



MID-OHIO REGIONAL MORPC PLANNING COMMISSION

SMART REGION

A smart region is one that embraces and takes action on smart infrastructure investments for the technological age. Through our Smart Region resources, Central Ohio is better prepared for its future.

The following deliverables were developed by the Smart Region Task Force. The task force served as an ad-hoc committee to prepare Central Ohio communities for smart infrastructure investments by developing a shared vision for a “smart region.”

The Smart Regional Task Force worked for nearly a three-year period to examine the potential benefits and unintended consequences of smart infrastructure investments. It is also worked to generate regional policies and guidelines that will lead to the creation of a smart region.



Smart Region Task Force Roster

Name	Affiliation
Dana McDaniel, Chair	City of Dublin
Joe Stefanov, Vice Chair	City of New Albany
Paul Benedetti	Logan County Chamber of Commerce
Courtney Falato	OSU, Smart Cities
Todd Fortune	LCATS
Matt Greeson	City of Worthington
Anthony Jones	City of Gahanna
Rocky Kambo	City of Powell
Holly Mattei	Violet Township
Scott Miller	Ohio University, Russ College of Engineering
Eric Phillips	Union County Chamber of Commerce
Joanna Pinkerton	OSU - Honda Partnership, Transportation Research Center
Letty Schamp	City of Hilliard
Kelly Scocco	City of Columbus Public Service
Angela Siefer	National Digital Inclusion Alliance
Ike Stage	Mayor, Grove City
Mike Stevens	City of Columbus, Smart Columbus
Jonathan Stewart	CAC Member
Emille Williams	COTA
Matt Windholtz	Battelle
MORPC Staff	
William Murdock	MORPC
Aaron Schill	MORPC
Thea Walsh	MORPC
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SMART STREETS POLICY

BACKGROUND

For decades, transportation has been understood primarily as the movement of people and goods via motorized vehicles on a network of publicly funded highways and streets, with most vehicles being privately owned by individuals or companies and supplemented by public transit running on fixed routes. Technological advancements are rapidly transforming this conventional view of transportation into the concept of a mobility system that employs digital communications and information technologies to provide a variety of services for moving people and goods. These include transportation network companies, shared vehicles (motorized and non-motorized), employer-provided shuttles, unmanned aerial vehicles, or drones, and increasingly connected and autonomous vehicles that collect, transmit and share large volumes of data. Similarly, the transportation network is being transformed by the deployment of digital technologies that collect, transmit and share data with its users and managers about traffic, incidents and the condition of the infrastructure.

These emerging technologies must be implemented to improve service delivery and the quality of life in Central Ohio as it continues to grow in population and employment. If implemented thoughtfully, these advancements have the potential to improve safety, reduce congestion, increase system efficiency, and deliver services more effectively.

Digital infrastructure is a key component for deploying these technologies and realizing their benefits. This infrastructure needs to be regional in nature to maximize the potential of these technologies. It requires a significant investment to build and maintain this infrastructure. A regional policy on the deployment of digital infrastructure is an effective way to ensure that public infrastructure investments are made in a way that supports the capability of these technologies to effectively serve public interests and improve the quality of life in Central Ohio.

DEFINITIONS

Smart Streets comprise a mobility system able to leverage current and emerging technologies and data to provide services more effectively and improve the quality of life of all residents.

Digital Infrastructure is the system that provides and supports digital communications, including fiber optic cable, wireless communications, and the hardware and software that supports them.

Intelligent Transportation System (ITS) are technologies that advance transportation safety and mobility and enhance productivity by integrating advanced communications technologies into transportation infrastructure and modes of travel.

Mobility is the quality or state of being mobile or movable.

Mobility System is the infrastructure, services, data, technology, and governance that enables the mobility of people and goods.

VISION

Central Ohio is the leader in creating a regional smart mobility system that is connected, inclusive, secure, and resilient across jurisdictions, providing services effectively to improve the quality of life of all residents.

PURPOSE

To ensure public investments in mobility are planned, selected, scoped, designed, constructed, and maintained in a manner that advances a Smart Region.

