

## Chapter 6: Context-Sensitive Transportation

The Experience of Travel .....	p. 251
The Roadway Network .....	p. 257
Bridges.....	p. 264
Trails and Paths .....	p. 271
Toolbox for Context-Sensitive Transportation .....	p. 281

**PICTURED:**

Clarion County Roadway with Trail Crossing



# THE EXPERIENCE OF TRAVEL

A context-sensitive transportation network in the Pennsylvania Wilds is centered on a general philosophy that the experience of traveling from place to place is just as important as the experience enjoyed at the destination.

It is not enough to focus planning efforts only on individual buildings, towns, and places. Attention must also be given to the experience of travel, whether by motor vehicle, bicycle, foot, watercraft, or other means.

Chapter 3 of this Design Guide, “Roadway Corridors,” addresses this concept by providing guidelines for development that is visible along roads and, in particular, along scenic routes. Chapter 6 takes the idea further and focuses on the transportation system itself, including roadways, bridges, bikeways, trails, and navigable waterways. In many areas of the Pennsylvania Wilds, the transportation system winds around hills, dips into valleys, crosses rivers and streams, and offers tremendous views. Navigating a curve, journeying over a historic steel truss bridge, or waiting to pass on a one-lane road are part of the Pennsylvania Wilds experience.



Many roads twist and turn through the rural and forested Pennsylvania Wilds landscape

# THE EXPERIENCE OF TRAVEL

Simply put, a context-sensitive transportation system is one that considers the environment through which the transportation system passes.

A safe and functional road, bridge, or trail in the Pennsylvania Wilds should not look just like every other road, bridge, and trail found in other parts of the Commonwealth and beyond, especially if it provides a unique travel experience.

The Pennsylvania Wilds landscape is mostly rural, but also includes developed town centers, residential communities, and industry; and, as the landscape changes, so should transportation facility design. A true context-sensitive transportation project achieves harmony with the surrounding community and considers and complements the area's environmental, scenic, historic, and natural assets.



Narrow roads that follow the natural topography are part of the Pennsylvania Wilds travel experience



The goal of a context-sensitive transportation network for the Pennsylvania Wilds is to be multi-modal, functional, safe, and in harmony with its surroundings.

# THE EXPERIENCE OF TRAVEL

## Cross-Discipline Collaboration

To develop the transportation network into a system that meets the needs of its users while also complementing the region's character, stakeholders at all phases of a transportation project's design and implementation process must work together. Collaboration among community members, planners, engineers, and participating public agencies is vital early in the design process. At this early stage, design aspirations need to be balanced with multi-modal utilization, safety considerations, engineering requirements, and monetary costs for construction and long-term maintenance.



Clearfield County

Sometimes, one or more of these considerations will outweigh the others. At other times, all will have equal importance. Collaboration among stakeholders must continue throughout the entire planning, design, and construction process to achieve design objectives that are feasible to implement; the entire project must be well coordinated from beginning to end.



When transportation projects are approached with a context-sensitive mindset, the region's travel systems will serve as worthy counterparts to the beautiful natural and built environments.

# THE EXPERIENCE OF TRAVEL

## Bicycling in the Pennsylvania Wilds

Pennsylvania roadways are considered to be multi-modal; as such, cyclists are considered vehicle drivers. The Commonwealth is aggressively developing a network of bicycle routes that specifically utilize designated roadways, some of which traverse the Pennsylvania Wilds. For example, the Route 6 Corridor travels across the entire northern section of the state, including through several counties in the Pennsylvania Wilds, and is a part of the Bicycle PA Route network (Route Y). Significant improvements are currently underway to upgrade the roadway to better accommodate cyclists.



Roadways, bicycle routes, and trails form a multi-modal transportation network throughout the region.



Pine Creek Rail Trail  
Darling Run Access,  
Tioga County



Off Route 6,  
Warren County



Susquehanna River Walk,  
Lycoming County

# THE EXPERIENCE OF TRAVEL

## It's All About Perspective

In a traditional transportation planning project, emphasis is typically placed on the transportation facility itself and not the surrounding context or the potential for multiple modes of travel. For example, when a bridge is planned for reconstruction, the objectives can be solely focused on engineering and vehicle safety. By taking a context-sensitive transportation approach, however, the bridge designer also considers the traveler's experience when approaching and crossing over the bridge. What will the traveler see and experience? Even slight modifications to the design may change the experience from "nothing special" to "wow, look at that view!" Further, the multiple use design considers how to best incorporate non-motorized vehicular or pedestrian travel; blending all modalities into a context-sensitive "experience."

The context-sensitive designer also considers the perspective of those that will have a view of the transportation facility from the surrounding area. How will the facility appear in relation to its surroundings? Does the facility complement or fit into the surrounding landscape? In context-sensitive transportation planning, the goal is to develop facilities that are thoughtfully placed within the landscape, while also being safe and cost-effective to build and maintain.



# THE EXPERIENCE OF TRAVEL

## It's All About Perspective

From a multiple use perspective, the designer blends other modalities including both on the surface of the bridge as well as the underside if the bridge traverses a road, railway, or land or water trail.

