



US Army Corps  
of Engineers ®

# EIRS Bulletin

Engineering Improvement Recommendation System

No. 97-05

Date: 30 June 1997

The Engineering Improvement Recommendation System Bulletin is part of our Information Feedback System and is used in military construction programs to expedite dissemination of information regarding problems. The probable solutions included in the EIRS BULLETIN have not been thoroughly explored or staffed. Accordingly, these probable solutions do not represent a final HQUSACE position, and their use is not mandatory. Probable solutions are considered as informational in nature for the purpose of permitting prompt consideration by the field. EIRS Bulletin recipients are encouraged to comment on the probable solutions presented so that other viewpoints can be considered in the development of the final HQUSACE position. Since changes to criteria approved by ENG Form 3078, Recommended Changes to Engineering Documents, are expected to remain firm, they are identified as final solutions and should be used in current design. To defray printing costs, local reproduction of this bulletin is authorized. This issue of the EIRS Bulletin contains 6 enclosures as follows:

ENCL 1: ENGINEERING AND DESIGN - Fire Protection Criteria for Child Development Centers (CDC)

ENCL 2: ENGINEERING AND DESIGN - Proper Handling of Refrigerants

ENCL 3: ENGINEERING AND DESIGN - Moratorium on the Use of Cold-Formed, Load Bearing Structural Systems - Policy

ENCL 4: ENGINEERING AND DESIGN - Fire Protection for Helicopter Hangars

ENCL 5: RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS - ENG Form 3078 Follow-up Actions

ENCL 6: ENGINEERING AND DESIGN - CURRENT DESIGN CRITERIA - Recently Issued Criteria

FOR THE COMMANDER:

6 Encls

  
KISUR CHEUNG, P.E.  
Chief, Engineering Division  
Directorate of Military Programs

## ENGINEERING AND DESIGN

### Fire Protection Criteria for Child Development Centers (CDC):

a. Problem: The 1997 edition of NFPA 101, *Life Safety Code*, has recently been issued with an effective date of 7 February 1997. This new edition has several changes that affect criteria for CDC. Changes that need to be addressed in our criteria are as follows:

(1) Occupancy Classification: The 1997 edition of the Life Safety Code classifies new CDC as New Day-Care Occupancies. In previous editions of the Life Safety Code, CDC were classified as a subclassification to the educational occupancy.

(2) Corridors: In the 1997 edition of the Life Safety Code, corridors in new CDC are now required to be one-hour fire-rated. In the previous editions, corridors were not required to be fire-rated if each activity room had a direct exit to the outside, or if the facility was fully sprinklered.

b. Probable Solution: Replace Paragraphs 4h, 4i, 4j, and 4k of Appendix G of the AEI, with the following. Note that Paragraphs 4h, 4i, 4j and 4k were previously replaced by EIRS Bulletin 95-02, Encl 1. This bulletin will supersede EIRS Bulletin 95-02, Encl 1.

"4h. Fire Protection Criteria. The general criteria for child development centers (CDC) is NFPA 101, Life Safety Code (LSC) (reference G-9). However, the LSC is based on a staff-to-child ratio which is less than that which is used in Army CDC. The LSC states that if staff-to-child ratios are less than that on which the code requirements are based, additional safeguards as determined by the authority having jurisdiction (AHJ) will be necessary. The AHJ for CDC is HQUSACE/CEMP-E. The fire protection criteria of this document include those additional safeguards required to compensate for staff-to-child ratios less than that prescribed by LSC. Fire protection criteria for Army CDC will be issued by HQUSACE/CEMP-E only.

(1) Occupancy Classification. CDC are classified as Day-Care Occupancies when applying the NFPA 101, Life Safety Code (reference G 9), and as Educational Occupancies, Division 3, when applying the Uniform Building Code (reference G-34).

(2) Occupant Load. The allowable occupant load for fire and safety considerations will be based on NFPA 101, Life Safety Code (LSC) (reference G-9). The allowable occupant load is based on the capacity of the exit components not on floor area. LSC does establish minimum exit capacities, based on an assumed maximum probable number of occupants which is based on gross floor area. However, if the capacity of the exit components exceeds the minimum, the allowable occupant load increases. The determining factor for occupant load with respect to safety is the clear width of the exits and exit access.

(3) Construction Type. Construction for CDC facilities will comply with the construction requirements of the Uniform Building Code. Noncombustible construction (Types I and II) is the

Encl 1 (4 pages)

preferred method of construction, since noncombustible construction enhances the fire safety of CDC, allows for omission of sprinklers in the attic, and reduces clearance requirements of heat producing equipment, such as kitchen exhaust ducts. The use of combustible construction (Type III, IV or V) must be approved by the major command before being allowed for any CDC.

(4) CDC will not be located in basements or above the level of exit discharge. New CDC will be constructed on grade.

(5) Corridors: Corridors will comply to requirements of the Life Safety Code (reference G-9). The 1997 edition of the Life Safety Code requires that corridors in new CDC be constructed of walls that have a one-hour fire resistance rating. One-hour fire-rated walls will be equipped with 45-minute fire-rated doors at openings. Vision panels in the one-hour fire-rated corridors wall should be 3/4-hour fire-rated windows with fire-rated glazing, such as 1/4-inch wire glass. For wire glass, the maximum area for 3/4-hour fire-rated glazing is 200 sq. cm (1296 sq. in.) per window, with no individual light exceeding 1308 mm (51 1/2 in.) in width and 1371 mm (54 inches) in height. Corridor will be used only for access and egress. Corridors will not be used for, or open to child activities, nor contain combustible materials and furnishings, except for a minimum amount required for the receptionist area.

4i. Fire Protection System. The following fire protection systems and equipment will be provided:

(1) Complete automatic sprinkler protection in accordance with NFPA 13 (reference G-27) for new CDC facilities.

(a) Wet pipe sprinkler protection is the preferred sprinkler system because of high reliability and low maintenance requirements of these systems. However, care must be made to avoid freezing of sprinkler piping located in the attic spaces. If piping is subject to freezing, the sprinkler system in area subject to freezing will be either a dry-pipe or pre-action sprinkler system.

(b) Sprinkler waterflow alarms will be provided. Waterflow alarms will sound the building alarm and summons the fire department.

(c) Inspector's test connections will discharge directly to a safe, outside location and onto a hard surface. Location of inspector's test will be indicated on the drawings.

(d) Sprinkler heads will be quick-response type.

(2) An unobstructed fire department connection for the sprinkler system.

