Intersections along East and West 7th St (CR 601) and the Intersection of East Front St (CR 620) and Leland Ave

Union County
City of Plainfield, NJ

Council Meeting

September 14, 2020

North Jersey Transportation Planning Authority (NJTPA)
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Defining the Vision. Shaping the Future.
NJTPA
NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

Michael Baker INTERNATIONAL

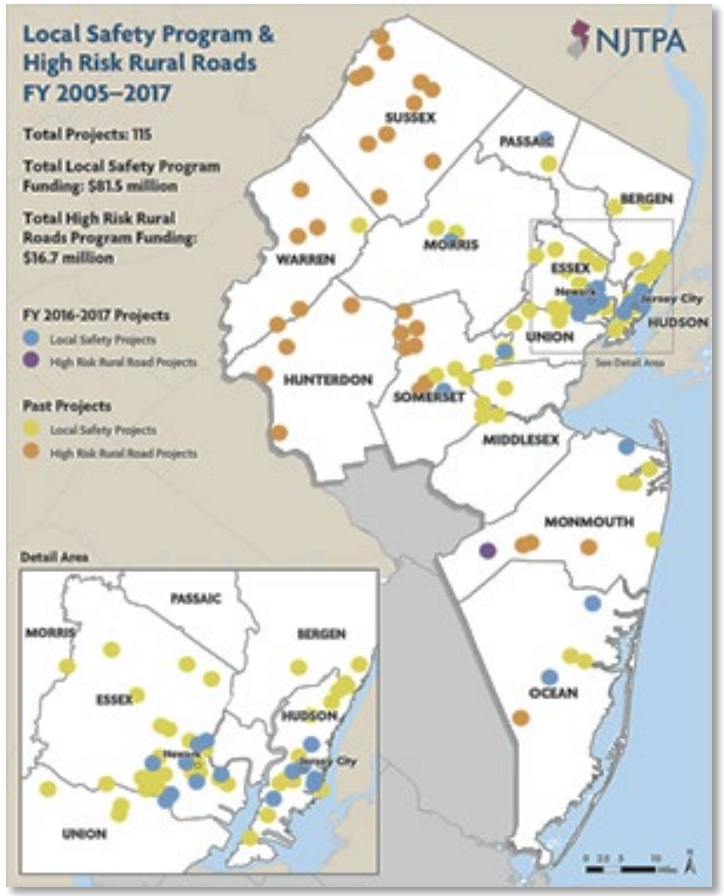
U.S. Department of Transportation
Federal Highway Administration

DEPARTMENT OF TRANSPORTATION
THE STATE OF NEW JERSEY

Federal Transportation Funding

North Jersey Transportation Planning Authority

The Metropolitan Planning Organization for Northern New Jersey



Local Safety and High Risk Rural Roads Programs

- Over $98 million in funding since 2005 on County and Local Roadways
- Relatively quick-fix safety improvements

Highway Safety Improvement Program (HSIP)

- Emphasizes a data-driven, strategic approach to improving highway safety

Network Screening

- Identifies locations experiencing:
- High crash frequencies
- Severe crash injuries
- Specific crash types such as right-angle or roadway departures

Community Outreach

- Provides the public, local stakeholders and officials with an opportunities for provide comments and ask questions