The context-sensitive designer also considers travel trends. The 21st century is witnessing a significant shift in mobility preferences. The younger generation tends to prefer to live and work within the same community; prefers walking/bicycling and/or public transportation for their mobility needs; and are more averse than previous generations to owning motor vehicles. Concurrently, there is a growing segment of travelers (journey cyclists) that prefer the use of a bicycle as their primary mode for both travel and vacationing. Government agencies as well as the medical community are also strongly encouraging walking and cycling to promote healthy lifestyles among all age groups. Key to this promotion is walking/cycling as an alternative to driving.

The reduced use of personal motor vehicles has a positive environmental impact and helps to re-focus traffic flow back into our cities and communities, promoting both community and economic development. All of these documented trends have a significant impact on the mobility infrastructure and should be properly incorporated into the design process.



# THE ROADWAY NETWORK

Most visitors to the Pennsylvania Wilds travel to and around the region by car. However, a growing number of visitors are journey cyclists who experience the region by bicycle. By law, bicyclists are considered vehicle drivers with a right to access the roadways of the state. So roadway networks need to consider both motorized and non-motorized vehicles. As such, providing a safe, efficient, and balanced roadway network is paramount to supporting mobility and commerce.

By applying context-sensitive concepts to street design, the roadway system can meet engineering and safety requirements while also preserving the idyllic and natural aesthetic that characterizes the Pennsylvania Wilds. **The core tenets of context-sensitive road design include:** 1) tailoring road design to the character of the community; 2) considering the current and planned land uses that the road will serve; 3) accommodating multiple user types (i.e., trucks, cars, motorcycles, buses, recreational vehicles, bicycles, and pedestrians that may use the same facility); and 4) reducing impacts on the environment.

It is also recognized that residents, workers, commerce vehicles, and tourists share the road. If local roads are designed to function well for all user types, pressures on local and state governments to build new roads, widen roads, and increase speed limits on existing roads will be reduced. The idea is to make the region's roadway network function the best it can, and be tailored to the context through which the road traverses.



# Guidelines: The Roadway Network

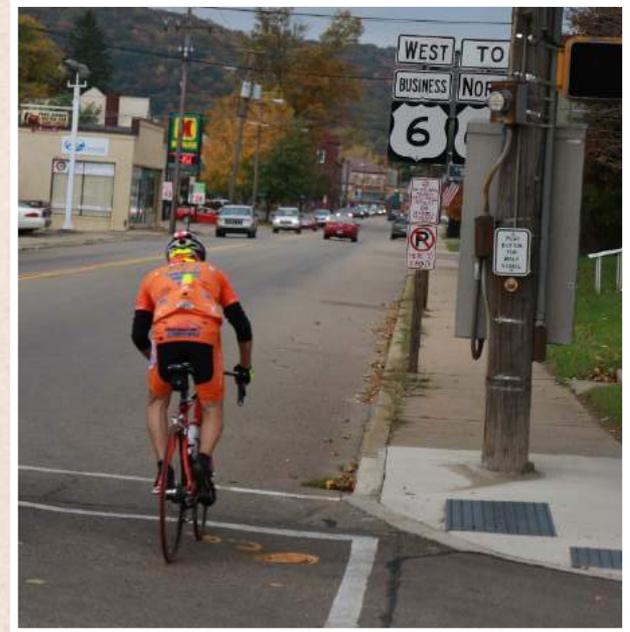
1. Design road facilities to achieve harmony with their environs in terms of alignment, width, striping, curbing, decorative materials, and overall configuration. As the surrounding land use context transitions from a rural to suburban to urban setting, the design of the roadway should respond accordingly. Consult the Smart Transportation Guidebook prepared by the Pennsylvania and New Jersey Departments of Transportation for technical road design guidelines based on a context-sensitive philosophy. This is an extremely useful guidebook.
2. In scenic areas and especially along known tourist routes, create opportunities for safe turn-outs. Turn-out areas provide spaces for drivers to pull off the road to enjoy the view and/or to allow faster-moving vehicles to pass. Turn-outs are also great spots to place interpretive signs and historic markers to enhance the traveling experience.
3. Road designs should accommodate pedestrians on the roadway system where safe and appropriate. As vehicle drivers, bicyclists have a right to the roadway and the design must incorporate their accommodation. Extensive use of signage to alert both cyclists and motorists of the multi-modal characteristics of our roadways is essential as the transition from exclusive motor vehicle use to multi-modal use progresses. In high activity areas, physically or visually separate vehicle traffic from non-vehicular traffic where possible. Visual markings alert drivers to share the road.
4. While the provision of sidewalks and on-street parking is appropriate for higher density suburban and urban environments, they should be implemented sparingly on roads located within areas characterized by rural land uses. Examples of contexts which typically necessitate on-street parking and sidewalks include suburban and urban settings, recreation and school uses, town centers, shopping districts, and historic districts.
5. Enhance the pedestrian environment along roads within town centers by providing continuous sidewalks of generous widths, maximizing pedestrian and bicycle linkages, surfacing sidewalks with decorative treatments, planting street trees, providing street furniture and trash receptacles, implementing enhanced crosswalks, and installing pedestrian bulb-outs. Be sure to consider accessibility for those with disabilities when designing sidewalks, crosswalks, and other features of the pedestrian environment.
6. Match the curbing design to the surrounding context. No curbs and rolled curbs with roadside drainage swales convey a rural ambiance, whereas a traditional curb and gutter design gives the perception of a suburban or urban character.
7. Match the illumination level to the surrounding context. Dark skies and low lighting levels indicate a rural and rustic environment, while brighter lights indicate activity zones such as town centers and important crossroads.

