

Sustainable Public Rights of Way (SPROW) Subcommittee Meeting

February 5, 2025, 10:30 a.m. to 12:00 p.m.
(Virtually via Microsoft Teams)



North Central Texas
Council of Governments
Environment & Development

Agenda

1. Welcome and Introductions

Discussion Items

2. The Smart Surfaces Peer Learning Network

3. Celebrating Leadership in Development Excellence (CLIDE) Awards

4. Chapter: Green Infrastructure and Low Impact Development

5. Chapter: ROW Planning, Administration, and Policy

6. Chapter: Complete Streets

Other Business and Roundtable Discussion

7. Public Works Program Updates

8. Roundtable

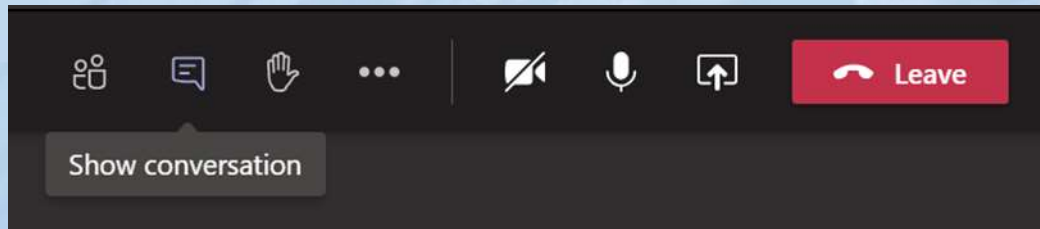
9. Schedule for the Next Meeting.

10. Adjournment



1. Welcome and Introductions

- The meeting agenda, presentation and handouts are located on the SPROW subcommittee [webpage](#)
- Please use the chat function to add your name and organization for attendance



DISCUSSION ITEMS



2. The Smart Surfaces Peer Learning Network





The Smart Surfaces Coalition is made up of more than 40 leading national and international organizations with a shared commitment to creating **cooler**, **healthier**, and **more resilient** cities by cost-effectively reducing the impacts of extreme urban heat and flooding.

Smart Surfaces

Infrastructure strategies that cost-effectively manage urban heat and stormwater while maximizing health, climate, and equity co-benefits

Reflective/Cool Roofs



Green Roofs



Porous & Permeable Pavements



Solar Photovoltaics



Reflective/Cool Pavements



Trees



Green Stormwater Infrastructure



Zero & Negative-Carbon Concrete



Cities for Smart Surfaces

SSC is partnering with 10 metro areas across the US to facilitate the adoption of Smart Surfaces at the metropolitan level and working with communities in those regions to support community-led, local Smart Surface implementation projects.



Funded and Engaged SSC Partners

Project Coordinator



Data Visualization and Cost-Benefit Analysis



City and Community Support



Federal Funding



COLUMBIA LAW SCHOOL

SABIN CENTER FOR CLIMATE CHANGE LAW



Policy + Legal



COLUMBIA LAW SCHOOL

SABIN CENTER FOR CLIMATE CHANGE LAW



Health Research and Communications



HARVARD
T.H. CHAN
SCHOOL OF PUBLIC HEALTH

Smart Surfaces Policy

Baltimore:

- [Cool Roof Ordinance](#)
- [Urban Meadows Research](#)
- [Tree Canopy Protections](#)
- [Climate Resilience Authority](#)

Charlotte:

[Sustainable Facilities Policy](#)

Dallas:

[Comprehensive Energy and Climate Action Plan Bond Resolution \(\\$1.25 Billion\)](#)



Image credit: [Dumbarton Oaks Park Conservancy](#)



Image credit: [Dallas CEAP](#)

Smart Surfaces in Public Right-of-Way ([complete slide deck](#))

Incorporating smart surfaces into traffic calming measures cost-effectively reduces traffic-related accidents, manages stormwater, reduces extreme heat, and improves air quality



[Retrofitted intersection with stormwater retention and traffic calming](#) in DC

Image Credit: Toole Design

- 20% of all traffic deaths involve pedestrians or cyclists
- After adding a landscaped center strip and narrower traffic lanes, **accidents involving pedestrian crossings decreased by 80% and overall accidents decreased by 30%**



[Solar reflective paint coating](#) in Los Angeles

Image Credit: GAF

- Painting murals on the streets **decreased accidents involving pedestrians and cyclists by 50%**
- Solar-reflective coatings can reduce ambient air temperatures and surface temperatures during extreme heat days

Curb Extensions/Bumpouts, Protected Lanes



[“Stormwater Bumpout” on Queen Lane, Philadelphia](#)

Image Credit (left and above): Philadelphia Water Department



[Newcomb Avenue - San Francisco Public Utilities Commission](#)

“The sustainable streetscape project on Newcomb Avenue is not only **reducing peak stormwater flow rates by 72–83%**, but has **reduced 85th percentile speed 3 mph** in each direction and **halved the volume of motor vehicle traffic** cutting through this neighborhood street.”

