

SECTION TABLE OF CONTENTS

GENERAL REQUIREMENTS

SECTION 01090

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES.....01090-1
1.2 ORDERING INFORMATION.....01090-1

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Table of Contents --

SECTION 01090

SOURCES FOR REFERENCE PUBLICATIONS

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., UL 1 (1985; Rev thru Nov 1992) Flexible Metal Conduit. However, when the sponsoring organization has not assigned a number to a document, an identifying number has been assigned for convenience, e.g. UL's unnumbered 1992 edition of their Building Materials Directory is identified as UL-01 (1992) Building Materials Directory. The sponsoring organization number (UL 1) can be distinguished from an assigned identifying number (UL-1) by the dash mark (-).

1.2 ORDERING INFORMATION

The addresses of the organizations whose publications are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the sponsoring organization should be ordered from the source by title rather than by number.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
444 N Capitol St NW # 249
Washington DC 20001-1512
Ph: 202-624-5800; Fax: 202-624-5806

AMERICAN CONCRETE INSTITUTE (ACI)
PO Box 19150
Detroit MI 48219-0150
Ph: 313-532-2600; Fax: 313-538-0655

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
11 W 42nd St
New York NY 10036-8002
Ph: 212-642-4900; Fax: 212-302-1286

AMERICAN PUBLIC WORKS ASSOCIATION (APWA)
Building News, Inc.
3055 Overland Ave
Los Angeles CA 90034-3431
Ph: 213-202-7775

AMERICAN RAILWAY ENGINEERING ASSOCIATION (AREA)
50 F St NW
Washington DC 20001-1530
Ph: 202-639-2190; Fax: 202-639-2183

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
1916 Race St
Philadelphia PA 19103-1108
Ph: 212-642-4900, Fax: 212-302-1286

AMERICAN WATER WORKS ASSOCIATION (AWWA)
6666 W Quincy Ave
Denver CO 80235-3011
Ph: 800-926-7337; Fax: 303-794-7310

AMERICAN WELDING SOCIETY (AWS)
PO Box 351040
Miami FL 33135-7040
Ph: 800-443-9353; Fax: 305-443-7559

AMERICAN WOOD-PRESERVER'S ASSOCIATION (AWPA)
PO Box 286
Woodstock MD 21163-0286
Ph: 801-465-3169; Fax: 301-465-3195

CORPS OF ENGINEERS (COE)
Order from:
U.S. Army Engineer Waterways Experiment Station
ATTN: Technical Report Distribution Section, Services Branch, TIC
3909 Halls Ferry Rd.
Vicksburg, MS 39180-6199
Ph: 601-634-2355; Fax: 601-634-2506

FEDERAL SPECIFICATIONS (FS)
Order from:
Standardization Documents Order Desk
Bldg. 4D
700 Robbins Av
Philadelphia, PA 19111-5094
Ph: 215-697-2179; Fax: 215-697-2978

FEDERAL STANDARDS (FED-STD)
Order from:
Standardization Documents Order Desk, Bldg 4D
700 Robbins Av
Philadelphia, PA 19111-5094
Ph: 215-697-2179; Fax: 215-697-2978

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)
Publications and Programs Inquiries
Room E128, Administration Building
Gaithersburg, MD 20899
Ph: 301-975-3058

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION TABLE OF CONTENTS
GENERAL REQUIREMENTS
SECTION 01130

ENVIRONMENTAL PROTECTION

PART 1. GENERAL.....	1
1.1 DEFINITIONS.....	1
1.2 ENVIRONMENTAL PROTECTION REQUIREMENTS.....	1
1.2.1 Environmental Protection Plan.....	1
1.2.1.1 Laws, Regulations, and Permits.....	1
1.2.1.2 Protection of Features.....	1
1.2.1.3 Procedures.....	2
1.2.1.4 Permit or License.....	2
1.2.1.5 Drawings.....	2
1.2.1.6 Environmental Monitoring Plans.....	2
1.2.1.7 Traffic Control Plan.....	2
1.2.1.8 Surface and Ground Water.....	2
1.2.1.9 Work Area Plan.....	2
1.2.1.10 Plan of Borrow Area.....	3
1.2.1.11 Emergency Response Plan.....	3
1.2.1.12 Noise Control Plan.....	3
1.3 SUBCONTRACTORS.....	3
1.4 PERMITS OBTAINED BY CORPS OF ENGINEERS AND VENTURA COUNTY.....	3
1.4.1 Restrictions (Recommendations) from the California Regional Water Quality Control Board.....	4
1.4.2 Measures from the California Department of Fish and Game.....	6
1.4.3 Measures from National Marine Fisheries Service.....	11
1.5 REGULATORY REQUIREMENTS.....	11
PART 2. PRODUCTS (Not Applicable).....	11
PART 3. EXECUTION.....	11
3.1 PROTECTION OF ENVIRONMENTAL RESOURCES.....	11
3.1.1 Protection of Land Resources.....	11
3.1.1.1 Work Area Limits.....	11
3.1.1.2 Protection of Landscape.....	11
3.1.1.3 Reduction of Exposure of Unprotected Erodible Soils.....	12
3.1.1.4 Temporary Protection of Disturbed Areas.....	12
3.1.1.5 Erosion and Sedimentation Control Devices.....	12
3.1.1.6 Location of Contractor Facilities.....	12
3.1.1.7 Borrow Areas on Government Property.....	12
3.1.1.8 Disposal Areas on Government Property.....	13
3.1.1.9 Temporary Excavation and Embankments.....	13
3.1.1.10 Disposal of Solid Wastes.....	13
3.1.1.11 Disposal of Chemical Wastes.....	13
3.1.1.12 Disposal of Discarded Materials.....	13
3.1.1.13 Disposal of Contaminated Soils.....	13
3.2 HISTORICAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES.....	13
3.3 PROTECTION OF WATER RESOURCES.....	14
3.3.1 Washing and Curing Water.....	14
3.3.2 Diversion Operations.....	15
3.3.3 Stream Crossings.....	15

3.3.4	Monitoring of Water Areas Affected by Construction Activities.....	15
3.3.5	Water Contamination.....	15
3.3.6	Hazardous Materials.....	15
3.4	PROTECTION OF FISH AND WILDLIFE RESOURCES.....	15
3.5	PROTECTION OF AIR RESOURCES.....	15
3.5.1	Particulates.....	16
3.5.2	Hydrocarbons and Carbon Monoxide.....	16
3.5.3	Odors.....	16
3.5.4	Monitoring Air Quality.....	16
3.6	NOISE.....	16
3.6.1	Construction Equipment and Vehicles.....	17
3.6.2	Mobile or Fixed Equipment.....	17
3.6.3	Electrically-Powered Equipment.....	17
3.6.4	Noise-Producing Construction Activity.....	17
3.7	TESTS.....	17
3.7.1	Laws, Regulations and Ordinances.....	17
3.7.2	Protection of Land Resources.....	17
3.7.3	Protection of Water Resources.....	17
3.7.4	Pollution Control Facilities.....	17
3.8	INSPECTION.....	18
3.9	POST CONSTRUCTION CLEANUP.....	18
3.10	RESTORATION OF LANDSCAPE DAMAGE.....	18
3.11	MAINTENANCE OF POLLUTION FACILITIES.....	18
3.12	TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL.....	18
3.13	ESTHETIC TREATMENT AND EROSION CONTROL.....	18

-- End Table of Contents --

SECTION 01130

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 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 ENVIRONMENTAL PROTECTION REQUIREMENTS

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. Comply with Federal, State, and local regulations pertaining to the environment, including but not limited to water, air, and noise pollution.

1.2.1 Environmental Protection Plan

Within 15 days after receipt of Notice of Award of the contract and at least 7 days prior to the Preconstruction Conference, the Contractor shall submit in writing an Environmental Protection Plan and meet with representatives of the Contracting Officer to develop mutual understanding relative to compliance with this provision and administration of the environmental protection program. Approval of the Contractor's plan will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures. The Government reserves the right to make changes in his environmental protection plan and operations as necessary to maintain satisfactory environmental protection performance. The environmental protection plan shall include but not be limited to the following:

1.2.1.1 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.

1.2.1.2 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.

1.2.1.3 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 the procedures to be followed to correct pollution of the environment due to accident, natural causes or environmental protection plan.

1.2.1.4 Permit or License

The Contractor shall obtain all needed permits or licenses.

a. The Contractor shall prepare and submit a Notice of Intent and a Storm Water Pollution Prevention Plan to the California Water Resources Board (Sacramento Office) and provide a copy to the Regional Water Quality Control Board (Los Angeles) and Corps of Engineers (including a copy to Environmental Resource Branch) four weeks prior to initiation of the project construction.

Waste Water Discharge Permit/ National Pollutant Discharge Elimination System (NPDES) permit shall be obtained by the Contractor and fees related to these permit should be paid by the Contractor. The construction contractor shall coordinate requirements of the West Discharge or National Pollutant Discharge (NPDES) Elimination System Permit with the Environmental Resources Branch.

1.2.1.5 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.

1.2.1.6 Environmental Monitoring Plans

The Contractor shall include environmental monitoring plans for the job site which incorporate land, water, air and noise monitoring.

1.2.1.7 Traffic Control Plan

The Contractor shall include a traffic control plan for the job site.

1.2.1.8 Surface and Ground Water

The Contractor shall establish methods of protecting surface and ground water during construction activities.

1.2.1.9 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. Measures would be followed to avoid accidental spills of oil and grease during construction and

debris removal operations. If such spills occur, the contractor would be required to immediately clean the affected area and remove the materials from the site.

1.2.1.10 Plan of Borrow Area

The Contractor shall include a plan of borrow area for the job site. Borrow area(s) shall not extend beyond the Work Limits shown.

1.2.1.11 Emergency Response Plan

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

1.2.1.12 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.

1.3 SUBCONTRACTORS

Assurance of compliance with this section by subcontractors will be the responsibility of the Contractor.

1.4 PERMITS OBTAINED BY CORPS OF ENGINEERS AND VENTURA COUNTY

The Corps of Engineers obtained a Section 401 Water Quality Certification from the California Regional Water Quality Control Board (Encl. 1) and Ventura County Flood Control District obtained a Section 1601 Stream Alteration permit from the State of California, Department of Fish and Game (Encl. 2) for this project. The agreement is for the entire Santa Paula Creek Flood Control Project. An attempt was made to include the applicable restrictions (recommendations) in the specifications. The Contractor should review the enclosed permit and certification as it will be enforced by the Contracting Officer. See Contract Clause entitled "PERMITS AND RESPONSIBILITIES".

401 Water Quality Certification (WQC) was obtained for the project construction (dated September 11, 1996, Case File Number 96-094). The WQC is expiring in July 2001, the Corps will submit a request for an extension. A revised WQC would be obtained prior to the construction of Phase III. The Contractor shall follow conditions identified by the WQCB. A copy of the existing WQC is attached with the P&S.

The current Stream Alteration Agreement (per Section 1601 of the California Fish & Game Code) is being revised by the Ventura County Flood Control District to include activities upstream of Stewart's Ranch Crossing. The Contractor shall follow conditions identified in the 1601 Streambed Alteration Agreement and any amendments to the Agreement during construction. A copy of the Existing Stream Alteration Agreement is attached with the P&S.

1.4.1 Restrictions (Recommendations) from the California Regional Water Quality Control Board

1.4.1.1 The Contractor shall develop and submit a detailed sediment erosion control and pollution prevention plan (two copies) to this Regional Board (Attn: Surveillance) 15 days prior to any excavation and construction within Santa Paula Creek. If this Regional Board requires modifications prior to or during the construction phase, the plan(s) shall be modified by the Contractor, accordingly. The plan(s) shall include the use of settling basins, hay bales, and silt fences (or other appropriate measures) for any surface water diversion and groundwater (subsurface water) dewatering activities within the project site or work within any flowing streams. This plan shall also include stormwater pollution prevention measures specific to this project, such as protection of exposed slopes/banks, access routes, and temporary onsite stockpiles of excavated materials.

1.4.1.2 Upstream and downstream monitoring for turbidity and total suspended solids (TSS) shall be implemented.

! These constituents shall be monitored on a daily basis during the first week of diversion/dewatering activities or work within any flowing streams, and then on a weekly basis, thereafter, until the streambed bottoms are restored.

! Downstream TSS shall be maintained at ambient levels.

! Where natural turbidity is between 0 and 50 NTU, increased turbidity due to project activities shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.

1.4.1.3 For each phase, 15 days prior to any excavation/construction within Santa Paula Creek, the project proponent shall submit to this Regional Board (Attn: Surveillance) a final water diversion plan, including structure configuration, location, construction materials, equipment, operation procedures, erosion and sediment control measures, and fish exclusion provisions. If this Regional Board requires modifications prior to or during the construction, this plan shall be modified by the Contractor, accordingly. This plan may be combined with item no. 1 above. During construction, operation, and removal of the water diversion structure, any fish that may be impacted shall be removed, held, and released back or relocated to another suitable habitat prior to the activities.

1.4.1.4 The Contractor shall apply for a permit from the California Regional Water Quality Control Board - Los Angeles Region, 101 Centre Plaza Drive, Monterey Park, California 91754-2156 for any dewatering activity (other than diversion) where pumping is required and results in the disposal of groundwater (including subsurface water) to surface waters, groundwater, or land. Please contact Mark Pumford, Ventura Coastal Unit, at (213) 266-7596 for further information.

1.4.1.5 The limits of all construction activities shall be limited by the plans, specifications, or as approved by the Contracting officer.

1.4.1.6 No excavation/construction equipment and/or materials shall be stored within Santa Paula Creek, including wetlands and dry streambeds. All staging and storage areas shall be located outside any surface waters and equipped with adequate containment provisions.

1.4.1.7 All equipment or vehicles operated within or adjacent to surface waters shall be checked and maintained daily to prevent leaks/discharges of materials. No equipment maintenance shall be done within or near surface waters.

1.4.1.8 Designated spoil areas shall be visually marked prior to any excavation/construction activity. Stockpiling of excavated material shall be confined to these areas, and not discharged to surface waters, or wherever the spoil could be transported back to the creek or into other surface waters. The only exception is the redeposition of excess excavated material to the borrow site for the creation of the low-flow channel.

1.4.1.9 All construction activities shall follow best management practices to minimize impacts on water quality and beneficial uses. Dust control activities shall be conducted in such a manner that would not produce downstream runoff. Construction and sanitary wastes/wastewater shall be properly contained, treated, and/or disposed of, and not discharged to surface waters or groundwater.