(3) At least one hydrant within 90 m (300 feet) of the facility.

(4) An automatic fire alarm evacuation system in accordance with NFPA 72 (reference G-27).

- (a) The system will be activated by manual pull stations and by smoke detectors.
  - (b) A manual pull station will be provided at each exit door which discharges directly to the outside.
  - (c) Smoke detectors shall be provided in all areas except in the kitchen and in spaces that are not air-conditioned, such as attic spaces and the main mechanical equipment room.
  - (d) The fire alarm system will be connected to the installation fire department for emergency response and for system monitoring.
  - (e) The alarm notification will be both audio and visual. Audio alarms should be textual audible appliances conforming to NFPA 72, National Fire Alarm Code (reference G-27).
- (5) Portable fire extinguishers in accordance with NFPA 10, *Standard For Portable Fire Extinguishers* (reference G-27). Fire extinguishers will be in locations accessible to adults only.
- 4j. Fire Area Separation. Fire-rated walls will be provided in accordance with NFPA 101, Life Safety Code (reference G-9). The Life Safety Code requires one-hour fire-rated separation of mechanical rooms equipped with fuel-fired equipment, and laundry rooms, in addition to the corridors. One-hour fire-rated walls will be equipped with 45-minute fire-rated doors at openings.
- 4k. Exit Criteria. Exits will comply with NFPA 101, Life Safety Code (reference G-9), and the following:
- (1) Each module will have at least two remote exits, one of which will lead directly to the outside and the other will lead directly to a exit access corridor. Neither exit will require travel through any other room or program area. Exit access corridor will have a minimum clear width of 1.8 m (6 feet).
  - (2) Doors from the modules and outside exit doors will swing in the direction of exit travel. Outside exit doors will be equipped with flush type push-bar panic hardware mounted 1120 mm (44 inches) above the finish floor.
  - (3) Each child activity module for children under three years of age will have a direct outside exit conforming to the following:
    - (a) Exits will be wide enough to accommodate a crib. The door opening will have a minimum clear width of 864 mm (34 inches). The minimum clear width may be reduced to 813 mm (32 inches) if evacuation cribs are no wider than 737 mm (29 inches) including any projections. Single-action hold-open devices will be required on exterior exit doors in infant areas to prevent automatic closing of the door. Hold-open devices will not be provided on other exit doors.

Note: Exterior doors and frames should be designed to allow doors to swing open wide and achieve the required clear opening. The exterior veneer of finish must not prevent the exit doors from providing a required clear opening. For example, improper position of the pivot point of the door hinges with respect to the surface of the exterior can prevent the exit door from opening to the required clear opening width.

(b) Ramps with non-slip surfaces for emergency evacuation of wheeled cribs will be provided for exits openings. Ramps will lead to a smooth hard-surfaced evacuation route which leads to a public way or to a safe area. The maximum slope of the ramp will be 1:12. Ramps will be provided with guard rails whenever ramps exceeds one-foot above ground level. The minimum width of the ramps and hard-surface evacuation route is 1220 mm (48 inches). At turns and bends, the hard-surface evacuation route will be wider to account for the turning radius of the evacuation cribs.

(c) Door thresholds and hardware will be designed to facilitate the exit of a crib containing several infants by a single adult. The thresholds will have a low profile.

(4) Required fire exits from the building will lead to a public way or to a clear safe area which is a minimum distance of 15.2 mm (50 feet) from the building.

4l. Kitchen Equipment and Exhaust Systems. Kitchen equipment and exhaust systems will meet the requirements of NFPA 96 (reference G-28) and will be protected by a wet chemical system or a water spray system approved for protecting kitchen equipment. The extinguishing system will be monitored by a separate zone on the fire alarm control panel and will activate the building fire alarm system upon discharge."

c. Paragraph 4l. Fire Protection Options I and II, and Table G-10, Fire Protection Criteria of Appendix G of the AEI was deleted from EIRS Bulletin 95-02 and should remain deleted.

d. Implementation of this criteria is considered to have special application as defined by Paragraph 8c of FR 1110-345-100

## ENGINEERING AND DESIGN

### Proper Handling of Refrigerants:

- a. **Problem:** EIRS Bulletin 97-03, Encl 3, addressing the proper handling of refrigerants, contained a misleading sentence in paragraph 2.
  
- b. **Probable Solution:** The misleading sentence in EIRS 97-03, Encl 3, page 2, stated that “all refrigerant containing parts, except for piping and those parts outside the building, shall be installed in a machinery room”. This is a quote from paragraph 4, section 7.4.2 of ASHRAE 15 which applies only to certain applications. The designer should use Table 2, System Application Requirements, in conjunction with paragraph 7.4 to determine the complete criteria for handling of refrigerants in machinery rooms.

ENGINEERING AND DESIGN

Moratorium on the Use of Cold-Formed, Load Bearing Structural Systems - Policy:

a. **Problem:** The Corps of Engineers has a moratorium on the use of cold-formed load bearing structural systems. This moratorium was reaffirmed in a memorandum, 7 March 1997, and signed by BG Anderson. Questions have been raised concerning the extent and nature of the moratorium.

b. **Probable Solution:** With few exceptions, the use of cold-formed members is not authorized. Cold-formed members may be used in standing seam metal roof systems that have been tested and approved using the ASTM E 1592 test procedures. Cold-formed wall panels for metal buildings are allowed if the building manufacturers are approved suppliers.

(1) If a project design is at the preliminary stages of 10 to 35 percent, the cold-formed members must not be used. If a project has passed the 35 percent design stage and the cold-formed members have been used in the design, the project may continue. However, complete design computations must be done by the designer and details of the connections shown on the contract drawings. In no case will the design and/or details be transferred to the construction contractor.

(2) The Air Force is particularly concerned with the use of cold-formed structural members on their projects. The Air Force Headquarters Civil Engineering Support Agency has explicitly expressed their position in their memorandum, 30 April 1997, to this office and has issued a policy letter to their Major Commands reinforcing the moratorium on cold-formed structural members. For ongoing projects in the late stages of design, the Air Force has agreed with our procedure of requiring design computations and details to verify the adequacy of cold-formed members.

If you have any further questions, please contact Mr. Ray Navidi or Mr. Charles Gutberlet, Jr., CEMP-ET, at (202) 761-0223.

