

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE _____ PAGE _____ OF _____ PAGES

2. AMENDMENT/MODIFICATION NO. _____		3. EFFECTIVE DATE _____	4. REQUISITION/PURCHASE REQ. NO. _____	5. PROJECT NO. <i>(If applicable)</i> _____
6. ISSUED BY _____ CODE _____		7. ADMINISTERED BY <i>(If other than Item 6)</i> _____ CODE _____		

8. NAME AND ADDRESS OF CONTRACTOR <i>(No., street, county, State and ZIP Code)</i> CODE _____ FACILITY CODE _____	(X)	9A. AMENDMENT OF SOLICIATION NO. _____
		9B. DATED <i>(SEE ITEM 11)</i> _____
		10A. MODIFICATION OF CONTRACT/ORDER NO. _____
		10B. DATED <i>(SEE ITEM 11)</i> _____

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)* _____

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: <i>(Specify authority)</i> THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES <i>(such as changes in paying office, appropriation date, etc.)</i> SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER <i>(Specify type of modification and authority)</i>

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER <i>(Type or print)</i>		16A. NAME AND TITLE OF CONTRACTING OFFICER <i>(Type or print)</i>	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
<i>(Signature of person authorized to sign)</i>		<i>(Signature of Contracting Officer)</i>	

Item 14. Continued.

CHANGES TO VOLUME I – PROJECT INFORMATION, BIDDING REQUIREMENTS, CONTRACT FORMS, AND CONDITIONS OF THE CONTRACT

1. Replace the Price Proposal Schedule, (pages 00010-3 through 00010-5), with the accompanying new Price Proposal Schedule, (pages 00010-3 through 00010-5), bearing the notation "ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011."
2. Replace the following Sections with the attached new Sections of the same number and title, bearing the notation "ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011."

SECTION 00120 PROPOSAL SUBMISSION REQUIREMENTS
SECTION 00710 WAGE RATES

3. Write-in change to Section 00700 CONTRACT CLAUSES – Revise clause "52.236-1" to read as follows:

"52.236-1 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984)

The Contractor shall perform on the site, and with its own organization, work equivalent to at least **twelve (12%) (am#3)** percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government."

CHANGES TO VOLUME II – DESIGN AND PERFORMANCE REQUIREMENTS

4. Replace the following chapters with the accompanying new chapters of the same number and title, bearing the notation "ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011:"

CHAPTER D2 WATER AND DRAINAGE
CHAPTER D24 SANITARY WASTE
CHAPTER D31 ENERGY SUPPLY
CHAPTER D34 AIR DISTRIBUTION
CHAPTER D36 HVAC CONTROLS
CHAPTER D41 FIRE SPRINKLER AND EXTINGUISHING SYSTEMS
CHAPTER D43 FIRE DETECTION AND ALARM
CHAPTER D53 BRANCH CIRCUITS
CHAPTER D71 VOICE AND DATA
CHAPTER D93 SPECIAL GROUNDING SYSTEMS
CHAPTER E19 OTHER EQUIPMENT

CHANGES TO VOLUME III – SPECIFICATIONS

5. Replacement Sections – Replace the following sections with the accompanying new sections of the same number and title, bearing the notation "ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011:"

SECTION 01000 DESIGN AND CONSTRUCTION SCHEDULE
SECTION 01015 DESIGN REQUIREMENTS AFTER AWARD

6. Deleted Sections – Delete the following section and delete from the Table of Contents:

SECTION 13815 AUTOMATED METER READING SYSTEM

CHANGES TO VOLUME IV – ATTACHMENTS

7. Replacement Drawings (Volume IV, Attachment A).- Replace the drawings listed below with the attached new drawings(s) of the same number, bearing the notation "AM #0003":

a02.cal	A-2	Design Analysis
a03.cal	A-3	Design Analysis
a04.cal	A-4	Performance Standard Criteria
a05.cal	A-5	Performance Standard Criteria
m02.cal	M-2	Plumbing Details
ld03.cal	LD-3	Option #2 Truck Loading Dock Sections and Details

END OF AMENDMENT

Solicitation No.DACA63-02-R-0011

PRICE PROPOSAL SCHEDULE
(To be attached to SF 1442)

Design-Build Tactical Equipment Shop FY02
Fort Hood, Texas

BASE BID: All work required by the Contract documents for the design and construction of the Ft Hood Tactical Equipment Shop exclusive of work required by Option Bid Items.

Item No.	Description	Estimated Quantity	Unit	Unit Price	Estimated Amount
0001	All work to design and construct the Tactical Equipment Shop, Complete, Including all <u>(AM#1)</u> , utilities to the 1524 mm (5-foot) line, and exclusive of all other work listed separately.				
		Sum	Job	***	\$ _____
0002	<u>All work to design and (AM#3)</u> Construct all Exterior Work outside the building's 1524 mm (5-foot) line (Including utilities to the Fort Hood utility tie-in, earthwork, paving, sidewalk, parking lot paving, curb and gutter, turfing, <u>(AM#1)</u> , and all other work not listed separately)				
		Sum	Job	***	\$ _____
0003	<u>Mobilization and Demobilization (AM3#)</u>	Sum	Job	***	\$ _____
0004	Final Record Drawings	Sum	Job	***	\$ <u>50,000.00</u>

TOTAL BASE BID \$ _____

Solicitation No.DACA63-02-R-0011

PRICE PROPOSAL SCHEDULE

0005 OPTION NO. 1:

Additional cost for all work required by the plans and specifications for using epoxy floor covering in lieu of the hardener/sealant used in the Base Bid. (AM#1)

TOTAL OPTION NO. 1 \$ _____

0006 OPTION NO. 2:

Additional cost for all work required by the plans and specifications to construct a Truck Loading Dock including Concrete loading dock, Concrete pavement, storm drainage pipe and structures, site grading, and demolition of existing pavement. (AM#2)

TOTAL OPTION NO. 2 \$ _____

TOTAL BID (BASE BID PLUS OPTION NOS. 1 & 2) \$ _____

0007 Completion Time for all work (not to exceed the maximum time stated in Section 01000 DESIGN AND CONSTRUCTION SCHEDULE).

PROJECT COMPLETION TIME: _____ Calendar Days

NOTES:

1. ARITHMETIC DISCREPANCIES (EFARS 14.407-2)

(a) For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bidding schedule as submitted by bidders:

- (1) Obviously misplaced decimal points will be corrected;
- (2) In case of discrepancy between unit price and extended price, the unit price will govern;
- (3) Apparent errors in extension of unit prices will be corrected; and
- (4) Apparent errors in addition of lump-sum and extended prices will be corrected.

(b) For the purpose of bid evaluation, the Government will proceed on the assumption that the bidder intends his bid to be evaluated on the basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

Solicitation No.DACA63-02-R-0011

PRICE PROPOSAL SCHEDULE

NOTES: (cont)

2. If a modification to a bid based on unit prices is submitted, which provides for a lump sum adjustment to the total estimated cost, the application of the lump sum adjustment to each unit price in the bid schedule must be stated. If it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every unit price in the bid schedule.

3. Bidders must bid on all items.

4. Costs attributable to Division 01 - General Requirements is assumed to be prorated among bid items listed.

5. Responders are advised that this project may be delayed, cancelled or revised at any time during the solicitation, selection, evaluation, negotiation and/or final award process based on decisions related to DOD changes in force structure and disposition of the Armed Forces.

6. EXERCISE OF OPTIONS (SWDR 715-1-1 (16 January 1996))

The Government reserves the right to exercise the option(s) by written notice to the Contractor either singularly or in any combination for up to 90 calendar days after award of the Base Bid without an increase in the Offeror's Bid Price. Completion of added items shall continue at the same schedule as the Base Bid unless otherwise noted in Section 01000 DESIGN AND CONSTRUCTION SCHEDULE, paragraph 1 entitled SCHEDULE.

7. The Army will procure this facility through a design and cost competition in accordance with the provisions set forth in this Request for Proposals (RFP). When a contract is awarded, it will be a "Firm Fixed Price Contract."

8. The Congress, in authorizing and funding this contract, has established certain cost limitations for the project. The current authorization for the complete design and construction of this project is \$11,500,000.00. (AM#1) Proposals that exceed this funding limit after exercising any options may be rejected. Submission of desirable alternative features exceeding minimum requirements may be considered as long as award can be made within the established funds.

9. Any proposal that is materially unbalanced as to prices for the Base Schedule may be rejected. An unbalanced proposal is one that is based on prices significantly less than the cost for some work and prices that are significantly overstated for other work and can also exist where only overpricing or underpricing exists.

END OF PRICE PROPOSAL SCHEDULE

SECTION 00120
PROPOSAL SUBMISSION REQUIREMENTS
03/2002

1 GENERAL

1.1 INTRODUCTION

Through the use of a one-step procurement process, the Department of the Army desires to obtain the design and construction of a Tactical Equipment Shop at Fort Hood, Texas. In this procurement procedure consideration will be given to the Project Organization and Personnel; Experience; Past Performance; Financial Capacity; preliminary design, and cost proposals. Final selection and basis for award of the Design/Build Contract will be on the basis of qualifications, technical quality, price, and other salient factors considered to be in the Government's best interests. If awarded the Contract, the offeror shall complete the design and construction documents and construct the facility in compliance with those completed requirements.

1.2 WHERE AND WHEN TO SUBMIT PROPOSAL

Submit the Proposal no later than the date and time indicated in Item 13.A of the Solicitation, Offer and Award form (Standard Form 1442) found in Section 00010, SOLICITATION, OFFER, AND AWARD.

1.3 EXPLANATION TO PROSPECTIVE OFFERORS

Any prospective offeror desiring an explanation or interpretation of the solicitation, drawing, specifications, etc. must request such in writing, and are directed to the individuals listed in Section 00100 INSTRUCTIONS TO OFFERORS, soon enough to allow a reply to reach all prospective offerors before the submission of their proposals. Oral explanation/instructions given before award of a contract will not be binding. Any information given a prospective offeror concerning a solicitation will be furnished promptly to all other prospective offerors as an amendment to the solicitation, if that information is necessary for submitting proposals, or if the lack of it would be prejudicial to other prospective offerors.

1.4 REQUIRED TECHNICAL DATA FOR PROPOSAL SUBMISSION

Offerors are advised that the required data will be utilized for review and evaluation and used for determination of a "Quality Rating" by a Technical Evaluation Board and that all data submitted for consideration under this proposal will be reviewed only for the purposes required for evaluation and award. The Government will not make assumptions concerning the offeror's intent, capabilities, facilities, or experiences. Clear identification is the sole responsibility of the offeror.

1.5 PROPOSAL PREPARATION

Instructions for the preparation and organization of each proposal are included herein. The proposal shall be submitted as summarized below and as required by the specifications.

1.5.1 Volume I – Primary Design Construction Team Management Proposal

- A. Project Organization and Personnel**
- B. Experience**
- C. Past Performance**
- D. Financial Capacity**

1.5.2 Volume II – Preliminary Design Proposal

- A. Design Proposal (Volume II)**
- B. Preliminary Project Schedule (Volume II)**

1.5.3 Volume III – Cost/Price Proposal

- A. Solicitation, Offer and Award (SF 1442)**
- B. Price Proposal Schedule**
- C. Bid Guarantee**
- D. Representations and Certifications**
- E. Subcontracting Plan (Applies to Large Businesses Only)**
- F. Small Disadvantaged Business (SDB) Utilization Plan (Applies to all Offerors)**

1.5.4 Format

1.5.4.1 Written Material

- a. All written material, including catalog cuts, shall be submitted in standard three ring loose-leaf binders. Proposals shall be tabbed and labeled in a manner to afford easy identification from a Table of Contents. Font size shall be not less than 10 point. Each page shall be identified with the appropriate page number centered at the bottom of the page. Sheet size of the proposal contents shall be 8 ½ by 11 inches. 11 by 17 inch sheets will be allowed for charts and tables but will be counted as 2 single-sided or 4 double-sided pages. Legibility, clarity, coherence, and the contents are important. Volume I (The Primary Design Construction Team Management Proposal) proposal length shall be limited to 70 single-sided or 35 double-sided pages, exclusive of the cover sheet, Table of Contents, and appendices. The offeror shall not submit verbatim sections or attachments of this solicitation as part of their proposal. Offers that do not meet these requirements may be subject to rejection.
- b. A cover sheet identifying the offeror and the project shall be provided. The second sheet shall be a Table of Contents.
- c. Table of Contents. The proposal shall contain a detailed Table of Contents. The complete Table of Contents shall be included in each binder used.
- d. Materials submitted but not required by this solicitation (such as company brochures and equipment lists) shall be relegated to appendices.
- e. Proposal revisions for written portions of the proposal, including catalog cuts and specifications, shall be submitted as page replacements with revised text readily identifiable, e.g. bold face print or underlined. The source of the revision, e.g. Error, Omission, or Clarification (EOC), amendment or other Contractor-initiated change, shall also be indicated for each revision. Revised pages shall be numbered, dated, submitted in same number of copies as the original proposal submittal, and a different color page than the original.

1.5.4.2 Drawings

- a. Full size drawings shall be submitted in accordance with Section 1016, DESIGN DOCUMENT REQUIREMENTS. Each drawing shall be identified with the appropriate Sequence and Sheet Numbers in the lower right hand corner. The original and one copy of all drawings must be full size drawings. The remaining copies may be full size or reduced size, but no smaller than 11 x 17 inches.
- b. All alternate designs which may or may not be priced as additive or deductive items shall be graphically described on separate drawings from the base proposal design. All alternate designs shall meet the minimum requirements of the solicitation.

c. Proposal revisions for drawings shall be submitted as sheet replacements with all changes identified on the drawings with clouds and in the title block, including the source of the revision, e.g. Error, Omission, or Clarification (EOC), amendment, or other Contractor-initiated change. Revised drawings shall be numbered, dated, and submitted in the same number of copies as the original proposal submittal.

1.5.4.3 Electronic Material

The offeror shall submit one copy of the proposal and all revisions, if applicable, on CD-ROM. All textual material, catalog cuts, and other non-drawing material shall be in Adobe Acrobat Portable Document Format (.pdf), arranged in the same order as the hard copy version with each section or part book marked. All drawings shall be formatted in accordance with Section 1016 DESIGN DOCUMENT REQUIREMENTS, Paragraph “.CAL Files.” The offeror must ensure that all textual material, if it has been scanned, has been converted to a text searchable document by using the Paper Capture tool in Adobe Acrobat.

1.5.4.4 Proposal Submission

The proposal submitted shall include an original, copies as indicated below, and one electronic copy on CD-ROM disks (Volumes I and II on one disk and Volume III on another disk.) Each proposal shall be marked to clearly identify the original and the copies. The copies shall be numbered.

Volume I – Primary Design Construction Team Management Proposal	Original and nine (9) copies
Volume II – Preliminary Design Proposal	Original and nine (9) copies
Volume III – Cost/Price Proposal	Original and nine (9) copies

1.6 REFERENCED PUBLICATIONS

Corps of Engineers' (COE) design criteria and manuals that are referenced in this solicitation, such as Technical Manuals (TM) and Instructions (TI), Military Handbooks, Engineering Regulations (ER), and Engineering Manuals (EM), can be downloaded from the Internet at the following address: <http://www.hnd.usace.army.mil/techinfo> or obtained from the current National Institute of Building Science's (NIB) Construction Criteria Base (CCB) CD-ROM disk. The COE SWD-AEIM, AR 190-51, and EC 1110-1-92 are on the Solicitation CD-ROM Disk. The Installation Information Infrastructure Architecture (I3A) guidelines can be downloaded from the Internet at the following address: <http://arch-odisc4.army.mil/>. Obtaining other referenced publications such as Federal and Military specifications, Military Standards, and industry standards (i.e., ASTM, ANSI, ACI, NFPA, building codes) will be the responsibility of each offeror. See Section 00100 INSTRUCTIONS TO OFFERORS, paragraph "52.211-2 AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L (AUG 1998)", for information on obtaining these publications. Offerors are warned that due to the limited time for proposal preparation and submittal, there may not be enough time for ordering and receiving any of the above references. Failure to receive requested references will not be sufficient reason for extension of the proposal submission date.

1.7 UNNECESSARILY ELABORATE PROPOSALS OR QUOTATIONS

Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to this solicitation are not desired and may be construed as an indication of the offeror's lack of cost consciousness. Elaborate artwork, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor wanted.

1.8 REQUIREMENT FOR SPECIAL MARKING OF PROPOSAL DATA

Envelopes or other cover for material submitted in response to this RFP shall be opaque, and must be so presented that they may easily be identified. At a minimum, the outside cover for each volume must show:

Destination of Proposal
Name and location of project as described in the RFP documents
Solicitation number
Name and address of offeror
Project volume number

Submit the proposal in the format specified. Oral or telephonic proposals or modifications will not be considered.

Mail or deliver the proposal to the address listed on the Standard Form 1442, "Solicitation, Offer and Award."

1.9 DESCRIPTION OF EVALUATION CRITERIA

1.9.1 Volume I – Primary Design Construction Team Management Proposal Preparation

The Primary Design Construction Team Management Proposal shall include information as described below and shall be presented in the sequence listed.

A. Project Organization and Personnel:

1. Personnel (Primary Design Construction Team):

- a. This factor considers the offeror's proposed design, construction, and management team. Provide professional resume data on the individuals who will be key personnel on the Primary Design Construction project team. Key personnel identified in this section should be senior working-level people who will be involved in design and construction on a day-to-day basis, as opposed to departmental level supervisors or executives. If reassignment of personnel is considered possible, provide the names and resumes of the alternate professionals in each assignment.

