

APPENDIXH
EXAMPLE CIVIL WORKS CHECKLIST

This checklist is intended to serve only as a guide in checking or reviewing design documents for errors and omissions. It cannot substitute for the exercise of sound engineering judgement by reviewers. Reviewers should be particularly cautious not to let personal preferences affect their work. Professionals must maintain control of their decisions, understand the technical basis for those decisions, and independently evaluate significant data upon which the design decisions are based. The main usefulness of a checklist such as this is to provide a "minimum" check of consistency between disciplines, compatibility of drawings to specifications, and conformance with functional requirements and design criteria. It is expected that it will be modified by each USACE command to fit specific requirements. Each item in the checklist must be checked off to indicate that the item has been reviewed, or marked "NA" to indicate it is not applicable.

1. Prior to initiation of plans and specifications, review GDM, DM, FDM (or technical appendix to the feasibility report), local cooperation agreement, and the environmental documentation. The feasibility main report, environmental documentation, and authorizing legislation should also be reviewed for added design considerations. _____
2. Identify responsibility for drawings and input for various drawings. _____
3. Review survey data, determine adequacy of available topo and request additional surveys, and establish centerline and offset reference points if necessary. _____
4. In conjunction with the PM, determine funding requirements and milestones. Check — on previously submitted funding requirements and schedules to assure compatibility. _____
5. Prepare work order requests to technical elements (hydrology, hydraulics, geotech, environmental, recreation, specifications and cost engineering, surveys, drafting, real estate, technical specialists, design section, etc.). Clearly identify work required, cost, and time of completion on work order. — — _____
6. Make field trip to study site drainage, bridges, disposal areas, work areas, borrow areas, obstructions, etc. _____
7. Through the PM, inform local sponsors that contract plans are being prepared and advise them of critical dates for their submittals (rights of way, relocations, detours, recreational facilities, site drainage, disposal areas, borrow areas, work areas, contributed finds, bridge drawings, etc.). _____
8. Through the PM, determine if any relocation contracts will be necessary for relocations that are a Federal responsibility. If so, initiate contact immediately with the owner/agency and set up a meeting. Generally, a minimum of one year is needed to obtain an executed contract. _____

9. Through the PM, initiate by letter requests for information from the local sponsor. Be specific as to what is required and when it is required. _____
 - a. Prepare copies of rights+ f-way required for project (including borrow areas, contractor work areas, access, detours, turnaround, etc.). _____
 - b. Send right-of-way (R/W) drawings to real' estate division with a memorandum requesting R/W. _____
 - c. With the PM, meet with the local sponsor to discuss relocations. _____
 - d. Obtain location and drawings of all utilities. _____
 - e. Obtain location and drawings of existing bridges and other structures crossing or in the project area. _____
 - f. Through the PM, determine if the local sponsor intends to include "Contributed Funds, Other" in Government contract (ER 1140-2-301). Notify locals of items and obtain from them the approximate cost. Arrange for obtaining funds. Prepare "spread sheet" and memo for record to accept local funds. Write memorandum to finance and accounting requesting billing of locals. _____
 - g. In conjunction with the PM, develop tentative pay items and quantities for "Contributed Funds, Other. " _____
10. Review cost-sharing agreements for recreational features and update to conform with plans and specifications. Identify recreational requirements for impacts and incorporation into the design drawings. _____
11. Request survey organization to tie our construction control line to existing survey monuments and have them prepare alinement data sheets. _____
12. Lay out plan and profile drawings and site drainage, coordinate with local sponsor. _____
13. Lay out rights-of-way and construction easement on contract drawings; do not dimension R/W easements. If easements have not been requested from local interest, do so by memorandum to real estate division. Get all requirements for placing fill, required fill areas, heights, compaction, clearing site, etc. _____
14. AU items of work and existing conditions should clearly show on the plan and profile sheets with proper drafting symbols, notes, and legends. _____
15. Sufficient details and sections should be shown so that it is evident to any contractor specifically what is required. _____

16. Label drawings with nomenclature contained in guide specifications. Also, clearly show items of work for pay purposes; e.g., “concrete, invert.” _____
17. Prepare list of guide specifications and specifications required for project and make up technical provisions and special provisions. _____
18. Obtain listing of survey monuments and bench marks to be used for control and included in the specifications. Copies of controls should be provided to locals for their work as soon as possible. _____
19. Request preliminary review of drawings at this stage from specifications section, cost engineering branch, geotech branch, environmental branch, design section chief, and other design section project leaders; arrange constructibility review conference with construction division. _____
20. Develop quantity take off. Unit price estimating should be done to see if the project is within funding budget. _____
21. Through the PM, develop local sponsor information and requests:
- a. Request and coordinate identification of items within right-of-way that will be abandoned in place, removed by others, relocated by others, removed by contractor, etc. Place information on drawings. Walk project site with locals. _____
 - b. Obtain list of contacts and special requirements for inclusion into the specifications. _____
 - c. Any design done for the local sponsor must have the local sponsor’s approval (signature) on original drawings. _____
22. Obtain file number from file room and put on drawings. Obtain all signatures on drawings. Check all drawings. _____
23. Finalize quantity takeoffs. All quantities should have had an independent check; major quantities should have had two independent checks. Quantities should be rounded off. _____
24. Finalize design analyses. All design analyses should have had an independent check and a table of contents. _____
25. Prepare draft or bid items in clear and logical order and draft special provisions and technical provisions of specification and estimating section. _____
26. Review plans and specifications and amend as necessary. It is particularly important to review the measurement and payment items to check for consistency with the quantity take off made previously and to see that terminology in bid items agrees with drawings. _____

27. Coordinate and prepare “Engineering Consideration and Instructions for Field Personnel” for transmittal to Construction Division. _____
28. Prepare and provide diversion and control of water plan to specifications and estimating after coordinating assumed discharge with hydrology. _____
29. Plans and specifications will be based upon an approved GDM, DM, FDM, or technical appendix to the feasibility report, as appropriate. The initiation of plans and specifications will not predate the approval of the appropriate document except in unusual circumstances. _____
30. For projects requiring local cooperation, detailed plans and specifications will not be prepared until there is reasonable assurance that the conditions of local cooperation will be complied with. —
31. Verify that all shop drawings and material certifications to be submitted are listed in the submittal register. _____
32. Verify that boring logs shown on drawings have soil classified in accordance with the Unified Soil Classification System. Water table and soil data obtained should also be shown. _____
33. Verify that unusual geological and ground water conditions or problems materials are clearly emphasized for contractor’s benefit. —
34. All horizontal and vertical control points are located properly with pertinent data shown; i.e., coordinates, elevations, references, stationing, and/or start of construction. —