

Figure 30. Section 1: Gerard Avenue existing and recommended cross section (facing south)

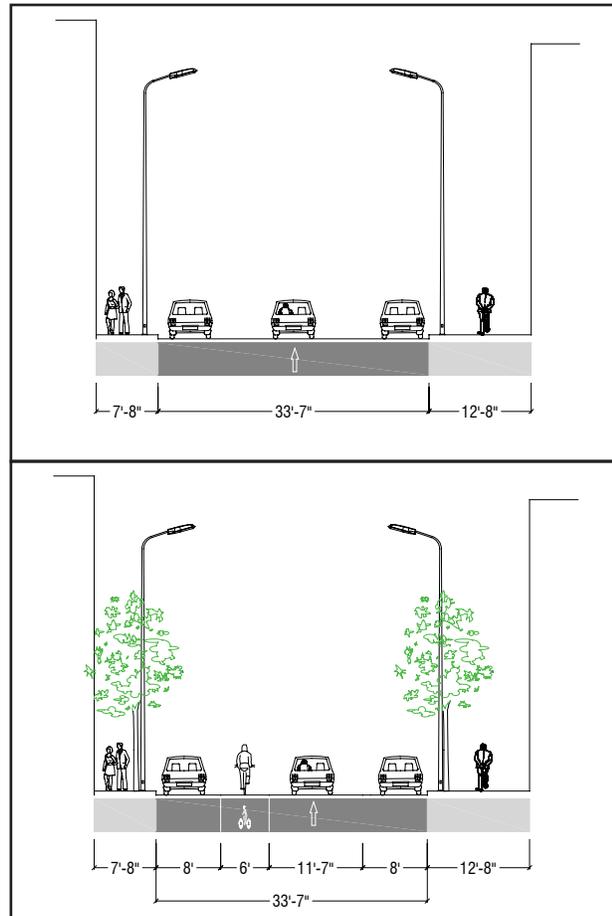


Figure 31. Section 1: Walton Avenue existing and recommended cross section (facing south)

*East 149<sup>th</sup> Street*

The route would continue on East 149<sup>th</sup> Street to connect the Gerard and Walton Avenue bike lanes and the existing 145<sup>th</sup> Street Bridge pedestrian and bicycle paths.

The New York City Department of Design and Construction (DDC) is reconstructing East 149<sup>th</sup> Street from River Avenue to A.J. Griffin Place (east of the Grand Concourse). A roadway median, which is planned to be built along East 149<sup>th</sup> Street to facilitate the safety of crossing pedestrians, would leave no room along the street segment for a Class 1 or Class 2 bicycle lane; instead, DDC recommends a Class 3 signed route. To further enhance the safety of bicyclists along this busy stretch of East 149<sup>th</sup> Street, we recommend the use of NYCDOT’s “shared lane”

bicycle route pavement markings (as outlined above for East 157<sup>th</sup> Street).

Alternate Route

*East 150<sup>th</sup> Street between Exterior Street and the Grand Concourse*

East 150<sup>th</sup> Street is recommended as an alternate westbound upland connection between Exterior Street and the Grand Concourse. Between River Avenue and the Grand Concourse, this street is narrow, with one westbound travel lane and two curbside parking lanes. In addition, sanitation trucks park along East 150<sup>th</sup> Street between River Avenue and Gerard Avenue, and sometimes between Gerard Avenue and Walton Avenue. Therefore, a Class 3 route should be

signed here.

In the future, according to the Gateway Center FEIS, East 150<sup>th</sup> Street between River Avenue and Exterior Street will be closed to through traffic and used for access to an adjacent parking lot. Permission for public bicycle use of this segment of East 150<sup>th</sup> Street would have to be negotiated with the Gateway Center developers.

## Section 2: 145<sup>th</sup> Street Bridge to Madison Avenue Bridge

### Preferred Route

#### *Gerard Avenue and Walton Avenue*

Class 2 bike lanes should be striped along Gerard Avenue and Walton Avenue between East 138<sup>th</sup> Street and East 149<sup>th</sup> Street.

The through traffic lane on Gerard Avenue between East 138<sup>th</sup> and East 140<sup>th</sup> streets narrows to only 30 feet to accommodate an adjacent northbound on-ramp to the Deegan Expressway, but parking is not allowed on either side of the street. The eastern sidewalk varies in width from 10 to 15 feet; there is no sidewalk on the western side.

Gerard Avenue between East 140<sup>th</sup> and East 149<sup>th</sup> streets is similar in geometry and traffic to Section 1. The street is one-way northbound with one vehicular travel lane, two parking lanes, and wide sidewalks, which between East 146<sup>th</sup> Street and East 149<sup>th</sup> Street are in poor condition or only partially paved. Between Gerard Avenue and Exterior Street, the north sidewalk of East 146<sup>th</sup> Street is not paved, and the south sidewalk is only partially paved. These sidewalks should be repaved.

Gerard Avenue between East 138<sup>th</sup> and East 149<sup>th</sup> streets is sufficiently wide to accommodate a six-foot Class 2 bike lane. The lane between East 138<sup>th</sup> and East 140<sup>th</sup> streets would need to be striped on the east side of Gerard Avenue to avoid the approach to the northbound highway on-ramp. A three-foot buffer separating the bike path and sidewalk from automobile traffic should also be striped on these two blocks due to the moderately heavy traffic approaching the Deegan on-ramp (see Figures 33 and 34). Riders would need to cross the street just north of East 140<sup>th</sup> Street to continue from the bike lane on the east side of the street to the west side.

Walton Avenue between East 149<sup>th</sup> and East 138<sup>th</sup> Streets is also very similar to its segment along Section 1. The one-way southbound street has a single moving lane, metered or alternate side of the