Project Location

5 Intersections

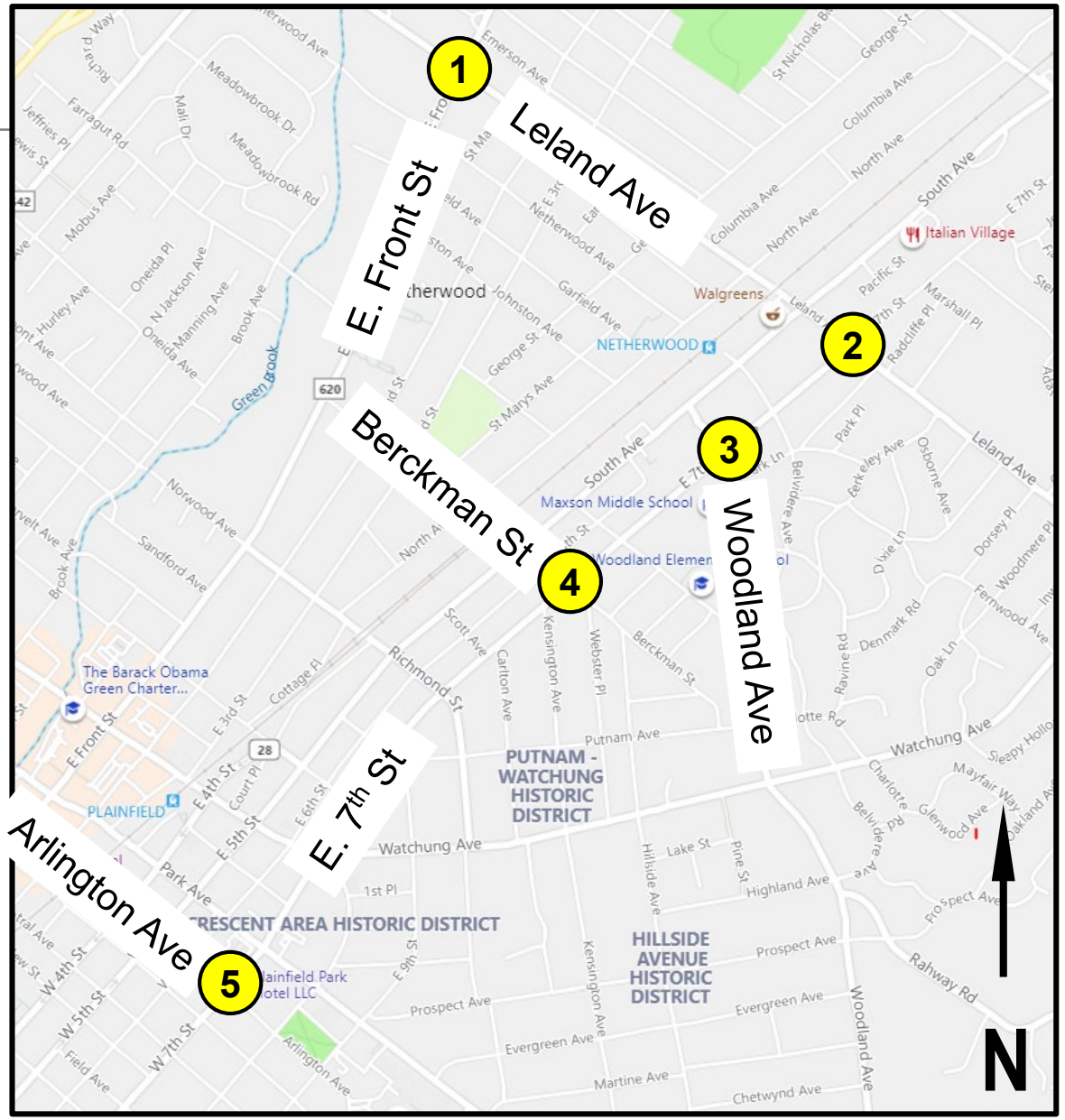
1. E. Front Street & Leland Avenue
2. Leland Avenue & E. 7th Street
3. Woodland Avenue & E. 7th Street
4. Berckman Avenue & E. 7th Street
5. Arlington Avenue & E. 7th Street

Crash Data (2013-15)

1.	E. Front Street & Leland Avenue	8 crashes
2.	Leland Avenue & E. 7th Street	18 crashes
3.	Woodland Avenue & E. 7th Street	11 crashes
4.	Berckman Avenue & E. 7th Street	10 crashes
5.	Arlington Avenue & E. 7th Street	6 crashes

3 pedestrian crashes (2 @ 7th & Leland / 1 @ 7th & Arlington)

Overrepresentation of right angle crashes



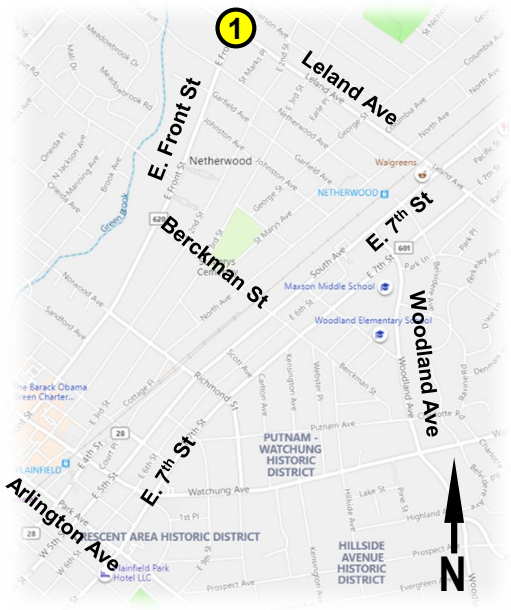
Existing Conditions

- Outdated signal pole and mast arm standards
- Pre-timed signals
- Missing pedestrian signal heads and push buttons
- Curbs ramps do not all meet ADA compliance
- Faded crosswalks

