Bicycle and Pedestrian Study

For the Central Business Districts of Scranton and Wilkes-Barre

Prepared for:

LACKAWANNA LUZERNE MPO

Lackawanna County Planning Department
123 Wyoming Avenue, 5th Floor, Scranton, PA 18503

Luzerne County Department of Planning & Zoning
20 N. Pennsylvania Avenue #208, Wilkes-Barre, PA 18701

Prepared by:

Barry Isett & Associates, Inc.
1170 Highway 315, Suite 3, Wilkes-Barre, PA 18702

With:

Campbell Thomas & Co. Architects
1504 South Street, Philadelphia, PA 19146-1636

Steve Spindler Cartography
429 Vernon Road, Jenkintown, PA 19046

December 2020

Acknowledgements

MPO Staff

Steve Pitoniak, Planning Department Manager, Lackawanna County
Matthew Jones, Executive Director, Luzerne County Planning Dept
John Petrini, Transportation Planner, Luzerne County
Chris Chapman, Transportation Planner, Luzerne County
Edmund O'Neill, Director of Operation Services, Luzerne County

Study Committee

Kathy Bednarek, Luzerne County Transit Authority
Joseph Coffay, Wilkes-Barre Police Department
Leslie Collins, Scranton Tomorrow
Christine Dettore, PA Dept of Conservation & Natural Resources
Bob Fiume, County of Lackawanna Transit System
Martin Fotta, United Neighborhood Community Development Corp
Butch Frati, City of Wilkes-Barre
Mary Garm, Lackawanna County Library System
Lauren Golden, Delaware & Lehigh National Heritage Corridor
Carl Graziano, Scranton Police Department (retired September 2020)
April Hannon, PA Dept of Transportation
William Harris, City of Wilkes-Barre
Gabrielle Holko, Marywood University
Paul Kaspriskie, Wilkes University
Don King, City of Scranton
Mark Murphy, University of Scranton
Larry Newman, Diamond City Partnership
Nanci Romanyshyn, Citizen Cyclist
Michele Schasberger, Live Well Luzerne
Janet Sweeney, Pennsylvania Environmental Council
Rachel Sweeney, Geisinger
Richard Williams, Citizen Cyclist
Vivian Williams, Scranton Area Foundation
Harry Wollman, Lackawanna Medical College
Owen Worozbyt, Lackawanna Heritage Valley National & State Heritage Area

Project Funding

Funding for this project was provided by the Keystone Recreation, Park and Conservation Fund through the Pennsylvania Department of Conservation and Natural Resources, Bureau of Recreation and Conservation, Local Share Account through the Pennsylvania Department of Community and Economic Development, and the Lackawanna Luzerne Transportation Study.

*Cover Photo courtesy of **Luzerne County Historical Society**. West End Wheelmen's Club in front of the South Main Street Clubhouse in 1896. To promote the fledgling sport in the Wyoming Valley, the 'West Enders' organized club races, larger regional meets and a three-day meet of wheelmen from across the nation.*

Table of Contents

Chapter 1 | Introduction 5
Project Scope of Work 5
Delineation of Study Area 5
Public Participation Process 6
Vision, Goals, and Objectives 7
Project Partners 7
Demographics 7
Chapter 2 | Inventory and Methodology 9
Recent and Ongoing Plans, Reports, Maps, and Guides 9
Field Survey 11
Public Participation Process 11
Usage Feasibility 12
Legal Feasibility (Ownership Status) 12
Benefits of Bicycle Facilities 13
Characteristics and Conditions 15
Scranton, Pennsylvania 15
Wilkes-Barre, Pennsylvania 16
Conditions Evaluation Maps 18
Street Experience 18
Photos examples of **Street Experience** in Scranton 19
Photos examples of **Street Experience** in Wilkes-Barre 20
Street Conditions 21
Photos examples of **Street Condition** in Scranton 22
Photos examples of **Street Condition** in Wilkes-Barre 23
Determination of Feasibility 24
Public Support 24
Financing 24
Constructability 25
Local Transportation 26
COLTS (County of Lackawanna Transit System) in Scranton 26
LCTA (Luzerne County Transportation Authority) in Wilkes-Barre 29
Long Distance Transportation 31
Amtrak Thruway Buses 31

Greyhound Bus 32
Martz Trailways 32
Fullington Trailways 33
Linking Transit and Tours 33
Longer Travel for More Distant Tours and Adventures 33
Special Excursion Services 34
Existing Conditions Maps of Scranton 35
Existing Conditions Maps of Wilkes-Barre 41
Chapter 3| Types of Facilities Considered 47
Bicycle Facilities 47
Multiuse Trail or Sidepath 47
Cycle Track 48
Protected Bike Lane 49
Bike Lane 49
Sharrows 50
Bicycle Signalization & Signage 50
Bicycle Boxes 51
Bicycle Parking 51
Examples of Public Squares and Major Crossroads that Accommodate Bicyclists 52
The Design Challenge faced in Wilkes-Barre's Public Square 52
Queen's Circus Roundabout, Battersea, London, England 52
A Dutch- Roundabout with bi-directional cycling lanes 54
Another Roundabout in Cambridge. England 54
Multi-Level Intersections 56
Chapter 4 | Network Recommendations 57
Signage Recommendations 57
Traffic and Safety Signage 57
Shared Roadways 58
Bicycle Lanes and Cycle Tracks 59
Wayfinding Signage 59
Bike Share Program Recommendations 60
What is Bike Share? 60
Existing programs in Scranton and Wilkes-Barre: 61
Scranton 61

Wilkes-Barre 61
Recommendations: 61
Potential Funding Sources 62
Advisory Board and Community Partners 64
Key Implementation Responsibilities 65
County Planning Departments 65
Cities and Local Municipalities 66
Public Works Departments 66
Recreation Departments 66
Police Departments 67
Transportation Authorities 67
Advocacy Groups and Service Organizations 67
Educational Institutions 67
Employers and Corporations 67
Chapter 5 | Action Plan for Downtown Scranton 69
Description of Network Plan for Downtown Scranton 69
The Outer Loop 70
The Inner Network 73
Downtown Scranton Phasing Plan and Opinion of Probable Costs 77
Summary of Key Recommendations 81
Key Recommendations for Scranton Improvements 82
Scranton Proposed Improvements 83
Scranton Phasing Plan 84
Lackawanna Avenue Existing Conditions 85
Lackawanna Avenue Conceptual Plan 86
Chapter 6 | Action Plan for Downtown Wilkes-Barre 87
Description of Network Plan – Downtown Wilkes-Barre & Link to the D&L Trail 87
D&L Trail Alignment in the Central Business District 94
Downtown Wilkes-Barre Phasing Plan and Opinion of Probable Costs 95
Summary of Key Recommendations 99
Key Recommendations for Wilkes-Barre Improvements 100
Wilkes-Barre Proposed Improvements 101
Wilkes-Barre Phasing Plan 102
River Street Existing Conditions Page 1 103

River Street Existing Conditions Page 2.....104
River Street Conceptual Plan Page 1 105
River Street Conceptual Plan Page 2 106

Chapter 1 | Introduction

Project Scope of Work

The Lackawanna Luzerne Transportation Study Metropolitan Planning Organization (LLTS MPO) has put an emphasis on multimodal transportation. This study focuses on alternative pedestrian and bicyclist transportation by identifying a safe, efficient, and equitable bicycle and pedestrian network within the cities of Scranton and Wilkes-Barre. The proposed network follows federal and state guidelines for bicycle and pedestrian facilities, such as the PennDOT Bicycle Facilities design and the Federal Highway Administration Small Towns and Rural Multi-modal Networks. The study process followed the guidelines set forth by the Pennsylvania Department of Conservation and Natural Resources (DCNR).

Funding for this study was provided by three sources:

- Keystone Recreation, Park and Conservation Fund through the Pennsylvania Department of Conservation and Natural Resources, Bureau of Recreation and Conservation
- Local Share Account administered by the Pennsylvania Department of Community and Economic Development
- Lackawanna Luzerne Transportation Study Metropolitan Planning Organization

Delineation of Study Area

Scranton and Wilkes-Barre are the largest cities in Lackawanna and Luzerne counties, respectfully; each are nestled in the Lackawanna and Susquehanna River valleys. Scranton is the county seat of Lackawanna County and measures 25.54 square miles—while Wilkes-Barre holds the county seat of Luzerne County and measures 7.197 miles. The city boundaries blend with the neighboring boroughs and create extensive urban life in the valleys. PennDOT bicycle routes crisscross the valleys

via two long distance trails—with plans to connect the two cities within the next decade.

The focus of this study is to develop a bicycle and pedestrian network in the downtown central business districts of both cities. In order to effectively develop a plan in this tightly-defined location, the greater region was evaluated to see where cyclists were coming from and what destinations they wanted to get to.

For the purpose of this study, the Downtown Scranton Business District is defined as Lackawanna Avenue to Vine Street, and Jefferson Avenue to Mifflin Avenue. The Downtown Central Business District of Wilkes-Barre has been defined as South Street to North Street, and River Street to Pennsylvania Avenue.

Public Participation Process

In order to obtain input throughout the study process, a number of public participation techniques were implemented during this study—including a study committee, public meetings, key person interviews, stakeholder meeting, public guided walks, and an electronic mapping survey. The majority of public participation occurred prior to COVID-19 social distancing restrictions.

A study committee was developed with stakeholders from each downtown. Committee members included public transportation officials, city planners, trail managers, college and university representatives, PennDOT, DCNR, and avid cyclists. A complete list of committee members and meeting minutes can be found in Appendix A. Committee meetings were held in person, except for the final committee meeting that was held virtually.

Public meetings were held in the downtown areas of Scranton and Wilkes-Barre to gather input on where the public was cycling from, where they wanted to go, and what obstacles they have encountered while cycling in each of the downtowns. Once a draft plan was developed, it was presented to the public for feedback. A complete list of public meeting dates, presentations, and meeting minutes can be found in Appendix A.

Key person interviews were conducted with city planners, bike shop owners, interest groups, and avid cyclists. A group of stakeholders in each city met to candidly talk about the bike study draft plan and upcoming projects in both cities. These stakeholders comprised of planners, representatives from special interest groups, business leaders, and representatives from college operations and facilities departments. Stakeholder feedback was incorporated into the bike study plans. A

complete list of key interviewees and meeting minutes can be found in Appendix A.

WikiMapping, an online mapping tool that allows users to enter routes and destinations on a map with comments and photographs, was used to obtain information about where cyclists wanted to bike, what roads they were using, where sidewalks were missing or compromised, and what obstacles pedestrians and cyclists encountered. The survey was open for six weeks during the early stages of the study process. A summary of the data can be found in Appendix A.

Vision, Goals, and Objectives

The Lackawanna Luzerne Transportation Study Metropolitan Planning Organization's vision for the study is to reduce traffic congestion by encouraging people to choose walking and cycling as their preferred modes of transportation. The primary focus of the study is to develop a bicycle network for the central business districts of Scranton and Wilkes-Barre. The secondary focus of the study is the reduction of impediments to the pedestrian network.

Project Partners

The Lackawanna Luzerne Transportation Study Metropolitan Planning Organization has numerous partners in both cities and counties. It is working closely with the planning departments, the public transit organizations, colleges and universities, business development organizations, trail developers, police departments, and cycling community. A complete list of study partners can be found in Appendix B.

Demographics

The City of Scranton is one of two cities in Lackawanna County and is the sixth largest city in Pennsylvania. Scranton serves as the county seat and, in 2019, held an estimated population of 76,653. The male to female ratio is approximately 1:1 with females slightly exceeding males at 50.7% to 49.3%. The median age is 36.8 years and is slightly under the state median of 40.8. The estimated median household income in 2017 was $35,904, increasing from the previous median of $28,805 in 2000. The median gross rent in 2017 was $751, and the percentage of residents living in poverty was 22.4%.

The City of Wilkes-Barre is one of four cities in Luzerne County and serves as the county seat. The estimated population in 2019 was 40,766. Similar to Scranton, the male to female ratio is approximately 1:1 with

females slightly exceeding males at 50.9% to 49.1%. The median age is 34.0 years and is slightly under the state median age of 40.8. The estimated median household income in 2017 was $40,601, increasing from the previous median of $26,711 in 2000. The median gross rent in 2017 was $706 and the percentage of residents living in poverty was 30.1%.

Chapter 2 | Inventory and Methodology

The Bicycle and Pedestrian Study focuses on the physical conditions within the downtown business districts of Scranton and Wilkes-Barre. The proposed improvements will build upon previous plans and studies and the momentum of multimodal transportation initiatives that are already underway.

Recent and Ongoing Plans, Reports, Maps, and Guides

As part of the inventory and methodology phase of this study, the project team analyzed existing resources for both Scranton and Wilkes-Barre. The following plans and reports were of particular interest:

Lackawanna-Luzerne Long Range Transportation Plan Update 2015 | The vision remains the same as the original 2011 plan.

Luzerne Lackawanna Regional Plan 2011 | This bi-county plan paints a vision for a two-county wide pedestrian and bicycle friendly network. The study encourages the incorporation of bicycle and pedestrian facilities in all re-development and new development. Greenways, open space, and outdoor recreation facilities are viewed as important components of the overall vision.

City of Wilkes-Barre Trail / Greenway Feasibility / Master Plan 2010 | This trail plan for the City of Wilkes-Barre outlines existing trails in the greater Wilkes-Barre area and proposed trail routes through the city, including the D&L route into the central business district. The proposed routes utilize railroad and vehicular corridors.

Greater Kingston Area Trail / Greenway Feasibility / Master Plan 2012 | This study takes a look at trails on the northwest side of the Susquehanna River in the Greater Kingston area, including Edwardsville, Forty Fort, Kingston, Larksville, Luzerne, and Swoyersville.

Scranton Levee Trail Feasibility Study 2007 | Commissioned by the Lackawanna Heritage Valley, this study evaluates utilization of the city levee as a multiuse trail.

Master Site Plan for the Luzerne County portion of the Delaware & Lehigh Trail 2007 | The Delaware & Lehigh National Heritage Corridor commissioned this study of the D&L Trail between White Haven and Georgetown, a twenty-five mile section of the 168-mile trail. The study identified alternative alignments in controversial areas.

Lackawanna Riverwalk Preliminary Design Report 2005 | This preliminary design study takes an in-depth look at one section of the Scranton Loop Trail identified in the previous report. It builds upon previous studies of the corridor, including the U. S. Army Corps of Engineers Reconnaissance Report on the Lackawanna River.

Open Space, Greenways, & Outdoor Recreation Master Plan 2004 | Another bi-county planning effort that emphasizes the importance of land use practices that protect sensitive lands and encourage outdoor recreation facilities (including trails) and interconnected systems. A goal of the study is to develop a network of pedestrian and bicycle facilities that promotes trails as alternative modes of transportation and to incorporate pedestrian and bicycle facilities into traffic planning.

Scranton Loop Trail Preliminary Alignment Study 2002 | This study outlines a loop in downtown Scranton that traverses both sides of the Lackawanna River and connects the Lackawanna River Heritage Trail to the downtown business district. The corridor utilizes both vehicular and railroad corridors.

Bus Route Maps | The bus routes of both County of Lackawanna Transit System (COLTS) and Luzerne County Transportation Authority (LCTA) were studied to see how pedestrians and cyclists can utilize public transportation in combination with pedestrian and cyclist routes to cover lengthy distances.

The following **maps** were also reviewed:

- Traffic volumes for each downtown business district
- Lackawanna Luzerne County Long Range Transportation Plan – Figure 4.2.5 Map of Trails and Trailheads 2010
- Bike Scranton – Bike Share Locations
- Lackawanna River Heritage Trail – Location of Trailheads
- D&L Trail Map – online map

The following **guides** were evaluated for destinations of pedestrians and cyclists:

- Scranton: The Electric City
- My Downtown Wilkes-Barre

- The Office Self-Guided Walking Tour (Scranton)
- Downtown Scranton Riverwalk Trail

In addition to regional plans, reports, maps, and guides, **pedestrian and bicycle standards** from national and state technical reference materials were utilized:

- U.S. Access Board: Americans with Disabilities Act Accessibility Guidelines
- FHWA: Manual on Uniform Traffic Control Devices (MUTCD)
- AASHTO: Guide for the Development of Bicycle Facilities
- NACTO: Urban Street Design Guide
- PennDOT Bicycle and Pedestrian Master Plan
- PennDOT Connects Initiative

Field Survey

The study team spent time in the field evaluating existing conditions within the downtown central business districts of both cities. During several site visits, the team took numerous photos and documented street and cartway widths, sidewalk widths and location, street trees and vegetated barriers, on-street parking location and conditions, building conditions, and the pedestrian scale of each block.

Public Participation Process

Several public participation techniques were implemented during the study—including a study committee, public meetings, key person interviews, a stakeholder meeting, public guided walks, and an electronic mapping survey. These techniques were used to help gather and analyze data in the early stages, as well as provide feedback on potential facilities during later stages. Key stakeholders in both downtowns were brought in early to help shape the project throughout the study. These stakeholders will be key project partners to continue moving the project forward once the study is complete.

A study committee was established early in the project and met with the project team four times during the project. Stakeholders from each city were selected including transportation planners, city planners, trail managers, developers, college representatives, business development leaders, county bus representatives, cyclists, PennDOT, and DCNR.

A Design Charrette was held in each city to gather input from the community. Attendees included experienced and novice cyclists, public officials, business owners, and citizens with general interest. Attendees provided valuable input on where they would like to bike, how they are currently cycling around each city, what their destinations are, and

where they are cycling from. Both pedestrian and cycling barriers and obstacles were identified and potential improvements were discussed.

Once a draft plan was developed, a Public Comment Session was held in each city. The proposed bicycle and pedestrian improvements were presented. Feedback on the proposed system was addressed.

Early in the study process, Guided Walks were held with the public in each of the downtown business districts. Barriers and obstacles were observed. Potential improvements and safety upgrades were discussed.

Walks were also conducted with the County Planning staff members in each city. Pedestrian and bicycle obstacles were pointed out to the project team. Successful pedestrian improvements were highlighted. The Wilkes-Barre walk was joined by members of Wilkes University who highlighted the pedestrian and bicycle improvements made by the university in conjunction with the city.

Stakeholder / Key Person Interviews were conducted with people associated with planning, development, and the cycling in each city. Proposed improvements were presented to each city's stakeholders, and their feedback was addressed. Changes were incorporated into their plans.

The project team incorporated WikiMapping into the planning process: An electronic survey tool into which respondents enter routes and points of interest on a map. Comments and photos are pinned to specific points and lines. WikiMapping was used to identify current routes being used, destinations and/or points of origin, and routes that cyclists and pedestrians want to use but have not due to safety concerns.

Usage Feasibility

The project team reviewed the existing conditions in each city, paying attention to the curb-to-curb width of each street. The intent of the proposed network is to introduce bicycle facilities into both downtowns at a low cost. Thus, improvements that were favored rely on re-striping rather than changes in the physical makeup of the street. When the network becomes more popular, each city can reevaluate the bicycle facilities and determine if they need to be upgraded.

Legal Feasibility (Ownership Status)

With the exception of one improvement, all of the proposed bicycle facility improvements fall within the street right-of-way, and the majority fall within the curb-to-curb cartway. Both city and state-

owned streets are within the study areas of the cities. Any improvements to the state streets will require further coordination with PennDOT.

The exception to the city and state rights-of-way is the proposed multiuse trail between Mifflin Avenue and the active rail line. This rail line is owned by the Northeast Regional Rail Authority and operated by the Delaware-Lackawanna Railroad Company. The multiuse trail will need to be closely designed with input from both the city, rail authority, and railroad.

Benefits of Bicycle Facilities

As we begin to see Scranton and Wilkes-Barre transition to a pedestrian and bicycle-friendly transportation culture, the two cities must alter their transportation infrastructure accordingly. Adopting a street design that best supports multimodal transportation will not only meet the needs of its citizens and provide a safe opportunity for all users, but it will also improve circulation for automobile travel.

Bicycle facilities such as sharrows, bicycle signage, bicycle lanes, cycle tracks, and parking protected bike lanes are just a few facilities that can help improve the roadway design and provide a safe and convenient option for urban cyclists. Bicycle facilities have the opportunity to provide numerous other benefits to the cities of Scranton and Wilkes-Barre. Some of these benefits include:

Bicycle facilities can help make places more valuable. As city populations grow, motor vehicle congestion increases. This can be seen in both Scranton and Wilkes-Barre where there is an increase in student populations, businesses, and downtown residents. New roads are rarely an option in mature cities, but bike lanes and other facilities can be incorporated into existing roadways to bring order and predictability to streets—as well as provide transportation choices while helping to build neighborhoods. By extending the geographic range of travel, bike lanes can also help surrounding residential neighborhoods redevelop.

Bicycle facilities can help local companies attract talent. Several recent studies have shown that younger people are increasingly disenchanted by driving. As Millennials and members of Generation X enter the work force, they are increasingly preferring downtown jobs and a faster-paced lifestyle that include nearby homes and access to services. Because bicycle facilities make biking more comfortable in the urban environment, companies can develop in downtown without investing in as much vehicular parking spaces for their employees. Bicycle facilities

in the downtowns can also enable nearby workers to reach their desk quicker, cheaper, and under their own pedal power.

Bike commuters are healthier and more productive. According to a 2003 study by the U.S. Department of Health and Human Services[1], "workplace physical activity programs can reduce short-term sick leave by six to 32 percent, reduce health care costs by 20 to 55 percent, and increase productivity by 2 to 52 percent." While we do not know how much of those effects are due to biking, the benefits of incorporating physical activity into daily routines are undeniable.

Encouraging people to bicycle commute via improved bicycle facilities can also lead to improved physical and mental health. Additionally, as companies work to lower healthcare costs, employees benefiting from regular exercise can help increase overall hourly productivity and cut expenses.

Bike commuters enjoy the special health advantages of personal transportation without the cost and congestion of driving. During the current pandemic, bicycle travel in cities has increased by 300 to 400 percent. In addition to affording commuters "contactless" travel during a health crisis, bicycle travel by its nature is outdoors where the risk of infection is lessened.

Bike facilities increase the visibility and sales of retail stores. Evidence shows that bike infrastructure gives retail businesses a boost. In growing urban communities, protected bike lanes and cycle tracks encourage more people to ride bikes for everyday trips and errands. When people build bicycle travel into their daily routines and errands, they become regulars—stopping often and spending as much or more per month as people who run errands by car. In addition, ten customers who arrive by bike can fit into the parking space of one customer who arrives by car.

Bicycle facilities help reduce congestion: Vehicular gridlock can cost the average peak period traveler almost 40 hours a year—in addition to increased fuel costs and environmental costs due to carbon emissions. Encouraging bicycle use can help shift travel from cars to other modes and can have a vast impact on congestion. In urban areas where cars and bicyclists travel at similar speeds, bike lanes can accommodate 7 to 12 times as many people per meter of travel lane than car lanes[2].

Characteristics and Conditions

Scranton, Pennsylvania

Scranton was incorporated as a borough in 1856 and later as a city in 1866. It is the largest city in Lackawanna County, Pennsylvania, and holds the county seat. Currently the sixth largest city in the state, Scranton was once the third largest industrial giant in Pennsylvania—fueled by the once-abundant coal and iron ore resources of the region.

In the 1840s, while much of the regional economics were driven by anthracite coal, the Scranton brothers brought iron and steel technology to the area into a town once known as Slocum Hollow. The brothers began conducting business as the Lackawanna Coal & Iron Company and later as the Lackawanna Steel Company. Lackawanna Steel initially produced rail for the Erie Railroad and later expanded production to supply other companies in the rapidly growing rail network. Transitioning into the railroad industry was a logical "next step" for the Scranton brothers, and early into this vocation they successfully connect the Lackawanna Railroad to the Erie Railroad in 1851. Primarily, steel production and the railroad industry are the twin industries that drove growth and carried Scranton into the World War II era.

Like many cities and towns in Pennsylvania's coal region, Scranton saw a downturn as the steel and railroad industries faded after the Second World War. Today, Scranton is in a period of restoration and revitalization with a much more diversified economic base—which includes emphasis on its history and a vision as a "destination city."

The Scranton Electric Building Built as the Board of Trade Building in 1896 - An example of Beaux Arts style

The kickoff of the "Electric Age" is often cited as beginning with Edison's lighting of New York City streets in 1882. In Scranton, electric lights were introduced in 1880 at the Dickson Manufacturing Company, and six years later the city had the country's first streetcar system

operating entirely on electricity. It was Reverend David Spencer, a local minister, who proclaimed Scranton "The Electric City."

The character and overall experience of downtown Scranton is in a process of evolution and change. A significant number of recent building and street construction projects are transforming the character and street experience, and some of it not for the better. Much of the architecture—both new and old—is still at a very human scale at low to medium rise form, and that easily lends itself to the development of a very positive pedestrian environment. However, it is clear that a significant emphasis is still on the automobile as the primary means of traveling in and around the downtown, as there is little attention being paid to the impact on the sidewalks. The work along Lackawanna Avenue is a good start, but it is not without weak points. The downtown is still rich in historic architectural resources that represent a wide variety of the Victorian revival and neoclassical styles popular during the period of the city's original growth and development. In addition, there are some very fine examples of the Beaux Arts and Chicago School styles. They add significantly to the experience and should be preserved and enhanced.

Wilkes-Barre, Pennsylvania

Springtime at Public Square – The Wilkes-Barre Deposit & Savings Bank Building Circa 1930 – Tallest building in the Wyoming Valley

Centrally located in the Wyoming Valley, Wilkes-Barre was founded in 1769, incorporated as a borough in 1806, and later a city in 1871. It is the largest city in Luzerne County, Pennsylvania, as well as the Luzerne county seat, and it is the 13th largest city in the state. Wilkes-Barre was initially established by "Yankee" settlers from the Connecticut Colony in the 1760s as a venture of the Susquehanna Company, governed by Connecticut. By 1769, Wilkes-Barre—named after British Parliament members John Wilkes and Isaac Barré who defended the interests of the colonies—was one of five counties established in the western territories by the Connecticut Yankees in lands also

claimed by Pennsylvania. This resulted in a series of conflicts that came to be known as the "Pennamite-Yankee Wars" that lasted more than two decades. There was significant violence and bloodshed, and the first settlement of Wilkes-Barre was burned to the ground by tribes of the Delaware Nation and loyalist militia. A final resolution came in 1799 when the Pennsylvania legislature granted the Yankees and others the right to settle in the Wyoming Valley as citizens of the Commonwealth of Pennsylvania. It is interesting to note that the downtown street grid we see in Wilkes-Barre today had been established by plans prepared by the original Yankee settlers in 1770—including the city's prominent public square.