Image and Text Credit (left) - [National Association of City Transportation Officials](#)

Case Study: Boston's green infrastructure policy for curb extensions



[Protected bike lane to separate vehicles from bikes in Boston, MA](#)

Image Credit: City of Boston's Office of Green Infrastructure Instagram Account

City design standards require that **curb extensions** use the following green infrastructure alternatives in place of impervious materials:

- Bioretention in the right-of-way (e.g., rain gardens and bioswales)
- Infiltration tree pits/tree trenches
- Porous Paving
- Stone subsurface infiltration area
- One-time seeding of groundcover, low-grow fescue or wildflower mix



[Green infrastructure curb extension in Dorchester neighborhood of Boston, MA](#)

Image Credit: City of Boston's Office of Green Infrastructure Instagram Account

Designing Traffic Calming Circles and Roundabouts

Traffic calming circles and roundabouts can be designed to manage stormwater by

- installing **at or below grade** where feasible
- incorporating **curb inlets**
- including **green infrastructure**, like bioretention, permeable pavers, and use of native plants

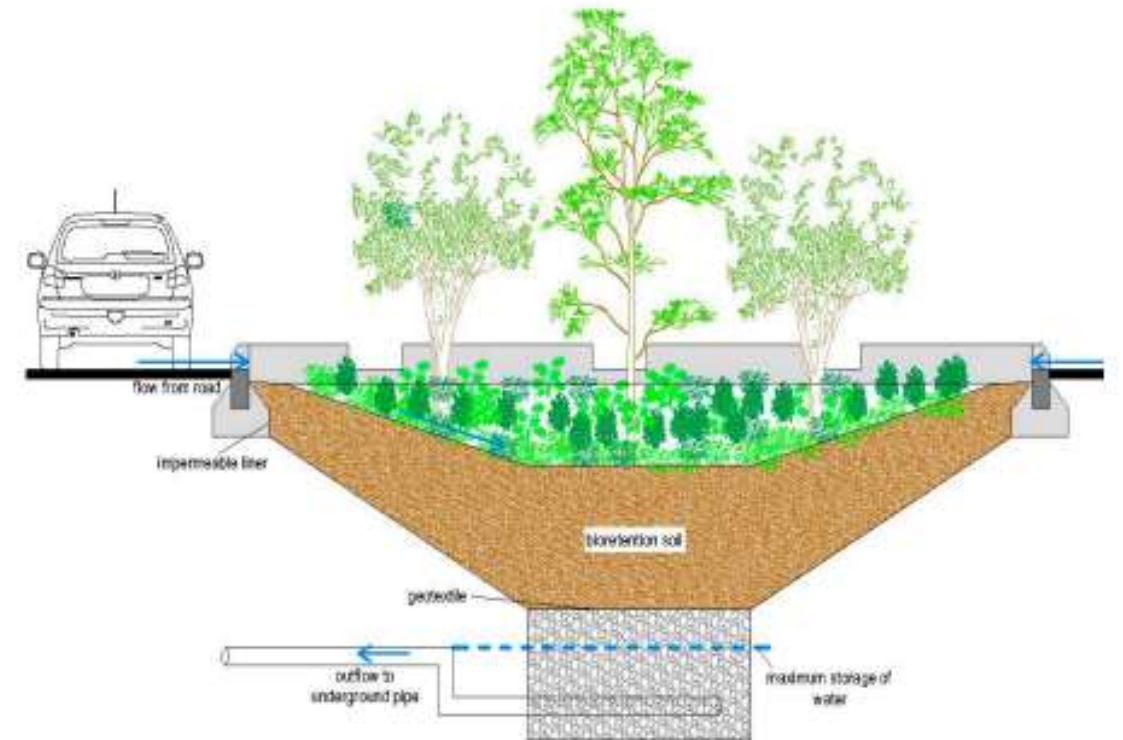


Image is a conceptual sketch of a bioretention system in a roundabout
Credit: Priari (2018) "[Promoting the Use of Public Areas for Sustainable Stormwater Management in Cities with Mediterranean Climate](#)"

Tucson's Traffic Calming Circles

City of Tucson has implemented numerous traffic circles with bioretention basins. The city's [Green Stormwater Infrastructure and Low Impact Development Standard Details and Site Guidance](#) states:

“Traffic circles with stormwater harvesting basins in the planting areas can provide important traffic calming and nuisance flooding benefits.”



Image Credit: [City of Tucson, AZ](#)



Image Credit: [HarvestingRainwater.com](#)

Visual and Texture Changes for Pedestrian Safety and Stormwater Management



[Installation of permeable pavers in traffic intersection in Maryland.](#) The pavers pictured above are capable of supporting [AASHTO HS-25 truck loading](#).

