



North Olden Avenue Extension from New York Ave to Pennington Rd Local Concept Development Study

Ewing Township and City of Trenton, Mercer County, NJ

Local Officials Briefing #3

September 30, 2020



HOUSEKEEPING ITEMS

- Please mute your microphone during the presentation
- Questions will be answered at the end of the presentation
 - Use the Meeting Chat at the bottom of the screen OR
 - Click the Raise Your Hand button

PROJECT TEAM



Project Sponsor & Facility Owner



Funding & Administration



Lead Consultant



Primary Subconsultant

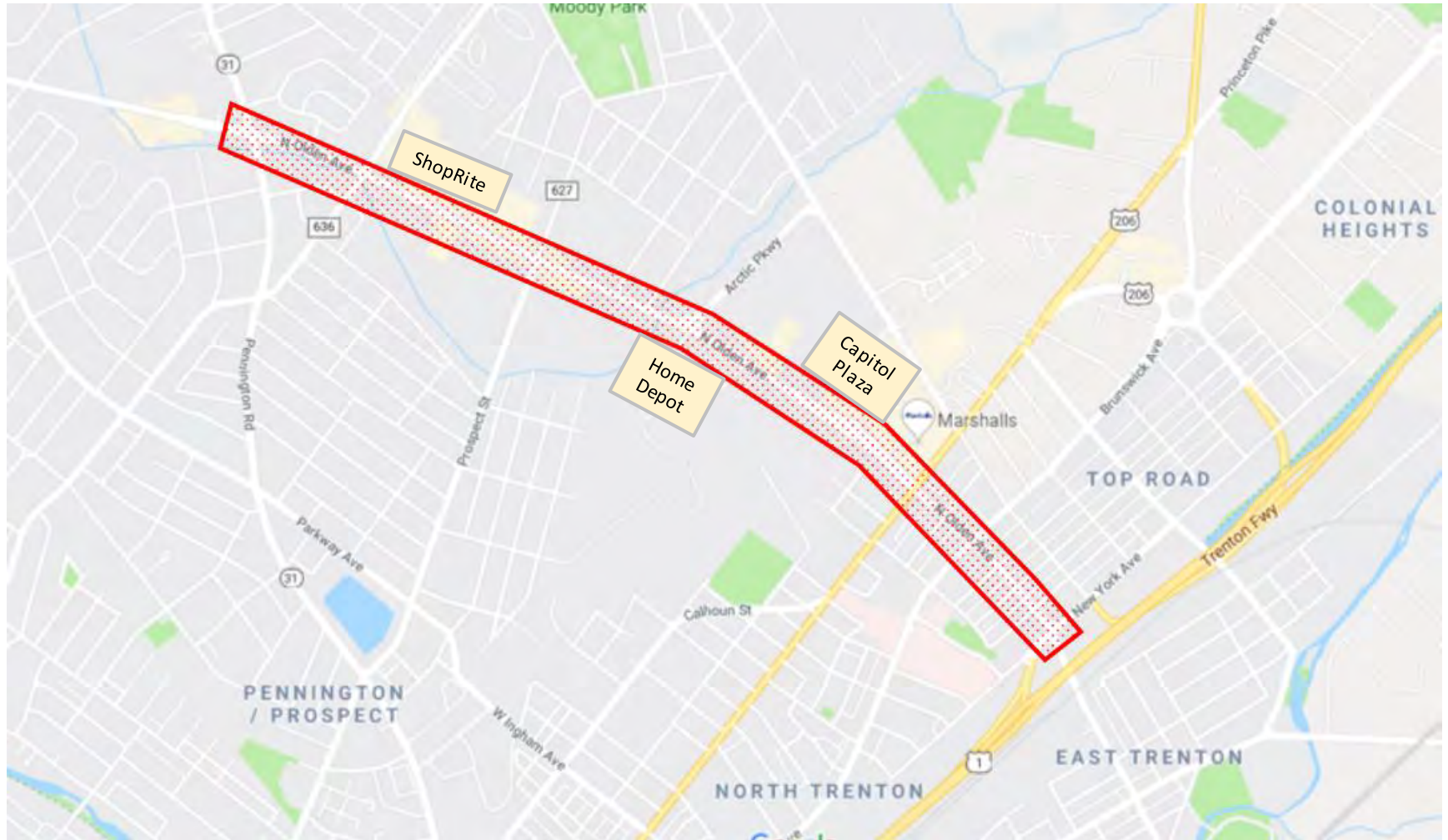


Other Subconsultants

PROJECT BACKGROUND

- Local Concept Development Study was initiated in March 2019
- Corridor is in need of upgrades to improve safety of all roadway users, including motorists, bicyclists, pedestrians and transit users
- Stakeholders Meeting/Public Information Center held on March 10, 2020 to present the corridor alternatives
 - Same alternatives that will be presented today
- Meeting purpose is to present the Preliminary Preferred Alternative (PPA) and obtain feedback