1.4.1.10 No permanent diversion berms shall be constructed.

1.4.1.11 Sediment removal for the purpose of reaching and maintaining channel design capacity shall not involve wet excavations (i.e., an unsaturated zone of at least 1.5 meters (5 feet) above the highest anticipated level of the water table shall be preserved). Prior to excavation, the Contractor shall notify the California Regional Water Quality Control Board - Los Angeles Region, 101 Centre Plaza Drive, Monterey Park, California 91754-2156 (Attn: Surveillance) as to the status of excavation and potential impacts to groundwater. If the water table were encountered, all project activities shall stop and the Contractor shall submit a request for modification to the California Regional Water Quality Board (Attn: Surveillance Unit).

1.4.1.12 All the excess materials that are not used for backfilling or recontouring of the streambed shall be removed from the creek. The Contractor shall apply for a Waste Discharge Requirements permit, as applicable, from the California Regional Water Quality Control Board - Los Angeles Region, 101 Centre Plaza Drive, Monterey Park, California 91754-2156 for inland disposal of non-hazardous contaminated soils and materials. All other waste material removed shall be relocated to a legal point of disposal or recycled for use as a soil amendment, if applicable. A legal point of disposal is defined as one for which Waste Discharge Requirements have been established by a California Regional Water Quality Control Board, and is in full compliance therewith. Please contact John Lewis, Technical Support Unit, at (213) 266-7552 for further information.

1.4.1.13 The Contractor shall comply with requirements set forth in the Water Quality Control Plan, Los Angeles Region (1994) as indicated in Appendix I.

1.4.1.14 The Contractor shall comply with the local regulations associated with the Regional Board's municipal storm water permit that is issued to Ventura County and co-permittees under NPDES No. CAS0063339 and Waste Discharge Requirements Order No. 94-082 and any subsequent order.

1.4.1.15 All communications with the California Regional Water Quality Control Board - Los Angeles Region, 101 Centre Plaza Drive, Monterey Park, California 91754-2156 shall identify the case file number 96-094.

1.4.1.16 Discharges resulting from air-water blasting for grouted stone treatment shall require prior approval from this Regional Board. Unless the project proponent can demonstrate that all runoff resulting from air-water blasting can be contained outside of Santa Paula Creek, the project proponent shall:

(1) apply for a stormwater or NPDES permit for that specific activity if it is proposed that there will be a discharge to surface waters and no containment measures will be implemented; or,

(2) apply for general Waste Discharge Requirements (Permit) if there will be a discharge to land or groundwater (e.g., if there will be a discharge to the dry streambed portion of Santa Paula Creek, and containment measures are implemented to isolate the discharge from the flowing stream and allow it to percolate to the groundwater); or,

(3) notify this Regional Board if containment measures within the creek will be implemented so that there is no percolation to the groundwater and no flow to the creek of any water contaminated with solids, chlorine, high pH, or other pollutants.

1.4.1.17 The Contractor shall coordinate and contact the Corps' Environmental Resource Branch prior to excavation activities are initiated at the upstream borrow site (upstream of Stewart's Ranch Crossing) to ensure that adjacent sensitive resources are avoided and not impacted.

1.4.1.18 Rocks for the upstream borrow site (upstream of Stewart's Ranch Crossing) shall be obtained between June 30 and November 1. No construction activities at the borrow site shall be performed in flowing water to avoid any impacts to aquatic resources.

1.4.1.19 At the upstream borrow site, the Construction contractor shall salvage native vegetation and the top 6-12 inches of streambed alluvial material in stockpile. After excavation, this material can be redeposited into the site to facilitate the revegetation of the excavated site.

1.4.2 Measures from the California Department of Fish and Game

1.4.2.1 Staging/storage/idling/parking areas for equipment and materials shall be located outside of the stream.

1.4.2.2 Vehicles shall not be driven or equipment operated in water covered portions of a stream or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in the Agreement and as necessary to complete authorized work.

1.4.2.3 Access to the worksite shall be via existing roads and access ramps unless specifically noticed in the EIS\EIR environmental assessment and final Department reviewed construction plans.

1.4.2.4 Vehicles may be driven on the stream bed in dry areas to traverse the distance to the work site from the access point, and in the immediate vicinity -

within 15 meters (50 feet)- of the work area and only as necessary to accomplish the authorized work.

1.4.2.5 Spoil storage sites shall not be located within a stream, where spoil can be washed back into a stream, or where it will cover aquatic or riparian vegetation.

1.4.2.6 The Contractor shall construct effective water velocity dissipation devices at any/all outlet structures to minimize erosion.

1.4.2.7 Rip-rap shall only be placed in areas where shown in the plans.

1.4.2.8 Installation of bridges, culverts or other structures shall be such that water flow (velocity and low flow channel width) is not impaired. Bottoms of temporary culverts if required shall be placed at or below stream channel grade.

1.4.2.9 All plans for design of concrete sills and other features that could potentially impede fish migrations shall be/must have been approved by the California Department of Fish and Game.

1.4.2.10 The Contractor shall not construction any temporary or permanent dam, structure, flow restriction or fill except as described in the Contractor's notification.

1.4.2.11 No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 45 meters (150 feet) of the high water mark of any stream.

1.4.2.12 The Contractor shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws and it shall be the responsibility of the Contractor to insure compliance.

1.4.2.13 Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily to prevent leaks of materials that if introduced to water could be deleterious to aquatic life.

1.4.2.14 Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the stream shall be positioned over drip pans.

1.4.2.15 No equipment maintenance shall be done within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas under any flow.

1.4.2.16 The clean-up of all spills shall begin immediately. The California Department of Fish and Game shall be notified immediately by the Contractor of any spills and shall be consulted regarding clean-up procedures.

1.4.2.17 Raw cement/concrete or washings thereof, asphalt, paint, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from project related activities

shall be prevented from contaminating the soil and/or entering the waters of the State. Any of these materials, placed within or where they may enter a stream, by the Contractor or any party working under contract, or with the permission of the Contractor, shall be removed immediately.

1.4.2.18 Precautions to minimize turbidity/siltation shall be taken into account during project planning and implementation. This may require that the work site be isolated and that water be diverted around the work area by means of a barrier, temporary culvert, new channel, or other means approved by the California Department of Fish and Game. Precautions may also include placement of silt fencing, hay bales, sand bags, and/or the construction of silt catchment basins, so that silt or other deleterious materials are not allowed to pass to downstream reaches. The placement of any structure or materials in the stream for this purpose, not included in the original project description or California Department of Fish and Game approved water pollution/water diversion plan shall be coordinated with the California Department of Fish and Game. Coordination shall include the negotiation of additional Agreement provisions.

1.4.2.19 Silty/turbid water from dewatering or other activities shall not be discharged into the stream. Such water shall be settled, filtered, or otherwise treated prior to discharge. The Contractor's ability to minimize turbidity/siltation shall be the subject of pre-construction planning and feature implementation.

1.4.2.20 Upon California Department of Fish and Game determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life activities associated with the turbidity/siltation shall be halted until effective Department of Fish and Game approved control devices are installed or abatement procedures are initiated.

1.4.2.21 Prior to commencing construction, the Contractor shall prepare a diversion and control of water/water pollution control plan for this project. The plan shall be consistent with the terms and conditions of this Agreement and the requirements of the U.S. Army Corps of Engineers and Regional Water Quality Control Board. The Operator shall submit this plan to the California Department of Fish and Game for review and approval. Any terms and conditions in the final approved water diversion-water pollution plan which are more restrictive than in this agreement shall be a part of this Agreement and shall be enforceable by the California Department of Fish and Game. Any changes in the original project description or California Department of Fish and Game approved water pollution/water diversion plan shall be coordinated with the California Department of Fish and Game. Coordination may include the negotiation of additional Agreement provisions.

1.4.2.22 When operations require moving of equipment across a flowing stream such operations shall be conducted without increasing stream turbidity. For repeated crossings, the Contractor shall install a bridge, culvert, or rock-fill crossing. The minimum diameter of culverts shall be 600 millimeters (24 inches). The maximum lengths of culverts shall not exceed 10 meters (35 feet). Flow velocities shall not be increased above ambient levels. Any such installation shall be approved by the California Department of Fish and Game's fishery biologist prior to placement. Should a Department of Fish and Game biologist not be available approval may be conferred by a biologist from the National Marine Fisheries Service, U.S. Fish and Wildlife Service or U.S. Corps of Engineers.

1.4.2.23 If a streambed has been altered during the operations, its low flow channel shall be reconfigured to simulate natural meanders, pools, riffles, falls, etc. The Contractor shall not leave the streambed/low flow channel as a flat wide channel or sluice like area. The proposed plan for reconfiguring the streambed shall be approved by the California Department of Fish and Game's fishery biologist at least 30 days prior to completion of excavation.

1.4.2.24 Rock, gravel, and/or other materials shall not be imported to, taken from or moved within the bed or banks of the stream, except as otherwise addressed in the EIS/EIR and EA.

1.4.2.25 If pumps are required, intakes placed in stream water shall be fitted with 3 millimeter (1/8 inch) or smaller mesh screens for January 1, through March 30, and 6 millimeters (1/4 inch) or smaller mesh screens thereafter. No velocity increases shall be allowed at the pump intake screen. Intake structures shall be approved by the California Department of Fish and Game's fishery biologist.

1.4.2.26 The Contractor shall not allow any activity within FLOWING WATER from November 1 to March 31 the recognized sensitive period for wildlife and aquatic species known to inhabit the area. ANY WORK IN FLOWING WATER during the period from April 1 TO JUNE 1 shall be either approved by the California Department of Fish and Game's fishery biologist (or functional equivalent as explained in i below) or surveyed in the following manner to avoid impacts to steelhead trout:

a. Contractor shall provide a qualified fisheries biologist who shall be present at all times during the diversion and control of water. The biologist shall immediately notify the Contractor and Contracting Officer if diversion activities have the potential to adversely affect steelhead and the Contractor shall cease or modify construction activities as necessary.

b. The area extending from 100 feet upstream to 100 feet downstream will be surveyed at random locations to determine the presence or absence of steelhead. The surveying will be done twice a week during the period of March 15 to June 1 while work is being done in flowing water.

c. Surveying will take place at least 2 weeks prior to the start of work in flowing water.

d. Work in the Creek will only take place if steelhead are not present.

e. The operator is responsible for carrying out the testing and notifying the Department of the results.

f. Diversion of water from one low flow alignment to another alignment shall occur gradually to allow any fish or other aquatic wildlife the opportunity to migrate from the old low flow (which will be dewatered) to the new low flow.

g. Any remaining pools of the old low flow shall be monitored by the fisheries biologist until they are dry enough to determine that no salmonid fish remain trapped in the pools. Such monitoring may require several days depending upon the size of the pools.

h. If any salmonid fish are detected in the drying pools by the fisheries biologist, the Contractor shall immediately inform the National Marine Fisheries Service and the California Department of Fish and Game. No attempt shall be made to move the trapped salmonids without approval of NMFS and only by personnel with appropriate permits.

i. If the California Department of Fish and Game's fishery biologist is not available, approval to work in the stream based on the above conditions can be conferred by a biologist from the National Marine Fishery Service.

1.4.2.27 The Contractor shall telephone the California Department of Fish and Game's fishery biologist Mauricio Cardenas at (805) 568-1223 or 640-0969, prior to commencing activities within the bed, bank, and channel of any stream or river. The Contractor shall leave his/her name, date and time called, telephone number, the stream name, work location, nature of planned activities, and proposed schedule.

1.4.2.28 The Contractor shall provide a copy of this Section 1601 Agreement, between the California Department of Fish and Game and Ventura County Flood Control District to all contractors, subcontractors, and the Contractor's project supervisors. COPIES OF THE AGREEMENT AND ALL REQUIRED PERMITS AND SUPPORTING DOCUMENTS SHALL BE READILY AVAILABLE AT WORK SITES AT ALL TIMES DURING PERIODS OF ACTIVE WORK and must be presented to any California Department of Fish and Game personnel, or personnel from another agency upon demand.

1.4.2.29 The Contractor shall notify the Department in writing at least five (5) days prior to initiation of construction and at least five (5) days prior to completion of construction activities. Notification shall be sent to the California Department of Fish and Game at 330 Golden Shore, Suite 50, Long Beach, California 90802, Attn: ES. FAX Number (310) 590-5192 or 5193 (Reg 5-LB).

1.4.2.30 The Contractor grants to the California Department of Fish and Game employees and/or their consultants (accompanied by a California Department of Fish and Game employee) the right to enter the project site at any time to ensure compliance with the terms and conditions of this Agreement and/or to determine the impacts of the project on wildlife and aquatic resources and/or their habitats.

1.4.2.31 The California Department of Fish and Game reserves the right to enter the project site at any time to ensure compliance with terms/conditions of this Agreement.

1.4.2.32 The Department reserves the right to cancel this Agreement after giving notice to the Contractor in writing if the Department determines that the Contractor has breached any of the terms or conditions of the Agreement.

1.4.2.33 The Department reserves the right to suspend or cancel this Agreement for other reasons, including but not limited to, the following:

a. The Department determines that the information provided by the Contractor in support of this Agreement/Notification is incomplete or inaccurate;

b. The Department obtains new information that was not known to it in preparing the terms and conditions of this Agreement;

c. The condition of, or affecting fish and wildlife resources change; and

d. The California Department of Fish and Game determines that project activities have resulted in a substantial adverse effect on the environment.

1.4.3 Measures from National Marine Fisheries Service

All Terms and Conditions identified in the recent (September 27, 2000) Biological Opinion prepared by the National Marine Fisheries Service shall be followed, as applicable, by the contractor to ensure that construction activities does not jeopardize the continued existence of the endangered steelhead. A copy of the Biological Opinion is attached (Encl. 3).

1.5 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 or specifications. Environmental protection shall be as stated in the following subparagraphs.

3.1.1 Protection of Land Resources

Prior to the beginning of any construction, the Contracting Officer will 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. 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.

b. Sediment Basins. Sediment from construction areas shall be trapped in temporary or permanent sediment basins. The Contractor shall institute effluent quality monitoring programs as required by state and local environmental agencies.

3.1.1.5 Erosion and Sedimentation Control Devices

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.

3.1.1.6 Location of Contractor Facilities

At the option of Contractor, the Contractor's field offices, staging areas, stockpiles, storage, and temporary buildings may be placed in areas designated on the contract drawings and approved by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only on approval by the Contracting Officer.

3.1.1.7 Borrow Areas on Government Property

Borrow areas on government property shall be managed to minimize erosion and to prevent sediment from entering nearby water courses or lakes.

3.1.1.8 Disposal Areas on Government Property

Disposal areas on government property shall be managed and controlled to limit material to areas designated and prevent erosion of soil or sediment from entering nearby water courses. Disposal areas shall be developed in accordance with the grading plan indicated on the contract drawings.

3.1.1.9 Temporary Excavation and Embankments

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

3.1.1.10 Disposal of Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. The Contractor shall transport all solid waste off government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal.

3.1.1.11 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.

3.1.1.12 Disposal of Discarded Materials

Discarded materials other than those which can be included in the solid waste category shall be handled as directed by the Contracting Officer.

