An aerial photograph of a coastal city, likely Seattle, showing a dense urban grid and a waterfront area. A dark blue horizontal band is overlaid across the middle of the image, containing white text. The text reads "VOLUME 2, SECTION 3: EVALUATION OF TRAIL ALTERNATIVES".

**VOLUME 2, SECTION 3:  
EVALUATION OF TRAIL ALTERNATIVES**

## 3.0 Evaluation of Trail Route Alternatives

In Section 3, Evaluation of Trail Route Alternatives, two overall potential Trail Alignments (Trail Alignment 1 and Trail Alignment 2) are presented. These Trail Alignments are comprised of a series of segments developed using the four trail types discussed and shown in Section 2, Proposed Trail Types (i.e., Type 1 - On Piers, Type 2 - Built-up Rip Rap, Type 3 - Retaining Wall, Type 4 - At Grade). The selection of the Trail Alignments is based on the project area limitations and conditions identified along the approximately 3-mile project area from Spuyten Duyvil Station to Ludlow Station.

The proposed routes for Trail Alignment 1 and Trail Alignment 2 are depicted in Maps 1.1-1.3 and Maps 2.1-2.3. There are route segments within each alignment developed to address route options for the unique challenges and limitations found in the project area. The ultimate end user/responsible party who would develop, own and operate the walkway would have the option of selecting trail segments, under either trail alignment alternative, which best meet their project goals.

Each Trail Alignment is described in detail below and corresponds to the Maps at the end of this Section. Order of magnitude construction cost estimates are provided for each Trail Alignment and its route alternatives.

### 3.1 Trail Alternatives

#### Trail Alignment 1

Under Trail Alignment 1, the entirety of the proposed trail would be constructed using the Multi-Use Trail Option Type 1 – On Piers (Type 1) elevated walkway (See Figure 2.3 for an example of the Type 1 walkway). This alignment alternative is the more expensive alignment of the two trail alignments considered in this report, as it is on piers for much of its entire length and a good portion of the walkway is built in the water. However, despite its higher cost, there are many advantages to Trail Alignment 1 that make it a feasible option for the project area. Maps 1.1-1.3 show Trail Alignment 1.

One of the primary challenges faced in determining a feasible route for a multi-use trail in the project area is the limited space available along the shoreline, due to the location of the railroad tracks and its critical ancillary infrastructure and equipment near the bank of the Hudson River. Further, in order to ensure access for maintenance, public safety, and security there would need to be a minimum setback distance from the railroad infrastructure for any trail constructed in the project area (see Section 1.5 Design Standards).

Given the limited space available in the project area, the advantage of Trail Alignment 1 is that the elevated trail would be located in the water and be independent of the shoreline. As a result, the design of this alignment would not have to maintain a minimum setback distance or address changes in the shoreline landscape. Moreover, Trail Alignment 1 would be installed at an elevation above expected levels of sea-level-rise and storm surge predictions, improving the resiliency characteristics of the walkway and protecting the adjacent railroad from potential damage.

There is one location in the project area where an elevated walkway in the water is not considered feasible – the shoreline area west of the Riverdale Yacht Club. The Riverdale Yacht Club would likely object to the placement of a walkway in this area as it would impede its water access, a core purpose of the yacht club.

Further complicating the design of a trail in this location is the insufficient space available to construct

a walkway in the area east of the Riverdale Yacht Club and west of the railroad tracks. The setback distance from the railroad tracks required by Metro-North's design standards (see Section 1.5 Design Standards) preclude developing a trail in the limited area available east of the Riverdale Yacht Club. To construct a walkway in this location, the trail would have to be partially or fully located within the eastern edge of the Riverdale Yacht Club property. This would require an easement or other access agreement with the yacht club to use their property for this section of the trail.

