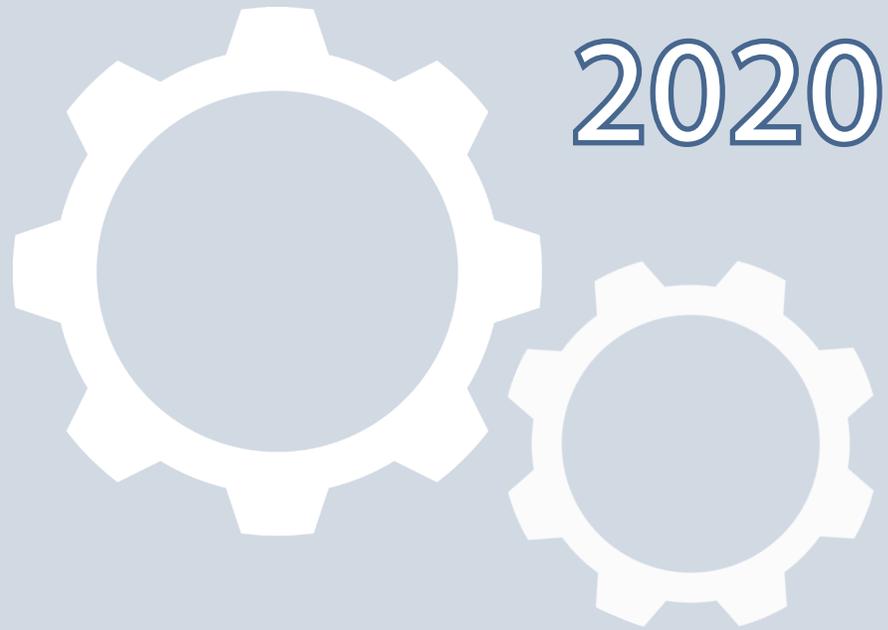


GEAR UP 2020



RAPID GOAL SETTING FOR A 21ST CENTURY NASHVILLE

A Joint project of The City of Nashville, The Urban Land Institute (ULI) Nashville, and Gabe Klein



GEAR UP 2020

A Set of Fast Actions for Metropolitan Nashville's Public Space, Infrastructure and Mobility Systems

*A Joint project of The City of Nashville, The Urban
Land Institute (ULI) Nashville, and Gabe Klein*

Executive Summary

I. PREMISE / MISSION STATEMENT:

There is a recognition in 2016 that Nashville, and all cities, are living-breathing ecosystems. As such, Metro no longer has the space, budget, time, or tolerance for the inefficiency of each of our cities systems to operate independently versus synergistically. It is ideal for the layers of public space, hard infrastructure and transportation services to work as integrated systems as much as possible; planned and implemented in a way that results in maximum forward compatibility and flexibility, and a whole that is more than the sum of its parts. It is also essential to set and then achieve aggressive goals ranging from public safety to equity to economic growth and crucial that these systems are not operating at cross-purposes, or are not capitalizing on efficiencies that can be achieved through coordination.

It is the goal for this document is to provide a set of actionable, short-term, specific ideas to move Nashville forward by the year 2020, accounting for the above mission while thinking about the latest technologies, business models and government innovations in formulating this goal oriented, milestone-driven set of actions. GEAR UP 2020 is a set of actions that can help to fulfill related plans laid out in the expansive and comprehensive NashvilleNext, Middle Tennessee Connected, Moving Tennessee Forward, Nmotion2015 and other long term planning efforts already undertaken. Nashville Next is a world class multi-disciplinary plan with well thought out implementation. Gear-Up 2020 supports the actions and in some cases provides more detail, reinforces the importance of an action, or suggests an important interim step and responsible party to get there.

All too often the best big plans fail to come to fruition because we don't collaborate and establish shorter term vision, goals and measurable, time-based objectives that are communicated clearly so that citizens, business owners, and politicians can rally behind and act on the change. We aim for the city's collective infrastructure, mobility systems and open spaces to benefit the community as a whole, maintain our sense of place and move us forward as a collaborative entity over the next four years.

Gear-Up 2020 is meant to then be answered by Metro leadership: assessed for feasibility and broken down into specific SMART goals to be achieved during the Mayor's first term. *"This study should define the goals, Metro should identify the answers"*



II. THE PROCESS:

Based on conversations with Mayor Barry and city leadership, this effort built a framework that both works to respect prior and current planning in Metro, as well as to recognize the new administration and its goals and the regional framework in place. We also were tasked with assessing the latest technologies and business models that may allow faster implementation, as well as public-private partnership opportunities that may not have existed even two years ago. In short, a calibration based on history, innovation, and this moment in time and the opportunity that it represents.

We then assembled a team of local thinkers with the Urban Land Institute-Nashville and placed them on the three following subcommittees to work with the Gear-Up Committee made up of Gabe Klein, Kim Hawkins of Hawkins Partners, Inc., and Rose Faeges-Easton of ULI Nashville:

• Transportation Subcommittee

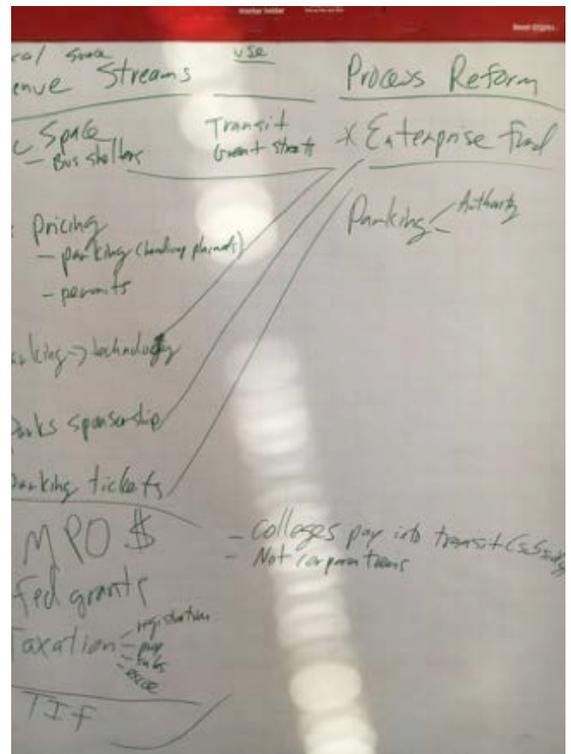
- o Scott Black, Bristol Development Group
- o Amy Burch, RPM Transportation Consultants, LLC
- o Jennifer Carlat, Nashville Area Chamber of Commerce
- o John Gore, Barge Cauthen and Associates
- o Cyril Stewart, Cyril Stewart, LLC

• Open Space Subcommittee

- o Tracey Ford, EOA Architects, PLLC
- o Kim Hawkins, Hawkins Partners, Inc.
- o Kyle McGavin, MarketStreet Enterprises
- o Josh Randolph, Aerial Development Group

• Utilities and Infrastructure Subcommittee

- o Will Gamble, J E Dunn Construction
- o Martin Heflin, StreetLights Residential
- o Matt Nicholson, Turner Construction
- o Phil Ryan, Cherry & Associates
- o Don Williams, Gresham, Smith and Partners
- o Andrew Wolthers, Littlejohn and S&ME Company



Our Subcommittees had key responsibilities alongside the leadership of the Committee

- Analyze the existing plans and see what priorities could be done better and faster
- Assess gaps based on new needs or priorities introduced over the last few years
- Interview local stakeholders in government, private sector and non-profit for ideas and feedback
- Assess how public-private & NGO partnerships enhance Metro's ability to meet aggressive goals
- Assess new technologies and business models could be leveraged to further Metro's goals
- Compile broad list of goals with no sacred cows including rethinking government departments & roles
- Review initial goals and recommendations to refine a draft document

We worked to balance the history and plans to date while taking into account and leveraging new leadership in the city, new disruptive technologies at the fore, public-private partnership and innovative finance options, and a desire for maximum return on investment over the next 4 years while achieving true economic equity paired with robust economic growth. The following *initial areas of study* as well as *guiding principles* were utilized in the formulation of Gear Up 2020:

INITIAL AREAS OF STUDY:

Transportation and Public Safety:

- Mode Split / Mode Share Goals and determination of priorities
- Active Transportation vision and recommendations
- Parking Policy / Parking Maximums / Zoning Adjustment recommendations
- Vision Zero / Active Transportation / Safe Routes to Schools
- Complete Streets
- Balancing Resident/Worker and Tourist needs w/ modes of transportation
- Reprioritization of Capital Program based on Mayor's priorities and Gear Up Recommendations
- Technology policy recommendations
- Partnership with public safety agencies

Infrastructure and Utilities:

- Storm Water and Green Infrastructure
- Trash Collection and Recycling
- Fiber Network
- Technology
- Nashville Electric Service
- Utility Responsibility in Maintaining Streets

Quality of Open Space:

- Parks / Greenways
- ROW and Alleys as open space
- Public Art
- Tree Canopy
- Health Benefits
- Maintenance
- Citizen participation
- Economic impact
- Urban Agriculture

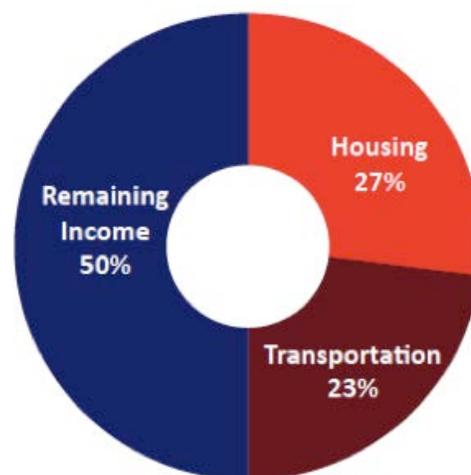


Figure 6: According to the Center for Neighborhood Technology's Housing and Transportation Affordability Index, on average in Nashville/Davidson County, 50 percent of income is spent on housing and transportation needs.

MISSION AND GUIDING PRINCIPLES:

1. **Streets and Public Space as Systems:** It is a necessity for our rights of way to incorporate context sensitive design and to be built as complete streets and interconnected places going forward; in a way that values people/pedestrians above all and provides beautiful, comfortable environments to walk, bike, shop, work and linger while simultaneously moving freight and goods, facilitating transit, infiltrating storm water, providing shade and inspiring delight through public art and space.



2. **No more “Accidents:”** It is a necessity to provide for the safety of all modes of transportation and to implement a *vision for zero deaths* caused by conflicts in public space by clearly providing for all modes in a hierarchical, safety-prioritizing balance.
3. **Equity:** It is a necessity for our city to efficiently and creatively use the public space that is under our stewardship to benefit all citizens of Nashville with no priority given to any privileged class or geography.
4. **Streets and Public Space as Job Creators:** ...while at the same time looking for higher returns on investment that benefits commerce and economic growth.
5. **Forward-Compatible Technology:** Assess the latest technologies and look at how they can fit into or help achieve Nashville’s desire for a livable city.
6. **Play to our strengths:** Public-private partnerships or P3’s should be leveraged to provide the best quality service to citizens at the highest value, and create sustainable jobs for local businesses and international providers in the process.
7. **Respect for Existing Work:** We must construct a framework that recognizes and integrates existing Nashville plans, existing and ongoing projects, and the leaders of city departments that have been, and will continue to make Nashville a thriving city.
8. **Best Practices:** We must also bring in fresh perspectives by benchmarking against other world-class and peer-cities, and by facilitating two-way communication with all stakeholders, from Metro Council Members to the business community with priority given to the citizens that make up Metro Nashville.
9. **Communicate and Implement with SMART-Goals:** We also must ultimately communicate and market this broader vision to the community of stakeholders with a timeline for a realistic, time-based implementation plan that is set by the city leaders that will achieve the results for the citizenry.
10. **Land Use Reform:** We have created our transportation problems by poorly planning land use which has resulted in people living far from work. This can be remedied by providing more compact, walkable, mixed-use development.

III. GEAR-UP 2020 TIMELINE:



* In April of 2016 the Mayor’s office was sent a preliminary list of Gear-Up priorities so that in the spirit of “getting things done, Metro could jump on low hanging fruit and not waste any time in the Mayor’s first term. In other cases, they were already examining issues that we would also bring to the table. Thus, some of our recommendations will have already begun by the time we publish.

IV. SUMMARY OF RECOMMENDATIONS:

A. TRANSPORTATION AND MOBILITY

- i. Create a Metro Nashville Department of Transportation
- ii. Set 2-year Action Plans for Department of Transportation
- iii. Set Mode-share Goals
- iv. Create a Regional Transportation Demand Management Program (TDM)
- v. Public Parking Overhaul
- vi. Reform Third Party Use of Public Space
- vii. Dedicated Transit Funding for Projects that has Broad Regional Support
- viii. Finalize Plan which will Plan and Build Regional Support for Implementable Initial Transit Line Segment as part of a Regional Network
- ix. Dramatically Increase Active Transportation Options and Infrastructure
- x. Increase Growth of Nashville B-Cycle by Fourfold
- xi. In Rank Order, Address the 50 worst crash intersections
- xii. Commit to Vision Zero to Eliminate Road Fatalities by 2025
- xiii. Create Great Streets Corridor Program
- xiv. Always Build Complete Streets and Default to Pedestrians as Priority in Public Space
- xv. Join the National Association of City Transportation Officials (NACTO)

B. OPEN SPACE

- i. Create Enterprise Fund and Dedicated Funding for Parks
- ii. Analyze Conversion of Existing Parking Facilities to Affordable Housing, Open Space
- iii. More Equity in Park Spaces for Children and Families of all Income Levels and Geography with Non-Profit Partner
- iv. Create Nashville “Spaces and Places” Program
- v. Leverage Opportunities for Additional Conservation, Parks and Greenways

C. INFRASTRUCTURE AND UTILITIES

- i. Reconstitute Street Tree Program, develop Urban Forestry Program
- ii. Account and Accommodate for All Users for All Construction Projects
- iii. Reinforce and Expand Low Impact Development Standards (LID) for Metro and Developers
- iv. Return on Investment Analysis of Burying Power Lines
- v. Create Street Light Master Plan for Metro

D. GOVERNMENT REINVENTION AND P3 RECOMMENDATIONS

- i. Create Enterprise Funds
- ii. Implement Smart Cities Open Platform and Incorporate Shared Mobility
- iii. Consider Establishment of an Office of Grant Management
- iv. Develop Comprehensive Strategic Communications Plan
- v. Form an Office of Public-Private Partnerships (P3)
- vi. Consolidate and Manage Metro Assets and Property Management
- vii. Set up a Nashville Fellowship Program
- viii. Create or Utilize a “Civic Engagement” Application

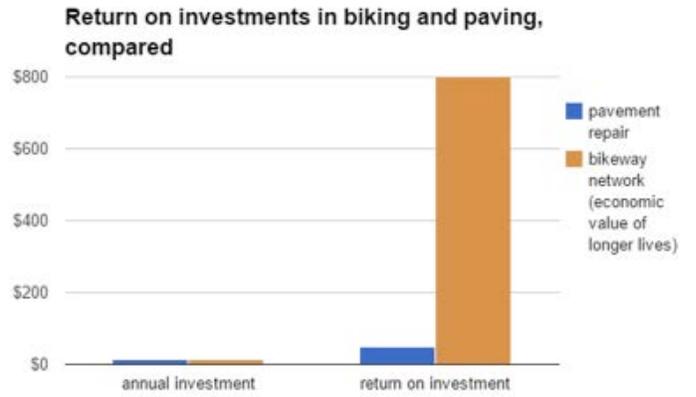
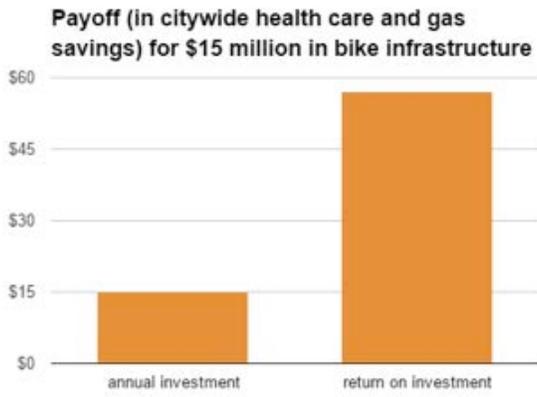


V. Recommendations: Table Definitions

This section relates to the categories included in the tables for each goal

Time to Implement	Medium: 2016/2017
Control	Local
Cost	Medium
P3 Opportunity?	Indirect, staff consultants & contracts can be utilized
Revenue/ROI	Medium
Politics/Optics	Positive
Guiding Principles	ALL
Ownership	Mayors Office
Related Recommendations	Enterprise Funds, P3 Office
Net/Net	WIN-WIN

1. “Control” reflects whether the recommendation can be carried out by Metro Nashville Government, or whether some part of the decision making lies with the state government, the general assembly, the federal government, or some other entity. Local control generally means faster implementation.
2. “Cost” means the relative budget to make this recommendation come to fruition:
 - “Low” means primarily staffpower and city leaders and staff time
 - “Medium” means additionally some level of budget allocation at the local level
 - “High” means grants, federal funding, or a sizeable local allocation would be needed to either start or fulfill the initiative
3. “P3 Opportunity:” Is there a “direct,” “indirect” or no opportunity for public-private and/or non-profit partnership to achieve this recommendation?
4. “ROI” refers to Return on Investment and is strictly a loose estimate at this stage. ROI in simple terms = (gain from investment minus cost of investment)/ cost of investment. For our purposes “Low” means 0-1x (cost to breakeven), “Medium” means 2x-4x investment and “High” represents 5x-10X+. As an example, University of Zurich studied Portland for the Journal of Physical Activity and health and found that a bike lane generated 64X the ROI that road work does:
5. “Politics/Optics” refers to the potential positive versus negative response the recommendation might engender from the general public, which can affect ability to or the timing to implement, taking into account control and cost.
6. “Ownership” refers to the ultimate accountable entity for getting the recommendation done and then the supporting agencies who would be involved. Without ownership established, implementation is unlikely to occur.
7. Which “Guiding Principles” this recommendation makes reference to, and identifies “Related Recommendations” laid out in this document.
8. “Net/Net:” taking all of these factors into account, is this recommendation clearly a win-win solution for multiple problems or stakeholder groups? A Win to address a single issue? Losing propositions are generally not included unless it is unclear and we are recommending study based on stakeholders expressed interest.

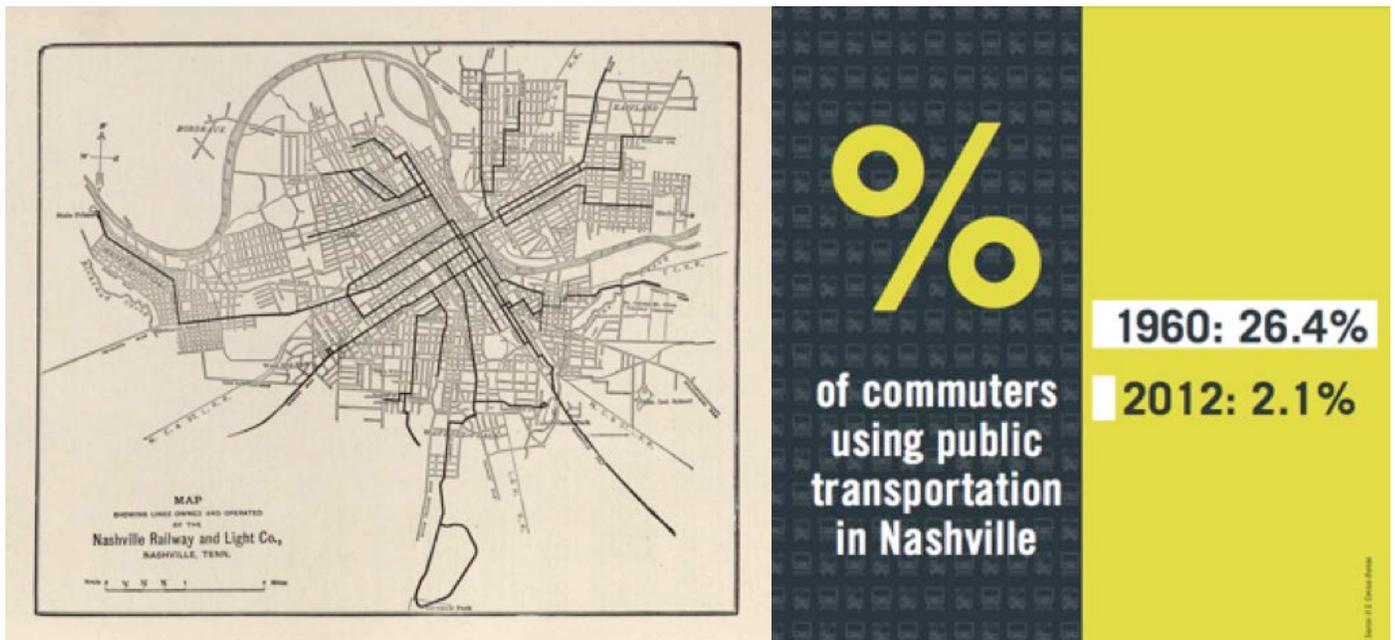


Source: [Journal of Physical Activity and Health, 2011](#)

A. TRANSPORTATION AND MOBILITY RECOMMENDATIONS:

Background: Nashville is growing...fast, with a 2% increase in population every year and 9.2% over the last 5, Nashville is adding 30,000 residents per year and is expected to actually have a worker shortfall of 35,000 people by 2020 according to the Nashville Chamber of Commerce. Fundamentally, like many parts of the country particularly the sunbelt states, Metro has a land-use problem, which results in a compounding transportation problem. We are adding residents, and jobs, but not near one another. In fact out of the 96 largest Metropolitan Statistical Area's, Nashville has the fifth longest commute distance in the United States averaging 11 miles (after Houston, Dallas, Phoenix and Atlanta) and continued to see a decline in jobs in the urbanized area over the last decade. Also, like many North American cities, Nashville once had a more robust, connected transit system. As this went away, cars became the priority, and the associated land-use sprawled, and in a cycle, residents came to rely more on single occupancy vehicles.

We now face stark choices in terms of what we want to be, and whether the growth we see today will be sustainable in the future without a major shift in priorities. Younger workers, retirees, and increasingly families alike want walkable, bikeable, safe, transit oriented neighborhoods with nearby amenities. The transportation system is often looked at primarily as a way to “move people” as effectively as possible because of sprawl. Our challenge is to shift the paradigm to creating the “best places” where ideally as little movement as possible is needed between live, work, school, and daily amenities.

