

## **5. Recommendations**

### **Middletown Road**

The goal in designing this route was to connect cyclists from the Hutchinson River Greenway and the subway to Pelham Bay Park, and the proposed greenway that runs through it. The challenges of designing this route are that the Bruckner Expressway bisects the corridor thereby isolating Pelham Bay Park. Additionally, the streets to the north and south of this corridor are mostly one-way, making a direct route across the expressway and back impossible. As a result of the geographic challenges of this corridor, three alternatives have been examined for the bicycle route along Middletown Road.

There are two pedestrian overpasses traversing the Bruckner Expressway. One overpass has an entrance ramp located at Buhre Avenue, west of the Bruckner and terminates in Pelham Bay Park, east of the Bruckner. The second overpass is located to the south and has an entrance ramp at Roberts Avenue and terminates at Middletown Road east of the Bruckner. Alternative A utilizes the Roberts Avenue overpass and Alternative B utilizes the Buhre Avenue overpass. Alternative C utilizes both overpasses, connecting them with a two-way bicycle lane along the southbound Bruckner Expressway service road.

*Alternative A - See Figure 5.7 for the bicycle route*

This alternative will take eastbound cyclists from the western edge of the study corridor to Mahan Avenue, which is approximately 29 feet wide, where cyclists would turn onto the one-way northbound street and travel for one block (See Figure 5.1 on the following page). At Roberts Avenue cyclists would turn onto the one-way eastbound street and travel for two blocks (see Figure 5.2 on the following page) where the Roberts Avenue overpass would take them across the Bruckner and onto Middletown Road. Roberts Avenue is approximately 30 feet wide with parking permitted on both sides of the street.

**Photo 5.1**



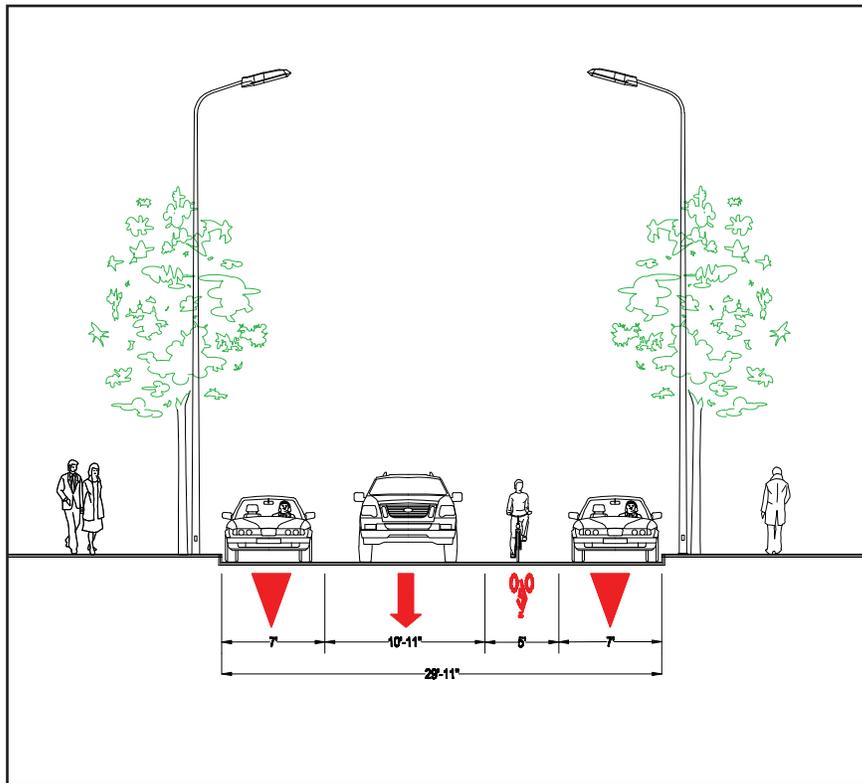
Roberts Avenue overpass, Middletown Road  
east of Bruckner.

**Photo 5.2**



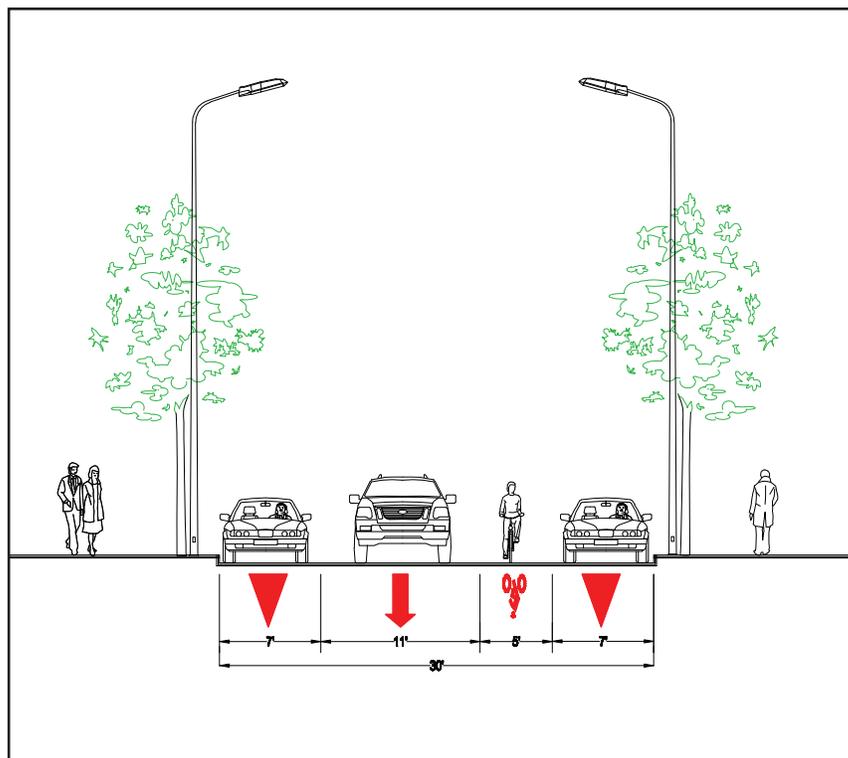
Roberts Avenue overpass, Middletown Road  
west of Bruckner.

