Multimodal Transportation Planning Work Program

City of Norfolk - Department of Transit
March 2021
Bike-Pedestrian Counters

Background & Objective

The City of Norfolk is initiating a Bike-Pedestrian Counter Program to provide a reliable method of data collection. The automatic counting equipment will provide continuous count data for bicycles and pedestrians and will be used by the city’s planners, government, and other bicycle and pedestrian organizations to understand the trends of these two alternative transportation modes in the city. Walking and biking are key elements in a multimodal transportation system, and if Norfolk aspires to become a multi-modal city, it needs to ensure a safe and comfortable environment for pedestrians and bicyclists.

These new counters will be an addition to the six counters the City already has. In order to plan better for infrastructure projects, to appropriately prioritize improvements, and to justify investments regarding bicycles and pedestrians, more counters are needed to collect the necessary data. For instance, the number of people walking and biking in particular areas can be linked with crash data and therefore highlight the areas needed for improvements to make walking and biking safer. Not only will the counters be used to understand the patterns of pedestrians and bicyclists, but they will also be used for performance measures from new investments. In addition, the use of the counters can help Norfolk achieve a Silver award through the League of American Bicyclists as a symbol for being a bicycle-friendly city. Norfolk currently has a Bronze award.

This project is linked with the Norfolk Bicycle & Pedestrian Strategic Plan, which strives to make walking and biking more comfortable and more connected in the city. The new Bike-Ped Counter Program is a 5-year program with 32 total locations (15 on existing bike lanes & trails and 17 on future bike lanes) with the hope of prompting new plans to improve the city’s walkability and bikeability.

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### Work Elements

**PHASE 1 – Existing Bike Lanes**

- **Existing Conditions:** Map locations of existing bike lanes & counters
- **Proposed Counters:** Map locations of proposed counter along existing bike lanes
- **Approve proposed counter locations & choose vendor and installer
- **Site survey of each proposed counter location
- **Installation of 15 counters**

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### EXISTING bike-ped counters

<table>
<thead>
<tr>
<th>ID</th>
<th>LOCATION</th>
<th>OWNERSHIP</th>
<th>TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Plum Point Park (ERT)</td>
<td>Eco Counter / ERT owned</td>
<td>bike/ped</td>
</tr>
<tr>
<td>02</td>
<td>Larchmont Library (ERT)</td>
<td>Eco Counter / ERT owned</td>
<td>bike/ped</td>
</tr>
<tr>
<td>03</td>
<td>Park Ave/Claiborne Ave (ERT)</td>
<td>Eco Counter / ERT owned</td>
<td>bike/ped</td>
</tr>
<tr>
<td>04</td>
<td>E. Ocean View Avenue</td>
<td>Eco Counter / City owned</td>
<td>bike/ped</td>
</tr>
<tr>
<td>05</td>
<td>ERT Bridge/Lamberts Point</td>
<td>Eco Counter / City owned</td>
<td>bike/ped</td>
</tr>
<tr>
<td>06</td>
<td>Weyanoke Footbridge</td>
<td>Eco Counter / City owned</td>
<td>bike/ped</td>
</tr>
<tr>
<td>07</td>
<td>E. Ocean View Avenue</td>
<td>Roadsys / City owned</td>
<td>bike/ped</td>
</tr>
<tr>
<td>08</td>
<td>E. Ocean View Avenue</td>
<td>Roadsys / City owned</td>
<td>bike</td>
</tr>
<tr>
<td>09</td>
<td>7th View Street</td>
<td>Roadsys / City owned</td>
<td>bike</td>
</tr>
<tr>
<td>10</td>
<td>Church Street</td>
<td>Roadsys / City owned</td>
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</tr>
<tr>
<td>11</td>
<td>W. Ocean View Avenue</td>
<td>Roadsys / City owned</td>
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</tr>
<tr>
<td>12</td>
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<tr>
<td>13</td>
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</tr>
<tr>
<td>15</td>
<td>Lafayette Boulevard</td>
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</tr>
<tr>
<td>16</td>
<td>Lafayette Boulevard</td>
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<td>bike</td>
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<tr>
<td>17</td>
<td>W. Olney Road</td>
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<td>bike/ped</td>
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<tr>
<td>19</td>
<td>W. 35th Street</td>
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</tr>
<tr>
<td>20</td>
<td>W. 26th Street</td>
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<td>bike</td>
</tr>
<tr>
<td>21</td>
<td>W. 27th Street</td>
<td>Roadsys / City owned</td>
<td>bike</td>
</tr>
</tbody>
</table>
PHASE 2 – Future Bike Lanes