The discovery and successful deep mining of anthracite coal around Wilkes-Barre drove growth and carried jobs, people, and other industries through the 19th century and into the 20th. With the high productivity and high quality of the coal came the city's nickname "The Diamond City." Other industries included railroads, locomotive manufacture, retail sales, banking, silk and garment manufacturing, and brewing. Wilkes-Barre is also the original home of the Planters Peanut Company.

The transition from coal after World War II marked the start of a slow decline for Wilkes-Barre. At that time, natural disasters struck the city and surrounding region: Flooding closed the deep mines in 1959, and, in 1972, Wilkes-Barre was among the cities hardest hit by Tropical Storm Agnes—with seventy percent of the estimated cost of damage in Pennsylvania going straight to the Wyoming Valley. Luzerne County alone saw 25,000 homes and businesses damaged or destroyed, and an estimated one billion dollars in losses. Nine feet of water in Wilkes-Barre's downtown left a number of buildings damaged beyond repair.

Today, Wilkes-Barre continues to be in a period of significant reinvestment and redevelopment as the result of flood recovery and natural change over time. Successful new flood controls are in place, and substantial reconstruction and rehabilitation projects are completed or underway throughout the downtown. Work impacting the downtown include the riverfront, projects in and around Public Square, and substantial expansions to the Wilkes University and Kings College. While some of the new construction is taller than its predecessors, the city still maintains a predominantly low to medium rise scale, and much of the existing architectural fabric in and around the downtown is still generally representative of most periods of its history—including its industrial past. Newer street construction seems to be employing efforts to create a positive pedestrian experience while still accommodating significant motor vehicle traffic. There are a significant number of large parcels throughout the downtown left by demolished

buildings that are currently being used as surface parking lots. At least some locations appear to be future construction sites.

Conditions Evaluation Maps

The street conditions of each city were evaluated based on visual and photographic review of the downtowns. This qualitative analysis is depicted in the Conditions Evaluation Maps on two levels on a block-by-block basis:

1. The overall "Street Experience."
2. The more specific "Street Conditions."

Both are rated on a simple basis of "GOOD", "FAIR", or "POOR" which are respectively designated on the maps by green, yellow, and red.

Street Experience

Street Experience is an overall subjective evaluation of the entire block based on three conditions as follows:

<u>Street Trees and Plantings – Triangle designation</u>

Approximate quantity of Street Trees or other landscaping that contributes directly to the street character, quality, and experience.

Good (green) – About 50% or more

Fair (yellow) – less than 50%

Poor (red) – little to none

<u>General Maintenance – Square designation</u>

Overall street maintenance including sidewalk paving condition, landscape maintenance, general order, and cleanliness.

Good (green) – Well maintained and clean including walks, landscaping, and buildings.

Fair (yellow) – Some maintenance issues such as needed walk repairs, landscape maintenance, or building maintenance.

Poor (red) – Significant maintenance issues such as heavily damaged sidewalks, overgrown or poorly maintained landscaping, building deterioration, debris accumulation, etc.

Street Life/Experience – Circle designation

The most subjective evaluation, this addresses the quality of Street Experience based on the two previous conditions in combination with the activities within the properties along the streets.

Good (green) – This is a well maintained block with effective landscaping and continuously interesting activity—such as active storefronts, pleasant parks, or nicely landscaped property/building frontages.

Photos examples of Street Experience in Scranton

An older row of buildings with newer sidewalk treatments including street trees, pavement variation, and curbside parking offer a good experience along busy Lackawanna Ave. in Scranton.

The general experience around the Courthouse Square in Scranton is good, primarily due the parklike setting. However, street trees along the perimeter would be a nice improvement.

Fair (yellow) – These streets may be well maintained or have some issues and may or may not have effective landscaping, but these factors may be further compounded by lack of activity—such as substantial inactive building frontage (blank wall) or substantial parking or garage frontage.

Poor (red) – These blocks are rare but are clearly weak in all areas noted.

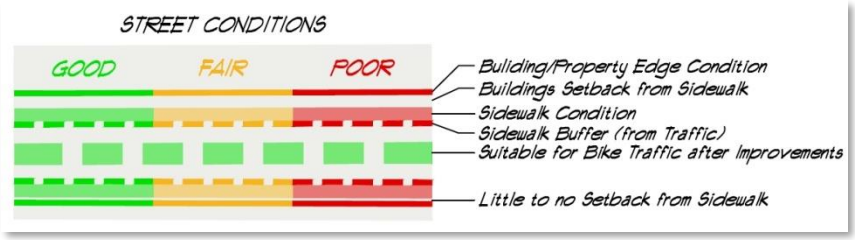
Photos examples of Street Experience in Wilkes-Barre

An older block of N. Main Street in Wilkes-Barre. This end near Jackson illustrates a fairly good experience, but conditions vary along the block and reduce the overall evaluation to fair.

More recent construction on S. Main Street in Wilkes-Barre reveals a number of approaches used both to moderate traffic and provide a generally good experience along Main Street

Street Conditions

Street Conditions seem fairly self-explanatory and focus a bit more detail on conditions along each side of the street. Five conditions were evaluated on a qualitative basis as follows:



Building/Property Edge Condition

Good (green) – These are well maintained building fronts with significant activities or well landscaped edges that contribute positively to the street experience or quality.

Fair (yellow) – This indicates maintenance issues with building or landscaping and/or uses that contribute less to the quality of the experience, such as significant garage or parking frontages.

Poor (red) – This indicates a poorly maintained edge or one that contributes little or nothing positive to the street experience. Typically noted were significant frontages of parking areas with no separation from the sidewalk.

Building Setback from Sidewalk

This is simply an indication that a setback exists or does not. While some setbacks are more substantial than others, the critical impact to the street experience is if there is one or not. Even a minor setback can improve the sidewalk character or even allow room for related sidewalk activity.

Sidewalk Condition

Good (green) – Sidewalks, new or old, that are in good condition and well maintained.

Fair (yellow) – Typically older sidewalks that are developing conditions that need to be addressed in terms of repair and maintenance such as cracking, spalling, and some raised joints which can be a tripping hazard. Sidewalks that seem narrow are included in this designation.

Poor (red) – Older sidewalks that are clearly in poor condition. Typically, these are heavily cracked or damaged with numerous uneven and lifted joints. Inappropriate sidewalk repairs are also included in this group. Asphalt replacements of concrete walks were noted as well as what appeared to be asphalt repairs over existing damaged concrete.

Photos examples of Street Condition in Scranton

A more recent sidewalk treatment along busy Jefferson Ave. in Scranton. The planters along the building edge are a nice approach, but the bollard and chain treatment seem to highlight the problems with an active traffic lane right at the curb line.

While this is a clear example of a poor sidewalk condition along Jefferson Ave. in Scranton, it also shows there is tremendous potential for improvement on what could be a very pleasant block experience.

Photos examples of Street Condition in Wilkes-Barre

An older block of S. Washington Street in Wilkes-Barre. This end near East South Street illustrates a fairly good experience, but conditions vary along the block and reduce the overall evaluation to fair.

More recent construction on S. Pennsylvania Avenue in Wilkes-Barre reveals a number of approaches used both to moderate traffic and provide a generally good experience along Pennsylvania Avenue.

Sidewalk Buffers

These are physical features that provide both physical and perceived separations between pedestrians on the sidewalk and the active traffic lanes of the roadway.

Good (green) – This includes fully-planted separations or tree wells separated by distinct changes in paving that are significant in width. In some cases, these are reinforced by on-street parking.

Fair (yellow) – This includes planted separations or tree wells, with or without changes in paving, that are limited or minimal in width. In some cases, these are reinforced by on-street parking or the on-street parking is the only buffer.

Poor (red) – Traffic lanes are at the curb line with no physical or perceived buffer.

Suitability for Bicycle Traffic

Based on the proposals of the study, all the major streets of the downtowns have the potential to support bicycle traffic with appropriate modifications.

Determination of Feasibility

In developing recommendations for the proposed bicycle facilities in Scranton and Wilkes-Barre, we first determined the feasibility of possible bicycle facilities being recommended. To aid in the determination of feasibility for the proposed bicycle facilities, the project team considered and evaluated Public Support, Financing, and Constructability.

Public Support

As with any project that proposes a change within a community, public support for the recommended change is essential. Even if a project is fully funded and can be constructed safely, efficiently, and inexpensively, it will likely never move ahead without support from the community it impacts.

In incorporating the community and evaluating public support for bicycle facilities in Wilkes-Barre and Scranton, an extensive public outreach process took place for this study. This included a fully transparent community planning effort that incorporated public input throughout. From the early stages of developing project goals and objectives, through the later stages of preparing alternative solutions and project recommendations, public participation and community collaboration always took a leading role in this study. The public participation process is further explained in section III. C. of this report.

Financing

In addition to determining feasibility in terms of public participation, feasibility should also be evaluated for project financing. It is essential to ensure that project implementation costs are within the means of the community and that public/private funding can be attained through project grants to implement project recommendations. As part of this study, the project team evaluated cost effective solutions for all proposed bicycle facilities, assessed potential funding sources that are available for project implementation, and prepared project phasing

plans to prioritize utilization of these available funds. Potential funding sources are further explained in section V. F of this report.

Constructability

In terms of constructability, the goals of the proposed bicycle facilities for both Scranton and Wilkes-Barre are to introduce elements that meet the following criteria:

- User safety
- Ease of implementation
- Cost effective

In order to meet those goals, the proposed facilities make an effort to use time-tested methods that have proved safe for on-road use by bicycles such as selective bike lanes, two-way cycle tracks, on-road shared use, multiuse sidewalks, and multiuse trails. All proposed facilities take advantage of existing roadway, sidewalk, and trail construction. The proposed designs are developed within the existing roadway/sidewalk widths and configurations. With few exceptions, no curb or paving modifications are proposed. The primary methods of implementation are through pavement markings—including modification of existing traffic lane markings—and signage.

Facilities provided are required to comply with the Americans with Disabilities Act (ADA). Much of the work, as noted, is within the existing roadway/sidewalk configuration and some modification to the existing construction may be required to meet the "ADA Standards for Accessible Design". We expect these modifications to be minimal and have little impact on the overall project costs. Scranton's modern Lackawanna Transit Center serves both local and long-distance bus lines.

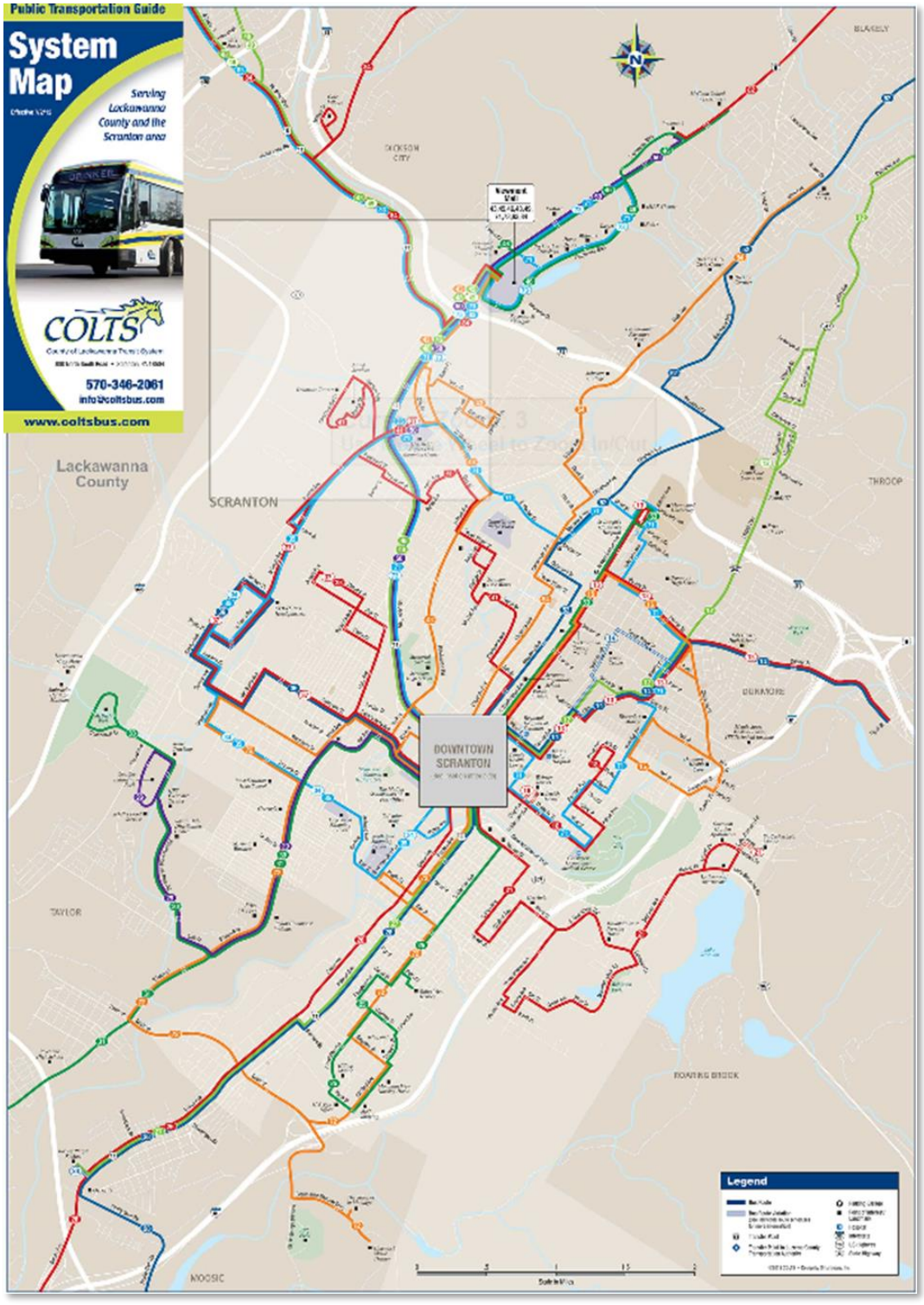
Local Transportation

[Note: At the time of this writing, COVID-19 led to many services' curtailment or suspension. They are slowly being brought back. Check with the operators to confirm current schedules]

COLTS (County of Lackawanna Transit System) in Scranton

Here is a brief history from the COLTS website:

> *The County of Lackawanna Transit System was formed in October 1972 under the Municipal Authorities Act of 1945. COLTS was officially certified by the state as a municipal authority in November 1972.*
> *COLTS replaced the Scranton Transit Company, which had provided electric trolley service and bus service for many years. The nation's first successful electric streetcar system began service in Scranton in November 1886. It was these electric trolleys that gave the city its nickname, "The Electric City."*
> *Bus service completely replaced electric streetcars in December 1954.*



The COLTS System Map can be found at:
http://coltsbus.com/images/MapsZoom2016/MapExtended.html

Here is a brief description of COLTS Services from their website:

> *Daily Service*
> *COLTS runs 26 daily fixed routes from 5:30 a.m. to 12:55 a.m. Monday through Friday, and 23 routes from 7:45 a.m. to 12:55 a.m. on Saturday. Please note that NOT all COLTS buses run during these times and you should check individual schedules.*
> *These routes all stop at the Lackawanna Transit Center, located at 30 Lackawanna Avenue in Scranton (also called the "bus hub").*
> *COLTS provides additional shuttle service through a private sub-contractor that originate at the Viewmont Mall, not the Lackawanna Transit Center*
> *Evening Transportation for Work and Job Training*
> *The Evening City Circle Routes provide transportation for second- and third-shift employees in Scranton between 7 p.m. and 1 a.m. There are two routes. Both shuttle buses circle their routes continually, beginning and ending at the Lackawanna Transit Center. The shuttles run Monday through Saturday. On Saturdays, the Evening City Circle North begins at 6 p.m. and the shuttles alternate direction every hour.*
> *Paratransit Service*
> *COLTS provides complementary paratransit service to individuals who have a disability that prevents them from using the fixed route bus system. Please call (570) 963-6795 for more information.*
> *COLTS ADA paratransit service is provided during the same service area and time as COLTS fixed route buses.*

Bike Racks

COLTS outfitted its entire fleet of buses in June 2013 with bike racks purchased with money from the American Recovery and Reinvestment Act of 2009. Each bike rack holds two bikes and is easy for our customers to use.

However, there are NO bike racks on COLTS' smaller subcontracted buses, which serve the following routes:

46 Mall Circulator

82 Simpson/Carbondale/Route 6

83 Newton/Ransom

84 Chinchilla/Clarks Green/Justus

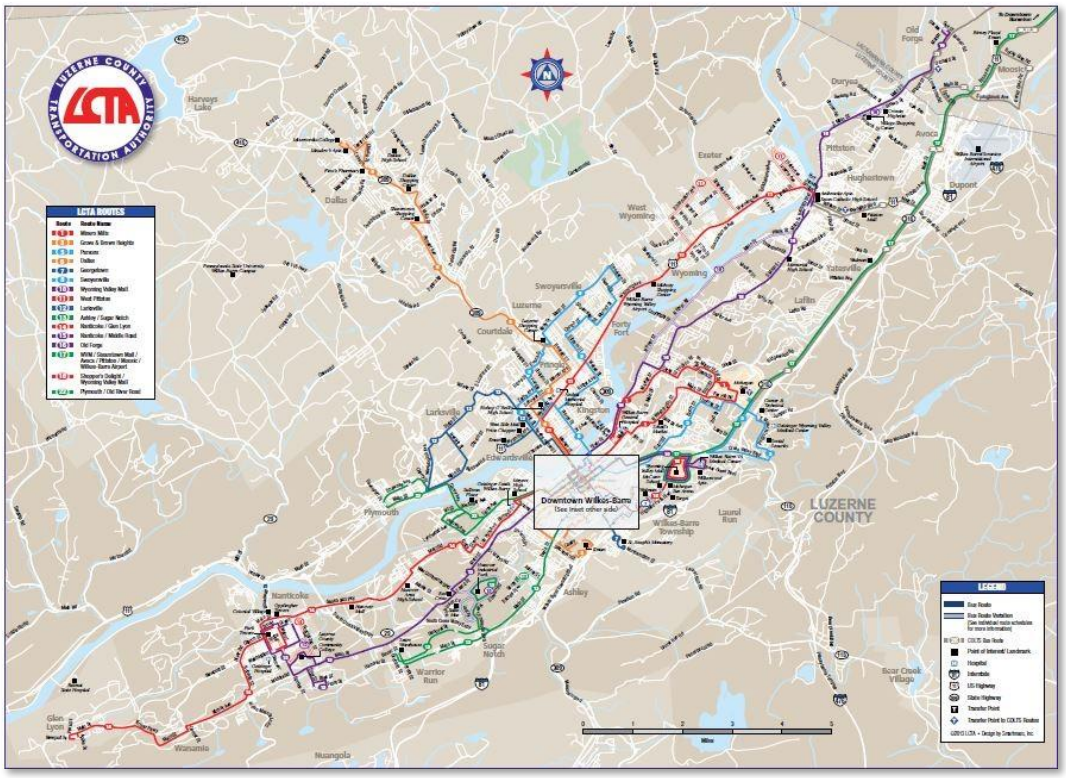
71 Evening City Circle North

72 Evening City Circle South

LCTA (Luzerne County Transportation Authority) in Wilkes-Barre

Here is a brief history drawn from the LCTA website:

> *The LCTA was created as part of a demonstration project to aid with recovery after Hurricane Agnes. Two transit companies were acquired to form the system that today serves Wilkes-Barre and nearby communities.*
> *Beginning in 2010, routes now start/end at the James F. Conahan Intermodal Transit Center.*
> *LCTA Routes serve all of Wilkes-Barre and link with numerous nearby communities including Scranton and Hazleton.*
> *Service areas of the LCTA, with a downtown Wilkes-Barre enlargement.*
> *For more detail, see: https://www.lctabus.com/schedules/system/*


LCTA ROUTES
Downtown Wilkes-Barre
(See inset other side)
LUZERNE COUNTY
Wilkes-Barre Township
Laurel Run
Plymouth
Kingston
Luzerne
Courtdale
Forty Fort
Swoyersville
West Wyoming
Wyoming
Exeter
Pittston
Hughestown
Dupont
Avoca
Old Forge
Moosic
Duryea
Dallas
Harveys Lake
Larksville
Ashley
Nanticoke
Glen Lyon
Warrior Run
Sugar Notch
Scar Creek Village
Wanamie
Nuangola
LEGEND


Downtown Wilkes-Barre
Intermodal Center
Wilkes-Barre
Wilkes-Barre General Hospital
Wilkes-Barre VA Medical Center
Wyoming Valley Mall
Willowwood Apts.
Price Chopper
McGowan School
Mohegan Sun Arena
Walmart
Target
Sam's Club
Kohl's
Memorial High School
Park Avenue Towers
Little Flower Manor
Valley View Terrace
LCTA ROUTES
LEGEND

LCTA describes itself as "Bike Friendly" and notes on its website:

> *Did you know that LCTA is bike friendly?*
> *Yes, we have bike racks on our buses that are free to use!*
> *You can:*
> • *Take your bike to work and simply ride the bus in the morning, and get your exercise in after work*
> • *Take your bike to a number of different parks or bike trails in the area by using the bus*
> • *Take a bus ride anywhere we service and ride the bike back so you can access areas you typically wouldn't on the bike alone!*
> *There are many different reasons why using the bus to transport your bike may be a huge benefit to your life!*

Long Distance Transportation

Long distance services to Scranton and Wilkes-Barre not only give visitors access to Scranton and Wilke-Barre—they also give local residents access to other walkable towns and numerous trails for walking and bicycling. Long distance links also allow for one-way excursions: utilizing transit one way then hiking or bicycling back the other.

Amtrak Thruway Buses

Most people are surprised to learn that Amtrak operates thruway buses from Scranton and Wilkes-Barre to 30th Street Station in Philadelphia—with a stop at White Haven adjacent to Hickory Run State Park. Bicycles may be taken on these buses in a bike bag or other container, giving walker and bicyclists access to such trails as the D&L Trail in White Haven and the Schuylkill River Trail in Philadelphia. In Philadelphia, many Amtrak trains now offer bicycle service, and all Amtrak trains carry folding bicycles as hand luggage.

Here's Amtrak's description of their service in Northeast Pennsylvania:

> *Residents of Scranton, Wilkes-Barre and White Haven, Pa. can now connect to Amtrak's Northeast Corridor and the national passenger rail network via convenient and affordable Thruway Bus service to/from Philadelphia 30th Street Station, provided by Martz Trailways.*
> *Daily bus trips between northeastern Pennsylvania and Philadelphia provide convenient connections to/from Northeast Regional and Acela Express trains serving Washington, Boston, Virginia cities and intermediate points. Connections can also be made to the Keystone Service and Pennsylvanian (Harrisburg, Lancaster, Pittsburgh) as well as Crescent (Atlanta, New Orleans), Silver Star (Orlando, Tampa, Miami) and Capitol Limited (Cleveland, Chicago) trains.*
> *Amtrak Thruway connections enable passengers to utilize other carriers to connect with Amtrak trains from cities without Amtrak rail stations.*

All buses and Northeast Corridor trains are equipped with on-board Wi-Fi and electrical outlets.
Passengers can book bus and train tickets together at Amtrak.com or via the Amtrak mobile apps available for iPhone, Android and Windows devices.

Greyhound Bus

Greyhound operates several routes from Scranton and Wilkes-Barre, including:

- to Philadelphia, with intermediate stops in Mount Pocono, Stroudsburg/Delaware Water Gap, Easton, Allentown, and Doylestown—giving access to many outdoor areas as well as the D&L Trail, the Appalachian Trail, the September 11th National Memorial Trail, the Pennsylvania Highlands Trail, the Route 202 Trail, and the Schuylkill River Trail;
- to New York City, with an intermediate stop in Newark, NJ, with access to the numerous trails in those cities;
- to Buffalo, NY, with intermediate stops in Binghamton, Syracuse, Rochester and Batavia, NY—giving access to trails along the Chenango River in Binghamton, and to the Erie Canalway Trail between Syracuse and Buffalo.

Greyhound will check bicycles utilizing the cargo bay beneath the bus.

Martz Trailways

Martz operates several routes from Scranton and Wilkes-Barre, including:

- to Philadelphia, with intermediate stops in White Haven, Stroudsburg/Delaware Water Gap, Easton, Allentown, Quakertown and Doylestown—giving access to many outdoor areas as well as the D&L Trail, the Appalachian Trail, the September 11th National Memorial Trail, the Pennsylvania Highland Trail, the Route 202 Trail, and the Schuylkill River Trail;
- to New York City, with some runs having intermediate stops in Pennsylvania at the Wyoming Valley Mall in Wilkes-Barre, Mount Pocono, and the Delaware Water Gap—with access to the Appalachian Trail and the September 11th National Memorial Trail in Delaware Water Gap, as well as the numerous trails in New York City.

Martz will check bicycles utilizing the cargo bay beneath the bus.

Fullington Trailways

Fullington operates several routes from Scranton and Wilkes Barre, including:

- from Scranton and Wilkes-Barre to Harrisburg via Hazleton and Pottsville, giving access to many outdoor areas including the Schuylkill River Trail and the September 11th National Memorial Trail;
- from Wilkes-Barre only to Dallas, Red Rock, Highsville, Williamsport, Lock Haven, Bellefonte, and State College—giving access to the Pine Creek Gorge Trail and other trails along the Susquehanna River at Williamsport, as well as trails in the State College area.

Martz will check bicycles utilizing the cargo bay beneath the bus.

Linking Transit and Tours

Scranton and Wilkes-Barre are blessed with the Susquehanna and Lackawanna rivers and their surrounding mountains. This geography lends itself to transit-accessible tours and access to historic sites, restaurants, offices, and shopping. The deep valleys carved by the two rivers encouraged the creation of a largely linear string of communities up and down these rivers—providing a dense population more easily served by transit than in more sprawling communities. The trails that are completed or are being developed along the rivers are well served by COLTS and LCTA buses. These transit-to-trail links will give easy access to one-way and roundtrip travel by foot, bicycle, and transit. For example, a hike or bicycle tour from Carbondale to Scranton along the scenic Lackawanna River can begin with a one-way ride with COLTS.

Longer Travel for More Distant Tours and Adventures

As noted in the descriptions of the long-distance services offered by Greyhound, Martz, and Fullington, many towns surrounding Wilkes-Barre and Scranton are trailheads for some of Pennsylvania's most beautiful trails.