Figure 5.1



Bicycle Lane Section: Mahan Avenue

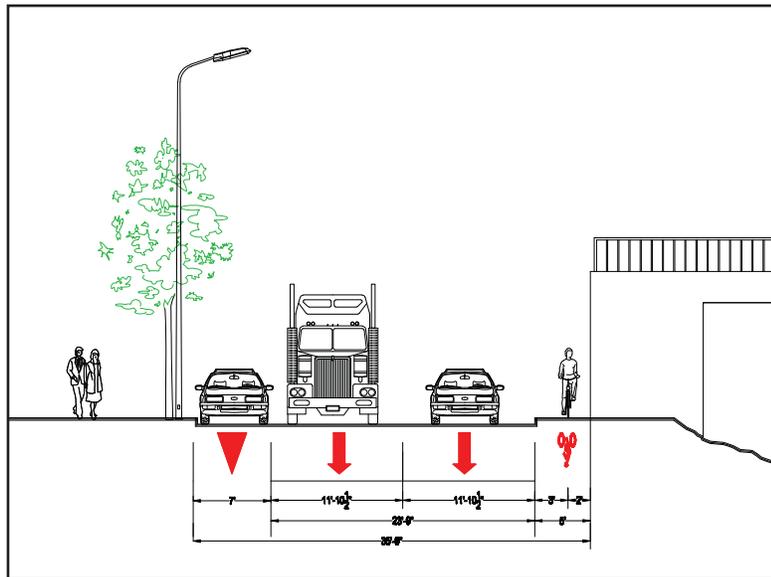
Figure 5.2



Bicycle Lane Section: Roberts Avenue

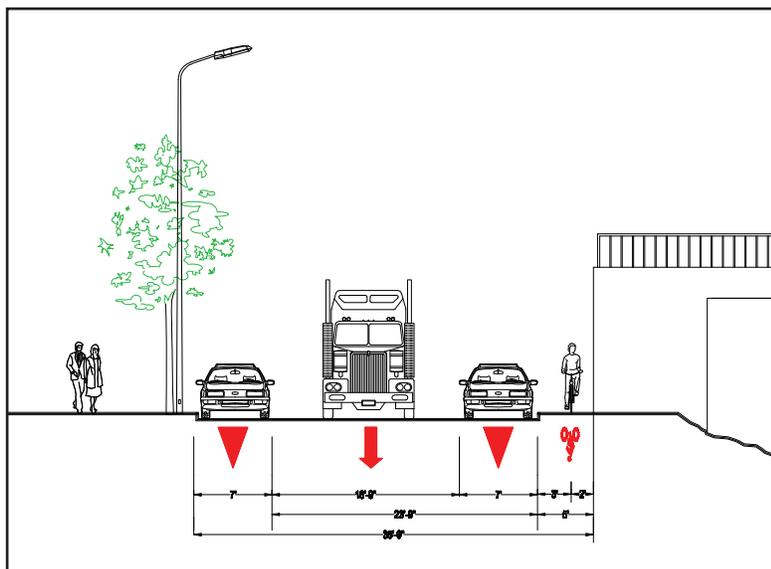
The westbound route would be different since cyclists cannot travel counterflow on one-way streets. Westbound cyclists would cross the Roberts Avenue overpass and turn onto the southbound service road for the Bruckner Expressway and travel for one block. See Figure 5.3, which illustrates the 7:00AM to 7:00PM time period when there will be two travel lanes, and Figure 5.4, which illustrates the 7:00PM to 7:00AM time period when there will be one travel lane. At Middletown road cyclists would turn west and travel to the end of the corridor. See Figures 5.5 and 5.6 on the following page which illustrates the bicycle lane striped on the service road or the curb extended to provide a bicycle lane protected by parked vehicles.

**Figure 5.3**



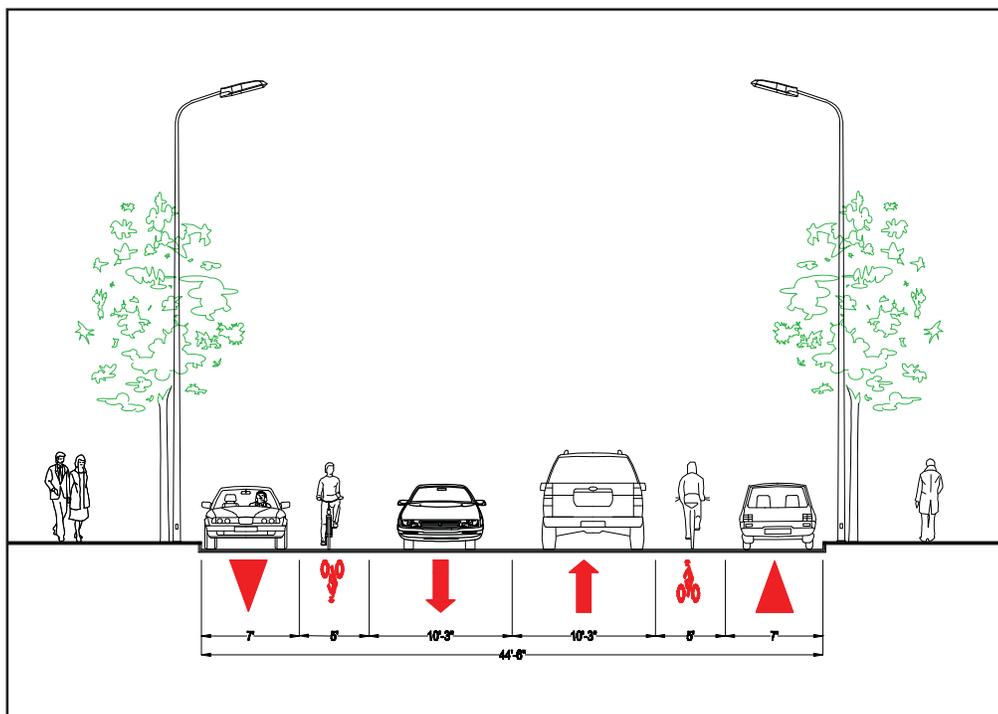
Bicycle Lane Section: Bruckner Expressway Service Road, One-way Lane 7:00AM-7:00PM

