

Memorandum

To: Distribution

From: Dustin Rouse, Chief Engineer *DR*

Date: June 27, 2022

Subject: Quantity Splits

This memo is to provide clarity, revise quantity split procedures for several items, and combine all quantity split guidance documents. This memo is effective for all projects let to contract on or after October 13, 2022. This memo supersedes and rescinds the following design memos:

- "Quantity Splits", dated October 14, 2005
- "Quantity Splits Reference Guide for Designers", dated November 4, 2005
- "Quantity Splits Revision", dated February 15, 2012

Quantity splits are used for billing FHWA and local governments, federal reporting, and for providing cost information for counties, districts, and cost-benefit analysis. Quantity splits can be accomplished in two ways, depending on the requirements:

Hard splits: Detailed separation of quantities, typically accomplished by breaking work into line items and subtotals in quantity frames in the plans package.

Soft splits: Splits the final costs using a ratio based on the project length. To determine the ratio for a soft split, simply calculate the percentage of the project length in each respective area. In example:

Project Length = 9.2 miles: 7.7 miles in County A, 1.5 miles in County B.

$$\text{Ratio} = \frac{7.7}{9.2} \text{ to } \frac{1.5}{9.2} \sim 0.84 \text{ to } 0.16, \text{ or } \mathbf{84\% \text{ County A to } 16\% \text{ County B}}$$

The following table describes how to address various situations involving quantity splits:

Situation	Type of split to use
Projects crossing Financial District line	Soft split
Projects crossing Reservation boundary	Soft split
Functional classification changes within project limits	Soft split
Improvement type changes within project limits	Soft split
Projects crossing Urban boundary	Soft split
Projects crossing County line	Soft split
Traffic Control and Mobilization	Soft split
Local Agency financial involvement	Hard splits are required for any work which the Local Agency is financially responsible for. A typical example of this is a City waterline that the City is paying for but will be constructed with the MDT project.
Bridge work	Varies – see next page

Bridge work

Hard Splits are usually required in the following cases (further described in the Individual Scenarios section below):

- New Bridge (split for each structure)
- Bridge Replacement (split for each structure)
- Bridge Replacement w/culvert (split for each structure)

Individual Scenarios:

1. *Projects involving a single bridge, nominated by the bridge program with the sole purpose and need of addressing the bridge.*
 - Since the purpose and need of these projects is to address the bridge, the roadwork is considered incidental to, and a necessary product of the bridge work. This work is thereby eligible for bridge-specific funding, and there will be no funding split for the roadwork portion separate from the bridge work. Projects in this scenario will not require any hard splits whatsoever (unless there is local agency financial involvement).
 - Soft splits are still required if any of the soft-split situations from the table on the previous page apply.
2. *Projects involving multiple bridges, nominated by the bridge program with the sole purpose and need of addressing the bridges.*
 - Since the purpose and need of these projects is to address the bridges, the roadwork is considered incidental to, and a necessary product of the bridge work. This work is thereby eligible for bridge-specific funding, and there will be no funding split for the roadwork portion separate from the bridge work.
 - For bridges meeting any of the three bullets above (new bridge, bridge replacement, or bridge replacement w/culvert), the collective bridge and roadway items need to be hard split for each individual location. The collective bridge and roadwork costs for each individual site can then be tracked as one cost for federal bridge reporting requirements.
 - For bridges not meeting any of the three bullets above (new bridge, bridge replacement, or bridge replacement w/culvert), each bridge needs to be identified in the SOW report with the percentage of funding applicable to that bridge (soft split). The collective bridge and roadwork costs for each individual site can then be tracked as one cost for federal bridge reporting requirements.
 - Soft splits are still required if any of the soft-split situations from the table on the previous page apply.
3. *Projects with a purpose and need that expands beyond addressing the bridge(s), regardless of nomination origin.*
 - Since the purpose and need of these projects is broader than purely bridge-centric, bridge work must be split out of the rest of the project. In these cases, the adjacent roadwork is not considered incidental to the bridge work.
 - For bridge(s) meeting any of the three bullets above (new bridge, bridge replacement, or bridge replacement w/culvert), individual bridge quantities must be hard split for each individual bridge. The bridge costs for each individual bridge can then be tracked for federal bridge reporting requirements. While the roadwork needs to be split out and tracked separately from the bridge work as a whole, the roadwork does not need to be split out (if the project includes multiple locations) unless any of the soft-split situations from the table on the previous page apply.

- For bridges not meeting any of the three bullets above (new bridge, bridge replacement, or bridge replacement w/culvert), each bridge needs to be identified in the SOW report with the percentage of funding applicable to that bridge (soft split). This allows bridge costs to be tracked for federal bridge reporting requirements.
- Soft splits are still required if any of the soft-split situations from the table on the previous page apply.

Additionally, bridge split requirements for individual projects may be adjusted/modified at the discretion of the MDT Bridge Engineer, so long as federal requirements are met.

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