

# In Ohio, Road Projects Beautify Communities Through Aesthetic Design

Transportation officials at Ohio Department of Transportation (ODOT) have adopted new guidelines to ensure that projects across the state are attractive and compatible with local surroundings.

ODOT's *Aesthetic Design Guidelines* are intended to provide a consistent approach to integrate aesthetic design principles on bridges, retaining walls, noise barriers, traffic signals, lighting, signs, and landscaping.

Tim Hill, Environmental Services Administrator with ODOT's Office of Environmental Services, states that the aesthetics approach "will help build some consistency to the look and feel of our transportation system across Ohio," without a major cost burden to the program.

This approach, Hill added, "applies equally to the smallest bridge replacement and to our largest projects."

The guidelines describe aesthetic design principles, how they fit into the state's Project Development Process, and how they should be applied on specific projects. The guidelines also include checklists, a summary of standard "baseline" treatments, and case study examples of treatments on projects across the state.

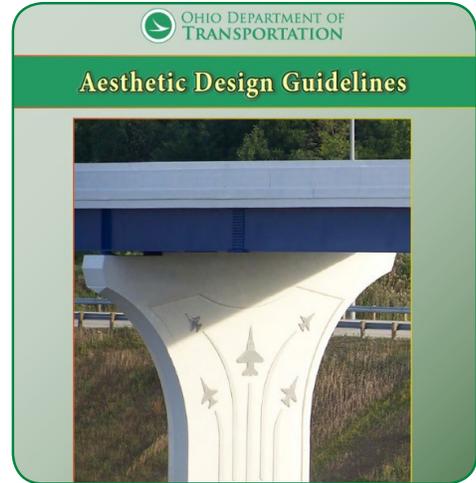
## What Are Aesthetic Treatments?

The guidelines establish two ways that aesthetics can be incorporated into highway design:

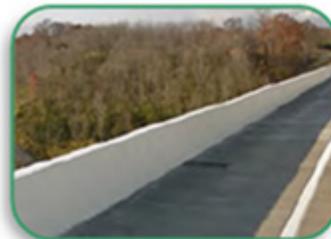
- "Baseline treatments," that use standard engineering and construction specifications to install features that are attractive, suitable for the intended purpose, and generally cost effective, or
- "Enhanced treatments" that go above and beyond the typical roadway design.

Baseline treatments are used in projects where special consideration is unnecessary or cost-prohibitive. ODOT has selected a palette of baseline features that are "geared toward establishing the aesthetic 'background' [and] are crucial to creating cohesive, uncluttered, and visually appealing transportation corridors."

Baseline treatments include such things as plain or minimally adorned concrete retaining walls, bridge fascia, or parapets; bridge girders in simple colors; color chain link or other simple wire fencing along rights-of-way; and painted and galvanized supports for highway signs and lighting.



The Ohio Department of Transportation *Aesthetic Design Guidelines*.



Examples of baseline treatments include concrete parapets with form liner patterns for bridges. Photo: Ohio DOT.



ODOT intends for the cost of baseline treatments to be routinely included in the overall project construction cost and therefore no additional justification would be required. According to ODOT, baseline treatments are intended to “raise the bar” from an aesthetics perspective by creating a consistent look and feel to Ohio’s transportation system state-wide without substantial cost increases.

Enhanced treatments, alternatively, are called for where there is a need for “bold, eye-catching, and memorable aesthetic elements.” Specifically, enhancements should be used in circumstances such as areas where an aesthetic theme exists or special aesthetic treatments were agreed upon as a result of stakeholder outreach or public involvement. Also, enhanced treatments can be the result of environmental commitments related to aesthetics or where a local public agency sponsors the enhancements.

The guidelines caution that enhanced treatments can cost significantly more and take more time to install, and therefore should be approached through effective planning and due consideration. All enhanced treatments are approved through a central office committee that provides oversight to ensure the appropriate use of aesthetic treatments.

## Implementation Advice



Proposed enhanced treatment for Third Street Bridge. Photo: Ohio DOT.

Planners and designers use the ODOT guidelines to identify project planning, placement, maintenance, and cost considerations for a variety of baseline and enhanced treatments for bridges and roadways. The guidelines are intended to help develop an aesthetic treatment plan, but planners and designers also need to use ODOT’s design manuals for engineering specifics.