**Figure 5.4**



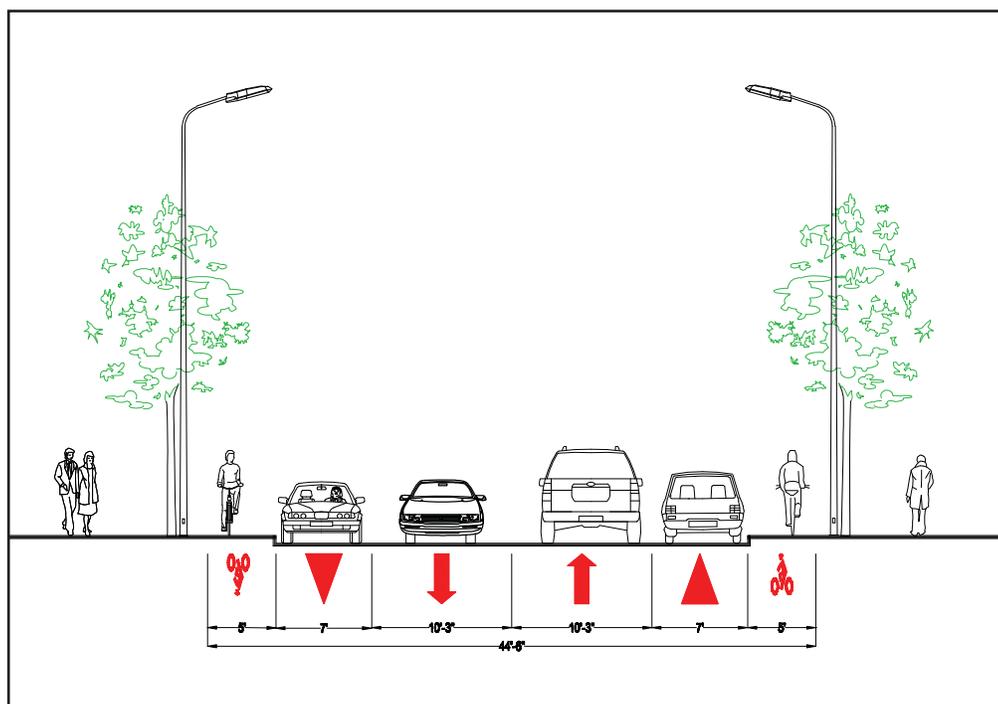
Bicycle Lane Section: Bruckner Expressway Service Road, One-way Lane 7:00PM-7:00AM

Figure 5.5



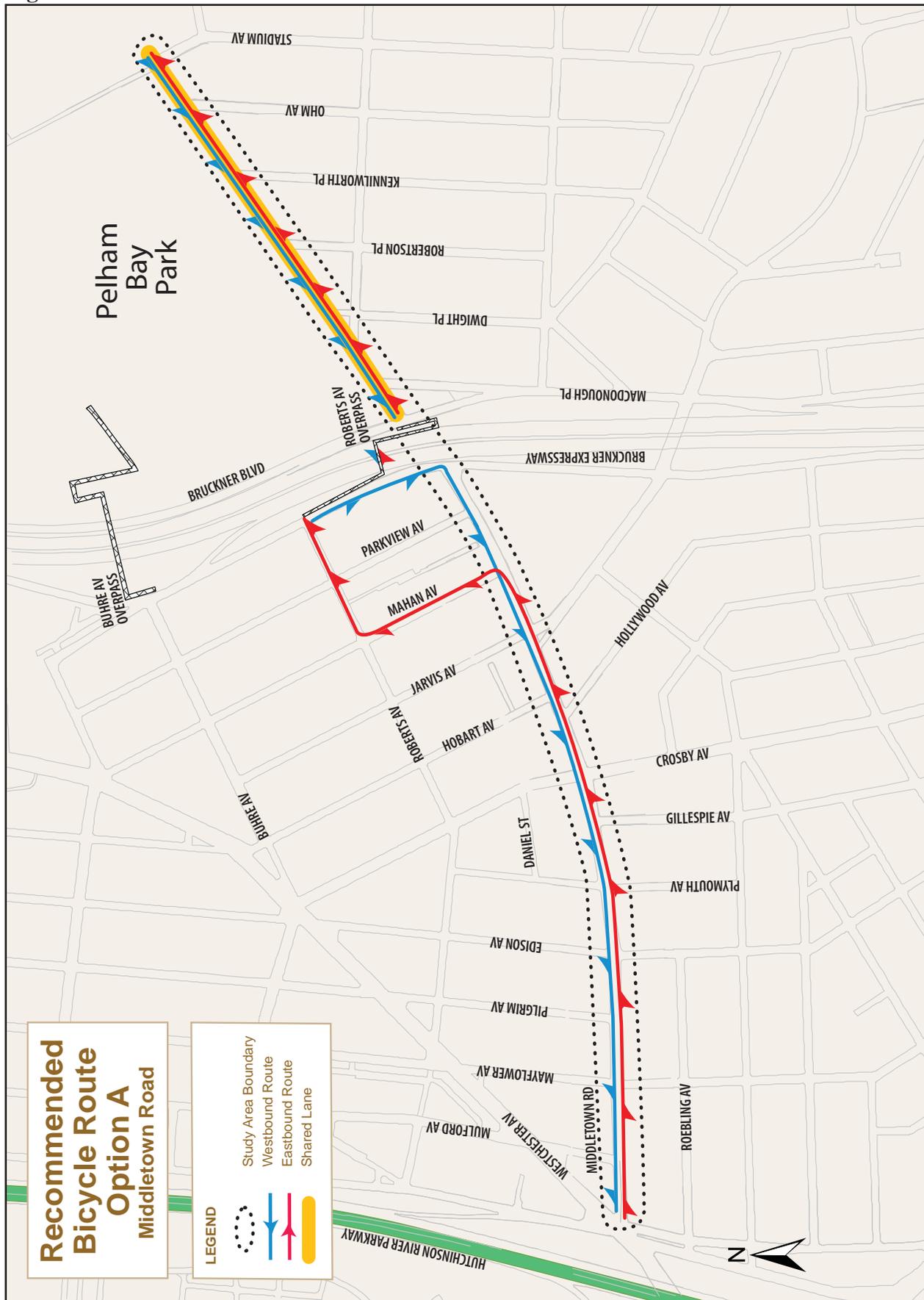
Bicycle Lane Section: Middletown Road, Striped Class II Lane

Figure 5.6



Bicycle Lane Section: Middletown Road, Protected Lane

Figure 5.7



*Alternative B - See Figure 5.9 for the bicycle route*

This alternative will take eastbound cyclists from the western edge of the study corridor to Mahan Avenue, where cyclists would turn onto the one-way northbound street and travel for two blocks. At Buhre Avenue cyclists would turn east onto the two-way street and travel for two blocks where the Buhre Avenue overpass would take them across the Bruckner and directly into Pelham Bay Park.