A potential option to address the constraint posed by the Riverdale Yacht Club would be to locate the trail east of the railroad tracks, on the western boundary of Riverdale Park. The proposed trail could cross the tracks by repurposing an existing bridge abutment (See Map 1.1) and continue north along the western edge of the park, approximately 3,500 feet to Riverdale Station. The trail portion along the western side of Riverdale Park would use the Multi-Use Trail Option Type 4 – At-Grade (Type 4) walkway (See Figure 2.6 in Section 2 for an example of the Type 4 walkway).

To demonstrate the various options for Trail Alignment 1, the project area has been divided into several segments. The first segment of Trail Alignment 1 is shown on Map 1.1 as Segment 1A, connecting the proposed trail access point at Spuyten Duyvil Station to an area approximately around West 246th Street. At this point, Trail Alignment 1 has the option to cross east, over the railroad tracks, to avoid the Riverdale Yacht Club, shown as Segment 1B on Maps 1.1 & 1.2. Segment 1C shows the route Trail Alignment 1 would take if it were to use portions of the east side of the Riverdale Yacht Club's property, see Maps 1.1 & 1.2.

North of the yacht club constraint, the next segment of Trail Alignment 1 is Segment 1D, extending from approximately West 254th Street to West 261st Street (as shown in Map 1.2). The trail could terminate at West 261st Street, taking advantage of the overpass present at this location, and avoid the pinch point created by the Westchester County Waste Water Treatment Plant in the project area (as shown on Maps 1.2 & 1.3). If the trail were to continue north to Ludlow Station, the final segment would be Segment 1E, routed around the western edge of the treatment plant, and returning users to the local street network via Fernbrook and Ludlow Streets, in the Ludlow section of Yonkers (See Maps 1.2 & 1.3).

#### Trail Alignment 2

For Trail Alignment 2, the trail would be primarily constructed by a combination of Multi-Use Trail Options Type 2 - Built-Up Rip-Rap (Type 2) and Type 3 - Wall (Type 3) walkway. In the areas where Type 2 and Type 3 walkways would not be feasible, the Type 1 walkway would be used. Relative to Trail Alignment 1, this alignment alternative would be the lesser expensive of the trail options considered in this study. See Figures 2.4 & 2.5 in Section 2 for an example of the Type 2 and Type 3 walkways.

The Type 2 walkway is proposed for Trail Alignment 2 where sufficient land area is available. The advantage of the Type 2 walkway is it is the least expensive and has the longest lifespan of all walkway types considered for the project area. The disadvantage of the Type 2 walkway is it requires the most land area for the installation of the enhanced rip-rap slope.

Where space available is limited to fit the trail on the shoreline, the Type 3 walkway is proposed. This walkway section is also less expensive compared to the Type 1 walkway, but more expensive than the Type 2 walkway. Unlike the Type 2 walkway, the Type 3 walkway can be built vertically from the edge of the water, necessitating less space (compared to Type 2).

Trail Alignment 2 cannot be constructed solely by a combination of the Type 2 and Type 3 walkways. There are areas where the Type 1 walkway must be used, due to insufficient space available and to transition to access points for the trail that cross over the tracks. The Spuyten Duyvil station access point is a good example of this transition area (See Maps 1.1 & 2.1). The trail must cross two sets of tracks to get to the shoreline. This can only be accomplished by constructing bridges over both the Metro-North

and Amtrak tracks in this area. The height of the bridges would not allow another type of trail to be constructed except Type 1.

To demonstrate the various options for Trail Alignment 2, the project area has been divided into segments. The first segment of Trail Alignment 2 is shown on Map 2.1 as Segment 2A and connects the proposed trail access point at Spuyten Duyvil to a point just south of West 231st Street. As Trail Alignment 2 is constructed primarily using the Type 2 and Type 3 walkway options on the landside of the shoreline, the alignment is complicated by the existing overhead power feeders that run approximately from Metro-North's traction power Substation A-12 to the area just south of the Riverdale Yacht Club. One option, shown as Segment 2B on Map 2.1, would be to stay west of the overhead power feeders by using a combination of Type 1 and Type 3 walkways. Another option to address the constriction created by the overhead power utilities in this area, is to relocate the utilities underground, creating additional space for the construction of the walkway. In this option, shown as Segment 2B<sub>i</sub> on Map 2.1, the reliance on the more expensive Type 1 walkway to get around the overhead power feeders would be reduced, and a significant portion of the trail could be constructed using the Type 2 walkway.

