

DEPARTMENT OF THE ARMY
Omaha District, Corps of Engineers
106 South 15th Street
Omaha, Nebraska 68102-1618

:NOTICE: Failure to acknowledge : Solicitation No. DACA45 02 R 0021
:all amendments may cause rejec- :
:tion of the offer. See FAR : Date of Issue: 8 MAY 2002
:52.215-1 of Section 00100 : Date of Receiving Proposals:
19 JUN 2002

Amendment No. 0001
30 May 2002

SUBJECT: Amendment No. 0002 to Request for Proposal Solicitation Package
for Design and Construction of REPLACE FAMILY HOUSING, PHASE 1
(FY 02) & PHASE 2 (FY 03), FXBM 994502, ELLSWORTH AFB, SOUTH
DAKOTA.
Solicitation No. DACA45 02 R 0021.

TO: Prospective Offerors and Others Concerned

1. The specifications and drawings for subject project are hereby modified
as follows (revise all specification indices, attachment lists, and drawing
indices accordingly). A new CD-ROM includes the amendment narrative and all
new and revised drawings.

a. Specifications. (Descriptive Changes.)

(1) Standard Form SF1442, delete pages 00010-1 thru 00010-6 and
substitute the attached Pages 00010-1 thru 00010-6.

(2) Section 00110, Page 2, paragraph 1.4, delete first sentence
reading "Offerors shall submit ... as described herein:" and
substitute:

"Offerors shall submit the original and six (6) copies of their
proposal, each consisting of two 3-ring binders with Tabs (dividers)
separating the sections, as described below. Tab 1 - Technical Data
will be submitted in a binder separate from Tabs 2 through 5."

(3) Section 00110, Page 3, paragraph 2.1.1, at the beginning of
the paragraph, insert:

"Tab 1 - Technical Data will be submitted in a separate binder from
Tabs 2 through 5."

(4) Section 00110, Page 4, paragraph 2.1.1, line 10 from top of
page, after "delivery of the housing units.", insert:

"Any betterment included in the Offeror's proposal that is applicable
to housing units shall be applicable for all the housing units. See
Section 01001 GENERAL REQUIREMENTS for list and priority of
betterments."

(5) Section 00110, Page 13, paragraph 4(f)(7)(ii) Above Average, line 3, sentence beginning with "Deficiencies...", delete "Deficiencies" and substitute "Weaknesses".

(6) Section 00800, Page 5.

(a) Paragraph 1.6.1, lines 1 thru 3, delete "The Contractor will be given ... pricing option is exercised." and substitute:

"The Contractor will be given all the Phase 1 (FY 02) and Phase 2 (FY 03) housing units at Notice to Proceed (NTP). No demolition or work on the Phase 2 units shall begin until the Phase 2 pricing option(s) are exercised. The Contractor is prohibited from allowing any workers to live in the existing Phase 1 and Phase 2 housing units."

(b) Paragraph 1.6.2, line 3, after "shall be completed", insert: "and accepted by the Contracting Officer".

(7) Section 00800, Page 8, delete paragraph 1.13 in its entirety and substitute:

"1.13 BASE CIVIL ENGINEER WORK CLEARANCE REQUEST (AF FORM 103), "DIGGING PERMIT."

The Contractor will be responsible for coordinating a government supplied, Base Civil Engineer Work Clearance Request (AF Form 103) prior to performing digging of any type. The Contractor shall process the digging permit by coordinating with and obtaining signatures from responsible representatives of the organizations listed on the AF Form 103 prior to obtaining final approval from the Air Force Base Civil Engineer or his approved representative. The area requested for clearance for each individual permit shall be limited to a maximum of two (2) weeks production for an individual permit. The Contractor will be given assistance, by the Government, in the execution of the initial two (2) Work Clearance Requests. Thereafter, Government assistance will be limited to an as-needed basis in the event of unusual circumstances. It will be the contractor's responsibility to coordinate the completion of the necessary AF Form 103 and arrange to have existing utilities located as indicated on the completed form, prior to the beginning of digging operations in the individual areas. This coordination is anticipated to take approximately three (3) working days to complete per request, and may require coordination with as many as twenty (20) individuals located on or near the base. A blank copy of the AF Form 103 is included at the end of this section. Any unusual delay in obtaining approval from any particular organization will be reported immediately to the Chief of Construction Management.

(a) Utility Staking Requirements: The Contractor shall layout and mark his intended utility routing before calling for field coordination by utility personnel. This shall be done a minimum of five working days in advance of when digging is expected to begin. Once all responsible utility representatives have field located crossover and/or interference points between the new utility route and existing utilities, and signed off on the digging permit to signify completion of the field coordination of the digging permit, then digging in the

area represented by the digging permit may begin. Any utility service markers or markings established by the utility representatives must be maintained by the Contractor through the completion of the digging operations.

(b) Digging Operations: Digging near established interference or crossover points shall be done by hand, five (5) feet either side of the point along the intended route, in order to prevent disturbing the existing utility. If the existing utility is uncovered in the new excavation, it shall be protected from damage and movement while in the open excavation and during backfill. The contractor shall be responsible for the repairs and associated costs for repairs of any utility damaged by construction, whose location was made known to the Contractor."

(8) Section 00800, Attachments, insert the attached Base Civil Engineer Work Clearance Request (AF Form 103).

(9) Section 01001, Page 2, paragraph 1.1, line 4, after "South Dakota.", insert:

"See Pricing Schedule for 74 Basic and 4 Option units."

(10) Section 01001, Page 3, Paragraph 1.1.

(a) Unit Quantities and Sizes for Phase 1 (FY 02), delete all information listed for B4a, B4b, C4a and C4b units and substitute:

"B4 21 1350 SF 1350 SF 4" and

"C4 17 1350 SF 1350 SF 4".

(b) Option O-4 Sizes for Phase 1 (FY 02) Units, delete all information listed for B4a, B4b, C4a and C4b units and substitute:

"B4 1567 SF" and

"C4 1528 SF".

(11) Section 01002, Page 10, paragraph 2.1.7.7, delete the entire text of this paragraph and substitute:

"Existing street signs shall remain in-place."

(12) Section 01002, Page 13, add the following new paragraph 2.1.7.12, as follows:

"2.1.7.12 Bus Shelter Repair

The three (3) existing bus shelters shall remain in-place. Location of bus shelters is shown on the RFP drawings. The existing bus shelters are primarily aluminum-framed structures with glazing panels. The glazing panels shall be replaced on these shelters. See Section 01003 ARCHITECTURAL HOUSING UNIT REQUIREMENTS for glazing panel requirements."

(13) Section 01002, Page 36.

(a) Paragraph 9.2.1, line 2, after "equipment and appliances.", insert:

"The existing units to be demolished are two-story brick duplexes of which 16 units (8 duplexes) have partial basements accessible from the outside and all other units have full basements accessible from the inside."

(b) Paragraph 9.2.2, line 1, delete "signs,"; Also, line 2, after "Family Housing Project", insert:

", except for existing bus shelters."

(14) Section 01003, Page 7, paragraph 7.7, line 10, after "all roofing products.", insert:

"A 5-year warranty against installation defects that materially affect the performance shall also be provided for the completed roofing installations. Installation defects shall be considered to include any application where precipitation produced water enters the facility, prescribed components for a complete assembly are discovered to be missing, components move from their place of application or visual flaws become visible due to incorrect installation procedures as defined by recognized application instruction documents of the manufacturer or the roofing industry."

(15) Section 01003, Page 12.

(a) Following paragraph 8.4, add:

"8.5 BUS STOP SHELTERS

Replace the glazing in three existing bus stop shelters. Glazed panels measure 5 feet 6 inches x 7 feet 0 inches (2 per each shelter) and 2 feet 6 inches x 7 feet 0 inches (2 per each shelter). New glazing shall be of laminated glass units, 1/4 inches thick. Laminated glass shall consist of two layers of fully tempered transparent flat type, clear glass. Glass shall be bonded together with a standard PVB interlayer. Glazing accessories and procedures shall be as recommended by the glazing manufacturer."

(b) Paragraph 9.1, lines 6 thru 8, delete "with cultured marble ... ANSI A118.9" and substitute:

"as specified in Section 01006 MECHANICAL HOUSING UNIT REQUIREMENTS, paragraph 4.3.4 Bathtub/Shower Units."

(16) Section 01003, Page 14, paragraph 11.1.4, to the end of the paragraph, add:

"Ranges shall be natural gas units. See Section 01006 MECHANICAL HOUSING UNIT REQUIREMENTS for gas piping requirements."

(17) Section 01004, Page 4.

(a) To the end of paragraph 4.1, add:

"See RFP drawings for required locations of carpet."

(b) Paragraph 4.2, line 2, delete "for dining and family rooms" and substitute:

"(See RFP drawings for required locations of sheet vinyl.)"

(18) Section 01005, Page 2, paragraph 3.1, line 2, delete "structural engineer registered in the state of South Dakota" and substitute "registered structural engineer".

(19) Section 01009, Page 2.

(a) Paragraph 1.2, lines 1 thru 7, delete "The Contractor shall be responsible for ... shall require preparation and submission of" and substitute:

"The Contractor shall prepare".

(b) Paragraph 1.3, lines 2 thru 5, delete "Ellsworth Air Force Base points of contact ... appropriate health and safety requirements for demolition."

(20) Section 01009, Page 3, paragraph 1.4.

(a) First paragraph, line 2, delete "one type of material" and substitute "two types of materials."; Also, to end of the first paragraph, add:

"In addition, asbestos-containing floor with associated asbestos-containing mastic is assumed to be present underneath existing flooring in the kitchens, entryways, and hallways."

(b) Second paragraph, delete the first sentence reading "The Contractor has two options for disposal of this material." and substitute:

"The Contractor shall propose to either remove remaining asbestos-containing materials or leave them in place for demolition."

(c) Delete the third paragraph reading "If removal of the transite is proposed, the Contractor ... for workers, decontamination, and air monitoring." and substitute:

"If removal of asbestos-containing materials is proposed, the Contractor shall follow the requirements of Section 13280A ASBESTOS ABATEMENT. If demolition with asbestos-containing materials in place is proposed, the Contractor shall follow the requirements of Section 01400 SPECIAL SAFETY REQUIREMENTS, including all paragraphs related to asbestos; and shall comply with all applicable state of South Dakota regulations."

(21) Section 01332, Page 18, paragraph 2.3.2, delete the text of this paragraph and substitute:

"If the Contractor proposes to demolish the buildings with all asbestos-containing materials in place, all requirements in Section 01400 SPECIAL SAFETY REQUIREMENTS, including those pertaining to asbestos and lead, shall be followed. If the Contractor proposes to remove asbestos-containing materials prior to demolition, the asbestos requirements of Section 13280 ASBESTOS ABATEMENT shall be followed instead of the asbestos requirements of Section 01400."

(22) Section 01332, Page 28, paragraph 3.6.1.2, address for U.S. Army Corps of Engineers, Black Hills Area Office, delete "2100 South 7th, Suite 102, Rapid City, SD 57701" and substitute:

"631 St. Anne Street
Suite 101
Rapid City, South Dakota 57701-4667".

(23) Section 01451A, Page 5, paragraph 3.4.2, lines 7 thru 9, delete "assigned as System Manager but may have other duties as project superintendent in addition to quality control" and substitute "assigned no other duties".

(24) Attachment D, delete reference to Section 02440 TRAFFIC SIGNS in its entirety.

b. Specifications (New and/or Revised and Reissued). Delete and substitute or add specification pages as noted below. The substituted pages are revised and reissued with this amendment. For convenience, on the revised specification pages, changes have been identified by underlining of added text and strikeout of deleted text.

| <u>Pages Deleted</u> | <u>Pages Substituted or Added</u> |
|----------------------|---|
| 01400-1 thru 01400-5 | 01400-1 thru 01400-11 |
| --- | 13280A-1 thru 13280A-36 and Attachments |

c. Drawings (Deleted). The following sheets of drawing code AF 711-15-01 are deleted from the RFP drawings.

(1) Sheets A1.5 and A2.5.

d. Drawings (Reissued). The following sheets of drawing code AF 711-15-01 are revised with latest revision date of 30 May 2002, and reissued with this amendment. These drawings are included on the reissued CD-ROM issued with this amendment. The only drawings not reissued are Sheets G0.1, G1.2 and C0.0, but are included with the amendment set.

(2) Sheet G1.1.

(3) Sheets C0.1, C0.2, C0.3, C2.2, C2.2 and C4.1.

(4) Sheets A1.1, A1.2, A1.3, A1.4, A2.1, A2.2, A2.3, A2.4, A3.1, A3.2, A3.3, A3.4, A3.5, A5.1, and A6.1.

(5) Sheet EU.1.

e. Drawings (New). The following new sheets of drawing code AF 711-15-01 dated 30 May 2002 are hereby added to the request for proposal drawings and are issued with this amendment. These drawings are included on the reissued CD-ROM issued with this amendment.

(1) Sheets C0.4 and C0.5.

(2) Sheets V1.1 and V1.2.

2. This amendment is a part of the proposing papers and its receipt shall be acknowledged on the new Standard Form 1442. All other conditions and requirements of the request for proposal remain unchanged. If the proposals have been mailed prior to receiving this amendment, you will notify the office where proposals are received, in the specified manner, immediately of its receipt and of any changes in your proposal occasioned thereby.

a. Hand-Carried Proposals shall be delivered to the U.S. Army Corps of Engineers, Omaha District, Contracting Division (Room 301), 106 South 15th Street, Omaha, Nebraska 68102-1618.

b. Mailed Proposals shall be addressed as noted in Item 8 on Page 00010-1 of Standard Form 1442.

3. Offers will be received until 3:00 p.m., local time at place of receiving proposals, 19 JUN 2002.

Attachments:

Standard Form 1442, Pages 00010-1, 00010-2, 00010-3, 00010-4, 00010-5 & 00010-6
Base Civil Engineer Work Clearance Request (AF Form 103)
Spec Pages listed in 1.b. above
Dwgs. listed in 1.d. and 1.e. above
Pre-Proposal Conference Meeting Minutes with Attendance Roster (For Information Only)

U.S. Army Engineer District, Omaha
Corps of Engineers
106 South 15th Street
Omaha, Nebraska 68102-1618

30 May 2002
DRL/4547

| | |
|--|--|
| 14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code) DUNS Number : CODE FACILITY CODE | 15. TELEPHONE NO. (Include area code) 16. REMITTANCE ADDRESS (Include only if different than Item 14) |
|--|--|

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within * calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)

AMOUNTS

* - 120
 See Attached PRICING SCHEDULE
 Contractor's Fax No. _____ CAGE CODE _____
 Contractor's E-Mail address _____

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS

(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each)

| AMENDMENT NO. | | | | | | | | | |
|---------------|--|--|--|--|--|--|--|--|--|
| DATE | | | | | | | | | |
| | | | | | | | | | |

| | | |
|---|----------------|-----------------|
| 20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) | 20B. SIGNATURE | 20C. OFFER DATE |
|---|----------------|-----------------|

AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

| | |
|------------|---------------------------------------|
| 22. AMOUNT | 23. ACCOUNTING AND APPROPRIATION DATA |
|------------|---------------------------------------|

| | | |
|--|-------------------|--|
| 24. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified) | ITEM 26 | 25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO <input type="checkbox"/> 10 U.S.C. 2304(c) () <input type="checkbox"/> 41 U.S.C. 253(c) () |
|--|-------------------|--|

| | |
|---|--|
| 26. ADMINISTERED BY CODE | 27. PAYMENT WILL BE MADE BY |
| U.S. Army Engineer District, Omaha 106 South 15th Street Omaha, Nebraska 68102-1618 | USAED Omaha c/o USACE Finance Center 5722 Integrity Drive Millington, TN 38054-5005 |

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

| | |
|---|--|
| <input type="checkbox"/> 28. NEGOTIATED AGREEMENT (contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract. | <input type="checkbox"/> 29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation, is hereby accepted as to the items listed. This award commutes the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary. |
|---|--|

| | |
|--|--|
| 30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print) | 31A. NAME OF CONTRACTING OFFICER (Type or print) |
| 30B. SIGNATURE | 30C. DATE |
| 31B. UNITED STATES OF AMERICA | |
| BY | |
| 31C. AWARD DATE | |

PRICING SCHEDULE

| <u>Item</u> | <u>Description</u> | <u>Quantity</u> | <u>Unit</u> | <u>Unit Price</u> | <u>Amount</u> |
|--|---|-----------------|-------------|-------------------|---------------|
| <u>BASIC</u> | | | | | |
| 1. | Entire work complete for Replace Family Housing (Phase 1)- FY-02 (74 Junior Enlisted Housing Units and associated site work at Ellsworth AFB (construction cost only), excluding Options listed below. | Job | L.S. | xxx | \$ _____ |
| | Design Cost for Item No. 1 | Job | L.S. | xxx | \$ _____ |
| TOTAL AMOUNT OF BASIC (Basic Item No. 1) | | | | | \$ _____ |
| <u>OPTIONS</u> | | | | | |
| O-1 | All work complete for Each of the following FY-02 Junior Enlisted Housing Units and associated site work (design and construction cost), excluding Sub-Option Items O-3B and O-4B listed below. See last sentence of Note 2. | | | | |
| 0-1A | One Housing Unit Type B3 | Job | L.S. | xxx | \$ _____ |
| 0-1B | One Housing Unit Type B4 | Job | L.S. | xxx | \$ _____ |
| 0-1C | One Housing Unit Type C3 | Job | L.S. | xxx | \$ _____ |
| 0-1D | One Housing Unit Type C4 | Job | L.S. | xxx | \$ _____ |
| TOTAL AMOUNT (OPTION O-1) | | | | | \$ _____ |
| O-2 | All work complete for Replace Family Housing (Phase 2)- FY-03 (22 Junior Enlisted 3-Bedroom Units and associated site work at Ellsworth AFB (construction cost Only), excluding Options listed below. | Job | L.S. | XXX | \$ _____ |
| | Design Cost for Item No. O-2. | Job | L.S. | XXX | \$ _____ |
| TOTAL AMOUNT (OPTION O-2) | | | | | \$ _____ |

O-3 Additional amount to provide a two-car garage and a two garage door openers, in lieu of one-car garage and one door opener in Basic Item No. 1 and Option Item Nos. O-1 And O-2 (design and construction cost).

| | | | | | |
|---------------------------|--|-----|-------|----------|----------|
| O-3A | FY-02 Housing Units (Basic Item 1). | Job | L.S. | XXX | \$ _____ |
| O-3B | FY-02 Housing Units (Option Item O-1). | 4 | Units | \$ _____ | \$ _____ |
| O-3C | FY-03 Housing Units (Option Item O-2). | Job | L.S. | xxx | \$ _____ |
| TOTAL AMOUNT (OPTION O-3) | | | | | \$ _____ |

O-4 Additional amount to provide the additional square Footage as shown on the RFP drawings for each floor Plan type. (design and construction cost).

| | | | | | |
|---------------------------|--|-----|-------|----------|----------|
| O-4A | FY-02 Housing Units (Basic Item 1). | Job | L.S. | xxx | \$ _____ |
| O-4B | FY-02 Housing Units (Option Item O-1). | 4 | Units | \$ _____ | \$ _____ |
| O-4C | FY-03 Housing Units (Option Item O-2). | Job | L.S. | xxx | \$ _____ |
| TOTAL AMOUNT (OPTION O-4) | | | | | \$ _____ |

O-5 Additional amount to complete construction for Basic Item No. 1 within 12 months from NTP Of site and foundation work.

| | | | | | |
|--|--|-----|------|-----|----------|
| | | Job | L.S. | xxx | \$ _____ |
|--|--|-----|------|-----|----------|

GRAND TOTAL AMOUNT (BASIC PLUS ALL OPTIONS) \$ _____

NOTES:

- See SECTION 00100, INSTRUCTIONS, CONDITIONS, & NOTICES TO OFFERORS FOR AWARD for evaluation of options. The Government reserves the right to exercise the following Options and sub-Option items no earlier than 1 October 2002 and no later than 15 February 2003: O-2, O-3C, and O-4C; and all other FY-02 options or sub-option items: O-1A, O-1B, O-1C, O-1D, O-3A, O-3B, O-4A, O-4B and O-5 within 90 days after issuance of Notice to Proceed. Sub-Option Item Nos. O-3B, O-3C, O-4B and O-4C will not be exercised without first exercising the corresponding housing units Option. The terms "Construction Cost" and "Design Cost", noted above, includes everything required to complete the work, including associated profits and fees.
- Basic Item No. 1 and Option Item Nos. O-1 and O-2 housing units includes, but is not limited to: demolition of corresponding number of existing units, construction of new housing units, basements (excluding 'D'--ADA Units), 1-Car

Garages, double wide driveways, garage door openers for 1-Car garages, playgrounds and associated equipment, and backyard fencing, porches and other items required by the solicitation. Basements are to be used for mechanical equipment and interior storage. Laundry equipment will be located in the basement in 'B' and 'C' units, but will remain on the first floor in 'D' --ADA units. For Option Item O-1, Contractor has choice of housing unit location from locations shown on RFP drawings for FY 02 Housing Units [Types B3, B4, C3 and C4].

