CESPK-ED-M (1110) 17 October 1996

MEMORANDUM FOR RECORD

SUBJECT: Civil Works Guide Specifications Steering Committee Meeting Minutes

1. The Civil Works Guide Specifications Steering Committee (CWGSSC) on specifications met on 20-21 August 1996 in Arlington, Texas. A list of attendees (enclosure 1) and agenda (enclosure 2) are enclosed.

2. Freddie Rush, LMV, opened the meeting with introductions of current and four new at-large District members. Foo Eng, SPD, was present in proxy for Donald L. Bergner. Jim Nakasone, POD, will no longer serve as a committee member due to limited funding and involvement of POD in civil works. Comments were made on the importance of proper specification preparation considering the Association of General Contractors report that poor specification preparation cost millions in project modifications and contractor claims. Also, the laws and rules that govern our business are constantly changing, i.e., FIRMR is rescinded, DOD software may replace SAACONS, and FAR is under considerable change.

3. Charles Baldi, CECW, reported that Ray Duncan will not be attending this meeting. He may attend future meetings if funding is available and his services are obtained. Mr. Baldi repeated the role and function of the steering committee is to keep the Civil Works Guide Specifications (CWGS) viable and give designers useful tools to improve the quality of civil work's projects. He reported that HQ continues a realignment and office move, but he will continue to be the POC for CWGSSC. Charlie and/or Tom Shaw plan to attend the SPECSINTACT Interagency Configuration Control and Coordinating Board (SI-CCCB) meeting in the first week of October and will relay any CWGSSC issues to the SI-CCCB. He also briefed us on pending legislation requiring 50% Contracting that would increase the percentage of CW projects contracted out to A-E. Target percentage are 25% of CW projects will be A-E for all Districts. The internal proration would be a minimum of 40% for engineering and design and not less than 35% for planning effort. Districts with less than 25% A-E contracts would have to show a net increase of 10% per year.

4. Mr. Rush, reviewed the meeting agenda and minutes of the first meeting of 11-12 June 1996. The minutes were approved with some minor corrections noted. Freddie will correct the minutes as approved and send them to Mr. Baldi. George Norton, NED, requested a copy of the Report on Specifications by Ray Duncan be provided to the CWGSSC.

5. Terms of the four new at-large members were determined. Don Carmen, SAW, and Al Geisen, NCS, will serve four year terms. Donald N. Johnson, MRK, and Steven Freitas, SPK, will serve two year terms. Steven Freitas is Secretary of the CWGSSC.

6. Mr. Freitas invited members to e-mail their meeting notes on items they wished to include or emphasize in the minutes within the week following the meeting. The draft minutes will be e-mailed to committee members within two weeks following the meeting for their review. Comments on the minutes will be returned to Steve within ten days of e-mail date on which he sends draft minutes. Final minutes should be e-mailed a week after comments on draft minutes are due.

7. Larry Seals, ORD, provided an Information Paper (enclosure 3) and Decision Paper (enclosure 4) sample format. These formats will be used to present items and issues to the CWGSSC. New issues will use the information paper format. Use of the coordination paragraph is optional, depending on the issue being

presented. Copies of information papers will be distributed to committee members 30 days before the next scheduled meeting. The decision paper format will be used to forward CWGSSC recommendations to HQUSACE. District personnel may also present Information Papers to the CWGSSC. Districts will pay all labor, travel, and per diem to attend the CWGSSC meeting to present issues at their initiative. The CWGSSC intends to pay for labor, travel, and per diem if the CWGSSC asks a District to attend a meeting to discuss or present an issue. The common word processing system format to be used for CWGSSC electronic documents is WordPerfect 5.1. Steven Freitas volunteered to create WordPerfect template files for both information and decision papers.

8. Districts should recommend changes to published documents using ENGR FORM 3078 as noted in EC 1110-1-85, paragraph 12.e. Charlie Baldi processes all 3078 received by HQUSACE for Civil Works issues. Freddie will call Jim Quinn, HND, about publishing approved CW 3078 in Engineering Improvement Recommendation System (EIRS) Bulletins.

9. CWGSSC now has 16 members. All 16 members are to have the opportunity to vote on recommendations. The vote may be made in person, by proxy, by telephone, or in writing submitted to the Chair before meeting. A favorable vote by 12 members is required to approve a recommendation. It was agreed that the quorum to conduct general routine business is 12 members. All general routine business actions must be approved by a vote of the majority present. Issues can be tabled once if additional information or time is required to consider the issue.

10. SPECSINTACT Issues Discussed.

a. Steven Freitas reported on the July Beta Test of SPECSINTACT v1.4 Editor Module. Testing was interrupted on the third day by evacuation of Kennedy Space Center for hurricane Bertha, however, the SPECSINTACT Editor was greatly improved. A few bugs remain to be fixed, but cursor movement, screen repainting, and file save speeds are tremendously faster than earlier versions. The new release is planned for the Construction Criteria Base (CCB) #38 in October 1996, but an advance copy may be available in September. A module that enables MS Word to edit the SPECSINTACT Standard Generalized Markup Language (SGML) file was also shown.

b. Freddie Rush will draft the recommendation to SPECSINTACT Board to make SPECSINTACT fully SGML compliant.

c. SPECSINTACT produces Submittal Registers for jobs on ENG FORM 4288. It also has a Submittal Register Program feature that creates a disk containing submittal information and a program to modify the information outside SPECSINTACT. Compatibility between the SPECSINTACT Submittal Register Program feature and with Resident Management System (RMS) were discussed. The Submittal Register Program is a database system and information can be imported into RMS.

d. Discussion on the recommendation to mandate the use of SPECSINTACT for CW projects in the ER on Specification Engineering was tabled until our next meeting. Tom Shaw, LMK, will contact EG&G to obtain the latest version of SPECSINTACT for each committee member to evaluate before the next meeting. The CWGSSC will discuss and decide on the recommendation to mandate the use of SPECSINTACT for CW projects.

e. The committee recommends that all specification writers attend the PROSPECT Course on Specification Writing at regular intervals of three to five years. Freddie Rush will prepare recommendation to Huntsville Division, through Jim Quinn, that the course includes four hours of instruction on SPECSINTACT. The training should be provided in a computer laboratory with two hours on the Masters and Jobs modules, and at least two hours on the Editor Module.

f. Charlie Baldi is working on a support contract that may provide a SPECSINTACT workshop for each Division and their District employees. Divisions will provide training facilities and computers, and Districts will fund travel and per diem for District employees. Steering committee members will serve as their Division POC for the workshop. Sacramento District has found "Just in Time Training" the most effective and productive way to train design teams using SPECSINTACT for the first time. Freddie will write the recommendation to HQUSACE.

