**4R CONCEPTUAL STUDY REPORT**

**For Resurfacing, Restoration, Rehabilitation or Reconstruction of Interstate or Freeway Roadways**

**[ ]** Freeway (Non-Interstate) [ ]  Interstate

**PART I**

**1. Project Information**

|  |  |  |  |
| --- | --- | --- | --- |
| A. Job Number |       | F. Construction Year |       |
| B. County |       | G. Begin Continuous Log Mile |       |
| C. Route |       | H. End Continuous Log Mile |       |
| D. Direction (s) |       | I. Total Project Length |       |
| E. Travelway ID(s) |       | J. Functional Classification |       |

 K. Project Location Description (attach location sketch):

 L. District Rehabilitation Proposal (If Developed):

**2. Traffic Data**

 A. Construction Year (     ) ADT:

1. Design 20-Year (     ) ADT:

1. Growth Rate:

 D. % Trucks:

1. Truck Classifications:

|  |  |  |  |
| --- | --- | --- | --- |
| Truck Classification  | % | Truck Classification | % |
| Class 4 |       | Class 9 |       |
| Class 5 |       | Class 10 |       |
| Class 6 |       | Class 11 |       |
| Class 7 |       | Class 12 |       |
| Class 8 |       | Class 13 |       |

 F. Operational (Posted) Speed:

**3. Existing Pavement Data**

1. Provide the history of the existing pavement and attach typical sections (if available) showing thickness of existing pavement and the previous treatment. In new construction, provide proposed typical section showing the roadway template such as lane widths, shoulder widths, curb types, median barriers, etc.
2. For pavement resurfacing, restoration, and rehabilitations; describe the general condition of the existing surface and the amount of pavement repairs needed.
3. Indicate any restrictions to adding thickness to the existing roadway.

* 1. **Pavement Coring and Submittal**

Cores should be taken for all rehabilitation projects in order to identify the extent of the pavement deterioration and to implement the most appropriate pavement rehabilitation treatment. Coring may be omitted if all of the following apply:

1. The proposed treatment is not needed to restore smoothness.
2. No coldmilling or recycling will be conducted.
3. Short-term improvements are acceptable.

The pavement engineer shall be consulted on the number of cores, type of cores, and if additional testing is needed. The district shall not dispose of pavement cores before consultation with the pavement engineer.

**5. Attach Pavement Type Selection** Form **for Reconstruction**

 **(This section may be omitted if reconstruction is not being considered)**

**PART II**

**6. Geometric Data**

 A. Identify geometrics of adjoining sections compared to project location.

 B. List roadside obstacles within the horizontal clearance limits (clear zone).

**7. Accident Data, Safety Enhancements and Access Management.**

 A. Project accident rate:

 B. Statewide accident rate for highways of same functional classification:

 C. Attach data pertaining to the number, location, type and severity of accidents. (5 year accident by log mile)

 D. Indicate predominant type of accident and locations.

 E. Identify any locations within or adjacent to the project limits which are on the “High Severity Location Lists” in the TMS database

 F. Is there a relationship between the accident rate and any design exception requested?       Explain.

 G. Describe the measures being taken to enhance safety on this project.

1. Does this section of highway meet current access management criteria? If not, can safety be enhanced by upgrading some or all of the access to the highway to criteria in the MoDOT Access Management Guidelines?
2. Are bicycle/pedestrian facilities to be provided on the project? Explain.

**8. Conceptual Cost Data ($1,000's)**:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Right of Way** | **Construction** | **Total** |
| **Current Estimate** |       |       |       |
|  |  |  |  |

|  |  |
| --- | --- |
| Approved by:  |  |
|  |      , P.E. |
|  |  District Engineer |
|  |  |
|  |       |