The guidelines recommend forming an interdisciplinary team to create a vision for a particular transportation corridor. This vision would include the needs and goals of the various communities and landscapes along the corridor. Development of such a corridor vision results in a cohesive, unified design for the entire length of a corridor.

The aesthetic considerations—both baseline and enhanced—should be kept within the vision and principles established for each transportation corridor. The aesthetic principles depend on the type of corridor, such as urban, suburban, or rural. The visual design elements seen either from the roadway or from the community should be harmonious and compatible with the surroundings. The importance of each visual design element are briefly discussed in the guidelines, which include line, form, color, shape, pattern, texture, and relief.

ODOT uses a Project Development Process to manage projects from concept through completion, and documentation of baseline aesthetic treatments is prepared by the design team during the appropriate development stages. If it is determined that enhanced treatments are to be used, appropriate options will be evaluated by the design team. The selected treatments continue to be reviewed through various stages of project development, including funding assessments, preliminary engineering, environmental reviews, contractor selection, right-of-way acquisition, and construction.

## Aesthetic Treatments as Mitigation

In some projects, aesthetic treatments are selected as a way to mitigate the environmental impacts of a project. This could include impacts to historic properties that are addressed under Section 106 of the National Historic Preservation Act and public parks addressed under Section 4(f) of the Department of Transportation Act. Such mitigation measures are carried through as environmental commitments and must be completed and accounted for by ODOT.

The guidelines provide several examples of enhanced aesthetics constructed as an environmental commitment. These include:

- The aesthetic textures used on a retaining wall installed near an historic property;
- An historic bridge relocated and refurbished as part of a multimodal trail;
- Design incorporated into the abutment of the redesigned Third Street Bridge in Dayton, highlighting the history of an historically underserved community; and
- Landscaping elements along a relocated and refurbished highway that is adjacent to Hocking Hills State Park.

## Lessons Learned

ODOT has learned some lessons both in implementing aesthetic treatments and creating guidelines for future projects.

To make the most of a project's aesthetic vision, the guidelines recommend engaging local communities by holding charrettes and other stakeholder meetings. This allows citizens to share their ideas about aesthetics to the project team, which ODOT can put into practice within the project's budget.

"Aesthetic enhancements typically come at a higher cost for both construction and maintenance," according to the guidelines, so project planners should select enhanced treatments that strike a balance between budget and aesthetics.

A project to upgrade the interchange between I-70 and I-75 near Dayton provided an opportunity for ODOT and the local community to include aesthetic treatments that would be fitting for a major gateway interchange. Landscaping design provides beautiful, distinct features and hardy, low-growing species were selected to reduce the need for irrigation and mowing. Concrete curbs were constructed around some landscaped areas for visual effect but in lower, flatter areas the curbs impeded drainage and the beds became oversaturated. ODOT has worked on remedies including the installation of French drains under the curbs and making small curb cuts.



*Enhancement Example: I-75/I-70 Interchange Dayton. This interchange has numerous aesthetic treatments, including decorative landscaping in infield areas and between ramps.*

The Dayton project also includes attractive aviation and space-themed pictographs on the flyover ramp piers and retaining walls. While some pictographs work well visually, designers learned that those that have no contrasting colors or are too small and can be challenging for travelers to notice at freeway speeds.

Ohio's design guidelines could be used by other transportation agencies to develop their own aesthetic approaches. ODOT referenced aesthetics design guidelines issued by a number of other DOTs, including Maryland, Minnesota, Nevada, and Rhode Island.

"Over time, ODOT will continue to evaluate the look and feel of our system and make adjustments to this guidance as needed," Hill stated. "We are excited to see these guidelines implemented across our state."

For more information, link to ODOT's *Aesthetic Design Guidelines*, or contact Tim Hill at [Tim.Hill@dot.ohio.gov](mailto:Tim.Hill@dot.ohio.gov).



For more information on The Center for Environmental Excellence by AASHTO, please visit [environment.transportation.org](http://environment.transportation.org) or contact the Director of the Center for Environmental Excellence, **Melissa Savage** at [msavage@aaashto.org](mailto:msavage@aaashto.org).