A Statistical Model

**TxDOT** is undertaking a more rigorous evaluation of the likelihood that a project area requires further evaluation based on the amount of new Right-of-Way (ROW) proposed for the project. For this evaluation, we developed a statistical model, showing the likelihood that a project requires a field investigation based on the amount of proposed new ROW. This brief summary provides more information about the model and its potential applications.

**DATA:** The model uses data from hundreds of consultant studies of different projects across the state. The data input to the model includes the acres of proposed new right of way for each project and the consultant’s recommendation regarding whether a field investigation was warranted.

**PRELIMINARY RESULTS:** The graph (Figure 1) shows preliminary results from this study. The figure shows that the likelihood of a project being recommended for a field investigation increases greatly as the amount of proposed new right of way increases. Of particular note is the very low probability that a project without proposed new right of way is recommended for additional investigation. This study thus supports the claim that projects occurring entirely within existing right of way do not contain well-preserved sites and so do not warrant further work.

**Figure 1.** Plot of the relationship between the amount of new right of way proposed for a project and the probability that a consultant recommends a field investigation of that project.

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**NEXT STEPS**

TxDOT is continuing to study this issue, incorporating more projects and a larger number of variables in the model. We plan to use the results of this study to inform recommendations for a programmatic approach to evaluating and treating certain types of projects.

Given the preliminary study results, preservation efforts might be better spent on some activity other than the investigation of projects confined to the existing right of way.