ENGINEERING AND DESIGN

Fire Protection for Helicopter Hangars:

a. Problem: ETL 1110-3-467, *Fire Protection For Helicopter Hangars*, was issued in December 1994 and needs updating in the following areas:

(1) In Section 4.2 of ETL 1110-3-467, water-only sprinkler systems using early suppression fast response (ESFR) sprinklers are listed as an option for protecting helicopter hangars. However, the ETL does not include a ceiling height limitation, as imposed by National Fire Protection Association (NFPA) 13, *Standard for the Installation of Sprinkler Systems*.

(2) Spacing requirements for ESFR sprinklers listed in Paragraph 4.2.5 of the ETL is no longer consistent with NFPA 13.

(3) For foam sprinkler systems, recent research indicates that the temperature rating of the sprinklers in hangars, as specified in Paragraph 4.3.2, should be reduced and that quick-response sprinklers should be specified for improved performance.

b. Probable Solution: The following changes to ETL 1110-3-467, *Fire Protection For Helicopter Hangars*, should be implemented until a new ETL is developed and published:

(1) Helicopter hangars whose ceiling height is over 12.2 m (40 feet) will be protected with a foam-water sprinkler system as specified in Section 4.3 of the ETL. Wet pipe, water-only sprinkler systems using ESFR sprinklers as specified in Section 4.2 are acceptable for hangars whose ceiling height is 12.2 m (40 feet) or less.

(2) Change Paragraph 4.2.6 to, "The maximum distance between ESFR sprinklers will not be more than 3.0 m (10 feet) and the minimum distance will not be less than 2.4 m (8 feet)".

(3) Change Paragraph 4.3.2 to, "Sprinklers will be quick-response, upright spray type with an intermediate temperature rating".

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS

### ENG Form 3078 Follow-up Actions:

a. Problem: ENG Forms 3078 which indicate an affirmative action by HQUSACE are provided to the originating USACE Commands. Since the ENG Forms 3078 will result in changes to the criteria and guidance, all USACE Commands should receive the same information to be used in criteria designs.

b. Probable Solution: Reviewed ENG Forms 3078 which make a commitment to change guide specifications, manuals, etc. will be included in the EIRS Bulletin, unless the change has been accomplished. This enclosure includes a copy of ENG Form 3078.

Encl 5 (22 pages)

ENG FORMS 3078

<u>CONTROL NO.</u>	<u>PUB NO.</u>	<u>OFFICE SYMBOL</u>
9078	CEGS-08700	CESPK-CO-C
9080	CEGS-01030, CEGS-04200 CEGS-04225, CEGS-09510 CEGS-16415	CEMRO-ED-DG
9081	CEAGS-08201A	CESPK-CO-C
9083	CEGS-08700	CESPK-CO-C

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS**

*(Submit a separate form in quadruplicate for each report)*

*(ER 1110-345-100)*

OFFICE SYMBOL AND DATE  
CESPK-CO-C  
April 24, 1997

DOCUMENT NUMBER AND DATE  
CEGS 08700 (MARCH 1996)

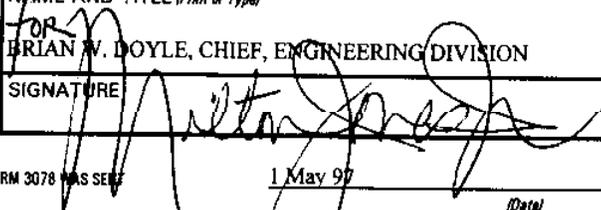
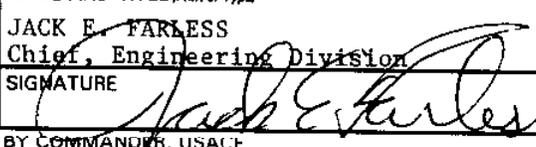
DOCUMENT TITLE  
BUILDER'S HARDWARE

DOCUMENT TYPE

- DRAWING ((STANDARD) (DEFINITIVE))     SPECIFICATION ((GUIDE) (STANDARD))  
 DESIGN GUIDES     TECHNICAL MANUAL  
 ENGINEER MANUAL     ENGINEER REGULATION     OTHER

- MILITARY  
 CIVIL WORKS

SUBJECT  
PARAGRAPH 2.4.9 LOCK TRIM AND HANDICAP ACCESSIBILITY

ROUTING <i>(Check)</i>		ACTION RECOMMENDED BY DISTRICT COMMANDER <i>(See Sheet 2)</i>	
FROM:  District Commander U.S. Army Engineer District,  Sacramento CESPD-ED-M		OFFICE SYMBOL CESPK-ED	NAME AND TITLE <i>(Print or Type)</i> FOR BRIAN W. DOYLE, CHIEF, ENGINEERING DIVISION
1a. TO: HQUSACE (CEMP-EA)		DATE 24 Apr 97	SIGNATURE 
1b. TO:  Division Commander U.S. Army Engineer Division,  South Pacific CESPD-ET		COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER  RECOMMEND APPROVAL.	
2. TO:  HQUSACE (CEMP-EA) WASH DC 20314-1000		OFFICE SYMBOL ^CEMP-E	NAME AND TITLE <i>(Print or Type)</i> JACK E. FARLESS Chief, Engineering Division
		DATE 21 May 1997	SIGNATURE 
3. TO:  Division Commander U.S. Army Engineer Division, South Pacific ATTN: CESPD-ET 333 MARKET STREET San Francisco, CA 94105-2195		COMMENTS OR ACTION BY COMMANDER, USACE  See attached CEMP-EA comments.	
		OFFICE SYMBOL ^CEMP-E	NAME AND TITLE <i>(Print or Type)</i> KISUK CHEUNG, P.E., Chief, Engineering Division
		DATE 9 Jun 97	SIGNATURE 
4. RETURN TO:  District Commander U.S. Army Engineer District, Sacramento CESPK-ED-M		COPY FURNISHED  CESPK-ED-M (Architectural Design Section) CESPK-CO-C	

## RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)

 OFFICE SYMBOL AND DATE  
 CESPK-CO-C

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

1.

## PROBLEM:

## PARAGRAPH 2.4.9 LOCK TRIM

There are a number of accessories specified. These items are not shown in brackets as options.

- a. For example, in line 3, knobs, levers are specified. If the requirement for "knobs" was not edited out the contractor could content that he could provide knobs in lieu of lever handles.
- b. Paragraph 2.4.1 NOTE enclosed in asterisks references "lever handles" and "Uniform Accessibility Standards" which probably should be "The Uniform Federal Accessibility Standards (UFAS) as referenced in ADA, is seen only by the designer.
- c. There is no specific verbiage requiring lever handles in order to meet UFAS or the Americans With Disabilities Act (ADA), which ever pertains to the Federal Government.
- d. There is no reference to UFAS or ADA in paragraph 1.1 Reference.