Future Counter:
Map locations of future bike lanes & counters

Approve proposed counter locations

Site survey of each proposed counter location

Installation of 17 counters

Deliverables

1. Development & release of RFP – seeking a vendor to deliver and maintain bike-ped counters


3. Installation of Phase 1 bike-ped counters – W. Ocean View Avenue (1), 7th View Street (1), E. Ocean View Avenue (2), Church Street (1), Llewellyn Avenue (3), Lafayette Boulevard (2), Olney Road (2), 35th Street (1), 26th Street (1), 27th Street (1)

4. Installation of Phase 2 bike-ped counters

5. Bicycle and pedestrian data to be collected with the newly installed counters. Used to understand the trends of bicycling and walking in these areas of the city (example data on right).

Schedule

<table>
<thead>
<tr>
<th>Target Completion Date: March 2021 (Phase 1)</th>
<th>Completed</th>
<th>In Progress</th>
<th>Upcoming</th>
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</thead>
<tbody>
<tr>
<td>Map of existing &amp; proposed counters</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Approval of proposed counter locations</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selection of Vendor and Installer</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order &amp; delivery of counters</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1 site survey</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 1 installation</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Phase 2 data collection to determine location of future counters</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Phase 2 site survey</td>
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<td></td>
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<tr>
<td>Phase 2 installation</td>
<td>X</td>
<td></td>
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</tr>
</tbody>
</table>

Participants

Project Manager: Evandro Santos

Transit planning team
- Matt Straley – Created maps of existing and proposed counters & gained access to the website feed that collects/stores the counter data
- Anna Dewey – Will help with installation & data collection

Bike-Ped Trails Commission
Public Works Department
Vendor: Roadsys Inc.
Installer: Virginia Sign and Lighting (VSL)

Funding

$132,000 (CIP funds) + $16,000 (sensor placement/electronics activation) = $148,000

$60,000 (installation)

Account # 4000 10 4194 5303
Background & Objective

To further the goal of becoming a multi-modal city, the City of Norfolk has prepared a new RFP to obtain docked and/or dockless electric-assisted bikes as a new bike share program. The new program will not only benefit visitors to Norfolk by allowing them to explore the city in a cost-effective manner, but it will also benefit residents. The bike share program will provide another means of transportation for residents' daily trips and it will also allow them to access transit stops more easily (instead of always having to walk). When planning for public transit, it is important to consider the first and last-mile access to the stops as these are the ways in which people get to/from their destinations. Not being able to easily access a transit stop may prevent potential riders from using the bus. The new bike share program will give residents an alternative for these first and last-mile trips and will make transit more convenient.

Vendors will be allowed to apply for either a docked or dockless Electric-Assisted Bike Share program. All vendor proposals will be considered, and a committee will select the winner. The City of Norfolk previously had a bike-share program, but the vendor failed to renew its contract with the city in early 2020. Therefore, the new Electric-Assisted Bike Share is set to replace the former program and will likely introduce a new bike-share concept to the city, a dockless concept, which is the same kind of model used with the Lime scooters. These bike-share programs will strengthen Norfolk as a bike-friendly city as it looks to embrace its multi-modal future.

This project is also linked to the Norfolk Bicycle & Pedestrian Strategic Plan goal of improving the experience and the environment for walking and biking in Norfolk.