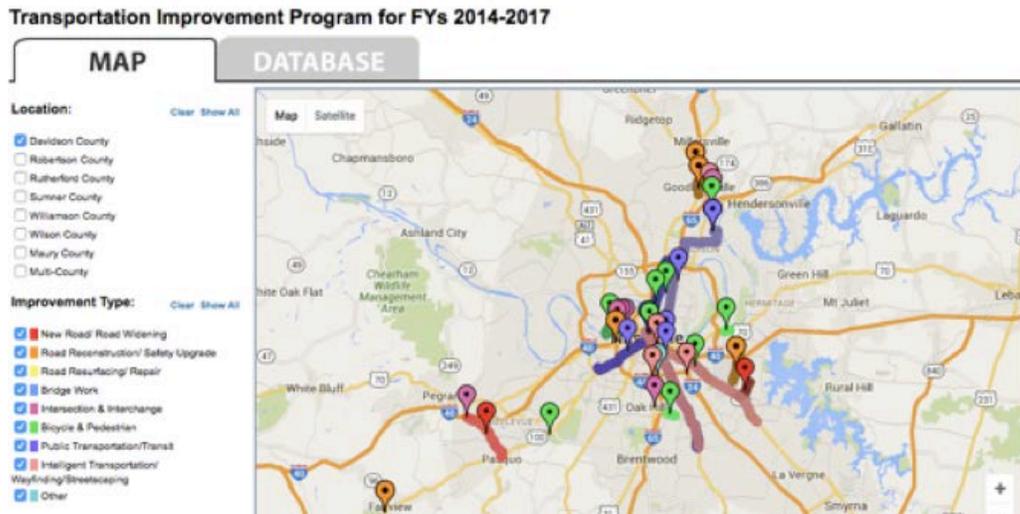


http://www.lib.utexas.edu/maps/mcgraw_electric.html

Courtesy of the Nashville Chamber of Commerce

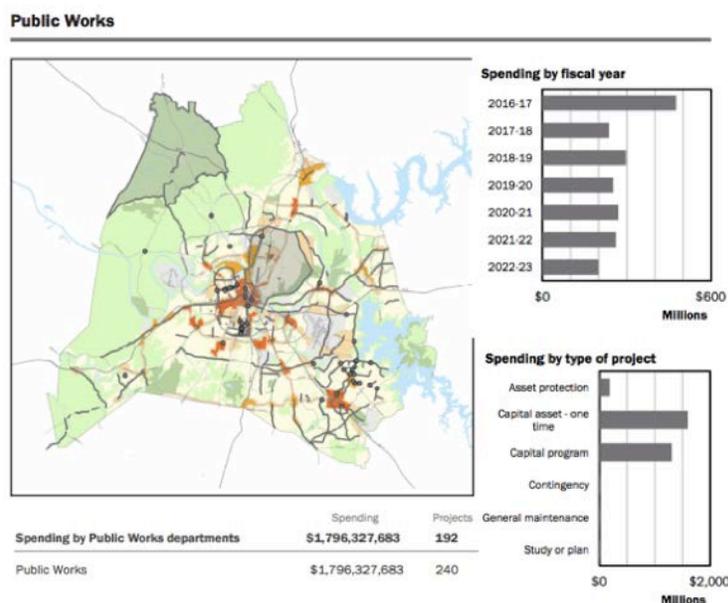
When researching an approach for transportation in Metro Nashville it is important to understand the existing transportation improvement program that is in motion currently (2014-2017). This is a program that has been put forth by Metro, and after discussion, negotiation and changes, adopted by the Metropolitan Planning Organization (MPO) that oversees policy, funding, and regional coordination of the transportation and land use program for Middle Tennessee.

The projects are funded through a combination of local, state and federal funds. The Transportation Committee conducted 10 stakeholder interviews to better understand Metro’s priorities, projects and their relationship to the Nashville Next plan, what issues they currently face, and what ideas they have that may help guide the GEARUP 2020 goal setting process. It should be noted that the committees were not siloed so Open Space and Utilities also made recommendations for Transportation and vice-versa.



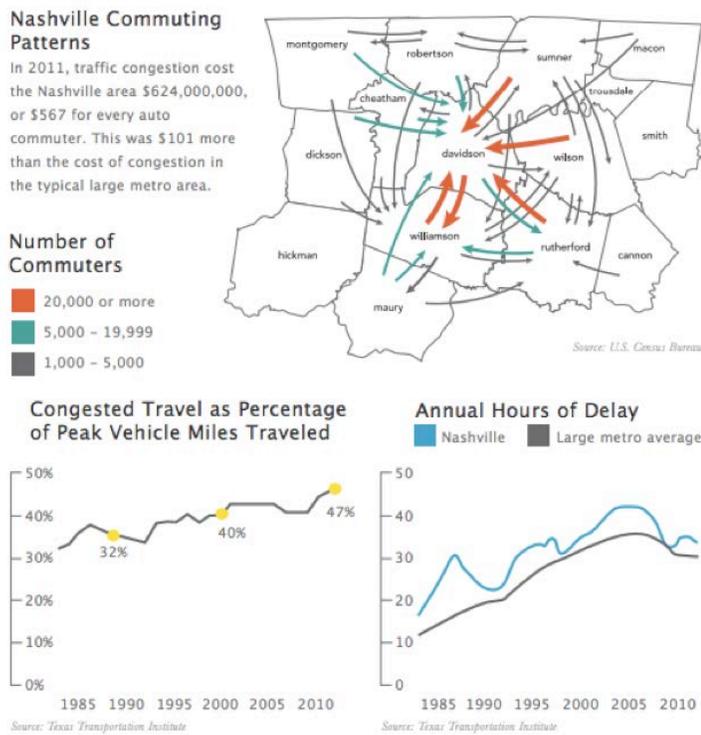
The Metro Department of Public Works spends the bulk of the designated federal transportation infrastructure funds in the transportation improvement program (TIP) with some budget going to Metro Transit Authority, Metro Planning and a few other agencies.

Additionally it should be noted that the MPO has a “Regional Transportation Plan” (RTP) and there is also an “nMotion” strategic planning effort currently underway by MTA/RTA. nMotion will ultimately be rolled into the next MPO RTP and likely set the game plan for transit efforts in Nashville/Davidson Co.



Opportunities: Our research and stakeholder interviews revealed consistent comments:

1. The lack of transit investment is holding the region back from fulfilling its potential and competing against other cities for investment and economic development.
2. Only 1-3% of Nashville residents use transit for commuting.
3. The AMP was an important learning experience for the region and perhaps better prepared us for the current planning efforts underway and ultimately a solid transit investment for the future.
4. There is no one entity that feels, or is “ultimately responsible” for regional execution of a next-generation transit system, from visioning to stakeholder outreach to funding to design and construction.
5. There is not a stand-alone transportation department in Nashville and this contributes to stagnation in terms of innovation, commitment to complete streets, active transportation, and ultimately accountability to move Nashville forward.
6. The value attributed to public space in Nashville is considerably lower than the norm in larger cities, resulting in poorly planned construction staging which creates congestion, a lack of pedestrian connectivity, and encourages people to default to the car, with little revenue coming to the city.
7. While Nashville is growing fast now, there is an uneasy feeling that this could change quickly without a philosophical change followed by funding that addresses the myriad of challenges created by the growth.



SOURCE: <http://www.nashvillechamber.com/docs/default-source/research-center-studies/nashville-datascape-2013.pdf?sfvrsn=2>

8. There are the beginnings of efforts towards making active transportation a primary mode of transport including a small bikeshare program and some bike lanes, better sidewalks, and a riverfront greenway. Now a commitment is needed to put it on equal footing with driving, and higher priority for trips less than 3 miles.
9. In terms of budget, there is a feeling that transportation funds are being left on the table at the MPO, particularly federal funds. There is also a lack of creativity in innovative financing for projects. With the new P3 legislation passed by the state this Spring, there is a sense of urgency to leverage, now.
10. There is a recognition by many stakeholders including the Metro health department that a sea change is needed in how we view the built environment and health. The U.S. has built places that make people sick rather than healthy in the latter half of the 20th century and it is unsustainable for the future.
11. Motor vehicle deaths are at epidemic levels and are the leading cause of death in Nashville residents 25-44 and the number three killer across all age and racial backgrounds after heart disease and cancer.
12. A sustainable Nashville with clean air for our residents depends on giving residents more options to walk, bike or take transit – all of which improve air quality by getting people out of single-occupancy vehicles. Using “transportation demand management” we could educate people on choices in tandem with creating them.

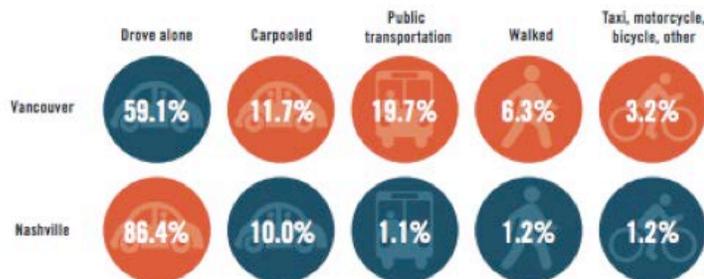
Excess CO₂ per Peak Auto Commuter in Pounds

Source: Texas Transportation Institute, 2011



Mode of Transportation Breakdown*

Source: U.S. Census Bureau 2012; Statistics Canada, 2011



Courtesy of the Nashville Area Chamber of Commerce

i. Recommendation: Create a Metro Nashville Department of Transportation

Time to Implement	Medium: 2016/2017
Control	Local
Cost	Medium
P3 Opportunity?	Indirect, staff consultants & contracts can be utilized
Revenue/ROI	Medium
Politics/Optics	Positive
Guiding Principles	ALL
Ownership	Mayors Office
Related Recommendations	Enterprise Funds, P3 Office
Net/Net	WIN-WIN

Background: Transportation is no longer on an island with practitioners focused primarily on throughput and safety. City transportation departments and their leaders are now charged with implementing policies and programs that prioritize equity, health, economic growth and broader public safety.

Like many cities, Nashville is growing dramatically, reaching 656,000 people in the latest census, ahead of Memphis and just shy of Boston. In many cities, the Public Works Department housed transportation and engineering with transportation planning relegated to the backseat or in many cases fractured or non-existent. Bold plans are often shelved in favor of the incremental, or little change in favor of not deviating from the standard operations and maintenance procedures. It has also become clear that Nashville is not competing effectively for dollars with the MPO, federal STP funds, the plethora of federal grants and leaving potential resources on the table. Creating a separate DOT in Metro Nashville addresses many of the concerns listed above and allows the city to move forward on true complete streets, advance transit, properly value the right of way, get every dollar for Nashville that's available and have a hand-in-hand relationship with planning.

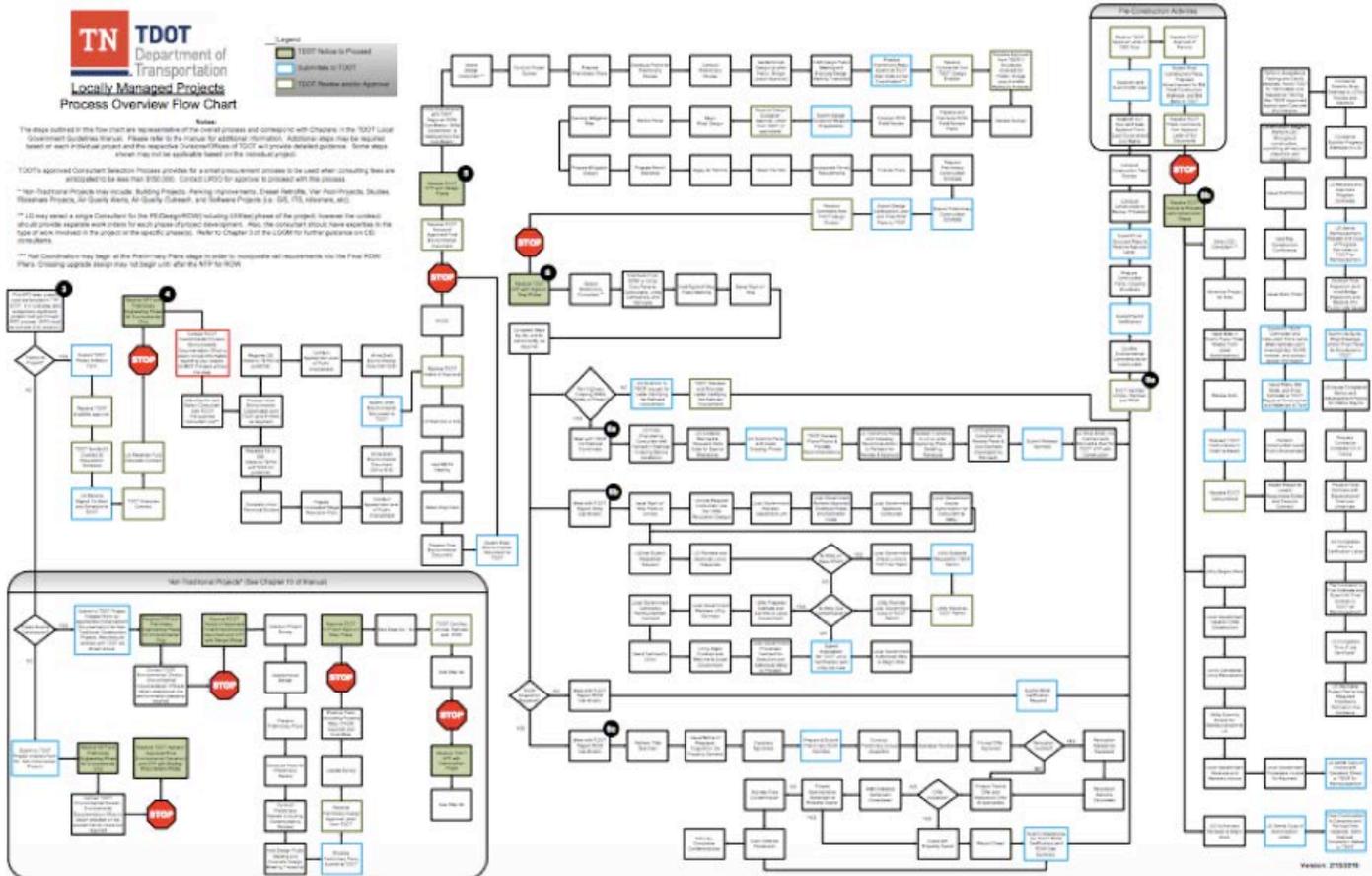
Recommendation Overview: First, quickly benchmark best practices nationally. Cities from Washington D.C. to Oakland California and Chattanooga Tennessee have had to address this issue at approximately the same point or earlier in their growth pattern. Second, look holistically at the work of the Metro Transit Authority (MTA), Public Works, Planning, Bikeshare and other departments to ensure that the full constellation of services, projects and functions are examined before working on organizational chart. Third, identify solid leadership for the department with a combination of internal existing team members and a minority of outsiders with experience in other environments. Fourth, ideally an integrated "Project Development" division needs to be created in the new department with transportation planning, parking and public space policy, traffic engineering, complete streets (transit, walk, bike, car) etc. combined under one division head. Last, remember that this is about assembling a new organization with the proper governance, management structure and procurement and budgetary tools to exploit maximum 3rd party funding, to move quickly to serve citizens, and to reinforce the mission to take Nashville sustainably into the 21st century and beyond.

Examples: Oakland, Chattanooga, DC

Note 1: We are assuming that this recommendation is adopted, and therefore we will refer to a "DOT" or "Metro DOT" in the remainder of this document when discussing the implementation of transportation programs. We will continue to refer to Metro Public Works for DPW if referring to maintenance or some operations.

EXAMPLE SMART GOAL:

- The Nashville Metro Mayor’s Office will consult with various stakeholders over the Summer and Fall of 2016 with a goal of staffing up a new Department of Transportation with its own leadership and funding stream for the 2017 budget year.



Note 2: This is the process map for navigating the state department of transportation for funding and project selection locally, it’s incredibly complex. With processes this tough to navigate, and knowing that we need to get every dollar that we can, a transportation department with its own finance and legal team, and a laser focus will be better situated to navigate the differing funding streams and systems at the state, federal and regional (MPO) level.

Will we spend more to stand up a separate department? Yes. If structured properly will the new department be able to capture new funding sources from the regional, state and federal level? Will the new agency be able to generate significant new revenues to cover increased overhead? In my experience, yes with the right leadership and team. An ROI analysis should bear this out.

ii. Recommendation: Set 2-year Action Plans for Department of Transportation

Time to Implement	Medium: 2017
Control	Local
Cost	Low
P3 Opportunity?	Indirect: consultants to be utilized
Revenue/ROI	High
Politics/Optics	Positive
Guiding Principles	ALL
Ownership	DOT with support from Mayors Office, MPW, MTA, Planning
Related Recommendations	Enterprise Funds, P3 Office
Net/Net	WIN-WIN

Background: Cities often have many long range plans and Nashville is no exception. NashvilleNext is one of the more comprehensive long range plans. The two-year action plan is much like our effort with Gear-Up 2020. It breaks down the larger, longer goals into manageable chunks that we commit publicly, and internally to achieve. For example, “double bike mode share within 2 years” or “Institute pay by phone system citywide by January 2017.” These are tangible goals that then can be broken down further for each division, and to individual employees to track through their performance metrics to get it done. Most importantly, a short term action agenda forces stakeholders to be on the same page if a collaborative approach is taken to visioning, and setting agreed upon goals and timeframes. Ultimately, it also forces accountability which results in more getting done for our citizens in each department that undertakes this process.

Recommendation Overview: As noted in other goals, there are excellent benchmarks in this area, but Nashville can personalize the effort and perhaps go further. This can be a living document online that people can comment on. Or, it could be GIS based so that you can see how the goal would affect your neighborhood, or put in a request for that goal to be implemented in your neighborhood. Or perhaps we can engage the citizenry to do some of the work. A new department of transportation should be full of energy, and a Chief Performance Officer or Chief of Staff may be the right person to coordinate this effort with the Director of Transportation Planning, working closely with the Metro Planning staff.

Examples: [Chicago](#), [Seattle](#), [D.C.](#)

EXAMPLE SMART GOAL:

- The newly minted DOT will establish its core mission, vision and goals, validate them throughout the agency, with City Hall and other stakeholders and put together an action agenda within 6-8 months of beginning operations.

iii. Recommendation: Set Mode-share Goals

Time to Implement	Short: 2016
Control	Local
Cost	Low
P3 Opportunity?	No
Revenue/ROI	Ultimately High
Politics/Optics	Mixed
Guiding Principles	Best Practices, Communicate and Implement
Ownership	Planning w/ support from MPO (data), Mayors Office, DOT
Related Initiative	TOD,
Net/Net	WIN-WIN



Background: As Michael Bloomberg often says, “if you can’t measure it, you can’t manage it.” Additional related “isms” might be: “data without intuition is almost as useless as intuition without data” and “you will never reach a goal that you don’t set.” Why all of the isms? Because with mode-share you need to have goals to build a program around... and you need a comprehensive transportation program that includes a lot of the recommendations in this document to meet a goal. So where to start? We start by looking at where we are in Metro Nashville and there is good news and bad news. The bad news is that 96.4% of people are commuting by car. The good news is that 10% is via shared ride so there is something to build on for ridesharing and carpooling. There is nowhere to go but up in terms of non-auto trips. We have to get started.

As outlined in other goals, we need to go beyond lip service when it comes to walking, biking and transit, and commit to mainstreaming these choices as primary options for Nashville residents and visitors to move. Mode share goals give people something tangible to work towards and, if carried out properly, should inform all of our planning from parking requirements, to complete streets implementation to building a comprehensive transit plan, and system. In other words, mode-share goals speak to the level of commitment to Get. It. Done.

Recommendation Overview: Looking at Nashville Next, Volume V: Access Nashville 2040 there is quite detailed information in terms of where we sit now). Aggressive goals should be tied to commitments in increased sidewalk, bike lane, TOD, and transit infrastructure... and services. Set goals for the end of Mayor Barry’s term. Starting with 10%-20%+ year over year increases are absolutely not out of the question based on where we are today and should be larger with bikeshare expansion. This compounds to larger numbers in the out years. These mode-share goals should be codified in 2 year action agendas put out by the city DOT.

Examples: Washington D.C., Chicago

EXAMPLE SMART GOALS:

- Set data based, aggressive mode share goals tied to implementation of new infrastructure, public and private service expansion, and TDM by December 31st 2016 for the next 10 years
- MPW to include a tripling of bicycle mode-share by 2020 in the WalknBike Master Plan with recommendations to achieve and recommended specific actions by December 2016.

iv. Recommendation: Create a Regional Transportation Demand Management Program (TDM)

Time to Implement	Short: Start by end of 2016
Control	Local & State (funding)
Cost	Low (State to fund)
P3 Opportunity?	Yes
Revenue/ROI	Medium
Politics/Optics	Positive
Guiding Principles	Equity, Communicate and Implement
Ownership	Planning, MPO, DOT works with TDOT for regional approach and funding, additional partnership and funding through MPO
Related Initiative	Communications Plan
Net/Net	WIN-WIN

Background: TDM is a program that provides information, outreach, and marketing support for “alternative transportation” options. From direct to consumer, to outreach to business, TDM seeks to facilitate programs ranging from guaranteed ride home, pretax and other employer/employee transit benefits for businesses, parking and special event information, trip mapping, advance purchase of transit passes etc.

Recommendation Overview: Best practice review quickly moving to a Request for Qualifications/Proposal for an outsourced TDM program. Line up funding with TDOT. Senior staff communicated that they are open to funding and participating in a robust regional TDM offering. Perhaps supplement funding with MTA/RTA, Downtown Partnership etc. and competitive application for yearly recurring CMAQ through MPO.

Examples: Arlington County Virginia, Washington D.C.



EXAMPLE SMART GOAL:

- Metro Planning to do 30 day best practice review with TDOT, DOT, MPO, then 30 day RFQ/ RFP process and select TDM vendor by Fall 2016 for January 2017 launch.

v. Recommendation: Public Parking Overhaul

Time to Implement	Short: 2016
Control	Local
Cost	Medium
P3 Opportunity?	Likely Indirect, Possibly Direct
Revenue/ROI	High
Politics/Optics	Mixed
Guiding Principles	Best Practices, Streets as Job Creators, Forward Compatible Technology
Ownership	Public Works/Mayors Office
Related Initiative	Zoning Changes
Net/Net	WIN-WIN-WIN

Background: Nashville has cheap parking aplenty. The off-street garages that focus on consumer business charge 10/hr w/ max dailies of \$14-\$25 vs. Metro public garage rate of \$12/day. On-Street parking is \$1 to \$1.50/hr and only Monday to Sat 8am-6pm even though like most cities, the business district hours of activity have dramatically expanded. Anecdotally in our interviews we heard that there is little enforcement and that residents will typically not pay the meter and risk the low chance of an \$11 ticket. This is likely contributing to artificially low revenue for the city, low parking turnover for businesses, encourages unnecessary trip-making which results in congestion and low air quality and discourages investment in transit.

Recommendation Overview: Quick internal assessment of the who, what, where, why, when of parking. Then draft RFI/RFQ for the latest in parking technology, implementation, compatibility of hard and soft systems and ongoing management including processing, collections and ticketing. Consider a new system extending meter hours in the CBD to 11pm and raising rates to market. Additional enforcement should also be an integral element of this change. Overall curbside management is equally important particularly with the movement towards pickup, delivery, ridesharing etc. FedEx, UPS, etc. which currently park in travel lanes, bike lanes with little to no ticketing or enforcement – also the potential of creating a balance with on street parking and dedicated loading areas for such vehicles. Communication and outreach to the public, merchants, and delivery companies new and old will be needed to create the program and facilitate the needed change.

Notes on Ownership: Because this involves planning, public space, procurement and operations, there is an argument to be made for this effort to be run out of the Mayor’s office to assure a completely open-mind to the outcomes and potential efficiencies with a panel made up of multiple departments to evaluate. If the new DOT was stood-up with a robust public space management division they could likely handle this as well.

Note: An important source of funds for the Nashville Downtown Partnership is garage parking revenue, which funds bikeshare. Increased parking revenue could mean increasing bikeshare and other innovative projects downtown that then spread to outlying areas.

Examples: San Francisco, Washington D.C.

EXAMPLE SMART GOALS:

- DOT to provide review of Nashville Parking based on parking technology to the Mayor’s Smart City working group and Metro by September 1st 2016 to assure that new parking system fees, technology and applications can be put in place by 2017 to increase usability, turnover and revenues to Metro.
- Planning and DOT to assess the effect on parking turnover and mode-share shift of raising rates to match private lots pricing and extending meters to 16-18 hours per day 6 days per week throughout Metro by October 2016 (in tandem with technology implementation.
- Metro to implement pay by phone parking by January 2017
- Metro to consider parking maximums in private developments

vi. Recommendation: Reform Third Party Use of Public Space

Time to Implement	Short/Medium: 2016 for 2017 Budget Cycle
Control	Local
Cost	Low
P3 Opportunity?	Yes
Revenue/ROI	High
Politics/Optics	Positive
Guiding Principles	Streets and Public Space as Systems, No More Accidents
Ownership	Public Works w/ support from Mayors Office
Related Initiative	Enterprise Funds, Parking Reform
Net/Net	WIN

Background: Nashville like many American cities has a multi-prong problem with use of public space. The value of public space does not take into account access by cyclists and pedestrians, and encourages lengthy, often unannounced usage by utilities and construction zones for development. By fixing this problem we can alleviate considerable congestion, help traffic flow, raise revenues, charge the real cost of government providing service and make Nashville residents safer. In terms of ROI, we can also get the third parties to pay for paving a much larger share of our streets.