3.1.1.13 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 state and federal regulations. Appropriate actions shall be taken to minimize exposure to construction workers, recreational users, and nearby residents.

3.2 HISTORICAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

Existing historical, archaeological and cultural resources within the Contractor's work area will 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 by implementing the following Best Management Practices when excavating material from the Creek during cleanout operations to mitigate impacts to aquatic habitat:

a. Pipe culverts shall be placed in the low flow stream where the stream must be crossed on a regular basis. The Contractor shall not allow any activity within flowing water from November 1 to March 31 the recognized sensitive period for wildlife and aquatic species known to inhabit the area. All culverts or pipes shall be removed by November 1. Any work in flowing water during the period from April 1 to June 1 shall be either approved by the Department's fishery biologist (or functional equivalent) or surveyed in the manner prescribed in paragraph 64 of the California Department of Fish and Game Agreement Regarding Proposed Stream or Lake Alteration (see Encl. 2).

b. The Contractor shall measure the turbidity level and ensure that the turbidity levels are under the levels identified in the 401 Water Quality Certification. Periodically the Corps environmental staff would monitor project construction to ensure that turbidity levels remain within acceptable range; if those levels increase, additional measures would be developed and implemented to limit turbidity.

c. Silt fencing, hay bales, sand bags, and/or the construction of silt catchment basins shall be placed downstream of any operation which may create turbidity. Such devices shall reduce turbidity to that level existing upstream of the cleanout activities.

d. Construct a low-flow channel that meanders within the middle third of the stream bottom. The design specifications of the low-flow channel shall be as shown on Sheet 14 of the Plans. This sheet shows the typical alignment and dimensions of the low-flow (pilot) channel.

e. Excavate sediment and debris from the channel in such a manner as to leave the stream bottom rough and irregular rather than smooth, both across the channel, as well as, along the channel. Leave large rock to create randomly-spaced shallow pools along the stream inter-connected by riffles created by small and medium rock.

f. Leave stream bottom rough and irregular rather than smooth.

g. Water used for project construction shall be contamination free.

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 Diversion 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, removal of berms and pipes 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.

3.3.3 Stream Crossings

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

3.3.4 Monitoring of Water Areas Affected by Construction Activities

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

3.3.5 Water Contamination

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.

3.3.6 Hazardous Materials

If hazardous materials are released during construction, appropriate actions shall be taken to minimize the exposure of fishery and wildlife resources construction workers, and nearby residents.

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 by the Contractor prior to beginning of construction operations.

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, Ventura County Air Pollution Control District 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.

a. To reduce fugitive dust, the excavation site and the stockpile material shall be watered twice a day and the unpaved roads shall be watered three times a day.

b. When wind speeds exceed 20 miles per hour, all excavation and grading operations shall be suspended.

c. Truck speeds on unpaved roads shall not exceed 15 miles per hour.

d. Operation of heavy equipment shall be limited to the hours between 8:00 a.m. and 5:00 p.m. Truck transportation shall be permitted between 7:00 a.m. and 7:00 p.m., Monday through Saturday. No operation or transportation shall occur on Sundays.

e. Truck traffic shall be limited to the designated haul route; Harvard/Telegraph Road and Hallock Drive shall be used to access Highway 126.

3.5.1 Particulates

Dust particles, aerosols, and gaseous by-products from all construction activities, processing and preparation of materials, such as from asphaltic batch plants, 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, plant sites, 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: PROTECTION OF AIR RESOURCES to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators or other methods will 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.

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.

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. All air areas affected by the construction activities shall be monitored by the Contractor.

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.

3.6.3 Electrically-Powered Equipment

Electrically-powered equipment instead of pneumatic or internal combustion powered equipment shall be used, where feasible.

3.6.4 Noise-Producing Construction Activity

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

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 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.

3.7.3 Protection of Water Resources

The Contractor shall prevent the contamination of creeks, ditches, or other bodies of water with harmful chemicals; the Contractor shall dispose of waste materials; and the Contractor shall provide erosion control.

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 Contracting Officer will notify the Contractor in writing of any observed noncompliance 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 will 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 RESTORATION OF LANDSCAPE DAMAGE

The Contractor shall restore all landscape features damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be in accordance with the plans submitted for approval by the Contracting Officer.

3.11 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.

3.12 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

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

3.13 ESTHETIC TREATMENT AND EROSION CONTROL

The exposed grouted stone sideslope throughout the channel shall be air-water blasted as described below to achieve a more natural appearance:

a. The Grouted Stone Protection shall be installed such that one third (1/3) to one half (1/2) of the exposed stones project above the grout line.

b. The exposed stone surface shall be thoroughly cleaned by air-water blasting or other approved method. The air-water blasting shall be capable of producing a minimum pressure of (689kPa) 100 psi and shall be of such nature as to adequately perform the work required.

c. The approved colored grout will be allowed to set for a minimum of one hour (or other length of time as specified by the Contracting Officer) before air-water blasting is commenced. The air-water blasting will be at right angles to the surface of the grout.

-- End of Section --

SECTION TABLE OF CONTENTS

SITE WORK

SECTION 01200
GENERAL REQUIREMENTS

1.	REFERENCES.....	1
1.1	Federal Specifications.....	1
1.2	National Institute of Standards and Technology (NIST).....	1
1.3	U.S. Department of the Army, Corps of Engineers (COE) Engineer Manual	1
2.	PROJECT FACILITIES.....	1
2.1	Construction Signs.....	1
2.2	Bulletin Board at the Contractor's office.....	1
2.3	Sanitary Facilities.....	1
2.4	Project Engineer's Office.....	1
3.	CONSTRUCTION SIGNS.....	1
4.	BULLETIN BOARD.....	2
5.	MAINTENANCE AND DISPOSAL OF PROJECT FACILITIES.....	2
6.	SCRAP MATERIAL.....	2
7.	SALVAGE MATERIALS.....	2
8.	ARCHAEOLOGICAL FINDINGS DURING CONSTRUCTION.....	2
9.	PUBLIC UTILITIES, NOTICES, AND RESTRICTIONS.....	2
9.1	General.....	2
9.2	Relocation or Removal.....	3
9.3	Utilities Not Shown.....	3
9.4	Coordination.....	3
9.5	Service Connections.....	3
9.6	Notices and Notification.....	3
9.6.1	Notification.....	3
9.6.2	Police, Highway Patrol, and Fire Departments.....	3
9.6.3	Utilities are to be Relocated or Protected.....	3
10.	CONCRETE AGGREGATE SOURCE.....	4
11.	PUBLIC SAFETY.....	4
12.	OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) STANDARDS.....	4
13.	PERMITS.....	5
14.	AS-BUILT DRAWINGS.....	5
15.	PROJECT ENGINEER'S OFFICE.....	6
16.	TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (ER 415-1-15, 31 OCT 89)..	7
17.	INSURANCE REQUIRED BY THE VENTURA COUNTY TRANSPORTATION COMMISSION.....	8
18.	STONE BORROW PIT AREA.....	8
19.	SEQUENCE OF CONSTRUCTION.....	8
20.	COOPERATION WITH OTHERS.....	9

--End of Table of Contents--

SECTION 01200

GENERAL REQUIREMENTS

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.

1.1 Federal Specifications (FS).

FS FF-B-575	(Rev C) Bolts, Hexagon and Square
FS FF-N-105	(Rev B; Am 3; Int Am 4; Notice 1) Nails, Brads, Staples and Spikes: Wire, Cut and Wrought
FS FF-N-836	(Rev D; Am 3) Nut: Square, Hexagon, Cap, Slotted, Castle, Knurled, Welding and Single Ball Seat
FS MM-L-751	(Rev H) Lumber; Softwood
FS TT-E-529	(Rev D) Enamel, Alkyd, Semi-Gloss
FS TT-P-25	Rev E; Am 2) Primer Coating, Exterior (Undercoat for Wood, Ready-Mixed, White and Tints)

1.2 National Institute of Standards and Technology (NIST).

NIST PS 1	(1983) Construction and Industrial Plywood
-----------	--

1.3 U.S. Department of the Army, Corps of Engineers (COE) Engineer Manual.

COE EM 385-1-1	Safety and Health Requirements Manual (1 April 1981, Rev 1 October 1987)
----------------	--

2. PROJECT FACILITIES. The Contractor shall construct and/or erect the following project facilities:

2.1 Construction Signs. The signs shall be erected by the Contractor, at the locations designated by the Contracting Officer within 15 days of the commencement of site work under this contract. The data required by the safety sign shall be corrected daily. The construction signs include three project signs and six hard hat signs at location designated by the Contracting Officer.

2.2 Bulletin Board at the Contractor's office.

2.3 Sanitary Facilities.

2.4 Project Engineer's Office

3. CONSTRUCTION SIGNS. Project, Safety, and Hard Hat Signs shall be constructed as detailed on Figures 1, 2 and 3. Decals will be furnished by the Contracting Officer. Lumber shall conform to FS MM-L-751, and shall be seasoned Douglas Fir, S4S, Grade D or better except that posts, braces and spacers shall be

construction Grade (WCLB). Plywood shall conform to NIST PS 1, grade A-C, Group 1, exterior type. Bolts shall conform to FS FF-B-575, nuts shall conform to FS FF-N-836, and nails shall conform to FS FF-N-105. Paints shall conform to FS TT-P-25 for primer and FS TT-E-529 for finish paint and lettering. 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.

4. BULLETIN BOARD. A weatherproof bulletin board, minimum 0.9 meter wide and 0.75 meter high, with hinged glass door shall be provided adjacent to or mounted on the Contractor's project office at each site location. If adjacent to the office, the bulletin board shall be securely mounted on no less than 2 posts. Bulletin board and posts shall be painted or have other approved factory finish. The bulletin board shall be easily accessible at all times and shall contain wage rates, equal opportunity notice, and such other items required to be posted.

5. MAINTENANCE AND DISPOSAL OF PROJECT FACILITIES. The Contractor shall maintain the project facilities in good condition throughout the life of the project. Upon completion of work under this contract, the facilities covered under this section will remain the property of the Contractor and shall be removed from the site at his expense.

6. 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.

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

8. ARCHAEOLOGICAL FINDINGS DURING CONSTRUCTION. There are no known archaeological remains at the project site. Should any skeletons, artifacts, or other archaeological remains be uncovered during the construction, the Contractor shall suspend operations at the site of discovery and continue operations in other areas. The Contractor shall notify the Contracting Officer immediately of the findings. Included with the notifications shall be a brief statement to the Contracting Officer of the location and the content findings. Should the discovery site require archaeological studies resulting in delays and/or additional work, the Contractor will be compensated by an equitable adjustment.

9. PUBLIC UTILITIES, NOTICES, AND RESTRICTIONS.

9.1 General. The approximate location of each site's features, utilities and pipelines known to exist within the limits of the work area, are indicated on the drawings, 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 owners for such damage caused by his operations.

9.2 Relocation or Removal. All utilities shown on the plans except as otherwise indicated on the drawings will be left in place.

9.3 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.

9.4 Coordination. The Contractor shall contact Hugh Claybaugh of Ventura County Flood Control District at 805-654-2016 to obtain any necessary utility company phone numbers and contacts. The Contractor shall call the utility companies to establish a mutual performance schedule for removal or relocation of any utilities. The Contractor shall coordinate all utility removal and relocation immediately upon award of this contract and report any potential delays to the contracting officer.

9.5 Service Connections. The contractor shall make all necessary arrangements with the applicable utility companies not less than 72 hours prior to construction for all installation of meters and connection to the utilities and shall pay all costs in connection therewith, including all costs for service until final acceptance of the project.

9.6 Notices and Notification.

9.6.1 Notification. The Contractor shall notify the Contracting Officer 7 days in advance of the time work will be started at each site.

9.6.2 Police, Highway Patrol, and Fire Departments 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 street are to be closed at different times, notifications shall be made on a day-to-day basis.

9.6.3 Utilities are to be Relocated or Protected. The Contractor shall notify the Contracting Officer, in writing, 7 days prior to starting work on any utility to be relocated or protected. On each relocation, notification shall include dates on which the Contractor plans excavation, by-pass work, removal work and/or installation work, as applicable.

9.6.4 The Contractor shall notify the Contracting Officer, in writing, not less than 14 days in advance of the date on which he will complete trenching, excavation, fill or rough grading, as applicable, at each location where such completed work is required.

9.6.5 Existing Bench Marks and Right-of-way 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.

9.7 Restrictions.

9.7.1 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.

9.7.2 Working Hours. The Contractor shall restrict all construction activities to the following schedule:

Monday thru Friday	7 a.m. to 7 p.m.
Saturday	8 a.m. to 7 p.m.

9.7.2.1 No work will be permitted on Sundays or Federal Holidays without the prior written approval from the Contracting Officer.

10. CONCRETE AGGREGATE SOURCE. After the award of the contract, the Contractor will designate in writing only one source or one combination of sources from which he proposes to furnish aggregates. If the Contractor proposes to furnish aggregates from a source or from sources not listed above, he may designate only a single source or single combination of sources for aggregates. Samples for acceptance testing will be provided as required by SECTION 03301: CAST-IN-PLACE STRUCTURAL CONCRETE. If a source for coarse or fine aggregate so designated by the Contractor is not approved for use by the Contracting Officer, the Contractor may not submit for approval other sources but will furnish the coarse or fine aggregate, as the case may be, from an approved source listed above at no additional cost to the Government.

11. PUBLIC SAFETY. The Contractor will provide temporary fencing, barricades, and/or guards, as shown on the drawings to provide protection in the interest of public safety at each site. Whenever the Contractor's operations create a condition hazardous to the public, he will 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, and State 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.

12. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) STANDARDS. The OCCUPATIONAL SAFETY and HEALTH ACT (OSHA) STANDARDS for CONSTRUCTION (Title 29, Code of

Federal Regulations Part 1926) and the Corps of Engineers General Safety Health Requirements Manual, EM 385-1-1, and California Title 8, Division 1, are all applicable to this contract. The most stringent requirement of the two standards will be applicable.

12.1 Accident Reporting. In accordance with EM 385-1-1, the Contractor shall submit a written summary of worker's compensation claims which have been filled by worker's 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".

12.2 Hazardous Materials and Wastes Management. The Contractor shall transport and store all hazardous materials, if used in project construction, at construction staging sites in accordance with current state and federal regulations prior to use. Hazardous materials shall be used by trained hazardous materials personnel only in accordance with the manufacturer's recommendations and state and federal regulations for handling, as applicable.

13. PERMITS.

13.1 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.