Work Elements

Development & release of original combined RFP – released in April 2020, but no applicants applied

Development & release of new RFP – seeking a vendor to implement, maintain, and operate an e-bike share program

Data collection & map of existing bike rack locations (map on left) & map of locations of recommended on-street parking corrals for e-bikes

Phase 1 – installation & launch of new bike share program with electric-assisted bikes

Phase 2 – expansion of program along the city’s bike network with more e-bike corral parking locations identified

*Data collected from DNC, ODU, Parks & Rec Department, and HRT
Deliverables

1. Electric-Assisted Bike RFP – vendors can apply for a docked or dockless Electric-Assisted Bike Share Program

2. Installation and launch of Phase 1, including approval of on-street parking corral locations for dockless e-bikes (map on right)

Example design of on-street e-bike corral parking (also allows e-scooters)

Schedule

<table>
<thead>
<tr>
<th>Target Completion Date: Summer 2021 (Phase 1)</th>
<th>Completed</th>
<th>In Progress</th>
<th>Upcoming</th>
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<tbody>
<tr>
<td>Data collection &amp; map of existing bike rack locations</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Approval of on-street corral locations</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stripping of 23 initial on-street parking corrals</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release of new Electric-Assisted Bike RFP</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selection of vendor</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Phase 1: launch of new bike-share program</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Phase 2: expansion of bike-share program</td>
<td>X</td>
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<td></td>
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</tbody>
</table>

*January 21, 2021

Participants

**Project Manager: Evandro Santos**

Transit planning team
• Matt Straley – Collected data and mapped existing bike rack locations throughout the City, mapped recommended on-street corral locations & will serve on the selection committee to choose a vendor
• Anna Dewey – Assisting with corral locations and will help with the selection of a vendor & the implementation of the program/public outreach

Bike-Ped Trails Commission
Department of Transit staff
DNC & Norfolk Fire Marshal
Division of Parking
Vendor: TBD

Funding

No Funding (revenue-share program)
Account # 1000 45 310 5307 312
Multimodal Transportation Master Plan (MMTMP)

Background & Objective

The City of Norfolk is currently developing a Multimodal Transportation Master Plan, which is a comprehensive study of the city’s transportation system with the aim of reimagining travel in the city to make daily trips safer and more convenient – for all modes. This project examines the existing conditions of the city in terms of demographics, walkability, activity density (job + residential density) as well as the existing bus service. In addition to the bus network, pedestrian and bicycle accessibility and infrastructure needs are taken into consideration and will be incorporated into the Multimodal System Plan section of the MMTMP.

The main objective of this Master Plan is to better connect the way residents and visitors travel throughout the city and the region by foot, bike, scooter, bus and car in the short, medium, and long-term. Norfolk has a bus system in place, but its slow and inconvenient service puts residents who use it at a disadvantage. In order for Norfolk to compete with other American cities as a place where residents and businesses want to locate, it needs to make important transportation investments to not only ensure the safety of its residents, but to also give people the freedom and the choice to get to where they need to go. This Plan will provide the City with a guide for how to link all modes of transportation to support the safety, freedom, and prosperity of Norfolk and its residents.

The MMTMP is a stand-alone plan that will be used as a resource for future plans and projects in the city. Throughout the development of the MMTMP, many of the city’s current plans have been referenced (PlaNorfolk2030, Downtown Norfolk Plan, Norfolk Bicycle & Pedestrian Strategic Plan, Norfolk Vision 2100, Norfolk Capital Improvement Plan and Multimodal System Design Guidelines) to align the visions and objectives for establishing a healthier and thriving community.

Work Elements

**PHASE 1**

Existing System & Goals for Transit

- Existing Conditions Assessment: evaluation of existing transit network, transit market & transit needs assessment
- Public Outreach: What are the public’s priorities for transit service? What improvements would they like to see for the future of Norfolk’s transit system?

*Image: Current activity density (the density of both jobs & residents)*

**PHASE 2**

Multimodal System Plan & Transit System Redesign

- Multimodal System Plan Draft: preliminary visualization of how a multimodal system can be structured in Norfolk (image)
- Ridership Concept vs. Coverage Concept
  - Public Outreach: How would the public balance the two concepts? What goals from both concepts are most important to the public and how can they be incorporated into the transit system redesign?

