

Field Examination Checklist (3R and 4R Projects)

Design Manual
Chapter 1
General Information

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Pre-Field Exam

- ❑ Approved concept statement and “plan package” prepared by the Field Exam Engineer is assigned by the Assistant Design Engineer to responsible section for development.
 - Concept plan package contains:
 - ❑ Project initiation letter from Assistant Design Engineer.
 - ❑ Final concept statement and other pertinent correspondence.
 - ❑ 11”x17” “as built” plans of roadway to be repaired.
- ❑ Section Engineer assigns package to designer to prepare the field exam plan (this is usually the same person responsible for the project).
 - Preparation includes making a field exam title sheet, necessary typicals to meet concept criteria, copy of concept on 11”x17” paper, copy of Field Exam Checklist items (see below), copy of original plan furnished in plan package, 1 blank 11”x17” page for additional field exam notes.
 - All sheets are 11”x17” and field exam copies are made as necessary. Usually 4-11”x17” plans are given out to field exam personnel, and 2-8 ½”x14” plans for official field exam plan and backup.
 - Field Exam Checklist (to be provided by the District)
 - ❑ Patching quantities—full depth, partial depth, and surface.
 - ❑ Locations and lengths (i.e. station to station) for leveling and strengthening.
 - ❑ Areas of haul-outs.
 - ❑ Survey for culvert extensions (for reinforced concrete box (RCB) extensions in English units - 100 feet each side of the structure and 100 feet left and right of centerline at 25-foot intervals, provide a 20-scale drawing; in metric units – 300 meters each side of the structure and 300 meters left and right of centerline at 7.5 meter intervals, provide a 200 scale drawing).
 - ❑ Survey for safety dikes (100 feet (30 meters)) each side of proposed safety dike and up to 100 feet (30 meters) from centerline of roadway). For large ones only.
 - ❑ Survey and 20-scale (200-scale if metric) of proposed right turn lanes (from centerline of side road back 400 feet (125 meters) and up to 75 feet (23 meters) from centerline of roadway, cross section every 50 feet (15 meters)).
 - ❑ Survey of horizontal curves (at least 3 locations within full super - edges and centerline).
 - ❑ Embankment and pipe quantities for flattening transverse slopes (National Highway System (NHS) routes ONLY); items to be tabulated by location.
 - ❑ Names and addresses of affected utility companies.
 - ❑ Locations of entrances to be reshaped.
 - ❑ Names of affected state events.

- Locations of mailboxes to be relocated to a minimum of 8 feet (2.5 meters) from the pavement edge.
- Survey trees within the roadside recovery area.
- Number and location of EF joints.

- Disposition of bridge handrail and guardrail, including posts.
- Inventory of existing guardrail (use tables found in Quantities for Barrier Removal, located at S:\Users\Methods\Guardrail\BarrierQuantities.doc, and tables found in Variables Needed for Barrier Design, located at S:\Users\Design\Methods\Guardrail\BarrierVariables.doc).
- Locations (station to station) for longitudinal joint repair.
- Locations and quantities of engineering fabric to be placed over random cracks.
- Tabulation of adjustment of fixtures.
- Clearing and grubbing quantities.

- Other items to be discussed/reviewed with the District during the field exam and noted on the plans should include the following:
 - Contractor furnish borrow? **(Yes) / (No)**
 - Full depth patches to be Portland concrete cement (PCC)? **(Yes) / (No)**
 - Full depth PCC patches to be doweled? **(Yes) / (No)**
 - Soils to determine and provide tabulation of subdrains? **(Yes) / (No)**
 - Pollution Prevention Plan (PPP) required? **(Yes) / (No)**
 - Field Office? **(Yes) / (No)**
 - Construction Survey? **(Yes) / (No)**
 - Survey by Office of Design? **(Yes) / (No)**
 - Pavement markings for turn lanes as determined by the District? **(Yes) / (No)**

- After submitting field exam package to person for preparation, the Section Engineer will contact the District Engineer to set up a field exam date and time (usually 2 to 6 weeks after project is assigned).
 - If concept statement is unclear about need for subdrains, contact Soils Engineer to verify if they will be needed. (Soils personnel do not usually attend the field exam).
 - If any culvert, RCB, and/or bridge work is noted in concept, advise Preliminary Bridge Engineer of impending field exam date and if anyone will attend. Whether representative attends or not, provide copy of proposed field exam plan to Preliminary Bridge Engineer no later than 1 week prior to trip.

- The Section Engineer will write a memo to the District Engineer confirming date, time, meeting location, when Central Office personnel will leave Ames, statement that no plans will be sent in advance, and statement about whether representative from the Office of Bridges and Structures should or does not need to attend. Distribution is as follows: Design Engineer, both Assistant Design Engineers, District Construction Engineer, District Maintenance Engineer, Field Exam Engineer (write on his/her copy asking if van is available), Assistant Bridges and Structures Engineer, Preliminary Bridge Engineer, Soils Engineer, FHWA representative (if necessary), Records Center, Project Scheduling Engineer.
 - If the Field Exam Engineer is attending, he/she will be responsible for transportation. If the Field Exam Engineer is not attending, then the Section Engineer will be responsible for transportation.

Field Exam

- ❑ Local field exam personnel are to meet District personnel at agreed time and place.
- ❑ Begin Field Exam notes (usually with contrasting color or markings).
 - Note taker is usually the Field Exam Engineer, senior design technician, Assistant Section Engineer, Section Engineer or other person from Design familiar with the procedure.
 - Write the field exam date and attending personnel, including their position, on the title sheet.
 - Prior to beginning the exam, the Design person in charge will recap concept of proposed project.
 - Any items discussed on review are written on plans.
 - After the field exam is over, Design person in charge will recap the day's exam and note any disagreements and change any errors noted on the review plans.
 - The notes on the official 8 ½"x14" plan need to be legible and able to be understood by any future reviewers. Notes should be specific and self-explanatory.

Post Field Exam

- ❑ If necessary recopy field exam information on backup plan.
 - ❑ Set up time with Assistant Design Engineer to review field exam plan.
 - ❑ When reviewing plan with Assistant Design Engineer it is important to have all Design personnel in attendance.
 - ❑ Section Engineer or Design representative in charge of the field exam is to draft a letter under the Section Engineer's name. Note that even if the Field Exam Engineer is present, he/she will not be writing the field exam letter.
 - The letter will be sent to the District Engineer along with 3 copies of the plans. The letter will indicate when information is needed from various sections and departments.
 - Distribution to:
 - Design Engineer
 - Assistant Design Engineer
 - District Construction Engineer
 - District Resident Construction Engineer w/ field exam plan
 - Field Exam Engineer
 - Assistant Bridge Engineer
 - Preliminary Bridge Engineer w/ field exam plan
 - Soils Engineer w/ field exam plan
 - Records Center
 - ROW Director
 - ROW Design Supervisor
- And others as necessary:
- ROW Utilities Officer
 - ROW Agreements officer
 - Roadside Development
 - Program Management
 - Project Scheduling Engineer
 - FHWA representative w/ field exam plan