Proposed Improvements

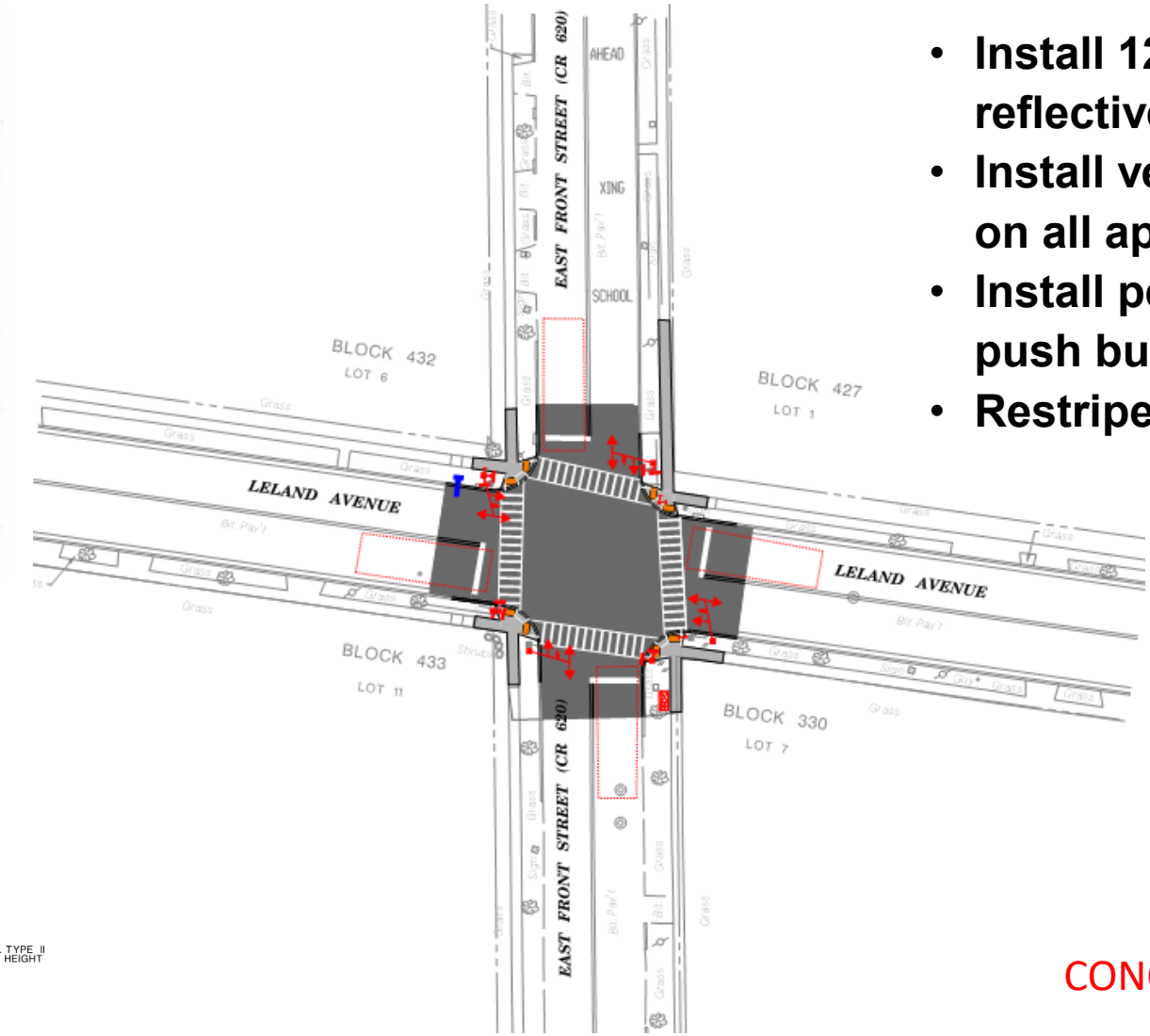
- New traffic signal poles, mast arms, 12” signal heads with retro-reflective backplates, video image detection, signal cabinets, and structural foundations
- New pedestrian signal heads, push buttons, detectable warning surfaces, and restriping of high visibility crosswalks (ADA compliance)
  - Updated static signs for pedestrian crossing
- Improved lighting at intersections
- Milling and paving of roadway surface within disturbance areas

1. East Front Street (CR 620) and Leland Avenue



LEGEND

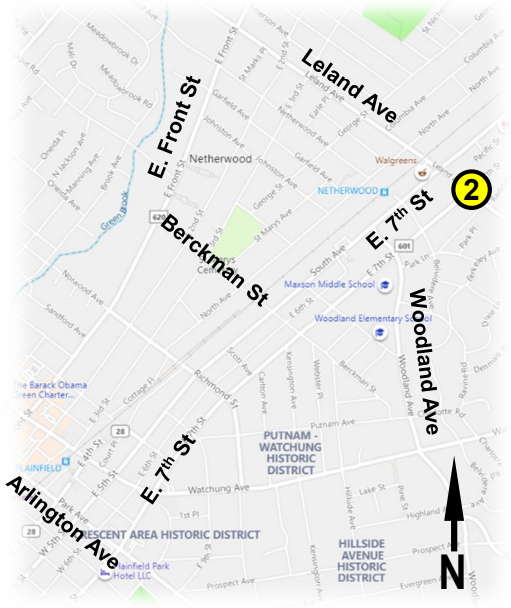
EXISTING	PROPOSED	
⊣▷	▶	TRAFFIC SIGNAL HEAD
	▮	PEDESTRIAN SIGNAL HEAD
	▬	VEHICLE IMAGE DETECTION CAMERA
	▭	IMAGE DETECTION AREA
▭	▭	TRAFFIC SIGNAL CABINET AND METER CABINET
▣	▣	TRAFFIC SIGNAL POLE FOUNDATION
○		UTILITY POLE
	▭	NEW PAVEMENT AREA
▬	▬	CURB RAMP DETECTABLE WARNING SURFACE
	⊣	PEDESTRIAN PUSH BUTTON
	◦	VERTICAL PIPE FOR PUSH BUTTON MOUNT
	▬	LIGHTING STANDARD ASSEMBLY WITH 150W HPS I.E.S. TYPE II CUTOFF MONGOOSE LUMINAIRE, AT 26-FEET MOUNTING HEIGHT
	◥	DRAINAGE INLET
▭	▭	SIDEWALK

