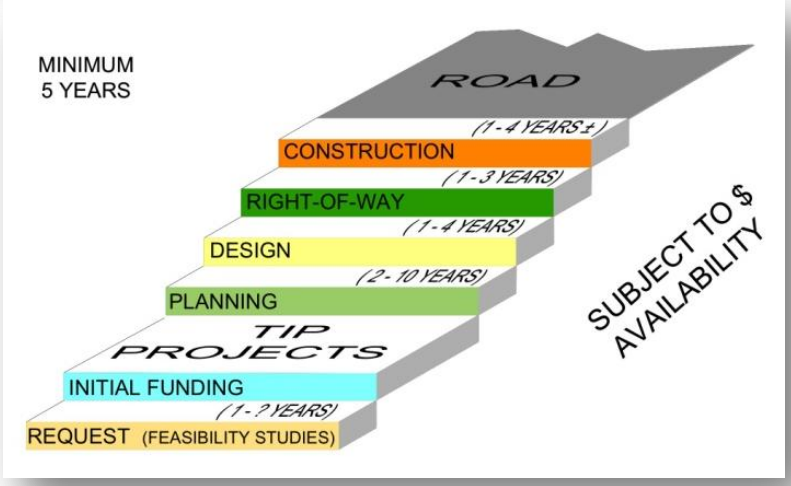
How Does a Road Get Built?

Have you ever wondered how a road comes to be? And how you or your organization can be part of the process?



The process of building a road, from the initial request to construction, should take between 5 and 21 years, depending on perceived need, technical issues, growth rate, and available funding. Throughout the process, there are opportunities at each step for public involvement through meetings, focus groups, flyers, and surveys. ***YOUR*** participation is an integral part of the planning process and we want you to be involved!

REQUEST (FEASIBILITY STUDIES) *(1-? years)*

Anyone can propose a transportation project based on an identified need. All projects begin in the Long-Range Transportation Plan (LRTP) where the initial need, local consensus, and local support are developed. A project's sponsoring agency will perform a feasibility study which evaluates the reasons for the project, the environmental issues associated with the project, and the cost of the project. The study may also include some public involvement and an assessment of local support for the project. The interest and support of the public and local decision-makers is critical in seeing projects move from the LRTP to the Transportation Improvement Program (TIP).

*The **Long-Range Transportation Plan (LRTP)** is a comprehensive plan that provides a vision of the region's future growth and development over the next 25 years for all modes of transportation: road, bus, rail, bicycle, pedestrian, and air. The plan is updated every 4 years.*

***Sponsoring agencies** include:*

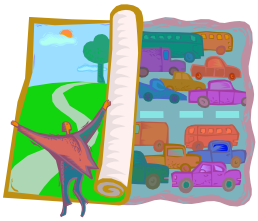
- *County and municipal governments*
- *North Carolina Department of Transportation (NCDOT)*
- *Federal Highway Administration (FHWA)*
- *Federal Transit Administration (FTA)*
- *Private, non-profit, or civic organizations that can coordinate with a government agency.*

INITIAL FUNDING

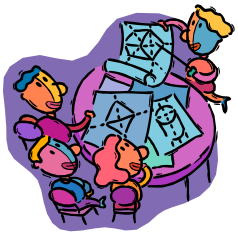
At this point, the project enters the TIP. Getting initial funding for the project is a critical step in getting the project built. However, initial funding does not guarantee that a project will be built quickly. Delays can be caused by changes in political administration, transportation costs increasing, and transportation budgets getting cut. To help establish priorities for the TIP, a 30-day public comment period and public meetings give you the opportunity to ask questions about the TIP process and projects.

*The **Transportation Improvement Program (TIP)** lists all projects for which federal funds are anticipated, along with non-federally funded projects that are regionally significant. The TIP covers a 7-year period and is updated every 2 years.*

PLANNING *(2-10 years)*



Projects spend the majority of their development time in the planning phase. Project planning should take 2-10 years. Large, complex, or controversial projects may take much longer. There are many projects across the United States and North Carolina that have been in the planning process for 20 years or more. Delays may involve staff availability, lack of consensus on the project, shifting agency priorities, and scope issues.



Critical environmental work, the design work, and public involvement are done in this phase. To fulfill the requirements of the National Environmental Policy Act (NEPA), engineers or planners establish the purpose and need of the project, forecast future traffic, evaluate environmental factors, and begin the permit application process. Public meetings and workshops are held to get feedback from the public. By the end of the planning phase, design work is approximately 80% done and permit applications are complete.

DESIGN *(1-4 years)*

Information collected during the planning phase is used to determine the location and type of road to be constructed. In many instances, several alternatives will be studied. The final location is selected based on citizen input through public meetings, professional input from coordinating agencies, and evaluation of existing physical and environmental conditions. Design engineers prepare detailed plans for the proposed road that include the number of lanes, the width of right-of-way required, what types of materials to be used and how much material will be needed.

RIGHT OF WAY *(1-3 years)*

At this point in the process, the construction plans are 90% to 95% complete, leaving only minor details to be worked out. The transportation agency purchases the majority of the right-of-way (ROW) necessary to build the project. Acquiring land to complete the process involves negotiation between property owners and the transportation agencies. The process can be lengthy and potential delays during this phase could include escalating ROW costs, finding property owners, and stalling tactics by property owners.

> ***Right-of-Way (ROW)*** *is land owned by the city, state, or federal government for a roadway. If there is not enough room to build a road, land may be purchased from property owners or donated by property owners.*

CONSTRUCTION *(1-4 years)*

The final stage of a project is construction. Requests for bids are sent out and the transportation agency awards the construction contract to the lowest responsible bidder. The bidder (private contractor) is then obligated to construct the project in accordance with plan requirements and specifications upon which the bid was received.

Transportation engineers and staff monitor the construction process, document the quantity of work performed, make certain the environment is protected, manage traffic flow along the project, work with adjacent property owners, observe work zone safety and oversee coordination with state and federal agencies.

Once the project is complete, a final inspection is made by an engineer not involved in the project's construction to verify it has been completed properly. The highway is then opened to traffic.

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