Recommendation Overview: In DC and Chicago Gabe Klein and teams reformed public space use and permitting comprehensively. It takes a combination of benchmarking what fees should be (which DPW has done), reforming permitting so that no workarounds are available for the process, tying inspections to new restoration standards, passing a new set of regulations through council, and providing top flight mapping tools and coordination service for the third party users of the rights of way (carrots and sticks). If implemented well, third party users will also save money and encounter less stakeholder resistance to projects. Technology for utility coordination is available for fast implementation.

Stakeholders include: Telecoms (fiber), Utilities, Developers

Examples: Chicago, Washington D.C.

Notes: <http://www.collinsengr.com/14-5-million-cost-savings-2014-ytd-chicago-construction-coordination/>
<https://gcn.com/articles/2014/11/19/chicago-transportation-dotmaps.aspx>

EXAMPLE SMART GOALS:

- MPW with support of Planning and the Mayor's Office will continue to undertake a benchmarking against other cities latest public space management plans with a November 2016 deadline for presenting changes to Metro code that codifies a new management structure for public space, permitting and coordination plan, and fees and penalties for public way usage.
- MPW will institute a technology tool to coordinate developers, utilities, telcos, and citizen requests for use of the public way by February 2017.

vii. Recommendation: Dedicated Transit Funding for Projects that has Broad Regional Support

Time to Implement	Short/Medium: 2016/2017 For 2018 Budget Cycle
Control	Local/Regional/MPO, State and Federal
Cost	High
P3 Opportunity?	Direct
Revenue/ROI	High
Politics/Optics	Mixed
Guiding Principles	ALL
Ownership	Mayors Office with Coalition from Planning Department, DOT/MTA, MPO, ULI, Business Community, BID, Airport Authority.
Related Initiative	Communications Plan, Create DOT, Equity, Land Use Reform
Net/Net	WIN (mixed optics based on AMP)

Background 1: We asked MTA: “Who is responsible for actually implementing new transit? The response was that “MTA/RTA’s charter gives broad responsibility ... but don’t actually have the organizational capacity to do it.” So this is tied closely to setting up a DOT with responsibility for Metro Transit implementation, and a cross-functional/departmental team at DOT, Planning, and MTA to work on the product/service. MTA is a service operator at its core (with outsourced day to day operations) and they can be a close partner on planning, communications, but there does not seem to be a belief that any significant movement will take place in terms of large scale transit projects if MTA is tasked with implementation and funding. Layer on the new P3 legislation passed by the state and the level of sophistication needed to engage and it creates an opportunity and a sense of urgency.

Background 2: Dedicated funding was brought up as a priority by everyone we interviewed about transit. Also the fact that transportation is pay-go and debt free historically is a wonderful thing, but it may be time to either take on some debt on a high return on investment-bus rapid transit project or engage in a P3 for a more costly but also high return on investment-light rail implementation. The beauty is that we have solid finance and political models in more conservative places like Phoenix to follow where they have self-taxed via referendum to the tune of \$30b for multi-modal investment including new light rail + bus efficiency, bike etc. The Nashville Chamber of Commerce’s Moving Forward is undertaking independent research in conjunction with the Victoria Transport Policy Institute, on the universe of sustainable funding sources to determine which are best suited for Middle Tennessee. The research should be completed this fall.



Recommendation Overview: This likely has to be a regional approach and we believe that Mayor Barry is poised to be the best as lead to garner a large coalition of public and private support. We need to stop talking and start chalking but with a solid plan to implement high quality transit. Then look at P3's, tax-increment financing, TIFIA loans, bonding against dedicated tax increments etc. Not in a vacuum but as pieces of a financial menu to take on a large complex project. A P3 could involve shifting much of the risk to the private sector for design, build, operate, maintain, and perhaps even finance.

An example project that could have broad support would be light rail, or gold standard bus rapid transit, possibly from a regional commuter or visitor hub such as the airport into the Nashville core (and convention center) as the beginning of a system. This type of service is only being suggested because in other locales these starter segments that serve multiple market segments, and can generate higher fare box recovery from travelers can offset the ramp-up needed for locals to embrace the system and for developers to build around the transit stops, thereby supporting increased ridership by local commuters. For a phase 2 project, a small dedicated sales tax increase and/or bond referendum could be more feasible with success under Nashville's belt. An initial line segment could rely on a number of federal funding streams including new loan programs recently made available (see addendum) supplemented by tax-increment financing.

EXAMPLE SMART GOALS:

Metro will:

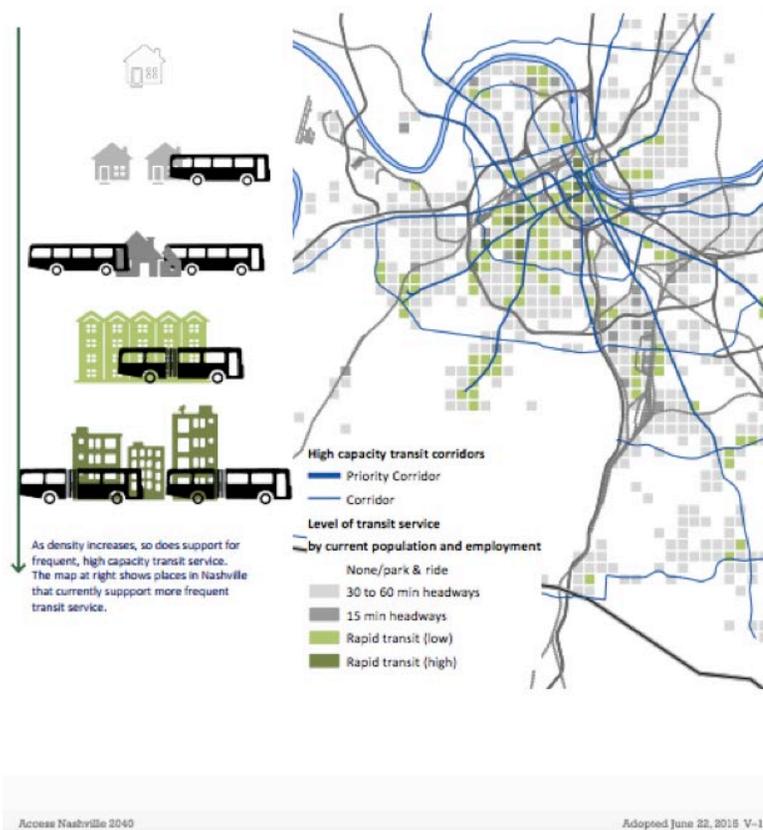
- Coalesce with the other regional and state stakeholders around an initial project path forward by September 2017
- Metro and coalition put together a funding plan that includes a P3 component if project is sizeable enough
- Coalition led by Metro puts RFI/RFQ on the street by March of 2018 for 30 day response
- If Responses meet criteria, move to RFP on street by June 2018, Responses by August 2018
- Select vendor and have funding in place by September 2018

viii. Recommendation: Finalize Plan which will Plan and Build Regional Support for Implementable Initial Transit Line Segment as part of a Regional Network

Time to Implement	Short/Medium: 2016/2017 For 2018 Budget Cycle
Control	Local/Regional/State?
Cost	Medium/High
PPP Opportunity?	Yes
Revenue/ROI	High
Politics/Optics	Mixed
Key Principles	Streets as Job Creators, Clear Roles and Responsibilities, P3, Equity
Ownership	Mayors Office and MPO with coalition from Planning Department, DOT/MTA, ULI, Business Community, BID, Airport Authority.
Related Initiative	Communications Plan, Create DOT, P3 Office
Net/Net	WIN-WIN

Background 1: As with transit funding, Mayor Barry is in a unique position to lead the region in a multi-partner effort to bring transit to Nashville. The failure of the AMP is not necessarily devastating to transit efforts in general. In fact, it has been valuable in educating stakeholders on why transit is key for the region, the costs of not acting, and for advocates to understand what levers will work/not to bring a transit system to Nashville.

Background 2: There are solid plans on the table in Nashville ranging from \$840m to over \$5b One of the upsides of Bus Rapid Transit is ability to implement using reallocated, but existing road space, and the accompanying lower cost. One the downside, when it comes to political compromises, BRT often gets watered down to “BRT-lite” or worse, and sharing road space with cars to avoid taking auto capacity away. Rail is more expensive but is less apt to be watered down as a result of it needing to have standard features like at-grade boarding for instance. Also developers and politicians often can get their head around a premium light rail or streetcar system, but have not seen a premium BRT, or still see the bus as a stigmatized option for non-choice riders so having this honest dialogue can create the space for education on the +/- of the modal options. The nMotion planning effort to be completed in fall of 2016 will also be a key point in time to examine how a new vision of transit can serve the region.



Recommendation Overview: Being honest about the issues laid out above will help Nashville choose options that take advantage of this unique moment in time, in history. The goal should be to position the region to build something that will be successful in garnering initial support, through to ridership, allowing a larger system plan to be undertaken. Qualitative and quantitative analysis should be done not just on the fully loaded societal benefits of transit investment, but also on the costs of not acting. How will this hurt businesses, equity, sustainability, and competitive positioning? What will the infrastructure costs look like if we continue to wait to act? The end goal is to create walkable neighborhoods and business districts linked by high quality transit for longer trips, bikes for medium trips. The car becomes an option versus mandatory.

Form / Function Matrix:
Metropolitan Land Use Options in the U.S.

	REGIONALLY SIGNIFICANT	LOCAL SERVING
 WALKABLE URBAN	WALKUP (Walkable Urban Place) <ul style="list-style-type: none"> Office Space ≥ 1.4M sq ft -OR- Retail Space ≥ 340,000 sq ft WalkScore ≥ 70.5 Avg Intersection density ≥ 100 per sq mile 	WALKABLE NEIGHBORHOOD <ul style="list-style-type: none"> WalkScore ≥ 65 Avg Intersection density ≥ 100 per sq mile
 DRIVABLE SUB-URBAN	DRIVABLE EDGE CITY <ul style="list-style-type: none"> Office Space ≥ 1.4M sq ft -OR- Retail Space ≥ 340,000 sq ft 	DRIVABLE SUB-DIVISION <ul style="list-style-type: none"> All land not allocated to other categories

Categories of WalkUPs:

Our previous research determined that there are eight types of WalkUPs.¹¹

Using the 20th-century, center-city/suburbs dichotomy, the first five types of WalkUPs tend to locate in a metro's central city. The last three tend to occur in a metro's suburban areas.

Walkable urban development is not simply a phenomenon of revitalization in central cities, but also a trend of urbanizing suburbs.

Generally found in
CENTER CITIES

- 1. Downtown:** The traditional center of a metro's central city. Occasionally there are Secondary and Tertiary Downtowns.
 - Examples: All Traditional Downtowns
St. Paul *metro Minneapolis-St. Paul*
Tacoma *metro Seattle*
Brooklyn, Newark, and Jersey City *metro New York City*
- 2. Downtown Adjacent:** WalkUPs that cluster around the central city Downtown.
 - Examples: Dupont Circle *metro Washington, DC*
Capitol Hill *metro Seattle*
Little Tokyo *metro Los Angeles*
- 3. Urban Commercial:** Former local-serving commercial districts in decline during the late 20th century, recently revitalized as regionally significant WalkUPs.
 - Examples: Columbia Heights *metro Washington, DC*
Lincoln Park *metro Chicago*
Melrose *metro Los Angeles*
- 4. Urban University:** Places where institutions of higher learning have embraced, and are integrated with, their community.
 - Examples: Westwood (UCLA) *metro Los Angeles*
University District (University of Washington) *metro Seattle*
Morningside Heights (Columbia University) *metro New York City*
- 5. Innovation Districts:** Places where the knowledge-based innovation economy is focused (research, tech-transfer, startups, corporate facilities, etc.), many times growing out of Urban University WalkUPs.
 - Examples: University City *metro Philadelphia*
South Lake Union *metro Seattle*
Cortez *metro St. Louis*

Generally found in
SUBURBS

- 6. Suburban Town Center:** Eighteenth and 19th-century towns eventually swallowed by larger metro areas and recently revitalized.
 - Examples: Evanston *metro Chicago*
Bellevoe *metro Seattle*
Pasadena *metro Los Angeles*
- 7. Redeveloped Drivable Sub-urban:** Places originally developed as strip commercial and/or regional malls that have since urbanized.
 - Examples: Belmar *metro Detroit*
Tysons *metro Washington, DC*
Perimeter Center *metro Atlanta*
- 8. Greenfield or Brownfield:** WalkUPs developed on undeveloped land or reclaimed land, mainly former industrial uses.
 - Examples: Reston Town Center *metro Washington, DC*
Atlantic Station *metro Atlanta*
Country Club Plaza *metro Kansas City*

Foot Traffic Ahead 2016, Courtesy of The Center for Real Estate and Urban Analysis, School of Business at George Washington University, Locus & Smart Growth America

As with funding, and closely tied to it, this is a regional approach with Mayor Barry as likely lead with a large coalition of public and private support needed. The development community and ULI should be big boosters and the cornerstone of the business community that will support efforts for high quality, high capacity transit. This is currently in evidence with the Moving Forward initiative of the Nashville Chamber of Commerce and their coalition of public and private working together to create regional transportation solutions.

Leaders should not focus on the costs, but focus on the return on investment. If a \$5b investment will generate \$15b in return vs. a \$1b investment generating \$1.5b in return, the optimal direction is clear. An initial line segment will help to prove this out, but initially as we model outcomes we need to look at the fully loaded set of benefits, from return on farebox to real estate values, to job creation, tax increment created etc. and compare apples to apples in the modelling. If developers feel that they can build thousands more units around rail versus bus or vice versa that needs to be taken into account in the analysis.

Last, we cannot lose sight of the customer, of people in this process. We should make efforts to point out the benefits of transit that accrue to citizens whether they do or do not ride transit, such as greater opportunity for low income, youth and elderly, economic development potential, environmental benefits, etc. If a person says they will not ride, then ask “why” and let’s address those problems from alignment, to first and last mile access to frequency of service and the comfort of the waiting facilities and real time information needed for reliability.

EXAMPLE SMART GOALS:

- Provide funding for 10 Metro employees annually to attend Transit Alliance of Middle Tennessee’s Transit Citizens Leadership Academy (TCLA – likely for administrators in relevant departments) or the Transit Government Leadership Class (TGLC – elected and/or appointed officials) in 2016.
- MTA to convene non-profit entities for joint quarterly meetings by January 2017 to create a more formalized venue for non-profit and public entities related to multi-modal transportation to convene and understand what each group is working on and how to coordinate. Include the main public sector partners with TAMT, Transit Now, TN Public Transportation Assoc., etc
- Mayor Barry to convene a one day facilitated forum in September 2016 with all the regional leaders to explore the options on the table in all of the long range plans.

ix. Recommendation: Dramatically Increase Active Transportation Options and Infrastructure for Equity, Safety, Health, Economic Development

Time to Implement	Short/Medium: 2016-2019
Control	Local/State
Cost	Medium
P3 Opportunity?	No
Revenue/ROI	Medium
Politics/Optics	Mixed to Positive
Guiding Principles	Equity, Streets as Job Creators, Vision Zero
Ownership	Parks, Planning with DOT w/ support of Mayors Office
Related Initiative	Create DOT, Address worst intersections
Net/Net	WIN-WIN

Background: When decoupling the costs of housing and transportation, economically disadvantaged people spend a disproportionate percent of income on transportation. Health care costs in the U.S. are double what they are in Denmark, where active transportation is a way of life. Walking and biking are 2nd class modes of transportation currently in Nashville and need to be mainstreamed.

Recommendation Overview: An active transportation action-plan needs to be pulled together relatively quickly, funding identified, and a department tasked with implementing it (DOT). This ties into new

EXAMPLE SMART GOALS:

- Revise code to require sidewalks to be constructed or reconstructed on entire frontage for all development that requires a building permit by January 2017.
- If existing sidewalks meet the requirements of the Major and Collector Street Plan or other guiding document for a new development, require 1/2 the frontage distance to be constructed in a location where sidewalks gaps exist and ROW is available within 1,000 feet of the project.
- City to provide transparent data on use of in lieu of fees on their website and justification and process for development by Summer 2016.

Figure 1: Sidewalk Questions

Where do Nashvillians most want new sidewalks?
How much additional do they think households should pay for them?

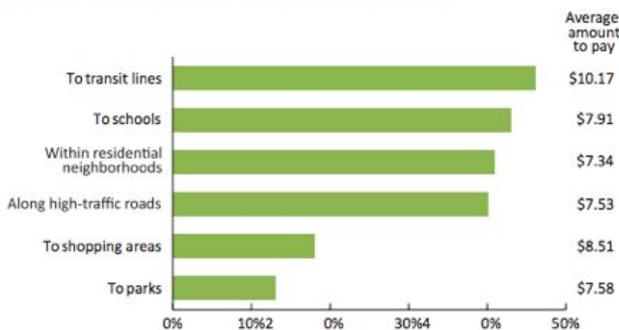
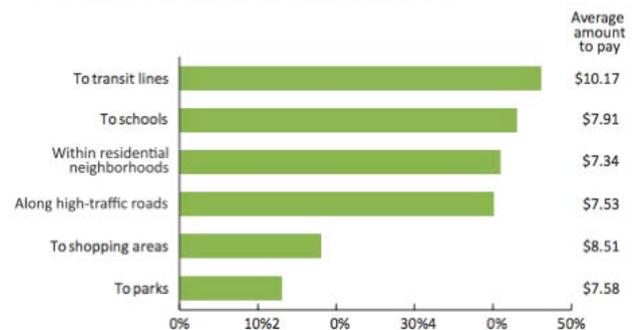


Figure 1: Sidewalk Questions

Where do Nashvillians most want new sidewalks?
How much additional do they think households should pay for them?



Courtesy The League of American Bicyclists
Courtesy Access Nashville

regulations for construction with accommodation for pedestrians and cyclists, complete streets, NACTO guideline implementation with engineers, a plan for constructing protected bike lanes and a sidewalk network, converting some parking space into public space and so forth. Messaging around the above will be key. The Metro Health and Planning Departments are very willing partners, as is the business community, development community and schools.

We also recommend continuing activities such as the “[NACTO roadshow](#)” and provide cycling network planning and implementation training for DPW, Planning, Parks, MPO and the TDOT planners and engineers as well as private sector developers and designers to learn how to implement change in traditional and non-traditional settings.

Examples: [Chicago Pedestrian Plan](#) [Chicago Cycling Plan](#) [Make Way For Play Guide](#) Ties back to the [2 year plan](#), as we are doing with Gear-Up 2020

Tennessee is experiencing a lot of growth in cycling, walking.... are we accommodating for it?



Lincoln Hub, Chicago, IL. Built in 2015. Photo Credit: John Greenfield

x. Recommendation: Increase Growth of Nashville B-Cycle by Fourfold

Time to Implement	Short: 2017
Control	Local
Cost	Medium
P3 Opportunity?	Yes
Revenue/ROI	Medium
Politics/Optics	Positive
Guiding Principles	Equity, Streets and Public Space as Systems
Ownership	MPW/DOT with support from Planning (Metro Parks and Schools may be stakeholders) Nashville Downtown Partnership
Related Initiative	Set Mode-Share Goals, Increase Active Transportation Options
Net/Net	WIN

Background: Bikeshare is as valuable as it is useable. Like any modal system, bigger is better, and the return on the investment is exponentially higher on a system at scale. A small system is attractive for tourists to peruse the Downtown. A big system that extends out into the neighborhoods is used as utilitarian transportation. The low comparative cost of bikeshare implementation and the high return on investment make expanding from 31 stations to 125 a no-brainer.

Recommendation Overview: We need a spark to make cycling as transportation take off in Nashville. An investment in a considerably larger bikeshare system has worked around the world in like cities. How can we do this without all of the infrastructure to support it in the form of bike lanes? The answer is that you have to do it all. More bike infrastructure, immediately, and you need to launch a much larger bikeshare system. Both in my experience have been equally important in getting more people on bikes. The system should be coordinated with transit linkage, major job centers, universities, hospitals and neighborhoods and existing bike trails. In tandem we need to create major north-south, and east-west protected bike lane routes in and out of the core of Nashville. We can also institute low cost memberships for lower income people to use bike share for pennies a day. The financing of the system can be through a combination of CMAQ funds from the federal government, grants, philanthropy, corporate sponsorships, advertising, member and usage fees.

EXAMPLE SMART GOALS:

- Planning, MPO, Mayors Office, Downtown Partnership, and Transportation/Public Works need to convene within 30 days to plan for the expansion, looking at:
 - o Funding and sponsorship
 - o Contracts for expansion, physical equipment and operations and maintenance
 - o Performance metrics in general and in contract to align incentives
 - o Governance of a larger system
 - o Branding, marketing and communications
 - o Station placement and crowd sourcing of input
- Pilot a Bike Share Equity Program by providing low cost or free memberships and providing bike share in low-income communities using a grant mechanism administered by organizations like [PeopleforBikes](#). Example programs include Austin and Atlanta.

xi. Recommendation: In Rank Order, Address the 50 worst crash intersections outlined in the 2014 Public Works Pedestrians Bicycle Safety Pilot Project Report and report annually

Time to Implement	Short/Medium: 2016-2019
Control	Local/State
Cost	Medium
PPP Opportunity?	No
Revenue/ROI	Medium
Politics/Optics	Positive
Key Principles	Equity, Streets as Job Creators, Safety
Ownership	MPW/DOT with support from Planning (Metro Parks and Schools may be stakeholders)
Related Initiative	Vision Zero
Net/Net	WIN

Background: Establishing a Department of Transportation and an associated enterprise fund sets the stage to self fund (as much as possible) improvements at the worst 50 crash site intersections. Note: An **enterprise fund** establishes a separate accounting and financial reporting mechanism for municipal services for which a fee is charged in exchange for goods or services.

Recommendation Overview: This is a common method of attacking this type of safety problem in cities by utilizing the 80/20 rule. Typically the bulk of the crashes are happening at a subsection of substandard intersections. Improvements can range from quick interventions such as repainting crosswalks, to larger projects to rebuild infrastructure with less direct competition for space between people and 4000 lb vehicles. Technologies can also be employed to address safety, and to track the progress being made. Ranging from signalization improvements like leading pedestrian intervals, to automated enforcement of stop lights.

Aggressive timelines should be set and budget allocated even if it needs to be borrowed in the short term as lives are at stake.

Pedestrian & Bicycle Safety Pilot Project
November 2014
Metro - Nashville
PUBLIC WORKS

Tennessee Nonmotorists killed in Traffic Crashes

Year	Pedestrian	Pedalcyclist	Other/Unknown	Total
1994	58	6	5	109
1995	103	14	1	118
1996	94	5	4	103
1997	107	9	1	117
1998	82	6	1	89
1999	76	8	6	90
2000	99	7	3	109
2001	77	5	3	85
2002	72	3	3	78
2003	96	4	4	104
2004	83	7	3	93
2005	70	10	5	85
2006	69	7	7	103
2007	69	6	6	81
2008	60	7	4	71
2009	71	9	3	83
2010	87	4	3	94
2011	80	5	3	88
2012	87	8	2	97
2013	69	8	6	84
2014	88	5	0	93
2015*	110	10	0	120

Tennessee pedestrian and cyclists deaths since 1994.
Credit: Tennessee Highway Patrol

EXAMPLE SMART GOALS:

- Planning and MDOT to study the effect of right on red, and well as right on green (allowing turns) on pedestrian injuries and fatalities by the end of 2016 with implementation plan in Spring of 2017
- MPW to assess budget and timeline for installing leading pedestrian intervals at all intersections with pedestrian traffic for the 2017 budget and striping year
- MDOT to design plan implement continental crosswalk standard at all Metro intersections by the end of the 2018 construction season
- Establish green markings as the standard for all conflict zones by 2017
- MDOT to review of all current slip lanes within the Urban Services Area for potential elimination by September 2017 (slip lanes allow vehicles to not stop or slow through a major intersection using a wide radius – a major conflict for pedestrians and cyclists)

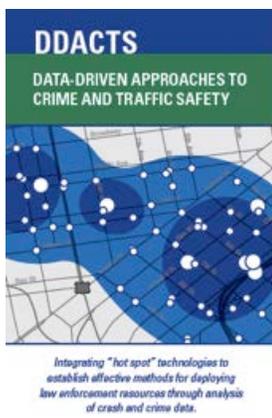
xii. Recommendation: Commit to Vision Zero to Eliminate Road Fatalities by 2025, in part by lowering local speed limits

Time to Implement	Medium/Long: 2017-2025
Control	Local/State
Cost	Medium
P3 Opportunity?	Yes (Smart Cities, Autonomous, Automated Enforcement)
Revenue/ROI	Medium
Politics/Optics	Positive, Neutral with automated enforcement
Guiding Principles	Equity, Streets as Job Creators, Safety
Ownership	PW-DOT/Mayors Office
Related Initiative	Address 50 Worst Intersections, Always Build Complete Streets, Streets as Job Creators
Net/Net	WIN

Background: There is really no number more than zero that is acceptable for traffic crashes. We must start by changing our language and admitting publicly that these are not “accidents.” 93% of traffic fatalities are caused by driver error. That means that collectively this is in our control. Davidson County has a crash every 26 minutes and pedestrian and bicyclist deaths are at a 20 year high.