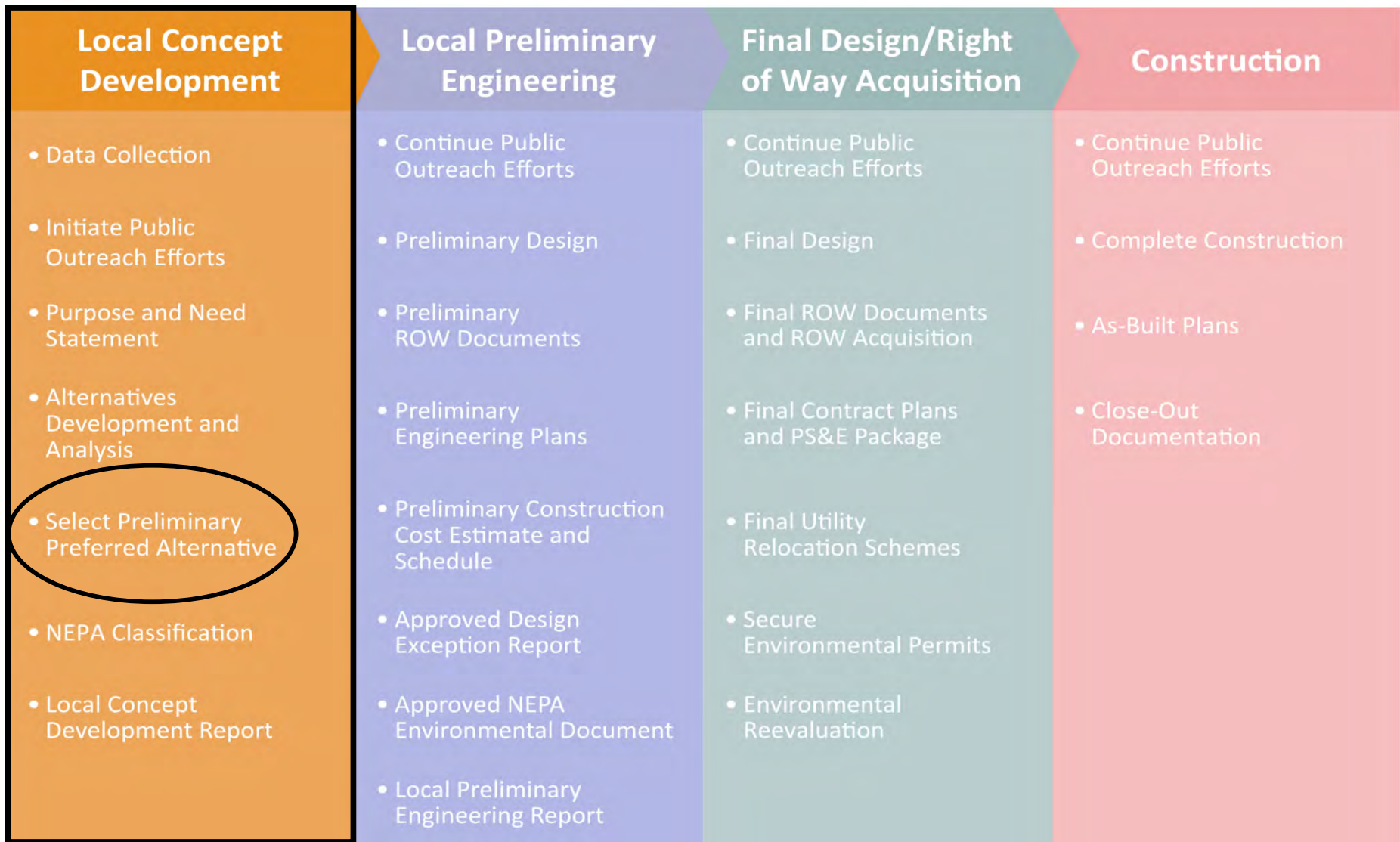
PROJECT LOCATION



N. Olden Avenue from Pennington Road (Route 31) to New York Avenue

- Ewing Township & City of Trenton

LOCAL CAPITAL PROJECT DELIVERY PROCESS

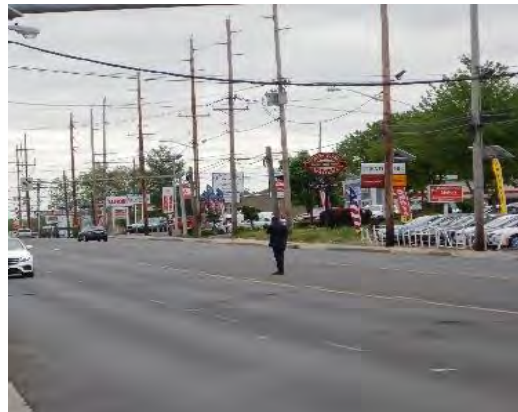


EXISTING CONDITIONS

- Olden Avenue Posted Speed Limit
 - 35 MPH from Pennington Road to Capitol Plaza
 - 25 MPH from Capitol Plaza to New York Avenue
- 2019 Annual Average Daily Traffic = 30,273 veh/day
- Two lanes in each direction with center median left turn lane
 - Pennington Road to Princeton Avenue
- One lane in each direction with on-street parking
 - Princeton Avenue to New York Avenue

EXISTING CONDITIONS (CONT.)

- Numerous commercial driveways and access points
- Truck traffic near Mercer County Transfer Station
- Utility poles, signs and fire hydrants within sidewalk
- Bicyclists and pedestrians crossing midblock and using median left turn lane as a refuge area
- Bicyclists using sidewalk and riding against the flow of traffic



OVERREPRESENTED CRASH TYPES

- 402 Vehicular Crashes (2016-2018)

COLLISION TYPE (3-YR)	COUNT	% OF TOTAL	2017 AVERAGE*
Rear End	160	40%	33%
Sideswipe	86	21%	13%
Right Angle	82	20%	18%
Left Turn	33	8%	4%
Encroachment	5	1%	< 1%
At Signalized Intersection	254	63%	14%

- 23 Pedestrian/Bicyclist Crashes (2014-2018)

COLLISION TYPE (5-YR)	COUNT / % OF TOTAL	% OF ALL CRASHES	2017 AVERAGE*
Pedestrian	15 / 65%	~3%	2%
Pedacyclist	8 / 35%	~2%	1%

* 2017 average (latest available) for the county road system (all counties)

TRAFFIC CONDITIONS

- Median left turn lane
 - Cars entering/exiting driveways
 - Makeshift pedestrian refuge
 - Automobile dealership off-loading
- Congestion was observed between Princeton and New York Avenue