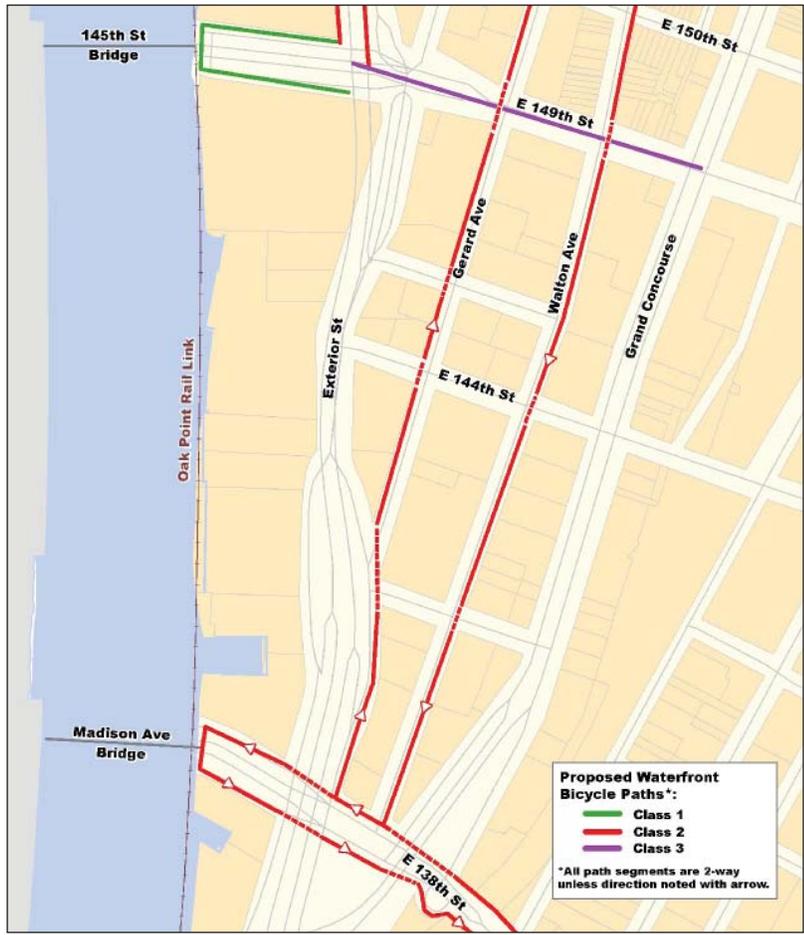


Figure 32. Section 2 map with preferred route

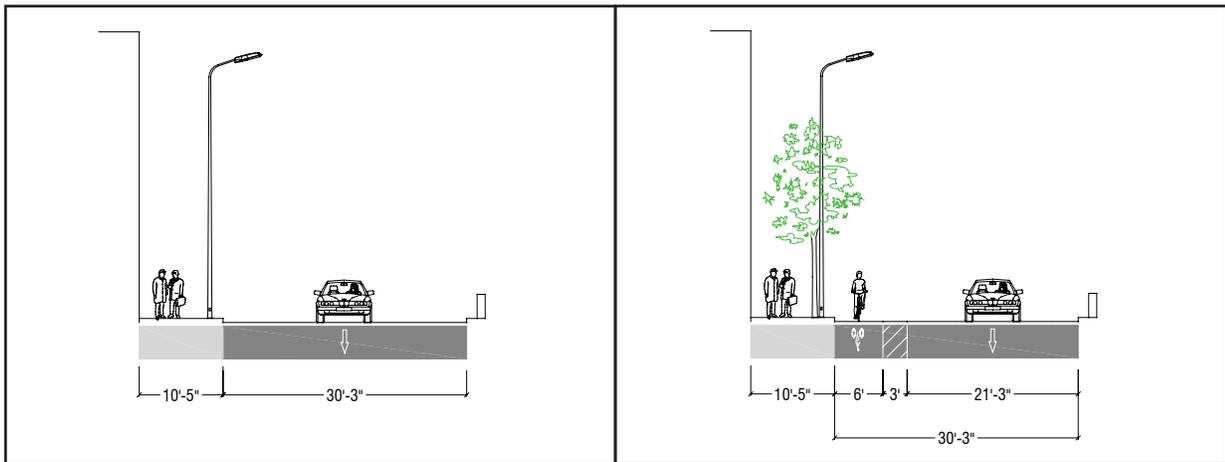


Figure 33. Gerard Avenue between East 140<sup>th</sup> and East 138<sup>th</sup> streets, existing and recommended cross section (facing south)

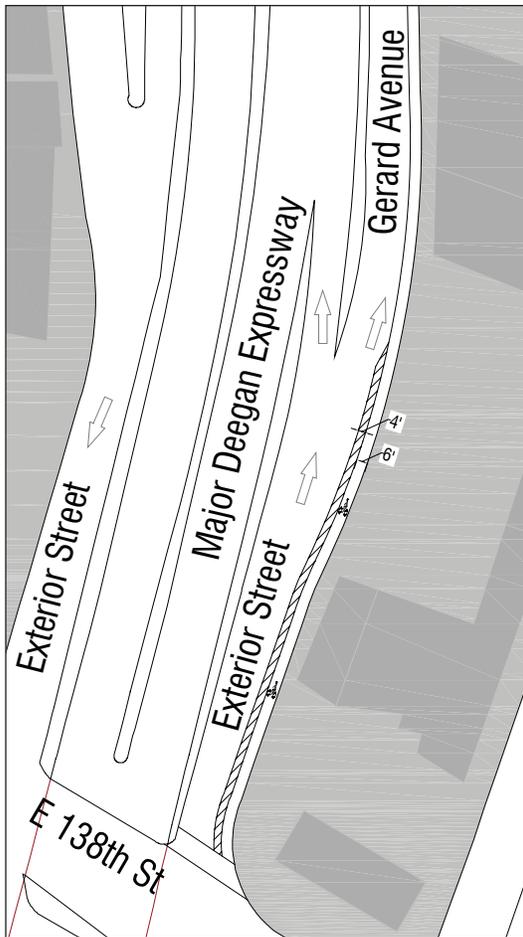


Figure 34. Gerard Avenue between East 140<sup>th</sup> and East 138<sup>th</sup> streets, recommended footprint

street parking along both curbs, and relatively light traffic.

A southbound Class 2 bicycle lane should be striped on the east side of Walton Avenue as far south as East 138<sup>th</sup> Street. One potential problem along this segment is an uphill grade change between East 144<sup>th</sup> Street and East 140<sup>th</sup> Street. While the incline is noticeable, it should not prove to be a major obstacle for most bicyclists.

Both Walton and Gerard Avenues between East 138<sup>th</sup> Street and East 140<sup>th</sup> Street lack street trees, which should be planted to green these streets. This may be accomplished through opportunities presented by a Memorandum of Understanding, signed by the New York City Council in 2004 (to gain permission from New York State to build a water filtration plant

under the Mosholu Golf Course in Van Cortlandt Park), that requires city investment in the Bronx’s parks and in the overall increase and improvement of the borough’s tree life.

According to the New York State Department of Environmental Conservation at <http://www.dec.state.ny.us/website/environmentdec/2004b/bronxparcs930.html>:

“A comprehensive program to ‘green’ [the Bronx] will include the creation of new greenstreets, improvement and expansion of horticultural plantings in parks and playgrounds, and the addition of street trees in under-served neighborhoods. Parks will also upgrade and expand the Bronx Greenhouse and Nursery.

The state also will establish a comprehensive urban forestry program, administered by the New York State Energy Research and Development Authority (NYSERDA) and the Department of Environmental Conservation (DEC). Ten million dollars will be utilized for this program, which will further the greening of the Bronx, improve air quality, reduce ambient air temperatures, and help reduce energy costs and heat ‘island’ effect by planting thousands of trees in parks, playgrounds, streets and other targeted areas of the borough.”

