees, subcontractors, agents or invitees have received the same Safety Orientation through sessions conducted by or through the Contractor before any work is performed on the Project. The Contractor shall give Railway a minimum of thirty (30) days' advance notice for scheduling the Safety Orientation.

## 1.03 Railway Requirements

- 1.03.01 The Contractor shall take protective measures as are necessary to keep railway facilities, including track ballast, free of sand, debris, and other foreign objects and materials resulting from his operations. Any damage to railway facilities resulting from Contractor's operations will be repaired or replaced by Railway and the cost of such repairs or replacement shall be paid for by the Agency.
- 1.03.02 The Contractor shall notify the Railway's Division Superintendent \_\_\_\_\_ at (\_\_\_\_\_) \_\_\_\_\_ and provide blasting plans to the Railway for review seven (7) calendar days prior to conducting any blasting operations adjacent to or on Railway's Property.
- 1.03.03 The Contractor shall abide by the following clearances during construction:
  - ◆ 25'-0" Horizontally from centerline of nearest track.
  - ◆ 22'-6" Vertically above top of rail (Temporary Falsework Clearance may be reduced to 21'-6" Subject to Railway and Public Utilities Commission approval)
  - ◆ 27'-0" Vertically above top of rail for electric wires carrying less than 750 volts
  - ◆ 28'-0" Vertically above top of rail for electric wires carrying 750 volts to 15,000 volts
  - ◆ 30'-0" Vertically above top of rail for electric wires carrying 15,000 volts to 20,000 volts
  - ◆ 34'-0" Vertically above top of rail for electric wires carrying more than 20,000 volts
- 1.03.04 Any infringement within State statutory clearances due to the Contractor's operations shall be submitted to the Railway and to the (Agency) \_\_\_\_\_ and shall not be undertaken until approved in writing by the Railway, and until the (Agency) \_\_\_\_\_ has obtained any necessary authorization from the State Regulatory Authority for the infringement. No extra compensation will be allowed in the event the Contractor's work is delayed pending Railway approval, and/or the State Regulatory Authority's approval.
- 1.03.05 In the case of impaired vertical clearance above top of rail, Railway shall have the option of installing tell-tales or other protective devices Railway deems necessary for protection of Railway operations. The cost of tell-tales or protective devices shall be borne by the Agency.
- 1.03.06 The details of construction affecting the Railway's Property and tracks not included in the contract plans shall be submitted to the Railway by (Agency) \_\_\_\_\_ for approval before work is undertaken and this work shall not be undertaken until approved by the Railway.
- 1.03.07 At other than public road crossings, the Contractor shall not move any equipment or materials across Railway's tracks until permission has been obtained from the Railway. The Contractor shall obtain a "Temporary Private Crossing Agreement" from the Railway prior to moving his equipment or materials across the Railways tracks. The temporary crossing shall be gated and locked at all times when not required for use by the Contractor. The temporary crossing for use of the Contractor shall be at the expense of the Contractor.
- 1.03.08 Discharge, release or spill on the Railway Property of any hazardous substances in excess of a reportable quantity or any hazardous waste is prohibited and Contractor shall immediately notify the Railway's Resource Operations Center at 1(800) 832-5452, of any discharge, release or spills. Contractor shall not allow Railway Property to become a treatment, storage facility as those terms are defined in the Resource Conservation and Recovery Act or any state analogue.

- **1.03.09** The Contractor upon completion of the work covered by this contract, shall promptly remove from the Railway's Property all of Contractor's tools, equipment, implements and other materials, whether brought upon said property by said Contractor or any Subcontractor, employee or agent of Contractor or of any Subcontractor, and shall cause Railway's Property to be left in a condition acceptable to the Railway's representative.

## 1.04 Contractor Safety Action Plan

- **1.04.01** Each Contractor shall develop and implement a Safety Action Plan which shall be made available to Railway prior to commencement of any work on Railway Property. During the performance of work, the Contractor shall audit its compliance with the Safety Action Plan. The Contractor shall designate an on-site Project Supervisor who shall serve as the contact person for the Railway and who shall maintain a copy of the Safety Action Plan and subsequent audits at the job site for inspection and review by the Railway at any time during the course of the project. The Safety Action Plan shall contain, but not be limited to the following;

- ◆ Contractors Employee Safety
  - ◆ Safety Orientation (Sec 1.02.01)
  - ◆ Job Briefings (Sec 1.06.01 & 1.06.02)
  - ◆ Personal Protective Equipment ( Sec 1.06.08)
  - ◆ Protection of Railway Facilities and Railway Flagger Services (Sec 1.03.05 & 1.05)
  - ◆ Protection of Contract Employees working nearer than 25 feet from any track (Sec 1.06.03)
  - ◆ Work After Hours (Sec 1.06.04)
- ◆ Contractor Employee Training
  - ◆ Personal Injury Reporting (Sec 1.09)
  - ◆ Accident Investigation and Analysis
- ◆ High Risk Work Areas/Situations
  - ◆ Notification of Damage to Railway property or hazards that could effect the safe operation of trains (Sec 1.06.06)
  - ◆ Falsework/Shoring affecting the integrity of tracks (Sec 1.01.06)
  - ◆ Clearances affecting the integrity of train operations (Sec 1.03.03)
  - ◆ Moving Equipment and Materials across Railway's tracks (Sec 1.03.07)
  - ◆ Security of Machines, Equipment and Vehicles (Sec 1.06.10)
  - ◆ Power line Safety (Sec 1.06.12)
  - ◆ Excavation Safety (Sec 1.07)
- ◆ High Risk Employees
  - ◆ Alcohol and Drug Use (Sec 1.06.05)
  - ◆ Firearms or Deadly Weapons (Sec 1.06.07)
- ◆ Property Damage, Housekeeping and Clean-up (Sec 1.03.01 & 1.03.09)
  - ◆ Storage of Materials (Sec 1.06.09)
  - ◆ Facility Auditing
- ◆ Compliance with Laws (Sec 1.01.04)
- ◆ Hazardous Substances and Materials
  - ◆ Discharges, Releases and Spills (Sec 1.03.08)
  - ◆ Hazardous Materials encountered in excavations (Sec 1.08)

## 1.05 Protection of Railway Facilities and Railway Flagger Services:

- **1.05.01** The Contractor shall give a minimum of \_\_\_\_\_ working days notice to \_\_\_\_\_ the Railways Roadmaster at (\_\_\_\_\_) \_\_\_\_\_, in advance of when flagging services will be required.
- **1.05.02** Railway flagger and protective services and devices will be required and furnished when Contractors work activities are located over or under of and within twenty-five (25) feet measured horizontally from centerline of the nearest track and when cranes or similar equipment positioned outside of 25-foot horizontally from track centerline that could foul the track in the event of tip over or other catastrophic occurrence, but not limited thereto for the following conditions:

- ◆ 1.05.02a When in the opinion of the Railway's Representative it is necessary to safeguard Railway's Property, employees, trains, engines and facilities.
- ◆ 1.05.02b When any excavation is performed below the bottom of tie elevation, if, in the opinion of Railway's representative, track or other Railway facilities may be subject to movement or settlement.
- ◆ 1.05.02c When work in any way interferes with the safe operation of trains at timetable speeds.
- ◆ 1.05.02d When any hazard is presented to Railway track, communications, signal, electrical, or other facilities either due to persons, material, equipment or blasting in the vicinity.
- ◆ 1.05.02e Special permission must be obtained from the Railway before moving heavy or cumbersome objects or equipment which might result in making the track impassable.
- 1.05.03 Flagging services will be performed by qualified Railway flaggers.
  - ◆ 1.05.03a Flagging crew generally consists of one employee. However, additional personnel may be required to protect Railway Property and operations, if deemed necessary by the Railways Representative.
  - ◆ 1.05.03b Each time a flagger is called, the minimum period for billing shall be the eight (8) hour basic day.
  - ◆ 1.05.03c The cost of flagger services provided by the Railway, when deemed necessary by the Railway's representative, will be borne by the (Agency) \_\_\_\_\_ for a period of \_\_\_\_\_ consecutive calendar days beginning on the date work commences on or near the Railroad's property. The Contractor shall pay to the (Agency) \_\_\_\_\_ liquidated damages in the sum of \$ \_\_\_\_\_ per day for each day in excess of the above \_\_\_\_\_ consecutive calendar days the Contractor works on or near Railroad property, and which requires flagging protection of Railroad's facilities and trains.
  - ◆ 1.05.03d The average train traffic on this route is \_\_\_ freight trains per 24-hour period at a timetable speed of \_\_\_\_\_ MPH and \_\_\_\_\_ passenger trains at a timetable speed of \_\_\_\_\_ MPH.

## 1.06 Contractor General Safety Requirements

- 1.06.01 Work in the proximity of railway track(s) is potentially hazardous where movement of trains and equipment can occur at any time and in any direction. All work performed by contractors within 25 feet of any track shall be in compliance with FRA Roadway Worker Protection Regulations.
- 1.06.02 Before beginning any task on Railway Property, a thorough job safety briefing shall be conducted with all personnel involved with the task and repeated when the personnel or task changes. If the task is within 25 feet of any track, the job briefing must include the Railway's flagger and include the procedures the Contractor will use to protect its employees, subcontractors, agents or invitees from moving any equipment adjacent to or across any Railway track(s).
- 1.06.03 Workers shall not work nearer than 25 feet to the centerline of any track without proper flag/work protection provided by the Railway, unless the track is protected by track bulletin and work has been authorized by the Railway. If flag/work protection is provided, every contractor employee must know: (1) who the Railway flagger is, and how to contact the flagger, (2) limits of the flag/work protection, (3) the method of communication to stop and resume work, and (4) entry into flag/work limits when designated. Men or equipment entering flag/work limits that were not previously job briefed, must notify the flagger immediately, and be given a job briefing if working at less than 25 feet from center line of track.
- 1.06.04 When Contractor employees are required to work on the Railway Property after normal working hours or on weekends, the Railroad's representative in charge of the project must be notified. A minimum of two employees shall be present at all times.

- **1.06.05** Any Contractor employee, its subcontractors employee, agents or invitees under suspicion of being under the influence of drugs or alcohol, or in the possession of same, will be removed from the Railway's Property and subsequently released to the custody of a representative of Contractor management. Future access to the Railway's Property by that employee will be denied.
- **1.06.06** Any damage to Railway Property, or if any hazard is noticed on passing trains, shall be reported immediately to the Railway's representative in charge of the project. Any vehicle or machine which may come in contact with a track, signal equipment, or structure (bridge) could result in a train derailment and shall be reported by the quickest means possible to the Railway representative in charge of the project and to the Railway's Resource Operations Center at 1(800) 832-5452. Local emergency numbers are to be obtained from the Railway representative in charge of the project prior to the start of any work and shall be posted at the job site.
- **1.06.07** All persons are prohibited from having pocket knife with blade in excess of three (3) inches, firearms or other deadly weapons in their possession while working on Railway's Property.
- **1.06.08** All personnel protective equipment used on Railway Property shall meet applicable OSHA and ANSI specifications. Railway personnel protective equipment requirements are; a) safety glasses: permanently affixed side shields; no yellow lenses, b) hard hats with high visibility orange cover, c) safety shoes: hardened toe, above-the-ankle lace-up with a defined heel and d), high visibility retro-reflective orange vests are required as specified by the Railroad's representative in charge of the project. Hearing protection, fall protection and respirators will be worn as required by State and Federal regulations.
- **1.06.09** The Contractor shall not pile or store any materials, machinery or equipment closer than 25'-0" to the center line of the nearest Railway track. At highway/rail at-grade crossings materials, machinery or equipment shall not be stored or left temporarily which interferes with the sight distances of motorists approaching the crossing. Prior to beginning work, the Contractor, will establish a storage area with concurrence of the Railroad's representative.
- **1.06.10** Machines or vehicles must not be left unattended with the engine running. Parked machines or equipment must be in gear with brakes set and if equipped with blade, pan or bucket, they must be lowered to the ground. All machinery and equipment left unattended on Railway's Property must be left inoperable and secured against movement.
- **1.06.11** Workers must not create and leave any conditions at the work site that would interfere with water drainage. Any work performed over water shall meet all Federal, State and Local regulations.
- **1.06.12** All power line wires must be considered dangerous and of high voltage unless informed to the contrary by proper authority. For all power lines the minimum clearance between the lines and any part of the equipment or load shall be; 200 KV or below - 15 feet, 200 to 350 KV - 20 feet, 350 to 500 KV - 25 feet, 500 to 750 KV - 35 feet, 750 to 1000 KV - 45 feet and if capacity of the line is not known, minimum clearance of 45 feet must be maintained. A person shall be designated to observe clearance of the equipment and give a timely warning for all operations where it is difficult for an operator to maintain the desired clearance by visual means.

## **1.07 Excavation**

- **1.07.01** Before excavating, it must be ascertained by the Contractor if there are any underground pipe lines, electric wires, or cables, including fiber optic cable systems that either cross or run parallel with the track which are located within the Projects work area. Excavating on Railway's Property could result in damage to buried cables resulting in delay to Railway traffic, including disruption of service to users resulting in business interruptions involving loss of revenue and profits. Before any excavation commences, the Contractor must contact the Railway's Signal Supervisor and Roadmaster. All underground and overhead wires must be considered HIGH VOLTAGE and dangerous until verified with the company having ownership of the line. It is also the Contractor's responsibility to notify any other companies that have underground utilities in the area and arrange for the location of all underground utilities before excavating.

- **1.07.02** The Contractor must cease all work and the Railway must be notified immediately before continuing excavation in the area if obstructions are encountered that do not appear on drawings. If the obstruction is a utility, and the owner of the utility can be identified, then the owner should also be notified immediately. If there is any doubt about the location of underground cables or lines of any kind, no work will be performed until the exact location has been determined. There will be no exceptions to these instructions.
- **1.07.03** All excavations shall be conducted in compliance with applicable OSHA regulations and regardless of depth shall be shored where there is any danger to tracks, structures or personnel.
- **1.07.04** Any excavations, holes or trenches on the Railway's Property must be covered, guarded and/or protected when not being worked on. When leaving work site areas at night and over weekends, the areas must be secured and left in a condition that will ensure that Railway employees and other personnel who may be working or passing through the area are protected from all hazards. All excavations must be back filled as soon as possible.

## **1.08 Hazardous Waste, Substances and Material Reporting**

- **1.08.01** If Contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including but not limited to any non-containerized commodity or material, on or adjacent to Railway's Property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this Agreement, Contractor shall immediately: (a) notify the Railway's Resource Operations Center at 1(800) 832-5452, of such discovery; (b) take safeguards necessary to protect its employees, subcontractors, agents and/or third parties; and (c) exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of such release.

## **1.09 Personal Injury Reporting**

- **1.09.01** The Railway is required to report certain injuries as a part of compliance with Federal Railroad Administration (FRA) reporting requirements. Any personal injury sustained by an employee of the Contractor, subcontractor or Contractor's invitees while on the Railway's Property must be reported immediately (by phone mail if unable to contact in person) to the Railway's representative in charge of the project. The Non-Employee Personal Injury Data Collection Form contained herein is to be completed and sent by Fax to the Railway at 1(817) 352-7595 and to the Railway's Representative no later than the close of shift on the date of the injury.