Trail Alignment 2 shares the same constriction issue at the Riverdale Yacht Club location, as discussed above for Trail Alignment 1. Thus, similar to Trail Alignment 1, a potential option for Trail Alignment 2 is to cross the railroad tracks and follow the western edge of Riverdale Park to avoid the constraint posed by the Riverdale Yacht Club. This is shown as Segment 2C on Maps 2.1 & 2.2, the less feasible option of using a portion of the yacht club's property under Trail Alignment 2 is shown on Maps 2.1 & 2.2 as Segment 2D.

The combination of trail types used in Segment 2D is dependent on if the trail route can take advantage of the option to bury the power feeder cable. If the overhead power feeders remain, the trail would follow Segment 2D<sub>i</sub>, if the power cable were buried, the trail would follow Segment 2D<sub>ii</sub>. (See Maps 2.1 & 2.2). The trail portion along the western side of Riverdale Park would use the Multi-Use Trail Option Type 4 – At-Grade (Type 4) walkway (See Figure 2.6 for an example of the Type 4 walkway).

After the yacht club constraint, the next segment of Trail Alignment 2 is Segment 2E, extending from approximately West 254th Street to West 261st Street (as shown in Maps 2.2 & 2.3). The trail could terminate at West 261st Street, taking advantage of the overpass present at this location, avoiding the pinch point created by the Westchester County Waste Water Treatment Plant in the project area (as shown on Map 2.3). If the trail were to continue north to Ludlow, the final portion would be Segment 2F, routed around the western edge of the treatment plant, and returning users to the local street network via Fernbrook and Ludlow Streets, in the Ludlow section of Yonkers (See Map 2.3).



## 3.2 Estimated Probable Costs of Construction for Alternatives

Based on the Opportunities and Challenges Assessment of the project area, four trail types were developed for the walkway from Spuyten Duyvil to Ludlow. These four trail types are discussed in detail in Section 2, "Proposed Trail Types" and are shown in Figures 2.3-2.6 and the estimates of each of the four walkway types are presented in Figure 2.7 of Section 2. These estimates for the four walkway types were used to estimate the construction cost of Trail Alignment 1 and Trail Alignment 2 and the various segment options, as described in more detail below and shown in Figures 3.1-3.3.

The construction cost estimates shown in Figures 3.1-3.3 include the construction cost for the access points and bridges that would be required for the trail. However, it is important to note that the construction costs presented below and in Figures 3.1-3.3 do not include "soft costs." Examples of "soft costs" include (but not limited to) the costs associated with design, property acquisition, permitting, railroad support, and project/contract management. Typically, "soft costs" can represent an additional 25-30 percent to the construction cost for a project of this magnitude, depending on the complexity of the project. Furthermore, this study presents order of magnitude construction cost estimates that are based on study concepts only and not any level of engineering design.

### Estimated Construction Costs of Trail Alignment 1

As discussed in Section 3.1, "Trail Alternatives," Trail Alignment 1 has several options and for this reason is divided into five segments (Segments 1A, 1B, 1C, 1D, 1E). Each segment has a corresponding construction cost estimate. This segmented approach allows the ultimate end user/responsible party of the trail to determine the route, by segment, that fit best their goals and objectives for a potential walkway in the project area. The selected route can then be estimated by adding up the estimated construction cost for each segment of Trail Alignment 1.

