

# NCDOT ROADWAY DESIGN PUBLIC HEARING MAP

## CHAPTER 1: OVERVIEW

Using The Roadway Design Manual, Part II, Chapter 21 as a guide, Public Hearing Maps are created. It is imperative that the Roadway Hearing Map Design Database (Geopak Design and Computation Manager DDB) file is used to place all CADD elements. This is to ensure the proper level for each element placed. A Roadway hearing design script is then used to re-symbolize, re-prioritize, and adjust any color from what is on the screen to the plotted paper hardcopy. Using the hearing map DDB also aid in the placement of individual shape elements or like-group elements are placed in their appropriate Microstation models. If any element is not in the proper level or not in the correct file model, then the hearing map will not plot out correctly

This manual is broken in six sections, **Hearing Map Tools**, **Hearing Map Common Cadd Procedure**, **Hearing Map File And Models**, **Hearing Map DDB**, **Hearing Map Preparation**, and **Hearing Map Post Production**.

### HEARING MAP TOOLS

Microstation and Roadway Design Tools that can aid in the preparation of hearing map.

### HEARING MAP COMMON CADD PROCEDURE

Outline is the various common hearing map CADD procedures. These are repetitive task common in the preparation of hearing maps

### HEARING MAP FILE AND MODELS

Details of the hearing map seed file and models. Also include is the updated sequence of the hearing map file models.

### HEARING MAP DDB

The break down of the actual hearing map DDB file. Include are the navigation tool items for each model category.

### HEARING MAP PREPARATION

Described the normal sequential steps to take in preparing the actual hearing map. Normally the proposed horizontal design is the first. Next follow by the merged in TOPO files. Then the hearing map sheet dimensions are determined. Last create the shapes for existing and proposed elements.

### HEARING MAP POST PRODUCTION

These are activities that occur after the hearing map preparation has been completed. Outlined are the steps to set up the hearing map preview procedure. Discussed is the final matted hearing map plot to be sent to Photogrammetry. Also discussed is the procedure to request the hearing maps to be plotted. Lastly described is the list hearing maps in PDF format available to the general public.

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## General Microstation File Model Concept

### What is a Model?

Bentley's Definition:

"A DGN file component that contain elements. Design models can be either 2D or 3D, but they are most useful in their 3D form. Sheet models, which are flat and used for drawing composition, are ordinarily 2D. By default, the view windows of a design model have black backgrounds, and the view windows of a sheet model have white backgrounds."

Oak's Definition:

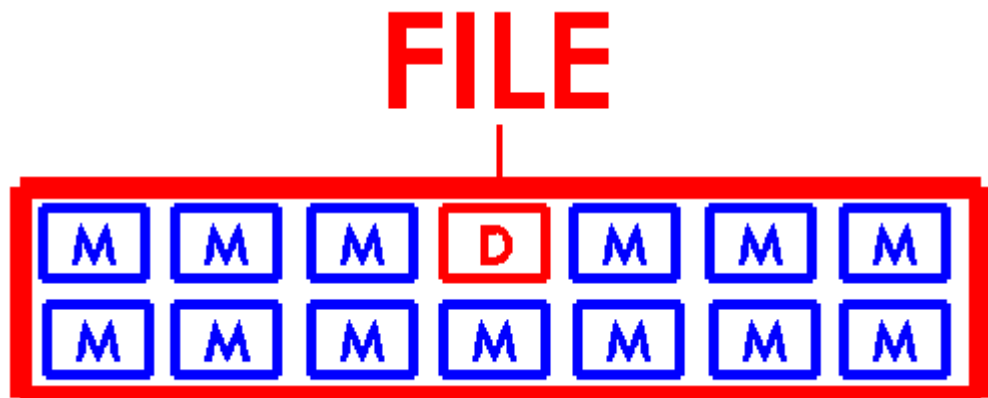
**model** – components or the composition of a Microstation file. In this manual the reference to Microstation models is often referred to as "**Microstation File Models**" or just "**File Models**" because Microstation files cannot exist without Microstation models and vice versa. . Each Microstation file must at least have one (1) master **Default** model. Each model in a Microstation file can be thought as "a file in a file", "folder in a filing cabinet", or the file's container, cell, or design plane. Like Microstation files, models can reference each other and can have independent working units. Note that levels are specific to the file, and not just to specific models. Meaning levels made available to a file are also available to all models.

### What are the advantages of models?

- Microstation elements contained in models have significantly less file size than identical elements with the same number of individual files.
- Provide a degree of control over level management. For example, our 60 pattern line levels can be eliminated and just one level for pattern line can be used, controlled by the various models. Or the need to create the various number of Geopak shape levels for the various baselines (L, Y1 to Y50). Currently 2 Geopak shape levels are suffice and in the future, Geopak can use models to control and distinguish the same levels with various models.
- Less likely to have file corruption problems comparing one file with several models with the same number of individual files.
- For file management, rather having several like files, one file with several like models can be used.