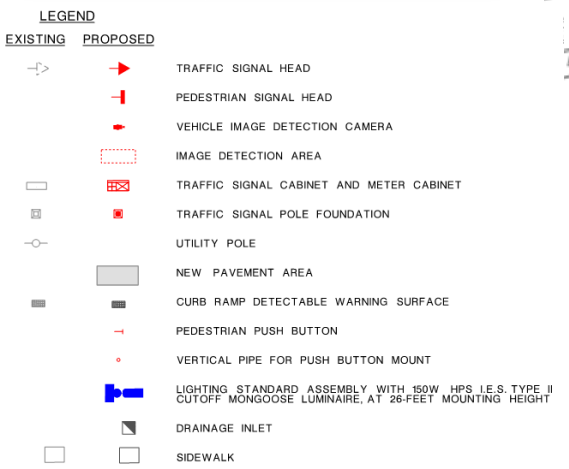


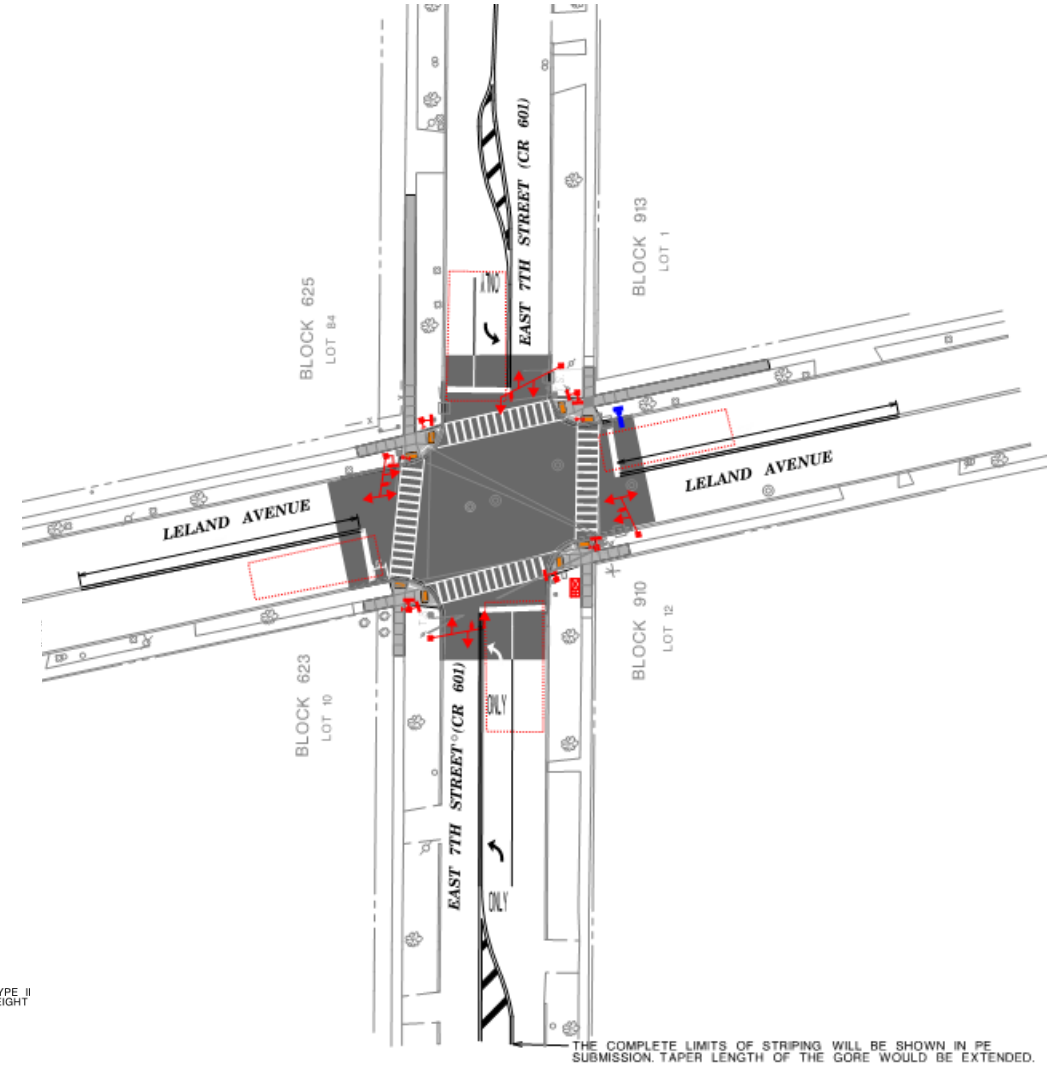
- Install 12” signal heads and retro-reflective backplates
- Install vehicle image detection cameras on all approaches
- Install pedestrian signal heads and push buttons
- Restripe high-visibility crosswalks