# Guidelines: The Roadway Network

8. Where lighting is desirable, select a lamppost fixture design that complements the architectural character of nearby buildings.
9. If retaining walls are needed, the wall design can have a considerable aesthetic impact. In addition to engineering requirements for location, height, and stability, also consider options for materials, color, and deterrents to vandalism that are in harmony with the surrounding environment.
10. Consider alternatives to paint as crosswalk markings; options include brick, pavers, or stamped concrete. Brick salvaged from a demolished structure in the community is a good candidate for crosswalk markings and other hardscape enhancements.
11. Retain historic road surfaces where possible, including brick roads and cobblestone. These are often irreplaceable and unique historic assets. However, because such surfaces can be hard to negotiate on a bicycle, directions for bicycle traffic should consider alternate routes.
12. If a road or bridge is permanently closed to vehicular (or rail) traffic, consider using it for pedestrian or bicycle use before decommissioning the right-of-way.
13. Design vehicular roadway networks to function in concert with off-road trail and bikeway networks. Where possible, there should be a safe, seamless, and uninterrupted connection between on-street sidewalks and bike lanes and off-road pedestrian and bicycle trails.
14. In many of the more rural areas of the Pennsylvania Wilds, municipalities are permitting the use of local roads by snowmobiles in the winter and four-wheelers in the warmer months. Visitors should be advised of the potential for this type of traffic in such a way that further adds to the rural and wild nature of the region.
15. When highways enter a populated area, the community should consider routing non-motorized traffic strategically through the community via a less trafficked route. This often provides the community the opportunity to encourage non-motorized traffic to pass through historic/scenic sections of their town as well as the retail sector of town. Oftentimes, major roadways are designed to by-pass the community. Re-routing permits the opportunity to engage the tourist.
16. For any and all bypass proposals, carefully consider the positive and negative effects on the community in the initial planning phase. Bypasses can be beneficial by, for example, removing truck traffic from a community's main street. However, the bypass can also divert pass-through traffic that local businesses rely upon for their economic success.

# Guidelines: The Roadway Network

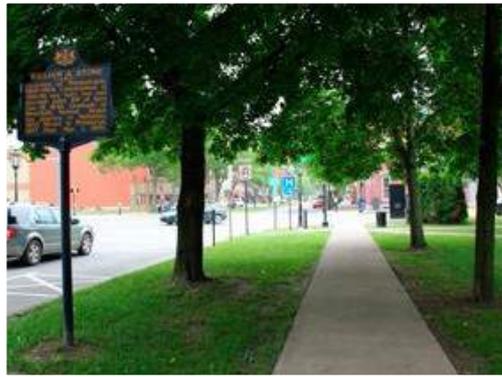
17. If truck braking noise is a public nuisance, the local government should work with the Pennsylvania Department of Transportation (PennDOT) to designate road segments where engine-brake retarder mufflers are required. After PennDOT approval, the requirement can be codified by ordinance and signs can be posted on the affected road segments.
18. Local governments are encouraged to participate in and support multi-jurisdictional efforts to gain Scenic Byway status along scenic roadway corridors, and particularly along routes frequently used by tourists.
19. Develop roadway maintenance plans that consider all modes of travel. For example, roads that serve as bike routes may require additional sweeping to remove gravel and other hazards from the bike travel lane or shoulder.
20. Encourage municipalities to develop Pedestrian and Bicycle Master Plans that provide a structured and logical guideline to the development of true multi-modal infrastructure. Such plans also assist PennDOT in understanding the best way to accommodate improvements of state infrastructure to best fit the local community's vision.



Route 6, Warren County



# Roadway Network



In town centers, provide continuous sidewalks with generous widths, enhanced with street trees, benches, and pedestrian-scale lighting when appropriate.



Provide safe turn-outs. Turn-outs can be simple (like this) or enhanced with interpretive signage or viewing platforms.

Enhance wide sidewalks with brick, planters, and pedestrian-scale lighting.



In areas where travelers are apt to pull over and enjoy the view, provide wide road shoulders and pull-off areas.



# Roadway Networks



Celebrate the region's authentic transportation system when selecting routes for scenic tours



Provide consistent identification signage along scenic drives. Scenic byway status can attract more visitors to local businesses



In rural areas, rolled curbs are appropriate



Provide clearly marked crosswalks between visitor destinations and trail and waterway access points



Consider the use of alternatives to paint for marking crosswalks



# Roadway Network



Interpret the transportation system



Highlight where roads, railways, and bridges made a significant contribution to the region's history



Design vehicular roadway networks to function in concert with off-road trail and bikeway networks



Alternatives to landscaping for areas subject to erosion, piling of snow, etc.



Use infiltration features for roadside drainage system



Use signage to alert road users to local use

# BRIDGES

Given the hilly and mountainous topography and thousands of miles of waterways in the Pennsylvania Wilds, bridges are an important aspect of the transportation system.

Whether a traveler is crossing a deep ravine, the wide expanse of the Allegheny or Susquehanna Rivers, or any of the smaller valleys, creeks, and streams, it is evident that bridge design has a considerable influence on the character of the transportation system.