For example, if Trail Alignment 1 is routed from the Spuyten Duyvil Station to West 246th Street (Segment 1A), avoids the constriction point in the project area created by the Riverdale Yacht Club by crossing the railroad tracks to use a portion of Riverdale Park (Segment 1B) and proceeds to West 261st Street (Segment 1D), the construction cost of Trail Alignment 1 would be approximately \$68M (absent soft costs). If Trail Alignment 1 were to stay west of the tracks and use a portion of the property of the Riverdale Yacht Club (Segment 1C) instead of crossing the tracks (i.e., not following Segment 1B), the construction cost of Trail Alignment 1 would increase to approximately \$79M. Under either of these two options for Trail Alignment 1, continuing past West 261st Street to Ludlow Street in Yonkers (Segment 1E) would add approximately \$17M to the construction cost of the project.

The varying construction cost of the options for the segments of Trail Alignment 1 are shown Figure 3.1. The "soft costs" mentioned previously would add approximately 25-30 percent to the construction costs shown in Figure 3.1.

### Estimated Construction Costs of Trail Alignment 2

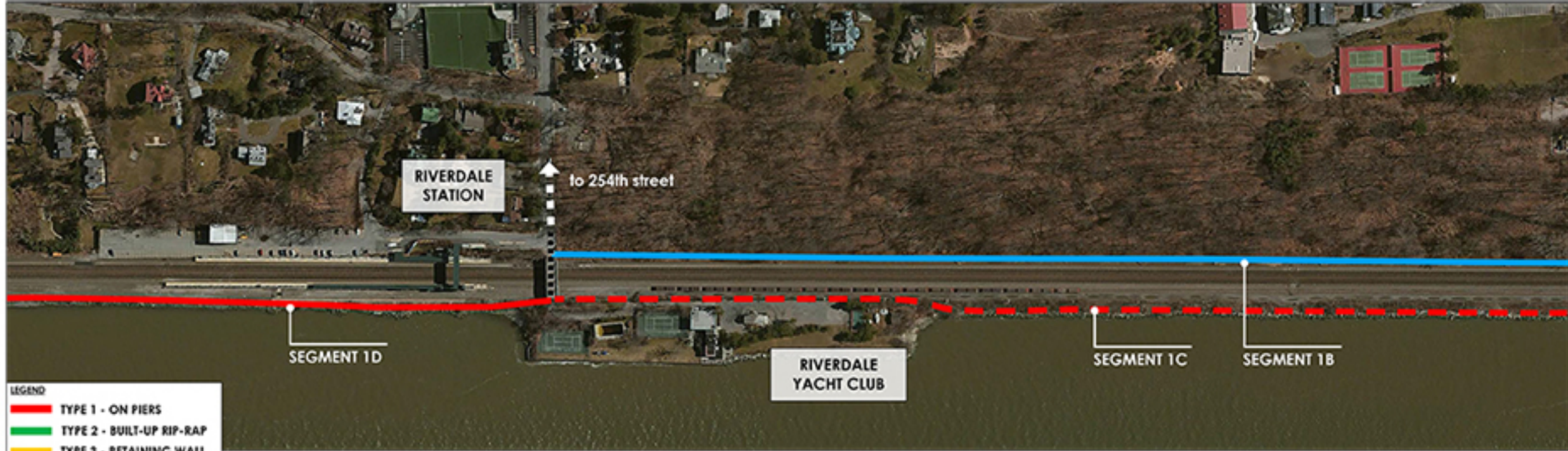
As discussed in Section 3.1, "Trail Alternatives," Trail Alignment 2 has several options and is divided into several segments (Segments 2A, 2B, 2B<sub>1</sub>, 2C, 2D, 2D<sub>1</sub>, 2E, 2F). Each segment has a corresponding construction cost estimate. This segmented approach allows the ultimate end user/responsible party of the trail to determine the route, by segment, that fit best their goals and objectives for a potential walkway in the project area. The selected route can then be estimated by adding up the estimated construction cost for each segment of Trail Alignment 2.