Image Credit: Ernest Maier

Texture and visual changes can provide traffic calming effects, and can be combined with permeable pavers for stormwater management in

- pedestrian crossings
- pedestrian refuges in traffic medians
- shared public ways
- transit stops
- furnishing zones
- low-speed traffic intersections

Road Markings, Painted Lanes

*Consider using **solar reflective pavement paints** for road markings, special use lanes, and intersections to **increase visibility** and reduce the **urban heat island effect**.*



Image Credit: [HUBSS](#)



[Crosswalk coating for high visibility in Baltimore, MD](#)

Image Credit: Graham Projects



Bike lane in Portland, OR. Image Credit: National Association of City Transportation Officials

SSC Web Tools

✓ Decision Support Tool



✓ Benefit-Cost Analysis Tool

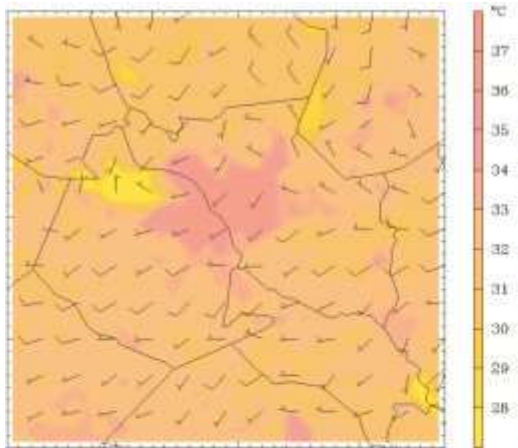


✓ Smart Surfaces Policy Tracker



Together, these three tools help cities and metro areas develop and implement climate, sustainability, and/or resilience policies, plans, grant applications and infrastructure investments

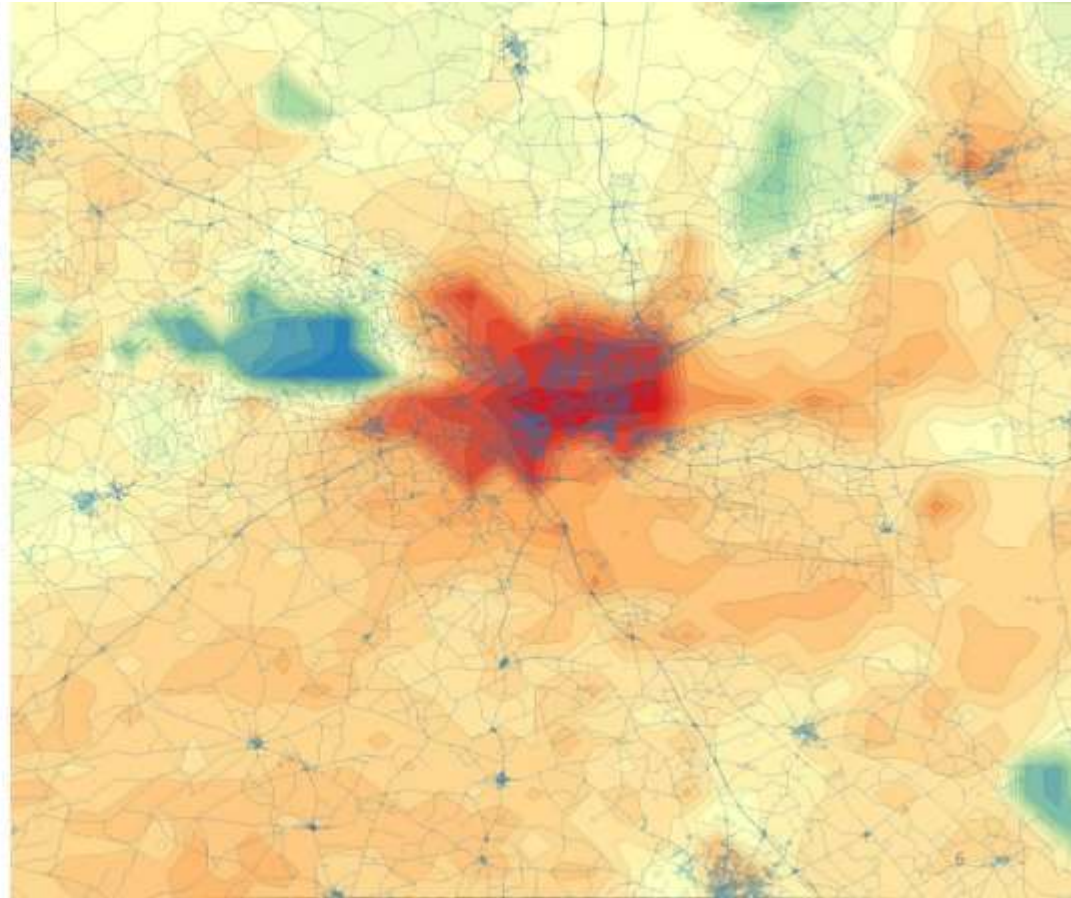
SSC tools build on Altostratus micrometeorological modeling...