Recommendation: Embrace the 5 E’s of Safe Routes to School as an umbrella for safe streets for everyone. Tying to our Complete Streets goal, and a commitment to balancing the public way in favor of the most vulnerable users we must have an ongoing engineering effort to redesign our streets for citizens at every opportunity; our children, our elderly, our disabled. We also tie into our Communication plan by educating our citizens as to why safety is crucial, and the impact of injuries and deaths on our communities emotionally, physically and financially. Encourage all of our citizens to get themselves out and into the new infrastructure we create to make them safe through the communication program. No plan for Vision Zero is complete without enforcement because it passively works, always, and creates a sense of insecurity around distracted, drunk, and reckless (speeding) driving. Finally we must evaluate, and measure our efforts regularly, and soon this can be in real time with Smart Cities cameras, sensors, and software.

Recommendation 2: Formalize a Vision Zero program and consider utilizing NACTO to benchmark against other cities work in the USA and abroad. Use the other goal setting exercises in this document, Nashville Next and beyond to feed the Vision Zero goals, with a goal of eradicating deaths over a decade. Lower local speed limits on neighborhood streets to 25 mph or less. So why the reduction? See the diagram below and the dramatic difference in fatality risk based on speed. Also, review the DDACTS framework with the National Highway Safety Administration, and Metro Police can learn more via The National Institute of Justice or the National Law Enforcement Liason Program. This is an opportunity for Metro DOT, Metro Police, and the Mayors Office to collaborate to cut traditional crime and traffic crime at the same time.



SPEED (MPH)	STOPPING DISTANCE (FT)*	CRASH RISK (%)†	FATALITY RISK (%)†
10–15	25	5	2
20–25	40	15	5
30–35	75	55	45
40+	118	90	85

* Stopping Distance includes perception, reaction, and braking times.

† Source: Traditional Neighborhood Development: Street Design Guidelines (1999), ITE Transportation Planning Council Committee 5P-8.

EXAMPLE SMART GOALS:

- Public Works to propose to Metro Council a 25 mph speed limit on all neighborhood streets categorized below collector in the Major and Collector Street Plan to increase pedestrian safety. Change city speed limit ordinance by January 2017 and replace all regulatory signs and pavement markings by August 2018.

Institute that protected bike lanes are the new standard when considering bicycle facilities on streets beginning in Fall of 2017. Current bike lanes will be assessed for conversion. It is understood that street widths and typology mean that contiguous separation is not always possible until a street is rebuilt.

Tennessee Pedestrian and Bicyclist Deaths Surpass 20-Year High

By TONY GONZALEZ • DEC 30, 2015

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Tennessee saw more pedestrians and bicyclists killed this year than any year in more than two decades.
TONY GONZALEZ/WPLN

Table 10 Crash Report Variables

Variable	Pedestrian Crashes	Bicycle Crashes
Male Drivers	57%	60%
Female Drivers	43%	40%
Male Pedestrian/Cyclist	60%	77%
Female Pedestrian/Cyclist	40%	23%
Crashes Involving Alcohol	11%	2%
Crashes Occurring in Day	39%	84%
Crashes Occurring in Night	61%	16%
Average Driver Age	45	43
Average Pedestrian/Cyclist Age	40	32
Hit & Run Crashes	29%	15%
Number of Fatalities	8	0
Crash Occurred at Intersections	52%	81%
Crash Occurred not at Intersections	48%	19%
Crashes in Parking Lots	19%	9%
Crashes near Bus Stops	97%	94%

Study data shows the characteristics of Nashville's crashes between vehicles and pedestrians.
METRO PUBLIC WORKS 9 of 5



xiii. Recommendation: Create Great Streets Corridor Program

Time to Implement	Medium/Long: 2016-2019
Control	Local
Cost	Low/Med
P3 Opportunity?	Yes
Revenue/ROI	High
Politics/Optics	Mixed to Positive
Guiding Principles	Streets as Job Creators, Vision Zero, Equity
Ownership	Planning with support of DOT/Mayors Office, Nashville Downtown Partnership
Related Initiative	Smart Cities, P3's, Enterprise Funds
Net/Net	WIN

Background: Corridor length improvements offer a level of investment, consistency and economic development rarely seen in cities today. Why? It's expensive and without money identified can become a futile planning process. In Washington D.C., the city leadership wanted new modern bus shelters. Advertisers wanted a premium location to place their ads. In a public-private partnership, the District did an \$85m (approx.) deal with Clear Channel to give them the rights to advertise on the shelters in exchange for upgrading all of the cities shelters (we can require digital info, wifi etc.) and yearly payments from ClearChannel. This was bonded against for over \$500m to rebuild 8 key corridors in Washington, often stretching from lower income, to middle income communities. The development and taxes then pay back the bond in a high ROI strategy.

Recommendation Overview: Evaluate all potential assets that can be offered for concession. Evaluate all services desired for the public way including sensors, Wifi and other smart cities apps. Evaluate what we can expand in services to low-income residents via free bikeshare, better way-finding, enhanced shelters. Put out an RFQ that could potentially combine all elements, as most future implementations of Street Corridors will have an advertising component. Also examine how Tax Increment Financing could be utilized more effectively in tandem.

EXAMPLE SMART GOAL:

- Metro Planning to work with Metro DOT to formulate a master plan for a Nashville Great Streets Program, identifying funding, P3 opportunities and implementation strategy. Metro Planning and DOT to put together list of candidates for corridor-length improvements



Notes: [DC Great Streets Program](#) [San Francisco Parklet Plan](#) [Chicago Bus Shelter Concession](#)

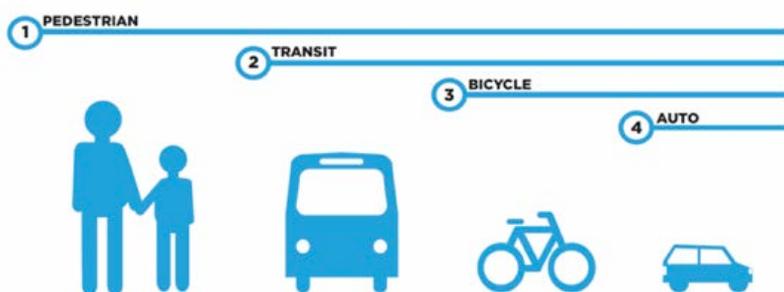
xiv. Recommendation: Always Build Complete Streets & Default to Pedestrians as Priority in Public Space

Time to Implement	Fall 2016
Control	Local, State
Cost	Low
P3 Opportunity?	Yes in execution of projects
Revenue/ROI	High
Politics/Optics	Positive
Guiding Principles	Streets as Job Creators, Vision Zero, Equity
Ownership	Planning with support by PW-DOT & Mayors Office
Related Initiative	Vision Zero
Net/Net	WIN

Background: Nashville like over 500 jurisdictions has adopted Complete Streets formally as the default for street design, specifically Nashville’s Complete Streets Policy was passed in 2010 by Executive Order 40. Also, like most jurisdictions (state and local) it has not truly been adhered to as a default standard. We applaud Mayor Barry’s recent efforts to enhance and institute stringent guidelines for Nashville in May of 2016. We also compliment DPW’s recent efforts to institute Barnes Dance intersections and other innovative options for pedestrian safety.

Recommendation Overview: Per Mayor Barry’s Executive Order dated May 23rd 2016, we recommend the institution of reporting specifically on complete streets and adherence to the NACTO Urban Design Guidelines. Further recommended is the institution of a specific process if deviation from the guidelines is desired that requires planning, and Mayor’s office signoff before a project is approved. Additionally, for the purpose of institutionalizing change in Nashville, we recommend having a NACTO Training and Workshop in Nashville to provide training for DOT, Planning, the MPO and the TDOT planners and engineers concurrently on the guidelines and how to institute them in traditional and non-traditional settings. Formally adopting a modal hierarchy that always puts people first, will also go a long way to institutionalizing the full intent of Complete Streets.

Examples: Chicago, NYC



Chicago modal hierarchy
<http://wkcr.com/2016/03/07/pedestrian-scramble-crosswalks-come-to-downtown-nashville>

Courtesy: Walk Bike Nashville

xv. Recommendation: Join the National Association of City Transportation Officials (NACTO)

Time to Implement	Summer 2016
Control	Local
Cost	Low
P3 Opportunity?	No
Revenue/ROI	High
Politics/Optics	Positive
Guiding Principles	Streets as Job Creators, Vision Zero, Equity
Ownership	PW-DOT with Mayors Office
Related Initiative	Vision Zero
Net/Net	WIN

Background: Benchmarking and sharing of information, policy leadership, and Designing Cities Conferences are all key to staying on top of thought leadership in transportation, public space and human centered design. NACTO

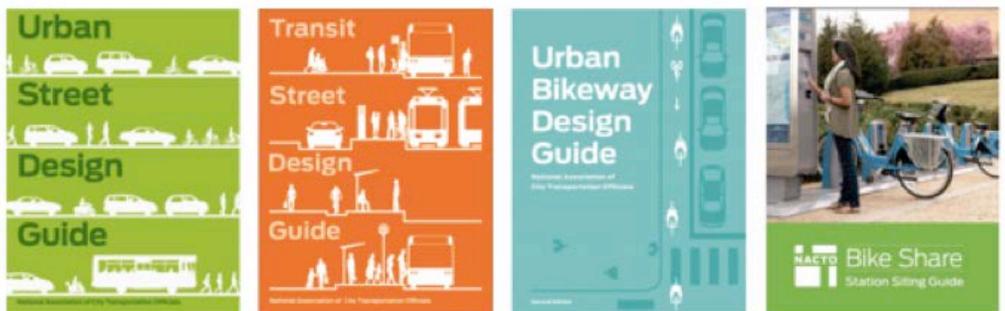
Recommendation Overview: Nashville at 600k people+ qualifies for NACTO membership and could benefit greatly from the interactions, design standards, conferences and policy leadership. Additionally, we recommend that a minimum of two trips per year should be planned, one U.S. and one abroad to compare quality of life, services and infrastructure and transportation with organizations like NACTO and People for Bikes.

EXAMPLE SMART GOALS:

- Public Works to formally adopt NACTO guidelines as defacto design standards with exceptions as noted within Mayor Barry’s Green and Compelte Streets Executive Order from May 2016.
- MDOT to Plan for one study visit within the U.S. in 2016 and one study visit abroad in 2017 by Planning, Mayor’s Office, Transportation, private sector and non-profit leaders with designated focus for each visit.

Publications

NACTO’s publications provide a vital resource for practitioners, policy-makers, academics, and advocates alike.



B. OPEN SPACE RECOMMENDATIONS:

Background: Nashville has natural beauty aplenty, positioned on the Cumberland River, a tributary of the Ohio River, and has a robust park and trail network. Integrating nature into its urban spaces, and into development however can be a challenge. Based on a survey of nearly 1,500 real estate industry professionals conducted by PricewaterhouseCoopers and the Urban Land Institute, Nashville ranked 7th nationally in terms of attractiveness to real estate investors for 2016.[56]

From Wikipedia: “As of October 2015, according to city figures, there is more than \$2 billion in real estate projects underway or projected to start in 2016. Due to high yields available to investors, Nashville has been attracting a lot of capital from out-of-state. A key factor that has been attributed to the increase in investment is the adjustment to the city’s zoning code. Developers are now able to easily include a combination of residential, office, retail and entertainment space into their projects. Additionally, the city has invested heavily into public parks. Centennial Park is undergoing extensive renovations. The change in the zoning code and the investment in public space is consistent with the millennial generation’s preference for walkable urban neighborhoods.[57]”

This reinforces the need for Nashville to continue to bake robust open space into all new development projects, whether public or developer led. Government has an opportunity to lead by example and to create opportunities for the private sector to enhance public space and amenities when approving PUD’s.

Opportunities: Whether looking at Nashville’s park system, plazas, or right of way, there are opportunities for activation, public art, amenities, and entrepreneurship in our open spaces. Health, wellness and quality of life are also key outputs of Nashville’s work on creating world class places like Centennial park which result in healthier, happier citizens and economic development. With a record amount of development taking place in Nashville, there is also an opportunity to create more balanced open space in future developments, and to leverage private investments and partnership to enable this positive outcome. Last but not least, open-space can be fun, for children, but also for adults and we should make sure to prioritize enjoyment in the design of our public spaces.



The 21 Montreal Adult Swings

To arrive at their recommendations, The Open Space Committee conducted 21 stakeholder interviews in public, private and non-profit to better understand their relationship to the Nashville Next study, what issues they currently face, and what ideas they have that may help guide the goal prioritization process for Gear-Up 2020.

Research and stakeholder interviews revealed consistent comments:

1. We have added 4000 acres in parks over the last 5 years, most of it land-banked. Are there opportunities to use that land for food production or non-profit uses?
2. Are we adequately programming parks? Do we have the amenities for citizens in parks? Could providing these amenities with the private/non-profit sector generate revenues for better programming?
3. Are their benchmarks from other park systems that can result in cost savings and better service? An example would be the use of goats vs. paying for mowing grass (Chicago)
4. Metro Parks are not recouping maintenance costs in many cases from events. (I.e. NHL Allstars, and Hall of Fame Park) Are there opportunities to get usage fees from personal trainers using facilities? Partner with Convention and Visitors Commission and Chamber to get dollars for repairs after major city events that attract visitors.
5. Streets need to be considered an extension of the parks, of the buildings, but the car-centric culture of the past is keeping Nashville from investing in streets beyond movers of machines vs, spaces for people.
6. As we move to consider our streets “parks” again as we did in the late 1800’s, what tactical urbanism concepts can be employed for low cost, high return interventions?
7. How can we facilitate more citizen engagement with everything from tree planting and gardening in public space, to tree adoption and maintenance, to public art and entrepreneurship in parks and streets?

**Health Snapshot
2012 Nashville MSA**

	Tennessee	Cannon	Cheatham	Davidson	Dickson	Hickman	Macon	Maury	Montgomery	Robertson	Rutherford	Smith	Sumner	Trousdale	Williamson	Wilson
% Fair/poor health	19	18	20	15	23	23	22	17	19	17	18	20	17	n/a	7	16
Physically unhealthy days	4.1	4	3.3	3	4.3	5.3	4.9	4.2	5.3	3.4	3.6	3.5	3.5	n/a	1.5	5
Mentally unhealthy days	3.4	3	3.8	2.9	4.1	3.9	5.2	2.4	3.1	2.8	3.1	4.2	3.5	n/a	1.8	3.8
% Low birth weight	9.4	9	8.7	9.3	8.3	9	7.9	9.1	8.2	8	8.3	8.5	7.8	10	6.9	8.7
% Adults obese	32	32	32	30	30	32	35	33	33	32	30	33	30	33	24	30
Motor vehicle deaths	9,098	28	99	643	104	44	55	129	192	113	225	49	177	22	113	130
Motor vehicle mortality rate	22	30	37	16	32	27	37	24	19	27	15	38	17	41	10	18
% No social-emotional support	19	n/a	12	18	17	19	27	14	15	17	13	n/a	19	n/a	15	22
Violent crime rate	713	199	309	1,323	462	252	272	766	697	551	477	258	350	406	143	463
Ozone days	8	0	1	8	0	0	0	0	0	7	2	0	16	2	1	5
Recreational facilities rate	7.8	0	2.5	9.3	10	0	0	11	6.2	4.5	7	5.2	9.4	0	16	9.8
% Limited access to healthy foods	11	28	20	10	19	34	31	1	19	14	11	26	13	33	8	12

Source: Compiled by University of Wisconsin Population Health Institute, 2012 County Health Rankings

i. Recommendation: Create Enterprise Fund and Dedicated Funding for Parks

Time to Implement	Short/Medium: 2016 for 2017 Budget Cycle
Control	Local
Cost	Medium
P3 Opportunity?	Yes in practice
Revenue/ROI	High: 10X +
Politics/Optics	Positive to Mixed
Guiding Principles	Streets as Job Creators, Clear Roles and Responsibilities
Ownership	Parks with support from Mayors Office, Budget Office, Planning
Related Initiative	Establishment of an Office of Grant Management, Form an Office of Public-Private Partnerships (P3)
Net/Net	WIN

Background: Parks and Open Space need to be a priority, and nothing says priority like budget and authority. We also need to enhance an environment of creativity and entrepreneurial spirit. Parks budget has been cut significantly over the past decade. At the same time Parks has taken over thousands of acres of new land, much of it land-banked until funds can be allocated for capital improvements. We heard from many stakeholders that it is time to enhance sponsorship opportunities within parks to augment maintenance and programming dollars available. We also heard that there is a need for more amenities and programming within parks for citizens.

We also heard great interest in increasing access to local food and yet community gardening is not allowed in a number of current Metro zoning designations.

Recommendation Overview: There are models to pull from in other cities around dedicated funding for the park system, as well as models for programming, community collaboration and revenue generation via amenities. Chicago for instance has a dedicated sales tax that is devoted to the 570 parks in the city. They also utilize sponsorships, foundation support and events like Lollapalooza to bring in much needed revenue for operations and programming. We want to instill a level of entrepreneurship in the park system. If we can align what citizens want in terms of amenities, along with what the private sector and non profits are willing to offer, at a fair price for citizens without sacrificing the beauty of the space (ie. Pollute the parks with commercialism) then we have a win-win-win.

There is also potential to utilize land-banked park land for temporary income prior to capital improvements through short term leases to farmers or non-profits which are aligned with the goals of Parks.

Examples: Chicago, Vancouver

EXAMPLE SMART GOALS

- Parks to establish a pilot partnership with Nashville Downtown Partnership to activate park space in the Downtown Loop via programming and vendors and to assist with maintenance by April 1st 2017.
- Parks Board to adopt policy allowing leases for park land for revenue by December 2016
- Change zoning code overall to allow for “non-commercial community gardening” in all zoning districts by December 2016.
- Provide tax rebate or reduction for portion of land allowed as temporary community garden food production by June 2017 with monitoring by non-profit such as Nashville Food Project or Hands On Nashville.



ii. Recommendation: Analyze Conversion of Existing Parking Facilities to Affordable Housing, Open Space (Metro and Privately Owned)

Time to Implement	Short/Medium: 2016 for 2017
Control	Local
Cost	Low
P3 Opportunity?	Yes
Revenue/ROI	High: 10X +
Politics/Optics	Positive
Guiding Principles	Equity
Ownership	Planning and Housing Department
Related Initiative	Communications Plan
Net/Net	WIN

Background: There are literally hundreds of parking facilities in Metro Nashville, large and small, surface lots and garages, above and below ground. Some may just be empty surface spaces waiting for a future use while others were planned as parking structures. Combined there are tens of billions of dollars tied up in this space. Why? Because starting in the 20th century and through today we need a place currently to store our single occupancy vehicles at home, work, or the shopping mall. This is changing in many denser cities now due to a realization of “induced demand,” essentially that we are encouraging people to drive by building lanes for traffic and parking, that parking is subsidized and a low ROI activity vs. housing people and business, and more recently that technology and new business models will obviate the need for up to 90% of parking in dense cities that are well served by transit over the next 10-15 years. Nashville is not the densest city by any means but does have too much parking currently as evidenced by the low prices. With further development, a new generation with much less interest in owning or driving vehicles, the introduction of autonomous cars and ridesharing, it is time to take a hard look at a roadmap for the next decade for policy and use of these spaces.

Recommendation Overview: The first step is to make sure we have a correct inventory of all publicly owned facilities, and all privately owned structures and surface lots as well. A GIS map outlining geographic dispersion as well as size (number of spaces, vertical and horizontal and total square footage and footprint). We also need to know the current value of these assets as they are today. We can then overlay with existing data on where we are projecting future growth (Planning) and where we are going to be short in terms of affordable and workforce housing, and open spaces, schools, recreational facilities and so forth. A study can then be undertaken that looks at the rate of onset for new technologies, demographic and psychographic shifts, government policy shifts, and new transportation options brought to bear. We can then look at what are the lowest use, highest value, biggest need, and examine the array of options including P3 for development of multi-use, mixed-use developments funded by the private sector to meet Metro Nashville’s goals. We should be able to assemble a structure that is a win-win-win for all parties over the status quo.

EXAMPLE SMART GOALS

- Planning to internally collect data on all properties associated with parking or that have no current use.
- Planning to overlay current and projected future needs by utilizing many departments data and input
- A strategy will be codified around planned conversion of lowest-use to highest and best use with maximum ROI and fully loaded societal benefit
- An RFI can be prepared for individual properties with preference given to local partner firms, disadvantaged firms etc.

iii. Recommendation: More Equity in Park Spaces for Children and Families of all Income Levels and Geography with Non-Profit Partner

Time to Implement	Medium: 2017
Control	Local
Cost	Medium
P3 Opportunity?	Indirect
Revenue/ROI	Med:
Politics/Optics	Positive
Guiding Principles	Streets as Job Creators, Equity
Ownership	Metro Parks with support from MPW and Mayors Office
Related Initiative	Great Streets Program, Complete Streets
Net/Net	WIN

Background: Parks and play spaces make a place feel like a complete neighborhood with safe space for all to recreate. Given the Mayor’s focus on transportation and affordable housing, creative placemaking can ensure a focus on kids and families to coincide with affordable multi-modal transportation options and responsible land-use: playful elements on sidewalks, bus stops, etc.; flexible approaches to closing streets and/or slowing traffic to enable children (and adults) to recreate in the streets; kid-friendly bike lanes that connect housing to parks, community centers, schools etc.

Recommendations: Focus on community engagement, with a specific focus on engaging older youth as part of the solution. Youth understand the importance of play, parks and open space; are eager to contribute in positive ways to their community; and are powerful role models for young kids.

- An example is the [youth engagement initiative](#) in Baltimore, which Kaboom stood up with the city last year. Seed funding was provided by the Annie E. Casey Foundation in the aftermath of the post-Freddie Gray unrest.
- Another area of focus can be pocket parks, particularly in low-income neighborhoods, as a key to community development and livability—reduce blight, improve neighborhood safety, etc. A fairly recent [study](#) from Chicago examines the impact of pocket parks on property values and economic activity which helps to make a high-ROI argument based on qualitative and quantitative benefits.
- Last, emphasize the connection between access/use of parks/open space and addressing childhood obesity. See this interesting [population-level look](#) at benefits of investment in physical activity from the Global Obesity Prevention Center at Johns Hopkins which again reinforces a well-rounded argument for investment.

Note: In speaking with Kaboom, they mentioned that the city may be working with the Department of the Interior on a Let’s Move-related grant. There also may be a connection to Bill Frist’s work on obesity. Also, Kaboom has staff now in Nashville including Bruce Bowman.