11. Charlie Baldi asked all Districts and Divisions to submit comments on EC 1110-1-85 to him by 30 September 1996. CWGSSC discussed the following comments:

a. It was suggested that the draft ER Specification Engineering be revised and issued as a joint military/CW document. CWGSSC agreed to publish the ER as a CW document at this time and work with the military program directorate to develop a joint ER for Specification Engineering.

b. Charlie Baldi asked if any concern exists using the term Specification Engineer although no classification exists and it is not a general engineering discipline. The committee agreed that it is an acceptable term to describe the responsibilities and functions outlined in the draft ER.

c. Paragraph 5 will be revised to require each district to appoint someone to the duties of the Specification Engineer. A Chief of Specifications Section or Unit, if one exists, is the preferable choice, while a Technical Manager is the least desirable. The District will provide appropriate staff to support functions outlined or may contract with another district for support.

d. The committee agreed a paragraph for Construction Documents Format similar to 11.f should be provided in EC.

e. Paragraph 8 needs to be updated to provide directions on submission of information papers for consideration by the CWGSSC.

f. Need to update references to FARS and emphasize the deletion of references to Military and Federal Standards and Specifications.

g. Paragraph 12, CWGS Notice Program, should include information on the archiving of CWGS at Vicksburg District for ten years. The CWGS archives will be maintained through the CCB System and not in hard-copy.

12. The Construction Criteria Base (CCB) CD-ROM is produced by the National Institute of Building Sciences (NIBS). Tom Shaw will talk with NIBS on how to remove obsolete material from the CCB. Charlie Baldi will determine if there is a POC in HQUSACE for NIBS and if there is an existing procedure for updating the CCB in place. CWGSSC agreed to recommend elimination of old, obsolete, or superseded criteria from CCB as identified in EP 25-1-1. Vicksburg District

will keep an archive of 10 years of CCB back issues. Old, obsolete CE and CW specifications will be deleted from the CCB disks at a time to be announced.

13. Amendments.

a. There are problems in issuing amendments with SPECSINTACT. George Norton reported that there is no COE wide SOP on preparing Amendments. Some Districts issue amendments as page changes and others replace entire sections. CWGSSC needs response from Districts to determine the need for standardization, problems with SPECSINTACT and SAACONS. Some of the issues and questions are:

i. Do we need to standardize amendment formats?
ii. Is there a need for a standardized amendment template?
iii. How does SAACONS deal with amendments?
iv. Any other comments the District may have on amendments.

b. At the last meeting, Ray Duncan commented that there was a problem with making amendments using SPECSINTACT. Steven Freitas described several ways to prepare amendments using SPECSINTACT (enclosure 5). Steven will draft a recommendation on automating the amendment process with SPECSINTACT for CWGSSC action. Tom will also present the concept at next meeting of SPECSINTACT Board.

14. CWGS 01025, Measurement and Payment. George Norton presented an Information Paper, SUBJECT: Problems with Bidding Schedule Preparation, dated 20 August 1996 (enclosure 6). George will write recommendation to limit use of unit prices in compliance with FAR 36.207 requirements and propose changes to ER 1110-2-1302, Civil Works Cost Engineering.

15. District Design Guides. Tom Shaw requested copies of District or A-E design guides that outline specification preparation. He wants to develop a standard A-E Civil Works Design Guide with generic guidelines. The standard would be used to develop A-E Civil Works Design Guides by Districts that have none and/or tailored to the Districts current procedures. Send them directly to Vicksburg District, ATTN CELMK-ED-DE Tom Shaw, 2101 N. Frontage Road, Vicksburg MS 39180.

16. CW Specifications Notice Program. Tom Shaw confirmed information reported at the last meeting on Notice Program operation and funding. LMK is maintaining 70 CWGS/quarter at approximately 10 hours/CWGS/quarter at a rate of $58.00/hour. Tom projected a total annual cost of $162,000.00 for the Notice Program in FY 97. Mr. Baldi had submitted a request of $150,000 in FY-97 budget. Tom said half of the CWGS are fully metric and they are starting conversion of the last 1 or 2.

17. The committee continued consideration of guide specifications (GS) that should be deleted, retained, updated, developed or combined with CEGS from the last meeting as follows:

a. Agreed to recommend deletion of the following GS:
CE 1103 Photogrammetric Mapping
CE 1104 Aerial Photography for Photogrammetric Mapping
CE 1504 Crest Gate Seal Heaters

b. GS CE 1308, Stone Protection, is in the process being updated to CWGS 02542. Agreed to recommend removal of drawings from CWGS 16643, Cathodic

Protection for Lock Miter Gates and incorporate them into EM 1110-2-2703.

c. Agreed to survey Districts for local GS they may have to update and/or replace the following:

CE 1102 Dredging
CE 1309 Levees
CWGS 15346 Lubricating Systems for Flood Control Pumping Plants

d. Further action on GS to be retained by HDC was tabled until Bill Wottlin, NPD, can check with HDC about converting HDC GS to SPECSINTACT format and distributing them on the CCB:

CE 2205.01A Turbine Water Flow Measuring Equipment
CE 5910 Welded Power Penstocks (and Surge Tanks)
CW 13331 SCADA
CW 16212 Tubular Hydraulic Turbines AC Generators & Appurtenant Equipment

e. Agreed to recommend the following GS be merged into ER or EM:

CW 01333 Hydrographic Surveying
CW 01334.1 Global Positioning System

e. Agreed to delete CE 3301, Cast-in-Place Structural Concrete, from list of GS to be combined with CEGS. We also agreed to add CWGS 2211, CWGS 3101, and CWGS 3210 to the list. Charlie Baldi will ask CWGS and CEGS HQUSACE proponents to check GS on feasibility of combination. Further action on the following GS was tabled pending his report at our next meeting:

CWGS 2211 Clearing (Timber and Structure)
CE 2215 Geotextiles Used as Filters
CE 2311 Round Timber Piles
CE 2315 Steel H-Piles
CE 2365 Prestressed Concrete Piles
CWGS 3101 Formwork for Concrete
CWGS 3210 Steel Bars and Welded Wire Fabric for Concrete Reinforcement
CE 3307 Concrete for Minor Structures
CE 3425 Precast Prestressed Concrete
CWGS 14210 Elevators for Dams, General Type, AC & DC

f. Agreed to update following GS by ENG FORM 3078:

CE 2148 Relief Wells. ORD will add section on pilot hole.
CE 2214 Soil Bentonite Slurry Trench Cutoff. NAD will add section on cement bentonite.

g. Agreed to withdraw Summary of Work, Contract Closeout, and Geotextiles Tubes from list of GS to be developed. Freddie Rush will write the recommendation to replace and develop CWGS for the following agreed priority:

(1) Dredging (Includes Underwater Blasting)
(2) Levees
(3) Drainage Structures through Levees and Small Dams
(4) Concrete Restoration
(5) Rock Anchors and Soil Anchors

(6) Cathodic protection for miter gates
(7) Placement of Concrete for Concrete Slurry Cutoff Walls
(8) High Mast Lighting
(9) Lubricating Systems for Flood Control Pumping Plants

18. Unified Corporate GS. Don Carmen, SAW, proposed that the Corps should have one list of GS because CW projects often use CEGS and Corps of Engineers Abridged Guide Specifications (CEAGS). There was significant concern expressed on elimination of CEAGS reported by Jim Quinn, HESC, at the last meeting. The committee agreed to survey the Districts to determine which CEAGS are used in CW projects and develop a recommendation on the disposition of CEAGS. We will also ask Jim if he has any data to support the decision on CEAGS demise. The issue of creating a unified corporate list of GS was tabled.

19. ASTM and ANSI Standards. Donald Johnson, MRK, asked about the availability of ASTM and ANSI Standards in electronic media. Charles Pearre, CECW-EP, is checking into a Corps-wide subscription with Information Handling Service. Charlie will check on it and report at the next meeting.

20. Electronic Bid Sets (EBS). Steven Freitas will provide an Information Paper on the EBS Initiative. He'll also draft recommendation to the SPECSINTACT Board to append section files to the section table of content files, when both are requested. This will reduce by one-half the number of specification files that need to be managed in EBS. Another recommendation will be developed to eliminate a step in the EBS process by providing a driver that creates print files in Portable Document Format (PDF). Charlie stated he has provided EG&G with $50,000 and they may be asked to perform these tasks. Tom will also discuss these issues at the next SPECSINTACT Board meeting.

21. Special Contract Requirements. Don Carmen and George Norton stated a need for guidance in preparing specification Contract Clauses and SECTION 00800, Special Contract Requirements (AKA Front End). They will collaborate on an Information Paper for the next meeting.

22. Charlie Baldi will try to obtain $50,000 to research and test twisted and welded wire mesh gabions as specified in CWGS 02541 Wire Mesh Gabion. Charlie requested a survey of Districts that plan to use gabion structures and information on potential CW projects.

23. Freddie Rush will check on funding for CWGSSC and report at next meeting.

24. There being no further discussion or business to be considered by the Committee, the meeting was adjourned.

Steven P. Freitas
Secretary, CWGSSC

6 Encls
1. List of Attendees
2. Agenda
3. Information Paper Format
4. Decision Paper Format
5. Amendments in SPECSINTACT
6. Bidding Schedule Preparation

CIVIL WORKS STEERING COMMITTEE
Meeting Attendance
Arlington, Texas
20-21 August 1996

1.	Charlie Baldi	CECW-EP	(202) 761-8894
2.	Thomas R. Shaw	CELMK-ED-DE	(601) 631-5579
3.	Freddie S. Rush	CELMV-ET-ET	(601) 634-5936
4.	Jim M^{c}Henry	CENCD-E-EG-T	(312) 353-1801
5.	Al Geisen	CENCS-DE-D	(612) 290-5522
6.	George H. Norton	CENED-ED-DS	(617) 647-8870
7.	Joe Miller	CEMRD-ET-E	(402) 697-2649
8.	Donald N. Johnson	CEMRK-EP-CS	(816) 426-5144
9.	John Kerkowski	CENAD-ET-ET	(212) 264-7106
10.	Bill Wottlin	CENPD-ET-E	(503) 326-3861
11.	Larry Seals	CEORD-ET-EQ	(513) 684-3034
12.	Tim Pope	CESAD-ET-EG	(404) 331-6703
13.	Don Carmen	CESAW-EP-EE	(910) 251-4656
14.	Foo Eng	CESPD-ET-E	(415) 977-8108
15.	Steven P. Freitas	CESPK-ED-M	(916) 557-7296
16.	James D. Adkinson	CESWD-ETE-T	(214) 767-2353

Enclosure 1

AGENDA

CIVIL WORKS STEERING COMMITTEE

TUESDAY, 20 AUGUST 1996:

0800 - 0810	Announcements	Freddie Rush
0810 - 0820	Introduction of New Members & Proxies	
0820 - 0830	Comments from HQUSACE	Charlie Baldi
0830 - 0845	Review and Discuss Agenda	Committee
0845 - 0900	Read and Approve Minutes of First Meeting	Committee
0900 - 0910	Select 2-yr & 4-yr At-Large Members	Committee
0910 - 0930	Break	
0930 - 0945	Discussion - Format for Recommendations - Developing Recommendations - Presenting Recommendations - Quorum	Committee
0945 - 1030	SPECSINTACT - Results of July Beta Test - Develop Recommendation to Make SI Editor fully SGML Compliant - Mandate SPECSINTACT? - Future of Specifications Software	Committee
1030 - 1050	Break	
1050 - 1130	Comments on EC 1110-1-85	Committee
1130 - 1300	Lunch	
1300 - 1315	Updating CCB CD-ROM	Committee
1315 - 1345	Amendments	George Norton
1345 - 1400	CWGS 01025 Measurement & Payment	George Norton
1400 - 1430	Break	
1430 - 1500	Design Guides	Tom Shaw
1500 - 1520	CWGS Notice Program Funding	Tom Shaw
1520 - 1540	Summarize Day 1 Results	Committee
1540 - 1600	Outline Day 2 Activities	Committee