Also, given that bridge crossings have been a commonplace necessity since the region's earliest transportation networks were developed, many historically significant bridges are found throughout the Pennsylvania Wilds. Such bridges, many with a noteworthy design, highlight the cultural heritage of the area and also represent a unique and irreplaceable resource.

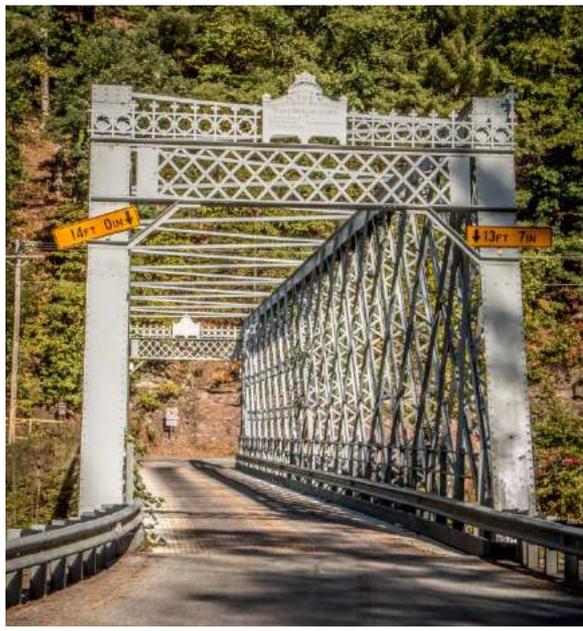
As existing bridges age and as new bridge crossings are considered, context-sensitive concepts should be applied to ensure that bridge structures complement the visual character and historical context of the region.



Ramsey Bridge, former railroad bridge over Pine Creek now part of the Pine Creek Rail Trail.  
Lycoming County

# BRIDGES

With respect to bridges, a context-sensitive approach encourages the preservation of historic bridges whenever feasible, and designing new and replacement bridges in such a way that pays homage to the region's legacy of iconic bridge architecture.



Upper Bridge at Slate Run, Lycoming County



Bucktail Regiment Memorial Bridge, Smethport, McKean County

As with other aspects of the transportation network, but even more so with bridges because their structural components can be seen from various angles, it is important for bridge design to consider the surrounding context.

# Guidelines: Bridges

1. Provided that engineering and safety requirements are met, preserve and restore bridges that are considered historically, culturally, and/or architecturally significant. Covered bridges and steel truss bridges are of particular historic significance in the Pennsylvania Wilds.
2. In cases where a historically, culturally, and/or architecturally significant bridge cannot be preserved in place, look for opportunities to reuse the structure in a different location, either as a bridge or repurposed for another use. PennDOT will often make decommissioned bridges available for relocation and reuse.
3. If a bridge is needed for a trail crossing, contact PennDOT's Historic Preservation Supervisor to inquire if a decommissioned historic bridge is available for this purpose.
4. Consult with PennDOT's Historic Preservation Supervisor to assess historical relevance of bridge sites, assign appropriate historical significance designations, and garner support for current and future bridge restoration/retrofitting projects.
5. When new bridge construction is required, design the bridge to emulate the region's historic bridge designs (or original bridge design for bridge replacement projects) with respect to appearance, workmanship, and use of materials.
6. Install signage at eligible bridges to educate bridge users about the historical relevance of bridge sites. Such signs may include date of bridge construction, bridge designer, architectural style and building materials used to construct the bridge.



7<sup>th</sup> Street Pedestrian Bridge  
Coudersport, Potter County

# Guidelines: Bridges

7. Consider all sides of the bridge structure. Also, if the bridge crosses over a navigable waterway or hiking/bicycle trail, consider views approaching the bridge and traveling under the bridge from the waterway or trail.
8. Carefully consider the visual impact of utility placement, whether anchored above, aside, or beneath the bridge structure.
9. Design new bridges to accommodate multiple modes of transportation. Often times, while traversing a bridge, the traveler is afforded gorgeous vistas. Where possible and where safety is assured, bridge improvements/construction should allow for pedestrian/cyclist pull-offs to permit viewing and/ or photographing the vista. Also where possible, pull-offs for motorists as they approach the bridge should be provided and signed, allowing the motorist to park and walk to the viewing platform.
10. If fishing is permitted from the bridge, provide physical separation from the vehicle travel lanes for this purpose.
11. Consider potential environmental impacts during the conceptual bridge design process. Design and site bridges in ways that avoid or minimize effects on environmentally sensitive areas.



The two-span Jersey Shore Bridge, rehabilitated in 2000, is one of the last remaining truss bridges on the West Branch Susquehanna River.

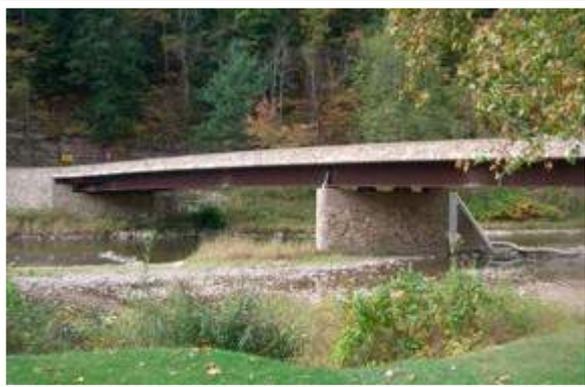


# Bridges



Benezette, Elk County

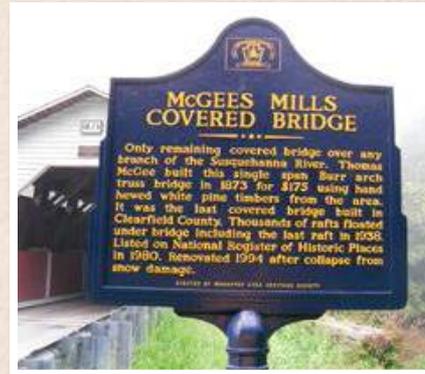
Consider all sides of the bridge structure for its design. The design of the bridge above incorporates the appearance of stone on the water-sides and public art and wildlife in a stenciled mural on the road-sides of the bridge.



