

Permanent Erosion Control Establishment (PECE) Work Guidance

8/1/2018

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, "Permanent Erosion Control Establishment Report". 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, verify 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" (Lump Sum)
- Supplemental Work Item **066227** "Additional Permanent Erosion Control Establishment Work"
- Office Engineer AADD database to check the box for "Permanent Erosion Control Establishment Working Days" on the "Data Input" layout for the "submittal memo" under the section titled "Prosecution of Work". Doing this will automatically add 250 working days to the contract. (FileMaker Pro 15 or newer software is required)

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 use PECE when there are Plant Establishment days on the Contract?

Follow the steps bulleted above. Indicate the number of working days in the field for "Plant Establishment Working Days" (PE) in the AADD database. Since PE working days will be completed concurrently with PECE working days, the total working days for the contract will increase automatically in the AADD database only when more than 250 working days is indicated in the PE working days field.

Verify that the "Notice to Bidders" shows PE, PECE working days and total working days correctly. Verify that the PE and PECE special provisions and bid items are shown in the contract.

How do I estimate the cost for 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.

How do I estimate the cost for 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. While each project has unique challenges, an appropriate starting amount to consider for allocation is one quarter of the amount estimated for the original hydroseeding bid items.