### Alternate Route

#### *Exterior Street*

The use of Exterior Street between East 149<sup>th</sup> and East 138<sup>th</sup> streets as an alternative to the Gerard and Walton Avenues one-way pair of bicycle lanes is not recommended for the short term. Traffic circulation is disorganized and trucks park perpendicularly to the street to load and unload, making pedestrian and bicycle circulation very dangerous. In addition,

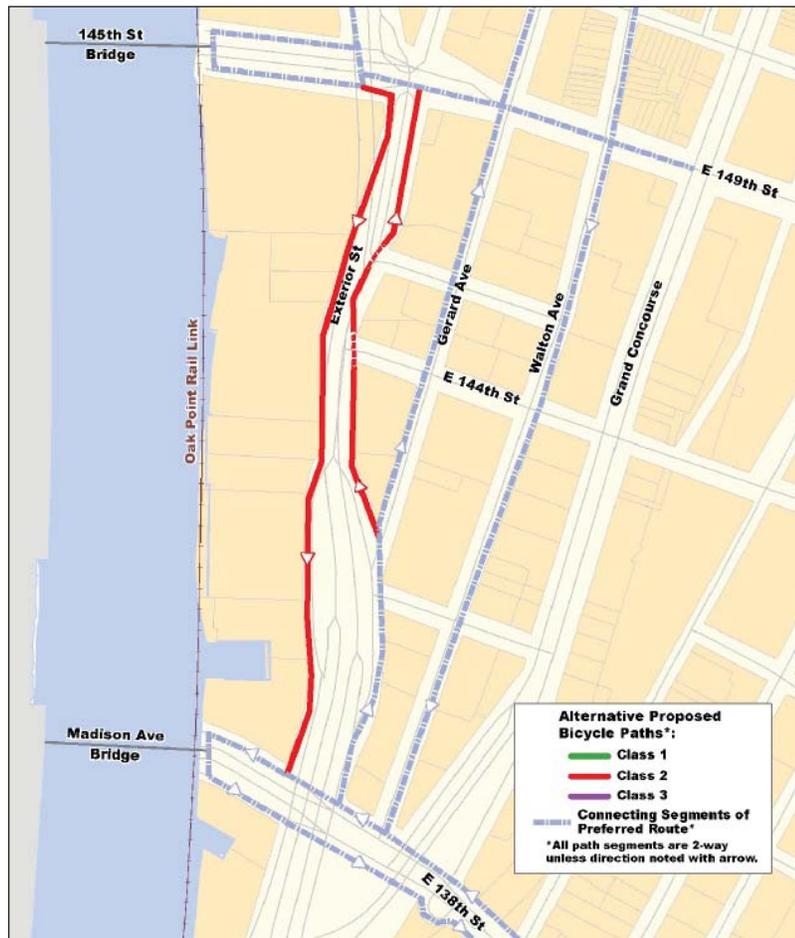


Figure 35. Section 2 map with alternate route

sidewalks along this segment of Exterior Street are missing or need repaving.

According to the *Bronx Harlem River Study* (NYC DCP, Bronx Office, 2005) the vacant and underutilized lots located between the Major Deegan Expressway and the waterfront along Section 2 may be rezoned in the future, which could create new opportunities for waterfront access. At the time of this writing, DCP’s Port Morris North rezoning study, which would include this area, is in its early stages.

Should the area be rezoned and Exterior Street improved in the future, then this segment could be redesigned as the continuation of the preferred long-term route along Exterior Street

as described in Section 1. In the short term, the sidewalks along this segment should be repaved.

#### *East 138<sup>th</sup> Street*

Six-foot wide Class 2 bike lanes with adjacent 3-foot wide buffers should be installed on East 138<sup>th</sup> Street between Exterior Street and the Grand Concourse. The southbound lane on Walton Avenue would connect to the eastbound lane on East 138<sup>th</sup> Street via an existing crosswalk. A crosswalk should be marked at East 138<sup>th</sup> Street and Gerard Avenue to allow westbound cyclists riding on East 138<sup>th</sup> Street to continue north on the Gerard Avenue bike lane.

*Connection to the Madison Avenue Bridge*

The current design of the crosswalk at the foot of the Madison Avenue Bridge leaves bicyclists and pedestrians under-protected from vehicular traffic. Vehicles turning right onto the bridge cut the corner at the entrance to the north-side bicycle and pedestrian path on the bridge, and the path on the south side is clipped by vehicles exiting the bridge and turning south onto East 135<sup>th</sup> Street (see Photo 16, page 22).

Pedestrian and bicycle safety would be enhanced by building a raised median on the east side of the crosswalks at the end of both bridge bike/pedestrian paths to create a holding area for crossing bicyclists and pedestrians, and to channel traffic to prevent vehicles from cutting corners and clipping bike/pedestrian space (see Figure 36). The addition of a leading pedestrian interval (LPI) might also be considered for the traffic signals controlling the southwest bridge crossing to protect pedestrians and bicyclists from turning vehicles. According to the “Pedestrian Safety Guide and Countermeasure Selection System:”

At signalized intersections, right and left turning vehicles present a danger to pedestrians crossing during the WALK interval...One practical solution to this problem is to program the traffic signals to allow the pedestrian to begin crossing before the vehicle traffic on the parallel street is given the green light. This is commonly referred to as a leading pedestrian interval (LPI).

Further analysis would be required to assess the impacts of an LPI on vehicular traffic at this intersection.

*East 138<sup>th</sup> Street street-ends*

The westerly end of East 138<sup>th</sup> Street continues on both sides of the Madison Avenue Bridge, where two dead-end streets are connected under the bridge by a 10-foot wide roadbed (see Photos 17 and 18, page 23). It is unclear whether these narrow street

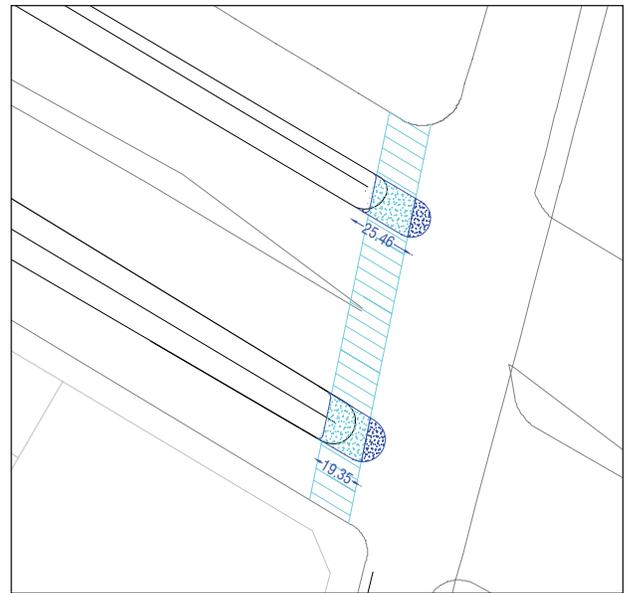


Figure 36. Madison Avenue Bridge median extensions footprint

extensions are one-way or two-way; in either case, they have very light traffic, and are essentially used as parking lots. While parking is permitted on the north side of the northerly street and on the south side of the southerly street, cars also park illegally on the north sidewalk of the southerly street.

