

DEPARTMENT OF THE ARMY  
Corps of Engineers, Omaha District  
215 North 17th Street  
Omaha, Nebraska 68102-4978

DM 415-1-5

CEMRO-CD-QR

Memorandum  
No. 415-1-5

15 February 1993

Construction and Design  
BIDDABILITY, CONSTRUCTIBILITY, OPERABILITY (BCO) REVIEW PROCEDURES

1. Purpose. This memorandum prescribes policies and procedures to ensure that the biddability, constructibility, and operability (BCO) of a project is considered during design and integrated into the construction procurement documents.

2. Applicability. This memorandum applies to all elements and personnel of the Omaha District Construction Program. BCO review procedures apply to all construction, service, and/or supply contracts to be administered by Omaha District Construction Division. These procedures apply without regard to the procurement method to be utilized.

3. References.

- a. ER 37-345-10
- b. ER 415-1-11
- c. ER 1110-2-1200
- d. ER 1110-345-100
- e. DM 1110-3-1
- f. Omaha District Construction Management Manual

4. General. Constructibility and biddability are defined in reference 3.b. as the ease with which a designed project can be built and with which the contract documents can be understood, bid, administered and enforced. Personnel from Engineering Division, Construction Division and the operating element will coordinate project review to improve designs. This coordinated effort will seek to minimize errors, conflicts and operational discrepancies to provide the most useable facility possible.

5. Guidance.

a. The following procedures will be utilized on contracts to be administered by Omaha District.

(1) The Chief, Engineering Division, will be responsible for ensuring that adequate time for a minimum of two specific BCO reviews in accordance with reference 3.b. is included in all design schedules. Engineering Division will

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This memorandum supersedes DM 415-1-5 dated 30 Aug 1990.

provide documents for review, evaluate comments, conduct backchecks and provide feedback on disposition of comments. These functions may be performed by Planning Division on the continuing authority civil works program. The Chief, Engineering Division, the assistant chief, or a designated branch chief will execute the certification of incorporation of comments using the format in appendix B. The certification will be provided to the Chief, Contracting Division, prior to bid opening. If the schedule does not allow time for the complete review, incorporation and certification process, and it is in the Government's best interests to proceed, a determination and findings signed by the contracting officer will be furnished and placed in the contract file in lieu of the certification.

(2) The Engineering Division technical manager will be responsible for distributing project design documents to all review elements, coordinating review by the various disciplines within Engineering Division, distributing annotated responses to reviewers, and for performing a back check of all incorporated comments. Format in appendix A will be used to transmit design submittals to the Construction Division, Quality Assurance (QA) Branch, Constructibility Review (QR) Section; the appropriate area engineer, and resident engineer or project office. This format will accompany each design submittal. The technical manager will be responsible for the initial portion of the form. After reviewing the design submittal, the resident engineer will complete the first endorsement and forward the form to the area engineer for signature. The area engineer will review and coordinate any changes with the resident engineer and then forward the form to QA Branch. QA Branch will review for accuracy and send the form to the Chief, Construction Division for second endorsement concurrence and signature. The completed form is then forwarded to the technical manager. The designer will use the information contained in endorsement one in preparation of the construction schedule, construction cost estimate, and the general requirements of the specifications. The technical manager will incorporate the completed original of the form in the 100 percent design analysis document.

(3) The Chief, Construction Division, will ensure that required reviews are performed in a timely manner within the design schedule. The Chief, Construction Division, the assistant chief or a designated branch chief will execute the certification of incorporation of comments using the format in appendix B.

(4) Construction Division's Constructibility Review Section will be responsible for reviewing all project design documents to be administered by the Omaha District Construction Division, and for entering the comments into the automated review management system (ARMS) on Omaha District designs. Constructibility review comments on designs prepared by other than the Omaha District will be forwarded to the office with design responsibility for their consideration. Constructibility reviews are separate and apart from the reviews and verifications required by references 3.c. and 3.d. Engineering Division remains responsible for technical review.

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(5) The area engineer is responsible for the review of all projects to be administered by the area. Procedures described in references 3.b. and 3.f. will be followed.

(6) Operating element personnel will perform operability reviews as prescribed in reference 3.b.

(7) The Chief, Contracting Division, will ensure that the fully executed certification form in appendix B or a determination of findings in accordance with reference 3.b. is on file prior to opening bids or proposals on any contract to be administrated by Omaha District Construction Division.

b. When Omaha District is the design agent for another district or agency, the Engineering Division technical manager will coordinate closely with the construction and operating personnel of the receiving district or agency to assure similar adequate procedures are in place to implement BCO reviews. The certification process required by reference 3.b. will be utilized on all applicable projects advertised and awarded by the Omaha District.

c. The BCO review is not intended to be a technical review; however, comments of a technical nature may be submitted when proposed applications raise a question in the reviewer's mind.

d. Particularly difficult issues, or issues that remain unresolved following the normal evaluation procedures will be referred to Programs and Project Management Division.