NON-EMPLOYEE PERSONAL INJURY DATA COLLECTION

INFORMATION REQUIRED TO BE COLLECTED PURSUANT TO FEDERAL REGULATION. IT SHOULD BE USED FOR COMPLIANCE WITH FEDERAL REGULATIONS ONLY AND IS NOT INTENDED TO PRESUME ACCEPTANCE OF RESPONSIBILITY OR LIABILITY.

1. Accident City/St \_\_\_\_\_ 2. Date: \_\_\_\_\_ Time: \_\_\_\_\_  
County: \_\_\_\_\_ 3. Temperature: \_\_\_\_\_ 4. Weather \_\_\_\_\_  
(if non-BNSF location)

5. Social Security # \_\_\_\_\_

6. Name (last, first, mi) \_\_\_\_\_

7. Address: Street: \_\_\_\_\_ City: \_\_\_\_\_ St. \_\_\_\_\_ Zip: \_\_\_\_\_

8. Date of Birth: \_\_\_\_\_ and/or Age \_\_\_\_\_ Gender: \_\_\_\_\_  
(if available)

9. (a) Injury: \_\_\_\_\_ (b) Body Part: \_\_\_\_\_  
(i.e. (a) Laceration (b) Hand)

11. Description of Accident (To include location, action, result, etc.):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. Treatment:

- First Aid Only
- Required Medical Treatment
- Other Medical Treatment

13. Dr. Name \_\_\_\_\_ 30. Date: \_\_\_\_\_

14. Dr. Address: \_\_\_\_\_ City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_  
Street: \_\_\_\_\_

15. Hospital Name: \_\_\_\_\_

16. Hospital Address: \_\_\_\_\_ City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_  
Street: \_\_\_\_\_

17. Diagnosis: \_\_\_\_\_

FAX TO  
RAILWAY AT (817) 352-7595  
AND COPY TO  
RAILWAY ROADMASTER FAX \_\_\_\_\_

**EXHIBIT "C-1"**

**Agreement  
Between  
THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY  
and the  
CONTRACTOR**

**THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY**

740 E. Carnegie Drive

San Bernardino, CA. 92408-3571

Attention: Manager Public Projects

Railway File: \_\_\_\_\_

Agency Project: \_\_\_\_\_

Gentlemen:

The undersigned, hereinafter referred to as Contractor, has entered into a Contract dated \_\_\_\_\_, 19\_\_ with the \_\_\_\_\_ for the performance of certain work in connection with the project.

\_\_\_\_\_ in the performance of which work the Contractor will necessarily be required to conduct operations within THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY ("Railway"), right of way and property ("Railway Property"). The Contract provides that no work shall be commenced within Railway Property until the Contractor employed in connection with said work for (Agency) \_\_\_\_\_ shall have executed and delivered to Railway an Agreement, in the form hereof, and shall have provided insurance of the coverage and limits specified in said Contract and Section 2 of this Agreement. If this Agreement is executed by other than the Owner, General Partner, President or Vice President of Contractor, evidence is furnished to you herewith certifying that the signatory is empowered to execute this Agreement for the Contractor.

Accordingly, as one of the inducements to and as part of the consideration for Railway granting permission to Contractor to enter upon Railway Property, Contractor, effective on the date of said Contract, has agreed and does hereby agree with Railway as follows:

**Section 1. RELEASE OF LIABILITY AND INDEMNITY**

Contractor agrees to release Railway from any claims arising from the performance of this Agreement which Contractor or any of its employees, subcontractors, agents or invitees could otherwise assert against Railway, regardless of the negligence of Railway, except to the extent that such claims are proximately caused by the intentional misconduct or gross negligence of Railway.

Contractor shall indemnify and hold harmless Railway for all judgments, awards, claims, demands, and expenses (including attorneys' fees), for injury or death to all persons, including Railway's and Contractor's officers and employees, and for loss and damage to property belonging to any person, arising in any manner from Contractor's or any of Contractor's subcontractors' acts or omissions or failure to perform any obligation hereunder. **THE LIABILITY ASSUMED BY CONTRACTOR SHALL NOT BE AFFECTED BY THE FACT, IF IT IS A FACT, THAT THE DESTRUCTION, DAMAGE, DEATH, OR INJURY WAS OCCASIONED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF RAILWAY, ITS AGENTS, SERVANTS, EMPLOYEES OR OTHERWISE, EXCEPT TO THE EXTENT THAT SUCH CLAIMS ARE PROXIMATELY CAUSED BY THE INTENTIONAL MISCONDUCT OR GROSS NEGLIGENCE OF RAILWAY.**

**THE INDEMNIFICATION OBLIGATION ASSUMED BY CONTRACTOR SHALL INCLUDE ANY CLAIMS, SUITS OR JUDGMENTS BROUGHT AGAINST RAILWAY UNDER THE FEDERAL EMPLOYEE'S LIABILITY ACT, INCLUDING CLAIMS FOR STRICT LIABILITY UNDER THE SAFETY APPLIANCE ACT OR THE BOILER INSPECTION ACT, WHENEVER SO CLAIMED.**

Contractor further agrees, at its expense, in the name and on behalf of Railway, that it shall adjust and settle all claims made against Railway, and shall, at Railway's discretion, appear and defend any suits or actions of law or in equity brought against Railway on any claim or cause of action arising or growing out of or in any manner connected with any liability assumed by Contractor under this Agreement for which Railway is liable or is alleged to be liable. Railway shall give notice to Contractor, in writing, of the receipt or dependency of such claims and thereupon Contractor shall proceed to adjust and handle to a conclusion such claims, and in the event of a suit being brought against Railway, Railway may forward summons and complaint or other process in connection therewith to Contractor, and Contractor, at Railway's discretion, shall defend, adjust, or settle such suits and protect, indemnify, and save harmless Railway from and against all damages, judgments, decrees, attorney's fees, costs, and expenses growing out of or resulting from or incident to any such claims or suits.

It is mutually understood and agreed that the assumption of liabilities and indemnification provided for in this Agreement shall survive any termination of this Agreement.

**Section 2. INSURANCE.**

(a) Before commencing any work under this Agreement, Contractor must provide and maintain in effect throughout the term of this Agreement insurance, at Contractor's expense, covering all of the work and services to be performed hereunder by Contractor and each of its subcontractors, as described below:

(1) Workers' Compensation coverage as is required by State law. THE CERTIFICATE MUST CONTAIN A SPECIFIC WAIVER OF THE INSURANCE COMPANY'S SUBROGATION RIGHTS AGAINST THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY.

\$,000,000

(2) Commercial General Liability insurance covering liability, including but not limited to Public Liability, Personal Injury, Property Damage and Contractual Liability covering the obligations assumed by Contractor in Section 1, with coverage of at least ~~\$2,000,000~~ per occurrence and ~~\$6,000,000~~ in the aggregate. Where explosion, collapse, or underground hazards are involved, the X, C, and U exclusions must be removed from the policy.

10,000,000

(3) Automobile Liability insurance, including bodily injury and property damage, with coverage of at least \$1,000,000 combined single limit or the equivalent covering any and all vehicles owned or hired by the Contractor and used in performing any of the services under this agreement.

(4) Railroad Protective Liability insurance stating The Burlington Northern and Santa Fe Railway Company is the Named Insured covering all of the liability assumed by the Contractor under the provisions of this Agreement with coverage of at least \$2,000,000 per occurrence and \$6,000,000 in the aggregate. Coverage shall be issued on a standard ISO form CG 00 35 01 96 and endorsed to include ISO form CG 28 31 10 93 and the Limited Seepage and Pollution Endorsement (see attached copy).

The average train traffic per 24-hour period on this route is \_\_\_ freight trains at a timetable speed of \_\_\_ MPH and \_\_\_ passenger trains at a timetable speed of \_\_\_ MPH and \_\_\_ switch engine movements.

All insurance shall be placed with insurance companies licensed to do business in the States in which the work is to be performed, and with a current Best's Insurance Guide Rating of A- and Class VII, or better.

In all cases except Workers' Compensation and Railroad Protective Liability coverage the certificate must specifically state that THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY IS AN ADDITIONAL INSURED.

Any coverage afforded Railway, the Certificate Holder, as an Additional Insured shall apply as primary and not excess to any coverage issued in the name of Railway.

- (b) Such insurance shall be approved by the Railway before any work is performed on Railway's Property and shall be carried until all work required to be performed on or adjacent to Railway's Property under the terms of the contract is satisfactorily completed as determined by (Agency), and thereafter until all tools, equipment and materials not belonging to the Railway, have been removed from Railway's Property and Railway Property is left in a clean and presentable condition. The insurance herein required shall be obtained by the Contractor and Contractor shall furnish Railway with an original certificate of insurance, signed by the insurance company, or its authorized representative, evidencing the issuance of insurance coverage as prescribed in (a) 1, 2 and 3 above, plus the original Railroad Protective Liability insurance policy to:

Attention: Laurie Bishop  
The Burlington Northern and Santa Fe Railway Company  
Maintenance Field Support  
4501 Kansas Avenue  
Kansas City, Kansas 66106

The certificate of insurance shall guarantee that the policies will not be amended, altered, modified or canceled insofar as the coverage contemplated hereunder is concerned, without at least thirty (30) days notice mailed by registered mail to Railway.

Full compensation for all premiums which the Contractor is required to pay on all the insurance described hereinafter shall be considered as included in the prices paid for the various items of work to be performed under the Contract, and no additional allowance will be made therefor or for additional premiums which may be required by extensions of the policies of insurance.

It is further distinctly understood and agreed by the Contractor that its liability to the Railway herein under Section 1 will not in any way be limited to or affected by the amount of insurance obtained and carried by the Contractor in connection with said Contract.

The Railway file reference number and location information shown at the top of this Agreement, must appear on any original insurance policies or certificates of insurance sent to Railway by the Contractor.

Section 3. The Contractor will observe and comply with all the provisions, obligations and limitations to be observed by Contractor which are contained in the subdivision of the specifications of said Contract, entitled EXHIBIT "C", CONTRACTOR REQUIREMENTS, and shall include, but not be limited to, payment of all costs incurred for any damages to Railway roadbed, tracks, and/or appurtenances thereto, resulting from use, occupancy, or presence of its employees, representatives, or agents or subcontractors on or about the construction site.

Section 4. Contractor shall be responsible to Railway, including its affiliated railway companies, and its tenants for all damages for any unscheduled delay to a freight or passenger train that affects Railway's ability to fully utilize its equipment and to meet customer service and contract obligations. Contractor will be billed, as further

provided below, for the economic losses arising from loss of use of equipment and train service employees contractual loss of incentive pay and bonuses, and contractual penalties resulting from train delays, whether caused by Contractor, or subcontractors, or by the Railway performing Railway Work. Railway agrees that it will not perform any act to unnecessarily cause train delay.

For loss of use, Contractor will be billed per freight train hour at an average rate of (\$385.33 in 1997) with annual adjustments per hour per train as determined from Railway's record. Any disruption to train traffic may cause delays to multiple trains at the same time for the same period.

In addition to the above damages, passenger, U.S. mail trains and certain other grain, intermodal, coal and freight trains operate under incentive/penalty contracts between Railway and its customer. Under these arrangements, if Railway does not meet its contract service commitment, Railway may suffer loss of performance or incentive pay or be subject to a penalty payment. Contractor shall be responsible for any train performance and incentive penalties or other contractual economic losses actually incurred by Railway which are attributable to a train delay caused by Contractor, or subcontractors.

As example, a train arrives 30 minutes after its contract service commitments and Railway is assessed damages per terms of the contract. Either Contractor, and/or subcontractors, caused a 29 minute delay to the train and therefore are not responsible for any train performance and incentive penalties or other contractual economic losses actually incurred by Railway.

As example, a train arrives 30 minutes after its contract service commitments and Railway is assessed damages per terms of the contract. Either Contractor, and/or subcontractors, caused a 31 minute delay to the train and therefore are 100% responsible for any train performance and incentive penalties or other contractual economic losses actually incurred by Railway.

The contractual relationship between Railway and its customers is proprietary and confidential. In the event of a train delay covered by this Agreement, Railway will share information relevant to any train delay to the maximum extent consistent with Railway confidentiality obligations. Damages for train delay for certain trains could be as high as \$50,000.00 per incident.

Contractor and subcontractors shall plan, schedule, coordinate and conduct all Contractor's work so as to not cause any delays to any trains.

Kindly acknowledge receipt of this letter by signing and returning to the undersigned two original copies of this letter, which, upon execution by Railway, shall constitute an Agreement between us.

Yours truly,

\_\_\_\_\_  
(Contractor)

By \_\_\_\_\_

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, Zip

**The Burlington Northern and Santa Fe  
Railway Company**

By \_\_\_\_\_

\_\_\_\_\_  
Assistant Director Public Projects

Accepted this \_\_\_ day of \_\_\_\_\_, 19\_\_

## LIMITED SEEPAGE, POLLUTION AND CONTAMINATION COVERAGE ENDORSEMENT WORDING

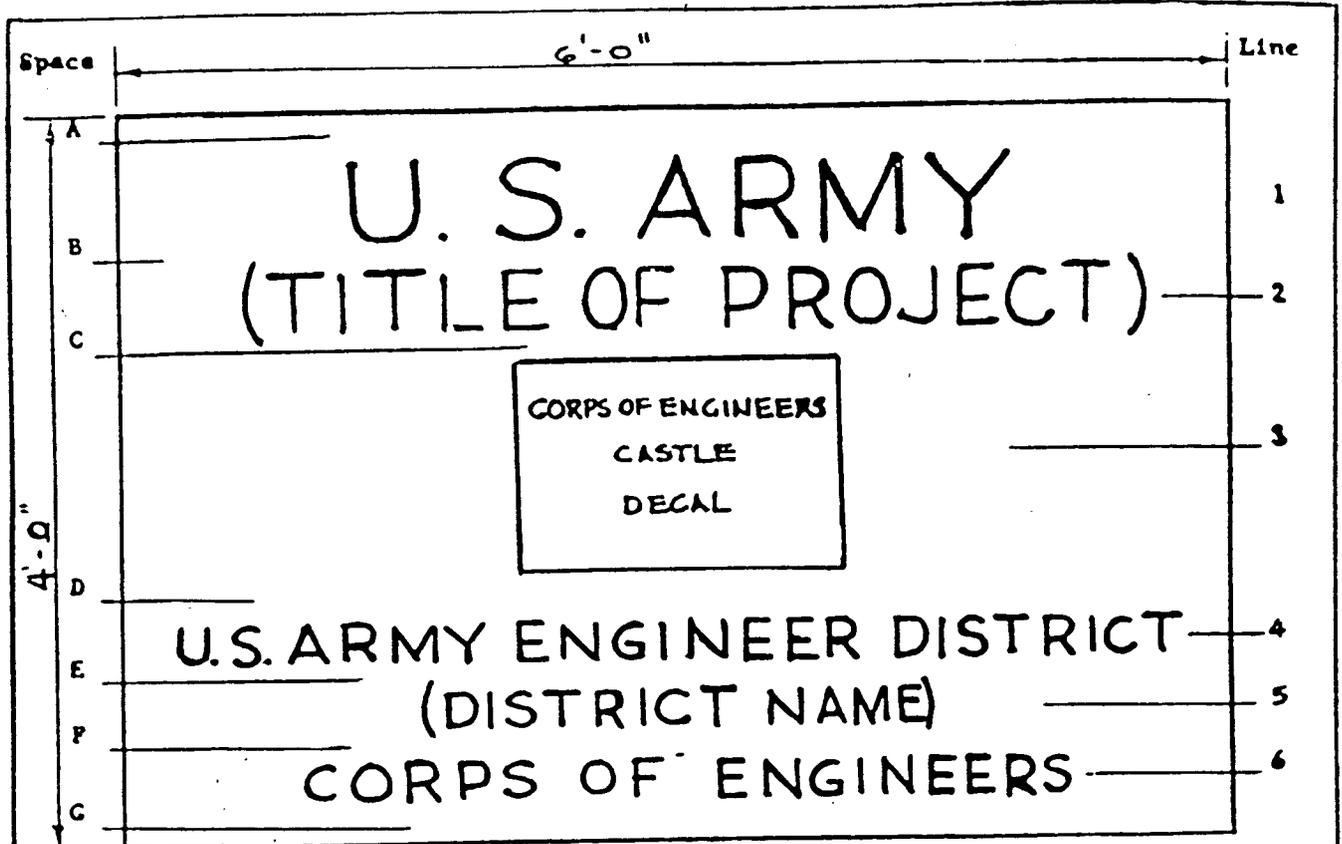
In consideration of the premium charged it is understood and agreed that Exclusion f. of Coverage A. of this Policy shall not apply to the liability of the Insured resulting from seepage and/or pollution and/or contamination caused solely by:

- a) unintended fire, lightning or explosion: or
- b) a collision or overturning of a road vehicle: or
- c) a collision or overturning or derailment of a train.

