FREEWAY DRIVE & STATION AREA

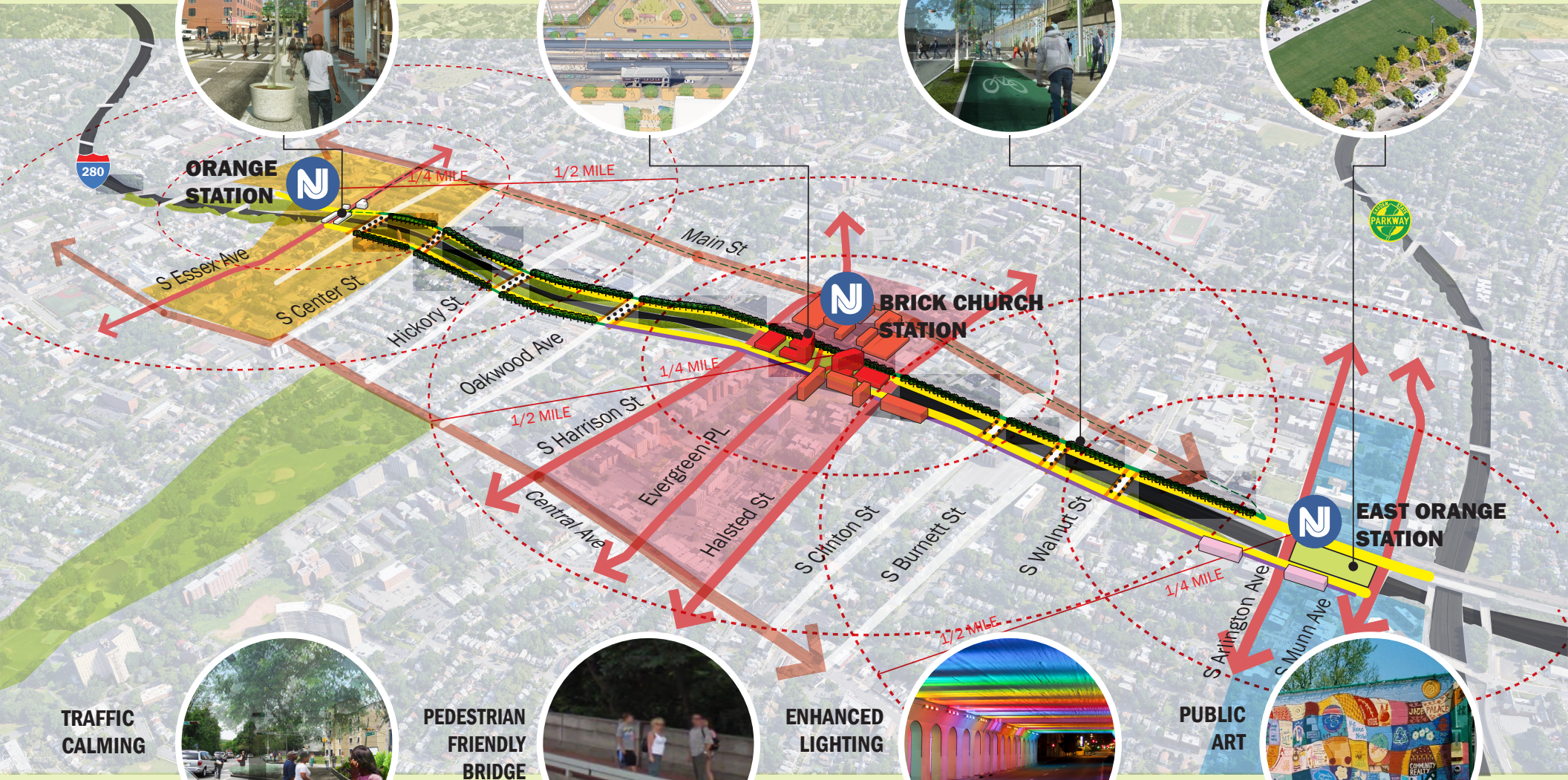
SAFETY AND
PUBLIC REALM STUDY

SAFE PEDESTRIAN CONNECTIONS

ECONOMIC DEVELOPMENT

DEDICATED BIKE LANES

NEW CIVIC PARK



TRAFFIC CALMING

PEDESTRIAN FRIENDLY BRIDGE

ENHANCED LIGHTING

PUBLIC ART

NJTPA
NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

Perkins Eastman

The preparation of this report has been financed in part by the U.S. Department of Transportation, North Jersey Transportation Planning Authority, Inc., Federal Transit Administration and the Federal Highway Administration. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or its use thereof.

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The Plan


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Overview

The Freeway Drive & Station Area Safety and Public Realm Study proposes a comprehensive strategy for transforming Freeway Drive in Orange and East Orange into a pedestrian- and bike-friendly multimodal thoroughfare. The new Freeway Drive would repurpose the outermost lanes of Freeway Drive East and West for parallel parking and dedicated bike lanes. New medians, street trees, lighting, and signage will help Freeway Drive project a greener, more positive image of the communities adjoining them and create a quality setting to attract new economic development. With right-sized traffic lanes on its thirteen bridges, and new traffic controls at each of its intersections, the Plan will facilitate pedestrian movement between the areas north and south of Route 280. It will also encourage access to the three train stations while maintaining traffic flow at appropriate speeds along, and across, the Freeway Drive Corridor.

The Plan builds on numerous earlier studies. However, the Freeway Drive and Station Area Safety and Public Realm Study puts forth, for the first time, a broader vision for the entire corridor as a place people feel comfortable being in, rather than simply passing through, coupled with specific physical and operational recommendations for its transformation. The Plan takes an integrated approach, looking at current traffic data, adjacent land uses, the physical character of each area within the corridor, and the area's demographic characteristics.

"The Greening of Freeway Drive": Proposed Bike Lane on Freeway Drive

Existing Conditions

Freeway Drive encompasses two NJDOT highway service roads paralleling Route 280, Freeway Drive East, and Freeway Drive West, which comprise the primary focus of the larger Freeway Drive study area that spans the municipalities of Orange and East Orange in Essex County and extends from Essex Street to the west to the Garden State Parkway on the east. The Study Area includes thirteen bridges that span Route 280 and three NJ TRANSIT rail stations on the north side of Freeway Drive West.

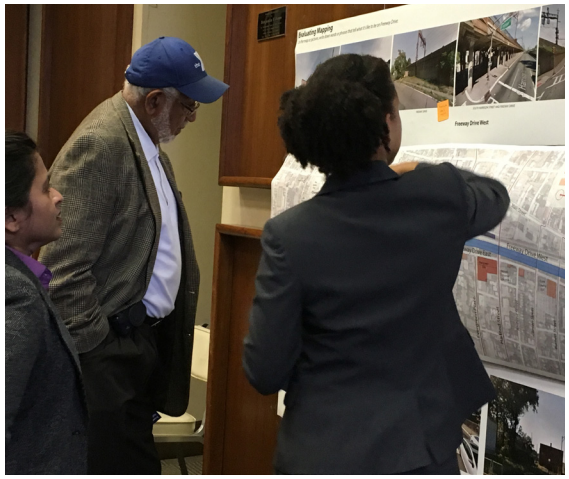
In its current configuration, Freeway Drive provides greater capacity than is needed for its typical daily traffic volumes, and has unnecessarily wide vehicular travel lanes of 11-12 feet that convey the sense of a high speed thoroughfare. Segments along Freeway Drive carry 800 to 1,500 vehicles per hour at morning peak period and 1,000 to 1,700 vehicles per hour in the evening peak. Data collected by the Team, including current field recording, historical data from previous studies,

and NJDOT data, indicated that while the number of vehicles entering Freeway Drive from Route 280 is significant; a similar number of vehicles are exiting Freeway Drive at north/south cross streets throughout the corridor. This distribution of traffic results in traffic volumes along the corridor that can be accommodated by two travel lanes, providing opportunity for lane reduction. The Team's analysis of north-south traffic levels revealed considerable variation amongst the Study Area's thirteen bridges, which are under the jurisdiction of the NJDOT, suggesting that there are opportunities for lane reduction and/or redesignation due to the relatively low traffic volumes they carry. The Team's intersection level of service analyses indicate that the elimination of one travel lane along the Freeway Drive westbound approaches will result in maintaining acceptable levels of service during the weekday morning.

The population living within the Freeway Drive Study Area is characterized by high levels of poverty and transit dependency. Between 64 and 67 percent of all households in the Census tracts within half a mile of Orange, Brick Church, and East Orange Station are classified as low-income. 22 percent of the commuters within the study area do not have a vehicle available. Over 25 percent of the area's workers take public transportation underscoring the importance of improving access to the Corridor's three NJ TRANSIT stations. Open space and recreational opportunities are almost non-existent within the Freeway Drive Corridor, pointing to the need for improving the area's public open space and recreational resources.

Long Term Vision: Proposed Capping at Essex Avenue

The poor quality of the public realm within the Freeway Drive Corridor has established it as a significant physical, visual, and psychological divide between the areas to the north and south. Freeway Drive appears vast in scale, and without definition; dominated by asphalt, with little shade and vegetation. Approximately half of the train station catchment areas lack safe and attractive pedestrian and bicycle access due to the current size and configuration of Freeway Drive. The result is a corridor that is inhospitable to pedestrians and the community at large. This is a perception that was underscored in the course of the Team's public engagement efforts, where many residents spoke of a genuine fear of walking across Freeway Drive.



October 10, 2016 Engagement Event

January 17, 2017 Public Engagement

Public Engagement

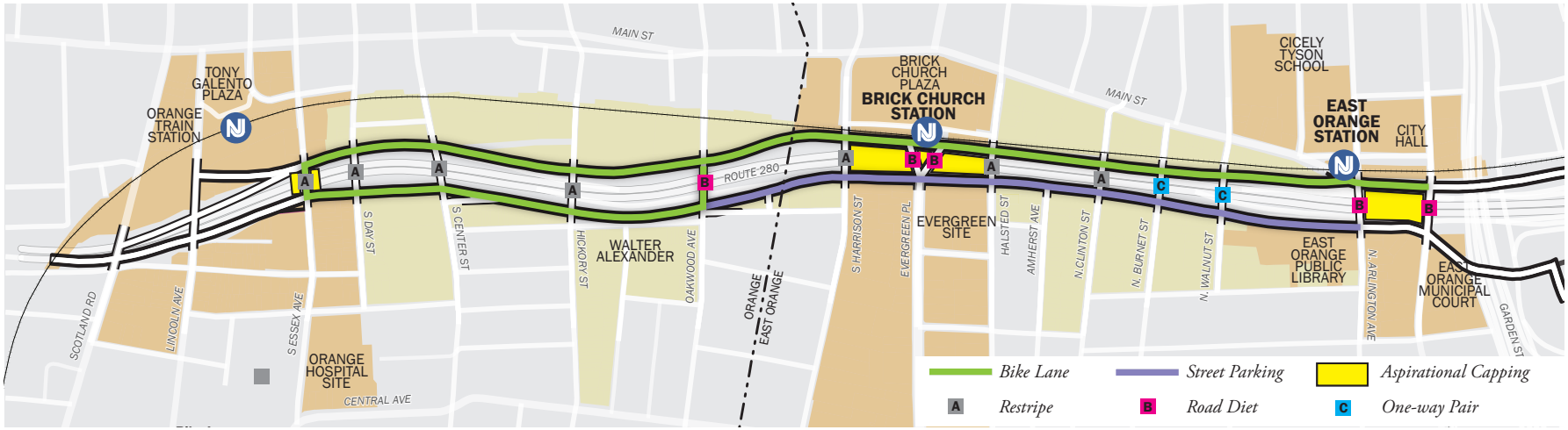
The Team solicited extensive input from stakeholders and the public through:

- Two informational sessions, which offered several opportunities for participants to ask questions and offer ideas;
- Two crowdmapping sessions, where participants walked along the study area and offered their ideas for improvements;
- Two 'open house' workshops, where participants reflected on what the consultants had learned in their research, and reviewed draft ideas for improving the area;
- Opportunities for participants who could not make a meeting to share their thoughts online on the Urban Essex Smart Growth Coalition's website;
- 15 interviews with representatives of city agencies, area nonprofit organizations and associations with a special interest in the Freeway Drive corridor.

Between 90 and 110 stakeholders from both cities participated in at least one of these sessions. The engagement events were designed to inspire members of the public to generate ideas, allowing participants to choose which improvements they wanted to have on Freeway Drive, and where. Ideas offered by community members at the different events held in the two municipalities were consistent and complementary with one another, indicating consensus amongst the residents of Orange and East Orange. They emphasized three key priorities:

- Making Freeway Drive safer for pedestrians;
- Improving access to the three NJ TRANSIT Stations for greater access to Manhattan, which has increasingly become the employment engine for the region;
- Looking for opportunities to increase recreational opportunities and open space.

Overall Plan Recommendations



Freeway Drive East and West

Extra lanes of Freeway Drive East and West will be used bike land or street parking to provide safer, greener and more attractive environment to the people in East Orange and Orange area.

- Bike Lane: The Plan proposes to transform the outermost lane on Freeway Drive West and part of Freeway Drive East become a dedicated bicycle lane.
- Street Parking: The extra lane will be dedicated to parallel street parking to support the adjacent land uses, and provides buffers for pedestrians walking on the sidewalk along Freeway Drive East. The end of these blocks will "bulb out" to shorten the crossing distance for pedestrians and provide an opportunity for planting.

North-South Bridges

By resizing vehicular roadway and improving pedestrian experience, the bridges will connect north and south more in pleasant and safer way. By each bridge's capacity and traffic volume, it will be treated in three different manner: A Restriping, B Road Diet, and C One-way Pair.

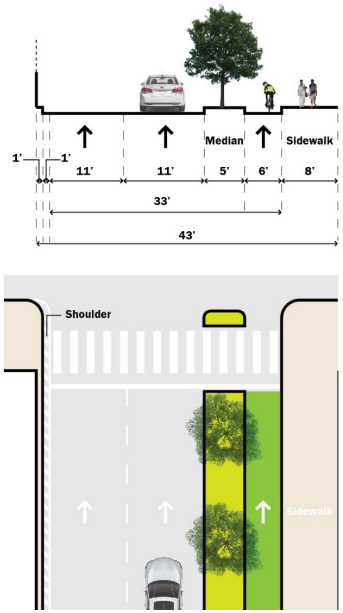
Long-term Aspirational Capping

The Plan also puts forth a long term vision for capping Route 280 at its three key Transit Gateway sections. This includes:

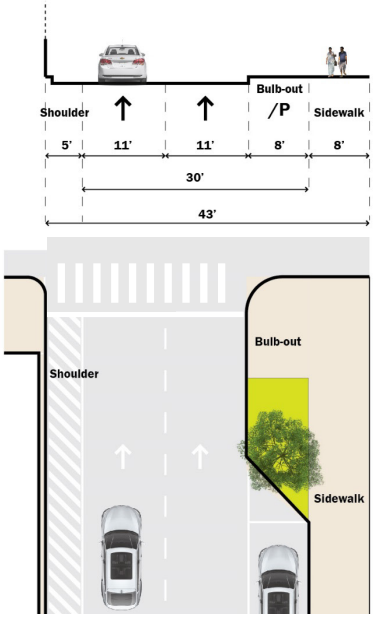
- a new park between South Arlington and South Munn Avenue south of the East Orange NJ TRANSIT Train Station, which would recenter East Orange's bifurcated civic center district;
- the creation of two new full block development parcels immediately south of the Brick Church NJ TRANSIT Train Station, which would serve to catalyze development along the Evergreen Place corridor; and
- new street-oriented retail structures lining the South Essex Street Bridge to link the north and south sides of the City of Orange's downtown and Orange NJ TRANSIT Train Station.

The capping concepts, while aspirational, would improve connectivity between neighborhoods, increase access to the station, provide community amenities, and encourage transit-oriented development on the south sides of Freeway Drive.

Freeway Drive East and West



Proposed bike lane and planted median

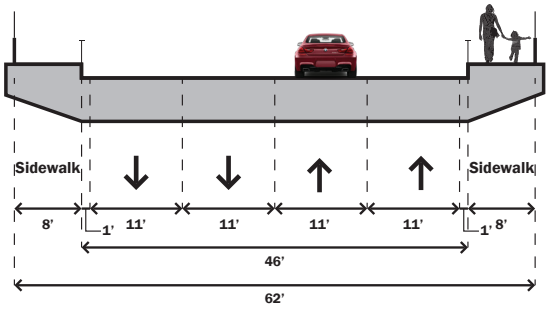


Proposed bulb-out and on street parking

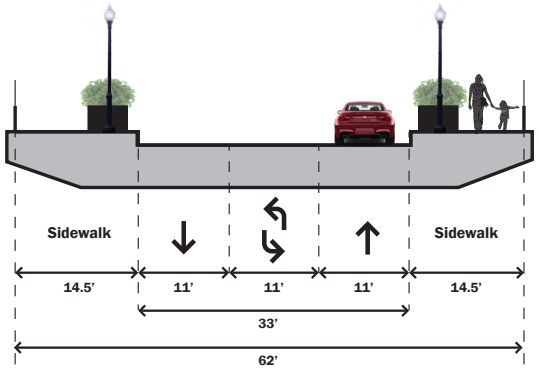
Long-term Aspirational Capping

Long term vision: Aspirational Capping

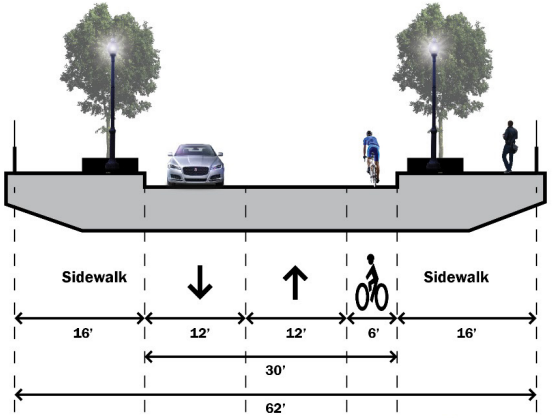
North-south Bridges



A *Restriping and safety rails*



B *Road diet*



C *One way pair (with bike lane)*

Implementation

Implementation of the plan can take multiple paths. A single phase would allow for a complete transformation of Freeway Drive all at once. However, this strategy would depend on a large funding allocation that would be challenging to secure. Alternatively, a layered implementation approach could allow for more flexibility in funding, allowing the plan to be executed in phases as funds permit. This could start with more economical solutions, like painted bulb-outs and medians to test out key elements of the plan. More permanent improvements involving lane reductions, and traffic calming on the north-south bridges could be undertaken two at a time, moving from the center of the project area to the edges of the project area. The Plan identifies short, medium and long term measures, to provide a roadmap for future implementation efforts.

In order to implement the plan, government funding on all levels - federal, state, and local should be pursued - as well as private sector and foundation sources. Improvements to Freeway Drive West are estimated to fall within a cost range of $6 million to $7 million; improvements to Freeway Drive East range from $7 to $8 million. Improvements to the north-south crossings are estimated to range between $3 to $4 million. Implementations of all recommended improvements for all three areas combined are estimated to range from $16 million to $19 million.

Estimated costs for the aspirational proposals to deck over Route 280 in the three Gateway locations range between $53-64 million (assuming three-story structures over the Brick Church Station decks). Higher density development above the Brick Church Station Decks would entail increased costs for a more robust structure to support the additional load. 20-story buildings plus six-story parking garage for instance, would add an additional $120-125 million. These would be most likely implemented through public-private partnerships, by leveraging the development potential of the sites created by the new decks.

- **Short term implementation** (1 to 4 years)
  - » Pilot projects and outreach events such as "Bicycle Sundays"
  - » The murals proposed for the blank wall section of Freeway Drive West
  - » Traffic signal phasing and timing adjustments
- **Medium Term Implementation** (4 to 10 years)
  - » Restriping and new lighting at underpasses
  - » Restriping Freeway Drive East and West to reduce the roads from three lanes to two. (may include a buffered bike lane and parallel parking.)
  - » Coordination of the traffic and pedestrian signals to align with the new scheme.
  - » The Route 280 ramp improvements with restriping
- **Long Term Implementation** (11+ years)
  - » Lane adjustments including planted medians, Bike lanes, Bulb-outs, and on street parking
  - » New signage and reducing the speed limit to 30 mph (including new traffic and environmental graphics)
  - » New pedestrian amenities such as sidewalks, curb ramps, crosswalks, audible push buttons at crossings, countdown pedestrian heads at crossings, lead pedestrian intervals and improved lighting
  - » North/South bridges improvements

Outline of Short, Medium, and Long Implementations

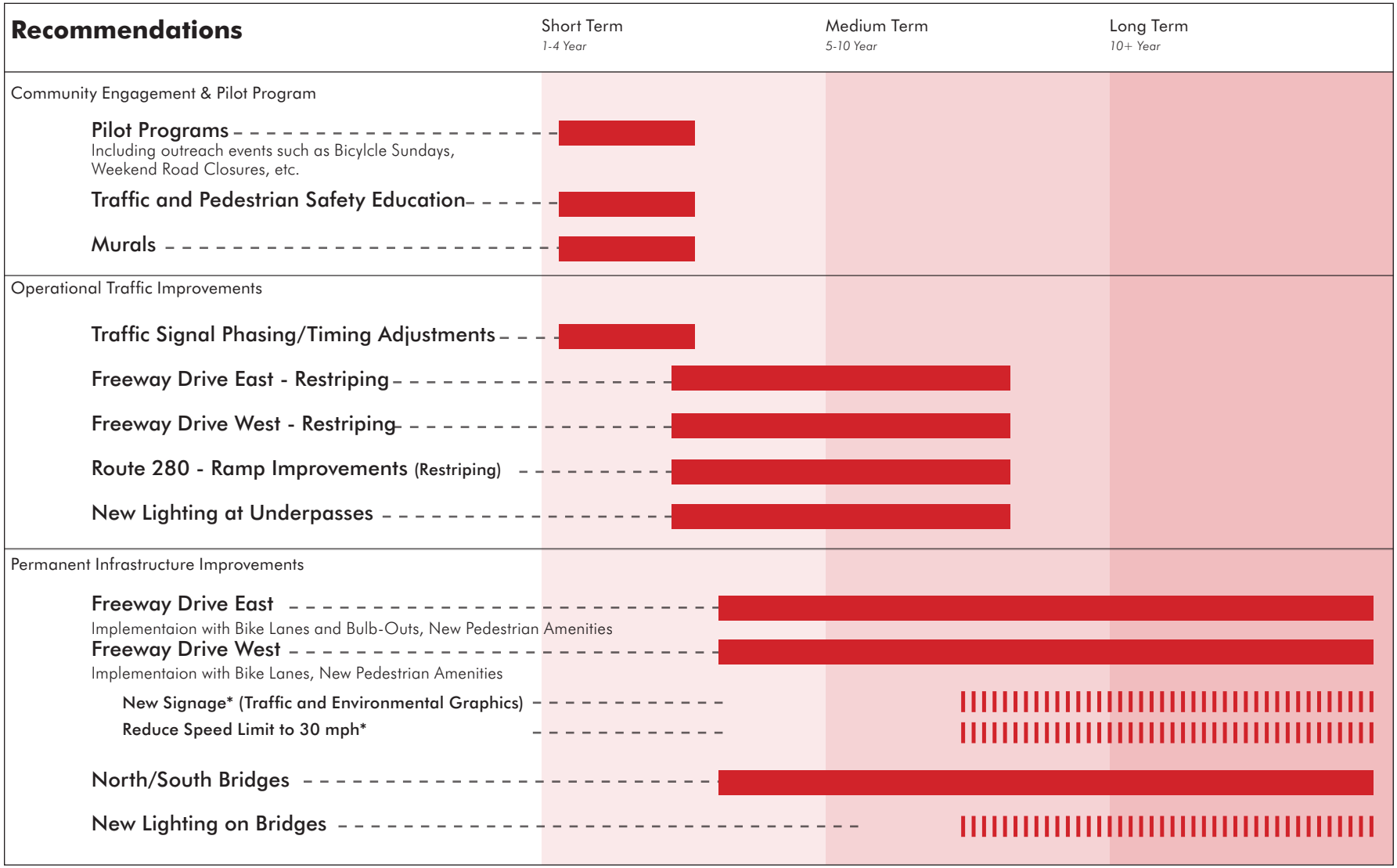


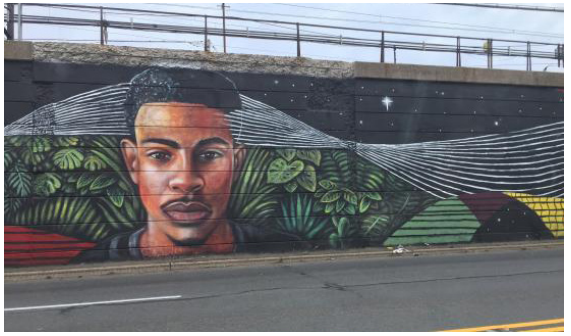
Table showing recommendations and assumed times for implementation

Conclusion

As with all major transformative projects, short term outcomes are important to demonstrate to residents and stakeholders that progress is being made while longer term efforts are being advanced and funding is pursued. Such "early wins" also serve to raise general awareness of the study area, and generate support in the larger project. Short term actions could include a combination of pilot projects and outreach events such as "Bicycle Sundays," or weekend closures of one or more of the traffic lanes to allow for car-free recreational bike use. These programs would allow residents to see the potential of this plan and build public support for the plan. New murals for the blank wall section of Freeway Drive West between Halsted Street and South Arlington Avenue is another potential short term project.