GOALS

- Connectivity: Strategically advance digital infrastructure (primarily broadband) and access across jurisdictions throughout the region to improve mobility and the delivery of public services and effectively support economic development.
- Flexibility: The mobility system is flexible, scalable, and able to support evolving digital technologies to improve people's mobility and the delivery of public services.
- Interoperability: The mobility system is interoperable and can effectively and securely collect and share data across jurisdictions for processing and analysis to improve mobility, safety, infrastructure management, and the quality of life.
- Equity: The mobility system is accessible to all people, and emphasizes improving access and mobility for the disadvantaged.

POLICY

Statements

MORPC supports the Smart Streets concept throughout Central Ohio. To promote the acceptance and practice of Smart Streets, MORPC recommends that local jurisdictions and the state of Ohio develop and adopt Smart Streets policies to meet their needs and are compatible with this regional policy.

MORPC seeks to incorporate the Smart Streets concept into the planning, programming, scoping, design, implementation, maintenance, and performance monitoring of all transportation infrastructure and encourages all infrastructure investments in Central Ohio to follow this policy.

This policy will be applied to all projects awarded funding through MORPC. MORPC will ensure the uses of these funds are consistent with this policy, incorporating Smart Streets concepts as appropriate. The policy is intended to identify opportunities where they exist and leverage our investments in infrastructure. It requires sponsors to take certain considerations regarding digital infrastructure into account during project development, document the findings, and provide a rationale for its decisions. The policy does not include the specific criteria for how those decisions will be judged. Those criteria are expected to develop and change rapidly as the technologies emerge and evolve and be very dependent on the individual circumstances of

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each project. Instead, the policy is intended for the project sponsor, the program administrators, and the existing organizational institutions to make informed, transparent decisions about the digital infrastructure components of transportation projects, using standards and criteria they mutually agreed upon. If it is successful, the policy will not result in imposing a burden upon sponsors or their projects, but, through its deliberate application, help to generate the awareness and knowledge necessary to lead them to processes and outcomes they value themselves.

This policy is not intended to create new rights for utilities outside those provided by existing law and contract.

Applicability

Many factors will be considered to determine whether a project is consistent with the policy.

1. Prior to submitting a formal application or request for funding, MORPC staff will be available to the sponsor to review the proposed use of funds, to discuss any potential Smart Streets considerations with the project, and to provide resources for technical assistance.
2. The formal application or funding request shall provide sufficient information about the projects for staff to determine whether the proposed project adheres to this policy. The evaluation and selection process will incorporate Smart Streets concepts.
3. Once MORPC-attributable funds are committed to a project, staff will continually monitor its development through the construction/implementation. This includes review and comment on (if applicable) requests for proposals, field reviews, scoping, preliminary studies, systems engineering analysis, design plans, and change orders to ensure adherence to this policy and provide guidance on incorporating Smart Streets concepts.

Requirements

The policy's requirements are listed below and grouped by the four goals of the policy. Some of these are already required by existing laws, regulations, and standards. They are included here to stress their importance for Smart Street concepts.

Connectivity

1. The project sponsor shall complete the checklist accompanying this policy and provide the information to MORPC.
2. The project shall use the most appropriate development process and design standards. Any digital infrastructure related to the project shall meet accepted industry standards.
3. Project sponsors shall notify the owners of digital infrastructure located within the project limits of the project scope and schedule after MORPC has committed funds to the project. They shall be given the opportunity to participate in the plan review process. This policy is not intended to create new rights for utilities outside those provided by existing law and contract.
4. The sponsor shall provide MORPC with geocoded data for the location, type and specifications of publicly-owned digital infrastructure that was installed as part of the project. Sensitive data must be protected by a non-disclosure agreement.
5. If the project will affect digital infrastructure adjacent to institutional uses or public facilities, such as a police or fire station, school, library, recreation center, government offices, or maintenance facility, the project sponsor shall engage the facility

owner/operator about the possibility of the facility having access, if feasible, to the affected infrastructure.

6. If the construction of a project requires the removal or relocation of the project sponsor's digital infrastructure in current use for a transportation service, the infrastructure shall be maintained by being relocated or replaced. The replacement infrastructure shall meet current industry standards, be compatible with the existing infrastructure, and be sufficient to continue current transportation uses.