Enhance bridge design with natural stone when possible



# Bridges



Install signage that explains the historical relevance of bridge sites



Provided that engineering and safety requirements are met, preserve and restore bridges that are considered historically, culturally, and/or architecturally significant



# Bridges



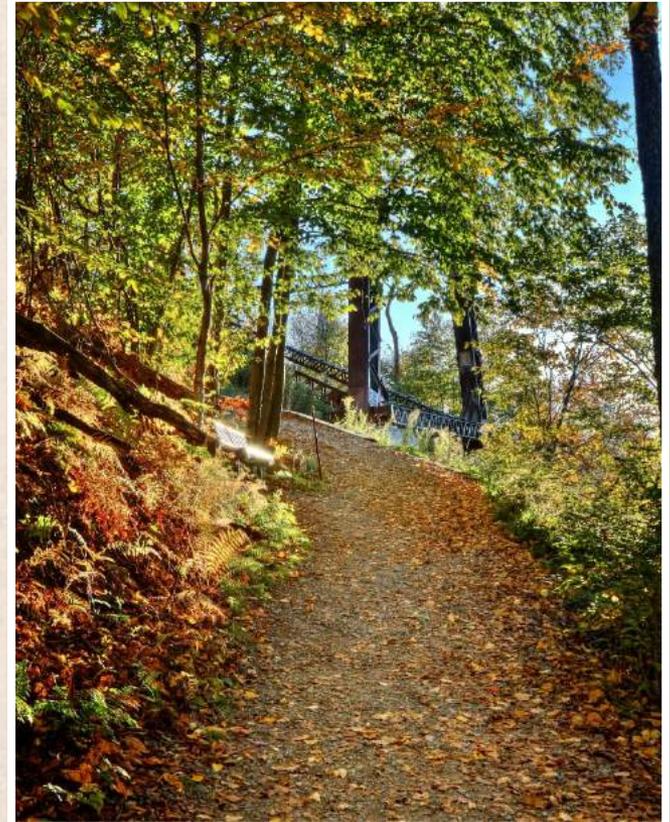
## Re-Thinking What's Possible for Underutilized or Abandoned Transportation Facilities

Kinzua Bridge State Park in McKean County features remnants of a railroad bridge (viaduct) used to transport coal and lumber across the Kinzua Gorge. Built in 1882 then rebuilt in 1900, this National Engineering Landmark was described as the longest (2,053-foot-long) and tallest (301 feet tall) railroad bridge in the world. In 2003, a tornado knocked over 11 of the steel towers supporting the Kinzua Viaduct. Subsequently, the remaining towers were reinforced, new bridge decking was installed, railroad tracks were repaired, and a new Kinzua Sky Walk was created. Since its opening in 2011, visitors can again enjoy views across the Kinzua Gorge from the former railroad bridge, and views down through a glass bottom observation area.

# TRAILS AND PATHS

The Pennsylvania Wilds region features thousands of miles of different types of trails and pedestrian paths. These include forest hiking trails, rail trails, mountain bike, ATV, snowmobile and equestrian trails. Such facilities provide residents and visitors with extensive recreational opportunities and access to the region's natural amenities.

Non-motorized transportation networks in particular bolster community health as well as enhance environmental sustainability by reducing reliance on motorized vehicles in some settings. Investing in trail networks that are context-sensitive can also spur economic benefits for communities by attracting trail users to older village centers, stimulating businesses that serve trail users, and increasing the value of trail-adjacent properties.



Kinzua Bridge Hiking Trail, McKean County

# TRAILS AND PATHS

Employing a context-sensitive approach to non-motorized transportation planning and design entails thinking about such facilities as an intertwined network that includes destinations such as town/village centers, parks, recreation centers, nature preserves, scenic areas, historic districts/landmarks, transit centers, and schools.

During conceptual planning and design of non-motorized trails and paths, devote time to understanding trail-user behavior, and determining what modes of transportation (e.g., foot, bicycle, ATV, etc.) to accommodate. Evaluating future trail-user behavior also influences designation of the trail/path as a single- or multi-use facility, which will in turn shape technical design details and maintenance requirements.

A context-sensitive approach to trail and path planning also requires sensitivity to and engagement of landowners (e.g., residential neighbors, retail businesses, and/or industrial park owners) at each stage of the process.