3. Prices must be entered for all items of the schedule. Grand total amount offers submitted without prices being entered on the individual items will be rejected. Additions will be subject to verification by the Government. Unit prices above are not subject to the provisions of Contract Clause "Variations in Estimated Quantities".

4. Project Completion Time:

In the spaces provided in the Pricing Schedule below, insert the design and construction durations for the items indicated below. Offers submitted without completion times being entered for each of these Items in pricing schedule being evaluated may be rejected. **See Section 00110, Paragraph 2.3.2 Evaluation, item (b) Project Schedule.** Project completion time includes design, design reviews, construction, and final clean-up of premises.

5. Construction Cost (Design and Construction) limitation, See Section 00100, Paragraph 2.2, DESIGN AND CONSTRUCTION COSTS.

CONSTRUCTION AND DESIGN TIME

BASIC ITEM NO. 1 (FY-02 HOUSING UNITS, INCLUDING SUB-OPTION ITEMS O-3A AND O-4A, EXCLUDING OPTION ITEM O-5)

Design and Construction time (From date of NTP for Basic Item No. 1 to completion of work, including Sub-Option Items O-3A and O-4A, but excluding Option O-5)
_____ days*

OPTION ITEM 0-1 (FY-02 HOUSING UNITS, UNIT TYPES AS INDICATED BELOW, INCLUDING CORRESPONDING PARTS OF SUB-OPTION ITEMS O-3B AND O-4B)

Additional design and construction time to be added to the completion time indicated for Basic Item No. 1 above to complete work, for each unit type indicated below, including corresponding parts of Sub-Option Items O-3B and O-4B

_____ days* (Unit Type B3)

_____ days* (Unit Type B4)

_____ days* (Unit Type C3)

_____ days* (Unit Type C4)

OPTION ITEM 0-2 (FY-03 HOUSING UNITS, INCLUDING SUB-OPTION ITEMS O-3C AND O-4C)

Additional Design and Construction time (From date this option is exercised to completion of work) _____ days*

BASIC ITEM NO. 1 (FY-02 HOUSING UNITS, INCLUDING OPTION ITEM O-5 AND SUB-OPTION ITEMS O-3A AND O-4A)

Design and Construction time (From date of NTP for Basic Item No. 1 to completion of work, including Sub-Option Items O-3A and O-4A and Option O-5) _____ days*

* - IF SUB-OPTION ITEMS ARE NOT AWARDED, NO ADJUSTMENTS TO COMPLETION TIME WILL BE MADE.

| BASE CIVIL ENGINEERING WORK CLEARANCE REQUEST <i>(See Instructions on Reverse)</i> | | | | | | DATE PREPARED |
|--|----------------------------|--|----------|--------------------------------------|---------------------------------------|-----------------|
| 1. Clearance is requested to proceed with work at _____ | | | | | | |
| on Work Order No. _____, Contract No. _____, involving excavation or utility disturbance per attached sketch. This area <input type="checkbox"/> has <input type="checkbox"/> has not been staked or clearly marked. | | | | | | |
| 2. TYPE OF FACILITY/WORK INVOLVED | | | | | | |
| A. PAVEMENTS | | D. FIRE DETECTION & PROTECTION SYSTEMS | | | G. AIRCRAFT OR VEHICULAR TRAFFIC FLOW | |
| B. DRAINAGE SYSTEMS | | E. UTILITY | OVERHEAD | UNDERGROUND | H. SECURITY | |
| C. RAILROAD TRACKS | | F. COMM | OVERHEAD | UNDERGROUND | I. OTHER | |
| 3. DATE CLEARANCE REQUIRED | | | | 4. DATE OF CLEARANCE | | |
| 5. SIGNATURE OF REQUESTING OFFICIAL | | | | 6. TELEPHONE NO. | | 7. ORGANIZATION |
| ORGANIZATION | | REMARKS <i>(Use Reverse for additional comments)</i> | | | REVIEWER'S NAME AND INITIALS | |
| 8. B A S E C I V I L E N G I N E E R I N G | A. ELECTRICAL DISTRIBUTION | | | | | |
| | B. STEAM DISTRIBUTION | | | | | |
| | C. WATER DISTRIBUTION | | | | | |
| | D. POL DISTRIBUTION | | | | | |
| | E. SEWER DISTRIBUTION | | | | | |
| | F. ENVIRONMENTAL | | | | | |
| | G. PAVEMENTS/ GROUNDS | | | | | |
| | H. FIRE PROTECTION | | | | | |
| | I. ZONE _____ | | | | | |
| | J. OTHER <i>(Specify)</i> | | | | | |
| 9. SECURITY POLICE | | | | | | |
| 10. SAFETY | | | | | | |
| 11. COMMUNICATIONS | | | | | | |
| 12. BASE OPERATIONS | | | | | | |
| 13. CABLE TV | | | | | | |
| 14. COMMERCIAL UTILITY COMPANY | | | | | | |
| <input type="checkbox"/> TELEPHONE | | | | | | |
| <input type="checkbox"/> GAS | | | | | | |
| <input type="checkbox"/> ELECTRIC | | | | | | |
| 15. OTHER <i>(Specify)</i> _____ | | | | | | |
| 16. REQUESTED CLEARANCE | | <input type="checkbox"/> APPROVED | | <input type="checkbox"/> DISAPPROVED | | |
| 17. TYPED NAME AND SIGNATURE OF APPROVING OFFICER <i>(Chief of Operations Flight or Chief of Engineering Flight)</i> | | | | | 17a. DATE SIGNED | |

INSTRUCTIONS

The BCE work clearance request is used for any work (contract or in-house) that may disrupt aircraft or vehicular traffic flow, base utility services, protection provided by fire and intrusion alarm system, or routine activities of the installation. This form is used to coordinate the required work with key base activities and keep customer inconvenience to a minimum. It is also used to identify potentially hazardous work conditions in an attempt to prevent accidents. The work clearance request is processed just prior to the start of work. If delays are encountered and the conditions at the job site change (or may have changed) this work clearance request must be reprocessed.

18. REMARKS. *(This section must describe specific precautionary measure to be taken before and during work accomplishment. Specific comments concerning the approved method of excavation, hand or powered equipment, should be included.)*

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01400

SPECIAL SAFETY REQUIREMENTS

05/00 Rev 12/01

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUMMARY
 - 1.2.1 General
 - 1.2.2 Description of Work
- 1.3 PRECONSTRUCTION CONFERENCE
- 1.4 SUBMITTALS
- 1.5 ACCIDENT PREVENTION PLAN
 - 1.5.1 Requirements
 - 1.5.1.1 Responsible Individual(s)
 - 1.5.1.2 Subcontractor Supervision
 - 1.5.1.3 Indoctrination of New Employees
 - 1.5.1.4 Tool Box Safety Meetings
 - 1.5.1.5 Fire Prevention and Protection
 - 1.5.1.6 Housekeeping
 - 1.5.1.7 Mechanical Equipment Inspection
 - 1.5.1.8 First Aid and Medical Facilities
 - 1.5.1.9 Sanitation
 - 1.5.1.10 Safety Promotions
 - 1.5.1.11 Accident Reporting
 - 1.5.1.12 Job Hazard Analysis
- 1.6 RADIOLOGICAL EQUIPMENT
- 1.7 EXCAVATION AND TRENCHING
- 1.8 ASBESTOS AND LEAD PAINT
 - 1.8.1 Safety Plans
 - 1.8.2 Safety and Health Oversight
 - 1.8.3 Qualifications
 - 1.8.3.1 Competent Person
 - 1.8.3.2 Testing Laboratory
 - 1.8.4 Exposure Assessment
 - 1.8.4.1 Asbestos
 - 1.8.4.2 Lead Paint
 - 1.8.5 Employee Protection
 - 1.8.5.1 Respiratory Protection Program
 - 1.8.5.2 Protective Equipment
 - 1.8.5.3 Decontamination Areas
 - 1.8.5.4 Handwashing Facilities
 - 1.8.5.5 Medical Surveillance
 - 1.8.5.6 Training
 - 1.12.6 Engineering Controls

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section Table of Contents --

SECTION 01400

SPECIAL SAFETY REQUIREMENTS
05/00 Rev 12/01

PART 1 GENERAL

1.1 REFERENCES

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

CODE OF FEDERAL REGULATIONS (CFR)

| | |
|--------------------|---|
| <u>29 CFR 1910</u> | <u>Occupational Safety and Health Standards</u> |
| 29 CFR 1926 | Safety and Health Regulations for Construction |

ENGINEERING MANUALS (EM)

| | |
|------------|--|
| EM 385-1-1 | (1996 and Changes) Safety and Health Requirements Manual |
|------------|--|

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

| | |
|-----------------------------|--|
| <u>NIOSH Pub No. 84-100</u> | <u>(1984; Supple 1985, 1987, 1988 & 1990) NIOSH Manual of Analytical Methods</u> |
|-----------------------------|--|

1.2 SUMMARY

1.2.1 General

This section provides guidelines for preparation of accident prevention plans, and to implement the accident prevention clause (this specification) and EM 385-1-1, Safety and Health Requirements Manual. The U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1 is available from U.S. Government bookstores operated by the Government Printing Office and a copy is included on the CD-ROM issued with this solicitation. Changes to EM 385-1-1 applicable to this contract include only those revisions posted at the following website (all revisions up to the time this solicitation is issued): http://www.hq.usace.army.mil/soh/hqusace_soh.htm ("Changes to EM"). U.S. Government bookstores are located in most major cities including Milwaukee, Chicago, Kansas City, Denver, and Pueblo, Colorado.

If the Contractor intends to demolish the buildings with all asbestos-containing materials in place, all requirements in this section pertaining to asbestos and lead shall be followed. If the Contractor intends to remove asbestos-containing materials prior to demolition, only the lead requirements of this section apply, and removal requirements specified in Section 13280A ASBESTOS ABATEMENT shall be followed.

1.2.2 Description of Work

This project involves the replacement of family housing units at Ellsworth AFB, SD.

1.3 PRECONSTRUCTION CONFERENCE

See Contract Clause "PRECONSTRUCTION CONFERENCE". A preconstruction conference will be scheduled prior to beginning of site work. Requirements relative to planning and administration of the overall safety program will be discussed.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan; G-RE

The written site-specific Accident Prevention Plan.

1.5 ACCIDENT PREVENTION PLAN

The Contractor shall submit, prior to the start of on site construction activity, a proposed accident prevention plan which shall be the accident prevention policy to be followed by all of the Contractor's and subcontractor's personnel and supervisory staff during performance of the work.

1.5.1 Requirements

The proposed plan shall be developed after a careful analysis of the work involved and shall be tailored specifically to the conditions of this project. The Contractor's accident prevention plan shall contain, as a minimum, the following general information or procedures for the activity indicated. The Contractor shall submit his plan for review and acceptance prior to commencing work.

1.5.1.1 Responsible Individual(s)

The Contractor shall designate an onsite employee as the individual responsible for insuring the accident prevention plan is implemented and enforced.

1.5.1.2 Subcontractor Supervision

Explain procedures to assure that subcontractor(s) fully comply with the accident prevention plan.

1.5.1.3 Indoctrination of New Employees

The plan shall include provisions for advising workers of the purpose of the accident prevention plan, specific hazards on the job and precautions to be taken, emergency procedures, information concerning tool box safety

meetings, required protective equipment, cleanup rules and location of company safety rules (posting or handout).

1.5.1.4 Tool Box Safety Meetings

Hold weekly "Tool Box" safety meetings. Timely safety subjects shall be determined by a responsible individual. Employees will be informed of time, location, who will conduct, and subject. Identify procedures for including subcontractors. The Contractor shall provide a copy of the Weekly Tool Box Meeting and Monthly Supervisor's Safety Meeting to the Contracting Officer.

1.5.1.5 Fire Prevention and Protection

Identify source of fire protection. Insure adequate fire extinguishers, water barrels, or other fire-fighting equipment is located on site. Explain prevention activities to include storage areas and special hazards such as welding and use of flammable liquids, and other special hazards.

1.5.1.6 Housekeeping

Daily cleanup of all debris and waste materials is required. Adequate disposal containers should be placed strategically around the site. Debris shall be removed on a regular basis. Explain procedures that include use of barrels, dumpsters, trash chutes, etc.

1.5.1.7 Mechanical Equipment Inspection

All mechanical equipment (trucks, cranes, forklifts, backhoes, graders, etc.) shall be inspected prior to use and at fixed intervals throughout the life of the contract. Explain how inspections will be accomplished (frequency, by whom, and records to be kept).

1.5.1.8 First Aid and Medical Facilities

First aid facilities shall be made available on the job site. Arrangements for emergency medical attention shall be made prior to start of work. All emergency numbers (doctor, hospital, ambulance, fire department) shall be posted at the project superintendent's office.

1.5.1.9 Sanitation

Include provisions for toilet facilities, drinking water and washing facilities. A sufficient number of toilet facilities as specified in EM 385-1-1 shall be provided unless permission is granted to use existing facilities (portable chemical are authorized). Insure safe drinking water and individual cups are available. For the projects where corrosive or toxic materials are used, separate washing facilities are required.

1.5.1.10 Safety Promotions

The Contractor shall promote accident prevention. Identify method (posters, awards etc.).

1.5.1.11 Accident Reporting

All accidents (employee injuries, vehicle, building, or equipment damage etc.) regardless of their severity, shall be reported to the onsite government representative or to the area engineer, who in turn will advise

the Contractor of forms to be submitted and timeframes.

1.5.1.12 Job Hazard Analysis

When job situations change and it is necessary to alter safety requirements, a Job Hazard Analysis will be accomplished, documented, and added as an addendum to the Accident Prevention Plan. Each Job Hazard Analysis shall include, but not be limited to, a description of the work, probable hazards related to that work and positive precautionary measures to be taken to reduce or eliminate each hazard. An example of changing situations may be new subcontractors performing work such as earth moving, trenching, concrete work, roofing, electrical, masonry etc. The onsite government representative will determine the format and amount of detail required of the written plan.

1.6 RADIOLOGICAL EQUIPMENT

In addition to any applicable Nuclear Regulatory Commission, state, local, or other federal licenses or permits, and in accordance with requirements of EM 385-1-1, Safety and Health Requirement Manual, the Contractor is required to obtain a service permit to use, store, operate, or handle a radiation producing machine or radioactive materials on a Department of Defense (DOD) Installation. The service permit shall be obtained from the appropriate U.S. Army or U.S. Air Force Command through the Contracting Officer's representative. The Contractor should notify the Contracting Officer during the prework conference if a radiation producing device will be utilized on a DOD Installation in order to determine the permit application requirements, and allow a lead time of 45 days for obtaining a permit.

1.7 EXCAVATION AND TRENCHING

The standards for excavation and trenching are outlined in 29 CFR 1926, Subpart P. These standards shall be followed in addition to those outlined in EM 385-1-1.

1.8 ASBESTOS AND LEAD PAINT

1.8.1 Safety Plans

The accident prevention plan shall contain distinct sections entitled Lead Safety Plan and Asbestos Safety Plan. Each section will address the following topics: qualifications of the competent person, laboratory qualifications, personal air monitoring, exposure assessment, work practices for specific Class II asbestos activities, engineering controls to reduce exposure, personal protection equipment, respiratory protection program, hygiene facilities and practices, medical surveillance, employee training, housekeeping, and waste containerization, labeling and disposal.

1.8.2 Safety and Health Oversight

Work which may expose personnel to asbestos and lead paint shall be supervised by a Competent Person as defined in 29 CFR 1926.1101 and 29 CFR 1926.62 and as required in paragraph: Qualifications of this section. The Competent Person shall be able to identify existing and predictable asbestos and lead paint hazards and shall have the authority to take corrective measures to eliminate them. Personal air monitoring shall be overseen by the Competent Person.

1.8.3 Qualifications

1.8.3.1 Competent Person

a. Asbestos

The Contractor's full-time onsite Competent Person shall meet the competent person requirements of 29 CFR 1926 Section .1101 and shall have completed the EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C. The Competent Person shall be experienced in the administration and supervision of asbestos abatement projects, including exposure assessment and monitoring, work practices, protective measures for personnel, setting up and inspecting asbestos abatement work areas, ACM generated waste containment and disposal procedures, decontamination units installation and maintenance requirements, site safety and health requirements, etc. and have had a minimum of 2 years on-the-job experience.

b. Lead Paint

The Contractor's full-time onsite Competent Person shall meet the competent person requirements of 29 CFR 1926 Section .62 and be experienced in administration and supervision of projects involving lead-based paint, including work practices, protective measures for personnel, etc. This person shall have completed a Contractor Supervisor LBP abatement course by an EPA Training Center or an equivalent certification course, and have had a minimum of 2 years on-the-job experience.

1.8.3.2 Testing Laboratory

a. Asbestos

The Contractor shall provide the name, address and telephone number of the independent testing laboratory selected to perform the sample analyses and report the results. The testing laboratory shall be completely independent from the Contractor as recognized by federal, state or local regulations. Written verification, signed by the testing laboratory principal and the Contractor, that the laboratory is fully equipped and proficient in conducting PCM of airborne samples using the methods specified by 29 CFR 1926, Section .1101, OSHA method ID-160, and the most current version of NIOSH Pub No. 84-100 Method 7400. Evidence that the laboratory is currently judged proficient (classified as acceptable) in counting airborne asbestos samples by PCM by successful participation in each of the last 4 rounds in the American Industrial Hygiene Association (AIHA) shall be submitted.

b. Lead Paint

The laboratory performing the analysis shall be an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and be rated proficient in the NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT). Currently, the American Association for Laboratory Accreditation (ASLA) and the American Industrial Hygiene Association (AIHA) are the EPA recognized laboratory accreditors.

1.8.4 Exposure Assessment

1.8.4.1 Asbestos

a. Initial Exposure Assessment

The Contractor's Competent Person shall conduct an exposure assessment immediately before or at the initiation of an asbestos abatement operation to ascertain expected exposures during that operation. The assessment shall be completed in time to comply with the requirements, which are triggered by exposure data or the lack of a negative exposure assessment, and to provide information necessary to assure that all control systems planned are appropriate for that operation. The assessment shall take into consideration both the monitoring results and all observations, information or calculations which indicate employee exposure to asbestos, including any previous monitoring conducted in the workplace, or of the operations of the Contractor which indicate the levels of airborne asbestos likely to be encountered on the job.

b. Negative Exposure Assessment

The Contractor may provide a negative exposure assessment for the specific asbestos job covered by this Specification Section. When provided, the Negative Exposure Assessment shall be based on one or more of the following criteria:

(1) Objective Data: Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations exceeding the PEL-TWA and PEL-Excursion Limit under those work conditions having the greatest potential for releasing asbestos.

(2) Prior Asbestos Jobs: Where the Contractor has monitored prior asbestos jobs for the PEL and the PEL-Excursion Limit within 12 months of the current job, the monitoring and analysis were performed in compliance with asbestos standard in effect; the data were obtained during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the Contractor's current operations; the operations were conducted by employees whose training and experience are no more extensive than that of employees performing the current job; and these data show that under the conditions prevailing and which will prevail in the current workplace, there is a high degree of certainty that the monitoring covered exposure from employee exposures will not exceed the PEL-TWA and PEL-Excursion Limit.

(3) Initial Exposure Monitoring: The results of initial exposure monitoring of the current job, made from breathing zone air samples that are representative of the 8-hour PEL-TWA and 30-minute short-term exposures of each employee. The monitoring covered exposure from operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

1.8.4.2 Lead Paint

For personnel who may be exposed to dust resulting from demolition or

removal of painted surfaces, the Contractor is required to perform an exposure assessment to determine personnel exposure levels to lead. This assessment shall consist of personal air monitoring representative of a full shift. Airborne concentrations of lead shall be collected and analyzed in accordance with 29 CFR 1926 Section .62. Results shall be reported in micrograms per cubic meter of air. The Competent Person shall use personal air monitoring results to determine the effectiveness of engineering controls, the adequacy of PPE and to determine if proper work practices are being employed. The Contracting Officer shall be notified if any personal air monitoring result equals or exceeds 30 micrograms per cubic meter of air. The Contractor shall take steps to reduce the concentration of lead in the air. If results are obtained indicating employee exposure below the action level for lead (30 ug/m³) the Competent Person may recommend to the Contracting Officer, in writing, appropriate reductions in employee protection. Alternatively, as determined by the Competent Person, where the Contractor has previously monitored for lead exposures within the past 12 months during work operations conducted under workplace conditions closely resembling the processes, type of materials, control methods, work practices, and environmental conditions used and prevailing in the Contractor's current operations, the Contractor may, upon approval of the Contracting Officer, use this data in making the initial determination of employee exposure.