Flexibility

1. Project requirements for digital infrastructure shall be sensitive to the context of the project setting, the scope of the project, and cost. Projects in different contexts may take different approaches to Smart Streets.
2. Sponsors shall govern the project's digital infrastructure in a state of good repair through its anticipated useful life and operate the infrastructure securely, in accordance with industry standards.

Interoperability/Data

1. All Intelligent Transportation Systems (ITS) associated with a project shall be interoperable with other such systems serving public infrastructure in the region. They will have the capability to transmit and share data with each other.
2. A systems approach shall be used in developing a project, such that the sponsoring agency has engaged and communicated with stakeholders (within the sponsoring agency as well as any other jurisdictions) about the potential interrelationships between the project and any existing, planned or proposed infrastructure in the vicinity of the project.
3. If there are other adjacent infrastructure projects planned, programmed or in development, the projects should be coordinated to ensure consistency and connectivity among the facilities serving the area.
4. Sponsors of projects with digital infrastructure components are required to have policies in place to guide the collection, use and sharing of data and to ensure the security and privacy of the system and the data within it, especially for potentially sensitive data such as personally identifiable information.
5. Public transit agencies shall be informed of projects being developed in their service areas and shall have the opportunity to coordinate with the project sponsor to jointly consider the ITS aspects of the project. Each transit agency and the project sponsor can determine the appropriate level of participation in project development.
6. All sponsors shall identify any ITS services, inventory elements, functional requirements and interfaces/information flows in the Central Ohio Regional ITS Architecture that are relevant to the project before beginning detailed design or right-of-way acquisition.
7. Projects shall facilitate ITS integration opportunities and ITS extensions of additional/future projects as identified in the Central Ohio Regional ITS Architecture by accounting for future integration requirements and describing how it will support future extensions of the regional architecture.

Equity

1. All digital infrastructure funded by the project must be primarily utilized to serve a public purpose.

2. The sponsor shall ensure that actions taken to comply with this policy do not prevent safe use of the public right-of-way by any mode (e.g., a traffic signal cabinet shall not block the clear walking zone on the sidewalk or encroach on a transit stop).
3. Project sponsors shall comply with all applicable laws, regulations, and standards regarding the installation and placement of digital infrastructure.

Recommendations

The following statements are recommendations. Project sponsors and others are not obligated to follow any of these recommendations to be considered in compliance with this policy.

1. Local governments are encouraged to adopt their own Smart Streets policies to meet the needs of their communities. They should strive for consistency with this regional policy and federal and state requirements.
2. State government agencies should work with Metropolitan Planning Organizations to ensure consistency in digital infrastructure policies at the state, regional and local level.
3. Project sponsors are encouraged to build redundancy and resiliency into digital infrastructure to a degree that is in accordance with industry best practices.
4. Project sponsors may encourage colocation with private utility infrastructure provided that it does not inhibit public use of the infrastructure or right-of-way.
5. Project sponsors should allow other local governments and public uses the option to pay for the use power and fiber installed as part of the project that is not reserved by the sponsor for a specific public use. See also Recommendation 4 regarding private uses of the conduit.
6. Project sponsors should consider incorporating other connected technologies into their projects that can benefit from and maximize the utility of the digital infrastructure being installed, such as smart lighting, traffic surveillance, security surveillance, data collection and reporting.
7. Project sponsors should avoid use of proprietary point technologies where practicable in favor of interoperable technologies.
8. Traffic signal maintenance should include upgrades to support connected vehicles when it can be installed at a comparably lower cost than a subsequent retrofit.
9. As multiple mobility providers emerge and the usage of shared/autonomous vehicles increases, the demand for curb space may become acute at certain times and places. Local agencies should consider policies to equitably and effectively manage these spaces.
10. MORPC advocates for open data sharing, good data governance and the adoption of policies to ensure data security by local public agencies. However, it also recognizes that every situation presents unique challenges and trade-offs such that these principles cannot be applied to specific projects nor every circumstance.