The northerly roadbed is insufficiently wide to permit a bicycle lane and still maintain travel and parking lanes. However, the northern sidewalk along this segment is 10 feet wide, and could be redesigned as a shared-use sidewalk, or the street could be signed as a Class 3 route.

The southerly segment of the East 138<sup>th</sup> Street extension is even narrower than the northerly segment. Cars parked illegally on the north sidewalk appear to belong primarily to a used auto dealer, who uses the street as an extension of its waterfront property, which is overflowing with cars. The south sidewalk could be reconfigured as a shared-use sidewalk, or the street designated as a Class 3 route. In either case, preserving the public nature of the street should be encouraged by enforcing parking regulations on the street.

These street end segments could provide a tranquil

way for bicyclists or pedestrians to cross the Madison Avenue Bridge/East 138<sup>th</sup> Street intersection and access an area near the waterfront (whose access is blocked here by the Oak Point Rail Link). However, the development of a street-end open space similar to the one recommended at East 149<sup>th</sup> Street was deemed infeasible: the need for vehicular access to the businesses south of the Madison Avenue Bridge impedes the use of the southern service road as open space, and on-street parking would have to be eliminated in order to reuse the northern service road.

### **Section 3: Madison Avenue Bridge to 3<sup>rd</sup> Avenue Bridge**

Section 3 is characterized by a lack of trees along its sidewalks. A generous planting of trees along the proposed routes below, especially along East 138<sup>th</sup> Street, Park Avenue, Rider Avenue, 3<sup>rd</sup> Avenue and East 135<sup>th</sup> Street, is recommended. Funds from the above-mentioned NYSERDA program to “green” the Bronx could be pursued for this purpose.

#### **Preferred Route**

##### *East 138<sup>th</sup> Street to 3<sup>rd</sup> Avenue*

Six-foot wide Class 2 bike lanes should be installed on East 138<sup>th</sup> Street between Exterior Street and the Grand Concourse to continue the preferred route as described in Section 2. The lanes would connect to a separated bi-directional path along Park Avenue, and then to a new bike/pedestrian bridge over the Major Deegan that would join the northern segment of Park Avenue to its southern street end.

Two-way East 138<sup>th</sup> Street between Exterior Street and the Grand Concourse is very wide, with three travel lanes (only two of them striped) in each direction separated by a striped seven-foot median; parking is allowed only on the south side of the street between Walton Avenue and the Grand Concourse. The Bx33 bus line runs along East 138<sup>th</sup> Street and stops on both sides of the street at East 138<sup>th</sup> Street and the Grand Concourse.

As seen in Figure 39, there is sufficient width to stripe six-foot wide Class 2 bike lanes on both sides of the street. However, the eastbound bus stop on the south side of the street at Grand Concourse should be relocated to the east by approximately 130 feet, where there is an unused, semicircular roadbed set back from the curb line with a wide sidewalk along its south side. Placing the bus stop at this location would allow the bike lane to curve around the bus stop to increase bicyclist safety (see Figure 40) while maintaining the wide sidewalk along the semicircle’s south side. Special signage and striping is recommended along the west-bound bike lane as it passes the bus stop on the north side of the street

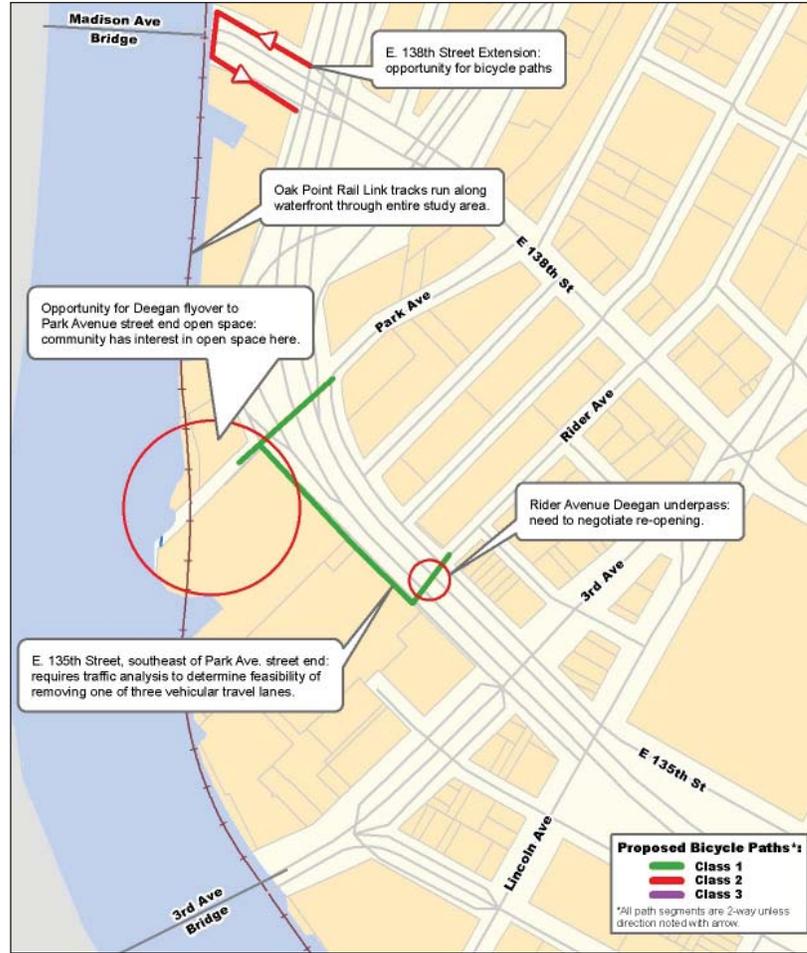


Figure 37. Map of opportunities and constraints along Section 3

at Grand Concourse. A raised median should be constructed at the Grand Concourse crosswalks to create a safe holding area for crossing pedestrians.

East 138<sup>th</sup> Street between the Grand Concourse and 3<sup>rd</sup> Avenue narrows so considerably that there is insufficient roadbed to permit striping bike lanes; this portion of the route would continue as a signed Class 3. Should the street be improved in the future, then sidewalk space could be borrowed to implement opposite side of the street, Class 2 bike lanes along these blocks.

*Park Avenue bi-directional path*

The facilities along East 138<sup>th</sup> Street would connect to a recommended bi-directional Class 1 path on the west side of Park Avenue between East 138<sup>th</sup> Street

and the Major Deegan Expressway, where access is blocked by jersey barriers and unused land. This segment of Park Avenue varies in width, but has one wide northbound travel lane, with parking on both sides of the street. The westerly sidewalk varies in width between 6 and 16 feet, while the easterly sidewalk is 10 feet wide.

The westerly sidewalk should be redesigned as a shared-use path and widened as necessary to create a 16-foot wide Class 1 path, with two five-foot wide bike lanes plus a six-foot wide pedestrian path. The reallocation of up to ten feet of roadbed for a shared-use sidewalk would not impact traffic on Park Avenue, which would retain two eight-foot wide parking lanes and a 13-foot wide vehicular travel lane (see Figure 41).