**PHASE 3**

Recommended Transit Network Design

- Draft New Network: redrawing of Norfolk’s bus routes using feedback from the public and from other city stakeholders
- Revised Multimodal System Maps: updated maps based on public comments/feedback
  - Public Outreach: Is the new network better for you, your neighborhood, and for the City? If not, how would you change the network?

*Image: Where a person can travel from downtown in the Ridership Concept*
PHASE 4

Implementation Strategy:
Needs Assessment (identifying areas with highest needs)
Program of Projects (timelines of projects)

Public Outreach:
Where are improvements most needed for walking, biking, scootering, and taking transit? What does the public think about the Program of Projects and the Multimodal Plan? Are any changes needed?

Multimodal Transportation Master Plan: finalized

Deliverables

1. Phase 1 – Choices Report, memos, presentations, maps/datasets, and videos for the public

2. Phase 2 – Multimodal System Plan draft, Concepts Report, memos, presentations, maps/datasets, and videos for the public

3. Phase 3 – Recommended Transit Network draft map, revised Multimodal System Plan, Draft New Network Report, memos, presentations, maps/datasets, and videos for the public

4. Phase 4 – Multimodal Transportation Master Plan including Multimodal System Plan, Bike and Pedestrian Master Plan, Multimodal Project Design Framework, Curb Space Management, Data & Technology Strategy, Transit System Redesign, Needs Assessment, Program of Projects & Implementation

Schedule

<table>
<thead>
<tr>
<th>Target Completion Date: October 2021*</th>
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<th>In Progress</th>
<th>Upcoming</th>
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<td>Phase 2: summer 2020</td>
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<tr>
<td>Phase 3: fall &amp; winter 2020</td>
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<tr>
<td>Phase 4: winter 2020 through fall 2021</td>
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<td>X</td>
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</tbody>
</table>

*2025 for continued bus service improvements

Participants

Project Manager: Evandro Santos

Transit planning team
- Matt Straley – Provides data to consultants, modifies website with project updates & helping with survey data entry
- Anna Dewey – Assists with data, maps & public meetings and helping with survey data entry

Consultants: EPR-PC, Jarrett Walker + Associates, AECOM, WPA, VIA

City Council, HRT, City Planning, Division of Parking, Communications Department, stakeholders, DNC

Funding

$995,997 (GF funds)
Account # 1000 45 310 5307 316
Bus Shelter Improvements

Background & Objective

The environment around a transit stop can be the determining factor for attracting potential transit users. Access to transit stops is an essential factor to consider when planning for safe, enjoyable, and convenient trips. If a transit stop is hard to access because of a lack of a sidewalk or a lack of amenities such as a shelter or bench, potential riders may choose not to take transit. Conversely, if the environment around the stop is inviting, safe, and easily accessible, more people may choose to or continue to ride the bus.

The City of Norfolk has generated a citywide bus stop inventory that assessed amenity needs at all bus stops around the city. This inventory was then used to determine which stops have a higher priority/necessity for improvements based on certain criteria (specified in Work Elements). Once these “high priority” stops were identified, a field analysis was conducted to determine which stops to improve with the current amount of available funding. The goal of this project is to enhance the bus stop experience by making it easier for pedestrians to access the stops, making the wait more comfortable with added amenities, and ensuring good connectivity of the stop with nearby pedestrian and bicycle networks. Such improvements have the potential to yield higher ridership as well as higher satisfaction with the overall transit experience.

The bus shelter improvement project is linked with the Multimodal Transportation Master Plan as the inventory and analysis of the stops depends on the new recommended bus network developed for the MMTMP.