For example, if the trail would span from the Spuyten Duyvil Station to just south of West 231st Street

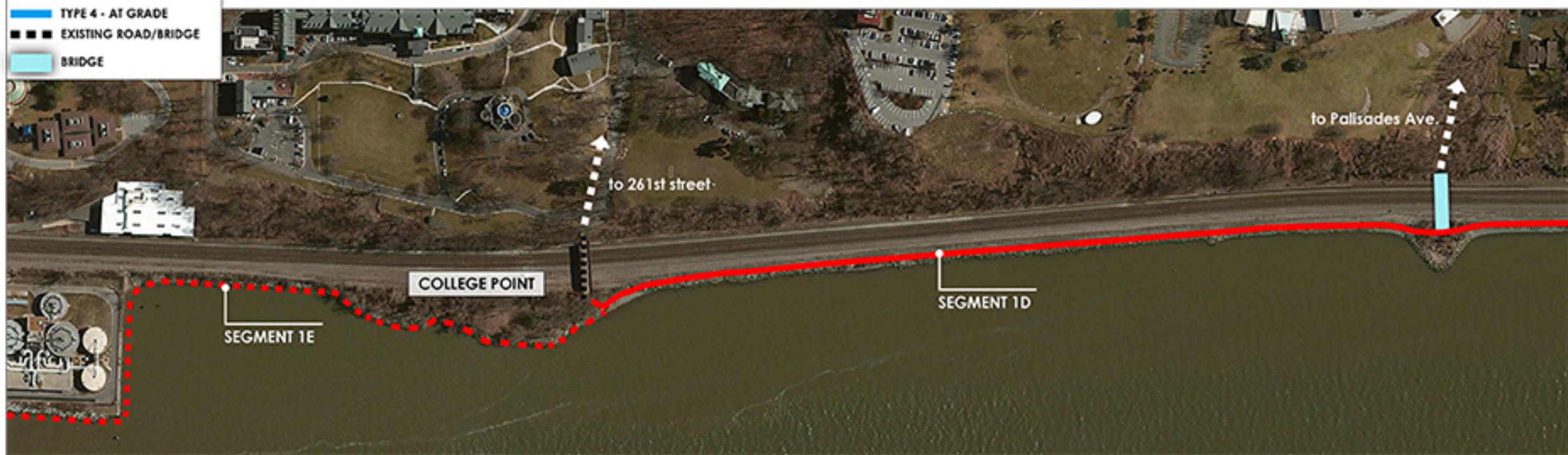
(Segment 2A), run west of the overhead power feeders (Segment 2B), avoid the constriction point in the project area created by the Riverdale Yacht Club by crossing the railroad tracks to use a portion of Riverdale Park (Segment 2C) and proceed to West 261st Street (Segment 2E), the construction cost of Trail Alignment would be approximately \$60M (absent soft costs). Continuing past West 261st Street to Ludlow Street in Yonkers (Segment 2F) would add approximately \$14M to the construction cost of the project.

The varying construction cost of the options for the segments Trail Alignment 2 are shown in Figures 3.2-3.3. The tables show the construction cost difference by segment for the option to stay west of the overhead power feeders or bury the power cable. The "soft costs" mentioned previously would add approximately 25-30 percent to the construction costs shown in Figures 3.2-3.3.





- LEGEND
- TYPE 1 - ON PIERS
  - TYPE 2 - BUILT-UP RIP-RAP
  - TYPE 3 - RETAINING WALL
  - TYPE 4 - AT GRADE
  - EXISTING ROAD/BRIDGE
  - BRIDGE