2.

## RECOMMENDED SOLUTION:

Suggest revising paragraph 2.4.9 as follows:

## 2.4.9 Lock Trim

- a. Lock trim shall be [cast,] [forged,] or [heavy wrought] construction of commercial plain design. In addition to meeting the test requirement of BHMA A156.2 or BHMA A156.3, [knobs,] [levers handles,] [roses,] and [escutcheons] shall be 1.27 mm (0.50 inch) thick, if unreinforced. If reinforced, the outer shell shall be 0.89 mm (0.35 inch) thick and the combined thickness shall be 1.78 mm (0.070 inch) [except that knob shanks shall be 1.52 mm (0.60 inch) thick.] [Knob diameter shall be 54 to 57 mm (2-1/8 to 2-1/4 inches.)] [Lever handles shall be of the plain design with ends returned to no more than 10 mm (1/2 inch) from the door face.]
- b. Revise reference in para. 2.4.1 NOTE from Uniform Accessibility Standards to Uniform Federal Accessibility Standards.
- c. Either add a new paragraph or add to an existing paragraph verbiage which specifically addresses "levers handles" in order to meet UFAS or ADA requirements for handicap accessibility.
- d. Reference UFAS or ADA in paragraph 1.1, which ever pertains to Federal Government.

NAME OF SUBMITTER (Optional)

Ronald Goldsberry, CESPK-CO-C, thru Steve Freitas - Criteria Management Unit

WORK TELEPHONE NUMBER (Optional)

(916) 557-7296

**ENG Form 3078 Continuation**

CEMP-EA Response to CESPCK-CO-C Recommendations for CEGS-08700, Builders' Hardware, dated March 1996, CEMP-E Action No. 9078:

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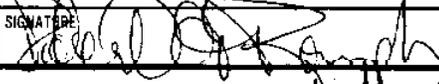
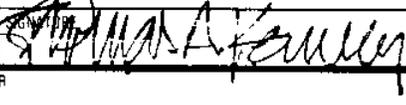
Concur with Recommendation 2.a. The CEGS will be revised essentially as indicated. (See below.)

Concur with Recommendation 2.b. DoD policy on accessibility indicates that we adhere to the Uniform Federal Accessibility Standards (UFAS) and the additional requirements of 36 CFR, Part 1191, Americans with Disabilities Act Accessibility Guidelines (ADAAG), that are more stringent than UFAS. A determination will be made for this CEGS whether only one of the standards needs to be referenced or both. If UFAS remains, the title will be corrected as recommended. This note will also be relocated to Part 1 of the CEGS as a general note indicating that designers must follow UFAS (and/or ADAAG) when specifying [all] hardware for buildings required to be accessible in accordance with the Architectural and Engineering Instructions (AEI), *Design Criteria*.

Nonconcur with Recommendation 2.c. Lever handles are already specified under paragraph 2.4.9, Lock Trim, and this product is the same whether it is used for accessibility or not. However, in addition to the bracketed option for knobs, another bracketed option will be added for *knurled knobs for doors to hazardous areas in handicapped accessible buildings*.

Concur with Recommendation 2.d.

Additionally, CEGS-08700 Part 3 will be revised to require contractors to install and adjust hardware (mounting heights, opening force/door sweep for door-closing devices, etc.) in accessible buildings in accordance with UFAS (and/or ADAAG).

<b>RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS</b> <i>(Submit a separate form in quadruplicate for each report)</i> (ER 1110-345-100)		OFFICE SYMBOL AND DATE CEMRO-ED-DG 28 March 1997
DOCUMENT NUMBER AND DATE CEGS 1030 (9/93); 04200 (7/92); 04255 (7/92); 09510 (8/96); 16415 (8/96)	DOCUMENT TITLE Various Titles - SEE ATTACHED	
DOCUMENT TYPE <input type="checkbox"/> DRAWING (STANDARD) (DEFINITIVE) <input checked="" type="checkbox"/> SPECIFICATION (GUIDE) (STANDARD) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY  <input type="checkbox"/> CIVIL WORKS
SUBJECT Contractor Options on Use of English/Metric Masonry and Recessed Light Fixtures		
ROUTING (Check) FROM: District Commander U.S. Army Engineer District 1612 USPO & Courthouse 215 N. 17th Street Omaha, NE 68102-4978	ACTION RECOMMENDED BY DISTRICT COMMANDER <i>(See Sheet 2)</i>	
	OFFICE SYMBOL CEMRO-ED	NAME AND TITLE (Print or Type) Robert F. Rounph, Chief, Engineering Division
	DATE 01 APR 1997	SIGNATURE 
1a. TO: HOUSACE (CEMP-EA) WASH DC 20314-1000	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT <u>1 April 1997</u> <i>(Date)</i>	
1b. TO: CEMRD-ET-E Division Commander U.S. Army Engineer Division, Missouri River <del>P. O. Box 103 DTS</del> <del>Omaha, NE 68101-0103</del> 2565 W. Center Rd. Omaha, NE 68144-3869	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER See attached comments.	
	OFFICE SYMBOL CEMRD-ET	NAME AND TITLE (Print or Type) KRISTINE L. ALLAMAN, P.E. <i>K. Allaman</i> Director, Engineering & Tech Services
	DATE 27 MAY 1997	SIGNATURE 
2. TO HOUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE See attached CEMP-EA comments.	
	OFFICE SYMBOL CEMP-E	NAME AND TITLE (Print or Type) KISUK CHEUNG, P.E., Chief, Engineering Division/MP
	DATE 6 JUN 1997	SIGNATURE 
3. TO CEMRD ET E Division Commander U.S. Army Engineer Division, Missouri River P. O. Box 103 DTS Omaha, NE 68101-0103	COMMENTS BY DIVISION COMMANDER	
	OFFICE SYMBOL	NAME AND TITLE (Print or Type)
	DATE	SIGNATURE
4. RETURN TO: CEMRO-ED-DI District Commander U.S. Army Engineer District 1612 USPO & Courthouse 215 N. 17th Street Omaha, NE 68102-4978	COPY FURNISHED	

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)**

OFFICE SYMBOL AND DATE  
CEMRO-ED-DG  
28 March 1997

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

**1. PROBLEM:**

- CEGS 01030 (09/30), Metric Measurements
- CEGS 04200 (07/92), Masonry
- CEGS 04255 (07/92), Non-Bearing Masonry Veneer/Steel Stud Walls
- CEGS 09510 (08/96), Acoustical Ceilings
- CEGS 16415 (08/96), Electrical Work, Interior

Subject guide specifications need to be revised to clarify Contractor's Option on the use of English/Metric measurements for Masonry and Recessed Light Fixtures. CEGS 04200 does not provide the masonry contractor guidance on how to incorporate English/Inch-pound masonry products into the metric designs. In addition, CEGS 04255, CEGS 09510, and CEGS 16415 do not indicate to the subcontractor that there is a materials option.