Notwithstanding the foregoing it is agreed that the coverage provided by this Endorsement shall not apply to:

1. loss of, damage to or loss of use of property directly or indirectly resulting from sub-surface operations of the Insured, and/or removal of, loss of or damage to sub-surface oil, gas or any other substance;
2. any site or location used in whole or in part for the handling, processing, treatment, storage, disposal or dumping of any waste materials or substances;
3. the cost of evaluating and/or monitoring and/or controlling seeping and/or polluting and/or contaminating substances;
4. the cost of removing and/or nullifying and/or cleaning up seeping and/or polluting and /or contaminating substances on property at any time owned and/or leased and/or rented by the insured and/or under the control of the Insured.

Notwithstanding the foregoing, Item 1 does not apply to tunnels.



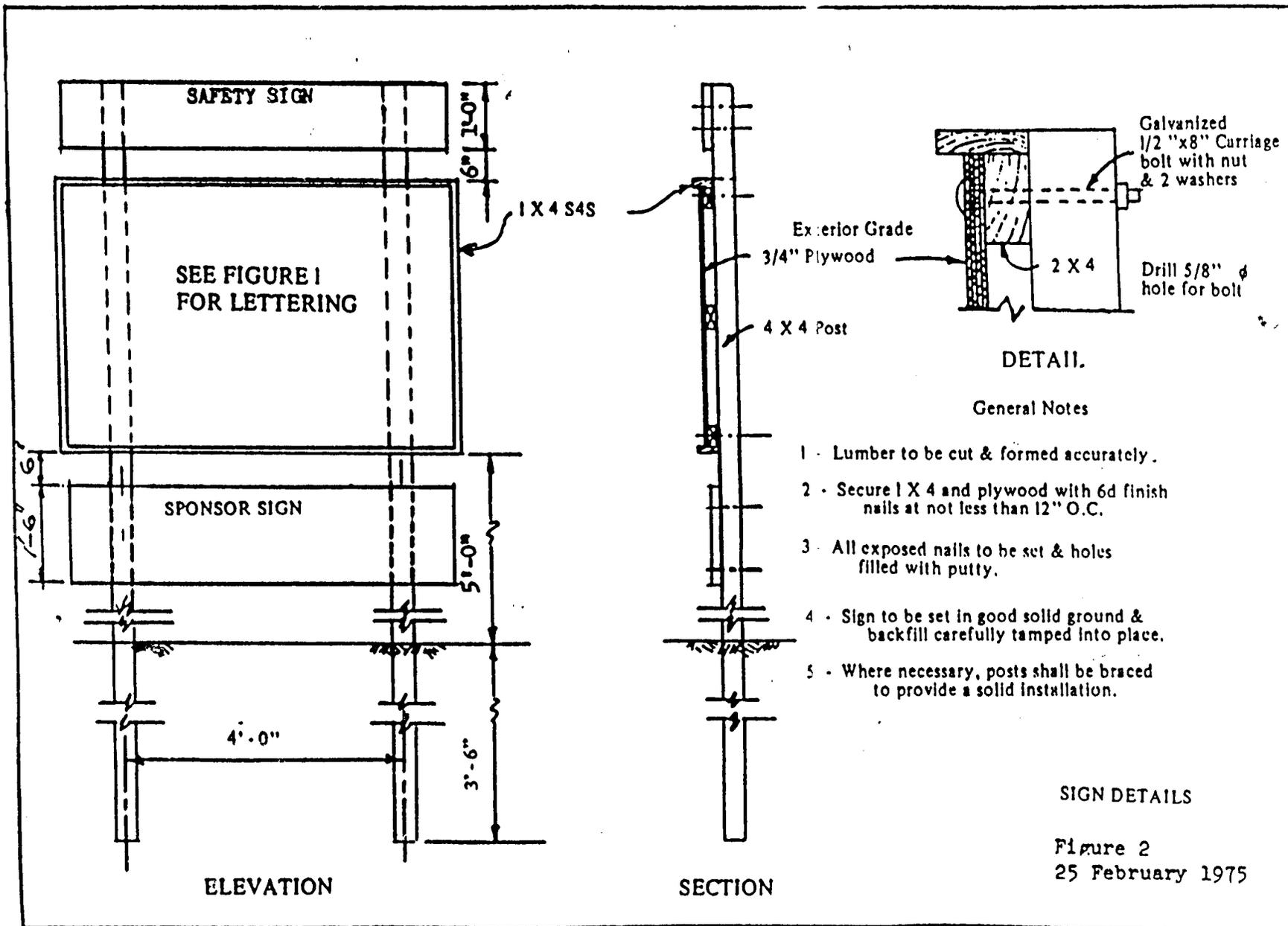
SCHEDULE

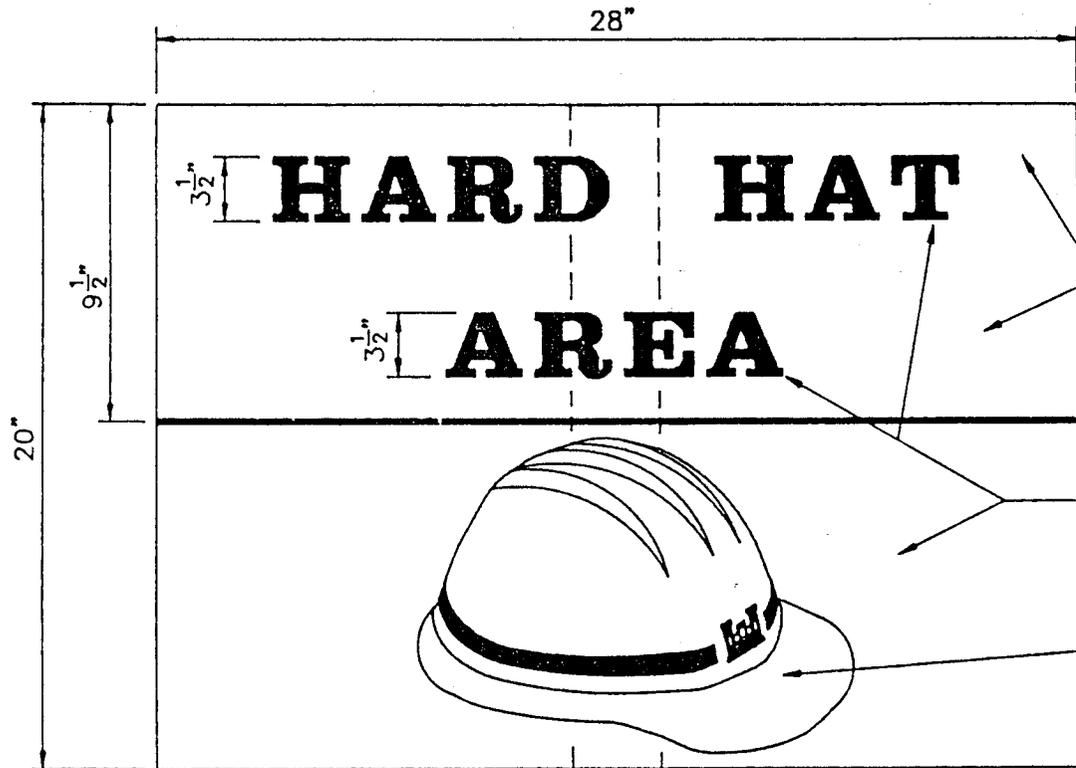
<u>Space</u>	<u>Height</u>	<u>Line</u>	<u>Description</u>	<u>Letter Height</u>	<u>Stroke</u>
A	3"	1	U. S. ARMY	5 1/2"	7/8"
B	2"	2	PROJECT NOMENCLATURE	4"	5/8"
C	2"	3	CORPS OF ENGINEERS CASTLE (DECAL)	1 1/2"	--
D	3"	4	U. S. ARMY ENGINEER DISTRICT	2 3/4"	3/8"
E	2"	5	DISTRICT NAME	2 1/4"	1/4"
F	2"	6	CORPS OF ENGINEERS	2 1/2"	3/8"
G	3"				

Lettering Color -- Black

PROJECT SIGN  
(Army-Civil Works)

Figure 1  
14 August 1972



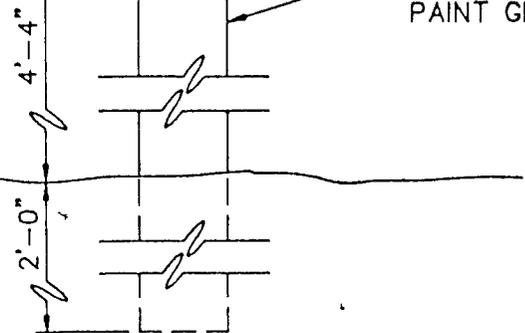


WHITE:  
PAINT BACK OF SIGN WHITE

GREEN

HARD HAT DECAL FURNISHED  
BY GOVERNMENT

4" X 4" POST  
PAINT GREEN



GENERAL NOTES:

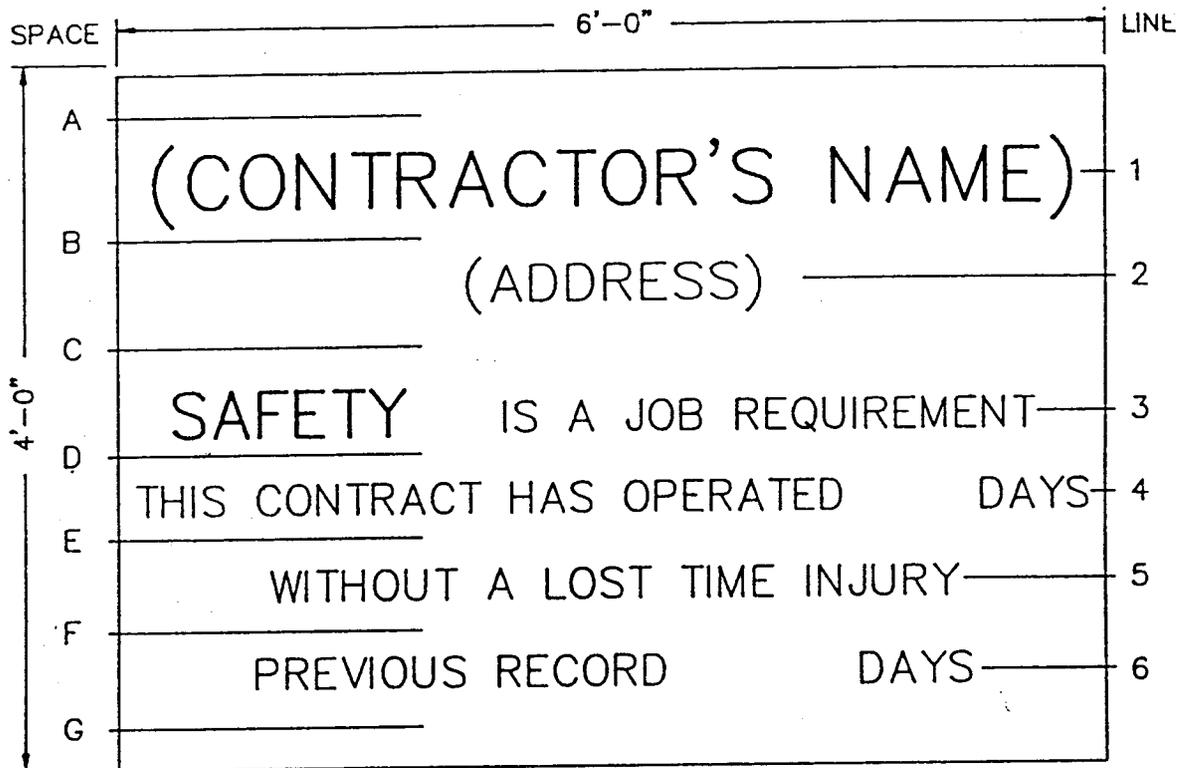
1. Green & White Paint shall be opaque glossy as specified in ANSI Standard Z53.1.
2. Bolt Sign to post w/2 1/2" dia. Carriage Bolts.

STANDARD DETAIL  
HARD HAT SIGN

U.S. ARMY ENGINEER DISTRICT  
SACRAMENTO

Drawn T. Tufts Not to Scale  
Checked R. Simmons NOV. 1987

File No. 80-25-774



## SCHEDULE

<u>SPACE</u>	<u>HEIGHT</u>	<u>LINE</u>	<u>DISCRIPTION</u>	<u>LETTER HEIGHT</u>
A	5"	1	CONTRACTOR'S NAME	5"
B	3"	2	ADDRESS	3"
C	6"	3	SAFETY IS A JOB REQUIREMENT	4 1/2" & 3"
D	3"	4	ALL LETTERING	3"
E	3"	5	ALL LETTERING	3"
F	3"	6	ALL LETTERING	3"
G	5"			

NOTE:

LETTERING SHALL BE BLACK No. 27038, FEDERAL STANDARD 595.  
SIGN SHALL BE INSTALLED IN THE SAME MANNER  
AS THE PROJECT SIGN.

STANDARD DETAIL

**SAFETY SIGN**

U S ARMY ENGINEER DISTRICT  
SACRAMENTO

Drawn T. Tufts

Not to Scale

Checked R. Simmons

NOV. 1987

File number 80-25-707

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-- End of Section Table of Contents --

## SECTION 01250

## MEASUREMENT AND PAYMENT

## PART 1 GENERAL

## 1.1 LUMP SUM PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirement, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

## 1.1.1 Diversion and Control of Water

Water shall be directed away from construction sites. All permanent construction shall be carried on in areas free from water.

Payment for Diversion and Control of water will be made at the applicable contract price, which payment shall constitute full compensation for diverting and controlling the water in work areas, complete.