Figure 38. Section 3 map with preferred route

Alternate Route

*Park Avenue northbound*

A northbound six-foot wide Class 2 bicycle lane should be striped on the west side of Park Avenue, should the shared-use path along Park Avenue and the bike/pedestrian bridge over the Deegan (see below) prove infeasible. The facility would connect to the proposed lane on the south side of the northerly segment of East 135<sup>th</sup> Street (described below) and to the Class 2 lanes recommended on East 138<sup>th</sup> Street.

*New Pedestrian and Bicycle Overpass to Park Avenue street-end*

The Park Avenue bi-directional path would connect to a new bicycle and pedestrian overpass at the end of Park Avenue that would span the Major Deegan Expressway and connect to the Park Avenue street-end (see description below) on the south side of the Deegan. The overpass would be 16 feet wide to accommodate pedestrians and cyclists (see Figure 44). According to the New York State Department of Transportation, the minimum standard vertical clearance for a pedestrian structure over the Major Deegan Expressway is 17 feet, with a desirable clearance of 17 and one-half feet. The ramps to and from the bicycle and pedestrian overpass would comply with the access requirements of the American Disabilities Act (ADA). (Generally, the ADA requires a maximum run of 30 feet for ramps

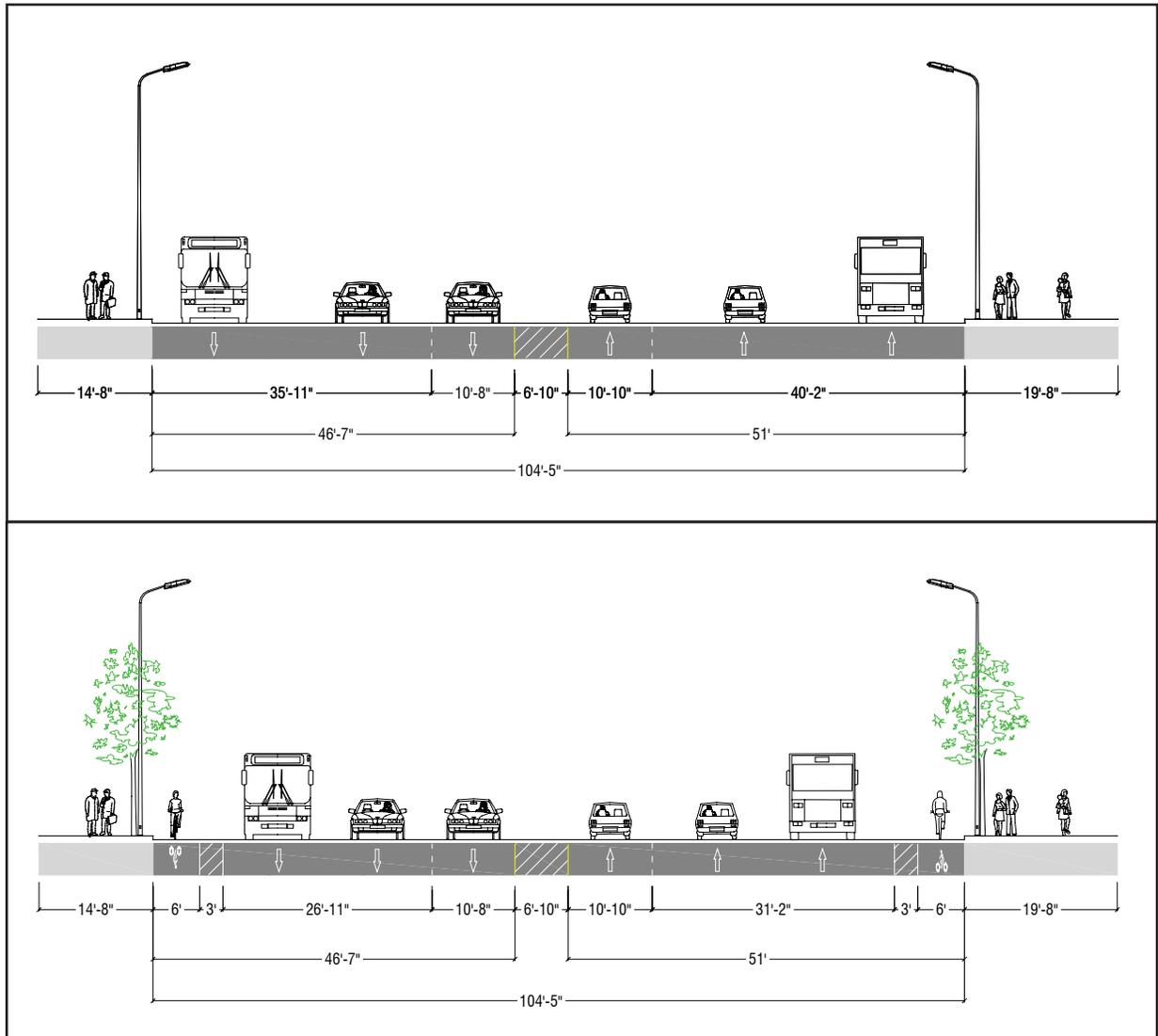


Figure 39. East 138<sup>th</sup> Street between Walton Avenue and Park Avenue, existing and recommended cross section (facing west)

with slopes between 6.25 and 8.33 percent, a five-foot long flat landing at either end of a ramp, and a five-foot wide landing if there is a directional change in the alignment at the landing.)

The preferred design for the overpass (as shown in Figure 43) features a 233-foot long ramp along Park Avenue north of the Deegan Expressway, a deck with two bays with spans of 143 feet and 110 feet, respectively, and a 257-foot long ramp along the Park Avenue street end south of the Major Deegan. The southerly ramp would be initially perpendicular to the bridge deck, span over East 135<sup>th</sup> Street, and then switch back toward Park Avenue. This design is

intended to maximize the distance between the end of the southerly ramp and the railroad crossing. A possible design alternative for the overpass is shown in Figure 45.

