#### COST ESTIMATE GUIDE FOR SCOPING

(These cost figures were last updated on 12-18-2017)

**\*These cost per mile factors contained within this document should in no case be considered to contain sufficient detail to allow their inclusion in the STIP, used to determine a Program Amount or used for the Asset Management Plan.\***

**Cost-per-mile Assumptions**

**New 2 Lane (Major)**

Grading & Drainage $846,000 44 ft. Roadbed

Base & Surface $1,282,000 Medium Duty Pavement

**New 2 Lane (Minor)**

Grading & Drainage $617,000 32 ft. Roadbed

Base & Surface $619,000 32 ft. Light Duty Pavement (2 – 4’ Shoulders)

**Add Lanes for Dual Lanes**

Grading & Drainage $748,000 38 ft. Roadbed

Base & Surface $1,117,000 Medium Duty Pavement

$1,430,000 Heavy Duty Pavement

### New 4 Lane

Grading & Drainage $1,300,000 2 - 38 ft. Roadbed & Median

Base & Surface $2,234,000 Medium Duty Pavement

$2,860,000 Heavy Duty Pavement

**Interchanges-Ramps Only,** Excludes bridges and crossroad

**Lump sum each**

Grading & Drainage $ 1,366,000

Base & Surface $846,000

*Note: Grading cost includes 30% Rock and assumes Medium Grading.*

**Grading Adjustment Factors**

Flat: 0.7; Rolling: 1.0; Mountainous: 3.0

Use these grading factors, unless justified with district information and proper documentation.

**Miscellaneous and Utility Costs** may be assumed to total **20 percent** of the sum of grading & drainage, and surface & base, unless additional analysis is warranted.

**Maintenance Treatment Cost can be found on Page 5**

**Cost per**

**Bridge Structures** **Sq. foot**

Typical Girder $105

Temporary Bridge (State furnished) $60

Temporary Bridge (Contractor furnished) $140

Major Lake Crossing $200 - $250

Major River Crossing $250 - $450

* **Percentage Cost Factors:**

Bridge costs per square foot should be increased for the following:

Item % Increase

Staged Construction 10

Horizontal Curve Alignment 5

Skews 20 to 30 degrees 10

Skews 30 to 50 degrees 25

Seismic Category B\* 10

Seismic Category C\* 15

Seismic Category D\* 25

Tight Site/Limited Access 10

\* Only applies to Major Routes or First and Second Priority Earthquake response routes. See Sheets 3 and 4 of this figure for details of seismic categories.

* **For Stream Crossings:**

Bridge Replacement Length = 1.10 X Existing Bridge Length, unless otherwise documented. The existing bridge length can be obtained from TMS.

Bridge replacement length may be longer than 1.10 X Existing Bridge Length for bridges crossing FEMA regulatory floodways. Bridges on new alignments are required to span the entire floodway. For bridges on existing alignment, use 1.10 X Existing Bridge Length when the 100-year flood does not overtop the existing roadway. When the 100-year flood does overtop the existing roadway, the new bridge will be required to span the entire floodway.

* **For Companion Grade Separation Structures:**

Bridge Replacement Length = Existing Bridge Length. The existing bridge length can be obtained from TMS.

Bridge Width should equal traveled way, shoulders and barrier rail width.

* **Bridge Approaches:**

The cost of bridge approaches should be added to the total cost derived from the approach slab area. Bridge slab cost:

English: ($25/ft2) ( roadway width, ft) (20 ft.) (2)

**Cost per**

**Bridge Removals** **Sq. foot**

Simple Structures $8

Steel Structures over Roads $10

Concrete Structures over Interstates $25

(quick opening of lanes to traffic required)

* **Bridge Rehabilitations:** Fill out a Structural Rehabilitation Checklist and contact Bridge Division for assistance.

**Specialized Projects**

Projects having unusual features and special scopes of work should be compared to similar types of district projects using historic data. Generic cost information listed in this guide should not be applied for projects such as traffic signal improvements, geometric improvements, and other types of small projects. Check with GHQ Design Bidding and Contract Services for assistance.

Additional costs should be included in the project estimate for retaining walls, extensive sound walls, temporary bypasses and traffic signals.