## 1.1.2 Clear Site and Remove Obstructions

Payment for Clear Site and Remove Obstructions will be made at the applicable contract price, which payment shall constitute full compensation for clearing, grubbing within the channel rights-of-way and at fill sites inside the construction easement and removal of all indicated obstructions within the project limits. Except as otherwise specified, payment includes applicable earthwork; removal abandoned lines, chain link fence and access gates; and the disposal of all materials.

## 1.1.3 Relocation Half Pipe

Payment for Relocation half pipe will be made at the applicable contract price, which payment shall constitute full compensation for excavation, backfill, removal and reinstall the existing half pipe at location as specified in the plan, and restore the earth surface.

## 1.1.4 Demolition

Payment for demolition will be made at the applicable contract price, which payment shall constitute full compensation for removal and disposal of the existing structures as required, including but not limited to maintenance road, grouted stones, entire bridge super structure, retaining wall, parapet wall, wing walls, abutment wall, pier, abutments, pier and abutment

footings, channel invert, performing temporary excavations, backfill temporary excavations, complete.

#### 1.1.5 Drainage Pan

Payment for Drainage Pan will be made at the applicable contract price, which payment shall constitute full compensation for trench and structural excavation, backfill, sand bedding, reinforced concrete pipe placement, concrete collar, and end section, complete. Payment will not include fencing for which other applicable payment items are provided.

#### 1.1.6 Concrete Inlet Structure

Payment for the Concrete Inlet Structure shall be made at the applicable contract price, which payment shall constitute full compensation for structural excavation, backfill, forming, concrete placement, reinforcing steel, finishing, curing the inlet structure, complete.

#### 1.1.7 24" RCP, Collar, End Section

Payment for 24" RCP, Collar, End Section will be made at the applicable contract price, which payment shall constitute full compensation for trench and structural excavation, backfill, sand bedding, reinforced concrete pipe placement, concrete collar and end section, complete. Payment will not include fencing for which other applicable payment items are provided.

#### 1.1.8 Underpass Extension with Wingwalls

Payment for the Underpass Extension with Wingwalls shall be made at the applicable contract price, which payment shall constitute full compensation for structural excavation, backfill, forming, concrete placement, reinforcing steel, finishing, wall texturing, curing the underpass extension and wing walls, complete.

#### 1.1.9 Retaining Walls

##### 1.1.9.1 Payment for Retaining Wall No. 1

Payment for Retaining Walls No. 1 will be made at the applicable contract price, which payment shall constitute full compensation for structural excavation, backfill, forming, concrete placement, reinforcing steel, finishing, wall texturing, curing the retaining wall, complete. Payment will not include fencing for which other applicable payment items are provided.

##### 1.1.9.2 Payment for Retaining Wall No. 2

Payment for Retaining Walls No. 2 will be made at the applicable contract price, which payment shall constitute full compensation for structural excavation, backfill, forming, concrete placement, reinforcing steel, finishing, wall texturing, curing the retaining wall, complete. Payment will not include fencing for which other applicable payment items are provided.

## 1.1.10 Concrete Parapet Wall

Payment for the Concrete Parapet Wall shall be made at the applicable contract price, which payment shall constitute full compensation for structural excavation, backfill, forming, concrete placement, reinforcing steel, finishing, wall texturing, curing the parapet wall, complete. Payment shall not include removal of stonework, asphalt, and concrete channel lining for which other applicable payment items are provided.

## 1.1.11 Concrete Channel Invert

Payment for Concrete Channel Invert shall be made at the applicable contract price, which payment shall constitute full compensation for structural excavation, backfill, forming, concrete placement, reinforcing steel, finishing, curing the channel invert complete. Payment shall not include removal of concrete channel lining for which other applicable payment items are provided.

## 1.1.12 Grouted Stone

Payment for Grouted Stone will be made at the applicable contract unit price, which payment shall constitute full compensation for obtaining and placing the grouted stone and grout, complete.

## 1.1.13 Abutments

## 1.1.13.1 Payment for West Abutment

Payment for West Abutment will be made at the applicable contract price, which payment shall constitute full compensation for furnishing all labor, material, tools, equipment and incidentals for structural excavation, backfill, forming, concrete placement (including Portland cement), reinforcing steel, drill and bonding dowels, finishing, wall texturing, curing the abutment, including pile cap, complete.

## 1.1.13.2 Payment for East Abutment

Payment for East Abutment will be made at the applicable contract price, which payment shall constitute full compensation for furnishing all labor, material, tools, equipment and incidentals for structural excavation, backfill, forming, concrete placement (including Portland cement), reinforcing steel, drill and bonding dowels, finishing, wall texturing, curing the abutment, including pile cap, complete.

## 1.1.14 East Abutment Wingwall

Payment for East Abutment Wingwall will be made at the applicable contract price, which payment shall constitute full compensation for furnishing all labor, material, tools, equipment and incidentals for structural excavation, backfill, forming, concrete placement (including Portland cement), reinforcing steel, drill and bonding dowels, finishing, wall texturing, curing the wing wall, complete.

## 1.1.15 Concrete Underpass Ramp

Payment for Concrete Underpass Ramp will be made at the applicable contract price, which payment shall constitute full compensation for subgrade preparation including excavation and compacted fill, forming, reinforcing steel, concrete placement, finishing, curing the concrete underpass ramp, complete.

#### 1.1.16 Pier

Payment for Pier will be made at the applicable contract price, which payment shall constitute full compensation for furnishing all labor, material, tools, equipment and incidentals for structural excavation, backfill, forming, concrete placement (including Portland cement), reinforcing steel, drill and bonding dowels, finishing, curing the pier, including pile cap, complete.

#### 1.1.17 Pile Driving Test

Payment for Pile Driving Test will be made at the applicable contract price, which payment shall constitute full compensation for demonstrating the applicable tests and furnishing test reports.

#### 1.1.18 Dynamic Test

Payment for Dynamic Test will be made at the applicable contract price, which payment shall constitute full compensation for demonstrating the applicable tests and furnishing test reports.

#### 1.1.19 Irrigation and Landscaping

Payment for Irrigation and Landscaping operations will be made at the applicable contract price which payment shall constitute full compensation for installation of irrigation lines, plantings and seedings, grading, tillage, soil amending, fertilizing, mulching, jute, watering, and maintaining the irrigation and landscaping areas until accepted by the Contracting Officer.

#### 1.1.20 Bicycle Trail Closure and Detour

Payment for Bicycle Trail Closure will be made at the applicable contract price, which payment shall constitute full compensation for providing the closure and detours, including temporary barricades, fences, and restoration of the closure and detour areas upon completion of the work.

#### 1.1.21 As-Built Drawings

Payment for As-Built Drawings will be made at the applicable contract price, which payment shall constitute full compensation for providing the project as-built drawings.

### 1.2 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described

below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirement, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

#### 1.2.1 Excavation

##### 1.2.1.1 Measurement

A survey of the site shall be made prior to commencement of work, and all measurements will be based on this survey without regard to any changes in the site that may be made between the excavation lines and grades indicated on the drawings or staked in the field and ground surfaces as indicated by the above mentioned surveys. The actual slopes as excavated may be greater or less than those indicated or staked depending on the materials excavated and methods used in performing the work, but such alterations shall not change the measurement for payment from the original lines as specified herein. The quantity of directed excavation necessary for the removal of unsuitable foundation material as specified shall be included in the measurement of the excavation where the unsuitable soils are encountered. Quantities will be computed in cubic yards by the average end area method using cross sections taken at significant changes in geometry except that the maximum distance between cross sections shall not exceed (25) feet and the planimeter will be considered a precise instrument for measurement of plotted cross section. All excavation outside of excavation lines shown on the drawings or staked in the field will be considered as being for the convenience of the Contractor.

##### 1.2.1.2 Payment for Excavation

Payment for Excavation will be made at the applicable contract price, which payment shall constitute full compensation for excavation and disposal of excavated materials along the railroad embankment including excavation and disposal of topsoil.

##### 1.2.1.3 Unsatisfactory Soils

No separate payment will be made for the excavation and disposal of unsatisfactory soils. When such excavation is directed, payment will be included in the applicable contract price for the items of work under which the unsuitable soils are encountered. When there is no applicable contract item an adjustment will be made.

##### 1.2.1.4 Excavation for Structures

No separate payment will be made for excavation for structures. All costs therefore shall be included in the applicable contract item to which the work applies.

#### 1.2.1.5 Trenches

No separate payment will be made for excavation of utility and pipe trenches. All costs therefore shall be included in the applicable contract prices for the items to which the work applies.

#### 1.2.1.6 Unit of Measure

Unit of measure: cubic yard.

#### 1.2.2 Compacted Fill

##### 1.2.2.1 Measurement

Measurement for compacted fill will be made between the excavation and structure lines and the fill limit lines, or between the ground lines and fill lines, as indicated or staked in the field. Quantities will be computed in cubic yards by the average end area method using cross sections taken at significant changes in geometry except that the maximum distance between cross sections shall not exceed (25) feet and the planimeter will be considered a precise instrument for measurement of plotted cross section.

##### 1.2.2.2 Payment for Compacted Fill

Payment for Compacted Fill will be made at the applicable contract price, which payment shall constitute full compensation for locating, obtaining borrow, hauling, placing and compacting the fill.

##### 1.2.2.3 Fill for Structures

No separate payment will be made for fill or backfill about structures. All such costs shall be included in the applicable contract prices for items to which the work applies.

##### 1.2.2.4 Subgrade Preparation

No separate payment will be made for subgrade preparation and all costs in connection therewith shall be included in the contract prices for items to which the work applies.

##### 1.2.2.5 Unit of Measure

Unit of measure: cubic yard.

#### 1.2.3 Structural Steel

##### 1.2.3.1 Measurement

Invoices or shipping tickets from the fabrication plant that shows the weight of each member will be considered adequate to determine the quantity of structural steel members for measurement purposes. Weighbills or Delivery tickets may be used in lieu of invoices in the event that weights are not included on the invoices. The weight of nuts, bolts, washers and accessories will not be included in the measurement.

## 1.2.3.2 Payment

Payment for Structural Steel will be made at the applicable contract unit price, per ton, which payment shall constitute full compensation for fabrication and assembly, and furnishing all labor, tools, equipment and incidentals, complete.

## 1.2.3.3 Unit of Measure

Unit of measure: ton (2,000 pounds).

## 1.2.4 Elastomeric Bearing Pads

## 1.2.4.1 Payment

Payment for Elastomeric Bearing Pads will be made at the applicable contract price, which payment shall constitute full compensation for furnishing all labor and material, installed, complete.

## 1.2.4.2 Unit of Measure

Unit of measure: Each.

## 1.2.5 Furnish and Drive Piling

## 1.2.5.1 Measurement

The Contracting Officer reserves the right to increase or decrease the length of piles to be furnished and installed by changing the pile locations or elevations, requiring the installation of additional piles, or requiring omission of piles from the requirements shown and specified. Whether or not such changes are made, the Contractor will be paid at the contract unit price per linear foot (including control test piles), multiplied by the total length of acceptable piles actually placed.

## 1.2.5.2 Payment

Payment will be made at the applicable contract unit price, which payment shall constitute full compensation for furnishing, delivering, handling, and/or installing (as applicable) all material, labor and equipment necessary to meet contract requirements applicable to the piles. The Contractor will not be allowed payment for withdrawn, broken, or rejected piles or (except for control test piles) for any portion of a pile remaining above the cut-off point.

## 1.2.5.3 Unit of Measure

Unit of measure: linear foot.

## 1.2.6 Asphalt Concrete Pavement

## 1.2.6.1 Measurement

The Contractor shall weigh each load on a certified platform scale and shall furnish the Contracting Officer with duplicate Weighmaster's Certificates showing the actual net weights. One ticket shall be furnished to the plant inspector and one ticket to the inspector at the construction site. The bituminous mixture shall be weighed after mixing and no deduction will be made for the weight of bituminous material incorporated therein. Asphalt concrete pavement used for the convenience of the Contractor will not be measured for payment.

#### 1.2.6.2 Payment

Payment for Asphalt Concrete Pavement will be made at the applicable contract price, which payment shall constitute full compensation for surface preparation, asphalt concrete hauling, placing, and compacting, complete.

#### 1.2.6.3 Unit of Measure

Unit of measure: ton (2,000 pounds).

#### 1.2.7 Asphalt Curb

##### 1.2.7.1 Measurement

Measurement of asphalt curb will be made to the nearest linear foot horizontally along the centerline from end-to-end of the curb, in place.

##### 1.2.7.2 Payment

Payment for Asphalt Curb will be made at the applicable contract unit price, per linear foot, which payment shall constitute full compensation for obtaining and placing the curb, complete.

##### 1.2.7.3 Unit of Measure

Unit of measure: Linear foot.

#### 1.2.8 Aggregate Base Course for Road

##### 1.2.8.1 Measurement

The Contractor shall weigh each load on a certified platform scale and shall furnish the Contracting Officer with duplicate Weighmaster's Certificates showing the actual net weights. One ticket shall be furnished to the plant inspector and one ticket to the inspector at the construction site. Aggregate base course used for the convenience of the Contractor will not be measured for payment.

##### 1.2.8.2 Payment

Payment for Aggregate Base Course for Road will be made at the applicable contract price, which payment shall constitute full compensation for subgrade preparation, aggregate base course hauling, placing, and compacting, complete.

## 1.2.8.3 Unit of Measure

Unit of measure: ton (2,000 pounds).

## 1.2.9 Aggregate Base Course for Subballast

## 1.2.9.1 Measurement

The Contractor shall weigh each load on a certified platform scale and shall furnish the Contracting Officer with duplicate Weighmaster's Certificates showing the actual net weights. One ticket shall be furnished to the plant inspector and one ticket to the inspector at the construction site. Aggregate base course for subballast used for the convenience of the Contractor will not be measured for payment.

## 1.2.9.2 Payment

Payment for Aggregate Base Course for Road will be made at the applicable contract price, which payment shall constitute full compensation for subgrade preparation, aggregate base course hauling, placing, and compacting, complete.

## 1.2.9.3 Unit of Measure

Unit of measure: ton (2,000 pounds).

## 1.2.10 Fencing, 5 Ft Chain Link

## 1.2.10.1 Measurement

Measurement of chain link fencing will be made to the nearest linear foot horizontally along the centerline from end-to-end of the fence, in place. Temporary fencing will not be included in the measurement.

## 1.2.10.2 Payment

Payment for Fencing, 5 Ft Chain Link will be made at the applicable contract price, which payment shall constitute full compensation for furnishing and installing the fencing, complete in place.

## 1.2.10.3 Unit of Measure

Unit of measure: linear foot

## 1.2.11 Gates, 5 Ft Chain Link

## 1.2.11.1 Payment

Payment for Gates, 5 Ft Chain Link will be made at the applicable contract price, which payment shall constitute full compensation for furnishing and installing the gates, complete.

## 1.2.11.2 Unit of Measure

Unit of measure: each

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

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SECTION 01330

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09/97

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-- End of Section Table of Contents --

SECTION 01330

SUBMITTAL PROCEDURES

09/97

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION

Submittals required are identified by SD numbers as follows:

SD-01 Data

SD-04 Drawings

SD-06 Instructions

SD-07 Schedules

SD-08 Statements

SD-09 Reports

SD-13 Certificates

SD-14 Samples

SD-18 Records

SD-19 Operation and Maintenance Manuals

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 Government Approved

Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.2.2 Information Only

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

### 1.3 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

### 1.4 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

### 1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

## PART 2 PRODUCTS (Not Applicable)

## PART 3 EXECUTION

### 3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in

compliance with existing laws and regulations.