See Sections 01015 DESIGN REQUIREMENTS AFTER AWARD, 01320 PROJECT SCHEDULE, 01430 DESIGN QUALITY CONTROL, and 01451 CONTRACTOR QUALITY CONTROL for minimum personnel qualifications. The following list shall be provided as a minimum:

Project Manager
Project Architect
Senior Structural Engineer
Senior Mechanical Engineer
Senior Electrical Engineer
Senior Civil Engineer
Fire Protection Engineer
Corrosion Engineer or Specialist (NACE)
Lightning Protection Specialist (Am#3)
Registered Communication Distribution Designer
Design Quality Control Manager
Construction Quality Control Manager
Project Scheduler

Information to be provided includes:

Name
Project assignment
Name of firm with which associated
Years experience: with this firm, with other firms
Education: degrees(s)/year/specialization
Active registration: state and year first registered

Experience and qualifications relevant to proposed project: for each project listed, provide project description, project dates, the individual's project assignment to include specific roles and responsibilities, and its relevance to this solicitation. Identify the length of time key personnel stayed on their contracts and how well they managed their portion of the referenced contracts.

b. Identify the Designer(s)-of-Record for each discipline

c. In an appendix, provide letters of commitment for all key personnel on the Primary Design Construction project team and any proposed alternate personnel. By identifying these personnel, the offeror is making a commitment that, barring unforeseen circumstances, they are the personnel who will be assigned to the project. A letter of commitment from each firm committing specific individuals from the firm may be provided in lieu of separate letters for each individual. After contract award, substitutions for any of the key personnel or alternates shall require the Contracting Officer's approval.

d. Capacity to Perform

(1) Provide a list of key professional job titles. Indicate the total number of personnel in each category for the Primary Design Construction Team, including consultants, and identify all personnel.

(2) Discuss capacity to successfully perform the requirements of this Contract based on current workload and staffing. Discuss strategy to provide supplemental and/or replacement personnel to support this project during design and/or construction, as necessary. In the appendix, provide a list of all current contracts for the Primary Design Construction Team members, including consultants.

2. Team Organization and Management:

a. Provide an organizational chart and supporting narrative describing how the team will be structured. Include all key design and construction personnel and firms on the organizational chart. Discuss the specific roles and responsibilities of each key individual and firm.

b. Describe the proposed management structure for the team. Discuss how the design and construction process will be managed, to include a discussion on delegation of authority within the team.

c. Describe interactions within the team and with the Corps of Engineers during design. Discuss how design changes will be handled and the roles that various team members will play when dealing with design changes. Discuss the role of construction team members during design phase.

d. Describe interactions within the team and with the Corps of Engineers during construction. Discuss how changes will be handled during construction and the roles that various team members will play when dealing with changes during construction. Discuss the role of design team members during construction. Specifically address design team's role in construction Quality Control program; Requests For Information (RFI's); shop drawing/submittal review and approval; attending progress meetings; site visits; inspections; and contract completion and closeout.

e. Describe the time control systems to be utilized. Discuss the use of the project schedule for managing the design and construction. Describe internal procedures for handling delays to minimize time growth.

f. Identify the items of work to be self-performed by offeror and the percentage of the overall contract value that this work represents.

g. Describe the team's computer-aided drafting and design (CADD) capabilities. Identify the CADD software to be used in the design of this project; if all disciplines are not using the same CADD software, identify the software that each discipline is using. Discuss compatibility with the Government's target CADD. Explain how compatibility will be achieved if the design, or portion of the design, is prepared using a CADD system other than the Government's target CADD system. (Refer to Section 01016 DESIGN DOCUMENT REQUIREMENTS for information on the Government's target CADD system and compatibility requirements.)

B. Experience

1. Provide a list of projects currently underway or completed within the last 5 years that best demonstrates the design and construction experience of the team (firms and/or individual team members) to successfully complete this facility using a design/build process. Experience beyond 5 years ago for construction contractors will not be given consideration unless the key personnel proposed for this project played a significant role in the earlier project and the project can be shown to be similar to this project. An offeror must make clear the extent of involvement in those projects by current key personnel and clearly describe how the older project is similar to this project, considering changes in technology, materials, equipment, codes, etc. Experience beyond 5 years ago for design firms will not be given consideration.

List no more than 10 projects total. The list of projects shall include the following information:

- a. Project name and location
- b. Type of facility
- c. Nature of firm's responsibility (design, construction or both)
- d. Identify type of contract (design, design/build, or construction)
- e. Project owner's name and address and project manager's (point of contact) name, telephone number, fax number, and email address (if known)
- f. If a government contract, include the contracting agency and contracting officer's name, telephone number, fax number, and email address (if known)
- g. Date started
- h. Original scheduled completion date
- i. Actual completion date
- j. Overall size of facility (in square feet or square meters)
- k. Construction cost (excluding design costs)
- l. Duration of construction (excluding design time)
- m. Problems encountered and corrective actions taken
- n. Identify which proposed team members and/or firms were involved in the project; their specific roles and responsibilities on the project; and the extent of time they were involved with the project
- o. Relevance of experience to the solicitation project

2. Joint Ventures: If offeror represents the combining of two or more companies for the purpose of this RFP, the proposal shall indicate whether the firms have experience working together in design/build ventures and for how long and how many projects. In addition, each company of this joint venture shall list their Government contract experiences.

C. Past Performance:

1. For each design and/or construction firm on the project team, provide firm's name, address, and DUNS number.

2. Non-Corps References

For each non-Corps project listed under "Volume I: Experience" factor, offerors should send Client Authorization Letters and Contractor Performance Report (See Section 00500) to each reference listed in the proposal to assist in the timely processing of the past performance evaluation. In an appendix, provide a copy of issued letters with the offeror's proposal. Copies of aforementioned letters will not count towards the page limitation stated in Paragraph 1.5.4.1 of this Section.

3. Offerors are encouraged to submit awards, letters, evaluations, or other forms of recognition that demonstrate their performance capabilities and customer satisfaction. If provided, this additional past performance information shall be relegated to an appendix and will not count towards the aforementioned page limitation.

4. New Companies

For new companies entering the marketplace (without relevant company experience) the quality of the past performance of their key management personnel of the Primary Design Construction Team and consultants will indicate the risk of good performance and become the basis of the past performance evaluation. Identifying how long key personnel stayed on their contracts and how well they managed their portion of the referenced contracts will be of great importance in the evaluation process.

D. Financial Capacity:

Submit a letter of current bonding capacity from a Bonding Company. This letter will not count towards the aforementioned page limitation.

1.9.2 Volume II – Design Proposal Preparation

PRELIMINARY DESIGN PROPOSAL

The purpose of the Preliminary Design Proposal is:

To provide sufficient design information for the Government to determine the acceptability of the proposed design in meeting the functional requirements set forth herein for operational use and economical maintenance during the anticipated life of the facility.

To provide data for a determination of the engineering sufficiency and soundness of the basic approach to the design for each technical discipline. Also, it will serve as a documentary check that the designer has been provided or has developed the essential engineering criteria necessary for all facets of final computations and detailed development of a thoroughly engineered, coordinated, economical, and functional design.

The Preliminary Design Proposal consists of two parts, the Design Proposal and the Preliminary Project Schedule:

A. Design Proposal

1. The design proposal shall include, as a minimum, the following descriptive narratives, manufacturer's catalog data, and graphic information:

a. Narratives

(1) General Description

(a) Provide brief description of the facility addressing the overall design, materials components, and engineering. DO NOT INCLUDE DESIGN CALCULATIONS. Include the following:

- (i) Basic site layout **for the Tactical Equipment Shop site and the option #2 Truck Loading Dock site (am#3)** and the rationale behind the site design. Address existing site features, site demolition requirements, new utilities, site improvements, **and identify pavement section to be used for hardstand pavement. (am#1)**
- (ii) Building's architectural configuration and the rationale behind the design. Address relationship of the site and site activities to the building. Address exterior and interior building materials.
- (iii) Building's interior configuration, to include general discussion on interior finishes, including those in the shops, offices, general administrative areas, warehouse and common areas (copy rooms, break/vending areas, restrooms). Discuss use of common areas within the facility. DO NOT PROVIDE COLOR BOARDS.
- (iv) Structural system and the rationale behind the selection of the proposed system, including identification of major structural materials and systems.
- (v) Heating, Ventilation and Air Conditioning system and rationale behind the selection of the proposed system.
- (vi) Vehicle Maintenance Systems including waste oil, waste antifreeze, off-spec fuel collection and storage, POL distribution and dispensing systems, vehicle exhaust systems, parts wash and wash bay systems, compressed air systems and rationale behind the selection of the proposed systems.
- (vii) Hoisting systems and the rationale behind the selection of the proposed systems.
- (viii) Fire protection system and the rationale behind the selection of the proposed system.
- (ix) Exterior power distribution systems (upgrade to existing system) and the rationale behind the selection of the proposed system. Discuss service to the building and location. Identify type of wire. Identify whether aerial or underground.
- (x) Interior power distribution systems and the rationale behind the selection of the proposed system. Identify electrical characteristics of power supply (phase, voltage, KVA). Provide description of panels, protection devices and typical loading of circuits. Identify type of wire.
- (xi) Exterior lighting system and the rationale behind the proposed system. Address exterior lighting locations, illumination levels for each area, and lighting controls.
- (xii) Interior lighting system and the rationale behind the selection of the proposed system. Address illumination levels for each area, emergency lighting, and lighting controls.
- (xiii) Interior communications systems (telephone, data, cable TV, sound transmission) and the rationale behind the selection of each system.
- (xiv) Environmental Considerations and Occupational Safety and Health Issues.

(b) Describe the energy-efficient and/or energy-saving features proposed for this project.

(c) Identification of proposed methods of meeting security requirements.

(d) If the design proposal includes any deviations from the RFP requirements, including functional or adjacency requirements, identify the deviation, provide justification for the deviation, and describe the benefit/improvement that the deviation provides to the facility. (See Section 00150 PROPOSAL EVALUATION AND CONTRACT AWARD, paragraph "DESIGN FREEDOM".)

(e) Identify all proposed betterments. (See Section 00800 SPECIAL CONTRACT PROCEDURES, clauses entitled "DESIGN-BUILD CONTRACT ORDER OF PRECEDENCE" AND "PROPOSED BETTERMENTS".)

b. Manufacturer Catalog Data

Manufacturer catalog data shall include industry standard quality indicators for the specific material or equipment and that will be used to establish the proposed construction quality during proposal evaluation. Data may be in the form of CSI standard product information formats Manu-Spec and Spec-Data, and manufacturer's specifications and details. Furnish data, arranged by CSI Divisions, on:

- (1) Glazing: windows and glazing for library and classrooms.
- (2) Doors
- (3) Interior finishes, to include floors, base, walls, ceilings, toilet partitions, lavatory tops
- (4) Exterior finishes, to include walls, roof, and soffits
- (5) Interior and exterior light fixtures, including identification of where each proposed fixture type will be used
- (6) Any other catalog data deemed pertinent

c. Graphic Information

Furnish preliminary drawings and schematics to illustrate the proposal. If a plan does not fit on one standard size drawing sheet at the scale specified, provide an overall plan to fit on one standard size drawing sheet plus individual sheets at the scale specified.

- (1) Site Layout Plan, minimum scale 1:400 or 1:500, showing:
 - (a) Building location
 - (b) Service drives, parking, and hardstand
 - (c) Location of site features (i.e. landscaping, sidewalks, lighting, mechanical and electrical equipment)
 - (d) Set-backs
 - (e) Preliminary grading and drainage Plan
- (2) Architectural Floor Plans, minimum scale 1:100 (1/8" = 1'), with all areas identified, showing:
 - (a) Gross area of building; exterior and interior dimensions; size of areas; critical and basic dimensions.
 - (b) Area calculations
 - (c) Preliminary finish schedule
 - (d) Plumbing fixture locations, including drinking fountains
 - (e) Furniture layout (Note: Providing furniture is not a part of the Contract)
- (3) Interior Sections/Elevations, minimum scale 1:50 (1/4" = 1'), showing:
 - (a) Offices
 - (b) Common areas (break/vending areas, copy areas)
 - (c) Restrooms
 - (d) Shops
 - (e) Warehouse
- (4) Exterior Elevations of building(s), minimum scale 1:100 (1/8" = 1'), showing:
 - (a) Fenestrations and material indications.
 - (b) Critical and basic dimensions.
 - (c) Exterior finish materials.
- (5) Building Cross-Sections

Provide one cross-section through each wing of the building(s) and one longitudinal cross-section through the building indicating floor and ceiling heights, and all overhead equipment and utility distribution as well as crane hook range of motion.

d. Sustainable Design. Using the Sustainable Project Rating Tool (SPiRiT), provide a self-assessment of the sustainability features of the facility (see Volume IV ATTACHMENTS for the Sustainable Project Rating Tool manual and rating sheets). For each required element and for each point-scored element where you have met (or exceeded) the requirement, provide justification of how you have met the stated requirement. Justification shall be documented on the non-annotated version of SPiRiT tool (SPiRiT v1.4 (.doc), April 2001) available on the Internet at <http://www.cecer.army.mil/Sustdesign/SPiRiT.cfm>, or use the version that is on the Solicitation CD. Justification shall be inserted in the document immediately after the requirement text for each element. Label the justification as "Justification of Scoring". Scoring shall be summarized on the SPiRiT scoring sheet (SpiRiT v1.4 (.xls), April 2001) available at <http://www.cecer.army.mil/Sustdesign/SPiRiT.cfm> (this file is also located on the Solicitation CD). This scoring summary shall be attached to the front of the SPiRiT tool in the submitted documentation. Goal is minimum Bronze level certification. If Bronze level certification cannot be attained, discuss the factors that prevent achieving this goal in one section prior to the beginning of the SPiRiT scoring summary.

B. Preliminary Project Schedule.

A time-scaled logic diagram shall be submitted with the Preliminary Design proposal reflecting the detailed design phase activities and summary level construction activities from Notice to Proceed through final completion, including all option work. Project Schedule shall conform to Section 01320 PROJECT SCHEDULE and may be used for preparation of the Preliminary Schedule required in Section 01320 after award. The following information shall be included as a minimum:

1. Detailed design activities
2. Summary level construction activities
3. Phasing requirements
4. Critical Path
5. Milestones and Constraints
6. Overall Design Duration, in calendar days
7. Overall Construction Duration, in calendar days
8. Overall Proposed Duration, in calendar days

The Contractor shall propose the contract durations for Work Item #1, Design and Construction of the new facility. The proposed duration shall not exceed the duration specified in Section 01000, Design and Construction Schedule. The proposed schedule shall support the proposed duration. Upon contract award, the successful offeror's proposed duration shall become the contract duration for Work Item #1. It should be noted that the Government will include provisions in the contract for liquidated damages for each calendar day the Contractor exceeds the contract schedule.

1.9.3 VOLUME III Cost/Price Proposal Preparation

Prices shall be firm. The offeror's price, to be considered in the competitive negotiation evaluation, shall be the offeror's Total Base Bid, including all option work, as shown on the price proposal schedule. The cost/price proposal will be evaluated separately, after evaluation of Volume I and Volume II. The cost/price proposal shall consist of the following:

1. Solicitation, Offer and Award.

The Standard Form 1442 shall be completely filled out and signed by a principal of the firm authorized to bind the design-build team. Signature(s) must be in long hand.

2. Price Proposal Schedule

- a. Offerors shall complete the Price Proposal Schedule by filling out the pricing data blanks.

b. Overhead and profit shall be applied proportionally to each category and will not be required to be shown separately.

c. Offerors shall include allowance for weather days in the Cost/Price Proposal and shall schedule any contingency for severe weather in accordance with weather requirements included in Section 01000, DESIGN AND CONSTRUCTION SCHEDULE.

3. Bid Guarantee.

The bid guarantee shall be submitted in accordance with Section 00700, Contract Clauses.

4. Representations and Certifications.

Representations are local, state, and federal representative statements and certifications made by the Offeror concerning a variety of issues. Complete each item in Section 00600, REPRESENTATIONS AND CERTIFICATIONS, and submit one original with the Volume III proposal.

5. Subcontracting Plan. (Applies to Large Businesses only.)

All large businesses shall submit a subcontracting plan with their technical and price/cost proposals. The plan shall be prepared in accordance with FAR 52.219-9. Failure to submit an acceptable subcontracting plan may make the offeror ineligible for award of the contract. The submission of the subcontracting plan is in no way advantageous to large businesses over any small business in the evaluation process. A sample subcontracting plan and scoring checklist are included on the solicitation CD-ROM disk. See Section 00100 INSTRUCTIONS TO OFFERORS, paragraph SMALL BUSINESS SUBCONTRACTING PLAN for additional information and Fort Worth District subcontracting floors.

6. Small Disadvantaged Business (SDB) Utilization Plan. (Applies to all Offerors.)

Offerors shall submit a SDB Utilization Plan, to include the following information:

- a. Identification of each SDB concern proposed and the work each is to perform.
- b. Targets expressed in dollars and percentages representing each SDB concern's participation of the total contract value.
- c. Total target value of all SDB participation, expressed in dollars and percentages, of the total contract value.

The offeror is put on notice that any targets represented in submitted proposal will be incorporated into and become part of any resulting contract. All proposed SDB concerns must be certified by the Small Business Administration and listed in the online database PRO-Net. SDB concerns may register in PRO-Net at <http://pronet.sba.gov>.

1.10 CLARIFICATIONS AND FINAL PROPOSAL REVISION

1.10.1 General

Any conflicting criteria which cannot be resolved by the Order of Precedence specified in Section 00800 SPECIAL CONTRACT REQUIREMENTS shall be brought to the attention of the Government by the Offeror as part of the written clarification requirement of the proposal. In the absence of such request for clarification, the Offeror shall perform to the most beneficial criteria as determined by the Government.