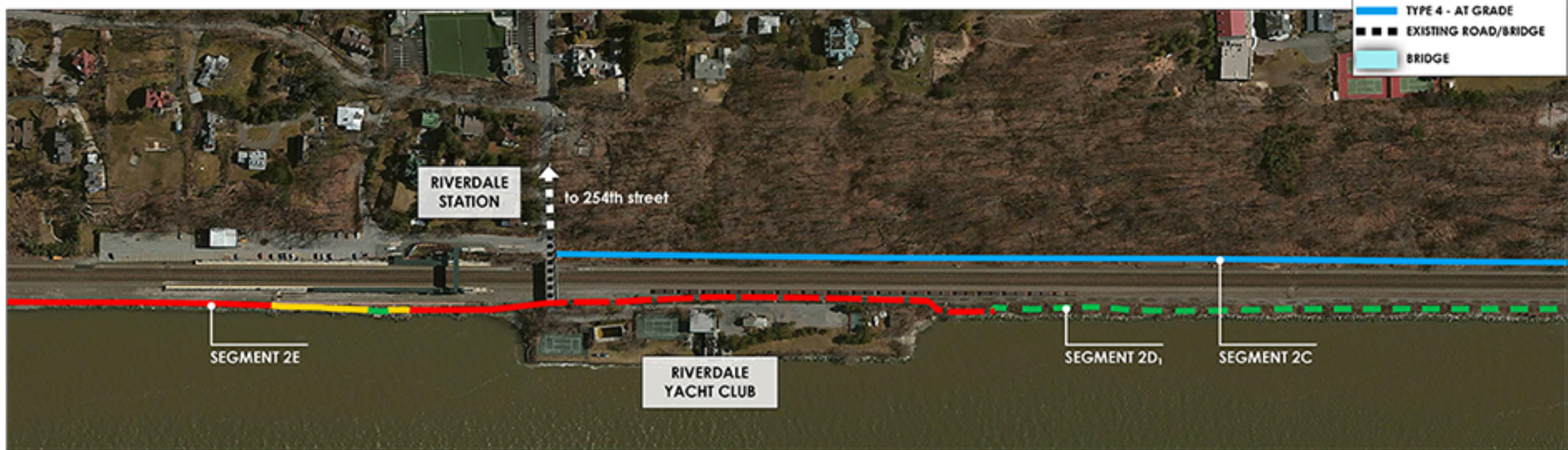
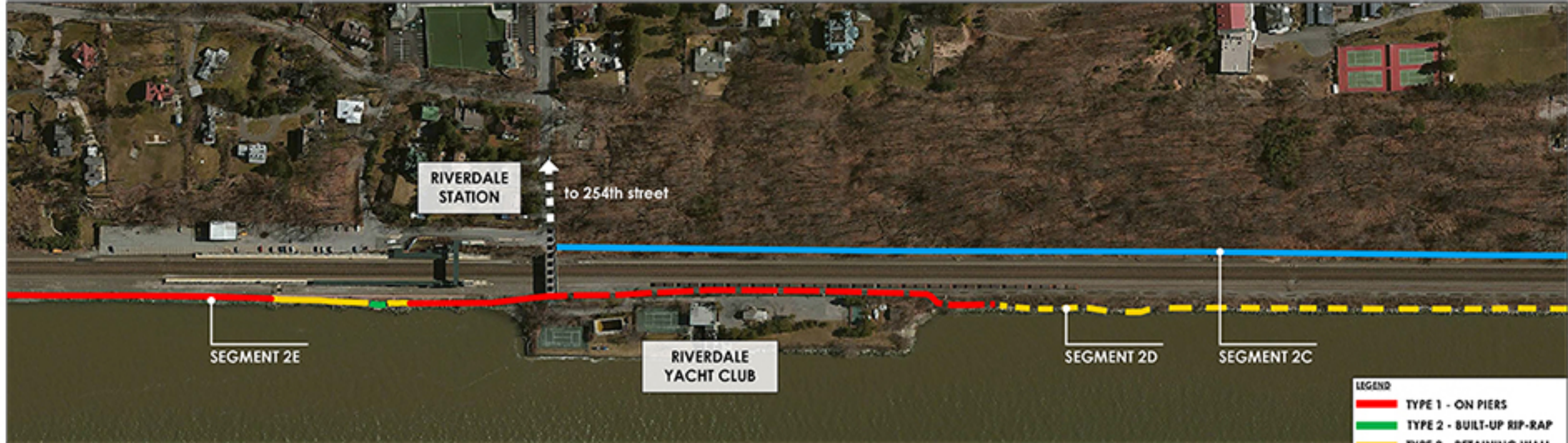