### 3.2 SUBMITTAL REGISTER (ENG FORM 4288)

At the end of this section is one set of ENG Form 4288 listing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Contractor will also be given the submittal register files, containing the computerized ENG Form 4288 and instructions on the use of the files. These submittal register files will be furnished on a separate diskette. Columns "d" through "r" have been completed by the Government; the Contractor shall complete columns "a" and "s" through "u" and submit the forms (hard copy plus associated electronic file) to the Contracting Officer for approval within 15 calendar days after Notice to Proceed. The Contractor shall keep this diskette up-to-date and shall submit it to the Government together with the monthly payment request. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. The submittal register and the progress schedules shall be coordinated.

### 3.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 15 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

### 3.4 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

### 3.5 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

#### 3.5.1 Procedures

Submittals shall be made to the Contracting Officer's Representative. Two copies of submittals For Information Only (FIO) are required. Six copies are required for all other submittals.

#### 3.5.2 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

### 3.6 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

### 3.7 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. Four copies of the submittal will be retained by the Contracting Officer and two copies of the submittal will be returned to the Contractor.

### 3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

### 3.9 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

<p>CONTRACTOR</p> <p>(Firm Name)</p> <p>_____ Approved</p> <p>_____ Approved with corrections as noted on submittal data and/or attached sheets(s).</p> <p>SIGNATURE: _____</p> <p>TITLE: _____</p> <p>DATE: _____</p>
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-- End of Section --

**SUBMITTAL REGISTER**  
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION

**BNSF RR BRIDGE**

CONTRACTOR

SPECIFICATION SECTION

**01200**

ACTIVITY NO.	TRANS-MITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										CLASSI- FICATION	CONTRACTOR SCHEDULE DATES				CONTRACTOR ACTION		GOVERNMENT ACTION		REMARKS				
					D	I	N	S	C	O	I	G	R	E		S	A	M	U	M	C	D	E		S	U	C	D
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.	q.	r.	s.	t.	u.	v.	w.	x.	y.	z.	aa.		
			1.2	As-Built Drawings	X											X												
			1.2	Utilities to be relocated or Protected					X							X												
			1.2	LA County Sewer Project					X							X												
			1.2	Underground Service Alert					X							X												
			1.2	Street Closures					X							X												
			1.2	Spill Reporting					X							X												
			1.2	BNSF Roadmaster					X							X												
			1.2	Bicycle Trail Detour					X							X												
			1.2	Accident Reporting					X							X												
			1.2	Insurance Policies					X							X												





**SUBMITTAL REGISTER**  
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION

**BNSF RR BRIDGE**

CONTRACTOR

SPECIFICATION SECTION

**02200**

ACTIVITY NO.	TRANS-MITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										CLASSI- FICATION	CONTRACTOR SCHEDULE DATES				CONTRACTOR ACTION		GOVERNMENT ACTION		REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
					D	I	N	S	C	O	I	G	R	E		S	A	M	M	A	T	O	M		O	R	E	V	I	E	W	E	R	S	T	A	P	R	O	V	A	M	R	P	N	R	E	V	E	R	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D	A	T	S	U	B	Y	C	O	D	E	D





**SUBMITTAL REGISTER**  
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION

**BNSF RR BRIDGE**

CONTRACTOR

SPECIFICATION SECTION

**02250**

ACTIVITY NO.	TRANS-MITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										CLASSI- FICATION	CONTRACTOR SCHEDULE DATES				CONTRACTOR ACTION		GOVERNMENT ACTION		REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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**SUBMITTAL REGISTER**  
(ER 415 1-10)

CONTRACT NO.

TITLE AND LOCATION

**BNSF RR BRIDGE**

CONTRACTOR

SPECIFICATION SECTION

**07150**

ACTIVITY NO.	TRANS-MITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										CLASSI- FICATION	CONTRACTOR SCHEDULE DATES				CONTRACTOR ACTION		GOVERNMENT ACTION		REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR  
MANUFACTURER'S CERTIFICATES OF COMPLIANCE**

(Read instructions on the reverse side prior to initiating this form)

DATE

TRANSMITTAL NO.

**SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS** *(This section will be initiated by the contractor)*

TO	FROM	CONTRACT NO.	CHECK ONE: <input type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITTAL OF TRANSMITTAL _____
----	------	--------------	---

SPECIFICATION SEC. NO. (Cover only one section with each transmittal)	PROJECT TITLE AND LOCATION
---	----------------------------

ITEM NO.	DESCRIPTION OF ITEM SUBMITTED (Type size, model number/etc.)	MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction no. 8)	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION (See Instruction No. 8)	FOR CE USE CODE
				SPEC. PARA. NO.	DRAWING SHEET NO.			
a	b	c	d	e	f	g	h	i

REMARKS	I certify that the above submitted items have been reviewed in detail and are correct and instruct conformance with the contract drawings and specifications except as otherwise stated.  _____ NAME AND SIGNATURE OF CONTRACTOR
---------	---

**SECTION II - APPROVAL ACTION**

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE
--	--	------

## INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No." This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box, on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288 for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation " column when a submittal is not in accordance with the plans and specifications..also, a written statement to that effect shall be included in the space provided for "Remarks."
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

### THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

- |  |   |
|--|---|
| A - Approved as submitted.   | E - Disapproved (See attached).   |
| B - Approved, except as noted on drawings.   | F - Receipt acknowledged.   |
| C - Approved, except as noted on drawings.<br>Refer to attached sheet resubmission required. | FX - Receipt acknowledged, does not comply<br>As noted with contract requirements |
| D - Will be returned by separate correspondence.   | G - Other (Specify)   |

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

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## DIVISION 01 - GENERAL REQUIREMENTS

## SECTION 01430

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## SECTION 01430

## ENVIRONMENTAL PROTECTION

## PART 1 GENERAL

## 1.1 DEFINITIONS

For the purpose of this specification, environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for but not limited to aesthetic, cultural and/or historical purposes. The control of environmental pollution and damage requires consideration of air, water, and land, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

## 1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01330 SUBMITTAL PROCEDURES:

SD-09 Reports

Environmental Protection Plan; GA.

Submit plan in writing within seven days after the Notice of Award.

## 1.3 ENVIRONMENTAL PROTECTION REQUIREMENTS

These requirements are to provide and maintain, during the life of the contract, environmental protection. Plan for and provide environmental protective measures to control pollution that develops during normal construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project; and comply with Federal, State, and local regulations pertaining to the environment, including but not limited to water, air, and noise pollution; biological resources, transportation, recreation, public services and utilities; geology, seismicity and soils; hazardous materials and waste management. The Contractor shall comply with all the requirements of the Environmental Protection Plan as described in this section. This plan shall be applicable prior to and during the construction of the BN&SF Bridge modification at the Rio Hondo River.

## 1.3.1 Environmental Protection Plan

The Contractor shall submit an Environmental Protection Plan covering all mitigation measures contained herein for the protection of the environment

as identified and discussed further in this section. The Government shall review the environmental protection plan and all the pre-construction submittals within seven calendar days of receipt from the Contractor. The Contractor shall meet with representatives of the Contracting Officer to develop a mutual understanding relative to compliance with this provision and administration of the environmental protection program immediately after the Notice of Award to ensure complete compliance. Construction and/or associated activities thereof shall not commence until the environmental protection plan is approved by the Government. Approval of the Contractor's plan shall not relieve the Contractor of his responsibility for adequate and continuous control of pollutants and other environmental protection measures. The Government reserves the right to make changes in the Contractor's environmental protection plan and operations as necessary to maintain satisfactory environmental protection performance. The environmental protection plan (with details for each requirement specified in later provisions of Section 01430) will include but not be limited to the following:

- a) A commuter trip reduction plan to achieve an average ridership of 1.5 individuals.
- b) Written procedures limiting the idling of construction equipment at construction sites to two minutes or less.
- c) Written procedures to be followed to suspend the use of powered equipment during second-stage smog alerts within one hour of notification.
- d) A list of all construction equipment anticipated to be used on the project, listing the make and model, type of fuel used (diesel, gasoline, or alternative), and engine specifications (e.g. engine size, horsepower, etc.)
- e) A written description of the installation of a wind-speed monitoring device capable of recording and displaying peak 10-second gusts during each hour of construction.
- f) A map of proposed sediment barriers to be in place during construction.
- g) A list of waste asphalt, concrete, and masonry disposal locations at sites away from the construction site/construction staging sites.
- h) A list of noise specifications for all pile drivers used on the project.
- i) A list of sensitive receptor locations where noise levels may exceed 14 decibels (A-weighted) and where sound barrier walls may need to be constructed.
- j) Anticipated traffic flow patterns and changes due to construction activities in the areas impacted by the construction project, access to bus stops, sidewalk access plans, locations of recreational trails, safety structures, and rest stop/seating areas.

- k) Locations of signs both on the construction site (limiting speeds to 25 m.p.h. and construction hours in accordance with Section 01200 GENERAL REQUIREMENTS), and on impacted streets as part of the overall traffic mitigation plan.
- l) A construction routing plan identifying the locations of access driveways to both construction staging sites and construction sites, and the locations of preferred traffic routes to and from construction staging sites and construction sites.
- m) A map identifying the equipment refueling and maintenance areas, locations of hazardous waste storage, materials stockpiles, mobile equipment staging, and parking areas.
- n) A hazardous materials transport plan identifying preferred traffic routes to and from the construction staging sites and construction sites.
- o) Records documenting that the training of all project construction workers involved in the use of hazardous materials took place prior to the start of project construction.
- p) An Emergency Response Plan including but not limited to locations of hazardous waste spill kits, specific procedures for hazardous materials spill containment and public notification, and notification of local emergency service providers.

#### 1.3.1.1 Laws, Regulations, and Permits

The Contractor shall prepare a list of Federal, State and local laws, regulations, and permits concerning environmental protection, pollution control and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations and permits. These shall include, but not be limited to, local city ordinance compliance permits (e.g. business excavation and hauling permits), California OSHA permits, and Air Quality Management District permits. NPDES and 401 Permits have already been obtained by the Government as discussed in Section 3.3. Permits identified shall be obtained by the Contractor and submitted along with the initial list to the Contracting Officer within seven calendar days after the Notice of Award.

#### 1.3.1.2 Protection of Features

The Contractor shall determine methods for the protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archaeological and cultural resources. These methods, if not discussed in detail in the environmental protection plan identified in this section, shall be added and submitted to the Contracting Officer within seven calendar days after the Notice of Award.

#### 1.3.1.3 Procedures

The Contractor shall implement procedures to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall set out procedures to be followed to correct pollution of the environment due to accident, natural causes or environmental protection plan as described more in detail in this section. Failure to comply with the approved environmental protection plan could result in payment delays.

#### 1.3.1.4 Permit or License

The Contractor shall obtain all needed permits or licenses. Copies of these permits and/or licenses shall be submitted to the Contracting Officer within seven calendar days after the Notice of Award date.

#### 1.3.1.5 Drawings

The Contractor shall include drawings showing locations of any proposed temporary excavations or embankments for haul roads, material storage areas, structures, sanitary facilities, stockpiles of earth materials, and disposal areas for excess earth material and unsatisfactory earth materials as discussed and/or in addition to measures described further in this section.

#### 1.3.1.6 Environmental Monitoring Plans

The Contractor shall include environmental monitoring plans for the job site which incorporate land, water, air, traffic, recreation, public service, hydrogeology, soils, hazardous materials / waste management and noise monitoring as described further in this section.

#### 1.3.1.7 Traffic Control Plan

The Contractor shall include a traffic control plan for the job site and other surrounding areas that would be used during construction hours for transport of materials, equipment, etc., as described further in this section.

#### 1.3.1.8 Surface and Ground Water

The Contractor shall establish methods of protecting surface and ground water during construction activities by methods described further in this section.

#### 1.3.1.9 Work Area Plan

The Contractor shall include a work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. The plan shall include measures for marking the limits of use areas. This plan shall be submitted to the Contracting Officer for review and approval within seven calendar days after the Notice of Award.

#### 1.3.1.10 Plan of Borrow Area

The Contractor shall include a plan of the borrow area for the job site as discussed further in this section. This plan shall be submitted to the Contracting Officer for review and approval within seven calendar days after the Notice of Award.

#### 1.3.1.11 Emergency Response Plan

An emergency response plan shall be prepared for responding to hazardous materials spills at all project construction sites. The plan shall identify actions to immediately control hazardous materials spills, and procedures to notify appropriate health officials.

The Contractor shall submit to the Contracting Officer for review and approval within seven calendar days after the Notice of Award an emergency response plan. The plan should outline the response to be taken should an emergency involving but not limited to hazardous material spills at project construction and/or staging area sites occur during construction hours. The plan should identify actions to immediately control hazardous spills, and procedures to notify appropriate health officials, local jurisdictions and authorities. The plan should identify the lead Contractor representative to address an incident of this nature.

The plan should also include specific procedures for hazardous materials spill containment and public notification. The plan should also consider and address appropriate response measures to prevent and/or minimize the exposure of fish and wildlife resources in the lower River, construction workers, and nearby residents.

#### 1.3.1.12 Noise Control Plan

The Contractor shall develop a noise control plan. Noise control features and plans shall be reviewed and approved by a noise control engineering professional as provided for by the Contractor. This plan shall include the mitigation measures identified and discussed further in this section and submitted within seven calendar days after the Notice of Award as discussed further in this section.

##### a. Noise Producing Equipment:

The Contractor shall submit a list of all noise producing equipment and vehicles. The list shall describe the type of noise control device used on each piece of equipment and identify equipment and vehicles for which noise control devices are not available or feasible as discussed further in this section.

##### b. Noise Producing Signals:

The Contractor shall submit written procedures limiting the use of noise producing signals to safety warnings. The procedures shall be distributed to all construction supervisors, foreman and workers. Procedures shall also be prepared and distributed regarding the volume of project related public address or music systems. The Contractor shall also submit a list with signatures showing that each construction worker and employee on-site

have received these procedures.

The Contractor shall submit these written procedures and signature sheet to the Contracting Officer for review and approval within seven calendar days from the awarded contract date, limiting the use of noise producing signals for safety warnings. Noise-producing signals such as horns, whistles, alarms and bells shall be limited and approved by the Contracting Officer.

#### 1.3.1.13 Public Services and Utilities

The Contractor shall send a schedule of project construction activities to all emergency service providers and utility companies near the project area within seven calendar days after the Awarded contract date. The schedule shall identify the date and location of proposed construction activities as discussed further in this section.

#### 1.4 SUBCONTRACTORS

Assurance of compliance with this section by subcontractors shall be the responsibility of the Contractor and subject to disciplinary action and/or shut down until compliance is met.

#### 1.5 PERMITS OBTAINED BY CORPS OF ENGINEERS

The Corps of Engineers have not obtained any permits for this project. See Contract Clause entitled "PERMITS AND RESPONSIBILITIES".

#### 1.6 REGULATORY REQUIREMENTS

The Contractor shall comply with all state regulatory and statutory requirements.