For example, people can take a Greyhound bus to Easton where they can walk or bike the D&L Trail to White Haven and Hickory Run State Park. From there, a Martz bus can pick up trail users and return them to Scranton or Wilkes-Barre.

Special Excursion Services

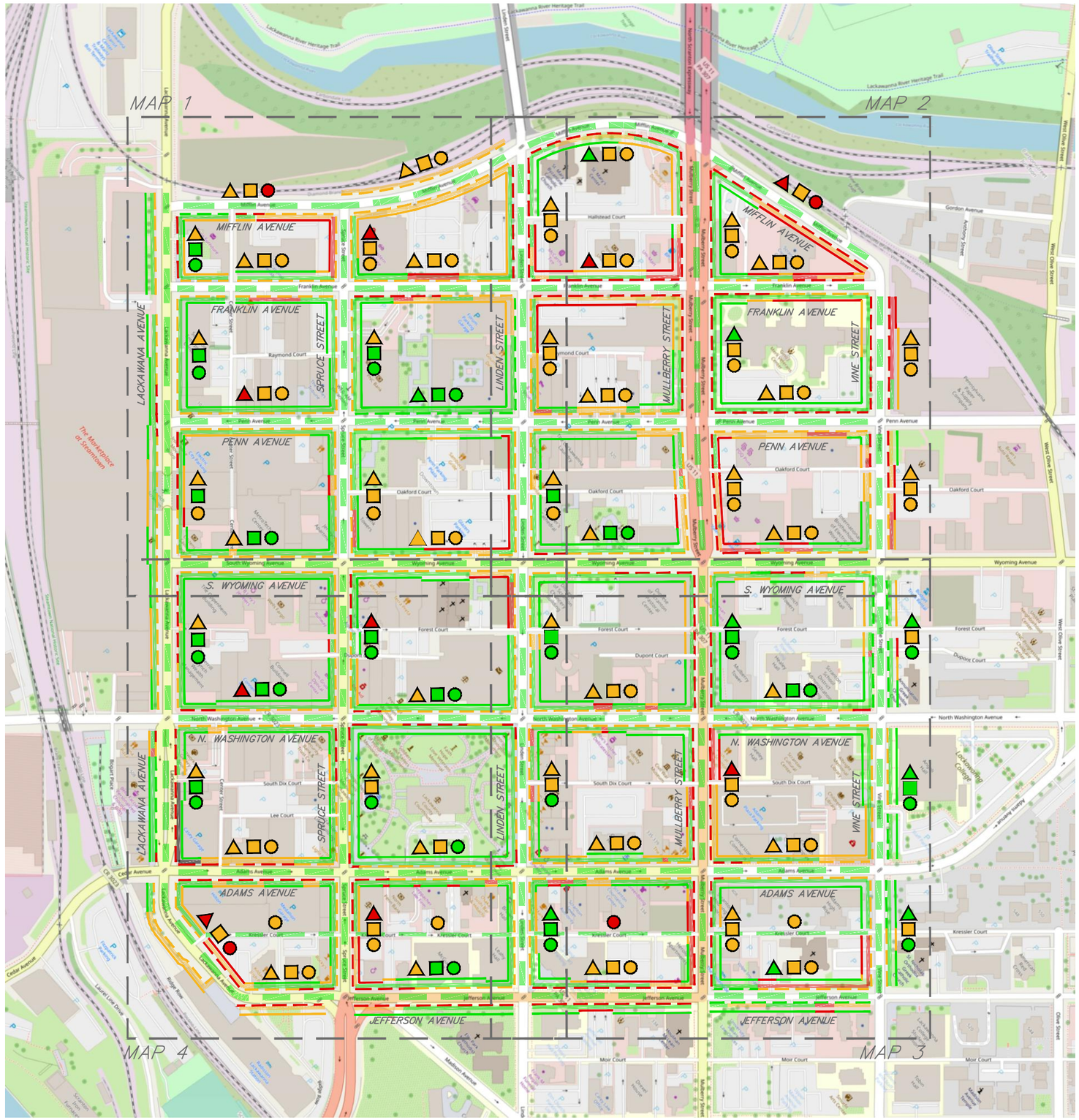
While regularly-scheduled transit is convenient for most days of the year, there are special excursions available such as the steam trains that are operated out of Scranton at the Steamtown National Historic Site. With good planning and advanced reservations, one can go on a memorable trip by steam train and return by trail. For example, there are occasional excursions from Steamtown to the Delaware Water Gap. From there, a return to Wilkes-Barre or Scranton via the Appalachian and D&L trails would be an experience never to be forgotten. The picture to the right is a steam excursion to the Delaware Water Gap.

Existing Conditions Maps of Scranton

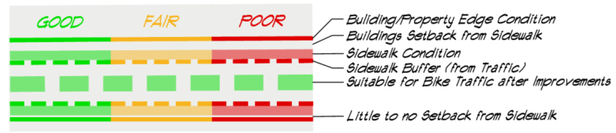
LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

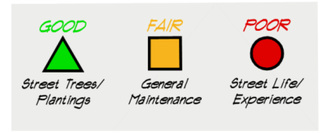
SCRANTON
EXISTING CONDITIONS - Map Key



STREET CONDITIONS



STREET EXPERIENCE



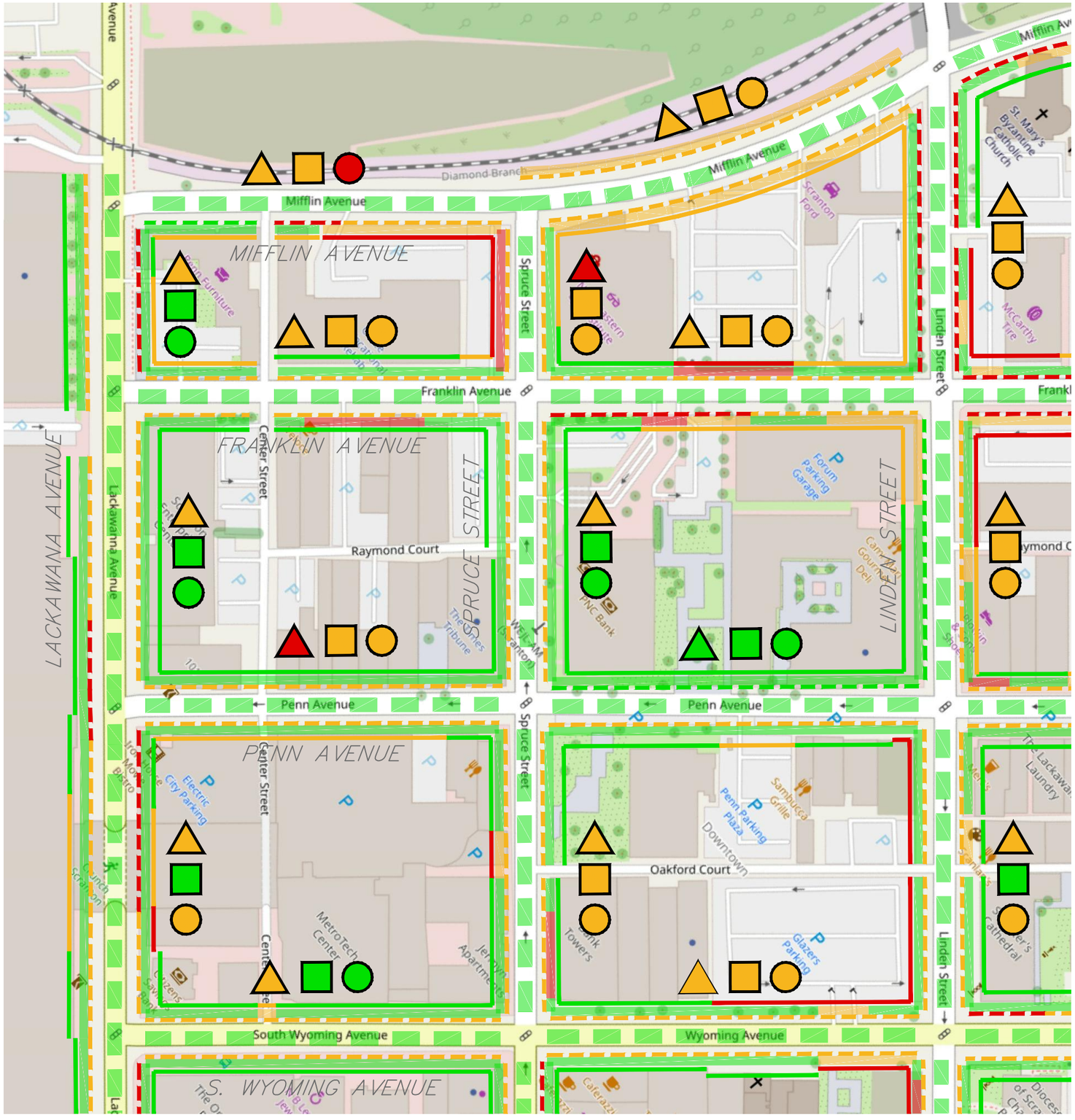
BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT&C

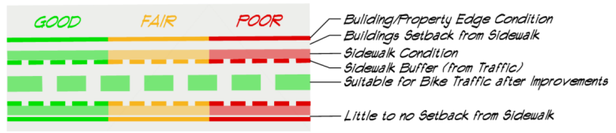
LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

SCRANTON
EXISTING CONDITIONS - Map 1



STREET CONDITIONS



STREET EXPERIENCE

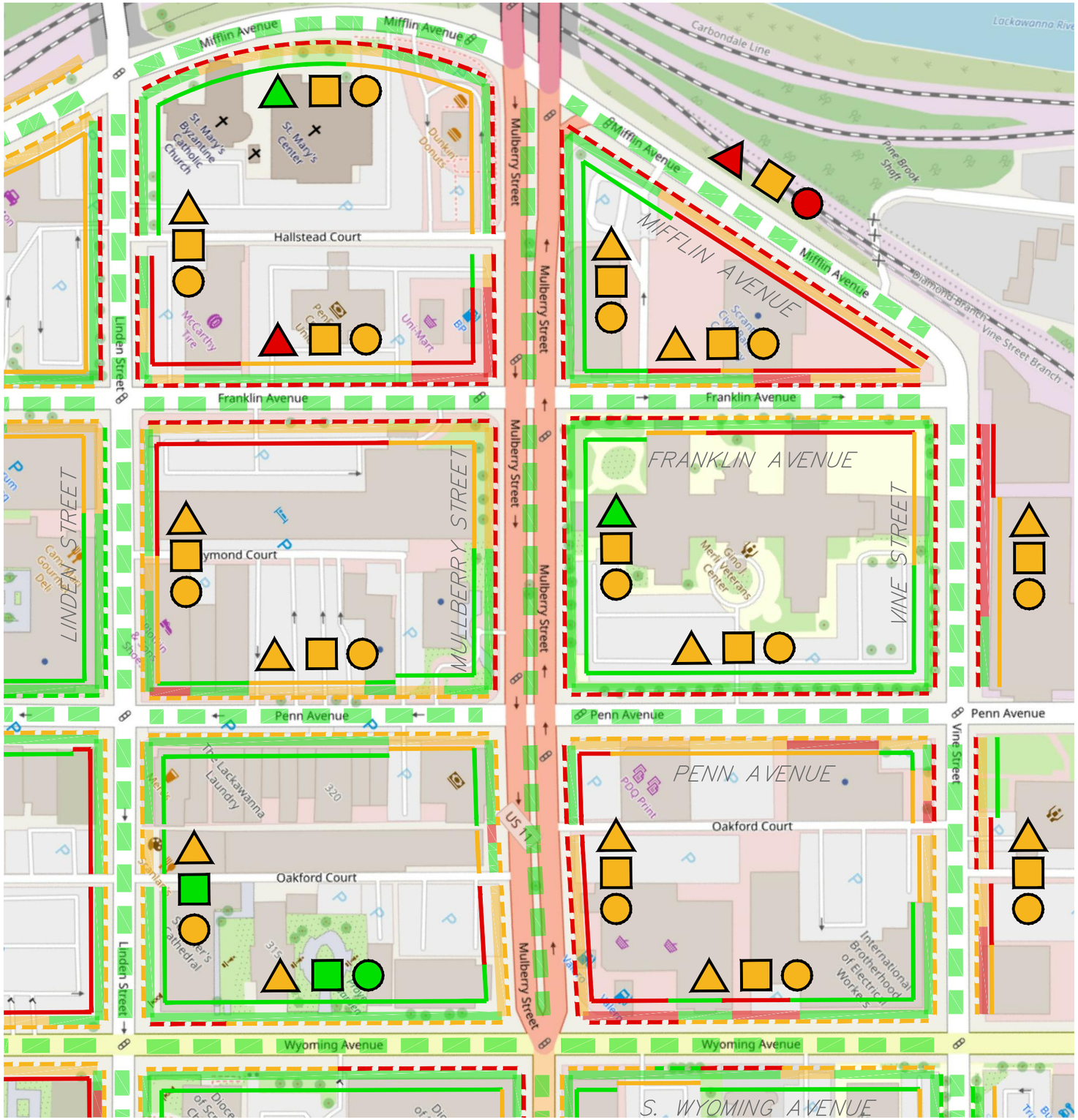
BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT &C

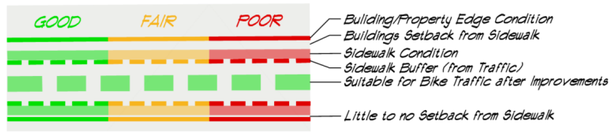
LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

SCRANTON
EXISTING CONDITIONS - Map 2



STREET CONDITIONS



STREET EXPERIENCE

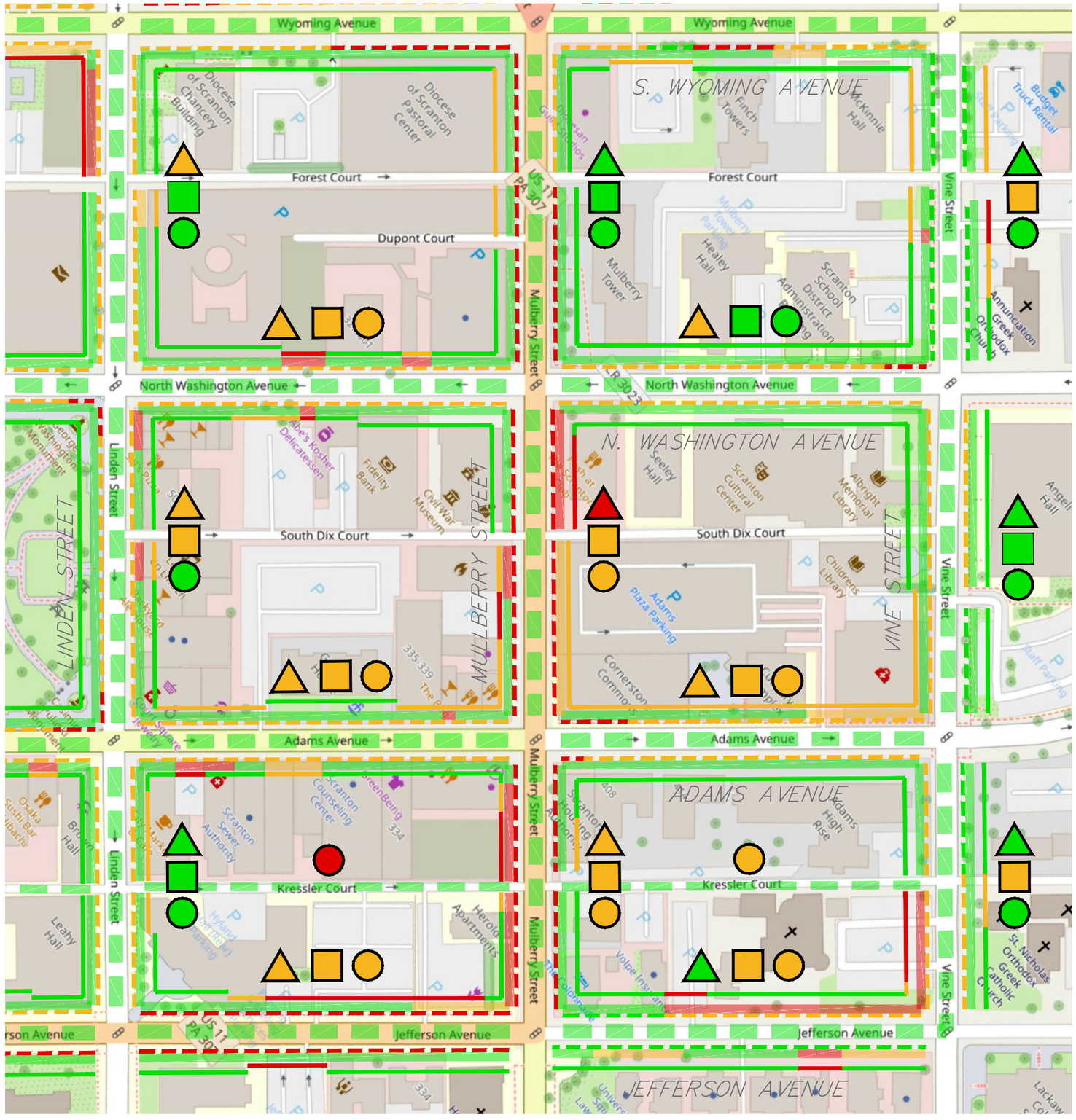
BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT&C

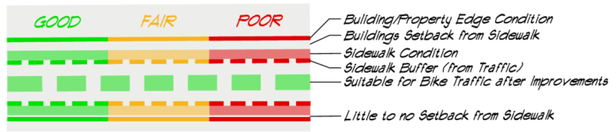
LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

SCRANTON
EXISTING CONDITIONS - Map 3



STREET CONDITIONS



STREET EXPERIENCE

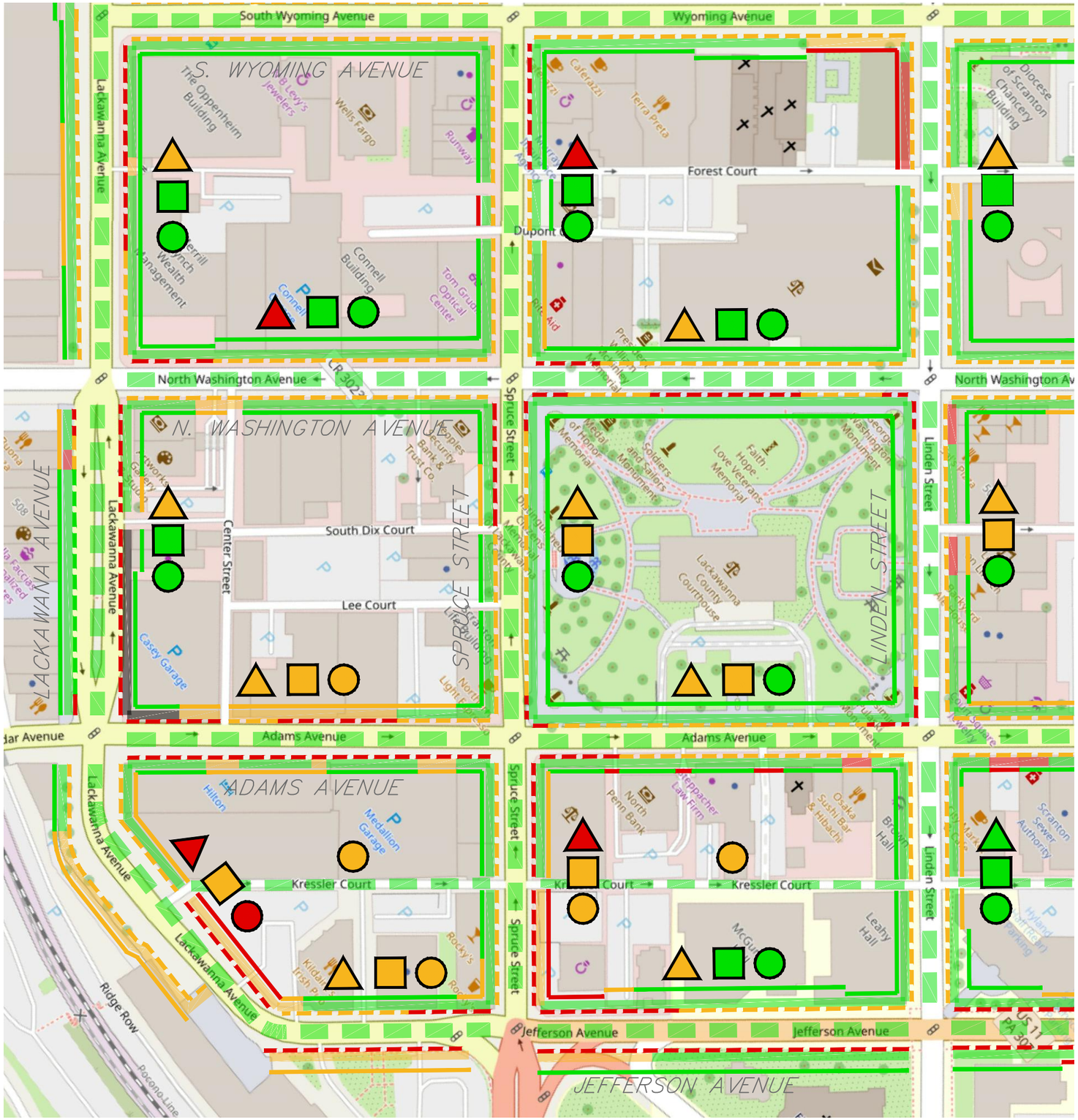
BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT &C

LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

SCRANTON
EXISTING CONDITIONS - Map 4



STREET CONDITIONS

GOOD	FAIR	POOR	
			Building/Property Edge Condition
			Buildings Setback from Sidewalk
			Sidewalk Condition
			Sidewalk Buffer (from Traffic)
			Suitable for Bike Traffic after Improvements
			Little to no Setback from Sidewalk

STREET EXPERIENCE

GOOD	FAIR	POOR
Street Trees/ Plantings	General Maintenance	Street Life/ Experience

BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

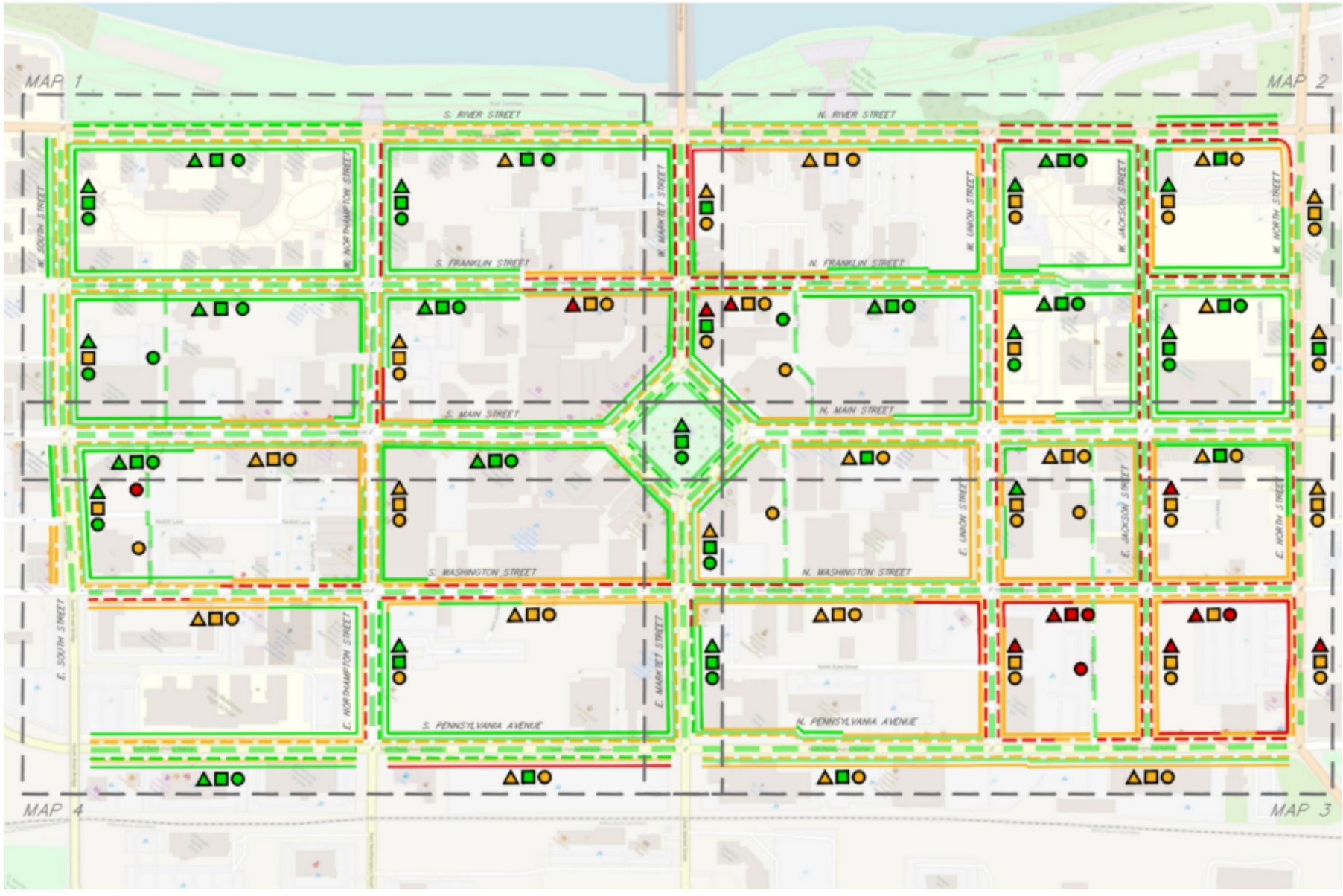
CT &C

Existing Conditions Maps of Wilkes-Barre

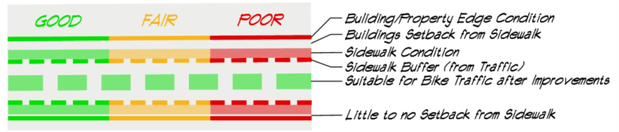
LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