- LEGEND
- █ TYPE 1 - ON PIERS
  - █ TYPE 2 - BUILT-UP RIP-RAP
  - █ TYPE 3 - RETAINING WALL
  - █ TYPE 4 - AT GRADE
  - EXISTING ROAD/BRIDGE
  - BRIDGE









- LEGEND
- █ TYPE 1 - ON PIERS
  - █ TYPE 2 - BUILT-UP RIP-RAP
  - █ TYPE 3 - RETAINING WALL
  - █ TYPE 4 - AT GRADE
  - EXISTING ROAD/BRIDGE
  - █ BRIDGE





SEGMENT 1A				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	6,030	\$2,920.00	\$17,607,600.00
ACCESS POINTS	LUMP SUM	1	\$12,000,000.00	\$12,000,000.00
BRIDGES	LUMP SUM	1	\$2,500,000.00	\$2,500,000.00
SUBTOTAL				\$32,107,600.00
30% CONTINGENCY				\$9,632,280.00
<b>TOTAL SEGMENT 1A</b>				<b>\$41,739,880.00</b>
SEGMENT 1B				
TYPE 4 WALKWAY AT GRADE	LINEAR FOOT	3,550	\$430.00	\$1,526,500.00
SUBTOTAL				\$1,526,500.00
30% CONTINGENCY				\$457,950.00
<b>TOTAL SEGMENT 1B</b>				<b>\$1,984,450.00</b>
SEGMENT 1C				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	3,600	\$2,920.00	\$10,512,000.00
SUBTOTAL				\$10,512,000.00
30% CONTINGENCY				\$3,153,600.00
<b>TOTAL SEGMENT 1C</b>				<b>\$13,665,600.00</b>

SEGMENT 1D				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	3,560	\$2,920.00	\$10,395,200.00
ACCESS POINTS	LUMP SUM	1	\$6,000,000.00	\$6,000,000.00
BRIDGES	LUMP SUM	1	\$2,000,000.00	\$2,000,000.00
SUBTOTAL				\$18,395,200.00
30% CONTINGENCY				\$5,518,560.00
<b>TOTAL SEGMENT 1D</b>				<b>\$23,913,760.00</b>
SEGMENT 1E				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	4,400	\$2,920.00	\$12,848,000.00
TYPE 4 WALKWAY AT GRADE	LINEAR FOOT	200	\$430.00	\$86,000.00
SUBTOTAL				\$12,934,000.00
30% CONTINGENCY				\$3,880,200.00
<b>TOTAL SEGMENT 1E</b>				<b>\$16,814,200.00</b>

Note: Engineer's estimate of probable Construction Cost is based on a feasibility study and not based on any design work and excludes any and all potential soft costs, including railroad support costs. Engineer's opinion of probable Construction Cost is made on the basis of Engineer's experience and qualifications and represent Engineer's best judgment as an experienced and qualified professional engineer generally familiar with the construction industry. However, since Engineer has no control over the costs of labor, materials, equipment, or other services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding and market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary.