**2. RECOMMENDED SOLUTION:**

Attached are proposed changes to the subject specifications (indicated by double underline).

NAME OF SUBMITTER (Optional)

GAYLIN BERGER, GM-13 / BRUCE HARRIS, GM-13

WORK TELEPHONE NUMBER (Optional)

(402) 221-4554 / 4440

ENG FORM 3078

CEMRO-ED-DG  
28 March 1997**DOCUMENTS:**

CEGS 01030 (09/93), Metric Measurements  
 CEGS 04200 (07/92), Masonry  
 CEGS 04255 (07/92), Non-Bearing Masonry Veneer/Steel Stud Walls  
 CEGS 09510 (08/96), Acoustical Ceilings  
 CEGS 16415 (08/96), Electrical Work, Interior

**1. SECTION 01030, METRIC MEASUREMENTS****a. Paragraph 2. General, should read as follows:**

This project includes metric units of measurements. The metric units used are the International System of Units (SI) developed and maintained by the General Conference on Weights and Measures (CGPM); the name International System of Units and the international abbreviation SI were adopted by the 11th CGPM in 1960. In some cases both metric SI units and English inch-pound (I-P) units are included in a section of the specifications; the measurements used in any particular case have been determined by the circumstances involved. Specifications requiring metric measurements may contain requirements for equipment (e.g. printers, HVAC systems) described in I-P units; in which case no metric substitution will be allowed. Specifications requiring metric measurements may include references to related non-metric industry and/or Government standards; in which case the requirements of the standard govern. {For American Society for Testing Materials (ASTM) references in the technical specifications, the Contractor shall use the metric publication, if one is available (For example: ASTM A 36, use ASTM A 36M). An acceptable substitute to hard Metric SI Concrete Masonry Unit (CMU) and Recessed Lighting Fixtures is English inch-pound (soft metric) Concrete Masonry Units (CMU) products and Recessed Lighting Fixtures. The Contractor shall be responsible for any adjustments required to accommodate these alternative English inch-pound units at no additional cost to the Government. }

**b. Paragraph 3.1., Hard Metric should read as follows:**

A hard metric measurement is indicated by an SI value with no expressed correlation to an I-P value (e.g. 38 mm). Hard metric products are required when only metric dimensions are indicated, except for contractors options as outlined in paragraph 2. Products are considered to be hard metric when they are manufactured to metric dimensions or have an industry recognized metric designation.

## 2. SECTION 04200, MASONRY

Add the following changes indicated by double underline:

### a. PART 1, PARA 1.2 SUBMITTALS

\\*SD-04 Drawings\*\.

\\*Masonry Work\*\; \\*GA1\*\.

Drawings showing the location and layout of glass block units. Drawings including plans, elevations, and details of wall reinforcement; details of reinforcing bars at corners and wall intersections; offsets; tops, bottoms, and ends of walls; control and expansion joints; and wall openings. Bar splice locations shall be shown. \^If the contractor chooses to use inch-pound CMU products, then the drawings shall also locate all cut CMU products. Architectural elevations shall be submitted indicating the location of all cut, exposed brick and CMU products.\ Bent bars shall be identified on a bending diagram and shall be referenced and located on the drawings. Wall dimensions, bar clearances, and wall openings greater than one masonry unit in area shall be shown. No approval will be given to the shop drawings until the Contractor certifies that all openings, including those for mechanical and electrical service, are shown. If, during construction, additional masonry openings are required, the approved shop drawings shall be resubmitted with the additional openings shown along with the proposed changes. Location of these additional openings shall be clearly highlighted. The minimum scale for wall elevations shall be \^1 to 50.\ \^-1/4 inch per foot.-\ Reinforcement bending details shall conform to the requirements of \-ACI SP-66-\.

### b. PART 2. PRODUCTS

#### 2.1 GENERAL REQUIREMENTS

The source of materials which will affect the appearance of the finished work shall not be changed after the work has started except with Contracting Officer's approval. \^The general contractor has the option to use either hard metric or substitute English inch-pound (soft metric) CMU products. If the general contractor decides to substitute English inch-pound CMU products, then the following additional requirements shall be met:\

2.1.1 The metric dimensions indicated on the drawings shall not be altered to accommodate English inch-pound CMU products either horizontally and vertically. The 100mm building module will be maintained, except for the CMU products themselves.

2.1.2 <sup>M</sup>10 mm mortar joint widths shall be maintained as specified.

2.1.3 Indicated reinforcing bar spacing shall not be exceeded. Inch-pound CMU products must accommodate reinforcing bar placement. Rebars will not be cut, bent or eliminated to fit into the inch-pound CMU products module.

2.1.4 Brick and inch-pound CMU products cannot be reduced in size by more than one-third (1/3) in height and one-half (1/2) in length. Cut CMU products shall not be located at ends of walls, corners, and other openings.

2.1.5 Cut, exposed brick and CMU products shall be held to a minimum and shall be located where it would have the least impact on the architectural aesthetic goals of the facility.

2.1.6 Other building components, built into the CMU products, such as window frames, door frames, louvers, grilles, fire dampers, etc., that are required to be metric, will remain metric.

2.1.7 Additional metric guidance can be found in section 01030: Metric measurements.

### 3. SECTION 04255, NON-BEARING MASONRY VENEER/STEEL STUD WALLS

Add the following changes indicated by double underline:

#### a. PART 1, Para 1.2. SUBMITTALS

\\*Masonry Veneer\Steel Stud Wall System\*\; \\*[GA1]\*\

Details of cold-formed steel framing and support around openings, including framing connections, steel lintels, steel shelf angles, attachment to other building elements and bridging. Drawings shall indicate thickness, material, dimensions, protective coatings, and section properties of all steel studs and other cold-formed steel framing members and of all steel lintels and shelf angles used in exterior wall framing. Drawings shall also indicate size and type of all fasteners including size and type of all welds. If the contractor chooses to use English inch-pound masonry products, then the drawings shall also locate all cut masonry products. Architectural elevations shall be submitted indicating the location of all cut masonry products.

