

Requesting Visualization Assistance

Project Development and Environmental Analysis Branch		Approved: 11/10/08 Version: 1.2
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Purpose

The purpose of this procedure is to explain how to request and obtain visualization services from The Enterprise Visualization Section.

Responsibility

PDEA Project Planning Engineers may need visualization in many steps during the planning of a project. It is essential to assess that need early in the planning stages. Once functional design (cross sections, roadway design files, etc.) is available for the project, visualization can be requested.

Scheduling and Time Constraints

A 3 to 6 month turnaround should be expected depending on the complexity of the project and the type of work requested. It is possible to expedite that time frame but it is project dependent. As with requesting work from other departments, plan ahead and allow for a minimum of 3 months for a finished product.

Procedures

Procedure Input(s): PDEA ensures that the following are available when requesting visualization:

- Aerial photo
- Digital Terrain Modeling (DTM) files
- Cross sections
- Geopak Database (.gpk) files with list of alignments (vertical and horizontal)
- Design (.dsn) files and all attached reference files

(Note: In addition, the Visualization group may require information from other units such as Hydraulics, Traffic, and Structure Design.)

Procedure Output(s) – Final project with required visualizations

- Step 1.** The PDEA Project Planning Engineer determines the need and feasibility of visualization assistance for each assigned project.
- Step 2.** If visualization assistance is required, the PDEA Project Planning Engineer decides on the type(s) of visualization applicable to the project. The Enterprise Visualization Group website has examples of the products in the portfolio. <https://inside.ncdot.gov/Business/technology/Visualization/Pages/default.aspx>
The different types of work that can be requested are as follows :
- Illustrations
 - 3D Models and Renderings
 - Photosimulations
 - Animations
- Step 3.** When the PDEA Project Planning Engineer determines the type(s) of visualization required, he/she submits the Visualization Request Form, located on the Enterprise Visualization Group website <https://inside.ncdot.gov/Business/technology/Visualization/Lists/>
- The request form asks for contact information, project description, source data available, and work requested.
 - The source data available includes choices of file types. Aerial photography and DTM/tin/Triangles are data provided from Photogrammetry (requested by PDEA). Roadway Design should be able to provide Geopak Database (gpk), Design (dsn), Typical sections, cross sections, and inp/shp/eop (see glossary, may only be necessary if visualization needs to cut additional cross sections).
 - For the description of work requested, include a detailed and complete list of all images included for each alternative. Electronic copies and hard copies can be requested.
- Step 4.** After the PDEA Project Planning Engineer submits the visualization request form, he/she will receive a call from either the Enterprise Visualization IT Manager or the person assigned to the project within a week to meet to discuss the details and time frame. At this meeting, the IT Manager will decide whether the work can be performed in-house or needs to be contracted to a consultant.
- If the PDEA Project Planning Engineer has not been contacted to confirm receipt of the request after a week, the Engineer should follow up by contacting Enterprise Visualization IT Manager.

Background

Visualization can be used in presentations during project meetings, public hearings, or for internal planning decisions. It can be an enhancement that clarifies a design in PDEA and be more informative for the public in the later stages of a project.

The Enterprise Visualization Section is part of Business Relationship Management and Visualization Unit. They are part of NCDOT Information Technology (IT) Department. The

Visualization section's goal is to provide state of the art visualization products for all units within NCDOT.

They have an informative website that shows examples and explanations of the services they can provide for us. <https://inside.ncdot.gov/Business/technology/Visualization/Pages/default.aspx>

Policy, Regulatory, and Legal Requirements

None

Warnings and Precautions

None

Resources and Tools

[NCDOT Enterprise Visualization Website](#)

[Visualization Request Form](#)

Contacts

- For suggestions to change this procedure contact: Karen Capps, (919) 715-7299
- For questions about performing this procedure contact: April Annis, (919) 733-7844, ext. 229

User Access

Intended for NCDOT Internal Use Only, but not exempt from the public records access requirements