13.2 National Pollutant Discharge Elimination System (NPDES) Permit or Wastewater Discharge Permit or Regional State Water Resources Control Board Notification. The Contractor shall pay all fees and obtain either a NPDES Permit or a Wastewater Discharge Permit from the California State Water Resources Control Board, Division of Water Quality or notify the State Water Resources Control Board if containment measures within the creek will be implemented so that there is no percolation to the groundwater and no flow to the creek of any water contaminated with solids, chlorine, high pH, or other pollutants. The general permit requires development and implementation of the Storm Water Pollution Prevention Plan (SWPPP) a copy of which shall be maintained on-site throughout the construction period. A copy of the plan shall also be submitted to the Contracting Officer. The Contractor shall submit a Notice of Intent (NOI) including fees to: State Water Resources Control Board; Division of Water Quality; P.O. Box 1977, Sacramento, CA 95812-1977; Attention: Storm Water Permit Unit. See Encl. 1 to SECTION 01130, page 6, Construction Phases, paragraph 2.

14. AS-BUILT DRAWINGS.

14.1 General. The Contractor shall furnish one set of as-built prints for use in preparation of as-built drawings by the Government. The as-built prints 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, the requirements for these additional

drawings will be the same as for the as-built drawings included in the original submission. The prints 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 building or structure.
- c. Correct grade or alignment of roads, 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, insulation material, dimensions of equipment foundations, etc.
- f. The topography and grades of all drainage installed or affected as a part of the project construction.
- g. All changes or modifications which results from the final inspection.

14.2 Submittal to Contracting Officer for review and approval. Not later than two weeks after acceptance of the project by the Government, the Contractor shall deliver to the Contracting Officer 3 full size sets of blue-line prints marked up to depict 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. The Contractor shall complete the corrections and return the drawings to the Contracting Officer within ten (10) calendar days.

15. PROJECT ENGINEER'S OFFICE. The Contractor shall provide the following office facilities for the project engineer:

15.1 Office Trailer. The Contractor shall provide a suitable 3.65 meter x 12.2 meter (12' x 40') office trailer located in the Contractor's staging area. The exact site will require the Contracting Officer's approval. The trailer shall be adequately heated, well lighted, suitably ventilated, and cooled with a properly sized air conditioning unit. An adequate supply of cooled/heated drinking water shall be supplied and maintained. The trailer shall have sanitary facilities (toilet and sink) connected to a sewer line. Sewer, telephone (two telephone lines and two data lines), and electrical service shall be provided and maintained. The cost for sewer, water, power, and telephones will be the responsibility of the Contractor. Materials for the facilities shall be new and adequate for the intended use.

15.2 Open parking space for 6 vehicles shall be located convenient to the project engineer's office. The combined parking and building area shall be

enclosed with a woven wire fence approximately 1.8 meter high and with a 3 meter wide lockable gate accessible from a road or street. The fenced area shall be sufficient size to permit ease in the parking of vehicles and acceptable to the Contracting Officer.

15.3 The Contractor shall provide new commercial grade furniture for the project engineer's office, consisting of two desks, two desk chairs, a 2.4 meter by 0.91 meter (8' x 3') conference table with eight chairs, one copy machine capable of handling 200 copies a day, a plain paper FAX machine capable of handling 50 faxes a day, two book cases, and two locking filing cabinets, 1.8 meter by .91 meter (30"x 72") storage cabinet with locking doors, four (4) copies of full size and four (4) copies of half size contract drawing for the project, two dry erase boards with markers, erasers and cleaner. Items shall be maintained by the Contractor with the Contracting Officers approval.

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

16.1 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:

- (a) 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.
- (b) 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.

16.2 The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and 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>
3	2	2	2	0	0	0	0	0	1	2	2

16.3 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 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 16.2, 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).

17. INSURANCE REQUIRED BY THE VENTURA COUNTY TRANSPORTATION COMMISSION.

17.1 The Contractor shall, at its expense, procure and keep in force at all times during the term of this contract, a comprehensive form of insurance covering its liability, including but not limited to, Public Liability and Property Damage, assumed by the Contractor under the contract covering bodily injury to or deaths of persons and property damage or destruction, in the amount of \$1,000,000. The Ventura County Transportation Commission shall be named as one of the insured parties.

17.2 All insurance shall be placed with insurance companies licensed to do business in the State of California, and approved by the Contracting Officer. The Contractor shall furnish the Ventura County Transportation Commission with a certificate, or certificates evidencing such. INSURANCE MUST PROVIDE FOR COVERAGE OF INCIDENTS WITHIN 15 METERS (50 FEET) OF A RAILROAD TRACK, AND ANY PROVISION IN THE INSURANCE POLICY TO THE CONTRARY MUST BE SPECIFICALLY DELETED.

17.3 Each policy shall provide that it shall not be canceled or materially changed unless at least thirty (30) days prior written notice of cancellation or change shall have been mailed by the insurance company to the Ventura County Transportation Commission. Any notice to be given by the Contractor to the Ventura County Transportation Commission shall be deemed to be properly served if it is deposited in the United States mail, postage prepaid, addressed to Ventura County Transportation Commission (ATTN: Mr. Christopher Stephens), 950 County Square Drive, Suite 207, Ventura, California 93003.

18. STONE BORROW PIT AREA.

18.1 The Contractor will be allowed to obtain type 2 stone from the designated borrow pit shown on sheet 2 of the contract drawings. Excavation depths shall not exceed the existing low flow and shall be a maximum of 3.048 meters (10 feet). Excavated slopes shall not be steeper than 1 vertical over 2 horizontal.

All excavated material from the borrow pit that is not used as part of the project construction shall be placed back in the borrow pit and shall be meet the compaction requirements of miscellaneous fill in accordance with section 02200. Finished grades shall be benched similar to the pre-project conditions and surface drainage shall preclude ponding and concentrated flows. No borrow pit material shall be hauled offsite unless approved by the contracting officer. Section 01130 ENVIRONMENTAL PROTECTION describes additional conditions applicable to the usage of this borrow pit. All construction activities associated with the use of the stone borrow pit shall be done at the Contractor's expense and shall comply with all contract specifications.

19. SEQUENCE OF CONSTRUCTION.

19.1. The Contractor shall sequence construction to satisfy all environmental restrictions and conditions. SECTION 01130 ENVIRONMENTAL PROTECTION requires that beginning 1 November 2001 and ending 31 March 2002, steelhead trout must have passage through the low flow channel with special restrictions and conditions. Therefore, contractor shall complete all type 1 stone work, invert

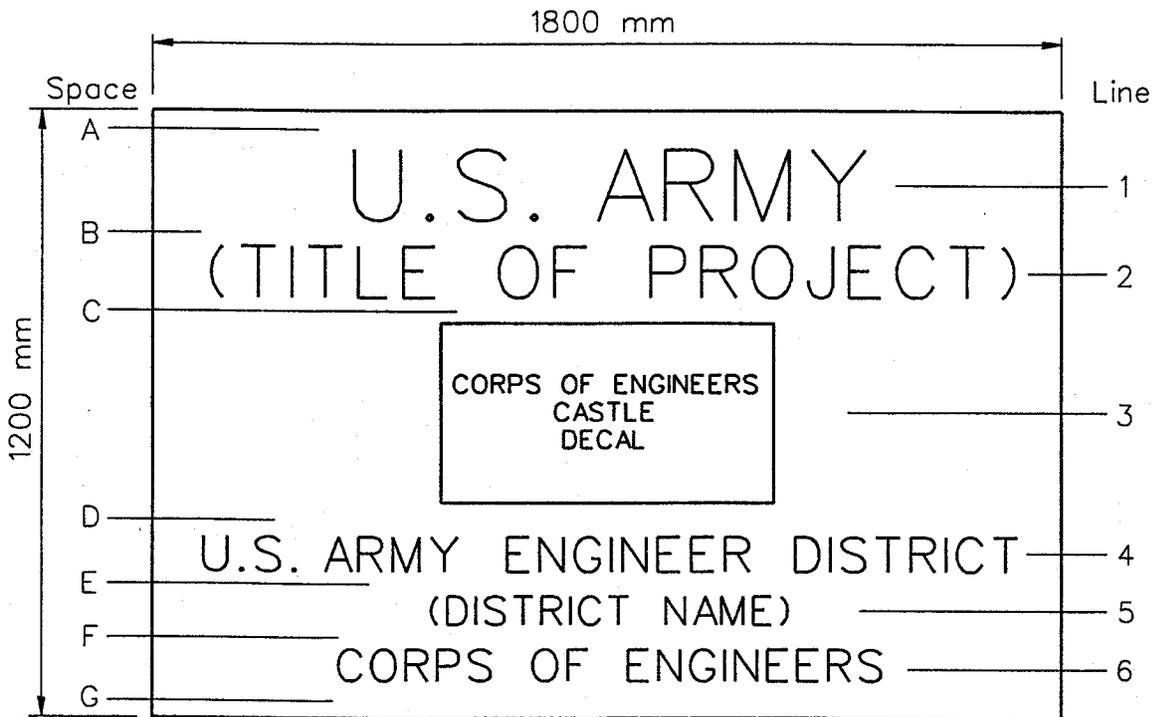
work, and the fish ladder prior to 1 November 2001. Any temporary construction and construction delays required to satisfy the environmental requirements of SECTION 01130 ENVIRONMENTAL PROTECTION will be at the Contractor's expense. Any construction that is damaged during the construction period by storm flows or any stormwater runoff shall be replaced at the Contractor's expense.

20. COOPERATION WITH OTHERS.

20.1. In addition to the CONTRACT CLAUSE: OTHER CONTRACTS, agreements shall be made for cooperative use and maintenance of project haul roads and access roads.

During the life of the project there may be work within the channel to the North and South of the fish ladder area. The Contractor shall coordinate his activities with other contractors as to not delay or interfere with their work.

-- End of Section --



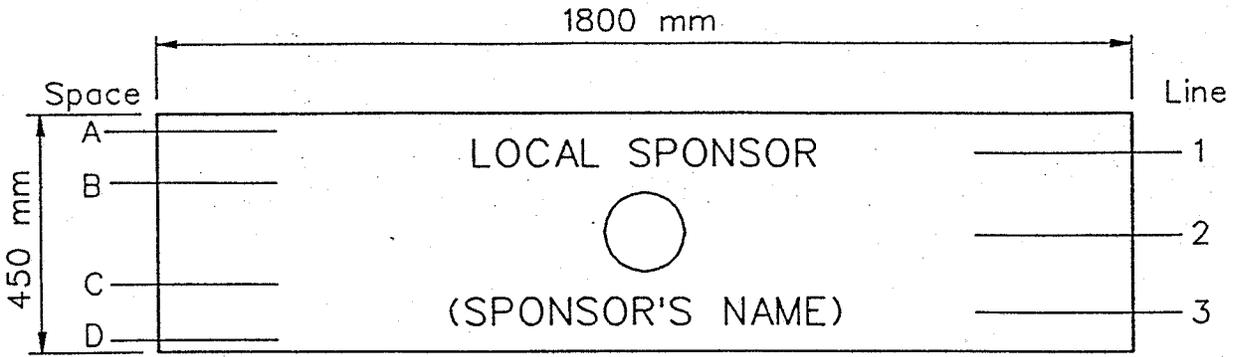
<u>Space</u>	<u>Height</u>	<u>Line</u>	<u>Description</u>	<u>Letter Height</u>	<u>Stroke</u>
A	75				
		1	U.S. ARMY	140	22
B	50				
		2	PROJECT NOMENCLATURE	100	16
C	50				
		3	CORPS OF ENGINEERS CASTLE (DECAL)	345	
D	70				
		4	U.S. ARMY ENGINEER DISTRICT	70	9
E	50				
		5	DISTRICT NAME	60	6
F	50				
		6	CORPS OF ENGINEERS	65	9
G	75				

Letter Color -- Black

PROJECT SIGN
(Army-Civil Works)

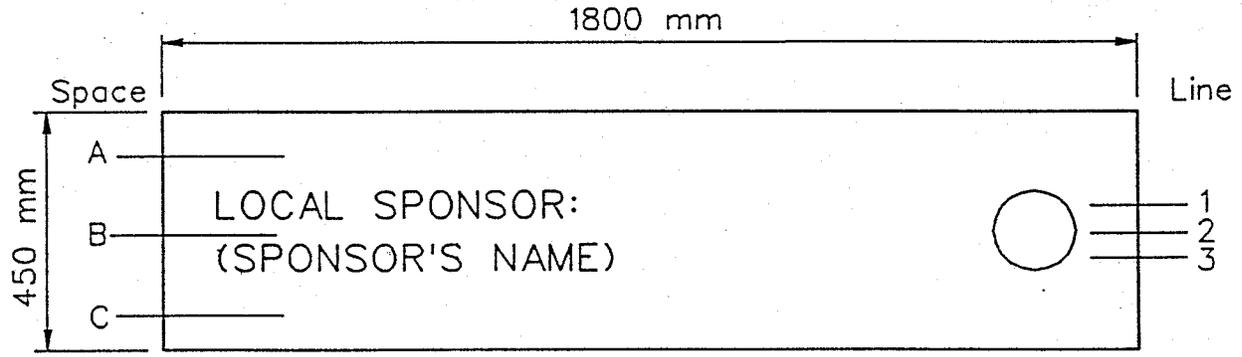
Figure 1
October 1996

All units are in millimeters.