CONCEPT PLAN FOR DISCUSSION PURPOSES

2. East 7th Street (CR 601) and Leland Avenue







- **Restripe NB & SB E. 7th St to include left turn bays. Establish "No Parking" zone for 150 feet of both the NB/SB approaching and receiving lanes**
- **Left turn movements shall be permissive**
- **Install 12" signal heads and retro-reflective backplates**
  Install vehicle image detection cameras on all approaches
  Install pedestrian signal heads and push buttons
  Restripe high-visibility crosswalks

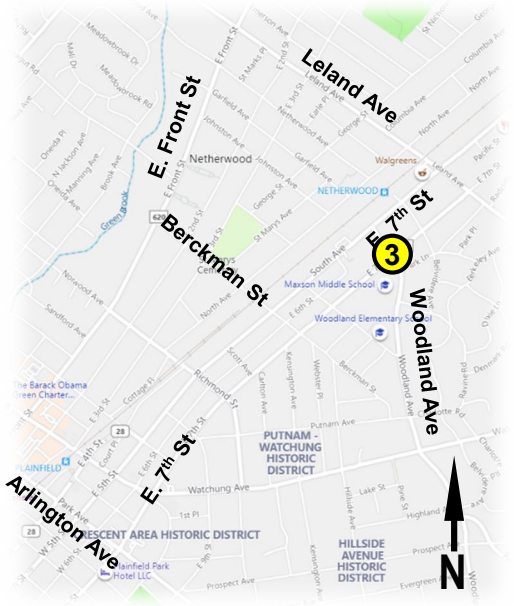
CONCEPT PLAN FOR DISCUSSION PURPOSES

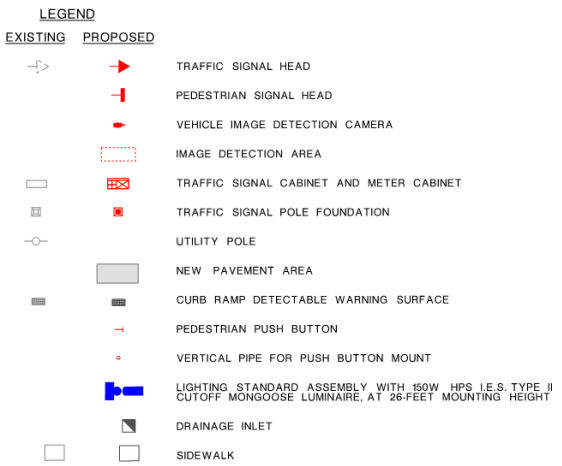
East 7th Street Signal Phase Changes

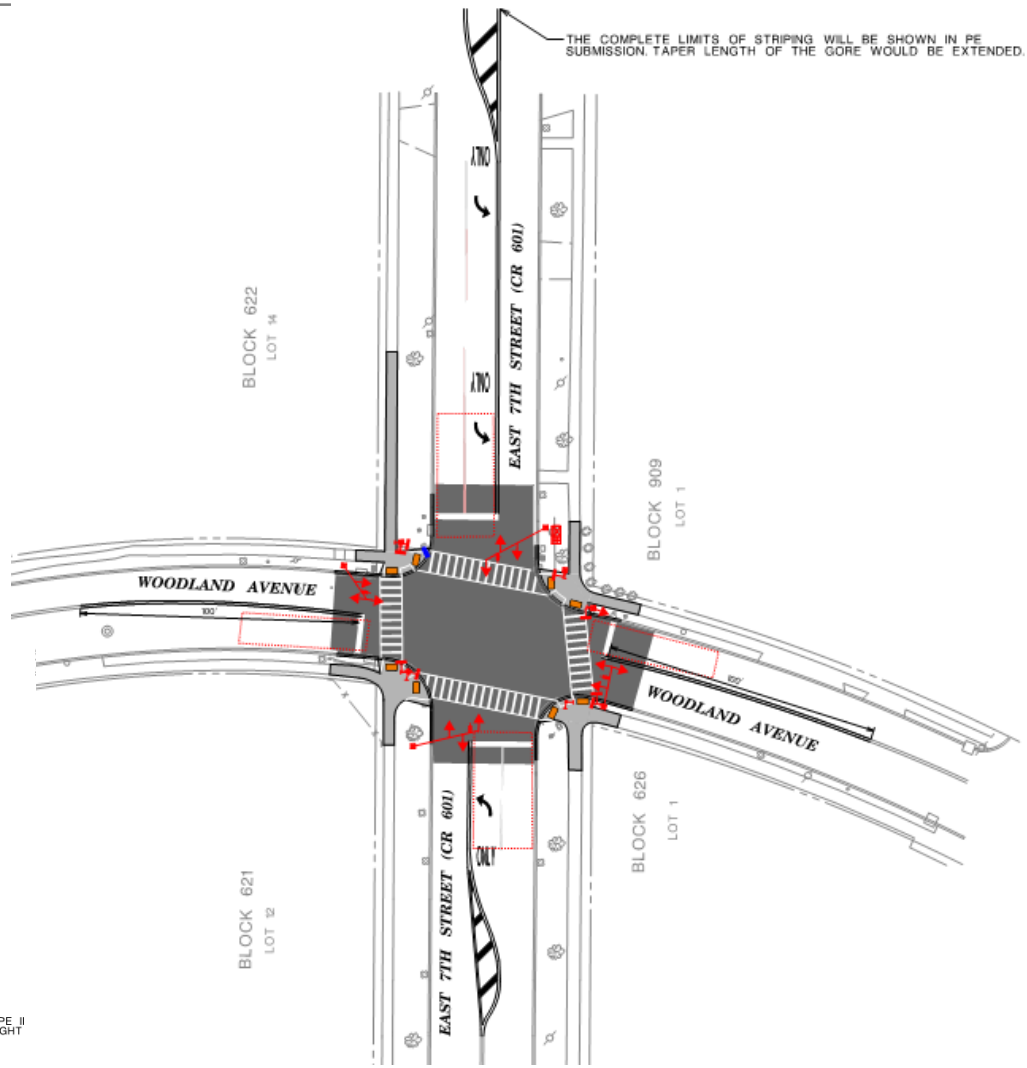
E. 7th Street at Leland Avenue and Woodland Avenue

- Synchro analysis determined turning bays necessary based on existing vehicle volumes
- Left turn bays added; turns permissive
- Parking removal required along E. 7th Street
  - At Leland Avenue 11 spaces
  - At Woodland Avenue 16 spaces