EXAMPLE SMART GOALS

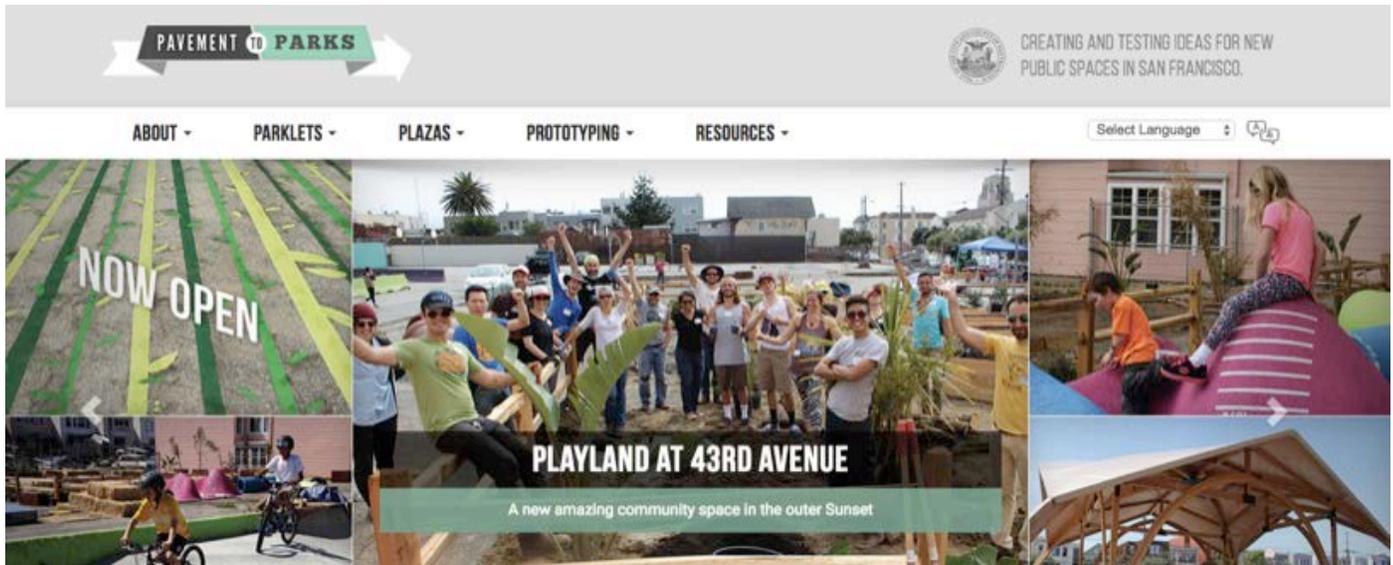
- Metro Parks and Mayor’s Office will evaluate opportunities and potential partners for a pilot test of an activation partnership with a non-profit for the 2017/2018 season.
- Incorporate and use and play for all ages embracing ULI’s Building Healthy Places principles



iv. Recommendation: Create Nashville “Spaces and Places” Program

Time to Implement	Short/Medium: 2016 for 2017 Budget Cycle
Control	Local
Cost	Medium
P3 Opportunity?	Yes
Revenue/ROI	Med: 5X +
Politics/Optics	Positive
Guiding Principles	Streets as Job Creators, P3
Ownership	Public Works/Transportation with support from Planning, Mayors Office
Related Initiative	Great Streets Program, Complete Streets
Net/Net	WIN

Background: Government has a hard time moving quickly, particularly to alter the makeup of streets. Besides, who better to make their streets better than the community who spends every day with them. In cities around the United States, it has been found that when government sets up a process for neighborhood community and business organizations to create experimental pop up park spaces, pop up shops, food trucks... people do just that. The result is consistently happier neighbors, lower crime, and increased retail business. It’s also about government providing more regulatory flexibility in a world that is increasingly all about our ability to adjust to a changing environment. In many ways this is the simplest of the P3’s, just remove the friction to allow progress.



Chicago Make Way for People process. Courtesy CDOT

Recommendation Overview: Nashville should establish parameters for utilizing public space in more interesting ways than vehicular storage. This can be done with templates from other cities as well as input from local business and community stakeholders. Once these parameters have been set we need to establish design standards that dictate a safe environment for all users of the public space while also maintaining creativity (so we don't have cookie cutter spaces). Standard maintenance contracts can be written up, and an expedited permit process for communities to move quickly. Following the practices in Chicago, this can be a revenue positive program for the city if we add unregulated spaces into the system, and in San Francisco, corporate sponsors have also stepped up to pay for parklet installations. These innovations can also be applied in plazas, alleys and larger public spaces for entrepreneurship and Smart City applications like free WiFi and analog or digital wayfinding.



Example of Digital Wayfinding in Arlington County Virginia, Courtesy of Transit Screen

Note: Instill entrepreneurship in the community, allow flexibility and forward compatibility in public space, start to move away from streets as “place for machines”

EXAMPLE SMART GOALS:

- Planning long with PW/Transportation and Parks will form a task force to come up with a formal public space innovation program by the end of 2016 that streamlines permitting, includes easy to follow design standards, and allows neighborhood groups and business improvement districts to create parklets, enhance plazas, and convert alleys etc. to modular, temporary, people oriented spaces
- Metro Arts to identify revenues from the percent for art fund that can be applied for by neighborhoods through vetted process by 2017.
- MPW to work with Metro Arts to convene interested non-profits to explore potential guidelines for application process, submit annual applications and involve BPAC to review and vote on winners to be funded
- Mayors Office with MPW to develop a regular schedule for Open Streets in Nashville based on other cities for 2017 Spring Season. Work with Walk.Bike Nashville and BPAC to review examples.
- Mayors Office to consider provisions to make parklets permanent if supported by the neighborhood. Team with Nashville Civic Design Center to assist neighborhoods to develop conceptual parklet plans.

v. Recommendation: Leverage Opportunities for Additional Conservation, Parks and Greenways land

Time to Implement	Medium: 2017
Control	Local
Cost	Low, expand acquisition: Medium
P3 Opportunity?	Yes, Direct
Revenue/ROI	High
Politics/Optics	Positive
Guiding Principles	Public Space as Systems, Equity, Job Creators, P3s, Respect Ex. Work, Best Practices
Ownership	Metro Parks
Related Initiative	Enterprise Funds, P3 Office
Net/Net	WIN-WIN

Background: Growth in Nashville has been exponential, with 2016 building permits of \$3.65 billion dollars (exceeding our previous high by 50%). With that growth comes higher land costs and more pressure on land for development. It is difficult for Metro Parks to allocate the needed funds for acquisition of park or greenways land, or for non-profits to create and manage the desired conservation easements equal with the pace of development. This lack of acquisition has been especially noted within the most urban areas, which are seeing the most rapid development pressures.

There are a number of non-profits in Nashville and Middle Tennessee with interests and passion toward the conservation and promotion of parks and greenways, yet these groups tend to form competitive silos as they seek funding for their efforts. This results in sometimes disjointed, competing efforts to achieve the same vision.

Recommendation Overview: Metro Parks should work with non-profits to effectively communicate the need and benefits to overall quality of life and economic development for conservation and additional parks. Metro Parks should create a simple mechanism for accepting funds for acquisition or programming assistance from the private sector utilizing the newly formed Nashville Parks Foundation or Greenways for Nashville.

Develop a strategic plan for identifying opportunities for pocket parks and potential land acquisition within the urban areas by working with other Metro departments to identify land not required for critical uses (i.e. Metro Water Services for excess land at tank locations or Metro Public Works with the elimination of slip lanes). Form strategic partnerships with non-profits, neighborhood groups and proximate private sector entities for the development and management of these lands.

EXAMPLE SMART GOALS

- Metro Parks to convene a task force with The Trust for Public Land and The Land Trust for Tennessee to develop tools to leverage private land conservation through small grants program (to fund costs of easements) or revolving fund for development rights by April 2017.
- Metro Parks to establish and convene quarterly meetings of all local and regional non-profit partners to align interests and bridge gaps by January 2017.
- Metro Parks to initiate a simple mechanism for acceptance and disbursement of funds from the private sector for acquisition, improvements, programming and/or maintenance. Mechanism should be in place by January 2017.
- Metro Parks to work with Metro Planning and other Metro departments to identify excess Metro land within identified “park deserts” for potential new park land which can meet department goals by January 2017. These identified lands should be evaluated in the Metro Parks and Greenways Master Plan.
- Expand parks acquisition funds annually at a rate commensurate with land value appreciation.

C. INFRASTRUCTURE AND UTILITIES RECOMMENDATIONS:

Background: Infrastructure is typically not sexy, or well understood by the public in terms of complexity and cost. We have water from the pipes and we take it for granted. We have been driving on the road for our entire lives and we assume it will be there for our children. The reality of the situation is that much of our American infrastructure is at the end of its useful life, with 50 year-old roads and highways and 100 year old water pipes in many U.S. cities and towns. Complicating matters further, some utilities were in place in some form prior to the formation of the local government, which makes relationships and clarity of responsibility often cloudy. The Infrastructure and Utilities Committee conducted nine stakeholder interviews to better understand their relationship to the Nashville Next study, what issues they currently face, and what ideas they have that may help guide the GEARUP 2020 goal setting process.

Research and stakeholder interviews revealed the following consistent comments:

1. Metro Government and their departments need to understand, design, and control with much greater authority how infrastructure is built and maintained within the Public ROW. Currently much of the specifics are left to a wide variety of different designers, developers, contractors and utility providers. Design standards, design intent, and the initiation of improvements are left up to individual projects, their developers and designers and vary wildly from project to project. Specifics for each utility are listed below.
2. Many/most utility details and design standards have not changed in half a century and were developed for suburban conditions and are not suitable for dense/urban areas. Specifics are listed below for each utility but in general across the board utility providers on the ground making day to day decisions do not seem to be focused on the built environment or have interest or incentive to think about the big picture, which is that their specific utility is the part of an overall system of streets and public spaces and not a stand-alone entity.
3. There is an opportunity to look at stormwater and drainage through a new lens. Metro Water Services has issued a comprehensive new (2016) LID stormwater management manual that looks to be very high quality and benchmarked against other plans including Virginia's. This should be embraced by all departments responsible for building in, or adjacent to the public ROW.

Opportunities: This is a large category and the recommendations are in no way comprehensive, but stood out as priorities for resolution.

1. Stormwater and Drainage
 - Create master plan for separating storm water and sanitary sewer
 - Address storm drainage runoff from Public ROW (currently no regulations for public ROW but very strict controls for Private)
 - Reassess utility cost to align with promoting denser, more compact development within urban transects
 - Embrace LID (low impact development) standards and tie street trees & Irrigation into program
2. Streetlights
 - Create a master plan with clear standards, spacing, style and technical standards
 - Provide mounted street lighting within alleys to reduce clutter
 - Look at LED upgrades citywide as part of Smart Cities implementation
3. Renewable Energy
 - Make Nashville a center for entrepreneurship in the renewable energy space

i. Recommendation: Reconstitute Street Tree Program, Develop Urban Forestry Program

Time to Implement	Short/Medium: 2016 for 2017 Budget Cycle
Control	Local
Cost	Low
PPP Opportunity?	Yes in practice
Revenue/ROI	High: 10X +
Politics/Optics	Positive to Mixed
Key Principles	Streets and Public Space As Systems , Streets as Job Creators
Ownership	Mayors Office w/ support from PW
Related Initiative	Complete Streets
Net/Net	WIN

Background: We heard a lot about street trees and landscaping ranging from “who controls them” and “many entities are involved” to “how can partnerships be undertaken to take care of them.” The jurisdiction for street trees falls under the Department of Public Works currently. They have an inventory of the 2000 urban trees in the downtown, but for the county there is an estimate based on the aerial imagery assessment from 2010 that established that 47.3% of Metro is tree covered, and 15.3% of the public right of way is covered by tree canopy. Taking into consideration that the county is 526 sq. miles this seems to be a good way to assess the coverage. There is a lot of information available online regarding the tree program and the Metro Tree Advisory Committee whose purpose it is to “...assist in educating the community and agencies of the Metropolitan Government regarding the value of trees and proper techniques for the planting, maintenance, and removal of trees.”

Recommendation Overview: We recommend that the Mayor’s office look at how many entities control landscaping and trees in public space and on Metro properties. Based on the results of that process, a decision can be made as to whether consolidation of the various responsibilities should be made into a division of Urban Forestry and then if so, in which department that should reside. We recommend an inclusive process for developing a tree master plan (and management plan) which acknowledges trees role in sustainability, as shade, and as public infrastructure that creates a sense of place. This master plan should involve public and stakeholder input and be communicated to the public and related non-profits effectively upon completion. Ideally the Mayor’s office would look at the resources needed to manage an enhanced Urban Forestry program and set the enhanced program in motion for 2017. The program should take into account an enhanced level of transparency and partnership with non-profits, developers, and business improvement districts in planting and playing a role in maintaining trees. In Summary:

- Consider trees as public utility and give equal importance within Public ROW
- Provide master plan and design and installation standards for street trees taking into consideration utilities.
- Have one entity responsible for maintenance of all street trees in Metro
- A system for private developers/owners to install and maintain new street trees should be in place and promoted (consider offering credit toward Tree Density Unit in the zoning code)
- A system for labeling, inventorying and marketing street trees as a valuable asset
- Tying back to goals around communication and civic engagement, a robust role for the public should be considered in education and possibly even maintenance of the urban forest.

EXAMPLE SMART GOALS

- Metro to identify correct department for consolidation of public right of way landscape maintenance with a meaningful role for non profit assistance (for tree planting and maintenance) for pilot in mid 2017.
- Metro agency responsible for trees to convene all non-profits/community advocates relating to trees for the development of educational training processes for community volunteer corps to care and maintain community trees, where applicable, by December 2017.
- MPC to examine changing zoning code to allow shade trees on streets to count toward the Tree Density Unit requirement for development (allowance should include irrigation and maintenance agreement) by December 2016.

ii. Recommendation: Account and Accommodate for All Users for All Construction Projects via Public-Way Coordination, Proper Regulations and Pricing

Time to Implement	Now: Summer 2016
Control	Local
Cost	Low
P3 Opportunity?	Yes in development
Revenue/ROI	Medium to High if Coordination Exceptional
Politics/Optics	Positive
Guiding Principles	Vision Zero, Streets and Public Space as Systems, Best Practices
Ownership	PW-DOT & Permitting
Related Initiative	Vision Zero, Streets as Job Creators
Net/Net	WIN

Background: Construction in the public way is often the last area to be addressed in terms of safety of all users. There is an explosion of construction in Nashville and setting higher standards for accommodation is easy in that there are excellent benchmarks now in other cities. It is incumbent on the development community to adhere to the standards set by the city, so clear communication and enforcement are key.



Nashville Example from 2015, courtesy of Walk-Bike Nashville

Metro Nashville has recently introduced legislation to strengthen Metro’s permit process for sidewalk and travel lane closures for construction and events. This is to be commended and reinforced with continued monitoring.

Recommendation Overview: As in the reform of third party use of the right of way, which this is an extension, there are fairly simple steps to follow for implementation. Benchmarking against Washington D.C. and their regulations and processes including covered walkways would be ideal, and a picture of the practical difference in approach is below. If pricing of the right of way is appropriate, combined with proper accommodations being required in code for developers, utilities, and city and contract construction crews in the streets, and uniform inspections undertaken, a systems approach will work.

Examples: Washington D.C. Chicago

EXAMPLE SMART GOALS:

- MPW should convene stakeholders and develop a plan to manage the various communications providers and assess higher fees if needed to manage, creating clear management protocol by December 2017
- MPW should adopt a platform for all public right of way management, (emergency, development and utility coordination) by June 2017 to assure as little disruption to citizens and businesses, no duplicate digging, and all important cost sharing of work for high ROI.



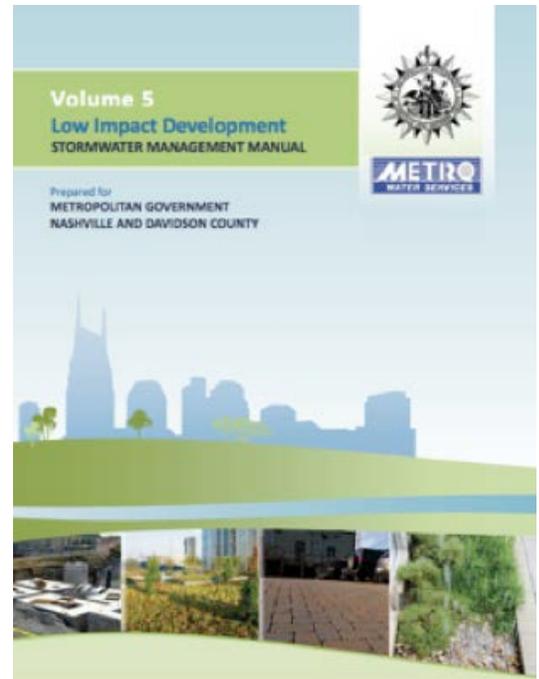
Washington D.C. Covered walkways and ideal accommodations for bike/ped during construction

iii. Recommendation: Reinforce and Expand Low Impact Development Standards (LID) for Metro and Developers

Time to Implement	Now: Summer 2016
Control	Local
Cost	Low
P3 Opportunity?	Yes in development
Revenue/ROI	Med
Politics/Optics	Positive
Guiding Principles	Streets as Job Creators, Sustainable Streets
Ownership	Water and MPW with support from Planning, Housing
Related Initiative	Urban Forestry Program
Net/Net	WIN

Background: The LID manual produced by Metro Water is solid. Currently there are incentives to move developers towards LID in their projects (table below). This is a great first step as they can save considerable costs regardless of incentives based on lowering construction and maintenance costs which has been proven time and time again by studies of comparative projects with/without LID. We applaud Metro for making Stormwater Vol 5 mandatory as of March 1st, 2016.

Background 2: When it comes to public works projects in the right of way there are also large cost savings by employing LID. In Chicago in our biggest implementation on the Blue Island Cermak Sustainable Streetscape project which was 14 initial blocks of streetscape, all low impact design, and integrated into a new school etc., we saw a 21% cost savings over traditional projects with dramatic storm water and runoff benefits and 42% lower energy usage.



1. Community and Education
NE corner of Western Ave. and Blue Island Ave.
A green, open plaza welcomes you to the first stop on this tour. Here at the gateway to the Pilsen neighborhood, you'll see a sustainable street with thoughtful community connections. Trees and landscaping planters make this space an inviting, beautiful space for neighbors to relax and enjoy. People stopping in the plaza can learn more about the street by reading the sign on the hybrid light fixture below.

2. Pilsen's Sustainable Street Project Summary
SE corner of Blue Island Ave. and Oakley Ave.
As this stop, you can read an overview of this project and a description of the goals that guided the construction of this new sustainable street.

3. Stormwater Management
NW corner of Blue Island Ave. & Wood St.
As you look down Blue Island Ave. at this stop, you'll probably notice the permeable pavers that cover the parking and hiking areas. Rainwater soaks through the cracks in between these pavers and is best temporarily in storm drains and then before soaking into the ground. Soaking the stormwater in this way provides a natural of water for the plants in the sidewalk and reduces the potential for flooding.

4. Energy Conservation
NE corner of Cermak Rd. and Ashland Ave.
On this corner, you can take a look at the practices that help conserve energy on our street. Efficient street lights use less energy to light up the street while high alkali, reflective pavement increases the uniformity of the light. The bus stop and hybrid light fixture here use solar and wind energy, rather than fossil fuels, to power energy-efficient lights.
The street itself was paved using warm-mix technology, a new, fuel-saving way to install asphalt. We also reduced the amount of energy used during construction by using local and recycled materials to build this street.

5. Alternative Transportation
SW corner of Blue Island Ave. and Ashland Ave.
Check out the ways we are making traveling easier and safer, and fun, at this stop. A bus stop and a new bike lane connect the neighborhood to the rest of the city. Hybrid light poles and smart traffic lights along the sidewalk make the street safer and better at all times of the day. Permeable pavers break down snow and reduce flooding, making your walk a little more enjoyable.

6. Stormwater Management
NE corner of Cermak Rd. and LaSalle St.
When you get to this stop, look around. What you see may look like a fountain or a playground, but it is actually a water sculpture that conserves and filters water. Rain running off this street's roof captures into the water sculpture, where a wicking channel draws the water. The fountain like effect of this water sculpture is fun to watch, and it uses no pumps or electricity to run.
The plaza just beyond the water sculpture is made with permeable pavers and lets rainwater seep into a hidden storage area below. This water also drains slowly toward the water sculpture, reappearing after a day or so.
After being slowed down in the water sculpture, the rainwater is filtered as it flows through a bed of a special mineral called zeolite, which traps disease pathogens. The water then flows on to the bioswale, where the water is further filtered as it soaks into the ground.
Remember that aside from the permeable pavers below, as well as runoff from the roadway, leads the plants in the stormwater basin of the school.

7 and 8. Water Efficiency
SE corner of Cermak Rd. and Thrupp St.
NE corner of Cermak Rd. and May St.
At these stops you can learn some of the ways this street uses water wisely. The drought-resistant plants in this bioswale system require less water to grow or that no drinking water needs to be used to care for them. The bioswale is also designed to make the best use of these plants' natural processes which can break down residual pollutants on the dirt edges of the bioswale. Across the street, infiltration planters also use composted fertilizer planters and use composted fertilizer to care for plants.

9. Heat Island Reduction
SW corner of Cermak Rd. and Morgan St.
Here you can see how sustainable street technologies work together to fight the urban heat island effect: the texture of stormwater basins is lighter than their concrete counterparts. The permeable concrete curbs on the street reflects heat away instead of absorbing it as pavement concrete does. The plants and trees along the sidewalk also help cool the street by providing shade and releasing water vapor into the air.
If you continue south along this street, you'll be able to see light-colored permeable pavers on Blue Island Avenue that also help fight the heat island effect.

10. Material Recycling
SW corner of Cermak Rd. and National St.
Recycling plays a role in almost all parts of this street. The sidewalk curbs were recycled newspaper and ground glass former bags, an industrial waste byproduct, and the asphalt concrete recycled the rubber, steel shingles, and aggregate. You can find out more about which parts of the street use recycled materials by looking at the signs on the hybrid light fixture here.

How to Get There
By Public Transit
Pilsen's Sustainable Street is accessible by the CTA's Pink Line as well as the following bus routes: 8 Halsted, 9 Ashland, 21 Cermak, 43 Western, 44 Blue Island, 49th.

By Bike
Blue lines on Halsted St. and Blue Island Ave. connect to Pilsen's Sustainable Street.

By Car
Pilsen's Sustainable Street is located on Blue Island Ave. and Cermak Rd. (2200 s. between Western Ave. 1200 s. and Halsted St. 1800 s.) approximately 3 blocks north of the Logan Expressway (55).

For More Information
To learn more about sustainable streets and how the technology on this street work, go to [www.pilsen.org](http://pilsen.org) or look for the Chicago's Sustainable Streets Program brochure at locations throughout the city.

Legend

- permeable pavers
- rain strip
- hybrid light fixture
- infiltration planter
- micro-tile concrete curbs
- permeable pavers
- street light

Recommendation Overview: In my experience the challenge is to get adherence across the board, consistently by developers, and government themselves when building horizontally or vertically. Metro has codified and adopted the new LID Manual during the writing of this document which is a big step forward. Further enhancements such as allowing increased density, lowered permitting fees or expedited permitting could be looked at as further incentives to go beyond the minimum requirements. Also all building codes should be evaluated to make sure there are no disincentives to LID. Cities like Chicago and Portland have now moved towards a mandatory model for some interventions which will dramatically increase public and private entities employing green development standards.