WEDNESDAY, 21 AUGUST 1996:

0800 - 0830	CWGS to be Deleted - Prepare List - Prepare Recommendation	Committee
0830 - 0915	CWGS to be Combined with CEGS - Finalize List - Prepare Recommendation	Committee
0915 - 0945	Break	

ENCLOSURE 2

AGENDA (Continued)

0945 - 1030	CWGS to be Developed - Finalize List - Prioritize List - Prepare Recommendation	Committee
1030 - 1045	CWGS to be Assigned to HDC	Committee
1045 - 1100	Break	
1100 - 1145	CWGS to be Updated - Finalize List - Prepare Recommendation	Committee
1145 - 1315	Lunch	
1315 - 1400	Prioritize CWGS Actions for Funding Purposes	Committee
1400 - 1415	Special Clauses	Committee
1415 - 1445	Break	
1445 - 1530	Open Discussion	Committee
1530 - 1600	Summarize Results/Actions of Meeting	Committee
1600	Adjourn	

CEORD-ET-EQ 14 June 1996

MEMORANDUM FOR Civil Works Specifications Steering Committee

SUBJECT: Format for an Information Paper

1. This is an information paper.

2. PURPOSE: Provide a short one or two sentence description of why the paper was prepared. Why does the reader need this information?

3. RECOMMENDED USE: Indicate who is to use this paper and how they are expected to use it.

4. INFORMATION: Summarize the information in separate sub-paragraphs as needed. This paragraph should be an executive summary of the information that is to be presented. Detailed facts, exhibits, or additional information for the committee should be attached to this paper as TABs.

[5. COORDINATION: This paragraph is not needed by the Steering Committee.]

X Encls
1. TAB A
2. TAB B
3. TAB etc.

SIGNATURE BLOCK

ENCLOSURE 3

CEORD-ET-EQ 14 June 1996

MEMORANDUM FOR Civil Works Specifications Steering Committee

SUBJECT: Format for a Decision Paper

1. This is a decision paper.

2. PROBLEM: Provide a one or two sentence description of the problem.

3. RECOMMENDATIONS: List multiple recommendations as separate sub-paragraphs. Use short concise statements.

4. BACKGROUND AND DISCUSSION: Summarize the facts that led to the recommendations. This paragraph should be written as an executive summary and should present only the highlights of all the information considered. The goal is to present the problem and the facts in a one page summary. Additional information for a more in-depth understanding of the problem can be attached to this sheet as TABs and referenced in the body of the this text.

[5. COORDINATION: This paragraph is not needed by the Steering Committee.]

X Encls
1. TAB A
2. TAB B
3. TAB etc.

SIGNATURE BLOCK

Enclosure 4

U.S. ARMY ENGINEER DISTRICT, SACRAMENTO

AMENDMENTS IN SPECSINTACT

1. Creating amendments using SPECSINTACT is not a difficult process and like many Windows applications, you can prepare amendments several different ways. This is fortunate because as many ways to amend specifications exist as to prepare them. Two ways are presented below.

2. You need to be familiar with the following SPECSINTACT features to prepare amendments:

   a. SPECSINTACT Editor and Menu. The Edit Menu of the SPECSINTACT Editor Module contains the following features:

      1) Redlining: Edit text for future addition or deletion.

      2) Execute Redlines: Remove <ADD> and <DEL> tags and remove deleted text encompassed by the deletion tags. The user is prompted for confirmation before they execute the command.

      3) Text Tag <TXT>. Use the Text Tag to encompass paragraphs in the document.

      4) Hard Page Break Tag <PGE>. Use the Page Break tag to insert a hard page break into the file. Use "Insert Page Break" command to insert a hard page break token at the current cursor position. To delete a hard page break, tags must be visible. Page break tags do not have end tags.

      5) The Tool Bar. The Tool Bar is a row of buttons that allow quick insertion of SGML tags. Press the desired button to insert SGML tags at the cursor position. You may also select text and then press the desired button to enclose the selected text with the appropriate SGML tags. Tags grey or ungrey as the cursor is moved depending on whether the tag is permitted in the current text, i.e., a sub-part tag is only allowed in a part tag.

         a) Text Button. The Text Button inserts text tags <TXT></TXT> at the cursor position if no text was selected before pressing the button. If text was selected, text tags surround it.

   b. Shift and Delete <Shft+Del>. With tags on, position the cursor on a beginning tag and press Shift and Delete <Shft+Del> keys simultaneously to delete the tags and the text between the tags. For example, to delete an entire sub-part, position the cursor on the beginning sub-part tag, and press Shft Del. This will remove the entire sub-part with all its contents.

   c. Right Mouse Button. While editing documents, you may use the right mouse button as a shortcut to reach some Editor commands such as Paste, Find, Replace, etc. Press the right mouse button and then select a command from the menu displayed.

      1) Attributes Command. The Attributes command is available by pressing the right mouse button when the cursor is between any of the following tags:

<ITM>Item</ITM>
<LST>List</LST>
<TXT>Text</TXT>

2) Indent. The Indent option of the Attributes command indents the first line of the tagged text. Enter the numeric value (+/-) for the indented Item, List, or Text.

d. Print dialog box. The Print dialog box provides selection options for processing and printing reports and sections using the check box to the left of each option. Also, it provides an additional option dialog box.

1) Options dialog box. The Options button in the Print dialog box has its own dialog box that provides the following additional format options.

a) Header/Line. The default header comprises the Job Title and Job Name. You may change the header by inserting or removing variable fields. You may also change the header by typing in the header fields. Use the default line number of 4 for a single line header. For a two-line header, change the line to 3.

b) Footer/Line. The default footer contains the Section Number and the page Number (centered on the line). You may modify the footer by using the variable fields or by typing text into the footer fields. Use the default line number of sixty-two for both single and two-line footers.

c) Header/Footer/Text Justification. You may center text in the header or footer fields, left justify, or right justify by using the pipe symbol as follows:

i. To center text: |enter text between pipe symbols|
ii. To left justify: enter text left of pipe symbols||
iii. To right justify: ||enter text right of pipe symbols

d) Hide. Check the box to hide the adjacent feature.

i. Section Dates. Section(s) will be printed without section dates.
ii. Notes. Section text will be printed without notes.
iii. Tags. Text will be printed without the SPECSINTACT SGML Tags.
iv. Redlines. Text will be printed without redlines.

e) Page Options. Controls the range of pages printed.

i. All Pages: All pages of selected sections will be printed.
ii. From/To: Indicate page number for print to start on and page number to end on.