#### PART 2 PRODUCTS (NOT APPLICABLE)

#### PART 3 EXECUTION

#### 3.1 PROTECTION OF ENVIRONMENTAL RESOURCES

The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. The Contractor shall confine his activities to areas defined by the contract drawings and specifications. Environmental protection shall also include the following subparagraphs.

##### 3.1.1 Protection of Land Resources

After the Awarded contract date and prior to the beginning of any construction, the Contracting Officer shall identify all land resources to be preserved within the Contractor's work area. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, top soil, and land forms without special permission from the Contracting Officer. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized by

the Contracting Officer. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

#### 3.1.1.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas where no work is to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence and during all construction operations. Where construction operations are to be conducted during darkness, the markers shall be visible during darkness. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

#### 3.1.1.2 Protection of Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features to be preserved, indicated and defined on the drawings submitted by the Contractor as a part of the Environmental Protection Plan, shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques.

#### 3.1.1.3 Reduction of Exposure of Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated and specified. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in instances where the constructed feature obscures borrow areas, quarries and waste material areas, these areas shall not initially be cleared in total. Clearing of such areas shall progress in reasonably sized increments as needed to use the areas developed as approved by the Contracting Officer.

#### 3.1.1.4 Temporary Protection of Disturbed Areas

Such methods as necessary shall be utilized to effectively prevent erosion and control sedimentation, including but not limited to the following:

##### a. Retardation and Control of Runoff

Runoff from the construction site shall be controlled by construction of diversion ditches, benches, and berms to retard and divert runoff to protected drainage courses, and the Contractor shall also utilize any measures required by area-wide plans approved under Paragraph 208 of the Clean Water Act.

The Contractor shall abide by and implement the provisions outlined in the Storm Water Pollution Prevention Plan required under the General Storm Water Construction Activity Permit for the control of storm water. A copy of the plan can be obtained from the Contracting Officer. All erosion control measures and other protection measures mentioned in this plan shall be used for compliance.

b. Erosion and Sedimentation Control Devices / Sediment Barriers

Sediment from construction areas and the construction staging site shall be trapped in temporary basins as necessary as directed by the Contracting Officer. The Contractor shall institute effluent quality monitoring programs as required by state and local environmental agencies. The Contractor shall submit a map and/or plan identifying the location of proposed sediment basins.

The Contractor shall submit to the Contracting Officer for review and approval a map identifying locations of necessary sediment barriers to trap sediments (i.e., sandbags, silt fence, temporary containment dams) downstream of each construction site/operation resulting from construction activities such as dewatering operations.

The Contractor shall construct or install all temporary and permanent erosion sedimentation control features. Temporary erosion and sediment control measures such as berms, dikes, drains, sedimentation basins, grassing and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operative.

3.1.1.5 Location of Contractor Facilities

The Contractor's field offices, staging areas, stockpiles, storage, and temporary buildings shall be placed in areas designated on the contract drawings and approved by the Contracting Officer.

3.1.1.6 Temporary Excavation and Embankments

Temporary excavation and embankments shall be controlled to protect adjacent areas from contamination.

3.1.1.7 Disposal of Solid Wastes

Solid wastes (excluding clearing debris), which include broken concrete, asphalt, metal scrap, wood and debris from the modification work, shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. All solid waste materials generated from construction activities shall become the property of the Contractor and shall be removed from the construction site to an area approved by the Contracting Officer. The Contractor shall transport all solid waste off all construction site and staging areas and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. All material shall be handled as directed by the Contracting Officer.

The Contractor shall submit to the Contracting Officer for review and approval, a list of off-site disposal locations for masonry, concrete, and/or asphalt. Disposal shall be prohibited at project construction sites.

Masonry, concrete and/or asphalt shall be contained and covered while waiting to be disposed.

3.1.1.8 Disposal of Chemical Wastes

Chemical wastes shall be stored in corrosion resistant containers, removed from the work area and disposed of in accordance with Federal, State, and local regulations as discussed further in this section.

#### 3.1.1.9 Disposal of Contaminated Soils

a. The Contractor shall monitor excavations and areas of earthmoving for gaseous emissions and shall sample and analyze any suspected materials. If materials are verified to be contaminated, notify the Contracting Officer for appropriate action. The Contractor shall take remedial action based on the extent and magnitude of contaminated conditions as directed by the Contracting Officer.

b. Contaminated soils encountered during project construction shall be disposed of in accordance with applicable local, state and federal regulations. Appropriate actions shall be taken to minimize exposure to construction workers, recreational users, and nearby residents as discussed further in this section.

#### 3.2 HISTORICAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

Existing historical, archaeological and cultural resources within the Contractor's work area shall be so designated by the Contracting Officer and precautions shall be taken by the Contractor to preserve all such resources as they existed at the time they were pointed out to the Contractor. The Contractor shall install all protection for these resources so designated on the contract drawings and shall be responsible for their preservation during this contract. If during construction items of apparent archaeological or historical interest are discovered, they shall be left undisturbed and the Contractor shall report the find immediately to the Contracting Officer.

#### 3.3 PROTECTION OF WATER RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to avoid pollution of surface and ground waters. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract.

The Contractor shall keep copies on-site and comply with the conditions contained in the General Storm Water Construction Activity Permit (Storm Water Pollution Prevention Plan (SWPPP) in compliance with NPDES requirements) and the Section 401 Water Quality Certification obtained for this job. Copies of the permit and Storm Water Pollution Prevention Plan can be obtained from the Contracting Officer. Diversion techniques as described in the Storm Water Pollution Prevention Plan shall be used during construction operations.

##### 3.3.1 Washing and Curing Water

Waste waters directly derived from construction activities shall not be allowed to enter water areas. These waste waters shall be collected and

placed in retention ponds where the suspended materials can be settled out or the water evaporated in order to separate the pollutants from the water.

### 3.3.2 Cofferdam and Diversion Operations / Dewatering Operations

The Contractor shall plan his operations and perform all work necessary to minimize adverse impact or violation of the water quality standard for the State of California. Construction operations for dewatering and removal of diversions shall be controlled at all times to limit impact of water turbidity on the habitat for wildlife and impacts on water quality for downstream use.

The Contractor shall submit to the Contracting Officer for review and approval a map identifying the location of proposed dewatering operations.

### 3.3.3 Stream Crossings

Stream crossings shall be controlled during construction. Crossings shall provide movement of materials or equipment which does not violate water pollution control standards of the Federal, State or local government.

### 3.3.4 Monitoring of Water Areas Affected by Construction / Water Contamination

3.3.4.1 Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor in order to prevent contamination of ground water and water along waterways. All refuse, oil, greases, and other petroleum products; all toxic materials; all cement or concrete; or water containing such materials shall be disposed of in a manner to prevent their entry into the ground water and water along the Los Angeles River. These procedures shall be reviewed and approved by the Contracting Officer. A log of monitoring activities shall be submitted monthly for compliance as discussed further in this section.

3.3.4.2 A spill kit containing absorbent materials shall be maintained at construction site(s). All employees shall be familiar with the procedures to utilize the spill kit and the locations where they are kept.

### 3.3.5 Hazardous Materials

3.3.5.1 If hazardous materials are released during construction, appropriate actions shall be taken to minimize the exposure of fishery and wildlife resources in the lower Los Angeles River and San Pedro Bay, construction workers, and nearby residents as discussed further in this section.

### 3.3.5.2 Hazardous Materials, Transport and Storage Plan

The Contractor shall submit to the Contracting Officer for review and approval a hazardous materials storage plan. The plan shall prohibit hazardous materials storage near the channel and/or subdrains. The Contractor shall temporarily store all fuels and other hazardous materials away from the project area. Liquid fuels, paints, solvents, and other hazardous materials would not be stored or handled in bulk quantities in

spreading basins and/or channels.

The Contractor shall submit to the Contracting Officer for review and approval a hazardous materials transport and storage plan that identifies preferred traffic routes for the transport of hazardous materials, and areas in which hazardous materials storage is proposed. Hazardous materials would be defined but not limited to contaminated soils and fuel for equipment. Confirmation of hazardous materials shall be coordinated with the Environmental Planning representatives from the Corps of Engineers and/or Los Angeles County Department of Public Works. The Contractor shall also provide written verification that any hazardous materials proposed to be transported and stored off-site are in accordance with current state and federal regulations.

Any hauling of material such as but not limited to sediment, rock, masonry, concrete and asphalt, shall be covered or maintain at least two feet of freeboard during transport or haul of material.

3.3.5.3 The Contractor shall provide proof that all project construction workers involved in the use of hazardous materials were trained prior to construction, including a description of the content of the training. The Contractor shall submit a monthly list of persons known to have been exposed to hazardous materials. See Monthly Logs.

#### 3.3.6 Equipment Refueling

The Contractor shall submit to the Contracting Officer for review and approval a list of equipment and vehicle refueling and maintenance areas. Maintenance of equipment and vehicles in, near or on the levees of the flood control channel are prohibited. Refueling of equipment and vehicles shall also be prohibited in, near, or on the levees of the flood control channel unless proper written justification for in-channel refueling is provided by the Contractor and approved by the Government. Should in-channel refueling be required and approved by the Government, appropriate mitigation measures such as, but not limited to, containment structures shall be constructed in order to prevent the introduction of spilled fuel into the river. Refueling of pile driver rigs will be permitted in the channel with appropriate mitigation measures. All other refueling operations shall be conducted at least 25 feet from the top of the outermost edge of the channel levee. The Contractor shall use only low sulfur content diesel fuel in all internal combustion engines used at the construction site. The Contractor is responsible for refueling all equipment and vehicles off-site or at the staging area designated on the plans. Other refueling site locations requested by the Contractor shall be approved by the Contracting Officer.

The Contractor shall store all equipment at the staging site area. No construction equipment shall be left in the channel, on the levee or other areas of the construction site at the end of a construction day, except that equipment for which prior approval has been obtained by the Government. Pile driver rigs shall be permitted to remain in the channel overnight, but shall be removed when rainfall is predicted in the Los Angeles River watershed. All other equipment should be stored at the staging site and/or other off-site locations obtained at the expense of the

Contractor. All construction and staging site areas shall be secured and protected by the Contractor.

### 3.3.7 Street Sweeping

At the close of each working day, any materials as a result of construction activities, such as dirt, tracked into the adjacent streets (streets for construction access) or lying uncontained in the construction areas are to be swept up. A log of street sweeping activities shall be maintained and submitted monthly for compliance. See Monthly Logs.

### 3.4 PROTECTION OF FISH AND WILDLIFE RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to and damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed for all workers by the Contractor prior to beginning of construction operations. The Contractor may contact the Environmental Planning representatives from the Corps of Engineers, Ronald F. Lockmann at (213) 452-3847 and/or from the Los Angeles County Department of Public Works, Ulysses Fandino at (626) 458-4337 for assistance in preparing this list. This list shall be reviewed and approved by the Contracting Officer.

### 3.5 PROTECTION OF AIR RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to minimize pollution of air resources. All activities, equipment, processes, and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with the State of California and all Federal emission and performance laws and standards. Special management techniques as set out below shall be implemented to control air pollution by the construction activities which are included in the contract.

#### 3.5.1 Particulates

Dust particles, aerosols, and gaseous by-products from all construction activities, processing and preparation of materials shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, spoil areas, borrow areas, and all other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards mentioned in the paragraph 3.5 PROTECTION OF AIR RESOURCES to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type or other methods shall be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated at such intervals as to keep the disturbed area damp at all times. The Contractor must have sufficient competent equipment available to accomplish this task.

Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs.

The Contractor shall water down active construction sites to prevent the

uplift of dust at all construction site and staging areas at least two (2) times per day. See Mitigation Monthly Logs.

### 3.5.2 Hydrocarbons and Carbon Monoxide

Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

The Contractor shall submit written procedures to limiting idling of construction equipment at construction sites and staging areas to the Contracting Officer. The procedures shall be distributed to all construction supervisors, foreman and workers. A signature sheet with all construction workers and employees anticipated to be present on the project site shall acknowledge receipt of the idling procedures and commitment for compliance by signing the signature sheet.

The Contractor shall provide good maintenance of all equipment including but not limited to the proper tuning of off-road heavy equipment to reduce combustion sources of air emissions. See Mitigation Monthly Logs.

### 3.5.3 Odors

Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

### 3.5.4 Monitoring Air Quality

Monitoring of air quality shall be the responsibility of the Contractor.

#### 3.5.4.1 Wind-speed Monitoring

The Contractor shall install wind-speed monitoring equipment at the construction site(s) at locations approved by the Contracting Officer. The monitoring equipment shall record and display the peak 10-second gust of wind during each hour of construction. A weekly summary shall be submitted for compliance and include periods when construction activities are curtailed in response to wind conditions along with the meteorological data. The Contracting Officer shall suspend excavation, grading, or other particulate-generating activities when winds (peak 10-second gusts) exceed 25 miles per hour. The contract completion date shall be extended by the number of days activities are suspended.

### 3.5.5 Transport of Materials

All trucks hauling dirt, sediment or other loose materials from construction site are to be covered or shall maintain at least 2 feet of cover from the top edge of the truck to the material being hauled. Trucks shall not be allowed to idle for more than two minutes when not in active use.

### 3.5.6 Smog Alerts

The Contracting Officer shall notify the Contractor when a second stage smog alert is in effect and order the suspension of the use of powered

construction equipment or construction vehicles. The Contractor shall not claim shut-down time due to smog alerts. A log of these shut-down periods shall be prepared and submitted. See Mitigation Monthly Logs.

### 3.5.7 Trip Reduction Plan

The Contractor shall develop a trip reduction plan for all construction workers and employees who would be at the construction site to achieve an average vehicle ridership of 1.5 individuals per day. The trip reduction plan should be submitted to the Contracting Officer for review and approval.

### 3.5.8 Construction Equipment Idling

The Contractor shall submit written procedures to limiting idling of construction equipment at construction sites and staging areas to the Contracting Officer. The procedures shall be distributed to all construction supervisors and foreman. A signature sheet with all the construction workers signatures shall acknowledge receipt of the idling procedures and commitment for compliance.

### 3.5.9 Traffic Routing Plan

The Contractor shall develop a traffic routing plan identifying the most efficient traffic routes to the project site and staging areas and submit to the Contracting Officer for review and approval. The routes should consider community safety and route construction traffic on less-congested streets and away from residential streets. The Contractor shall schedule all fill material and concrete deliveries to occur between the hours of 7:00 am and 7:00 pm weekdays and 8:00 am and 7:00 pm Saturdays. All other deliveries of materials shall occur between the hours of 9:00 am and 4:00 pm Monday through Saturday. No construction shall occur on Sundays.

Signing and flagmen shall be utilized where construction equipment interfaces with public traffic. The plan shall identify where the flagmen shall be situated to assist the flow of traffic during deliveries.

The plan shall also identify locations of access driveways for construction workers, employees, deliveries construction routes. Access for equipment for construction activities from the channel shall be permitted from the staging site area. The Contractor has the option to construct an access ramp from the staging site to the top of the levee. Access ramps from the levee into the channel located at points to be determined. Modification of existing access ramps shall not be permitted unless written justification as to why the existing conditions prevent the Contractor from completing the construction and why no other alternatives are acceptable is provided to and approved by the Government. No other access into the channel invert shall be permitted. If the Contractor constructs the access from the staging site to the channel levee, the Contractor shall take down the existing fencing located between the staging site and channel levee slope, as directed by the Contracting Officer, and shall replace in kind after construction is completed. The plan shall also include vehicular and pedestrian detour plans (including autos and buses), details of truck haul routes and site access points, details of roadway restriping and signage for vehicular and pedestrian circulation, including turn restrictions, lane

assignments, speed limit and crosswalks, relocation of bus stops, and parking details, including restrictions and prohibitions. Access driveways shall be planned with the consideration of prohibiting construction vehicles on local residential streets.