<u>Space</u>	<u>Height</u>	<u>Line</u>	<u>Description</u>	<u>Letter Height</u>	<u>Stroke</u>
A	50	1	LOCAL SPONSOR	50	9
B	50	2	SPONSOR'S EMBLEM (DECAL)		
C	50	3	(SPONSOR'S NAME)	50	9
D	50				

- OR -

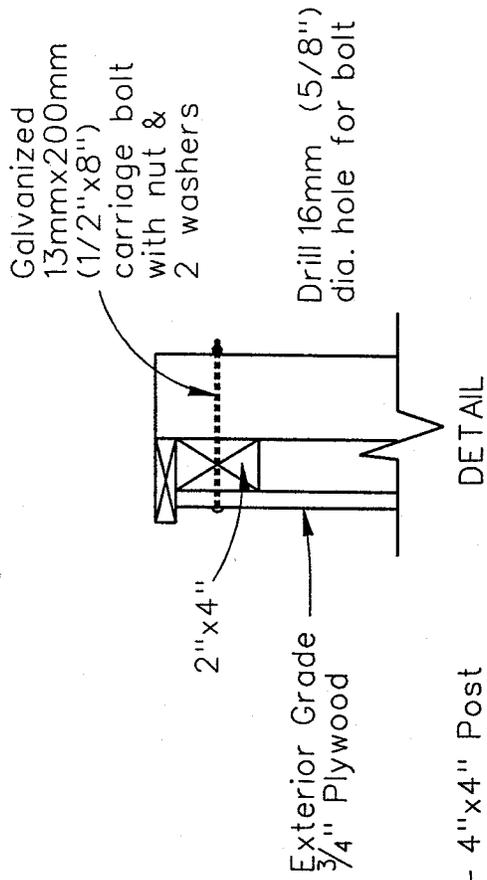


<u>Space</u>	<u>Height</u>	<u>Line</u>	<u>Description</u>	<u>Letter Height</u>	<u>Stroke</u>
A	150	1	LOCAL SPONSOR	50	9
B	50	2	SPONSOR'S EMBLEM (DECAL)		
C	150	3	(SPONSOR'S NAME)	50	9

Lettering Color -- Black

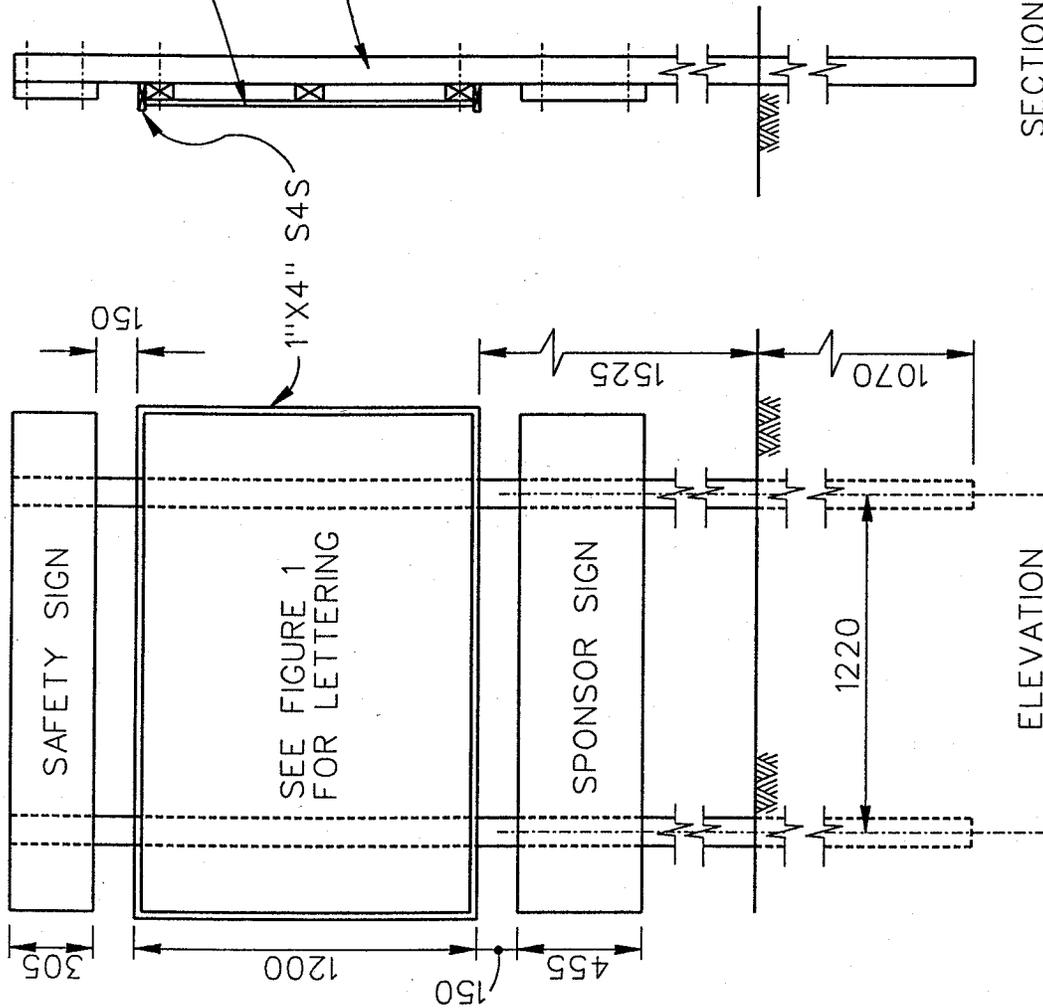
All units are in millimeters.

Figure 1A
October 1997



General Notes

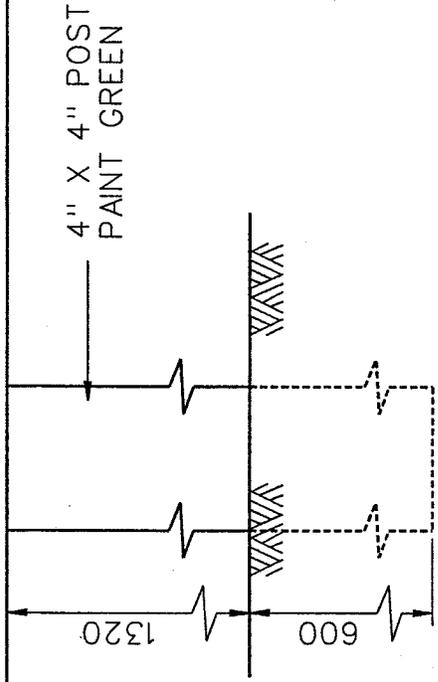
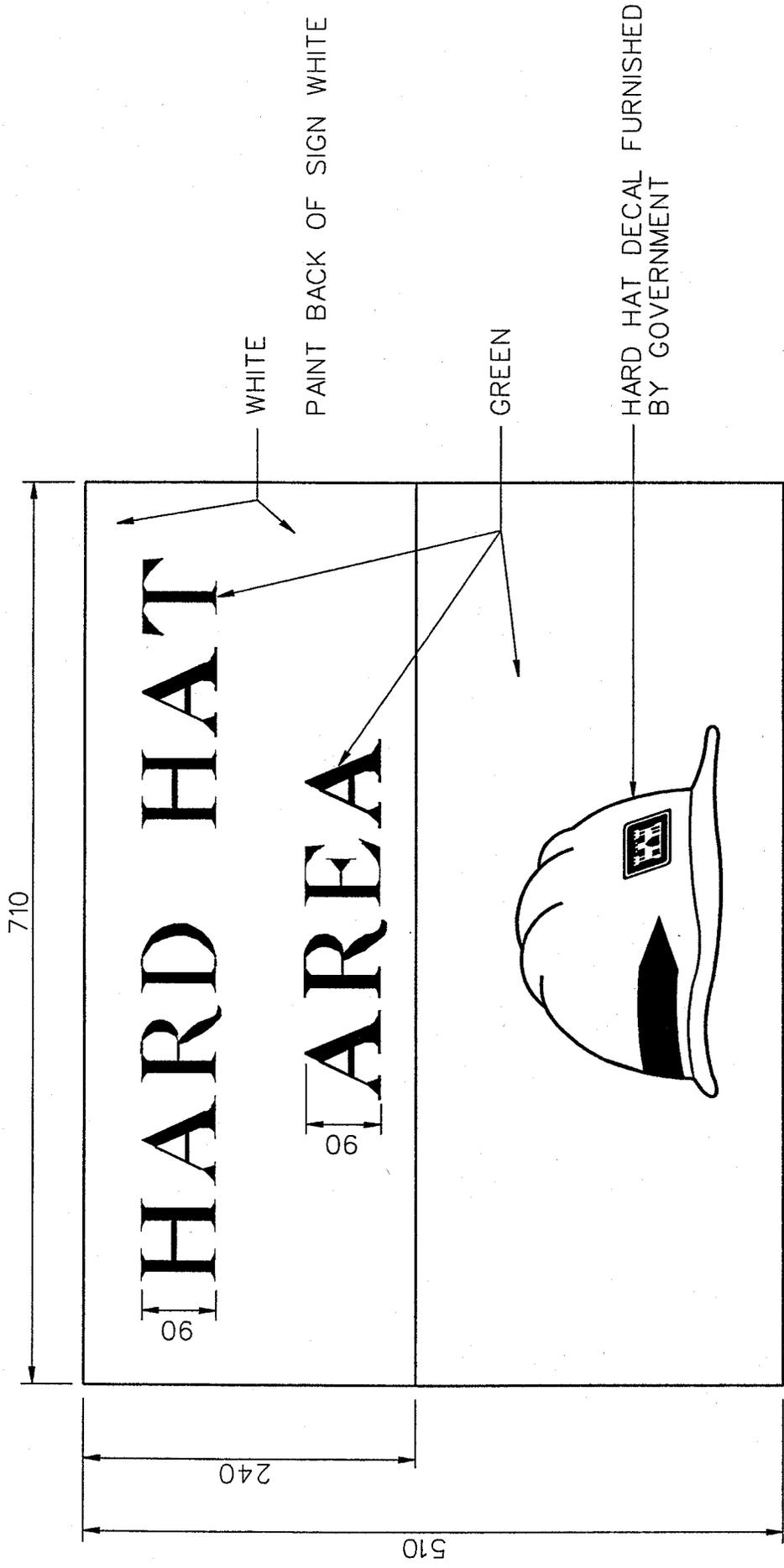
1. Lumber to be cut & formed accurately.
2. Secure 1"x4" & plywood with 6d finish nails at not less than 305mm(12") O.C.
3. All exposed nails to be set & holes filled with putty.
4. Sign to be set in good solid ground & backfill carefully tamped into place.
5. Where necessary, posts shall be braced to provide a solid installation.



SIGN DETAILS

Figure 2
October 1996

All units are in millimeters unless otherwise indicated.

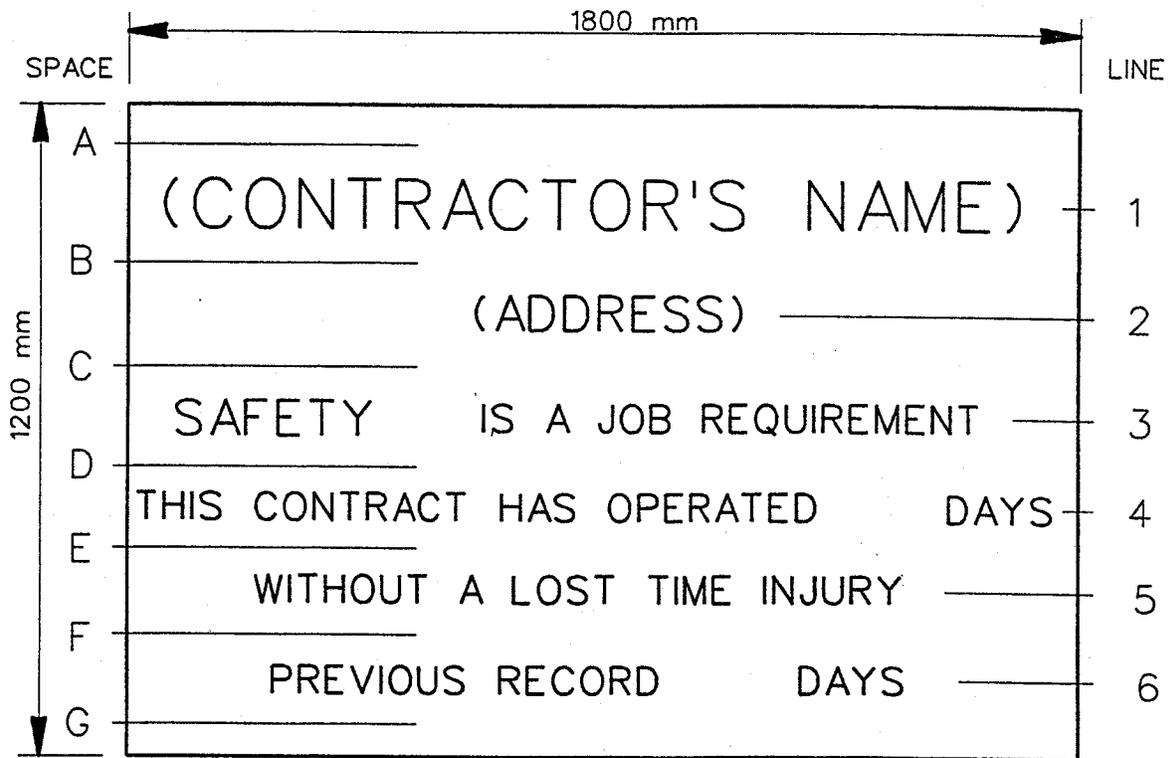


General Notes

1. Green & white paint shall be opaque glossy as specified in ANSI Z53.1
2. Bolt sign to post with two 15 mm dia. carriage bolts.

Figure 3
October 1996

All units are in millimeters unless otherwise indicated.



<u>SPACE</u>	<u>HEIGHT</u>	<u>LINE</u>	<u>DESCRIPTION</u>	<u>LETTER HEIGHT</u>
A	125			
B	75	1	CONTRATOR'S NAME	125
C	150	2	ADDRESS	75
D	75	3	SAFETY IS A JOB REQUIREMENT	115 & 75
E	75	4	ALL LETTERING	75
F	75	5	ALL LETTERING	75
G	125	6	ALL LETTERING	75

Notes

Lettering shall be black No. 27038 standard 595.
 Sign shall be installed in the same manner
 as the Project Sign.

**SAFETY SIGN
 STANDARD DETAIL**

All units are in millimeters.

SECTION 01250

MEASUREMENT AND PAYMENT

PART 1	GENERAL.....	1
1.1	REFERENCES.....	1
1.2	SUBMITTALS.....	1
1.3	LUMP SUM PAYMENT ITEMS.....	1
1.3.1	Diversion and Control of Water.....	1
1.3.2	Clear site and remove obstructions.....	1
1.3.3	Fish Ladder.....	2
1.3.4	Overpour.....	2
1.3.5	Erosion Control Planting.....	2
1.4	UNIT PRICE PAYMENT ITEMS.....	3
1.4.1	Excavation.....	3
1.4.2	Compacted Fill.....	3
1.4.3	Stone Protection, Type 1.....	4
1.4.4	Stone Protection, type 2.....	4
1.4.5	Grouting Stone Protection.....	5
1.4.6	Chain Link Fence.....	5
1.4.7	Aggregate Base Course, for Service Road.....	6
1.4.8	Side Drains.....	6
1.4.9	Pipe (CMP).....	7
1.4.10	Maintenance of Erosion Planting.....	7
1.5	OPTIONAL ITEMS.....	8
1.5.1	East Side Slope, Grouted Stone Protection Sta 31+50 to Sta 34+80.....	8
1.5.2	Power Pole Area(from sta 21+75 to sta 24+00).....	8
1.5.3	Pilot Channel from Sta. 34+80 to Mouth of Channel Sta. 10+00.....	8
1.5.4	West Side Drains.....	9
PART 2	PRODUCTS (NOT APPLICABLE).....	9
PART 3	EXECUTION (NOT APPLICABLE).....	9

-- End Table of Contents --

SECTION 01250

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 REFERENCES

Not Applicable. See applicable specification section for each bid item.

1.2 SUBMITTALS

In general, the Contractor shall provide proof of completed work and payment justifications (i.e., weight certificates, labor time cards, etc.) as required by the Contracting Officer.