*Park Avenue street-end*

The Park Avenue street-end southwest of East 135<sup>th</sup> Street is one of the two places in the study area with direct access to the waterfront, since the Oak Point Rail Link is located on shore at this particular spot (see Photo 28, page 28). The local South Bronx community has long advocated for the development of this street-end as public open space, which would include water-related recreational facilities such as a

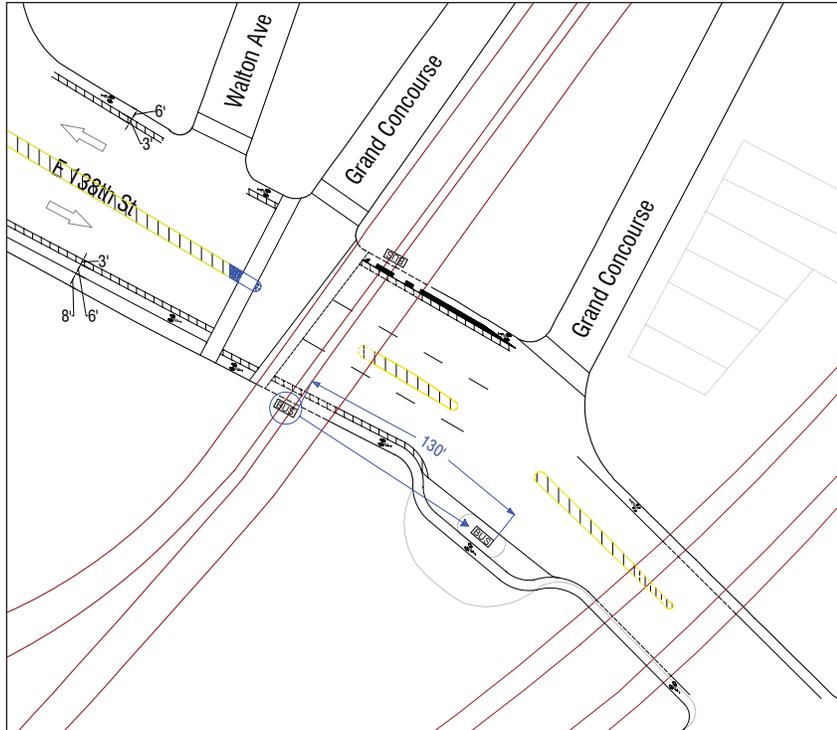


Figure 40. Bus stop relocation at East 138<sup>th</sup> Street

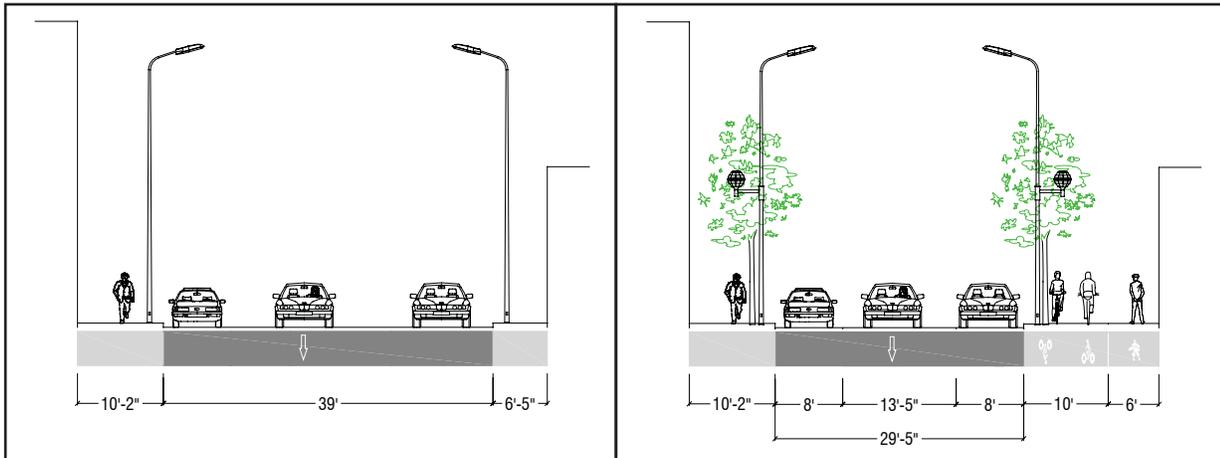


Figure 41. Park Avenue between East 138<sup>th</sup> Street and East 135<sup>th</sup> Street, existing and recommended cross section (facing south)

canoe launch and opportunities for education about Harlem River aquatic life. Recently, a collaborative effort between Friends of Brook Park and New Yorkers for Parks resulted in an initial design for parkland and areas of public access on this spit of land which extends from the end of Park Avenue into the Harlem River (see Figure 46). This design concept would involve the use of a mapped street segment (Park Avenue). However, this street segment is a dead end and is isolated from upland connections by the Deegan Expressway, and is therefore rarely used.

One problem is that local residents accessing the waterfront must cross the at-grade Oak Point Rail Link tracks. However, reportedly only two trains per day cross this site. Crossing the tracks without any type of warning or barrier, even with

limited rail activity, poses a risk for pedestrians and bicyclists. Currently, there is a sign that alerts people approaching the tracks from Park Avenue that the area beyond the street end is a railroad crossing. The TD recommends the installation of a crossing gate to safely warn bicyclists and pedestrians of oncoming trains. According to the *New York City Waterfront Revitalization Program* (1999):

Municipally-owned waterfront sites should be used for water-dependent uses, and/or should be developed to promote public access, where safety and security concerns can be addressed.... Priority shall be given to the development of mapped parklands and appropriate open space where the opportunity exists to meet



Figure 42. Section 3 map with alternate route



Figure 43. Major Deegan Expressway pedestrian and bicycle overpass at Park Avenue, footprint

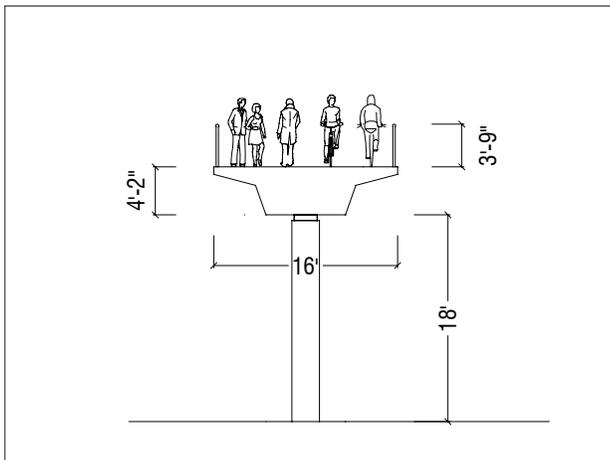


Figure 44. Major Deegan Expressway pedestrian and bicycle overpass at Park Avenue, cross section



Figure 45. Major Deegan Expressway pedestrian and bicycle overpass at Park Avenue, alternative footprint

the recreational needs of...communities without adequate waterfront park space and/or facilities, (and) because safety is an important concern, waterfront areas must be visually and physically connected to centers of activity, with frequent, direct and safe paths to supervised areas or public streets.

New Yorkers for Parks, a parks advocacy group, is seeking discussions with CSX (who operate the trains which run along the Oak Point Rail Link) to install a train-activated security gate or signal here.

*East 135<sup>th</sup> Street (southerly street segment) between East 138<sup>th</sup> Street and Park Avenue*

East 135<sup>th</sup> Street between East 138<sup>th</sup> Street and 3<sup>rd</sup> Avenue is divided into two segments by the elevated Major Deegan Expressway. The northerly street segment is one-way northwest-bound, while the southerly segment is one-way southeast-bound. The establishment of a Deegan bicycle/pedestrian overpass at Park Avenue to connect to the planned street end open space would require long-term planning and implementation. In the short term, the preferred connection to the street end at Park Avenue would be via a Class 1 bi-directional path, separated from traffic by a raised barrier, designated on the sidewalk along the southerly segment of East 135<sup>th</sup> Street between East 138<sup>th</sup> Street and Park Avenue (see Photo 20, page 25). A Class 1 path is preferable due to heavy traffic entering and exiting the Deegan (see Existing Conditions). The roadbed of East 135<sup>th</sup> Street could be narrowed by up to six feet and the space reallocated to the existing sidewalk for use as a 16-foot wide multi-use path. The installation of the path would not impact traffic, since the street would retain two 12-foot travel lanes and on-street parking is not permitted.

