



Pavement Determination Process

Design Manual
Section 1
General Information

Originally Issued: 04-15-10

Revised: 11-30-11

Early each year the Pavement Design Section prepares two lists from the Department's paving projects that are scheduled to be let in the following fiscal year. The first list includes major rehabilitation and resurfacing projects. The second list includes all projects containing a significant amount (greater than 5000 SY or tons) of full depth paving.

For each project in the list, information is required regarding the quantity of significant paving items. The purpose of gathering this information is to complete the following tasks in the specific order shown below:

- A) Conduct a Life Cycle Cost Analysis (LCCA) for the full depth paving projects to determine the most cost effective pavement type.
- B) Present the results of the LCCA for each project to the pavement selection committee.
 1. This information along with the list of rehabilitation and resurfacing projects assists the committee in reviewing the entire paving program for the fiscal year. With the goal of having enough work for the concrete and asphalt industries to both remain competitive, the committee reviews and decides on the pavement type of each full depth paving project.
- C) The committee's decisions are communicated to the design sections so that the proper pavement type and thickness is used in the plans for the full depth paving projects.
- D) The information regarding the potential work load for the next fiscal year is sent to the concrete and asphalt industries so that they are aware of the upcoming projects and can tentatively plan their work load and target projects that are of interest to them.

Rehabilitation and Resurfacing Projects

Generally, by the time the list of rehabilitation and resurfacing projects are put together, the District and design staff will have completed concepts of their projects, including preliminary treatment options. During the various stages of plan development the Pavement Design Section assists in the selection of appropriate treatments, mixes, binders and aggregate types. The specific information required for each project, such as the significant paving items and quantities, are included in the rehabilitation and resurfacing list before providing the list to the pavement selection committee.

Full Depth Paving

The development of the information included in the full depth paving list is somewhat more involved.

In the early stages of plan development the Pavement Design Section provides the design sections with a preliminary pavement thickness for a PCC pavement. All projects are initially designed for the PCC thickness because it is less than the HMA equivalent. The designers are encouraged to discuss their projects with the Pavement Design Section at this stage to prevent incorporation of an inaccurate pavement design in the plans.

When it is time to complete the life cycle cost analysis, the Pavement Design Section sends out the list of full depth paving projects to the design sections. The list includes a cover letter and an equivalent full depth 40 year design thickness for concrete and asphalt options for each project.

The information on how to complete the work sheets is included in the [cover letter](#).

The design sections are asked to complete an [Excel work sheet](#) for each type of pavement on each project to provide the quantity of major paving items for that type of pavement.

For a typical list see [full depth projects](#).

Once the completed work sheets are returned, the Pavement Design Section completes a life cycle cost analysis for all the projects for which the pavement type has not been determined previously. The process then follows steps “B” through “D” as outlined above.

Traffic Forecast Request Process

Iowa DOT Districts and Offices:

1. Open: http://dotnet/planning/planning_index.asp (Use Internet Explorer)
 - a. Systems Planning
 - b. IRUT Traffic Request Form (Always start with a clean form)
 - i. Open as Read-Only and then Save As “Your Project Description”
 1. Instructions are also provided (if needed)
2. Attach and Email to the Office of Systems Planning Traffic Forecasting Coordinator

Office of Design (ONLY):

1. The request process doesn’t change, other than using the new request form.
 - a. Open: http://dotnet/planning/planning_index.asp (Use Internet Explorer)
 - i. Systems Planning
 - ii. IRUT Traffic Request Form (Always start with a clean form)
 1. Open as Read-Only and then Save As “Office of Design Description”
 - a. Instructions are also provided (if needed)
 2. Notify Tommy Bowman of the new request and he’ll forward to the Office of Systems Planning Traffic Forecasting Coordinator

Please note the dotnet page will always have the most up to date request form and directions.

Chronology of Changes to Design Manual Section:

001D-004 Pavement Determination Process

11/30/2011 Revised
Updated the section with the new traffic forecast request process.

4/15/2010 NEW
Document current DOT practices