#### b. Part 2. Products

Add the following paragraphs:

##### 2.1. GENERAL REQUIREMENTS

The source of masonry materials which will affect the appearance of the finished work shall not be changed after the work has started except with the Contracting Officer's approval. The Contractor has the option to use either hard metric or substitute English inch-pound (soft metric) masonry products. If the Contractor decides to substitute English inch-pound masonry products, then the following additional requirements shall be met:

2.1.1. The dimensions indicated on the drawing shall not be altered to accommodate English inch-pound masonry products horizontally and vertically. The 100mm building module shall be maintained, except for the actual physical size of the masonry products themselves.

2.1.2. Mortar joints widths shall be maintained as specified.

2.1.3. Indicating<sup>of</sup> reinforcing bar spacing shall not be exceeded. Inch-pound masonry products shall accommodate reinforcing bar placement. Reinforcing bars shall not be cut, bent or eliminated to fit into the English inch-pound masonry product modules.

2.1.4. Masonry English inch-pound products shall not be reduced in size by more than one-third (1/3) in height and one-half (1/2) in length. Cut masonry products shall not be cut at ends of alls, corners, and other openings.

2.1.5. Cut, exposed masonry products shall be held to a minimum and shall be located where it will have the least impact on the aesthetics of the facility.

2.1.6. Other building components built into the masonry products, such as window frames, door frames, louvers, fire dampers, etc., that are required to be metric, shall remain metric.

2.1.7. Additional metric guidance can be found in SECTION 01030: Metric Measurements.

### 3. SECTION 09510, ACOUSTICAL CEILINGS

Add the following changes indicated by double underline:

#### PART 1, Section 1.2 GENERAL REQUIREMENTS

Acoustical treatment shall consist of sound controlling units mechanically mounted on a ceiling suspension system. The unit size, texture, finish, and color shall be as specified. ^The Contractor has the option to substitute English inch-pound (soft metric) recessed light fixtures (RLF) for hard metric recessed light fixtures. English inch-pound acoustical ceiling tile systems; including acoustical ceiling tiles, recessed light fixtures, air diffusers, air registers and grills; shall be provided with the English inch-pound recessed light fixtures, provided that they do not interfere with other design requirements. All other criteria contained in this specification applies to both hard metric and English inch-pound acoustical tile systems. For additional guidance see specification Section 01030: METRIC MEASUREMENTS.^  
The location and extent of acoustical treatment shall be as shown on the drawings.

4. SECTION 16415. ELECTRICAL WORK, INTERIOR

Add the following changes indicated by double underline:

PART 1, Section 1.2 General

1.2.3 English Inch-Pound (Soft Metric) Recessed Light Fixture Option.

The contractor has the option to substitute English inch-pound (soft metric) recessed light fixtures (RLFs) for hard metric RLFs. Coordinate with specification Section \=09510=\ ACOUSTICAL CEILINGS and Section \=01030=\ METRIC MEASUREMENTS.

CEMRD-ET-E/Rumbaugh/(402)697-2645/5 May 97

SUBJECT: Eng Form 3078 dated 28 Mar 97, CEMRO-ED-DG. *Contractor Options on Use of English/Metric Masonry and Recessed Light Fixtures*

MRD COMMENTS:

1. Recommend approval with the following comments:

a. Section 04200, page 4 of 9, paragraph 2.1, first sentence added, change "general contractor" to "contractor"

b. Section 04200, page 4 of 9, paragraph 2.1.2. Delete "10 mm]" at the start of the sentence. This will leave only a reference that another paragraph specifies the mortar joint width. If the width changes, it will not have to be updated in more than one place.

c. Add changes to mechanical specifications to cover diffusers, grills, etc. as mentioned by HNC.

9080  
RJR

**ENG Form 3078 Continuation**

CEMP-EA Response to CENWO-ED Recommendations for the following guide specifications: CEGS-01415 (formerly 01030), Metric Measurements, dated March 1997; CEGS-04200, Masonry, dated July 1992, CEGS-04255, Non-Bearing Masonry Veneer/Steel Stud Walls, dated July 1992; CEGS 09510, Acoustical Ceilings, dated August 1996; and CEGS 16415, Electrical Work, Interior, dated August 1996.  
CEMP-EA Action No. 9080

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**CEGS 01415** (formerly 01030), Metric Measurements: Nonconcur with CENWO-ED recommendation for section 01415. We should not make a blanket statement about metric designation concerning American Society for Testing Materials (ASTM) references in our guide specifications. A number of ASTM references contain dual measurements without the metric designation, e.g. ASTM C55, 62, 90, etc. Paragraph 1.3 of the CEGS 01415 will be revised as follows (revisions are underlined):

“ Measurements shall be either in SI and IP units as indicated, except for soft metric measurements or as otherwise authorized. When only SI or IP measurements are specified for a product, the product will be procured in specified units (SI or IP), unless otherwise authorized by the Contracting Officer. The contractor shall be responsible for all associated labor and materials when authorized to substitute one system of units for another and, for final assembly and performance of the specified work and/or products.”

**CEGS 04200**, Masonry. Concur with CENWO-ED recommendation with the exception of the following:

a. Paragraph 1.2. Instead of the CENWO-ED suggested statement for paragraph 1.2, add, “If the contractor opts to furnish inch-pound (IP) CMU products, drawings showing elevations of walls exposed to view shall be submitted for approval by the contractor and shall indicate the location of all cut CMU products.”

b. Paragraph 2.1. Change “general contractor” to “contractor.”

c. Paragraph 2.1.2. Delete “10 mm” at the start of the sentence.

d. Paragraph 2.1.3. Delete the first two (2) sentences of the paragraph. These requirements are over-restrictive.

**CEGS 04225**, Non-Bearing Masonry Veneer/Steel Stud Wall. Same comment as CEGS 04200, Masonry, apply here.

**CEGS 09510**, Acoustical Ceilings. Concur with CENWO-ED recommendation modified

as follows: "The contractor has the option to substitute inch-pound (IP) recessed light fixtures (RLF) for metric RLF. If the contractor opts to furnish inch-pound RLF, other ceiling elements like acoustical ceiling tiles, air diffusers, air registers and grills, should also be IP products. The contractor shall be responsible for coordinating the whole ceiling system with other details, like the location of access panels and ceiling penetrations, etc., shown on the drawings."