EXAMPLE SMART GOALS:

- Metro DOT/DPW will adhere to these design standards and Mayor Barry's Green Streets executive order for all horizontal construction and General Services for all vertical construction.
- Green Roof incentive will be rewritten by September 1st 2016 to make it useable
- MPW to work with MWS to formalize Nashville specific green street construction standards that can be used by developers to integrate green infrastructure within public ROW by June 2017.
- MWS to review policies to allow for criteria for a system of storm water management districts and credits and how they would be monitored by June 2017. Establish cost for credits for developers to buy if provided on Metro land.
- MWS to develop master plan for separation of storm and sanitary system with implementation timeline by Summer 2018.
- MWS to reassess fees by Summer 2017 based on consistency with NashvilleNext and land use policies (density and utility cost) to disincent polices that spread out development and increase long term infrastructure cost instead of denser more compact development, also minimizing maintenance and overall environmental impact.
- Work with non-profits like Cumberland River Compact to develop a communication plan which identifies the accomplishments of green infrastructure within MWS.

Table 1. Green Infrastructure Incentives

Incentive	Requirement/Benefit
Stormwater User Fee Credit	Sites designed in accordance with the LID Manual can receive a 75% downward adjustment in their Stormwater User Fees.
Redevelopment Credit	Certain previously developed sites can meet a Runoff Reduction goal of 60% instead of 80%. A site must have a current, pre-development runoff coefficient (Rv) greater than 0.4 to qualify.
Green Roof Rebate	MWS provides a credit of up to \$10 per square foot of green roof installed within the combined sewer system. The credit is applied to the site's sewer bill for up to five years. Please visit the MWS Stormwater Website for more information.
Reduced Detention Requirement (see Chapter 3.2.5.)	Certain sites designed in accordance with the LID Manual can reduce their required stormwater detention quantity.

iv. Recommendation: Return on Investment Analysis of Burying Power Lines

Time to Implement	Now: Spring-Summer of 2017
Control	Local, and NES
Cost	High
P3 Opportunity?	Yes in development
Revenue/ROI	Typically low
Politics/Optics	Medium to Positive
Guiding Principles	Best Practices
Ownership	Mayors Office, COO with support from Planning, DOT/DPW with NES
Related Initiative	Great Streets
Net/Net	?

Background: Above ground power lines can be unsightly, get damaged by storms with high winds knocking out power, and preclude certain enhancements to streetscapes because of the presence of poles. Having said that the cost associated with burying power lines can be exorbitant. There was a great deal of interest by stakeholders questioned in examining this topic. Many feel that electrical poles, overhead lines, and surface equipment is a major hindrance to street design in much of Nashville. Downtown Nashville is within the “Downtown Energy District” which has standards for underground duct banks and equipment vaults. The biggest issues seem to be in the first ring neighborhoods which are developing with dense patterns, but still have overhead lines and poles which are not compatible with urban streets and buildings. Specific neighborhoods include Germantown, Midtown, East Nashville, Sobro, Wedgewood Houston, etc.

Recommendation Overview: Because of the very high costs per block and the uncertainty as to whom would pay for it (NES, Metro, Developers) an analysis is recommended that looks at the costs, potential scenarios for undergrounding and paying for project, what neighborhoods would be prioritized, and the return on investment looking quantitatively and qualitatively. Fundamentally there has to be some financial return to justify and a study should bear this out. In Washington D.C. this was a topic for over a decade as it related to Ward 5 but no one was stepping up to pay for it. In 2012 this was resolved with a public private partnership between DC and the electric utility, Pepco to underground wires in 5 wards at a cost to taxpayers of over \$1 billion.

EXAMPLE SMART GOALS:

- Mayors ECD to convene group of MDHA, NES and area developers by January 2017 to determine use of NES revenue allowance and TIF funds within redevelopment areas to establish plausibility of burying lines.
- Examine the practicality of undergrounding all wires as part of Great Streets initiative on affected corridors. As sidewalks and streets likely being rebuilt and all electrical being upgraded, duct banks being installed should be incremental cost.

v. Recommendation: Create Street Light Master Plan for Metro

Time to Implement	Winter 2016/17
Control	Local
Cost	Low
P3 Opportunity?	Yes in development
Revenue/ROI	medium
Politics/Optics	Positive
Guiding Principles	Streets as Job Creators
Ownership	PW/DOT with input from NES and TDOT
Related Initiative	Implement Smart Cities
Net/Net	WIN

Background: We heard from interviewees that in general street lighting improvements are left up the whim of developers and design teams (beyond minimal wood poles and cobra head fixtures for instance). Developers have to initiate street light improvements themselves and the details, style, spacing and extent of improvements are normally arbitrarily left up to the design team's taste and subject to the projects budget. Once a design is decided upon, coordination for permitting is often a clumsy exercise between NES, MPW, and TDOT. Very little specific direction is typically given and responsibility and jurisdiction between agencies is often unclear.

Recommendation Overview: A specific master plan for street lighting detailing design standards, style by street classification and/or neighborhood type, and technical standards should be established so that re-development projects, or owners wishing to improve their frontage have specifics to work toward and are not left to their own devices. The goal is for the public right of way to have consistency in business districts, historic districts and neighborhoods where desired.

EXAMPLE SMART GOALS:

- MPW to work with NES to develop a Streetlight Master plan by Summer of 2018 which relates to the MCSP and transect developed by MPC.
- MPW to work with Planning to codify clear aesthetic and design standards by neighborhood and street type by January 2017, and to be utilized in all redevelopment projects going forward.
- NES to review opportunities for shielding within existing fixtures and provide dark sky options for retrofit and for new standards for review by MPW and Gen Services by January 2017.
- NES and MPW to define clear process for permitting by December 2016.
- NES should agree on a standard with Metro within the urban areas to allow for building mounted street lights by Summer 2017.



D. GOVERNMENT REINVENTION AND P3 RECOMMENDATIONS:

Background: Often the biggest opportunity in government or any large organization for that matter is to create efficiencies in the system. By definition this means systematic changes at the macro level vs. one-off band aids and we are seeing a lot of continuous process improvement undertakings in Nashville and around the country (kudos!). In all of our recommendations there is reinvention woven in but the recommendations in this category are generally more about making broader change to the system than specific agency recommendations.

i. Recommendation: Create Enterprise Funds

Time to Implement	Short/Medium: 2016 for 2017 Budget Cycle
Control	Local
Cost	Low
PPP Opportunity?	Yes in practice
Revenue/ROI	High: 10X +
Politics/Optics	Positive to Mixed
Key Principles	Streets as Job Creators, Clear Roles and Responsibilities
Ownership	Mayors Office with support of Budget Office
Related Initiative	Expand Bikeshare, Create DOT
Net/Net	WIN

Background: When creating a new Department, like a DOT, this is the time to indoctrinate creativity and entrepreneurial spirit. Many of Nashville’s physical assets are underpriced and undervalued. At first blush it may seem that this benefits consumers, for instance with cheap parking with little ticketing, or a pure approach to park space w/ few amenities & ads. The truth is that it hurts other policy goals ranging from economic development for retail who need parking turnover or a platform to sell to visitors, to sustainability and funding transit (why do we need it when we can park for free?). It is important to tie revenues not only back to the agency that controls the asset, but that the funds are earmarked for progressive uses so that all stakeholders understand the relationship for instance from parking revenue, to go into alternative transportation, or transit.

Recommendation Overview: There are models to pull from in other cities and we should examine any agency that has undervalued assets or charges fees, from Parks, Housing, to DOT, to General Services, and Planning which is shooting for \$840k in revenues in 2016. We want to instill entrepreneurship, the will to explore P3’s and the best service possible for constituents and visitors.

Notes: Also look at Chicago’s “Activate” program as a model for non-profit led P3’s to activate public space with entrepreneurship, art, technology, etc. We need to cross silos so that for example, we expand bike connectivity and food service offerings in parks.

EXAMPLE SMART GOALS:

- Metro Mayors Office will put together a plan to stand-up a Metro DOT with input from Planning, MPW, MPO, MTA, Budget Office etc. by November 2016 and Establish budget Authority and Charter by January 2017.
- MDOT will be the first agency to have an enterprise fund to be established at the outset by Metro and City Council.

ii. Recommendation: Implement Smart Cities Open Platform and Incorporate Shared Mobility

Time to Implement	Short/Medium: 2016-2019
Control	Local
Cost	Med/High
P3 Opportunity?	Yes
Revenue/ROI	Med/High
Politics/Optics	Mixed to Positive
Guiding Principles	Streets as Job Creators, Vision Zero, Play to Our Strengths
Ownership	CIO/Technology W/ support Planning/PW-DOT/Mayors Office
Related Initiative	Great Streets Corridor Program, DOT, Forward Compatible Technology
Net/Net	WIN

Background: With Columbus Ohio announced as the winner out of the original 78 Cities for the \$50m Smart Cities Challenge the odds of winning were very low. However, DOT is set on facilitating the other cities in some way to also make this happen. From TIGER Grants to Fast Lane Grants and Pilot Grants there is \$ to implement smart city technology at the federal level, and Nashville is an attractive geography for the administration. There are also new innovative financial options being worked on from the private sector to provide financing and shorter paybacks to justify alternate funding streams. Kansas City for instance is already implementing their [Living Lab](#) with Sensity, Cisco etc. for a 2016 debut.

Recommendation Overview: We need to look at the seven finalists plans for benchmarks, assess all the latest federal funding availability and look at short-medium term funding and implementation and private partner options. Pilots to Programs could range from autonomous vehicle testing as first/last mile to transit, real time communication and information for consumers using sensors, public Wifi and renewable energy to help power LED streetlights, integrated route planning and payment apps, flexible bus routing and much more. Because of the range of opportunities, we recommend that this be spearheaded by the Mayors Office and the Chief Innovation Officer with extensive coordination and input from key departments. Kansas City has committed \$3.8m over 10 years and \$12m has been committed thus far by the private sector. There are revenue stream possibilities from pole access, data collection, advertising etc.

Smart Cities are only as smart as the improvement in quality of life produced and so we recommend identifying a purpose and need for the projects around people, sustainability and quality of life before getting too deep into technology. In our conversations we did hear from stakeholders that they felt the following opportunities were important:

Parking – surge pricing; vacancy/availability information; mobile payment; enforcement; etc.
Transit – mobile payment; payment for complementary “last mile” services – parking, bikeshare, Uber, Lyft
Smart signalization – Adaptive Signal Control Technology
Transit Signal Prioritization

Examples: DOT Grants Kansas City IOT Program, Portland, Summary of all 7 plans, Seattle Shared-Use Mobility Plan

EXAMPLE SMART GOALS:

- Mayor Barry’s Office will institute a Smart Cities Advisory Council with subcommittees to come up with and propose a strategy for finance, technology, human centered design and priority vendors by December 1st 2016
- MTA to adopt mobile payment app by 2017 for full rollout by June 2017
- General Services to develop and begin implementation of a plan for non-gated EV charging for Metro employees and the public at Metro facilities throughout the county by January 2017
- Develop a shared-use mobility strategy by the end of 2017 that looks at how to fulfill Metro’s goals around equity, safety, feeding a transit system and so forth by utilizing bikeshare, carshare, rideshare

iii. Recommendation: Consider Establishment of an Office of Grant Management

Time to Implement	Short: Summer/Fall of 2016
Control	Local
Cost	Low
P3 Opportunity?	Outcome-wise yes
Revenue/ROI	High: 20X +
Politics/Optics	Positive
Guiding Principles	Streets as Job Creators,
Ownership	Mayors Office, with Support from Planning Department, Budget Department, MDOT
Related Initiative	P3's, Create a DOT
Net/Net	WIN

Background: Between Federal, State, MPO, Foundation and other grant programs (vs. formula funds), it is very hard for agencies to not only keep track of all of the grant opportunities, but to figure out which to apply for, and then to execute by the deadlines. Additionally, the opportunities are getting more complex and the interagency coordination needed to apply for opportunities like say, Smart Cities will intimidate agencies into not acting. This role should be a valuable resource for agencies in terms of information, skillset, and ability to coordinate complex grant proposals. The role also will get guidance from the Mayor's office and central planning on multi-agency priorities as well as agency specific opportunities that need to be pursued. See Addendum at the end of this document for a running list of grant opportunities compiled by Metro Planning.

Recommendation Overview: Having a centralized grant management office does not necessarily dictate a net increase in resources although it could. Depending on current staffing levels in Budget, Planning, Public Works etc. this could be an FTE move to a central location such as Planning, Budget or The Mayor's Office. It could also be one person that coordinates with leads in each agency and has a fellow/intern pool from year to year. In addition to staff, a software platform to track grant management, applications, support reporting, and provide information to all stakeholders and the public would be ideal. Ideally we would also track ROI on the newly facilitated role.

Examples: Hillsborough Florida, Houston Texas

EXAMPLE SMART GOALS:

- Metro commits to establishing a central grant coordinating office by the next budget cycle or sooner that will set goals, support agencies current efforts, and track progress for all external grant programs for infrastructure.
- The initial goal is to increase grants by 50% in the first 2 years and possibly expand beyond infrastructure and transportation as it establishes a track record of success (schools, health etc.)

iv. Recommendation: Develop Comprehensive Strategic Communications Plan

Time to Implement	Short: 2016
Control	Local
Cost	Low/medium
P3 Opportunity?	Engage probono help via NGO partner?
Revenue/ROI	Medium
Politics/Optics	Positive
Guiding Principles	Communicate and Implement with Smart-Goals:
Ownership	Mayor's Office/Communications with support from agencies
Related Initiative	Transit Plan, Equity, Action Agenda
Net/Net	WIN

Background: Private corporations spend a considerable percentage of time and \$ in communicating their mission, and features, advantages and perceived benefits of their product and services as effectively as possible. Government needs to adopt the same strategy but can have a comparable impact at a much lower cost utilizing their unique set of channels and a relatively captive audience (transit vehicles, public space, government web). Communication strategy also forces us to examine whether our goals are worthwhile and today's internet enabled platforms and social media allows government to facilitate two-way communication with stakeholders and the public at large on a consistent and as-needed basis.

Recommendation Overview: Establish a communications plan for Metro's current priorities. Key areas for messaging:

- Why parking needs to change (technology, revenues, turnover),
- Why we need affordable-equitable Housing + Transportation,
- Need for innovative entrepreneurial government to serve citizens (reorgs, enterprise funds, PPP)
- Investing vs. spending on our future (ROI of transit, active transportation vs. road expansion)
- Dedicated transit funding strategy
- Physical & Mental health benefits of open space, active transportation, tree canopy (and lowered health care costs)...
- How Green Infrastructure benefits the community

Notes: This effort could be coordinated via Metro Mayors office with each department working on their individual plan via a consultant that is looking across government, and/or via pro-bono team through a 3rd party like ULI, BID etc. Needs to be tied to Gear-Up 2020, Nashville Next and SMART Goals.

EXAMPLE SMART GOALS:

- Formulate draft communications strategy with agencies around Metro's key initiatives by November 1st, 2016, final strategy with monthly plans by January 2nd 2017.
- Establish a bottom-up approach so that agencies have maximum input, buy-in and can populate with their great ideas and work.
- Establish framework for all agencies and monthly communications plan by November 1st 2016
- MPW Tree Advisory should work to create system of labeling for trees and public benefit info and distribute through Public Information Officer and media by April 1st, 2017.

v. Recommendation: Form an Office of Public-Private Partnerships (P3)

Time to Implement	Short: 2016
Control	Local
Cost	Low/medium
P3 Opportunity?	That is the goal ultimately, but need Gov't team to manage
Revenue/ROI	High
Politics/Optics	Positive
Guiding Principles	Play to our strengths, Streets as job creators
Ownership	Mayors Office, Economic Development
Related Initiative	Transit Plan, Affordable Housing, SMART Cities
Net/Net	WIN

Background: Now that Tennessee has passed a law allowing individual jurisdictions to enter into mass transit P3's, this appears to be the perfect time to initiate a more formal approach towards engaging the private sector to examine the full range of public-private collaborations around transportation, smart cities, next-generation energy, affordable housing, advertising sponsorships and more.

Recommendation Overview: Hire a Director of P3's within the Mayor's Office or the Mayor's Office of Economic and Community Development. Mayoral Fellows can round out a slim team of 2-3 a with low cost, high energy workforce that purposely rotates on a yearly basis. Based on similar experiences in the District of Columbia, key recommendations that could help this effort's success are:

- This office functions as an in-house consultancy to agencies within the government vs. being attached or aligned with transportation, general services etc.
- A hard look needs to be taken at procurement processes and problems as they can keep P3 efforts from materializing
- Prepare to build maintenance and operations into contracts to maximize benefit
- Follow through is key on the government side to build a reputation with private sector entities that projects are worth bidding on and that best prices should/can be offered (lower risk premium)

Examples: Washington D.C. Stanford White Paper

EXAMPLE SMART GOAL:

- Metro Mayor's Office will benchmark against three peer cities and come up with implementation plan for P3 Office by February 2017.

vi. Recommendation: Consolidate and Manage Metro Assets and Property Management

Time to Implement	Medium: 2017
Control	Local
Cost	Medium
P3 Opportunity?	Indirect, staff consultants & contracts can be utilized
Revenue/ROI	High
Politics/Optics	Positive
Guiding Principles	Equity, Technology, P3, Ex. Work, Best Practices
Ownership	General Services
Related Initiative	Add Parks Land, Smart Cities
Net/Net	WIN-WIN

Background: Metro buildings and land and vehicle fleet operations and maintenance currently fall within the jurisdiction of a number of different Metro departments. Several of those departments have grown over the years with the property and asset management aspects of their departments growing as well, but without a staff with experience in these specific areas. It is also difficult to accurately assess the total assets of Metro government and the total utilization of those assets as they are scattered through various departments. Metro has implemented a management system called Center of Responsible Energy (CORE) which uses real time utility data and building automation that could provide benefit to property management outside of those currently housed within Metro General Services.

Recommendation Overview: There would conceivably be an economy of scale and technologies if a greater number of property and asset management were managed under one umbrella department, such as General Services. Finances for Metro departments could benefit from the “sharing economy” with the expense of large pieces of equipment which may have occasional use by more than one department, be purchased and managed by General Services or through the development of an overall lease agreement for periodic use.

With the documentation of Metro property across the county, the consolidation of information might identify underutilized property, structures and fleet that may be able to serve another need by another department, thereby providing potential savings for acquisition and management of those assets.

EXAMPLE SMART GOALS:

- Metro to develop and implement a strategy for a facility management system portal such as Archibus which can more effectively utilize real time utility data / building automation and sustainable strategies through CORE by December 2017.
- Metro to identify excess or underutilized property of Metro departments which might meet other Metro goals for expanding services (i.e. parks, libraries) or which might meet other Metro goals for social equity including affordable and workforce housing by December 2017. Where property might be available for housing, work with the Mayor’s office for the identification of housing non-profits or for-profit developers and a strategy for how the property might be disseminated for development.

vii. Recommendation: Set up a Nashville Fellowship Program

Time to Implement	Medium: Mid 2017
Control	Local
Cost	Low/medium
P3 Opportunity?	With Universities
Revenue/ROI	High:
Politics/Optics	Positive
Guiding Principles	Communicate and Implement with Smart-Goals:
Ownership	Mayors Office, Office of Human Resources, Communications
Related Initiative	Best Practices
Net/Net	WIN

Background: With the hardships of government hiring and the lure of young graduates to the private sector, we risk not bringing in fresh ideas, or the next generation of innovative managers into municipal government. In previous experience in the District of Columbia, some of the brightest thinkers were the grad students in the [DC Cap City Fellow program](#). In Chicago, there were Code For America Fellows (we didn't have a fellowship program internally). By setting up a systematic yearly program that brings in the best and the brightest to government service, we bring in a fresh group yearly to give them a rotational experience of public service from various vantage points, seed the ranks of management on an ongoing basis, and get lower cost, high intellect problem solvers to troubleshoot and consult.

Recommendation Overview: The Mayors office will establish a program to attract recent graduates of master's degree programs in public administration, public policy, urban planning and related fields. The fellows will commit to 18 months working for Metro and will rotate through 2-3 host agencies in that timeframe. They will support management in "analyst" type roles and/or tiger team implementations that require critical thinking, innovation, and execution skills. Ideally Metro would establish an "at-will" class of employee, likely either affiliated with executive service, internship, or a hybrid.

Notes: Suggested requirements are:

- Must have completed an undergraduate degree, a graduate degree or will complete a graduate degree by September 2018
- Ideal candidates have graduated within the last two to three years
- 3.5 GPA required, waivers can be granted in exceptional cases
- US Citizen or Legal Non-Citizen Resident status
- Required to live in the Nashville Metro within 180 days of appointment

EXAMPLE SMART GOAL:

- Provide benchmarking against three peer cities. Metro Human Resources will have an application process for Fellows for the Fall of 2017

viii. Recommendation: Create or Utilize a “Civic Engagement” Application

Time to Implement	Short/Medium: 2016 for 2017
Control	Local
Cost	Low
P3 Opportunity?	Yes
Revenue/ROI	High: 10X +
Politics/Optics	Positive to Mixed
Guiding Principles	Streets and Public Space As Systems , Streets as Job Creators
Ownership	Mayors Office with support from Parks, PW, GS etc.
Related Initiative	Complete Streets, Communications Plan
Net/Net	WIN

Background: How can we create more civic engagement in meaningful ways that gives citizens a more active role in government services and innovations? How do we lower the cost of providing government services to taxpayers? We are widely geographically disbursed and people live and work in the same communities day-in and day-out. Can we shift the paradigm so that instead of calling and waiting for an often under-resourced government to come and irrigate or trim a tree, or put up a no parking sign for an event, we instead involve and catalyze the public to play a role at a fraction of the cost, and give them more ownership in their community? Enter “participatory government.” Now that we have technology to virtually cross old barriers of time and space, let’s use them to make Nashville a better place. If we execute well, we will cut some costs, but more importantly we will have better maintained communities and more engaged neighbors. First though, we start by engaging with citizens in a frictionless manner by conditioning them to report problems.

Recommendation Overview: There are two components to this recommendation. 1. Changing processes to allow more public interaction with traditional systems fulfilled by government 2. An application (app) should be utilized like See-Click Fix, or built to serve the needs of Nashville agencies and citizens.

- A round table with agencies can be held to source what issues are most commonly complained about, and service response levels need to be improved.
- Benchmark against other cities utilizing digital citizen engagement tools and their top uses (pot holes, litter, crime etc.)
- Pilot a service (app and process) with limited agencies
- Full-scale citywide rollout
- Plan for adoption of services by the public, like watering of trees
- Challenge private sector to enhance applications to allow participation

EXAMPLE SMART GOAL:

- Metro will assess what needs are most important for citizen service requests for use with a public facing CSR application like See-Click-Fix for 2017 implementation.
- Metro will examine opportunities for Citizen “participatory government” for 2018 rollout

Addendum I.

Future Grant Opportunities for Metro Nashville

Section 5309 Capital Investment Grants

FTA

Next Call for Project: 2017 (Deadline hasn't been announced)

MPO TIP Implications: These funds for transit capital are reflected in the TIP, noted as 5309. No New Starts-specific funds are in the TIP.

The Capital Investment Grant program is a discretionary grant program unlike most others in government. Instead of an annual call for applications and selection of awardees by the Federal Transit Administration (FTA), the law requires that projects seeking CIG funding complete a series of steps over several years to be eligible for funding. For New Starts and Core Capacity projects, the law requires completion of two phases in advance of receipt of a construction grant agreement – Project Development and Engineering. For Small Starts projects, the law requires completion of one phase in advance of receipt of a construction grant agreement – Project Development. The law also requires that FTA recommend in an Annual Report to Congress a proposed allocation of funding to the projects it believes are meritorious. The maximum Section 5309 CIG share for the Program of Interrelated Projects as a whole is 80 percent.

The discretionary Capital Investment Grant (CIG) program provides funding for fixed guideway investments such as new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit, and ferries, as well as corridor-based bus rapid transit investments that emulate the features of rail.

<https://www.transit.dot.gov/funding/grant-programs/capital-investments/capital-investment-program-frequently-asked-questions>

Sample Projects:

MTA/FTA Transit

Congestion Mitigation and Air Quality (CMAQ)

TDOT

Next Call for Project: 2017 (Deadline hasn't been announced)

MPO TIP Implications: These funds are reflected in the TIP, notes as CMAQ.