Alternate Route

*Rider Avenue Underpass to the Park Avenue Street-End*

Alternate means of access to the proposed



Figure 46. Park Avenue street-end design by New Yorkers for Parks

Park Avenue street-end open space would be required should a bicycle and pedestrian bridge over the Major Deegan prove infeasible. An existing tunnel under the Major Deegan at Rider Avenue could provide an alternate connection to the waterfront. As mentioned in the Existing Conditions chapter, the Rider Avenue underpass is currently fenced off to pedestrian and bicycle traffic, and its re-opening would have to be negotiated with the New York State Department of Transportation (see Photo 21, page 25).

The proposal to reuse this underpass would also require the installation of a crosswalk and a bicyclist/pedestrian-activated traffic signal at the intersections of Rider Avenue and both segments of East 135<sup>th</sup> Street, and the removal of a travel lane from the southerly section of East 135<sup>th</sup> Street in order to create a two-way multi-use path providing access to the Park Avenue street-end. This recommendation would allow the third travel lane on East 135<sup>th</sup> Street to remain southeast of the Rider Avenue underpass.

While a traffic analysis would be required to assess the impacts of removing a travel lane, the proposed action appears to be feasible. East 135<sup>th</sup> Street between the Park Avenue street-end and 3<sup>rd</sup> Avenue has three 10/11-foot travel lanes and no on-street parking. Cars on East 135<sup>th</sup> Street begin to queue in the curb lane to turn right onto 3<sup>rd</sup> Avenue or the bridge only after they are southeast of the Rider Avenue underpass. Traffic between the Deegan on-ramp at Park Avenue and the 3<sup>rd</sup> Avenue intersection is relatively light, and northwest of Rider Avenue traffic rarely backs up due to congestion. The route would continue on East 135<sup>th</sup> Street, which has wider sidewalks northwest of Park Avenue, to East 138<sup>th</sup> Street (this segment is described below).

#### *Rider Avenue*

To accommodate southbound riders, the recommended route on East 138<sup>th</sup> Street would

connect to Rider Avenue. However, the narrow two-way street is not of adequate width to stripe a bike lane. In addition, United Parcel Service (UPS) delivery trucks frequently cross the Rider Avenue sidewalk to enter the back of a UPS building at the corner of Rider and East 135<sup>th</sup> Street. A Class 3 route should be signed along Rider Avenue between East 138<sup>th</sup> and East 135<sup>th</sup> Streets, and “shared lane” pavement markings should be striped to enhance the visibility of the bicycle route. Should the street be improved in the future, then sidewalk space could be borrowed to implement opposite side of the street, Class 2 bike lanes along Rider Avenue.

#### *East 136<sup>th</sup> Street*

Rider Avenue ends at East 135<sup>th</sup> Street, cut off by the Deegan Expressway. To connect to 3<sup>rd</sup> Avenue, riders would continue east on a new bicycle lane striped on the south side of East 136<sup>th</sup> Street, which would connect to a bi-directional shared-use path along the west side of 3<sup>rd</sup> Avenue. Marking a five-foot wide eastbound Class 2 lane would not have an adverse impact on traffic or parking, since the street would be left with two seven-foot parking lanes and an 11-foot travel lane. The partially-paved southern sidewalk along this segment of East 136<sup>th</sup> Street should be repaved.

#### *East 135<sup>th</sup> Street (northerly street segment)*

The northerly segment of East 135<sup>th</sup> Street has a lane of vehicular traffic and parking along the north side. There is no sidewalk on the south side of the street, which abuts a wall supporting the Deegan Expressway (see Photo 26, page 27). A one-way Class 2 bicycle lane should be striped along the northerly segment of East 135<sup>th</sup> Street between 3<sup>rd</sup> and Park avenues. The lane should be marked on the south side of the street to facilitate its connection to the recommended shared-use path along Park Avenue described above. The street would be divided into an eight-foot parking lane, a new six-foot wide bicycle lane with a three-foot buffer, and a 13-foot travel lane (see Figure 47). In addition, the northern sidewalk on East 135<sup>th</sup> Street between Canal Place and Canal Street West should be paved.

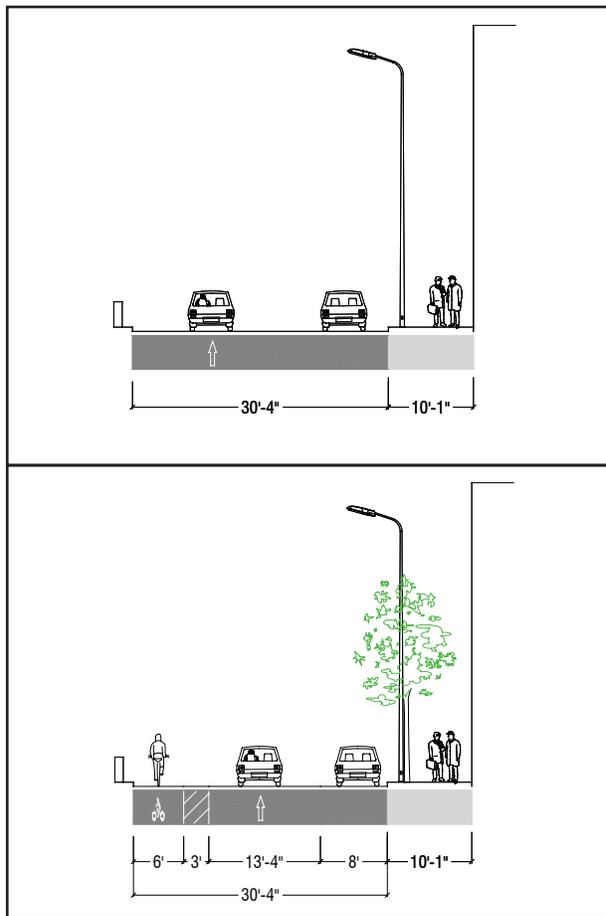


Figure 47. Section 3: East 135<sup>th</sup> Street northerly street segment, existing and recommended cross section (facing west)

### 3<sup>rd</sup> Avenue

The route on East 135<sup>th</sup> and East 136<sup>th</sup> streets would connect to a bi-directional shared-use path along the west side of 3<sup>rd</sup> Avenue, which is one-way southbound and heavily trafficked. 3<sup>rd</sup> Avenue between East 136<sup>th</sup> Street and the northerly segment of East 135<sup>th</sup> Street is very wide, with five vehicular travel lanes (including one right-turn lane), alternate side of the street parking, and wide sidewalks on both sides of the street.