**CEGS 16415**, Electrical Work, Interior. Concur with CENWO-ED recommendation modified as follows: " Paragraph 1.2.3, Recessed Light Fixtures (RLF) Option. The contractor has the option to substitute inch-pound (IP) RLF for metric RLF. Coordinate with Section 09510, Acoustical Ceilings."

Coordination: This response has been coordinated with CEMP-ET (Mr. Charles Gutbertlet, Mr. Bob Billmyre), CEHNC (Mr. Severo Lopez), and CENWD (Mr. Steve Rumbaugh). The recommended texts will appear in the guide specifications only when SI units are selected as the unit of measurements. Also, all metric project specification shall include section 01415, Metric Measurements.

<b>RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS</b> <i>(Submit a separate form in quadruplicate for each report)</i> (ER 1110-345-100)		OFFICE SYMBOL AND DATE CESPCK-CO-C 13 MAY 1997
DOCUMENT NUMBER AND DATE CEAG3 08201A (APRIL 1993)	DOCUMENT TITLE WOOD DOORS	
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) (DEFINITIVE)) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) (STANDARD)) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY  <input type="checkbox"/> CIVIL WORKS
SUBJECT WOOD DOORS		
ROUTING (Check)		
FROM:	ACTION RECOMMENDED BY DISTRICT COMMANDER <i>(See Sheet 2)</i>	
District Commander U.S. Army Engineer District, Sacramento CESPK-ED-M	OFFICE SYMBOL CESPK-ED	NAME AND TITLE (Print or Type) BRIAN W. DOYLE, CHIEF, ENGINEERING DIVISION
	DATE 13 May 97	SIGNATURE <i>[Signature]</i>
1a. TO: HQUSACE (CEMP-EA)	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT <u>13 May 97</u> (Date)	
1b. TO: Division Commander U.S. Army Engineer Division, South Pacific CESPD-ET	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER RECOMMEND APPROVAL	
	OFFICE SYMBOL CESPD-ET-E	NAME AND TITLE (Print or Type) JACK E. MARLESS, Chief, Engineering Division
	DATE 27 May 97	SIGNATURE <i>[Signature]</i>
2. TO: HQUSACE (CEMP-EA) WASH DC 20314-1000	COMMENTS OR ACTION BY COMMANDER, USACE NON CONCUR (SEE CEMP-EA ATTACHED COMMENTS)	
	OFFICE SYMBOL CEMP-E	NAME AND TITLE (Print or Type) KIGUK CHEUNG, P.E., Chief, Engineering Division/MT
	DATE 6/11/97	SIGNATURE <i>[Signature]</i>
3. TO: Division Commander U.S. Army Engineer Division, South Pacific ATTN: CESP-D ET 333 Market Street San Francisco, CA 94105	COMMENTS BY DIVISION COMMANDER	
	OFFICE SYMBOL	NAME AND TITLE (Print or Type)
	DATE	SIGNATURE
4. RETURN TO: District Commander U.S. Army Engineer District, Sacramento CESPK-ED-M (ET&S)	COPY FURNISHED CESPK-CO-C (RONALD GOLDSBERRY) CESPK-ED-M (ARCHITECTURAL)	

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)**

OFFICE SYMBOL AND DATE  
CESPK-CO-C

PROBLEM DESCRIPTION AND ACTION RECOMMENDED *(Use additional sheets if necessary.)*

1.

**PROBLEM:**

- a. CEAGS-08201A (April 1993) has not been updated to meet its counterpart CEGS-08201 (October 1994).
- b. Note C indicates this guide specification is based on CEGS-08201 (March 1989) including Notice 5. CEGS-08201 (March 1989) has been superseded by CEGS-08201 (October 1994).
- c. CEGS-08201 (October 1994) indicates Special change note relocation (Aug 95) and Changes thru Notice 1 (Nov 95).

2.

**RECOMMENDED SOLUTION:**

- a. Revise entire CEAGS-08201A to be in accord with CEGS-08201 (OCTOBER 94).

NAME OF SUBMITTER *(Optional)*

Ronald Goldsberry, CESPK-CO-C, thru Steve Freitas - Criteria Management Unit

WORK TELEPHONE NUMBER *(Optional)*

(916) 557-7296

**ENG Form 3078 Continuation**

CEMP-EA Response to CESPKE-ED-M Recommendations for CEAGS-08201A, Wood Doors, dated 13 May 1997, CEMP-E Action No. 9081:

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Nonconcur with Recommendation 2.a. Changes to CEAGS 08201A are unwarranted. There is a pending action to revise CEAGS to create more "narrow scope sections," which will result in the cancellation of CEAGS. This cancellation is anticipated to occur in late FY 98.

9/2/98

<b>RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS</b> <i>(Submit a separate form in quadruplicate for each report)</i> (ER 1110-345-100)		OFFICE SYMBOL AND DATE CESPCK-CO-C 9 MAY 1997
DOCUMENT NUMBER AND DATE CEGS 08700 (MARCH 1996)	DOCUMENT TITLE BUILDERS HARDWARE	
DOCUMENT TYPE <input type="checkbox"/> DRAWING ((STANDARD) (DEFINITIVE)) <input checked="" type="checkbox"/> SPECIFICATION ((GUIDE) (STANDARD)) <input type="checkbox"/> DESIGN GUIDES <input type="checkbox"/> TECHNICAL MANUAL <input type="checkbox"/> ENGINEER MANUAL <input type="checkbox"/> ENGINEER REGULATION <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> MILITARY  <input type="checkbox"/> CIVIL WORKS
SUBJECT SUBPART 2.4.5 LOCK CYLINDERS (MORTISE, RIM AND BORED)		
ROUTING (Check)		
FROM:	ACTION RECOMMENDED BY DISTRICT COMMANDER <i>(See Sheet 2)</i>	
District Commander U.S. Army Engineer District, Sacramento CESPK-ED-M	OFFICE SYMBOL CESPK-ED	NAME AND TITLE (Print or Type) BRIAN W. DOYLE, CHIEF, ENGINEERING DIVISION
	DATE 9 May 97	SIGNATURE <i>Brian W. Doyle</i>
1a. TO:	INFORMATION COPY OF THIS ENG FORM 3078 WAS SENT _____ <i>(Date)</i>	
HOUSACE (CEMP-EA)	9 May 97	
1b. TO:	COMMENTS, ACTION, OR RECOMMENDATION BY DIVISION COMMANDER	
Division Commander U.S. Army Engineer Division, South Pacific CESPD-ET	RECOMMEND APPROVAL.	
	OFFICE SYMBOL CESPD-ET-E	NAME AND TITLE (Print or Type) JACK E. FARLESS Chief, Engineering Division
	DATE 27 May 97	SIGNATURE <i>Jack E. Farless</i>
2. TO:	COMMENTS OR ACTION BY COMMANDER, USACE	
HOUSACE (CEMP-EA) WASH DC 20314-1000	Concur. Changes will be incorporated essentially as recommended.	
	OFFICE SYMBOL CRMP-E	NAME AND TITLE (Print or Type) KISUK CHEUNG, P.E., Chief, Engineering Division/MP
	DATE 9 Jun 97	SIGNATURE <i>Phillip T. Campbell, Col</i>
3. TO:	COMMENTS BY DIVISION COMMANDER	
Division Commander U.S. Army Engineer Division, South Pacific ATTN: CESPD-ET 333 Market St. San Francisco, CA 94105	OFFICE SYMBOL	NAME AND TITLE (Print or Type)
	DATE	SIGNATURE
4. RETURN TO:	COPY FURNISHED CESPK-CO-C (RONALD GOLDSBERRY) CESPK-ED-M (ARCHITECTURAL DESIGN SECTION)	
District Commander U.S. Army Engineer District, Sacramento CESPK-ED-M (ET&S)		