3. The assumption made at this point is the specifications have been through all internal reviews and issued a Biddability/Constructability/ Operability certificate and reproduced for distribution. However, a contractor has a question, or an error or omission has been found and the specifications require an amendment. We must start with a clean slate

for each amendment and no longer need to keep the original tagged deletions or additions. Therefor, execute the following steps to prepare sections for an amendment.

a. Open the SPECSINTACT Jobs Module.
b. Open the job to be amended.
c. Select the "Edit Sections" radial button.
d. Click OK.
e. Select the section to be amended.
f. Select "Edit/Execute Redlines."
g. Click OK to remove <ADD> and <DEL> tags and remove deleted text.
h. Repeat e through g for all sections to be amended.

4. With redlining off, insert Hard Page Break <PGE> Tags at the beginning of the page to be amended and an immediate following page to isolate amendments and maintain the existing pagination of the section remainder.

5. Two ways of editing sections in SPECSINTACT for amendments are presented as follows:

   a. A vestige of the traditional "cut and paste" amendment techniques used during the era of type writers includes placing an asterisk (*) in the margins. The asterisk is normally placed in the left margin on the first line. An asterisk follows the last line of amended text in the right margin. We accomplish this in SPECSINTACT using the Indent option of the Attributes command as follows:

      1) Turn redlining off.
      2) Find the section of text to be amended and delete the beginning text Tag <TXT> using delete key.
      3) Select the lines of text preceding the amended portion with the cursor keys or left mouse button and click on the Tool Bar Text Button TXT.
      4) Repeat 3 with separate text tags for the two remaining portions of text
      5) Position the cursor on the first line of the amended section inside the text tags.
      6) Click on the right mouse button to pop the edit menu dialog box.
      7) Click on Attributes.
      8) Click on Indent.
      9) Enter a negative distance, i.e., -0.33, to indent left of the left margin. A positive value will provide a normal indentation.
      10) Position the cursor immediately following <TXT INDENT=-0.33> and enter a (*) followed by three spaces.
      11) Turn redlining on.
      12) Make your deletions and additions.
      13) Turn redlining off.
      14) Position the cursor immediately before the ending </TXT> and enter spaces until the line wraps. Enter a (*), position the cursor before the (*) and backspace until the (*) is the last character on the line.
      15) Repeat steps 2) through 14) for each sub-part amendment.
      16) Save the amended file.

   b. The "cut and paste" method is beginning to yield to the word processing capability of "redlining" amendments. Most programs that redline, including SPECSINTACT, show deleted text with a hyphen (-) overstrike character. Programs show additions as **bold**, *italized*, or

with a single or double underline character, or shaded background. The shaded background is usually printer dependent. Some programs also show changed sections by vertical piping (|) or shading in the margin. SPECSINTACT uses the single underline character to show additions by default. SPECSINTACT easily handles amendments using the redlining option as follows:

1) Turn redlining on.
2) Make your deletions and additions.
3) Save the amended file.

6. Click on Cancel to close the edit selection dialog box. The amendments are ready for printing.

7. Select Jobs/Print to get the Job Print Options dialog box. Click on the Options button in the Print dialog box and make the following format changes:

   a. You may add an enclosure line right justified in the lower line of the two-line footer, i.e., ||ENCL 1 TO AMEND NO. 0001.
   b. Hide. Click the check box to the left of Redlines to hide the redlines when making a traditional amendment with (*). Clear the check box to print the redlines when using the "redline" amendments.
   c. Change the page number variable {PAGE} in the default Footer/Line to the original page of the amendment.
   d. Enter the current page to start printing in "Page From/To" and the page to end on. Remember to add in any additional pages created by prior amended sub-parts.
   e. Click on OK and Save to save your changed print options.
   f. Select Some Sections and select the amended section.
   g. Repeat steps c through f for each page amended.

ASTM C 920	(1987) Elastomeric Joint Sealants
ASTM C 1107	(1991a) Packaged Dry, Hydraulic-Cement Grout (Nonshrink)
ASTM D 75	(1987; R 1992) Sampling Aggregates
ASTM D 1752	(1984; R 1992) Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM E 96	(1994) Water Vapor Transmission of Materials

ARMY CORPS OF ENGINEERS, WATERWAYS EXPERIMENT STATION (COE)

COE CRD-C 400	(1963) Water for Use in Mixing or Curing Concrete
COE CRD-C 572	(1974) Corps of Engineers Specification for Polyvinylchloride Waterstops

1.2 MEASUREMENT AND PAYMENT

1.2.1 Measurement

Measurement of concrete will be made on the basis of the actual volume of concrete within the paylines of the structures as indicated on the drawings. Measurement of concrete placed against the sides of any excavation without the use of intervening forms will be made only within the paylines of the structure. No deductions will be made for rounded or beveled edge, for space occupied by metal work, for electrical conduits or timber, or for voidsor embedded items that areeither less than 5 cubic feet on volume or 1 square foot in cross section.

1.2.2 Payment

Unless otherwise specified, payment for concrete structures will be made at the respective contract prices per cubic yard for Items, "Concrete Walls" and "Concrete Slab". The contract price shall include all costs associated with manufacturing, furnishing, delivering, testing, placing, finishing and curing of concrete; and all labor, materials, equipment and other tools required to complete the concrete work. Reinforcing steel and any embedded parts that are specified to be paid for separately shall not be included in this unit price payment item. No payment will be made for concrete placed in structures for which payment is incidental or made as a lump sum.