The Plan shall also identify construction activities currently planned for the designated staging area. The Plan shall also establish the locations of haul routes on major streets or highways into and out of staging sites and construction sites and specifically near these sites.

#### 3.5.10 Notification to Local Jurisdictions

The Contractor shall coordinate with the Contracting Officer and Environmental Planning representatives from the Corps of Engineers and Los Angeles County Department of Public Works regarding public outreach. Letters shall be distributed by the Contractor to affected city departments of planning, public works, public information, and public libraries. The Contractor may be required to conduct and coordinate community meetings in a city adjacent to the project reaches. Information provided at this meeting shall identify potential temporary road, bike and equestrian trail detours and/or closures, and vehicular detours resulting from project construction activities. Signage of these detours and/or closures shall be prepared and posted by the Contractor at all appropriate access locations approved by the Contracting Officer. The Contracting Officer may require the Contractor to be responsible for preparing and sending flyers to local residents within 500 feet of the project limits and staging areas upon request of the Contracting Officer. All correspondence with the local community shall be approved and directed by the Contracting Officer.

#### 3.5.11 Fuel Source for Equipment

The Contractor shall use methane, natural gas, or propane-powered equipment and vehicles, rather than gasoline or diesel-powered equipment or vehicles where feasible. The Contracting Officer shall approve the equipment not powered by methane, natural gas, or propane-powered equipment or vehicles prior to the start of construction. The Contractor shall submit a list of construction equipment anticipated to be used on the project to the Department for review and approval. The list shall identify all construction equipment by type of fuel used (diesel, gasoline, or alternative fuel). The Contractor shall provide documentation of contact with Contractors and/or major equipment suppliers for each piece of equipment using gasoline or diesel fuel to indicate why the use of an alternative fuel is not feasible.

#### 3.5.12 Bus Stop Access Plan

The Contractor shall contact the local transit agencies servicing the area to notify them of construction activities. If bus stops are affected, the Contractor shall coordinate with the transit agencies and prepare a bus stop access plan identifying the locations and anticipated duration of closure of bus stops. Bus stop access should be maintained wherever possible during the entire construction period. Install safety feature such as fencing, barriers, and/or warning signs if bus stops are affected to allow adjacent bus stops to remain open. The Contractor shall submit to

the Contracting Officer a list of transit agency contacts and written verification by the Contractor that bus stops would not be affected. Verification shall include the date, transit agency contact, map of routes to be used and statement of no effect.

### 3.5.13 Pedestrian Access

The Contractor shall submit to the Contracting Officer for review and approval a sidewalk access plan, identifying the location and anticipated duration of closure of sidewalks. The plan should maintain pedestrian access throughout the construction period by keeping sidewalks open as much as public safety considerations would permit. Install safety features such as, but not limited to, fencing, barriers, and warning signs in construction areas to allow adjacent sidewalks to remain open.

## 3.6 NOISE

### 3.6.1 Construction Equipment and Vehicles

All noise-producing construction equipment and vehicles using internal combustion engines shall be equipped with mufflers, and air-inlet silencers where appropriate, in good operating condition that meet or exceed original factory specification. Mobile or fixed "package" equipment (e.g., arc-welder, air compressor) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.

### 3.6.2 Mobile or Fixed Equipment

All mobile or fixed noise-producing equipment used on the project, which is regulated for noise output by a local, state, or federal agency, shall comply with such regulation as discussed further in this section.

### 3.6.3 Electrically-Powered Equipment

Electrically-powered equipment instead of pneumatic or internal combustion powered equipment shall be used where feasible, as discussed further in this section.

3.6.3.1 The Contractor shall submit a monthly summary of the number of electrically powered, pneumatically powered and internal combustion powered equipment used on the project as discussed further in this section. See Mitigation Monthly Logs.

### 3.6.4 Noise-Producing Construction Activity

Noise-producing construction activity shall comply with local noise control regulations.

### 3.6.5 Equipment and Vehicles

The Contractor shall submit to the Contracting Officer a list of all noise producing project equipment and vehicles. The list shall describe the type of noise control device used on each piece of equipment, and identify equipment and vehicles for which noise control devices are not available or

feasible. All equipment shall provide noise-producing project equipment and vehicles using internal combustion engines with mufflers, and air-inlet silencers, that meet or exceed original factory specifications. Equip mobile or fixed "package" equipment (eg. arc-welders, air compressors) with shrouds and noise-control features that are readily available for that type of equipment. Anything used different from what is described shall be approved by the Contracting Officer in writing.

### 3.6.6 Stockpile of Material and Mobile Equipment

The Contractor shall submit to the Contracting Officer for review and approval a list of material stockpile (such as but not limited to concrete, asphalt, and masonry) and mobile equipment staging, parking, and maintenance areas. Stockpiles are defined as any type of material left temporarily on site and the property of the Contractor. These stockpiles should be located at least 50 feet away (or the greatest distance allowable as approved by the Contracting Officer if 50 feet is not available) from noise-sensitive receptors. Receptors are identified as schools, hospitals, residential areas.

The Contractor shall stabilize any areas of exposed soil, such as dirt stockpiles, dirt berms, and temporary dirt roads, with covers to prevent the uplift of material from wind.

### 3.6.7 Posted Traffic Signs

The Contractor shall post traffic signs at all construction and staging site areas limiting traffic speeds to 25 miles per hour. The signs shall be posted such that all construction workers and employees on the site can visually observe the sign from their vehicles at all access points of the project limits. The Contractor shall also place 25 miles per hour signs on local streets alongside or adjacent to the construction zone areas. Upon completion of the posting, the Contractor shall provide the Contracting Officer with a written statement stating that signs have been posted, with the identification of all locations. The Contractor shall make sure that all workers abide by the speed limits. The Contracting Officer and/or representatives of the Contracting Officer has the right to stop work at the Contractor's expense until compliance is met.

The Contractor shall post signs at all construction zones limiting construction hours to 7:00 a.m. - 7:00 p.m., weekdays, 8:00 a.m. - 7:00 p.m. on Saturdays. The Contractor shall submit, one day after posting, in writing to the Contracting Officer, written verification that the construction hours of operation signs were posted at all access locations in areas visible to all construction workers, employees and local residents. These hours of construction would apply, but not be limited to noisy maintenance activities and all debris and material transport. Where local jurisdictions impose more stringent limits on the hours of construction activity, these limits should take precedence and be followed.

The Contractor shall submit to the Contracting Officer for review and approval a list identifying locations prohibiting left-turns along the restriped street segment near construction staging sites so that the remaining roadway width not utilized by traffic accessing the staging site

could be fully used for through-traffic flow. The Contractor shall post signs prohibiting left turns along the restriped street segment near construction staging sites, seven days after the Awarded contract date. The Contractor shall submit to the Contracting Officer written verification that no left turn signs were posted at all appropriate construction site access points.

The Contractor shall submit to the Contracting Officer for review and approval a list of contacts made with local City jurisdictions during the permitting process.

The Contractor shall submit to the Contracting Officer for review and approval a construction traffic routing plan, identifying the locations of access driveways. Local streets are prohibited as routes leading to access driveways. Exceptions can apply where necessary and unavoidable and at the approval of the Contracting Officer.

#### 3.6.8 Impact Pile Drivers

The Contractor shall submit to the Contracting Officer for review and approval a list of noise specifications for all impact pile drivers to be used during project construction. These specifications shall include the noise intensity and pile driver make and model. Impact pile drivers shall be limited to 95 decibels, A-weighted at a distance of 50 feet, consistent with federal GSA "Construction Equipment and Practices" Guide Specifications.

### 3.7 TESTS

The Contractor shall establish and maintain quality control for environmental protection operations to assure compliance with contract requirements and maintain records of his quality control for all construction operations, including, but not limited to the following items.

The Contractor shall record on daily reports any problems in complying with laws, regulations and ordinances and corrective action taken. Three copies of these records and tests, as well as the records of corrective action taken, shall be furnished to the Government as directed by the Contracting Officer.

#### 3.7.1 Laws, Regulations and Ordinances

The Contractor must comply with all Federal, State, and local laws, regulations and ordinances concerning pollution control.

#### 3.7.2 Protection of Land Resources

The Contractor shall prevent landscape defacement and provide post-construction clean-up and replacement, if necessary.

#### 3.7.3 Protection of Water Resources

The Contractor shall prevent the contamination of Los Angeles River or other bodies of water with harmful chemicals; the Contractor shall dispose of waste materials; and the Contractor shall provide erosion control. A

clean site shall be maintained at all times. Trash and all refuse generated by the construction workers and/or employees shall be disposed of properly.

#### 3.7.4 Pollution Control Facilities

The Contractor shall provide for the maintenance of pollution control facilities. The Contractor shall conduct a training course on the maintenance of pollution control facilities.

#### 3.8 INSPECTION

The Corps monitor shall notify the Contracting Officer of non-compliance with the Environmental Protection Plan. The Contracting Officer shall notify the Contractor in writing of any observed non-compliance with the Contractor's Environmental Protection Plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action as may be approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or costs or damages allowed to the Contractor for any such suspension.

#### 3.9 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction.

#### 3.10 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain all constructed facilities and temporary pollution control devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

#### 3.11 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL AND HAZARDOUS MATERIALS

The Contractor shall train personnel in all phases of environmental protection prior to construction. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities (instruments required for monitoring purposes) to insure adequate and continuous environmental pollution control.

The Contractor shall provide training to all construction workers involved in the use of hazardous materials. This training shall take place five calendar days prior to the start of construction with the Contracting Officer present. The Contractor shall submit to the Contracting Officer documentation that the training class occurred and provide an outline of the content of the course and a list and sign-in sheet of attendees. The training class should give project construction workers orientation training on the start day of construction to ensure that the workers understood the training received earlier.

#### 3.12 PROTECTION OF RECREATIONAL ACTIVITIES

### 3.12.1 Recreational Trail Plan - Lario Bike Trail, Pedestrian Paths, Equestrian Trails and Local Coastal Zone Access

#### a. Equestrian Trails

The Contractor shall prepare an equestrian trail closure plan. The plan shall identify the signage that shall be used to close the equestrian trail during the week from Monday to Friday for the duration of the project. The Contractor shall provide for the usage of the equestrian trail, on Saturdays and Sundays. Should the Contractor anticipate that construction activities shall continue to commence on Saturdays, the Contractor shall post the proper signage to reflect that closure at least two days prior to the Saturday closure.

The Contractor shall provide access to the equestrian trail on all Sundays throughout the duration of the project. The signage shall identify the closed reach and duration of the closure. All signage for the temporary weekend detour(s) and/or closure of the equestrian trail shall be placed within seven calendar days of the approved plan. Closures and/or detours would be determined by the Los Angeles County Department of Parks and Recreation. These plans shall include the location for posting temporary detour and/or closure signs at construction sites affecting the equestrian trail, all temporary access locations and the applicable dates and time impacted.

The proposed equestrian trail plan shall include maintenance near all construction sites and be provided for by the Contractor and coordinated with the approval of the Contracting Officer and Jim McCarthy, from the Los Angeles County Department of Parks and Recreation, at (213) 738-2972.

#### b. Bicycle Trail Closure

Typical bike path signs shall read "BIKE PATH CLOSED BETWEEN \_\_\_\_\_ AND \_\_\_\_\_, (DATE TO DATE)". Temporary closure shall be adequately signed two weeks prior to construction. The location of closure, dates and time consistent throughout the project period shall be posted. Construction signage must also advise the public of the potential presence of vehicles and construction equipment on the bike trail. The limits of closures, proposed signage and location shall be submitted in a plan for review by the Contracting Officer. The Contractor shall provide flagmen to coordinate movement on the levee when construction equipment and trail users are present at the same time. The Contractor shall ensure the safety of the construction workers and trail users, by protective measures as outlined in the Contractor's plan.

All closures shall be adequately barricaded at all access ramps within the closure phase. The Contractor shall contact and coordinate with Mr. Romo at (625) 458-3941 within 5 days after the awarding of the contract, regarding temporary closures, detours and protection of the public for recreational usage of the trail.

### 3.13 PROTECTION FOR PUBLIC SAFETY

### 3.13.1 Project Construction Schedule

The Contractor shall send a schedule of project construction activities in writing to all emergency service providers and utility companies that service the project area and adjacent properties within seven calendar days after the Awarded contract date. Review and approval of this notification should be obtained from the Contracting Officer prior to submittal to the emergency service providers and utility companies. The schedule shall identify the date and location of proposed construction activities. The Contractor shall submit copies of the written notification to the Contracting Officer one day after compliance for record.

### 3.13.2 Safety Structures

The Contractor shall submit a list of safety structures to the Contracting Officer for review and approval. The Contractor shall provide adequate safety structures in the construction areas during bridge modifications. Safety features could include but are not limited to fencing, barriers placed around construction areas, warning signs, and placement of construction equipment at night in areas that are secured from the general public. The Contractor shall provide written notice to the Contracting Officer that the approved safety structures are in place one day after placement.

### 3.14 ENVIRONMENTAL PROTECTION MEASURES DURING CONSTRUCTION

The Contractor shall prepare the following Mitigation Monthly Logs by completing the forms on a daily basis. Each entry shall identify the necessary information required on the logs, and the signature of the Contractor and in some cases the Contracting Officer and/or Representatives thereof on a daily and/or weekly basis. The following is the list of Mitigation Monthly Logs required to be completed by the Contractor.

TEMPORARY TRAFFIC CONTROL ACTIVITIES  
 CONSTRUCTION MATERIALS DELIVERY RECORDS  
 SECOND-STAGE SMOG ALERT/SUSPENSION OF POWER EQUIPMENT USE  
 SUMMARY OF POWER SUPPLY TYPES  
 WIND SPEED MONITORING \*\*  
 INSPECTION OF HAUL OF MATERIAL  
 SITE WATERING ACTIVITIES  
 OFF-ROAD HEAVY EQUIPMENT MAINTENANCE ACTIVITIES  
 CONSTRUCTION WORK WITHIN FLOOD CONTROL CHANNELS  
 INSPECTION OF BULK GRANULAR MATERIALS  
 STREET SWEEPING ACTIVITIES  
 HAZARDOUS MATERIAL SPILL KIT INSPECTION  
 POWER EQUIPMENT USAGE  
 VIBRATORY /IMPACT PILE DRIVER USAGE  
 HAZARDOUS MATERIALS USERS\*\*\*  
 EXCAVATED MATERIALS SAMPLING  
 SUMMARY OF PERSONS EXPOSED TO HAZARDOUS MATERIALS  
 SUMMARY OF ENVIRONMENTAL PROGRAMS (WASTE MANAGEMENT DIV.) COORDINATION

\*\* These logs shall be submitted on a weekly basis to the Contracting Officer.

\*\*\* These logs shall be submitted on a quarterly basis to the Contracting Officer.

### 3.15 MITIGATION MONTHLY LOGS

Listed below is the first page of each monthly log required to be completed by the Contractor. The complete logs shall consist of entries for each day of each month for the duration of the construction period as directed by the Contracting Officer. A complete log chart package shall be furnished to the Contractor after the Notice to Proceed.