 - School drop-off/pick-up at Paul Robeson Charter School
 - Red light running at Princeton Avenue
 - Heavy truck traffic



PURPOSE AND NEED

- The purpose of the project is to improve safety, traffic operations and mobility for all users of the N. Olden Avenue corridor including motorists, pedestrians, bicyclists and transit users.

PURPOSE AND NEED

- Significant crash history along the corridor
 - 402 vehicular crashes from 2016 to 2018
 - 23 Pedestrian and Bicycle crashes from 2015 to 2018
 - Right Angle crashes at intersections and driveways
- N. Olden Avenue serves commuter, local, and commercial/retail traffic
- High travel speeds
- Properties having multiple, wide access driveways are prevalent along the corridor

PURPOSE AND NEED

- High pedestrian and bicycle activity along the entire corridor
 - Pedestrians and bicyclists utilize center left turn lane as a refuge to cross mid-block
 - Barriers to pedestrian mobility include signs, utility poles, and fire hydrants within sidewalk
- Traffic congestion was observed between Princeton Avenue and New York Avenue
 - Reduced roadway cross section and on-street parking
 - School traffic
 - Significant heavy truck traffic

GOALS AND OBJECTIVES

- **Improve pedestrian and bicycle compatibility** along N. Olden Avenue where feasible
- Comply with Mercer County, Ewing Township and City of Trenton **Complete Streets Policies**
- **Reduce/eliminate barriers to pedestrian, bicyclist and transit user mobility** along the corridor
- **Reduce heavy truck traffic impacts** within the project limits
- **Improve traffic operations** at signalized intersections where feasible
- **Minimize environmental, social and economic impacts** along the corridor

GOALS AND OBJECTIVES (CONT.)