![Diagram showing inventory and prioritization of bus stops based on criteria]

The diagram illustrates the inventory of all 628 bus stops (including those from the MMTMP new network) and the prioritization of 117 stops for improvements based on certain criteria (listed below). GIS analyses and field work for each of the 117 priority stops are conducted, followed by the identification of potential improvements and planning-level costs. Preliminary engineering of the top 44 selected bus stops using available funding completes the project.
Deliverables

1. Inventory – list of all bus stops and their amenities in the City of Norfolk based on the new recommended network from the MMTMP

2. Map – citywide map summarizing data collection and field work results

3. Recommendations for improvements – based on the final list of bus stops, planning-related costs, and available funding

4. Improvements – addition of bus shelters and/or other amenities at the top 44 selected bus stops

Schedule

<table>
<thead>
<tr>
<th>Target Completion Date: October 2021</th>
<th>Completed</th>
<th>In Progress</th>
<th>Upcoming</th>
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</thead>
<tbody>
<tr>
<td>Bus stop amenities &amp; ridership data collected by HRT &amp; JWA</td>
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<td></td>
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<tr>
<td>Map of all existing stops for preliminary inventory data collection</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Assessment of amenities for bus stops based on new recommended network</td>
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<tr>
<td>Prioritization &amp; selection of 117 bus stops for field analysis</td>
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<tr>
<td>GIS analyses &amp; field work for each of the 117 priority stops</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Initial list/map of stops to improve &amp; planning-level cost estimates</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Finalizing list of bus stops &amp; recommendations for improvement</td>
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<tr>
<td>Preliminary engineering at top 44 selected bus stop locations</td>
<td>X</td>
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</tr>
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</table>

Participants

Project Managers: Evandro Santos & Debbie Mangiaracina

Transit planning team
- Matt Straley – Collected data on existing amenities, ridership & stop locations, mapped existing stops to use for data review & assisted with selection of top bus stops
- Anna Dewey – Assisted with inventory, developed criteria to prioritize bus stops for field analysis & assisted with selection of top bus stops

Consultant: Kimley-Horn

Transit engineering team – Keith Darrow (in coordination with the pedestrian improvement project)

Funding

$3,000,000 (sidewalks) + $1,200,000 (bus shelters) = $4,200,000 (Urban + CMAQ funds)

Account # TBD
Vision Zero

Background & Objective

Each year there is a steady number of fatal and non-fatal pedestrian and bicycle crashes in Norfolk along all types of roads. This crash data highlights the need for a safer approach to transportation in the city as well as better street design to boost the safety for pedestrians and bicyclists. To ameliorate this problem, the City of Norfolk has adopted a Vision Zero Policy as an approach to eliminate all pedestrian and bicycle fatalities and injuries and to make the city’s streets safer for all users.

City Council has agreed in support that Vision Zero Initiatives be a significant factor in the planning and development of the City’s Multimodal Transportation Master Plan. Incorporating these initiatives will be crucial as the Multimodal Plan takes a comprehensive look at how to redesign Norfolk’s transit network in a safe and convenient way for pedestrians, bicyclists, scooter users and transit riders. In addition to the Multimodal Plan, Vision Zero objectives are being incorporated into other projects around the city. Linking the Vision Zero Policy with several of the city’s transportation projects will help ensure the development and application of specific actions that will work to reduce all fatalities and injuries in the City of Norfolk to zero.

Work Elements

- Public outreach/education campaigns about pedestrian & bicycle safety – maps showing crash data
- Reduction of speed limits to 20 mph for certain residential streets based on DMV traffic speed studies and pilot projects
- Pedestrian crossing upgrades with a goal of zero pedestrian and bicycle fatalities from accidents with cars within city limits
- Compliance with ADA (1980) requirements
- Multimodal Plan (MMTMP) addresses bicycle & pedestrian safety to address Vision Zero Policy

Primary Projects – PLANNING

BICYCLE CRASHES (2019)

BICYCLE CRASHES Heat Map (2019)
Deliverables

1. Public outreach – flyers, videos, maps and other means of communication

2. Vision Zero Strategies - ways in which the City of Norfolk can make changes to infrastructure and traffic safety culture through improvements in data collection, engineering, education/outreach & enforcement

