

Policy: 2434-1- Method of Payment for Earthwork
Section: Earthwork
Office/Department: Office of Engineering Services

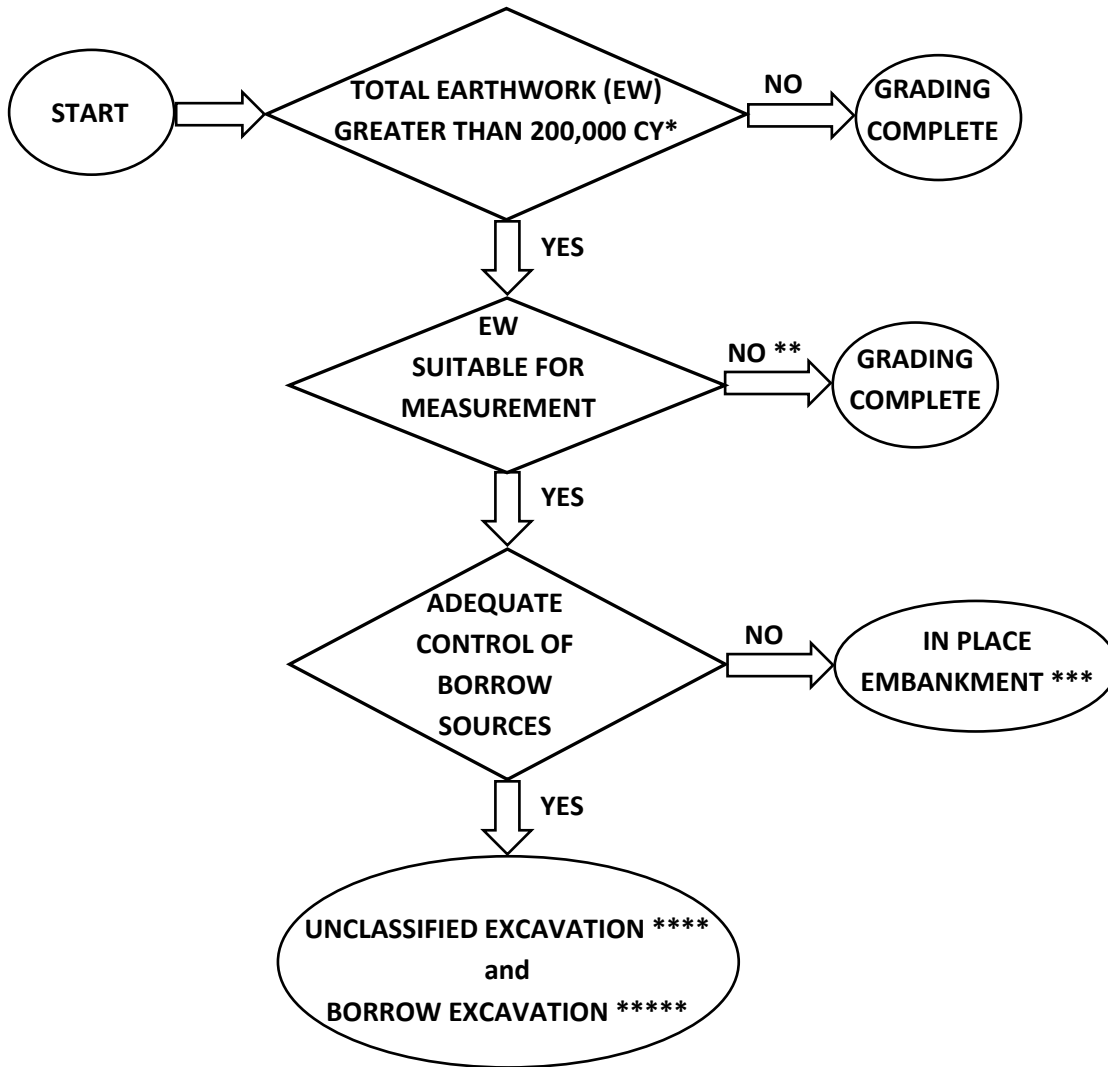
Reports To: Chief Engineer
Contact: 404-631-1000

The purpose of this document is to provide general guidelines for the following:

- Selecting the appropriate method of payment for earthwork.
- Presenting earthwork information on construction plans, and
- Defining required earthwork related items to be included in Field Plan Review (FPR) and Corrected Final Field Plan Review (CFFPR) submissions.

The FPR inspection team will make recommendations as to the method of payment for earthwork using these general guidelines and the team's engineering judgment and experience to ensure the appropriate method of payment for earthwork is selected. These are general guidelines and are not inclusive of all types of projects. Prior to FPR, designers are encouraged to seek advice based on project location from the applicable District Construction Office as to the typical method of payment for earthwork for their project. Also, some projects will have Constructability Review meetings at which the method of payment for earthwork should be discussed.