A 12-foot wide bi-directional shared-use path should be established along the west side of 3<sup>rd</sup> Avenue. The path would be protected from moving vehicles by a raised barrier in order to physically separate contra-flow bicyclists from automobile traffic. Vehicular

traffic would not be impacted, since the street would retain five 12-foot wide moving lanes and parking lanes along each curb (see Figure 48).

The intersection of 3<sup>rd</sup> Avenue and the northerly segment of East 135<sup>th</sup> Street has no signals for its crosswalk, despite its busy traffic. The intersection should be improved by installing missing pedestrian crossing signals.

3<sup>rd</sup> Avenue between the northerly and southerly street segments of East 135<sup>th</sup> Street is divided by columns supporting the elevated Deegan Expressway. The outer lanes act as lightly-traveled service roads. The westerly lane channels traffic to the 3<sup>rd</sup> Avenue extension on the west side of the bridge. The heavily-traveled center lanes carry traffic to and over the bridge.

The 3<sup>rd</sup> Avenue bi-directional Class 1 path should continue along the westerly 3<sup>rd</sup> Avenue service road to direct bicyclists and pedestrians to and from the 3<sup>rd</sup> Avenue Bridge multi-use paths and to the recommended paths along the 3<sup>rd</sup> Avenue street extensions (see description below). The westerly service road is sufficiently wide, with a single travel lane, to permit the reallocation of 10 feet of the street for use as a bi-directional bicycle path adjacent to the sidewalk. This configuration would leave an 11-foot vehicular travel lane, which is adequate to accommodate the light traffic volumes on the street.

For the blocks between East 136<sup>th</sup> and East 138<sup>th</sup> streets, 3<sup>rd</sup> Avenue is insufficiently wide to permit the installation of bicycle lanes. The street is less than 60 feet wide, with four southbound lanes of vehicular traffic, and two of the moving lanes are frequently partially blocked by parked buses. Both sides of 3<sup>rd</sup> Avenue are designated as “bus layover areas” for New York City Transit (NYCT) buses. Use of the sidewalk as a multi-use path is not feasible given an abutting Shell Gas Station. A Class 3 route, with “shared lane” markings (see Section 1 description for E. 157<sup>th</sup> Street) should be signed for this block.

Four bicycle and pedestrian accidents were reported at 3<sup>rd</sup> Avenue and East 138<sup>th</sup> Street between 2001

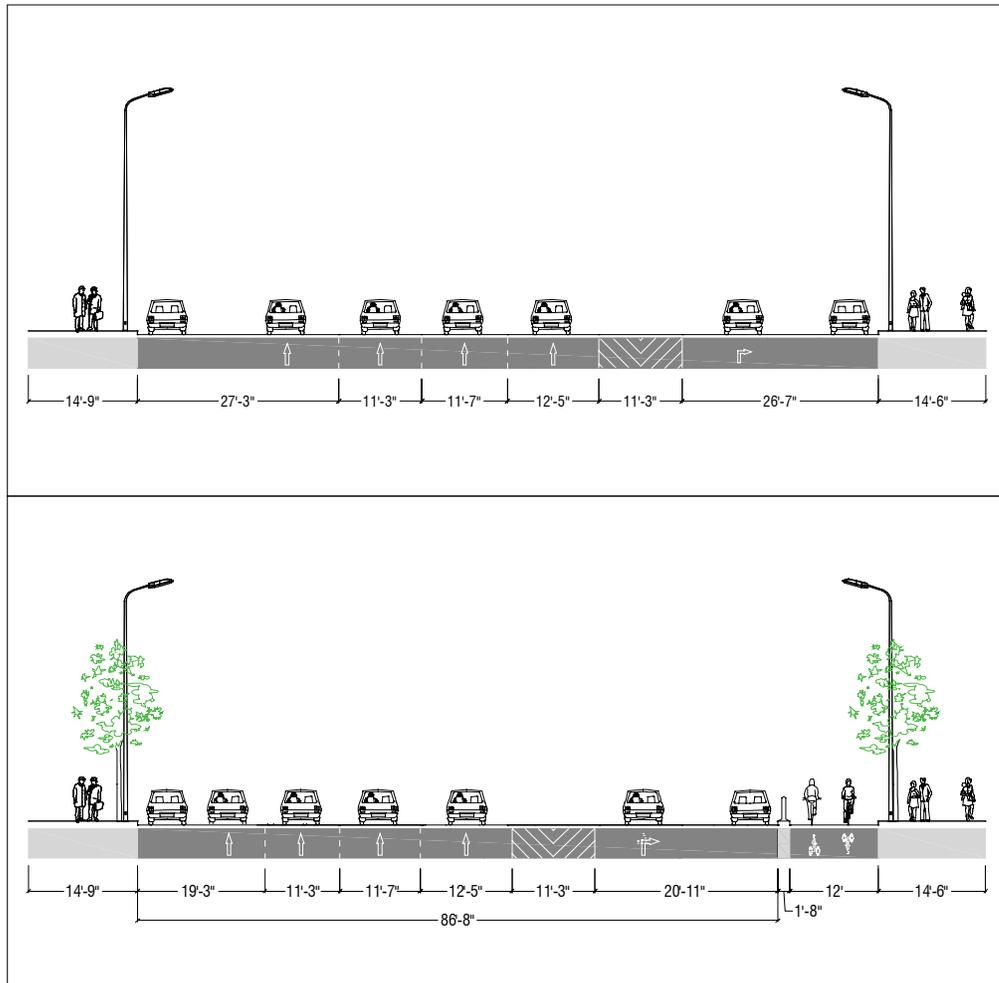


Figure 48. 3<sup>rd</sup> Avenue between East 136<sup>th</sup> Street and East 135<sup>th</sup> Street, existing and recommended cross section (facing south)

and 2003 (see Existing Conditions accident map). Additional bicycle and pedestrian safety improvements for this intersection should be studied.

### Additional Connections

#### *Morris Avenue*

Two-way Morris Avenue provides an upland connection for cyclists and pedestrians. The street has relatively moderate traffic and direct access to busy arterials and cultural and retail destinations to the north of the study area.

Class 3 signs should be installed on Morris Avenue between East 138<sup>th</sup> Street and East 142<sup>nd</sup> Street. The street has two travel lanes and a parking lane

in each direction, and is not wide enough to permit the marking of bicycle lanes (see Photo 29, page 28). Should Morris Avenue be reconstructed in the future, the reallocation of sidewalk space (the westerly sidewalk is almost 25 feet wide, the easterly sidewalk is 15 feet wide) for use as on-street bicycle lanes should be considered.

Between East 142<sup>nd</sup> Street and East 149<sup>th</sup> Street, Morris Avenue narrows to less than 50 feet. The street is still two-way, but has only one vehicular travel lane (and a parking lane) in each direction. The street could be striped with a six-foot bicycle lane in each direction without impacting traffic, since an 11-foot travel lane and an eight-foot parking lanes in each direction would be retained.