



Montana Department of Transportation  
PO Box 201001  
Helena, MT 59620-1001

## Memorandum

To: Distribution

From: Paul Ferry, P.E.  
Highways Engineer

Date: March 24, 2010

Subject: Shrink/Swell Factors in the Grading Frames

In a memo dated August 19, 2008, we described a number of changes that were to be incorporated into the Grading Summary. These changes were made in conjunction with the removal of the mass diagram from the final plans package. One of the changes that was specified was to show the shrink/swell factors in the "Remarks" column of the grading summary.

In an effort to reduce liability, the shrink/swell factors will no longer be shown in the grading summary. All other items listed below and include in the August 19, 2008 memo must still be included in the grading summary.

If a project has only one value for shrink (or swell), show only one entry in each column for the total excavation, embankment+, borrow or excess.

If a project has multiple shrink/swell factors, show the station range of each factor with an entry in each column for the total excavation, embankment+, borrow or excess (similar to how surfacing quantities are shown for a single typical section).

If it is determined that a forced balance should be used (e.g. at a bridge), show the station range for the separate areas and place a separate entry in each column for the excavation, embankment+, borrow or excess within that range (e.g. there would be a station range and quantities from the beginning of the project to the bridge end and a separate station range and quantities from the other bridge end to the end of the project).

If the project has a hard split for different funding or at a reservation boundary, a separate entry should be placed in each column for the quantities in the appropriate station range.

No changes are necessary on the Additional Grading Summary.

This change to the Grading Summary should be included in all projects where the Mass Diagram will be eliminated from the contract plans packages.

If you have questions concerning this, please contact me at 444-6244.

Pf.

Distribution:

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