- **Minimize ROW impacts** to the extent feasible
- Provide **access management** along the corridor to the extent possible
- **Correct controlling substandard design elements** where feasible
- **Minimize disruptions to traffic operations** during construction
- **Maintain access to adjacent properties** at all times during construction
- **Minimize road user costs** during construction to the extent feasible

CONCEPTUAL IMPROVEMENTS

- Corridor and intersection improvements were developed to meet the Project Purpose & Need and Goals & Objectives including:
 - Improve safety and mobility of all roadway users
 - Reduce travel speeds
 - Improve pedestrian and bicycle compatibility
 - Improve traffic operations
- Four (4) alternatives were developed for the corridor
 - Alternative 1A
 - Alternative 1B
 - Alternative 2A
 - Alternative 2B

CONCEPTUAL IMPROVEMENTS (ALL ALTS)

- Pedestrian hybrid beacons (HAWK signals)
 - Near Parkside Plaza/Shop Rite
 - At 6th Street between Prospect Ave and Arctic Parkway
 - Between Arctic Parkway and Capitol Plaza
- Bus Turnout in front of Parkside Plaza



Example HAWK Signal



Bus Turnout

CONCEPTUAL IMPROVEMENTS (ALL ALTS)

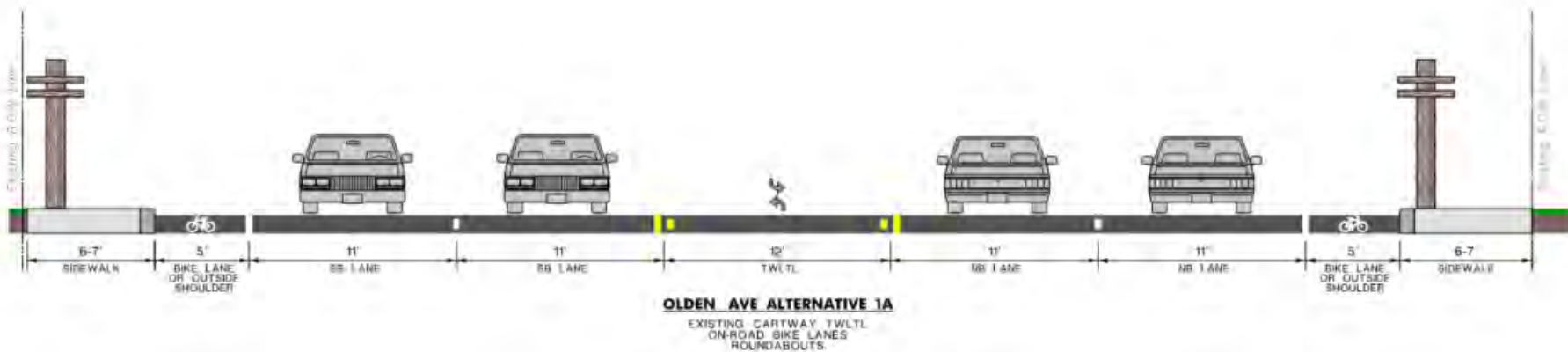
- Add 2nd lane on Olden Ave NB between Princeton Ave and Brunswick Ave
- Remove on-street parking



- Add 2nd lane on New York Ave WB
- Add bulb-outs at unsignalized intersections to shorten pedestrian crossing distances
- Add Rapid Rectangular Flashing Beacons at unsignalized intersections for pedestrian safety

ALTERNATIVE 1A – No Median, Roundabouts

- Two (2) 11' wide travel lanes in each direction
- 12' wide Two-Way Left-Turn Lane
- 5' wide outside shoulder or bike lane in each direction
- 6-7' sidewalks in each direction
- High-visibility crosswalks