1.3 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 requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided. No adjustments will be made to the BIDDING SCHEDULE quantities or unit prices to accommodate additional work due to flood flows (Contractor is responsible for protecting his work for the duration of the contract), Contractor's negligence, or convenience to the Contractor.

1.3.1 Diversion and Control of Water

1.3.1.1 Payment

General payment for diversion and control of water will be made at the applicable contract price, which payment shall constitute full compensation for: Diversion and Control of Water Plan; maintaining the work area in a dry condition; excavation, compacted fill, and miscellaneous fill as required due to erosion and deposition of materials created by all flood flows; and environmental monitoring.

1.3.1.2 Unit of Measure

Unit of measure: lump sum.

1.3.2 Clear site and remove obstructions.

1.3.2.1 Payment

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 of abandoned lines, chain link fence; and the disposal of all materials.

1.3.2.2 Unit of Measure

Unit of measure: lump sum.

1.3.3 Fish Ladder

1.3.3.1 Payment

Payment for Fish Ladder will be made at the applicable contract price, which payment shall constitute full compensation for all labor, materials, tools, equipment, and incidentals to construct the fish ladder including shaping, fine grading and terracing the area, re-bars, colored concrete, formwork, curing, finishing, steel plates, stone protection type 3 and grouting stone protection for type 3 stone.

1.3.3.2 Unit of Measure

Unit of Measure: lump sum

1.3.4 Overpour

1.3.4.1 Payment

General payment for Overpours will be made at the applicable contract price for which payment shall constitute full compensation for all labor, materials, and equipment required for overpours, complete, including: excavation, compacted fill, steel reinforcement, form work, and colored concrete.

1.3.4.2 Unit of Measure

Unit of measure: lump sum.

1.3.5 Erosion Control Planting

1.3.5.1 Payment

General payment for Erosion Control Planting will be made at the applicable contract price for which payment shall constitute full compensation for all labor, materials, and equipment required for Erosion Control Planting, complete, including: excavation; compacted fill; plants; hydro seeding; permits; connection to supply lines; irrigation systems; pipes; sprinkler and drip heads; controllers; valves; reducers; couplers; fertilizer injecting systems; bubblers; rock mulch; and maintenance of all aforementioned landscape features prior to implementation of the Maintenance of Erosion Planting, such maintenance shall comply with the requirements of Maintenance of Erosion Planting.

1.3.5.2 Unit of Measure

Unit of measure: lump sum.

1.4 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the BIDDING SCHEDULE and described below.

The unit 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 requirements, tests and reports, and for performing all work required for each of the unit price items. No adjustments will be made to the BIDDING SCHEDULE quantities or unit prices to accommodate additional work due to flood flows (Contractor is responsible for protecting his work for the duration of the contract), Contractor's negligence, or convenience to the Contractor.

1.4.1 Excavation

1.4.1.1 Payment

Payment for Excavation will be made at the applicable contract price for which payment shall constitute full compensation for all labor, materials, and equipment required for excavation, complete, including: surveying and staking; excavating; excavation and disposal of unsuitable materials; disposal of excess materials; dewatering of groundwater; shoring required to protect existing structures and utilities.

1.4.1.2 Measurement

A survey of the existing topography shall be made by the Contractor prior to commencement of work, and all measurements will be based on this survey. Excavation shall be computed between the existing surveyed ground and the design invert, including excavation required for subgrades of all stone and the subgrade of the fish ladder. Quantities will be computed in cubic meters 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 (8) meters and the planimeter will be considered a precise instrument for measurement of plotted cross section.

1.4.1.3 Unit of Measure

Unit of measure: cubic meter.

1.4.2 Compacted Fill

1.4.2.1 Payment

Payment for Compacted Fill will be made at the applicable contract price for which payment shall constitute full compensation for all labor, materials, and equipment required for compacted fill between existing grades and finish (design) grades, complete, including: surveying and staking; compacted fill from original ground to design grades; compacted fill required to replace unsuitable materials; providing compacted fill material (which may be from

processed required excavations), hauling, and stockpiling of satisfactory compacted fill materials.

1.4.2.2 Measurement

A survey of the final design grade topography shall be made by the Contractor and all measurements will be based on this survey. Measurement for compacted fill will be made between the top of surveyed finished grades and the top of design grades of the grouted stone, excavation lines as shown on the drawings, or existing ground. Quantities will be computed in cubic meters 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 (8) meters and the planimeter will be considered a precise instrument for measurement of plotted cross section.

1.4.2.3 Unit of Measure

Unit of measure: cubic meter.

1.4.3 Stone Protection, Type 1

1.4.3.1 Payment

Payment for Stone Protection, type 1 will be made at the applicable contract price, which payment shall constitute full compensation (all labor, materials, and equipment) for surveying, staking, furnishing (includes all required work to purchase and haul to the site acceptable material from approved source(s)), and placing the stones. Payment for the grout shall not be included in this item.

1.4.3.2 Measurement

The quantity of stone to be paid for will be number of metric ton (1 metric ton = 1.10 English ton), determined by scale weights, acceptably placed within the lines and grades shown on the drawings or directed by the Contracting Officer. No adjustments will be made to the BIDDING SCHEDULE quantities or unit prices to accommodate additional required stone for grouted Type 1 stone protection work due to flood flows (Contractor is responsible for protecting his work for the duration of the contract), Contractor's negligence, or convenience to the Contractor.

1.4.3.3 Unit of Measure

Unit of Measure: metric ton.

1.4.4 Stone Protection, type 2

1.4.4.1 Payment

Payment for Stone Protection, type 2 will be made at the applicable contract price, which payment shall constitute full compensation (all labor, materials, and equipment) for surveying, staking, furnishing (includes all required work to first extract and process acceptable material from required excavations and, if need be, purchasing and hauling to the site acceptable material from

approved source(s)), and placing. Payment for the grout shall not be included in this item.

1.4.4.2 Measurement

The quantity of stone to be paid for will be number of metric ton (1 metric ton = 1.10 English ton), determined by scale weights, acceptably placed within the lines and grades shown on the drawings or directed by the Contracting Officer. No adjustments will be made to the BIDDING SCHEDULE quantities or unit prices to accommodate additional required stone for grouted stone protection work due to flood flows (Contractor is responsible for protecting his work for the duration of the contract), Contractor's negligence, or convenience to the Contractor.

1.4.4.3 Unit of Measure

Unit of Measure: metric ton.

1.4.5 Grouting Stone Protection

1.4.5.1 Payment

Payment for Grouting Stone Protection will be made at the applicable contract price, which payment shall constitute full compensation for all labor, materials, and equipment required to grout the Stone for Type 1 Grouted Stone Protection and Stone for Type 2 Grouted Stone Protection, complete. Payment includes furnishing and placing colored grout to depths shown. Payment for Grouting Stone Protection includes the grout required for the grouted stone ramps, complete.

1.4.5.2 Measurement

The total quantity of Grouting Stone Protection for which payment will be made will be measured by weighing all the ingredients in trial batches of grout and converting each batch to absolute volume; thus the volume determined and the number of batches of grout of corresponding proportions acceptably placed in the work shall be used to determine the quantity of grout. No adjustments will be made to the BIDDING SCHEDULE quantities or unit prices to accommodate additional grouting stone protection work due to flood flows (Contractor is responsible for protecting his work for the duration of the contract), Contractor's negligence, or convenience to the Contractor.

1.4.5.3 Unit of Measure

Unit of Measure: cubic meter.

1.4.6 Chain Link Fence

1.4.6.1 Payment

Payment for Chain Link Fence (including access gates) will be made at the applicable contract price, which payment shall constitute full compensation (all labor, materials, and equipment) for surveying, staking, furnishing all materials, performing related earthwork, concrete, and steel reinforcement

complete. Payment shall not include any temporary fencing required for construction.

1.4.6.2 Measurement

The total quantity of Chain Link Fence for which payment will be made will be the linear distance of fencing as shown on the plans, profiles, and cross sections. No adjustments will be made to the BIDDING SCHEDULE quantities or unit prices to accommodate additional required fencing work due to flood flows (Contractor is responsible for protecting his work for the duration of the contract), Contractor's negligence, or convenience to the Contractor.

1.4.6.3 Unit of Measure

Unit of Measure: linear meter.

1.4.7 Aggregate Base Course, for Service Road

1.4.7.1 Payment

Payment for Aggregate Base Course will be made at the applicable contract price, which payment shall constitute full compensation (all labor, materials, and equipment) for surveying, staking, excavating from finish (design) grades to subgrade, furnishing (includes all required work to extract and process acceptable material from required excavations and/or purchasing and hauling to the site acceptable material from approved source(s)), placing, watering, compacting, and grading between existing grades and finish (design) grades. No separate payment shall be made for aggregate base course required as a result of erosion and scour from flood flows.

1.4.7.2 Measurement

The quantity of stone to be paid for will be number of metric ton (1 metric ton = 1.10 English ton), determined by scale weights, acceptably placed within the lines and grades shown on the drawings or directed by the Contracting Officer. No adjustments will be made to the BIDDING SCHEDULE quantities or unit prices to accommodate additional required aggregate base course work due to flood flows (Contractor is responsible for protecting his work for the duration of the contract), Contractor's negligence, or convenience to the Contractor.

1.4.7.3 Unit of Measure

Unit of Measure: metric ton.

1.4.8 Side Drains

1.4.8.1 Payment

Payment for Side Drain will be made at the applicable contract price, which payment shall constitute full compensation (all labor, materials, and equipment) for excavation of side ditch, Stone type 4, Geotextile filter fabric, CMP risers and elbows, connection to CMP pipe, Galvanized plates, Galvanized hoops, and all galvanized connection hardwares in place, completed.

1.4.8.2 Measurement

The total quantity of Side Drains for which payment will be made will be the quantity of side drains shown on the plans, E1, E2, and W1.

1.4.8.3 Unit of Measure

Unit of Measure: Each.

1.4.9 Pipe (CMP)

1.4.9.1 Payment

Payment for Pipe (CMP) will be made at the applicable contract price, which payment shall constitute full compensation (all labor, materials, and equipment) for CMP D610mm, and 740 mm, including excavation, placement and backfill, and cold cutting to finish grades.

1.4.9.2 Measurement

The total quantity of CMP for which payment will be made will be the actual quantity placed measured along the centerline of the pipe from the connection of the risers to the outlets.

1.4.9.3 Unit of Measure

Unit of Measure: Meter.

1.4.10 Maintenance of Erosion Planting

1.4.10.1 Payment

Payment for Maintenance of Erosion Planting will be made at the applicable contract price, which payment shall constitute full compensation (all labor, materials, and equipment) for satisfactory establishment of plants and satisfactory maintenance of the irrigation systems including excavations, compacted fill, miscellaneous fill, rock mulch, water for irrigation, fertilizers, replacements and repairs of plants and irrigation systems as required, trees and shrubs trimming, all cultivating, related landscape work, and coordination of monthly inspections required for payment.

1.4.10.2 Measurement

The total quantity of Maintenance of Erosion Planting for which payment will be made will be the number of months stated by the BIDDING SCHEDULE. No adjustments will be made to the BIDDING SCHEDULE quantities or unit prices to accommodate additional required maintenance of erosion planting work due to flood flows (Contractor is responsible for protecting his work for the duration of the contract), Contractor's negligence, or convenience to the Contractor.

1.4.10.3 Unit of Measure

Unit of Measure: Month.

1.5 OPTIONAL ITEMS

1.5.1 East Side Slope, Grouted Stone Protection Sta 31+50 to Sta 34+80

1.5.1.1 Payment

Payment for East Side Slope, Grouted Stone Protection Sta 31+50 to Sta 34+80 will be made at the applicable contract price, which payment shall constitute full compensation for all labor, materials, and equipment required to grout the Stone for Type 2 Grouted Stone Protection including restoring side slope to design condition: excavation, compacted fill, removing stone, compacting subgrade, replacing stone, cleaning stone, air and water blasting, complete. Payment includes furnishing and placing colored grout to depths shown.

1.5.1.2 Measurement

The total quantity of East Side Slope, Grouted Stone Protection Sta 31+50 to Sta 34+80 for which payment will be made will be measured by weighing all the ingredients in trial batches of grout and converting each batch to absolute volume; thus the volume determined and the number of batches of grout of corresponding proportions acceptably placed in the work shall be used to determine the quantity of grout. No adjustments will be made to the BIDDING SCHEDULE quantities or unit prices to accommodate additional grouting stone protection work due to flood flows (Contractor is responsible for protecting his work for the duration of the contract), Contractor's negligence, or convenience to the Contractor.

1.5.1.3 Unit of Measure

Unit of measure: cubic meter.

1.5.2 Power Pole Area (from sta 21+75 to sta 24+00)

1.5.2.1 Payment

General payment for Power Pole Area will be made at the applicable contract price for which payment shall constitute full compensation for all labor, materials, and equipment required for the power pole area; including: excavation, compacted fill, overpour, stone protection type 2, grouting stone protection, service road ABC, erosion control planting, and chain link fence.

1.5.2.2 Unit of Measure

Unit of measure: lump sum.

1.5.3 Pilot Channel from Sta. 34+80 to Mouth of Channel Sta. 10+00

1.5.3.1 Payment

Payment for Pilot Channel will be made at the applicable contract price for which payment shall constitute full compensation for all labor, materials, and

equipment required for Excavation between existing grades and finish (design) grades, complete, including: surveying and staking; excavation from original ground to design grades; disposal of excess materials. No separate payment shall be made for excavation which is considered as being for the convenient of the contractor.

1.5.3.2 Measurement

Quantity will be computed in cubic meters by the average area time the length of the pilot channel or other approved method. All excavation outside of excavation lines shown on the plans will be considered as being for the convenience of the contractor.

1.5.3. Unit of Measure

Unit of measure: cubic meter.

1.5.4 West Side Drains

1.5.4.1 Payment

Payment for West Side Drains will be made at the applicable contract price, which payment shall constitute full compensation (all labor, materials, and equipment) for: removal and replacement of grouted stone, ABC service road, fence, landscaping and landscape stone, irrigation; excavation, compacted fill, stone type 4, geotextile filter fabric, CMP pipe D 610mm and D 740mm, cold cutting to finish grade, CMP risers and elbows, connection to CMP pipe, Galvanized plates, Galvanized hoops, and all galvanized connection hardwares in place, completed.

1.5.4.2 Measurement

The total quantity of Side Drains for which payment will be made will be the quantity of side drains shown on the plans, W2, and W3.

1.5.4.3 Unit of Measure

Unit of Measure: Each.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

SECTION TABLE OF CONTENTS

GENERAL REQUIREMENTS

SECTION 01300

SUBMITTAL DESCRIPTIONS

PART 1 GENERAL.....1
 1.1 SUBMITTALS.....1
PART 2 PRODUCTS (Not Applicable).....2
PART 3 EXECUTION (Not Applicable).....2

-- End of Table of Contents --

SECTION 01300

SUBMITTAL DESCRIPTIONS

PART 1 GENERAL

1.1 SUBMITTALS

The submittals described below are those required and further described in other sections of the specifications. Other requirements pertaining to submittals are included in the SPECIAL CLAUSES and SECTION: SUBMITTAL PROCEDURES. Submittals required by the CONTRACT CLAUSES and other nontechnical parts of the contract are not included in this section.

