



# ROADWAY DESIGN UNIT

NCDOT Technical Services Division



**The Roadway Design Unit offers roadway design guidance, support and plan development at every stage of project delivery.**

Roadway Design staff provide technical expertise to help ensure designs are complete, constructable and in compliance with state and national guidance.

The unit works with other technical disciplines and divisions to effectively and efficiently resolve design challenges that arise during plan production or construction.

Unit staff review ongoing research to aid in setting design guidance,

policies and procedures.

Our support services team develops, tests and maintains all roadway-related computer-aided design and drafting (CADD) standards. They also provide CADD support and training to all NCDOT staff and consultants.

Our lighting and electrical team designs lighting and electrical assemblies for installations such as interchanges, tunnels, weigh stations and novelty items.

## Services

- CADD support for roadway design workspaces
- Encroachment and locally administered project reviews
- Lighting and electrical needs evaluation and plan development
- Interpretation of design guidance
- ORD implementation support
- Prequalification of private engineering firms
- Quality assurance reviews of consultant plans
- Roadway design plan development and quantities
- Technical and CADD training
- Workday estimates

## Contact

Email [rdyresources@ncdot.gov](mailto:rdyresources@ncdot.gov) with roadway design questions or for plan development support on your project.

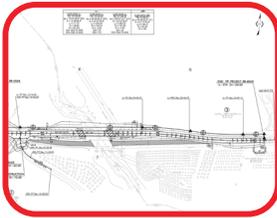
Find resources, information and contacts on our Connect site.

[connect.ncdot.gov/projects/Roadway/Pages/](https://connect.ncdot.gov/projects/Roadway/Pages/)





# PROJECT EXAMPLES



## ROADWAY DESIGN PLAN DEVELOPMENT

Roadway Design assisted Structures Management in preparing roadway designs from alternate selection through final plans to replace 20 bridges, including developing right of way plans and final using Bentley's OpenRoads Designer (ORD) (pictured) and public meeting maps.



## SLOPE REPAIR

Roadway Design completed construction plans and quantities for a Division 14 slope repair in Jackson County that incorporated hydraulic and geotechnical solutions to reestablish and reinforce a failing side slope.



## EMERGENCY BRIDGE EMBANKMENT REPAIR

Roadway Design helped Division 13 and the Hydraulics Unit develop construction plans for repairing an embankment in Yancey County that washed out during heavy rainfall.



## EXPRESS DESIGN

Roadway Design staff developed the express design for a single lane roundabout in Pender County.



## LIGHTING AND ELECTRICAL SYSTEMS DESIGN

Roadway Design's Lighting and Electrical Team design the lighting and electrical systems for bridges. The photo shows lighting that illuminates the artistic facia on girders and concrete medallions on the Wade Avenue Bridge over Capital Boulevard in Raleigh.