WILKES-BARRE
EXISTING CONDITIONS - Map Key



STREET CONDITIONS



STREET EXPERIENCE

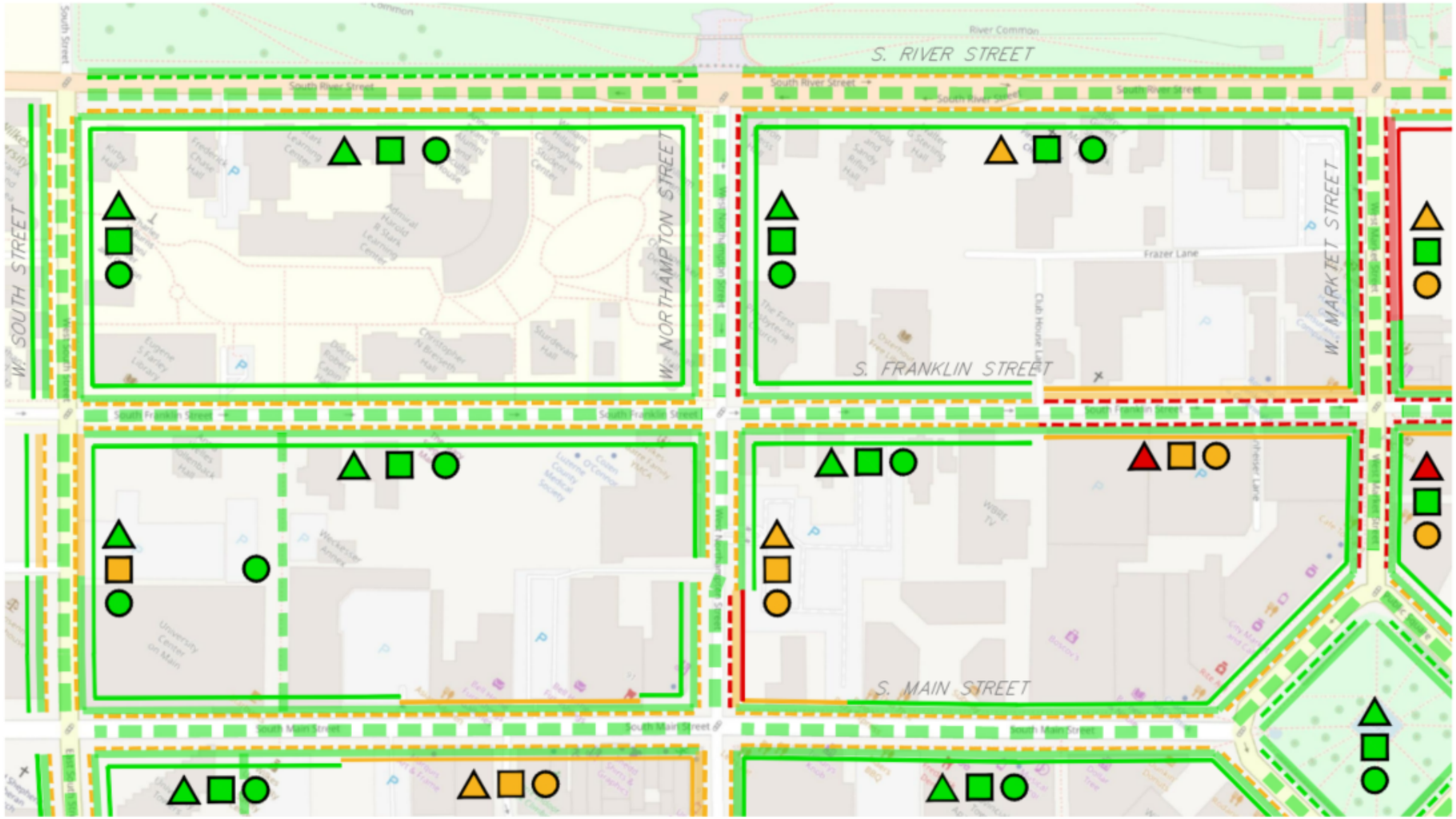
BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT&C

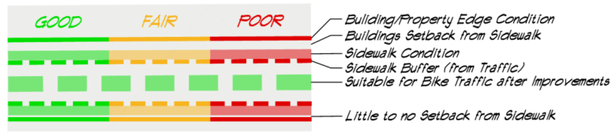
LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

WILKES-BARRE
EXISTING CONDITIONS - Map Key



STREET CONDITIONS



STREET EXPERIENCE

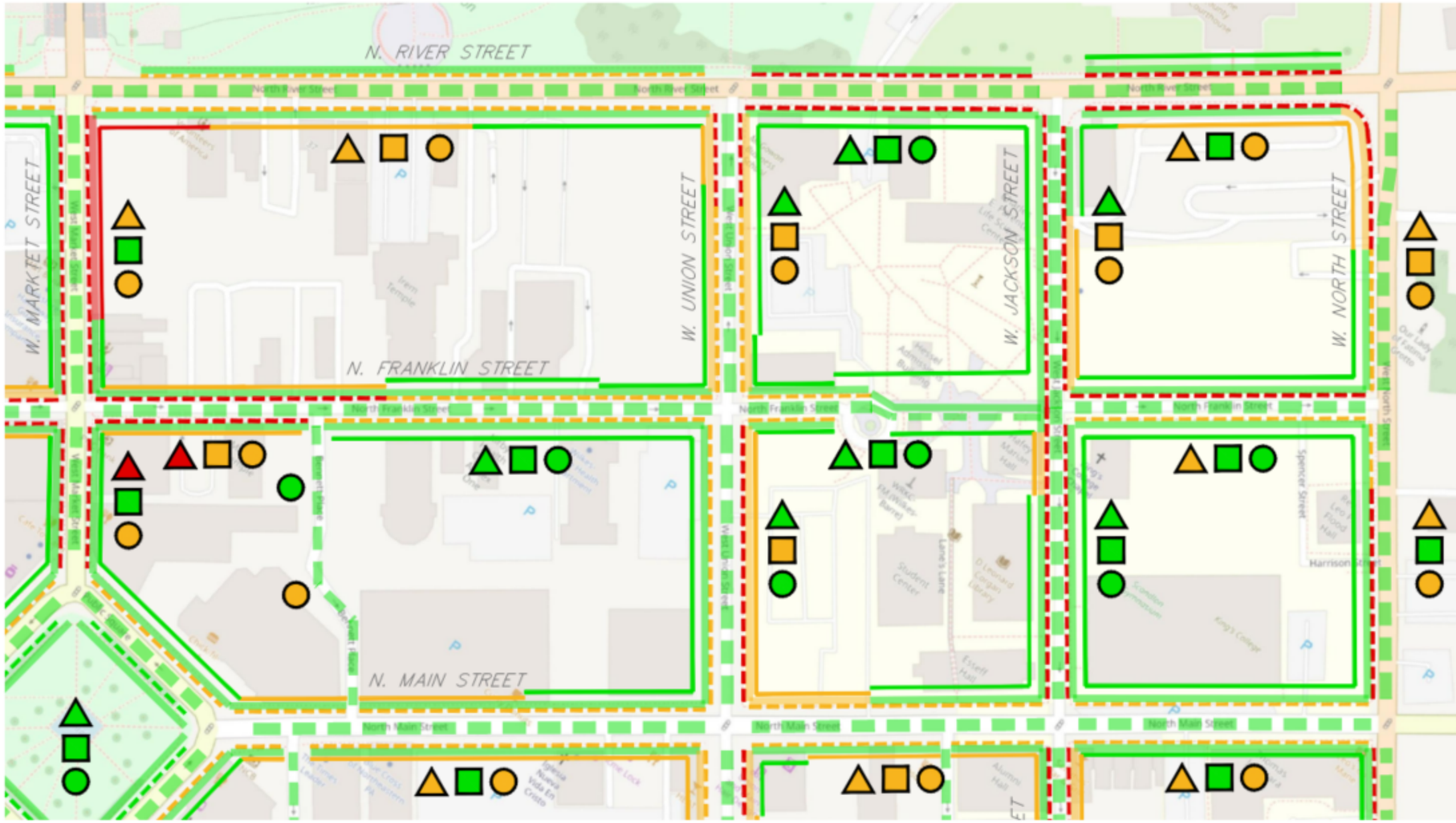
BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT&C

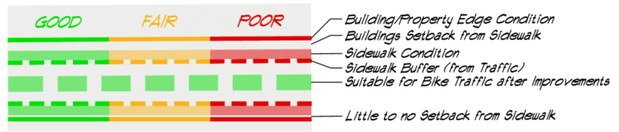
LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

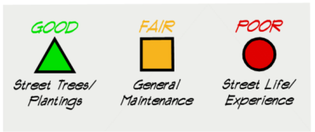
WILKES-BARRE
EXISTING CONDITIONS - Map Key



STREET CONDITIONS



STREET EXPERIENCE



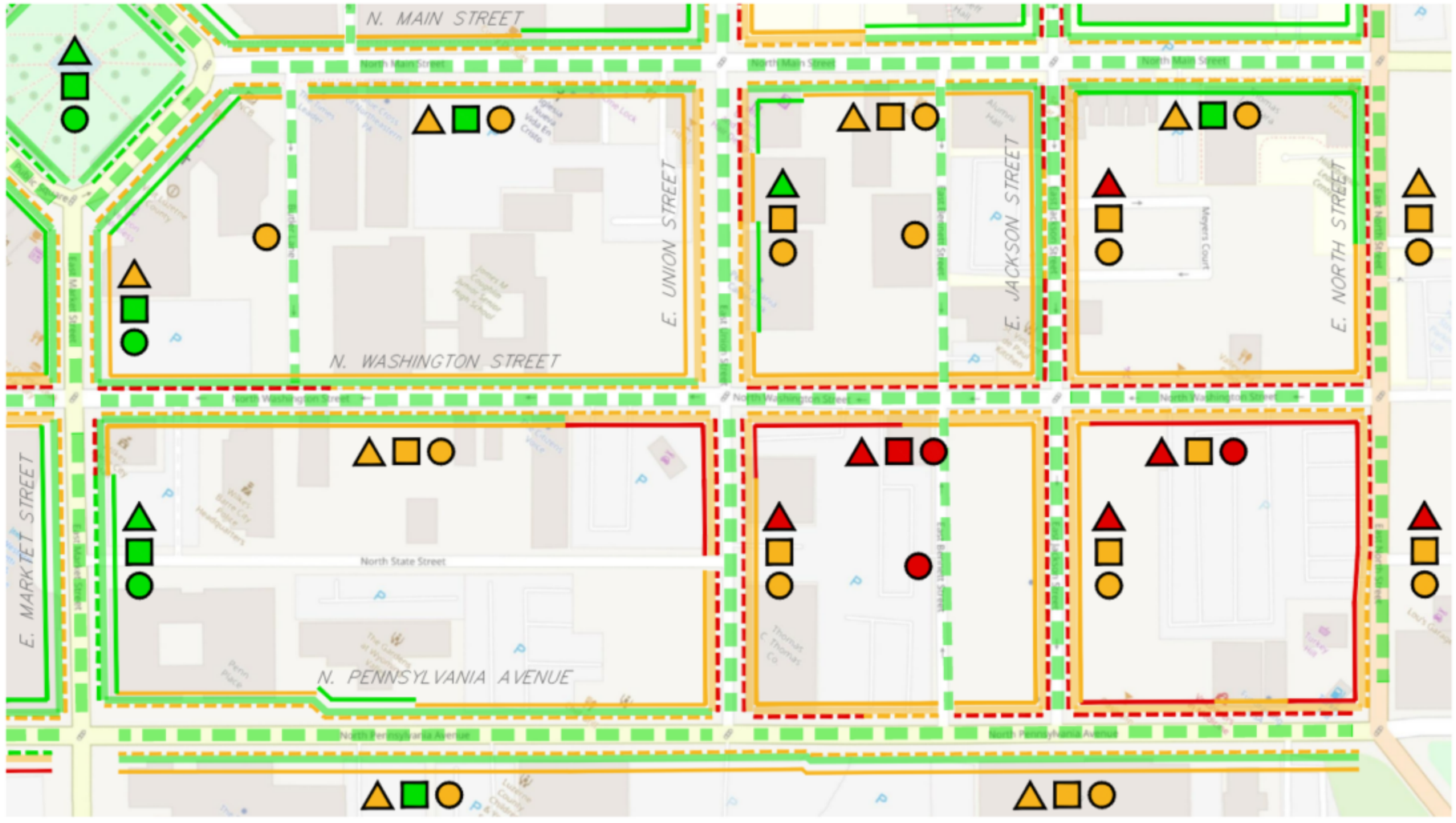
BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT&C

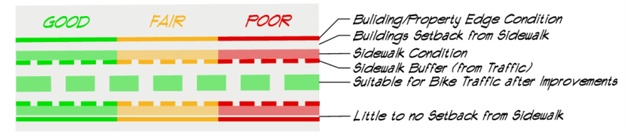
LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

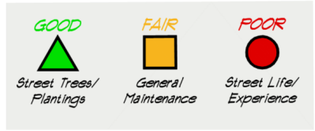
WILKES-BARRE
EXISTING CONDITIONS - Map Key



STREET CONDITIONS



STREET EXPERIENCE



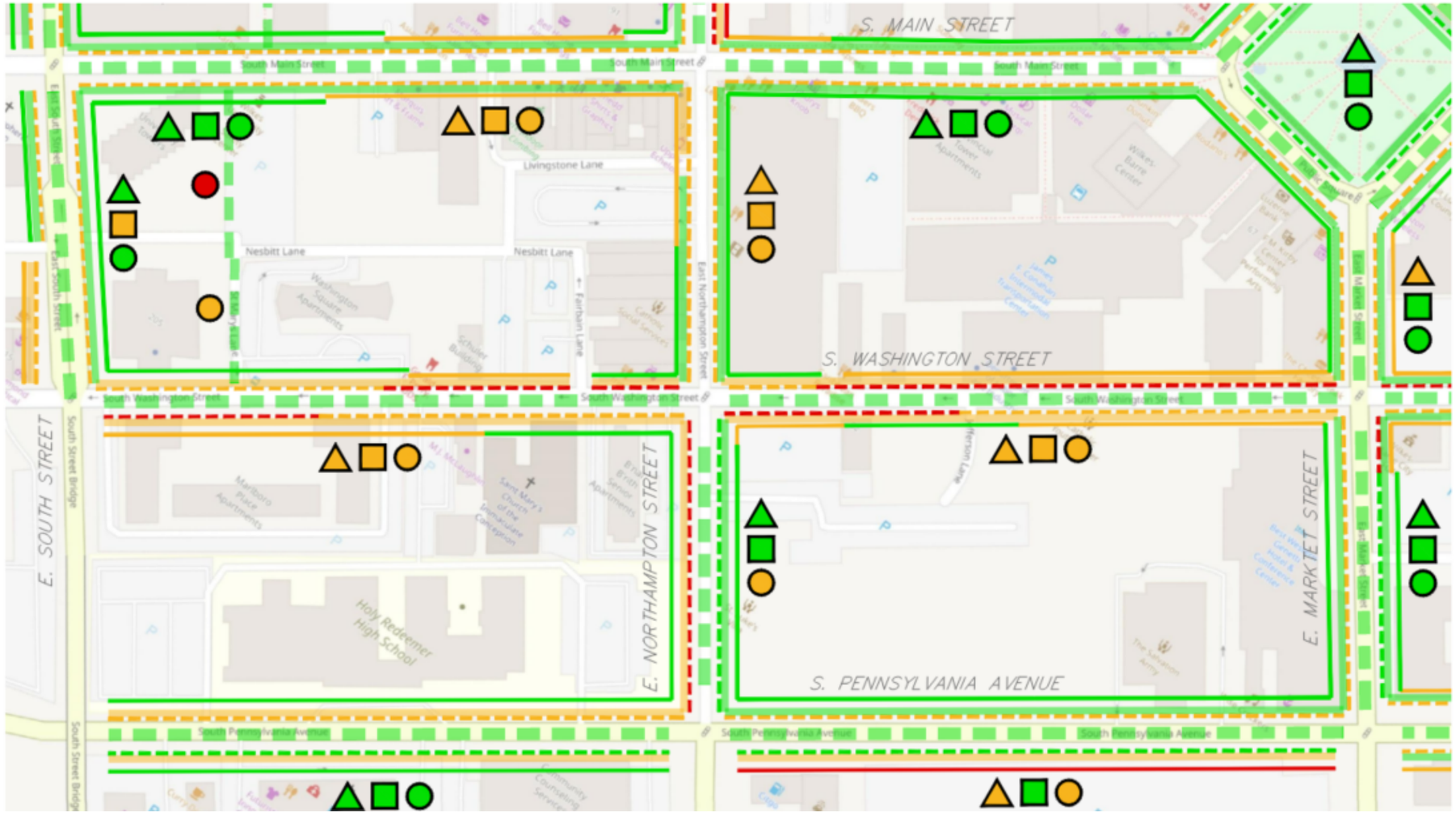
BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT&C

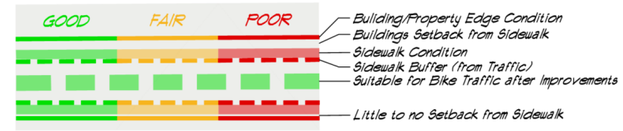
LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

WILKES-BARRE
EXISTING CONDITIONS - Map Key



STREET CONDITIONS



STREET EXPERIENCE

BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT &C

Chapter 3| Types of Facilities Considered

Prior to developing recommendations for a bicycle network, it is important to first understand the variety of bicycle facilities that are available. It is also important to recognize that different conditions and circumstances call for different bicycle facility recommendations to be made. Within the context of downtown Scranton and Wilkes-Barre, several bicycle facility types were considered:

Bicycle Facilities

Multiuse Trail or Sidepath

Multiuse Trails or Sidepaths provide one of the safest pedestrian and bicycle facilities by enabling complete separation from vehicular traffic. Due to limitations in the availability of public right-of-way, multiuse trails are less common in urban environments but can be suitable facilities in parks and along highways and waterways. Multiuse trails are typically 10 to 12 feet in width and come in a variety of surfaces.

Cycle Track

Cycle Tracks provide a safe multidirectional bicycle facility that is typically separated from the roadway by a buffer of 2 to 3 feet. This buffer can come in the form of parking protection, reflective bollards, or simply pavement markings. Cycle Tracks are typically paired with a pedestrian sidewalk and are ideally 10 to 12 feet in width to enable bicycles to easily pass each other.

Protected Bike Lane

A protected bike lane is a one-directional bike facility with an additional buffer space between the bike lane and the vehicle lane or parked cars. Protected bike lanes are typically used on high-volume or high-speed roads—or roadways with high parking turnover. Similar to cycle tracks, the protective buffer can come in the form of parking protection, reflective bollards, or pavement markings.

Bike Lane

Bike Lanes provide a marked space along a length of the roadway and are designated for use by bicyclists traveling in a single direction. Although physical separation is not used, bike lanes can be color backed to visually define a separation between the bicycle lane and the roadway. Bike lanes are typically 5 to 6 feet in width but can be narrower if the roadway is constrained.

Sharrows

Shared Lane Markings or "Sharrows" are pavement marking symbols that indicate appropriate bicycle positioning in a shared vehicle and bicycle lane. Although sharrows do not provide a completely separated space for bicycles, they can be ideal for use on downhill or connector areas with narrow conditions and are often paired with "share the road" signage. Sharrows can also be color backed to visually define a section of road that is open to bicycles and vehicles.

Bicycle Signalization & Signage

Intersections are known to be the most dangerous locations for vehicles, cyclists, and pedestrians. Bicycle signalization and signage can be utilized to help define both the appropriate location and the timing for crossing movements for all traffic modes. Similar to pedestrian crossing signalization, bicycle crossing signalization can be incorporated into the cycle of a traffic signal.

Bicycle Boxes

Bicycle Boxes provide an additional safety measure that can help a cyclist transition across vehicle lanes, through an intersection, or between various types of bicycle facilities. A green zone between the stop bar and crosswalk allows bicycles to pull in front of motor vehicles at a signal to accommodate and improve visibility of bicycles at the intersection.

Bicycle Parking

Just as cities work to accommodate parking for vehicle traffic coming and going from downtown, parking for bicycle traffic should also be considered in areas cyclists may look to travel. Although numerous bicycle parking options are available, bicycle parking should generally be designed to:

- Support the bicycle at two points above its center of gravity.
- Accommodate high security U-shaped bike locks.
- Accommodate locks securing the frame and one or both wheels.
- Provide adequate distance (minimum 36") between spaces

Examples of Public Squares and Major Crossroads that Accommodate Bicyclists

The Design Challenge faced in Wilkes-Barre's Public Square

The unusual diamond shape of the Public Square creates numerous conflicts between people, bicycles and motor vehicles as they pass through the square, or make turns from Main to Market or vice-versa. Here are a few examples from cities around the world that have faced similar issues.

The Public Square, the intersection of Main and Market Streets, presents unusual challenges in accommodating motor vehicles, pedestrians, and bicycles

Queen's Circus Roundabout, Battersea, London, England

The Queen Circus Roundabout **represents the first fully segregated roundabout in** London. Cyclists and vehicles are kept apart by using raised curbs and separate traffic lights. In this example, bicycles are in their own lanes, but still within the roadway.

The Queens Circus Roundabout

The same drawing as above, but with the bike lanes shown in green.

A Dutch- Roundabout with bi-directional cycling lanes

Here the pedestrians and bicycles are separated from the roadway with a planted buffer.

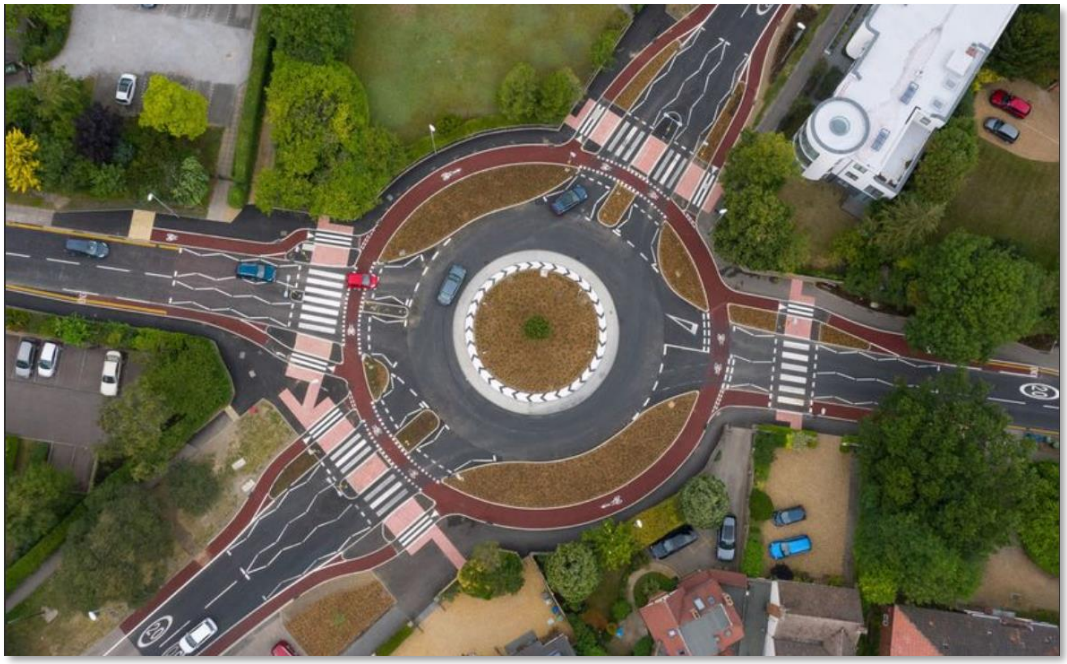
Here is a link to a video with 5 minutes of traffic on this Dutch roundabout with bi-directional cycling lanes:

https://www.youtube.com/watch?v=FR5l48_h5Eo&app=desktop

This design is attractive to bicyclists of lesser ability or desire to ride in traffic, and offers lessons for a potential redesign of the Public Square.

Another Roundabout in Cambridge. England

As shown in the illustration on the next page, another crossing of two major streets has been provided with separate accommodations for motor vehicles, pedestrians and bicyclists. Although the roadways in this example are only two lanes, there are only two traffic lanes on the legs of Market Street and Main Street that feed into the Public Square, giving this example some value in developing potential solutions for the Public Square.



The Cambridge Roundabout with all modes separated

Here is an on-line file of photos showing the roundabout in use:

https://www.cambridge-news.co.uk/news/cambridge-news/gallery/dutch-roundabout-cambridge-new-photos-18732279

This roundabout prioritizes pedestrians and bicycles over motor vehicles.

Here's the link to a video instructing residents and others on how to use this type of roundabout:

https://www.cambridgeindependent.co.uk/news/video-how-to-use-the-uk-s-first-dutch-style-roundabout-in-fendon-road-cambridge-9117723/

If this type of bicycle facility is implemented around Public Square, a similar education campaign would help the public prepare to use the new multimodal traffic system.

Multi-Level Intersections

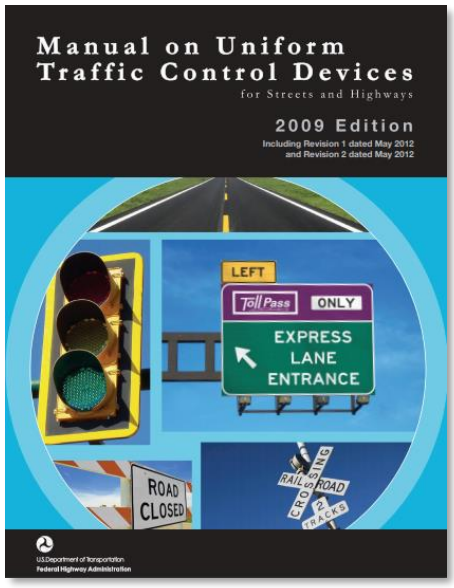
Probably far beyond anything to be considered in the Public Square is the multi-level facility that is an example of bicycle facilities that are being advanced around the world. Here there's accommodations not only for pedestrians and bicycles, but also for public transit in the form of a light-rail line, with an underpass for the green-painted bike lanes and cycle track.

Chapter 4 | Network Recommendations

Signage Recommendations

A new bicycle network in Scranton and Wilkes-Barre will need to be supported by appropriate signage. This signage will not only ensure that vehicular, bicycle, and pedestrian traffic can safely and cohesively travel throughout the city streets—it will also ensure that residents and visitors can easily and efficiently travel to and from their destinations.

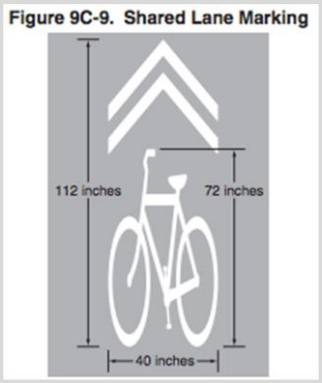
Bicycle facility signage guidelines help to provide a standardized and uniform system for our roadways that should be followed in each downtown. Standardizing the sign design and placement in terms of size, shape, color, and content of signs improves recognition of each bicycle facility and promotes safety—no matter which project area the user visits. Uniformity of bicycle facility signs remains as important as standardization of sign design and placement. Bicycle facilities with identical conditions should be marked with the same type of sign regardless of where those conditions occur. This signage should be specific to bicycle sharrows, bicycle lanes, and cycle tracks. Uniformity also enhances safety and the comfort level of roadway users.