SD-01, Data

Submittals which provide calculations, descriptions, or documentation regarding the work.

SD-04, Drawings

Submittals which graphically show relationship of various components of the work, schematic diagrams of systems, details of fabrication, layouts of particular elements, connections, and other relational aspects of the work.

SD-06, Instructions

Preprinted material describing installation of a product, system or material, including special notices and material safety data sheets, if any, concerning impedances, hazards, and safety precautions.

SD-07, Schedules

Tabular lists showing location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

SD-08, Statements

A document, required of the Contractor, or through the Contractor, from a supplier, installer, manufacturer, or other lower tier Contractor, the purpose of which is to confirm the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verifications of quality.

SD-09, Reports

Reports of inspections or tests, including analysis and interpretation of test results. Each report shall be properly identified. Test methods used shall be identified and test results shall be recorded.

SD-13, Certificates

Statement signed by responsible official of a manufacturer of a product, system or material, attesting that the product, system or material meets specified requirements. The statement must be dated after the award of this contract, must name the project, and must list the specific requirements which are being certified.

SD-14, Samples

Samples, including both fabricated and unfabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.

SD-18, Records

Documentation to record compliance with technical or administrative requirements.

SD-19, Operation and Maintenance Manuals

Data which forms a part of an operation and maintenance manual.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

SECTION 01305

SUBMITTAL PROCEDURES

Index

1. SUBMITTAL CLASSIFICATION.....1
2. APPROVED SUBMITTALS.....1
3. DISAPPROVED SUBMITTALS.....1
4. WITHHOLDING OF PAYMENT.....1
5. GENERAL.....1
6. SUBMITTAL REGISTER.....2
7. SCHEDULING.....2
8. TRANSMITTAL FORM.....2
9. SUBMITTAL PROCEDURE.....2
10. CONTROL OF SUBMITTALS.....2
11. GOVERNMENT APPROVED SUBMITTALS.....2
12. INFORMATION ONLY SUBMITTALS.....2
13. STAMPS.....4

-- End of Table of Contents --

SECTION 01305

SUBMITTAL PROCEDURES

1. SUBMITTAL CLASSIFICATION. Submittals are classified as follows:
 - 1.1 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 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.
2. APPROVED SUBMITTALS. The approval of submittals by the Contracting Officer 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 CQC requirements of this contract, is responsible for the dimensions and design of adequate connections, details and 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 given consideration unless accompanied by an explanation as to why a substitution is necessary.
3. 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 as specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, notice as required under the Contract Clause entitled "Changes" shall be given promptly to the Contracting Officer.
4. WITHHOLDING OF PAYMENT. Payment for materials incorporated in the work will not be made if required approvals have not been obtained.
5. GENERAL. The Contractor shall submit all items listed on the Submittal Register (ENG Form 4288) or specified in the other sections of these specifications. The Contracting Officer may request submittals in addition to those listed 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 used in the contract drawings. Submittals shall be made in the respective number of copies and to the respective addresses set forth below. 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) representative and each respective transmittal form (ENG Form 4025) shall be stamped, signed, and dated by the CQC representative certifying that the accompanying submittal complies with the contract requirements. 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.

6. SUBMITTAL REGISTER (ENG Form 4288). At the end of this section is one set of ENG Forms 4288 listing each item of equipment and material for which submittals are required by the specifications. Columns "c" thru "o" have been completed by the Government. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. This register and the progress schedules shall be coordinated.

7. 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. No delays damages or time extensions will be allowed for time lost in late submittals.

8. TRANSMITTAL FORM (ENG Form 4025). The sample transmittal for (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 will 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.

9. SUBMITTAL PROCEDURE. Submittals shall be made as follows:

9.1 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.

10. 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."

11. 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 date. Four copies of the submittal will be retained by the Contracting Officer and two copies of the submittal will be returned to the Contractor.

12. INFORMATION ONLY SUBMITTALS. Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. These submittals will be used for information

purposes. 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 and will not prevent the Contracting Officer from requiring removal and replacement if nonconforming material is incorporated in the work. This does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or check testing by the Government in those instances where the technical specifications so prescribe.

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

CONTRACTOR
(Firm Name)
_____ Approved
_____ Approved with corrections as noted on submittal data and/or attached sheets(s).
SIGNATURE: _____
TITLE: _____
DATE: _____

-- End of Section --

SUBMITTAL REGISTER
(ER 415-1-10)

CONTRACT NO.

TITLE AND LOCATION
SANTA PAULA CREEK - REACH 3 INCLUDING FISH LADDER

CONTRACTOR

SPECIFICATION SECTION
DACW09-

TRANSMITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL											CLASSIFICATION	PREVENTER	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS
				DATA	DRAWINGS	INSTRUCTIONS	SCHEDULES	STATEMENTS	REPORTS	CERTIFICATES	SAMPLES	RECORDS	INFORMATION ONLY	GOVERNMENT APPROVED			SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	CODE	DATE	SUBMIT TO GOVERNMENT	CODE	DATE	
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.	
		SECTION 00800	SPECIAL CONTRACT REQUIREMENTS																						
		11.	Notifications of Discrepancies		x									x											
		14.	Equipment Cost and Pricing Data																						
		1200	As-Built Drawings										x	x											
		SECTION 01440	CONTRACTORS QUALITY CONTROL																						
		2	CQC Plan	x											x										
		SECTION 02200	EXCAVATION FILLING AND BACKFILLING																						
		1.5	Shoring Calculations	x																					
		1.5	Dewatering/Drainage Plan		x									x											
		1.5	Shoring Drawings		x																				
		1.5	Field Density Tests	x						x				x											
		1.5	Testing of Backfill Material	x						x				x											
		SECTION 02215	GEOTEXTILE																						
		1.3	Geotextile Certificate										x												
		SECTION 02241	AGGREGATE BASE COURSE																						
		1.4	Degree of Completion	x						x				x											
		1.4	Moisture Content	x										x											
		1.4	Particle Size and Gradation	x										x											
		1.4	Liquid Limit & Plasticity Index	x										x											
		SECTION 02600	STONE PROTECTION																						

SUBMITTAL REGISTER

(ER 415-1-10)

CONTRACT NO.

TITLE AND LOCATION
SANTA PAULA CREEK - REACH 3 INCLUDING FISH LADDER

CONTRACTOR

SPECIFICATION SECTION
DACW09-

TRANSMITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										CLASSIFICATION	PREVENTER	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS
				DATA	DRAWINGS	INSTRUCTIONS	SCHEDULES	STATEMENTS	REPORTS	CERTIFICATES	SAMPLES	RECORDS	INFORMATION ONLY			GOVERNMENT APPROVED	SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	CODE	DATE	SUBMIT TO GOVERNMENT	CODE	
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.
		2.1.3.4	Quality Compliance Testing	x					x		x			x										
		SECTION 02650	GROUTING STONE PROTECTION																					
		1.2	Aggregates						x					x										
		1.2	Grout Mix Design	x					x					x										
		1.2	Portland Cement	x					x					x										
		1.2	Curing Materials	x					x					x										
		SECTION 02660	WATER DISTRIBUTION SYSTEM																					
		1.4	Wastewater Disposal Method						x					x										
		1.4	Satisfactory Installation					x						x										
		1.4	Bacteriological Disinfection	x									x	x										
		SECTION 02700	SIDE DRAINS																					
		1.4	Tests for Pipe						x	x				x										
		SECTION 02811	IRRIGATION SYSTEMS																					
		1.2	Framed Instructions			x								x										
		1.2	Field Training Data	x		x						x		x										
		1.2	Spare Parts	x									x	x										
		1.2	Sprinkler System		x	x					x			x										
		1.2	Fertilizer Injector	x	x				x					x										
		1.2	Field Tests	x					x					x										
		1.2	Operation & Maintenance Manuals	x		x			x					x										
		SECTION 02831	CHAIN LINK FENCE																					

SUBMITTAL REGISTER
(ER 415-1-10)

CONTRACT NO.

TITLE AND LOCATION
SANTA PAULA CREEK - REACH 3 INCLUDING FISH LADDER

CONTRACTOR

SPECIFICATION SECTION
DACW09-

TRANSMITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL											CLASSIFICATION	PREVENTER	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS
				DATA	DRAWINGS	INSTRUCTIONS	SCHEDULES	STATEMENTS	REPORTS	CERTIFICATES	SAMPLES	RECORDS	INFORMATION ONLY	GOVERNMENT APPROVED			SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	CODE	DATE	SUBMIT TO GOVERNMENT	CODE	DATE	
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.	
		1.2	Chain Link Fence	x				x					X												
		SECTION 02935A	NATIVE PLANT HYDROSEED																						
		1.2	Delivery				x	x					X												
		1.2	Application of Pesticides					x					X												
		1.2	Maintenance Report									x	X												
		1.2	Hydroseed Establishment	X			X						X												
		1.2	Seed						X	X			X												
		1.2	Fertilizer						X	X			X												
		SECTION 02950	TREES, SHRUBS, GROUND COVER & VINES																						
		1.2	Erosion Control Planting	X		X							X												
		1.2	Application of Herbicide Material	X			X	X		X			X												
		1.2	Delivery				X	X					X												
		1.2	Soil Amendments						X	X			X												
		1.2	Plants						X	X			X												
		1.2	Herbicide						X	X			X												
		1.2	Plant Establishment Period			X			X			X	X												
		1.2	Maintenance			X			X			X	X												
		SECTION 03101	FORMWORK FOR CONCRETE																						
		1.3	Materials	X									X												
		1.3	Inspection						X				X												
		1.3	Sample Panels	X	X							X		X											

SUBMITTAL REGISTER

(ER 415-1-10)

CONTRACT NO.

TITLE AND LOCATION
SANTA PAULA CREEK - REACH 3 INCLUDING FISH LADDER

CONTRACTOR

SPECIFICATION SECTION
DACW09-

TRANSMITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL											CLASSIFICATION	PREVENTER	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS
				DATA	DRAWINGS	INSTRUCTIONS	SCHEDULES	STATEMENTS	REPORTS	CERTIFICATES	SAMPLES	RECORDS	INFORMATION ONLY	GOVERNMENT APPROVED			SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	CODE	DATE	SUBMIT TO GOVERNMENT	CODE	DATE	
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.	
		SECTION 03150	EXPANSION, CONTRACTION, AND CONSTRUCTION JOINTS IN CONCRETE																						
	1.2		Premolded Exp. Joint Filler Strips						X					X											
		SECTION 03301	CAST-IN-PLACE STRUCTURAL CONCRETE																						
	1.2		Concrete Mix Proportioning	X										X											
	1.2		Testing Technicians					X						X											
	1.2		Concrete Construction Inspector					X						X											
	1.2		Construction Joint Treatment					X						X											
	1.2		Curing & Protection					X						X											
	1.2		Cold Weather Placing					X						X											
	1.2		Hot Weather Placing					X						X											
	1.2		Aggregate Quality						X					X											
	1.2		Uniformity of Concrete Mix						X					X											
	1.2		Tests & Inspections						X					X											
	1.2		Cementitious Material							X				X											
	1.2		Impervious Sheet Curing Material							X				X											
	1.2		Air-Entraining Admixture							X				X											
	1.2		Other Chemical Admixtures							X				X											
	1.2		Membrane-Forming Curing Compound							X				X											
	1.2		Non-shrink Grout							X				X											
		SECTION 03307	CONCRETE																						

SUBMITTAL REGISTER
(ER 415-1-10)

CONTRACT NO.

TITLE AND LOCATION
SANTA PAULA CREEK - REACH 3 INCLUDING FISH LADDER

CONTRACTOR

SPECIFICATION SECTION
DACW09-

TRANSMITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL											CLASSIFICATION	PREVENTER	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS
				DATA	DRAWINGS	INSTRUCTIONS	SCHEDULES	STATEMENTS	REPORTS	CERTIFICATES	SAMPLES	RECORDS	INFORMATION ONLY	GOVERNMENT APPROVED			SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	CODE	DATE	SUBMIT TO GOVERNMENT	CODE	DATE	
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.	
		1.3	Air-Entraining Admixture	X									X												
		1.3	Accelerating Admixture	X									X												
		1.3	Water-Reducing or Retarding Admixture	X									X												
		1.3	Curing Materials	X									X												
		1.3	Reinforcing Steel	X									X												
		1.3	Expansion Joint Filler Strips, Premolded	X									X												
		1.3	Joint Sealants - Field Molded Sealants	X									X												
		1.3	Batching and Mixing Equipment	X									X												
		1.3	Conveying and Placing Concrete	X									X												
		1.3	Formwork					X					X												
		1.3	Aggregates						X				X												
		1.3	Concrete Mixture Proportions						X				X												
		1.3	Cementitious Materials							X			X												
		1.3	Aggregates								X		X												
		1.3	Batching and Mixing Equipment								X		X												
		SECTION 05500	MISCELLANEOUS METAL																						
		1.3	Miscellaneous Metal Items		X								X												
		SECTION 07150	WATERPROOFING & DAMPPROOFING																						
		1.2	Materials								X		X												

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE <i>(Read instructions on the reverse side prior to initiating this form)</i>	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. <i>(Cover only one section with each transmittal)</i>	PROJECT TITLE AND LOCATION	CHECK ONE: THIS TRANSMITTAL IS FOR <input type="checkbox"/> FIO <input type="checkbox"/> GOV'T. APPROVAL
--	----------------------------	--

ITEM NO.	DESCRIPTION OF ITEM SUBMITTED <i>(Type size, model number/etc.)</i>	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. <i>(See Instruction no. 8)</i>	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION <i>(See Instruction No. 6)</i>	FOR CE USE CODE
				SPEC. PARA. NO.	DRAWING SHEET NO.			
a.		c.	d.	e.	f.	g.	h.	i.

REMARKS	I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated. <div style="text-align: right; border-top: 1px solid black; width: 100%;"> NAME AND SIGNATURE OF CONTRACTOR </div>
---------	--

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED <i>(List by Item No.)</i>	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-R 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.
Refer to attached sheet resubmission required. | FX -- Receipt acknowledged, does not comply
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.