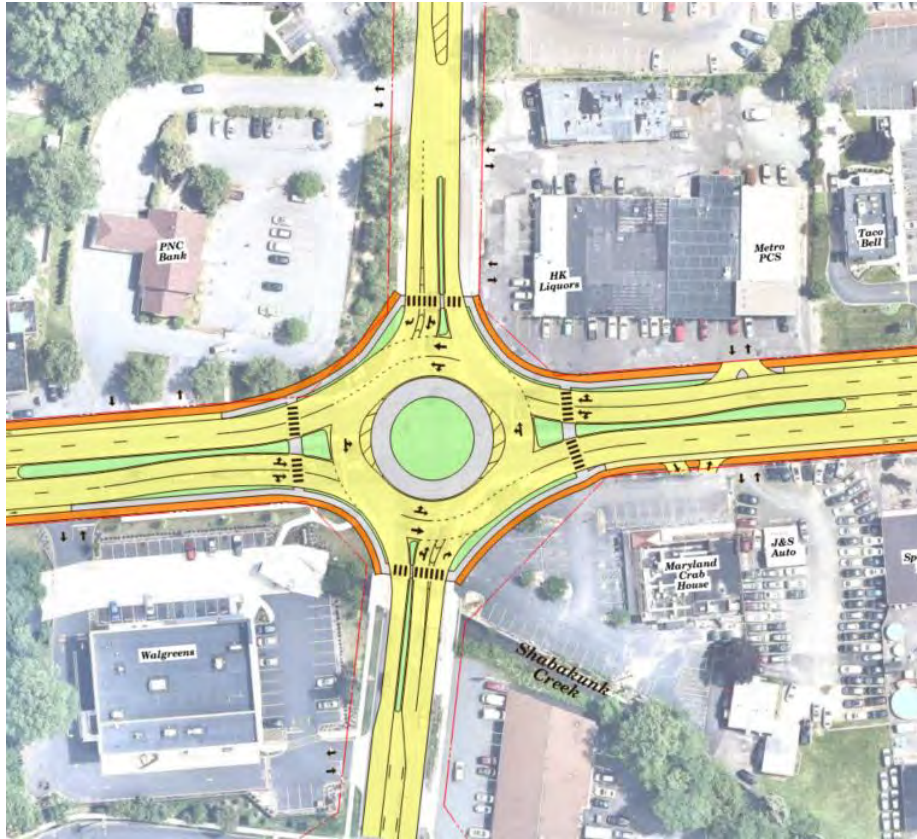
ALTERNATIVE 1A (CONT.)

- Roundabouts
 - Parkside Avenue
 - Prospect Avenue
 - Arctic Parkway
 - Capitol Plaza

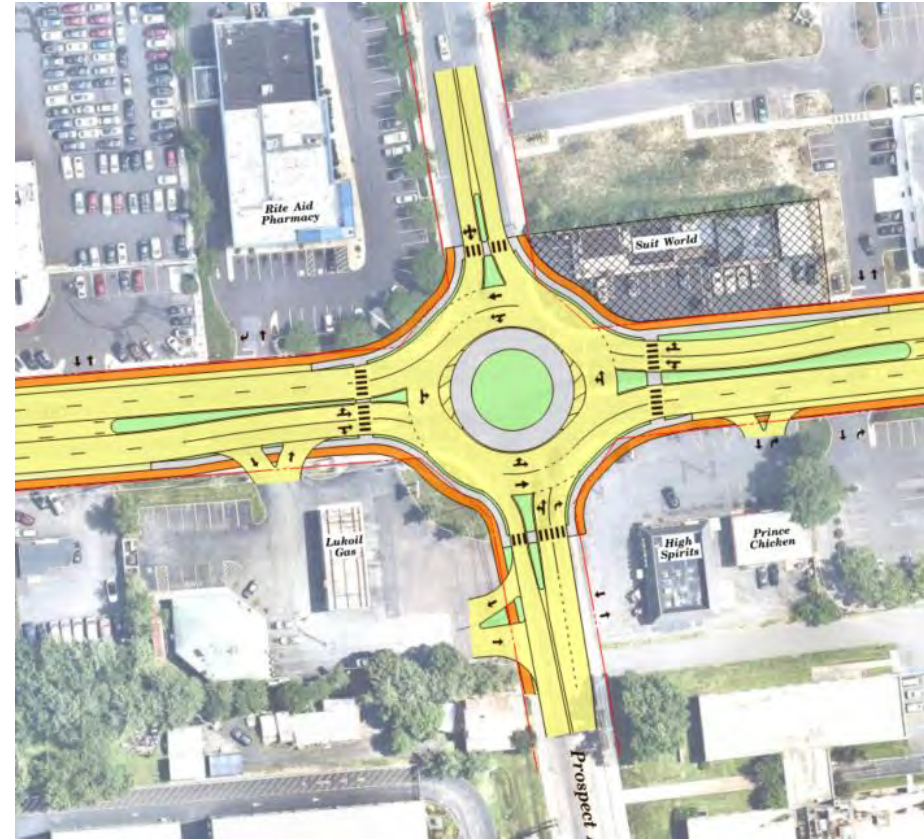


Proposed roundabout at Arctic Parkway

ALTERNATIVE 1A (CONT.)



