

## **Permanent Erosion Control Establishment (PECE) Work Guidance**

### **Why was PECE Created?**

Traditionally, under the provisions of the construction contract, the Contractor may not be available to repair failed erosion control work and meet the slope stabilization goals of the project. Because of the time required for seed germination, all or most of the contract working days are expended before the results of the permanent erosion control work becomes apparent to the Resident Engineer.

PECE requires the Contractor to be available to perform permanent erosion control repairs prior to "Contract Acceptance" to ensure that adequate vegetation cover and slope stabilization is attained for the project. Established vegetation is required to protect slopes from erosion caused by wind, rain and gravity destabilization. A stabilized slope has a post-construction sediment loss equal to or less than the pre-construction sediment loss.

Keeping the Contractor available during the PECE period will hasten any repair work that may be needed, such as after severe weather events, and will reduce the workload on the Maintenance Division. PECE provides an additional 250 working days after completion of all other construction activity to assess the success of the erosion control work and meet the project's slope stabilization goals.

### **What does the PECE SSP and Bid Item do?**

The PECE SSP and Bid Item provide 250 working days of PECE inspections to identify deficiencies in erosion control work and perform repairs or replacement as needed. Deficiencies are identified by the Contractor's Water Pollution Control Manager using Construction form CEM-2032. The form is reviewed and approved by the Resident Engineer. Repair or replacement work is performed by the Contractor via contract change order.

### **When to use PECE?**

**The PECE SSP is not intended to be used on all projects with permanent erosion control work.** Using the SSP inappropriately will cause construction contract administration costs to increase and may introduce bidder uncertainty creating undesirable bidding habits. Before deciding to use PECE, check that the project has at least two of the following:

- Slopes that are 2:1 or steeper
- Poor soil health that slows sustainable plant growth (ie. Serpentine, or Decomposed Granite)
- A significant number of erosion control design elements (blankets, netting, mesh, fiber rolls and socks) that may need repair and adjustments prior to permanent slope stabilization
- Potential direct discharge of sediment into receiving waters that are 303D listed under the Clean Water Act.

## **How is PECE integrated into a PS&E?**

The District Office Engineer and Designer must do the following for successful PECE on a project.

Use:

- Standard Special Provision 21-3 for PECE
- Bid Item **211111** "Permanent Erosion Control Establishment Work"
- Supplemental Work Item **066227** "Additional Permanent Erosion Control Establishment Work"
- "Data Input for Submittal Memo" in the District Office Engineer AADD database to indicate Erosion Control working days (similar method for Plant Establishment Working days) in the working days data input field.

Assist the District Office Engineer in reviewing the "Draft Contract Book" from Division of Engineering Services- Office Engineer, with attention directed to the "Notice to Bidders" to verify that the PECE working days match what is indicated in the contract documents. Check that the PECE SSP and associated bid items were included.

## **How do I estimate the cost for the Bid Item and Supplemental Work Item?**

### **Bid item 211111 for Permanent Erosion Control Establishment Work**

Lump sum amount that is normally between \$3,000 and \$10,000. This bid item is largely the Contractor's administrative cost associated with staying on the contract for up to one year after completion of the construction activities.

### **Supplemental work item 066227 for Additional Permanent Erosion Control Establishment Work**

Lack of seed germination is likely to be the most common and most expensive deficiency during PECE inspections. Reapplication of the hydroseeding will be the most likely solution for the "lack of seed germination" deficiency. An appropriate amount to allocate for the supplemental work item 066227 is one quarter of the amount estimated for the original hydroseeding bid items. That amount should be adequate to cover deficiencies not directly related to hydroseeding.