**Photo 5.3**



Buhre Avenue overpass east of Bruckner

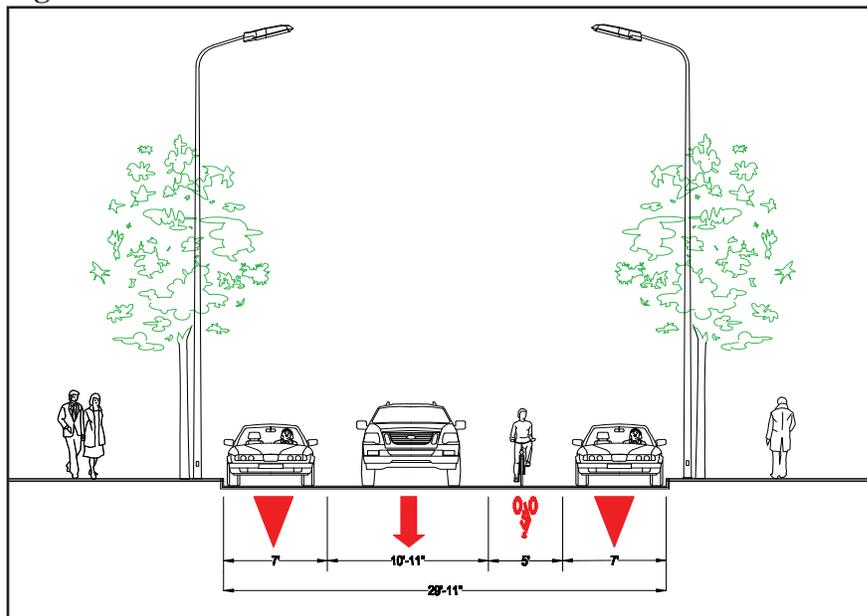
**Photo 5.4**



Buhre Avenue overpass west of Bruckner

Westbound cyclists would cross the Buhre Avenue overpass and travel west on Buhre Avenue for one block until Parkview Avenue where cyclists would turn onto the one-way southbound street and travel for two blocks (See Figure 5.8). At Middletown Road cyclists would turn west and travel to the end of the corridor.

**Figure 5.8**



Bicycle Lane Section: Parkview Avenue

Figure 5.9

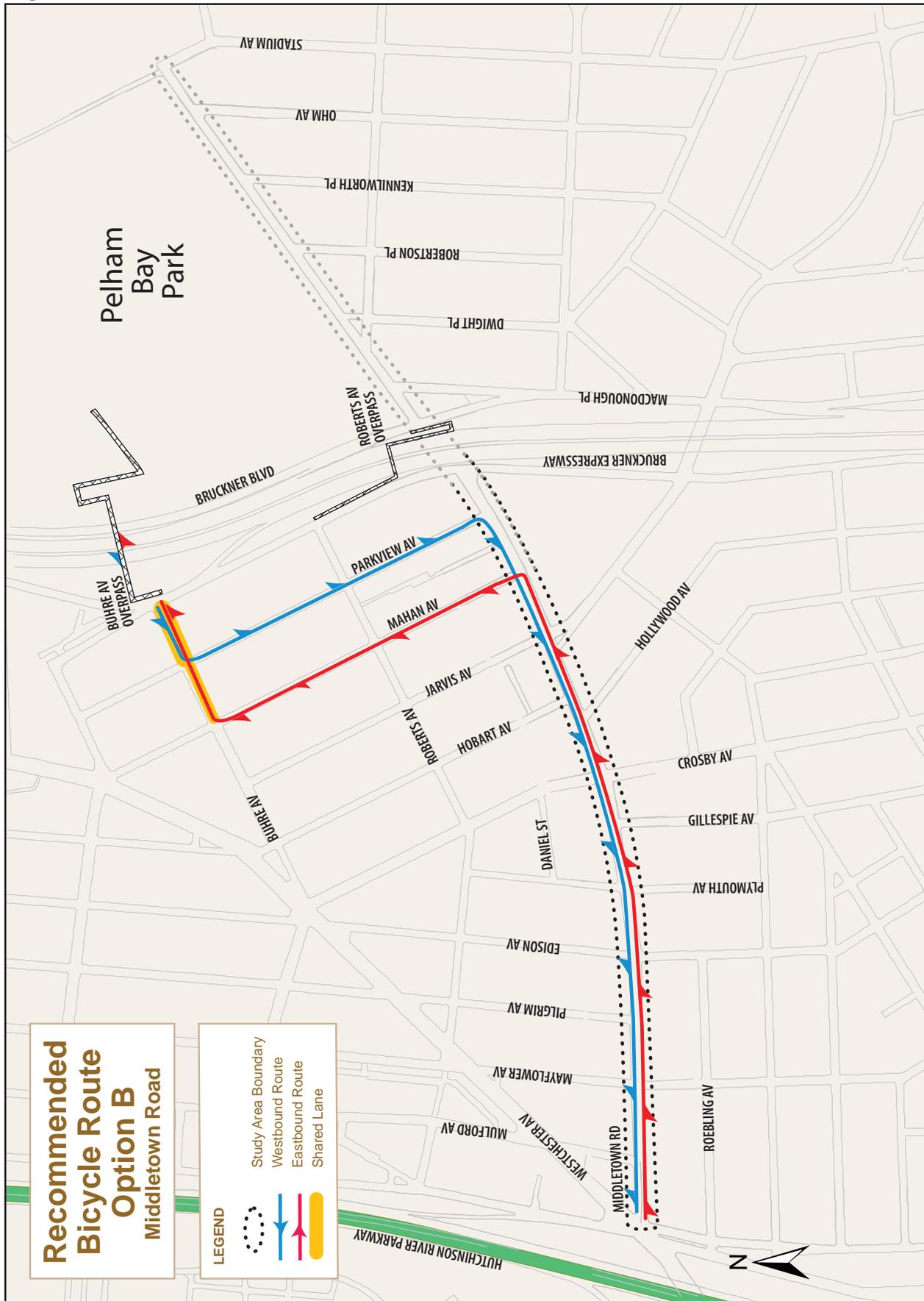




Figure 5.12



While this alternative is the most direct route and would give cyclists the most flexibility, it is also a truck route and the resulting travel lanes will be narrow. Additionally, transition signage and striping would be necessary north of Buhre Avenue and south of Middletown Road since the service road will lose a travel lane from 7:00PM to 7:00AM. Data obtained from the New York City Department of Transportation indicates that volumes on the southbound Bruckner Expressway service road between 7:00AM and 9:00AM range from 544 to 1077. The volumes between 4:00PM and 6:00PM range from 810 to 1338. The complete Automatic Traffic Recorder counts are on file at the NYC Department of City Planning, File Number 04-0216.