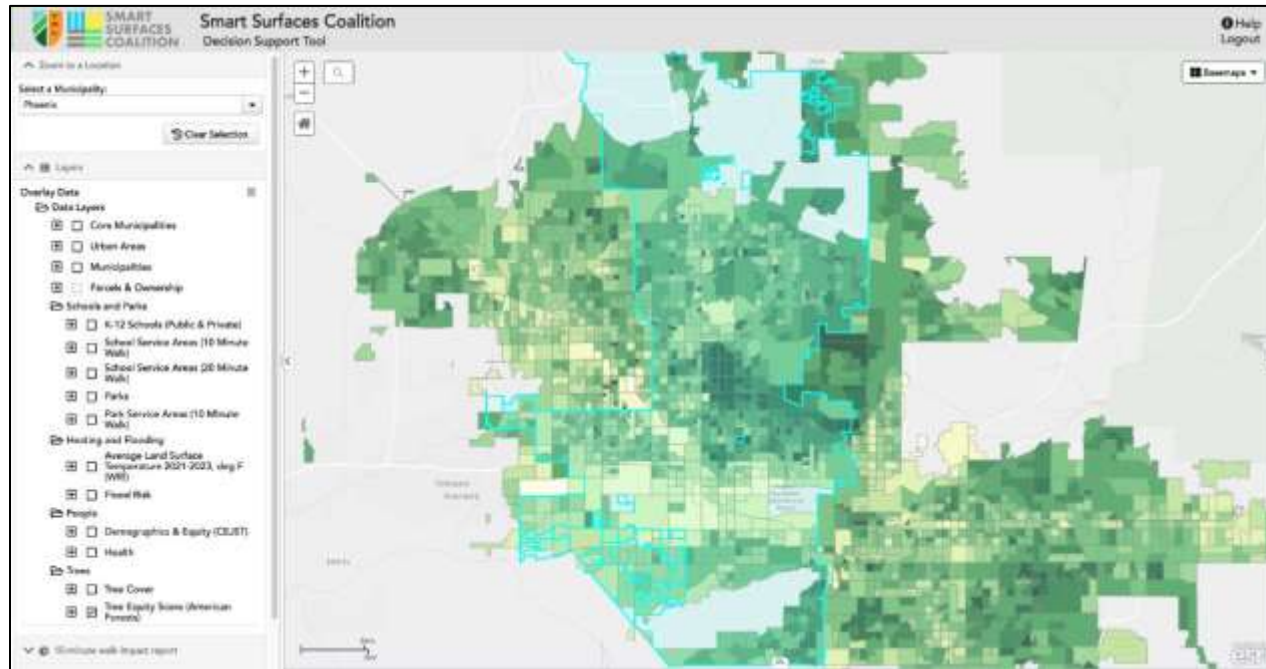
Columbia, SC

- Model air temperature (2 m AGL, °C)
- 3 km resolution
- 1400 EDT, July 2, 2022
- Wind: WSW

9/6/2023 Altostratus^{Inc.}



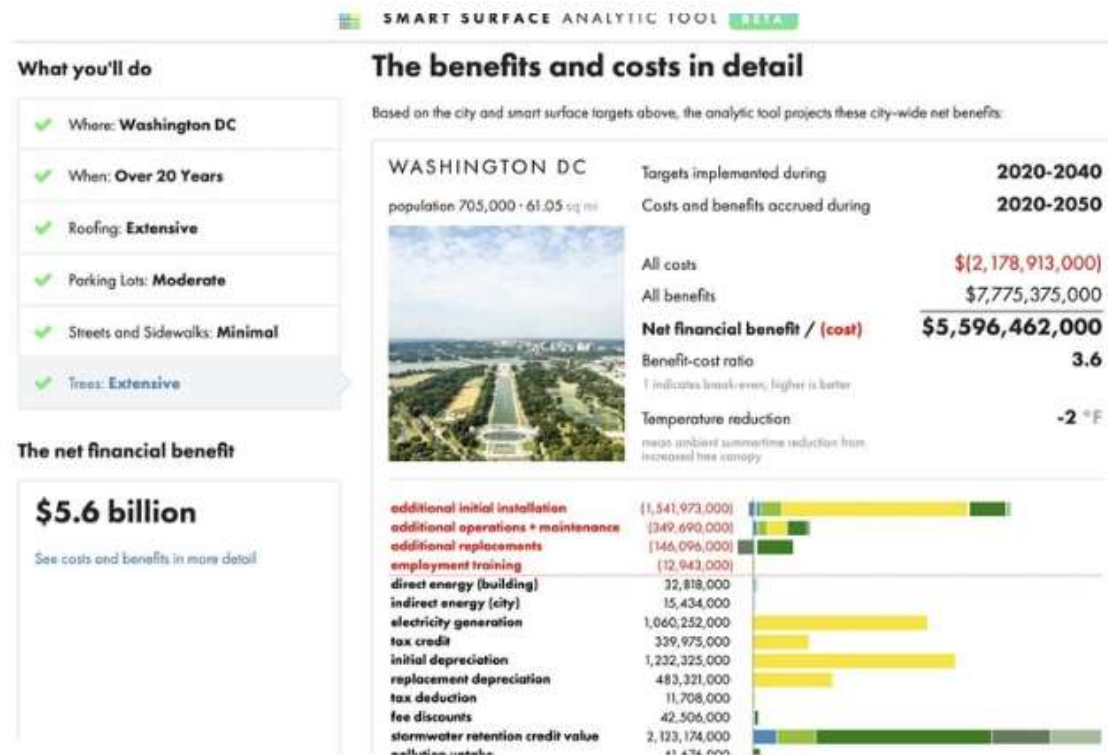
Decision Support Tool (DST)