1.10.2 Clarifications Prior to Proposal Due Date

In the event that clarifications are required prior to submitting the Volume I or II proposal, contact the individuals listed in Section 00100, INSTRUCTIONS TO OFFERORS. All RFP holders will be advised of significant clarifications affecting the scope of the project.

1.10.3 Clarifications Submitted with Proposals

For clarifications remaining at the time and date that proposals are due, written clarifications may be included in the proposal for consideration by the Government. Clarifications submitted with proposals shall clearly identify the understanding of the RFP documents and how this understanding is reflected in the cost proposal. Extensive qualifications, exclusions and exceptions in the form of clarifications may be considered by the Government to be non-responsive and may be grounds for rejection of the proposal.

1.10.4 Final Proposal Revision

If the Contracting Officer determines that discussions are necessary, all offerors in the competitive range will be given an opportunity to submit a final proposal revision. All proposal revisions must be submitted as required in paragraph 1.5.4 Format, subparagraphs 1.5.4.1 Written Material and 1.5.4.2 Drawings.

1.11 PAYMENT FOR PROPOSALS

Offerors will not be reimbursed for the cost of preparing their proposals.

1.12 NOTICE

Failure to submit all the data indicated in this section may be cause for determining a proposal non-responsive and, therefore, not considered for award.

2 PRODUCTS (NOT USED)

3 EXECUTION (NOT USED)

END OF SECTION

APPLICATION OF WAGE DECISIONS

Solicitation No: **DACA63-02-R-0011**

Project: **Design/Construct Tactical Equipment Shop**

Location: **Fort Hood, Texas**

1. Service Contract Act (SCA) Wage Determination Number 94-2523, Revision 15, will be applicable to those activities performing installation support requirements for certain minor maintenance repairs, clerical support services, custodial services, grounds maintenance, and landscaping or for those services requiring the utilization of professional/service employees, i.e., Biologists, Agronomists, Environmentalists, Environmental Abatement, Computer Specialists, Architects/Engineers, Surveyors, and associated Technicians thereof of the professional/technical trades.

NOTE: Payroll records are not required to be submitted to the U.S. Army Corps of Engineers for work performed under the Service Contract Act (SCA). SCA payroll records are required to be kept by the Prime Contractor, and available for review if requested, for a minimum of three years from the date of contract completion. Labor compliance will be monitored by the U.S. Department of Labor for SCA labor records.

2. Davis-Bacon Act Wage Decision, TX020051, Building Construction Projects, will be applicable to the construction, alteration, painting or repair of buildings, installation within buildings, appurtenances to buildings, foundations for buildings, excavation and fill for buildings, and utilities within five feet of buildings for those construction activities performed in **Bell County, Texas.**

3. Davis-Bacon Act Wage Decision, TX020043, Heavy and Highway Construction Projects, will be applicable to all utilities more than five feet from buildings, and any other construction requirements not shown in paragraph 2 above in **Bell County, Texas**

NOTE:

(1) PAYROLL RECORDS ARE REQUIRED, UNDER THE DAVIS-BACON ACT, TO BE SUBMITTED TO THE U.S. ARMY CORPS OF ENGINEERS FOR ALL CONSTRUCTION WORK PERFORMED.

(2) THE WAGE DECISION NUMBER APPLICABLE TO THE WORK PERFORMED IS TO BE SHOWN ON ALL THE CERTIFIED PAYROLL RECORDS SUBMITTED.

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

WAGE DETERMINATION NO: 94-2523 REV (15) AREA: TX,WACO

WAGE DETERMINATION NO: 94-2523 REV (15) AREA: TX,WACO

REGISTER OF WAGE DETERMINATIONS UNDER

U.S. DEPARTMENT OF LABOR

FOR OFFICIAL USE ONLY BY FEDERAL AGENCIES PARTICIPATING IN MOU WITH DOL

WASHINGTON D.C. 20210

William W.Gross
Director

Division of
Wage Determinations

Wage Determination No.: 1994-2523

Revision No.: 15

Date Of Last Revision: 07/06/2001

State: **Texas**

Area: **Texas** Counties of Anderson, **Bell**, Bosque, Brazos, Coryell, Falls, Freestone, Hamilton, Hill, Leon, Limestone, McLennan, Mills, Robertson

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION TITLE	MINIMUM WAGE RATE
Administrative Support and Clerical Occupations	
Accounting Clerk I	7.87
Accounting Clerk II	8.59
Accounting Clerk III	10.41
Accounting Clerk IV	11.71
Court Reporter	13.22
Dispatcher, Motor Vehicle	12.08
Document Preparation Clerk	10.01
Duplicating Machine Operator	10.01
Film/Tape Librarian	10.40
General Clerk I	8.24
General Clerk II	9.26
General Clerk III	11.41
General Clerk IV	12.78
Housing Referral Assistant	12.68
Key Entry Operator I	8.62
Key Entry Operator II	12.28
Messenger (Courier)	7.63
Order Clerk I	9.57
Order Clerk II	10.45
Personnel Assistant (Employment) I	10.16
Personnel Assistant (Employment) II	11.71
Personnel Assistant (Employment) III	13.93
Personnel Assistant (Employment) IV	16.56
Production Control Clerk	14.58
Rental Clerk	10.40
Scheduler, Maintenance	10.40
Secretary I	10.40
Secretary II	12.21
Secretary III	13.22
Secretary IV	14.27
Secretary V	15.99
Service Order Dispatcher	10.40
Stenographer I	10.45
Stenographer II	13.36
Supply Technician	15.42
Survey Worker (Interviewer)	12.08
Switchboard Operator-Receptionist	8.48

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Test Examiner	12.21
Test Proctor	12.21
Travel Clerk I	9.40
Travel Clerk II	10.28
Travel Clerk III	11.13
Word Processor I	9.44
Word Processor II	10.66
Word Processor III	12.38
Automatic Data Processing Occupations	
Computer Data Librarian	10.46
Computer Operator I	9.89
Computer Operator II	13.81
Computer Operator III	16.28
Computer Operator IV	18.04
Computer Operator V	19.96
Computer Programmer I (1)	16.06
Computer Programmer II (1)	19.29
Computer Programmer III (1)	21.77
Computer Programmer IV (1)	26.33
Computer Systems Analyst I (1)	22.60
Computer Systems Analyst II (1)	24.16
Computer Systems Analyst III (1)	27.47
Peripheral Equipment Operator	11.55
Automotive Service Occupations	
Automotive Body Repairer, Fiberglass	15.59
Automotive Glass Installer	13.40
Automotive Worker	13.40
Electrician, Automotive	14.17
Mobile Equipment Servicer	11.73
Motor Equipment Metal Mechanic	14.95
Motor Equipment Metal Worker	13.40
Motor Vehicle Mechanic	14.95
Motor Vehicle Mechanic Helper	10.90
Motor Vehicle Upholstery Worker	12.56
Motor Vehicle Wrecker	13.40
Painter, Automotive	14.17
Radiator Repair Specialist	13.40
Tire Repairer	11.33
Transmission Repair Specialist	14.95
Food Preparation and Service Occupations	
Baker	9.89
Cook I	8.70
Cook II	9.89
Dishwasher	6.52
Food Service Worker	6.58
Meat Cutter	10.96
Waiter/Waitress	6.84
Furniture Maintenance and Repair Occupations	
Electrostatic Spray Painter	14.17
Furniture Handler	9.23
Furniture Refinisher	14.17
Furniture Refinisher Helper	10.90
Furniture Repairer, Minor	12.56
Upholsterer	14.17
General Services and Support Occupations	
Cleaner, Vehicles	7.15
Elevator Operator	7.15

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Gardener	9.45
House Keeping Aid I	7.00
House Keeping Aid II	7.86
Janitor	7.17
Laborer, Grounds Maintenance	8.54
Maid or Houseman	6.23
Pest Controller	10.73
Refuse Collector	7.15
Tractor Operator	8.77
Window Cleaner	7.87
Health Occupations	
Dental Assistant	10.93
Emergency Medical Technician (EMT)/Paramedic/Ambulance Driver	10.93
Licensed Practical Nurse I	9.66
Licensed Practical Nurse II	10.83
Licensed Practical Nurse III	12.12
Medical Assistant	9.77
Medical Laboratory Technician	11.24
Medical Record Clerk	10.37
Medical Record Technician	13.54
Nursing Assistant I	7.56
Nursing Assistant II	8.50
Nursing Assistant III	9.27
Nursing Assistant IV	10.40
Pharmacy Technician	12.19
Phlebotomist	10.83
Registered Nurse I	14.37
Registered Nurse II	17.58
Registered Nurse II, Specialist	17.58
Registered Nurse III	21.27
Registered Nurse III, Anesthetist	21.27
Registered Nurse IV	25.49
Information and Arts Occupations	
Audiovisual Librarian	15.04
Exhibits Specialist I	14.31
Exhibits Specialist II	18.07
Exhibits Specialist III	20.79
Illustrator I	13.91
Illustrator II	17.56
Illustrator III	20.20
Librarian	16.86
Library Technician	12.08
Photographer I	11.44
Photographer II	13.91
Photographer III	17.56
Photographer IV	20.20
Photographer V	24.53
Laundry, Dry Cleaning, Pressing and Related Occupations	
Assembler	6.55
Counter Attendant	6.55
Dry Cleaner	7.79
Finisher, Flatwork, Machine	6.55
Presser, Hand	6.55
Presser, Machine, Drycleaning	6.55
Presser, Machine, Shirts	6.55
Presser, Machine, Wearing Apparel, Laundry	6.55
Sewing Machine Operator	8.37

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Tailor	8.96
Washer, Machine	7.57
Machine Tool Operation and Repair Occupations	
Machine-Tool Operator (Toolroom)	14.17
Tool and Die Maker	16.20
Material Handling and Packing Occupations	
Forklift Operator	10.18
Fuel Distribution System Operator	13.66
Material Coordinator	12.13
Material Expediter	12.13
Material Handling Laborer	8.46
Order Filler	9.51
Production Line Worker (Food Processing)	10.53
Shipping Packer	10.72
Shipping/Receiving Clerk	10.72
Stock Clerk (Shelf Stocker; Store Worker II)	10.14
Store Worker I	7.73
Tools and Parts Attendant	11.60
Warehouse Specialist	10.62
Mechanics and Maintenance and Repair Occupations	
Aircraft Mechanic	17.16
Aircraft Mechanic Helper	12.51
Aircraft Quality Control Inspector	18.00
Aircraft Servicer	14.43
Aircraft Worker	15.39
Appliance Mechanic	14.17
Bicycle Repairer	11.33
Cable Splicer	14.95
Carpenter, Maintenance	14.17
Carpet Layer	13.40
Electrician, Maintenance	16.18
Electronics Technician, Maintenance I	15.28
Electronics Technician, Maintenance II	16.97
Electronics Technician, Maintenance III	19.30
Fabric Worker	12.56
Fire Alarm System Mechanic	14.95
Fire Extinguisher Repairer	11.73
Fuel Distribution System Mechanic	14.95
General Maintenance Worker	13.40
Heating, Refrigeration and Air Conditioning Mechanic	14.95
Heavy Equipment Mechanic	14.95
Heavy Equipment Operator	14.95
Instrument Mechanic	17.19
Laborer	8.46
Locksmith	14.17
Machinery Maintenance Mechanic	15.03
Machinist, Maintenance	14.95
Maintenance Trades Helper	10.90
Millwright	14.95
Office Appliance Repairer	14.17
Painter, Aircraft	14.17
Painter, Maintenance	14.17
Pipefitter, Maintenance	17.83
Plumber, Maintenance	16.35
Pneudraulic Systems Mechanic	14.95
Rigger	14.95
Scale Mechanic	13.40

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Sheet-Metal Worker, Maintenance	14.95
Small Engine Mechanic	13.40
Telecommunication Mechanic I	15.48
Telecommunication Mechanic II	18.67
Telephone Lineman	15.48
Welder, Combination, Maintenance	14.95
Well Driller	14.95
Woodcraft Worker	14.95
Woodworker	11.88
Miscellaneous Occupations	
Animal Caretaker	7.46
Carnival Equipment Operator	9.28
Carnival Equipment Repairer	10.01
Carnival Worker	6.22
Cashier	7.36
Desk Clerk	8.63
Embalmer	16.84
Lifeguard	9.02
Mortician	16.84
Park Attendant (Aide)	11.32
Photofinishing Worker (Photo Lab Tech., Darkroom Tech)	8.89
Recreation Specialist	11.97
Recycling Worker	9.29
Sales Clerk	8.42
School Crossing Guard (Crosswalk Attendant)	7.15
Sport Official	8.61
Survey Party Chief (Chief of Party)	15.28
Surveying Aide	9.53
Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	13.06
Swimming Pool Operator	9.89
Vending Machine Attendant	9.29
Vending Machine Repairer	11.37
Vending Machine Repairer Helper	9.29
Personal Needs Occupations	
Child Care Attendant	8.63
Child Care Center Clerk	10.76
Chore Aid	6.37
Homemaker	11.97
Plant and System Operation Occupations	
Boiler Tender	14.95
Sewage Plant Operator	14.17
Stationary Engineer	17.19
Ventilation Equipment Tender	10.90
Water Treatment Plant Operator	14.17
Protective Service Occupations	
Alarm Monitor	9.65
Corrections Officer	12.62
Court Security Officer	12.62
Detention Officer	12.62
Firefighter	13.63
Guard I	8.45
Guard II	11.10
Police Officer	14.75
Stevedoring/Longshoremen Occupations	
Blocker and Bracer	14.89
Hatch Tender	12.95
Line Handler	12.95

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Stevedore I	12.03
Stevedore II	13.68
Technical Occupations	
Air Traffic Control Specialist, Center (2)	27.84
Air Traffic Control Specialist, Station (2)	18.62
Air Traffic Control Specialist, Terminal (2)	20.50
Archeological Technician I	12.68
Archeological Technician II	13.85
Archeological Technician III	17.56
Cartographic Technician	21.24
Civil Engineering Technician	18.47
Computer Based Training (CBT) Specialist/ Instructor	20.72
Drafter I	11.97
Drafter II	13.15
Drafter III	17.97
Drafter IV	21.25
Engineering Technician I	13.63
Engineering Technician II	16.43
Engineering Technician III	18.40
Engineering Technician IV	26.25
Engineering Technician V	30.72
Engineering Technician VI	32.32
Environmental Technician	19.94
Flight Simulator/Instructor (Pilot)	23.54
Graphic Artist	15.67
Instructor	17.16
Laboratory Technician	15.32
Mathematical Technician	19.94
Paralegal/Legal Assistant I	12.84
Paralegal/Legal Assistant II	14.44
Paralegal/Legal Assistant III	17.66
Paralegal/Legal Assistant IV	21.37
Photooptics Technician	18.17
Technical Writer	22.71
Unexploded (UXO) Safety Escort	17.16
Unexploded (UXO) Sweep Personnel	17.16
Unexploded Ordnance (UXO) Technician I	17.16
Unexploded Ordnance (UXO) Technician II	20.76
Unexploded Ordnance (UXO) Technician III	24.88
Weather Observer, Combined Upper Air and Surface Programs (3)	14.16
Weather Observer, Senior (3)	15.73
Weather Observer, Upper Air (3)	14.16
Transportation/ Mobile Equipment Operation Occupations	
Bus Driver	12.39
Parking and Lot Attendant	7.08
Shuttle Bus Driver	10.21
Taxi Driver	8.25
Truckdriver, Heavy Truck	14.33
Truckdriver, Light Truck	10.21
Truckdriver, Medium Truck	14.26
Truckdriver, Tractor-Trailer	14.33

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$2.02 an hour or \$80.80 a week or \$350.13 a month.

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VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 10 years, and 4 after 20 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3) WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordnance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordnance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry- house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordnance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordnance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordnance, explosives, and incendiary material differential pay.

** UNIFORM ALLOWANCE **

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

** NOTES APPLYING TO THIS WAGE DETERMINATION **

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444 (SF 1444)} Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper. When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

GENERAL DECISION TX020051 03/29/02 TX51

General Decision Number **TX020051**

Superseded General Decision No. TX010051

State: **TEXAS**

Construction Type:

BUILDING

County(ies):

BELL CORYELL

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories).

