



pennsylvania
DEPARTMENT OF TRANSPORTATION


What is Smart Transportation?

“Smart Transportation is partnering to build great communities for future generations of Pennsylvanians by linking transportation investments and land use planning and decision making.”


Integrating Smart Transportation

Understand the Context
Must be determined in Planning – Pre TIP
Context **MUST** consider:

- Land Use
- Community
- Environment
- Transportation
- Financial



“Sustainability must be reflected in all our infrastructure investments...
... it implies a commitment to the principles of livability...
The era of one-size-fits-all transportation projects must give way to one where preserving and enhancing unique community characteristics, be they rural or urban, is a primary mission of our work rather than an afterthought.”



*Secretary Ray LaHood, US DOT
January 21, 2009*

Implementing Smart Transportation

- 1 Increasing Partnership Efforts
- 2 Changing the Rules
- 3 Changing the Decision Making Processes

1. Increasing Partnership Efforts

- Sharing Smart Transportation message
- Strategic discussions with partner agencies and organizations and local municipalities
- Outreach activities and interactive workshops with local officials and professionals




Planning Roles PA

- Land use controls are at the local government level – in accordance with the MPC
- County planning agencies
 - Want to be involved
 - Have relationships with their municipalities
 - Have a good grasp on development
- MPO's/RPO's have the responsibility for regional transportation planning

Partnering Actions

| | |
|--|---|
| <p>PennDOT & Planning Partners</p> <ul style="list-style-type: none"> • Work with municipalities to understand land development decisions and limitations • Work together to understand how to manage and maintain existing transportation assets • Understand local planning and transportation goals and align project alternatives with these goals | <p>Municipalities</p> <ul style="list-style-type: none"> • Make land use decisions based on understanding of long-term transportation impacts and fiscal realities • Improve local network connectivity • Adopt ordinances that promote smart transportation (access management, mixed-use, TOD, etc.) • Promote alternative modes of transportation • Plan regionally and work with all levels of government |
|--|---|




Ordinances can encourage land uses to treat streets as traffic conduits

3. Changing the Decision-Making Processes

Revised Project Delivery Process

- Including partners in the development of new process- Municipalities, MPOs/RPOs, Resource Agencies
- Emphasis on planning
- Organizational changes to respond to new focus
- Link Mobility Plan, L RTPs and TIPs – and reduce delivery times
- Develop Smart Transportation selection criteria for TIPs & L RTPs




Project Development Process Goals

- Invest in projects that are needed and supportive of community, regional and state goals
- Increase the predictability of program
- Ensure ownership of fiscal responsibilities
- Increase sustainability by linking land use and transportation decisions
- Improve environmental process
- Strengthen the linkage between long range plan and programming decisions

Key Changes

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|--|---|---|---|---|--|
| Problem Assessment | Problem Identification in L RTP | Problem Initiation | Problem Definition | Project Identification in TIP/STIP | Preliminary Engineering/ NEPA Decision | Final Design/ Construction |
| Focus on and define the problem, not the solution | Determine the priority of the problem within the region Use an asset management methodology to understand the priority of problem Use evaluation criteria consistent with Mobility Plan to prioritize problems | Identify potential range of land use and multi-modal transportation solutions Enhance coordination with municipalities, resource agencies and stakeholders | Identify range of potential solutions, costs and schedules Understand the surrounding future land use and transportation context | Develop more definitive costs and schedules for projects Use evaluation criteria that are consistent with the Mobility Plan to determine which projects are funded | Use planning decisions & better-defined project need to streamline this phase | More accurate schedules and costs will increase predictability and streamline this phase |



Understanding
Land Use and
Transportation
Contexts



Key Smart Transportation Approach:

Flex roadway design to respect
the land use context



Identifying and Using Land Use Contexts

RURAL
SUBURBAN CORRIDOR
SUBURBAN CENTER
SUBURBAN NEIGHBORHOOD
TOWN / VILLAGE CENTER
TOWN / VILLAGE NEIGHBORHOOD
URBAN CORE