Bicycle network signs can typically be classified as one of the following groups: Traffic and Safety Signage or Wayfinding Signage.

Traffic and Safety Signage

Traffic and safety signage for bicycle facilities should follow the guidelines outlined in the **Manual on Uniform Traffic Control Devices (MUTCD)** which is



Shared Roadways should follow MUTCD standards and use a combination of Shared lane markings (sharrows) and signage.

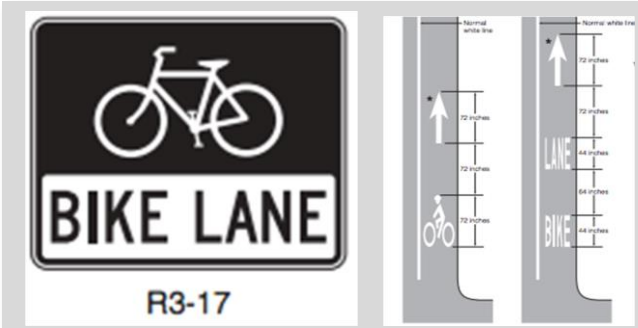
recognized as the national standard for all traffic control devices installed on any street, highway, bikeway, or private road open to public travel. The MUTCD defines traffic control devices as all signs, signals, markings, and other devices used to regulate, warn, or guide traffic—that are placed on, over, or adjacent to a street, highway, pedestrian facility, bikeway, or private road open to public travel by authority of a public agency or official having jurisdiction—or, in the case of a private road, by authority of the private owner or private official having jurisdiction. Chapter Nine of the MUTCD addresses traffic control for bicycle facilities.

In chapter nine of MUTCD, the guidelines and sign types for bicycle facilities are provided terms of regulatory signs, warning signage, and guide signs. Regulatory and warning signs are used when bicycle facility users must perform an action—or provide warning or caution and promote safety of users and property. Signs should only be placed where potential conflicts are unclear, or to emphasize the significance of a potential conflict.

Within the context of the Scranton and Wilkes-Barre bicycle network, the following signage and pavement markings should be considered:

Shared Roadways

Shared roadways that do not designate a dedicated space for cyclists must rely on roadway signage and pavement markings to clearly identify the roadway as a shared bicycle facility. **Sharrows (shared lane markings)**



Bicycle Lanes and Cycle Tracks may use various bike lane markings and signage to designate a dedicated bicycle area.

and either **Share The Road (W16-1P)** or **Bicycle May Use Full Lane (R4-11)** signage can help inform both cyclists and drivers of the shared space. **Bike Route (D11-1)** signage may also be utilized to indicate a bicycle route.

Green-backed bicycle lane pavement markings and plastic delineator posts help to further define a bike lane/cycle track, as well as provide a better sense of security.

Bicycle Lanes and Cycle Tracks

Similar to shared roadways, bike lanes and cycle tracks should utilize both pavement markings and signage. Dedicated bike lanes and cycle track should incorporate **Bike Lane (R3-17)** signage in addition to bike lane pavement markings. Cycle tracks that enable two-way bicycle traffic should also provide centerline markings to separate travel direction.

In addition to standard bicycle lane signage and standard pavement markings, green-backed pavement markings and delineator posts can further help to designate the area dedicated to cyclists. These additional measures are recommended for both Scranton and Wilkes-Barre as they provide a better sense of safety for all road users.

Wayfinding Signage

Wayfinding Signs are used to indicate location, direction, and/or distance to a point of interest. Wayfinding signs help to direct bicycle facility users to destinations along the corridor, whereas interpretive signs are used to uncover points of interest throughout the area such as cultural, historic, or environmental features. Wayfinding signs are typically placed at

MUTCD M1-8a Sign is a typical confirmation sign

decision points along bicycle routes—typically at the intersection of two or more bike routes and at other key locations along these routes.

There are generally three types of wayfinding sign types:

Confirmation Signs – These signs indicate that the cyclist is on a designated route. They occasionally include information on distance and time.

Turn Signs – These signs indicate where a bike route/facility turns from one street to another and often includes a destination and arrows.

MUTCD D1-1b Sign is a typical turn sign

Decision Signs – These signs mark a juncture of two or more bike facilities or routes and indicate the designated bike route/facility at the juncture and the direction to key destinations. Key destinations with arrows, distances, and travel times may be incorporated on decision signs.

MUTCD D1-3c Sign is a typical decision sign

Confirmation signs, turn signs, and decision signs are identified under **Guide Signs** in the MUTCD.

Bike Share Program Recommendations

What is Bike Share?

Unlike more traditional bike rentals that enable customers to rent a bike from a specific location for a designated amount of time, bike share relies on a system of self-service bike stations. Users typically check out a bike using a membership or credit/debit card. They can then ride to their destination and drop the bike in a nearby docking station. Many bicycle share programs are accessed by a mobile app, so you can usually find a bike nearby from wherever you are at that time. In addition to the typical docking station-based bike share, there are also dock-less bike share programs that enable patrons to start and end their trips wherever a bike is available within the service area. Determining the pros and cons of each option to identify the best fit for each city is recommended.

Existing programs in Scranton and Wilkes-Barre:

Scranton

In downtown Scranton and Carbondale, **BikeLackawanna** operates a free-to-use seasonal bike share program that functions much like a free bicycle rental program. Patrons are able to borrow a bike from seven different locations in the region, ride anywhere they wish throughout the historic Lackawanna Heritage Valley, then return their bicycle when the ride is finished.

Wilkes-Barre

Although a bike share/rental program is no longer available in Downtown Wilkes-Barre, there was a program in place that was similar to that of Scranton. This program was operated by The Rotary Club of Wilkes-Barre—in partnership with businesses and organizations such as the Luzerne County Convention & Visitors Bureau and Luzerne County Bikes & Walks. Bicycles could be borrowed daily and returned to the original location within their hours of operation.

Recommendations:

In addition to developing a bicycle network in Scranton and Wilkes-Barre, a bike share program should also be considered. Bike share can help support the developing network for facilities by promoting bicycle transportation and tourism—as well as providing bicycle accommodations and transportation flexibility for local residents, students, and employees. Bike share programs around the county have reported increased use by new demographics of users, increased safety through the increasing visibility of a cyclist population, and positive economic impact on commercial areas.

Bike share programs are typically operated in partnership with a private bike share company. It is imperative that each city adopt a bike share program ordinance and permit system in order to set the standard for the bike share program in their city. There are numerous bike share programs that have seen success nationwide, but, within Pennsylvania, four operations continue to thrive:

- Indego (Philadelphia)
- Bike Pottstown/Bike Schuylkill (Phoenixville, Pottstown, Hamburg)
- Pittsburgh Bike Share (Pittsburgh)
- Healthy Ride (Pittsburgh)

As part of this study, it is recommended that Scranton and Wilkes-Barre consider adopting a bike share program that is similar to the ones used in Pennsylvania. The proposed bike share program should serve both downtowns and could be unveiled in collaboration with the bicycle facility network. Expansion of the bicycle program should be a collaborative process that identifies opportunities for docking locations along the proposed network.

Potential Funding Sources

Bicycle and pedestrian projects are eligible for a broad number of funding sources both federally and locally. Pedestrian and bicycle projects that improve pedestrian and bicycle transportation, rather than recreation walking and bike use, fall under **multimodal transportation**. Pedestrian and bicycle routes that fall under recreational use and enhance or restore open space have additional sources of funding through recreation funding programs.

US Department of Housing and Urban Development Community Development Block Grants – The Community Development Block Grants (CDBG) Program is a U.S. Department of Housing and Urban Development (HUD) program intended for community development projects that primarily serve low to moderate income neighborhoods as defined by the latest Census Data. More than approximately 38% of the households in a Census block group must be of low to moderate income in order for the municipality to qualify for "area benefits" that will serve that particular neighborhood. The exceptions to the "area benefit" are for (a) demolition of blighted properties and (b) removal of architectural barriers. Cities receive money every year to use on projects within their municipal boundaries.

The **Pennsylvania Department of Community and Economic Development** (DCED) offers several grant programs for multimodal transportation, community improvements, and outdoor recreation. Each program has different criteria for eligible applicants, projects, and grant deadlines. Most of DCED's programs are managed by the Commonwealth Financing Authority (CFA).

The **DCED Multimodal Transportation Fund Program** can be used for the development, rehabilitation, and enhancement of transportation assets to enhance communities, pedestrian safety, and transit revitalization. Eligible projects include streetscape enhancements, lighting, sidewalk enhancement, pedestrian safety, connectivity of transportation assets, and transit-oriented development—all of which are suitable for Scranton and Wilkes-Barre. Minimum project costs are $100,000 and the maximum grant request is $3 million. The program requires a 30%

match; however, in recent years, municipal applicants have been able to request a waiver to the match requirement.

Although the **DCED Keystone Communities Program** is geared mostly towards planning, façade programs, and associated implementation of designated Keystone Communities, there is a "development grant" category to fund physical improvements that are geared towards community revitalization, economic development, or streetscape-type efforts. Development grants could be a good option for Scranton and Wilkes-Barre. Grants may not exceed $500,000, or 30% of project costs.

The **DCED Local Share Account (LSA) Program** generally funds quality of life or public interest projects that benefit the community. There is no match requirement. The grant funds are sourced from the local casinos. Each casino has specific program guidelines and geographic regions: Scranton would qualify for the Monroe County LSA and Wilkes-Barre would qualify for the Luzerne County LSA program.

The **Act 13 Greenways, Trails, and Recreation Program** (GTRP) is specifically set aside for the planning, acquisition, development, rehabilitation, and repair of greenways, recreational trails, open space, parks, and beautification projects. The maximum grant award is $250,000 and there is a 15% match requirement. The multiuse trail in Scranton between Mifflin Avenue and the railroad tracks would qualify for GTRP.

The Pennsylvania Department of Transportation (PennDOT) also has several different funding programs for pedestrian and bicycle improvement projects. PennDOT's programs have specific project eligibility criteria and various application deadlines; each program should be checked for further details.

Similar to the DCED Multimodal Transportation Fund, **PennDOT** also has a **Multimodal Program** that funds the development, rehabilitation, and enhancement of transportation assets to enhance communities, pedestrian safety, and transit revitalization. Eligible projects include streetscape, lighting, sidewalk enhancement, pedestrian safety, connectivity of transportation assets, and transit-oriented development—all of which are suitable for Scranton and Wilkes-Barre. Minimum project cost is $100,000, and the maximum grant request is $3 million. There is a 30% grant match requirement that may be waived for municipal clients.

Formerly the Transportation Alternatives Program, PennDOT's **Transportation Alternatives Set-Aside Program** (TASAP) combines a variety of former grant programs together into one funding pool: Transportation Enhancements (TE), Safe Routes to School (SRTS), Scenic

Byways (Byways) and the Recreational Trails Program (RTP). TASAP projects build pedestrian and bicycle facilities, improve access to public transportation, create safe routes to school, preserve historic transportation structures, provide environmental mitigation, and create trails projects that serve a transportation purpose. There are ten eligible categories that promote safety and mobility. TASAP fund construction costs that are between $50,000 and $1 million.

The goal of PennDOT's **Green Light Go Program** is to reduce congestion and improve efficiency of existing traffic signals on state and local highways. Eligible applicants are municipalities and must provide a 20% match.

Another PennDOT program focused on signalized intersections is the **Automated Red Light Enforcement Transportation Enhancements Grant Program** (ARLE). The intent of ARLE is to fund relatively low-cost projects that improve the safety and mobility of the traveling public. The types of eligible projects vary widely from improvements to traffic signals, to roadway improvements at signalized intersections, and to school zones, guiderail, and roadside safety. Improvements recommended by LTAP programs such as the Local Safe Roads Communities and Walkable Communities are also eligible.

In addition to the potential funding from multimodal transportation funding, the multiuse trail would also be eligible for the following **recreation based** funding sources:

The Pennsylvania Department of Conservation and Natural Resources (DCNR) **Community Conservation Partnership Program** (C2P2) is an annual grant round that includes funding for trails, parks, recreation, and conservation projects. Funds are available for planning, acquisition, development, and equipment. Depending on the funding source, match requirements are either 50/50 or 80/20.

The Pennsylvania Environmental Council offers mini grants through the **Pocono Forests and Waters Conservation Landscape Initiative**. Eligible projects support and advance the goals and objectives of the Pocono Forest and Waters Conservation Landscape in seven counties, including Lackawanna and Luzerne counties. Project awards are between $2,000 and $5,000 and require a minimum dollar for dollar match.

Advisory Board and Community Partners

Public support plays an important role in implementing a successful pedestrian and bicycle network. From the start, the LLTS MPO has engaged key stakeholders through the **project study committee** which was created for this study. This committee will be key in moving the

project forward and it is recommended that the study committee evolve into an ***advisory board*** to begin implementing the pedestrian and bicycle improvements that have been recommended. The advisory board should work with both counties and cities to make recommendations on the plan implementation and play a key role in public relations.

A successful plan will be implemented by many **community partners** on different levels. The LLTS MPO and the cities of Scranton and Wilkes-Barre will be instrumental in the next phases of design, engineer, permitting, and construction. Community organizations such as Scranton Tomorrow and the Diamond City Partnership will be important liaisons between government offices, authorities, and agencies and the business partners and cycling community. An education and safety campaign will need to be led by government agencies, the local police departments, educational institutes, and the cycling community.

Key Implementation Responsibilities

The success of the proposed pedestrian and bicycle improvements will take the initiative and effort of many different agencies and organizations. The following outlines each organization and the key tasks that would help implement a successful pedestrian and bicycle network—as adapted from the 1996 PennDOT Statewide Bicycle & Pedestrian Plan.

County Planning Departments

- Assign responsibilities to staff person or agency for addressing bicycle and pedestrian issues.
- Work with local municipalities to assign staff person for addressing bicycle and pedestrian issues and to coordinate with the county.
- Institute a Bicycle/Pedestrian Advisory Committee.
- Institute a public awareness campaign of benefits of bicycling and walking.
- Provide leadership through the initiation and adoption of a comprehensive bicycle and pedestrian plan.
- Administer a public participation program.
- Initiate a citizen participation process that allows public input into decision-making regarding bicycling and walking.
- Increase the number of areas zoned as mixed-use development.
- Require all new development plans to include plans for accommodating bicycle and pedestrian facilities.
- Develop a comprehensive bicycle and pedestrian plan as a separate plan or as an element in the county transportation or open space plans.

- Develop and implement a procedure for evaluation of bicyclists' and pedestrians' needs in the early planning stages of all capital projects.
- Implement a bicycle usage monitoring program.
- Prepare land use plans and ordinances that encourage mixed-use development.

Cities and Local Municipalities

- Establish a capital funding program that can be used to fund bicycle and pedestrian related projects or leverage state and federal grants.
- Adopt ordinances to provide bicycle parking facilities at new buildings and employment centers.
- Initiate a citizen participation process that allows public input into decision-making regarding bicycling and walking.
- Initiate a citizen participation process that allows public input into decision-making regarding bicycling and walking.
- Require all new development plans to include plans for accommodating bicycle and pedestrian facilities.
- Develop and implement a procedure for evaluation of bicyclist and pedestrian needs in the early planning stages of all capital projects.
- Improve bicycle and pedestrian accessibility around schools and transit stations.
- Prepare plans for linkages between shopping centers, other commercial areas, parks, residential areas, and future land use.
- Design open space linkages using abandoned rail corridors, stream valleys, utility corridors, and other rights-of-way.

Public Works Departments

- Provide bicycle and pedestrian facilities in conjunction with capital projects.
- Provide bicycle and pedestrian facilities as independent capital projects.
- Develop a spot improvement and maintenance program.

Recreation Departments

- Promote bicycling and walking to parks by providing access facilities.
- Develop greenways to link open spaces.
- Conduct bicycle and pedestrian safety programs.
- Include programs to promote walking and bicycling.

Police Departments

- Foster safe, shared use of highways by all users through the promulgation of enforcement actions and programs.
- Develop and conduct educational programs that train bicyclists and motorists on safe bicycling and walking in traffic.
- Provide training for law enforcement officials in bicycle and pedestrian education and regulations.
- Implement a bicycle and pedestrian accident monitoring and surveillance system.

Transportation Authorities

- Improve bicycle and pedestrian facilities at transit facilities to encourage bicycling and walking connections to transit.
- Develop facilities and operational guidelines for carrying bicycles on buses.

Advocacy Groups and Service Organizations

- Assist with the development of comprehensive bicycle and pedestrian plans.
- Monitor legislative, educational, and engineering opportunities for increasing efficient and safe bicycling and walking.
- Conduct Effective Bicycling or similar education program.
- Provide assistance to educational institutions in the delivery of bicycle and pedestrian education programs.
- Conduct or assist with user surveys.
- Identify barriers to bicycling and walking.
- Participate in citizen participation or public involvement processes.

Educational Institutions

- Acquire or develop educational material that will encourage safe and effective bicycling and walking.
- Deliver bicycle and pedestrian education programs in conjunction with another curriculum or as a separate program.
- Support enforcement activities by providing educational elements.
- Develop programs to promote walking and bicycling while limiting student automobile parking.

Employers and Corporations

- Encourage bicycling and walking to work as part of an Employee Commute Options Program.

- Promote bicycling and walking as part of health and wellness programs.
- Provide bicycle parking and related facilities.

Chapter 5 | Action Plan for Downtown Scranton

Description of Network Plan for Downtown Scranton

The existing street network of the Downtown Scranton Central Business District is a grid pattern comprised of a combination of one-way and two-way streets and generally level topography. Parallel parking is typically available on at least one side of the street. In addition to parallel parking, Penn Avenue has head-in angled parking. The County Courthouse Square is located in the central part of the downtown where the Lackawanna County Courthouse and Federal Building are located. Businesses of varying sizes, as well as restaurants and apartments, make up the bulk of the downtown. The Marketplace at Steamtown dominates Lackawanna Avenue at the western edge of the study area, the Radisson and Hilton hotels are located in the southwestern corner, and the University of Scranton straddles Jefferson Avenue and stretches into the Hill Section. Vine Street contains several cultural and educational institutions including the Albright Library, the Children's Library, and Lackawanna College. The Scranton Cultural Center sits just around the corner on North Washington Avenue. The northern edge of downtown is defined by a railroad line and Lackawanna River, as well as the Lackawanna River Heritage Trail.

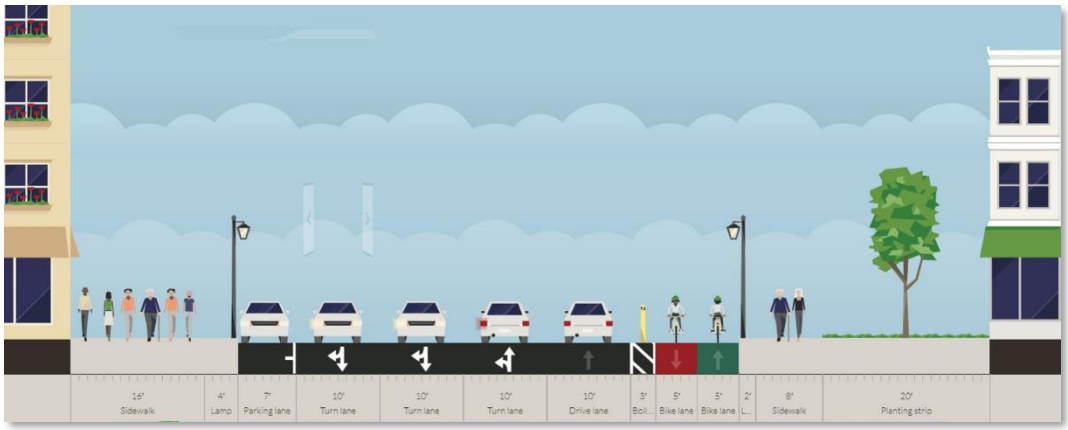
The Downtown Scranton Bicycle Network utilizes a combination of bicycle facilities on all streets in the Downtown Business District to create a bicycle network that appeals to cyclists of all abilities, skills, and comfort levels. Circling the Downtown Business District is a loop comprised of bicycle facilities that cater to the cyclist. The Outer Loop serves as the primary bicycle facility for Scranton and provides safe and convenient access to stores, businesses, apartments, hotels, and college/university campuses. A combination of bike lanes and sharrows traverse the downtown, connecting to and supplementing the Outer Loop. All one-way roads will remain one way. However, the head-in

angled parking on Penn Avenue will be turned into back-in angled parking, and the travel direction of Linden Street and Spruce Street will be reversed to 1960 circulation patterns. Key streets that extend beyond the Downtown Business District will be painted with sharrows in order to connect to key destinations and regional hubs.

The Outer Loop

Lackawanna Avenue – In the Central Business District, Lackawanna Avenue is a three- to five-lane, two-direction, minor arterial street with parallel parking available in various locations. The 500 block contains a center concrete island and narrows to three to four travel lanes. The Intermodal Center is located on the edge of the downtown business district and entrance to Steamtown National Historic Site.

The proposed Downtown Scranton Bicycle Network calls for a cycle track along Lackawanna Avenue between Mifflin Avenue and Kressler Court. The 10-foot wide bicycle corridor will hug the east side of Lackawanna Avenue, providing a thru route with only two street intersections: North Washington Avenue and Cedar / Adams Avenue. The cycle track will be separated from vehicular traffic by a 3-foot wide buffer containing delineator posts where applicable. Parallel parking will be maintained where space is sufficient and will help to serve as an additional protection from vehicular traffic. The 500 block center concrete island will be removed in order to accommodate both the bicycle corridor and vehicular traffic.

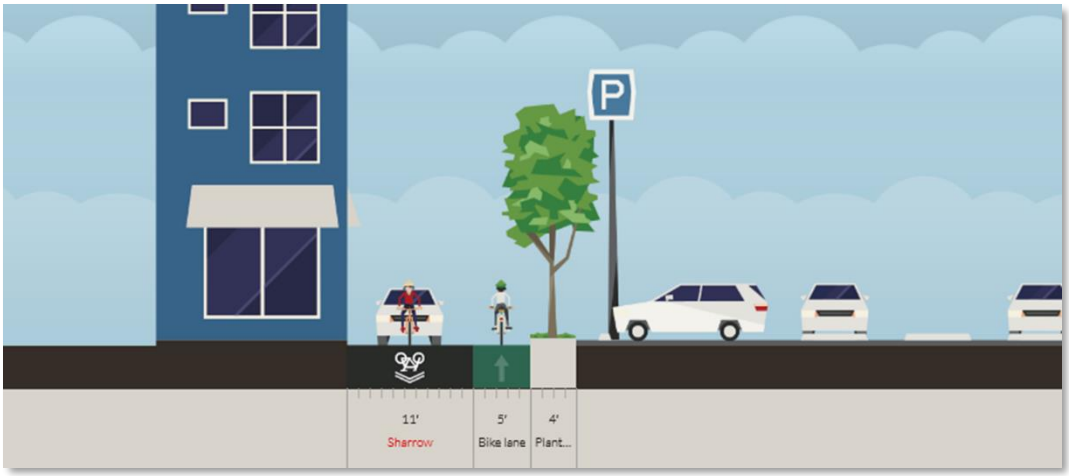


Streetmix image of the proposed Lackawanna Avenue Cycle Track

Beyond the Central Business District, bike lanes or sharrows should extend north on Lackawanna Avenue to North Main Avenue. Lackawanna River Heritage Trail users will access the downtown bicycle network from the Lackawanna Avenue Spur at the intersection of Lackawanna and North Seventh avenues.

Kressler Court – Kressler is a one-lane alleyway that runs between Lackawanna Avenue and Myrtle Street at the Watres Armory. Although Kressler is not wide enough for two travel lanes, it is open to two directional traffic running past a mix of residential and commercial uses: two hotels, a parking garage and numerous parking lots, apartments, a hospital, and various businesses. Kressler Court will be part of the Outer Loop of the proposed Downtown Scranton Bicycle Network—in addition to extending north towards Dunmore.

In order to accommodate bicycles, Kressler will become a one-way alley heading towards Lackawanna Avenue with a combination of sharrows and bike lane. Bicycles traveling towards Lackawanna Avenue will share the travel lane with vehicles. Bicycles traveling from Lackawanna Avenue will use a bike lane. Mid-block crossings of Spruce, Linden, and Mullberry streets will be developed to improve bicycle/pedestrian safety. This will likely include raised or textured crosswalks and warning signage.

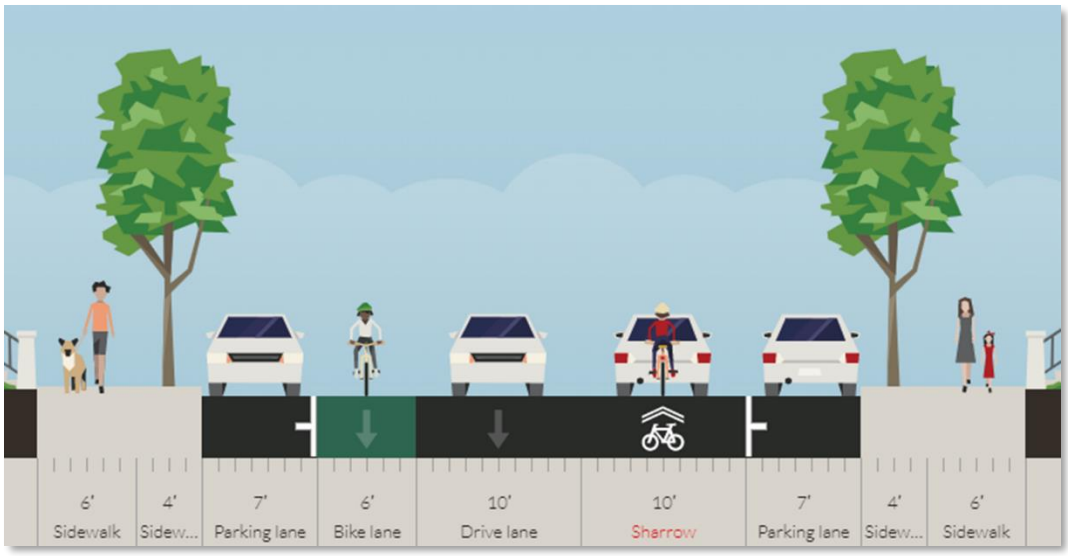


Streetmix image of Proposed Kressler Court Bike Lane and Sharrow

Vine Street – The eastern side of the Outer Loop is Vine Street: a two-direction, two- to three-lane street that runs past residential units, doctors' offices, libraries, educational facilities, social services, and other businesses. As the hilliest street of the central business district, it offers the most challenging grade changes for the cyclist.