Supports:

- Communication/education between city staff, policy makers, and public
- Development of city plans, policies, and grant applications
- Project and site prioritization

Benefit-Cost Analysis Tool (BCAT)



Includes:

- \$\$, °F, and CO2e impact through 2030, 2040, and 2050
- Benefits from energy, air quality, stormwater, health, and more

Allows municipalities to:

- Model impacts of policy changes and city- and neighborhood-scale infrastructure projects
- Communicate to public, city staff, policy makers, and City Manager/Mayor
- Analyze metrics for city plans and provide data for federal and state grant applications

Smart Surfaces Policy Tracker (SSPT)

SMART SURFACES POLICY TRACKER

POLICY TRACKER

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FILTER BY POLICY TYPE(S):

Any

FILTER BY POLICY GOAL(S):

Any

FILTER BY SMART SURFACE(S):

Any

FILTER BY CLIMATE ZONE:

Any

FILTER BY STATE:

Any

FILTER BY REGION:

Southwest

FILTER BY JURISDICTION:

Any

FILTER BY JURISDICTION SIZE:

<10K

SEARCH:

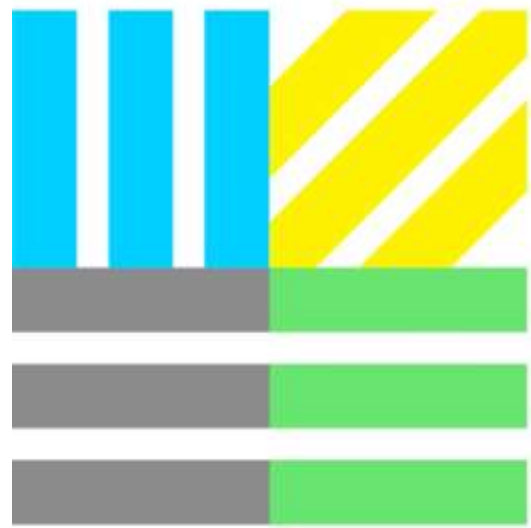
Enter keywords

SEARCH CLEAR

CURRENT FILTERS:

Allows policymakers to:

- Search for policies by Smart Surface technology, jurisdiction size/location, climate zone, etc.
- Identify/compare policy language from peer cities
- Review 450+ policies to date



**SMART
SURFACES
COALITION**

3. Celebrating Leadership in Development Excellence (CLIDE) Awards



North Central Texas
Council of Governments
Environment & Development



CLIDE

Celebrating Leadership In Development Excellence

Awards 2025



Applications accepted Feb. 3 – Feb. 28, 2025

www.developmentexcellence.com



Celebrating Leadership in Development Excellence (CLIDE) Awards honors

development and planning projects that exemplify the region's Principles of Development Excellence which outline a vision for sustainable, livable communities in North Texas.

The North Central Texas Council of Governments (NCTCOG) is looking for projects and programs in North Texas that exemplify these principles.

Applications accepted Feb. 3 – Feb. 28, 2025
www.developmentexcellence.com



CATEGORIES FOR SUBMITTAL

New Development

Projects on previously undeveloped sites exemplifying many Principles of Development Excellence.

Redevelopment

Projects that reuse or rebuild existing structures, exemplifying many Principles of Development Excellence.

Special Development

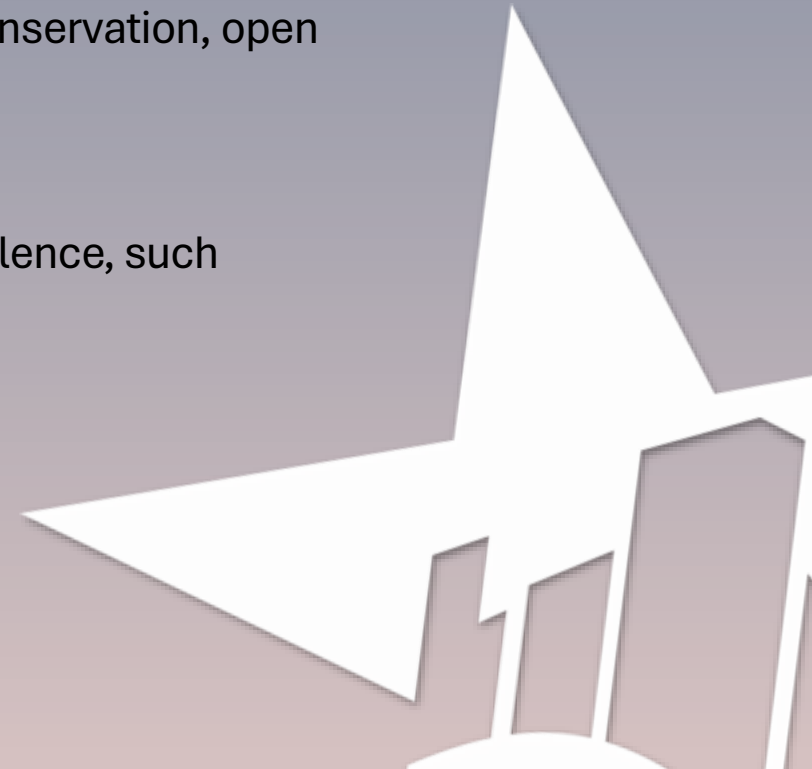
Projects that excel in promoting one or two Principles of Development Excellence, which could include Environmental Stewardship. Examples include sustainable infrastructure, energy conservation, open space or trail projects, and low-impact development.