Proposed roundabout at Parkside Avenue



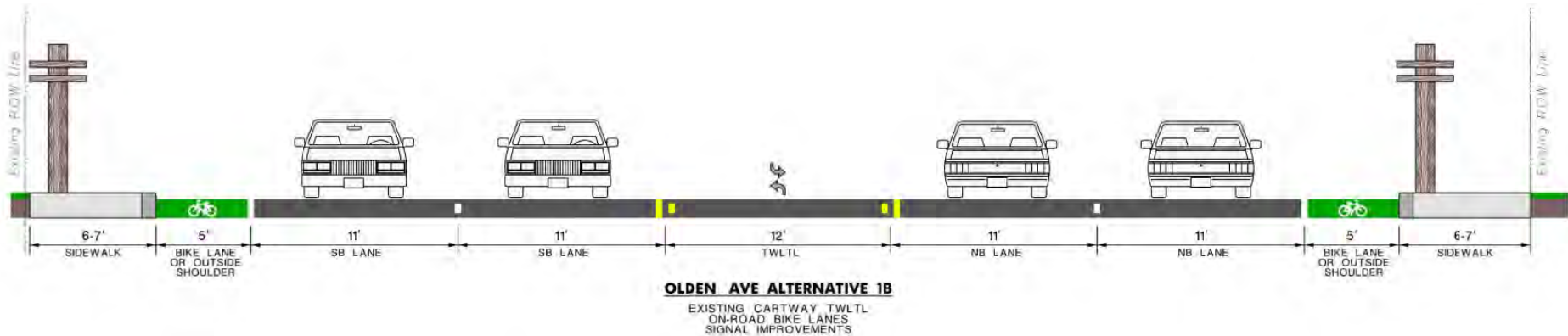
Proposed roundabout at Prospect Avenue

ROUNABOUT BENEFITS

- Reduce the overall number of crashes
 - Reduce injury, fatal and pedestrian crashes
- Reduce the number of conflict points at the intersection
- Reduce crash severity
- Provide traffic calming → reduces travel speeds
- Reduce delay and improve traffic flow
- Allow for U-turn movements
- Aesthetic gateway opportunities using central island

ALTERNATIVE 1B – No Median, Signal Upgrades

- Same cross section as Alternative 1A

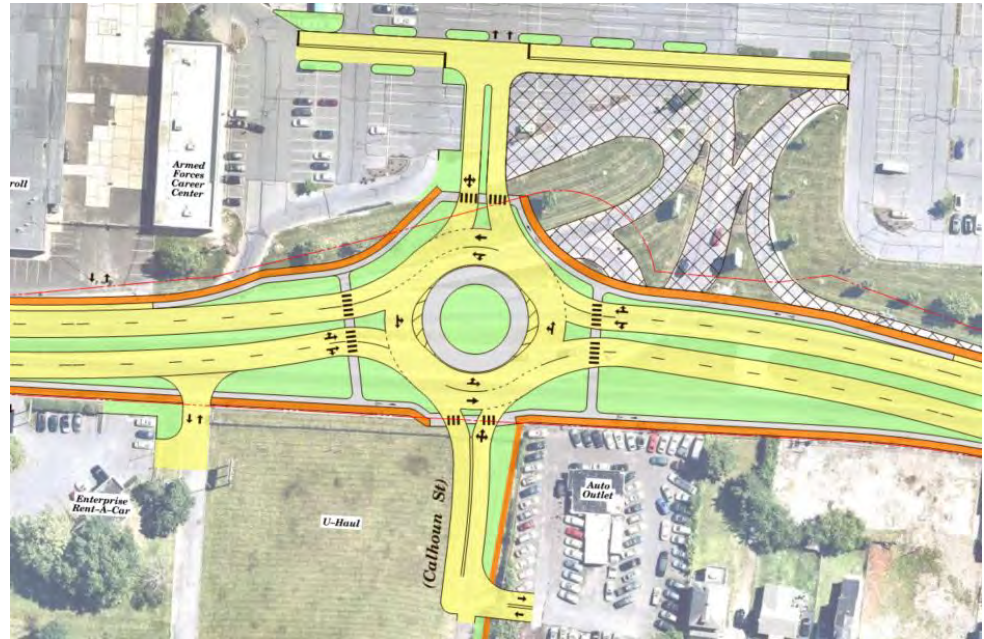


ALTERNATIVE 1B (CONT.)

- Minor improvements at signalized intersections
- Roundabout at Capitol Plaza only