1.8.5 Employee Protection

Until monitoring results are received which document that the employee is not exposed above the action level for asbestos or lead, the Contractor shall implement employee protective measures as listed below:

1.8.5.1 Respiratory Protection Program

A respiratory protection program shall be established as required by 29 CFR 1926 Section .103, .1101 and .62 and in accordance with 29 CFR 1910 Section .134. A NIOSH-approved respirator and cartridges appropriate to the job, as determined by the Competent Person, shall be furnished to each employee and visitor potentially exposed to airborne asbestos or lead. A fit test shall be conducted in accordance with applicable sections of 29 CFR 1926.

1.8.5.2 Protective Equipment

The Contractor shall furnish, at no cost to personnel, equipment/clothing for protection from airborne and waterborne asbestos and LBP debris. An adequate supply of disposable full-body coveralls, steel toe/shank boots with nonskid soles or impermeable work boot covers, gloves, hard hats and eye protection shall be worn by workers in regulated work areas. Employees shall be instructed in appropriate practices for donning and removing protective equipment. Protective clothing and equipment shall not be removed from the work site at any time.

1.8.5.3 Decontamination Areas

The employer shall establish a decontamination area that is adjacent to the regulated area for the decontamination of employees and their equipment which is contaminated with asbestos. The decontamination area shall be a designated area shall be covered by an impermeable drop cloth and shall be of sufficient size to accommodate cleaning of equipment and for removing personal protective equipment without spreading contamination beyond the area. The decontamination area shall be established in a manner such that employees must enter and exit the decontamination area through the

equipment drop area. Work clothing, must be HEPA vacuumed before it is removed. Equipment and other surfaces shall be cleaned prior to removing the items from the decontamination area. To prevent cross-contamination, the employer shall provide storage facilities for protective work clothing and equipment that are segregated from storage areas for street clothes and non-contaminated equipment. The employer shall also assure that employees do not leave the workplace wearing any protective clothing or equipment that is required to be worn during the work shift.

1.8.5.4 Handwashing Facilities

The employer shall provide adequate handwashing facilities for use by employees in accordance with 29 CFR 1926.51(f) and shall assure that employees wash their hands and face at the end of the work-shift.

1.8.5.5 Medical Surveillance

a. Asbestos

Before being exposed to airborne asbestos fibers, workers shall be provided with a medical examination as required by 29 CFR 1926, Section .1101(m) and other pertinent state or local requirements. This requirement shall have been satisfied within the last 12 months. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos and within 30 calendar days before or after the termination of employment in such occupation. X-ray films of asbestos workers shall be identified to the consulting radiologist and medical record jackets shall be marked with the word "asbestos."

b. Lead Paint

Medical surveillance for lead shall comply with the requirements of 29 CFR 1926 Section 62(j) and other pertinent state or local requirements. Analysis for blood lead and zinc protoporphyrin levels shall be included in the examination portion of the medical surveillance program.

1.8.5.6 Training

a. Asbestos

Workers conducting Class II asbestos work shall be provided training prior to the time of job assignment and, at least, annually. Training shall include, at a minimum the elements specified in 29 CFR 1926 Section .1101(k)(9) "Employee Information and Training".

b. Lead Paint

Workers potentially exposed to lead-contaminated dust shall be provided training regarding lead hazards prior to the time of job assignment and, at least, annually. Training shall include, at a minimum the elements specified in 29 CFR 1926 Section .62(l) "Employee Information and Training".

1.12.6 Engineering Controls

Engineering controls shall be employed to maintain the integrity of the asbestos material and lead paint and to minimize the potential for release of asbestos fibers or generation of lead-containing dust. To the degree

possible, asbestos-containing materials shall not be cut, ground, abraded or handled in any other manner that may render the material friable as described in 40 CFR 61, Subpart M and OSHA 29 CFR 1926.1101. The contractor shall describe proposed engineering control methods and practices in the lead safety and asbestos safety portions of the accident prevention plan."

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 13 - SPECIAL CONSTRUCTION

SECTION 13280A

ASBESTOS ABATEMENT

11/01

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 DEFINITIONS
- 1.3 DESCRIPTION OF WORK
 - 1.3.1 Abatement Work Tasks
 - 1.3.2 Unexpected Discovery of Asbestos
- 1.4 SUBMITTALS
- 1.5 QUALIFICATIONS
 - 1.5.1 Written Qualifications and Organization Report
 - 1.5.2 Specific Requirements
- 1.6 REGULATORY REQUIREMENTS
- 1.7 SAFETY AND HEALTH PROGRAM AND PLANS
 - 1.7.1 Asbestos Hazard Abatement Plan Appendix
 - 1.7.2 Activity Hazard Analyses Appendix
- 1.8 PRECONSTRUCTION CONFERENCE AND ONSITE SAFETY
- 1.9 SECURITY
- 1.10 MEDICAL REQUIREMENTS
 - 1.10.1 Medical Examinations
 - 1.10.2 Medical and Exposure Records
- 1.11 TRAINING PROGRAM
 - 1.11.1 General Training Requirements
 - 1.11.2 Project Specific Training
- 1.12 RESPIRATORY PROTECTION PROGRAM
 - 1.12.1 Respiratory Fit Testing
 - 1.12.2 Respirator Selection and Use Requirements
 - 1.12.3 Class II Work
 - 1.12.4 Sanitation
- 1.13 HAZARD COMMUNICATION PROGRAM
- 1.14 LICENSES, PERMITS AND NOTIFICATIONS
 - 1.14.1 General Legal Requirements
 - 1.14.2 Litigation and Notification
- 1.15 PERSONAL PROTECTIVE EQUIPMENT
 - 1.15.1 Respirators
 - 1.15.2 Whole Body Protection
 - 1.15.2.1 Gloves
 - 1.15.2.2 Foot Coverings
 - 1.15.2.3 Head Covering
 - 1.15.2.4 Protective Eye Wear
- 1.16 HYGIENE FACILITIES AND PRACTICES
 - 1.16.1 Decontamination Area Entry Procedures
 - 1.16.2 Decontamination Area Exit Procedures
 - 1.16.3 Lunch Areas
 - 1.16.4 Smoking
- 1.17 REGULATED AREAS
- 1.18 WARNING SIGNS AND TAPE

- 1.19 WARNING LABELS
 - 1.20 TOOLS
 - 1.21 RENTAL EQUIPMENT
 - 1.22 AIR MONITORING EQUIPMENT
 - 1.23 EXPENDABLE SUPPLIES
 - 1.23.1 Duct Tape
 - 1.23.2 Disposal Containers
 - 1.23.3 Disposal Bags
 - 1.23.4 Sheet Plastic
 - 1.23.5 Amended Water
 - 1.23.6 Leak-tight Wrapping
 - 1.24 MISCELLANEOUS ITEMS
- PART 2 PRODUCTS
- 2.1 ENCAPSULANTS
- PART 3 EXECUTION
- 3.1 GENERAL REQUIREMENTS
 - 3.2 PROTECTION OF ADJACENT WORK OR AREAS TO REMAIN
 - 3.3 METHODS OF COMPLIANCE
 - 3.3.1 Mandated Practices
 - 3.3.2 Control Methods
 - 3.3.3 Unacceptable Practices
 - 3.3.4 Class II Work
 - 3.3.5 Specific Control Methods for Class II Work
 - 3.3.5.1 Vinyl and Asphalt Flooring Materials
 - 3.3.5.2 Cementitious Siding and Shingles or Transite Panels
 - 3.3.6 Cleaning After Asbestos Removal
 - 3.3.7 Class II Asbestos Work Response Action Detail Sheets
 - 3.4 FINAL CLEANING AND VISUAL INSPECTION
 - 3.5 EXPOSURE ASSESSMENT AND AIR MONITORING
 - 3.5.1 General Requirements For Exposure
 - 3.5.2 Initial Exposure Assessment
 - 3.5.3 Negative Exposure Assessment
 - 3.5.4 Environmental Air Monitoring During Abatement
 - 3.5.5 Final Clearance Air Monitoring
 - 3.5.6 Air-Monitoring Results and Documentation
 - 3.6 CLEARANCE CERTIFICATION
 - 3.7 CLEANUP AND DISPOSAL
 - 3.7.1 Title to ACM Materials
 - 3.7.2 Collection and Disposal of Asbestos
 - 3.7.3 Weigh Bill and Delivery Tickets
 - 3.7.4 Asbestos Waste Shipment Record

-- End of Section Table of Contents --

SECTION 13280A

ASBESTOS ABATEMENT

11/01

PART 1 GENERAL

This section describes requirements to be followed if the Contractor chooses to remove all asbestos-containing siding, asbestos-containing floor tile and associated mastic from the units prior to demolition. For health and safety requirements, if the Contractor chooses to demolish the units without removing the asbestos, see Section 01400 SPECIAL SAFETY REQUIREMENTS.

Attachments: Detail Sheets 9A, 9B, 9C, 11, 12, 14, 15, 19, 57 and 81

1.1 REFERENCES

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- ANSI Z87.1 (1989; Errata; Z87.1a) Occupational and Educational Eye and Face Protection
- ANSI Z88.2 (1992) Respiratory Protection

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- ASTM D 1331 (1989; R 1995) Surface and Interfacial Tension of Solutions of Surface-Active Agents
- ASTM D 4397 (1996) Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications
- ASTM E 1368 (2000) Visual Inspection of Asbestos Abatement Projects
- ASTM E 84 (2000a) Surface Burning Characteristics of Building Materials
- ASTM E 96 (2000) Water Vapor Transmission of Materials

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH Pub No. 84-100 (1984; Supple 1985, 1987, 1988 & 1990)
NIOSH Manual of Analytical Methods

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (1996) U.S. Army Corps of Engineers Safety
and Health Requirements Manual

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 340/1-90/018 (1990) Asbestos/NESHAP Regulated Asbestos
Containing Materials Guidance

EPA 340/1-90/019 (1990) Asbestos/NESHAP Adequately Wet
Guidance

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1926 Safety and Health Regulations for
Construction

40 CFR 61 National Emission Standards for Hazardous
Air Pollutants

40 CFR 763 Asbestos

42 CFR 84 Approval of Respiratory Protective Devices

49 CFR 107 Hazardous Materials Program Procedures

49 CFR 171 General Information, Regulations, and
Definitions

49 CFR 172 Hazardous Materials Table, Special
Provisions, Hazardous Materials
Communications, Emergency Response
Information, and Training Requirements

49 CFR 173 Shippers - General Requirements for
Shipments and Packagings

1.2 DEFINITIONS

- a. Adequately Wet: A term defined in 40 CFR 61, Subpart M, and EPA 340/1-90/019 meaning to sufficiently mix or penetrate with liquid to prevent the release of particulate. If visible emissions are observed coming from asbestos-containing material (ACM), then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wetted.
- b. Aggressive Method: Removal or disturbance of building material by sanding, abrading, grinding, or other method that breaks, crumbles, or disintegrates intact asbestos-containing material (ACM).
- c. Amended Water: Water containing a wetting agent or surfactant

with a surface tension of at least 29 dynes per square centimeter when tested in accordance with ASTM D 1331.

- d. Asbestos: Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.
- e. Asbestos-Containing Material (ACM): Any materials containing more than one percent asbestos.
- f. Asbestos Fiber: A particulate form of asbestos, 5 micrometers or longer, with a length-to-width ratio of at least 3 to 1.
- g. Authorized Person: Any person authorized by the Contractor and required by work duties to be present in the regulated areas.
- h. Building Inspector: Individual who inspects buildings for asbestos and has EPA Model Accreditation Plan (MAP) "Building Inspector" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.
- i. Certified Industrial Hygienist (CIH): An Industrial Hygienist certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.
- j. Class I Asbestos Work: Activities defined by OSHA involving the removal of thermal system insulation (TSI) and surfacing ACM.
- k. Class II Asbestos Work: Activities defined by OSHA involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos - containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastic. Certain "incidental" roofing materials such as mastic, flashing and cements when they are still intact are excluded from Class II asbestos work. Removal of small amounts of these materials which would fit into a glovebag may be classified as a Class III job.
- l. Class III Asbestos Work: Activities defined by OSHA that involve repair and maintenance operations, where ACM, including TSI and surfacing ACM, is likely to be disturbed. Operations may include drilling, abrading, cutting a hole, cable pulling, crawling through tunnels or attics and spaces above the ceiling, where asbestos is actively disturbed or asbestos-containing debris is actively disturbed.
- m. Class IV Asbestos Work: Maintenance and custodial construction activities during which employees contact but do not disturb ACM and activities to clean-up dust, waste and debris resulting from Class I, II, and III activities. This may include dusting surfaces where ACM waste and debris and accompanying dust exists and cleaning up loose ACM debris from TSI or surfacing ACM following construction.
- n. Clean room: An uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

- o. Competent Person: In addition to the definition in 29 CFR 1926, Section .32(f), a person who is capable of identifying existing asbestos hazards as defined in 29 CFR 1926, Section .1101, selecting the appropriate control strategy, has the authority to take prompt corrective measures to eliminate them and has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.
- p. Contractor/Supervisor: Individual who supervises asbestos abatement work and has EPA Model Accreditation Plan "Contractor/Supervisor" training; accreditation required by 40 CFR 763, Subpart E, Appendix C.
- q. Critical Barrier: One or more layers of plastic sealed over all openings into a regulated area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a regulated area from migrating to an adjacent area.
- r. Decontamination Area: An enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.
- s. Demolition: The wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.
- t. Disposal Bag: A 6 mil thick, leak-tight plastic bag, pre-labeled in accordance with 29 CFR 1926, Section .1101, used for transporting asbestos waste from containment to disposal site.
- u. Disturbance: Activities that disrupt the matrix of ACM, crumble or pulverize ACM, or generate visible debris from ACM. Disturbance includes cutting away small amounts of ACM, no greater than the amount which can be contained in 1 standard sized glovebag or waste bag, not larger than 60 inches in length and width in order to access a building component.
- v. Equipment Room or Area: An area adjacent to the regulated area used for the decontamination of employees and their equipment.
- w. Employee Exposure: That exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.
- x. Fiber: A fibrous particulate, 5 micrometers or longer, with a length to width ratio of at least 3 to 1.
- y. Friable ACM: A term defined in 40 CFR 61, Subpart M and EPA 340/1-90/018 meaning any material which contains more than 1 percent asbestos, as determined using the method specified in 40 CFR 763, Subpart E, Appendix A, Section 1, Polarized Light Microscopy (PLM), that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent, as determined by a method other than point counting by PLM, the asbestos content is verified by point counting using PLM.

- z. Glovebag: Not more than a 60 by 60 inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.
- aa. High-Efficiency Particulate Air (HEPA) Filter: A filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.
- bb. Homogeneous Area: An area of surfacing material or thermal system insulation that is uniform in color and texture.
- cc. Industrial Hygienist: A professional qualified by education, training, and experience to anticipate, recognize, evaluate, and develop controls for occupational health hazards.
- dd. Intact: ACM which has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix. Removal of "intact" asphaltic, resinous, cementitious products does not render the ACM non-intact simply by being separated into smaller pieces.
- ee. Model Accreditation Plan (MAP): USEPA training accreditation requirements for persons who work with asbestos as specified in 40 CFR 763, Subpart E, Appendix C.
- ff. Modification: A changed or altered procedure, material or component of a control system, which replaces a procedure, material or component of a required system.
- gg. Negative Exposure Assessment: A demonstration by the Contractor to show that employee exposure during an operation is expected to be consistently below the OSHA Permissible Exposure Limits (PELs).
- hh. NESHAP: National Emission Standards for Hazardous Air Pollutants. The USEPA NESHAP regulation for asbestos is at 40 CFR 61, Subpart M.
- ii. Nonfriable ACM: A NESHAP term defined in 40 CFR 61, Subpart M and EPA 340/1-90/018 meaning any material containing more than 1 percent asbestos, as determined using the method specified in 40 CFR 763, Subpart E, Appendix A, Section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.
- jj. Nonfriable ACM (Category I): A NESHAP term defined in 40 CFR 61, Subpart E and EPA 340/1-90/018 meaning asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in 40 CFR 763, Subpart F, Appendix A, Section 1, Polarized Light Microscopy.
- kk. Nonfriable ACM (Category II): A NESHAP term defined in 40 CFR 61, Subpart E and EPA 340/1-90/018 meaning any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos, as determined using the methods specified in 40 CFR 763, Subpart F, Appendix A, Section 1, Polarized Light Microscopy, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

11. Permissible Exposure Limits (PELs):

(1) PEL-Time weighted average(TWA): Concentration of asbestos not in excess of 0.1 fibers per cubic centimeter of air (f/cc) as an 8 hour time weighted average (TWA), as determined by the method prescribed in 29 CFR 1926, Section .1101, Appendix A, or the current version of NIOSH Pub No. 84-100 analytical method 7400.

(2) PEL-Excursion Limit: An airborne concentration of asbestos not in excess of 1.0 f/cc of air as averaged over a sampling period of 30 minutes as determined by the method prescribed in 29 CFR 1926, Section .1101, Appendix A, or the current version of NIOSH Pub No. 84-100 analytical method 7400.

- mm. Regulated Area: An OSHA term defined in 29 CFR 1926, Section .1101 meaning an area established by the Contractor to demarcate areas where Class I, II, and III asbestos work is conducted; also any adjoining area where debris and waste from such asbestos work accumulate; and an area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limit.
- nn. Removal: All operations where ACM is taken out or stripped from structures or substrates, and includes demolition operations.
- oo. Repair: Overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates, including encapsulation or other repair of ACM attached to structures or substrates. If the amount of asbestos so "disturbed" cannot be contained in 1 standard glovebag or waste bag, Class I precautions are required.
- pp. Spills/Emergency Cleanups: Cleanup of sizable amounts of asbestos waste and debris which has occurred, for example, when water damage occurs in a building, and sizable amounts of ACM are dislodged. A Competent Person evaluates the site and ACM to be handled, and based on the type, condition and extent of the dislodged material, classifies the cleanup as Class I, II, or III. Only if the material was intact and the cleanup involves mere contact of ACM, rather than disturbance, could there be a Class IV classification.
- qq. Surfacing ACM: Asbestos-containing material which contains more than 1% asbestos and is sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.
- rr. Thermal system insulation (TSI) ACM: ACM which contains more than 1% asbestos and is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain or water condensation.
- ss. Transite: A generic name for asbestos cement wallboard and pipe.
- tt. Worker: Individual (not designated as the Competent Person or a supervisor) who performs asbestos work and has completed asbestos worker training required by 29 CFR 1926, Section .1101, to include

EPA Model Accreditation Plan (MAP) "Worker" training; accreditation required by 40 CFR 763, Subpart E, Appendix C, if required by the OSHA Class of work to be performed or by the state where the work is to be performed.

1.3 DESCRIPTION OF WORK

The work covered by this section includes the removal of asbestos-containing materials (ACM) which are encountered during demolition activities associated with this project and describes procedures and equipment required to protect workers and occupants of the regulated area from contact with airborne asbestos fibers and ACM dust and debris. Activities include OSHA Class II work operations involving ACM. The work also includes containment, storage, transportation and disposal of the generated ACM wastes. More specific operational procedures shall be detailed in the required Accident Prevention Plan and its subcomponents, the Asbestos Hazard Abatement Plan and Activity Hazard Analyses required in paragraph SAFETY AND HEALTH PROGRAM AND PLANS.

1.3.1 Abatement Work Tasks

The specific ACM to be abated consists of asbestos-containing siding which is present underneath the existing exterior on the housing units. In addition, asbestos-containing floor tiles and associated mastic are assumed to be present under existing flooring materials in the kitchens, entryways, and hallways of all units. All other asbestos-containing materials requiring removal from the units will be removed under another contract.

1.3.2 Unexpected Discovery of Asbestos

For any previously untested building components suspected to contain asbestos and located in areas impacted by the work, the Contractor shall notify the Contracting Officer (CO) who will have the option of ordering up to 3 bulk samples to be obtained at the Contractor's expense and delivered to a laboratory accredited under the National Institute of Standards and Technology (NIST) "National Voluntary Laboratory Accreditation Program (NVLAP)" and analyzed by PLM at no additional cost to the Government. Any additional components identified as ACM that have been approved by the Contracting Officer for removal shall be removed by the Contractor and will be paid for by an equitable adjustment to the contract price under the CONTRACT CLAUSE titled "changes". Sampling activities undertaken to determine the presence of additional ACM shall be conducted by personnel who have successfully completed the EPA Model Accreditation Plan (MAP) "Building Inspector" training course required by 40 CFR 763, Subpart E, Appendix C.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Respiratory Protection Program; G-RE

Records of the respirator program.