Selection of the Appropriate Payment Method



* Unadjusted (neat) volume of cut (excavation) + unadjusted (neat) volume of fill (embankment) from cross section end area files for the entire project.

** All projects with Total EW quantity greater than 200,000 CY require the approval of the Division Director of Construction to use the GRADING COMPLETE pay item.

*** INPLACE EMBANKMENT is acceptable for use only as follows:

1. Projects requiring BORROW EXCAVATION quantity greater than 10,000 CY where borrow sources are not likely to be available near the project location.
2. Embankment placed by dredging or hydraulic methods.
3. Projects that don't meet 1 or 2 require the approval of the Division Director of Construction to use the IN PLACE EMBANKMENT pay item.

**** UNCLASSIFIED EXCAVATION is the unadjusted (neat) volume of cut (excavation) in CY.

***** BORROW EXCAVATION may or may not be required. It is the unadjusted (neat) volume of material in CY still needed from borrow pits after available and suitable material from the excavations on the project have been utilized in the project's embankment construction.

Presentation of Earthwork in the Plans

No earthwork quantities should be shown anywhere in the plans except for the Summary of Quantities (SOQ) drawings. When a quantity is shown on the SOQ, it should be the total quantity, not broken out by drawing number, roadway, or station numbers.

GRADING COMPLETE (Specification Section 210) is a Lump Sum (LS) pay item thus no quantity, even for information only, is shown in the plans. **GRADING COMPLETE** pay item includes **CLEARING & GRUBBING** (Specification Section 201) thus the **CLEARING & GRUBBING** (LS) item is not shown separately on the SOQ.

UNCLASSIFIED EXCAVATION (Specification Section 205) is a Cubic Yard (CY) pay item thus the unadjusted (neat) volume of cut (excavation) from cross section end area files for the entire project in CY is shown on the SOQ. **CLEARING & GRUBBING** (LS) item is also required and shown separately on the SOQ.

- **BORROW EXCAVATION** (Specification Section 206) is a Cubic Yard (CY) pay item. If **BORROW EXCAVATION** is needed after available and suitable material from the excavations on the project have been utilized in the project's embankment construction, the unadjusted (neat) volume needed from borrow pit(s) cut (excavation) in CY is shown on the SOQ. In cases where borrow sources have been identified for a project, they should be indicated on the plans.
 - **BORROW EXCAVATION, INCL MATL** (CY) is the pay item typically used as it includes the Contractor providing the material from the Borrow Sources.
 - **BORROW EXCAVATION** (CY) is the pay item only used when the material is furnished to the Contractor at no cost.

IN PLACE EMBANKMENT (Specification Section 208) is a Cubic Yard (CY) pay item thus the unadjusted (neat) volume of fill (embankment) from cross section end area files for the entire project in CY is shown on the SOQ. **CLEARING & GRUBBING** (LS) item is also required and shown separately on the SOQ. **IN PLACE EMBANKMENT** is never used in conjunction with **GRADING COMPLETE, UNCLASSIFIED EXCAVATION, or BORROW EXCAVATION** on an individual project.

GRADING PER MILE (Specification Section 210) is a Linear Mile (LM) pay item and its use is limited to Maintenance Resurfacing projects.

PROCESS for requesting Division Director of Construction approval, if required by Earthwork Flow Chart, to use Grading Complete or In Place Embankment.

- District Construction or Design Phase Leader will coordinate with Project Manager on justification for Grading Complete or In Place Embankment.
- Project Managers submits email request with justification to State Construction Engineer for review.
- State Construction Engineer either denies request or submits recommendation of approval to Division Director of Construction.
- State Construction Engineer returns final decision by email to Project Manager.

Earthwork Requirements for FPR and CFFPR Submittal

Submittals requiring earthwork volume data and Designer's earthwork calculations

- Preliminary Field Plan Review (PFPR)
- Interim Field Plan Review (IFPR)
- Final Field Plan Review (FFPR)
- Corrected Final Field Plan Review (CFFPR)

All required earthwork volume data for any submittal will be based on only one of the following:

- Cross Section End Areas in text or spreadsheet format
- Difference in Proposed and Existing Surfaces in text or spreadsheet format
- Difference in Design and Existing Terrain Models in text or spreadsheet format

Required Designer's earthwork calculations for any submittal will be based on the following:

- The corresponding required earthwork volume data
- Shrinkage and Rock Swell Factors accounted for in the excavation and embankment calculations
- Utilize either "Shrink on Cut" or "Swell on Fill" calculation method

Earthwork volume data and Designer's calculations for all submittals will be provided for:

- Each stage of construction separately and project totals based on the staging
- Final earthwork cross sections

References:

None.

History:

formatting corrected, Date Last Reviewed will not change: 07/14/25

revised: 04/29/25;

added to TOPPS: 07/18/96