**East 228<sup>th</sup> Street and East 229<sup>th</sup> Street** - See Figure 5.15 for the bicycle route

This route is recommended in the NYC Bicycle Master Plan and would provide an on-street connection to the Bronx River Greenway and the residential area in the northeast Bronx. A challenge to implementing this route could be approximately 50 feet of angled parking along the north side of East 229<sup>th</sup> Street, west of Laconia Avenue. The angled parking is used by the police station located on the northwest corner of East 229<sup>th</sup> Street and Laconia Avenue. If it is not possible for NYCDOT to remove this angled parking and replace it with standard parallel parking for this 50-foot section of E. 229<sup>th</sup> Street, the bicycle will have to become a shared lane.

**Photo 5.5**



View of Bronx River Greenway connection from  
E. 229th Street

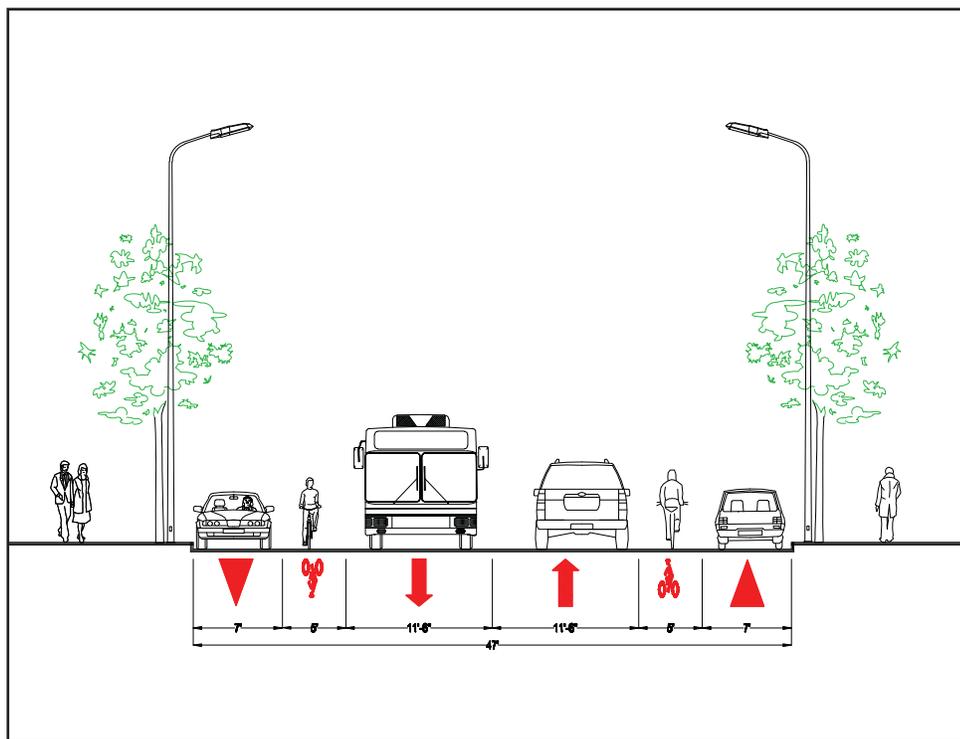
**Photo 5.6**



Police station on northwest corner of E. 229th Street and  
Laconia Avenue

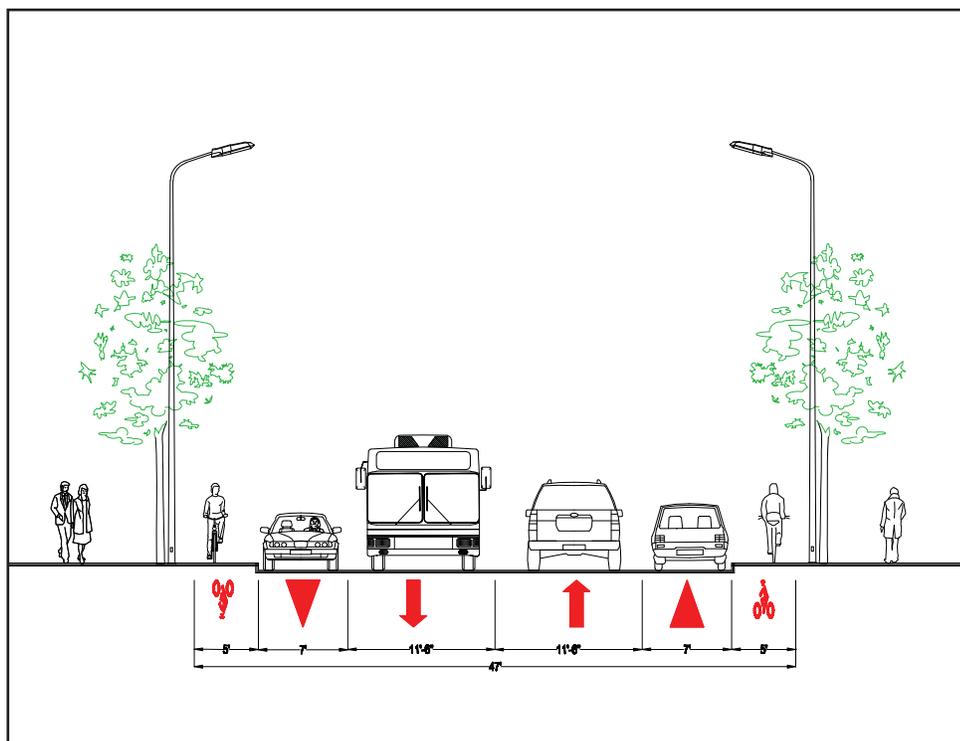
The recommended eastbound route begins at the greenway and travels east along East 229<sup>th</sup> Street to Needham Avenue. (See Figures 5.13 and 5.14, which illustrates a bicycle lane striped and the curb extended to provide a protected bicycle lane.) The westbound route travels west along East 229<sup>th</sup> Street to Laconia Avenue, turns south on Laconia for one block and then west onto East 228<sup>th</sup> Street to the Greenway. The recommended route is a Class II bicycle lane along the entire length of East 229<sup>th</sup> Street and for a portion of East 228<sup>th</sup> Street. The route becomes a shared lane east of Bronxwood Avenue along East 228<sup>th</sup> Street, where the road narrows significantly to 24 feet wide.

