

**FHWA DIVISION/ STA
CONTINUOUS PROCESS IMPROVEMENT STUDY
2000 Temporary Erosion Control Review Guidelines**

Background

The FHWA Division Office has identified as part of the Construction Monitoring Element of the Annual Stewardship Activities List in the Division's FY 2000 Performance Plan, a continuous process improvement study to be performed to evaluate the State's procedures and controls relative to temporary erosion control, to verify that the process is being implemented as intended and is producing the desired product.

Scope

The scope of this review is to analyze and evaluate the current procedures for temporary erosion control and to recognize Best Practices utilized nationally and/or by the Active construction projects as well as recently completed projects on the NHS will be reviewed in the field. The review will also include review of design plans of active projects, recently completed projects as well as projects currently in the design phase. The design reviews will be conducted in the Central Office in, and will include discussions with the appropriate personnel involved in the process.

Review Guidelines

Design

Design Directive 204 "Temporary Erosion Control" dated 4/3/95 and the A..... Erosion and Sediment Control Manual, dated November 1, 1993 (English) and March 1, 1995 (metric) will be used for reviewing projects in the design phase.

1. Has a copy of the preliminary plans been submitted to the appropriate resource agencies - for their review and comment?

2. Depending on the type of project, is the appropriate erosion control measures included in the preliminary plans?

Major Roadway projects - greater than 3 acres of land disturbance - individual 642 items

Small Bridges - Special Provision and pay item 642-14, Erosion and Sediment Control - Small Bridges@ and generic plan _____ Minor Roadway Projects - less than 3 acres of land disturbance - Item 642-13 "Temporary Pollution Control" with generic plan

3. If no land disturbance and no erosion control items required , is there a memorandum in the file stating such and included in the PS&E checklist?

4. Is there a response from the resource agencies in the file and on the PS&E checklist?

5. For major projects, check the 642 items and determine if the estimated quantities are correct as per DD 204:

- 642-01 - temporary berms
- 642-02 - slope drains
- 642-03-1 - ditch checks
- 642-03-2 - check dams
- 642-03-3 - sediment trap
- 642-03-4 - sediment dam
- 642-03-5 - riser
- 642-03-6 - sediment removal
- 642-03-7 - sediment pond
- 642-04-1 - temporary seed
- 642-05-1 - straw or hay mulch
- 642-05-2 - wood cellulose fiber mulch
- 642-06 - fertilizer
- 642-07 - fiber matting
- 642-08 - temporary pipe
- 642-09 - contour ditch
- 642-10 - agriculture limestone
- 642-11 - hay or straw bales
- 642-12 - silt fence

Construction

The Division Office 2000 Inspection Guide for Erosion and Pollution Control will be used for reviewing projects in the field.

**..... DIVISION OFFICE
2000 Inspection Guide
EROSION AND POLLUTION CONTROL**

General Project Data:

Date of Inspection:

Project Number:

County:

Inspection Made By:

In Company With:

References:

1. Division of Highways Standard Specifications and Supplemental Specifications;
2. Division of Highways Construction Manual;
3. Applicable Special Provisions and Design Directives;
4. Department of Highways Erosion and Sediment Control Manual, November 1, 1993 (English) and March 1, 1995 (metric).

Date of Applicable Special Provisions

Scope of Inspection:

This inspection consists of an on-site review of the erosion and pollution control procedures being implemented to abate air and water pollution. The State's supervisory control procedures and enforcement of the specifications and special provisions should be observed. The contractor's operations and preventative measures should be evaluated.

I. Office Portion

A. Review of Procedures:

1. **Stage I** (to cover first six weeks only). Did the contractor submit his Stage I plan at the pre-construction conference?
 - a. Date Submitted
 - b. Date Approved
 - c. Is an approved copy of the plan in the project files?

Does the plan conform with the suggested minimum requirements set forth in Section IV of Erosion Control Manual?

2. **Stage II**

- a. Date Submitted
- b. Date Approved
- c. Did the Regional Engineer request comments and/or recommendations from other Divisions of or outside agencies (IV-3 Erosion Control Manual)?

If not, was time a major consideration?

- d. Date major excavation began?
- e. Is an approved copy of the plan in the project files?

3. Comment on dates of approvals relative to beginning of work.

4. Was a field review made prior to the pre-construction conference as suggested in Erosion Control Manual?

5. Were resource agency personnel invited to attend field reviews on erosion control in accordance with the Erosion Control Manual?

If attended, representative were from?

6. Does a specific person on the project have the responsibility of checking erosion control periodically?

If so, describe his authority:

B. Review of Erosion Control Plan, Stage I and II

1. Does that plan adequately designate specific locations and dimensions for erosion control facilities? (Slope drains, sediment ponds, check dams, sediment traps, etc.)