Modification Number	Publication Date
0	03/01/2002
1	03/29/2002

COUNTY(ies):

BELL CORYELL

* ELEC0072A 08/30/2001

	Rates	Fringes
ELECTRICIANS	19.75	3.65+4%
CABLE SPLICERS	20.75	3.65+4%

IRON0482B 01/01/2002

	Rates	Fringes
IRONWORKERS, Structural	16.15	4.65

SUTX1067A 11/16/1991

	Rates	Fringes
AIR CONDITIONING AND HEATING MECHANICS (Excluding Duct Work)	9.10	
BRICKLAYERS	14.00	
CARPENTERS (Including Drywall Hangers)	11.58	
CEMENT MASONS	10.50	
GLAZIERS	7.00	.46
INSULATION INSTALLERS (Batt and Blown)	8.31	.54
IRONWORKERS, Reinforcing	11.00	
LABORERS (Including Mason Tenders)	5.61	
LATHERS	15.33	
PAINTERS	8.32	.13
PLASTERERS	12.78	
PLUMBERS AND PIPEFITTERS (Excluding HVAC Work)	10.07	
POWER EQUIPMENT OPERATORS: Backhoes	8.54	
ROOFERS	7.78	

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

SHEET METAL WORKERS (Including HVAC Work)	9.79	
SOFT FLOOR LAYERS	13.46	.26
TILE SETTERS	15.00	.25

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

INCIDENTAL PAVING AND UTILITIES

ASPHALT HEATER OPERATOR	7.55
ASPHALT RAKER	6.50
CARPENTER	8.75
CONCRETE FINISHER-PAVING	8.50
CONCRETE FINISHER-STRUCTURES	8.35
ELECTRICIAN	14.00
FORM BUILDER-STRUCTURES	8.90
FORM LINER-PAVING & CURB	8.05
FORM SETTER-PAVING & CURB	7.10
FORM SETTER-STRUCTURES	7.70
LABORER-COMMON	5.60
LABORER-UTILITY	6.45
MECHANIC	10.00
SERVICER	6.60
PIPELAYER	5.70
POWER EQUIPMENT OPERATORS:	
Asphalt Distributor	7.00
Asphalt Paving Machine	7.15
Broom or Sweeper Operator	6.60
Bulldozer, 150 HP & Less	7.10
Bulldozer over 150 HP	7.35
Concrete Paving Finishing Machine	7.00
Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel Less than 1 1/2 C.Y.	8.00
Crane, Clamshell, Backhoe, Derrick, Dragline, Shovel 1 1/2 C.Y. & Over	9.45
Foundation Drill Operator, Truck Mounted	10.50
Front End Loader 2 1/2 C.Y. & Less	7.10
Front End Loader Over 2 1/2 C.Y.	7.85
Motor Grader Operator, Fine Grade	9.05
Motor Grader Operator	8.35
Roller, Steel Wheel, Plant-Mix Pavement	6.20
Roller, Steel Wheel Other Flatwheel or Tamping	5.95
Roller, Pneumatic, Self Propelled	5.90
Scraper, 17 C.Y. & Less	6.15
Scraper, Over 17 C.Y.	7.10
Side Boom	6.30

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

Tractor, (Pneumatic) 80 HP & Less	6.00
Tractor, (Pneumatic) over 80 HP	7.20
TRUCK DRIVERS:	
Single Axle, Light	6.45
Single Axle, Heavy	6.60
Tandem Axle or Semi-trailer	6.55
WELDER	9.50

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

GENERAL DECISION TX020043 03/01/02 TX43

General Decision Number TX020043

Superseded General Decision No. TX010043

State: **TEXAS**

Construction Type:

**HEAVY
HIGHWAY**

County(ies):

BELL	CORYELL	TRAVIS
BEXAR	GUADALUPE	WILLIAMSON
BRAZOS	HAYS	
COMAL	MCLENNAN	

Heavy (excluding tunnels and dams) **and Highway Construction Projects** (does not include building structures in rest area projects). *NOT TO BE USED FOR WORK ON SEWAGE OR WATER TREATMENT PLANTS OR LIFT/PUMP STATIONS IN BELL, CORYELL, McLENNAN AND WILLIAMSON COUNTIES.

Modification Number	Publication Date
0	03/01/2002

COUNTY(ies):

BELL	CORYELL	TRAVIS
BEXAR	GUADALUPE	WILLIAMSON
BRAZOS	HAYS	
COMAL	MCLENNAN	

SUTX2042A 03/26/1998

	Rates	Fringes
AIR TOOL OPERATOR	8.08	
ASPHALT HEATER OPERATOR	11.00	
ASPHALT RAKER	8.00	
ASPHALT SHOVELER	7.97	
BATCHING PLANT WEIGHER	11.00	
CARPENTER	10.80	
CONCRETE FINISHER-PAVING	9.57	
CONCRETE FINISHER-STRUCTURES	8.83	
CONCRETE RUBBER	8.52	
ELECTRICIAN	16.25	
FLAGGER	6.86	
FORM BUILDER-STRUCTURES	8.77	
FORM LINER-PAVING & CURB	8.00	
FORM SETTER-PAVING & CURB	8.68	
FORM SETTER-STRUCTURES	8.73	
LABORER-COMMON	7.12	
LABORER-UTILITY	7.99	
MECHANIC	12.15	
OILER	11.40	
SERVICER	8.44	
PAINTER-STRUCTURES	10.00	
PIPE LAYER	8.27	
ASPHALT DISTRIBUTOR OPERATOR	9.70	

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

ASPHALT PAVING MACHINE	9.26
BROOM OR SWEEPER OPERATOR	7.12
BULLDOZER	9.28
CONCRETE CURING MACHINE	7.79
CONCRETE FINISHING MACHINE	11.00
CONCRETE PAVING SAW	9.79
SLIPFORM MACHINE OPERATOR	11.15
CRANE, CLAMSHELL, BACKHOE, DERRICK, DRAGLINE, SHOVEL	10.12
FOUNDATION DRILL OPERATOR TRUCK MOUNTED	15.00
FRONT END LOADER	8.86
HOIST - DOUBLE DRUM & LESS MIXER	10.81
MIXER - CONCRETE PAVING	7.12
MOTOR GRADER FINE GRADE	11.00
MOTOR GRADER	12.37
PAVEMENT MARKING MACHINE	11.14
PLANER OPERATOR	8.31
ROLLER, STEEL WHEEL PLANT-MIX PAVEMENTS	15.75
ROLLER, STEEL WHEEL OTHER FLATWHEEL OR TAMPING	7.73
ROLLER, PNEUMATIC, SELF PROPELLED SCRAPERS	7.33
TRACTOR-CRAWLER TYPE	7.17
TRAVELING MIXER	8.38
TRENCHING MACHINE, HEAVY	9.40
WAGON-DRILL/BORING MACHINE	7.92
REINFORCING STEEL SETTER PAVING	9.92
REINFORCING STEEL SETTER STRUCTURES	8.00
STEEL WORKER-STRUCTURAL	14.50
SPREADER BOX OPERATOR	10.61
WORK ZONE BARRICADE	11.73
SIGN INSTALLER	8.55
TRUCK DRIVER-SINGLE AXLE LIGHT	8.29
TRUCK DRIVER-SINGLE AXLE HEAVY	7.97
TRUCK DRIVER-TANDEM AXLE SEMI- TRAILER	8.32
TRUCK DRIVER-LOWBOY/FLOAT	7.954
WELDER	8.02
	10.12
	11.02

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

ACCOMPANYING AMENDMENT NO. 0003 TO SOLICITATION NO. DACA63-02-R-0011

1.) Has there been an initial decision in the matter? This can be:

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On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

CHAPTER D2

WATER AND DRAINAGE

PERFORMANCE

A. Basic Function:

1. Provide delivery of hot and cold domestic water to points of utilization and the removal of water, rainwater, and liquid waste.
2. Water and drainage elements comprise the following:
 - a. Plumbing Fixtures: All fixtures necessary for sanitation, occupancy, and use, that are connected to water supply or drainage; not including water heating or conditioning equipment or kitchen appliances.
 - b. Domestic Water: All elements required to distribute water to fixtures, including piping and equipment for water cooling, heating and storage.
 - c. Sanitary Waste: All elements required for removal of sanitary waste, including piping, venting, discharge and disposal, and equipment.
 - d. Rain Water Drainage: All elements required for drainage of rain water from building areas in which it may accumulate and drainage of clear wastes from building services; not including gutters and downspouts or subdrainage (A).
3. Where plumbing elements also must function as elements defined within another element group, meet the requirements of both element groups.
4. In addition to the requirements of this chapter, comply with requirements specified in Chapter 111 - Facility Performance and Chapter D - Services.

B. Amenity and Comfort:

1. Hot Water Supply:
 - a. Provide pressure balanced shower valves which limit the water temperature to 43.33 deg C (110 deg F).
 - b. Set water heater at 49 deg C(120 deg F)
2. Noise:
 - a. Design to eliminate trapping air in piping systems.
 - b. Locate risers in dedicated and sound attenuated chases.
 - c. Minimize noise produced by fixtures.
3. Convenience:
 - a. Fixture Heights: As specified in code.
 - b. Fixture Configurations: As specified in code.
 - c. Water Connections: Hot water on the left side of fixtures and cold water on the right side of fixtures.
4. Odors:
 - a. Locate odor producing elements in areas separate from human occupancy in dedicated equipment rooms.
 - b. Do not locate sanitary waste vent openings where odors are noticeable by occupants or by occupants of adjacent properties or where odor-bearing air may enter building spaces.
 - c. Connect fixtures to prevent entry of sewer gases into occupied spaces.

C. Health and Safety:

1. Health: Provide potable water.
 - a. Public utility water can be considered to be potable.
2. Waste Disposal: Connect each fixture to sanitary drainage system for proper disposal of waste

and harmful materials.

3. Pressure Control: Control pressures to protect the building, fixtures, equipment, and occupants from harm.
 - a. Maximum Water Distribution Working Pressure: 550 kPa (80 psi).
 - b. Pressure Reduction: Use pressure reducing valves or regulators.
 4. Prevention of Sewer Gas Leaks:
 - a. Provide waste system vents as required by code to avoid trap siphonage or compression.
 - b. Prevent entry of sewer gases from the sanitary sewer into building's sewer system.
 5. Protection of Potable Water Supply: As required by code. Provide backflow preventers on all services to building including Fire Protection System.
 6. Waste Drainage: Provide drinking fountains and water coolers with indirect waste pipe for drainage.
 7. Burn Hazards:
 - a. Maximum Fixture Discharge Temperature: 49 degrees C (120 degrees F).
 - b. Maximum Exposed Surface Temperature: 40 deg C (105 deg F).
 8. Fire Hazards:
 - a. Do not use combustible piping materials inside the building.
 - 1) Terminate combustible piping entering the building within 1.5 m (5 feet) of penetration.
 9. Hazard Labeling: Clearly label domestic hot water, domestic cold water, rain water drainage, and sanitary waste and vent systems indicating the nature of contents and direction of flow.
 - a. Conform to requirements of ANSI/ASME 13.1-1996.
 10. Hazardous Material Drainage: Prevent damage to public utility drainage systems by removing or neutralizing hazardous materials before discharging.
- D. Structure:
1. Insulated Pipes: Prevent compression of insulation by using pipe shields or saddles or dense insulation inserts.
- E. Durability:
1. Joint Durability: Provide watertight joints.
 2. Electrical Component Protection:
 - a. Do not route piping through electrical rooms, switchgear rooms, and transformer vaults unless it is absolutely necessary.
 - 1) Where piping must be routed near electrical equipment, shield the electrical equipment with drip pans which drain to the nearest floor drain.
 - b. Substantiation: See tests specified under Operation and Maintenance.
 3. Equipment Protection:
 - a. Domestic Water Distribution System: Provide a filtration device upstream of equipment which may be damaged by debris in the distribution system.
 4. Maximum Discharge Temperature into Sewer: 49 degrees C (120 degrees F).
- F. Operation and Maintenance:
1. Capacity of Water Service: Provide adequate water flow and pressure to supply peak demand requirements. Comply with requirements specified in the code and Chapter D21.
 - a. Water Delivery: If the water source has insufficient flow or pressure, provide means of increasing to required level.
 - 1) Use booster pumps.

- 2) Substantiation:
 - a) Design Development: Identification of pressure and flow requirements (design conditions) for the building; verification of source availability at design conditions.
 - b) Construction Documents: Equipment to be used to deliver water at design conditions; submit pump curves.
 - c) Construction: Test of system flow and pressure; submit report verifying performance.
- b. Water Flow:
 - 1) Maximum Velocity: 2.4 m/s (8 fps) at the design flow rate.
- c. Substantiation:
 - 1) Preliminary Design: Analysis and documentation of water supply source and flow conditions.
 - 2) Design Development: Piping design calculations and entrance locations.
 - 3) Construction: Prior to installation of plumbing fixtures and prior to concealment of piping, air and water tests of piping systems at 110 percent of operating pressure, maintaining pressure for 2 hours to demonstrate system is watertight.
 - 4) Construction: Functional tests of fixtures and equipment.
 - 5) Occupancy: Observation of function during full occupancy simulating extreme conditions.
2. Waste Pipe Sizing:
 - a. Size piping as required by code.
 - b. Building Drain: 100 mm (4 inches) diameter, minimum.
 - c. Buried Piping Below Slabs: 75 mm (3 inches) diameter, minimum.
 - d. Pipes 75 mm (3 inches) in Diameter and Smaller: Sloped at 1:50 (1/4 inch per foot), minimum, downward in the direction of flow.
 - e. Pipes 100 mm (4 inches) in Diameter and Larger: Sloped at 1:100 (1/8 inch per foot), minimum, downward in the direction of flow.
 - f. Substantiation:
 - 1) Preliminary Design: Analysis and documentation of sewer discharge method and locations.
 - 2) Design Development: Drainage design calculations and documentation of piping outlets.
 - 3) Construction: Air and water pressure tests of piping systems; functional tests of drains and equipment under simulated full occupancy loads.
 - 4) Occupancy: Observation of function during full occupancy simulating extreme conditions.
3. Rain Water Drainage Capacity: As specified in the code and as follows:
 - a. Secondary Drainage: Required for roofs and exterior structural decks that do not drain naturally. Provide secondary roof drains connected to a secondary drainage system.
 - b. Substantiation:
 - 1) Preliminary Design: Analysis and documentation of rain water discharge methods and locations.
 - 2) Design Development: Drainage design calculations and documentation of piping outlets.
 - 3) Construction: Air pressure test to verify continuity of piping; functional tests of each drain.
 - 4) Occupancy: Field observation of performance during at least two storms.
4. Ease of Maintenance and Repair:
 - a. Isolation of Piping Segments and Equipment: Provide a means of isolating the following:
 - 1) Each building from main water service. Provide a shut-off valve located inside a valve box whose removable access cover is at grade level.
 - 2) Water meter from building piping.

- 3) Each tenant space from building service, excluding locations where there is only one fixture with its own isolation valves.
 - 4) Each water branch from main service.
 - 5) Each vertical riser from piping below.
 - 6) Each water branch to fixtures or equipment from main vertical riser.
 - 7) Piping lower than the supply, to prevent unnecessary draining in the case of disconnection.
 - 8) Each plumbing fixture, storage tank, and item of equipment, so that removal of one will not necessitate shutdown of others.
 - 9) Individual fixtures and equipment. Provide an isolation device within 900 mm (3 feet) of pipe connection to item.
- b. Provision for Drainage of Water Distribution Piping:
- 1) Slope Piping Toward Drain: 1:500 (1/4 inch per 10 feet).
 - 2) Provide a system drain at the lowest point in the system.
 - 3) Provide an adequately sized drain for the volume of water inside the distribution system.
 - 4) Drain valve (or fixture shut-off valve) located at each low point.
- c. Provision for Cleaning of Drainage Piping: Provide a cleanout as required by code and as follows:
- 1) At the upstream end of each horizontal sanitary drainage pipe, for cleaning in direction of flow.
 - 2) At the dead end of each dead-end pipe.
 - 3) At exit of sanitary drainage pipe from building provide two way cleanout.
 - 4) Pipe 75 mm (3 inches) and Smaller: At intervals of 15 m (50 foot), maximum.
 - 5) Pipe 100 mm (4 inches) to 150 mm (6 inches): At intervals of 24 m (80 foot), maximum.
 - 6) Pipe 200 mm (8 inches) and Larger: At intervals of 30 m (100 foot), maximum.
 - 7) Clearance: As required by code to allow for cleaning and rodding of pipe.

PRODUCTS

A. Do not use:

1. deleted (Am#3).
2. deleted (Am#3).
3. deleted (Am#3).

METHODS OF CONSTRUCTION

A. Use the following practices and procedures:

1. Health: Maintain the safety of the potable water source at all times.
 - a. Do not connect the potable water source to any non-potable water source.
 - b. Keep animals and vermin out of open pipes, tanks, and other system components.
 - c. Keep other contaminants out of the distribution systems, equipment, and water source.
 - d. Do not connect private potable water source to public potable water source.

END OF CHAPTER D2

CHAPTER D24

SANITARY WASTE

PERFORMANCE

A. Basic Function:

1. Provide drainage for disposal of waste as required by the code and for the following:
 - a. Fixtures and equipment which have a waste connection or a domestic water connection.
 - 1) Waste connections are not required on icemakers, refrigerators with icemakers, exterior hose bibbs, and coffee makers.
 - b. Emergency Drainage: Floor drains located in:
 - 1) Basements.
 - 2) Rooms where waterproof membrane is specified or installed under floor finish.
 - c. Cleaning Drainage: Floor drains located as indicated in program.
 - 1) Hose-down areas.
 - 2) Breakroom.
 - d. Indirect Drainage: Floor drains to receive piping from:
 - 1) Equipment drain pans.
 - 2) Condensate drains.
 - 3) Other equipment that produces clear wastes.
 - 4) Other equipment specified to have indirect drain.
2. Where sanitary waste and vent elements must also function as elements defined within another element group, meet requirements of both element groups.
3. In addition to the requirements of this chapter, comply with all applicable requirements of Chapter 111 - Facility Performance, Chapter D - Services, and Chapter D2 - Water and Drainage.

B. Amenity and Comfort:

1. Convenience:
 - a. Do not locate floor drains and floor cleanouts in doorways or directly in traffic paths.
2. Odors:
 - a. Do not terminate vents within 3 m (10 feet) horizontally of doors, windows, air intake or exhaust openings, or other openings in the exterior enclosure, unless vent termination is at least 1 m (3 feet) above the top of the opening.
 - b. Do not locate vent openings under overhangs.
 - c. Do not locate vent openings closer than 3 m (10 feet) to lot line.
 - d. Extend vent pipes at least 150 mm (6 inches) above the surface of roofs.
 - e. Extend vent pipes at least 305 mm (12 inches) above overflow level of the highest fixture served by the vent.
 - f. Provide an automatic means of priming traps which may evaporate enough water to break the trap seal allowing sewer gases to enter the building.

C. Health and Safety:

1. Flammable or Toxic Wastes: Provide means of safely disposing of:
 - a. Oil.
 - b. Anti-freeze (glycol solution).
2. Disease and Infection:
 - a. Do not locate indirect drains in toilet rooms, unventilated or inaccessible rooms, or in air distribution or return plenums.
 - b. Provide a backflow prevention device in the sewer discharge to prevent back-up into plumbing fixtures and floor drains.