Figure 5.13



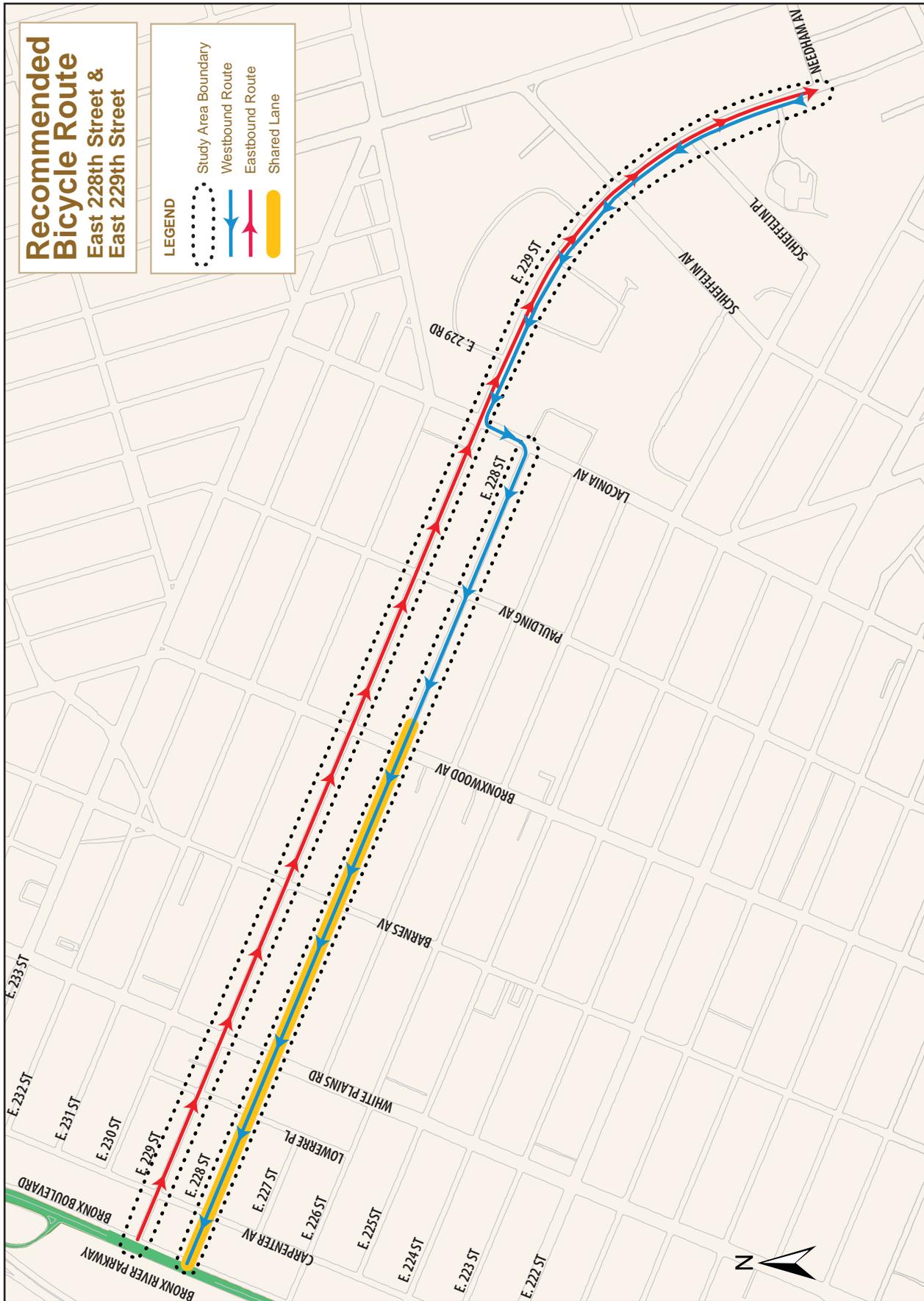
Bicycle Lane Section: E. 229th Street, Striped Class II Lane

Figure 5.14



Bicycle Lane Section: E. 229th Street, Protected Lane

Figure 5.15



**Mosholu Avenue and West 254<sup>th</sup> Street** - See Figure 5.20 for the bicycle route

This route is recommended in the NYC Bicycle Master Plan. The route would provide an important connection between the Riverdale Metro North station and Van Cortlandt Park. However, there are some challenges to implementing this route. Firstly, while Mosholu Avenue can accommodate a Class II bicycle lane, West 254<sup>th</sup> Street is much narrower and can only accommodate a shared lane. Additionally, West 254<sup>th</sup> Street travels along a steep east-facing slope which would likely be used by advanced riders only. Lastly, cyclists may only bring their bicycles on Metro North trains during off-peak hours, and a permit must be obtained in advance.

**Photo 5.7**

View of steep hill along W. 254th St. facing east

There are also infrastructure problems on West 254<sup>th</sup> Street which must be addressed before implementing a shared bicycle lane along this route. In many places the demarcation between the street and sidewalk is indistinguishable, in other places the curb or pavement is in poor condition. These maintenance conditions can create difficulties for both cyclists and motorists and should be repaired. The photos below depict the poor pavement conditions along West 254<sup>th</sup> Street.

**Photo 5.8**

Roadway conditions along W. 254th St.

**Photo 5.9**

Sidewalk Conditions along W. 254th St.

Although Mosholu Avenue can easily accommodate a Class II bicycle lane, we have identified two locations where the integration of traffic calming measures can make traveling along Mosholu Avenue safer for both pedestrians and cyclists.