Cleanup and Disposal; G-RE

Waste shipment records. Weigh bills and delivery tickets shall be furnished for information only.

Drawings; G-RE

Descriptions, and site layout to include methods for preventing the spread of airborne asbestos fibers, decontamination units, temporary waste storage facility, location of temporary utilities (electrical, water, sewer) and boundaries of each regulated area.

Materials and Equipment;

Manufacturer's catalog data for all materials and equipment to be used in the work, including brand name, model, capacity, performance characteristics and any other pertinent information. Test results and certificates from the manufacturer of encapsulants substantiating compliance with performance requirements of this specification. Material Safety Data Sheets for all chemicals to be used onsite in the same format as implemented in the Contractor's HAZARD COMMUNICATION PROGRAM. Data shall include, but shall not be limited to, the following items:

- a. Vacuum cleaning equipment
- b. Air monitoring equipment
- c. Respirators
- d. Personal protective clothing and equipment
 - (1) Coveralls
 - (2) Underclothing
 - (3) Other work clothing
 - (4) Foot coverings
 - (5) Hard hats
 - (6) Eye protection
 - (7) Other items required and approved by Contractors Designated IH and Competent Person
- e. Duct Tape
- f. Disposal Containers
- g. Sheet Plastic
- h. Wetting Agent
- i. Prefabricated Decontamination Unit (if used)
- j. Other items
- k. Material Safety Data Sheets (for all chemicals proposed)

Qualifications; G-RE

A written report providing evidence of qualifications for personnel, facilities and equipment assigned to the work.

Medical Requirements;

Physician's written opinion.

SD-06 Test Reports

Exposure Assessment and Air Monitoring; G-RE

Initial exposure assessments, negative exposure assessments, air-monitoring results and documentation.

Licenses, Permits and Notifications;

Licenses, permits, and notifications.

1.5 QUALIFICATIONS

1.5.1 Written Qualifications and Organization Report

The Contractor shall furnish a written qualifications and organization report providing evidence of qualifications of the Contractor, Contractor's Project Supervisor, Designated Competent Person, supervisors and workers; Designated IH (person assigned to project and firm name); independent testing laboratory (including name of firm, principal, and analysts who will perform analyses); all subcontractors to be used including disposal transportation and disposal facility firms, subcontractor supervisors, subcontractor workers; and any others assigned to perform asbestos abatement and support activities. The report shall be signed by the Contractor, the Contractor's onsite project manager, Designated Competent Person, Designated IH, designated testing laboratory and the principals of all subcontractors to be used. The Contractor shall include the following statement in the report: "By signing this report I certify that the personnel I am responsible for during the course of this project fully understand the contents of 29 CFR 1926, Section .1101, 40 CFR 61, Subpart M, and the federal, state and local requirements specified in paragraph SAFETY AND HEALTH PROGRAM AND PLANS for those asbestos abatement activities that they will be involved in."

1.5.2 Specific Requirements

The Contractor shall designate in writing, personnel meeting the following qualifications:

- a. Designated Competent Person: The name, address, telephone number, and resume of the Contractor's Designated Competent Person shall be provided. Evidence that the full-time Designated Competent Person is qualified in accordance with 29 CFR 1926, Sections .32 and .1101, has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C, and is experienced in the administration and supervision of asbestos abatement projects. The Designated Competent Person shall be responsible for compliance with applicable federal, state and local requirements, the Contractor's Accident Prevention Plan and Asbestos Hazard Abatement Plan. The Designated Competent Person shall provide, and the Contractor shall submit, the "Contractor/Supervisor"

course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Contractor shall submit evidence that this person has a minimum of 2 years of on-the-job asbestos abatement experience relevant to OSHA competent person requirements. The Designated Competent Person shall be onsite at all times during the conduct of this project.

- b. Project and Other Supervisors: The Contractor shall provide the name, address, telephone number, and resume of the Project Supervisor and other supervisors who have responsibility to implement the Accident Prevention Plan, including the Asbestos Hazard Abatement Plan and Activity Hazard Analyses, the authority to direct work performed under this contract and verify compliance, and have EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C. The Project Supervisor and other supervisors shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph.
- c. Designated Industrial Hygienist: The Contractor shall provide the name, address, telephone number, resume and other information specified below for the Industrial Hygienist (IH) selected to prepare or review the Contractor's Asbestos Hazard Abatement Plan, prepare and perform training, direct air monitoring and assist the Contractor's Competent Person in implementing and ensuring that safety and health requirements are complied with during the performance of all required work. The Designated IH shall be a person who is board certified in the practice of industrial hygiene or board eligible (meets all education and experience requirements) as determined and documented by the American Board of Industrial Hygiene (ABIH), has EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C, and has a minimum of 2 years of comprehensive experience in planning and overseeing asbestos abatement activities. The Designated IH shall provide, and the Contractor shall submit, the "Contractor/Supervisor" course completion certificate and the most recent certificate for required refresher training with the employee "Certificate of Worker Acknowledgment" required by this paragraph. The Designated IH shall be completely independent from the Contractor according to federal, state, or local regulations; that is, shall not be a Contractor's employee or be an employee or principal of a firm in a business relationship with the Contractor negating such independent status. A copy of the Designated IH's current valid ABIH certification or confirmation of eligibility in writing from the ABIH shall be included. The Designated IH shall visit the site as necessary for the duration of asbestos activities and shall be available for emergencies. IHs and IHTs supporting the Designated IH shall have a minimum of 2 years of practical onsite asbestos abatement experience. The formal reporting relationship between the Designated IH and the support IHs and IHTs, the Designated Competent Person, and the Contractor shall be indicated.
- d. Asbestos Abatement Workers: Asbestos abatement workers shall meet the requirements contained in 29 CFR 1926, Section .1101, 40 CFR 61,

Subpart M, and other applicable federal, state of South Dakota and local requirements. Worker training documentation shall be provided as required on the "Certificate of Workers Acknowledgment" in this paragraph.

- e. Worker Training and Certification of Worker Acknowledgment: Training documentation will be required for each employee who will perform OSHA Class II asbestos abatement operations. Such documentation shall be submitted on a Contractor generated form titled "Certificate of Workers Acknowledgment", to be completed for each employee in the same format and containing the same information as the example certificate at the end of this section. Training course completion certificates (initial and most recent update refresher) required by the information checked on the form shall be attached.
- f. Physician: The Contractor shall provide the name, medical qualifications, address, and telephone number of the physician who will or has performed the medical examinations and evaluations of the persons who will conduct the asbestos abatement work tasks. The physician shall be currently licensed by the state where the workers will be or have been examined, have expertise in pneumoconiosis and shall be responsible for the determination of medical surveillance protocols and for review of examination/test results performed in compliance with 29 CFR 1926, Section .1101 and paragraph MEDICAL REQUIREMENTS.
- g. First Aid and CPR Trained Persons: The names of at least 2 persons who are currently trained in first aid and CPR by the American Red Cross or other approved agency shall be designated and shall be onsite at all times during site operations. They shall be trained in universal precautions and the use of PPE as described in the Bloodborne Pathogens Standard of 29 CFR 1910, Section .1030 and shall be included in the Contractor's Bloodborne Pathogen Program. These persons may perform other duties but shall be immediately available to render first aid when needed. A copy of each designated person's current valid First Aid and CPR certificate shall be provided.
- h. Independent Testing Laboratory: The Contractor shall provide the name, address and telephone number of the independent testing laboratory selected to perform the sample analyses and report the results. The testing laboratory shall be completely independent from the Contractor as recognized by federal, state or local regulations. Written verification of the following criteria, signed by the testing laboratory principal and the Contractor, shall be submitted:
 - (1) Phase contrast microscopy (PCM): The laboratory is fully equipped and proficient in conducting PCM of airborne samples using the methods specified by 29 CFR 1926, Section .1101, OSHA method ID-160, and the most current version of NIOSH Pub No. 84-100 Method 7400, . The laboratory shall be currently judged proficient (classified as acceptable) in counting airborne asbestos samples by PCM by successful participation in each of the last 4 rounds in the American Industrial Hygiene Association (AIHA) Proficiency Analytical Testing (PAT) Program. The selected microscopists who will analyze airborne samples by PCM shall be judged proficient in counting samples as current participating

analysts in the AIHA PAT Program, and having successfully completed the Asbestos Sampling and Analysis course (NIOSH 582 or equivalent).

(2) Polarized light microscopy (PLM): If bulk analysis is required, provide evidence that the laboratory is fully equipped and proficient in conducting PLM analyses of suspect ACM bulk samples in accordance with 40 CFR 763, Subpart E, Appendix E; the laboratory is currently accredited by NIST under the NVLAP for bulk asbestos analysis and will use analysts with demonstrated proficiency to conduct PLM to include its application to the identification and quantification of asbestos content.

- i. Disposal Facility, Transporter: The Contractor shall provide written evidence that the landfill to be used is approved for asbestos disposal by the USEPA and state and local regulatory agencies. Copies of signed agreements between the Contractor (including subcontractors and transporters) and the asbestos waste disposal facility to accept and dispose of all asbestos containing waste generated during the performance of this contract shall be provided. Qualifications shall be provided for each subcontractor or transporter to be used, indicating previous experience in transport and disposal of asbestos waste to include all required state and local waste hauler requirements for asbestos. The Contractor and transporters shall meet the DOT requirements of 49 CFR 171, 49 CFR 172, and 49 CFR 173 as well as registration requirements of 49 CFR 107 and other applicable state or local requirements. The disposal facility shall meet the requirements of 40 CFR 61, Sections .154 or .155, as required in 40 CFR 61, Section .150(b), and other applicable state or local requirements.

1.6 REGULATORY REQUIREMENTS

In addition to detailed requirements of this specification, work performed under this contract shall comply with EM 385-1-1, applicable federal, state, and local laws, ordinances, criteria, rules and regulations regarding handling, storing, transporting, and disposing of asbestos waste materials. This includes, but is not limited to, OSHA standards, 29 CFR 1926, especially Section .1101, 40 CFR 61, Subpart M and 40 CFR 763. Matters of interpretation of standards shall be submitted to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply. The following state and local laws, rules and regulations apply: Administrative Rules of South Dakota (ARSD) 74:36:08 and ARSD 74:31.

1.7 SAFETY AND HEALTH PROGRAM AND PLANS

The Contractor shall develop and submit a written comprehensive site-specific Accident Prevention Plan at least 30 days prior to the preconstruction conference. The Accident Prevention Plan shall address requirements of EM 385-1-1, Appendix A, covering onsite work to be performed by the Contractor and subcontractors. The Accident Prevention Plan shall incorporate an Asbestos Hazard Abatement Plan, and Activity Hazard Analyses as separate appendices into 1 site specific Accident Prevention Plan document. Any portions of the Contractor's overall Safety and Health Program that are referenced in the Accident Prevention Plan,

e.g., respirator program, hazard communication program, confined space entry program, etc., shall be included as appendices to the Accident Prevention Plan. The plan shall be prepared or reviewed, signed (and sealed, including certification number if required), and dated by the Contractor's Designated IH, Competent Person, and Project Supervisor.

1.7.1 Asbestos Hazard Abatement Plan Appendix

The Asbestos Hazard Abatement Plan appendix to the Accident Prevention Plan shall include, but not be limited to, the following:

- a. The personal protective equipment to be used;
- b. The location and description of regulated areas including clean and dirty areas, and decontamination unit ;
- c. Initial exposure assessment in accordance with 29 CFR 1926, Section .1101;
- d. Level of supervision;
- e. Method of notification of other employers at the worksite;
- f. Abatement method to include containment and control procedures;
- g. Interface of trades involved in the construction;
- h. Sequencing of asbestos related work;
- i. Storage and disposal procedures and plan;
- j. Type of wetting agent to be used;
- k. Air monitoring methods (personal, environmental);
- l. Bulk sampling and analytical methods (if required);
- m. A detailed description of the method to be employed in order to control the spread of ACM wastes and airborne fiber concentrations;
- n. Fire and medical emergency response procedures;
- o. The security procedures to be used for all regulated areas.

1.7.2 Activity Hazard Analyses Appendix

Activity Hazard Analyses, for each major phase of work, shall be submitted and updated during the project. The Activity Hazard Analyses format shall be in accordance with EM 385-1-1 (Figure 1-1). The analysis shall define the activities to be performed for a major phase of work, identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on that phase until the Activity Hazard Analyses has been accepted and a preparatory meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activities, including the onsite Government representatives. The Activity Hazard Analyses shall be continuously reviewed and, when appropriate, modified to address changing site conditions or operations.

1.8 PRECONSTRUCTION CONFERENCE AND ONSITE SAFETY

The Contractor and the Contractor's Designated Competent Person, Project Supervisor, and Designated IH shall meet with the Contracting Officer prior to beginning work at a safety preconstruction conference to discuss the details of the Contractor's submitted Accident Prevention Plan to include the Asbestos Hazard Abatement Plan and Activity Hazard Analyses appendices. Deficiencies in the Accident Prevention Plan will be discussed and the Accident Prevention Plan shall be revised to correct the deficiencies and resubmitted for acceptance. Any changes required in the specification as a result of the Accident Prevention Plan shall be identified specifically in the plan to allow for free discussion and acceptance by the Contracting Officer, prior to the start of work. Onsite work shall not begin until the Accident Prevention Plan has been accepted. A copy of the written Accident Prevention Plan shall be maintained onsite. Changes and modifications to the accepted Accident Prevention Plan shall be made with the knowledge and concurrence of the Designated IH, the Project Supervisor, Designated Competent Person, and the Contracting Officer. Should any unforeseen hazard become evident during the performance of the work, the Competent Person shall bring such hazard to the attention of the Project Supervisor, Designated IH, and the Contracting Officer, both verbally and in writing, for resolution as soon as possible. In the interim, all necessary action shall be taken by the Contractor to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment. Once accepted by the Contracting Officer, the Accident Prevention Plan, including the Asbestos Hazard Abatement Plan and Activity Hazard Analyses will be enforced as if an addition to the contract. Disregarding the provisions of this contract or the accepted Accident Prevention Plan will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

1.9 SECURITY

Barriers to prevent entry of unauthorized personnel shall be provided for each regulated area. A log book shall be kept documenting entry into and out of the regulated area. Entry into regulated areas shall only be by personnel authorized by the Contractor and the Contracting Officer. Personnel authorized to enter regulated areas shall be trained, be medically evaluated, and wear the required personal protective equipment for the specific regulated area to be entered.

1.10 MEDICAL REQUIREMENTS

Medical requirements shall conform to 29 CFR 1926, Section .1101.

1.10.1 Medical Examinations

Before being exposed to airborne asbestos fibers, workers shall be provided with a medical examination as required by 29 CFR 1926, Section .1101 and other pertinent state or local requirements. This requirement shall have been satisfied within the last 12 months.

1.10.2 Medical and Exposure Records

Complete and accurate records shall be maintained of each employee's medical examinations, medical records, and exposure data, as required by 29 CFR 1910, Section .1910.20 and 29 CFR 1926, Section .1101 for a period of 50 years after termination of employment. Records of the required medical examinations and exposure data shall be made available, for inspection and

copying, to the Assistant Secretary of Labor for Occupational Safety and Health (OSHA) or authorized representatives of the employee and an employee's physician upon request of the employee or former employee. A copy of the required medical certification for each employee shall be maintained on file at the worksite for review, as requested by the Contracting Officer or the representatives.

1.11 TRAINING PROGRAM

1.11.1 General Training Requirements

The Contractor shall establish a training program as specified by EPA Model Accreditation Plan (MAP), training requirements at 40 CFR 763, Subpart E, Appendix C, the State of South Dakota regulations, OSHA requirements at 29 CFR 1926, Section .1101(k)(9), and this specification. Contractor employees shall complete the required training for the type of work they are to perform and such training shall be documented and provided to the Contracting Officer as specified in paragraph QUALIFICATIONS.

1.11.2 Project Specific Training

Prior to commencement of work, each worker shall be instructed in the following project specific training:

- a. The hazards and health effects of the specific types of ACM to be abated;
- b. The content and requirements of the Contractor's Accident Prevention Plan to include the Asbestos Hazard Abatement Plan and Activity Hazard Analyses and site-specific safety and health precautions;
- c. Hazard Communication Program;
- d. Hands-on training for each asbestos abatement technique to be employed;
- e. Heat and/or cold stress monitoring specific to this project;
- f. Air monitoring program and procedures;
- g. Medical surveillance to include medical and exposure record-keeping procedures;
- h. The association of cigarette smoke and asbestos-related disease;
- i. Security procedures;
- j. Specific work practice controls and engineering controls required for each Class of work in accordance with 29 CFR 1926, Section .1101.

1.12 RESPIRATORY PROTECTION PROGRAM

The Contractor shall establish in writing, and implement a respiratory protection program in accordance with 29 CFR 1926, Section .1101, 29 CFR 1910, Section .134, ANSI Z88.2, CGA G-7, CGA G-7.1 and DETAIL SHEET 12. The Contractor shall establish minimum respiratory protection requirements based on measured or anticipated levels of airborne asbestos fiber

concentrations encountered during the performance of the asbestos abatement work. The Contractor's respiratory protection program shall include, but not be limited to, the following elements:

- a. The company policy, used for the assignment of individual responsibility, accountability, and implementation of the respiratory protection program.
- b. The standard operating procedures covering the selection and use of respirators. Respiratory selection shall be determined by the hazard to which the worker is exposed.
- c. Medical evaluation of each user to verify that the worker may be assigned to an activity where respiratory protection is required.
- d. Training in the proper use and limitations of respirators.
- e. Respirator fit-testing, i.e., quantitative, qualitative and individual functional fit checks.
- f. Regular cleaning and disinfection of respirators.
- g. Routine inspection of respirators during cleaning and after each use when designated for emergency use.
- h. Storage of respirators in convenient, clean, and sanitary locations.
- i. Surveillance of regulated area conditions and degree of employee exposure (e.g., through air monitoring).
- j. Regular evaluation of the continued effectiveness of the respiratory protection program.
- k. Recognition and procedures for the resolution of special problems as they affect respirator use (e.g., no facial hair that comes between the respirator face piece and face or interferes with valve function; prescription eye wear usage; contact lenses usage; etc.).
- l. Proper training in putting on and removing respirators.

1.12.1 Respiratory Fit Testing

A qualitative or quantitative fit test conforming to 29 CFR 1926, Section 1101, Appendix C shall be conducted for each Contractor worker required to wear a respirator, and for the Contracting Officer and authorized visitors who enter a regulated area where respirators are required to be worn. A respirator fit test shall be performed for each worker wearing a negative-pressure respirator prior to initially wearing a respirator on this project and every 6 months thereafter. The qualitative fit tests may be used only for testing the fit of half-mask respirators where they are permitted to be worn, or of full-facepiece air purifying respirators where they are worn at levels at which half-facepiece air purifying respirators are permitted. If physical changes develop that will affect the fit, a new fit test for the worker shall be performed. Functional fit checks shall be performed by employees each time a respirator is put on and in accordance with the manufacturer's recommendation.

1.12.2 Respirator Selection and Use Requirements

The Contractor shall provide respirators, and ensure that they are used as required by 29 CFR 1926, Section .1101 and in accordance with the manufacturer's recommendations. Respirators shall be jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health (MSHA/NIOSH), or by NIOSH, under the provisions of 42 CFR 84, for use in environments containing airborne asbestos fibers. Personnel who handle ACM, enter regulated areas that require the wearing of a respirator, or who are otherwise carrying out abatement activities that require the wearing of a respirator, shall be provided with approved respirators that are fully protective of the worker at the measured or anticipated airborne asbestos concentration level to be encountered. For air-purifying respirators, the particulate filter portion of the cartridges or canister approved for use in airborne asbestos environments shall be high-efficiency particulate air (HEPA). The initial respirator selection and the decisions regarding the upgrading or downgrading of respirator type shall be made by the Contractor based on the measured or anticipated airborne asbestos fiber concentrations to be encountered. Recommendations made by the Contractor to downgrade respirator type shall be submitted in writing to the Contracting Officer. The Contractor's Designated Competent Person shall have the authority to take immediate action to upgrade or downgrade respiratory type when there is an immediate danger to the health and safety of the wearer. Respirators shall be used in the following circumstances:

- a. During all Class I asbestos jobs.
- b. During all Class II work where the ACM is not removed in a substantially intact state.
- c. During all Class II and III work which is not performed using wet methods. Respirators need not be worn during removal of ACM from sloped roofs when a negative exposure assessment has been made and ACM is removed in an intact state.
- d. During all Class II and III asbestos jobs where the Contractor does not produce a negative exposure assessment.
- e. During all Class III jobs where TSI or surfacing ACM is being disturbed.
- f. During all Class IV work performed within regulated areas where employees performing other work are required to wear respirators.
- g. During all work where employees are exposed above the PEL-TWA or PEL-Excursion Limit.
- h. In emergencies

1.12.3 Class II Work

The Contractor shall provide an air purifying respirator, other than a disposable respirator, equipped with high-efficiency filters whenever the employee performs Class II asbestos jobs where the Contractor does not produce a negative exposure assessment.