3. East 7th Street (CR 601) and Woodland Avenue



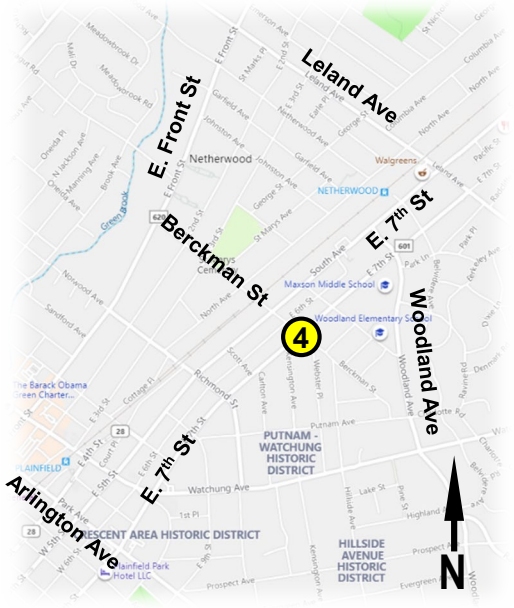


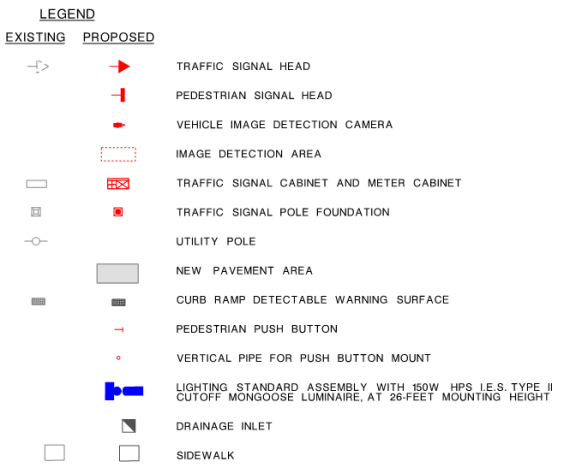


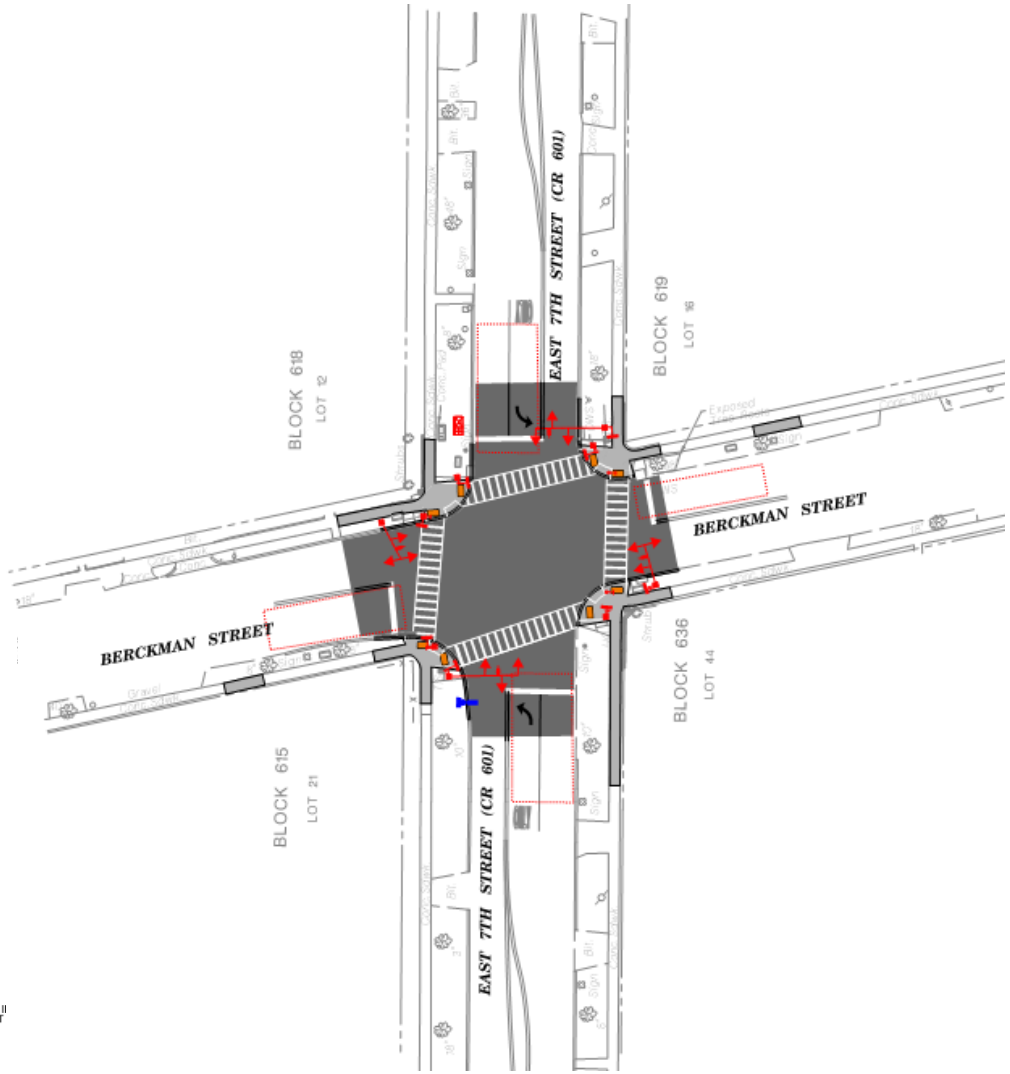
- **Restripe NB & SB E. 7th St to include left turn bays. Establish "No Parking" zone for 200 feet of the SB approach, 100 feet for the SB receiving lane, and 100 feet for both the NB approaching and receiving lanes**
- **Left turn movements shall be permissive**
- **Install 12" signal heads and retro-reflective backplates**
- **Install vehicle image detection cameras on all approaches**
- **Install pedestrian signal heads and push buttons**
- **Restripe high-visibility crosswalks**