D. Structure:

1. Hub-and-Spigot Joint Support: Support joints so they do not separate under weight of pipe or live loads.

E. Durability:

1. Corrosion Resistance:
 - a. Where corrosive wastes can be neutralized or diluted below harmful levels, removal is not required; otherwise, provide appropriate interceptors to remove corrosive wastes, including solids.
 - b. Neutralizing Devices: Automatically operating, using water or neutralizing medium to render basic materials, acidic materials, and other chemical wastes harmless.
 - 1) Construct the drainage system upstream of the neutralizing devices using materials which are resistant to the specific corrosive elements entering the system.
 - 2) Corrosive agents entering the sanitary drainage system which must be neutralized or removed:
 - a) Hydrochloric acid.
 - b) Sulfuric acid.
 - c) Caustic solutions.
 - c. Oil Interceptors: Located as indicated in program.
 - d. Sediment Interceptors: Located at each floor drain where significant amount of sand is likely to be tracked in by occupants or blown in by wind.
2. Condensation:
 - a. Prevent condensation from forming on or dripping from sanitary drain piping, floor drain bodies, drinking fountain or water cooler waste piping, condensate piping, and p-traps.

F. Operation and Maintenance:

1. Maintenance of Drainage:
 - a. Where sewer discharge is higher than item to be drained, provide a means of lifting the waste for drainage.
 - 1) Method of Lifting Waste: Provide a grinder pump ejector or sewage pump and vented sump to lift waste to the sanitary sewer for drainage.
 - b. Fittings, Joints, and Offsets: As required to ensure optimal flow through horizontal and vertical piping and at changes of direction.
 - c. Transitions Between Horizontal Piping and Vertical Risers:
 - 1) Sanitary Waste: Sanitary tees, wyes, or wyes and eighth bends.
 - 2) Vents: Wyes, wyes and eighth bends, and short radius fittings.
2. Ease of Cleaning:
 - a. Floor Drains: At low points in floor and flush with finish floor surface.
 - b. Cleanout Plugs: Flush with floor surface.
 - c. Drain equipment which produces or collects clear waste, such as condensation from cooling coils. Provide piping for the clear waste to the nearest floor drain.
 - d. Indirect Waste Pipes Over 25 mm (1 inch) Diameter: Provide a means to catch and remove solid materials 12.7 mm (1/2 inch) and larger, such as a strainer.
 - e. Oil Interceptors: Located as shown on drawings.
3. Minimization of Cleaning:
 - a. Grease Interceptors: Located at drains specifically intended for disposal of grease, as indicated in program.
 - b. Sediment Interceptors: Located at each floor drain where significant amount of sand is likely to be tracked in by occupants or blown in by wind.
4. Ease of Maintenance:

- a. Interceptors That Must be Manually Cleaned:
 - 1) Designed for minimum of 2 months operation between cleanings.
 - 2) Located close to or in the same area as drains that receive the harmful wastes, for supervision and maintenance by occupants creating the waste.
 - 3) Removable waste container, with spare.

PRODUCTS

A. Sanitary Waste and Vent Piping, Buried:

1. Use one or more of the following:
 - a. deleted (Am#3).
 - b. Polyvinyl chloride (PVC) DWV pipe and fittings, with solvent welded or gasketed joints.
 - c. deleted (Am#3).
 - d. deleted (Am#3).

B. Sanitary Waste and Vent Piping, Not Buried:

1. Use one or more of the following:
 - a. deleted (Am#3).
 - b. deleted (Am#3).
 - c. Polyvinyl chloride (PVC) DWV pipe and fittings, with solvent welded joints.
 - d. deleted (Am#3).
 - e. deleted (Am#3).

C. Chemical Resistant Sanitary Waste and Vent Piping:

1. Use one or more of the following:
 - a. Acrylonitrile butadiene styrene (ABS) plastic pipe and fittings, with solvent welded joints.
 - b. Cast iron pipe, hubless, with neoprene gaskets and stainless steel clamps.
 - c. Polyvinyl chloride (PVC) DWV pipe and fittings, with solvent welded joints.
 - d. Glass pipe and fittings, with gasketed compression couplings.
 - e. Polypropylene pipe and fittings, with fusion welded joints.

D. Cleanout Plugs:

1. Use one or more of the following:
 - a. Brass.

E. Cleanout Caps:

1. Use one or more of the following:
 - a. Brass.

F. Floor Drains:

1. Use one of the following:
 - a. Cast iron.
 - b. Copper.

END OF CHAPTER D24

CHAPTER D31

ENERGY SUPPLY

PERFORMANCE

- A. Basic Function:
1. Provide natural gas for use by HVAC, plumbing, and process equipment as follows:
 2. Comply with ICC International Fuel Gas Code-2000.
 3. Where energy supply elements also must function as elements defined within another element group, meet the requirements of both element groups.
 4. In addition to the requirements of this chapter, comply with all applicable requirements of Chapter 111 - Facility Performance, Chapter D - Services, and Chapter D3 - HVAC.
- B. Amenity and Comfort:
1. Heating: Provide fuel to all fuel burning equipment that is used to maintain space comfort and water heating.
 2. Leakage:
 - a. Provide leak-free distribution systems.
- C. Health and Safety:
1. Natural Gas System Working Pressure: 34 kPa (5 psig), maximum.
 2. Natural Gas Entrance into Facility: Locate the service meter at least 1 m (3 feet) from ignition sources.
- D. Structural:
1. Seismic Protection:
 - a. Provide fuel distribution system with the ability to flex where differential movement is anticipated.
 - b. Provide fuel distribution system supports capable of supporting twice its installed weight.
- E. Durability:
1. Expected Service Life Span: Provide a system which will be viable for the life of building.
 2. Vandalism: Protect the service meter from unauthorized access.
 3. Accidental Damage: Protect service meter from accidental damage.
- F. Operation and Maintenance:
1. System Capacity: Provide a fuel supply line (pipe) with capacity to serve the facility plus 50 percent reserve capacity.
 2. Ease of Service:
 - a. Provide shut-off valves as required by code and at each branch connection.

PRODUCTS

- A. Pipe:
1. Use one or more of the following:
 - a. Materials permitted by code.
 - b. Copper pipe with flared or brazed joints.
 - c. deleted (Am#3).

- d. Stainless steel pipe with threaded joints.
- e. Steel pipe with threaded or welded joints.

B. Fittings:

- 1. Use one or more of the following:
 - a. Materials permitted by code.
 - b. Copper.
 - c. Aluminum-alloy.
 - d. Ductile iron.
 - e. Steel.

METHODS OF CONSTRUCTION

- A. Construct the system as required by code.

END OF CHAPTER D31

CHAPTER D34

AIR DISTRIBUTION

PERFORMANCE

A. Basic Function:

1. Distribute air to maintain the required space conditions.
2. Where air distribution elements also must function as elements defined within another element group, meet the requirements of both element groups.
3. In addition to the requirements of this chapter, comply with all applicable requirements of Chapter 111 - Facility Performance, Chapter D - Services, Chapter D3 - HVAC, and Chapter D36 - HVAC Controls.

B. Amenity and Comfort:

1. Space Temperature Control: Coordination of air distribution system's design and installation with zoning and space temperature requirements specified in Chapter D36 - HVAC Controls.
 - a. Maintain winter effective temperature as defined by ANSI/ASHRAE Std 55-1992 with Addendum between 20 degrees C (68 degrees F) and 23.5 degrees C (74 degrees F).
 - b. Maintain summer effective temperature as defined by ANSI/ASHRAE Std 55-1992 with Addendum between 23 degrees C (73 degrees F) and 26 degrees C (79 degrees F).
2. Air Movement:
 - a. Provide an air distribution system that limits the air velocity to 0.25 m/s (50 fpm), maximum.
 - b. Adjustments: Provide an air distribution system which allows adjusting direction of airflow from supply diffusers, adjusting dampers, and changing the thermostat setpoint.
3. Acoustical Performance:
 - a. Air Distribution Background Noise: Provide systems which comply with the acoustical requirements of Chapter C - Interiors and the following RC Levels as defined in ASHRAE HVAC Applications Handbook, 1999. Do not exceed the sound pressure level for any octave band at the specified RC.
 - 1) Halls, Corridors, and Lobbies: 35-45, neutral.
 - 2) Executive and Private Offices: 25-35, neutral.
 - 3) Conference Rooms: 25-35, neutral.
 - 4) Teleconference Rooms: 25, maximum, neutral.
 - 5) Open Plan Offices: 30-40, neutral.
 - 6) Classrooms: 40, maximum, neutral.
 - b. Provide equipment with sound ratings which comply with testing and rating requirements of ARI 880-1998.
4. Cleanliness: Provide filtration of the air distributed to the occupied spaces.
 - a. Filter Efficiency: 85 percent arrestance per ASHRAE Standard 52.1-1992.
5. Odor: Provide exhaust to remove odors.
 - a. Toilets Exhaust: 25 L/s per fixture (50 cfm per fixture) commode or urinal and 75 L/s per (150 cfm) per shower; or 10 L/s per sq meter 2 cfm per sq. ft. whichever is greater.
 - b. Scheduled Maint. Bays : 7.6 L/s per sq m (1.5 cfm per sq. ft.).
 - c. POL Storage Exhaust: 12 air changes per hour.
 - d. Janitors Closet Exhaust: 10 L/s per sq m (2 cfm per sq. ft.).
 - e. Pit Exhaust: 12 air changes per hour.
 - f. Vehicle Exhaust System: 330 L/s per vehicle (700 cfm per vehicle).
 - g. Shops where solvents, fuel or other volatiles are or may be presented: 12 air changes per hour.

- h. Unscheduled Maintenance Bays Exhaust: 7.6 L/s per sq m (1.5 cfm per sq. ft.).
 - i. Mechanical Room Exhaust: 10 air changes per hour (winter) . 20 air changes per hour (summer)
6. Appearance:
- a. Diffuser Shape: Provide square diffusers, perforated type not acceptedable.
 - b. Diffuser Face: Provide louver face with adjustable opposed blade damper in the neck of the diffuser .
 - c. Linear Diffusers: Provide single slot linear diffusers.
 - d. Diffuser Color: Provide diffusers with ceiling matching color.
- C. Health and Safety:
- 1. Electrical Shock Prevention:
 - a. Provide a disconnect switch at each powered induction unit and electric reheat coil.
 - 2. Fire Sources: Provide air distribution elements constructed from incombustible materials.
 - 3. Fire Spread: Provide interlocks to prevent operation or start-up of air distribution elements when fire or smoke detection systems are in alarm condition.
 - 4. Accidental Explosion: Provide ventilation to prevent build-up of explosive gases as follows:
- D. Durability:
- 1. Expected Service Life Span: Provide a system which will last a minimum of 10 years in service without major repairs or operating expense.
 - 2. Aesthetic Life Span: Provide units exposed within the occupied space which will not fade, chip, or peel for a minimum of 10 years.
 - 3. Exposed Units within Occupied Spaces: Heavy gage, galvanized sheet steel, painted casing.
 - 4. Accidental Damage: Protection of ductwork from accidental damage.
- E. Operation and Maintenance:
- 1. Operating Parameters:
 - a. ~~deleted (Am#3)~~
 - b. Duct Construction: In accordance with SMACNA HVAC Duct Construction Standards-1995 with Addendum No. 1. (Am#3)
 - c. ~~deleted (Am#3)~~
 - d. ~~deleted (Am#3)~~
 - 2. Ease of Use: Provide units with individual controls coordinated with controls specified in Chapter D36.
 - 3. Ease of Cleaning: Provide units with removable access panels to allow cleaning.
 - 4. Energy Efficiency:
 - a. Unitary Air-Conditioner Integrated Part Load Value (IPLV): 10, minimum, calculated as specified by ARI 210/240-1994 or ARI 340/360-1993.
 - b. Unitary Air-Conditioner Seasonal Energy Efficiency Ratio (SEER): 10, minimum, at standard rating conditions specified by ARI 210/240-1994 or ARI 340/360-1993.

PRODUCTS

- A. Ductwork:
- 1. Use one or more of the following:
 - a. Galvanized sheet metal duct.
 - b. Stainless steel sheet metal duct.

- c. Aluminum sheet metal duct.
 - d. Flexible duct for short (less than 3m (10ft)) runnouts.
- B. Diffusers, Registers, and Grilles:
- 1. Use one or more of the following:
 - a. Steel diffusers.
 - b. Aluminum diffusers.
 - c. Stainless steel diffusers.
- C. Fans:
- 1. Use one or more of the following:
 - a. Steel fan housing with an aluminum propeller.
 - b. Steel fan housing with a stamped steel propeller.
 - c. Aluminum fan housing with an aluminum propeller.
 - d. Aluminum fan housing with an aluminum centrifugal wheel.
 - e. Steel fan housing with an aluminum centrifugal wheel.
 - f. Steel fan housing with a steel centrifugal wheel.
- D. Air Filters:
- 1. Use one or more of the following:
 - a. Panel filters.
 - b. Pleated panel filters.
 - c. Extended surface filters.
 - d. Cartridge filters.
 - e. Bag-type filters.
 - f. Cleanable media filters.

END OF CHAPTER D34

CHAPTER D36

HVAC CONTROLS

PERFORMANCE

A. Basic Function:

1. Provide the elements necessary to control the building's indoor environment.
 - a. Provide a programmable thermostat for each single zone unit to maintain the required space conditions and local, packaged control for each major piece of HVAC equipment.
 - b. Provide a building control system which controls the indoor environment, manages energy consumption, schedules preventative maintenance, controls interior lighting, controls exterior lighting, integrates fire alarm and security functions, monitors fuel consumption, monitors water usage, and monitors packaged equipment controls.
 - 1) Provide monitoring of major pieces of HVAC equipment.
 - 2) Monitor the following equipment:
 - a) Air handlers.
 - (1) On-off status.
 - (2) Entering air temperature.
 - (3) Leaving air temperature.
 - (4) Filter status (clean/dirty).
 - b) Chillers.
 - (1) On-off status.
 - (2) Entering chilled water temperature.
 - (3) Leaving chilled water temperature.
 - (4) Safety controls.
 - c) Packaged terminal air-conditioning units.
 - d) Unit ventilators.
 - e) Furnace: On-off status.
 - f) Pumps: On-off status.
 - 3) Control the following equipment:
 - a) Air handlers.
 - (1) Start-stop.
 - b) Chillers.
 - (1) Start-stop.
 - c) Packaged terminal air-conditioning units: Start-stop.
 - d) Furnace: Start-stop.
 - e) Pumps: Start-stop.
 - f) Gas Fired Unit Heaters: Start - stop.
 - g) Gas Fired Infrared Heaters: Start - stop
2. Where control and instrumentation elements also must function as elements defined within another element group, meet the requirements of both element groups.
3. **Meters: Provide electric, gas and water meters with pulse initiators. Supply conduits with conductors from each meter to a terminal cabinet in the main mechanical room for future connection. (Am#3)**
4. In addition to the requirements of this chapter, comply with all applicable requirements of Chapter 111 - Facility Performance, Chapter D - Services, and Chapter D3 - HVAC.

B. Amenity and Comfort:

1. Zoning and Space Temperature Control:
 - a. Provide each computer room with a dedicated zone. Provide temperature control.

2. Building Control System: Provide a central location to monitor and control each zone setpoint.
- C. Health and Safety:
1. Life Safety: Provide interconnection and coordination of HVAC controls with other life safety systems.
 2. Fire Sources: Provide products which are rated for the specific locations where they are installed.
- D. Durability:
1. Expected Service Life Span: Provide a system which will last a minimum of 10 years in service without major repairs or operating expense.
 2. Vandalism: Protect the system field panels from unauthorized access. Emergency shutoff switch for AHU located to be easily accessible by building occupants.
 3. Accidental Damage: Protect thermostats from accidental damage.
- E. Operation and Maintenance:
1. System Capacity: Provide a building control system with sensors and points to perform as specified and add 50 percent more points.
 2. Ease of Use:
 - a. DDC electronic/ electric control system shall be LONWORKS compatible. The system network **must be Echelon LONWORKS based on Echelon's LNS network operating system**. All nodes shall communicate with each other over a twisted pair of wires, utilizing Echelon's free topology. **LonMaker for Windows** or Honeywell **WEBstation** must be used to design, commission, operate, and maintain the multi-vendor, open, interoperable **LONWORK** control network.
 - b. Locate field panels in electrical closets.
 - c. Locate the central controller in the maintenance office.
 - d. Provide a system which is user programmable.
 - e. Provide field panels which are independent and do not need the central controller to continue functioning.
 3. Ease of Service:
 - a. Provide a system of modular design.
 4. Energy Efficiency: Provide :
 - a. Holiday scheduling.
 - b. Night setback.
 - c. Outside air economizer.
 - d. Chiller staging (if more than one chiller).
 - e. Optimum start.
 - f. Optimum stop.