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## SECTION 01451

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## SECTION 01451

## CONTRACTOR QUALITY CONTROL

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

## AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740 (1996) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM E 329 (1995b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

## 1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

## 1.3 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with SECTION 01330 SUBMITTAL PROCEDURES:

SD-09 Reports

Quality Control Plan; GA.

Submit not later than 30 days after receipt of notice to proceed.

SD-18 Records

Contractor Project Management System; GA.

Complete network system and logic diagrams within 30 days of notice to proceed.

## PART 2 PRODUCTS (NOT APPLICABLE)

## PART 3 EXECUTION

## 3.1 GENERAL

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause entitled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for on-compliance with quality requirements specified in the contract. The Quality Control Plan shall include a System Manager (other than the project superintendent) who shall report to the project superintendent. The project superintendent in this context shall mean the individual with the responsibility for the overall management of the project including quality and production.

## 3.2 QUALITY CONTROL PLAN

## 3.2.1 General

The Contractor shall furnish for review by the Government, not later than 30 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause entitled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Government will consider an interim plan for the first 15 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

## 3.2.2 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities

and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters will also be furnished to the Government.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with SECTION 01330: SUBMITTAL PROCEDURES.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.

h. Reporting procedures, including proposed reporting formats.

i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks and has separate control requirements. It could be identified by different trades or disciplines, or it could be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. This list will be agreed upon during the coordination meeting.

### 3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

### 3.2.4 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

### 3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 14 calendar days prior to the Coordination Meeting.

During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

### 3.4 QUALITY CONTROL ORGANIZATION

#### 3.4.1 General

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure contract compliance. The Contractor shall provide a CQC organization which shall be at the site at all times during progress of the work and with complete authority to take any action necessary to ensure compliance with the contract. All CQC staff members shall be subject to acceptance by the Contracting Officer.

#### 3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within his organization at the site of the work who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a construction person with a minimum of 3 years in related work. This CQC System Manager shall be on the site at all times during construction and will be employed by the prime Contractor. The CQC System Manager shall be assigned no other duties. An alternate for the CQC System Manager will be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate will be the same as for the designated CQC System Manager.

#### 3.4.3 Organizational Changes

The Contractor shall maintain his CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

#### 3.4.4 Additional Requirement.

In addition to the requirements described above, the CQC System Manager

shall have completed the course entitled "Construction Quality Management for Contractors". This course is offered periodically. Contact U.S. Army Corps of Engineers, Los Angeles District, Phil Strayhorn, (213) 452-3374 for information.

### 3.5 SUBMITTALS

Submittals shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

### 3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of work as follows:

#### 3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable specifications.
- b. A review of the contract drawings.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 24 hours in advance of

beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

### 3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

### 3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work.

### 3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same

definable features of work if the quality of on-going work is unacceptable, if there are changes in the applicable CQC staff, onsite production supervision or work crew, if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

### 3.7 TESTS

#### 3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of all tests taken, both passing and failing tests, will be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test will be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility will be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

#### 3.7.2 Testing Laboratories

##### 3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

##### 3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$675.00 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

### 3.7.3 On-Site Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

### 3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials will be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Corps of Engineers Division Laboratory, f.o.b., at the following address:

For deliveries: U.S. Army Engineer  
Attn: Water Ways Experiment Station  
P.O. Box 631  
Vicksburg, MS 39181-0631

Coordination for each specific test, exact delivery location, and dates will be made through the Area Office.

## 3.8 COMPLETION INSPECTION

### 3.8.1 Punch-Out Inspection

Near the completion of all work or any increment thereof established by a completion time stated in the Special Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the CQC System Manager shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph 3.9 DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished the Contractor shall notify the Government that the facility is ready for the Government "Pre-Final" inspection.

### 3.8.2 Pre-Final Inspection

The Government will perform this inspection to verify that the facility is complete and ready to be occupied. A Government "Pre-Final Punch List" may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected and so notify the Government so that a "Final" inspection with the customer can be scheduled. Any items noted on the "Pre-Final" inspection shall be

corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph will be accomplished within the time slated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

### 3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, his superintendent or other primary management person and the contracting Officer's representative will be in attendance at this inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice will be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and must include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause entitled "Inspection of Construction".

### 3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals reviewed, with contract reference, by whom, and action taken.

- g. Off-site surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.
- k. These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every seven days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

### 3.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the worksite, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

### 3.11 CONTRACTOR PROJECT MANAGEMENT SYSTEM

#### 3.11.1 General

3.11.1.1 The Contractor project Management System is included to assure adequate planning and execution of the work, to assist the Contracting Officer on appraising the reasonableness of the schedule, to evaluate progress of the work, and make progress payments, and to make decisions relative to time and/or cost adjustments which may result from changes in the work.

3.11.1.2 The management system is to be based on a computerized Network

Analysis (Critical Path Method) operated by on-site personnel at terminals located in the Contractors's on-site office. On-site management shall be capable of using the system to address all project activities and resources on a real time interactive basis and be capable of rapidly evaluating alternative scenarios which will optimize project management. Evidence of technical expertise of on-site personnel with the proposed computerized Network Analysis System shall be submitted for Contracting Officer's approval prior to on-site work.

3.11.1.3 The Contractor shall resource load all work activities. As a minimum, resource loading shall identify equipment, management, skilled and unskilled labor requirements. The Contractor may at his option decide on greater detail for his own purposes, but if this option is elected, the system must be able to consolidate resources into the above defined categories for use by the Contracting Officer.

3.11.1.4 The Contractor shall incorporate any and all milestone and contract required events which may be specified elsewhere within these specifications. Should milestone events be not specifically identified by the Government within these specifications, the Contractor shall identify at least five percent of the network activities and designate them as milestone activities.

3.11.1.5 The Contractor Project Management System is to be staffed and prepared pursuant of CONTRACT CLAUSE: SCHEDULE FOR CONSTRUCTION CONTRACTS, and CONTRACT CLAUSE: SUPERINTENDENCE BY THE CONTRACTOR. In preparing this system the Contractor assume responsibility for conformance with contract requirements, planning, sequencing of work, and determining the construction means and methods.

### 3.11.2 Submission and Approval

Submission and approval of the system shall be as follows:

3.11.2.1 The complete network system consisting of the detailed network mathematical analysis (including on-site manpower loading schedule) and network logic diagrams shall be submitted for approval within thirty (30) calendar days after receipt of Notice to Proceed. This shall be submitted in assembled hardcopy paper format and via 3-1/2 HD (High Density) floppy disk to allow restoring on Government Computers in accordance with the Corps of Engineers Standard Data Exchange Format as described in ER 1-1-11.

3.11.2.2 The Contractor shall participate in a review and evaluation of the proposed network logic diagrams and mathematical analysis by the Contracting Officer. Any revisions necessary as a result of this review shall be resubmitted for approval of the Contracting Officer within three (3) calendar days after the conference. The approved schedule shall be used by the Contractor for planning, organizing and directing the work, reporting progress, and requesting payment for work accomplished.

### 3.11.3 Network Modifications

3.11.3.1 In those cases where the contract performance is delayed due to causes beyond the control of the Contractor, and a time extension may be

allowable under one or more of the CONTRACT CLAUSES: CHANGES, or DIFFERING SITE CONDITIONS, or DEFAULT (FIXED PRICE CONSTRUCTION), or SUSPENSION OF WORK, or other applicable clauses, as a condition recedent to granting a time extension, the Contractor shall submit a time proposal in such format as to identify the specific subnet diagram and activities affected.

3.11.3.2 Change order proposals shall include description or listing of all proposed changes to the network, by activity, and demonstrate the effect on the contract required completion date. A complete list of activities changed and subnet of activities affected by the change shall be submitted.

3.11.3.3 Float or slack is defined as the amount of time between the early start date and the late start date, or the early finish date and the late finish date, of any of the activities in the NAS schedule. Float or slack is not time for the exclusive use or benefit of either the Government or the Contractor. Extensions of time for performance may be granted to the extent that equitable time adjustment for the activities affected exceed the total float or where otherwise justified, effect on contract completion can be shown. The contract completion date is fixed, and will be amended only if the modifications which include time are signed by the Contracting Officer.

3.11.3.4 Rapid resolution of change orders and the granting of other time extensions where authorized by the Contracting Officer is a critical part of the overall management system. Implementation of all justified activity and logic changes shall be made and reflected on the next monthly update after approval of the Contracting Officer.

3.11.3.5 If, in the opinion of the Contracting Officer, the current schedule no longer accurately reflects the Contractor's real plan for accomplishing the work, or no longer reflects a viable way of finishing the work on schedule, the Contractor shall be directed to revise the schedule and submit it for approval within seven (7) calendar days of direction.

#### 3.11.4 Logic Diagrams and Reports.

##### 3.11.4.1 Logic diagrams.

3.11.4.1.1 Logic diagrams shall show the order and interdependency of activities and sequence in which the work is to be accomplished as planned by the Contractor.

3.11.4.1.2 Detailed networks need not be timed scaled, but drafted to have a continuous flow from left to right, showing how the start of a given activity is dependent on the completion of preceding activities, and how its completion restricts the start of the following activities.

3.11.4.1.3 An assembled logic diagram of the complete project shall be submitted with the initial NAS, showing each activity's identifying numbers, duration and description, with the critical path easily identified. Updated assembled diagrams will be provided as required by logic changes (but not more frequently than the monthly update). The logic diagram shall be plotted on architectural size E paper.

3.11.4.1.4 In addition to the detailed schedule, a summary schedule shall be developed by the Contractor. The summary schedule shall consist of minimum thirty (30) activities and maximum of 100 activities, and be updated monthly.

#### 3.11.4.2 Reports.

3.11.4.2.1 After the network approval, the Contractor shall review and evaluate the actual progress with the Contracting Officer's representative on a weekly basis, and submit any updated weekly reports three (3) workdays after the meeting.

3.11.4.2.2 Three (3) weekly reports, selected from specific items of the menu will be required, for specified time window of the project (such as the next two weeks). These reports must be flexible in format, allowing generation of reports relating specifically to critical work areas, or areas of particular interest. The Government will identify the subject of the requested reports for the following week at a weekly review meeting. All activities involving the Government that affect progress will be coded to allow a separate report.

3.11.4.2.3 Monthly update reports will be submitted at midmonth showing status and actual start and finish dates of project activities, and will be capable of comparing the current status with the approved base schedule. Each monthly update report shall be uniquely identified and shall be stored on the Contractor's computer until the final pay estimate is processed. The content of the monthly update shall be flexible to show items listed in the menu. The midmonth report shall be used for partial payments.

3.11.4.2.4 A meeting shall be held three (3) workdays before the delivery of the midmonth report to discuss all input data. If the Contractor desires to make changes in his method of operation and scheduling, he shall clearly present the proposed changes.

3.11.4.2.5 A narrative report shall be submitted with midmonth report indicating current and anticipated problems, delaying factors, and conditions that are impacting the Contractor's work effort. An analysis showing the reasons for the delay/gain and their impact upon the current schedule shall be included. When it is apparent the scheduled milestone(s) and completion date(s) will not be met, the Contractor shall propose specific methods he intends to implement to bring the project back on schedule at no cost to the Government. Such measure may include but are not limited to:

- a. Increasing construction manpower in such quantities and crafts as will substantially eliminate the backlog of work effort.
- b. Increasing the number of working hours per shift; shifts per workday; workdays per week; the amount of construction equipment; or any combination thereof.
- c. Rescheduling of activities to achieve maximum practical concurrence of work shifts.

3.11.4.2.6 The Contractor shall implement such procedures as may be necessary for the active participation by his subcontractors in preparing and updating the schedule. Subcontractors shall be provided with schedules which identify the interfaces of their work with the work of others. At minimum, the Contractor shall provide bar graphs to each major subcontractor showing activity times with plots on an Early Start basis. Copies of these schedules shall also be provided to the Contracting Officer. The relationship between subcontractor and interdependency or work shall be managed by the Contractor. When these interdependencies are violated or impaired, the Contractor shall identify the problem, resolve it, and provide the information to the Contracting Officer as part of the monthly report.

### 3.11.5 Payment Requests.

3.11.5.1 The monthly update report shall be used as a basis for the monthly partial pay estimate. The report will state the cost, actual percent complete, and current value of partially completed or completed work. Subtotals from subnets representing separate areas of construction will be given, along with a grand dollar value of work completed for the project.

3.11.5.2 The first payment shall not be made until the Network Analysis Schedule has been approved by the Contracting Officer. If, in the judgment of the Contracting Officer, The Contractor fails or refuses to provide an approved schedule and other progress or input data specified, the Contractor shall be deemed not to have provided the required information upon which progress payments may be made, and no payment request will be honored.

3.11.5.3 Activities submitted for payment shall be based on the approved network activities and monetary amount. No payment shall be made for activities conducted in deviation of the approved logic.

3.11.5.4 Payment for activities conducted when previously dependent activities have not been completed or accepted due to quality defects shall be restricted at the discretion of the Contracting Officer, and may be the basis for a resubmittal of the logic diagram.

### 3.12 IMPLEMENTATION OF GOVERNMENT RESIDENT MANAGEMENT SYSTEM FOR CONTRACTOR QUALITY CONTROL OF CONTRACT

The contractor shall utilize a Government furnished CQC Programming Module (A computerized executable file which is DOS based and operates on a minimum of 80386 IBM compatible computers). The contractor must use the CQC module and provide updates from this module on electronic format. The Module includes a Daily CQC Reporting System form which must also be used. This form may be in addition to other Contractor desired reporting forms. However, all other such reporting forms shall be consolidated into this one Government specified Daily CQC Report Form. The Contractor will also be required to complete Government-Furnished Module elements which includes, but is not limited to Prime Contractor staffing; letter codes; planned cumulative progress earnings; subcontractor information showing trade,

name, address, point-of-contact, and insurance expiration dates; definable features of work; pay activity and activity information; required Quality Control tests tied to individual activities; planned User Schooling tied to specific specification paragraphs and contractor activities; Installed Property Listing, Transfer Property Listing and submittal information relating to specification section, description, activity number, review period and expected procurement period. The sum of all activity values shall equal the contract amount, and all Bid Items, Options and Additives shall be separately identified, in accordance with the "Bidding Schedule". Bid Items may include multiple Activities, but Activities may only be assigned to one such Bid Item. This Module shall be completed to the satisfaction of the Contracting Officer prior to any contract payment (except for Bonds, Insurance and/or Mobilization, as approved by the Contracting Officer) and shall be updated as required.

(1) During the course of the contract, the Contractor will receive various Quality Assurance comments from the Government that will reflect corrections needed to Contractor activities or reflect outstanding or future items needing the attention of the Contractor. The Contractor will acknowledge receipt of these comments by specific number reference on his Daily CQC Report, and will also reflect on his Daily CQC Report when these items are specifically completed or corrected to permit Government verification.

(2) The Contractor's schedule system shall include, as specific and separate activities, all Preparatory Phase Meetings (inspections); all O&M Manuals; and all Test Plans of Electrical and Mechanical Equipment or Systems that require validation testing or instructions to Government representatives.

(3) The Contracting Officer can provide information regarding training on the use of the RMS system.

-- End of Section --