Freeway Drive has long formed a significant physical, visual, and psychological barrier within the cities of Orange and East Orange, dividing the two Cities' respective downtowns, and residential neighborhoods, impeding residents' access to transit and opportunity, and creating unsafe conditions for pedestrians. Transforming Freeway Drive will yield multiple benefits ranging from pedestrian safety and improved access to transit, to economic development and public health. To succeed, it will require the active collaboration not only between the two cities, but a partnership with the State Department of Transportation and NJ TRANSIT. This plan provides a vision for the Corridor built on public input and consensus, and grounded in data, and a roadmap for moving forward.

Bronx River Parkway Bicycle Sundays



A recent mural project in Newark, NJ

Existing Conditions

Freeway Drive Westbound Between Walnut and Burnett

Freeway Drive Westbound at Harrison

Freeway Drive Eastbound at Harrison

Freeway Drive Westbound at Harrison

Traffic and Safety

Freeway Drive creates a significant physical, visual, and psychological divide between the residential areas to the south and the commercial areas and train stations to the north. Freeway Drive does serve a role in the regional network of access to a regional route and providing and alternative route for emergency situations.

Freeway Drive provides greater capacity than is needed for its typical daily traffic volumes. Curb to curb 12-foot-wide travel lanes and lack of shoulders result in excessive vehicle speeds. This condition is further exacerbated by the lack of 'friction" present along the sides of the roadway effectively creating a speed tunnel. All visual cues prioritize the motor vehicle and give the driver the indication to "speed."

From a pedestrian perspective, Freeway Drive is daunting and intimidating. Poor lighting, narrow sidewalks, limited corner areas, impeded sight lines, and travel lanes built right to the edge of the curb all play a part to define the pedestrian experience. The oversized condition of three lanes in each direction results in long crossing distances and the lack of pedestrian amenities such as countdown

timers and the lack of ADA accommodations (particularly at the intersection corners) result in a pedestrian environment that is uncomfortable and potentially dangerous.

Physical Description

Freeway Drive is under the jurisdiction of the NJDOT and currently provides multiple travel lanes along the corridor within an approximate 62 foot cartway. The number of lanes varies slightly through the corridor depending on the location (particularly related to the Route 280 ramp system).

In the westbound direction, two travel lanes are provided between Munn Avenue and Walnut Street in East Orange. Four travel lanes are provided between Walnut Street and Burnett Street (due to the addition of the ramp from Route 280 WB). Freeway Drive then tapers down to three travel lanes west of Burnett Street.

In the eastbound direction, there are three lanes the entire length (east of Day Street). A two-lane onramp to Route 280 EB is provided just east of Walnut Street. This section of Freeway Drive provides a four to five lane cross section. The speed limit along the entire corridor is 35 MPH (recently reduced from 40 MPH). There are curbs along both sides of the road (no edge striping is provided) and a sidewalk is provided along the outside of the

Route 280 Westbound off-ramp at Walnut Street

Freeway Drive Westbound at Day Street

Lanes of Freeway Drive East and West

roadway (not the Route 280 side) the entire length.

Each of the intersections along Freeway Drive is controlled with a traffic signal. These traffic signals provide a simple two phase operation within a 90 second background cycle length. The traffic signal green time for the Freeway Drive approach varies between 30 seconds and 60 seconds depending on the location within the corridor (particularly related to the Route 280 ramp system and the cross-street traffic volumes).

There are no land uses directly fronting on Freeway Drive westbound. The only direct access is to several parking spaces located underneath the NJ TRANSIT rail line just east of Prospect Street.

There are land uses "fronting" on Freeway Drive eastbound (particularly in East Orange). Most of these are community services buildings (county facilities, senior facilities, etc.), which front on Freeway Drive but provide all vehicular access to their parking areas from the side streets.

Freeway Drive Eastbound at Evergreen

Route 280 Eastbound Onramp from Freeway Drive EB

Freeway Drive Westbound at Day Street

Despite of speed limit reducing, the roadway characteristics have not changed. A modification to the design and character of the corridor could regain the balance between vehicle efficiency and pedestrian safety. Enforcement alone typically does not modify driver speed behavior.

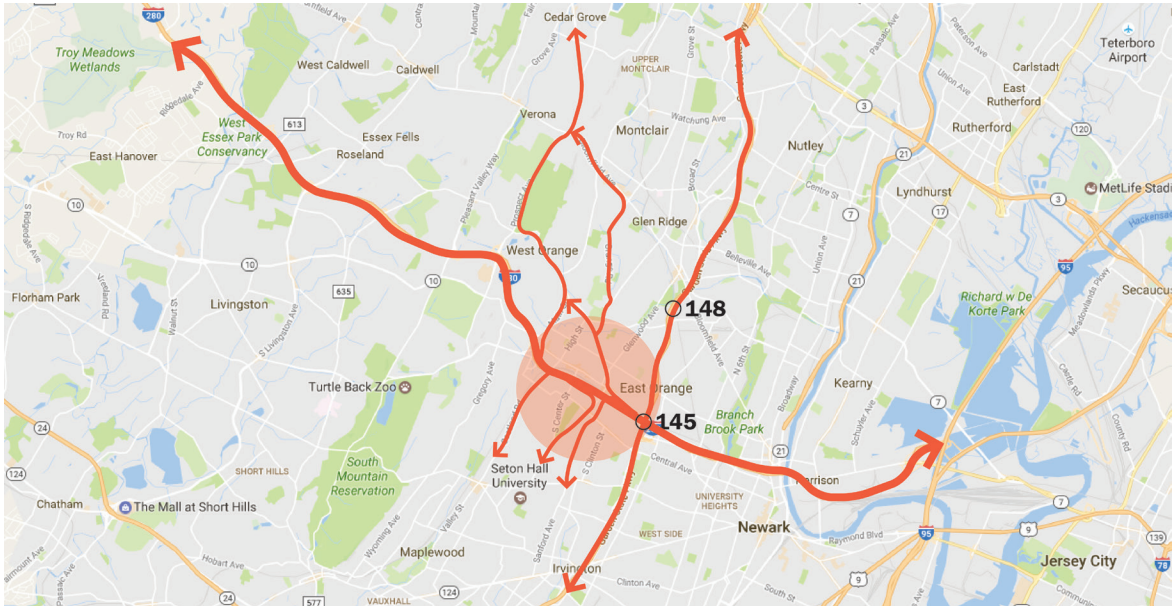
NJ TRANSIT parking- North Side of Freeway Dr WB just east of Prospect Street

Essex County Career Center - 50 South Clinton Street

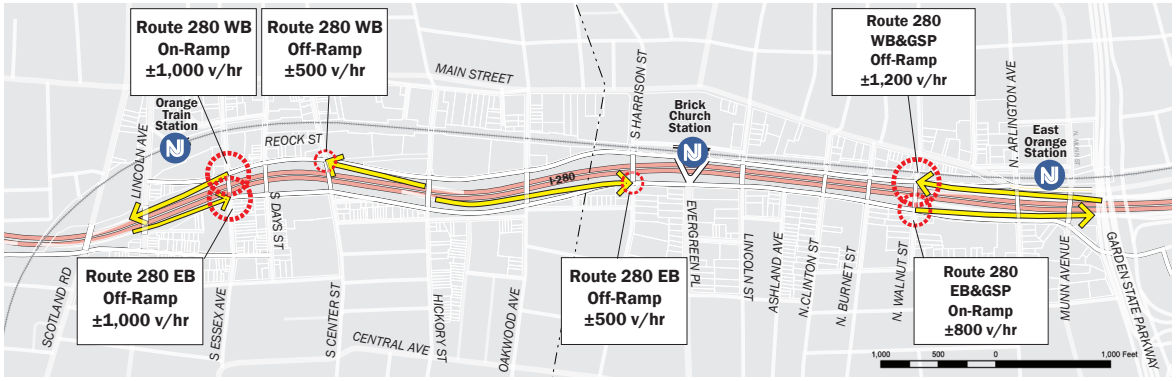
Who uses Freeway Drive?

Data indicate that Freeway Drive is being used as a distributor road for those traveling to/from East Orange and Orange as well by communities to the north (such as Montclair and West Orange) and south (such as South Orange and Maplewood). Observations and recordings confirm that Freeway Drive is not typically utilized as a Route 280 bypass (unless a crash or other road closure condition exists on Route 280).

Route 280 westbound provides an off-ramp to both East Orange (Clinton Street Exit) and Orange (Exit 11B – Day Street Essex Avenue Orange) and an onramp from Freeway Drive in Orange (just west of Essex Street). Similarly, Route 280 eastbound provides an off-ramp to both Orange (Exit 11 – Center Street Orange) and East Orange (Exit 11A – Harrison Street Clinton Street East Orange) and an onramp from Freeway Drive in East Orange (just east of Walnut Street). The Freeway Drive segments in East Orange typically carry more traffic than the segments in Orange but, in general, all segments carry approximately 1,000 to 1,500 vehicles per hour in the peak weekday morning and evening periods.



Freeway Drive functions as a distributor road

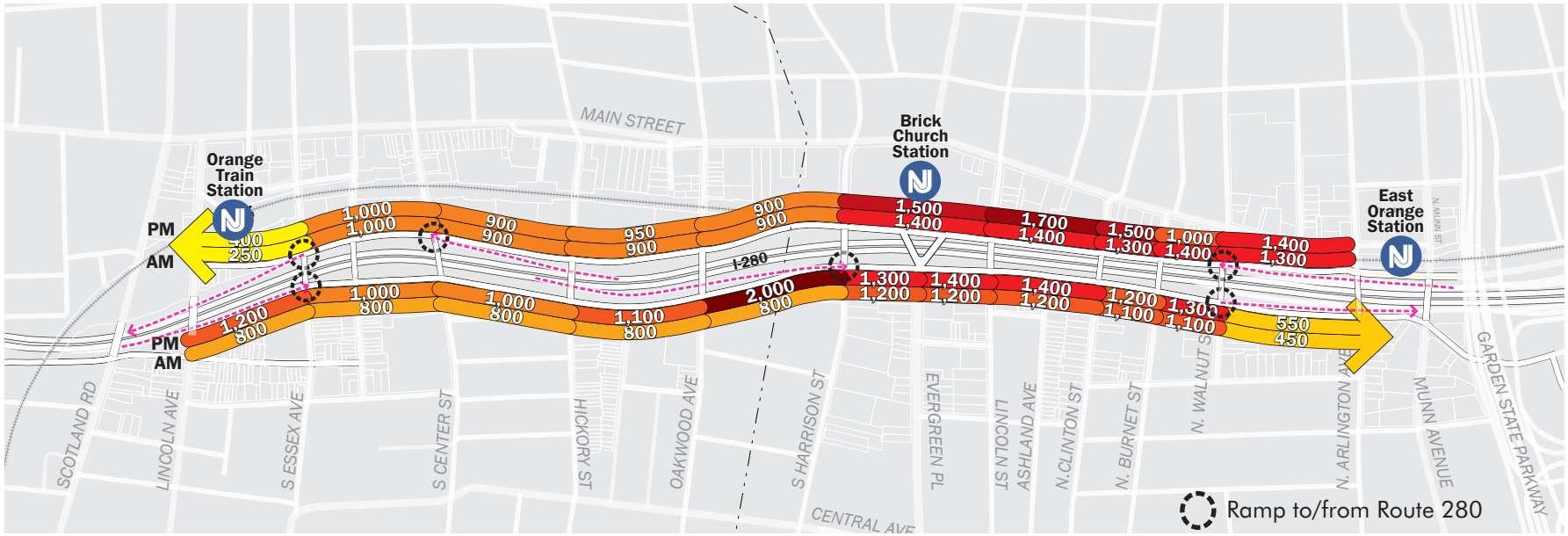


Route 280 Ramp Volume

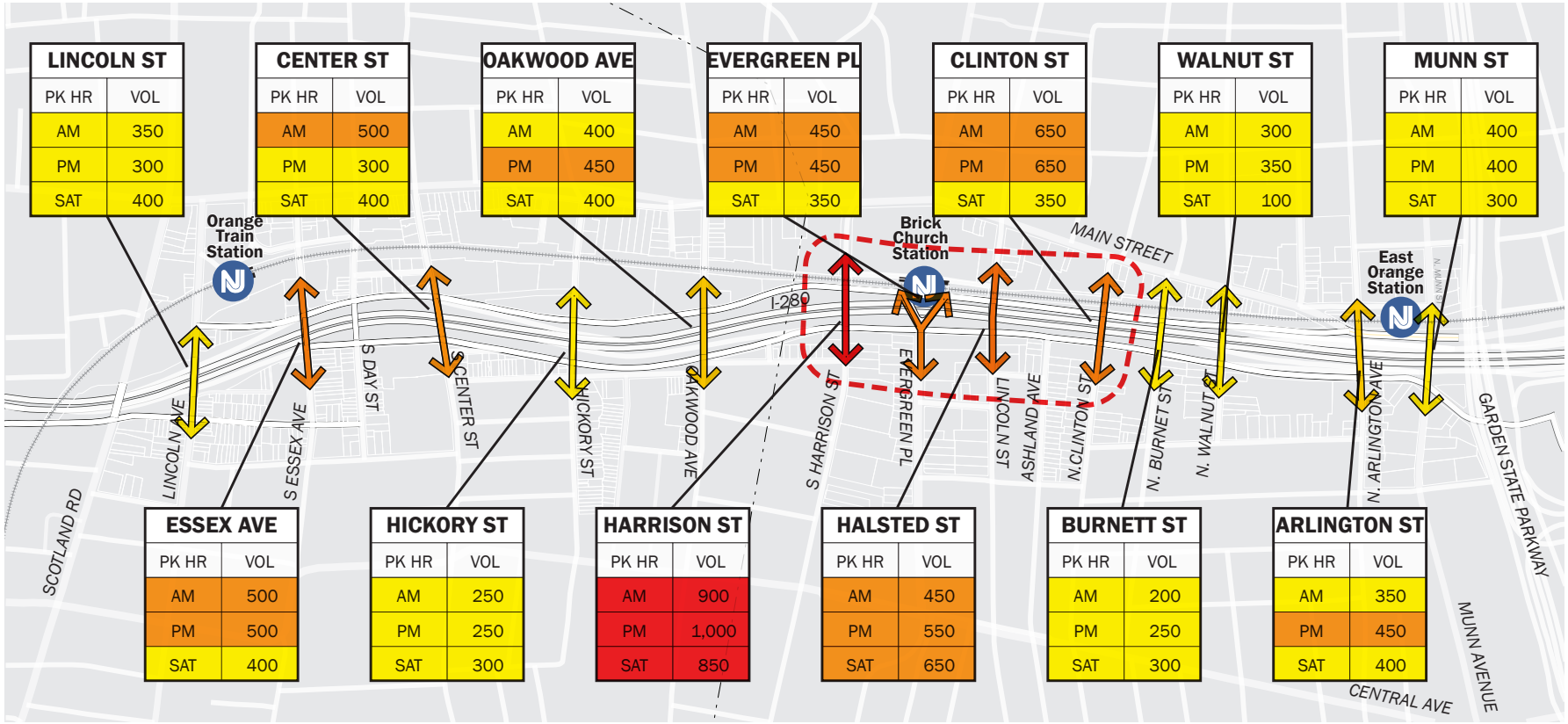
Vehicular Volume

The Freeway Drive study area is approximately 1.5 miles in length and provides more than a dozen signalized intersections in each direction. Peak period traffic data was compiled using historical data from previous studies conducted for the City of East Orange in 2010, NJDOT data from the state's traffic volume database, and current recordings taken in Fall 2016 (using both manual turning movement (MTM) and automatic traffic recorder (ATR) methods). The peak period conditions were identified as weekday morning and weekday evening. The weekend traffic volumes are significantly less than the weekday peak periods for Freeway Drive and the cross-street traffic.

The weekday evening peak period experiences a higher vehicular volume than does the weekday morning (particularly along Freeway Drive). East Orange segments are higher in volume than the Orange segments primarily due to the influence of traffic to/from Harrison Street. During the weekday morning peak period, most segments accommodate 800 to 1,500 vehicles per hour, and that volume increases slightly for the weekday evening peak hour to range from 1,000 to 1,700.

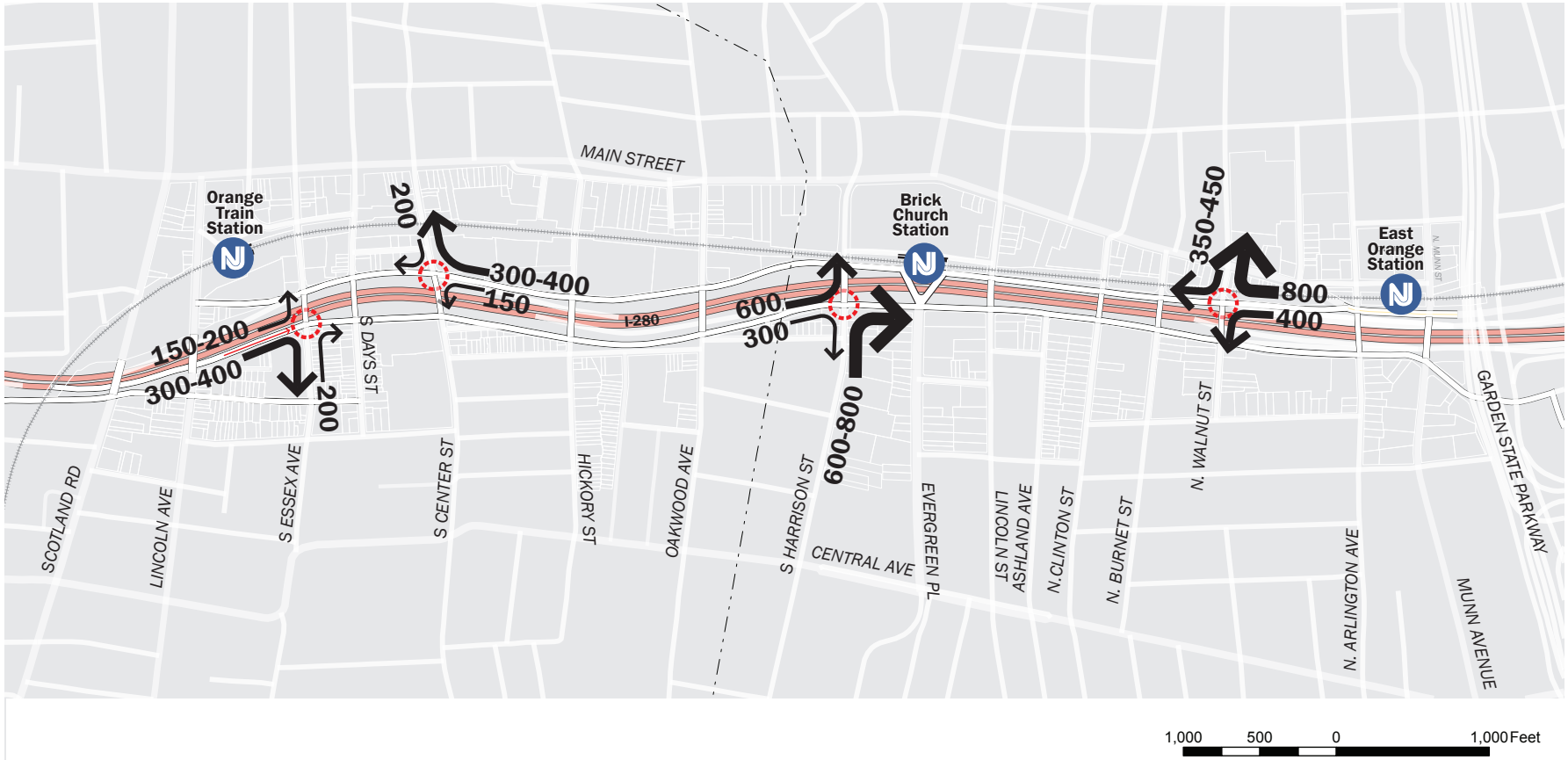


Freeway Drive Segment Volumes (AM and PM)



Cross Street Volumes (Peak Periods)

The cross-street traffic levels vary considerably throughout the study area. There are several cross streets such as Walnut, Burnett, Hickory, and Oakwood that accommodate 200 – 400 vehicles per hour, but other streets such as Clinton, Halsted, Evergreen and Essex that accommodate 400 – 600 vehicles per hour. Harrison Street, however, is the primary north/south connection along this study area and accommodates the highest vehicle volume of all the north/south cross streets in the range of 800 – 1,000 vehicles per hour.



Freeway Drive Volume Distribution

An important aspect of the traffic on Freeway Drive is that while the number of vehicles exiting Route 280 and using Freeway Drive is significant, a similar number of vehicles turn off Freeway Drive at critical north/south roadways throughout the corridor. This distribution of traffic results in traffic volumes along the corridor segments that provide opportunity for lane reduction.

Pedestrian Activity

Peak period pedestrian data was compiled using a combination of historical data from previous studies, observations during various project site visits and current pedestrian activity recordings.

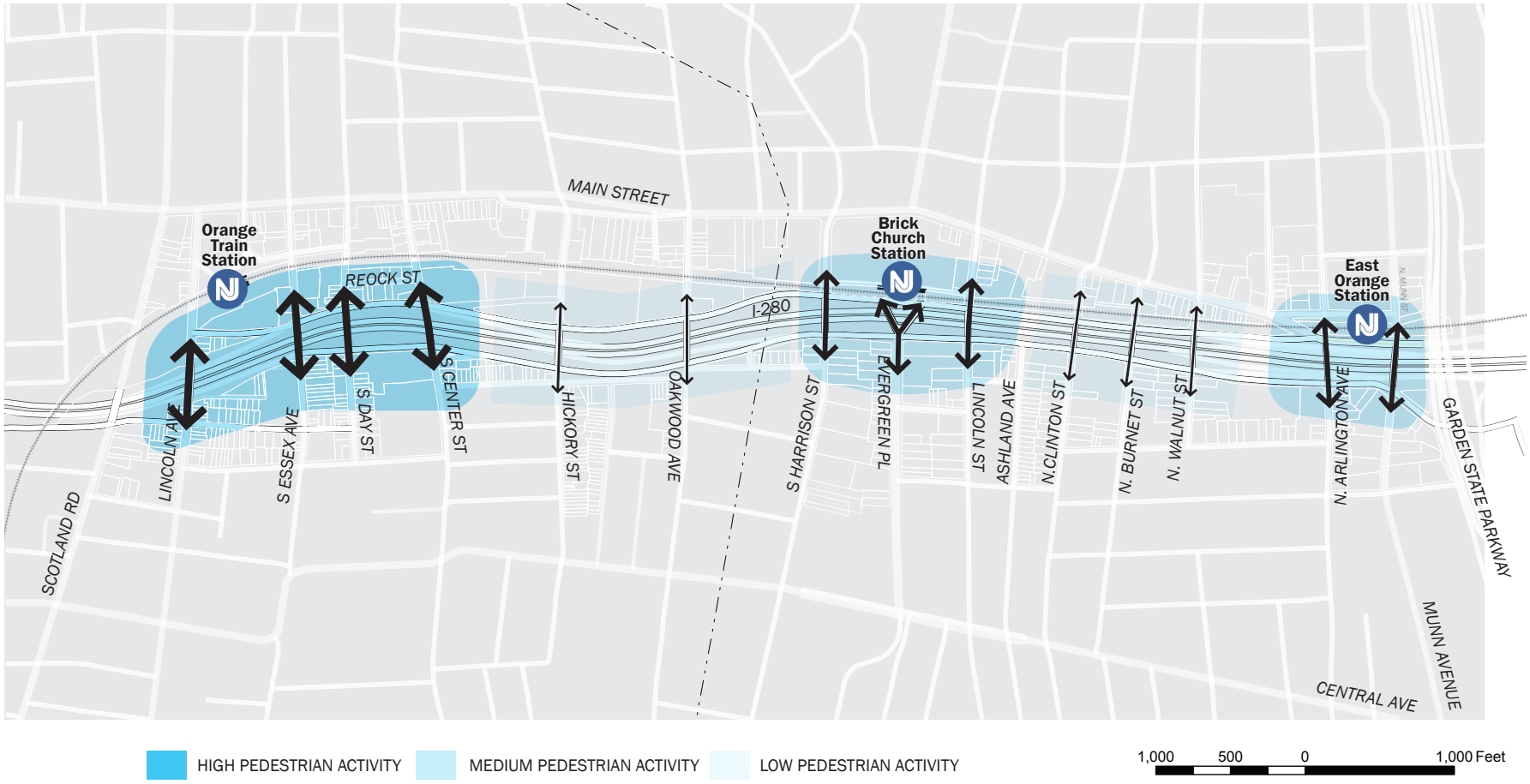
It was observed that little pedestrian activity occurs along Freeway Drive westbound; however, due to the community service type land uses, there is pedestrian activity along Freeway Drive eastbound (particularly in East Orange). This is in stark contrast to the rather significant pedestrian activity which occurs along the north/south cross streets. The pedestrian volume on the north/south cross streets corresponds directly to the land uses (commercial shopping areas, civic uses, schools). The pedestrian volume is concentrated near the East Orange Station area/East Orange civic plaza, Brick Church Station/Main Street commercial area, and Orange station/Essex Street commercial area. The fact that there is significant pedestrian activity across the Freeway Drive corridor should not be mistaken for a comfortable or safe pedestrian experience. The pedestrians are using this corridor out of pure necessity.