Appeals

If the sponsor and MORPC staff are unable to reach an agreement on assuring compliance with a provision of this policy, sponsors may ask the Attributable Funds Committee to grant an exemption from the provision or to review the situation. MORPC staff will review the request and provide a report with recommendations to the committee in advance of the decision. In the event that the sponsor disagrees with the action of the Attributable Funds Committee, the sponsor may appeal to the MORPC Policy Committee officers, who may or may not elect to hear the appeal request.

IMPLEMENTATION

Upon approval and adoption of this policy, the Attributable Funds Committee will be tasked with incorporating Smart Street concepts into the project selection process for MORPC-attributable funds. The policy will also guide MORPC staff in the preparation of the Metropolitan Transportation Plan and other plans it prepares or to which it contributes.

A resource guide will be developed to assist sponsors in developing projects that comply with the Smart Streets Policy. This guide will contain project-specific best practices, sample policies, funding opportunities, and information on other resources.

EVALUATION

MORPC reports annually on the region's progress toward targets established in the Metropolitan Transportation Plan. These targets include several ITS-related targets that can be considered in evaluating the effectiveness of this policy.

MORPC collects data on several aspects of projects receiving the assistance of MORPC-attributable funds, such as the lead agency, location, limits, type of work, length, number of travel lanes, pedestrian facilities, bicycle facilities, and funding by phase, source and year. Digital infrastructure components of these projects will be tracked through reporting mandated by Connectivity Requirement #4.

Portions of the Policy that are the subject of an appeal heard by the Attributable Funds Committee will be subsequently reviewed by the committee, and any recommendations concerning the policy will be considered for approval by MORPC's Community Advisory, Transportation Advisory, and Transportation Policy committees.



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SMART STREETS POLICY PROJECT CHECKLIST

PROJECT SCOPE

Using available information, check any of the following that could potentially be involved in the project:

- Right-of-way acquisition
- Utility relocation
- Excavation of more than 3 feet below ground level
- Traffic signal infrastructure
- Light poles

What transportation-related or mobility function will be performed by the digital infrastructure elements of the project?

CONNECTIVITY

Please cite the specific design guidance or resources related to digital infrastructure that you expect to use in the development and design of your project.

Will the project affect digital infrastructure in the vicinity of any institutional uses or public facilities? Check all that apply:

- Police or fire station
- School
- Library
- Recreation center
- Government offices
- Maintenance facility
- Other (please specify): _____

What digital infrastructure is currently present in the project area? Will it be maintained in place or will it potentially need to be relocated or replaced? What digital infrastructure is expected to replace the existing infrastructure to meet current industry standards and be sufficient to continue current public uses?

What communications infrastructure (e.g. coax, fiber, conduit, duct bank, pull boxes) are present in the project area? What specifications/details (owners, users, number of strands, lines, capacity) are known about each one?

What are the current publicized connection speeds of internet service available in the project area?

FLEXIBILITY

What agency will be responsible for ongoing maintenance of the digital infrastructure and how will this be budgeted? If the project sponsor is not responsible for maintenance after the project ends, please indicate responsible agency name. Please attach the maintenance agreement.

INTEROPERABILITY

Project limits should be selected so that they can accommodate existing and future connections. If the project touches another jurisdiction, was a systems approach taken? Were cross-jurisdictional connections considered?

Identify any public transit services and stops in the project area. Describe any engagement with the transit service provider regarding this project.

Will the digital infrastructure systems associated with this project be interoperable with other such systems serving public infrastructure in the region?

Identify any Intelligent Transportation Systems (ITS) services, inventory elements, functional requirements and interfaces/information flows in the Central Ohio Regional ITS Architecture that are relevant to the project.

Does the project present any ITS integration opportunities and ITS extensions of additional/future projects as identified in the Central Ohio Regional ITS Architecture? Describe how it will support future extensions of the regional architecture.

What policies are in place to guide the collection, use and sharing of data and to ensure the security and privacy of the system and the data within it?

EQUITY

Identify people and organizations that are expected to benefit from the digital infrastructure proposed in the project and any people and organizations that could have a potential benefit.