Adjacent to Red Bank Valley Rail Trail  
New Bethlehem, Clarion County



# Guidelines: Trails and Paths

1. Engage in multi-municipal collaboration to enhance regional trail networks. The primary aim of this collaboration should be to maximize connectivity between trail and path systems within varying jurisdictions through a regional planning approach.
2. Plan pedestrian and bicycle facilities as an intertwined network of multi-use trails, single-use paths, and bicycle routes (both existing and potential) that include key destinations such as village centers, shopping districts, parks and recreation facilities, nature preserves, scenic areas, historic districts/landmarks, transit centers, and schools.
3. Engage all stakeholders at every stage of the trail and path planning process. In particular, affected landowners should be consulted as early as possible when planning to construct new or expanded pedestrian and bicycle facilities.
4. Prioritize the safety of non-motorized trail and path users through employing smart design, sufficient policing, and adequate maintenance of such facilities.
5. Design trails and paths to follow natural contours and embrace natural features along the route. Co-locating trails within and parallel to active and inactive rail lines should also be considered.
6. Consider intended trail usage (i.e. pedestrians, bicyclists, equestrians, wheelchairs, in-line skaters, etc.) during the conceptual trail design process.
7. Adapt technical trail design aspects to accommodate the anticipated usage of the trail based on the design guidelines provided in *Pennsylvania Trail Design & Development Principles, Guidelines for Sustainable, Non-Motorized Trails*, available from PA DCNR. This and other trail development resources are available at [www.dcnr.state.us](http://www.dcnr.state.us) (Search “trail guidelines”).
8. Provide adequate physical buffers between sensitive ecological systems and trail/path routes.
9. Incorporate design features into trail construction that divert water away from and off of the trail in order to minimize the potential for erosion.
10. Develop a trail maintenance plan (TMP) that establishes a trail management structure and identifies the responsibility for maintaining trail networks, providing security for trail facilities, and managing conflicting and competing uses of trails.

# Guidelines: Trails and Paths

11. Provide signage of a common design (i.e., trailhead markers, informational kiosks, warning signs, reassurance blazes) along the same trail and pathway system. Design the signs to complement the surrounding environs through their architectural style and use of materials. Do not use the Pennsylvania Wilds logo on directional trail signs, as the logo may be interpreted as a trail marking and confuse the trail user about which trail they are using.
12. Based on anticipated trail activities, provide appropriate amenities (e.g., restrooms, bike racks, resting/picnic areas, trash receptacles) at trailheads and along trails and paths that meet the needs of users. For instance, hitching posts should be provided along equestrian trails and bicycle racks should be provided along bike trails.
13. In determining which tread materials to use on a path or trail, consider the intended uses and users of the trail/path, loading capacity of the material, surficial quality of the materials, and potential interaction between tread material and area soils. Avoid using paved surfaces in construction of trail networks unless a paved surface already exists or is necessary for user safety.
14. Use native plants for landscaping along trails and paths.
15. Where necessary, install protective railings, fences, gates, and barriers along trails and paths to protect users from adjacent hazards (water bodies, embankments, etc.), restrict vehicle access, and prevent users from trespassing onto adjacent private properties. When selecting building materials for railings, fences, gates, and barriers, utilize natural building materials (i.e., boulders and wood) that complement the surrounding landscape.
16. Plan appropriate access points for watercraft launches and use materials that will prevent or minimize sedimentation of the waterway.
17. If portable restrooms are provided, use screening techniques such as wood fencing to assist in blending them into the environment.
18. Pursue opportunities to create non-motorized paths along rivers and large water bodies. Examples include paved riverwalks and soft-surface trails.
19. Design riverwalks and waterside pathways to be accessible from public streets, sidewalks, parking areas, and adjacent public lands and use Federal ADA requirements wherever possible.

# Guidelines: Trails and Paths

20. Design riverfront access locations with elements that allow leisurely viewing of the waterway and pedestrian comfort (benches, informational signage, public art, etc.). Riverwalks should provide opportunities for a series of interesting experiences that reward the users as they travel along the pathway. These could include benches, viewing areas, interpretive signage, public art, and spaces for group gatherings/events/entertainment.
21. Where possible, allow for periodic areas where riverwalks and waterside pathways can widen to promote waterside activity, such as fishing and watercraft docking. Interaction of waterside and landside activities is desirable along Pennsylvania Wilds waterways in locations where it is physically feasible and environmentally responsible.
22. Employ consistent design elements along riverwalks and trails to deliver a consistent visual image and special sense of place along the pathway. For surfaces, benches, signs, trash receptacles, light posts, and other such elements, use locally available materials such as brick, stone, wood, works of local artisans, and regionally-crafted metals and materials to relate the design to the surrounding environment.
23. As roadways and waterways provide connections between communities, encourage the development of Master Plans and identification of connecting roadways and waterways as they enter and leave communities. From each point of ingress and egress to a community, conduct an assessment of how to best move traffic strategically and safely around and through the community. Resulting “routes” should not only provide mobility to the traveler, but also engage the community’s residents and businesses. The non-motorized routes should promote healthy lifestyles as well as community pride.
24. Plans should provide for intersect access. In other words, highly visible signage along all designated routes (whether motorized or non-motorized) should clearly identify access points for other routes of a different modality. In addition to signage, municipalities may include design and distribution of both printed and digital maps.
25. While recognizing the journey as a significant part of the travel experience, communities are encouraged to be as accommodating and visitor-friendly as possible. As all Pennsylvania Wilds communities are connected, providing the visitor with a positive experience within each community helps ensure repeat visits and word-of-mouth marketing. The positive experience is assisted by accommodations as described earlier, and by the hospitality of local residents and businesses.