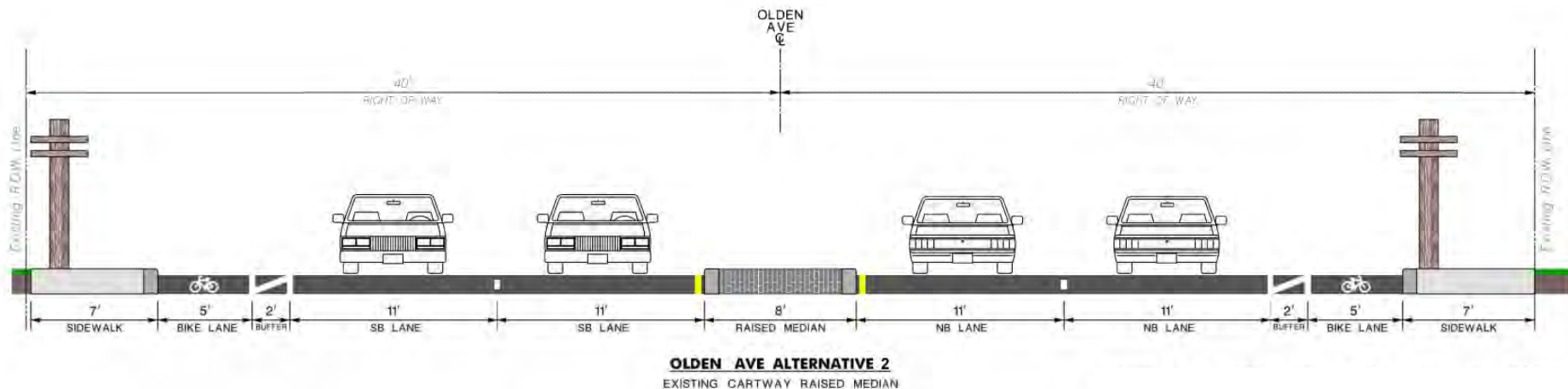
Revised Arctic Avenue signalized intersection



Proposed roundabout at Capitol Plaza

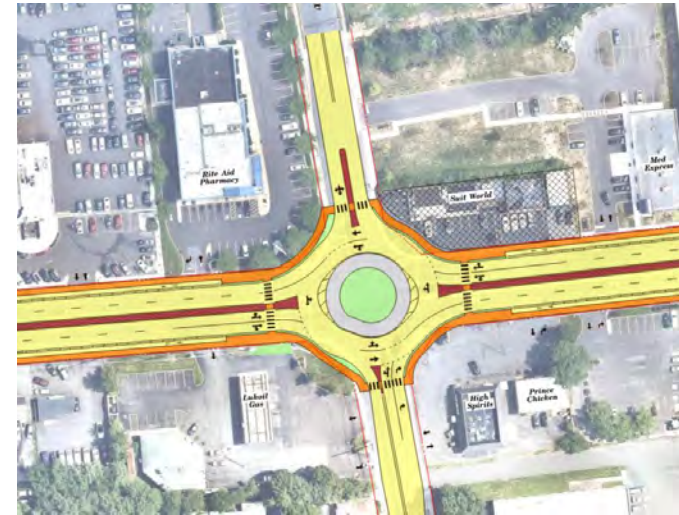
ALTERNATIVES 2A and 2B

- Two (2) 11' wide travel lanes in each direction
- 8' wide curbed center median
- 5' wide bike lane with 2' buffer
- 6-7' sidewalk
- High-visibility crosswalks



ALTERNATIVE 2A – Median, Roundabouts

- Alternative 2A includes roundabouts at:
 - Parkside Avenue
 - Prospect Avenue
 - Arctic Parkway
 - Capitol Plaza



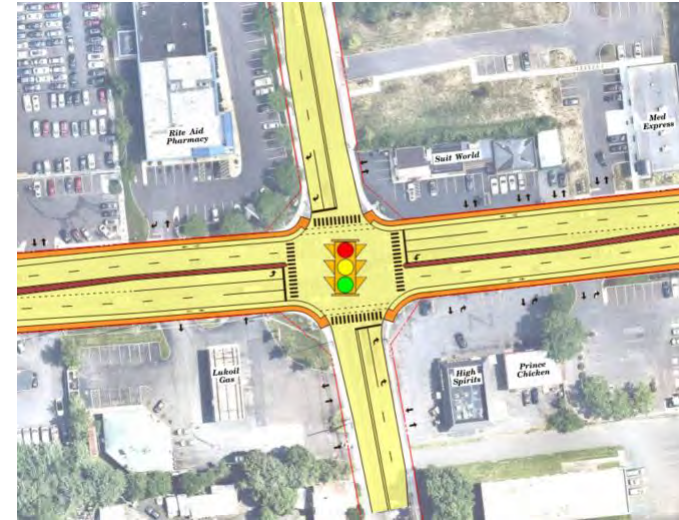
Proposed roundabout at Prospect Ave

Plan view of Corridor



ALTERNATIVE 2B – Median, Prospect Ave Signal

- Alternative 2B includes roundabouts at:
 - Parkside Avenue
 - Arctic Parkway
 - Capitol Plaza
- Signalized intersection at:
 - Prospect Avenue