Over the past several decades the Freeway Drive corridor has been dominated by vehicular activity to the detriment of pedestrian safety. Community residents spoke of a genuine fear of walking across Freeway Drive. It is clear why this is the case. The team observed pedestrians standing far back from the curb edge due to the proximity and speed of vehicles traveling past. The team also observed heavy trucks and buses travelling in lanes that are immediately adjacent to sidewalks. These sidewalks, while typically wider than four feet, are also bordered by the highway security fencing which curves inward and above the pedestrian's heads.

Pedestrian Amenities - Audit

In conjunction with the pedestrian activity, an audit was conducted of the pedestrian amenities throughout the corridor. The audit included:

- Sidewalks (width and condition)
- ADA ramping at intersections (grade and detectable warning surface)
- Crosswalks (presence and condition)



Cross Street Pedestrian Activity

Sidewalks

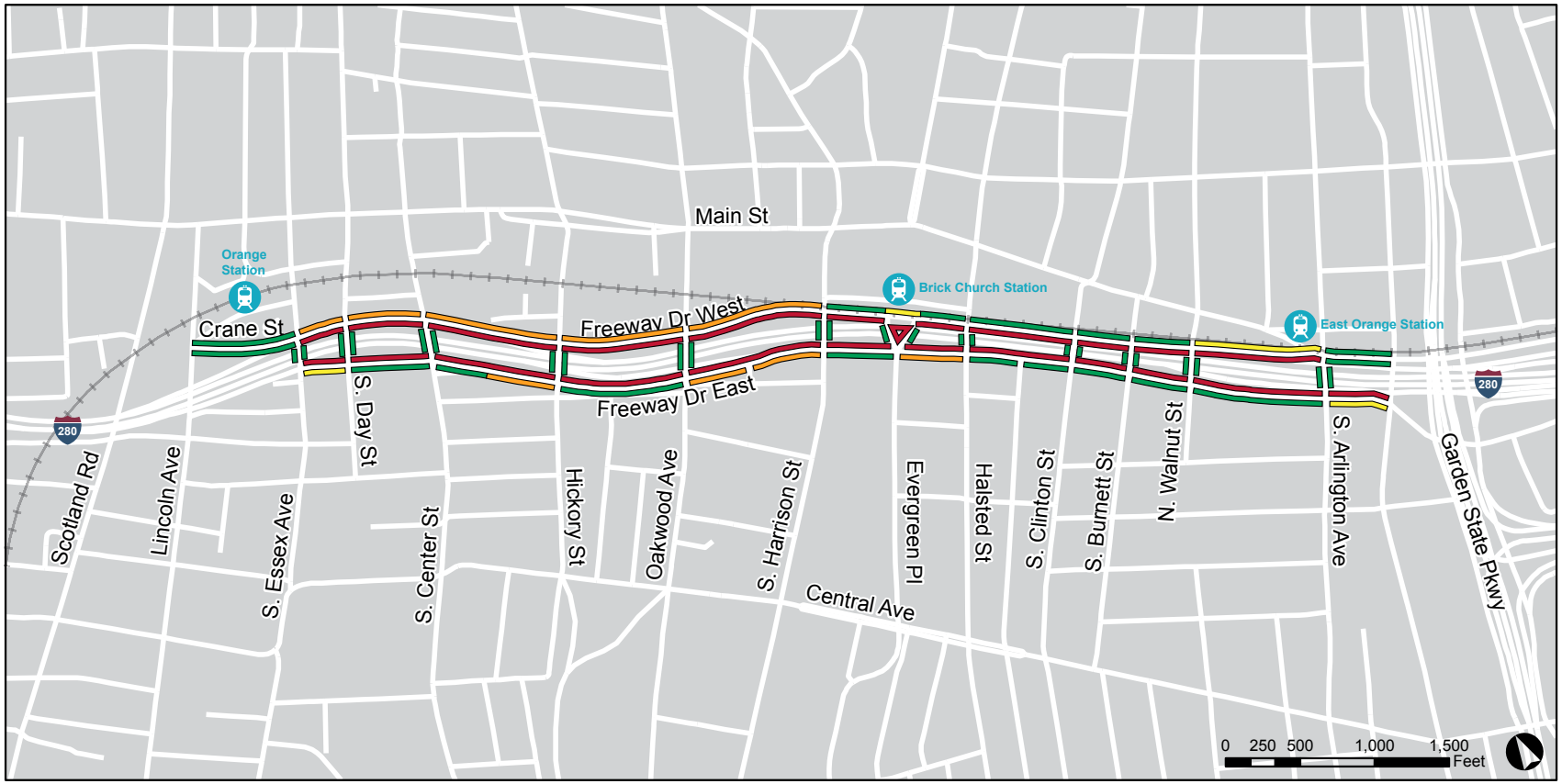
The sidewalks along Freeway Drive (both East and West) are generally of appropriate width and in good condition. There are, however, a few locations where light poles or other utilities obstruct the sidewalk. There are also locations where there is evidence of water ponding. The sidewalks are only provided on the north side of Freeway Drive West and the south side of Freeway Drive East.

The north/south cross streets all provide sidewalks which are at least four feet in width and generally in good condition. It should be mentioned, however, that the north/south roadways typically provide a four-lane cross section which abuts directly adjacent to the curb (no shoulders are provided). The provision of a travel lane directly adjacent to the sidewalk is uncomfortable for pedestrians and makes the sidewalk feel more narrow. Additionally, the safety fencing along the north-south crossing is curved inward (over the pedestrian's heads) which further reduces the effective width of the sidewalk and may tend to push pedestrians toward the curb edge.

Existing sidewalk conditions on Freeway Drive East

Typical sidewalk and fencing at bridges

Existing Sidewalk Conditions



Sidewalk effective width ≥ 4 ft and generally good quality

Sidewalk effective width ≥ 4 ft and poor quality (e.g. missing segments, deteriorated conditions, etc.)

Sidewalk width generally ≥ 4 ft, however effective width of some segments < 4 ft

No sidewalk present or ≤ 2 ft along Route 280

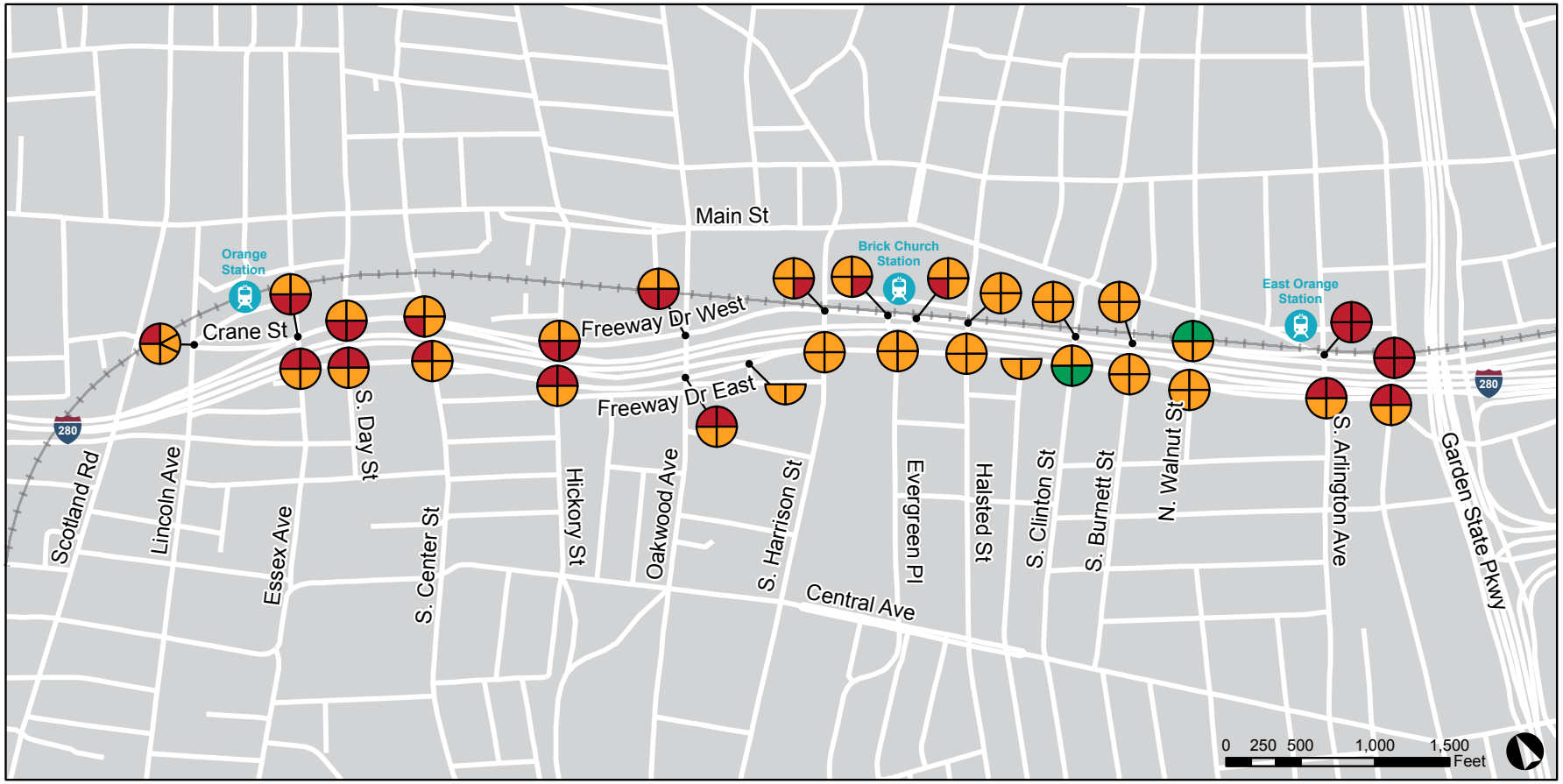
Curb Ramps

The curb ramps throughout the Freeway Drive corridor (both directions) were either not present at all or were in unacceptable condition (disrepair and/or non-compliant). Of the 30 intersections evaluated throughout the corridor, only two intersections provide curb ramps (four ramps in total) that are ADA compliant and acceptable for pedestrians. This is a critical issue to the pedestrian experience and renders the Freeway Drive corridor inaccessible for those in need of ADA accessibility. The lack of curb ramps also renders the Freeway Drive corridor uncomfortable and potentially unmanageable for those using wheeled shopping carts and/or baby strollers.

The level of non-compliance varies throughout the corridor. Some intersections provide curb ramps which are of steep grade or in a state of disrepair, while others provide a curb lip several inches tall at the road. There are also many intersection corners with no curb ramp at all.

Very active crossing at Clinton Street with a four inch ramp lip

Pedestrians Wheels Use (shopping carts, strollers, wheelchairs)



Curb ramp present, good quality

Curb ramp present, poor quality (e.g. steep slope, deteriorated, missing detectable warning surface, etc.)

No curb ramp present

Existing Curb Ramp Conditions

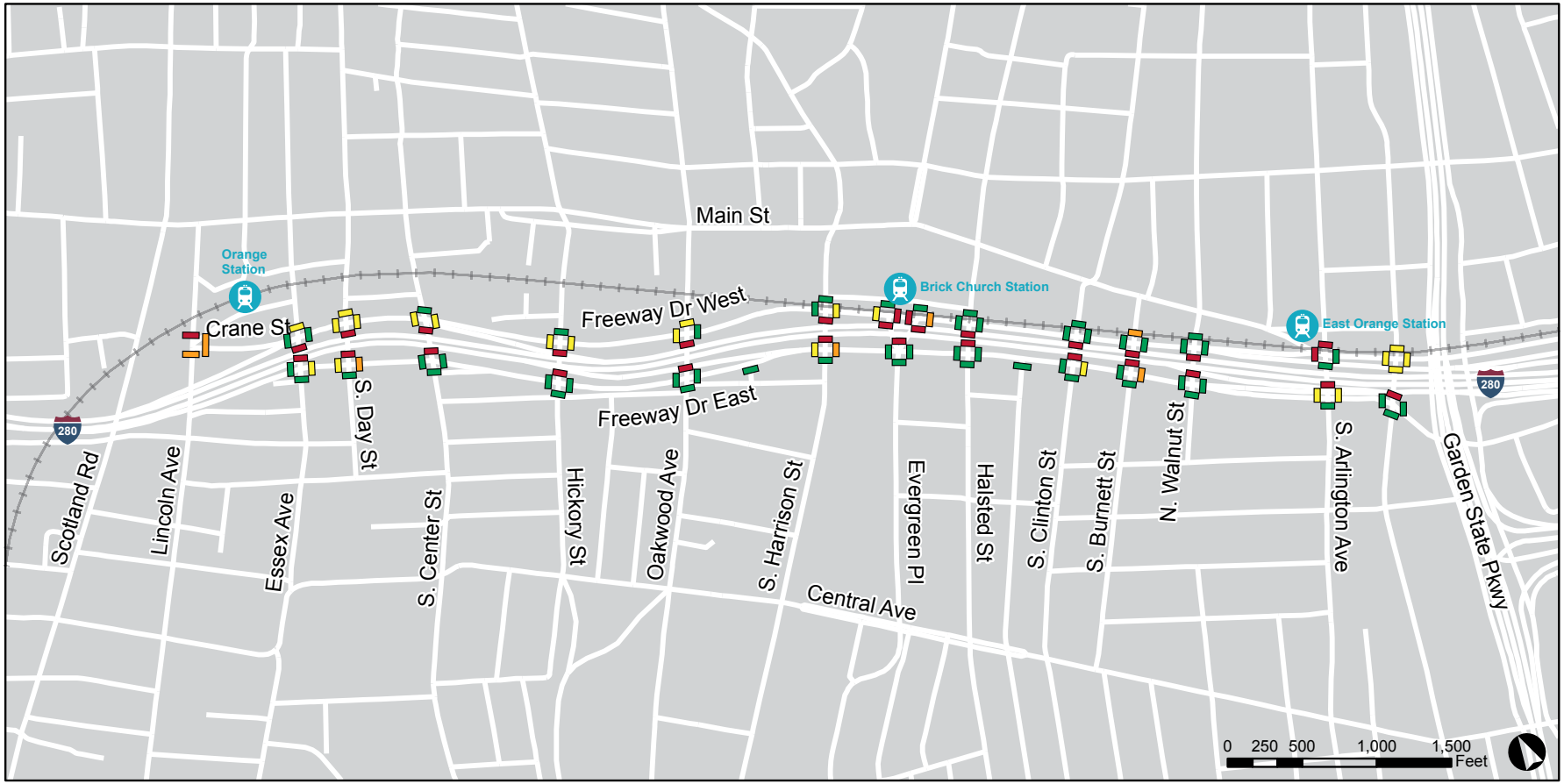
Crosswalks

The crosswalks throughout the corridor appear to have been installed several years ago. They are the high visibility ladder style crosswalks (which are the preferred design for high pedestrian activity locations). The crosswalks, however, vary in condition. Some are in very good condition and others are barely noticeable (please note that there is no sidewalk along the Route 280 fence line and pedestrian activity is discouraged along this area of the roadway).

Freeway Drive eastbound at Day Street - crosswalks in moderate to poor condition

Crosswalks are a critical factor in pedestrian safety... a visual cue that these intersections experience heavy pedestrian activity

Freeway Drive westbound at Walnut Street - crosswalks in good condition



Crosswalk visible, generally good condition

Crosswalk faded / somewhat visible and/or poor quality

Crosswalk very faded, difficult to discern

No crosswalk present

Existing Crosswalk Conditions

Crash History

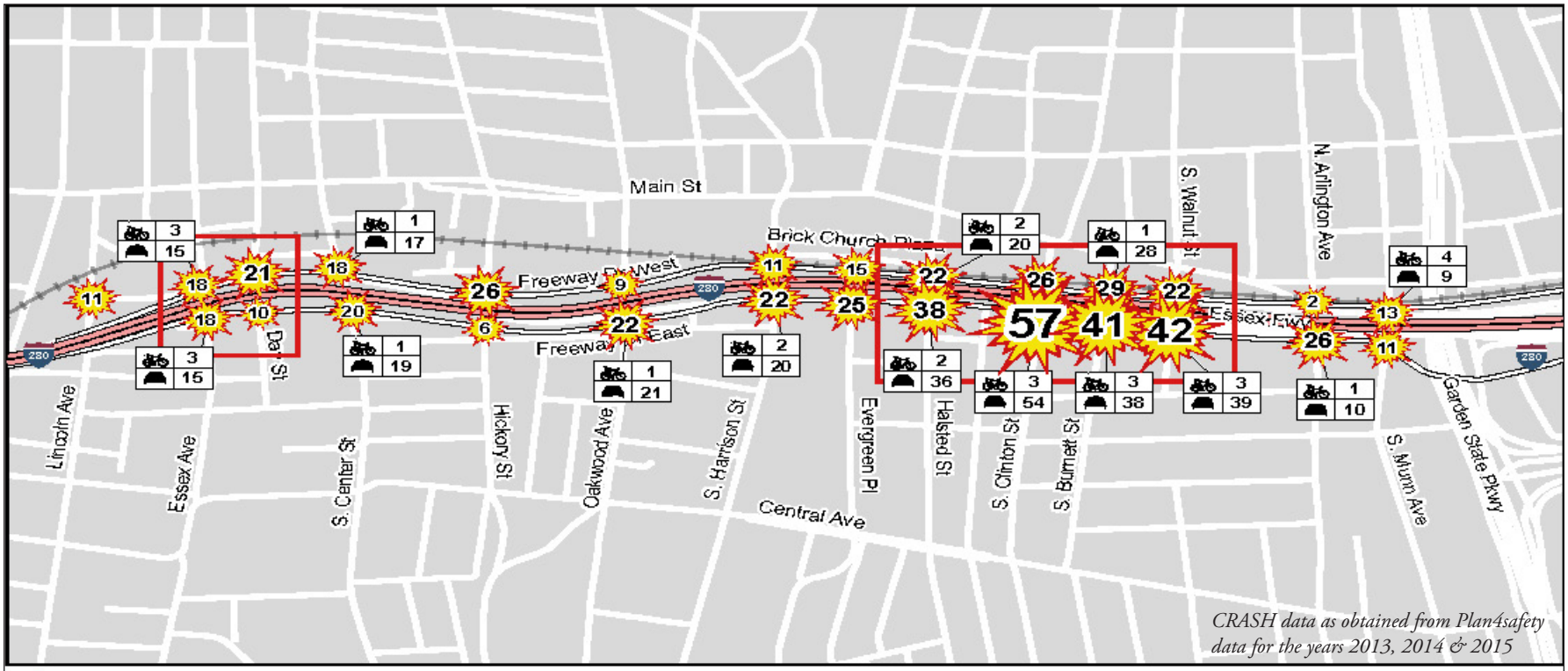
An evaluation of crash history is one of the methods of determining if a roadway corridor or intersection is operating safely. Safe operation considers motor vehicle, pedestrian, and vehicle crashes, although the emphasis for this study is on pedestrian crashes. The analysis was conducted utilizing the crash data available via the Plan4Safety program. Specifically, crash data from 2013, 2014 and 2015 was obtained and analyzed to identify trends and hotspots throughout the corridor. Attention was given to crashes that involved pedestrians and/or bicyclists.

In addition to the crash records, the team also solicited input from stakeholders and the public to determine locations and intersections that "feel" unsafe, uncomfortable or intimidating. Often the lack of crash history is not necessarily indicative of safety but rather an avoidance of the location by pedestrians.

The crash history (2013-2015) revealed a higher number of crashes at the intersections within East Orange (and particularly at the intersections along Freeway Drive eastbound). There is a cluster of crashes at the intersections with Halsted, Clinton, Burnett, and Walnut Streets. These intersections also experienced a higher number of pedestrian/bicycle related crashes. It is believed that this crash cluster is a product of the activity associated with the County service buildings, senior center, and other community based facilities. People's unfamiliarity with the facilities (building address, driveway location, main door location, etc.) combined with a focus of vehicle and pedestrian movements could be an explanation for this cluster.

In Orange, there is a cluster of pedestrian related crashes at the intersections with Essex Street. It is believed that this pedestrian cluster is directly related to the commuters utilizing the Orange Train Station. It is common that the combination of commuters attempting to park, rush for a train, and walk in the dark (early morning, later evening), all while wearing dark clothing/business attire, results in a cluster of pedestrian related crashes.

While the number of crashes throughout the corridor is not staggering, the sense throughout the corridor is that Freeway Drive was designed as a high-speed thoroughfare for vehicular traffic with very little attention to pedestrian accommodation and safety. Nearby residents say that due to current unsafe conditions they avoid walking along or across Freeway as much as possible and, when they must, they walk in an extremely guarded and defensive manner.



Key

High Crash Area
**Unless indicated, crash numbers above include only vehicular accidents*

Total crash number for the three years

Auto/Pedestrian/Bike Crashes

Auto/Auto Crashes

Crash History

Roadway Corridor and Intersection Analysis

The primary focus of the evaluation was to assess the lane capacity on Freeway Drive East and Freeway Drive West against the current traffic volume on those two throughfares. The evaluation utilized detailed capacity analyses for both the Existing (which serves as the No Build as well) and Build conditions at each intersection throughout the corridor. The methodology utilized in the capacity analyses is described in the 2010 Highway Capacity Manual, published by the Transportation Research Board. In general, the term Level of Service (LOS) is used to provide a "qualitative" evaluation of capacity based upon certain "quantitative" calculations related to empirical values, such as traffic volume and intersection control.

At the signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal "green time," turning percentages, truck volumes, pedestrian volumes, etc. The following table describes the level of service ranges for signalized intersections. The levels of service are graded just like in school (with LOS A being the best operation and LOS F being the most constrained/congested operation.) It is widely accepted that LOS A through D are good levels of service where all vehicles in a queue at a traffic signal will get through the signal in one cycle. LOS E represents more congested traffic conditions and is representative of peak period conditions at the majority of critical commuter corridor intersections throughout the state. LOS F represents constrained conditions where typically vehicles do not make it through an intersection in one cycle of the traffic signal. LOS F is also fairly common along many of the critical commuter corridors throughout the state.

Existing Conditions Analysis Summary

The existing conditions of the Freeway Drive corridor were analyzed using the existing traffic volumes and current intersection geometry and traffic signal settings. The Existing LOS are illustrated in Table 1 and are summarized below.

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (SEC)
A	≤10
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

Table 1. Level of Service Criteria for Signalized Intersections

Freeway Drive westbound - The intersection level of service analyses indicate that the Freeway Drive westbound approaches currently operate with acceptable levels of service during the weekday morning, weekday evening and Saturday mid-day peak periods. The intersections at/near the Route 280 ramps accommodate heavier traffic and tend to experience longer delays and LOS D / LOS E. In all, however, the Freeway Drive westbound levels of service and operation are generally considered good.

Freeway Drive eastbound - The intersection level of service analyses indicate that the Freeway Drive eastbound approaches currently operate with acceptable levels of service during the weekday morning, weekday evening and Saturday mid-day peak periods. In addition, all cross-street approaches currently operate with acceptable levels of service during those peak periods as well. In all, the levels of service and operation of the Freeway Drive eastbound corridor are considered acceptable.

Proposed Conditions Analysis Summary

The proposed condition considers removal of one of the travel lanes along Freeway Drive (in

each direction). The travel lane that is removed will then be repurposed as discussed in the "recommendations" section of this report. The proposed condition analysis confirms that safe and efficient traffic flow can be maintained along both directions of Freeway Drive. The Proposed Conditions LOS are summarized below.