Raising Public Awareness

Organizations or individuals that have educated the public about development excellence, such as through media stories or public education campaigns.

Public Policy and Planning

Entities that have adopted policies or programs related to Principles of Development Excellence. Examples include mixed-use policies, open space protection, historic preservation, design standards, and comprehensive plans.



4. Green Infrastructure (GI) and Low Impact Development (LID)

EPA promotes the use of Low Impact Development (LID) and Green Infrastructure (GI) as a cost-effective and resilient approach to stormwater management.



4. Green Infrastructure (GI) and Low Impact Development (LID) - Examples

Some Benefits of (GI) and (LID)

Community benefits include;

Cleaner Water
Wildlife Habitat

Enhanced Aesthetics

May Supplement Localized or Watershed Flood Protection



4. Green Infrastructure (GI) and Low Impact Development (LID) - Examples



Rain Garden in Parking Lot

Resources

- National Flood Insurance Program Community Rating System Coordinator's Manual, FIA15/2013
- CRS Resources: <http://www.crsresources.org>
- Low Impact Development: <http://water.epa.gov/polwaste/green/index.cfm>
- Green Infrastructure: http://water.epa.gov/infrastructure/greeninfrastructure/gi_what.cfm



Bioretention Swale in Parking Lot

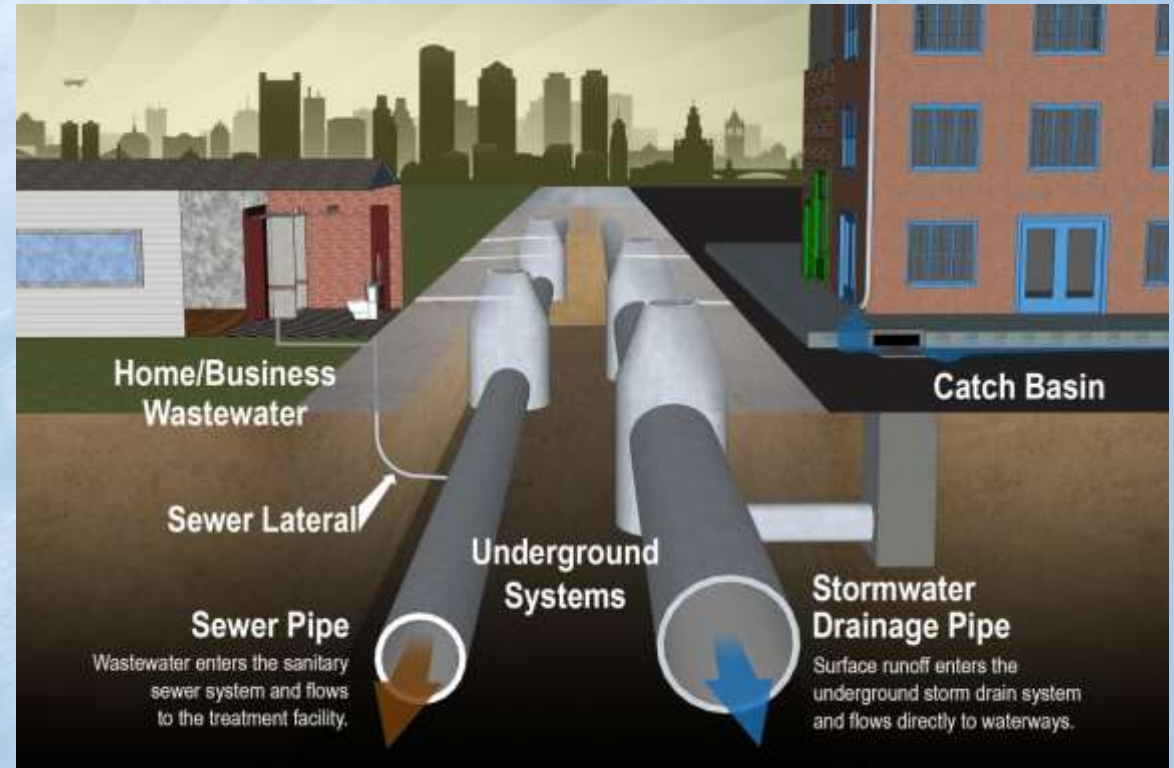


5. ROW Planning, Administration, and Policy

Joint Trenching

Guidelines for maximum and minimum size of pipe and/or junction box/vault.