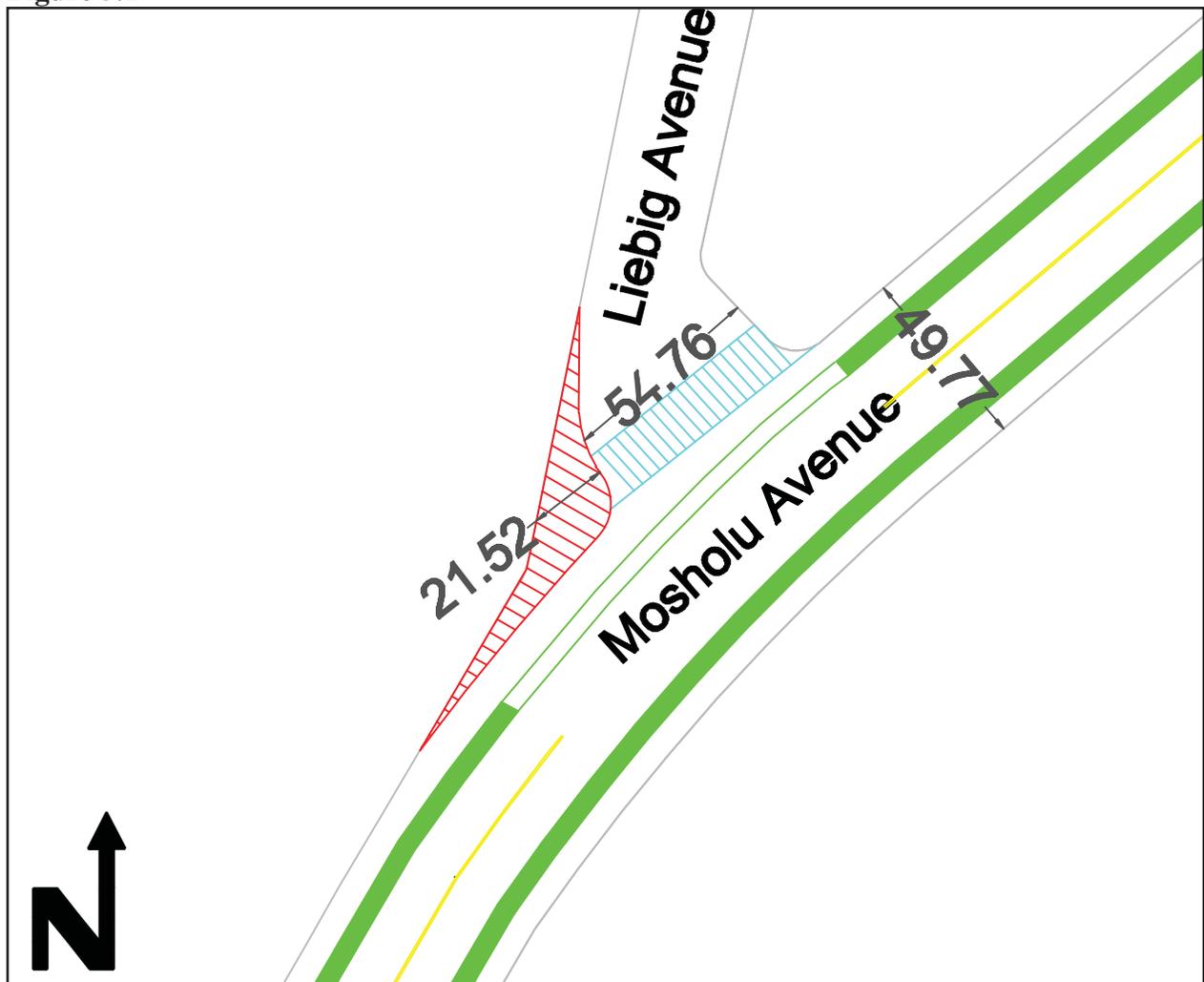
At the junction of Mosholu Avenue and Broadway the southbound right turn lane from Broadway is approximately 50 feet wide, with a single travel lane and a bus stop. At its existing width, vehicles are able to make high-speed right turns. Narrowing the roadway by extending the width of the traffic triangle will reduce the speed of vehicles turning onto Mosholu Avenue from Broadway. The traffic triangle is currently being used as green space. Extending the width of the plaza will allow for the planting of additional street trees which will enhance the gateway onto Mosholu Avenue and will assist the city in attaining its goal laid out in the PlaNYC 2030 initiative to plant one million trees throughout the five boroughs within the next 10 years.

**Figure 5.16**



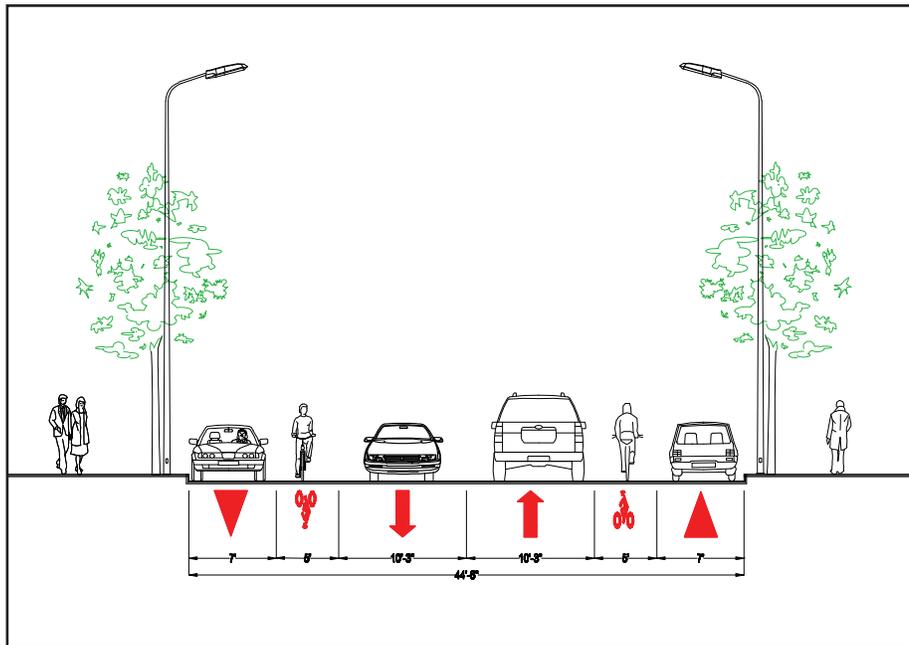
Another traffic calming measure is recommended for the intersection of Mosholu Avenue and Liebig Avenue. The obtuse angle at which Liebig Avenue intersects with Mosholu Avenue encourages vehicles to turn onto Mosholu Avenue at high speeds. With the installation of a bicycle lane along Mosholu Avenue, there is an increased risk of conflict between high-speed right turning vehicles and cyclists using the on-street bicycle lane. There is currently a stop sign at this intersection, however, reconstructing the curb with a tighter turning radius will encourage vehicles approaching the intersection to slow down and will improve the visibility of pedestrians and cyclists as well.