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The Government will maintain the option to sample and test joint sealer, joint filler material, waterstop, aggregates and concrete to determine compliance with the specifications. The Contractor shall provide facilities and labor as may be necessary to assist the Government in procurement of representative test samples. Samples of aggregates will be obtained at the point of batching in accordance with ASTM D 75. Concrete will be sampled in accordance with ASTM C 172. Slump and air content will be determined in accordance with ASTM C 143 and ASTM C 231, respectively, when cylinders are molded. Compression test specimens will be made,

Compounds for Curing Concrete</RTL>

<RID>ASTM C 494</RID> <RTL>(1992) Chemical Admixtures for Concrete</RTL>

<RID>ASTM C 685</RID> <RTL>(1993a) Concrete Made by Volumetric Batching and Continuous Mixing</RTL>

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</REF>
<REF> <ORG>ARMY CORPS OF ENGINEERS, WATERWAYS EXPERIMENT STATION (COE) </ORG>

<RID>COE CRD-C 400</RID> <RTL>(1963) Water for Use in Mixing or Curing Concrete</RTL>

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EXAMPLE * AMENDMENT WITH TAGS SHOWN

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EXAMPLE * AMENDMENT FINAL

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EXAMPLE REDLINE AMENDMENT WITH TAGS SHOWN

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EXAMPLE REDLINE AMENDMENT FINAL

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CENED-ED-DS 20 August 1996

MEMORANDUM FOR Civil Works Specifications Steering Committee

SUBJECT: Problems with Bidding Schedule Preparation

1. This is an information paper.

2. PURPOSE: This information paper defines and evaluates an apparent problem with the responsibility for development of Bid Schedules and determining the lump sum and unit price items.

3. RECOMMENDED USE: The Civil Works Steering Committee will use this paper to better understand the nature of the problems with bidding schedule preparation. The intent is to offer the subject to open discussion by the Committee for the evolution of recommendations to be included in a future decision paper.

4. INFORMATION: Cost Engineers are required to use the MCACES software for the preparation of cost estimates. Cost Engineering regulations make Cost Engineers accountable for participating in the development of bid schedules. They are also accountable for developing and maintaining historical cost data, and inputting the data into the MCACES estimating software package. MCACES uses a Civil Works Breakdown Structure (CWBS) model which groups products by feature and provides a numerical code and description for each feature. ER 1110-2-1302 states, "Each bid item on the bid schedule must be identified by the appropriate CWBS that will allow tracking of the total project cost." (See Encl 1)

The need for collecting historical cost data and for identifying bid items by the appropriate CWBS is interpreted by some Cost Engineers as a requirement for showing the unit and lump sum items on the bidding schedule to the same level of detail as they appear in the Cost Estimate. (See Encl 1, page 2)

In many instances, this creates a conflict with FAR 36.207, which gives a preference to lump sum pricing for defined parts of the work. There is also a conflict with the draft EC 1110-1-85, which states "The Specification Engineer is responsible for the Bid Schedule and determining the lump sum and unit price bid items."

Simply stated, the Cost Engineer and the Specifications Engineer have different motives for determining the lump sum and unit price items to appear on a Bid Schedule. The Cost Engineer needs historical cost data and wants the same level of detail on the schedule as his cost estimate. The Specifications Engineer must ensure that the bid schedule complies with the FAR and with ER 415-1-1 for clarity and simplicity.

ENCLOSURE 6

Specification engineers must also write the measurement and payment paragraphs to include in the project specifications. Writing such paragraphs for numerous complex bid items can be burdensome.

George H. Norton, P.E.
Steering Committee Member

3 Encls
1. Excerpts from ER 1110-2-1302
2. Excerpts from CWGS 01025
3. FAR 36.207

Management, and forwarded to the PM to ensure all schedules and commitments are fulfilled for project development. The PM will provide this portion of the cost estimate to the Cost Engineer for incorporation into the TOTAL CWE utilizing MCACES.

d. Construction management. Costs will be developed for all construction management activities from preaward requirements through final contract closeout, including in-house labor based upon work-hour requirements, materials, facility costs, support contracts, travel, overhead, and contingencies. Costs will be developed in detail in accordance with the CWBS. Costs for all construction management activities will be developed by Construction Division and forwarded to the PM to ensure that all schedules and commitments are fulfilled for project development. The PM will provide this portion of the estimate to the Cost Engineer for incorporation into the TOTAL CWE utilizing MCACES.

e. Price escalation for inflation. Since the components of each estimate are prepared with an identified common price level date, inflation factors must be utilized to adjust pricing to the project schedule to fully fund the estimate. The PM is responsible for ensuring that this process is complete and the estimate is escalated for inflation in accordance with the approved project schedule using the total project cost summary sheets specified in ER 5-7-1(FR). With inflation added to each major component previously described, the TOTAL CWE is developed.

9. Government Estimate

The Government estimate is the formal, approved construction cost estimate prepared to support contract award. A Government estimate is required for all contracts, or modifications exceeding $25,000 (FAR 36.203). It is used to evaluate bids or proposals, assist in negotiations, and serve as a guide in establishing a schedule for partial payments during contract execution. The Government estimate is based on final plans and specifications. Profit, contingencies, and Government costs associated with the contract award and execution are not included in the Government estimate. Government estimates prepared for contract modifications will include profit based on the factors as determined by use of the weighted guidelines.

10. Informal Cost Terms

Terms such as control estimates, study estimates, alternative or comparability estimates, budget estimates, "scratch" estimates, and project estimates are sometimes used for special purposes such as budget forecasting; making "rough" estimates based on sketches at the early stages of project development, or during construction. Normally, the Cost Engineer will provide cost data appropriate to the situation. These costs are sometimes based on historical data and unit prices from similar projects previously constructed. Terminology, as described above, is presented for general information, but their use is limited and not recognized as formal documentation for contract award or modifications.