PRODUCTS

- A. Building Control System Types:
1. Use one or more of the following:
 - a. Direct digital control (DDC) system compatible with LONWORKS.
 - b. a programmable thermostat with a on board electronic control sequences of the unitary equipment

END OF CHAPTER D36

CHAPTER D41

FIRE SPRINKLER AND EXTINGUISHING SYSTEMS

PERFORMANCE

- A. Basic Function:
1. Provide fire sprinkler or fire extinguishing systems for all interior spaces.
 2. Provide dry pipe sprinkler systems unless otherwise indicated or required by code.
 3. Spaces and Areas with Fire Sprinklers:
 - a. General Use (Not Indicated As Another Type): Dry pipe.
 - 1) Occupancy: Light Hazard.
 - 2) Density/Area: 3.3 L per min per sq m (0.08 gpm per sq ft) over 185 sq m (2000 sq ft).
 - b. Maintenance Shops:
 - 1) System Type: Dry pipe.
 - 2) Occupancy: Ordinary (Group 2) Hazard.
 - 3) Density/Area: 8.18 L per min per sq m (0.2 gpm per sq ft) over 280 sq m (3000 sq ft).
 - c. General Offices:
 - 1) System Type: Dry pipe.
 - 2) Occupancy: Light Hazard.
 - 3) Density/Area: 4.1 L per min per sq m (0.1 gpm per sq ft) over 280 sq m (3000 sq ft).
 - d. Storage:
 - 1) System Type: Dry pipe.
 - 2) Occupancy: Ordinary (Group 1) Hazard.
 - 3) Density/Area: 3.3 L per min per sq m (0.08 gpm per sq ft) over 185 sq m (2000 sq ft).
 - e. Mechanical Room:
 - 1) System Type: Dry pipe.
 - 2) Occupancy: Ordinary (Group 2) Hazard.
 - 3) Density/Area: 8.2 L per min per sq m (0.2 gpm per sq ft) over 280 sq m (3000 sq ft).
 - f. Warehouse:
 - 1) System Type: Dry pipe.
 - 2) Occupancy: single or double row rack storage to a height of 20 ft., class IV commodity, encapsulated, 8 ft. aisles, in-rack sprinlers.
 - g. POL Equipment room:
 - 1) System Type: Dry pipe.
 - 2) Occupancy: Extra (Group 1) Hazard.
 - 3) Density/Area: 12.2 L per min per sq m (0.3 gpm per sq ft) over 280 sq m (3000 sq ft).
 4. Provide code-required coverage if the coverage specified above is less than required by code.
 5. Fire Sprinklers: Design and construction in accordance with code and NFPA 13-1999.
 6. Where fire sprinkler and extinguishing elements also must function as elements defined within another element group, meet the requirements of both element groups.
 7. In addition to the requirements of this chapter, comply with all applicable requirements of Chapter 111 - Facility Performance, Chapter D - Services, and Chapter D4 - Fire Protection.
- B. Amenity and Comfort:
1. Accessibility:
 - a. Provide fire department connections as required by code and Mil Hdbk 1008C.
 - b. Provide interior hose stations in warehouse as required by NFPA 13.
 2. Appearance:
 - a. Provide spaces with the following types of sprinkler heads:

- 1) Spaces with suspended ceilings: Recessed or semi-recessed chrome sprinklers.
 - 2) Spaces without ceilings: Upright sprinklers.
 - 3) Electrical rooms: Guarded sprinklers.
 - 4) In-rack warehouse sprinklers: Guarded upright sprinklers.
 - b. Provide hose cabinets with off-white finish and glass window in the door.
 - c. Provide valves with brass finish.
 - d. Provide fire department connections with bright-chrome finish.
3. Convenience: Provide fire department connections for each standpipe as required by code.
- C. Health and Safety:
1. Sprinkler Head Performance: As required by code and NFPA 13-1999.
 - a. Flammable Storage Room: Quick-response (QR) sprinklers.
 - b. Warehouse: Quick-response (QR) sprinklers.
 2. Water Demand Requirements:
 - a. Determine minimum water supply requirements for each sprinkler system using the hydraulic calculation method defined by NFPA 13-1999.
 3. Water Source:
 - a. Provide water from a public service main.
- D. Structural:
1. Seismic Design:
 - a. Provide a sprinkler system which allows movement where differential movement is anticipated.
 - b. Provide sprinkler system supports capable of supporting twice its installed wet weight.
 - c. **Provide Backflow Preventor (Supervised Valves). (Am#3)**
 - d. **Provide Air Compressor on Floor. (Am#3)**
 - e. **Provide Seismic Design in accordance with NFPA. (Am#3)**
- E. Durability:
1. Expected Service Life Span: Provide a sprinkler system which will last a minimum of 10 years in service without major repairs or operating expense when maintained as specified in NFPA 25-1998.
- F. Operation and Maintenance:
1. Ease of Service:
 - a. Spare Sprinkler Heads: Provide additional sprinkler heads as required by code to service the system.

PRODUCTS

- A. Pipe:
1. Use the following: **(Am#3)**
 - a. Galvanized steel pipe, ASTM A53 or ASTM A135
- B. Fittings:
1. Use one or more of the following:
 - a. Cast iron.
 - b. Galvanized steel

METHODS OF CONSTRUCTION

- A. Construct the system using the following methods:

1. 2 inch and smaller pipe, use schedule 40 pipe with threaded or welded connections.
2. 2 1/2 inch to 4 inch pipe, use schedule 30 or 40 pipe with threaded or welded connections or schedule 10 pipe with rolled groove connections.
3. Pipe larger than 4 inch, use schedule 30 or 40 pipe with rolled or cut groove connections.

END OF CHAPTER D41

CHAPTER D43

FIRE DETECTION AND ALARM

PERFORMANCE

A. Basic Function:

1. Provide complete supervised addressable automatic fire detection and automatic alarm systems as required by code, also see attachment A, drawing A3.
2. Integrated systems performing all functions are required, subject to requirements of code for separated, independent systems.
3. deleted (Am#3).
4. deleted (Am#3).
5. deleted (Am#3).

B. Health and Safety:

1. Detection, Alarm, Notification Methods: In accordance with NFPA 72-1999.
2. Detection:
 - a. Air Handling Units Over 3360 cu m/h (2,000 cfm): Minimum of one detector in supply.
 - b. Upon detection of fire or smoke condition, automatic notification of occupants, and Ft. Hood central fire station.
 - c. Provide a heat detector in the room, which houses the fire alarm control panel.
3. Alarms:
 - a. Manual stations at minimum of 45 m (150 feet) intervals along means of egress paths, and at all exterior doors.
 - b. Audible Alarms: Minimum of 15 dB over ambient noise, audible throughout common areas and means of egress.
 - c. Visual alarms, in locations required by code and public toilets and corridors.
4. Fire Protection Controls:
 - a. Provide connections between alarm and detection system and fire suppression system activation sensors.
 - b. Upon Alarm: Shut down or deactivate the following:
 - 1) HVAC air distribution.
 - 2) Fire-rated window shutters.
5. Audible and visual trouble notification of operations staff, for alarm zone failures, annunciator zone failures, ground faults, backup power failure, water supply equipment failures.
6. Hard wired electrical supervision of all components required by MIL-HNDK-1008C and all tamper switches on post indicator valves. Trouble or alarm signals shall be sent to the Central fire station.
7. Error and Failure Prevention: Addressable system; "tamper" sensors at sensitive points; products of only one manufacturer or certified by manufacturer as compatible.
8. deleted (Am#3).

C. Operation and Maintenance:

1. Power Supplies:
 - a. Building power for all systems.
 - b. Dedicated Battery Backup Power:

- 1) Fire safety systems, 72 hours.
- 2) Emergency communications, 48 hours.
2. Ease of Use:
 - a. One centralized monitoring display (control panel) for all systems located in mechanical room and one remote annunciator panel located in a general office area.
3. Government Personnel Training: As specified in Chapter 00830.
 - a. Operational: Minimum of 8 hours, for each separate system.
 - b. Maintenance: Minimum of 8 hours, for each separate system.

PRODUCTS

A. Control Systems for All Applications:

1. **Use the following: (Am#3)**
 - a. Microprocessor-based hardware.

B. Fire/Smoke Detectors:

1. **Use the following: (Am#3)**
 - a. Photoelectric smoke detectors.
 - b. Fixed temperature heat detectors.

C. Warning Devices:

1. **Use the following: (Am#3)**
 - a. Horns.
 - b. Speakers.
 - c. Combination speaker /strobes.

D. Communication Cabling:

1. **Use the following: (Am#3)**
 - a. Copper cable.

END OF CHAPTER D43

CHAPTER D53

BRANCH CIRCUITS

PERFORMANCE

A. Basic Function:

1. Power: Provide adequate electrical power and safe and efficient distribution from panelboards to lighting, wiring devices, equipment, and appliances, based on the project program, other requirements in Volumes I through IV, and as follows:
2. Branch circuits comprise the following elements:
 - a. Branch circuit breakers.
 - b. Conductors and cable from panelboards to fixtures, wiring devices, and mechanical equipment.
 - c. Raceways and boxes.
 - d. Wiring devices, including, but not limited to, receptacles, wall switches, and wall plates.
 - e. Special receptacles, mounted 1.2 meter AFF: in Welding shop, provide three of 460v, 1-phase, 60Hz, and two **230v (Am#3)**, 3-phase, 60Hz. Provide at least one 220v, 3-phase, 60hz outlet between all Repair Bays on both walls.
 - f. Provide duplex receptacles on dedicated circuits nearby telephone backboards and patch panels equipment rack.

B. Operations and Maintenance:

1. Capacity: Provide branch circuit wiring with sufficient capacity as required by code. Minimum conductor size allowed is #12 AWG copper.
2. Dedicated Circuits: In addition to other requirements dedicated circuits shall be provided for the following:
 - a. Each electric water cooler (drinking fountain).
 - b. Fire Alarm control panel.
 - c. Public Address system power supply.
 - d. Each Copier, Fax machine.
 - e. Each Vending machine.
3. Motor voltage: All motors 0.375kw (1/2HP) and larger shall be 3-phase.
4. Quantity Limitation:
 - a. No more than six general purpose receptacles shall be connected to any one branch circuit.

PRODUCTS

A. Branch Circuit Wiring:

1. Use the following:
 - a. Concealed raceways except exposed is allowed in electrical, mechanical, and communication rooms[<>].

B. deleted (Am#3).

END OF CHAPTER D53

CHAPTER D71

VOICE AND DATA

PERFORMANCE

A. Basic Function:

1. Provide communication outlets _____ **(Am#3)**, and their connections to voice/data patch panels, protector module means of conveying voice communication between rooms and spaces in the building.

B. Operation and Maintenance:

1. System Labeling: All labels shall be in accordance with EIA/TIA-568B and 569 standards.
2. Transmission Capacity:
 - a. Voice Communications Cabling: 10/100 megabits per second; RJ45 connectors.
 - b. Data Communication Cabling: 10/100 megabits per second; RJ45 connectors.
 - c. _____ **deleted (Am#3)**.

PRODUCTS

A. Raceway: All communication wiring shall be installed in raceways:

1. Conduits, minimum of **21mm (3/4")**. **(Am#3)**
2. Ladder cable tray, NEMA VE 1, nominal 150mm (6") depth x 450mm (18") width, rung spacing 300mm (12") maximum centers. Trays shall be constructed of aluminum, or copper-free aluminum, or zinc-coated steel. Trays shall include splices, end plates, dropouts, and miscellaneous hardware. Edges, fittings, and hardware shall be finished free from burrs and sharp edges. Fittings shall have not less than the load-carrying ability of straight tray sections and shall have manufacturer's minimum standard radius. Trays shall originate above communication rooms.

B. Patch Panels (mounted on equipment rack):

1. Use category 5e, 8-pin modular connector patch panels, and 24-port single mode fiber optic patch panel.

C. Communication Cabling:

1. Use the following:
 - a. Each outlet shall have two-4pair #24 AWG copper telephone cable, category 5e, RJ45 jacks.
 - b. Distribution Cable: Copper.
 - c. RJ45 patch panel **with (Am#3)** 110 block.

END OF CHAPTER D71

CHAPTER D93

SPECIAL GROUNDING SYSTEMS

PERFORMANCE

- A. Basic Function:
1. Provide grounding systems that:
 - a. Reduce static electricity and transient and induced current in electronic equipment cabinets, racks, and supports.
 - b. Comply with applicable recommendations of IEEE 142-1991 and IEEE 1100-1999.
- B. Amenity and Comfort:
1. Appearance: Concealed grounding conductors.
- C. Health and Safety:
1. Lightning Protection System Minimum Capacity:
 - a. Maximum Ground Resistance: 25 ohms, between any individual down conductor and ground.
 - b. Provide air terminal, main conductors, down conductors, ground connections, and grounds.
 2. Fence Grounding Capacity:
 - a. Fences that are electrically continuous with metal posts embedded at least 610 mm (24 inches) into the ground, with or without concrete encasement, will be considered adequately grounded.
 - b. Maximum Ground Resistance: 25 ohms, between any point on fence and ground; minimum 2 grounding points for any section of fence.
- D. deleted (Am#3).

PRODUCTS

- A. Lightning Protection Conductors:
1. Use the following:
 - a. Stranded copper cable.
 - b. Structural steel superstructure, electrically-continuous.
 - c. Concrete reinforcing steel, electrically-continuous.
 - d. Sheet metal roofing or walls, electrically-continuous.

END OF CHAPTER D93

CHAPTER E19

OTHER EQUIPMENT

PERFORMANCE

A. Basic Function:

1. Other equipment comprises the following elements:
 - a. Parts or item wash equipment, including one "Hotsy" type packaged hot water wash unit for parts washing in scheduled maintenance bay. **(Am#3)**
 - b. **(am#1)** Vehicular service equipment, including used oil collection, used antifreeze collection, off-spec fuel collection, engine oil (50 wt.) dispensing, antifreeze dispensing, gear lube oil dispensing, transmission fluid dispensing, chassis lube (grease) dispensing, .
 - c. Vehicle exhaust collection equipment, including high temperature flexible exhaust hoses with vehicle adapters and hose reels.
 - d. Compact Item Repair Shop and General Item Repair Shop adjustable local exhaust nozzles.
 - e. Welding shop downflow benches and spring balanced adjustable flex hose local exhaust nozzles.
 - f. Brake shop downflow work bench with HEPA filtration.

B. Amenity and Comfort:

1. Parts/Vehicle wash unit: Provide stationary unit affixed to slab. Provide electric motor, belt drive, positive displacement pump. Provide trigger actuated hand held nozzle with hose. Provide a wall mounted adjustable timer for automatic unit shutdown. Minimum capacity shall be 0.19 L/s at a discharge pressure of 8270 kPa. Provide a gas fired water heating section for the item wash unit. Provide adjustable pattern spray tips or assorted pattern spray tips for each unit.
2. **(am#1)** Vehicular service equipment: Overhead hose reel shall be provided between each two scheduled maintenance bays for engine oil, antifreeze coolant, chassis grease, transmission fluid, and gear lube oil dispensing. Each dispensing hose for liquids shall be provided with dispensing meter. In addition, regulated compressed air station with duplex quick connectors and domestic water hose bibs shall be available at each column between shop service bays. Chassis lube and compressed air hose, reel, and dispensing regulator shall be provided in each service and inspection pit. **used** oil and **used** antifreeze receptors shall be provided at columns between each two service bays. The waste from the receptors shall be collected by a piped collection system and pumped to exterior **used** oil and **used** antifreeze storage tanks. Any collection piping located below grade shall be in double wall containment piping with leak detection system. Two rolling or slide out catch basins shall be provided in the service pit for collection of **used** oil and **used** antifreeze. These catch basins shall, through a flexible hose and diaphragm pump, transfer the received waste fluid to the appropriate storage tank. The **used** oil and **used** antifreeze tanks shall each be 1000 gallon capacity, double wall, concrete encased, above ground storage tanks. An off-spec fuel storage tank similar to the **used** oil tank shall also be provided. The contractor shall develop a method of receiving off-spec fuel from a catch pan and transfer it to the storage tank. **The designer is required to provide a laminated card with step-by-step operating procedures required for system start up, operation and shutdown located near the pump control valve or switch.** **(am#1)**
3. Vehicle exhaust collection equipment: Hose reel shall be electric motor operated.
4. Compact Item Repair & General Item Repair Shops shall each be provided with a spring balanced, flexible hose, local exhaust with flanged nozzle. The exhaust shall be wall mounted and shall have a 10 ft. radius of reach. Exhaust cfm shall be adequate to produce 100 fpm capture velocity at 6 to 9 inches from the nozzle. The exhaust fan shall be remotely located to minimize noise but shall be easily accessible for maintenance. Local exhaust shall be manually switched. Exhaust discharge shall be to the exterior of the building.

5. Welding shop downflow benches and local exhaust nozzles. Provide (4) four 2.3' x 3' downflow welding benches. Provide (4) four spring balanced, adjustable position, flex hose, local exhaust nozzles with flanged nozzles. Downflow benches and local exhaust nozzles shall be manifolded to a single exhaust fan. discharge shall be to the exterior of the building. Flowrate of benches shall be 200 cfm/sf of benchtop area. Flowrate of local exhaust nozzles shall be 1000 cfm each.
6. Brake shop downflow work bench shall be 5' x 3' with slotted or perforated, heavy duty steel work surface. The bench shall have a fixed rear shield and removable side shields to aid air flow and particulate capture. The work surface shall support a minimum concentrated load of 500 lbs and a minimum distributed load of 1200 lbs. The bench shall have an integral or separate exhaust fan and HEPA filtration section as well as integral cleanout doors and internal dust trays. The bench exhaust shall be discharged to the exterior of the building. Flowrate of the bench shall be 200 cfm/sf of benchtop area.

C. Health and Safety:

1. **Deleted by am#1.**
2. Vehicle service equipment:
3. Ventilation equipment shall be designed in accordance with ACGIH Industrial Ventilation manual of recommended practice.

PRODUCTS

- A. Construct using equipment and materials specified in section 15487, Vehicle Maintenance Equipment, located in volume IV.

METHODS OF CONSTRUCTION

- A. Construct using the methods specified in section 15487, Vehicle Maintenance Equipment, located in volume IV.