From Kressler Court, there will be sharrows as the cyclist coasts downhill towards Wyoming Avenue. Cyclists coming from Wyoming Avenue will need to climb the hill, and so a bike lane will be provided and will be protected by parallel parking. Between Wyoming Avenue and Mifflin Avenue, the land flattens, and the roadway widens to allow for a separated cycle track hugging the east side of the street, protected by parallel parking.

In order to extend bicycle facilities on Vine Street into the Hill Section and to connect the Central Business District to Nay Aug Park, steep grades need to be traversed. On uphill grades, cyclists should utilize a bike lane. While on downhill grades, cyclists can utilize sharrows.



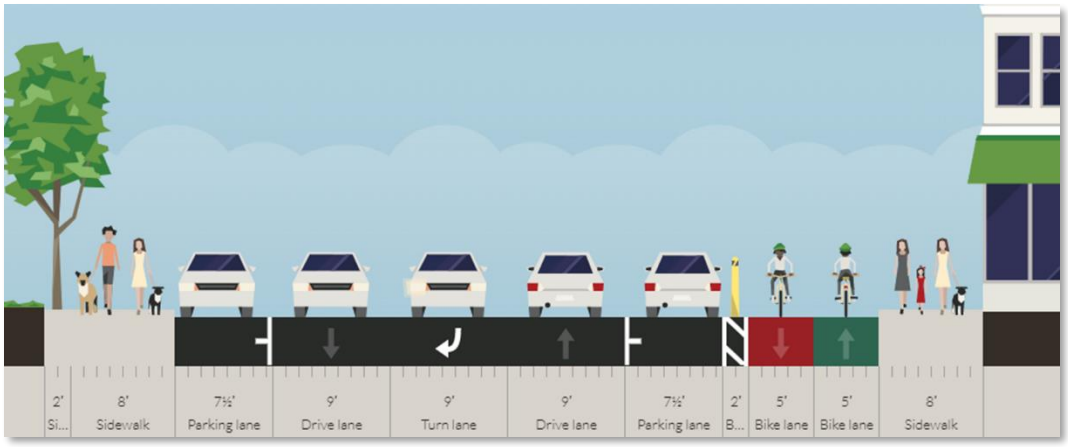
Streetmix image of Proposed Vine Street Sharrow and Bike Lane between Kressler Court and Washington Ave

Mifflin Avenue – Mifflin Avenue is a wide two-way street with two lanes and turning lanes at Mulberry, Linden, and Lackawanna. The north side of the street is bordered by multiple railroad tracks and the Lackawanna River. The southern side has few businesses, several churches, and parking lots. The Lackawanna River Heritage Trail can be accessed off of Mifflin Avenue in two locations: the Olive Street Trailhead can be accessed via Gordan Ave and North Olive Street and the Scranton High School Spur at North Seventh Avenue can be accessed from Mifflin Avenue by taking the Scranton Expressway Ramp to North Seventh Avenue.

Mifflin Avenue will have several bicycle facility treatments. From Vine Street the cycle track will continue onto Mifflin Avenue to Mulberry Street and then turn right onto Mulberry Street, cross the river, and exit to 7th Avenue and the Lackawanna River Heritage Trail. Between Mulberry Street and Lackawanna Avenue, sharrows will be added to the road.

Alternatively, near the intersection of Mifflin Avenue and Vine Street, Gordon Avenue intersects Mifflin. Cyclists can take Gordon to a multi-use trail that was proposed in a previous study between the active rail line and Mifflin Avenue. This trail would travel with the railroad tracks

below Mulberry and Linden Streets and come back up to grade with Mifflin Avenue to connect with Lackawanna Avenue.



Streetmix image of Proposed Vine Street Cycle Track

Lackawanna River Heritage Trail – The Lackawanna River Heritage Trail sits just outside the Outer Loop and the Central Business District. The trail is an important corridor along the heart of the valley, connecting communities from upstate New York via the D&H Rail Trail to the City of Pittston and the Luzerne County Recreational Trail.

The Lackawanna River Heritage Trail will connect to the Outer Loop in three locations: the spur to Lackawanna Avenue, the spur to Scranton High School, and a street connection to the Olive Street Trailhead from Mifflin Avenue to Gordan Street to West Olive Street.

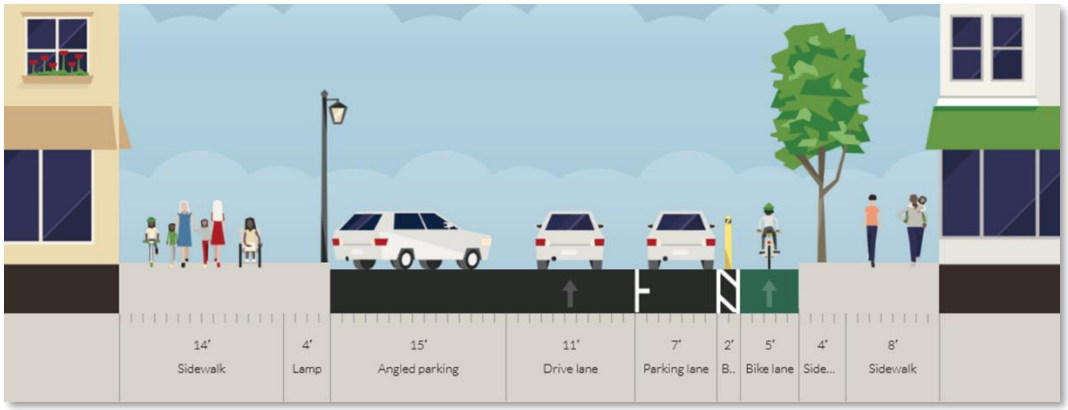
The Inner Network

Franklin Avenue – This low volume, two-way street is largely comprised of two travel lanes with parallel parking on both sides; in sections, it transitions to four lanes and no parking. Between Mulberry Street and Vine Street, Franklin Avenue becomes one-way eastbound. A mix of businesses, restaurants, and parking lots are located along Franklin. This Inner Network street will be reduced to two lanes with a center turning lane at intersections and bike lanes in both directions.

Penn Avenue – Between Mulberry Street and Lackawanna Avenue, Penn Avenue is a one-way minor arterial street with head-in angled parking on the left and parallel parking on the right. The street is lined with restaurants, banks, doctors' offices, and other small businesses. From Mulberry Street heading east towards Olive Street, Penn Avenue is a two-way street with parallel parking on both sides. Penn Avenue ends

at Olive Street and becomes Capouse Avenue—a two-lane, two-directional street lined with light industry and residential units.

In addition to bicycle facilities, vehicular upgrades are suggested between Mulberry Street and Lackawanna Avenue. Pull-in angled parking is not recommended due to the driver's line of sight being severely compromised when trying to exit the parking space. By changing the angled parking to back-in angled parking, the driver has better line of sight to exit the parking space. By narrowing travel lanes and parking, a one-way bike lane is proposed between the parallel parking and the sidewalk.



Streetmix image of Proposed Penn Ave Protected Bike Lane

Heading northeast—starting from Mulberry Street and heading out to Vine Street—sharrows are suggested and will extend out onto Capouse Avenue to Green Ridge.

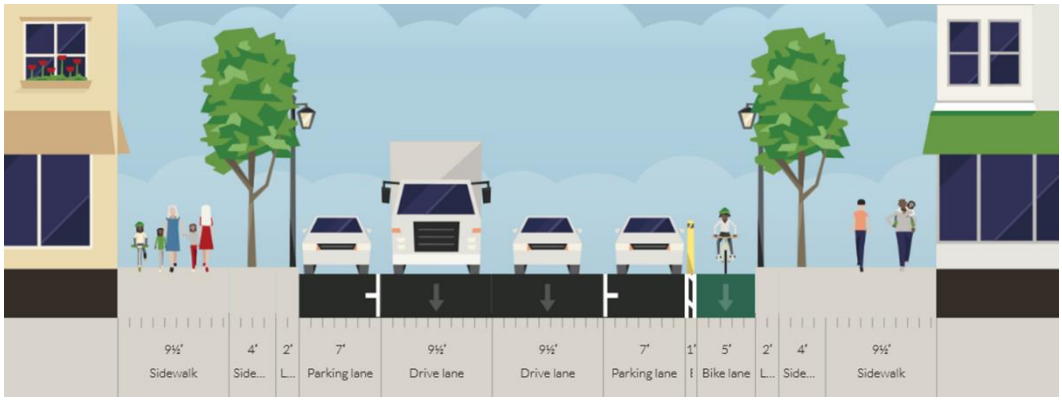
Wyoming Avenue – Wyoming Avenue is a wide four-lane, two-directional, minor arterial street with sidewalk bump-outs in places. The block between Lackawanna Avenue and Spruce Street has bus terminals in each direction, as well as parallel parking. Parallel parking continues between Spruce Street and Vine Street. The parking cannot be reduced and, due to the heavy volume of traffic and the limited width of the cartway to accommodate parking and four lanes of traffic, sharrows will be added to provide a route for experienced cyclists. The sharrows should extend out to Green Ridge.

North Washington Avenue – Between Olive Street and Lackawanna Avenue, North Washington Avenue is a one-way, two-lane minor arterial street. It is a mixed use street that is home to both the county and federal court houses, city hall and government offices, cultural facilities, restaurants, small businesses, and apartments. Parallel parking is available on both sides of the street—except to accommodate

turning lanes at Linden, Spruce, and Lackawanna. Due to the current one-way direction of Spruce and Linden streets, three blocks of North Washington Avenue between Mulberry and Lackawanna receives additional traffic as vehicles try to circle the county courthouse. Beyond the Central Business District boundary of Olive Street and Lackawanna Avenue, North Washington Avenue becomes a two-way, two-lane minor arterial street. Survey results and public comment showed that North Washington Avenue is highly used and desired route by cyclists as a connection between the Green Ridge, downtown, and South Side sections of the city.

The proposed bicycle facilities on North Washington Avenue include bike lanes and bicycle boxes at intersections. The bike lanes will extend outside the Central Business District to South Scranton and Green Ridge, connecting to Marywood University. The reversal of Spruce and Linden streets-as proposed further is this study-would help alleviate the vehicular traffic on North Washington Avenue between Mulberry and Lackawanna. In addition, dedicated delivery and loading zones would help mitigate traffic congestion.

Adams Avenue – Cedar Avenue, a two lane, two-way principal arterial street, comes from South Scranton and becomes Adams Avenue at Lackawanna Avenue on the southeastern edge of the Central Business District. Adams Avenue is a one-way, two-lane principal arterial highway that is an extension of Cedar Avenue. Parallel parking varies by block: Between Lackawanna Avenue and Spruce Street, there is no parking; between Spruce Street and Olive Street, there is parallel parking; and between Olive Street and North Washington Avenue, there is no parallel parking.



Streetmix image of Proposed Adams Ave Protected Bike Lane

A one-way bike lane is proposed on Adams Avenue—extending beyond the Central Business District into South Side on Cedar Avenue and joining the North Washington Avenue bike lanes to Green Ridge.

Jefferson Avenue – In the southwest corner of the Central Business District, Lackawanna Avenue wraps around the block and turns into Jefferson Avenue—running to Ash Street in Central Scranton. Jefferson is a two-lane, two-direction street with turning lanes at intersections. It receives traffic from the Central Scranton Expressway and indirectly from the North Scranton Expressway via Mulberry Street. There is parallel parking starting at Mulberry Street and extending out to Ash Street.

The proposed cycle track from Lackawanna Avenue will transition into bike lanes at Kressler Court, and the bike lanes will continue onto Jefferson Avenue. Bicycle facilities proposed on Jefferson Avenue include bike lanes and bike boxes at intersections.

Spruce Street – Except for the block between Franklin and Mifflin avenues, Spruce Street is a one-way, two-lane street with turning lanes at intersections. Between Jefferson and Penn, Spruce Street is a minor arterial street. Between Franklin and Mifflin, Spruce is a two-way street. Parallel parking lines both sides of the street for the entire length. Spruce Street receives a lot of traffic from the Central Scranton Expressway. The current direction of the one-way flow of traffic on Spruce and Linden streets prevents a circular flow of traffic around the County Courthouse.

In addition to bicycle facilities, vehicular improvements are also proposed. Historically, Spruce Street was a one-way street running from Mifflin Avenue to Jefferson Avenue. During the 1960s, the street was reversed to receive traffic from the Central Scranton Expressway. In addition to adding a bike lane and bike boxes to Spruce Street, Spruce Street will be reversed—starting at Mifflin Avenue and exiting onto the Central Scranton Expressway.

Linden Street – Linden Street is a minor arterial two-lane street with a mix of one-way and two-way sections. Starting in West Scranton at North Main Avenue, Linden Street is a two-way, two lane street. It crosses the Lackawanna River and runs for two blocks as a two-way street to Penn Avenue. Between Penn and Jefferson avenues, Linden Street is a one-way street running towards Jefferson Avenue. At Jefferson Avenue, Linden Street returns to a two-way, two-lane street within the University of Scranton Campus and terminates at Monroe Avenue.

When Spruce Street was reversed in the 1960s, Linden Street was also reversed. The reversal of these two street directions prevents traffic from circling the block around the County courthouse. Vehicles must now travel from North Washington to Lackawanna to Adams to Mulberry and back to North Washington, a three-block circle.

Similar to Spruce Street, both vehicular and bicycle facility improvements are suggested. This study suggests reversing the one-way direction between Mifflin and Jefferson Avenues back to the pre-1960s direction and to add a bike lane and bicycle boxes at intersections. The reversal of Spruce and Linden Streets will allow vehicles and cyclists to travel around Courthouse Square in a counterclockwise direction in collaboration with the bike lanes proposed on Washington and Adams Avenue. Sharrows shall extend beyond the Central Business District on Linden Street.

Mulberry Street – Mulberry Street is a principal arterial highway. Between Mifflin and Wyoming, it is a four-lane, two-way street with a center turning lane at the intersections. Between Wyoming and Jefferson, the street is narrower and reduces to four lanes. Sharrows are suggested on Mulberry Street for highly skilled cyclists that are comfortable riding in dense and/or fast traffic and may chose Mulberry Street for its direct route to several destinations. Less-skilled bicyclists will migrate to other streets with bike lanes, cycle-tracks, or other improvements. Strategies for making Mulberry Street safer and more desirable for bicyclists who are comfortable mixing in traffic include the installation of signage and sharrows, as well as improving the timing of traffic signals to encourage slower speeds. Due to the volume of traffic, this study recommends a further evaluation to determine the number of traffic lanes necessary to accommodate both vehicular traffic and separated bicycle facilities within the street cartway.

Downtown Scranton Phasing Plan and Opinion of Probable Costs

The bicycle facility improvements are proposed to be completed through a series of phases based on the complexity of incorporating bicycle facilities into the existing urban environment. Phased implementation will allow for design, engineering, agency coordination, and capital planning of more complicated streetscape changes—while basic changes that require less engineering, agency coordination, and funding should occur first.

The phasing plan developed for Scranton will allow for the bicycle network to develop in a methodical fashion. The goal of the phasing

plan is to introduce simple changes to the vehicle network with the least amount of cost prior to the development of facilities that require engineering and significant amounts of funding. The phasing plans were developed to provide a usable network at the earliest phase. The network will then be built upon with priority being given to the most sensible bicycle routes to the city as well as businesses, landmarks, and current popular bicycle routes.

The Opinion of Probable Cost has been prepared for the proposed pedestrian and bicycle network. These estimates are conceptual in nature to help identify estimated construction costs to assist in securing grant funding and budgeting for future phases. These costs have been developed based on the findings in this report prior to the beginning of any detailed design / engineering.

The opinion of probable costs has been developed to match the phasing plans. The estimate provides the client a phase-by-phase breakdown. Each phase indicates the location, type of improvement, and estimated cost. The itemized estimates, developed to complete the summary, can be found in Appendix C of this report. These estimates are provided on a street-by-street basis.

While this report is proposing a phased construction project, there is a savings associated with completing two or more phases at one time. These savings are a result of a lesser number of designs, bidding, mobilization, and traffic control costs. An estimated savings is shown with each phase if the project was completed in a single phase.

Phase 1 of the bicycle facilities proposed in Scranton includes the incorporation of **sharrows** on roadways that will be permanently used as a shared roadway. The sharrows allow for short construction duration, minimal disruption to vehicular movement, and minimal cost. Sharrows are proposed on the following streets:

- Jefferson Avenue – both directions
- Kressler Court – southwest lane
- Wyoming Avenue – both directions
- Mifflin Avenue – both directions between Lackawanna and Mulberry
- Center Street – both directions
- Mulberry Street – both directions
- Vine Street – northwest lane
- Olive Street – both directions

The study also suggests sharrows on Lackawanna Avenue, Vine Street, and Mifflin Avenue so that a complete bicycle loop is developed around

the city in phase 1. As defined below in subsequent phases, the sharrows will be replaced with cycle tracks.

Phase 1 improvements are anticipated to cost between $157,000 and $206,000 if each street is improved individually. If completing the work in one phase, there is a cost savings of $12,000 to $21,000. Table 1 below shows the street by street cost. Detailed estimates by street are located in Appendix C.

Table 1 – Phase 1 Opinion of Probable Costs			
#	Location	Improvement	Estimated Cost
1	Linden Street	Sharrows	$10,000 – 15,000
5	Gordan Ave	Sharrows	$7,000 – 10,000
6	Olive Street	Sharrows	$15,000 – 20,000
11	Center Street	Sharrows	$10,000 – 15,000
13	Mulberry Street	Sharrows	$15,000 – 20,000
15	Penn Ave	Sharrows	$5,000 – 7,000
17	Wyoming Ave	Sharrows	$20,000 – 25,000
18	Vine Street	Sharrows	$10,000 – 15,000
19	S. Washington Ave	Sharrows	$5,000 – 7,000
22	N. Washington Ave	Sharrows	$5,000 – 7,000
23	Center Street	Sharrows	$15,000 – 20,000
27	Kressler Ct	Sharrows	$20,000 – 25,000
28	Jefferson Ave	Sharrows	$15,000 – 20,000
		Total for Phase 1	**$157,000 – 206,000**
Potential cost savings if completed as a single project			($12,000 – 21,000)

Phase 2 of the proposed bicycle facilities is the development of the **cycle track** on **Lackawanna Avenue**. The Lackawanna Avenue cycle track will make significant improvements to walkability and to pedestrian and cyclist safety by providing cyclists of all ages, abilities, and skill levels with a safe corridor that is buffered from vehicular traffic. It is an important component of the Downtown Scranton bicycle network on the southwest side of the downtown.

The estimated cost of the phase 2 cycle track on Lackawanna Avenue is $850,000 to $975,000. Major changes will occur to the curb-to-curb cartway on the 500 block, and on-street parking will need to be reconfigured to buffer the cycle track. A detailed estimate is located in Appendix C.

Phase 3 includes the development of **bicycle lanes** along **Franklin** and **Penn** avenues to connect Lackawanna Avenue with the sharrow network and provide more direct circulation around the city's downtown. Outside of the downtown central business district, bicycle

lanes are proposed for Lackawanna Avenue to connect the downtown cycle track to North Scranton. A single bicycle lane is planned in conjunction with the sharrow on the one-way **Kressler Court** so that bicycles can traverse the south side of the city, opposing traffic from west to east.

Phase 3 bicycle lane improvements are estimated to cost between $256,000 to $320,000. If all bicycle lanes are installed under one contract, there is an anticipated cost savings of $30,000 to $35,000. Table 2 below shows the street by street cost. Detailed estimates by street are located in Appendix C.

Table 2 – Phase 3 Opinion of Probable Costs			
#	*Location*	*Improvement*	*Estimated Cost*
1	Lackawanna Ave	Bicycle Lanes (both directions)	$25,000 – 30,000
8	Franklin Ave	Bicycle Lane	$55,000 – 65,000
12	Penn Ave	Bicycle Lane	$55,000 – 65,000
16	Capouse Ave	Bicycle Lanes (both directions)	$25,000 – 30,000
18	Vine Street	Bicycle Lane	$70,000 – 85,000
26	Lackawanna Ave	Bicycle Lanes (both directions)	$10,000 – 15,000
27	Kressler Ct	Bicycle Lane	$25,000 – 30,000
		Total for Phase 3	**$265,000 – 320,000**
Potential cost savings if completed as a single project			($30,000 – 35,000)

Phase 4 includes **bicycle lane** improvements to **North Washington Avenue** and **Adams Avenue** to connect the east-west directions beyond the downtown. A **cycle track** is proposed at **Vine Street**, merging onto Mifflin then Mulberry to connect the network at the north end.

The phase 4 bicycle lanes are estimated to cost between $375,000 and $460,000. By adding the bicycle lanes to all the streets at once, there is a $50,000 to $60,000 cost savings. Table 3 below shows the street by street cost. Detailed estimates by street are located in Appendix C.

Table 3 – Phase 4 Opinion of Probable Costs			
#	*Location*	*Improvement*	*Estimated Cost*
4	Scranton Expressway	Two-way Cycle Track	$260,000 – 310,000
14	Vine Street	Two-way Cycle Track	$220,000 – 250,000
20	Washington Ave	Bicycle Lane	$50,000 – 65,000
21	N. Washington Ave	Bicycle Lanes (both directions)	$65,000 – 75,000

24	Cedar Ave	Bicycle Lanes (both directions)	$20,000 – 25,000
25	Adams Ave	Bicycle Lane	$45,000 – 55,000
		Total for Phase 4	**$660,000 – 780,000**
Potential cost savings if completed as a single project			($50,000 – 60,000)

Phase 5 includes improvements to **Linden** and **Spruce streets**. Along with **bicycle lanes**, the vehicular direction of each street is proposed to be reversed. Reversing the street direction will improve the flow of traffic around the city and will require engineering studies and agency coordination to upgrade the signaling systems, timing, striping, and signage.

Estimated costs for phase 5 reversing of Linden and Spruce streets is estimated to cost between $525,000 to $625,000. By completing both streets in one project there is an anticipated cost savings of $50,000 to $60,000. Table 4 below shows the street by street cost. Detailed estimates by street are located in Appendix C.

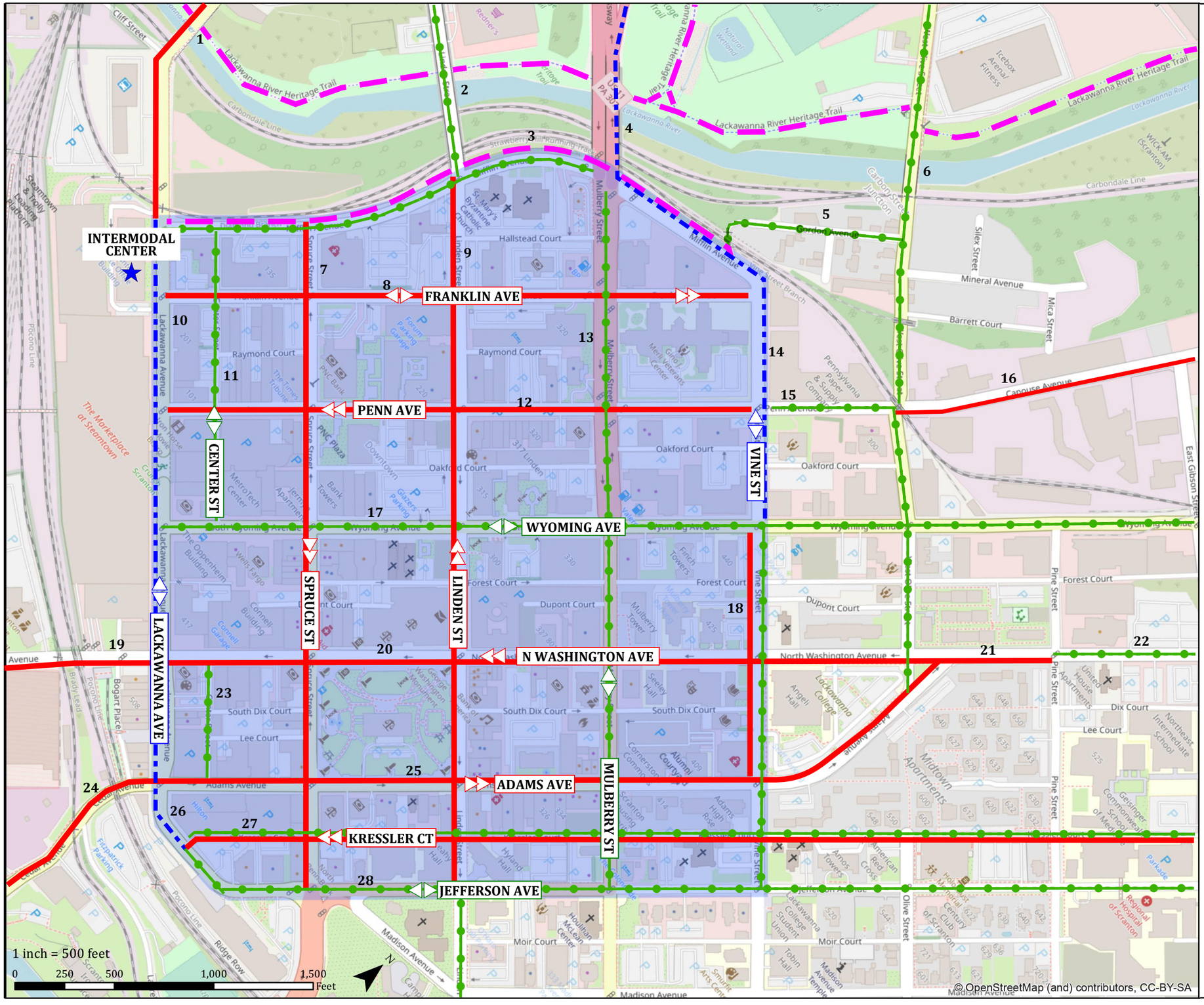
Table 4 – Phase 5 Opinion of Probable Costs			
#	Location	Improvement	Estimated Cost
7	Spruce Street	Bicycle Lane (reverse traffic)	$250,000 – 300,000
9	Linden Street	Bicycle Lane (reverse traffic)	$275,000 – 325,000
		Total for Phase 5	**$525,000 – 625,000**
Potential cost savings if completed as a single project			($50,000 – 60,000)

Summary of Key Recommendations

The proposed downtown Scranton bicycle and pedestrian improvements aims to create a walking and cycling network for pedestrians and cyclists of all ages, abilities, and skills. The implementation of the plan will take the coordination of the County, state agencies, development groups, and, most importantly, the City of Scranton. Stakeholders in the form of an advisory committee will have an important role of communication between the governing bodies and the public.