11. Civil Work Breakdown Structure (CWBS)

The CWBS identifies all project products beginning with the reconnaissance phase and continues through project completion. It provides a standard product related format to identify all costs throughout the project life cycle necessary to accomplish the work required under each Civil Works feature shown in Table 1. A Cost Engineer checklist, included in the MCACES model database as a template, groups these CWBS products by feature and further expands the levels of detail as necessary to assist in recognizing all the specific work items which may be required. The TOTAL CWE is then prepared by the Cost Engineer by incorporating all the feature costs into a single document as follows.

a. The construction features identified as 02 through 20 in Table 1 are a part of the overall checklist and provide the standard format for developing cost estimates associated with each of the construction features.

b. The checklist further groups all established CWBS products for the nonconstruction features into the appropriate feature categories for Lands and Damages, Planning, Engineering and Design, and Construction Management. The cost data related to these products will be supplied in the checklist (CWBS) format by the organization having the particular expertise or responsibility, e.g., Real Estate Division, Planning Division, Engineering Division, Construction

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Page 1

completion of all design for the remaining contracts and the design to support ongoing construction required during the construction period.

b. Project cost estimates during PED are primarily revisions to the TOTAL CWE due to refinements or changes in the design and/or progress schedule developed in the feasibility study. As the project is developed and the design is refined, the BCE must be used as a guide in managing the engineering and design process. A cost estimate (TOTAL CWE) must be prepared and included as a part of any required Project Design Memorandum, Feature Design Memorandum, Reevaluation Report, and/or Postauthorization Change Report. The cost estimate documentation required for any of these project submissions requiring HQUSACE or higher approval will be the same as discussed above for estimates for the feasibility phase.

c. After award of the first contract and construction of the project has begun, project cost estimates during construction again primarily become revisions to the TOTAL CWE as the design and/or progress schedule continues to become more refined. Cost estimates (TOTAL CWE) must be prepared and included as a part of each Feature Design Memorandum and/or any necessary Reevaluation Report or Postauthorization Change Report required to support the project during this phase. The cost estimate documentation required for any of these project submissions requiring HQUSACE or higher approval will be the same as discussed above for estimates for the feasibility phase.

d. As project cost estimates for plans and specifications for each contract are finalized, the TOTAL CWE is updated to reflect the changes or refinements in quantities, design parameters, and/or schedule relating to the overall project. When each contract is awarded, the TOTAL CWE will be updated to reflect the actual contract amount.

e. During construction, changes occur which affect estimates supporting construction and these must be incorporated into the contract. All design changes developed in Engineering Division during construction will be supported by a cost estimate prepared by Cost Engineering in MCACES and the appropriate CWBS. All other changes, modifications, and claims that occur during construction will have estimates as described in this appendix.

5. Government Estimates for Contract Award

a. A Government estimate is required for award of each construction contract in excess of $25,000 (FAR/EFAR) based upon a defined set of plans and specifications that represent the cost of performing the work within the time allocated by determining the necessary labor, equipment, and materials. This may be accomplished through adjustments or additions to the appropriate detail levels in the originally prepared BCE. The bid schedule should be structured for the specific contract in coordination with the Cost Engineer. Each bid item on the bid schedule must be identified by the appropriate CWBS that will allow tracking of the total project cost. The Government estimate required for either Sealed Bidding, Invitation for Bid (IFB), or Contracting by Negotiation, Request for Proposal (RFP), will be prepared by the Cost Engineer using the MCACES software. The Cost Engineer will participate in all negotiated contracts including, but not limited to, Small Business and Small Business Section 8(a), Service and Supplies, and/or cost plus contracts.

b. The Government estimate of fair and reasonable cost for a well-equipped contractor to complete a Civil Works construction contract is referred to as the "Government estimate." The procedures outlined in this appendix will result in uniformity and accuracy in the Government estimates and will protect the Government against excessive cost for contract work. To be effective, the Government estimate must be defendable in case of protests by bidders.

c. Government estimates shall be designated "For Official Use Only" until after bid opening and will consist of the following:

(1) Title Page

(2) Signature Page

(3) Bid Schedule

d. Title 33 U.S.C. Section 624 provides that projects for river and harbor improvement shall be performed by private contract if the contract price is less than 25 percent in excess of the estimated comparable cost of doing the work by Government plant or less than 25 percent in excess of a fair and reasonable estimated cost of a well-equipped contractor doing the work. The legistrative history indicates the Govern-ment estimate shall not include profit. Title 33 U.S.C. Section 622 provides that the Secretary of the

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APPENDIX D
PROCEDURES FOR PREPARATION OF COST ESTIMATES

1. Basis for Preparation of Estimate

a. General. This appendix establishes uniform guidance for estimating labor, equipment, materials and supplies, subcontracted work, overhead, profit, bond, and contingencies.

b. Planning the work. It is important to thoroughly understand the project scope of work and the biddability and constructability aspects of the project being estimated. The Cost Engineer must thoroughly review drawings, specifications, and other references to formulate a construction sequence and duration. A site visit is strongly recommended to relate the physical characteristics of the project to the available design parameters and details. The development of the construction sequence is necessary as soon as possible and should be used to provide a checklist of construction requirements throughout the cost estimating process.

c. Quantities. Cost Engineering is responsible for the accuracy of quantity "take-off's" when prepared by qualified Government personnel or A-E firms. On a case-by-case basis, assistance for making take-off's will be provided by the Technical Design Branch, Engineering Division, in support of Cost Engineering.

(1) Cost engineering personnel are responsible for independently spot-checking and reviewing all quantity estimates.

(2) The quantity take-off is an important part of the estimate and should be based on all available engineering and design data. All quantities should be shown in standard units of measure.

(3) The detail in which the quantities are prepared for each task is dependent on the design. Quantity calculations beyond design detail are often necessary to determine a reasonable price to complete the overall scope of work for the cost estimate. Project notes, added at the appropriate level in MCACES, will be used to explain the basis for the quantity calculations, to clearly show contingency allowances, and to note quantities determined by cost engineering judgment that will be reconciled upon design refinement.

(4) During construction, some material is wasted and lost from cutting, fitting, handling, or contamination. The Cost Engineer shall use judgement to determine the waste and loss allowance to be applied to appropriate items.

d. Sources of unit cost data.

(1) The Unit Price Book (UPB) associated with MCACES provides production rates, unit costs, and crew composition. The UPB supplies the majority of cost data for construction tasks normally found in building and building site work construction.

(2) Each Cost Engineering Branch should develop and maintain a record of past bids, unit costs, and completed project cost reports. Sources of unit cost data may include the UPB, quotes, audits, catalogs, pricing data, previous bid results, historical costs, the cost engineering database, as well as the expertise from other districts and MSC's. Such data serves as a source for developing or verifying the reasonableness of future unit prices.

(3) In Civil Works construction, the work is primarily of a specialized nature. During the reconnaissance phase, historical unit costs may be used or unit costs may be developed for the construction tasks. As the project develops through the feasibility phase and beyond, historical cost data should be used as a guide and unit cost development should become the primary goal.

e. Unit pricing.