END OF CHAPTER E19

SECTION 01000
 DESIGN AND CONSTRUCTION SCHEDULE
 03/2001
 AMENDMENT NO. 0003

PART 1 GENERAL

1.1 SCHEDULE

Commence, prosecute, and complete the work under this contract in accordance with the following schedule and Section 00700 CONTRACT CLAUSES clauses COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK and LIQUIDATED DAMAGES:

Item of Work	Commencement of Work (calendar days)	Completion of Work (calendar days)	Liquidated Damages per calendar day_____
(1) Completion of all design and construction work except Establishment of Turf, Truck Loading Dock and associated paving and sitework	Within 10 calendar days after receipt of Notice of Proceed	500	\$1400.00
(Am#3) (2) <u>Design and construction of Truck Loading Dock and associated paving and sitework</u>	<u>Within 10 calendar days after receipt of Notice of Proceed</u>	<u>90</u>	<u>\$ 500.00</u>
(3) Establishment of Turf	*	*	---

¹NOTES:

a. The Contract duration stated above for Work Item 1 is the maximum duration. Upon Contract Award, the Contractor's proposed duration as

stated on the Price Proposal Schedule shall become the contract duration for this Work Item. The liquidated damages stated above will be applied for each calendar day the Contractor exceeds the Contract duration schedule.

b. See Section 01015 DESIGN REQUIREMENTS AFTER AWARD, paragraph "SUBMISSION OF CONSTRUCTION DRAWINGS, SPECIFICATIONS, AND DESIGN ANALYSES," concerning submission of construction documents and Section 01000 paragraph, "SEQUENCE OF DESIGN/CONSTRUCTION," concerning start of construction.

c. For construction planning purposes Government review time for review submittals is specified in 01015 DESIGN REQUIREMENTS AFTER AWARD.

d. Delay in completion of design will not be considered as a valid reason to delay completion of entire work.

*Establishment of Turf

Planting and maintenance for turfing shall be in accordance with Contractor's Section for TURFING. No payment will be made for establishment of turf until all requirements of the section are adequately performed and accepted, as determined by the Contracting Officer.

1.1.1 Testing of Heating and Air-Conditioning Systems

The times stated for completion of this project includes all required testing specified in appropriate specification sections of heating, air conditioning and ventilation systems including HVAC Commissioning. Exception: boiler combustion efficiency test, boiler full load tests, cooling tower performance tests, and refrigeration equipment full load tests, when specified in the applicable specifications, shall be performed in the appropriate heating/cooling season as determined by the Contracting Officer.

1.2 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (OCT 1989)
(ER 415-1-15)(52.0001-4038 1/96)

a. This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the contract clause entitled "Default: (Fixed Price Construction)." In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

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

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

b. The following schedule of monthly anticipated adverse weather delays due to precipitation and temperature 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. Wind is not considered

in the Monthly Anticipated Adverse Weather Calendar Day Schedule.

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

KILLEEN, TX AREA (FORT HOOD, BELTON AND STILLHOUSE LAKES AND
RESERVE CTRS. ALONG HWY 36 FROM HWY 79 TO HWY US67)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4	4	4	4	6	4	3	3	4	4	3	4

c. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the contractor's scheduled work day.

The number of actual adverse weather delay 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 paragraph "b", above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled "Default (Fixed Price Construction)."

1.3 WORK RESTRICTIONS

1.3.1 Working Hours

Normal duty working hours shall be Monday through Friday, 0700 to 1700 hours.

1.3.2 Security Requirements

For the duration of this Contract, access to the Installation may be delayed between 30 minutes to an hour or more due to security precautions, including the checking of vehicle occupants' IDs, vehicle manifests, and the searching of all vehicles.

1.4 UTILITIES

1.4.1 Payment for Utility Services (FAR 36.303(C)(6))

Water, gas, and electricity are available from Government-owned and operated systems and will be charged to the Contractor at rates as provided in Contract Clause 52.236.14 AVAILABILITY AND USE OF UTILITY SERVICES.

(Am#3) 1.4.1.1 Meters and Temporary Connections

The Contractor, at its expense and in a manner satisfactory to the Contracting Officer, shall provide and maintain necessary temporary connections, distribution lines, and meter bases required to measure the amount of each utility used for the purpose of determining charges. The Contractor shall notify the Contracting Officer, in writing, 5 working days

before utility (gas, water, electricity) connections are desired so that a utilities contract can be established.

(Am#3) 1.4.1.2 Final Meter Reading

Before completion of the work and final acceptance of the work by the Government, the Contractor shall notify the Contracting Officer, in writing, 5 working days before termination is desired. The Government will take a final meter reading. The Contractor shall then remove all the temporary distribution lines, meter bases, and associated paraphernalia. The Contractor shall pay all outstanding utility bills before final acceptance of the work by the Government.

1.4.2 Outages

The Contractor shall coordinate all requests for utility outages with the Contracting Officer in writing 14 days prior to date of requested outage:

a. Water, (Am#3) and sewer outages shall be held to a maximum duration of 4 hours unless otherwise approved in writing.

b. All utility outages shall be scheduled only on Saturdays, Sundays, or holidays unless specific approval is otherwise received.
(Am#3)

c. Gas or Electrical outages are prohibited. Connections to gas and electric lines shall be connected hot without an outage. (Am#3)

1.5 STREET CLOSINGS

The Contractor shall coordinate all requests for street closings with the Contracting Officer in writing 14 days prior to date of requested outage:

a. One lane traffic shall be maintained at all times (except that a total closing may be allowed for specific 8-hour periods).

b. The final street repair shall be completed within 14 days after the start of any street crossing. Any part of the street returned to service prior to final repair shall be maintained smooth with hot-mix cold-lay surface course.

c. Open cuts across paved roads and streets for utility crossings will not be allowed. Utility crossings will be accomplished by boring or jacking procedures unless otherwise indicated. (Am#3)

(AM#3)

1.6 PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (DFAR 252.236-7004)(DEC 1991)

(a) The Government will pay all costs for the mobilization and demobilization of all of the Contractor's plant and equipment at the contract lump sum price for this Item.

(1) 60 percent of the lump sum price upon completion of the Contractor's mobilization at the work site.

(2) The remaining 40 percent upon completion of demobilization.

(b) The Contracting Officer may require the Contractor to furnish cost data to justify this portion of the bid if the Contracting Officer believes that the percentages in paragraphs (a)(1) and (2) of this clause do not bear a reasonable relation to the cost of the work in this contract.

- (1) Failure to justify such price to the satisfaction of the Contracting Officer will result in payment, as determined by the Contracting Officer, of-
(i) Actual mobilization costs at completion of mobilization;
(ii) Actual demobilization costs at completion of demobilization; and
(iii) The remainder of this item in the final payment under this contract.
(2) The Contracting Officer's determination of the actual costs in paragraph (b)(1) of this clause is not subject to appeal.

1.7 SEQUENCE OF DESIGN/CONSTRUCTION

(a) After receipt of the Contract Notice to Proceed (NTP) the Contractor shall initiate design, comply with all design submission requirements as covered under Division 01 General Requirements, and obtain Government review of each submission. No construction may be started, with the exception of clearing, etc, until the Government reviews the Final Design submission and determines it satisfactory for purposes of beginning construction. The Contracting Officer will notify the Contractor when the design is cleared for construction. The Government will not grant any time extension for any design resubmittal required when, in the opinion of the Contracting Officer, the initial submission failed to meet the minimum quality requirements as set forth in the Contract.

(b) If the Government allows the Contractor to proceed with limited construction based on pending minor revisions to the reviewed Final Design submission, no payment will be made for any in-place construction related to the pending revisions until they are completed, resubmitted and are satisfactory to the Government.

(c) No payment will be made for any in-place construction until all required submittals have been made, reviewed and are satisfactory to the Government.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 01015

DESIGN REQUIREMENTS AFTER AWARD
02/2002
AMENDMENT NO. 0003

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Section Includes

This section includes requirements for developing and submitting a design including preparation of drawings, specifications and design analyses conforming to the requirements contained in this section.

1.1.2 Section Excludes

This section does not include requirements for construction submittals which are specified in Section 01330 SUBMITTAL PROCEDURES.

1.2 DESIGN COMPLETION SCHEDULE

See paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK in Section 01000 DESIGN AND CONSTRUCTION SCHEDULE for the Completion Schedule of the entire work.

1.3 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.

CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI)

CSI MasterFormat (1995) MasterFormat

CODE OF FEDERAL REGULATIONS (CFR)

40 CFR 763 Asbestos

1.4 METRIC REQUIREMENTS (CONTRACTOR'S OPTION)

The Contractor has the option of providing the design in either English or Metric dimensions. Once the dimensional standard (English or Metric) is selected, the Contractor needs to remain consistent in using the same standard for the entire project. See Section 01016 DESIGN DOCUMENT REQUIREMENTS for additional requirements.

1.4.1 Definitions

Definitions of hard and soft metric are specified in Section 01415 METRIC MEASUREMENTS.

1.4.2 Project Documents

Wherever possible, the project documents shall be accomplished using "hard" metric measurements; drawings, narratives, calculations, dimensions, capacities, and similar expressions of measurement shall be expressed in "hard" metric units.

1.4.3 SI Units of Measure

Products and building components furnished in "hard" metric units are those manufactured using SI units of measure. SI units of measure shall be stated in metric only; do not repeat their English equivalency in parentheses following the metric unit.

1.4.4 Modular Construction Products

Soft metric conversions from their English units are permitted for modular construction products, unless the application of the product requires it to dimensionally coordinate into the 100 millimeter building module. Modular construction products are brick, concrete block, wallboard, plywood, suspended ceiling systems, recessed lighting, raised access flooring and other manufactured components with dimensions based upon a four (4) inch building module. Coordinate finishes available in metric with those available in non-metric.

1.4.5 Metric Design Guide

The designer shall obtain a copy of and follow the requirements in the "Metric Design Guide" (PBS-PQ260), May 1994, U.S. General Services Administration Public Buildings Service. A copy will be furnished after award of the contract.

1.5 DEFINITIONS

1.5.1 Acceptance

This is the Government's review of the design submittals, construction submittals, and record drawings for conformance to the Contract requirements. Acceptance shall not be construed to be an endorsement of the accuracy or completeness of the design. The Contractor is ultimately responsible for the contract design and construction. Design deficiencies or omissions in the accepted design shall be the responsibility of the Contractor and the Designer of Record.

1.5.2 Approve, Approved and Approval

As these words are used throughout the documents, they shall mean "as approved by the Designer of Record unless otherwise expressly stated." See Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES.

1.5.3 Complete Specification Section

A Complete Specification Section is one that follows the Construction Specifications Institute's (CSI) 16-Division, 3-Part Section format, including the required submittal register and testing requirements.

1.5.4 Contractor

Firm or company to whom award is made to design and construct the project.

1.5.5 Contract Documents

Contract Documents, in addition to the signed Contract Form and the Contract Clauses, include the Request for Proposal, all amendments, the Contractor's proposal as accepted at the time of contract award, and the Contractor approved, Government accepted 100% final construction documents.

1.5.6 Construction Documents

Documents provided by the Contractor and accepted by the Government for use in constructing the project, including but not limited to final design drawings and specifications, schedules, submittal registers, and color boards.

1.5.7 Corps of Engineers Guide Specifications (UFGS)

Includes the Corps of Engineers Unified Facilities Guide Specifications (UFGS) for Military Construction, the narrow-scope sections developed by the Fort Worth District (UFSWF GS), and the Fort Worth District Supplements to the UFGS.

1.5.8 Design Documents

Documents which include design drawings, project specifications, and design analyses (basis of design and calculations) prepared by or under the direct supervision of registered professional architects and engineers and proposed by the Contractor to meet the requirements of this Contract.

1.5.9 Design Drawings

Documentation showing in graphic and quantitative form the extent, design, location, relationships, and dimensions of the construction to be provided by the Contractor. (Note: Shop Drawings, as defined in Section 01330, "CONSTRUCTION SUBMITTAL PROCEDURES," are not to be provided until after design drawings are accepted for construction.)

1.5.10 Designer

Architects and Engineers (A/E) associated with the Contractor who are responsible for the design and have the qualifications and experience specified.

1.5.11 Designer of Record

The Contractor's Architect/Engineer (A/E) is the "Designer of Record" and officially approves the design submittals, construction submittals, and record drawings. There shall be a designer of record for each design discipline. The designer of record is solely liable for design errors and/or omissions and shall have professional liability insurance to insure the designer against design errors and omissions. The Contractor's Quality Control Staff will check and certify all submittals. See paragraph DESIGNER(S) OF RECORD for additional requirements.

1.5.12 Mandatory Guides

Mandatory Guides are those guides listed in the Project Table of Contents as Attachments or included in Divisions 2 through 16 of the Contract as unedited or partially edited guides and which shall be included in the

Contractor's technical specifications. Some of the guides may be partially edited while others may not be edited at all. The Contractor shall edit or finish editing these guides.

1.5.13 Mandatory Sections

Mandatory Sections are those sections included in Divisions 2 through 16 of the RFP which have been completely edited and shall be included in the Contractor's construction specifications verbatim.

1.5.14 Solicitation or Request for Proposal (RFP)

Documents furnished to prospective offerors containing proposal information and specifying criteria and project requirements for design and construction of the project. The documents include this specification, attachments, and the information drawings.

1.5.15 Construction Specifications

Construction specifications are the Contractor's developed construction specifications consisting of the Government-furnished Division 1 (General Requirements) sections, mandatory sections, and the Contractor-written sections in Divisions 2 through 16. Divisions 2 through 16 shall include the Contract mandatory specifications, the Contractor-edited Contract mandatory UFGS and UFSWF guide specifications, Contractor-developed UFGS sections for those items of work covered by the UFGS guides, and the Contractor-developed sections for those items of work not covered by the UFGS guides.

1.5.16 Design Development (60 Percent Design) Submittal

Design Development (60 Percent Design) Submittal shall mean 60 percent building and 100 percent site work, utilities (including utilities within the 1.5m (5 feet) line of the building), and foundation design submittal. See paragraph DESIGN SUBMITTALS for further clarification.

1.6 SUBMISSION OF CONSTRUCTION DRAWINGS, SPECIFICATIONS, AND DESIGN ANALYSES

1.6.1 Certification

With each submittal the Contractor shall certify that all items submitted in the design documents (after contract award) comply with the Contract requirements. The criteria specified in this Contract are binding contract criteria and in case of any conflict, after award, between the Contract criteria and Contractor's submittals, the criteria stated in the Document Order of Precedence in Section 00800 SPECIAL CONTRACT REQUIREMENTS will govern. The Contractor shall present with the letter of transmittal for each design submittal (including the 100 percent corrected design (compliance check) submittal) a certification that the submittal (drawings, specifications, design analysis, etc.) complies with the requirements stated above. Prepare the design certification and transmittal letter in the format shown on Attachment A attached at the end of this Section.

1.6.1.1 Signatures

The certification shall be signed by an officer of the Contractor's company and the licensed architect/engineer designer of record attesting that the drawings, specifications and design analyses prepared for the construction of the facility meet the requirements of the Contract.

1.6.2 Deviations

Deviations from the Contract requirements shall be identified in each design submittal's letter of transmittal. Deviations from the Contract requirements will be considered for approval by the Contracting Officer. The Contracting Officer may reject any deviation proposed by the Contractor without explanation.

1.6.3 Field Verification

The Contractor shall verify field conditions which are significant to design by field inspection, researching and reviewing the existing documents pertaining to the site and existing building(s), and evaluating observable existing conditions. The information shall be reflected in the design documents. It is the responsibility of the Contractor to evaluate existing conditions in the immediate proximity of the project to determine if such conditions may affect, or be affected by the proposed construction.

If there are site conditions which appear to affect the proposed construction the Contractor shall inform the Contracting Officer, in writing, before proceeding with the work.

1.6.4 Number of Copies

The number of copies for distribution is specified in paragraph "Review Document Distribution." For each design submittal, submit for review and acceptance the specified number of copies of the construction drawings, specifications, design analyses, equipment schedules, submittal register, and all other submittal data, which shall be in accordance with the requirements of the Contract Documents. Upon final acceptance, make distribution of the accepted design and construction documents within 7 calendar days. With each distribution, provide one CD-ROM disk (or more if required) containing all documents. The CD-ROM disks shall be fixated "Final," which is a recording option that renders the disk totally used so that no other data tracks can be added in a later recording session. Proposed modifications shall be submitted in 8 copies. Final modifications, after negotiations, shall be submitted in 8 copies (including one reproducible).

1.6.5 Final Construction Documents

Each distributed set shall consist of full-size paper drawings, specifications, submittal register, design analysis, and a CD-ROM disk(s) containing all of the final design documents (e.g. drawing, specification, submittal register, and design analysis files). Provide documents complete, accurate, and explicit enough to show compliance with the Contract requirements and to permit construction. Drawings and specifications illustrating systems proposed to meet the requirements of the Contract shall reflect proper detailing for each such system to assure appropriate use, proper fit, compatibility of components and coordination with the specifications and design analysis required by this section. Coordinate drawings to ensure there are no conflicts between design disciplines and between drawings and specifications. See Section 01016 DESIGN DOCUMENTS REQUIREMENTS for additional requirements. During and upon completion of the project, the accepted construction documents shall be corrected to reflect as-built conditions in accordance with Section 01770 CONTRACT CLOSEOUT.

1.6.5.1 Final Construction Drawings

In addition to the required number of hard copies of final design documents (e.g. drawings, specifications, submittal register, and design analysis), final construction (100 percent) drawings and record (i.e. as-built) drawings after the completion of the project shall be submitted on CD-ROM disk in the CADD format required by the Contract. On the CD-ROM disk include the electronic .dgn CADD drawing files, the CADD drawing files in .CAL format (CADD files converted to .CAL) for viewing on MaxView Reader, and an Excel spreadsheet listing for each drawing the drawing number, sequence number, level/layer assignments, line colors, line weights, and line types. See Section 01016 DESIGN DOCUMENT REQUIREMENTS for additional requirements.