1.12.4 Sanitation

Employees who wear respirators shall be permitted to leave work areas to wash their faces and respirator facepieces whenever necessary to prevent skin irritation associated with respirator use.

1.13 HAZARD COMMUNICATION PROGRAM

A hazard communication program shall be established and implemented in accordance with 29 CFR 1926, Section .59. Material safety data sheets (MSDSs) shall be provided for all hazardous materials brought onto the worksite. One copy shall be provided to the Contracting Officer and 1 copy shall be included in the Contractor's Hazard Communication Program.

1.14 LICENSES, PERMITS AND NOTIFICATIONS

1.14.1 General Legal Requirements

Necessary licenses, permits and notifications shall be obtained in conjunction with the project's asbestos abatement, transportation and disposal actions and timely notification furnished of such actions as required by federal, state, regional, and local authorities. The Contractor shall notify the Regional Office of the USEPA, state's environmental protection agency responsible for asbestos air emissions, and the Contracting Officer in writing, at least 10 days prior to the commencement of work, in accordance with 40 CFR 61, Subpart M, and state and local requirements to include the mandatory "Notification of Demolition and Renovation Record" form and other required notification documents. Notification shall be by Certified Mail, Return Receipt Requested. The Contractor shall furnish copies of the receipts to the Contracting Officer, in writing, prior to the commencement of work. A copy of the rental company's written acknowledgment and agreement shall be provided as required by paragraph RENTAL EQUIPMENT. For licenses, permits, and notifications that the Contractor is responsible for obtaining, the Contractor shall pay any associated fees or other costs incurred.

1.14.2 Litigation and Notification

The Contractor shall notify the Contracting Officer if any of the following occur:

- a. The Contractor or any of the subcontractors are served with notice of violation of any law, regulation, permit or license which relates to this contract;
- b. Proceedings are commenced which could lead to revocation of related permits or licenses; permits, licenses or other Government authorizations relating to this contract are revoked;
- c. Litigation is commenced which would affect this contract;
- d. The Contractor or any of the subcontractors become aware that their equipment or facilities are not in compliance or may fail to comply in the future with applicable laws or regulations.

1.15 PERSONAL PROTECTIVE EQUIPMENT

Two complete sets of personal protective equipment shall be made available to the Contracting Officer and authorized visitors for entry to the regulated area. Contracting Officer and authorized visitors shall be provided with training equivalent to that provided to Contractor employees

in the selection, fitting, and use of the required personal protective equipment and the site safety and health requirements. Contractor workers shall be provided with personal protective clothing and equipment and the Contractor shall ensure that it is worn properly. The Contractor shall select and approve all the required personal protective clothing and equipment to be used.

1.15.1 Respirators

Respirators shall be in accordance with paragraph RESPIRATORY PROTECTION PROGRAM.

1.15.2 Whole Body Protection

Personnel exposed to airborne concentrations of asbestos that exceed the PELs, or for all OSHA Classes of work for which a required negative exposure assessment is not produced, shall be provided with whole body protection and such protection shall be worn properly. The Contractor's Competent Person shall select and approve the whole body protection to be used. The Competent Person shall examine work suits worn by employees at least once per work shift for rips or tears that may occur during performance of work. When rips or tears are detected while an employee is working, rips and tears shall be immediately mended, or the work suit shall be immediately replaced. Disposable whole body protection shall be disposed of as asbestos contaminated waste upon exiting from the regulated area. Reusable whole body protection worn shall be either disposed of as asbestos contaminated waste upon exiting from the regulated area or be properly laundered in accordance with 29 CFR 1926, Section .1101. Whole body protection used for asbestos abatement shall not be removed from the worksite by a worker to be cleaned. Recommendations made by the Contractor's Designated IH to downgrade whole body protection shall be submitted in writing to the Contracting Officer. The Contractor's Designated Competent Person, has the authority to take immediate action to upgrade or downgrade whole body protection when there is an immediate danger to the health and safety of the wearer.

1.15.2.1 Gloves

Gloves shall be provided to protect the hands. Where there is the potential for hand injuries (i.e., scrapes, punctures, cuts, etc.) a suitable glove shall be provided and used.

1.15.2.2 Foot Coverings

Footwear, as required by OSHA and EM 385-1-1, that is appropriate for safety and health hazards in the area shall be worn. Reusable footwear removed from the regulated area shall be thoroughly decontaminated or disposed of as ACM waste. Disposable protective foot covering shall be disposed of as ACM waste.

1.15.2.3 Head Covering

Hood type disposable head covering shall be provided. In addition, protective head gear (hard hats) shall be provided as required. Hard hats shall only be removed from the regulated area after being thoroughly decontaminated.

1.15.2.4 Protective Eye Wear

Eye protection provided shall be in accordance with ANSI Z87.1.

1.16 HYGIENE FACILITIES AND PRACTICES

The Contractor shall establish a decontamination area for the decontamination of employees, material and equipment. The Contractor shall ensure that employees enter and exit the regulated area through the decontamination area. The decontamination area shall comply with applicable Federal and state regulations.

1.16.1 Decontamination Area Entry Procedures

The Contractor shall ensure that employees entering the decontamination area through the clean room or clean area:

- a. Remove street clothing in the clean room or clean area and deposit it in lockers.
- b. Put on protective clothing and respiratory protection before leaving the clean room or clean area.
- c. Pass through the equipment room to enter the regulated area.

1.16.2 Decontamination Area Exit Procedures

The Contractor shall ensure that the following procedures are followed:

- a. Before leaving the regulated area, respirators shall be worn while employees remove all gross contamination and debris from their work clothing using a HEPA vacuum.
- b. Employees shall remove their protective clothing in the equipment room and deposit the clothing in labeled impermeable bags or containers (see Detail Sheets 9 and 14) for disposal and/or laundering.
- c. Employees shall not remove their respirators in the equipment room.
- d. Employees shall shower prior to entering the clean room. If a shower has not been located between the equipment room and the clean room or the work is performed outdoors, the Contractor shall ensure that employees engaged in Class I asbestos jobs: a) Remove asbestos contamination from their work suits in the equipment room or decontamination area using a HEPA vacuum before proceeding to a shower that is not adjacent to the work area; or b) Remove their contaminated work suits in the equipment room, without cleaning worksuits, and proceed to a shower that is not adjacent to the work area.
- e. After showering, employees shall enter the clean room before changing into street clothes.

1.16.3 Lunch Areas

The Contractor shall provide lunch areas in which the airborne concentrations of asbestos are below 0.01 f/cc.

1.16.4 Smoking

Smoking, if allowed by the Contractor, shall only be permitted in designated areas approved by the Contracting Officer.

1.17 REGULATED AREAS

All Class II asbestos work shall be conducted within regulated areas. The regulated area shall be demarcated to minimize the number of persons within the area and to protect persons outside the area from exposure to airborne asbestos. Access to regulated areas shall be limited to authorized persons. The Contractor shall control access to regulated areas, ensure that only authorized personnel enter, and verify that Contractor required medical surveillance, training and respiratory protection program requirements are met prior to allowing entrance.

1.18 WARNING SIGNS AND TAPE

Warning signs and tape printed in English shall be provided at the regulated boundaries and entrances to regulated areas. The Contractor shall ensure that all personnel working in areas contiguous to regulated areas comprehend the warning signs. Signs shall be located to allow personnel to read the signs and take the necessary protective steps required before entering the area. Warning signs, as shown and described in DETAIL SHEET 11, shall be in vertical format conforming to 29 CFR 1910 and 29 CFR 1926, Section .1101, a minimum of 20 by 14 inches, and displaying the following legend in the lower panel:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

Spacing between lines shall be at least equal to the height of the upper of any two lines. Warning tape shall be provided as shown and described on DETAIL SHEET 11. Decontamination unit signage shall be as shown and described on DETAIL SHEET 15.

1.19 WARNING LABELS

Warning labels shall be affixed to all asbestos disposal containers used to contain asbestos materials, scrap, waste debris, and other products contaminated with asbestos. Containers with preprinted warning labels conforming to requirements are acceptable. Warning labels shall be as described in DETAIL SHEET 14, shall conform to 29 CFR 1926, Section .1101 and shall be of sufficient size to be clearly legible displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

1.20 TOOLS

Vacuums shall be leak proof to the filter, equipped with HEPA filters, of sufficient capacity and necessary capture velocity at the nozzle or nozzle attachment to efficiently collect, transport and retain the ACM waste material. Power tools shall not be used to remove ACM unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation capture

and collection system, or has otherwise been approved for use by the Contracting Officer. Residual asbestos shall be removed from reusable tools prior to storage and reuse. Reusable tools shall be thoroughly decontaminated prior to being removed from regulated areas.

1.21 RENTAL EQUIPMENT

If rental equipment is to be used, written notification shall be provided to the rental agency, concerning the intended use of the equipment, the possibility of asbestos contamination of the equipment and the steps that will be taken to decontaminate such equipment. A written acceptance of the terms of the Contractor's notification shall be obtained from the rental agency.

1.22 AIR MONITORING EQUIPMENT

The Contractor's Designated IH shall approve air monitoring equipment to be used to collect samples. The equipment shall include, but shall not be limited to:

- a. High-volume sampling pumps that can be calibrated and operated at a constant airflow up to 16 liters per minute when equipped with a sampling train of tubing and filter cassette.
- b. Low-volume, battery powered, body-attachable, portable personal pumps that can be calibrated to a constant airflow up to approximately 3.5 liters per minute when equipped with a sampling train of tubing and filter cassette, and a self-contained rechargeable power pack capable of sustaining the calibrated flow rate for a minimum of 10 hours. The pumps shall also be equipped with an automatic flow control unit which shall maintain a constant flow, even as filter resistance increases due to accumulation of fiber and debris on the filter surface.
- c. Single use standard 25 mm diameter cassette, open face, 0.8 micron pore size, mixed cellulose ester membrane filters and cassettes with 50 mm electrically conductive extension cowl, and shrink bands, to be used with low flow pumps in accordance with 29 CFR 1926, Section .1101 for personal air sampling.
- d. Single use standard 25 mm diameter cassette, open face, 0.45 micron pore size, mixed cellulose ester membrane filters and cassettes with 50 mm electrically conductive cowl, and shrink bands, to be used with high flow pumps when conducting environmental area sampling using NIOSH Pub No. 84-100 Method 7400.
- e. Appropriate plastic tubing to connect the air sampling pump to the selected filter cassette.
- f. A flow calibrator capable of calibration to within plus or minus 2 percent of reading over a temperature range of minus 4 to plus 140 degrees F and traceable to a NIST primary standard.

1.23 EXPENDABLE SUPPLIES

1.23.1 Duct Tape

Industrial grade duct tape of appropriate widths suitable for bonding sheet plastic and disposal container shall be provided.

1.23.2 Disposal Containers

Leak-tight (defined as solids, liquids, or dust that cannot escape or spill out) disposal containers shall be provided for ACM wastes as required by 29 CFR 1926 Section .1101 and DETAIL SHEETS 9A, 9B, and 14.

1.23.3 Disposal Bags

Leak-tight bags, 6 mil thick, shall be provided for placement of asbestos generated waste as described in DETAIL SHEET 9A.

1.23.4 Sheet Plastic

Sheet plastic shall be polyethylene of 6 mil minimum thickness. Film shall conform to ASTM D 4397.

1.23.5 Amended Water

Amended water shall meet the requirements of ASTM D 1331.

1.23.6 Leak-tight Wrapping

Two layers of 6 mil minimum thick polyethylene sheet stock shall be used for the containment of removed asbestos-containing components or materials too large to be placed in disposal bags as described in DETAIL SHEET 9B. Upon placement of the ACM component or material, each layer shall be individually leak-tight sealed with duct tape.

1.24 MISCELLANEOUS ITEMS

A sufficient quantity of other items, such as, but not limited to: scrapers, brushes, brooms, staple guns, tarpaulins, shovels, rubber squeegees, dust pans, other tools, scaffolding, staging, enclosed chutes, wooden ladders, lumber necessary for the construction of containments, UL approved temporary electrical equipment, material and cords, ground fault circuit interrupters, water hoses of sufficient length, fire extinguishers, first aid kits, portable toilets, logbooks, log forms, markers with indelible ink, spray paint in bright color to mark areas, project boundary fencing, etc., shall be provided.

PART 2 PRODUCTS

2.1 ENCAPSULANTS

Encapsulants shall conform to USEPA requirements, shall contain no toxic or hazardous substances and no solvent and shall meet the following requirements:

ALL ENCAPSULANTS

| Requirement | Test Standard |
|---|------------------------------|
| Flame Spread - 25, Smoke Emission - 50 | ASTM E 84 |
| Combustion Toxicity Zero Mortality | Univ. of Pittsburgh Protocol |
| Life Expectancy, 20 yrs Accelerated Aging Test | ASTM C 732 |

ALL ENCAPSULANTS

| | |
|-----------------------|---------------|
| Requirement | Test Standard |
| Permeability, Minimum | ASTM E 96 |
| 0.4 perms | |

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Asbestos abatement work tasks shall be performed as summarized in paragraph DESCRIPTION OF WORK and the Contractor's Accident Prevention Plan, Asbestos Hazard Abatement Plan, and the Activity Hazard Analyses. The Contractor shall use the engineering controls and work practices required in 29 CFR 1926, Section .1101(g) in all operations regardless of the levels of exposure. Personnel shall wear and utilize protective clothing and equipment as specified. The Contractor shall not permit eating, smoking, drinking, chewing or applying cosmetics in the regulated area. Personnel of other trades, not engaged in asbestos abatement activities, shall not be exposed at any time to airborne concentrations of asbestos unless all the administrative and personal protective provisions of the Contractor's Accident Prevention Plan are complied with. Power to the regulated area shall be locked-out and tagged in accordance with 29 CFR 1910, and temporary electrical service with ground fault circuit interrupters shall be provided as needed. Temporary electrical service shall be disconnected when necessary for wet removal.

3.2 PROTECTION OF ADJACENT WORK OR AREAS TO REMAIN

Asbestos abatement shall be performed without damage to or contamination of adjacent work or area. Where such work or area is damaged or contaminated, as verified by the Contracting Officer using visual inspection or sample analysis, it shall be restored to its original condition or decontaminated by the Contractor at no expense to the Government, as deemed appropriate by the Contracting Officer. This includes inadvertent spill of dirt, dust or debris in which it is reasonable to conclude that asbestos may exist. When these spills occur, work shall stop in all effected areas immediately and the spill shall be cleaned. When satisfactory visual inspection results are obtained and have been evaluated by the Contractor and the Contracting Officer, work shall proceed.

3.3 METHODS OF COMPLIANCE

3.3.1 Mandated Practices

The Contractor shall employ proper handling procedures in accordance with 29 CFR 1926 and 40 CFR 61, Subpart M, and the specified requirements. The specific abatement techniques and items identified shall be detailed in the Contractor's Asbestos Hazard Abatement Plan including, but not limited to, details of construction materials, equipment, and handling procedures. The Contractor shall use the following engineering controls and work practices in all operations, regardless of the levels of exposure:

- a. Vacuum cleaners equipped with HEPA filters to collect debris and dust containing ACM.
- b. Wet methods or wetting agents to control employee exposures during

asbestos removal, and cleanup.

- c. Prompt clean-up and disposal in leak-tight containers of wastes and debris contaminated with asbestos.
- d. Inspection and repair of polyethylene in work and high traffic areas.
- e. Cleaning of equipment prior to removing them from the equipment area.

3.3.2 Control Methods

The Contractor shall use the following control methods to comply with the PELs:

- a. Isolation of processes producing asbestos dust;
- b. Use of other work practices and engineering controls;

3.3.3 Unacceptable Practices

The following work practices and engineering controls shall not be used for work related to asbestos or for work which disturbs ACM, regardless of measured levels of asbestos exposure or the results of initial exposure assessments:

- a. High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.
- b. Dry sweeping, shoveling, or other dry clean-up of dust and debris containing ACM.
- c. Employee rotation as a means of reducing employee exposure to asbestos.

3.3.4 Class II Work

In addition to the requirements of paragraphs Mandated Practices and Control Methods, the following engineering controls and work practices shall be used:

- a. A Competent Person shall supervise the work.
- b. Impermeable dropcloths shall be placed on surfaces beneath all removal activity.

3.3.5 Specific Control Methods for Class II Work

In addition to requirements of paragraph Class II Work, Class II work shall be performed using the following methods:

3.3.5.1 Vinyl and Asphalt Flooring Materials

When removing vinyl and asphalt flooring materials which contain ACM, the Contractor shall use the following practices as shown in RESPONSE ACTION

DETAIL SHEET 57. Tiles shall be removed intact (if possible); wetting is not required when tiles are heated and removed intact. Flooring or its backing shall not be sanded. Scraping of residual adhesive and/or backing shall be performed using wet methods. Mechanical chipping is prohibited unless performed in a negative pressure enclosure. Dry sweeping is prohibited. The Contractor shall use vacuums equipped with HEPA filter, disposable dust bag, and metal floor tool (no brush) to clean floors.

3.3.5.2 Cementitious Siding and Shingles or Transite Panels

When removing cementitious asbestos-containing siding, shingles or transite panels the Contractor shall use the following practices shown in RESPONSE ACTION DETAIL SHEET 81. Intentionally cutting, abrading or breaking siding, shingles, or transite panels is prohibited. Each panel or shingle shall be sprayed with amended water prior to removal. Nails shall be cut with flat, sharp instruments. Unwrapped or unbagged panels or shingles shall be immediately lowered to the ground via covered dust-tight chute, crane or hoist, or placed in an impervious waste bag or wrapped in plastic sheeting and lowered to the ground no later than the end of the work shift.

3.3.6 Cleaning After Asbestos Removal

After completion of all asbestos removal work, surfaces from which ACM has been removed shall be wet wiped or sponged clean, or cleaned by some equivalent method to remove all visible residue. Run-off water shall be collected and filtered through a dual filtration system. A first filter shall be provided to remove fibers 20 micrometers and larger, and a final filter provided that removes fibers 5 micrometers and larger. After the gross amounts of asbestos have been removed from every surface, remaining visible accumulations of asbestos on floors shall be collected using plastic shovels, rubber squeegees, rubber dustpans, and HEPA vacuum cleaners as appropriate to maintain the integrity of the regulated area.

3.3.7 Class II Asbestos Work Response Action Detail Sheets

The following Class II Asbestos Work Response Action Detail Sheets are attached at the end of this specification section:

Vinyl Asbestos Tile Adhered to Concrete Floor System by Asbestos
Containing Adhesive: See Sheet 57
Asbestos Cement Siding: See Sheet 81

3.4 FINAL CLEANING AND VISUAL INSPECTION

Upon completion of abatement, the regulated area shall be cleaned by collecting, packing, and storing all gross contamination; see SET-UP DETAIL SHEETS 9 and 14. A final cleaning shall be performed using HEPA vacuum and wet cleaning of all exposed surfaces and objects in the regulated area. Upon completion of the cleaning, the Contractor shall conduct a visual pre-inspection of the cleaned area in preparation for a final inspection and recleaning, as necessary. Upon completion of the final cleaning, the Contractor and the Contracting Officer shall conduct a final visual inspection of the cleaned regulated area in accordance with ASTM E 1368 and document the results on the Final Cleaning and Visual Inspection as specified on the SET-UP DETAIL SHEET 19. If the Contracting Officer rejects the clean regulated area as not meeting final cleaning requirements, the Contractor shall reclean as necessary and have a follow-on inspection conducted with the Contracting Officer. Recleaning and follow-up reinspection shall be at the Contractor's expense.