6. Funding. Costs associated with BCO reviews are to be charged to planning and design funds in accordance with reference 3.a. Funding for BCO reviews will be included in the development of project budgets.

FOR THE COMMANDER:

APPENDICES  
APP A - CONSTRUCTIBILITY  
REVIEW FORMAT  
APP B - CERTIFICATION FOR BID  
OPENING FORMAT

  
WILLIAM S. PAVLICK  
LTC, EN  
Deputy Commander

DISTRIBUTION:  
B  
E

APPENDIX A

CONSTRUCTIBILITY REVIEW FORMAT

CEMRO-ED-\_\_\_(415-10e)

MEMORANDUM FOR

DATE:

CEMRO-CD

Area Engineer, \_\_\_\_\_

Resident Engineer, \_\_\_\_\_

SUBJECT: Constructibility Review for: \_\_\_\_\_

Transmitted herewith are \_\_\_\_\_ (stage) documents for the subject project.  
The review conference will be held on \_\_\_\_\_. The designer has estimated that  
this work will require \_\_\_\_\_ calendar days, based on award in \_\_\_\_\_.  
Request the information in endorsement 1 be furnished by \_\_\_\_\_  
Cost Code: \_\_\_\_\_. Budget: \$ \_\_\_\_\_  
Technical Manager \_\_\_\_\_

3 Encls

- 1. Design Analysis
- 2. Plans
- 3. Specifications

Chief, \_\_\_\_\_ Branch

THRU CEMRO-CD-QR

FOR CEMRO-CD 1st End

CEMRO-CD\_\_\_\_\_ DATE:

- 1. Recommended construction time \_\_\_\_\_ 2.  
(Network analysis) (progress chart) is to be required.
- 3. Contractor quality control by superintendent (is) (is not) acceptable.
- 4. Construction office for quality assurance personnel (is) (is not) to be furnished by contractor.
- 5. The special clauses (should) (should not) include a paragraph of weekly coordination meetings.
- 7. A project sign (is) (is not) recommended.
- 8. List any known local restrictions, regulations, Environmental Protective Agency regulations or restrictions that will affect project: \_\_\_\_\_
- 9. Project is in a security area (yes) (no).
- 10. Comments:

CEMRO-ED-\_\_\_\_\_ 2nd End

CEMRO-CD DATE

\_\_\_\_\_  
\_\_\_\_\_  
Concur.  
Concur with comments.

\_\_\_\_\_  
Area Engineer  
Resident Engineer

\_\_\_\_\_  
Chief, Construction Division

CERTIFICATION FOR BID OPENING FORMAT

CEMRO-ED- \_\_\_\_\_ DATE \_\_\_\_\_

MEMORANDUM FOR: (SEE BLOCKS BELOW)

SUBJECT: APPROVAL FOR BID OPENING  
NOTE: PROCESS DAY OF RECEIPT

TECHNICAL MANAGER \_\_\_\_\_  
 \_\_\_\_\_  
 BRANCH SECTION TELEPHONE

All final design, biddability, constructibility and operability reviews have been completed. Comments have been incorporated into the bidding documents as considered appropriate. There are no known modifications. The subject project, \_\_\_\_\_, located at \_\_\_\_\_, is ready to advertise.

In accordance with ER 415-1-11 requirements I:

1. TO: \_\_\_\_\_ CONCUR \_\_\_\_\_ DO NOT CONCUR \_\_\_\_\_  
 DATE \_\_\_\_\_  
 \_\_\_\_\_ CHIEF, \_\_\_\_\_ BRANCH

In accordance with ER 415-1-11 requirements I:

2. TO: \_\_\_\_\_ CONCUR \_\_\_\_\_ DO NOT CONCUR \_\_\_\_\_  
 DATE \_\_\_\_\_  
 \_\_\_\_\_ CHIEF, ENGINEERING DIVISION

In accordance with ER 415-1-11 requirements I:

3. TO: \_\_\_\_\_ CONCUR \_\_\_\_\_ DO NOT CONCUR \_\_\_\_\_  
 DATE \_\_\_\_\_  
 \_\_\_\_\_ CHIEF, CONSTRUCTION DIVISION

You are authorized to proceed with the project

4. TO: \_\_\_\_\_ CONCUR \_\_\_\_\_ DO NOT CONCUR \_\_\_\_\_  
 DATE \_\_\_\_\_  
 \_\_\_\_\_ CHIEF, ENGINEERING DIVISION

5. TO: \_\_\_\_\_ \_\_\_\_\_ Initiate action to proceed on subject project as authorized above.  
 \_\_\_\_\_ Permission to proceed is denied.  
 DATE \_\_\_\_\_  
 \_\_\_\_\_ TECHNICAL MANAGER

6 TO: CEMRO-CT-A  
 (Original Copy)

CF:  
 CEMRO-ED  
 CEMRO-  
 CEMRO-  
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