1.6.5.2 Computer Aided Design and Drafting (CADD) Systems

Within 10 days of Contract Notice to Proceed, furnish for approval samples of CADD electronic files created on the equipment and software to be used for this work. CADD work will not proceed until the Contractor's proposed CADD system and resulting CADD files have been acceptably demonstrated to work on the Corps of Engineers' Fort Worth District Office and the User's CADD systems.

1.6.6 Specifications and Design Analysis

Specifications and design analysis shall be provided in hard copy and on the same CD-ROM disk as the drawings, Microsoft Word for Windows format (Version Word 97 minimum, but shall be compatible with the version used at Fort Hood). The Division 1 sections included in the Contract shall be reprinted in the final 100 percent construction specifications. Hard copies of the specifications and design analyses shall be bound separately in 3-ring binders. Each set of documents shall have its own Table of Contents. See Section 01016 DESIGN DOCUMENTS REQUIREMENTS for editing and format requirements.

1.7 DESIGN DOCUMENTS

Design documents shall include construction drawings, specifications, submittal register, design analysis, and drafts of DD Form 1354. Detailing and installation of all equipment and materials shall comply with the manufacturers' recommendations. Construction drawings and specifications shall not make reference to RFP requirements. The Contractor, including designers, shall visit the site and make other trips as necessary during the design to accomplish the work. See Section 01016 DESIGN DOCUMENT REQUIREMENTS for additional descriptions.

1.7.1 Drawings

See paragraph SUBMISSION OF CONSTRUCTION DRAWINGS, SPECIFICATIONS AND DESIGN ANALYSES, subparagraph "Final Construction Documents."

1.7.2 Specifications

Format shall be the Construction Specification Institute (CSI) 16-Division, 3-Part Section format and match that used by the UFGS guide specifications. Sections which are not part of the UFGS and Fort Worth District guide specification series shall be numbered in accordance with the CSI section numbering system defined in CSI MasterFormat. No two sections shall have the same section number. Specifications shall be in sufficient detail to fully describe and demonstrate the quality of materials, the installation

and performance of equipment, and the quality of workmanship. Division 1 specifications shall consist of the Division 1 sections included in the Contract. The specifications shall clearly identify the specific products chosen to meet the requirements of the Contract (manufacturers' brand names and model numbers or similar product information). Turfing sections shall indicate planting dates.

1.7.3 Design Analysis

Describe the design of each discipline of work, including all features and the necessary calculations, tables, methods, and sources used in determining equipment and material sizes and capacities. Provide sufficient information to support the design of the various categories such as, but not limited to, architectural, interior design, structural, mechanical, electrical, civil including grading, drainage, paving, environmental, and outside utility services, and Contract included items.

1.7.4 DD Form 1354

The 1354 process consists of a preliminary (draft) DD Form 1354 and a Final DD Form 1354. Prepare a preliminary (draft) of DD Form 1354, TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY, so that Fort Hood can update their real property maintenance records. This draft shall contain as many of the resource code items with cost and quantity data as can be developed from the Contractor's final 100% construction documents. Submit it to the Contracting Officer within 30 days of the Government's acceptance of the 100% construction documents. The Government will use this Final DD Form 1354 to develop the interim 1354. The form, a sample of a completed form, and a general list of resource codes with cost and quantity data are included in the ATTACHMENTS. An electronic file of the form, DD1354.frl, for use with Delrina Perform Pro Form Filler, version 16 Jul 1992, or its successor software Form Flow Filler, Version 2.22 (March 5, 1999) is located on the Solicitation and Contract CD-ROM disks.

1.8 DESIGN AND CONSTRUCTION PERSONNEL QUALIFICATIONS

1.8.1 Project Manager - Design

The design project manager shall have a recognized four year or higher college degree in architecture or engineering, be professionally licensed, and have at least 3 years experience in managing design projects and have at least 5 years of design experience. The Design Project Manager may be the lead designer, and shall not be the same individual as the Construction Project Manager.

1.8.2 Project Manager - Construction

The project manager shall have a recognized four-year or higher college degree in architecture, engineering (or related technical fields), or construction management and have at least 5 years experience in managing design and construction projects or 10 years experience in managing construction projects only.

1.8.3 Project Architect

The project architect shall have a recognized four-year or higher college degree in architecture, be professionally licensed, 3 years experience as a lead architect, and have at least 5 years design experience.

1.8.4 Designers

In addition to the Project Architect, provide at least one professional licensed architect or engineer for each of the other design disciplines (landscape architectural, civil, electrical, mechanical, and structural design) with at least 5 years experience in their discipline. Each lead designer shall have a recognized four-year (or higher) college degree in architecture or engineering. The fire protection system shall be designed by a registered engineer with a minimum of five years experience in designing fire protection systems. **(Am#3) Analysis, design and installation of the lightning protection system shall be accomplished by a lightning protection specialist.** The field work, analysis, and design of the cathodic protection system shall be accomplished by or under direct supervision of an engineer licensed in corrosion engineering or a corrosion specialist certified by the National Association of Corrosion Engineers (NACE). Corrosion Engineer or Corrosion Specialist shall have a minimum of five years experience in designing and installing cathodic protection systems. **(Am#3)**

(Am#3) 1.8.5 Lightning Protection Specialist

Lightning Protection Specialist shall be a master certified by the lightning protection institute (LPI) in design and installation. This specialist shall have a minimum of five years experience in Design and Installation of lightning protection systems.

1.8.6 Registered Communications Distribution Designer

This project requires the utilization of a Communications Consultant who is a Registered Communications Distribution Designer (RCDD). This person shall design the telecommunications systems for the project, be involved in all phases of design, and shall coordinate with other disciplines for the systems listed in the Design Criteria References and these Design Instructions. This communication consultant shall have a minimum of five years of Telecommunications Design experience. The use of any on-staff electrical engineers for design of the telecommunication systems and who are not RCDD is not acceptable.

1.8.7 Design Quality Control Manager

Design quality control manager and the alternate manager qualifications are specified in Section 01430 DESIGN QUALITY CONTROL. Design quality control manager shall not be the same person as the construction quality control manager.

1.8.8 Construction Quality Control Manager

Construction quality control manager and assistants qualifications are specified in Section 01451 CONSTRUCTION QUALITY CONTROL. Construction quality control manager shall not be the same person as the design quality control manager.

1.8.9 CADD Personnel

CADD personnel shall be proficient in the preparation of architectural and engineering drawings and the CADD equipment that will be used to create the required drawings and record drawings. The lead CADD person shall have at least 5 years experience on the proposed equipment.

1.8.10 Project Schedule Scheduler

Qualifications for the Scheduler are specified in Section 01320 PROJECT SCHEDULE.

1.9 DESIGNER(S) OF RECORD

The Contractor shall identify, for approval, the Designer of Record for each area of work. One Designer of Record may be responsible for more than one area. All areas of design disciplines shall be accounted for by a listed, registered Designer of Record. The Designer(s) of Record shall stamp, sign, and date all design drawings under their responsible discipline at each design submittal stage (see Section 00800 SPECIAL CONTRACT REQUIREMENTS, clause "Registration of Designers.")

1.10 CONSTRUCTION MANAGEMENT KEY PERSONNEL

The Contractor's construction management key personnel shall be actively involved during the design process to effectively integrate the design and construction requirements of this Contract. In addition to the typical required construction activities, the Contractor's involvement shall include, but is not limited to, actions such as integrating the design schedule into the Master Schedule to maximize the effectiveness of fast-tracking design and construction (within the limits allowed in the Contract), ensuring constructability and economy of the design, integrating the material and equipment acquisition programs to meet critical schedules, effectively interfacing the construction QC program with the design QC program, and maintaining and providing the design team with accurate, up-to-date redline and as-built documentation. The Contractor shall require and manage the active involvement of key trade subcontractors in the above activities. The Contractor's Quality Control Staff will check and certify all submittals.

1.11 DESIGN SUBMITTALS

1.11.1 General

The Contractor shall schedule the number and date of the design submittal phases and conferences. Design submittals are required at the Design Development (preliminary 60 percent), Construction Drawings (final 100 percent) design stages and at the corrected Construction Drawings (final design) stage. The number, date, and contents of the design submittal phases shall be reflected in the project schedules. An authorization letter to start work will be provided separately by the Contracting Officer for each phase of the design. See paragraph "Government Design Review and Acceptance" and Section 01016 DESIGN DOCUMENTS REQUIREMENTS for additional requirements.

1.11.2 Design Development (60 Percent Design) Submittal

The 60 percent design submittal includes the 60 percent in-progress building design and the 100 percent complete site work, exterior utilities, and foundation design. These documents shall be packaged and stamped "For Review Only - Design Development (60% Design)". Each sheet of the drawings shall also be stamped except sitework, exterior utilities, and foundation drawings which will be stamped Construction Drawings (100% design) submittal. See Section 01016 DESIGN DOCUMENTS REQUIREMENTS for additional requirements.

1.11.3 Construction Drawings (100 Percent Design) Submittal

The 100 percent design submittal includes complete site and utility design and building design and shall be stamped "For Review Only -Construction Drawings (100% Design)", and each sheet of the drawings shall also be stamped. Contractor shall make final proposal of all materials and finishes at this stage.

1.11.4 Compliance Check Design Submittal

The compliance check design submittal(s) after the Government review of the 100 percent complete site and building designs shall be stamped "100% Corrected Design"; and each sheet of the drawings shall also be stamped and signed by the Designer of Record.

1.11.5 Insufficient Design Submittals and Delays

No additional time for completion of the contract will be granted to the Contractor due to insufficient design submittals. Delays caused by the Contractor in completion of the Design Development (60 percent design), Construction Documents (100 percent design), or the 100 percent corrected design will not be considered as valid reason to delay the entire project within the specified project duration.

1.11.6 Deviations or Betterments

The Contractor shall bring to the Government's attention any deviations or betterments made to the RFP and Contractor's proposal documents. These shall be summarized in letter form with reasons and highlighted or clouded details on the applicable drawings and documents submitted. See Section 00800 SPECIAL CONTRACT REQUIREMENTS for additional requirements concerning betterments.

1.11.7 Review Design Documents

The Contractor shall submit all drawing design documents on black-line media with "FOR REVIEW" stamped in 12.5 mm high letters in the lower right corner in red ink. Specifications and Design Analyses shall be hard copy with "FOR REVIEW" stamped in 12.5 mm high letters in the lower right corner in red ink. The Contractor shall submit Contractor-approved documents on black-line media with "APPROVED FOR CONSTRUCTION" similarly stamped.

1.12 DESIGN REVIEWS

Design reviews will be held in the offices of the Fort Worth District's Central Texas Area Office at Fort Hood, Texas at the Design Development (preliminary 60 percent), Construction Drawings (final 100 percent), and corrected final stages of the final design in accordance with the Contractor's Project Schedule. The Government shall have thirty (30) calendar days review period for each submittal ((Design Development (60 percent design) and Construction Documents (100 percent Design)) and fourteen (14) calendar days review period for resubmittal of the 100 percent Design (including the 100% final site work, utilities, and foundation portion of the 60% Submittal and the Compliance Check Design) after incorporation of final review comments. Design review conference(s) between the Contractor and the Government may be held after submittal of the Design Development (60 percent) and Construction Documents (100 percent) design(s) if the Government determines them necessary. The time for Government review will be calculated from the date of receipt of the design

submittals at the Government address to the date annotated conformance review comments are mailed to the Contractor.

1.12.1 Review Intent

Reviews will be for conformance with the technical requirements of the Contract. If the Contractor disagrees technically with any comment and does not intend to comply with the comment, the Contractor shall clearly outline, with ample justification, the reasons for noncompliance within 5 days after receipt of these comments in order that the comment(s) can be resolved. The Contractor shall furnish disposition of all comments, in writing, with the next scheduled submittal. If the Contractor believes the action required by any comment exceeds the requirements of the Contract, the Contractor shall immediately notify the Contracting Officer in writing and take no action regarding this matter until the matter is resolved.

1.12.2 Late Submittals

If a design submittal is over one (1) day late in accordance with the latest design schedule, the Government review period will be extended 7 days. The review conference will be held the week after the review period. Submittal date revisions shall be in writing at least one week prior to the affected submittal.

1.12.3 Review Document Distribution

For each review, review documents shall be sent, in the quantity indicated, to the addresses listed below. The documents will be in their then present "on-board" design status. All documents must contain an index of contents. Work shall, however, continue up to the time of the review conference date(s) when 2 copies of then-current design documents will be brought to the issuing office for the conference review. Originals of transmittal letters shall be sent to the Area Engineer, address as shown below, and copies should accompany each mail package. Transmittal letters shall indicate distribution by use of the "ATTN" code shown in the address.

No. of Copies

- (8 Copies) District Engineer
US Army Engineer District, Fort Worth
ATTN: CESWF-EC-D (Mr. James Mckenzie)
P.O. Box 17300
Fort Worth, TX 76102-0300
- (11 Copies) Commander, III Corps and Fort Hood,
ATTN: AFZF-PW-PPD,
(Mr. Ken Slaughter),
Building 4612, Engineer Drive
Fort Hood, TX 76544-5057
- (1 Copy) Commander, USAISEC-FDEO,
ATTN: AMSEL-IE-DE-IN-CO (SAIC)
(Mr. George Gaffney)
1435 Porter St., Suite 200
Fort Detrick, MD 21702-5047
- (5 Copies) US Army Engineer District, Fort Worth ;
ATTN: CESWF-AO-C

Mr. M. Leon Carroll
Bldg 4622,
PO Box 757
Killeen, TX 76540-0757
(Ofc location: Bldg 4622, Engineer Dr and 79th
Street - Ft Hood, TX 76544)

1.12.4 Additional Review Time

If for any reason the Government requires more time than that stated for review, then the Contractor will be granted an extension of time equal to the number of calendar days of delay.

1.12.5 Government Design Review and Acceptance

Government personnel will present review comments for discussion and resolution. Copies of comments, annotated by the Designer of Record with comment action agreed on, will be made available to all parties at least 10 calendar days prior to the conference. Review conferences will be scheduled by the Contractor. Unresolved problems will be resolved by immediate follow-on action at the end of conferences. Valid comments will be incorporated into the Documents. On receipt of final corrected design documents (with all backcheck comments incorporated) that are acceptable, the Contracting Officer shall notify the Contractor in writing that the documents are accepted and construction may begin. Furnish the final design and construction documents in accordance with paragraph "Number of Copies." The Government, however, reserves the right to not accept design document submittals if outstanding unincorporated comments are of too great a significance. In this case, every effort shall be made during follow-up action between the Contractor and the Fort Worth District to resolve conflicts and problems such that documents can be accepted. However, if final submittal(s) are incomplete or deficient, requiring correction by the Contractor and resubmittal for review, the cost of rehandling and reviewing will be deducted from payment due the Contractor at the rate of \$500.00 per submittal.

1.13 Final Construction Documents

Following the last submittal, the Contractor shall forward the completed original set of reproducibles for acceptance. Upon Government acceptance of corrected 100 percent final design documents, the original will be returned to the Contractor for reproduction purposes. The Contractor shall be responsible for reproduction. Within 7 calendar days after acceptance, the Contractor shall mail 1 complete set of the accepted design documents to the Fort Worth District, CESWF-EC-DC (Am#3) Attn: Jim McKenzie and 5 complete sets to the Corps of Engineers' Area Engineer, Central Texas Area Office. Each set shall consist of full size paper drawings, specifications, and design analysis and CD-ROM disk(s) containing all drawing, specifications, submittal register, and design analysis files). During and upon completion of the project, the accepted design documents shall be corrected to reflect as-built conditions in accordance with Section 01770 CONTRACT CLOSEOUT. After acceptance, changes to the final construction documents shall not be made without the Contracting Officer's knowledge and acceptance.

1.14 COORDINATION

1.14.1 Written Records

The Contractor shall prepare a written record of each design site visit, meeting, or conference, either telephonic or personal, and furnish copies to the Contracting Officer and all parties involved within 5 working days. Include subject, names of participants, outline of discussion, and recommendation or conclusions. Number each written record for the particular project under design in consecutive order.

1.14.2 Design Needs List

Throughout the life of the Contract the Contractor shall furnish the Contracting Officer a biweekly "needs" list for design related items. This list shall itemize in an orderly fashion design data required by the Contractor to advance the design in a timely manner. Each list shall include a sequence number, description of action item, and the name of the individual or agency responsible for satisfying the action item and remarks. Maintain the list on a continuous basis with satisfied action items checked off and new action items added as required. Once a request for information is initiated, that item shall remain on the list until the requested information has been furnished or otherwise resolved. Mail copies of the lists\ to both the Contracting Officer and the agencies tasked with supplying the information.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 ATTACHMENTS

ATTACHMENT A

[Prime Contractor's Letterhead]

Date: _____

Contract No.: _____

[Reviewing Component Address]

Subject: DESIGN CERTIFICATION AND TRANSMITTAL FOR

Project Title: _____

Project Location: _____

Contract No.: _____

Gentlemen,

Enclosed are the following documents which I hereby certify are in compliance with the Contract requirements of the subject construction contract and can be used to commence construction subject to Government acceptance:

1. Project Drawings
2. Project Specifications
3. Design Analysis
 - a. Civil
 - b. Water Supply and Wastewater Collection
 - c. Architectural
 - d. Interior Design
 - e. Structural
 - f. Mechanical
 - g. Fire Protection
 - h. Electrical
 - i. Environmental
4. Submittal Register

[Typed Name and Signature of the
Officer of the Prime Contractor's company]

5. Deviations

Copy to: [As standard with the Contractor]

[Typed Name and Signature of the
Licensed Architect/Engineer of Record]

-- End of Section --