3.5 EXPOSURE ASSESSMENT AND AIR MONITORING

3.5.1 General Requirements For Exposure

Exposure assessment, air monitoring and analysis of airborne concentration of asbestos fibers shall be performed in accordance with 29 CFR 1926, Section .1101, the Contractor's air monitoring plan, and as specified. Personal exposure air monitoring (collected at the breathing zone) that is representative of the exposure of each employee who is assigned to work within a regulated area shall be performed by the Contractor. Breathing zone samples shall be taken for at least 25 percent of the workers in each shift, or a minimum of 2, whichever is greater. Air monitoring results at the 95 percent confidence level shall be calculated as shown in Table 2 at the end of this section. Environmental air monitoring shall be performed or overseen by the Contractor's Designated IH. Environmental air monitoring shall be performed using NIOSH Pub No. 84-100 Method 7400 (PCM). Environmental air monitoring shall be conducted at a sufficient velocity and duration to establish the limit of detection of the method used at 0.005 f/cc. Monitoring may be duplicated by the Government at the discretion of the Contracting Officer. Results of breathing zone samples shall be posted at the job site and made available to the Contracting Officer. The Contractor shall maintain a fiber concentration inside a regulated area less than or equal to 0.1 f/cc expressed as an 8 hour, time-weighted average (TWA) during asbestos abatement activities. If fiber concentration rises above 0.1 f/cc, work procedures shall be investigated with the Contracting Officer to determine the cause. The Contractor's workers shall not be exposed to an airborne fiber concentration in excess of 1.0 f/cc, as averaged over a sampling period of 30 minutes. Should either an environmental concentration of 1.0 f/cc expressed as an 8-hour TWA or a personal excursion concentration of 1.0 f/cc expressed as a 30-minute sample occur inside a regulated work area, the Contractor shall stop work immediately, notify the Contracting Officer, and implement additional engineering controls and work practice controls to reduce airborne fiber levels below prescribed limits in the work area. Work shall not restart until authorized by the Contracting Officer.

3.5.2 Initial Exposure Assessment

The Contractor's Designated IH shall conduct or oversee an exposure assessment immediately before or at the initiation of an asbestos abatement operation to ascertain expected exposures during that operation. The assessment shall be completed in time to comply with the requirements which are triggered by exposure data or the lack of a negative exposure assessment, and to provide information necessary to assure that all control systems planned are appropriate for that operation. The assessment shall take into consideration both the monitoring results and all observations, information or calculations which indicate employee exposure to asbestos, including any previous monitoring conducted in the workplace, or of the operations of the Contractor which indicate the levels of airborne asbestos likely to be encountered on the job.

3.5.3 Negative Exposure Assessment

If a negative exposure assessment is provided, it shall conform to the following criteria:

- a. Objective Data: Objective data demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in

concentrations exceeding the PEL-TWA and PEL-Excursion Limit under those work conditions having the greatest potential for releasing asbestos.

- b. **Prior Asbestos Jobs:** Where the Contractor has monitored prior asbestos jobs for the PEL and the PEL-Excursion Limit within 12 months of the current job, the monitoring and analysis were performed in compliance with asbestos standard in effect; the data were obtained during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in the Contractor's current operations; the operations were conducted by employees whose training and experience are no more extensive than that of employees performing the current job; and these data show that under the conditions prevailing and which will prevail in the current workplace, there is a high degree of certainty that the monitoring covered exposure from employee exposures will not exceed the PEL-TWA and PEL-Excursion Limit.
- c. **Initial Exposure Monitoring:** The results of initial exposure monitoring of the current job, made from breathing zone air samples that are representative of the 8-hour PEL-TWA and 30-minute short-term exposures of each employee. The monitoring covered exposure from operations which are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

3.5.4 Environmental Air Monitoring During Abatement

Until an exposure assessment is provided to the Contracting Officer, environmental air monitoring shall be conducted at locations and frequencies that will accurately characterize any evolving airborne asbestos fiber concentrations. The assessment shall demonstrate that the product or material containing asbestos minerals, or the abatement involving such product or material, cannot release airborne asbestos fibers in concentrations exceeding 0.01 f/cc as a TWA under those work conditions having the greatest potential for releasing asbestos. The monitoring shall be at least once per shift at locations to be proposed in the asbestos abatement plan. If the sampling outside regulated area shows airborne fiber levels have exceeded 0.01 f/cc, work shall be stopped immediately, and the Contracting Officer notified. The condition causing the increase shall be corrected. Work shall not restart until authorized by the Contracting Officer.

3.5.5 Final Clearance Air Monitoring

Final clearance air monitoring is not required for this project since the units are scheduled for demolition.

3.5.6 Air-Monitoring Results and Documentation

Air sample fiber counting shall be completed and results provided within 24 hours (breathing zone samples), and 24 hours (environmental/clearance monitoring) after completion of a sampling period. The Contracting Officer shall be notified immediately of any airborne levels of asbestos fibers in excess of established requirements. Written sampling results shall be provided within 5 working days of the date of collection. The written results shall be signed by testing laboratory analyst, testing laboratory

principal and the Contractor. The air sampling results shall be documented on a Contractor's daily air monitoring log. The daily air monitoring log shall contain the following information for each sample:

- a. Sampling and analytical method used;
- b. Date sample collected;
- c. Sample number;
- d. Sample type: BZ = Breathing Zone (Personal), E = Environmental;
- e. Location/activity/name where sample collected;
- f. Sampling pump manufacturer, model and serial number, beginning flow rate, end flow rate, average flow rate (L/min);
- g. Calibration date, time, method, location, name of calibrator, signature;
- h. Sample period (start time, stop time, elapsed time (minutes));
- i. Total air volume sampled (liters);
- j. Sample results (f/cc);
- k. Laboratory name, location, analytical method, analyst, confidence level. In addition, the printed name and a signature and date block for the Industrial Hygienist who reviewed the daily air monitoring log verifying the accuracy of the information.

3.6 CLEARANCE CERTIFICATION

When asbestos abatement is complete, ACM waste is removed from the regulated areas, and final clean-up is completed, the Contracting Officer will certify the areas as safe before allowing the warning signs and boundary warning tape to be removed. The Contractor and the Contracting Officer shall visually inspect all surfaces for residual material or accumulated debris. The Contractor shall reclean all areas showing residual materials. The Contracting Officer will certify in writing that the area is safe before unrestricted entry is permitted.

3.7 CLEANUP AND DISPOSAL

3.7.1 Title to ACM Materials

ACM material resulting from abatement work, except as specified otherwise, shall become the responsibility of the Contractor for disposal and shall be disposed of as specified and in accordance with applicable federal, state and local regulations.

3.7.2 Collection and Disposal of Asbestos

All ACM waste shall be collected and placed in leak-tight containers such as double plastic bags (see DETAIL SHEET 9A); sealed fiberboard boxes (see DETAIL SHEET 9C); or other approved containers. Waste within the containers shall be wetted in case the container is breached. Asbestos-containing waste shall be disposed of at an EPA, state and local approved asbestos landfill. For temporary storage, sealed impermeable

containers shall be stored in an asbestos waste load-out unit or in a storage/transportation conveyance (i.e., dumpster, roll-off waste boxes, etc.) in a manner acceptable to and in an area assigned by the Contracting Officer. Procedure for hauling and disposal shall comply with 40 CFR 61, Subpart M, state, regional, and local standards.

3.7.3 Weigh Bill and Delivery Tickets

Copies of weigh bills and delivery tickets shall be submitted to the Contracting Officer during the progress of the work. The Contractor shall furnish the Contracting Officer scale tickets for each load of ACM weighed and certified. These tickets shall include tare weight; identification mark for each vehicle weighed; and date, time and location of loading and unloading. Tickets shall be furnished at the point and time individual trucks arrive at the worksite. A master log of all vehicle loading shall be furnished for each day of loading operations. Before the final statement is allowed, the Contractor shall file with the Contracting Officer certified weigh bills and/or certified tickets and manifests of all ACM actually disposed by the Contractor for this contract.

3.7.4 Asbestos Waste Shipment Record

The Contractor shall complete and provide the Contracting Officer final completed copies of the Waste Shipment Record for all shipments of waste material as specified in 40 CFR 61, Subpart M and other required state waste manifest shipment records, within 3 days of delivery to the landfill. Each Waste Shipment Record shall be signed and dated by the Contracting Officer, the waste transporter and disposal facility operator.

TABLE 2

FORMULA FOR CALCULATION OF THE 95 PERCENT CONFIDENCE LEVEL
(Reference: NIOSH 7400)

$$\text{Fibers/cc}(01.95 \text{ percent CL}) = X + [(X) * (1.645) * (CV)]$$

Where: $X = ((E)(AC))/((V)(1000))$

$$E = ((F/Nf) - (B/Nb))/Af$$

CV = The precision value; 0.45 shall be used unless the analytical laboratory provides the Contracting Officer with documentation (Round Robin Program participation and results) that the laboratory's precision is better.

AC = Effective collection area of the filter in square millimeters

V = Air volume sampled in liters

E = Fiber density on the filter in fibers per square millimeter

F/Nf = Total fiber count per graticule field

B/Nb = Mean field blank count per graticule field

TABLE 2

FORMULA FOR CALCULATION OF THE 95 PERCENT CONFIDENCE LEVEL
(Reference: NIOSH 7400)

Af = Graticule field area in square millimeters

$TWA = C1/T1 + C2/T2 = Cn/Tn$

Where: C = Concentration of contaminant

T = Time sampled.

TABLE 3
 NIOSH METHOD 7400
 PCM ENVIRONMENTAL AIR SAMPLING PROTOCOL (NON-PERSONAL)

| Sample Location | Minimum No. of Samples | Filter Pore Size (Note 1) | Min. Vol. (Note 2) (Liters) | Sampling Rate (liters/min.) |
|---|-------------------------------------|---------------------------|-----------------------------|-----------------------------|
| Inside Abatement Area | 0.5/140 Square Meters (Notes 3 & 4) | 0.45 microns | 3850 | 2-16 |
| Each Room in 1 Abatement Area Less than 140 Square meters | | 0.45 microns | 3850 | 2-16 |
| Field Blank | 2 | 0.45 microns | 0 | 0 |
| Laboratory Blank | 1 | 0.45 microns | 0 | 0 |

Notes:

1. Type of filter is Mixed Cellulose Ester.
2. Ensure detection limit for PCM analysis is established at 0.005 fibers/cc.
3. One sample shall be added for each additional 140 square meters. (The corresponding I-P units are 5/1500 square feet).
4. A minimum of 5 samples are to be taken per abatement area, plus 2 field blanks.

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME _____ CONTRACT NO. _____
 PROJECT ADDRESS _____
 CONTRACTOR FIRM NAME _____
 EMPLOYEE'S NAME _____, _____, _____,
 (Print) (Last) (First) (MI)

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

Social Security Number: _____-_____-_____,

WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH TYPES OF LUNG DISEASE AND CANCER. IF YOU SMOKE AND INHALE ASBESTOS FIBERS, THE CHANCE THAT YOU WILL DEVELOP LUNG CANCER IS GREATER THAN THAT OF THE NONSMOKING PUBLIC.

Your employer's contract for the above project requires that you be provided and you complete formal asbestos training specific to the type of work you will perform and project specific training; that you be supplied with proper personal protective equipment including a respirator, that you be trained in its use; and that you receive a medical examination to evaluate your physical capacity to perform your assigned work tasks, under the environmental conditions expected, while wearing the required personal protective equipment. These things are to be done at no cost to you. By signing this certification, you are acknowledging that your employer has met these obligations to you. The Contractor's Designated Industrial Hygienist will check the block(s) for the type of formal training you have completed. Review the checked blocks prior to signing this certification.

FORMAL TRAINING:

_____ a. For Competent Persons and Supervisors: I have completed EPA's Model Accreditation Program (MAP) training course, "Contractor/Supervisor", that meets this State's requirements.

b. For Workers:

_____ (1) For OSHA Class I work: I have completed EPA's MAP training course, "Worker", that meets this State's requirements.

_____ (2) For OSHA Class II work (where there will be abatement of more than one type of Class II materials, i.e., roofing, siding, floor tile, etc.): I have completed EPA's MAP training course, "Worker", that meets this State's requirements.

(3) For OSHA Class II work (there will only be abatement of one type of Class II material):

_____ (a) I have completed an 8-hour training class on the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls of 29 CFR 1926, Section .1101(g) and hands-on training.

_____ (b) I have completed EPA's MAP training course, "Worker", that meets this State's requirements.

_____ (4) For OSHA Class III work: I have completed at least a 16-hour course consistent with EPA requirements for training of local education agency maintenance and custodial staff at 40 CFR 763, Section .92(a)(2) and the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls at 29 CFR 1926, Section .1101, and hands-on training.

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

_____ (5) For OSHA Class IV work: I have completed at least a 2-hr course consistent with EPA requirements for training of local education agency maintenance and custodial staff at 40 CFR 763, (a)(1), and the elements of 29 CFR 1926, Section .1101(k)(9)(viii), in addition to the specific work practices and engineering controls at 29 CFR 1926, Section .1101(g) and hands-on training.

_____ c. Workers, Supervisors and the Designated Competent Person: I have completed annual refresher training as required by EPA's MAP that meets this State's requirements.

PROJECT SPECIFIC TRAINING:

_____ I have been provided and have completed the project specific training required by this Contract. My employer's Designated Industrial Hygienist and Designated Competent Person conducted the training.

RESPIRATORY PROTECTION:

_____ I have been trained in accordance with the criteria in the Contractor's Respiratory Protection program. I have been trained in the dangers of handling and breathing asbestos dust and in the proper work procedures and use and limitations of the respirator(s) I will wear. I have been trained in and will abide by the facial hair and contact lens use policy of my employer.

RESPIRATOR FIT-TEST TRAINING:

_____ I have been trained in the proper selection, fit, use, care, cleaning, maintenance, and storage of the respirator(s) that I will wear. I have been fit-tested in accordance with the criteria in the Contractor's Respiratory Program and have received a satisfactory fit. I have been assigned my individual respirator. I have been taught how to properly perform positive and negative pressure fit-check upon donning negative pressure respirators each time.

MEDICAL EXAMINATION:

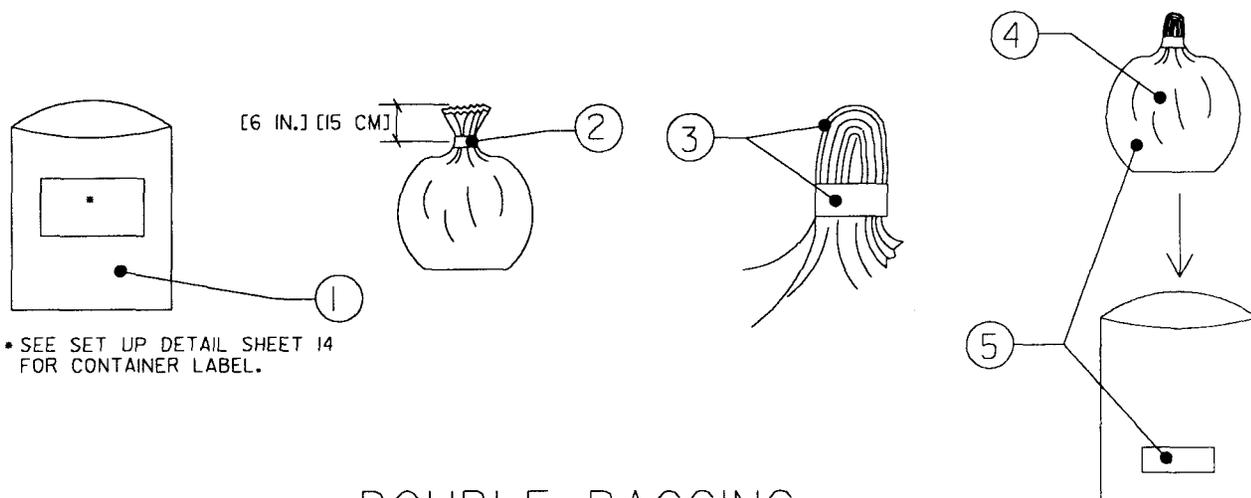
_____ I have had a medical examination within the last twelve months which was paid for by my employer. The examination included: health history, pulmonary function tests, and may have included an evaluation of a chest x-ray. A physician made a determination regarding my physical capacity to perform work tasks on the project while wearing personal protective equipment including a respirator. I was personally provided a copy and informed of the results of that examination. My employer's Industrial Hygienist evaluated the medical certification provided by the physician and checked the appropriate blank below. The physician determined that there:

_____ were no limitations to performing the required work tasks.
_____ were identified physical limitations to performing the required work tasks.

Date of the medical examination _____

Employee Signature _____ date _____
Contractor's Industrial Hygienist Signature _____ date _____

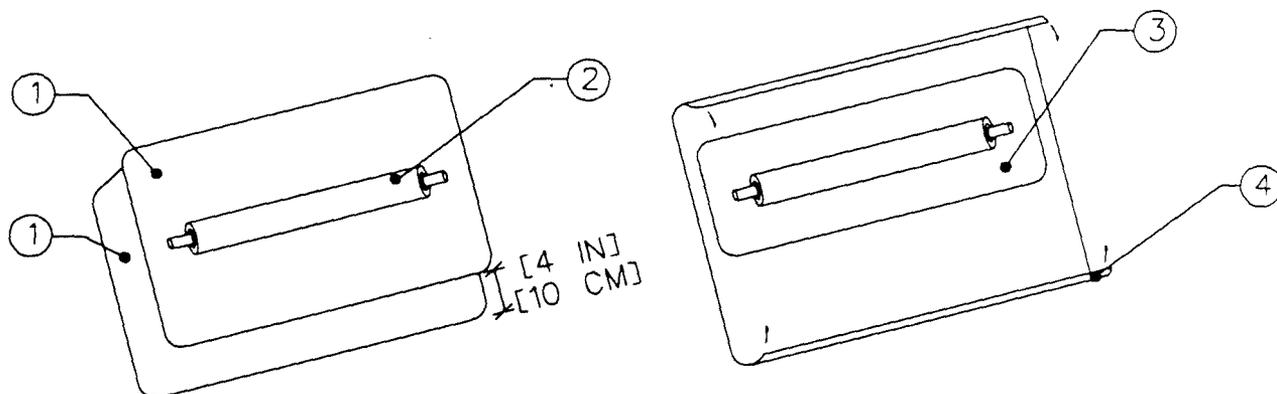
-- End of Section --



DOUBLE BAGGING

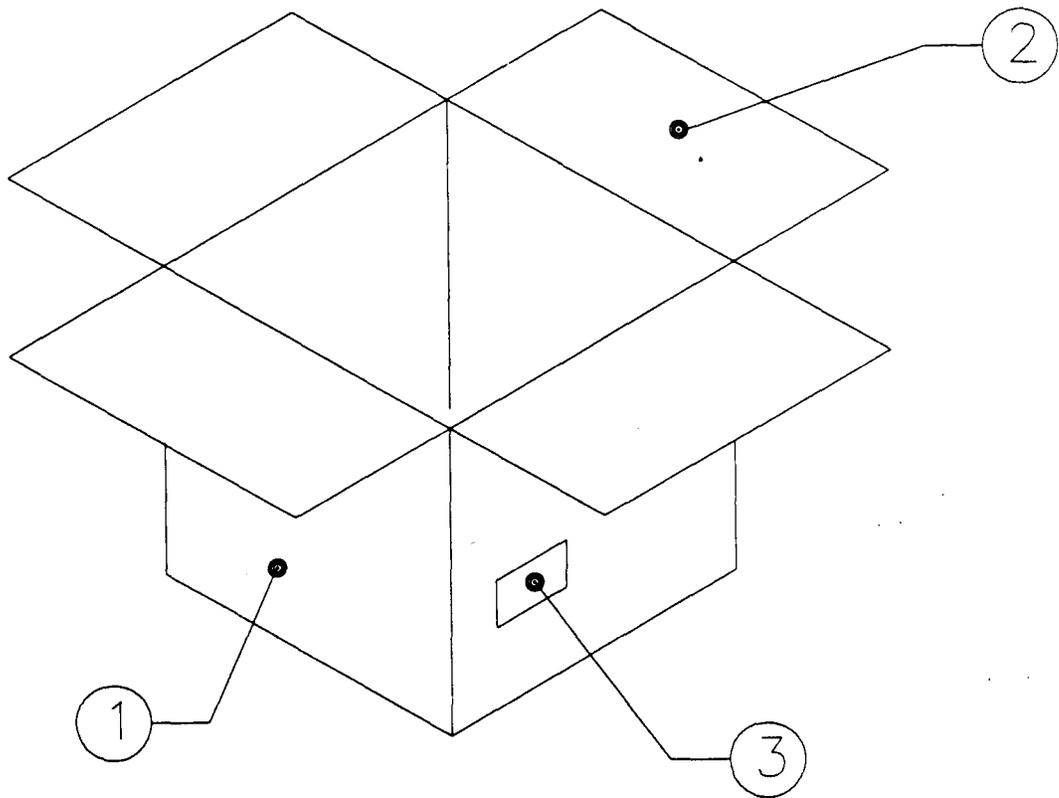
Containers—double bagging

1. Place the still-wet asbestos-containing and asbestos-contaminated material into a prelabeled 6-mil polyethylene bag. Do not overfill. Do not use bag for asbestos-containing or asbestos-contaminated material that could puncture the bag. (See sheet 9C for packaging items that could puncture bags.)
2. Evacuate with HEPA vacuum, and seal collapsed bag by twisting top [6 in] [15 cm] closed and wrapping with a minimum of two layers of duct tape.
3. Twist top and fold over. Apply second wrap of duct tape.
4. Adequately wet clean outside of disposal bag by wet wiping, and take bag to the equipment and staging area.
5. Place bag inside a second prelabeled 6-mil polyethylene bag.
6. Seal outer bag by repeating steps 2 and 3 above. Take bag to load-out unit; see sheet 20.