Signalized intersection at Prospect Ave

Plan view of Corridor



ALTERNATIVES ANALYSIS – NO BUILD

- Does not meet the Project Purpose and Need
- Eliminated from further consideration

ALTERNATIVES ANALYSIS – ALT. 1A

- Major Advantages

- Roundabouts are expected to improve safety and reduce crashes by $\approx 20\%$ at intersections
- Two-way left turn lane provides left turn access to driveways
- Anticipated reduction in travel speeds

- Major Disadvantages

- Two-way left turn lane does not provide as much safety benefit as a curbed median for roadway users
 - Bike lane buffer cannot be provided as recommended by the NJ Complete Streets Design Guide
 - Access impacts at roundabouts
- Eliminated from further consideration since it does not provide as many safety benefits as other alternatives

ALTERNATIVES ANALYSIS – ALT. 1B

- Major Advantages

- Least expensive
- Least overall impacts

- Major Disadvantages

- Crash reductions are not anticipated at signalized intersections
 - Travel speed will not be reduced
 - Two-way left turn lane does not provide as much safety benefit as a curbed median for roadway users
 - Bike lane buffer cannot be provided as recommended by the NJ Complete Streets Design Guide
- Eliminated from further consideration since this alternative provides the least safety benefits of all concepts

ALTERNATIVES ANALYSIS – ALT. 2B

- Major Advantages

- Roundabouts are expected to reduce crashes by $\approx 20\%$
- Anticipated reduction in travel speeds
- Bike lane and buffer provided for bicyclist safety
- Benefits of curbed median include:
 - Provides refuge area and reduces pedestrian crossing distance
 - Reduces Left Turn and Angle crashes at driveways
 - Opportunities for landscaping and on-site stormwater management/Green Infrastructure

- Major Disadvantages

- Curbed median limits left turn access to/from driveways
 - Access impacts at roundabouts
 - Traffic operations at Prospect Ave will be degraded due to increased u-turns
- Eliminated from further consideration due to operational and safety concerns at the Prospect Avenue traffic signal

ALTERNATIVES ANALYSIS – ALT. 2A

- Advantages

- Roundabouts are expected to reduce crashes by $\approx 20\%$
- Anticipated reduction in travel speeds
- Bike lane and buffer provided for bicyclist safety
- Benefits of curbed median include:
 - Refuge area for pedestrian safety
 - Crash reductions at driveways ($\approx 40\%$ reduction along corridor)
 - Opportunities for landscaping and on-site stormwater management/Green Infrastructure

- Disadvantages

- Curbed median limits left turn access to/from driveways
 - Left turns will be made via u-turns at roundabouts
 - Roundabouts will impact access driveways at intersections
- Selected as **Preliminary Preferred Alternative (PPA)** – provides the greatest safety benefit to motorists, pedestrians, bicyclists, and transit users

ALTERNATIVE 2A RENDERING



ALTERNATIVE 2A – PPA Impacts

- Right-of-Way (ROW)
 - Total acquisition of 2 properties
 - Partial acquisition at 18 properties (small areas of frontage)
- Permanent access impacts at 18 driveways
- Approximately 21 utility pole relocations
- Stormwater management is required (rain gardens, basins, Green Infrastructure)
- Public education regarding roundabouts and revised traffic patterns

PPA – Preliminary Construction Cost

ITEM	PRELIMINARY COST
CONSTRUCTION	\$16.3 M
UTILITIES	\$1.7 M
ROW	\$1.2 M
DESIGN (PE/FD/CONS)	\$6.6 M
TOTAL	\$25.8 M

PROJECT STATUS AND SCHEDULE

- Project Initiated in March 2019
- Completed Data Collection
- Developed Purpose and Need Statement
- Alternatives Development and Analysis Efforts
- Selected Preliminary Preferred Alternative
- Upcoming Tasks
 - Complete Local Concept Development Report
 - Complete LCD Phase – Winter 2020

COMMUNITY INVOLVEMENT SCHEDULE

Project Purpose and Need

- Local Officials Briefing #1 – August 7, 2019
- Stakeholders Meeting #1 – August 7, 2019

Conceptual Alternatives

- Local Officials Briefing #2 – March 4, 2020
- Stakeholders Meeting #2 – March 10, 2020
- Public Information Center #1 – March 10, 2020

Preliminary Preferred Alternative

- Local Officials Briefing #3 – September 30, 2020
- Public Information Center #2 – October 14, 2020
 - <http://creative-mt.com/oldenavenue/>

PROJECT CONTACT INFORMATION

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Thank You