AASHTO Specs for Storm Water Drainage Pipes, Manholes ETC



www.linkedin.com/pulse/aashto-specs-storm-water-drainage-pipes-manholes-etc-muhammad-bhatti/



5. ROW Planning, Administration, and Policy, cont.

Plan Requirements - Engineered, Sealed, As-builts

As-constructed record drawings (commonly called “As-builts”) are the record of the Project as constructed. As-builts are an essential resource when permitting for:

- New Construction
- Utility Relocation
- Demolition
- Rehab Projects



<https://learn.aiacontracts.com/articles/how-aia-contact-documents-address-as-built-drawings/>



5. ROW Planning, Administration, and Policy, cont.

Signal Light Timing

Traffic signals directly impact the quality of a transportation system



https://www.auburnmaine.gov/CMSContent/Boards_and_Committees/Elke_Ped_/COMPLETESTREETSBESTPRACTICESMANUAL.pdf

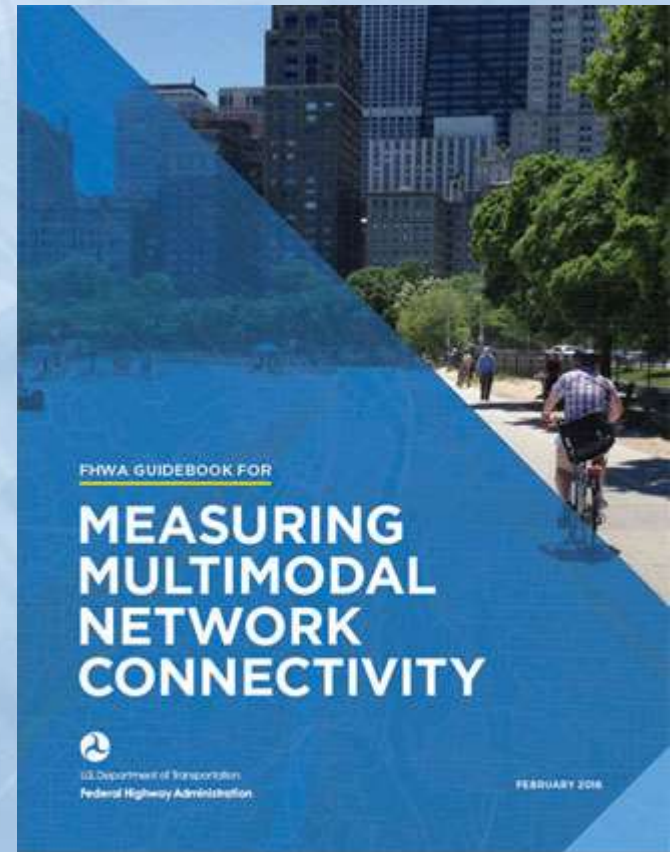


5. ROW Planning, Administration, and Policy, cont. - Examples

Federal Highway Administration (FHWA) published this Guidebook



WHAT ARE MULTIMODAL NETWORKS? Networks are accessible, interconnected pedestrian and/or bicycle transportation facilities that allow all users to safely and conveniently get where they want to go.



https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_connectivity/



5. ROW Planning, Administration, and Policy, cont. - Examples

National Cooperative Research Program (NCHRP) Report 841: Development of Crash Modification Factors for Uncontrolled Pedestrian Crossing Treatments



<https://nap.nationalacademies.org/catalog/24627/development-of-crash-modification-factors-for-uncontrolled-pedestrian-crossing-treatments>



6. Complete Streets

(FHWA) URBAN TREE AND UTILITY POLE RECOMMENDED PRACTICES

Urban practitioners have the opportunity to influence the design of highway and street projects and mitigate safety concerns before they arise.

“...the design process must balance [landscaping] benefits with the necessity for roadside safety.”

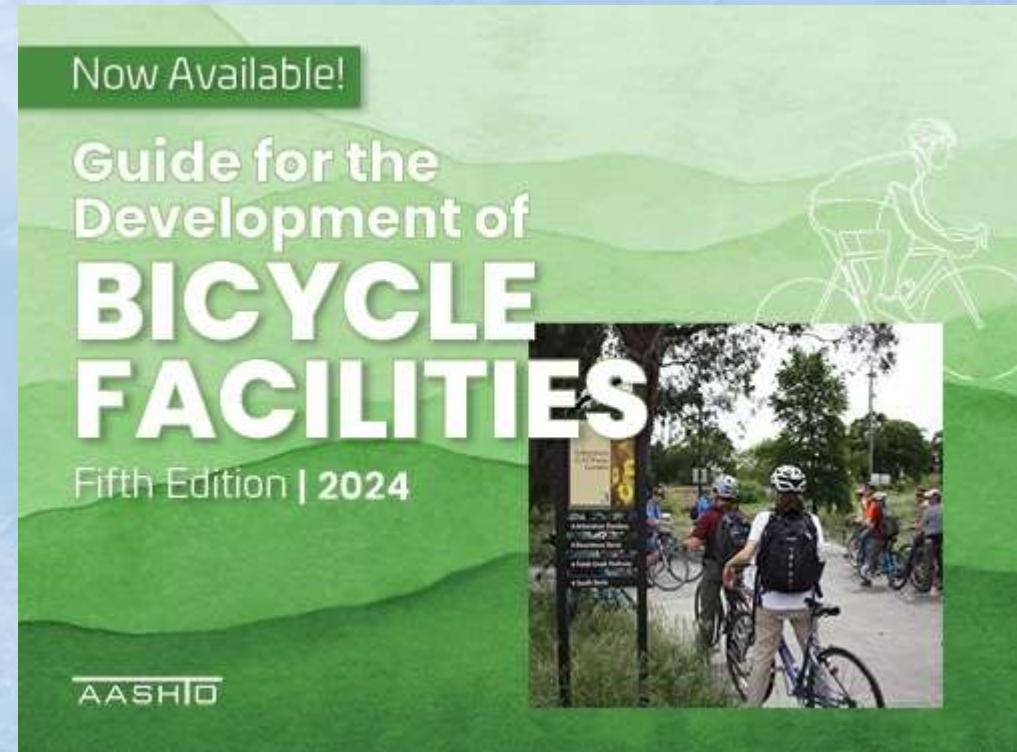
https://safety.fhwa.dot.gov/roadway_dept/countermeasures/safe_recovery/clear_zones/fhwas16043/ch4.cfm