Containers—leak-tight wrapping

1. Place two layers of 6-mil polyethylene sheet on surface so that the bottom layer is offset [4 in] [10 cm] from the top layer.
2. Place the still-wet asbestos-containing or asbestos-contaminated material that is too large (boiler, vessel, pipe segment, etc.) to be placed in disposal bags on the top layer of polyethylene.
3. Wrap the top layer tightly around the contaminated material. Seal all edges of the top layer of sheeting with duct tape. Apply labels; see sheet 14.
4. Repeat procedure with bottom layer, including labeling. Take to load-out unit; see sheet 20.

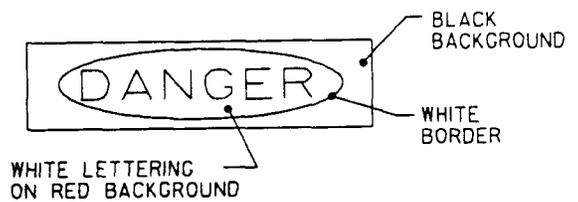
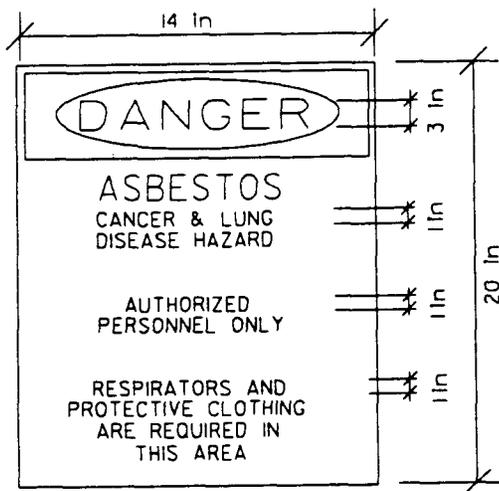


Containers—corrugated cardboard boxes

1. Place still-wet asbestos-containing or asbestos-contaminated material that could puncture disposal bags into heavy-duty corrugated cardboard boxes coated with plastic or wax that will retard deterioration from moisture.

2. Close flaps, and seal with duct tape.

3. Apply labels; see sheet 14. Place box into disposal bags; see sheet 9A. Take to load-out unit; see sheet 20.



AREA WARNING SIGNS AND WARNING TAPE

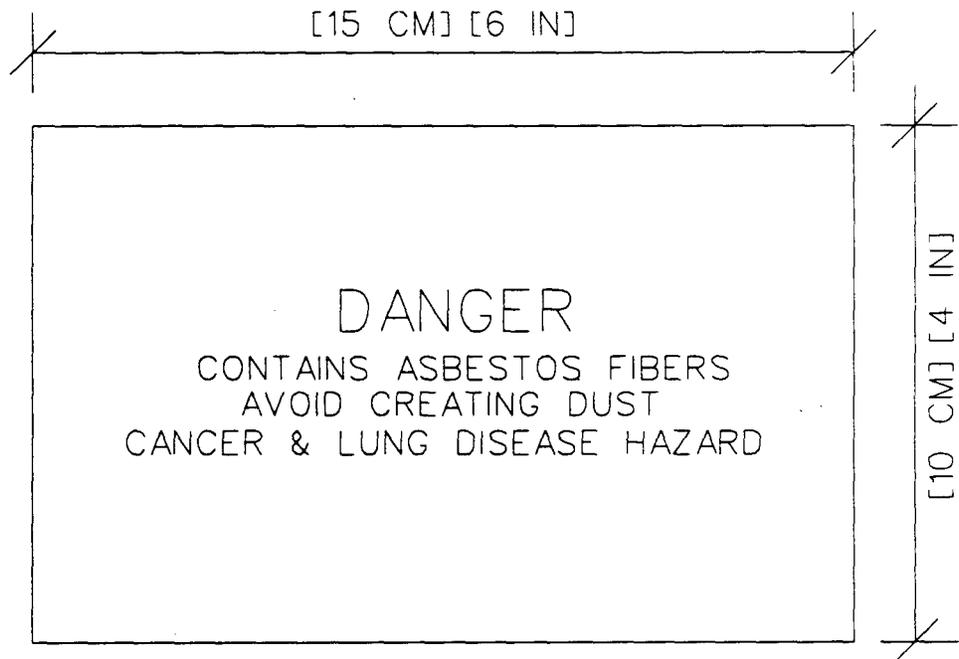
DETAIL 

Area warning signs and warning tape

1. Provide and install [4 mil] [0.10 mm] polyethylene warning tape at locations shown on the abatement area plan.
2. Warning tape is to be attached to wood or metal posts at [10 ft] [300 cm] on center. Tape must be [3 ft] [100 cm] from ground.
3. Attach both warning signs at each entrance of the work area and at [33 yd] [30 m] on center where security fencing is installed.
4. Warning signs must be in English and other languages required by the contract.
5. Install at eye level.

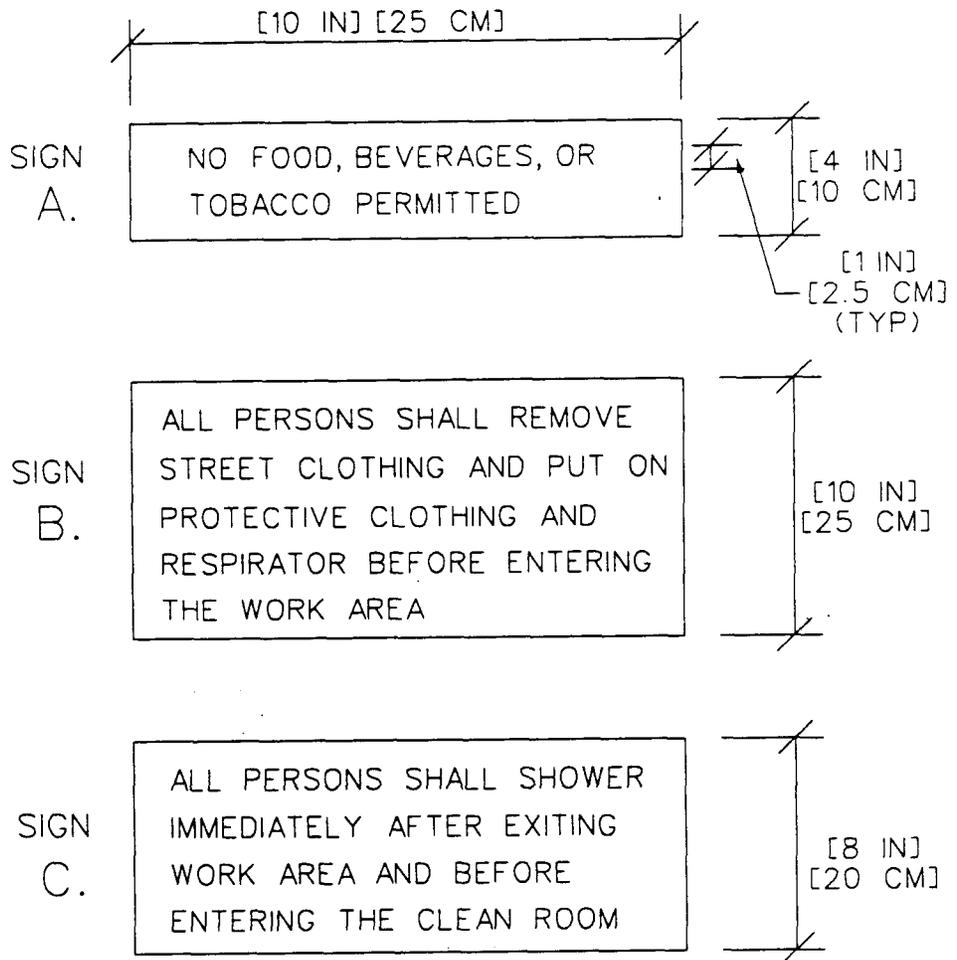
| FIBER CONCENTRATION | MINIMUM REQUIRED RESPIRATOR | |
|---|---|---|
| NOT IN EXCESS OF 1 FIBER/CC | HALF-MASK AIR PURIFYING RESPIRATOR WITH HEPA FILTERS |  |
| NOT IN EXCESS OF 5 FIBERS/CC | FULL FACEPIECE AIR-PURIFYING RESPIRATOR WITH HEPA FILTERS | HEPA FILTER  |
| NOT IN EXCESS OF 10 FIBERS/CC | LOOSE FITTING HELMET OR HOOD, POWERED AIR-PURIFYING RESPIRATOR WITH HEPA FILTERS | BATTERY POWERED BLOWER WITH HEPA FILTER  |
| NOT IN EXCESS OF 10 FIBERS/CC | POWERED AIR-PURIFYING RESPIRATOR WITH FULL FACEPIECE AND HEPA FILTER |  |
| NOT IN EXCESS OF 10 FIBERS/CC | LOOSE FITTING HELMET OR HOOD, SUPPLIED AIR RESPIRATOR OPERATED IN CONTINUOUS FLOW MODE WITH BACK-UP HEPA FILTER |  |
| NOT IN EXCESS OF 10 FIBERS/CC | SUPPLIED AIR RESPIRATOR WITH FULL FACEPIECE OPERATED IN CONTINUOUS FLOW MODE WITH BACK-UP HEPA FILTER | AIR SUPPLY  |
| NOT IN EXCESS OF 100 FIBERS/CC | FULL FACEPIECE SUPPLIED AIR RESPIRATOR OPERATED IN PRESSURE-DEMAND MODE WITH BACK-UP HEPA FILTER | AIR SUPPLY  |
| GREATER THAN 100 FIBERS/CC OR UNKNOWN CONCENTRATION | FULL FACEPIECE SUPPLIED-AIR RESPIRATOR OPERATED IN PRESSURE-DEMAND MODE WITH AUXILIARY POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS | AUXILIARY POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS  |
| | | AIR SUPPLY  |

Respiratory protection table



Disposal container label

Attach warning labels to each disposal container removed from abatement area.



Decontamination unit signage

1. Provide signs in English and other languages required by the contract.
2. Install at eye level.

Certification of Final Cleaning And Visual Inspection

Individual abatement task as identified in paragraph, Description of Work _____

In accordance with the cleaning and decontamination procedures specified in the Contractor's asbestos hazard abatement plan and this contract, the Contractor hereby certifies that he/she has thoroughly visually inspected the decontaminated regulated work area (all surfaces, including pipes, beams, ledges, walls, ceiling, floor, decontamination unit, etc.) in accordance with ASTM E1368, *Standard Practice for Visual Inspection of Asbestos Abatement Projects*, and has found no dust, debris, or asbestos-containing material residue.

BY: (Contractor's signature) _____ Date _____

Print name and title _____

(Contractor's Onsite Supervisor signature) _____ Date _____

Print name and title _____

(Contractor's Industrial Hygienist signature) _____ Date _____

Print name and title _____

Contracting Officer Acceptance or Rejection

The Contracting Officer hereby determines that the Contractor has performed final cleaning and visual inspection of the decontaminated regulated work area (all surfaces including pipes, beams, ledges, walls, ceiling, floor, decontamination unit, etc.) and by quality assurance inspection, finds the Contractor's final cleaning to be:

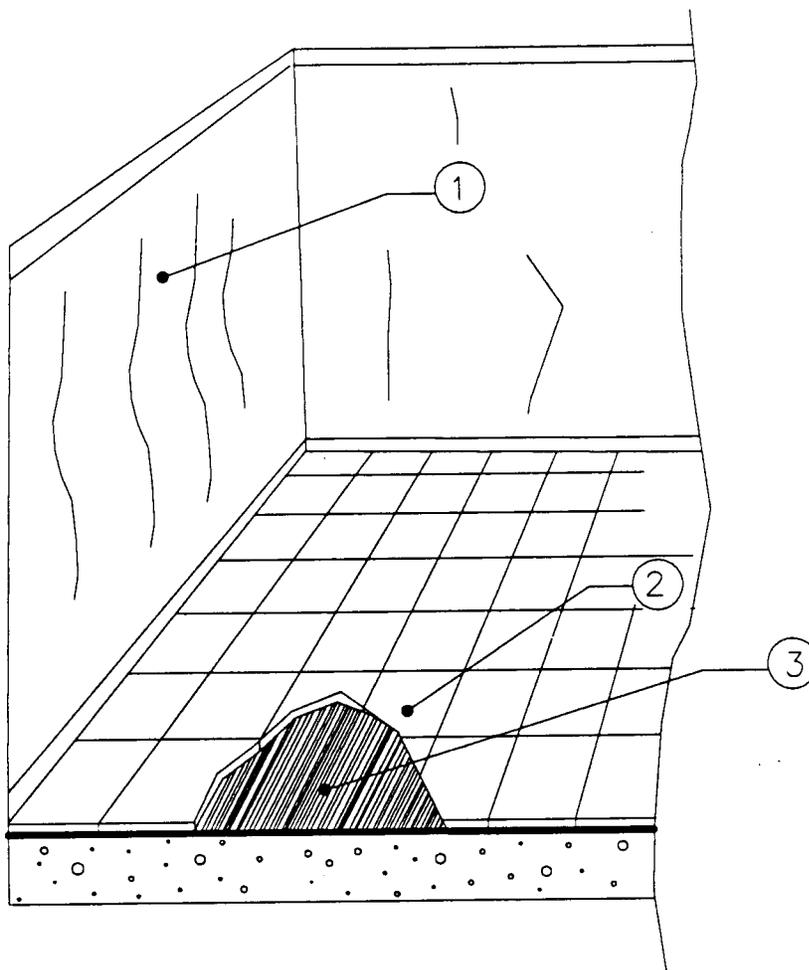
Acceptable

Unacceptable, Contractor instructed to reclean the regulated work area.

BY: Contracting Officer's Representative

Signature _____ Date _____

Print name and title _____



Removal of vinyl asbestos tile adhered to concrete floor system by asbestos-containing adhesive

1. Prepare containment area as specified on sheet 21.
NOTE: Where full containment area is required, follow instructions on sheet 4, except omit polyethylene on floor.

2. Lightly flood asbestos tile with amended water, and let soak for 48 hours. Remove asbestos tile and adhesive while they are wet in order to prevent asbestos fiber release. Place tile and adhesive into an

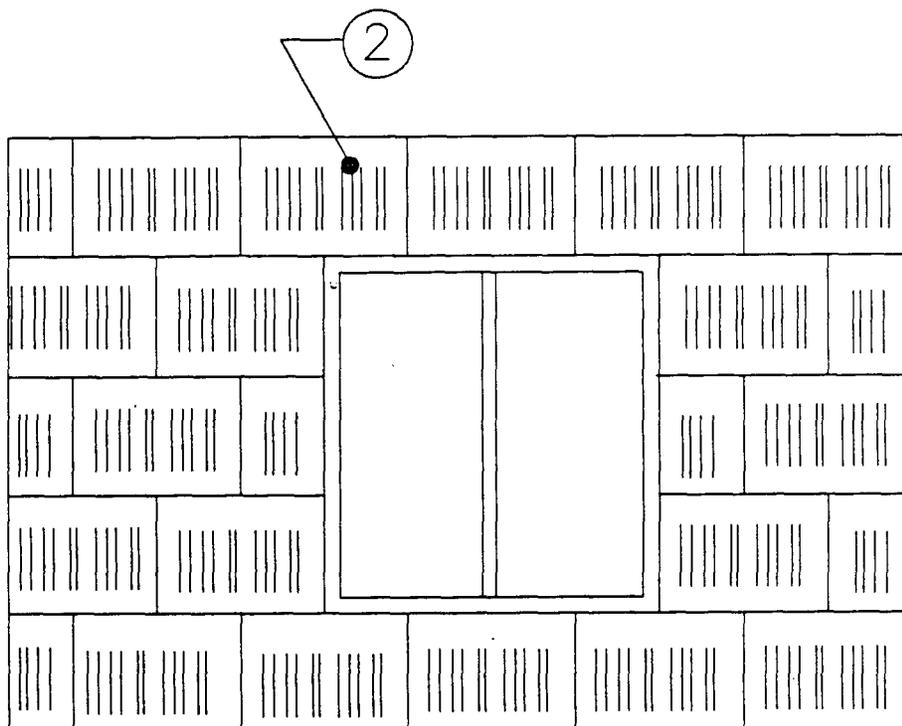
approved container; see sheet 9. Apply labels; see sheet 14.

3. Clean, HEPA vacuum, and wet wipe all surfaces.

4. Inspect and reclean area as necessary.

5. Prepare area for final air clearance.

6. Carry out final clearance requirements as specified on applicable sheet 18 or 21.



Removal of asbestos cement siding

1. No containment area is required. Establish boundaries of asbestos-regulated work area so that unauthorized entry is prevented; see sheet 11. Provide personal protection and decontamination facilities as specified in contractor's asbestos hazard abatement plan.
2. Wet mist siding with amended water, initially and during removal procedures.
3. Anchor 10-mil polyethylene sheeting below work area. Remove siding in a manner that will prevent crumbling, pulverizing, or reducing to powder during the removal procedure. NOTE: Normal breakage does not constitute crumbling, pulverizing, or reducing to powder.
4. Clean and HEPA vacuum all surfaces.
5. Inspect and reclean area as necessary.
6. Place all materials in Dumpster or other transport container lined with two layers of 6-mil polyethylene. Seal the joints and ends of each layer with duct tape; see sheet 9. Apply labels; see sheet 14. Other containers may be used; see sheet 9. Apply labels; see sheet 14.
7. Prepare area for final clearance.
8. Contractor and contracting officer will certify visual inspection of work area on sheet 19, *Certification of Final Cleaning and Visual Inspection*.

Meeting Minutes
Pre-Proposal Conference/Site Visit
Replace Family Housing (FY02/FY03)
Ellsworth AFB, SD

Date: May 22, 2002

Location: Dakota's Officer Club
2838 Arnold Drive
Ellsworth AFB, SD 57706

Solicitation No: DACA45-02-R-0021

Attendees: See Attachment 2

The pre-proposal conference commenced at 9:00 AM with a project overview and a question and answer session. Formal questions and answers are included in Attachment 1. At approximately 11:00 AM the attendees were shown several vacant units. Attendees were cautioned that the written requirements of the solicitation take precedence over verbal communications of the conference/site visit. Attendees were advised that a solicitation amendment would be issued the following week. Minutes are as follows:

INTRODUCTIONS: All parties in attendance introduced themselves and the company/agency they represented.

PROJECT SCOPE:

- The project includes demolition of existing housing and constructing 100 new units for junior enlisted housing in the Prairie View area. The different types of new housing units are shown on the drawings.
- Phase 1 (FY02) includes with 78 units and Phase 2 (FY03) is an option that includes an additional 22 units in Phase 2 (FY03). Phase 1 contains a basic item for 74 units and an option item for 4 additional units. The Phase 2 option will be awarded no earlier than October 1, 2002 and no later than February 15, 2003.
- The floor plan is included in the solicitation. The solicitation drawings are intended to show the design approved by the base based on their preferences for family housing. Alternative designs are not requested in the solicitation so that all firms are proposing on the same requirements. It is intended that any minor design revisions will be handled post award during the design submittal and review process.
- The only design submittals are related to materials, appliances, and equipment. The solicitation contains the requirements for materials, appliances, etc.
- The existing housing units are 2 story brick buildings with basements. The base is handling asbestos abatement except for transite boards behind the brick. The units will contain lead based paint. Debris should be transported to asbestos certified landfill, as required, with appropriate documentation. Check with the local landfill(s) for their capabilities. All units

will be vacated by July 1, 2002. Phase 2 units cannot be demolished until the Phase 2 option is exercised.