Key Recommendations for Scranton Improvements

- Both Lackawanna County and City of Scranton assign a bicycle and pedestrian staff person.
- Institute a bicycle and pedestrian advisory committee.
- Establish a public education campaign for pedestrians, cyclists, and motor vehicles.
- Adopt ordinances that require the inclusion of pedestrian and bicycle facilities in new development and redevelopment.
- Adopt ordinances and permits for bike share programs.
- Adopt a comprehensive bicycle and pedestrian plan at the county and city level.
- Provide pedestrian and bicycle facilities in capital projects.
- Promote walking and cycling as alternative forms of transportation.
- Train law enforcement on bicycle and pedestrian regulations so they can take enforcement action.
- Continue work with COLTS to improve bicycle and pedestrian facilities at transit facilities.



LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

SCRANTON PROPOSED IMPROVEMENTS

10.08.19 Revised 11.24.2020

LEGEND

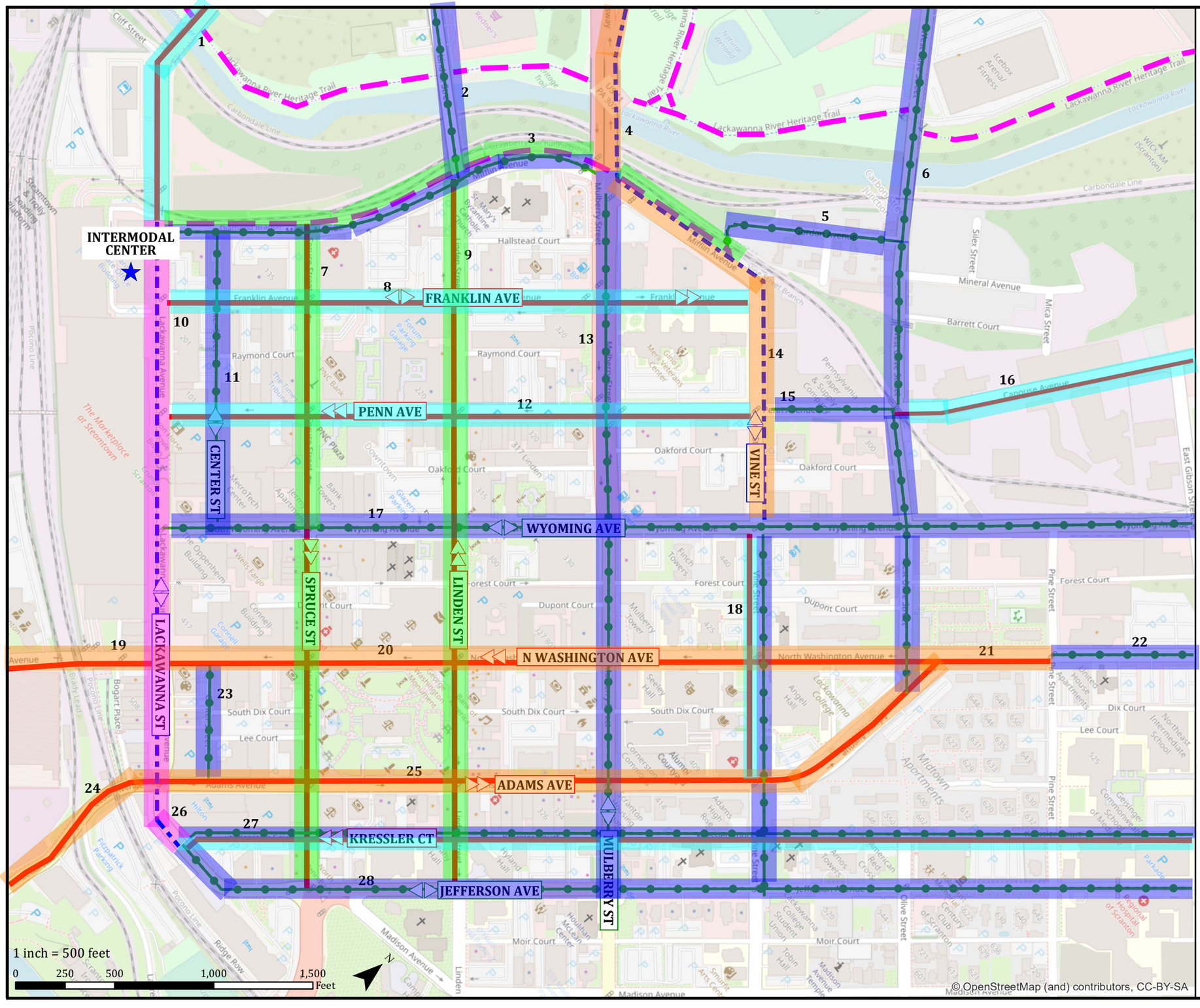
- Bike Lane
- Two-way Cycle Track
- Shared Use On-Road
- Multi-Use Trail

PROPOSED BICYCLE INFRASTRUCTURE IMPROVEMENTS

#	*Location*	*Improvement*
1	Lackawanna Ave	Bicycle lanes (both directions)
2	Linden St	Sharrows
3	Mifflin Ave	Multi-use trail / railroad corridor
4	Scranton Expressway	Two-way cycle track
5	Gordan Ave	Sharrows
6	Olive St	Sharrows
7	Spruce St	One-way traffic w/ bicycle lane
8	Franklin Ave	Bicycle lane
9	Linden St	One-way traffic w/ bicycle lane
10	Lackawanna Ave	Two-way cycle track
11	Center St	Sharrows
12	Penn Ave	Bicycle lane
13	Mulberry St	Sharrows
14	Vine St	Two-way cycle track
15	Penn Ave	Sharrows
16	Capouse Ave	Bicycle lanes (both directions)
17	Wyoming Ave	Sharrows
18	Vine St	Bicycle lane / sharrows
19	S Washington Ave	Sharrows
20	Washington Ave	Bicycle lane
21	N Washington Ave	Bicycle lanes (both directions)
22	N Washington Ave	Sharrows
23	Center St	Sharrows
24	Cedar Ave	Bicycle lanes (both directions)
25	Adams Ave	Bicycle lane
26	Lackawanna Ave	Bicycle lanes (both directions)
27	Kressler Ct	Bicycle lane / sharrows
28	Jefferson Ave	Sharrows

BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT &C



LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

DOWNTOWN SCRANTON PHASING PLAN

10.08.19 Revised 11.12.19

LEGEND

- Bike Lane
- Two-way Cycle Track
- Shared Use On-Road
- Multi-Use Trail

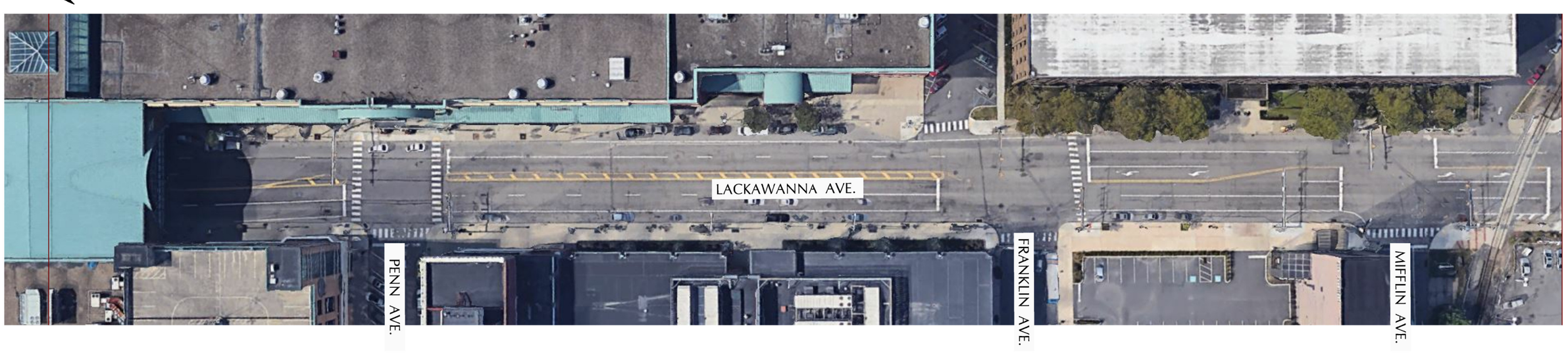
PHASE 1
PHASE 2
PHASE 3
PHASE 4
PHASE 5

PROPOSED BICYCLE INFRASTRUCTURE IMPROVEMENTS

#	Location	Improvement
1	Lackawanna Ave	Bicycle lanes (both directions)
2	Linden St	Sharrows
3	Mifflin Ave	Multi-use trail / railroad corridor
4	Scranton Expressway	Two-way cycle track
5	Gordan Ave	Sharrows
6	Olive St	Sharrows
7	Spruce St	One-way traffic w/ bicycle lane
8	Franklin Ave	Bicycle lane
9	Linden St	One-way traffic w/ bicycle lane
10	Lackawanna Ave	Two-way cycle track
11	Center St	Sharrows
12	Penn Ave	Bicycle lane
13	Mulberry St	Sharrows
14	Vine St	Two-way cycle track
15	Penn Ave	Sharrows
16	Capouse Ave	Bicycle lanes (both directions)
17	Wyoming Ave	Sharrows
18	Vine St	Bicycle lane / sharrows
19	S Washington Ave	Sharrows
20	Washington Ave	Bicycle lane
21	N Washington Ave	Bicycle lanes (both directions)
22	N Washington Ave	Sharrows
23	Center St	Sharrows
24	Cedar Ave	Bicycle lanes (both directions)
25	Adams Ave	Bicycle lane
26	Lackawanna Ave	Bicycle lanes (both directions)
27	Kressler Ct	Bicycle lane / sharrows
28	Jefferson Ave	Sharrows

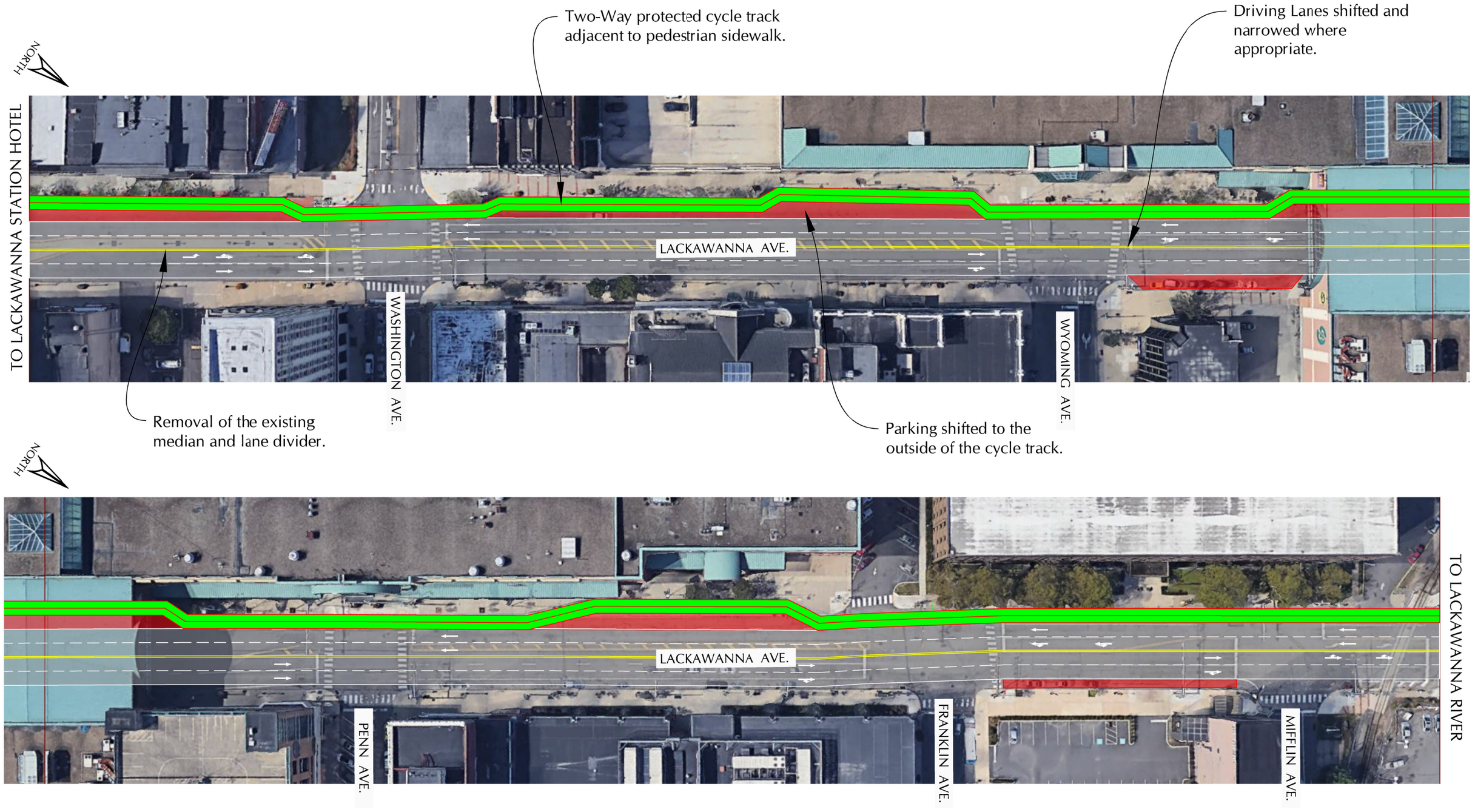
BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS
CT&C

EXISTING CONDITIONS ON LACKAWANNA AVE. IN SCRANTON



PROPOSED CYCLE TRACK ON LACKAWANNA AVE. IN SCRANTON

(THIS IS A DRAFT CONCEPT THAT WILL REQUIRE FURTHER PLANNING, DESIGN AND ENGINEERING)



Chapter 6 | Action Plan for Downtown Wilkes-Barre

Description of Network Plan – Downtown Wilkes-Barre & Link to the D&L Trail

The street network of the Wilkes-Barre downtown central business district is a grid pattern nestled between the Susquehanna River and inland railroad tracks that consist of a combination of two-way and one-way streets. Running from the southwest to the southeast, the rectangular blocks are long and narrow. River Street is a wide boulevard separating the downtown from the riverfront. Large mature trees line much of the street and wide sidewalks. The levee and levee wall obstruct views of the river except at two portals located on Northampton Street and midblock between Market and Union streets.

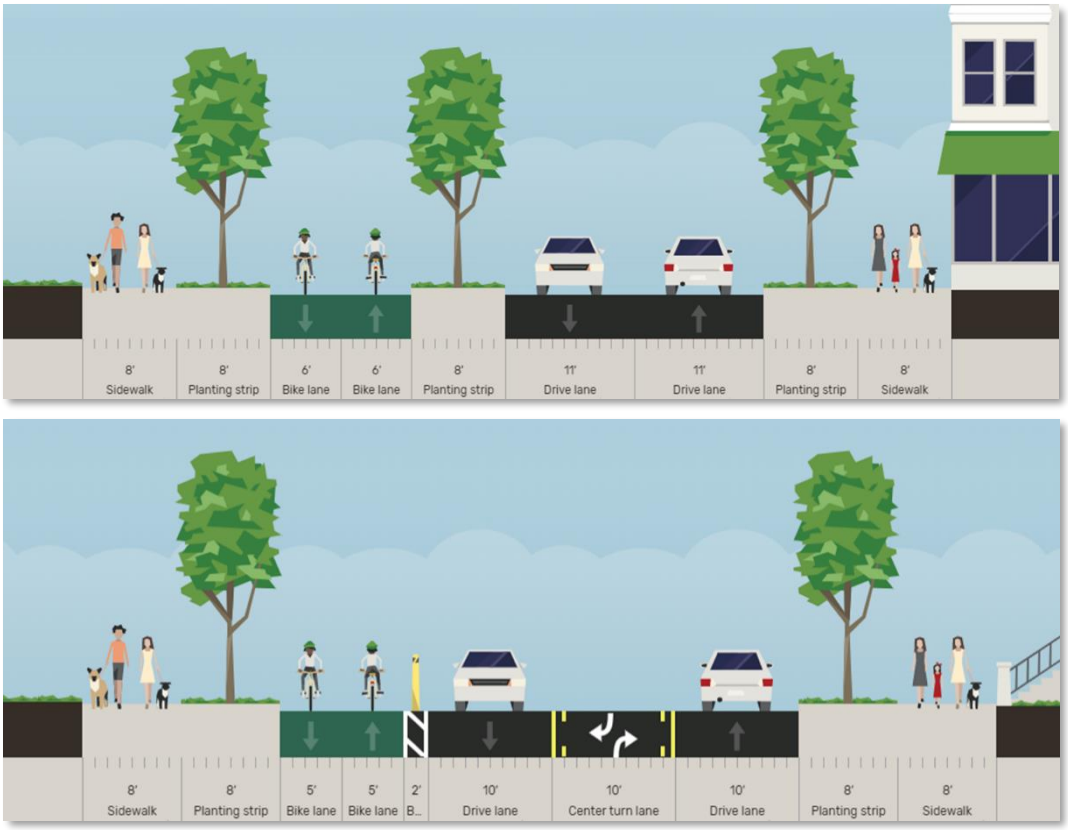
The D&L Trail is a long distance trail that will one day connect Wilkes-Barre to Bristol. It is proposed to enter the central business district from the southwest corner of the business district on the abandoned railroad alignment. A completed section of the D&L Trail runs along the Susquehanna River between the levee and the river and a another section is located on the Kingston side of the river.

The central part of downtown is known colloquially as the Square. The Square is rotated 45 degrees from the street pattern and is a public space used for the farmers market, public performances and gatherings, and for lunch breaks. Surrounding the Square is a combination of small businesses, government offices, eateries, performing arts venues, and apartments. The mixed use spreads out from the Square, and each end of the central business district is bookended by institutes for higher education—Wilkes University and Kings College.

The Downtown Wilkes-Barre Bicycle Network utilizes the entire street network of the central business district. A combination of bicycle facilities crisscrosses the street network, offering cyclists of all abilities, skills, and comfort levels the option to bike in downtown

Wilkes-Barre. The Wilkes-Barre facilities have a series of cycle tracks throughout the business district that are intertwined and crossed by bike lanes and sharrows. All streets are proposed to accommodate the cyclist.

In the proposed downtown Wilkes-Barre bicycle network, the majority of the cycle tracks are on the streets running southwest to northeast. The cycle tracks provide long avenues of dedicated cycling lanes that cross the downtown longitudinally. They provide bicycle facilities for the inexperienced and nonaggressive cyclist, as well as the experienced seasoned cyclist.



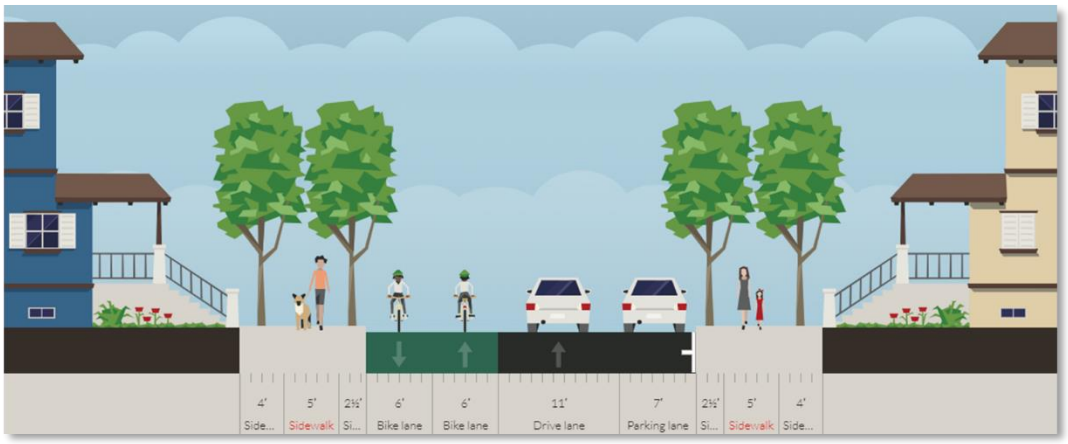
Streetmix images of Proposed River Street Cycle Track

River Street – The primary road defining the north side of town between the Susquehanna River and outer fringe of the business district, River Street beckons to be a grand boulevard. Currently, River Street is a principal arterial street that caters to vehicles, but basic changes can transform it into a mecca for all modes of transportation. The Proposed Downtown Wilkes-Barre Network calls for a 12-foot wide, two-way cycle track between the Susquehanna River levee and River Street. The

cycle track would be separated from vehicular traffic by an 8-foot wide planting strip to enhance the boulevard feel of the street. At intersections, the two driving lanes (one in each direction) will expand to a third turning lane, the planting strip will end, and the cycle track will be reduced to 10 feet in order to accommodate the third lane for left turns. Reflective flexible traffic delineators will separate the cycle track and vehicular traffic. Further study is needed outside the business district to determine the type of bicycle facility that would be appropriate beyond the business district.

Franklin Street – Franklin is a one-way, two-lane major collector street traveling northeast with parallel parking on the left side. South Franklin is a historic treelined corridor with old residences converted to mixed-use offices and housing mostly related to Wilkes University. Mid-block between Northampton and Market, the residential feel abruptly transitions to multi-story large city buildings sitting tight with the sidewalks. Street parking is lost for loading zones and turning lanes. Between Market and Union, the buildings shrink in size, the buffer between sidewalk and buildings widens, and on-street parking returns to one side of North Franklin Street until the street ends as a cul-de-sac in the heart of the Kings College campus.

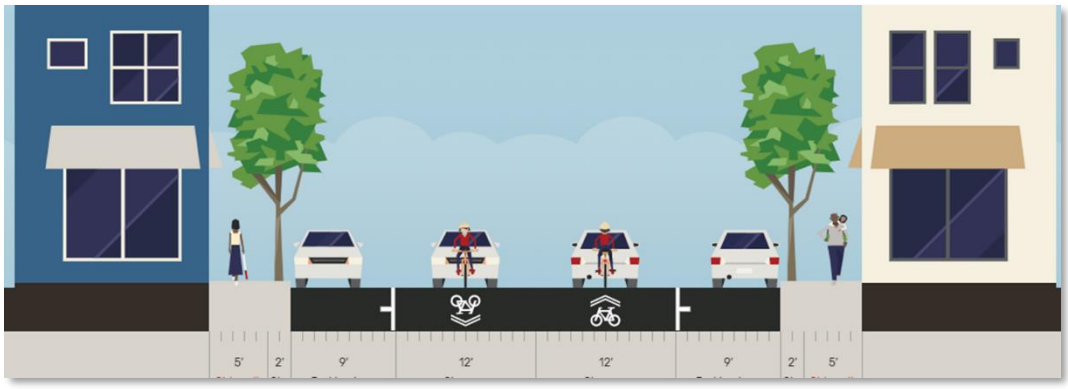
A two-way cycle track is proposed on the left-hand or northwest side of Franklin. This can be accommodated by dropping one vehicular lane and moving the parking to the right-hand or southeast side of the street. By placing the cycle track on the left-hand side or northwest of the street, bicycle traffic would travel alongside motor vehicles with opposing bicycle traffic (traveling southwest) traveling along the curb. This configuration also allows for easy street sweeping and snow removal of both the cycle track and vehicular travel lane. To avoid the risk of collision, opposing cycle traffic will be buffered from vehicular traffic by the cyclists traveling alongside cars. No changes are proposed in the cartway width. On Kings College campus, the bike facilities will need to be closely planned with the college to provide a safe route for bicycles and campus pedestrians. Any future planning of Franklin Street to make it a two-way vehicular street will need to include bicycle facilities.



Streetmix image of Proposed Franklin Street Cycle Track

Due to limited cartway widths and street uses, there are several streets that have limited ability to accommodate separate bicycle facilities. Some streets may be able to provide a combination of a bike lane in one direction and a mixed-use lane with sharrows in the opposing direction—while other streets will simply provide sharrows in both directions in their respective lanes. When there is a combination of a bike lane and sharrow lane, typically the bike lane is provided in uphill traffic conditions since cyclists usually slow down while climbing a hill—and sharrows are provided on the downhill section since downhill bicycle traffic is quicker and can match the slow speeds of downtown vehicular traffic.

Main Street – Main Street is the central linkage running southwest and northeast. It is a narrow two-way, two-lane minor arterial street with parallel parking on each side of the street. The road is not wide enough to accommodate an additional cycle track, and the traffic lanes cannot be reduced due to narrow width and because there is only one lane in each direction. The bicycle facilities proposed on Main Street are sharrows with bicycle boxes at the intersections. This street treatment is proposed to extend beyond the central business district into the residential sections of Wilkes-Barre.



Streetmix image of Proposed Main Street Sharrows

Washington Street – In the downtown Wilkes-Barre vehicular circulation pattern, Washington Street is the sister one-way major collector street to Franklin with traffic moving southwest with parallel parking on one side of the street. Washington Street differs in that the use is more commercial and office use with little to no vegetated buffer between the buildings and sidewalks. The James F. Conahan Intermodal Transportation Center, which includes the Martz Terminal, is located on Washington Street.

A similar two-way cycle track used on Franklin is proposed on Washington. The street would be reduced to one vehicular lane with the cycle track on the left-hand or southeast side of the street and parking on the right-hand or southwest side. At the intermodal center, careful consideration to all modes of transportation will need to be addressed. Bicycle access and accommodations are recommended at the intermodal terminal. Any future planning of Washington Street to make it a two-way vehicular street will need to include bicycle facilities.

Pennsylvania Avenue – Pennsylvania Avenue is a busy two-way, four-lane principal arterial street with turning lanes at intersections. Sharrows and bicycle boxes at intersections are proposed on this street for the advanced cyclist. This bicycle facility treatment is proposed to extend out beyond the downtown business district.

In the Proposed Downtown Wilkes-Barre Bicycle Facilities, bikes lanes are proposed on many of the streets that connect River Street to Pennsylvania Avenue.