6. Complete Streets

AASHTO Releases 5th Edition of Comprehensive Bike Guide

This guide provides information on the planning, design, and operation of bikeways along streets, roads, and highways, as well as on off-street paths in urban, suburban, and rural settings.



<https://aashtojournal.transportation.org/aashto-releases-5th-edition-of-comprehensive-bicycle-guide/>



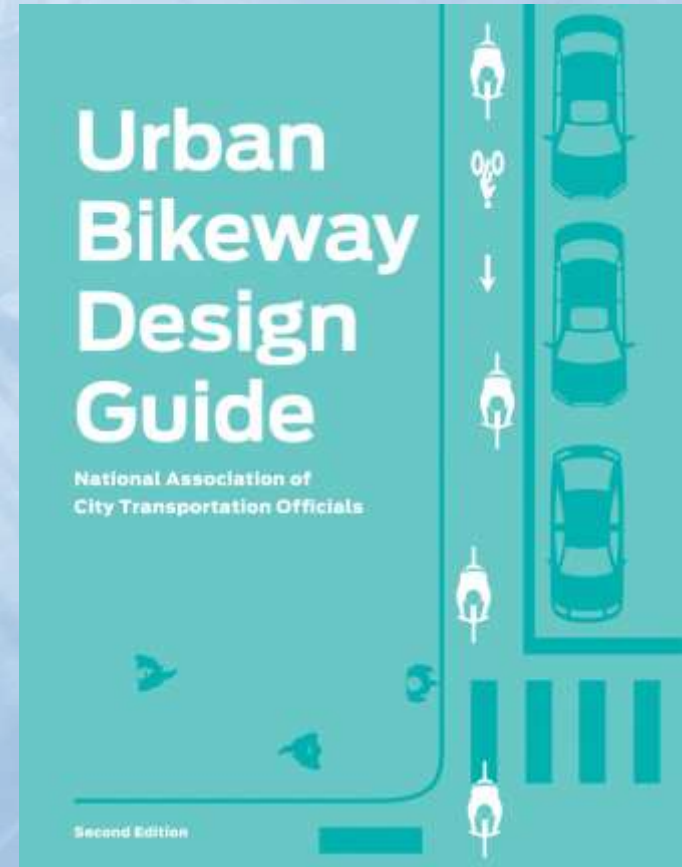
6. Complete Streets - Examples

This guide explains that Bikeway Signing and Marking is primary to:

Indicate the presence of a bicycle facility

OR

Distinguish that facility for bicyclists, motorists, and pedestrians



<https://nacto.org/publication/urban-bikeway-design-guide/bikeway-signing-marking/>



6. Complete Streets - Examples

United States Department of Transportation (USDOT) has developed a powerful new decision-support AI tool for state, local and tribal transportation agencies that assists in the siting, design, and deployment of Complete Streets.

Complete Streets AI: Generating, Integrating, and Activating Data for Mobility

- Complete the Data Gap
- Develop a Decision Support Tool



https://its.dot.gov/csai/?trk=public_post-text



OTHER BUSINESS AND ROUNDTABLE DISCUSSION



7. Public Works Program Updates

- Public Works Council (PWC) Meeting, February 20, 2025, 9:30–11:30 a.m. via Microsoft Teams
- Hybrid iSWM Workshop: Multiple Perspectives on iSWM, March 3, 2–4 p.m. via Microsoft Teams *or* in person in NCTCOG Transportation Council Room
- *integrated* Stormwater Management (iSWM) Subcommittee Meeting (In-person), Week of April 28, 2025
Seeking participation in iSWM manual update
- Access all items via [E&D Events Calendar](#)

For more information on the Public Works program please contact Carl Singleton at csingleton@nctcog.org or (817) 458-4768



8. Roundtable Discussion



8. Schedule for the Next SPR0W Meeting

Sustainable Public Rights of Way (SPROW) Subcommittee,
Meeting to be scheduled week of May 5, 2025, Virtually via
Microsoft Teams



Contact & Connect

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 EandD@nctcog.org