- The order of precedence in the solicitation documents in case of conflict is as follows: 1) Written RFP; 2) RFP drawings, and 3) Air Force Family Housing Guide and other referenced codes. All conflicts should be brought to the Government's attention as soon as possible.
- Housing types (e.g., B, C, D) and their locations are shown in the plans. There will be 5 handicapped accessible (Type D) units. The RFP defines the adaptability of handicapped units.
- Utilities are shown in the drawings. Some transformers may require relocation. Some sanitary sewers will have to be replaced because of the layout of the new housing units. Sewer capacity is adequate. Suggested using the zoom function on the CD-ROM to get a clearer picture of the utility requirements shown on the drawings.
- Project includes moving the security fence and installing a security gate with street access without having to go through base security. The project management plan requirement in the solicitation should state the firm's process to allow occupant access as phased turnover of units occurs.
- Topographic drawings will be included in the upcoming amendment. Overexcavation is required 5 feet below the foundation and floor slab depth, as stated in the RFP.
- Project includes a new playground and salvage of existing playground.
- Phased prototype construction is a requirement.

SOLICITATION/PROPOSAL REQUIREMENTS:

- Price Schedule includes a base item of 74 units with construction and design costs broken out; Option 1 includes 4 units with 1 unit of each type (e.g., B3, B4, C3, C4). Option 2 is 22 units in Phase 2 (FY03). Option 3 is a 2-car garage with 2nd garage door and opener. Option 4 is for additional square footage for all units (e.g., Government does not intend to exercise this option for the 22 Phase 2 units and not the 78 Phase 1 units). Option 5 is for an expedited schedule in which the completion of the basic item is achieved within 365 days from NTP of the site and foundation work. Depending on each firm's schedule, Option 5 could be a \$0 option.
- The cost limitations of \$12,330,000 for Phase 1 and \$4,314,000 for Phase 2 are stated in Section 00110, Paragraph 3. The Government reserves the right to award above this limit if determined to be in the Government's best interest. However, the Government also reserves the right to reject proposals that exceed the Cost Limitation.
- An original and 6 copies of the proposal are required. Proposals will be received on June 19, 2002. No public bid opening. If hand carrying proposals, allow time for security precautions stated in solicitation. Government will not release information during the proposal evaluation period. Award is anticipated in July 2002. The Government intends to award a contract without discussions (e.g., no revised proposals) so proposals should contain the best terms and pricing.
- Proposal should include SF 1442 that acknowledges all amendments and a completed Pricing Schedule. Bid bonds are not required with proposal. Performance and payment bonds for 100% of the contract price will be required after award to the successful firm. Section 00600 should be completed and submitted with the proposal. Contract clauses are included and full text version of clauses can be viewed on the web or requested from the Corps.
- This is a best value solicitation. The Government will evaluate Price approximately equal to the combined importance of the four technical factors included in the solicitation: 1) Technical Data; 2) Experience, Past Performance, & Personnel; 3) Project Management Plan; and 4)

Utilization of Small Business Concerns. Technical Data and Experience, Past Performance & Personnel are of approximately equal importance. Project Management Plan is less important than Technical Data and Experience, Past Performance & Personnel, but Project Management Plan is more important than Utilization of Small Business Concerns.

- In the Technical Data factor, the firm may propose “deviations” or “betterments” to the solicitation requirements. Deviations and betterments must be identified in the proposal. A list of prioritized betterments is included in the solicitation. Firms are cautioned that deviations from the requirements should be fully explained in the proposal and could result in an unfavorable evaluation if the Government believes the deviations negatively affect the quality of housing.
- Small businesses do not have to submit information under Utilization of Small Business Concerns and small businesses will automatically receive the highest evaluation for this factor. The small business size standard is \$28.5 million in annual revenues averaged over the last 3 years.

Lee McCormick
Contract Specialist

Attachments

1. Questions & Answers
2. Attendance Roster

Questions and Answers
Replace Family Housing (FY02/FY03)
Ellsworth AFB, SD
May 22, 2002

These questions may have been paraphrased or summarized. Where available the solicitation section and paragraph are referenced.

Reference: General

Q: Are CADD files of the RFP drawings available to proposers? This would be beneficial if enhancements are proposed.

A: No, the Government is not looking for additional design submittals. CADD files will be provided to the successful firm.

Reference: General

Q: Do the RFP drawings take precedence over AFFHG requirements and/or the RFP? Which of these three requirements governs in case of conflict?

A: The written solicitation takes precedence over drawings. Drawings take precedence over the Air Force Family Housing Guide. Conflicts should be brought to the Government's attention as soon as possible.

Reference: General

Q: Are proposers to assume that all units will receive basements? Some plans are not shown with basements and the RFP refers in places to units without basements.

A: Yes, all units will receive basements except for five handicapped accessible units identified in the solicitation.

Reference: General

Q: All 100 units are to be turned over to the contractor upon NTP. Can the contractor house workers in the Phase 2 units that are not demolished?

A: All 100 units will be turned over at NTP. However, the Phase 2 units will still need to be abated of environmental hazards by the Government when Phase 2 funds are available. The Phase 2 units cannot be demolished until the Phase 2 Option is exercised. One of the Phase 2 units is recommended to be used as the Contractor / Corps of Engineers Trailer. The Contractor is prohibited from allowing his workers to live in any of the existing housing units.

NOTE: This answer may contradict a verbal response provided to a small group of people during the site visit.

Reference: 00010-Page 1, Block 13A

Q: Will the proposal due date be extended because of the issuance of the upcoming amendment?

A: No, there are still 4 weeks left before proposals are due. Proposals will be due on 19 June 02.

Reference: 00010-Page 1, Block 13D

Q: Award date is anticipated to be in July 2002, but the solicitation requires a 120-day acceptance period. Is this correct?

A: Yes, the Government anticipates award in July, but additional time is included with the acceptance period in case of unexpected circumstances.

Reference: 00110-2.4

Q: Can you explain how a joint venture between a large business and a small business will be evaluated regarding the subcontracting plan requirements in the RFP? In such a case, will the value of the work performed by the SB partner count toward achieving the SB subcontracting goals?

A: A joint venture between a large business and small business would be classified as a large business and subject to the submittal and evaluation requirements in Section 00110, Paragraph 2.4. Because a joint venture would be a separate entity recognized as the prime contractor, work performed by the small business partner is not subcontracting effort, but rather prime contractor effort and, therefore, cannot be applied to the subcontracting goals.

Reference: 00110-2.4

Q: Lee McCormick said no SB contracting plan is required in the RFP proposal. We don't read the requirements under Tab 4 that way. Please verify if a SB Plan is required in the RFP submittal?

A: All large business proposers are required to submit the information stated in the solicitation for Tab 4 "Utilization of Small Business Concerns." Tab 4 of the proposal is a separate document from the official subcontracting plan that is approved, signed, and dated by the contracting officer.

NOTE: The requirements in this factor were specifically written to allow the selected firm to convert Tab 4 of the proposal into an official subcontracting plan with minimal effort.

Reference: 00110-2.4

Q: In the evaluation of Utilization of Small Business Concerns, small businesses automatically receive the highest rating. Do large businesses lose points simply because they are a large business?

A: No, a large business also may achieve the highest rating possible by exceeding the Government's requirements for this factor. An adjectival rating system will be used rather than point scoring.

Reference: 00110-3

Q: Can the Government exceed the cost limits identified? Will the Government consider awarding more than 100 units?

A: Yes, the Government can exceed the cost limits if determined to be in the Government's best interests. No, the Government would rather exercise options rather than increase quantity of units.

Reference: 01001-1.1

Q: This paragraph allows deviations to the RFP provided design if accepted by the Contracting officer. Are proposers allowed to submit drawings at the proposal stage illustrating deviations? If so, how will they be evaluated?

A: No, design drawing deviations are not desired in the Contractor's proposal. Design deviations to improve the functionality or constructability of the floor plan will be addressed after award during the design submittal and review process.

Reference: 01001-1.1

Q: The square footages for the Option 0-4 units are larger than the Phase 1 (FY02) listed footages. Does the government have a preference as to where the additional area is added on these larger units? Are the RFP provided drawings sized at the Basic size or the Option size?

A: The drawings show both the basic size requirements and option size requirements.

Reference: 01002-3.3.4

Q: This paragraph requires that; "The Contractor shall field verify the sanitary sewer capacity and invert elevations to ensure that it is adequate for the flows generated by the new family housing units." Can the government provide any data that would support the current RFP design? If not proposers may have to include an expensive sewage lift station within their cost proposals to cover the worst case scenario. Any additional information regarding the current state of the sewer P.O.C. and main capacity would be beneficial to both proposers and the government.

A: The Government has no additional data. Contractors should price their proposal based on the information provided by the Government. The contractor is only responsible to field verify sanitary sewer capacity to ensure adequacy of the system and inform the Government if a problem exists. The Government expects the existing sanitary sewer mains to be adequate to support the new housing units.

Reference: 01002-4.1

Q: Are any grading or topo drawings available for the new site? As a minimum, contours of the existing housing site would be helpful to proposers. Are there any drawings available to proposers that indicate existing trees? This would be helpful in pricing the protection, demolition or relocation of existing landscape elements.

A: Yes, these drawings will be provided in the upcoming amendment. Trees will not be indicated on the drawings.

Reference: 01002-4.2

Q: Existing grades would be helpful to provide pricing to the requirements set forth in this paragraph. Please consider providing proposers with new or existing contours for the site.

A: Drawings will be provided in the upcoming amendment.

Reference: 01002, Para 3.9

Q: Should street lights in common areas be included with the demolition?

A: No, street lights in common areas should remain. See RFP Section 01002, Paragraph 3.9.

Reference: 01002-5.0 thru 5.2

Q: It will be difficult to account for any new storm drainage requirements without any information on existing or new grades and drainage systems. Please consider providing proposers with additional information.

A: Topo Drawings will be provided by amendment. Storm Drain lines are shown on the drawings. Para 5.2 indicates that the intent of the RFP is to utilize the existing storm drain system and drainage patterns to the extent possible and as shown on the drawings. The Contractor is responsible for the design and construction of drainage revisions made.

Reference: 01003-3.2.2

Q: The RFP refers to proposers being able to utilize “existing housing plans or modifications thereof”. Does this apply to both the basic and option? If alternative designs are provided, how will they be evaluated? Are alternative plans desired?

A: Alternative plans are not desired. Minor deviations to the housing design will be addressed in the design process, not the evaluation process.

Reference: 01003-11.1.4

Q: Does the government have a preference between gas or electric ranges?

A: Gas is preferred. Also see 01006, Paragraph 5.3.1. Will clarify by amendment.

Reference: 01004-3.2

Q: This paragraph expresses that the “The principle goal of exterior finishes is to minimize all need for painting the exterior elements of the home to achieve low maintenance facilities.” RFP section 7.2 requires a fiber cement board system that will require painting. Please confirm whether or not alternative siding materials are allowed or desired.

A: Fiber cement board is required and the Government realizes that painting will be required.

Reference: 01004-4.2

Q: Carpet is required in living rooms and vinyl is required in dining rooms. The premise of combining living/dining rooms is to allow flexibility in living preferences. By requiring two separate floor finishes for these combined areas the rooms will lose flexibility and appear awkward in alternative furniture arrangements. Please reconsider requirement for vinyl in the formal dining area.

A: Will clarify intent by amendment.

Reference: 01005-3.1

Q: This paragraph requires that the structural designer be registered in the state of South Dakota. Section 00700 114. FAR 52.236-25 only requires that engineers need only be licensed “in a State or Possession of the United States”. These two requirements are in conflict with each other. Please confirm requirement.

A: FAR 52.236-25 takes precedence and Section 1005 will be revised in the upcoming amendment.

Reference: 01006-4.3.4

Q: Within this section the RFP requires one solid piece, fiberglass units for Bathtub/Shower Units. Section 01003-9.1 requires cultured marble surrounds at bathtubs. Which requirement governs?

A: One solid piece fiberglass units are required. Section 01003 will be revised in the upcoming amendment.

Reference: 01007-3.1.1

Q: 200 amp panel boards are excessive for residential units, especially when gas is utilized for HVAC and water heating. Please consider reducing to 150 or 100 amps. This will benefit the government by reallocating funds to more tangible enhancements to housing units.

A: Air Force Family Housing Guide requires 200 amp panel boards for units with air conditioning.

Reference:

Q: How is the transite to be disposed of? If total demo, then transite will be friable. Who is the point of contact for environmental flight?

A: Will clarify intent by amendment.

Reference: 00110-2.1

Q: Can we submit more than one product for the same piece of equipment? Locking us into one manufacturer now will severely limit our ability to negotiate prices once the job is awarded.

A: The Government would prefer only one product be submitted in order to most effectively evaluate compliance with the solicitation requirements, quality, deviations, and betterments. Where more than one product is submitted, the Government will only evaluate the least favorable product submitted.

NOTE: This answer may contradict a verbal response provided to a small group of people during the site visit.

Reference: Attachment A

Q: The RFP and the attached Geotechnical Report seem to contradict each other on the preferred method, drilled piers and grade beams or overexcavation. Which is preferred?

A: The Government's preference is for overexcavation and conventional footings on engineered fill. See Section 01005, paragraph 4.1.1.

Reference: Sheet A5.1

Q: Will the Government accept smaller or larger windows than 32-inch window requirement? Is the grill pattern required or can the windows have a custom pattern?

A: The solicitation requirements state a 32-inch window, but firms can propose deviations that, in the Government's opinion, result in a benefit. The windows must have a rectangular grid pattern.

**Replace Family Housing
Phase 1 & 2
Ellsworth AFB, SD
Pre-Proposal Conference
Attendance Roster
22 May (0900)
Ellsworth AFB, SD (Officer's Club)**

| <u>Name</u> | <u>Organization</u> | <u>Phone / Fax</u> |
|-------------------------------|---|---|
| 1. <u>Bui Brown</u> | <u>Central States Mech</u> | ^{OFF} (605) 341-1566 ^{FAX} 605-721-1566 |
| 2. <u>LARRY HERGES</u> | <u>Recess/cecn</u> | 605 385-2523 605 385-5736 |
| 3. <u>Lee McCormick</u> | <u>Omaha District</u> | 402-221-4045 402-221-4530 |
| 4. <u>Don SARTORIUS</u> | <u>Pella Windows</u> | (605) 341-2045 |
| 5. <u>RICHARD VEHTENHISER</u> | <u>HDR</u> | 816-360-2707 / 816-360-2772 |
| 6. <u>MARK BIASO</u> | <u>HDR</u> | 816-360-2792 / 816-360-2110 |
| 7. <u>STEVE HILL</u> | <u>HDR</u> | 402-399-1211 / 402-399-4917 |
| 8. <u>Don Walker</u> | <u>Muth Electric</u> | 605 996 3983 / 605-996-2203 |
| 9. <u>George White</u> | <u>LVI Services</u> | (303) 727-7205 / 7210 |
| 10. <u>ROBERT BRANDAER</u> | <u>SEH</u> | 608-347-2182 |
| 11. <u>Patrick Smith</u> | <u>C.D. SMITH Const.</u> | 920-924-2900 |
| 12. <u>Mike Boyer</u> | <u>SEH</u> | 605-338-7016 / 7071 |
| 13. <u>MIKE WILKINS</u> | <u>BUILDING CONSTRUCTION PARTNERSHIPS</u> | 816-753-2400 |
| 14. <u>DAVID E HENDRICKS</u> | <u>ROSMANN & ASSOCIATES</u> | 816 472-1442 |
| 15. <u>GLENN C. BARBER</u> | <u>GLENN BARBER ASSOC</u> | 605-342-7016 |
| 16. <u>Tom Hagemann</u> | <u>Action mcm, LLC</u> | 605 398-5212 |

| <u>Name</u> | <u>Organization</u> | <u>Phone / Fax</u> |
|------------------------------|--|---|
| 17. <u>NATE KENNER</u> | <u>GBA</u> | <u>605-342-7000 / 342-3804</u> |
| 18. <u>BIL BARBER</u> | <u>GBA</u> | <u>605-342/7006 / 342-5804</u> |
| 19. <u>Nancy Flagler</u> | <u>Flagler Trucking & Construction</u> | <u>605 347-9211 / 347 605 720-8210</u> |
| 20. <u>Eugene Flagler</u> | <u>" "</u> | <u>" "</u> |
| 21. <u>Evan Flagler</u> | <u>" "</u> | <u>" "</u> |
| 22. <u>John Stobbe</u> | <u>Omaha District</u> | <u>402-221-3985 / 4190</u> |
| 23. <u>Rick LaFenay</u> | <u>Wees Builder</u> | <u>612-243-5000</u> |
| 24. <u>Brett Christensen</u> | <u>WBSI</u> | <u>612-243-5000 / 5010 (FAX)</u> |
| 25. <u>TOM PHILLET</u> | <u>HUNT-BUDCORP</u> | <u>(915) 533-1122 x-261</u> |
| 26. <u>DAVE COLE</u> | <u>HUNT BUD CORP</u> | <u>(605) 923-1931</u> |
| 27. <u>TY BUCK</u> | <u>GILBE-BUCK</u> | <u>(208) 336-5171</u> |
| 28. <u>Bred Kurtz</u> | <u>Dean Kurtz Const</u> | <u>605-343-6665</u> |
| 29. <u>Steve Burgess</u> | <u>Dean Kurtz</u> | <u>605-343-6665</u> |
| 30. <u>SHAWN VOELLER</u> | <u>DEAN KURTZ CONST.</u> | <u>605-343-6665</u> |
| 31. <u>BILL BUTLER JR</u> | <u>CONRAD'S ELECTRIC</u> | <u>605 343 8744 / 605 343 7730</u> |
| 32. <u>BRAD JANS</u> | <u>DAKOTA MILLWORK</u> | <u>605 718 5680 / 605 718 5640</u> |
| 33. <u>Terry Fast / Home</u> | <u>Nature America Corp</u> | <u>FAX 605 856 2082 605-856-4303</u> |
| 34. <u>ROBIN HILL</u> | <u>28 CES/CECN</u> | <u>605/385-2523 5736 (FAX)</u> |
| 35. <u>LARRY HANSON</u> | <u>28 CES/CECN</u> | <u>605 / 385 2523</u> |
| 36. <u>DAVID Goodsell</u> | <u>28 CES/CEVC</u> | <u>(605) 385-2654 / 2650</u> |
| 37. <u>Larry Nelson</u> | <u>Nelson Ditching</u> | <u>381-0342 388-8463</u> |

| Name | Organization | Phone / Fax |
|----------------------------|----------------------------------|--|
| 38. <u>Dan Colgan</u> | <u>28 CES / CES</u> | <u>5-2523</u> |
| 39. <u>Tom LARSON</u> | <u>DEVELOPER ASSOC</u> | <u>605 356 3331 - 3106</u> |
| 40. <u>Reid Widney</u> | <u>First Dakota Enterprises</u> | <u>605-223-9600 - Fax 9511</u> |
| 41. <u>Archie Baumann</u> | <u>" " "</u> | <u>" " " " "</u> |
| 42. <u>Tom JOHNSTON</u> | <u>28 CES / CEH</u> | <u>605-385-2588</u> |
| 43. <u>Steve Hilton</u> | <u>28 CES / CEH</u> | <u>605-385-1113</u> |
| 44. <u>JERRY FREEMAN</u> | <u>FREEMAN'S ELECTRIC</u> | <u>F-605-341-6567 P-605-342-4099</u> |
| 45. <u>Jake Ankele</u> | <u>Iron Horse Excavating Inc</u> | <u>P 355-0045 Fax 346-0178</u> |
| 46. <u>BRET BUD</u> | <u>USACE</u> | <u>341-3169 / 341-4757</u> |
| 47. <u>Dwight Peltant</u> | <u>COPE OF ENGRS</u> | <u>605-923-2983 / 2558</u> |
| 48. <u>Lawrence Lamont</u> | <u>LAMONT DRYWALL</u> | <u>605-745-7571</u> |
| 49. <u>[Signature]</u> | <u>Construction Builders</u> | <u>605-342-3144</u> |
| 50. <u>Rever Neumann</u> | <u>" " "</u> | <u>" " "</u> |
| 51. <u>Dan Stoltz</u> | <u>COE</u> | <u>923-2983</u> |
| 52. <u>Chew Bears</u> | <u>Bears Inc</u> | <u>" " 5057 605-967-2370</u> |
| 53. <u>Dan [Signature]</u> | <u>" " "</u> | <u>" " "</u> |
| 54. <u>Jerry Letellier</u> | <u>Shamrock Ent</u> | <u>342-8865 342-3077</u> |
| 55. _____ | _____ | _____ |
| 56. _____ | _____ | _____ |
| 57. _____ | _____ | _____ |
| 58. _____ | _____ | _____ |