

INDOT Embracing New Practical Design Process

INDOT has embarked on a process that promises to fundamentally change the way INDOT projects are designed and built.

Practical Design is a change to the project delivery process that strives to build the right project, at the right time, to fulfill the project scope. The process will benefit Indiana's statewide transportation infrastructure by tailoring construction projects and building methods to deliver specific results. INDOT should see reduced costs throughout the project development process.

Practical Design also helps INDOT realize one of its 2014 agency goals by establishing a culture of continuous improvement that reduces operational and construction expenses by implementing revised practical design standards throughout the project delivery process.

"Practical Design is a national trend toward performance-based project delivery methods instead of the traditional, rigid code-based system that has been most commonly used in the past," said Scott Adams, who was selected as INDOT's Practical Design Director in January. "Practical Design encourages innovation and flexibility in design, and requires more information and a higher level of analysis when defining and deciding on the most appropriate design solution to a particular problem."

Tony McClellan, Southeast District Deputy Commissioner (DDC), serves as the executive owner providing leadership oversight for the implementation of Practical Design. McClellan, who will also continue in his role as Southeast DDC, will work jointly with Adams, Deputy Commissioner of Engineering and Asset Management Jay Wasson and Deputy Commissioner of Operations Ryan Gallagher on the initiative.



Representatives of INDOT's partners, vendors, and consultants attended a Feb. 20 Practical Design Workshop in Indianapolis.

INDOT hosted a stakeholder workshop for INDOT partners on Feb. 20 to kick off the effort of implementing Practical Design.

The purpose of the workshop was to engage, listen, and share ideas, experiences, and solutions that will propel INDOT to the forefront of performance-based project delivery methods. More than 60 representatives of Indiana's construction trades attended the event in Indianapolis.

Practical Design relies on a strong purpose and need project statement, and a clear process for approving and documenting the rationale for important decisions. It requires good engineering judgment to assess the severity of adverse consequences, evaluate design tradeoffs, and mitigate risks as much as possible.

Practical Design also involves the concept of “designing up.” With this approach, the existing condition of the facility is considered the baseline condition, the starting point from which we design up to the finished product, Adams said. More often than not, the end result is a facility that is safe, reasonable, and less costly than anticipated.

A large number of INDOT divisions, in both the districts and Central Office, are or will be influenced by Practical Design. Essentially, all participants in the project delivery process will be impacted by Practical Design -- from initial planning and programming to design, construction and maintenance.

As INDOT’s Practical Design efforts take root, the agency will reach out to its partners, vendors, and other experts to adopt and establish processes and procedures that will work best for Indiana.

The process will require a critical evaluation of INDOT’s project delivery model. It will require a cultural shift, a new way of thinking, and alternative considerations, Adams said. The end result will improve and ensure INDOT’s ability to deliver the best valued projects while enhancing safety, mobility and economic growth throughout the state.

The end product will be a design guidance system that encourages flexibility in design solutions to common problems, while maintaining and enhancing worker and motorist safety.

“Practical Design has been heralded as a success in other states – Missouri, Kentucky, Utah, Idaho, and Oregon,” McClellan said. “It has been endorsed by Commissioner Browning and INDOT’s executive team as the driving force toward establishing a culture of continuous improvement that will ultimately save taxpayers money and channel more dollars to capital investments. We are excited about the opportunities that the Practical Design program will present, and are looking forward to the resulting efficiencies that will come from this new endeavor.”



*INDOT Practical Design Director
Scott Adams*



Southeast DDC Tony McClellan provides executive ownership of the Practical Design initiative.