South Street – The southwest boundary of the Downtown Central Business District of Wilkes-Barre is identified by the minor arterial

South Street. South Street has varying conditions in the Business District—including cartway widths between 30 and 75 feet wide, no parking to parking parallel and angled parking, and sections of the street that have a center island.

South Street between River and Main – This section of Main Street is 30 feet wide with two-way traffic and two lanes. There is a turning lane at the intersections and limited parallel parking between intersections. Due to the narrow cartway of these two blocks, sharrows in combination with a bike lane are proposed on the section of South Street between River Street and Main Street. The parallel parking would need to be removed on this section and the bike lane would be located on the southwest side of the street.

The portion of South Street between *Main Street and Pennsylvania Avenue* is wide. It expands from 36 feet to 75 feet wide with parallel parking on one block and angled parking on one block. The two-lane road expands to four lanes with a concrete median and an additional turning lane at the intersections. Bike lanes with buffers are proposed in this section of South Street. The parallel parking is to remain, placing the bike lane between the parking and curb with an additional buffer between the bike lane and parking. The angled parking is to become parallel parking.

Northampton Street is another street with varying conditions, including one-way sections, two-way sections, and widths between 30 and 42 feet. North of Pennsylvania Avenue, Northampton Street is a major collector street and south of Pennsylvania Avenue is a minor arterial street. These varying conditions necessitate the use of different types of bicycle facilities.

The section of *Northampton between River and Franklin* is a one-way, two-lane street with parking on the right-hand side. The cartway is 30 feet. A two-way cycle track is proposed as a connection between the cycle tracks on River and Franklin. The Northampton Street cycle track will replace the vehicular lane on the left-hand or northeast side of the street. Parallel parking will remain on the right-hand or southeast side of the street. Any future planning of this block to change to a two-way street shall include accommodation of bicycle facilities and evaluate the need of on-street parking.

The cartway on *Northampton Street between Franklin and Main* expands to 38 feet and becomes a two-way street with parallel parking on one side. The section *between Main Street and Washington Street* varies between 33 and 38 feet with a 26-foot wide pinch point at Nesbitt Lane. Sharrows are proposed for this two-block long section of Northampton Street.

Between *Washington and Pennsylvania*, Northampton Street widens to 41 feet and expands to three lanes without any parking. Sharrows, bicycle boxes, and one bike lane are proposed to start at Washington and extend out beyond the Central Business District.

Market Street Bridge – The Market Street Bridge is a Classical Beaux-Arts style bridge with grand wide sidewalks and arches seen as you approach the downtown from Kingston. The sidewalks are 20 feet wide and span the length of the bridge with period style lighting. However, the arches at the city entry are a pinch point that narrows the walkway down to 9.5 feet. The bridge cartway of this principal arterial street is 54 feet wide accounting for five lanes of traffic: three entering the city, and two leaving. The bicycle facilities proposed on the Market Street Bridge are bike lanes located on the walkway. Cyclists will need to be encouraged to dismount and walk their bikes through the arches.

West Market Street – The cartway along West Market Street is 33 feet. There are two lanes exiting the city from Public Square and one lane entering the Square. This busy three-lane principal arterial street is proposed to have sharrows for experienced cyclists.

Public Square – This dynamic, one-way vehicular square is a principal arterial street and the center square accommodates a number of uses. The center public space is frequently used for public events, including a farmers market two days a week during the warmer months, and other festivals and music events. Parallel parking hugs the inner square and angled parking flanks the outside edge. A bike lane is proposed around the Square. However, a more in-depth traffic study is necessary to properly locate the bike lane and adjust vehicular traffic. Traffic signals will need to be upgraded with a cycle for bicycles.

East Market Street – Between Public Square and Pennsylvania Avenue, East Market Street ranges between two and four lanes with limited parallel parking near Public Square. The proposed bicycle facilities on this street are bike lanes flanking each side of the street separated by reflective flexible traffic delineators. The driving lanes will be two lanes—one in each direction with left-turn center lanes. The block adjacent to Public Square does not necessitate a turning lane. Instead, the limited parallel parking can remain on one side of the street.

West Union Street – Between *River Street and Franklin Street*, West Union is a one-way street heading towards River Street. There are two lanes of traffic and parallel parking—except at River Street when parking is exchanged for an additional left turn lane. Between *Franklin and* Main, the cartway expands to 42 feet. West Union becomes a two-way street with two lanes in each direction and parallel parking on one side. Between *Main and Washington*, West Union expands even further

to 51 feet for parking on both sides of the street. Between Washington and Pennsylvania, the cartway narrows to 32 feet. It continues to be a two-way street, but there is no parallel parking. Sharrows are proposed on West Union Street.

Bennett Street – Bennett Street is a small two-block alley between North Main and Pennsylvania. It is a one lane one-way street with parallel parking. However, the traffic direction of each block opposes the other. Sharrows are proposed on Bennett Street.

Jackson Street – On the northeast end of the central business district, Jackson Street is a one-way, two-lane, low volume road connecting River Street and Pennsylvania Avenue. A two-way cycle track is proposed on the left-hand or northeast side of the street in place of one vehicular lane.

North Street Bridge – This busy and prominent principal arterial bridge on the north corner of the city has two lanes of traffic in each direction, separated by a 4-foot high concrete barrier. The proposed bicycle facilities on this bridge are a bike lane in each direction. By narrowing the traffic lanes, a bike lane can fit in each direction.

North Street – North Street is a two-lane, two-way principal arterial street varying between 31 and 40 feet in width. There are turning lanes at intersections. No parallel parking is located on North Street. The proposed bicycle facilities vary on North Street due to the dramatic changes in width. Between *River Street and mid-block between Franklin and Main*, bike lanes are proposed on each side of the street. They are also proposed between *Franklin and Washington*. However, due to the narrower street conditions located from *mid-block between Franklin and Main* and east to *Washington and Pennsylvania*, bike lanes will not fit. Therefore, sharrows are proposed.

D&L Trail Alignment in the Central Business District

Based on the 2010 study titled *City of Wilkes-Barre Trail / Greenway Feasibility / Master Plan* and discussions with the Delaware and Lehigh National Heritage Corridor, the D&L Trail is proposed to enter the Central Business District along the abandoned railroad bed between Pennsylvania Avenue and Wilkes-Barre Boulevard. Appendix D contains a write-up from a site visit with the Delaware and Lehigh National Heritage Corridor and local officials from Ashley Borough. A trailhead is proposed at the historic train station on Wilkes-Barre Boulevard. The street network will be utilized to connect to the completed section of the D&L Trail that sits between the Susquehanna River and the levee

and the Luzerne County Levee Trail on the Kingston side of the river. This study proposes a pedestrian route and a cyclist-friendly route through the Central Business District of Downtown Wilkes-Barre to the trails along the Susquehanna River.

From the proposed alignment of the D&L Trail along the railroad corridor between Pennsylvania Avenue and Wilkes-Barre Boulevard in the southwest corner of the central business district, the trail can connect via any street with the central business district. The most direct route for pedestrians would be via Market Street to River Street and to the Market Street trailhead on the Kingston side. However, this route is not recommended for cyclists. The following bicycle friendly route is proposed through the central business. The D&L Trail (a multiuse trail) should continue on the railroad alignment to Market Street. The preferred bike route would then use the proposed bike lanes on Market Street to access the cycle track on Washington Street. To access the intermodal center on Washington Street, cyclists would turn left, or southwest, onto the Washington Street cycle track. To continue to the D&L Trail, cyclist would turn right, or northeast, onto the Washington Street cycle track to the Jackson Street cycle track and proceed to River Street. At River Street cyclist would turn left, or southwest, at the mid-block crossing onto the River Street cycle track and proceed to the levee portal at Millennium Circle. Cyclist will then dismount and walk their bicycles through the portal to the D&L Trail.

To access the Luzerne County Levee Trail Section of the D&L Trail (on the Kingston side of the Susquehanna River), cyclists continue on the River Street cycle track to Market Street bridge, cross the Susquehanna River on Market Street Bridge, and access the D&L Trail via the Market Street trailhead.

Downtown Wilkes-Barre Phasing Plan and Opinion of Probable Costs

The bicycle facility improvements to downtown Wilkes-Barre are proposed to be phased in to spread the cost of design, engineering, coordination, and construction over five phases. Basic changes to the streetscape occur in early phases—while more complex engineering and coordination and higher price tag projects are proposed for later phases.

The phasing plan developed for Wilkes-Barre was proposed to introduce a usable network early in the implementation of the bicycling and pedestrian improvements. The network will then be enhanced by providing facilities that are friendly to pedestrians and cyclists of all abilities and skills.

The Opinion of Probable Cost has been prepared for the proposed pedestrian and bicycle network. These estimates are conceptual in nature to help identify estimated construction costs to assist in securing grant funding and budgeting for future phases. These costs have been developed based on the findings in this report prior to the beginning of any detailed design / engineering.

The opinion of probable costs has been developed to match the phasing plans. The estimate provides the client a phase-by-phase breakdown. Each phase indicates the location, type of improvement, and estimate cost. The itemized estimates, developed to complete the summary, can be found in Appendix C of this report. These estimates are provided on a street-by-street basis.

While this report is proposing a phased construction project, there is a savings associated with completing two or more phases at one time. These savings are a result of a lesser number of designs, bidding, mobilization, and traffic control costs. An estimated savings is shown with each phase as if the project were completed in a single phase.

Phase 1 includes the incorporation of **sharrows** on roadways that will be permanently used as a shared roadway or as an intermediary until a dedicated bicycle facility has been developed. The sharrows have a short construction duration with minimal disruption to traffic and adjacent homes, businesses, and cultural centers. They also come at a minimal cost to implement, making the sharrows a simple first step to the bicycle network. Sharrows are proposed on the following streets:

- Pennsylvania Avenue
- Main Street
- Ross Street
- South Street
- Northampton Street
- Market Street
- Union Street
- North Street

Phase 1 also includes the sidewalk improvements on the Market Street bridge for the bicycle and pedestrian facilities and signage for the D&L bike route.

Phase 1 sharrow improvements are anticipated to cost between $189,000 to $264,000 if each street is improved individually. By completing the work in one phase, there is a cost savings of $20,000 to $30,000. Table 5 below shows the street by street cost. Detailed estimates by street are located in Appendix C.

Table 5 – Phase 1 Opinion of Probable Costs			
#	Location	Improvement	Estimated Cost
1	Market Street Bridge	Bicycle Lanes / Shared Sidewalk	$5,000 – 7,000
3	W. River Street	Sharrows	$7,000 – 10,000
6	Ross Street	Sharrows	$7,000 – 10,000
7	W. South Street	Sharrows	$7,000 – 10,000
9	W. Market Street	Sharrows	$5,000 – 7,000
14	Wilkes University Greenway	Multi-Use Sidewalk	$2,000 – 4,000
15	Northampton Street	Sharrows	$10,000 – 15,000
16	Main Street	Sharrows	$25,000 – 35,000
18	Bennett Place	Sharrows	$5,000 – 7,000
19	Union Street	Sharrows	$5,000 – 7,000
20	W. North Street	Sharrows	$2,000 – 4,000
21	Ross Street	Sharrows	$15,000 – 20,000
23	St. Mary's Lane	Sharrows	$5,000 – 7,000
26	Butler Lane	Sharrows	$5,000 – 7,000
30	E. Northampton Street	Sharrows	$7,000 – 10,000
31	Pennsylvania Ave	Sharrows	$45,000 – 60,000
32	E. Union Street	Sharrows	$5,000 – 7,000
33	E. North Street	Sharrows	$7,000 – 10,000
34	E. Northampton Street	Sharrows	$15,000 – 20,000
35	Scott Street	Sharrows	$5,000 – 7,000
		Total for Phase 1	**$189,000 – 264,000**
Potential cost savings if completed as a single project			($20,000 – 30,000)

Phase 2 includes **cycle track** facilities on **Franklin** and **Washington streets**, connecting the sharrow system of Phase 1 to traverse the city in an east-west direction. **Bicycle lanes** are also proposed on **Market Street** (between Public Square and Wilkes-Barre Boulevard) to connect the south side beyond the downtown, to the Square, to connect into the sharrow system. Additional bike lanes are proposed on the following street segments to improve the cycling experience:

- Ross Street between West River and South River streets
- Ross Street between Main and Washington streets
- Northampton Street between Pennsylvania Avenue and Wilkes-Barre Boulevard
- Union Street between Franklin Street and Main Street

Phase 2 includes the signage for the D&L bike route on Market Street between Wilkes-Barre Boulevard and Washington Street and Washington Street between the intermodal center and Jackson Street. Temporary signage will need to be placed along River Street to encourage cyclists to walk their bikes along the sidewalk to Millennium Circle.

The estimated cost of the phase 2 cycle tracks on Franklin and Washington streets and various bike lanes is $530,000 to $650,000. By completing the work in one phase, there is a $35,000 to $50,000 cost savings. A detailed estimate is located in Appendix C.

Table 6 – Phase 2 Opinion of Probable Costs			
#	*Location*	*Improvement*	*Estimated Cost*
4	W. Ross Street	Bicycle Lane	$10,000 – 15,000
13	Franklin Street	Two-Way Cycle Track	$190,000 – 220,000
17	Public Square	Bicycle Lanes	$45,000 – 65,000
19	Union Street	Bicycle Lane	$15,000 – 20,000
21	Ross Street	Bicycle Lane	$15,000 -20,000
24	Washington Street	Two-Way Cycle Track	$200,000 – 230,000
25	E. Market Street	Bicycle Lane	$40,000 – 60,000
34	E. Northampton Street	Bicycle Lane	$15,000 – 20,000
		Total for Phase 2	**$530,000 – 650,000**
Potential cost savings if completed as a single project			(35,000 – 50,000)

Phase 3 includes a **cycle track** facility along **River Street** and one block of **Northampton Street**. The improvements along River Street will include significant site upgrades and lane adjustments to create a safer corridor and enhance the street experience for all users and signage for the D&L bike route through the central business district.

The estimated cost of the phase 3 cycle tracks on River and Northampton streets is estimated between $935,000 to $1,045,000. By completing the work in one phase, there is a $20,000 to $25,000 cost savings. A detailed estimate is located in Appendix C.

Table 7 – Phase 3 Opinion of Probable Costs			
#	*Location*	*Improvement*	*Estimated Cost*
5	River Street	Separated Cycle Track	$900,000 – 1,000,000
8	W. Northampton Street	Two-Way Cycle Track	$35,000 – 45,000
		Total for Phase 3	**$935,000 – 1,045,000**
Potential cost savings if completed as a single project			($20,000 – 25,000)

Phase 4 includes **bicycle lanes** on **North Street Bridge** and along **North Street** to extend the network into Kingston and to connect the east side of the city. In addition, under Phase 4, a **cycle track** is proposed along

Jackson Street to connect the **River Street** cycle track to Pennsylvania Avenue—in turn, completing the cycle track network and the D&L route through the central business district.

The estimated cost of the phase 4 is estimated between $190,000 to $235,000. By completing the work in one phase, there is a cost savings of $25,000 to $35,000. A detailed estimate is located in Appendix C.

Table 8 – Phase 4 Opinion of Probable Costs			
#	Location	Improvement	Estimated Cost
2	North Street	Bicycle Lanes (both directions)	$50,000 – 60,000
11	Jackson Street	Two-Way Cycle Track	$100,000 – 125,000
12	W. North Street	Bicycle Lane	$25,000 – 30,000
29	E. North Street	Bicycle Lane	$15,000 – 20,000
		Total for Phase 4	**$190,000 – 235,000**
Potential cost savings if completed as a single project			($25,000 – 35,000)

Phase 5 includes **bicycle lanes** on **South Street** and **Union Street** to complete the bicycle network and to connect the facilities completed in prior phases.

The estimated cost of the phase 5 bicycle lanes is estimated between $100,000 to $125,000. By completing the work in one phase, there is a $15,000 to $25,000 cost savings. A detailed estimate is located in Appendix C.

Table 9 – Phase 5 Opinion of Probable Costs			
#	Location	Improvement	Estimated Cost
10	W. Union Street	Bicycle Lane	$15,000 – 20,000
22	South Street	Bicycle Lane	$50,000 – 60,000
27	E. Union Street	Bicycle Lane	$15,000 – 20,000
28	E. Bennett Street	Bicycle Lane	$20,000 – 25,000
		Total for Phase 5	**$100,000 – 125,000**
Potential cost savings if completed as a single project			($15,000 – 25,000)

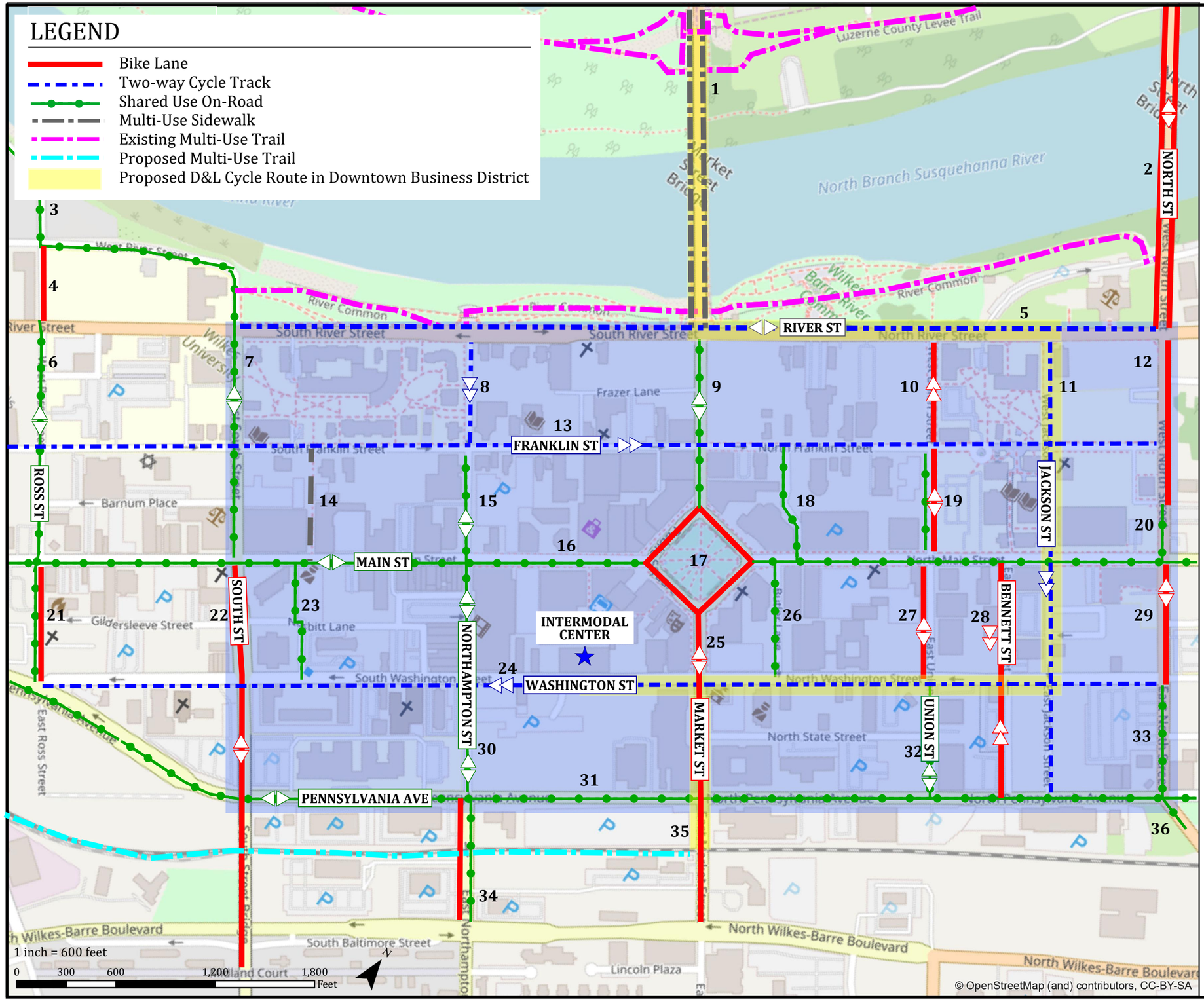
Summary of Key Recommendations

The proposed downtown Wilkes-Barre bicycle and pedestrian improvements aims to create a safe and accessible walking and cycling network for pedestrians and cyclists of all ages, abilities, and skills. Next steps in the plan will take careful coordination between the County, state agencies, and development groups. An advisory group of

stakeholders can help with the implementation of the plan by leading the communication between the public and governing bodies.

Key Recommendations for Wilkes-Barre Improvements

- Both Luzerne County and City of Wilkes-Barre assign a bicycle and pedestrian staff person.
- Institute a bicycle and pedestrian advisory committee.
- Develop partnership with Delaware and Lehigh National Heritage Corridor to facilitate the D&L Trail improvements within the central business district and partner with local municipalities and organizations to acquire, design/engineer, and construct the trail from Laurel Run to downtown Wilkes-Barre.
- Establish a public education campaign for pedestrians, cyclists, and motor vehicles.
- Adopt ordinances that require the inclusion of pedestrian and bicycle facilities in new development and redevelopment.
- Adopt ordinances and permits for bike share programs.
- Adopt a comprehensive bicycle and pedestrian plan at county and city level.
- Provide pedestrian and bicycle facilities in capital projects.
- Promote walking and cycling as alternative forms of transportation.
- Train law enforcement on bicycle and pedestrian regulations so they can take enforcement action.
- Continue work with LCTA to improve bicycle and pedestrian facilities at transit facilities.



LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

WILKES-BARRE PROPOSED IMPROVEMENTS

10.08.19 Revised 11.23.2020

PROPOSED BICYCLE INFRASTRUCTURE IMPROVEMENTS

#	*Location*	*Improvement*
1	Market St	Bicycle lanes / shared sidewalk
2	North St	Bicycle lanes (both sides)
3	W River St	Sharrows
4	W Ross St	Bicycle lane
5	River St	Separated cycle track
6	Ross St	Sharrows
7	W South St	Sharrows
8	W Northampton St	Two-way cycle track
9	W Market St	Sharrows
10	W Union St	Two-way cycle track
11	Jackson St	Two-way cycle track
12	W North St	Bicycle lane
13	Franklin St	Two-way cycle track
14	Wilkes U. Greenway	Multi-use sidewalk
15	Northampton St	Sharrows
16	Main St	Sharrows
17	Public Square	Bike lanes
18	Bennett Pl	Sharrows
19	Union St	Bicycle lanes / sharrows
20	W North St	Sharrows
21	Ross St	Bicycle lanes / sharrows
22	South St	Bicycle lane
23	St Mary's Ln	Sharrows
24	Washington St	Two-way cycle track
25	E Market St	Bicycle lane
26	Butler Ln	Sharrows
27	E Union St	Bicycle lane
28	E Bennett St	Sharrows
29	E North St	Bicycle lane
30	E Northampton St	Sharrows
31	Pennsylvania Ave	Sharrows
32	E Union St	Sharrows
33	E Union St	Sharrows
34	E Northampton St	Bicycle lane / sharrows
35	D&L Trail Bike Route	Signage
36	Scott St	Sharrows

BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT&C

LACKAWANNA LUZERNE MPO

Downtown Scranton & Wilkes-Barre Bicycle Study

WILKES-BARRE PROPOSED IMPROVEMENTS

10.08.19 Revised 11.23.2020

PROPOSED BICYCLE INFRASTRUCTURE IMPROVEMENTS

#	*Location*	*Improvement*
1	Market St *	Bicycle lanes / shared sidewalk
2	North St	Bicycle lanes (both sides)
3	W River St	Sharrows
4	W Ross St	Bicycle lane
5	River St *	Separated cycle track
6	Ross St	Sharrows
7	W South St	Sharrows
8	W Northampton St	Two-way cycle track
9	W Market St	Sharrows
10	W Union St	Two-way cycle track
11	Jackson St *	Two-way cycle track
12	W North St	Bicycle lane
13	Franklin St	Two-way cycle track
14	Wilkes U. Greenway	Multi-use sidewalk
15	Northampton St	Sharrows
16	Main St	Sharrows
17	Public Square	Bike lanes
18	Bennett Pl	Sharrows
19	Union St	Bicycle lanes / sharrows
20	W North St	Sharrows
21	Ross St	Bicycle lanes / sharrows
22	South St	Bicycle lane
23	St Mary's Ln	Sharrows
24	Washington St *	Two-way cycle track
25	E Market St *	Bicycle lane
26	Butler Ln	Sharrows
27	E Union St	Bicycle lane
28	E Bennett St	Sharrows
29	E North St	Bicycle lane
30	E Northampton St	Sharrows
31	Pennsylvania Ave	Sharrows
32	E Union St	Sharrows
33	E Union St	Sharrows
34	E Northampton St	Bicycle lane / sharrows
35	Scott St	Sharrows

** Denotes portion of the street is the D&L bike route through the CBD*

LEGEND

- Bike Lane
- Two-way Cycle Track
- Shared Use On-Road
- Multi-Use Sidewalk
- Multi-Use Trail
- Proposed Multi-Use Trail

PHASE 1
PHASE 2
PHASE 3
PHASE 4
PHASE 5

1 inch = 600 feet

0 300 600 1,200 1,800 Feet

BARRY ISETT & associates INC
MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

CT&C

Sheet 1

EXISTING CONDITIONS ON RIVER ST. IN WILKES-BARRE

(SOUTH STREET TO MARKET ST.)

NORTH

NORTH

Sheet 2

EXISTING CONDITIONS ON RIVER ST. IN WILKES-BARRE

(MARKET ST. TO NORTH ST.)

NORTH

NORTH

PROPOSED CYCLETRACK ON RIVER ST. IN WILKES-BARRE

(SOUTH STREET TO MARKET ST.)

(THIS IS A DRAFT CONCEPT THAT WILL REQUIRE FURTHER PLANNING, DESIGN AND ENGINEERING)

NORTH

Proposed bike lane on South St.

Two-way protected cycle track

Enhanced pedestrian crossings

NORTH

Tie into cycle track on Northampton St.

Cycle track protected by planted buffer

PROPOSED CYCLETRACK ON RIVER ST. IN WILKES-BARRE

(MARKET ST. TO NORTH ST.)

(THIS IS A DRAFT CONCEPT THAT WILL REQUIRE FURTHER PLANNING, DESIGN AND ENGINEERING)

NORTH

Pedestrians and bicyclists cross Market St. at the narrowest location. Planted buffers protect cyclists from turning vehicular traffic.

Enhance existing pedestrian crossings

Two-way protected cycle track

NORTH

Tie into bike lane on Union St. via bicycle box

Cycle track protected by planted buffer

Bicycle box to aid transition from cycle track to bike lanes