Investing in trail networks can spur economic benefits for communities

Ole Covered Wagon Tours - Pine Creek Rail Trail  
Lycoming and Tioga Counties



# Trails and Paths



Design trail signs to complement the surroundings with their architectural style and use of materials



Provide amenities (e.g., restrooms, bike racks, resting/picnic areas, trash receptacles) at trailheads and along trails and paths that meet user needs



Provide wayfinding signage along trails to indicate uses and trail amenities as well as visitor services in nearby towns



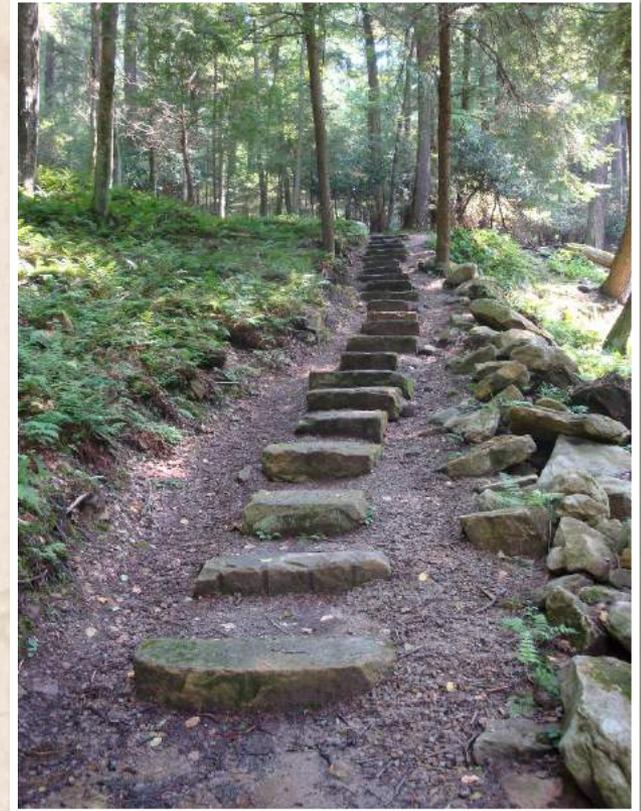
# Trails and Paths



Pursue opportunities to create non-motorized paths along rivers and large water bodies. The 2.25-mile long Levee Trail / William Clinger Riverwalk was constructed on a levee that protects Lock Haven from West Branch Susquehanna River



Use wood and stone (boulders) to enhance the trail experience. This Eric Benjamin Memorial Covered Bridge was built in 2006 to complement the historic stone work on the spillway of the Marilla Reservoir outside Bradford, McKean County.

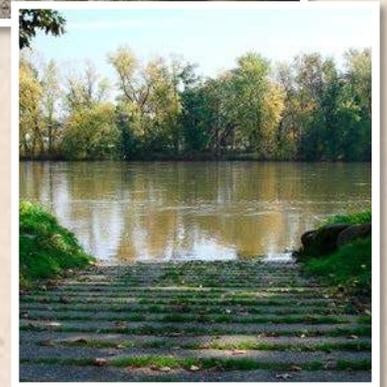


Use natural and locally sourced materials to enhance pathways and trails



# Trails and Paths

## Black Moshannon State Park, Centre County



Clearly identify approved trail uses and directional markers.  
Utilize educational and interpretive signage where appropriate

Plan appropriate access points for watercraft launches and use materials that will prevent or minimize sedimentation of the waterway



Non-motorized transportation networks bolster community health

Redbank Rail Trail  
Clarion and Jefferson Counties





# TOOLBOX: Context Sensitive Transportation

## **Technique 1:** Adapt Road Design Policies to Consider the Land Use Context

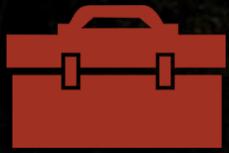
Existing street design policies that are applicable in many cities and towns are outdated, and only focus on accommodating road capacity, and maintaining the efficiency and safety of the circulation system. The by-product of this narrow design philosophy is the prevalence of automobile-centric transportation networks that do not fit the scale and context of their surrounding land use contexts. Furthermore, with the growth in popularity of bicycling and other alternative modes of transportation comes a concomitant demand for communities to provide a more balanced, multi-modal circulation system. Automobile-centric networks typically are designed to bypass the “heart” of a community, and therefore discourage visiting. A more balanced multi-modal circulatory system encourages visitation and promotes economic vitality.

In order to achieve a well-balanced, efficient, and safe multi-modal circulation system, local governments should amend and revise their road design manuals and policies to boost flexibility and incorporate context-sensitive considerations.

### **Areas of street design policies that may require revision include:**

- Roadway width
- Roadside design elements (i.e. sidewalk width and distance from curb)
- Operating speed limits
- Priority of roadway elements
- Considering the development and application of Special Roadway Type overlay areas (i.e. “Main Street,” “Industrial Street,” or “Rural Crossroads”).

Consult the Smart Transportation Guidebook prepared by the Pennsylvania and New Jersey Departments of Transportation for recommended roadway and roadside design guidelines that subscribe to a context-sensitive philosophy.