Conventional Functional Classification

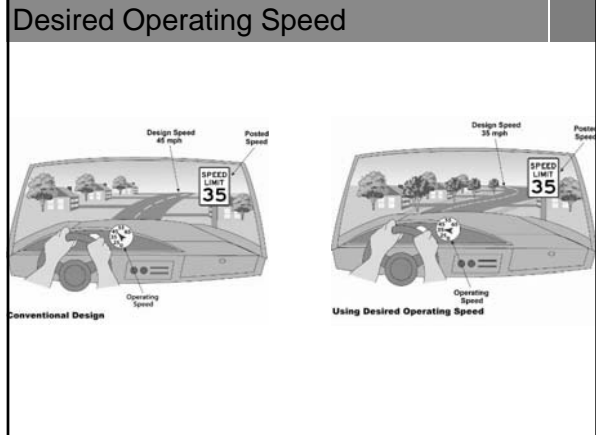
Arterial Collector Local

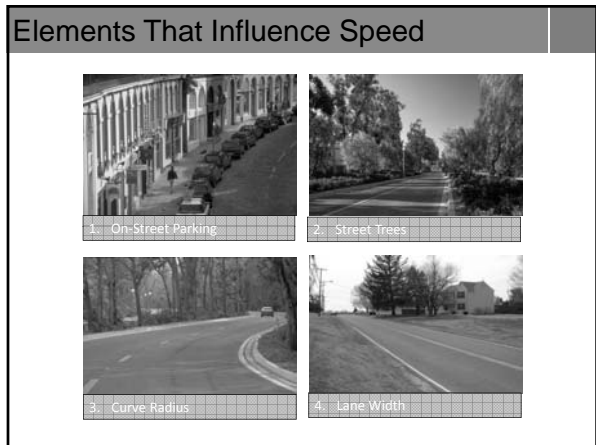
Why rethink function classification?

Just a few reasons...

- Some arterials carry predominantly local traffic and have many access points
- The design speed for the arterial class can be too high for an arterial serving as the "Main Street" of a community
- As land uses change, so should roadway design

Both of these roadways are principal arterials







Design Using the Principles

- Know the land use context
- Know the roadway type
- Set the desired operating speed
- Refer to the Matrix for the starting design values

Keys to a Smart Transportation Approach

Apply flexibility in new DM-2

Approach all projects by identifying the most urgent needs –ALL MODES

Determine most cost-effective solutions

Identify the existing and planned land use context on every project

Understand the interaction of the roadway with the larger network

Identify the desired operating speed

Design the roadway to reflect the project area context

Promote a well-connected roadway network wherever possible

Apply design exceptions when appropriate, without compromising safety

Applying the Principles

- Practical Experiences?
- What is working well?
- What are the CHALLENGES?

www.smart-transportation.com

 **Smart Transportation**
It starts with me

about | get involved | news | resources | contact | links



[Click here for the latest information on the Pennsylvania Commuter Transportation Initiative \(PCTI\) and Highway Occupancy Permits.](#)

We all know the world is changing rapidly around us. Every day, we see the prices increase at our local gas station, we read in the newspaper about global warming, we talk to our neighbors about traffic congestion or the slowing economy.

All of these trends are changing the needs and demands of our transportation system. To adapt to the changing world, the Pennsylvania Department of Transportation (PennDOT) is integrating a concept called "Smart Transportation" into the way we do business.

Smart Transportation simply asks us to understand and embrace our evolving financial, environmental, technological, and social contexts as we approach our transportation challenges. It is about consistently applying the most innovative tools and ideas to solve our new transportation challenges, while also helping to build great communities across Pennsylvania.

On this website, you will find a number of resources that will help you understand what we are trying to achieve, and how you can get involved with the effort. We are still constructing this website, and it will be continually updated as the Smart Transportation effort goes forward. Please email us at smarttransportation@state.pa.us with any comments or suggestions.

We look forward to everyone's help as we seek to build a more efficient, affordable, and sustainable transportation system. Together, we can ensure that our communities remain great places for future generations of Pennsylvanians.