Freeway Drive westbound - The intersection level of service analyses indicate that the elimination of one travel lane along the Freeway Drive westbound approaches will result in maintaining acceptable levels of service during the weekday morning, weekday evening and Saturday mid-day peak periods. Similar to the existing conditions, the intersections at/near the Route 280 ramps accommodate heavier traffic and tend to experience longer delays. To note is that the Freeway Drive westbound approach at Harrison Avenue will require maintaining the three lanes to accommodate the significant Freeway Drive to Harrison Avenue right turn volume. In all, Freeway Drive westbound continues to operate within acceptable levels of service.

It has been determined that slight signal timing adjustments (including adjustments to the signal progression) could be made at the intersections which are experiencing longer delays for cross street traffic to improve the overall operations. These details should be further clarified at the time the intersection is designed.

Freeway Drive eastbound - The intersection level of service analyses indicate that the elimination of one travel lane along the Freeway Drive eastbound approaches will result in maintaining acceptable levels of service during the weekday morning, weekday evening and Saturday mid-day peak periods. In addition, all cross-street approaches will continue to operate with acceptable levels of service. In all, Freeway Drive eastbound continues to operate within acceptable levels of service.

Upon completion of the analyses it is determined that the Freeway Drive corridors (both westbound and eastbound) will continue to operate with acceptable levels of service upon removal of one travel lane. The removal of the travel lane along Freeway Drive has minimal impact on the existing operation of the cross-street approaches, especially once a traffic signal synchronization and progression program is implemented along the entire corridor.

Freeway Drive Eastbound

Freeway Drive Westbound at S. Essex Ave

End of Freeway Drive West

Public Realm Overview

The public realm of Freeway Drive Corridor encompasses the space within the public right of way including the roadways, sidewalks, plazas, north-south bridges and the myriad "leftover spaces" to which the public has right of access. The quality of the public realm, is defined not only by the individual streetscape elements like street trees, planted areas, pedestrian amenities, and adjacent structures, but by the overall image, scale, and character they comprise as a whole. The overall of quality of the public realm has a significant impact on not only people's perception of Freeway Drive but how it functions as well.

Stretching two miles between the Garden State Parkway on its east end to South Essex Street to the west, Freeway Drive appears vast and without definition; dominated by asphalt, with little shade and vegetation. However, Freeway Drive can also be seen as series of distinct places, each with their own physical character, adjacent land uses, sense of scale and traffic context.

The Places of Freeway Drive West

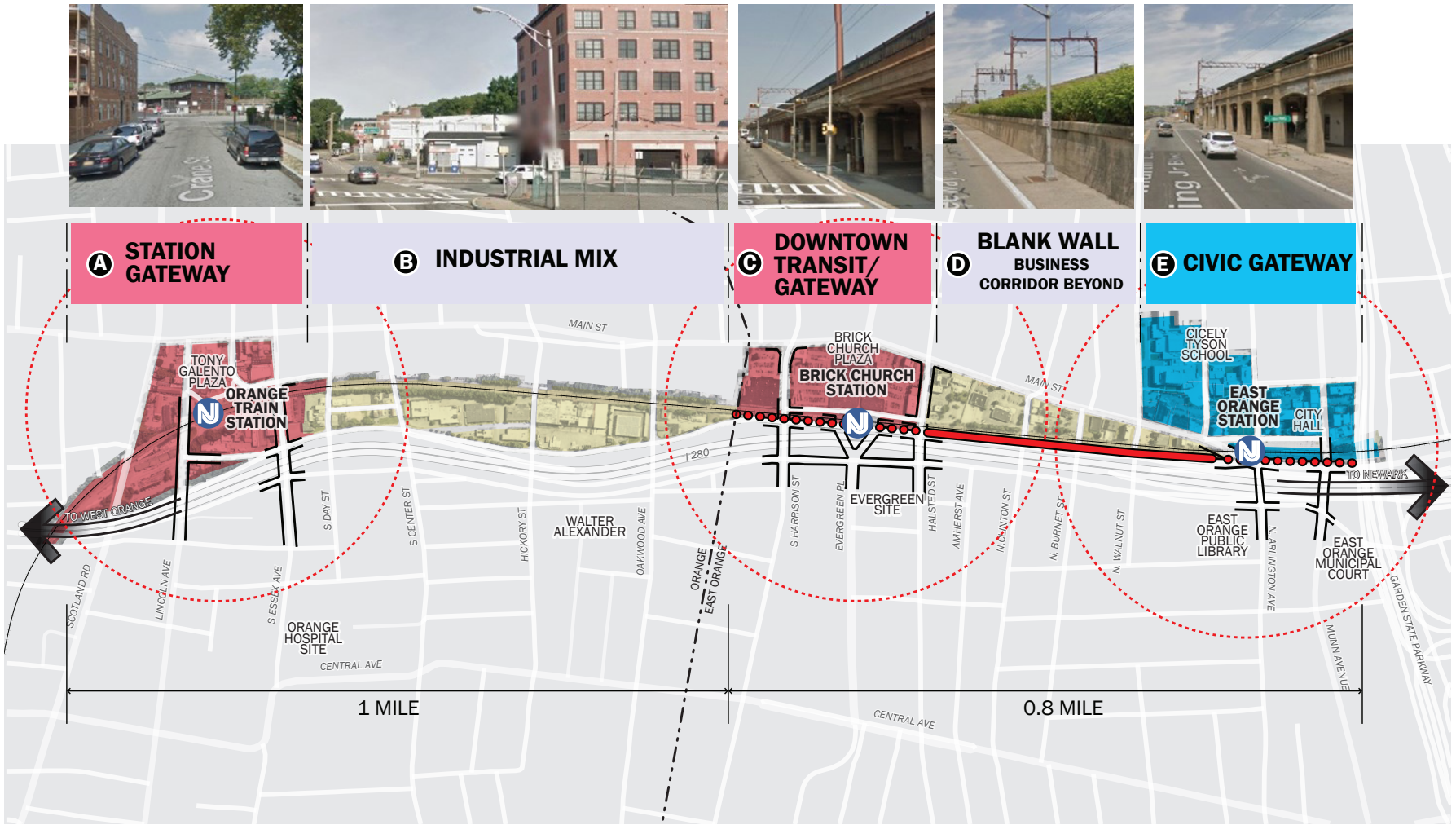
Anchoring the Freeway Drive's west end is the "Station Gateway." The Station Gateway area extends from Scotland Road to South Day Street and includes the Orange Train Station. Freeway Drive West terminates at the intersection of South Essex Avenue where it forks into an on-ramp for Route 280 and a local road, Crane Street, which feeds into the City of Orange Township. This section of Freeway Drive creates a break between the South Essex Avenue bridge and the entrance to the NJ TRANSIT Station.

The area to the east, between the intersections at Oakwood Avenue and South Harrison Street, is characterized by the mix of industrial and commercial uses in the area between Freeway Drive and the NJ TRANSIT Viaduct. Recent development proposals here suggest the need for more pedestrian accommodations. Here, Freeway Drive's curves creates a more intimate scale, and results in slower moving traffic.

The Downtown Transit Gateway is defined by the western boundary of East Orange and Halsted Street and is focused on Brick Church Station. The NJ TRANSIT viaduct which runs along the north side of Freeway Drive West is embellished here, representing an older ideal of infrastructure as civic art. This character can be taken advantage of and become a welcoming gateway to the neighborhood to the north.

To the east of this area is the "Blank Wall." This area spans from Halsted Street to Arlington Ave and is a "no man's land." This section of Freeway Drive West is defined by the long blank retaining wall which separates Freeway Drive West from the train rails above. The height of the wall and rail structure do not allow for any visibility into the business corridor beyond, and as such, this area is devoid of character and is an unwelcoming area for pedestrians. The lack of adjacent land uses also seems to encourage more rapid traffic.

The east end of Freeway Drive is anchored by the Civic Center Gateway section, which extends between Arlington Avenue and the Garden State Parkway. This section of Freeway Drive includes East Orange Station. The viaduct in this section was also designed as civic art and could contribute to the civic character of the areas to the north, which includes East Orange City Hall and the Cicely Tyson School, and the area to the south, which includes East Orange Public Library and East Orange municipal court. Route 280 and Freeway Drive interrupt what would and should be a more direct connection between these institutions. Generally, Freeway Drive West has less pedestrian activity due to the lack of adjacent land uses.



The Places of Freeway Drive West

The Places of Freeway Drive East

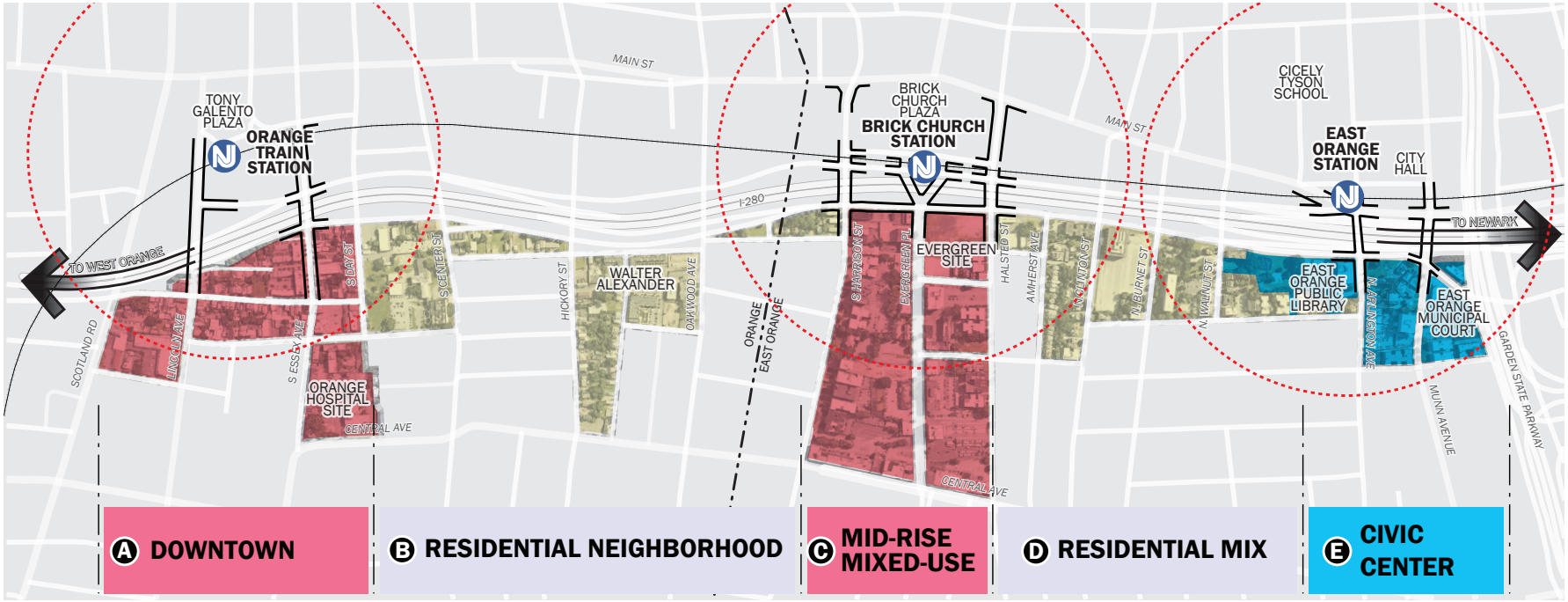
Similar to Freeway Drive West, Freeway Drive East can also be seen as a series of distinct places. In the "Downtown" section from South Essex Avenue to South Day Street, the southern end of Downtown Orange comes right up to Freeway Drive, making this section of Freeway Drive East more hospitable to pedestrians. Slowing traffic along this section would help support the uses along the south side of Freeway Drive East and help encourage more people to walk along this side as well.

To the east is the residential neighborhood which spans from South Day Street to South Harrison Street. Redevelopment activity in this area is highlighted by the Orange Housing Authority's the Walter Alexander Village. Freeway Drive East's curving profile along this section serves to slow traffic. The green triangles along the south side of Freeway Drive East act as buffers to the development to the south.

The section between South Harrison Street and Halsted Street is characterized by mid-rise mixed use development. This section is focused on the Evergreen Place corridor and is an area of current focus by East Orange for redevelopment, in particular, the "Evergreen Site." This corridor is separated from the Brick Church Train Station and the East Orange Downtown by the intersection of Freeway Drive and Route 280.

The area between Halsted Street and Arlington Avenue is characterized by a mix of residential uses. This area currently lacks safety features for pedestrians and parking to support land uses. Finally, east end of Freeway Drive East between Munn Street and the Garden State Parkway features an area which is anchored by the East Orange Public Library and the East Orange Municipal Court. Seen in the context of the related civic uses on the north side of Freeway Drive, this area can really be seen as a single Civic Center District, which is divided by Freeway Drive.

Freeway Drive in this area acts a major barrier between the two sides. There is a higher volume of pedestrian activity along Freeway Drive East generated by the development on the south side of Freeway Drive East. But the pedestrian and automobile experience in this area is also confusing due to the angles that occur at the intersections. This confusion leads to unsafe conditions for both drivers and pedestrians. Munn Avenue offers the potential for greater pedestrian activity and a better link between civic uses.



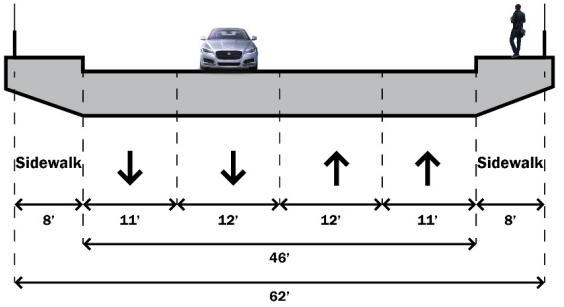
The Places of Freeway Drive East

Bridges

There are 13 bridges, which are under the jurisdiction of the NJDOT, within the project area spanning Route 280. While these bridges provide for abundant automobile access for north-south roads, they are much less successful in facilitating pedestrian access. The vehicular cartways typically provide for four lanes of traffic (two lanes in each direction), prioritizing automobiles over pedestrians. The bridges' narrow sidewalks, multiple lanes of traffic, and chain link fencing overlooking the eight lanes of traffic on Route 280 leave pedestrians feeling vulnerable and unprotected. Conditions at night are worse, with lighting limited to a single cobrahead light fixture on each bridge that partially illuminate the roadway, and no lighting at all at the pedestrian level.

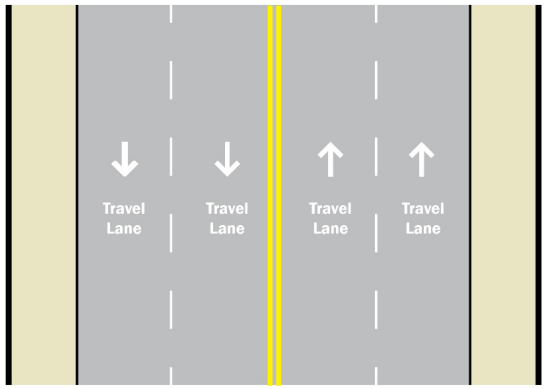
Pedestrian and vehicular activity on the bridges vary, with the highest volumes occurring along the corridors within the three gateway areas leading to the NJ TRANSIT stations. Improving the conditions for pedestrians on these crossings is needed to increase access between the north and south sides of Freeway Drive. With future development anticipated within these corridors, and proposed traffic calming along Freeway Drive West and Freeway Drive East, these improvements will be critical.

Bridge at S. Essex Ave from Freeway Drive West



Typical Bridge Section and Dimensions

Bridge at N. Munn Ave from East Orange Station stairs



Typical Bridge Plan

13 Bridges Crossing Freeway Drive

Environmental Justice

Environmental justice analysis in transportation investments ensures a fair distribution of resources among traditionally underserved populations. Executive Order (EO) 12898 authorized Federal actions to address environmental justice, and requires federal agencies to identify and address, disproportionately high and adverse human health or environmental impacts of their programs, policies, and activities on minority populations and low-income populations. The following is a characterization of the study area's socioeconomic conditions in the context of transportation (including transportation safety), housing and open space. Analysis showed that the population living within the Freeway Drive Study Area is characterized by relatively higher levels of poverty and transit dependency, as discussed below.

Low-Income Populations

Poverty is more pervasive within the study area than in Essex County as a whole (Figure 2). High poverty rates are associated with a multitude of negative impacts including poorer health, a greater share of income spent on basic necessities, and lack of connectivity

Between 64 and 67 percent of all households in the Census tracts within half a mile of Orange, Brick Church, and East Orange Station are classified as low-income

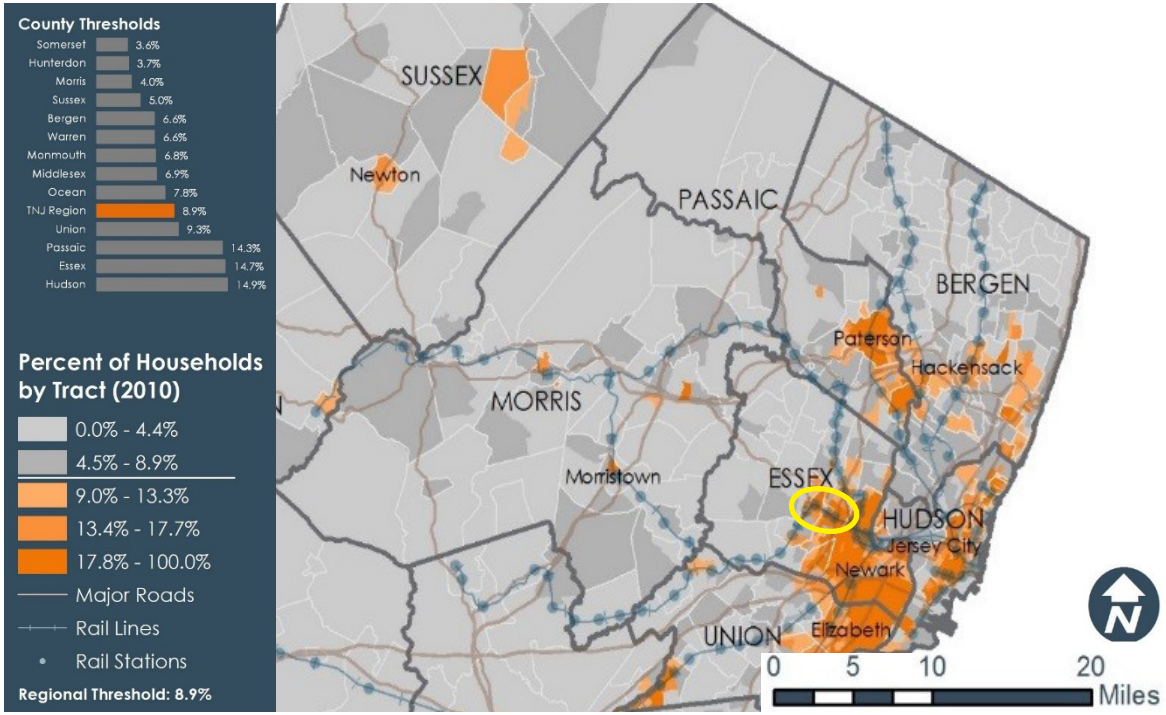


Figure 1. Together North Jersey Low-Income Households
Source: Together North Jersey. 2015. Communities of Concern.

to goods, services, and employment. Essex County contains the second-highest percentage of households in poverty in the Together North Jersey region.

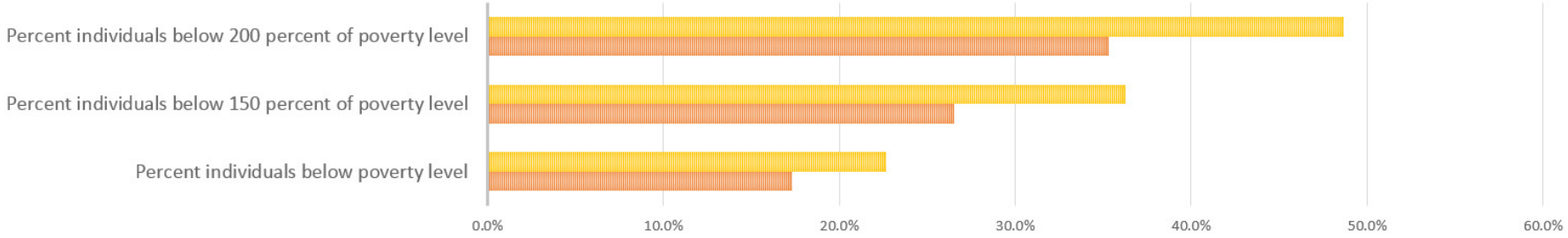
The area highlighted in Figure 1 shows that the area around Freeway Drive has a high concentration of low-income households relative even to Essex County.

Between 64 and 67 percent of all households in the Census tracts within half a mile of Orange, Brick Church, and East Orange Station are classified as low-income (defined here as income below 100 percent of the poverty rate) (Figure 3).

In fact, using a higher threshold for the definition of low-income demonstrates that the Freeway Drive area has a persistently high rate of low-income individuals relative to Essex County. Almost half of all individuals in the Freeway Drive area are below 200 percent of the poverty level; for Essex County, that value is closer to a third.

In general, low income households spend a higher percentage of their income on transportation than average. According to an FTA/HUD study; the average American household spends 18 percent of their income on transportation, whereas lower-income families spend upwards of 33 percent on transportation (FTA-HUD, 2008).

Car ownership represents a proportionally greater expenditure for low income households and low-income households are more likely to be without a car and to rely on transit in order to access public services, goods, and employment. This is confirmed by the data for the study area which indicates a high degree of reliance on public transportation.