2. Does the plan indicate the schedule of erosion control activities relative to the sequence of work operation?

a. Evaluate the scheduling of temporary seeding and mulching

b. Evaluate the scheduling of permanent seeding and mulching.

c. Evaluate the scheduling of other sediment controls, basins, ponds, traps, dams, berms, hay diversions, etc.

3. Does the plan adequately provide measures to be used to prevent stream pollution from waste sites, borrow sites, haul roads, contractor storage areas, maintenance-service areas, and truck washing areas?

4. If the contractor intends to exceed the 70 000 m³ limitation, does the plan indicate that he has planned for additional measures to satisfactorily maintain pollution control to the level contemplated by this limitation? (Reference 1994 Standard Specifications 642.4).

5. Comment on the completeness of the plan with respect to the intent of the requirements to maximize prevention of water pollution.

C. Review waste/borrow pit approvals for inclusion of permanent and Temporary measures (Reference Form HL-445).

D. Air Pollution

1. Have permits been obtained for burning?

Is daily permission for burning being obtained?

2. Were dust control facilities considered during certification of batch plants?
3. Were dust (particulates) control measures considered when choosing and approving haul roads, borrow and waste sites?

Comments:

II. Field Review

A. Clearing and Grubbing

1. What erosion measures were installed before and during the clearing and grubbing operation?
2. Were measures effective in preventing siltation during this operation?
3. Is the method of debris disposal satisfactory? (Logs, branches, stumps, ashes, etc.)

B. Earthwork and Drainage

1. Major Channel Relocations

- a. Have channel relocations been properly made in a manner that prevents pollution?
- b. Has a permanent lining been installed before diverting water?
- c. Comment on compliance with E.I.S. commitments if applicable.

2. Excavation

- a. Are cuts being seeded and mulched as work progresses (every 4.6 m or two weeks as suggested in Erosion Control Manual)?
- b. Comment on Timeliness:

3. Embankment Work

- a. Are embankment slopes being built to template and compacted to reduce run-off siltation?
- b. Are fills being seeded and mulched as work progressed (every 3 m or two weeks as suggested in Erosion Control Manual)?
- c. Comment on Timeliness:

4. What measures are being taken to enforce the erosion control specifications?

5. Haul Roads

Comment on control measures being used (temporary seeding, dust palliative, temporary pipes, ditching, etc.)

6. Waste and Borrow Pits

- a. Waste pit control measures should be similar to embankment measures.

Comment -

- b. Have waste pits been located adjacent to streams and/or constructed such that high water would cause erosion of the waste material?

Comment -

- c. Borrow pit control measures should be similar to excavation measures.

Comment -

7. Stockpiles of Embankment Material

Are the locations and measures applied consistent with erosion control requirements?

8. Rivers and Streams

- a. Are construction operations in or adjacent to rivers or streams being controlled to prevent pollution?
- b. Are appropriate tests being taken in compliance with Section 715.7.2 (check proposal)?
- c. Has a background level been established from tests or from existing data?
- d. Are there any guidelines (formal or informal) on when tests are to be taken in the project office?

9. Minor Drainage Channels

Are permanent linings being provided as soon as practicable and in conjunction with temporary controls?

III. General Questions on Pollution Control

- A. Has the need for measures other than those shown in the erosion control plan become apparent, but not implemented in the abatement efforts?

If yes, give your analysis of the reasons for this inaction.

- B. Were the erosion control features observed in the field adequately designed, constructed, and maintained?
- C. Will any temporary control structures be left as permanent measures?
- D. Are subcontractors conducting their work in a manner consistent with the prime contractor's requirements and erosion control plan?
- E. Are sanitary and other solid and liquid wastes from the project being properly controlled?
- F. Are dust control measures effective: (Haul roads, batch plants, work areas, etc.)

IV. General Comments

- A. Personnel
 - 1. Project and District Personnel
 - a. Comment on their interest and knowledge with respect to erosion control and pollution control.
 - b. Do they have a copy of the Erosion Control Manual?
 - 2. Does the contractor and project erosion control representative (weekly or after a storm event) jointly review measures for adequacy, maintenance and need for additional controls?
- B. Have efforts to date been reasonably effective and responsive to the intent of pollution control requirements?
- C. Is the contractor following the approved erosion control plan as evidenced by field operation?

Comment -

TENTATIVE LIST OF PROJECTS FOR REVIEW

Construction Field Reviews

District 2

District 3

District 4

District 6

District 8

Design Office Reviews

District 2

District 5

District 8

District 10

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