State Departments of Transportation (DOTs), local governments, and Metropolitan Planning Organizations (MPOs) may use CMAQ funds for a variety of transportation-related measures and programs. Project types typically considered eligible for CMAQ funding include: retrofit control equipment for diesel engines (e.g., diesel retrofits, engine re-powers), bicycle and pedestrian facilities and programs (also eligible for Transportation Alternatives funding), idling reduction projects, Travel Demand Management (TDM) programs, Transportation Control Measures (TCMs) that produce air quality benefits, education and outreach programs, public-private partnerships to implement projects that reduce emissions (public agency sponsor required), rideshare activities transit fare subsidy programs for air quality action days, traffic flow improvements intermodal freight projects transit projects vehicle inspection (I/M), programs transit fare subsidy programs, Intelligent Transportation Systems (ITS), and alternative fuels infrastructure experimental pilot projects.

Eligible highway projects include traffic flow improvements, such as traffic signal control systems, incident

management programs, high-occupancy vehicle (HOV) lanes and truck climbing lanes that do not increase capacity. Projects that increase highway capacity are not eligible for CMAQ funding, as they lead to increased vehicle emissions. CMAQ funds may be used for projects that reduce congestion as long as those projects achieve reductions in air emissions. Highway rehabilitation and maintenance activities are not eligible for CMAQ funding.

For most projects, CMAQ funding pays a maximum of 80 percent of eligible project costs. A minimum match of 20 percent non-federal funds is required for those projects. Project sponsors (e.g., local governments or private sector partners) are responsible for paying the 20 percent match. A small portion of CMAQ projects, such as carpool and vanpool projects, qualify for 100 percent funding.

<https://www.tn.gov/tdot/topic/cmaq>

Sample Projects:

Traffic Signals, Traffic Signal Timing

Every Place Counts Design Challenge

US DOT

Next Call for Project: 2017 (Deadline hasn't been announced)

MPO TIP Implications: These funds will likely need to be reflected in the TIP.

The Every Place Counts Design Challenge will provide technical assistance to local and tribal governments through “community vision” design sessions to improve access to reliable, safe, and affordable transportation for disconnected communities in urban, suburban, and rural areas. The purpose of the challenge is to raise awareness about bifurcated neighborhoods, identify innovative practices to reconnect communities, and inform the transportation project life cycle. The USDOT is accepting applications from local and tribal governments seeking assistance in correcting an existing transportation infrastructure problem by reconnecting a community or communities to jobs, healthcare, schools, grocery stores, and other essential services.

Eligible Projects for the Every Place Counts Design Challenge are capital projects for transportation infrastructure that include, but are not limited to:

- (1) highway projects eligible under Title 23, United States Code (including bicycle and pedestrian projects)
- (2) public transportation projects eligible under Chapter 53 of Title 49, United States Code
- (3) passenger and freight rail transportation projects
- (4) port infrastructure investments (including inland port infrastructure and land ports of entry)
- (5) Intermodal projects.

An Eligible Project is one that is planned or being developed to improve or replace existing infrastructure that offers an opportunity to reconnect communities to jobs, healthcare, schools, grocery stores, and other essential services.

<https://www.transportation.gov/opportunity/challenge>

Sample Projects:

Preliminary design concept: Reconnecting Neighborhoods - Jefferson St to Jackson St Lid over I-40 and 16th St Lid over I40



TOD (Transit Oriented Development) Planning

FTA

Next Call for Project: 2017 (Deadline hasn't been announced)

MPO TIP Implications: These funds will likely need to be reflected in the TIP.

Transit-oriented development (TOD) creates compact, mixed-use communities near transit where people enjoy easy access to jobs and services. Well-done TOD connects transit to desirable places to live, work and visit that feature amenities like entertainment venues, parks, retail, restaurants, an improved pedestrian environment and diverse housing choices. To encourage successful TOD projects in communities across the country, FTA has launched the Transit-Oriented Development Technical Assistance Initiative

The Pilot Program for TOD Planning helps support FTA's mission of improving public transportation for America's communities by providing funding to local communities to integrate land use and transportation planning with a transit capital investment that will seek funding through the Capital Investment Grant Program (CIG) Program. Comprehensive planning funded through the program must examine ways to improve economic development and ridership, foster multimodal connectivity and accessibility, improve transit access for pedestrian and bicycle traffic, engage the private sector, identify infrastructure needs, and enable mixed-use development near transit stations.

<https://www.transit.dot.gov/funding/funding-finance-resources/transit-oriented-development/transit-oriented-development>

Sample Projects:

MTA/FTA Transit

Safe Routes to School (SRTS)

TDOT

Next Call for Project: 2017 (Deadline hasn't been announced)

MPO TIP Implications: These funds are reflected in the TIP.

Safe Routes to School (SRTS) is a federally-funded program focusing on the benefits of children walking and biking to school. Its programs aim to improve safety for children and the community and provide opportunities to increase physical activity. A model program integrates health, fitness, traffic relief, environmental awareness, and safety under one program. Eligible recipients include state, local, and regional agencies including non-profit organizations.

In previous years approved projects include a diverse mix of educational activities including major projects such as sidewalk segments and shared-use paths, as well as minor improvements such as sign packages, crosswalks, and pedestrian signals

<https://www.tn.gov/tdot/article/safe-routes>

Sample Projects:

Funded and Withdrawn: Tom Joy Elementary School

Applied: Lakeview Elementary School, Dalewood Middle School, Una Elementary School, and Thomas A. Edison Elementary School

Multimodal Access Grant

TDOT through MPO solicitation

Next Call for Project: 2016 - 2017 (Deadline hasn't been announced)

MPO TIP Implications: These funds are reflected in the TIP.

TDOT's Multimodal Access Grant is a state-funded program created to support the transportation needs of transit users, pedestrians and bicyclists through infrastructure projects that address existing gaps along state routes. Multimodal facilities play an important role in providing transportation choices for people across Tennessee. With half of all trips in the United States being three miles or less, good walking, biking and transit facilities are essential to the continued growth and success of our towns and cities. Multimodal Access projects are state-funded at 95 percent with a 5 percent local match. Total project costs must not exceed \$1 million.

A maximum of \$950,000 (state funds) per project is available for scoping and design, acquisition of right-of-way and construction of projects that support multimodal transportation choices and connectivity. Eligible projects include, but are not limited to:

- (1) Pedestrian crossing improvements, including signage, signalization, median pedestrian refuge islands and crosswalks
- (2) Shoulders (a minimum of 4' wide to accommodate bicyclists)
- (3) Sidewalks
- (4) Bicycle lanes (on-road facility delineated with pavement markings and signs)
- (5) Improvements that address requirements of the Americans with Disabilities Act
- (6) Multi-use paths located within the transportation corridor. Multi-use paths (pedestrian plus bicycle traffic) must be a minimum of 10-feet wide.
- (7) Pedestrian-scale lighting (will not rank highly as a standalone project, but eligible as a project component)
- (8) Bus shelters and concrete pads
- (9) Road diets or traffic calming measures that enhance bicycle and/or pedestrian safety
- (10) Separated bicycle facilities
- (11) Park and ride facilities for carpooling or access to transit
- (12) Bus turnouts
- (13) Utility relocation (eligible as a project component)

Projects may be combinations of any of the above facilities and must meet ADA standards. In order to qualify for the Multimodal Access Grant, projects must meet be located along a state route or within 1/4 a mile of a state route and provide a direct connection to a state route or provide direct access to a transit hub (defined as a municipality's primary or secondary transit facility).

<https://www.tn.gov/tdot/topic/multimodal-multimodal-access-grant>

Sample Projects:

Regional Traffic Study and Timing Brentwood/Davidson County

Transportation Alternatives

TDOT

Next Call for Project: July 1 – October 3 each year

MPO TIP Implications: These funds are reflected in the TIP.



Transportation Alternative Program, formerly Federal Transportation Enhancement Program, fund local governments to build sidewalks, bike and pedestrian trails and to renovate historic train depots and other transportation related structures. The projects serve improving access and providing a better quality of life for people in the state of Tennessee.

Eligible Activities include:

- (1) Pedestrian and Bicycle Facilities - All facilities must be hard-surfaced, ADA compliant and provide adequate connectivity.
- (2) Safe Routes for Non-Drivers - Access and accommodation for children, older adults and individuals with disabilities
- (3) Conversion of Abandoned Railway Corridors to Trails - Acquisition of railroad rights-of-way; planning, design and construction of multi-use hard-surfaced, ADA accessible trails and rail-with-trail projects
- (4) Scenic Turnouts and Overlooks
- (5) Outdoor Advertising Management - Billboard inventories and removal of illegal and nonconforming billboards
- (6) Historic Preservation & Rehab of Historic Transportation Facilities
- (7) Vegetation Management - Improvement of roadway safety; prevention of invasive species; providing erosion control
- (8) Archaeological Activities - Projects related to impacts from implementation of current highway construction projects
- (9) Stormwater Mitigation - Pollution prevention and abatement activities to address stormwater management; water pollution prevention related to highway construction or due to highway runoff
- (10) Wildlife Management - Reduction of vehicle-caused wildlife mortality; restoration and maintenance of connectivity among terrestrial and aquatic habitats

<https://www.tn.gov/tdot/topic/tap>

Sample Projects:

Harding Place Sidewalk Phase I (Pin 111998), Harding Place Sidewalk Phase II (114944), 21st Ave Gateway Connector (Hillsboro Village), Gateway to Heritage I-40W Jefferson St and 28th Ave off Ramp Landscaping

Heart of Community Grant

Project for Public Spaces

Next Call for Project: 2017 (Deadline hasn't been announced)

MPO TIP Implications: These funds will likely need to be reflected in the TIP.

Heart of the Community is Southwest Airlines' multi-year program dedicated to revitalizing and activating public spaces in the hearts of cities in partnership with the pioneering nonprofit organization behind Placemaking, Project for Public Spaces (PPS). In the past, cash grants have ranged between \$50,000 and \$100,000 to the grantee, plus an equivalent amount of in-kind support in the form of technical assistance from PPS staff provided to help the partners realize their project and build local capacity for Placemaking. Projects must be in or near a city served by Southwest Airlines.

<http://www.pps.org/hotc-faq/>

Sample Projects:

- (1) Providence, RI - Expanded family friendly activities in Burnside Park, located in the heart of downtown Providence in Greater Kennedy Plaza by developing the Imagination Center. The Imagination Center is a fun destination that brings people together for activities like storytime, arts and crafts workshops, interactive play, live performances, and more. The Center is surrounded by colorful picnic tables, planting beds, and a wooden deck and includes book carts, beanbag seating, and an Imagination Playground play set.
- (2) San Antonio, TX - Activated historic Travis Park, located in the heart of downtown San Antonio. Based on feedback received during a series of public Placemaking workshops, Travis Park will now attract local residents and employees through new physical amenities, including games, umbrellas, movable tables and chairs, and ongoing public programming, such as fitness classes, historic tours, live music, free movies and game tournaments.

Spot Safety Program

TDOT

Next Call for Project: N/A (based on RSAR Safety Study)

MPO TIP Implications: Funded through state bucket fund

The Spot Safety Program funds project on state routes or at intersection with state routes only. Cost and scopes shall be limited pending on funding type and funding availability. However, the integrity and safety of the state roadway system will be the first consideration on all projects

Eligible Activities include:

- (1) Signalization
- (2) Intersection Modifications w/o Signalization
- (3) Sight Distance Modification
- (4) Adding Turn Lanes
- (5) Adding Turn Lanes w/o Signals
- (6) School Flashing Signals
- (7) Flashing Beacon
- (8) Acquisition of Land

<https://www.tdot.tn.gov/PublicDocuments/LocalPrograms/FundingGuidance/SpotSafetyGuidelines.pdf>

Sample Projects:

Harding Place Phase I (Pin 114944)

Surface Transportation Program

TDOT

Next Call for Project: Based on MPO Schedule

MPO TIP Implications: These funds are reflected in the TIP

The Surface Transportation program funds projects for cities whose population was 5,000 or greater as of the 2000 census, these funds can be used for any type of highway construction. They can also be used for ridesharing, vanpooling, intelligent transportation systems, and incident management, and any activity also eligible for transportation enhancement funding. In areas of 50,000 population or greater, the projects



are selected by the Metropolitan Planning Organization (MPO) and must be included in the Transportation Improvement Program (TIP).

<https://www.tdot.tn.gov/PublicDocuments/LocalPrograms/FundingGuidance/STPProgram.pdf>

Sample Projects:

Korean Veterans Blvd from 1st Ave S to 4th Ave S, Korean Veterans Blvd 4th Ave S to Roundabout, Intersection Improvements

Bridge Replacement and Rehabilitation Program (HBRRP)

TDOT

Next Call for Project: Local Programs Development Office Notifies (No submittal necessary)

MPO TIP Implications: State Bucket Funded

Bridge Replacement and Rehabilitation Program cover the replacement and rehabilitation of deficient bridges that are located off the state and interstate system of highways. Every two years, TDOT inspects all bridges across the state, determines their condition in accordance with NBIS and provides a rating that indicates the safe weight that can use the bridge. Bridges with a rating of 15 tons or less are added to the department's bridge replacement list, ranking them from the worst bridge to the best. A sufficiency rating of less than 80 is eligible for rehabilitation and bridges less than 50 are eligible for replacement. Rehabilitated bridges must have a sufficiency rating greater than an 80 at project completion and Federal HBRP funds cannot be used on that bridge again for 10 years.

The Local Programs Development Office notifies local agencies of bridges under their jurisdiction that have been selected for replacement. If the local government chooses to accept the bridge, the federal program pays 80% of the project cost—all phases are eligible. The remaining 20% is paid by the local government.

<https://www.tdot.tn.gov/PublicDocuments/LocalPrograms/FundingGuidance/BridgeReplacement.pdf>

Sample Projects:

Hillwood Ave over CSX (Joint Project with City of Belle Meade), Demonbreun Viaduct replacement, Korean Veterans Bridge over Cumberland River, Jefferson St bridge over Cumberland River; Church St. Viaduct over CSX, West Lawn Dr over tributary of Richland Creek, Battery Ln over Browns Creek, and many more

Interchange Lighting Program

TDOT

Next Call for Project: N/A – Safety driven/ coordination with TDOT

MPO TIP Implications: State Bucket Funding

Interchange Lighting Program funds lighting of an interchange on an interstate or interstate-type facility. These projects are funded by a 50% state and 50% local match.

<https://www.tdot.tn.gov/PublicDocuments/LocalPrograms/FundingGuidance/InterchangeLighting2014.pdf>

Sample Projects:

City of Goodlettsville I-65 Vietnam Vets Blvd

Local Interstate Connecting Routes

TDOT

Next Call for Project: Needs based/ Coordination with TDOT

MPO TIP Implications: These funds are reflected in the TIP.

A local interstate connecting route or connector shall mean a roadway or segment thereof that will provide or facilitate appropriate ingress and egress between the interstate highway facility and a roadway of important benefit to a locality. Applications will be received by the department from cities and/or counties for the construction of a connector route. Said applications shall be an official action of the city and/or county government. A certified copy of the resolution of the local government authorizing the application shall be attached thereto.

The program requires the local government to provide 50% of the cost of the facility. Accordingly, the local government will be given credit for 50% of the preliminary engineering cost at the time the construction deposit is requested

<https://www.tdot.tn.gov/PublicDocuments/LocalPrograms/FundingGuidance/LICBOOK.pdf>

Sample Projects:

Armory Dr Extension, Briley Parkway Extension from Brick Church Pike to Knight Rd, Stewarts Ferry and Lebanon Rd Intersection, and McCrory Ln and I-40

State Industrial Access Road

TDOT

Next Call for Project: Needs with Industry / Coordination with ECD

MPO TIP Implications: Not Listed

The Industrial Highway Act of 1959 authorizes the Tennessee Department of Transportation to contact with cities and counties for the development of "Industrial Highways" to provide access to industrial areas and to facilitate the development and expansion of industry within the State of Tennessee. TDOT implements the Industrial Highway Act through the department's State Industrial Access (SIA) Program. The department will consider and approve Industrial Highways based on project eligibility, economic criteria, physical constraints, and available funding. TDOT and the local government will each be responsible for 50% of the cost. The local government will also be responsible for submitting a deposit of the estimated amount of its 50% match

The eligible activities include

- (1) ROW and Utilities Deposits
- (2) Project Design
- (3) Permits
- (4) Construction

https://www.tn.gov/assets/entities/tdot/attachments/SIA_Application.pdf

Sample Projects:

Expressway Park Dr. Relocation for Purity Dairies, Crossing Blvd Extension for American General, Old Hickory Blvd turn lane at American General Way



Tennessee Highway Safety Office Grants

TDOT

Next Call for Project: N/A

MPO TIP Implications: N/A

The Tennessee Highway Safety Office (formerly Governor’s Highway Safety Office) provides grants to programs which are designed to reduce the number of fatalities, injuries and related economic losses resulting from traffic crashes on Tennessee’s roadways. Local governments, law enforcement agencies, academic institutions, and private non-profits can apply for National Highway Safety Transportation Administration pass-through funding for projects related to various areas of highway safety.

Eligible activities include: Alcohol Education, Alcohol Enforcement, DUI Prosecution, Distracted Driving, DUI/ Drug Courts, Emergency Medical Services/First Responder Training, High Visibility Enforcement, Impaired Driving Education, Motorcycle Safety, Occupant Protection, Planning and Administration, Police Traffic Services, Police Traffic Services, Safe Communities, Teen Driver Safety, and Traffic Records.

<http://www.tn.gov/tdot/section/ghso>

Sample Projects:

Accident Reporting System

Highway-Railroad Grade Crossing Program

TDOT

Next Call for Project: N/A

MPO TIP Implications: These funds are reflected in the TIP

The objective of TDOT’s Highway-Railroad Grade Crossing Program is to improve safety and reduce crash risk at Tennessee’s public highway-railroad grade crossings. “Grade” crossings refers to those crossings at which the highway and railroad are at the same level, as opposed to “grade separated” crossings in which there is a bridge to allow one to pass over the other.

Tennessee’s Highway-Railroad Grade Crossing Program, commonly referred to as the Section 130 Program, is a federal aid program authorized by United States Code Title 23, Section 130, and administered through the state by the Federal Highway Administration (FHWA). Typically, Section 130 funds are used to install warning devices, such as train-activated flashing lights, automatic gates, and warning bells. These funds may also be used to provide various other safety improvements at existing crossings and to assist in the closure of unneeded crossings. Priority for the available funds is given to crossings with the greatest likelihood of a collision occurring. This is determined using an FHWA accident prediction model, which takes into consideration many factors including:

- (1) average daily traffic on the highway
- (2) number of train movements per day
- (3) maximum train speed
- (4) crash history

The Highway-Railroad Grade Crossing Program maintains a crossing inventory database, including information about warning devices and signage, for each public crossing in Tennessee. The information is used to prioritize crossings for projects and to update the national crossing inventory database maintained by the

Federal Railroad Administration (FRA).

<https://www.tn.gov/tdot/topic/highway-railroad-grade-crossing>

Sample Projects:

Nolensville Rd with Nashville and Eastern Railroad crossing No. 348-630J(Pin 120129.00), Crossing No 348-670G (Pin 120133.00), and others

Injecting Innovation into Public Transportation

Grantor: TransitCenter, Inc. – One Whitehall Street, 17th floor, New York, NY 10004

Next Call for Proposals: TBA for Early 2017 and on a rolling basis

MPO TIP implications: N/A

From <http://transitcenter.org/programs/> -

TransitCenter, a national foundation committed to improving urban mobility, is a leading provider and researcher of commuter benefit programs. They develop innovative ways to encourage greater use of public transit for the purpose of reducing traffic congestion and improving air quality. Through these purposes they provide incentives for employers and employees alike to offset rising commuting costs.

In addition to their research, TransitCenter also offers grants that support organizations focused on improving transit and the quality of life in urban areas.

Their primary grant programs:

Open Call – largest funding program; receives requests for proposals on an annual basis. The next call for proposals will be early 2017.

Dispatch Grants - \$5000-\$20,000 is available on a rolling basis and awarded per year to non-governmental, non-profit civic organizations with 501c3 status whose focus is advocacy and education on urban transportation issues.

Several past grantees:

- MIT, Cambridge Mass – “Scaling up co-creative planning of transit corridors”
- Transportation for America, Washington, D.C. – “State-level policy Network for Transit Financing”.
- Open Plans, NY, NY – “StreetFilms series: how transit agencies are addressing challenges”.
- Alta Planning and Design, Portland, OR – “Evaluating Transportation Demand Management Results”.

TIGER (Transportation Investment Generating Economic Recovery)

Grantor: US DOT, 1200 New Jersey Avenue, SE, Washington, D.C. 20590

Next Call for Applicants: Deadline has not been announced

MPO TIP Implications: These funds are reflected in the TIP

From <https://www.transportation.gov/tiger/about> -

Since 2009, Congress has dedicated nearly \$4.6 billion for seven rounds of TIGER to fund projects that have a significant impact on the Nation, a region or a metropolitan area. TIGER can provide capital funding directly to any public entity, including municipalities, counties, port authorities, tribal governments, MPOs, or others



in contrast to traditional Federal programs which provide funding to very specific groups of applicants (mostly State DOTs and transit agencies).

TIGER

TIGER is a discretionary funding program; some active projects listed here:

- Nashville Transit Signal Priority System (Implementation of TSP on the Murfreesboro Pike Corridor
Applicant: Nashville MTA
Mode: FTA
Grant Amount: \$10,000,000.00
Round: TIGER 2013
Description: to install equipment on buses and at all signalized intersections on high traffic corridors to give buses signal priority. In addition, the city will install new bus shelters, pedestrian improvements, and intelligent transportation systems (ITS) devices (such as real-time bus signs) throughout the transit system. MPW providing the matching funds of \$3.3 million.

- City of Chattanooga Rail Transit Implementation Plan
Applicant: City of Chattanooga
Mode: FTA
Grant Amount: \$400,000.00
Round: TIGER 2014 Planning
Description: The Rail Transit Implementation Plan will evaluate the feasibility of using 21 miles of freight rail infrastructure for passenger service. Additionally, the plan seeks to establish an implementation strategy for a 23-mile long passenger rail system in the City.

- Restoring Pathways to Economic Opportunities
Applicant: City of Birmingham
Mode: FHWA
Grant Amount: \$125,000.00
Round: TIGER 2014 Planning
Description: The Restoring Pathways to Economic Opportunities Planning Project will examine mitigation opportunities for the impacts of an elevated interstate that bisects neighborhoods in downtown Birmingham, cutting lower income neighborhoods off from jobs and services.

Smart City Challenge:

Grantor: US DOT

Next Call for Notice of Funding: 2017 (Deadline has not been announced)

MPO TIP Implications: These funds will likely need to be reflected in the TIP.

From <https://www.transportation.gov/smartcity> -

The USDOT has pledged up to \$40 million (funding subject to future appropriations) to one city to help it define what it means to be a “Smart City “and become the country’s first city to fully integrate innovative technologies – self-driving cars, connected vehicles, and smart sensors – into their transportation network.

2016 grantee:

- City of Columbus, OH to receive up to \$40 million from US DOT to match with a \$100 million from private investors to fully integrate their transportation system with data and technology

centers to reconfigure the movement of people and goods throughout the city.

Urbanized Area Surface Transportation Program (U-STP):

Grantor: Nashville Area MPO, 800 Second Avenue South, Nashville, Tennessee 37210

Next Call for Projects: Next cycle to begin October 2016

MPO TIP Implications: These funds will be reflected in the TIP

From http://www.nashvillempo.org/transportation_projects/mpo_grant/#stp –

The Surface Transportation Program provides the funding to localities for projects on any Federal-aid highway. These include the National Highway System, bridge projects on any public road, transit capital projects, and intra-city and inter-city bus terminals and facilities. The primary purpose of these projects is to reduce congestion and improve safety and efficiency of regional multi-modal transportation systems.