	Percent individuals below poverty level	Percent individuals below 150 percent of poverty level	Percent individuals below 200 percent of poverty level
Freeway Drive & Station Area	22.7%	36.3%	48.7%
Essex County	17.3%	26.5%	35.3%

Figure 2. Percent of low-income individuals in the Freeway Drive area relative to Essex County
Source: US Census Bureau; American Community Survey. 2015 American Community Survey 5-year Estimates, Table DP04

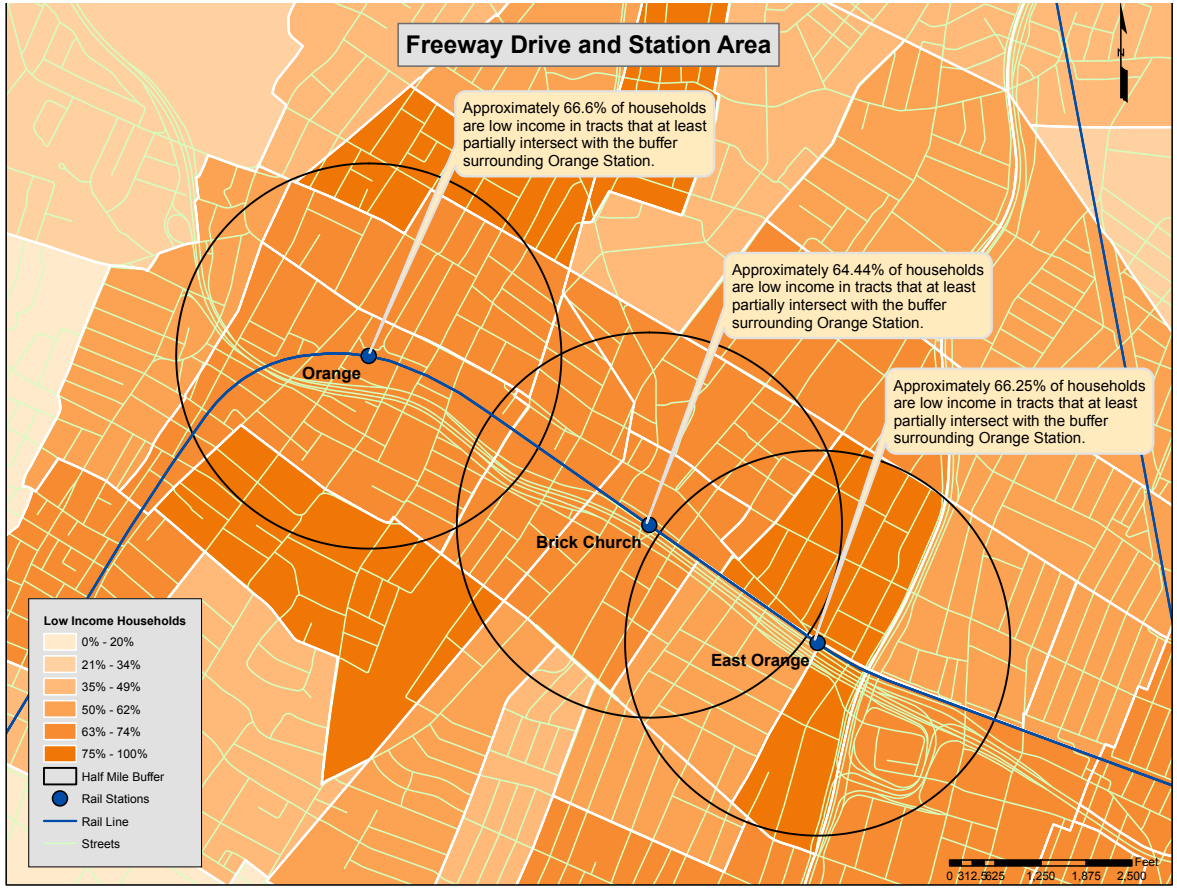


Figure 3. Low-income households (100 percent of the poverty rate) within half a mile of the three-station area
Source: US Census Bureau; American Community Survey. 2015 American Community Survey 5-year Estimates, Table S1701b

Transit User Group	Percentage
Workers 16 years and over who take public transportation (excluding taxicab)	25.4%
Percentage of commuters, by block group, without a vehicle available	21.9%
Together North Jersey* percentage of households without a vehicle available-threshold of concern	12.5%

Table 2. Transit dependency in the Freeway Drive Area

** Together North Jersey plan study area includes 13 nothern New Jersey counties: Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren.*

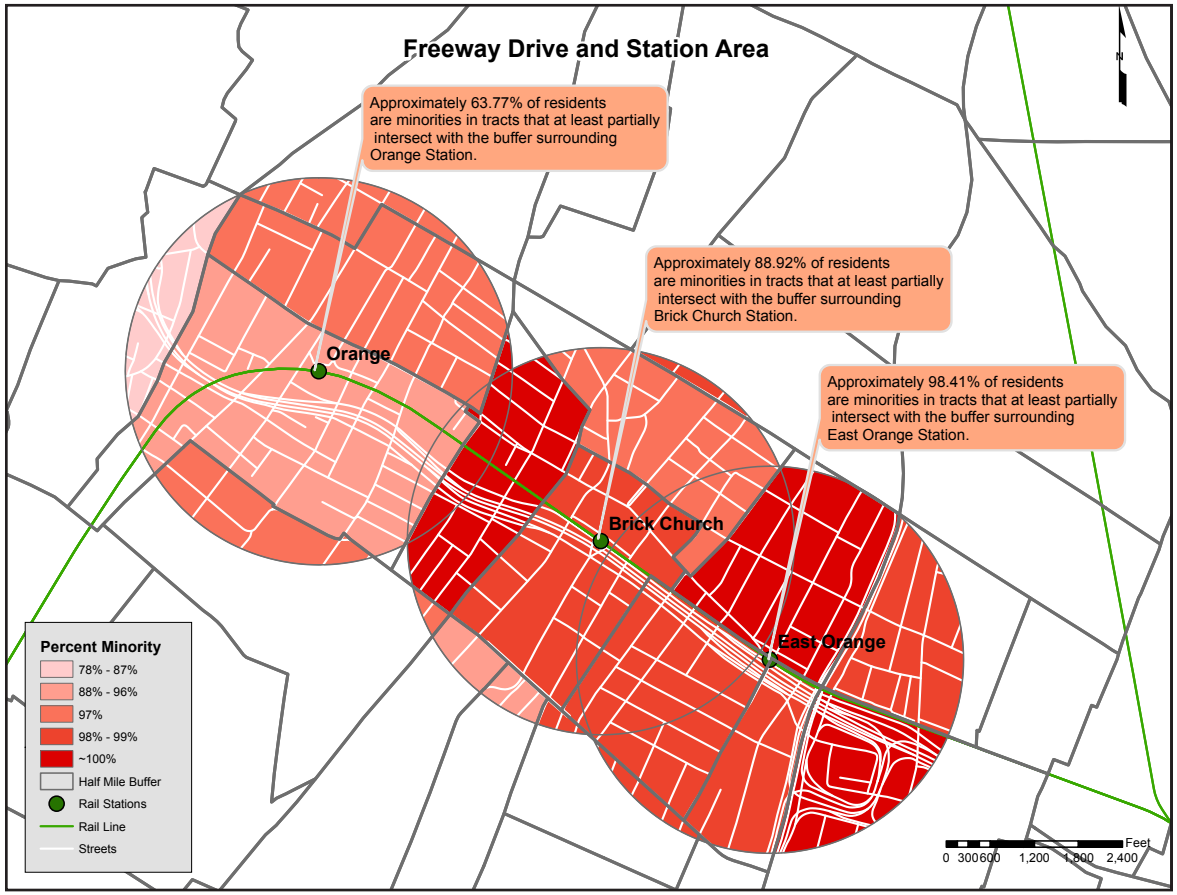


Figure 4. Minority population Freeway Drive Station Area
Source: US Census Bureau; American Community Survey. 2015 American Community Survey 5-year Estimates, Table B03002

Minority Populations

The area's percentage of minority households follows a similar pattern to the area's percentage of low-income households. According to Together North Jersey, Essex County has the second-highest concentration of minority households (Figure 5). Figure 4 shows a high concentration of minority households in the Freeway Drive area.

Between 64 and 98 percent of households contained within the buffer surrounding Orange, Brick Church, and East Orange stations have members that belonged to a minority group (Figure 4).

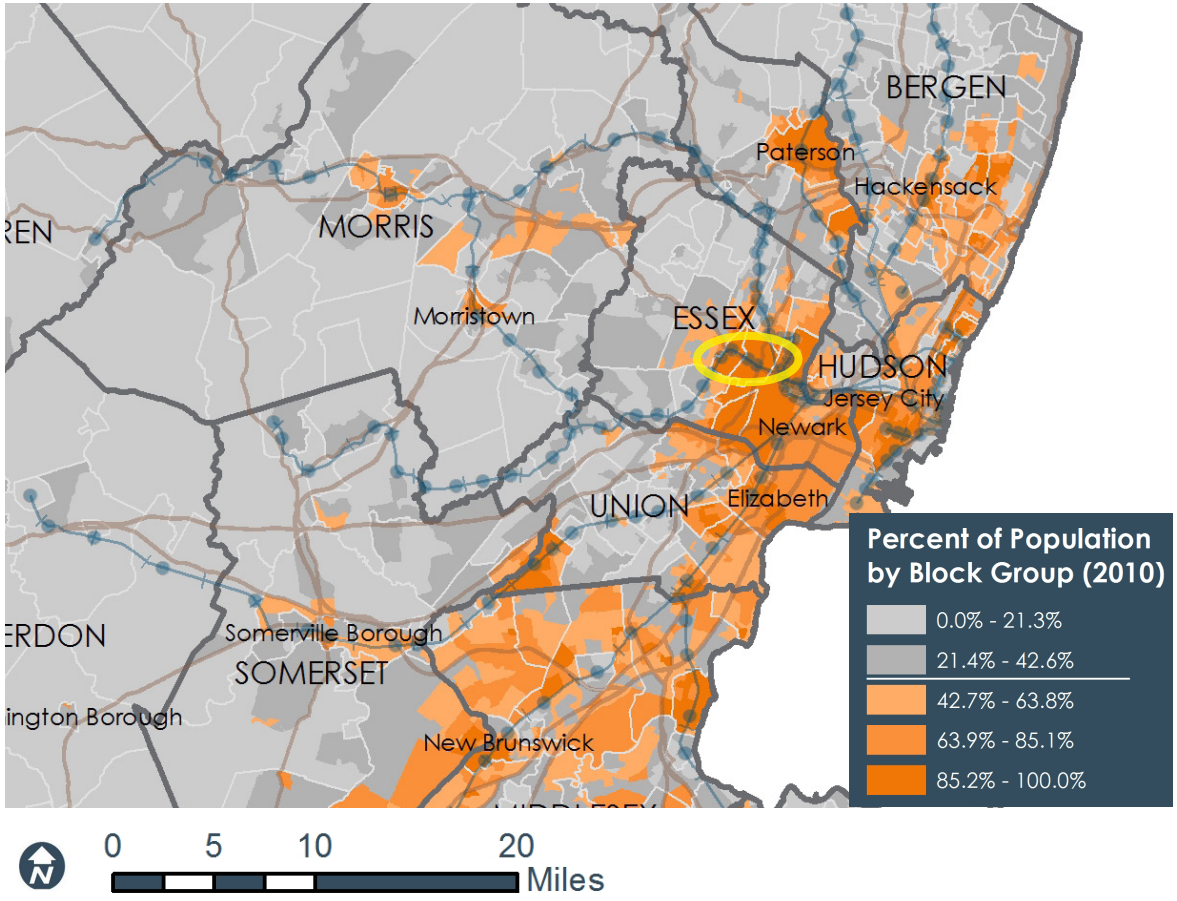


Figure 5. Together North Jersey - Minority Population

Transportation Safety

According to a literature review study by the Colorado Department of Transportation (CDOT, 2006), minority groups are more likely to travel by foot than white, non-Hispanic households (Surface Transportation Policy Project 2001).

The study also reports that fatality rates per mile traveled are 36 times higher for walkers than for car occupants. This suggests that minority groups are more likely to face unsafe pedestrian conditions on a regular basis (CDOT, 2006) with a negative effect on minority health (Pucher and Dijkstra 2000).

The relationship between poor pedestrian safety and minority and low-income status is also reported in a study by Smart Growth America, Dangerous by Design. This study indicates that people of color (and older adults) are particularly over-represented among pedestrian deaths. According to the data, 34.9 percent of the nonwhite or Hispanic population accounted for 46.1 percent of all pedestrian deaths between 2005 and 2014. This represents a disproportionate rates of pedestrian deaths for these population groups compared to the overall population.

Race	Essex County	Freeway Drive & Station Area
White	41.9%	9.8%
Black	39.9%	78.8%
Asian	4.9%	1.2%
Other	13.3%	10.3%
Hispanic ethnicity	21.7%	15.6%

Table 3. Race and ethnicity Freeway Drive
Source: US Census Bureau; American Community Survey. 2015 American Community Survey 5-year Estimates, Table B03002

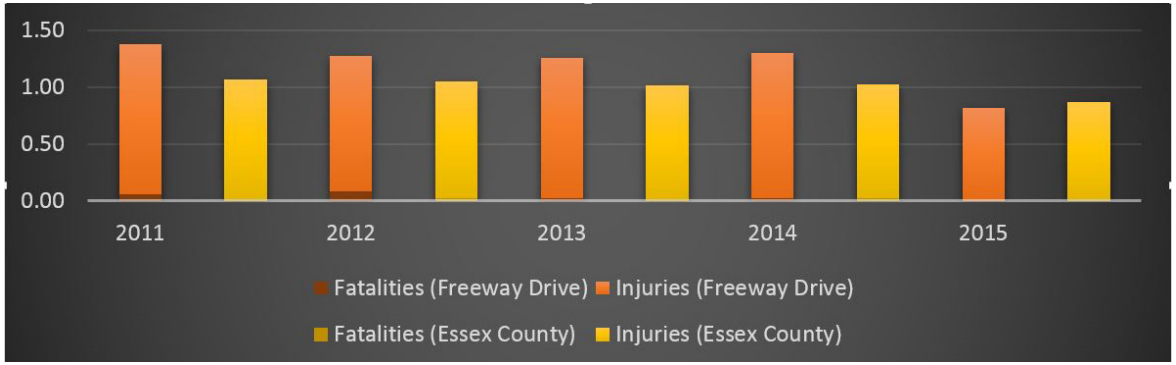


Figure 6. Rate of fatality and injury on Freeway Drive and in Essex County
Source: Rutgers Center for Advanced Infrastructure and Transportation, 2015. Plan4 Safety Crash Analysis Tool. http://cait.rutgers.edu/tsrc/plan4safety

This relationship between minority status and poor pedestrian safety is reflected in the Freeway Drive area, which has a high percentage of minority (black) households (Table 3) and rates of both fatalities and injuries that are markedly higher area relative to Essex County (Figure 6). A further discussion of safety indicators for the Freeway Drive area is provided below.

Safety Indicator:

Pedestrian Danger Index (PDI)

Smart Growth America's Pedestrian Danger Index (PDI) is a useful method of calculating each population's level of exposure to walking-related injury, and is a calculation of the share of local commuters who walk to work and the most recent data on pedestrian deaths. The PDI reveals that the national Black non-Hispanic community has a much higher PDI than the population as a whole (Figure 7). As shown in Figure 8, PDI is also significantly higher than average (PDI=18) for individuals over 65 years of age (PDI=34), and higher still for individuals over 75 (PDI=42). Smart Growth America also indicates that the lower a metro area's median household income, the more dangerous its streets are likely to be for people walking. Places where people are most likely to lack access to high-quality medical care are also places where people are likely to be struck and killed by a car while walking.

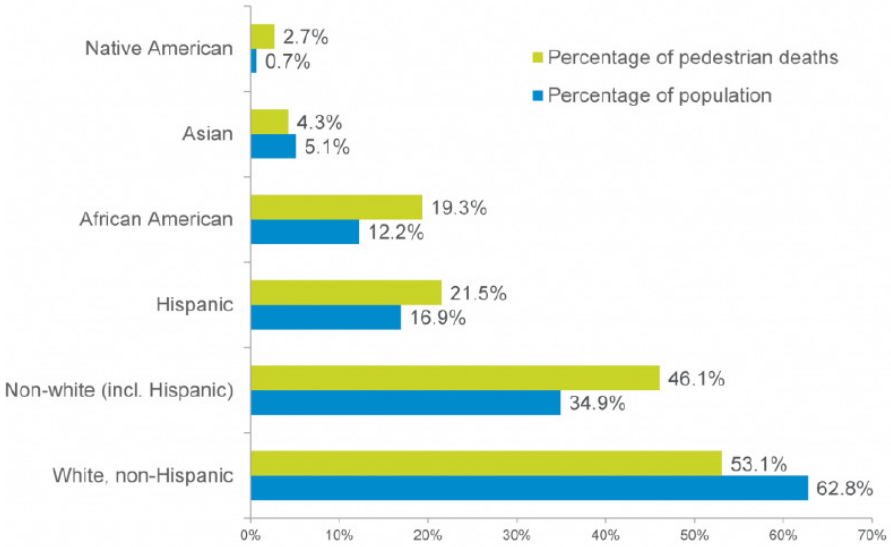


Figure 7. Pedestrian deaths by race/ethnicity relative to US population, 2005-2014
Source: Smart Growth America, 2017.

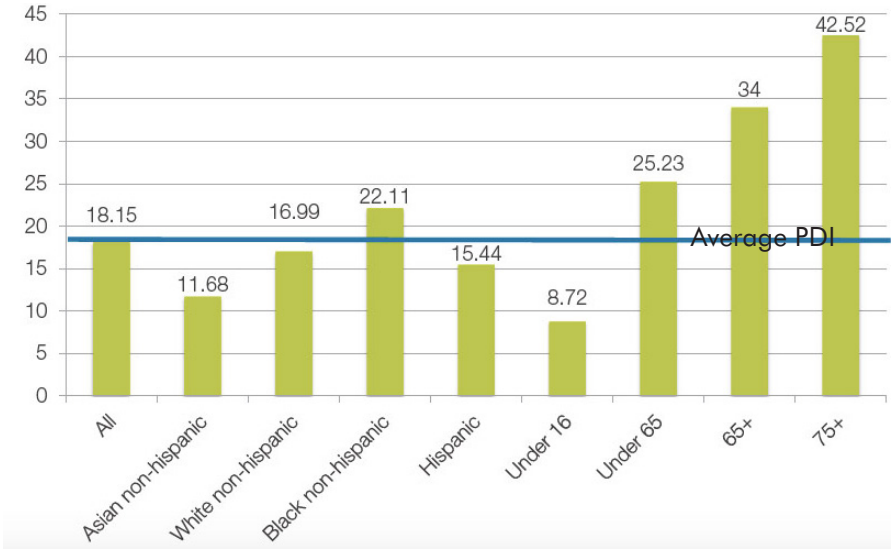


Figure 8. Pedestrian Danger Index by race and age
Source: Smart Growth America, 2017.

$$\text{Pedestrian Danger Index (PDI)} = \frac{\text{Average annual pedestrian fatalities (2009-2014) /total population (in 2014) * 100,000}}{\text{Percentage of commuters walking to work}}$$

Figure 9. PDI Calculation

NOTE: The Pedestrian Danger Index is a measure developed to account for raw pedestrian fatalities, relative populations of each place we measured and the most accurate source of pedestrian data we have – the US Census reported "Travel to Work" data. The formula allows <comparison of> data regarding pedestrian deaths, whether the count is measured in Wyoming or California, or in a place like New York City, where many people die each year on foot, but many more people are walking on a daily basis, too. (Smart Growth America, 2017).

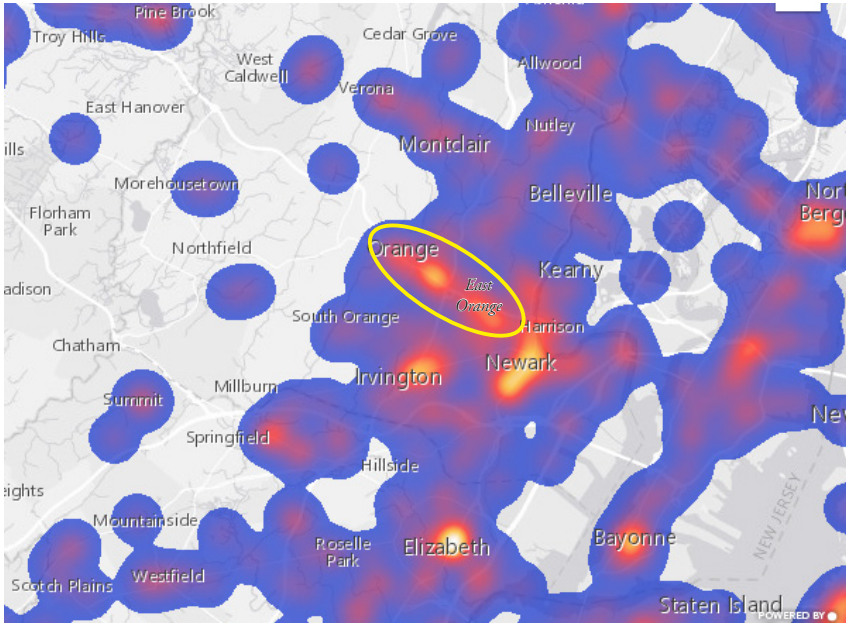


Figure 10. Heat map of pedestrian fatalities (Map generated using data from the Fatality Analysis Reporting System, provided by the National Highway Transportation Safety Administration).
Source: https://smartgrowthamerica.org/dangerous-by-design/

Regional Distribution of Pedestrian Fatalities

Reviewing the regional distribution of pedestrian fatalities (Figure 10) and the minority population (Figure 11) in the area shows a high degree of overlap: : red areas on Figure 10 have a relatively high number of pedestrian fatalities. These areas overlap in many cases with areas with relatively high minority populations (dark orange on Figure 11) compared to the state average.

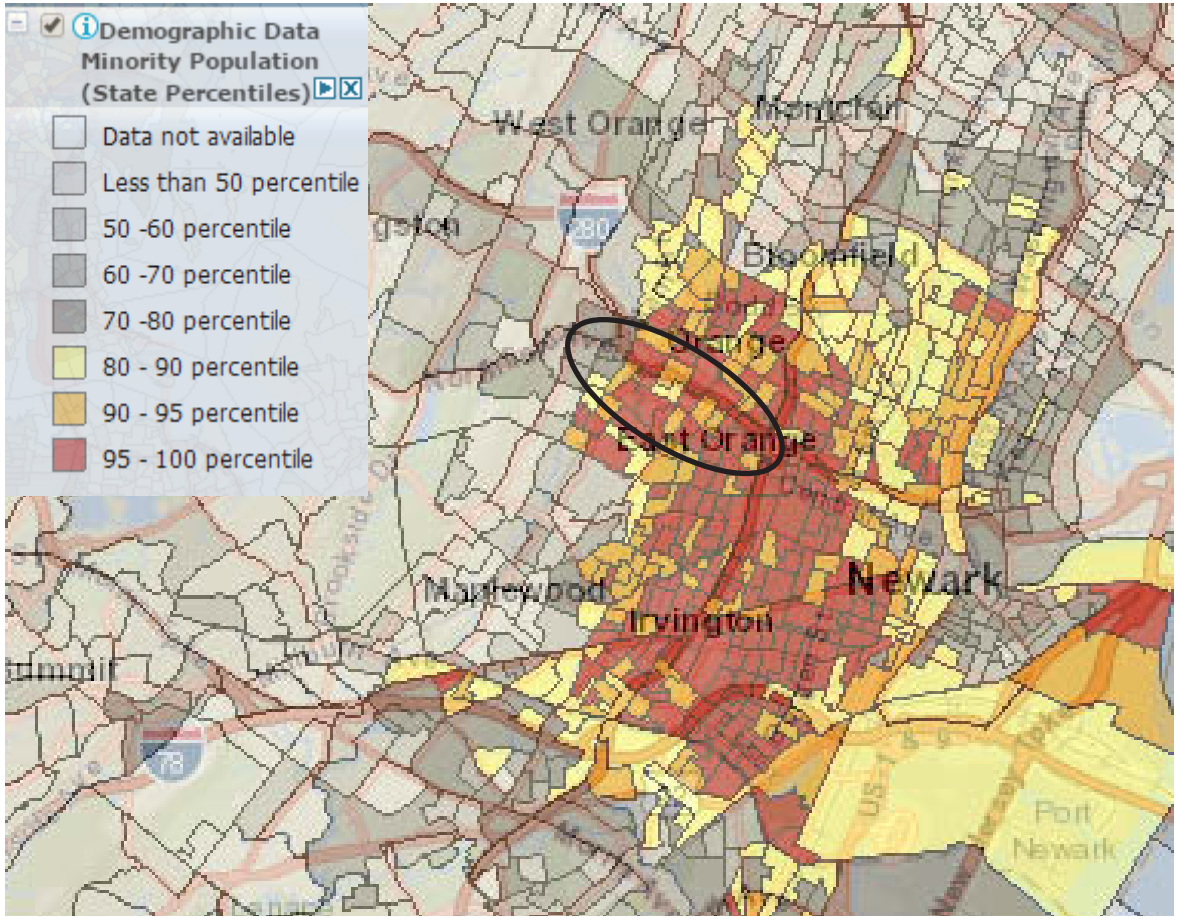


Figure 11. Minority Population
Source: EJScreen. 2016. EJ Indexes.(ACS 2010-2014) https://www.epa.gov/ejscreen

NOTES:
State percentiles enable comparison of a community to the rest of the state by using percentiles. The state percentile indicates what percent of the state population has an equal or lower value, in this case meaning a lower percent minority.

Explained differently, if results indicated that an area is 48% minority and is at the 69th state percentile, this would mean that 48% of the area's population is minority, and that is an equal or higher % minority than where 69% of the State population lives. In this case 95% of the state has a percentage minority lower than in the study area (dark orange)
https://www.epa.gov/ejscreen/how-interpret-standard-report-ejscreen

Percent minority <is defined> as a fraction of population, where minority is defined as all but Non-Hispanic White Alone. Calculated from the Census Bureau's American Community Survey 2010-2014. (https://www.epa.gov/ejscreen/glossary-ejscreen-terms#category-demographics)

Housing

Between 54 and 67 percent of all housing units are renter-occupied in the Census tracts surrounding Orange, Brick Church, and East Orange stations (Figure 12). This high percentage of rental properties may place a lingering burden on the area, as a high percentage of rental properties can cause property values to stagnate or even drop (WP, 2015). After the recession, however, rents did not drop and instead have been increasing steadily for several years.

During the same period, however, income growth has not kept pace, leaving low-income household at a greater disadvantage (Zillow, 2016).

Residents living in Freeway Drive and Station Areas are employed throughout the New York and New Jersey region (Table 4), and will rely on either transit or automobile to reach their place of employment (Figure 13).