# TOOLBOX: Context Sensitive Transportation

## Technique 2: Develop and Adopt a Pedestrian & Bicycle Master Plan

Pedestrian & Bicycle Master Plans should address all trails, paths, sidewalks, bicycle routes, and key destinations within a community. Such plans lay the groundwork for implementing a well-designed, integrated, safe, and efficient multi-modal transportation system within the community with focus on context-sensitivity.

Communities can pursue the development of Pedestrian & Bicycle Master Plans as either an approved special project or an adopted section of the comprehensive plan. The latter approach involves revision of the comprehensive plan, zoning, subdivision ordinance, and/or official map, and lends the plan more legal standing and can signify a high degree of support by local elected officials. Municipalities choosing to revise their comprehensive plan to include a Pedestrian & Bicycle Master Plan also become eligible to receive grants from various entities to implement trail and path improvement projects. Public involvement is a key ingredient to developing a comprehensive and effective Pedestrian & Bicycle Master Plan. Additionally, Pedestrian & Bicycle Master Plans should include performance measures to evaluate progress towards achieving the goals and objectives presented in the Plan. For some communities where four-wheeler and snowmobile traffic is permitted on municipal roadways, it may be preferred to develop a more comprehensive Motorized and Non-Motorized Mobility Plan. Incorporating the broader perspective may prove to better accommodate all mobility and safety concerns. Such a plan allows for capturing and providing guidelines for ATV, Snowmobile, waterway craft, and virtually any means of mobility.

### Resource:

Bicycle and Pedestrian Policy Study - The Pennsylvania State Transportation Advisory Committee: [http://www.talkpatransportation.com/docs/TAC\\_Bike\\_Ped\\_Policy\\_Report\\_Final.pdf](http://www.talkpatransportation.com/docs/TAC_Bike_Ped_Policy_Report_Final.pdf)



Business District,  
Kane, McKean County



# TOOLBOX: Context Sensitive Transportation

## Technique 3: Working with PennDOT and Regional Planning Organizations

Seek input from the relevant regional planning organization (RPO) and the Pennsylvania Department of Transportation (PennDOT) as early as possible in the transportation facility design process. RPOs implement regional transportation plans and RPO staff members can be helpful in assisting with PennDOT coordination. PennDOT regularly considers input on transportation facility design from RPOs, counties, cities, townships, boroughs, local community and trail organizations, and others. If a new or replacement bridge is to be constructed, or if streetscape improvement projects are to be undertaken, PennDOT will often work with the community to identify an appropriate bridge design or streetscape enhancements (brick or pavement, lighting, curb design, etc.) so that the project will enhance, rather than detract from, community character.

PennDOT's willingness to coordinate with a local community is greatly enhanced if the municipality has a documented plan in place that demonstrates a public process and identifies the community's preferences with respect to infrastructure for all modalities. The earlier that PennDOT hears from stakeholders about design aspirations, the better chance that those ideas will be considered. Proactive outreach to PennDOT is strongly encouraged, because unless design suggestions are brought to PennDOT's attention early in the planning process, project managers and others are more likely to only consider the most cost-effective (standard) project design available. Therefore, interjecting early allows for context-sensitive solutions to be developed.



Work with PennDOT early in the project to identify desired bridge design enhancements



PennDOT restored (rather than replaced) this historic truss bridge



# TOOLBOX: Context Sensitive Transportation

## Technique 3: Using PennDOT's ProjectPATH Program

PennDOT's Bureau of Project Delivery actively seeks out conversations with trail groups to determine if bridges will be needed now or in the future. If existing but unused vehicular bridges are located in the vicinity of a potential trail route, rather than hastily remove the bridge, PennDOT seeks to determine if the bridge could be used as a trail connection in the future. In addition, historic bridges scheduled for replacement can be moved from an existing site and reused along trails or in parks for non-motorized traffic.

PennDOT's **Project for Pennsylvania Transportation and Heritage (ProjectPATH)** informs local communities about the status of the review process for highway improvements and bridge replacements, evaluating their effects on historic properties, districts, or archaeological sites. The site also offers local groups the opportunity to become official "consulting parties" and to provide public input on how PennDOT might mitigate an "adverse effect" by incorporating features that instead have a positive effect on the community (like providing better pedestrian connections or downtown sidewalk amenities.) ProjectPATH manages a website that lists bridges for sale; however, if a specific bridge length or type is needed for a project, reach out to PennDOT with specifics because they have access to information about many more bridges with the potential for reuse.

Resource Links: <https://www.paprojectpath.org/penn-dot-crm/bridges/bridges-for-sale>

<https://www.paprojectpath.org>





# TOOLBOX: Context Sensitive Transportation

## **Technique 4:** Participating in PennDOT Connects Initiative

Just introduced in 2017, PennDOT Connects, an approach that will enhance local engagement and improve transportation-project planning, design, and delivery, expands PennDOT's requirements for engaging local and planning partners by requiring collaboration with stakeholders before project scopes are developed. PennDOT Connects aims to transform capital and maintenance project development by ensuring that community collaboration happens early, and that each project is considered in a holistic way for opportunities to improve safety, mobility, access, and environmental outcomes for all modes and local contexts. Earlier collaboration will ensure that projects meet current and projected needs as much as possible, and can reduce costly changes further in the project development process.

Specific areas to be discussed during collaboration include, but are not limited to: safety issues; bicycle/pedestrian accommodations; transit access; storm water management; utility issues; local and regional plans and studies; freight-generating land uses and more.