Schedule

<table>
<thead>
<tr>
<th>Target</th>
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<td>Vision Zero Initiatives</td>
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<td>Educating the public about the importance of bicycle &amp; pedestrian safety</td>
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<tr>
<td>DMV meetings for traffic speed control</td>
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<td></td>
</tr>
<tr>
<td>Pedestrian crossing improvements</td>
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<td>X</td>
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<td></td>
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<tr>
<td>Ensuring compliance with ADA requirements</td>
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<td>X</td>
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</tbody>
</table>

Participants

**Project Manager: Evandro Santos**

Transit planning team
- Matt Straley – Created & presented accident data/maps to Bike-Ped Commission
- Anna Dewey – Assisting with public outreach & data collection

City Council
Communications Department (Kelly Straub)
Bike-Ped Trails Commission
Transit engineering team

Funding

$25,000 (GF funds)
*currently $0 due to suspended funding

Account # 1000 45 310 5307 312
Signalized Intersections GIS Asset Management

Background & Work Elements
Signalized intersections and fiber GIS data are used in Lucity (the city’s asset management/work order system) to keep track of all the Department of Transit’s physical assets and work orders assigned to those assets. GIS assets data includes:

- Fiber Cables
- Conduit
- Cabinets
- Traffic Signal Poles
- Traffic Signal Heads
- Pedestrian Push Buttons
- Opticom
- Changeable Message Signs
- Cameras
- Signal Pole Mast Arms
- Signal Cables
- Poles
- Risers
- Junction Boxes
- Aerial Cable Carrier
- Traffic Detectors
- Cabinets
- Signal Cables
- Poles
- Ri

Schedule
On-going – as new intersections go live or as changes are made to existing intersections

Participants
IT-GIS, TOC
Transit engineering team – Rob Brown, John Stevenson, Debbie Mangiaracina, Irina Hoag, Keith Darrow, Olga Beltsar
Transit planning team – Matt Straley

*Image: Example of GIS assets data (signalized intersections & cabinets)

Data Management

Background & Work Elements
Data is an important part of decision making within the Department of Transit. Work being done includes receiving and maintaining data related to Lime e-scooter rides, bike/pedestrian accidents, and bike counters. When asked, the data and associated maps have been presented to department staff as well as to the Bicycle and Pedestrian Trails Commission. Work is also done to ensure that the data is uploaded to Norfolk’s Open Data Portal, so members of the public have access to this information.

Schedule
On-going – Lime data is received monthly, accident & bike counter data can be downloaded at any time

Participants
Lime, Norfolk Open Data Team | Transit planning team – Matt Straley

*Image: Multimodal Norfolk webpage that is frequently updated to provide the public with the most up-to-date information and on-going progress of the project

DOT Website Maintenance

Background & Work Elements
The department’s website is one of the main tools of communication to disseminate information from the Department of Transit to members of the public. Department projects have their own webpages with project scope of work, schedule, maps, contacts, and other relevant information included. Work is done to keep the department’s website up to date to keep the public and other entities informed about the projects and initiatives within the Department of Transit.

Schedule
On-going – as needed

Participants
Communications Department (Kelly Straub & webmaster team), Department of Transit staff
Transit planning team – Matt Straley

*Image: Example of GIS assets data (signalized intersections & cabinets)
Natural Resources & Conservation Data Reviews

Background & Work Elements
Projects receiving federal and state funding are required to look at natural heritage resources and other conservation values within the project area. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations. Using the Virginia Department of Conservation and Recreation’s Natural Heritage Data Explorer, project limits are inserted onto a map and a report is generated on whether resources and conservation values fall within project limits.

Schedule
On-going – as needed

Participants
Department of Transit staff
Transit planning team – Matt Straley

*Image: Map from a Natural Resources & Conservation report. Black rectangle is the project boundary and the red rectangle is the buffer area for the project.

GIS Support

Background & Work Elements
GIS is an important tool for graphical display and it’s also an important aspect of decision making. Work is done to assist staff within the Department of Transit with GIS tasks in support of specific initiatives. GIS work generally involves geocoding, map making, and/or web maps and applications.