Jobs Counts by Places (Cities, CDPs, etc.) Where Workers are Employed - All Jobs		
Newark city, NJ	1,658	11.80%
New York city, NY	1,385	9.90%
East Orange city, NJ	974	6.90%
Elizabeth city, NJ	401	2.90%
Jersey City, NJ	370	2.60%
Secaucus town, NJ	195	1.40%
Paterson city, NJ	161	1.10%
Morristown town, NJ	146	1.00%
Clifton city, NJ	131	0.90%
Paramus borough, NJ	131	0.90%
All Other Locations	8,499	60.50%

Table 4. Job Counts by Places
Source: US Census Bureau. 2016. U.S. Census Bureau. 2016. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. http://onthemap.ces.census.gov/

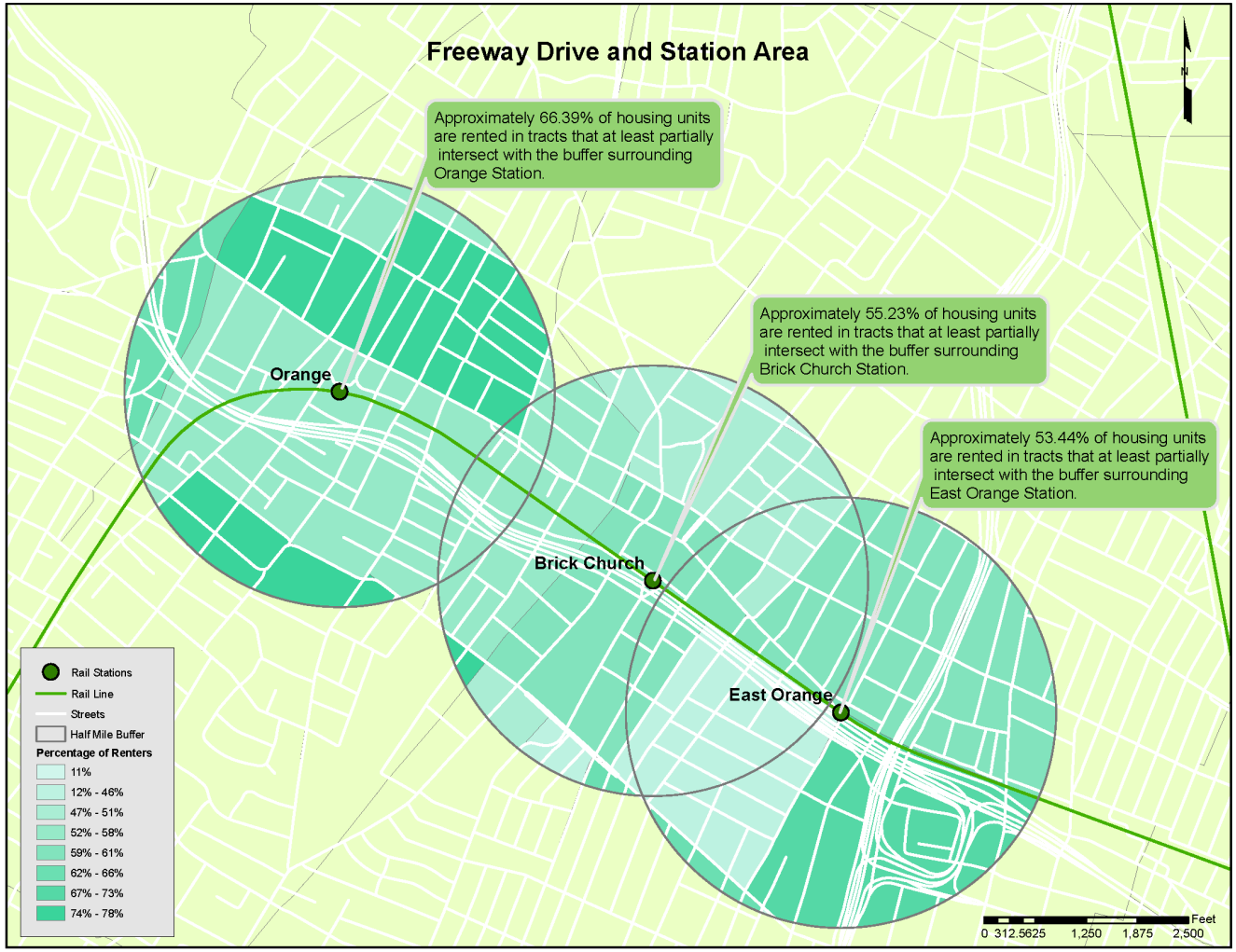


Figure 12. Rates of renter-occupancy in housing units in Freeway Drive area

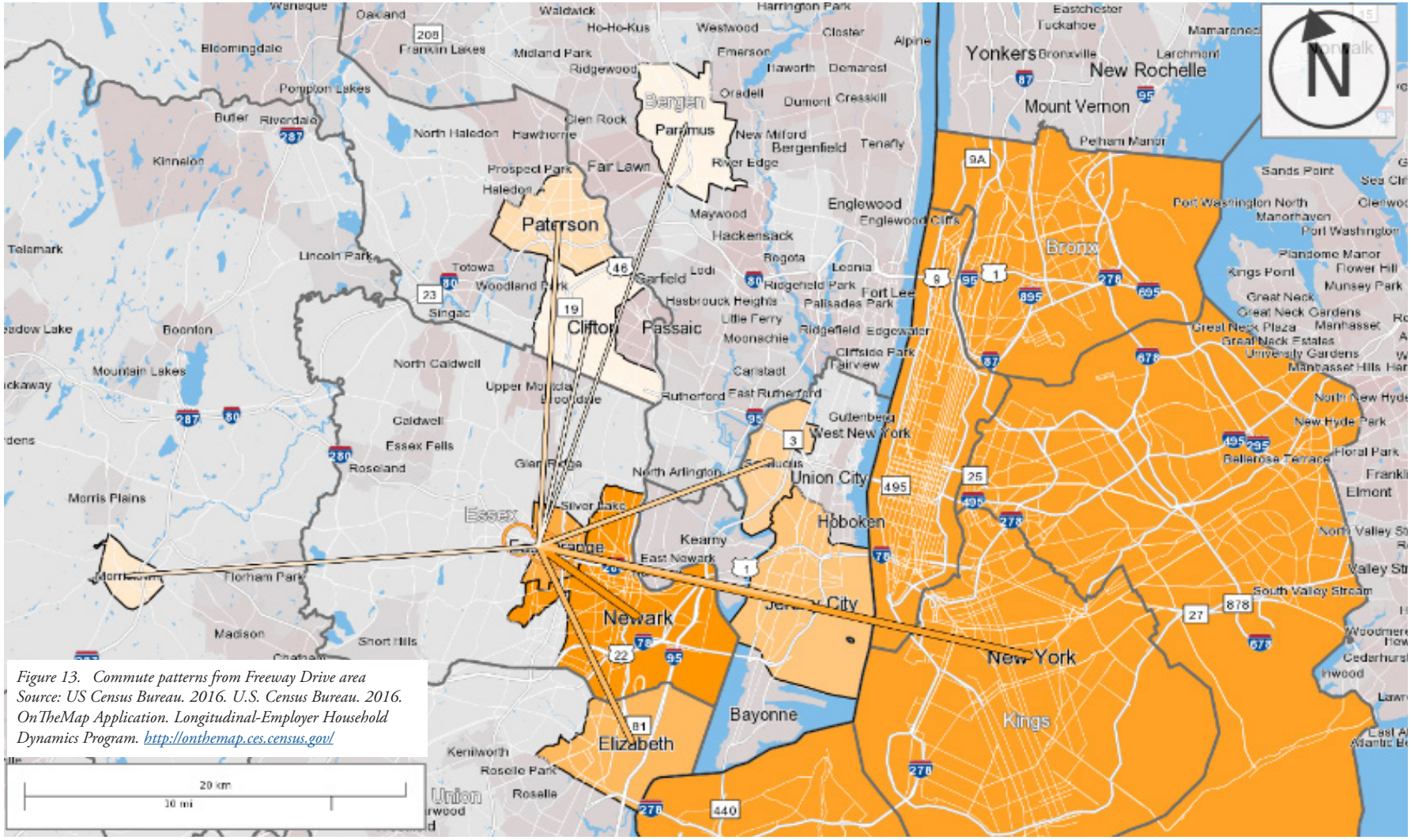


Figure 13. Commute patterns from Freeway Drive area
Source: US Census Bureau. 2016. U.S. Census Bureau. 2016. OnTheMap Application. Longitudinal-Employer Household Dynamics Program. http://onthemap.ces.census.gov/

Open Space

Open space is almost non-existent within the Freeway Drive area (Figure 14) nor located close to the area (Figure 15). This lack of open space diminishes recreational opportunities and the quality of life for low-income and minority groups in the Freeway Drive area, and provides further support for solutions that would provide additional outdoor opportunities.

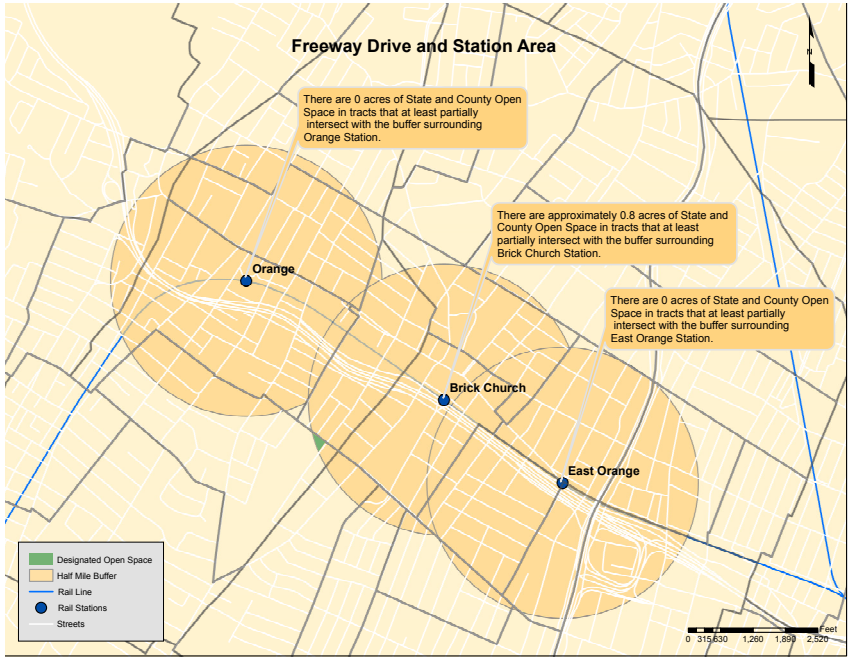


Figure 14. Open space located in the Freeway Drive area

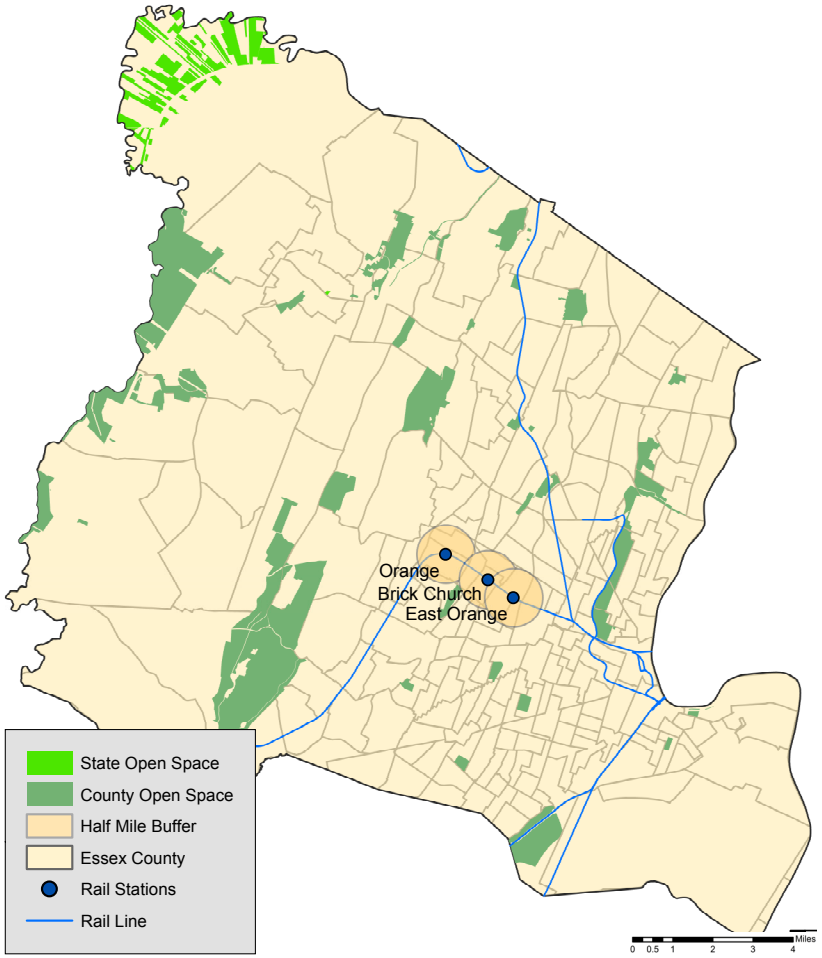


Figure 15. Open space near Freeway Drive area
Source: State of New Jersey – GIS Open Data, 2016. County Open Space.

Recommendations

Traffic and Safety

Physical modifications are necessary to change the character of the road and shift the focus from simply accommodating peak period traffic volumes to creating a corridor that can serve as a gateway and effectively distribute traffic to the various sections of the city. All recommendations will address intersection control and accommodate vehicular turning movements and ensure that pedestrian safety is paramount.

- Lane reduction on Freeway Drive in both directions
- Provide "friction" along the Freeway Drive corridor (parallel parking, bike lane, shoulder, etc.)
- Improve all pedestrian amenities (sidewalks, curb ramps, crosswalks)
- Install pedestrian signal amenities (audible pushbuttons, countdown pedestrian heads, lead pedestrian intervals)
- Route 280 ramp geometric improvements
- Traffic signal phasing/timing adjustments and intersection synchronization
- Speed limit reduction to 30 MPH upon completion of geometric improvements

An opportunity exists to create focal intersections along the corridor which not only serve to break the speed tunnel effect but also will serve as the gateways to certain critical cross streets which connect to major commercial areas on the north side. These focal intersections should provide physical improvements such as corner treatments, medians and other complete streets amenities that will serve as both traffic calming and pedestrian enhancements.

Bulb-out and street parking

Cross Streets

There is an opportunity to improve and simplify the cross streets while maintaining the existing bridge structures intact.

One of the recommendations is to reduce the current four lane section (two lanes in each direction) to a three-lane section (one lane in each direction with a back to back left turn lane that is sized based on the turning volumes). This design is recommended for Munn Avenue, Arlington Avenue, and Evergreen Place in East Orange as well as Oakwood Avenue and Essex Avenue in Orange.

Another recommendation is to provide alternating one way cross streets (thus simplifying the intersections by minimizing the turning movements and reducing the cross section from four lanes to two lanes). This design is recommended for Burnett Street and Walnut Street in East Orange.

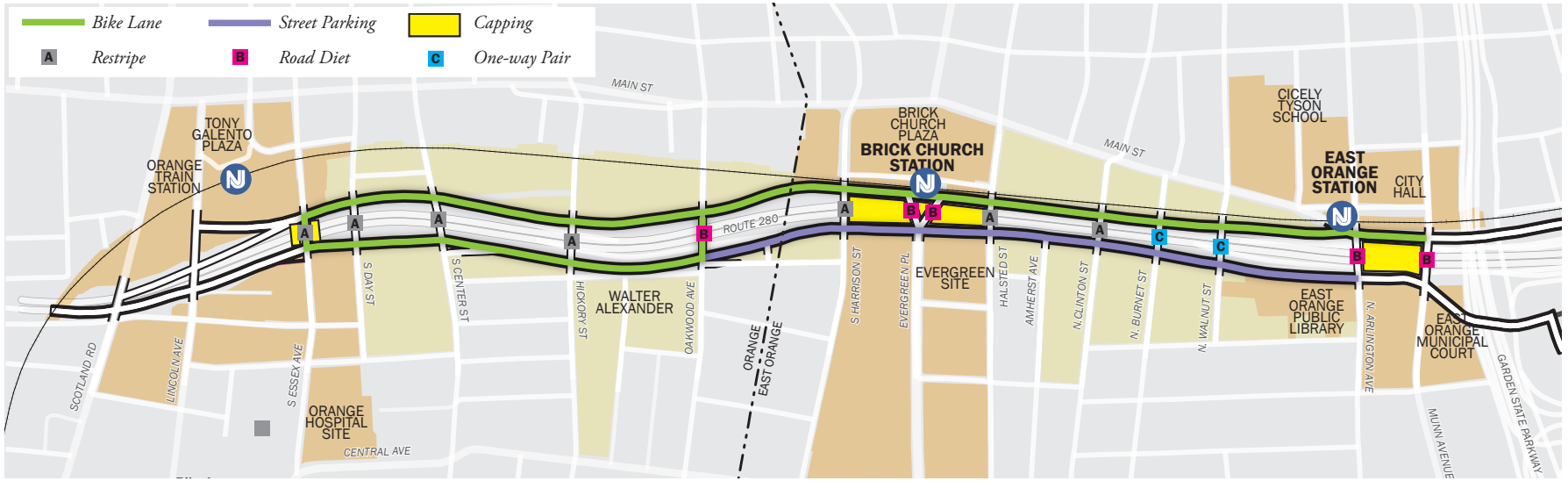
Another recommendation is to eliminate all vehicular traffic from one or more of the cross streets to convert it to a pedestrian only crossing. A properly located pedestrian only crossing would have tremendous benefits and provide direct, safe, and comfortable connections to major destinations. While not specifically evaluated for permanent implementation, this recommendation could be considered on a temporary basis for street fairs or other civic events.

Cross Street Recommendations

Public Realm

The Plan proposes to transform the outermost lane on Freeway Drive West and Freeway Drive East from South Essex Avenue to Oakwood Avenue to become a dedicated bicycle lane. The bicycle lane will be separated from the other traffic lanes by a landscaped median. This will improve the image of Freeway Drive by reducing the sheer expanse of asphalt. The landscaped median will provide an opportunity for trees, which will help soften the image, and establish a sense of scale along Freeway Drive. Opportunities for banners along the planted median will also help East Orange and Orange project a more positive image to passing drivers. Finally, the median will provide pedestrian refuge, making it easier for pedestrians to cross Freeway Drive. This will not only help reconnect the sections of the community north and south of Route 280, but improve access to the corridor's three rail stations.

Existing Condition on Freeway Drive East



Overall Plan Recommendations

Proposed bike lane and planted median on Freeway Drive

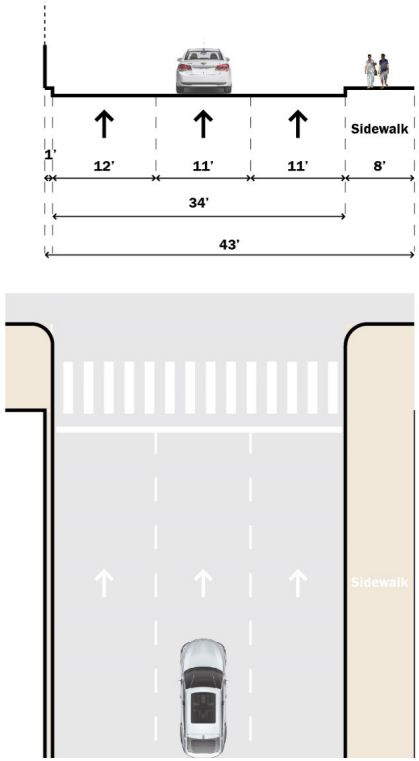


Figure 16. Existing Freeway Drive condition

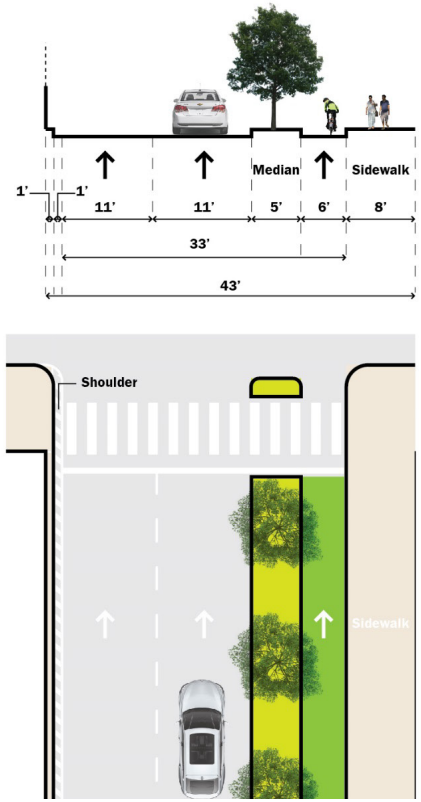


Figure 17. Proposed bike lane and planted median

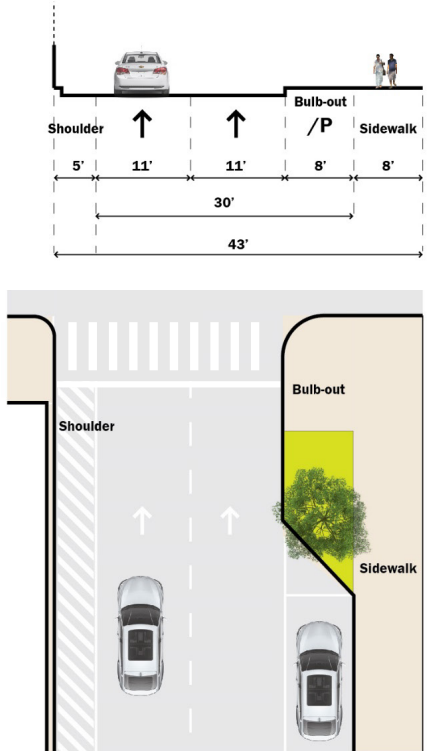
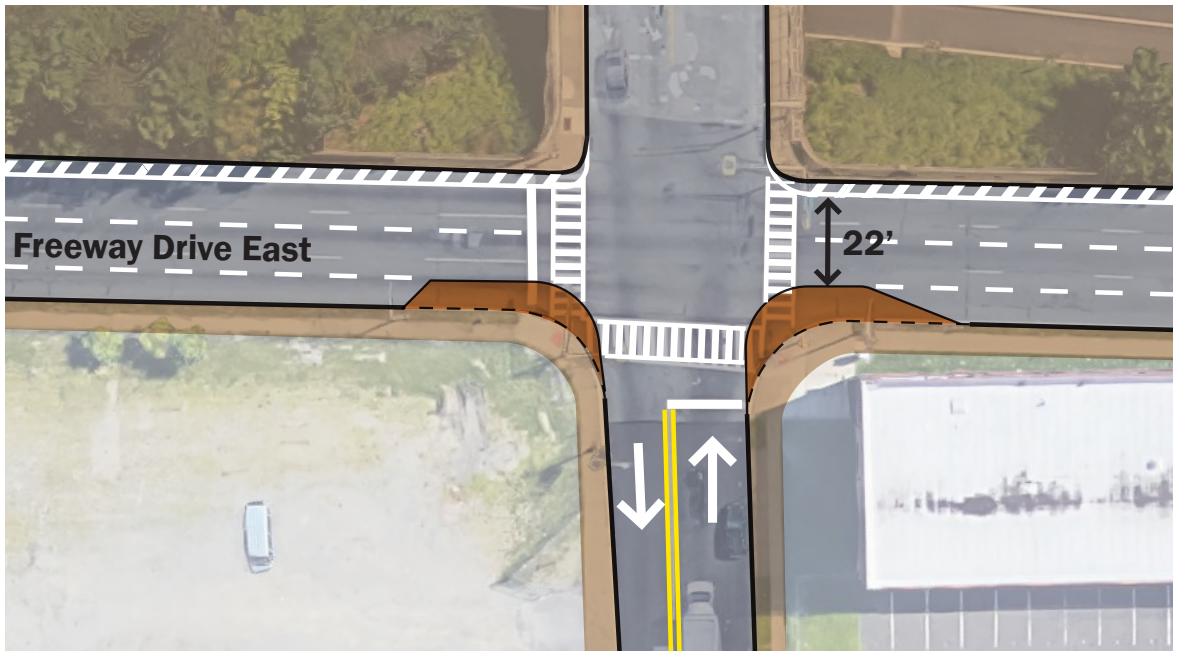


Figure 18. Proposed bulb-out and on street parking

The bike lane will establish a major new recreational and commuter resource for the existing residents of East Orange and Orange while appealing to a younger demographic as well. The outermost travel lane will be transformed into a six feet wide large dedicated bike lane that is separated from traffic by a five foot wide landscaped median. (Figure 17) These improvements will provide better setting for development and will also provide a broader range of access to the train stations for bicyclists.

On Freeway Drive East in East Orange, the extra lane will be dedicated to parallel street parking. (Figure 18) The parallel parking will occur from Oakwood Avenue to South Arlington Avenue. Additional parking is needed in this area to support the adjacent land uses. The street parking will also provide a buffer for pedestrians walking on the sidewalk along Freeway Drive East. The end of these blocks will "bulb out" to shorten the crossing distance for pedestrians and provide an opportunity for planting. The result will be a safer, greener, more attractive Freeway Drive.



North-South Crossing: Enhanced Intersection

Existing Crossing at Freeway Drive West

Bulb-out Crossing Example

North-South Bridges

The Plan proposes several roadway improvement recommendations to right-size the vehicular cartway and improve the pedestrian experience. These North-South bridge structures are under the jurisdiction of the NJDOT.