(1) As a general rule, approximately 80 percent of the direct costs of a project are represented by only 20 percent of the estimated work items. The greatest estimating effort should be concentrated on these critical elements. The unit cost for each of these items shall be carefully analyzed and shall be developed as the summation of all direct and indirect costs which will likely be incurred by an experienced and well-equipped contractor. Direct costs are those costs that can be associated with a specific item or unit of construction work in the project. Indirect costs are those costs that

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cannot be associated with a single item or unit of construction work in the project.

(2) The direct cost of the construction tasks comprising the remaining 80 percent of the work elements may be priced from historical sources. The Cost Engineer must use judgement to adjust for project conditions, when cost data is based on previously completed projects to include overhead and price level date adjustments for inflation.

(3) Lump sum bid items may be used for small and easily identified work noted in the drawings and included in the estimate. The cost of the lump sum item should be based on cost data related to the item's total direct and indirect costs.

2. Cost Estimate Components and Supporting Documentation

The following is provided to support the cost estimate submission requirements specified for each phase of project development as outlined in Appendix C, "Type of Cost Estimates."

a. Backup data. All information which was collected or prepared for the cost estimate should be organized by work item and included in the backup data. Such information might include notes on site visits, discussions or telephone conversations with individuals, brochures on special equipment or materials, sketches, and working drawings.

b. Bid schedule. The bid schedule is part of the procurement package and is included with the solicitation for bids. The estimate must be prepared showing the unit prices, quantities, extension of unit prices, lump sum items, and the total costs consistent with the bid schedule.

c. Construction schedule. The Cost Engineer will prepare a construction schedule to support the Government estimate that is consistent with the plans and specifications for completion of the work. It may be in the form of a bar chart or a Network Analysis System, but it must identify the sequence and duration of the tasks upon which the cost estimate is developed. The schedule must be prepared in sufficient detail to adequately develop the required labor, equipment, crew sizes, and production rates required for each of the identified construction tasks.

d. Detail sheets. Detail sheets generated by MCACES provide a complete listing of all labor, equipment, materials and/or crews used to develop all direct costs for each construction task. Although not required as documentation to support a cost estimate submission to HQUSACE, these reports become an important part of the cost estimate in the review and approval process at the district and as necessary for the MSC level submissions.

e. Drawings and sketches. Drawings and sketches which are appropriate may be used to show the basis of the cost estimate. Drawings may include a project map showing the location of the work with respect to principal cities, roads, railways, and waterways; a site map showing the location of the work, borrow, quarry, and spoil areas, and existing work access roads; any existing facilities usable by the contractor; a general plan and elevation, or profile of the work with typical sections; and a construction plan layout.

f. Notes. Notes are any explanations necessary to support the development of cost for individual construction tasks in the cost estimate. This descriptive information that covers areas such as manufacturers quotes, overtime requirements, material availability, and contingencies should be entered as notes to the appropriate MCACES title or detail level of the cost estimate.

g. Project narrative. The narrative defines the parameters upon which the cost estimate has been prepared to support the project scope and schedule and is applied by definition to the project level within MCACES. It describes the project requirements that must be performed in sufficient detail to give a clear understanding of the scope of work including length, width, height, and slope of primary features, special problems that will be encountered in performing the work, site conditions affecting the work, reasons for selection of major plant and equipment, assumptions made for mobilization and demobilization of all equipment, and the reasons for unusually high or low contingencies.

h. Project summary reports. Project summary reports are printouts from MCACES used to summarize costs for each title level established for the specific project cost estimate. There are a variety of summary reports that may be printed from MCACES such as project owner, project indirect, and project direct summaries. The summary reports required for a cost

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The number and identification of lump sum payment items is primarily a Construction Division concern. Generally, it is better to keep the number of lump sum payment items to a minimum. The description of the work included in a payment item is unique for each job and must be developed for each construction contract.

****

a. "Mobilization and Demobilization"

(1) Payment will be made for costs associated with mobilization and demobilization, as defined in Special Clause PAYMENT FOR MOBILIZATION AND DEMOBILIZATION.

(2) Unit of measure: lump sum.

b. "Structure # 1"

(1) Payment will be made for costs associated with operations necessary for construction of the structure at Station XX+XX.

(2) Unit of measure: lump sum.

c. "Structure # 2"

(1) Payment will be made for costs associated with operations necessary for construction of the structure at Station YY+YY.

(2) Unit of measure: lump sum.

1.4 UNIT PRICE PAYMENT ITEMS

****

NOTE: Unit price payment items should be used only where appropriate under the guidance of Federal Acquisition Regulation (FAR) Part 36 - Construction and Architect-Engineer Contracts paragraph 36.207. (Attached)

****

1.4.1 General

****

NOTE: The Unit Price payment items shown below are for illustration purposes only. Unit price payment item language must be written specifically for each job. Unit price payment item language appropriate for inclusion below is contained in guide specification sections.

****

Payment items for the work of this contract on which the contract\&&\ \&unit price&\ payments will be\&&\ \&made&\ are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant,

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Federal Acquisition Regulations

36.207 Pricing fixed-price construction contracts.

(a) Generally, firm-fixed-price contracts shall be used to acquire construction. They may be priced (1) on a lump-sum basis (when a lump sum is paid for the total work or defined parts of the work), (2) on a unit-price basis (when a unit price is paid for a specified quantity of work units), or (3) using a combination of the two methods.

(b) Lump-sum pricing shall be used in preference to unit pricing except when--

(1) Large quantities of work such as grading, paving, building outside utilities, or site preparation are involved;

(2) Quantities of work, such as excavation, cannot be estimated with sufficient confidence to permit a lump-sum offer without a substantial contingency;

(3) Estimated quantities of work required may change significantly during construction; or

(4) Offerors would have to expend unusual effort to develop adequate estimates.

(c) Fixed-price contracts with economic price adjustment may be used if such a provision is customary in contracts for the type of work being acquired, or when omission of an adjustment provision would preclude a significant number of firms from submitting offers or would result in offerors including unwarranted contingencies in proposed prices.

1/80 ER 1110-2-1302 p D-2 ¶ 1.e.(3) & 2.b. L.S okay for small, routine, identical items. Estimate must be consistent with CPS

P.C-3, ¶ 5.a - requires coord with CED

Encl (3)