**Figure 5.17**



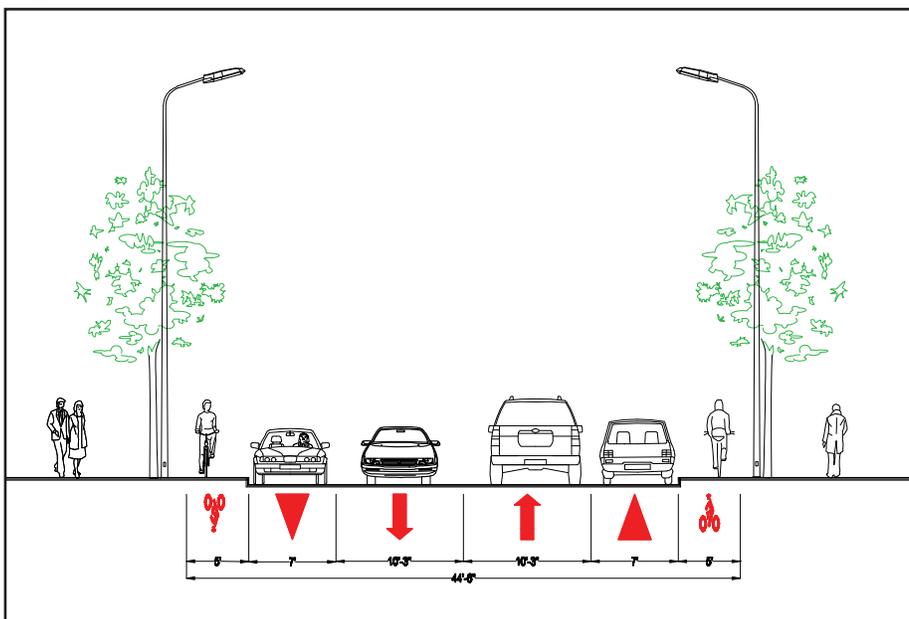
Challenges aside, this route would be the only bicycle lane in the Riverdale section of the Bronx, which is isolated from the subway. This connection would make Van Cortlandt Park and the Riverdale Metro North station more accessible to cyclists. Since both Mosholu Avenue and West 254<sup>th</sup> Street are both two-way streets the recommended eastbound and westbound routes are the same. (See Figures 5.18 and 5.19 which illustrate a bicycle lane striped adjacent to the travel lane, or the curb extended to provide a protected bicycle lane.)

**Figure 5.18**



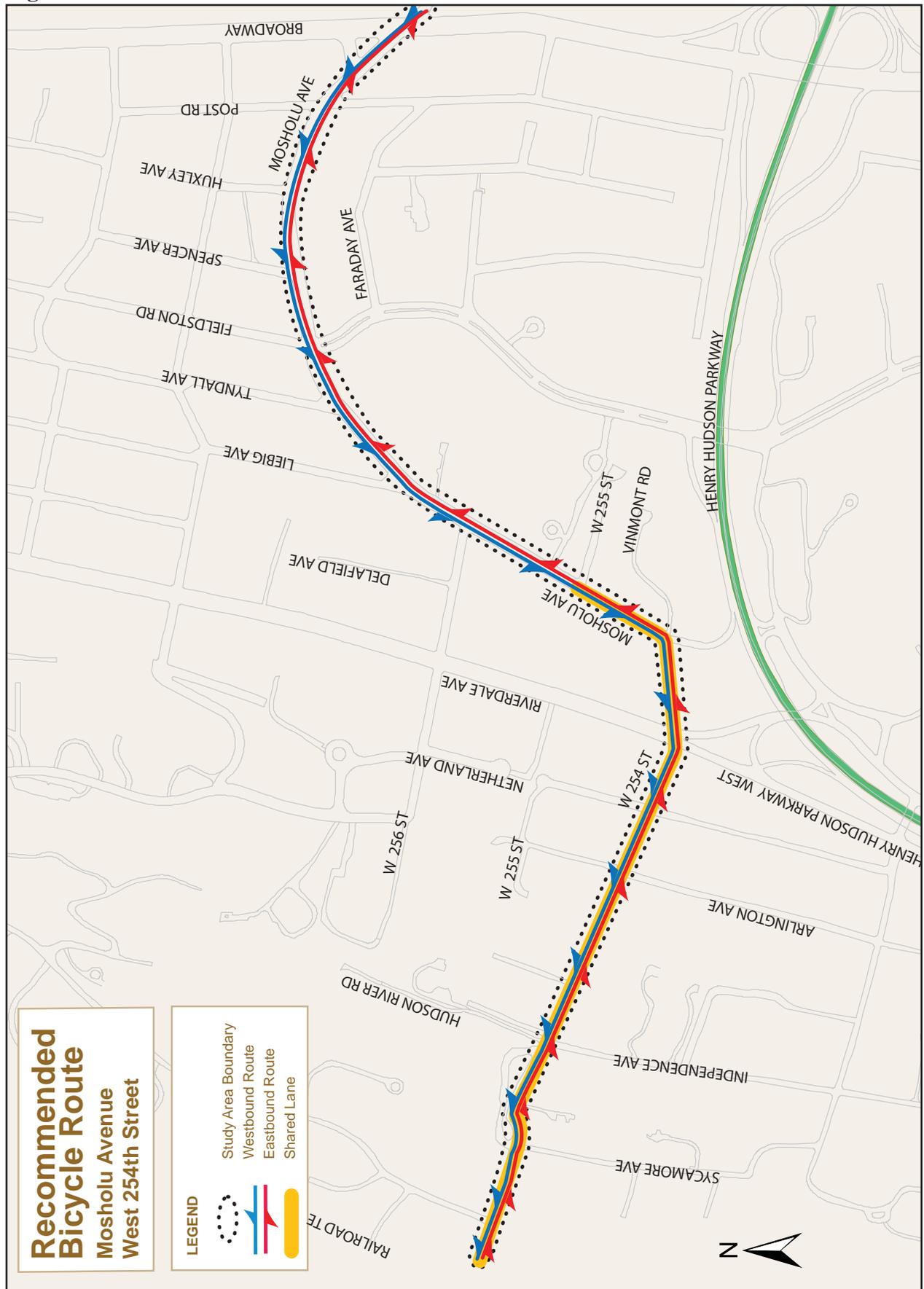
Bicycle Lane Section: Mosholu Avenue, Striped Class II Lane

**Figure 5.19**



Bicycle Lane Section: Mosholu Avenue, Protected Lane

Figure 5.20



**Conclusion**

This study recommends the implementation of portions of the Bicycle Master Plan along east-west corridors in the Bronx. The corridors selected for study build upon the existing bicycle network in the Bronx and establish connections to major destinations such as parks and transit.

A traffic analysis was conducted along each corridor to determine the impact a bicycle lane would have on the Level of Service along the three corridors selected for this study. The proposed design recommendations include the following, where appropriate:

- Five-foot wide striped Class II bicycle lanes
- Protected bicycle lanes between the curb and parking lane
- On-street shared lanes where designated bicycle lanes are not feasible
- Traffic calming measures to improve rider safety at specific intersections

The New York City Department of City Planning is committed to working with the New York City Department of Transportation, the community, and any relevant agencies to implement the recommendations presented in this study. If implemented, the three east-west corridors will enhance connectivity to the existing and proposed Greenway system throughout the borough assisting in the completion of the 1800-mile bike lane master plan as presented in the PlaNYC 2030 initiative.

Finally, The New York City Department of Transportation as the designated agency for implementing bicycle lanes will review and further evaluate the recommendations of this study.