(Reverse of ENG Form 4025-R)

SECTION TABLE OF CONTENTS

SITE WORK

SECTION 01415

METRIC MEASUREMENTS

1.1 REFERENCES.....1
1.2 GENERAL.....1
1.3 USE OF MEASUREMENTS.....1
 1.3.1 Hard Metric.....1
 1.3.2 Soft Metric.....2
 1.3.3 Neutral.....2
1.4 COORDINATION.....2
1.5 RELATIONSHIP TO SUBMITTALS.....2

-- End of Table of Contents --

SECTION 01415

METRIC MEASUREMENTS

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 E 380 (1993) Practice for Use of the International System of Units (SI)

ASTM E 621 (1994) Practice for Use of Metric (SI) Units in Building Design and Construction

1.2 GENERAL

This project includes metric units of measurements. The metric units used are the International System of Units (SI) developed and maintained by the General Conference on Weights and Measures (CGPM); the name International System of Units and the international abbreviation SI were adopted by the 11th CGPM in 1960. A number of circumstances require that both metric SI units and English inch-pound (I-P) units be included in a section of the specifications. When both metric and I-P measurements are included, the section may contain measurements for products that are manufactured to I-P dimensions and then expressed in mathematically converted metric value (soft metric) or, it may contain measurements for products that are manufactured to an industry recognized rounded metric (hard metric) dimensions but are allowed to be substituted by I-P products to comply with the law. Dual measurements are also included to indicate industry and/or Government standards, test values or other controlling factors, such as the code requirements where I-P values are needed for clarity or to trace back to the referenced standards, test values or codes.

1.3 USE OF MEASUREMENTS

Measurements shall be either in SI or I-P units as indicated, except for Soft metric measurements or as otherwise authorized. The Contractor shall be responsible for all associated labor and materials when authorized to substitute one system of units for another and for the final assembly and performance of the specified work and/or products.

1.3.1 Hard Metric

A hard metric measurement is indicated by an SI value with no expressed correlation to an I-P value, i.e., where an SI value is not an exact mathematical conversion of an I-P value, such as the use of 100 mm in lieu of 4 inches. Hard metric measurements are often used for field data such as distance from one point to another or distance above the floor. Products are considered to be hard metric when they are manufactured to metric dimensions or have an industry recognized metric designation.

1.3.2 Soft Metric

a. A soft metric measurement is indicated by an SI value which is a mathematical conversion of the I-P value which may or may not be shown in parentheses (e.g. 38.1 mm (1-1/2 inches)). Soft metric measurements are used for measurements pertaining to products, test values, and other situations where the I-P units are the standard for manufacture, verification, or other controlling factor. For example, a 3/8-inch thick steel plate may be referred to as a 10 mm thick plate which is a soft conversion of 3/8-inch rounded to the nearest millimeter.

b. A soft metric measurement is also indicated for products that are manufactured in industry designated metric dimensions but are required by law to allow substitute I-P products. These measurements are indicated by manufacturing hard metric product dimension followed by the substitute I-P equivalent value in parentheses (e.g., 190 x 190 x 390 mm (7-5/8 x 7-5/8 x 15-5/8 inches)).

1.3.3 Neutral

A neutral measurement is indicated by an identifier which has no expressed relation to either an SI or an I-P value (e.g., American Wire Gage (AWG) which indicates thickness but in itself is neither SI nor I-P).

1.4 COORDINATION

Discrepancies, such as mismatches or product unavailability, arising from use of both metric and non-metric measurements and discrepancies between the measurements in the specifications and the measurements in the drawings shall be brought to the attention of the Contracting Officer for resolution.

1.5 RELATIONSHIP TO SUBMITTALS

Submittals for Government approval or for information only shall cover the SI or I-P products actually being furnished for the project. The Contractor shall submit the required drawings and calculations in the same units used in the contract documents describing the product or requirement unless otherwise instructed or approved. The Contractor shall use ASTM E 380 and ASTM E 621 as the basis for establishing metric measurements required to be used in submittals.

-- End of Section --

SECTION TABLE OF CONTENTS

SITE WORK

SECTION 01440

CONTRACTOR'S QUALITY CONTROL

- 1. GENERAL.....1
- 2. QUALITY CONTROL PLAN.....1
 - 2.1 General.....1
 - 2.2 Coordination Meeting.....1
 - 2.3 The Quality Control Plan.....1
 - 2.4 Acceptance of Plan.....2
 - 2.5 Notification of Changes.....2
- 3. QUALITY CONTROL ORGANIZATION.....2
 - 3.1 Quality Control Manager.....2
 - 3.2 Personnel.....3
- 4. SUBMITTALS.....3
- 5. QUALITY CONTROL.....3
 - 5.1 Preparatory Phase (Inspection).....3
 - 5.2 Initial Phase (Inspection).....3
 - 5.3 Follow-up Phase (Later Inspections).....3
 - 5.4 Additional Preparatory and Initial Phases.....4
- 6. TESTS.....4
 - 6.1 Testing Procedure.....4
 - 6.2 Capability Check.....4
 - 6.3 Capability Recheck.....4
 - 6.4 Project Laboratory.....5
 - 6.5 Furnishing of Transportation of Samples for Testing.....5
- 7. COMPLETION INSPECTION.....5
- 8. DOCUMENTATION.....5
- 9. NOTIFICATION OF NONCOMPLIANCE.....6
- 10. CONTRACTOR PROJECT MANAGEMENT SYSTEM.....6
 - 10.1 General.....6
 - 10.2 Submission and Approval.....7
 - 10.3 Network Modifications.....7
 - 10.4 Logic Diagrams and Reports.....8
 - 10.4.1 Logic diagrams.....8
 - 10.8.1 Reports.....8
 - 10.15 Payment Requests.....9
- 11. IMPLEMENTATION OF GOVERNMENT RESIDENT MANAGEMENT SYSTEM.....10

-- End of Table of Contents --

SECTION 01440

CONTRACTOR'S QUALITY CONTROL

1. GENERAL.

The Contractor shall establish and maintain an effective quality control system.

The quality control system shall consist of plans, procedures, and organization necessary to provide materials, equipment, workmanship, and operations which comply with contract requirements. The system shall cover site operations, both onsite and offsite, and shall be keyed to the proposed sequence.

2. QUALITY CONTROL PLAN.

2.1 General. The Contractor shall furnish for approval by the Government, not later than 15 days after receipt of Notice to Proceed (NTP), the draft Contractor Quality Control (CQC) Plan. The plan has to be approved by the government in order to proceed. The final plan shall be submitted within 30 days after NTP. The plan shall identify personnel, procedures, instructions, records, and forms to be used. If the Contractor fails to submit an acceptable CQC plan within the time herein prescribed, the Contracting Officer may refuse to allow site activities to start if an acceptable plan is not furnished or withhold funds from progress.

2.2 Coordination Meeting. Before start of construction, the Contractor shall meet with the Contracting Officer or an Authorized Representative and discuss the Contractor's quality control system. 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 (inspection). Minutes of the meeting shall be prepared and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may also 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.

2.3 The Quality Control Plan. This plan shall include as a minimum, the following, to cover all construction operations, both on-site and off-site, including work by subcontractors, manufacturers, suppliers and purchasing agents:

a. A description of the quality control organization including chart showing lines of authority and acknowledgment that the Contractor will follow all aspects of the work specified herein.

b. The name, qualifications, duties, responsibilities and authorities of each person assigned a quality control function for the Contractor to implement work at each site. The staff shall include a quality control manager who shall report to the Contractor's project manager or someone higher in the Contractor's organization. The project manager in this context shall mean the individual with responsibility for the overall management of the project including quality of production.

c. A copy of the letter to the Quality Control Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the Quality Control Manager including authority to stop work which is not in compliance with the contract. The Quality Control 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 and managing submittals, including those of subcontractors, suppliers and purchasing agents. The procedures are in accordance with SECTION: 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. General Quality Assurance and Quality Control procedures. The Contractor shall submit to the Government the number of QA and QC samples and what they will be analyzed for. Details about test procedures, detection limits and sample collection and preservation will also be provided by the Contractor.

2.4 Acceptance of Plan. Acceptance of the Contractor's CQC plan is required prior to site work at each site. Acceptance is conditional and will be predicated on satisfactory performance during the implementation of the project. 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.

2.5 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 Contracting Officer.

3. QUALITY CONTROL ORGANIZATION.

3.1 Quality Control Manager. The Contractor shall identify 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 manager shall not allowed to perform as the project manager, superintendent, field foreman, or any other positions for the duration of the project contract and shall not be allowed to act or substitute for those positions or any other positions for the duration of the project construction. This quality control manger shall be approved by the Contracting Officer.

3.2 Personnel. A staff shall be maintained under the direction of the quality control manager to perform all quality control activities. The actual strength of the staff during any specific work period may vary to cover work phase needs, shifts, and rates of placement. The personnel of this staff shall be fully qualified by experience and technical training to perform their assigned responsibilities and shall be directly hired by and work for the Prime Contractor, and subject to acceptance by the Contracting Officer. The Contractor will add additional staff at no cost to the project, when necessary.

4. SUBMITTALS. Submittals shall be as specified in SECTION: SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

5. QUALITY CONTROL. Contractor Quality Control is the means by which the Contractor ensures that the construction including that of subcontractors, suppliers and manufacturers comply with the requirements of the contract plans and specifications. The controls shall be adequate to cover all construction operations, including both onsite and offsite fabrication, and will be keyed to the proposed construction sequence. The controls shall include at least three phases of inspection for all defined features of work as follows:

5.1 Preparatory Phase (Inspection). This shall be performed prior to beginning any work on any definable feature of work. It shall include a review of contract plans and applicable specifications; a check to assure that all materials and/or equipment have been tested, submitted and approved; a check to assure that provisions have been made to provide required control inspection and testing; a physical examination of materials, equipment and sample work to assure that they conform to approved shop drawings or submittal data and that all materials and/or equipment are on hand, and properly stored. The Contracting Officer Representative (COR) shall be notified at least 24 hours in advance of the preparatory inspection and such inspection shall be made a matter of record in the Contractor's Quality Control documentation as required below. Subsequent to the preparatory inspection and prior to commencement of work, the Contractor shall instruct each applicable worker as to the acceptable level of workmanship required in his CQC plan in order to meet contract specifications.

5.2 Initial Phase (Inspection). This phase shall be performed at the beginning of a defined feature of work. The following shall be accomplished: examination of the quality of workmanship, review of control testing for compliance with contract requirements, use of defective or damaged materials, omissions, and dimensional requirements. The Contracting Officer's Representative shall be notified at least 24 hours in advance of the initial inspection and such inspection shall be made a matter of record, and attached to the daily QC report.

5.3 Follow-up Phase (Later Inspections). These shall be performed daily to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. Such inspections shall be made a matter of record in the CQC documentation as required below. Final follow up inspections shall be conducted and test 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.

5.4 Additional Preparatory and Initial Phases. Additional preparatory and initial phases may be conducted on the same definable features of work as determined by the Government if the quality of ongoing work is unacceptable; or if there are changes in the applicable QC staff or in the on-site production supervision or work crew; or if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

6. TESTS.

6.1 Testing Procedure. The Contractor shall perform tests specified or required to verify that control measures are adequate to provide a product which conforms to contract requirements. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory which has been certified by the State of California and validated by the Corps of Engineers at Los Angeles, or establish a State-certified testing laboratory at the project site. Certification and validation shall be for the required test parameters. A list of tests which the Contractor understands he is to perform shall be furnished as a part of the CQC plan to the Contracting Officer. The list shall give the test name, frequency, specification paragraph containing the test requirements, and the personnel and laboratory responsible for each type of test and an estimate of the number of tests required. The Contractor shall perform the following activities and record and provide the following data:

- a. Verification that testing procedures comply with contract requirements.
- b. Verification that facilities and testing equipment are available and comply with testing standards.
- c. Verification that recording forms, including all of the test documentation requirements, have been prepared.
- d. Checking of test instrument calibration data against certified standards.
- e. Results of all tests taken, both passing and failing tests, will be recorded on the Quality Control report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test will be given. Actual test reports may be submitted later, if approved by the Contracting Officer, with a reference to the test number and date taken. An information copy of tests performed by an off-site 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.

6.2 Capability Check. The Contracting Officer will have the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check laboratory technician's testing procedures and techniques.

6.3 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.

6.4 Project Laboratory. The Contracting Officer will have 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.

6.5 Furnishing of 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:

Director
Waterways Experiment Section
U.S. Army Corps of Engineers

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

7. COMPLETION INSPECTION. At the completion of all work or any increment thereof established by a completion time stated elsewhere in the specifications, the Contractor shall conduct a completion inspection of the work and develop a punch list of items which do not conform to the approved plans and specifications. Such a list shall be included in the quality control documentation, as required by paragraph: DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The quality control manager or staff shall make a second completion inspection at each site to ascertain that all deficiencies have been corrected and so notify the Contracting Officer's Representative. The completion inspection and any deficiency corrections required by this paragraph will be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

8. DOCUMENTATION. The Contractor shall maintain correct records of quality control operations, activities, and tests performed including the work of suppliers and subcontractors. The Contractor shall maintain daily logs of field activities and record health and safety, quality control, and other activity-related issues. In addition, these records shall include factual evidence that the required activities have been performed, including but not limited to the following:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed today, giving location, description, and by whom.
- d. Test and/or control activities performed with results and references to specifications/plan requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.
- e. Material received with statement as to its acceptability and storage.

f. Identify 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. List 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 quality control manager. The report from the quality control manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

9. NOTIFICATION OF NONCOMPLIANCE. The Contracting Officer will notify the Contractor of any noncompliance with the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his representative at the site of the work, 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 any such stop orders shall be made the subject of claim for extension of time or for excess costs or damage by the Contractor.

10. CONTRACTOR PROJECT MANAGEMENT SYSTEM.

10.1 General.

10.1.1 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.

10.1.2 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.

10.1.3 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.

10.1.4 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.

10.1.5 The Contractor Project Management System is to be staffed and prepared pursuant of CONTRACT CLAUSE: SCHEDULE FOR CONSTRUCTION CONTRACTS, and CONTRACT CLAUSE: SUPERINTENDENT 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.

10.2 Submission and Approval. Submission and approval of the system shall be as follows:

10.2.1 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 90 mm HD (3 ½" 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.

10.2.2 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.

10.3 Network Modifications.

10.3.1 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.

10.3.2 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.

10.3.3 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.

10.3.4 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.

10.3.5 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.

10.4 Logic Diagrams and Reports.

10.4.1 Logic diagrams.

10.5 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.

10.6 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.

10.7 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.

10.8 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.

10.8.1 Reports.

10.9 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.

10.10 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.

10.11 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.

10.12 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.

10.13 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.

10.14 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.

10.15 Payment Requests.

10.15.1 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.

10.15.2 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.

10.15.3 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.

10.15.4 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.

11. IMPLEMENTATION OF GOVERNMENT RESIDENT MANAGEMENT SYSTEM. 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 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 specific specification paragraphs and contractor activities; Installed Property Listing, Transfer Property Listing and submittal information relating to individual activities; planned User Schooling tied 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.

11.1 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.

11.2 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.

-- End of Section --