The Nashville Area MPO has discretion to award Surface Transportation Program (STP) funds authorized by the United States Congress and receives an allocation of STP on behalf of the Nashville-Davidson Urbanized Area (U-STP) and the Murfreesboro Urbanized Area (M-STP).

Sample Projects funded with U-STP:

- Increased Guidance for improved Mobility
 Applicant: Nashville, TN (Lead Agency)
 Fund Amount: Total \$450,000 (Fed \$360,000; Local \$90,000)
 Round: 2014 Construction
 Description: Provide street names signs, guidance signs, pedestrian signalization to improve wayfinding for pedestrians and motorists

- Jefferson Street Intersections
 Applicant: Nashville, TN (Lead Agency)
 Fund Amount: Total \$160,000 (Fed \$128,000; Local \$32,000)
 Round: 2014 Right-of-Way
 Description: Construction of intersection improvements along Jefferson Street, including turn lanes, decorative signals, cross walks, road widening, and increased turn radii. The planned improvements are proposed for the 1) 28th Avenue/Ed Temple, and 2) 21st Avenue North intersections along Jefferson Street.

- Battery Lane/Harding Place at Franklin Road Improvements
 Applicant: City of Oak Hill (Lead Agency)
 Fund Amount(s): Total Right-of-Way \$120,500 (Fed \$96,400; Local \$24,100)
 Total Construction \$1,522,000 (Fed \$1,217,600; Local \$304,400)
 Description: Capacity improvements for the eastbound, westbound and southbound approaches to the intersection consisting of lane additions, lane extensions and lane widenings to meet current standards and to meet traffic demands.

Active Transportation (U-ALT):

Grantor: Nashville Area MPO

Next Call for Projects: to date, a new schedule has not been posted



MPO TIP Implications: These funds will be reflected in the TIP

From http://www.nashvillempo.org/plans_programs/tip/ATP.aspx -

Shaped by extensive public and stakeholder input, the MPO established a new direction for investments made with MPO-managed grant funds received through the Federal Highway Administration's Surface Transportation Program. The Active Transportation Program targets at least 15 percent of available Urban Surface Transportation Program resources for walking, bicycling, or transit-supportive projects that may not have otherwise received funding through more traditional revenue streams.

Sample Projects funded with U-ALT:

- Small Town Connections

Applicant: City of Nolensville

Grant Amount: \$415,000

Round: 2014-2017

Description: Construction of a trailhead and bridge, and environmental work for the Nolensville multi-use trail. The 10-foot wide trail stretches 4,300 feet and connects many destinations in Nolensville, including parks, schools, businesses and community destinations. The trail also connects with two existing Safe Routes to School trails funded with Safe Routes to School grants from the Tennessee Department of Transportation. The goal of the trail is to provide a safe and pleasant transportation and recreation option for those who live, work and visit Nolensville.

- North Nashville Mini Transit Hub

Applicant: Nashville MTA

Grant Amount: \$750,000

Round: 2014-2017

Description: Construction of a transit hub, sidewalks, and bicycle parking along Clarksville Pike (SR-112). The hub will provide a shelter that includes a heated waiting area, bicycle parking and pedestrian improvements, such as sidewalks and crosswalks, to access the hub. The hub serves three of MTA's highest-ridership routes, including the cross-town University Connector that connects many of Nashville's universities and colleges.

- Nolensville Pike Mini Transit Hub

Applicant: Nashville MTA

Grant Amount: \$1,500,000.

Round: 2014-2017

Description: Construction of a transit hub at the intersection of Nolensville Pike and Harding Place. The project will include covered bicycle parking, improved pedestrian crosswalks, sidewalks, signage and a heated waiting area for customers. The project will serve three high-ridership routes.

State Aid Road and Bridge Grant Program

TDOT

Next Call for Project: N/A

MPO TIP Implications: These funds are reflected in the TIP.

State Aid Road and Bridge Grant programs provide funds to local governments for improvements on local

roads and bridges. Eligible projects include state aid designated county and city roads and off-system, publicly owned bridges based on bridge condition. State Aid roads projects include: planning, engineering, right-of-way acquisition, grading, drainage, bridge and road construction, and pavement upgrades and repairs. Bridge grant projects include: bridge replacement, bridge rehabilitation, and culvert replacement. The funding varies by county and is based on a formula with money becoming available each year on July 1.

Sample Projects:

Completed: SA 1941(1) Hamilton Church Re-surfacing, SA1910 (3) Burkitt Road Re-surfacing, SA1937 (1) Granny White Pike Re-surfacing, SA19021 (5) Myatt Drive Resurfacing
 Under construction: SA190335(3) Una Antioch Pike Resurfacing, SA19023(6) Gallatin Pike Resurfacing

FEMA/TEMA

Next Call for Project: N/A
 MPO TIP Implications: N/A

On August 29, 2006, President George W. Bush issued Executive Order 13411. DAIP was created in response to this order. Our goal is to improve survivor access to disaster information and make applying for disaster assistance easier. The Federal Emergency Management Agency (FEMA), under the Department of Homeland Security (DHS), acts as the managing partner.

FEMA also provides state and local governments with preparedness program funding in the form of Non-Disaster Grants to enhance the capacity of state and local emergency responders to prevent, respond to, and recover from a weapons of mass destruction terrorism incident involving chemical, biological, radiological, nuclear, and explosive devices and cyber-attacks.

<http://www.fema.gov/preparedness-non-disaster-grants> and <https://www.disasterassistance.gov/about-us/overview>

Sample Projects:

May 2010 Flood, Tornado 2000, 1999, and 1998, and Ice Storm 1996

FHWA Disaster Relief

Next Call for Project: N/A
 MPO TIP Implications: N/A

Congress authorized in Title 23, United States Code, Section 125, a special program from the Highway Trust Fund for the repair or reconstruction of Federal-aid highways and roads on Federal lands which have suffered serious damage as a result of (1) natural disasters or (2) catastrophic failures from an external cause. This program, commonly referred to as the emergency relief or ER program, supplements the commitment of resources by States, their political subdivisions, or other Federal agencies to help pay for unusually heavy expenses resulting from extraordinary conditions.

The applicability of the ER program to a natural disaster is based on the extent and intensity of the disaster. Damage to highways must be severe, occur over a wide area, and result in unusually high expenses to the highway agency. Applicability of ER to a catastrophic failure due to an external cause is based on the criteria



that the failure was not the result of an inherent flaw in the facility but was sudden, caused a disastrous impact on transportation services, and resulted in unusually high expenses to the highway agency.

Sample Projects:
May 2010 Flood

Section 402 Highway Safety Funds:

Grantor: Tennessee Highway Safety Office (THSO), 18th floor, JK Polk Bldg., Nashville, TN 37243

Next Call for Projects: March 1-31, 2017

MPO TIP Implications: N/A

From <http://www.ghsa.org/html/stateinfo/programs/402.html>

The State and Community Highway Safety Grant Program, commonly referred to as Section 402, was initially authorized by the Highway Safety Act of 1966 and has been reauthorized and amended a number of times since then, most recently under MAP-21, with relatively few changes from SAFETEA-LU.

The THSO partners with law enforcement, government agencies, and non-profits to address Tennessee's highway safety needs at the state and community level through the use of Federal Highway Safety Grant Program funds.

The program is jointly administered by the National Highway Traffic Safety Administration (NHTSA) and the Federal Highway Administration (FHWA) at the federal level and by the State Highway Safety Offices (SHSO) at the state level.

Sample Projects funded by Section 402:

- Police Traffic Service
Applicant: Alcoa Police Department
Grant Amount: \$15,000
Round: 2016

- Network Coordinator
Applicant: Belle Meade Police Department
Grant Amount: \$15,000
Round: 2016

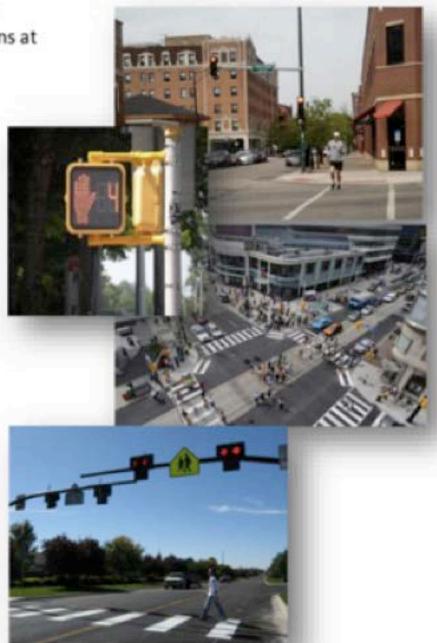
- Multi-violation Enforcement Campaign
Applicant: Brownsville Police Department
Grant Amount: \$35,000
Round: 2016

- State Law Enforcement Management Training
Applicant: Tennessee Department of Safety and Homeland Security
Grant Amount: \$32,160
Round: 2016

Addendum II. MPW Work in Progress for Pedestrian Safety

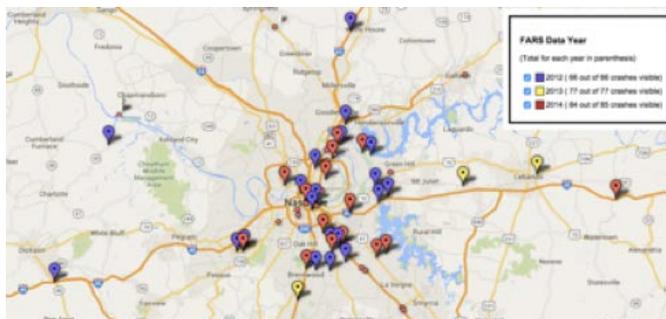
Pedestrian Signalization Countermeasures

- **Leading Pedestrian Intervals** and other signal timing improvements can increase the visibility of pedestrians at intersections.
- **Pedestrian Signals** upgraded with countdown timers can alert pedestrians when conflicts with vehicles may impact their safety.
- **Pedestrian Scrambles**, or 'barn house dances' as they are sometimes called, provide an exclusive pedestrian phase at signalized intersections so that pedestrians can cross without conflicts.
- **Left Turn Phases** can decrease the conflict between pedestrians and left-turning vehicles
- **Pedestrian Hybrid Beacons** stop vehicular traffic with a familiar steady red signal to make pedestrian crossings safer in mid-block locations.



Pedestrian Geometric and Roadway Countermeasures

- **Pedestrian Refuge Islands** decrease the number of lanes pedestrians must cross at once.
- **Crosswalk Distances** at skewed intersections can be reduced to limit pedestrian exposure to vehicles.
- **Fencing, Gating, and Landscaping** can be used to direct pedestrian traffic to appropriate crossing locations and help prevent mid-block crossings.
- **Road Diets** are one way of decreasing pedestrian exposure to vehicles on roadways where traffic volumes are low and pedestrian facilities can be incorporated.

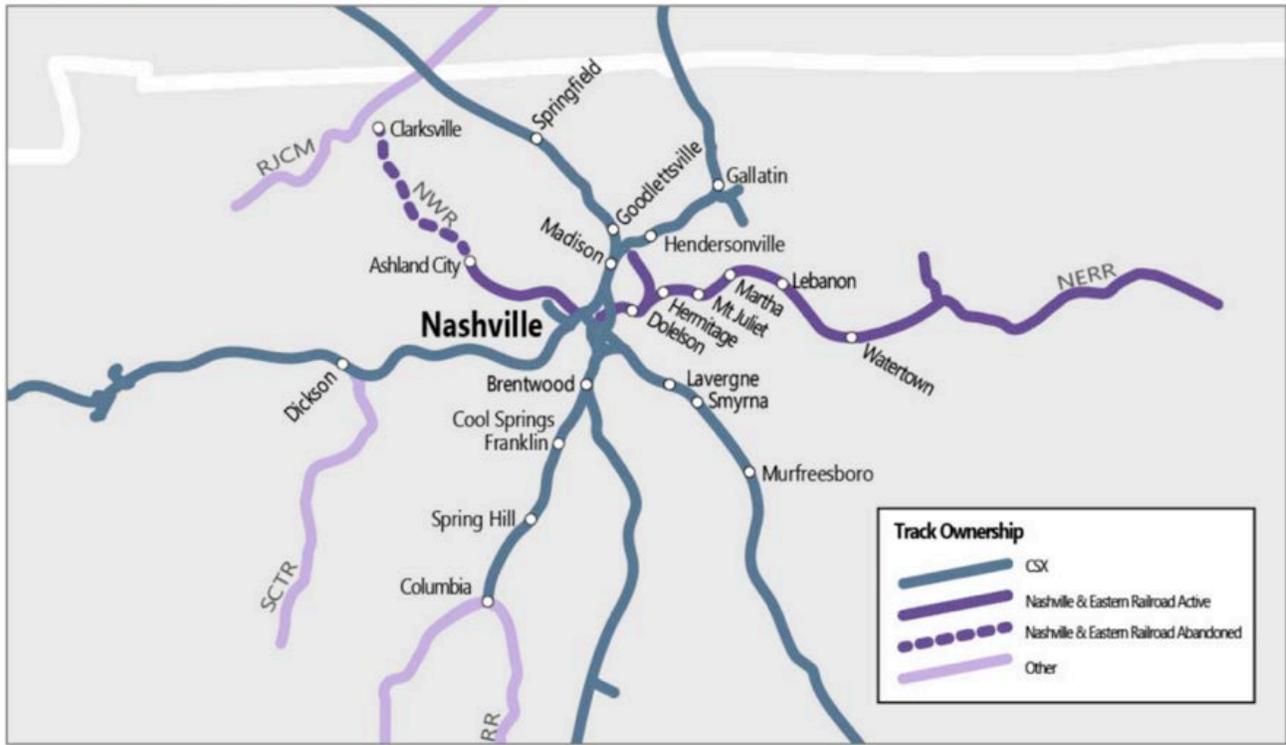


Nashville pedestrian and bicycle crash facts

- Between 2010 and 2013, 979 pedestrians and 220 bicyclists were hit
- Fifty high-crash areas had 4 or more incidents within one-tenth of a mile, accounting for 30 percent of all incidents.
- Men were involved in pedestrian crashes more as drivers and much more as pedestrian victims.
- 61% of pedestrian crashes were at night
- 29% were hit-and-runs

Addendum III. Existing Commuter Rail Network and New Funding Opportunities Available

MIDDLE TENNESSEE TRACK MAP (CSX IN BLUE)

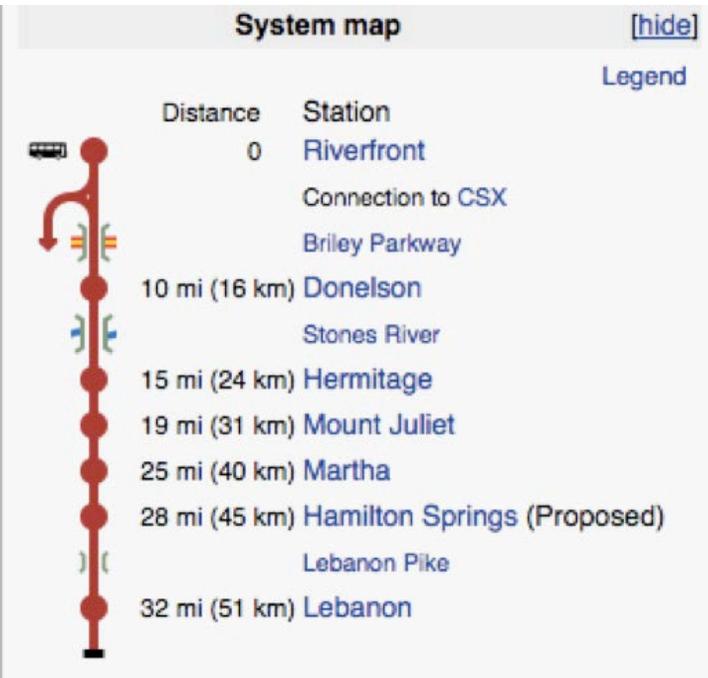


This map shows the dominance of CSX among freight line companies in Middle Tennessee.
Credit RTA

1 of 2

- New Commuter Rail Services since 1990**
- Tri-Rail in Miami in 1987
 - Shore Line East in New Haven, CT in 1990
 - MetroLink in Los Angeles in 1992
 - Virginia Railway Express (VRE) in Washington D.C. in 1992
 - Coaster service in San Diego in 1995
 - Trinity Railway Express (TRE) between Fort Worth and Dallas in 1996
 - Altamont Commuter Express in San Jose in 1998
 - Sounder in Seattle in 2008.
 - Music City Star in Nashville in 2006
 - Rail Runner Express in Albuquerque in 2006
 - FrontRunner in Salt Lake City in 2008
 - NorthStar in Minneapolis in 2009
 - A-Train in Denton County, TX in 2011
 - Capital MetroRail in Austin in 2011
 - Sunrail in Orlando in 2014

Most cities that have added commuter rail have not been successful with more than a single line.
Credit RTA





1707 L St. NW, Suite 1050
Washington, DC 20036

www.locusdevelopers.org/

MEMO

From: Christopher Coes, Director
To: Interested Parties
RE: Outline of Changes to RRIF Program
Date: December 8, 2015

Program Purpose

What is RRIF?

The Railroad Rehabilitation Improvement and Financing (RRIF) program is a federal loan program to provide direct loans and loan guarantees up to \$35 billion to finance development of railroad infrastructure.

What is new about RRIF?

Due to the recently passed surface transportation authorization, the FAST Act, the RRIF program has undergone significant changes including:

1. Expansion of RRIF eligibility to include transit-oriented development (TOD) infrastructure and commercial and residential development
2. Reformed RRIF Application requirements to provide greater certainty.
3. Enables real estate companies to apply through joint venture
4. Establishes a 4-year sunset provision for TOD financing.

New Eligible Activities and Selection Criteria

RRIF loan can be used to finance economic development, including commercial and residential development, and related infrastructure and activities that (1) incorporate private investment, and (2) is located near (or functionally related) to a passenger rail station or multimodal station that includes rail service.

In addition, the project must be able to start no later than 90 days after the date, which the loan is obligated, and demonstrate new sources of revenue for the passenger rail station or service by increasing ridership, tenant lease payments or other activities that generate revenue exceeding cost.

NOTE: TOD has been established as a new programmatic priority for the RRIF loan program.

Modification of Eligible Applicants

Eligible applicants include local or state governments, Amtrak, government sponsored authorities and corporations and railroad companies. Private corporations (i.e., real estate

companies) are now eligible applicants by joint venturing with one of the abovementioned applicants.

Funding

Federal Total share of Cost

RRIF loans will cover up to 75% of the total project cost for TOD projects. TOD projects must have a 25% non-federal match.

Application Fees and Process

RRIF may require applicants to pay an application fee and an investigation charge of up to one-half of one percent of the principal amount of the direct loan or portion of the loan guaranteed under RRIF.

Completed applications are required to receive notification of loan approval or disapproval within 60 days of submission.

Credit Risk Premium

FRA calculates a credit risk premium for the loan based on the creditworthiness of the borrower. Creditworthiness can now be determined by cash flows generate from the project or through dedicated revenue sources such as tolls, other user fees or payments owing to the obligor under a public-private partnership.

Repayment of Federal assistance

Repayment of a TIFIA loan must begin by five years after the substantial completion of the project, and the loan must be fully repaid within 35 years after the project's substantial completion or by the end of the useful life of the asset being financed, if that life is less than 35 years. The Secretary has the authority to determine the repayment schedule.

NOTE: In most cases a RRIF loan may not be subordinated to other debt in the event of project bankruptcy, insolvency, or liquidation. However, RRIF loans may be subordinated in some circumstances in which a public agency has outstanding senior bonds under a preexisting indenture.



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MEMO

From: Christopher Coes, Director
To: Interested Parties
RE: Outline of Changes to TIFIA Program
Date: December 8, 2015

Program Purpose

What is TIFIA?

The Transportation Infrastructure Finance and Innovation Act (TIFIA) is a popular federal loan program for eligible transportation projects of national or regional significance under which the USDOT provide three product offerings: (i) secured (direct) loans, (ii) loan guarantees, and (iii) standby lines of credit. The program is designed to fill financing gaps left by private capital markets and leverage federal funds by attracting substantial private and other non-Federal co-investment.

What is new about TIFIA?

Due to the recently passed surface transportation authorization, the FAST Act, the TIFIA program has undergone significant changes including:

1. Expansion of TIFIA eligibility to include transit-oriented development (TOD) and local infrastructure;
2. Reduction of the TIFIA project cost requirement for TOD and local infrastructure from \$50 million to \$10 million;
3. Streamlined application process for low-cost, low-risk projects to reduce the transaction costs and make it affordable to apply, including \$2 million grant per year will be available to defray application costs for smaller projects; and
4. Reduction of overall TIFIA funding from \$1 billion to \$275 million.

NOTE: For every TIFIA program \$1 leverages \$10 in direct loans.

New Eligible Activities

Project Types

Examples of eligible TOD capital projects:

- Property acquisition;
- Demolition of existing structures;
- Site preparation;
- Utilities;
- Building foundations;
- Walkways;
- Pedestrian and bicycle access to a public transportation facility;

- Construction, renovation, and improvement of intercity bus and intercity rail stations and terminals;
- Renovation and improvement of historic transportation facilities;
- Open space;
- Safety and security equipment and facilities (including lighting, surveillance, and related intelligent transportation system applications);
- TOD related infrastructure (i.e., parking garages)†
- Facilities that incorporate community services such as daycare or health care;
- A capital project for, and improving, equipment or a facility for an intermodal transfer facility or transportation mall; and
- Construction of space for commercial uses; and

NOTE: While TOD "related infrastructure" includes TOD infrastructure categories such as parking garages, these projects should (1) promote greater transit ridership, (2) walkability, or (3) increased private investment.

Example of Local Infrastructure Project Types

- Trail networks
- Protected bike lanes
- Sidewalks and Streets
- Pedestrian and bike friendly infrastructure

Eligible Applicants

Public or private entities seeking to finance, design, construct, own, or operate an eligible surface transportation project may apply for TIFIA credit assistance.

Funding

Federal Total share of Cost

TIFIA credit assistance may cover the following portions of the total cost of a project:

- TIFIA line credit: up to 33%
- TIFIA loan: up to 49% (NOTE: Average TIFIA loan cover up to 33% of total project cost)

Authorized Funding Levels

Year	2016	2017	2018	2019
Authorization	\$275MM	\$275MM	\$275MM	\$300M

NOTE: For every TIFIA program \$ 1 leverages \$10 in direct loans.

Repayment of Federal assistance

Addendum IV.

Metropolitan Nashville Government Staff* who were interviewed and contributed input as part of the Gear Up 2020 process, included:

Steve Bland, MTA/RTA
Rita Brockmann-Baker, Metro Nashville Police Department
Hank Clay, Metro Nashville Public Schools
Jonathan Cleghon, Metro Public Works
Devin Doyle, Metro Public Works
James Harbison, MDHA
Steve Holt, Metro Nashville Fire Department
Tommy Lynch, Metro Parks and Recreation
Ken Murdock, Metro Nashville Public Schools
Toks Omishakin, Tennessee Department of Transportation
Dr. Bill Paul, Metro Department of Health
Scott Potter, Metro Water Services
Doug Sloan, Metro Planning Department
Michael Skipper, Greater Nashville Regional Council (formerly of the MPO)
Jenna Smith, Metro Public Works
Nick Thompson, Nashville Electric Services
Nancy Whittemore, Metro General Services

**Additional input was contributed by various Metro Nashville Department of Planning staff, as well as other community stakeholders and practitioners.*

Addendum V.

Select member of the ULI Nashville Transportation Action Council who elected to submit input on Transportation and Infrastructure Goals and Priorities, included:

Tarek El Gammal, Southeast Venture
Emily Hunter, City of Franklin
Cliff Joyner, CBRE
Grant Kinnett, Boyle
H. Ross Lucas, Wolverton & Associates, Inc.
Andrew Maxwell, Oak Point Real Estate
Sagar Onta, RPM Transportation Consultants
Beth Ostrowski, Kimley Horn and Associates, Inc.
Charlie Smith, Barge Waggoner Sumner & Cannon, Inc.