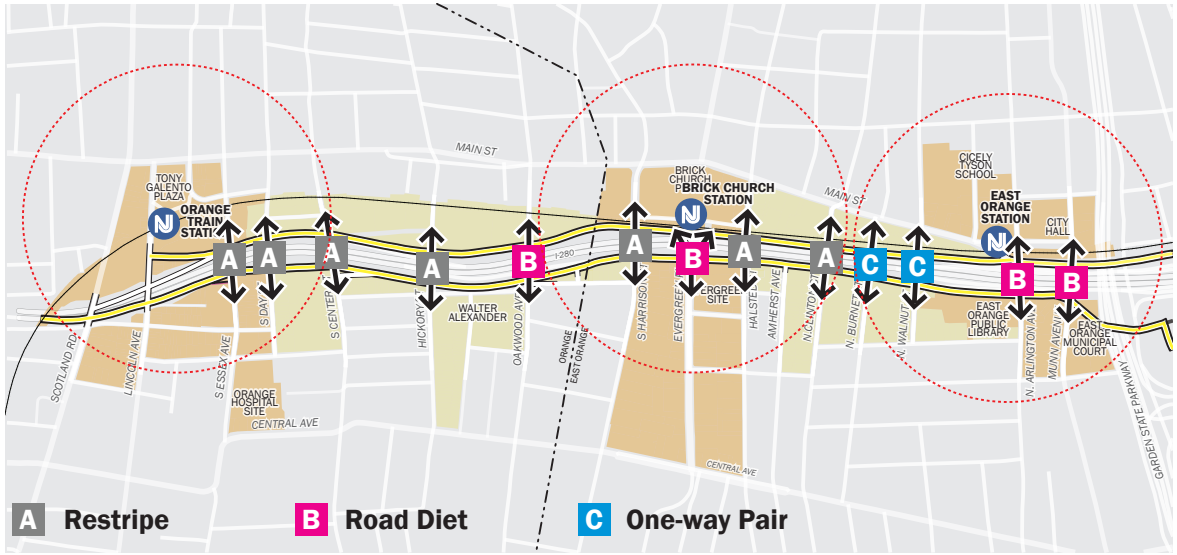
The most basic recommendation restripes the traffic lanes and adds a protective rail between the cartway and the sidewalk. The restriping reduces lane widths from 12 feet to 11 feet and creates a one foot shoulder in each direction. The combination of restriping and the addition of a protective rail will give pedestrians an increased level of safety, and perception of being protected from traffic. This design is recommended for Clinton Street, Halstead Street, and Harrison Street in East Orange as well as Hickory Street, Center Street and Day Street in Orange.

The second recommendation is a road diet, reducing traffic to one lane in either direction, but incorporating a left turn lane for turns onto Freeway Drive East and West. Reducing the total number of lanes to three will allow sidewalks to be widened by five feet on both sides providing room for planters which would create a buffer for pedestrians, and pedestrian level streetlights. This design is recommended for Munn Avenue, Arlington Avenue, and Evergreen Place in East Orange as well as Oakwood Avenue and Essex Avenue in Orange.

The third recommendation is pairing two adjacent bridges in a one-way couplet. This design reduces the total number of travel lanes from four lanes (two lanes in either direction) to two lanes in one direction, reduces the cartway, allowing the sidewalks to be widened

Existing Condition of Evergreen Place

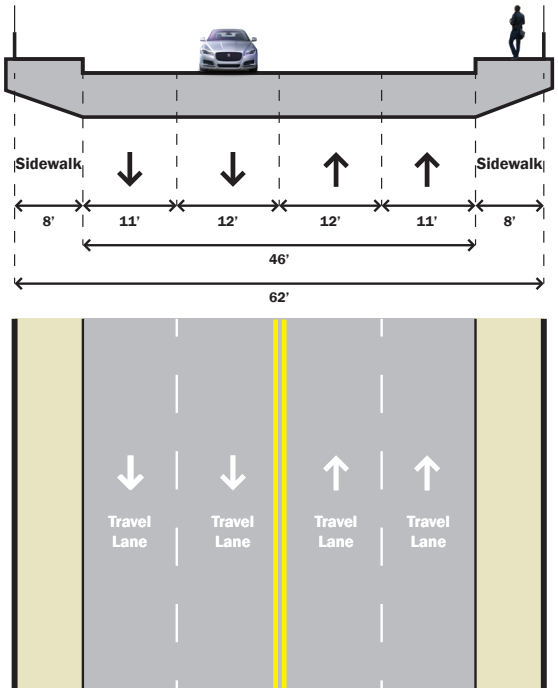
to approximately 16 feet (accommodating planters and pedestrian-oriented lighting), and provides a dedicated bike lane. This design will create a safer route for pedestrian travel and will provide for a dedicated north-south route for bicycles, something that currently does not exist in any of the Freeway Drive Bridges. This design is recommended for Burnett Street and Walnut Street in East Orange.



North/south bridge recommendations

On the seven streets with the lightest vehicular and pedestrian volume, i.e. South Essex Avenue, South Day Street, South Center Street, Hickory Street, and Halsted Street, the plan recommends the restriping and rail option.

In areas with high volumes of pedestrians and high volumes of traffic, i.e. Oakwood Avenue, Evergreen Place, North Arlington Avenue, and Munn Avenue, the plan recommends the road diet option. North Burnett and North Walnut Street, which are adjacent to each other would easily allow for travel in opposite directions.



Plan and section of typical existing conditions on north/south bridges

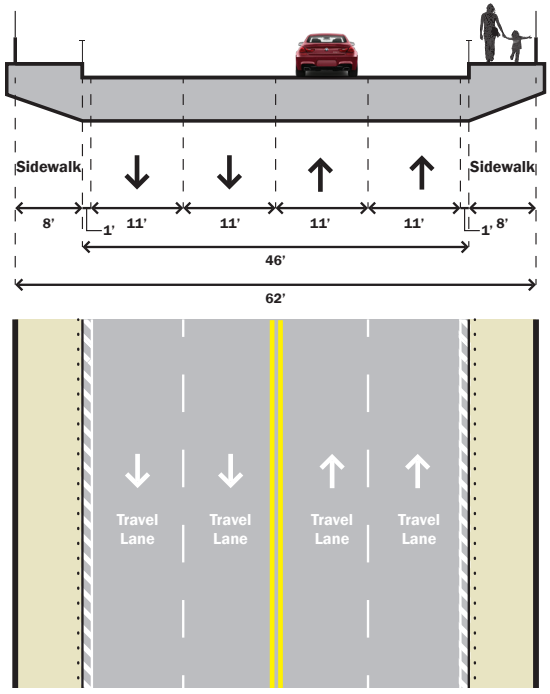


Figure 19. Restriping and safety rails

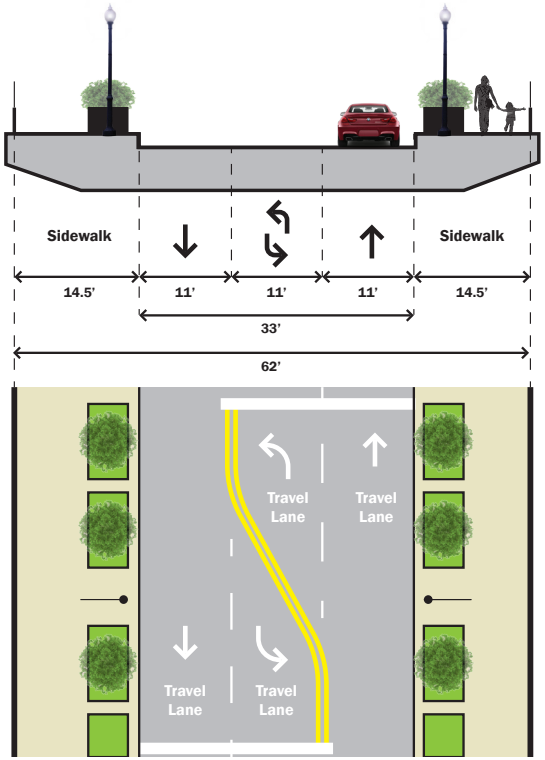


Figure 20. Road diet

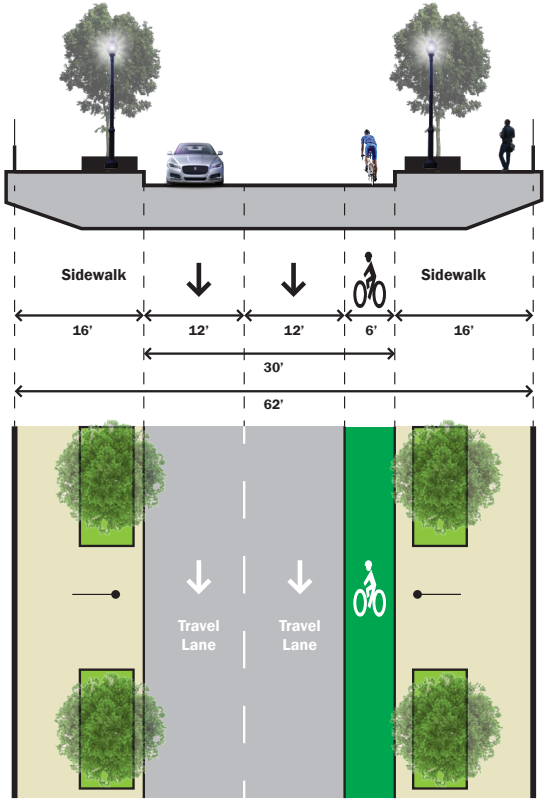


Figure 21. One way pair (with bike lane)

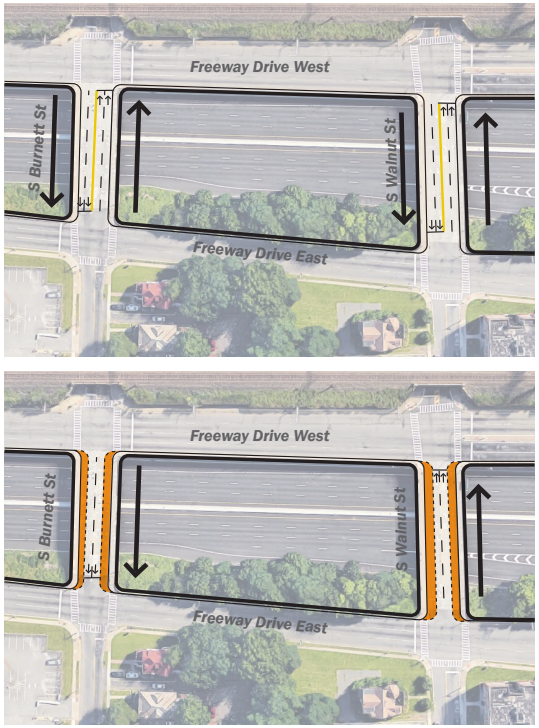


Figure 22. One way pair (with bike lane), Existing condition above

Long Term Aspirational Proposals: Strategic Capping over Route 280

This plan recommends capping Route 280 in three strategic locations within the three gateway corridors to improve connectivity between neighborhoods, to increase access to the station, provide community amenities, and encourage transit oriented development on the south side of Freeway Drive. Each of these caps may be implemented separately and apart from the changes to the existing bridges described in Options 1, 2 and 3 above.

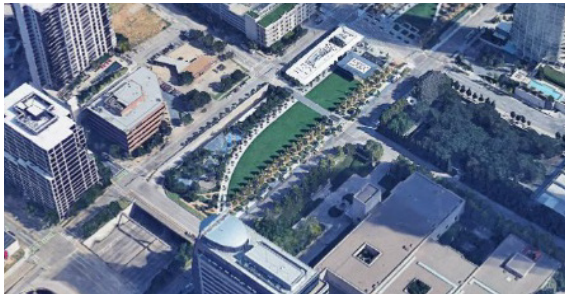
East Orange Station

At the East Orange Station, filling the gap between North Arlington and North Munn Avenue would better connect the City of East Orange's civic buildings to the north and south of Freeway Drive. Dedicating the cap to the creation of a new park and possibly a new recreational facility would complement the adjacent civic uses and create much needed open space for the relatively high density neighborhood along Munn Street. Capping in this area would create a 360' by 200' deck.

Long Term Vision: Capping at Civic Center

Long Term Vision: Aerial view of East Orange Civic Center District showinig major North / South Connection and Existing Land Use

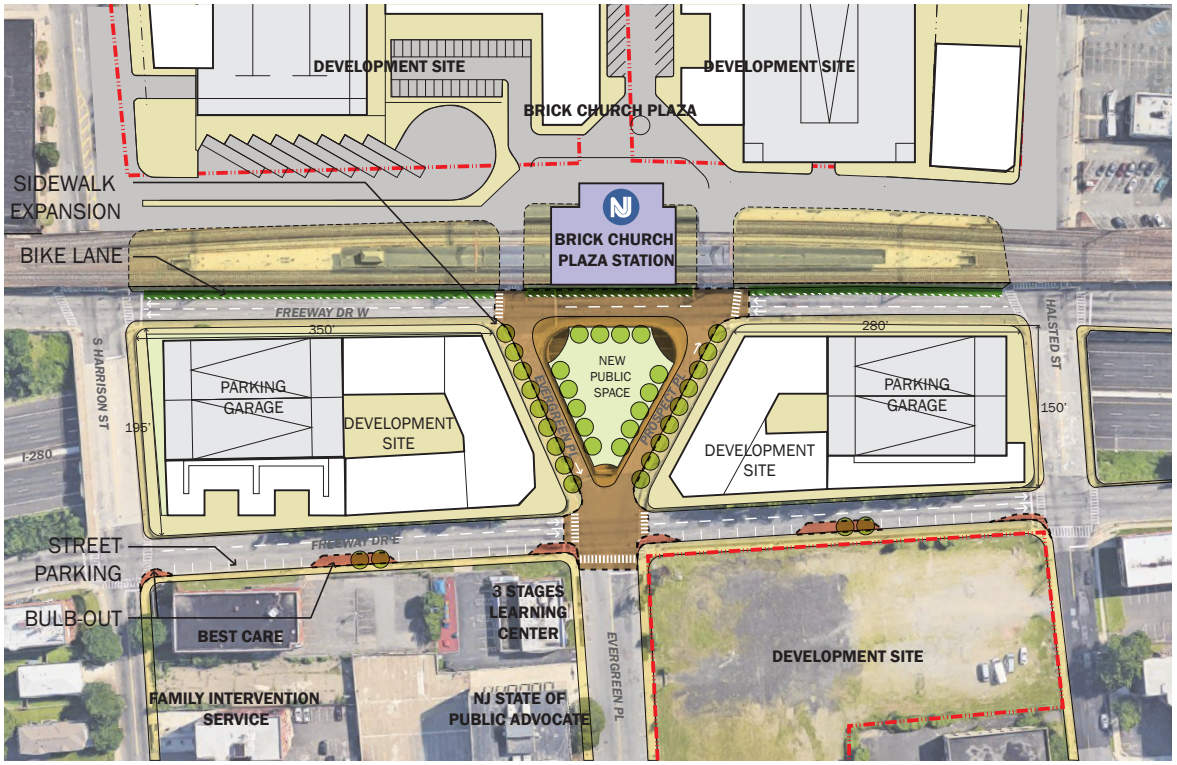
Precedent: New public open space created over Route 495 in Union City, NJ



Precedent: Large-scale capping over a highway with development above in Dallas, Texas

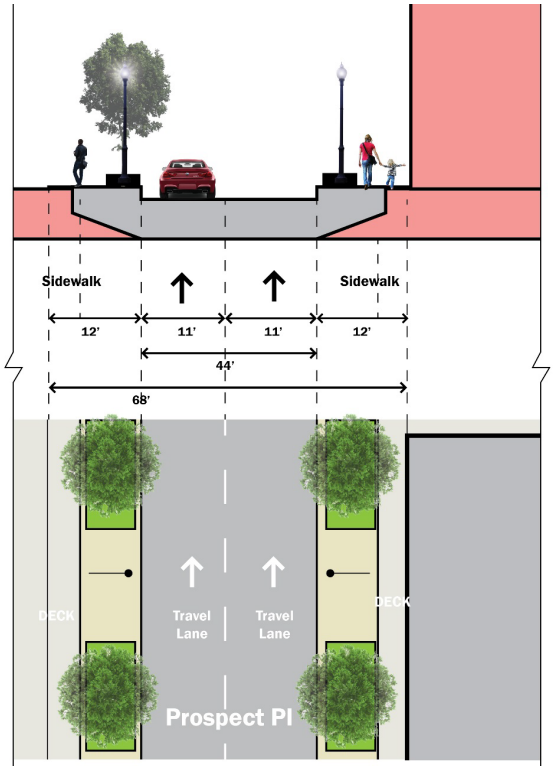
Brick Church Plaza Station

The Brick Church Plaza Station offers the best opportunity for major new transit oriented development. New development in this location would create a new 1.9 acre parcel between Harrison Street and Evergreen Place and a second 1.6 acre parcel between Evergreen Place and Halsted Street. Each of these parcels could accommodate significant development and parking to support the development and commuter needs. New development on these caps would also complement the City of East Orange's redevelopment initiatives at Brick Church Plaza and the Evergreen Site and transform the pedestrian experience between the commercial amenities to the north and south, connecting Evergreen Place, Brick Church Plaza, and the adjacent station. The plan envisions a new park on the triangular area between Evergreen Place and Prospect Place that will create an enhanced setting for the two new development parcels and a gateway into the City for those arriving by train at Brick Church Station.



Long Term Vision: Capping at Brick Church Plaza Station

Long Term Vision: Aerial view of Brick Church Station Area, showing the potential for new development between South Harrison Street and Halstead Street, and the major north south connections

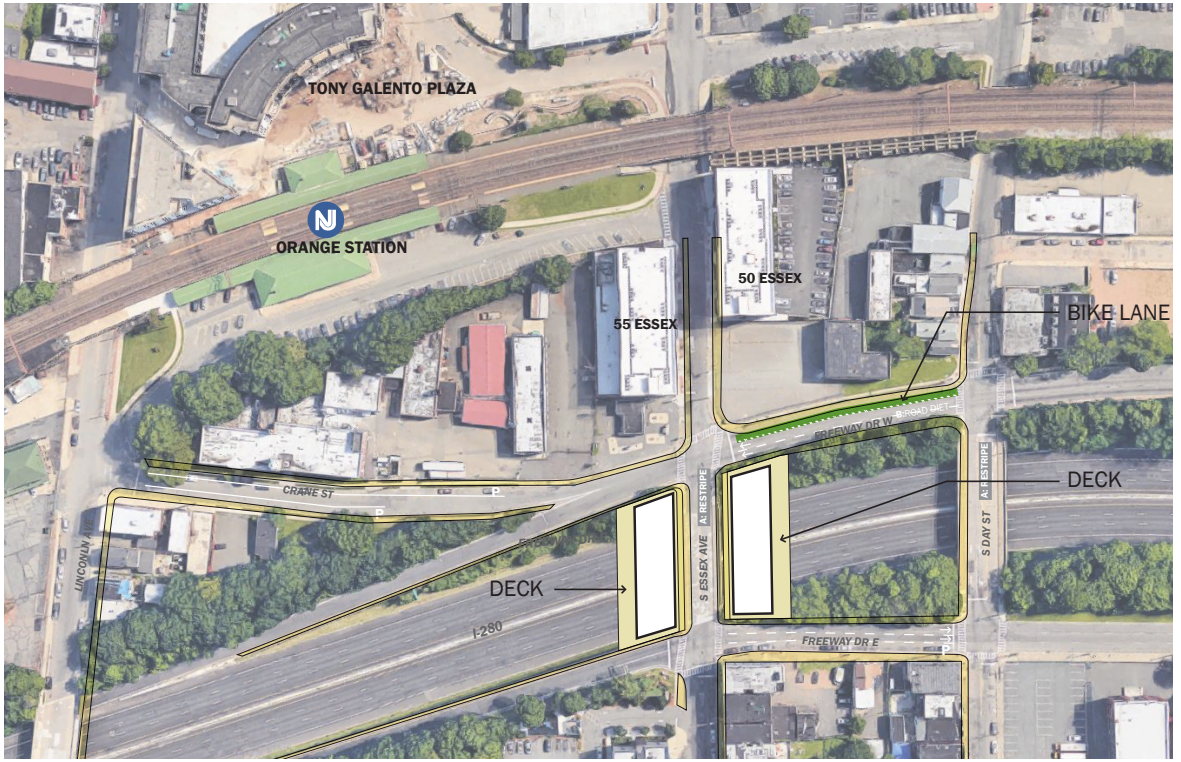


Proposed Capping at Brick Church Plaza Station

Existing condition at Brick Church Plaza Station

Orange Station

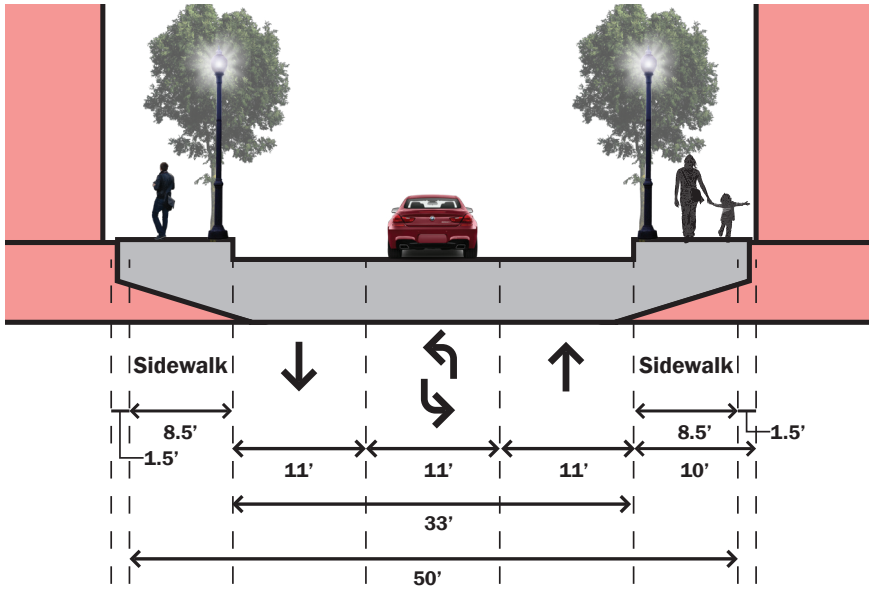
The Plan proposes a different approach for South Essex Avenue. Because of the on-ramp, capping is not possible in the most obvious location, between Lincoln Avenue and South Essex Avenue. The plan instead proposes construction of new single story retail structures on both sides of South Essex Avenue. This would provide for continuous active uses along the South Essex Avenue Bridge to create a vastly improved and continuous pedestrian experience, connecting one of the City of Orange's most important corridors to the NJ TRANSIT Station.



Long Term Vision: Capping at South Essex Avenue, Downtown Orange

Long Term Vision: Capping at South Essex Avenue. Downtown Orange

An example of capping to create new ground level retail to create a continuous pedestrian corridor in Columbus, Ohio



Long Term Vision: Capping at South Essex Avenue. Downtown Orange

Existing Condition at South Essex Avenue. Downtown Orange

Long Term Vision: Capping at South Essex Avenue. Downtown Orange

Public Engagement

Public Engagement

Residents and other stakeholders of Orange and East Orange had several opportunities to contribute ideas to the plan. Between October and January, there were:

- Two informational sessions, which offered several opportunities for participants to ask questions and offer ideas
- Two crowd-mapping sessions, where participants walked along the study area and offered their ideas for improvements
- Two 'open house' workshops, where participants reflected on what the consultants had learned in their research, and reviewed draft ideas for improving the area
- Opportunities for participants who could not make a meeting to share their thoughts online
- 15 interviews with representatives of city agencies, area nonprofit organizations and associations with a special interest in the Freeway Drive corridor

In addition, consultant team gathered ideas about Freeway Drive as part of a public engagement effort for the firm's work on the Orange Master Plan. Representatives of Orange, East Orange and the Urban Essex Coalition also provided input at the project Steering Committee meetings.

Between 90 and 110 stakeholders from both cities participated in at least one of these sessions. Many of the ideas offered by community members at the different events were consistent and complementary with one another. Many of the comments were also consistent with recommendations made in earlier planning efforts in Orange and East Orange.

The informational sessions and crowd-mapping were designed to inspire members of the public to generate ideas. Consultants did not make recommendations at these sessions, though they did share recommendations from earlier planning efforts. In the open houses, consultants offered some general recommendations for improvements. But the format of these sessions allowed participants to choose which improvements they wanted to have on Freeway Drive, and where. Residents and stakeholders of Orange and East Orange who participated in the Freeway Drive planning effort want to transform the Freeway Drive corridor from a gray set of service roads for Route 280 into a linear park and art garden – a safe and colorful place for greenery, art, retail and recreation.

The recommendations offered by stakeholders are feasible. With a modest amount of capitalization and sustained community and political support, several of these recommendations could be implemented within the next decade.