**RECOMMENDED CHANGES TO ENGINEERING DOCUMENTS (Cont'd)**

OFFICE SYMBOL AND DATE  
CESPK-CO-C

PROBLEM DESCRIPTION AND ACTION RECOMMENDED (Use additional sheets if necessary.)

**1. PROBLEM:**

- a. A recent MEMO from HQUACE, CEMP-EA (1110) dated 13 May 1996, regarding full and open competition, references locksets with removable cores, Best Lock Corporation was being specified to the exclusion of other manufactures' of equal products.
- b. Subpart 2.4.5 Lock cylinders (mortise, rim and bored), references within the paragraph, the provision of identifying the manufacturer of existing locks. (For example, Best Locking System, with removal cores, is predominately in use at many of the installations within the Sacramento district's jurisdiction).
- c. The MEMO further states that the interchangeability of cores and capability of matching existing key systems, regardless of the manufacturer, makes specification of proprietary systems typically unwarranted for this application.
- d. The MEMO further states that even with a Justification and Approval (J&A), bids from other manufactures who can meet the specified requirements, an "or equal" statement with salient features and identification of all known "equal" manufactures must be indicated in the specifications. It is felt that in today's changing industry specifying "known equal" manufacturers could be considered as limiting competition and therefore, should not be a part of the guide specification and/or when awarded, the Contract specifications.

**2. RECOMMENDED SOLUTION:**

- a. Suggest revising "Note" as follows:  
Six-pin cylinders will normally be specified for general-purpose construction. Seven-pin cylinders should be specified for more complicated master keyed systems. Removable cores will be specified only where frequent key changes are required. Seven-pin removable cores shall be specified when predominately in use at the installation. Bit key operated locks may be required in lieu of cylinder operated for asylum type construction. Where security grade cylinders are required, a suffix "A" may be added for drill and pick resistant cylinders.
- b. There are many requirements enclosed in brackets in Subpart 2.4.5. The designer shall carefully edit this paragraph. The intent is to allow full and open competition in the specifications whenever possible. When a keying system being specified for a project must be an extension of an existing key system it is important to indicate the name of the manufacturer of the existing system along with the salient features of that system (i.e. number of pins, removable or un-removable core, and keyway designation). Only in rare circumstances can the specified be edited or require a sole-source system and then a full (J&A) in accordance with FAR 6.303 must be prepared.  
**Justification and Approval**
- c. Recommend revising Subpart 2.4.5 as follows:  
Lock cylinders shall comply with BHMA A156.5. Lock cylinder shall have not less than [six] [seven] pins. [Cylinders shall have key removable type cores.] [[A [great] [grand] master keying system shall be provided.] [An extension of the existing keying system shall be provided. The existing locks were manufactured by [ ] and [do not] have interchangeable cores and has a [n] [ ] type keyway.] [A construction master keying system] [Construction interchangeable cores] shall be provided.] [Disassembly of knob or lockset shall not be required to remove core from lockset.] [All locksets, exit devices, and padlocks shall accept same interchangeable cores.] [All lockset, lockable exit devices, and padlocks shall accept same interchangeable cores.] Competitive manufacturer's "equal" locking systems are acceptable. To be considered "equal" the key lock cylinders or interchangeable cores must be provided to match the existing keyway designated system that is described above.

NAME OF SUBMITTER (Optional)

Ronald Goldsberry, CESPK-CO-C, thru Steve Freitas - Criteria Management Unit

WORK TELEPHONE NUMBER (Optional)

(916) 557-7296

## CURRENT DESIGN CRITERIA

### Recently Issued Criteria:

a. **Problem:** There have been instances where current design criteria were not used in project designs because recently issued Engineering and Design documents were placed in a central office file and were not distributed to design personnel who need to be aware of the current criteria and guidance.

b. **Probable Solution:** From all reports, EIRS Bulletins are widely circulated within the Engineering Division of USACE Commands and are readily accessible to all engineering and design personnel. This enclosure includes a listing of recently issued criteria.

Engineering and Design criteria for Civil Works and Military Programs are distributed by the "Construction Criteria Base (CCB)" System, National Institute of Building Sciences NIBS. CCB is available in CD-ROM format and is on the CCB web site at "<http://www.nibs.org/ccb>". Information about subscribing to CCB may be obtained by calling NIBS at (202) 289-7800. Current Military Programs Engineering and Design criteria are also available on our TECHINFO web site at "<http://w2.hnd.usace.army.mil>". For further information on TECHINFO, call the Huntsville Engineering and Support Center, CEHNC-ED-ES-G, at (205) 895-1821 between 8:00 a.m. and 4:00 p.m., Central Time.

Encl 6 (2 pages)

PUBLICATION LIST

<u>PUB-NO.</u>	<u>PUBLICATION</u>	<u>PUB-DATE</u>
CEGS-01320	Project Schedule	Jun 97
CEGS-08330	Overhead Rolling Doors	Jun 97
CEGS-09200	Lathing and Plastering	Jun 97
CEGS-09250	Gypsum Wallboard	Jun 97
ETL 1110-3-481	Containment and Disposal of Aqueous Film-Forming Foam Solution	May 97
TM 5-663	Child Development Center, Play Area Inspection and Maintenance Program	Mar 97