Picture?

See chapter 4 for further details of the hearing map file models.



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## Referencing File Models (Coincident, Coincident-World, and Interactive)

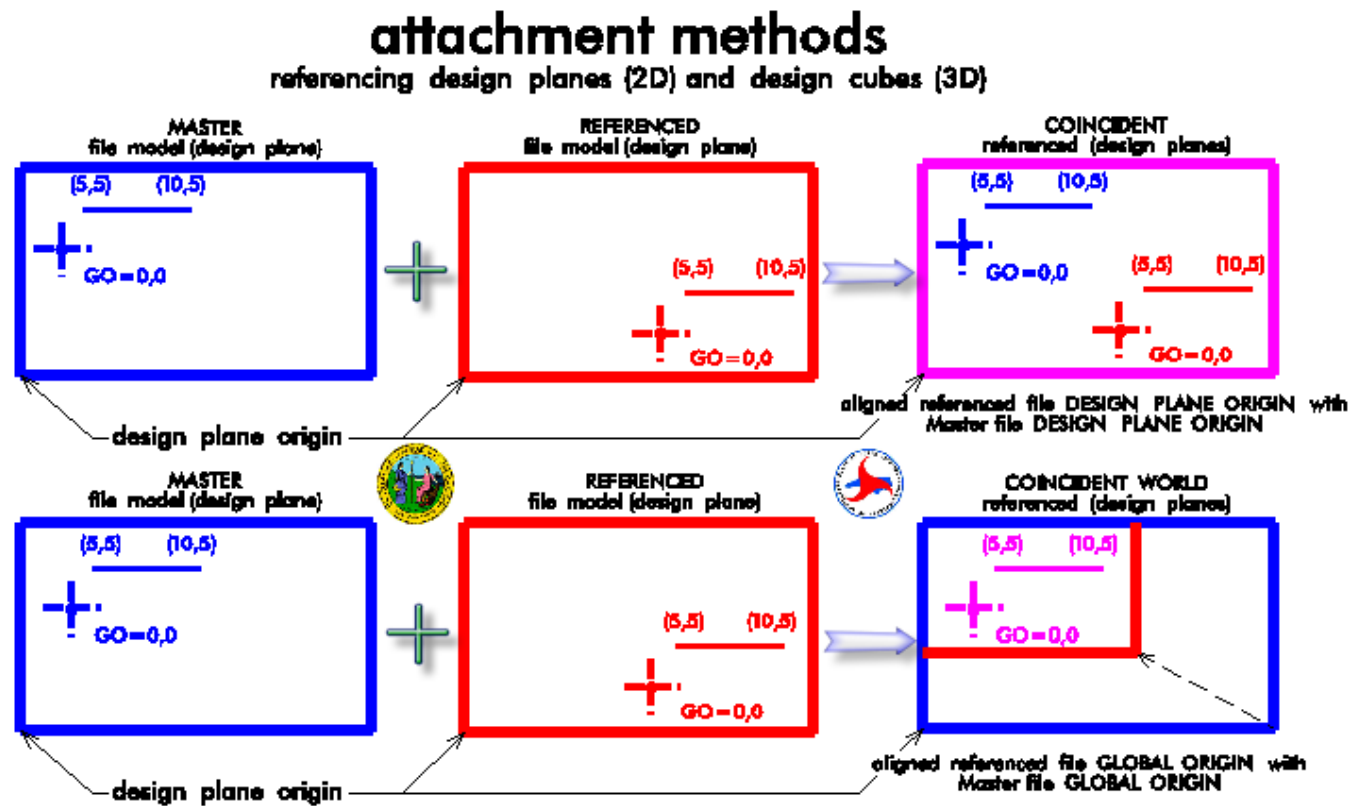
**What is the recommended referencing method proposed by Roadway CADD Support?**

Coincident World

**What is the difference between Coincident, Coincident World, and Interactive Referencing?**

**coincident** – attaching the referenced file **Default** model where its **DESIGN PLANE ORIGIN** is aligned with the master file model **DESIGN PLANE ORIGIN**. If there is a global origin difference between the two file models, then the referenced elements are not coordinately correct with respect to the master file model.

**coincident world**– attaching the referenced file **Default** model where its **GLOBAL ORIGIN** is aligned with the master file model **GLOBAL ORIGIN**. If there is a global origin difference between the two file models, then the referenced elements ARE coordinately correct with respect to the master file model.



**interactive** – option to reference other models, not just the **Default** model. Coincident and Coincident world attachment methods will still have to be selected. Other options include the ability to key-in logical names and setting live nesting depths.

**What is the referenced file model LOGICAL NAME used for?**

For regular plan production, specific logical names for the referenced plannametric files will plot out light or shaded underneath the dark solid DSN and master PSH file models.