Public Engagement: January 17, 2017

Methodology

The public and stakeholder engagement process included the following:

1. Informational Sessions

Two informational sessions were held during the month of October. The purpose of these meetings was to introduce the Freeway Drive project to the public and to gather initial thoughts and ideas from the public about Freeway Drive. One session was held at Orange City Hall and the other at East Orange City Hall. Approximately thirty (30) people attended the information sessions.

In these sessions, participants were asked to engage in several exercises to express their experiences, thoughts and ideas for Freeway Drive. The exercises were as follows:

- An evaluative mapping exercise in which participants were asked to share their opinions or thoughts on Freeway Drive. A map of the study area was presented, as well as pictures to help participants locate segments of the study area. Participants wrote their comments on Post-It notes and placed them on the map.
- A visioning exercise in which participants were asked to complete the phrase "Freeway Drive should…" The statement was posted on a poster board and participants were asked to complete the phrase by writing on Post-It note paper.
- An idea gathering exercise in which participants were asked to share their ideas about making Freeway Drive better. This too, involved a poster board and participants writing their thoughts on Post-Its.

Project Team members were available at each map station to help participants understand the exercise. Occasionally, consultant team wrote down the comments of participants who wanted to express their ideas orally.

During the presentation, participants were also asked about their thoughts on Freeway Drive and any ideas they had for improving it.

Flyer for public engagement events in November 2016

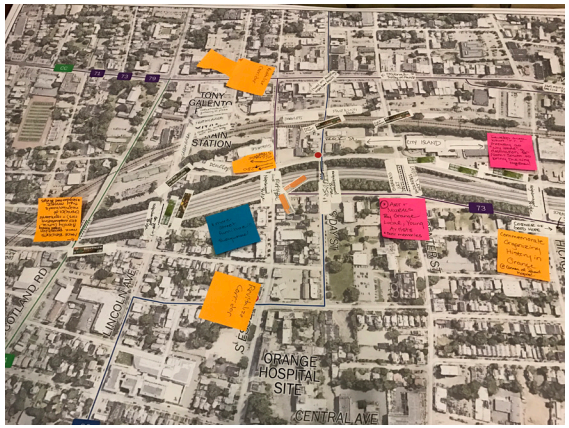
2. Crowd-mapping Sessions

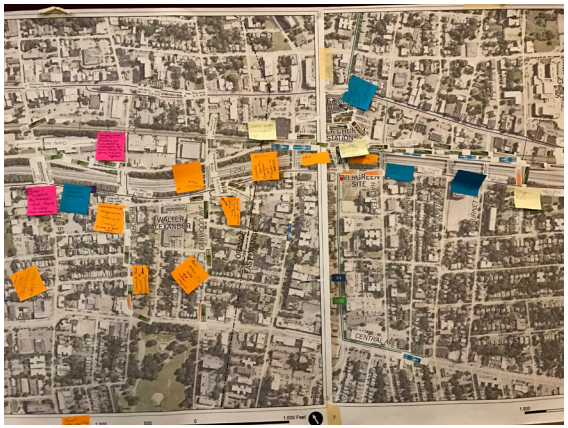
Two crowd-mapping sessions were held in November; one at East Orange Public Library and the other at Orange REC Center. The crowd-mapping sessions offered participants opportunities to recommend ways that improve Freeway Drive through various arts forms or activities (such as murals) or creative community activities. (such as a food truck festival). Participants were also welcome to offer other recommendations for improving Freeway Drive.

In crowd-mapping, participants are trained to identify assets and opportunity sites in a given area. While crowd-mapping can cover any topic, the crowd-mapping sessions for this project focused on creative and cultural assets. Participants were encouraged to look for five items in their mapping:

- Places of existing creative activities
- Areas with existing outdoor art work, or architecturally interesting buildings
- Locations that could be sites for future visual art work (murals, sculptures, etc.)
- Locations for exhibitions, performances of spaces to create art
- Vacant and semi-vacant buildings that could house arts or cultural activities

Crowd-mapping helps participants see their communities in new ways. Some participants see locations or buildings that they have overlooked. Some participants see spaces



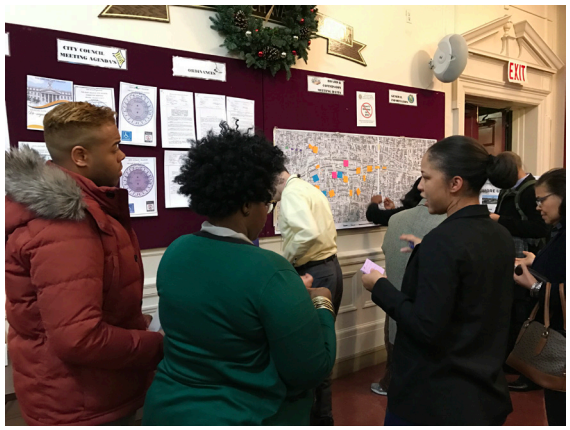


Community Comments from January 17, 2017 event

in new ways, and see new possibilities for long-vacant sites.

The crowd-mapping process moves back and forth from conversations about arts and cultural activities to social and economic issues in the study area. Participants in the East Orange crowd-mapping session talked about the need to provide safe spaces for NJ TRANSIT riders after dark. In Orange, conversations about art spaces led to discussions about dealing with loitering and drug dealing in certain areas.

Public Engagement January 31, 2017



Public Engagement, January 31, 2017

Flyer for public engagement event in January 2017

Community members write out comments to share their observations or recommendations at public engagement events

3. Stakeholder Interviews

To get a deeper understanding of what it is like to live, work or be along Freeway Drive, consultant team interviewed 15 people whose organizations are located on, or have a strong connection to, Freeway Drive. Because the focus of this project is on public safety and enhancing the public realm, the study team selected leaders of organizations that provided social services (such as HANDS and Family Intervention Services, Inc.) or served a wide variety of people who are on Freeway Drive frequently (such as the Orange Fire Department and the East Orange Public Library.) In addition, we also interviewed members of the Route 280 reverse archaeology team. (The Reverse Archaeology project documents and interprets the effect of Route 280. The project uses oral history, ethonography, artist interventions and community engagement to understand the stories of Route 280 to know more about how communities thrived before its construction and what it will take for current residents to plan to stay.)

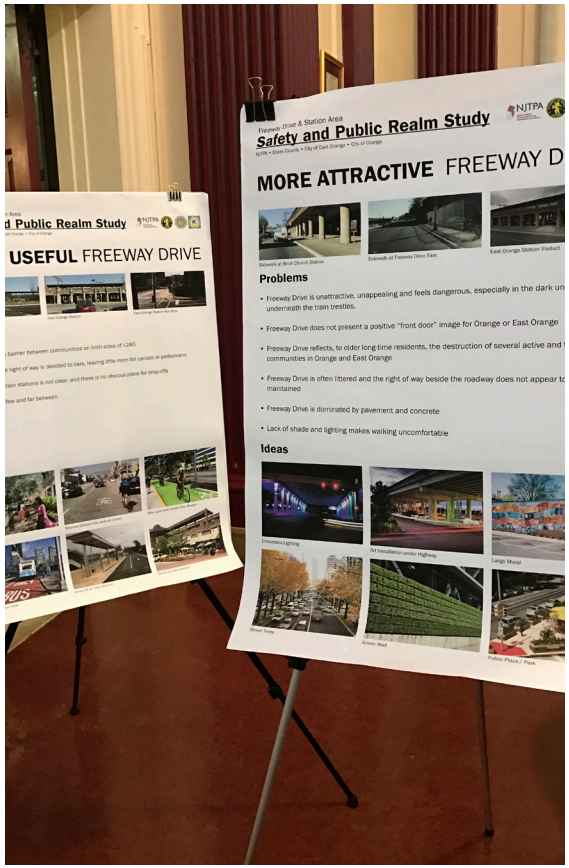
Stakeholders were asked descriptive questions related to either their personal, constituents or clients experiences along Freeway Drive. Additionally, questions were developed to get a better understanding of particular areas of the corridor that the consultant team should concentrate on. Finally, participants were asked to recommend improvements to the study area.

The vast majority of the people involved in the sessions were adults (a mix of young, middle-aged and senior adults) who lived or worked in East Orange or Orange.

The Create Freeway Drive workshops were designed to market-test several ideas for improving Freeway Drive. These ideas were drawn largely from information sessions and crowd-mapping workshops held in fall 2016, as well as some developed by members of the consultant team.

To enable and empower residents to develop their own ideas – rather than simply respond to those of the consultants – participants listened to or watched a slide presentation of analysis about Freeway Drive. The presentation showed, for example, that there is excess road capacity on both sides of Freeway Drive – which means that a car lane on each side could be eliminated without it having a big impact on traffic. It also presented findings and ideas from early public engagements.

Participants were then invited to learn more about specific strategies – such as green walls or bulb-outs through one-to-one conversations with members of the consultant team. Finally, participants went to a 'Create Freeway Drive' station, where they could apply labels representing different strategies – such as bulb-outs, green walls, bike lanes or art installations to a large map of the project area.



Public Engagement January 31, 2017

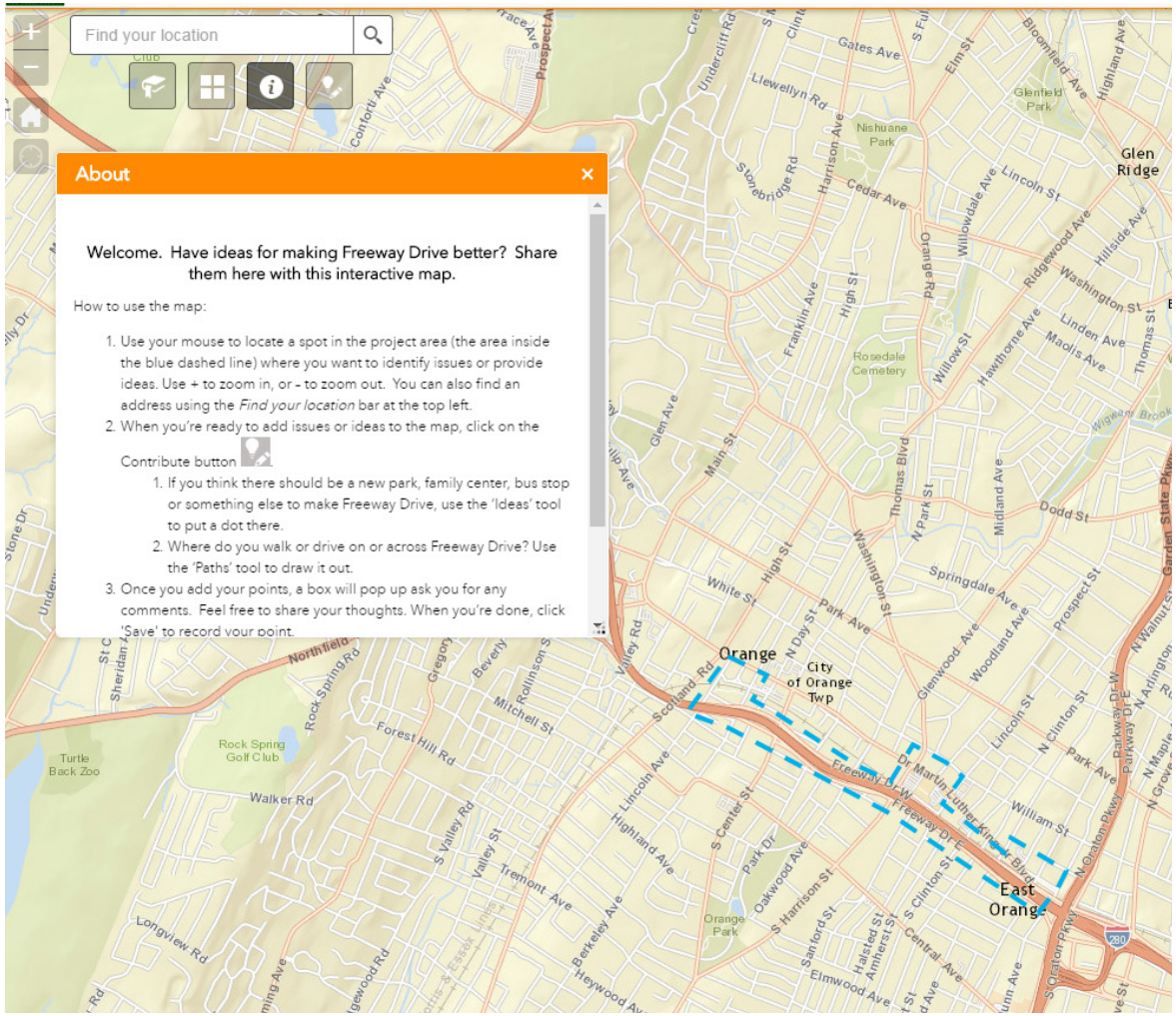
Interactive Website

The project team set up an interactive web map that allowed individuals living or working along the Freeway Drive corridor to provide input to the planning process. The map displayed aerial imagery at high resolution and allowed users to interactively explore the Freeway Drive corridor. The web map was designed to mirror the public input process that was followed during stakeholder meetings. Individuals who were unable to attend the stakeholder meetings or had subsequent information that they wanted to provide could use the map to add information about how they currently travel within the study area or to provide ideas on how to improve the corridor.

The project team set up the Freeway Drive Interactive Web Map to gather input as part of the analysis phase. The interactive web map allowed community members and other key stakeholders to provide input on safety issues along Freeway Drive and ideas to improve the transportation corridor. The web map played a critical component of the analysis phase by expanding the audience of the input process. For example, the interactive web map collected vital information from individuals who were unable to attend the stakeholder meetings or had subsequent information that they wanted to provide. The web map was designed to mirror the public input process that was followed during stakeholder meetings.

The interactive web map was hosted on the website of the Urban Essex Coalition for Smart Growth. This decision was based on the fact that the website is a centralized location for communication with community members. The interactive web map was a part of a set of tools on the website to both gather and disseminate information with the community. In addition, the interactive web map was a quick method of gathering information from key stakeholders.

The interactive web map allowed users to explore the identified study area. Users were able to choose between aerial imagery or street view, facilitating the identification of key areas within Freeway Drive. Within the web map, users could highlight points, lines, and areas on which they left comments. For example, a user could choose to add a point to a location and leave a comment about the lack of pedestrian safety that that location. The comments that users left were uploaded to a database, which could then be analyzed. In addition, shapefiles could be created from the user inputs.



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Implementation

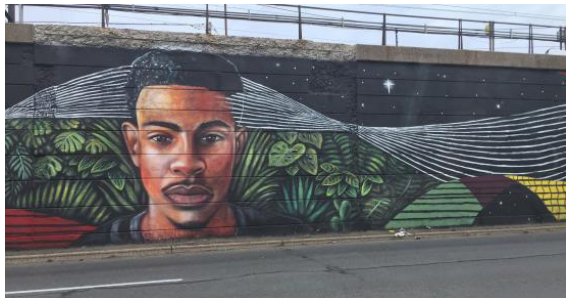
Implementation

The goal of this plan is a major transformation of the project area to improve safety for drivers and pedestrians as to well as enhance the public realm. As with all major transformative projects, short term outcomes are important to demonstrate to residents and stakeholders that progress is being made while longer term efforts are being advanced and funding is pursued. Such "early wins" also serve to raise general awareness of the study area, and generate support in the larger project.

There are different paths toward implementation. The plan could be executed in a single phase to allow for a complete transformation all at once. The cities of Orange and East Orange, and Essex County will need to work together to establish a preferred strategy. Alternatively, a more layered approach to the implementation would allow for the plan to be executed in phases as funds permit.

Short Term Implementation (1-4 years)

Short term actions could include a combination of pilot projects and outreach events such as "Bicycle Sundays," or weekend closures of one or more of the traffic lanes to allow for car-free recreational bike use. These programs would allow residents to see the potential of this plan and gain public investment. The murals proposed for the blank wall section of Freeway Drive West between Halsted Street and South Arlington Avenue is another potential short term project. Traffic signal phasing and timing adjustments could also be implemented in the short term.



A recent mural project in Newark, NJ was funded by Newark's EDC through a grant provided by the City of Newark and donations form Ray's Enterprises in Newark. This mural creates a welcoming entry to the city along Route 21 as a part of the Gateways to Newark Initiative.

Bronx River Parkway Bicycle Sundays program closes the Parkway to vehicles during the Spring and Fall, a cherished event for local residents and visitors from neighboring communities.

Medium Term Implementation (5 - 10 years)

The medium term projects involve restriping and new lighting at underpasses. As a part of the layered approach, Freeway Drive East and West could be restriped to reduce the roads from three lanes to two. Striping could also include a buffered bike lane and parallel parking. While this would not include the proposed planted median, bike lanes, and bulb-outs, the restriping approach could allow for more immediate results.

This would entail a new layer of asphalt to cover the existing striping; painting and striping; and coordination of the traffic and pedestrian signals to align with the new scheme. The Route 280 ramp improvements could be executed easily with restriping. This

restriping would remove the need for the ramp to merge with Freeway Drive traffic. No physical changes to the ramp would be necessary. These actions could be executed while the curbs/medians are constructed, which will take a minimum of three years.

Lighting at the underpasses will improve pedestrian safety and could create an improved image for Orange and East Orange. The lighting design process would take about one year. Coordinating where the electricity comes from and who pays for it would need to resolved. The entire process would take about one year for design and coordination, time for the bidding process, and three to six months to construct.

Example of an artistically illuminated underpass

Long Term Implementation (11+ years)

Long term project recommendations include built planted medians, bike lanes, bulb-outs, and on street parking. One of the most significant considerations would be coordinating drainage with the planted median. Currently, the drainage pattern moves water toward the north side of the road along Freeway Drive East. The planted median would interrupt this flow. The new design effort would need to address the change in drainage. Including grant submissions, the entire process would take three to five years.

New signage and reducing the speed limit to 30 mph should occur concurrently with the modifications to the roads' geometry. These projects would take a short time to execute, but are dependent on the timeline of the larger street improvements. New signage includes new traffic and environmental graphics (i.e. community banners). The cities would likely be able to fund their own environmental graphics while the traffic signage would likely be funded through grants.

The plan recommends that lane reductions wait until the geometric improvements of the roads have been completed. While speed limit signs are helpful, drivers will travel at a speed relative to the character of the road. When Freeway Drive has two lanes and pedestrian amenities, a speed limit of 30 mph would be better suited. The process of reducing the speed limit could be done relatively easily by writing letters and reports and proving the case for the speed reduction.

Similarly, new pedestrian amenities would be added concurrently with the geometric improvements to the roads. These proposed pedestrian amenities include sidewalks, curb ramps, crosswalks, audible push buttons at crossings, countdown pedestrian heads at crossings, lead pedestrian intervals and improved lighting. While some amenities could be added in the short to midterm phased approach, the larger pedestrian goal of the project would follow the long term timeline. As with the improvements to Freeway Drive, the improvements can be added in phases.

The North/South bridges could be undertaken two at a time, moving from the center of the project area to the edges of the project area. Starting the effort at Brick Church Plaza Station would not only address one of the busiest crossings, but would include both Orange and East Orange early in the process. Each bridge would require new pedestrian scale lighting and traffic lights at the intersections on Freeway Drive East and West to be reconfigured. Improving the bridges in pairs would allow work on Freeway Drive between the two bridges to occur concurrently. This is another alternative for how the project can be phased.

Aspirational Proposals

The capping projects over Route 280 are aspirational long term recommendations that could have significant long term economic development impact and have a catalyst effect on the three "Gateway" areas. These projects could take ten years or more to implement and would likely require some measure of public-private partnership. Capping Route 280 directly south of the East Orange Station would create two new significant development sites. The development potential of the two development sites could be leveraged to help finance the construction of the caps. The cap south of the East Orange Station would yield a large site which the plans envisions as a new civic park that is large enough to accommodate one or more development pads, which could similarly be leveraged to contribute to the financing of the cap in that location. In Orange, the Plan proposes new retail development opportunities on new decks over Route 280 on both sides of Essex Street. These two new retail pads could also be leveraged to help finance the decks.

Costs

Improvement items were individually costed to enable assemblage of different combinations of improvements and different improvement areas *Freeway Drive east, Freeway Drive West and North-South crossings. These included the following improvements:

a. Buffer + Dedicated Bike Lanes
b. Crosswalks
c. Roundabout
d. Traffic Lights
e. Striped Parallel Parking
f. Curb Bulb Out Sections
g. Concrete Shoulder Treatments
h. Restriping
i. Road Diet
j. One-way Pair

For Freeway Drive West the estimated combined cost for the Buffer + Dedicated Bike Lanes, Crosswalks, Roundabout and Traffic Lights range from $6 million to $7 million. For Freeway Drive East, the estimated combined cost for the Crosswalks, Traffic Lights, Striped Parallel Parking, Curb Bulb-Out Section and Concrete Shoulder Treatment range from $7 million to $8 million. For the north-south crossings the estimated combined cost for Restriping, Road Diet, and One Way Pair ranged from $3 million to $4 million. Implementation of all improvements was estimated to range from $15 million to $20 million.

These estimates account for contingencies, construction engineering, utility relocations and other items such as mobilization, lighting and maintenance of traffic. Consistent with industry standards for preparation of preliminary estimates at the concept design level, the preliminary cost estimates for street improvements were based on quantities and unit costs of main pay items. Unit costs of different elements were obtained from advertised bid prices on NJDOT's website. The remaining items were estimated based on NJDOT's construction classification and published coefficients for preliminary cost estimation. Cost by unit of proposed street improvements were developed using the provided typical sections. A detailed overview of cost estimation methods and data and detailed overview of the estimates is provided in the appendix.is provided in a separate Technical Memorandum dated _____.

In addition to the short term, near term and long term improvements (which would include combinations of the elements above), a cost estimate range was developed for aspirational development: capping over Route 280.

Cost estimates were developed for several capping options:

- Civic center Area (S. Munn to S. Arlington Ave): park, street treatment, roundabout - $20-$25 million
- Brick Church Station Park deck ($3- $4 million
- Brick Church East Plaza: Deck for 3 story-structures + 3-story parking garage -$20-$25 million
- Essex Avenue decks: Deck for 3-story buildings on either side ($10M)

The total estimated cost range for all deck and other improvements (not including building costs) but accounting for contingencies, construction engineering, utility relocation and other items such as lighting, maintenance of traffic and mobilization is estimated between $53-64 million.

Higher density development above the Brick Church West Plaza Deck would entail increased costs for a more robust structure to support the additional load. 20-story buildings plus 6 story-parking garage for instance, would add an additional $120-125 million.

The unit cost for capping over Route 280 (without building costs) was based on the cost per square foot of bridge construction published by NJDOT for use in concept design studies. This unit cost was then multiplied by a coefficient to account for land use type and anticipated structure complexity. The figures do not include contingencies but do include Maintenance of traffic and mobilization.

Funding

In order to implement the plan, government funding on all levels - federal, state, and local should be pursued - as well as private sector and foundation sources.

"Value capture" strategies such as Redevelopment Area Bond (RAB) funding to leverage future increases in property values attributable to improvements to Freeway Drive along the Freeway Drive Corridor should also be explored. Other forms of public-private partnership should also be considered for the caps envisioned at South Essex Street, Brick Church Station and East Orange Station. Foundation funding are another important potential source of funding, particularly for public art-related projects, and demonstration or pilot projects.

The following is a partial list of grants that could be pursued to advance implementation of the plan:

- NJDOT Bikeway Grant Program
- NJDOT: Safe Streets to Transit Program
- Transportation Alternatives Program administered by the New Jersey Department of Transportation (NJDOT), in partnership with the North Jersey Transportation Planning Authority (NJTPA)
- Safe Routes to School Program - The SRTS program is funded through the Federal Highway Administration's (FHWA) Federal Aid Program and is being administered by the NJDOT, in partnership with the North Jersey Transportation Planning authority (NJTPA)

List of recommendations and assumed times for implementation
**These recommendations would take a short amount of time to execute, but they should not be done until large changes are implemented*

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Nishuane Group
Techniquest

Community Work Session

Informational sessions

October 5, 2016, Orange City Hall
October 13, 2016, East Orange City Hall

- Info-collecting session from participants' experiences, thoughts and ideas for Freeway Drive.

Crowdmapping & Stakeholder Interviews

November 5, 2016, East Orange Public Library
November 12, 2016, Orange REC Center

- Crowdmapping: participants to identify assets and opportunity sites in a given area focused on creative and cultural assets.
- Stakeholder interview: stakeholders to help team identifying focus area and to recommend for improvements

'Create Freeway Drive' workshops

January 17, 2017, Orange Public Library
January 31, 2017, East Orange City Hall

- Analysis presentation by project team
- Strategy development session by participants

Transforming Freeway Drive: Recommendations and Dialogue

April 6, 2017, East Orange City Hall
April 26, 2017, East Orange City Hall

- Analysis and recommendation presentation by project team
- Following-up discussion between project team and participants

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