SECTION 1 - Location

Fill in the IDENTIFICATION NUMBER assigned to this investigation as shown on FORM TE-133-1 and all other appropriate information.

SECTION 2 - Benefits

This amount is the calculated annual safety benefits carried over from the TE-164 Safety Benefits Evaluation Form or other documentation. ANNUAL SERVICE BENEFITS can take several forms: Travel time savings, energy (gasoline) savings, or other operational savings (wear and tear on the vehicle, for example). For most projects, service benefits, when quantifiable, will be of several types and can readily be summed. Some or all of the “benefits” may in fact be “disbenefits”; these would be treated as negative numbers. If the overall service benefit is negative, it should be shown as a negative number.

SECTION 3 – Costs (see next page)
**COST ITEM OR PROJECT ELEMENT**: All elements, including right-of-way, to which a service life can be assigned are included here. Elements with the same service life can be combined; however, elements with different service lives must be shown on separate lines.

**SERVICE LIFE (YRS)**: Typical service lives are shown in Table I. When the service life for a given element is not readily apparent from Table I, judgment should be used to find the most appropriate value.

**COST**: The total cost for the element(s) is given.

**CRF @ 4%**: The Capital Recovery Factor for the given service life at a 4 percent interest rate is entered from Table I.

**ANNUALIZED COST**: The cost multiplied by CRF @ 4 percent.

**ITEM SUBTOTAL**: This represents the total cost of the above construction items.

**ANNUALIZED ITEM SUBTOTAL**: The total of the above annualized costs.

**COST OF CONTINGENCIES**: A contingency cost should be added into each project to allow for unexpected consideration and errors in estimating, as well as items not tied to a specific construction or maintenance element, such as maintenance and protection of traffic, field office or mobilization. The exact figure chosen will depend on several variables. The type of project is important, for a simple project can generally be more accurately estimated than a more complex project. The percent used for contingencies should reflect the estimator's confidence in the estimate: A less precise estimate should have a higher percent. The percent used for contingencies is chosen and multiplied by the annualized item subtotal to arrive at the annualized Cost of Contingencies. The Total Annual Cost is also shown; this can be calculated by multiplying the percent used by the item

<table>
<thead>
<tr>
<th>COST ITEM OR PROJECT ELEMENT</th>
<th>SERVICE LIFE (YRS)</th>
<th>COST</th>
<th>CRF @ 4%</th>
<th>ANNUALIZED COST</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

Please keep in mind that any Recommendation for Programming is based on the costs summarized here. Cost escalations during subsequent project development may necessitate the project's priority to be re-evaluated.
subtotal. (The percent and total cost of contingencies are complementary values: One can be derived from the other).

**ANNUAL COST FOR SPECIAL MAINTENANCE, OPERATION, ENERGY:**
This includes other annual costs not in the capital cost. It accounts for increases in maintenance and operation cost over the existing cost. An example is impact attenuators, with a maintenance cost per hit: The frequency of hits could be based on past history or a predictive method, such as the ROC methodology. An explanation of the cost(s) can be included in the comments section at the bottom of the form.

**TOTAL CAPITAL COST:** The sum of the item subtotal and cost of contingencies.

**TOTAL ANNUAL COST:** The sum of all annualized costs listed above.

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**SECTION 4 – B/C Ratio**

<table>
<thead>
<tr>
<th>B/C Ratio</th>
<th>Formula</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAFETY BCR</td>
<td>ANNUAL ACCIDENT COST / TOTAL ANNUAL COST</td>
<td>0.00</td>
</tr>
<tr>
<td>SERVICE BCR</td>
<td>ANNUAL SERVICE BENEFIT / TOTAL ANNUAL COST</td>
<td>0.00</td>
</tr>
<tr>
<td>TOTAL PROJECT BCR</td>
<td>TOTAL ANNUAL BENEFITS / TOTAL ANNUAL COSTS</td>
<td>0.00</td>
</tr>
</tbody>
</table>

The **SAFETY BCR**, **SERVICE BCR** and **TOTAL PROJECT BCR** are computed and inserted in the appropriate boxes.