Schedule
On-going – as needed

Participants
Department of Transit staff, other City of Norfolk staff
Transit planning team – Matt Straley

*Image (far right): Map of pavement markings throughout Norfolk

*Image (below): pavement markings re-striped July 2020 - January 2021

Pavement Markings

Background & Work Elements
Maintaining pavement markings is an important aspect of maintaining safe streets. The Department of Transit staff did a citywide field verification of all pavement markings and ranked them as green, yellow or red based on condition. GIS was used to make a citywide map of the final rankings. The map is now updated when markings are restriped or when streets are repaved.

Schedule
On-going – as needed

Participants
Department of Transit staff
Transit planning team – Matt Straley

*Image (far right): Map of pavement markings throughout Norfolk

GREEN = Best quality (clear/fresh markings that will not need to be re-striped soon) 47% of markings

YELLOW = Medium quality (not bad enough to re-stripe now but needs monitoring) 32% of markings

RED = Worst quality (markings should be re-striped ASAP) 21% of markings

*Image (below): pavement markings re-striped July 2020 - January 2021

JULY 2020 - JAN. 2021
Traffic Operations Center
Data Update

Background & Objective

The Traffic Operations Center (TOC) has staff who have to field locate aspects of the fiber network and signal-ized intersections when construction is occurring near these items. The signalized intersection information is also used in Lucity (the City’s asset management/work order system) to keep track of all of the department’s physical assets and work orders assigned to those assets. The data TOC is currently using consists of old paper maps and as-builts and requires time-consuming field investigations.

A GIS map has already been created with live data that Matt Straley maintains so the field crews can locate assets more accurately. The aim is to decrease field time for workers and have fewer broken assets.

Work Elements

- Keep department’s fiber network & signal-ized intersection GIS data updated from new installations or upgrades
- Will work with IT & TOC staff to develop an ArcGIS Field application where field staff can locate items using GPS & incorporate back into GIS
- Will create a web application for these assets so field crews can look at these features on their cell phones

Participants

Traffic Operations Center
Transit planning team – Matt Straley

Example of the online map for locators
Ocean View Avenue Comprehensive Traffic Study

**Background & Objective**

The aim of this study is to take a holistic look at Ocean View Avenue with regard to:

- Possible speed limit reduction down from 35 mph
- Investigation of roadway widths for proposed concept layouts – bike lanes & bike/golf cart lanes
- Associated costs for selected alternatives

Prior efforts in the same area involved a lane reduction from Capeview Avenue to 19th Bay Street where a four-lane undivided roadway was redesigned to include a center bi-directional lane, one travel lane each direction, and a buffered bike lane. This bike lane was a result of the City’s Bicycle & Pedestrian Strategic Plan. Now the question is, do we want to continue repurposing lanes westward to 1st View Street and eastward from 19th Bay Street to Shore Drive bridge? There have also been recent citizen requests to allow the use of golf carts on Ocean View Avenue, which are not currently allowed, but will be taken into consideration in this study.

The goal of this project is to encourage and develop a placemaking coastal community through a continued effort to repurpose Ocean View Avenue for bikes (and possibly golf carts).

**Proposed Work Elements**

- **Scope of Work, fees/budget & schedule** produced by Kimley-Horn
- **Literature review of best practice concepts for integrating golf carts**
- **Existing conditions: data collection, field investigations, safety analysis, speed analysis, traffic operations analysis**
- **Future conditions: future volumes & feasibility analysis, traffic operations analysis**
- **Development & evaluation of conceptual alternatives and planning-level cost estimates**

**Deliverables**

1. **Final Corridor Report**

**Schedule**

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<th>Target Completion Date: TBD</th>
<th>Completed</th>
<th>In Progress</th>
<th>Upcoming</th>
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<tr>
<td>Developing fees/budget &amp; schedule</td>
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</tbody>
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**Participants**

- **Project Manager:** Anna Dewey
- **Consultants:** Kimley-Horn, EPR-PC
- Transit engineering team – Rob Brown, John Stevenson
- Transit planning team – Evandro Santos