CONCEPT PLAN FOR DISCUSSION PURPOSES

4. East 7th Street (CR 601) and Berckman Avenue







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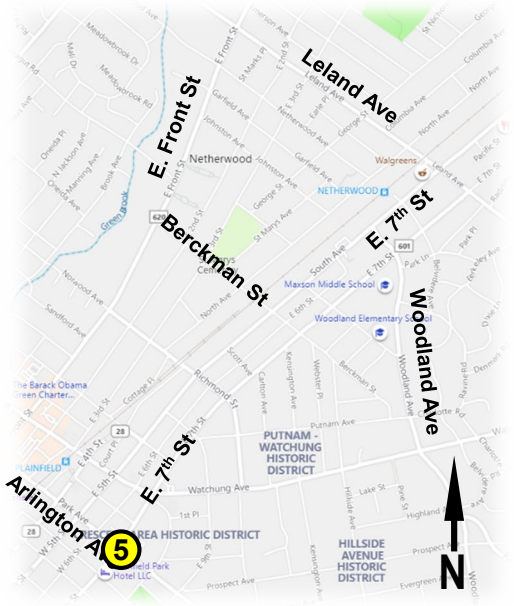
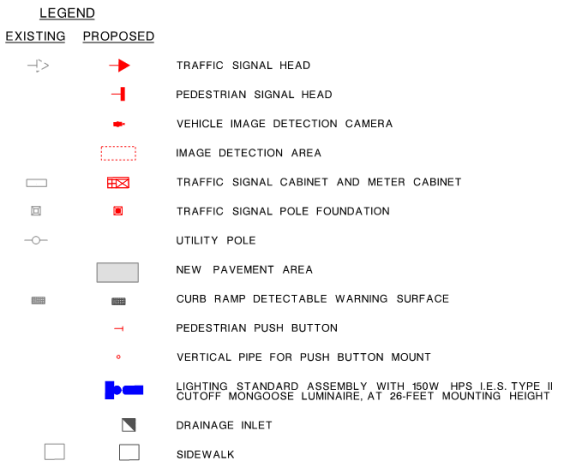
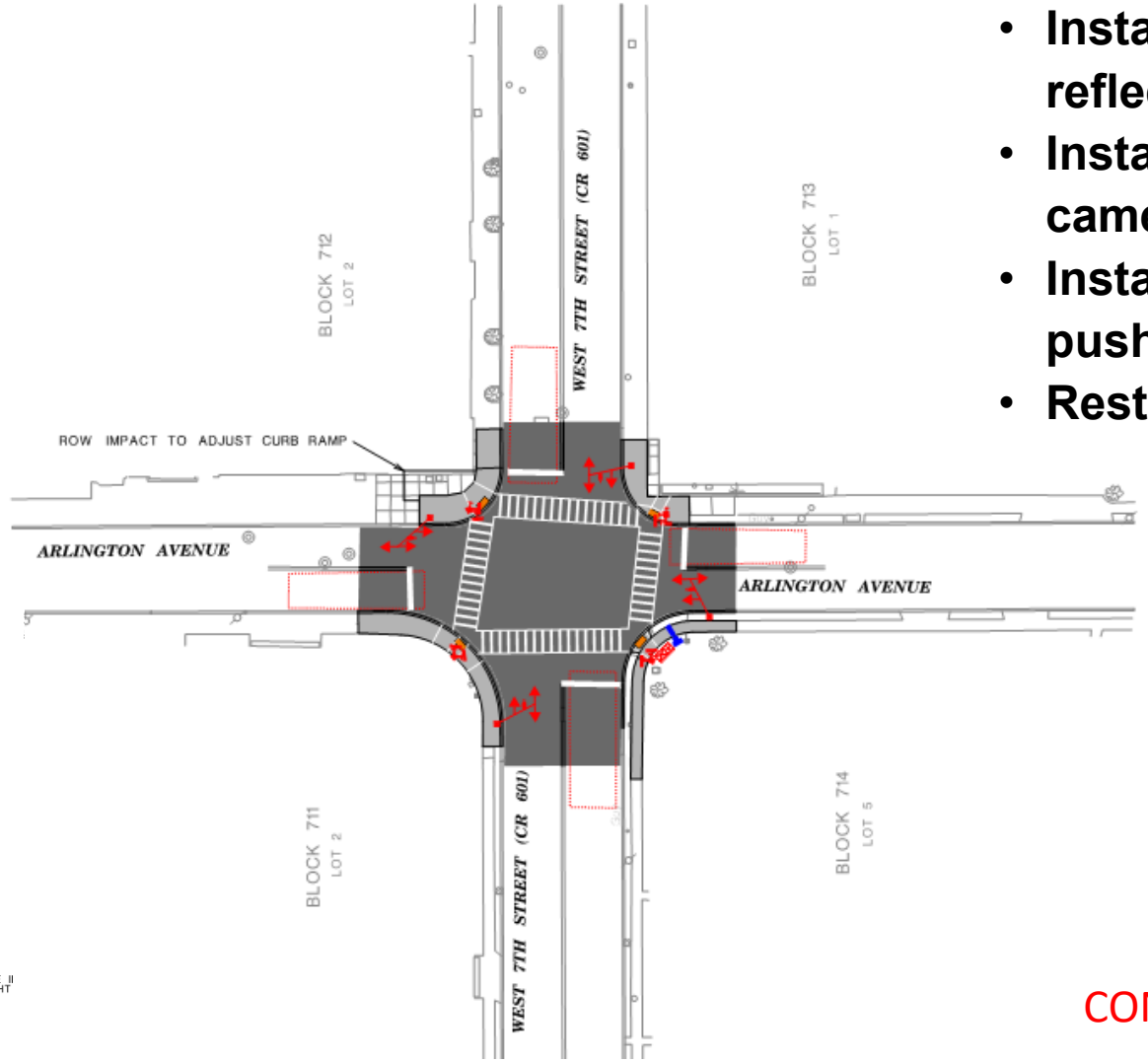
CONCEPT PLAN FOR DISCUSSION PURPOSES

5. East 7th Street (CR 601) and Arlington Avenue







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CONCEPT PLAN FOR DISCUSSION PURPOSES

Next Steps

Activity	Timeframe
Hold Public Information Center (PIC)	Oct 2020
Complete Preliminary Design	Dec 2020
NJDOT to Approve Environmental Document	April 2021
Complete Final Design and Submit to NJDOT for Review	Dec 2021
Anticipated Federal Authorization to Construct*	Oct 2022
Begin Construction*	March 2023
Construction Substantially Completed*	Oct 2023

**Subject to NJDOT Authorization*