FIGURE 3.1: ESTIMATED PROBABLE COST OF CONSTRUCTION FOR ALIGNMENT 1



SEGMENT 2A				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	1,750	\$2,920.00	\$5,110,000.00
TYPE 3 WALKWAY RETAINING WALL	LINEAR FOOT	1,150	\$1,100.00	\$1,265,000.00
ACCESS POINTS	LUMP SUM	1	\$6,000,000.00	\$6,000,000.00
BRIDGES	LUMP SUM	1	\$2,500,000.00	\$2,500,000.00
SUBTOTAL				\$14,875,000.00
30% CONTINGENCY				\$4,462,500.00
<b>TOTAL SEGMENT 2A</b>				<b>\$19,337,500.00</b>
SEGMENT 2B				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	1,400	\$2,920.00	\$4,088,000.00
TYPE 2 WALKWAY BUILT-UP RIP-RAP	LINEAR FOOT	130	\$620.00	\$80,600.00
TYPE 3 WALKWAY RETAINING WALL	LINEAR FOOT	1,600	\$1,100.00	\$1,760,000.00
ACCESS POINTS	LUMP SUM	1	\$6,000,000.00	\$6,000,000.00
SUBTOTAL				\$11,928,600.00
30% CONTINGENCY				\$3,578,580.00
<b>TOTAL SEGMENT 2B</b>				<b>\$15,507,180.00</b>
SEGMENT 2C				
TYPE 4 WALKWAY AT GRADE	LINEAR FOOT	3,550	\$430.00	\$1,526,500.00
SUBTOTAL				\$1,526,500.00
30% CONTINGENCY				\$457,950.00
<b>TOTAL SEGMENT 2C</b>				<b>\$1,984,450.00</b>

SEGMENT 2D				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	1,750	\$2,920.00	\$5,110,000.00
TYPE 2 WALKWAY BUILT-UP RIP-RAP	LINEAR FOOT	525	\$620.00	\$325,500.00
TYPE 3 WALKWAY RETAINING WALL	LINEAR FOOT	1,325	\$1,100.00	\$1,457,500.00
SUBTOTAL				\$5,110,000.00
30% CONTINGENCY				\$1,533,000.00
<b>TOTAL SEGMENT 2D</b>				<b>\$6,643,000.00</b>
SEGMENT 2E				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	1,750	\$2,920.00	\$8,833,000.00
TYPE 2 WALKWAY BUILT-UP RIP-RAP	LINEAR FOOT	215	\$620.00	\$133,300.00
TYPE 3 WALKWAY RETAINING WALL	LINEAR FOOT	320	\$1,100.00	\$352,000.00
ACCESS POINTS	LUMP SUM	1	\$6,000,000.00	\$6,000,000.00
BRIDGES	LUMP SUM	1	\$2,500,000.00	\$2,500,000.00
SUBTOTAL				\$17,318,300.00
30% CONTINGENCY				\$5,195,490.00
<b>TOTAL SEGMENT 2E</b>				<b>\$22,513,790.00</b>
SEGMENT 2F				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	3,700	\$2,920.00	\$10,804,000.00
TYPE 2 WALKWAY BUILT-UP RIP-RAP	LINEAR FOOT	700	\$620.00	\$434,000.00
TYPE 4 WALKWAY AT GRADE	LINEAR FOOT	200	\$430.00	\$86,000.00
SUBTOTAL				\$11,324,000.00
30% CONTINGENCY				\$3,397,200.00
<b>TOTAL SEGMENT 2F</b>				<b>\$14,721,200.00</b>

Note: Engineer's estimate of probable Construction Cost is based on a feasibility study and not based on any design work and excludes any and all potential soft costs, including railroad support costs. Engineer's opinion of probable Construction Cost is made on the basis of Engineer's experience and qualifications and represent Engineer's best judgment as an experienced and qualified professional engineer generally familiar with the construction industry. However, since Engineer has no control over the costs of labor, materials, equipment, or other services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding and market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary.

FIGURE 3.2: ESTIMATED PROBABLE COST OF CONSTRUCTION FOR ALIGNMENT 2



SEGMENT 2B <sub>1</sub>				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	670	\$2,920.00	\$1,956,400.00
TYPE 2 WALKWAY BUILT-UP RIP-RAP	LINEAR FOOT	2,460	\$620.00	\$1,525,200.00
ACCESS POINTS	LUMP SUM	1	\$6,000,000.00	\$6,000,000.00
SUBTOTAL				\$9,481,600.00
30% CONTINGENCY				\$2,844,480.00
<b>TOTAL SEGMENT 2B<sub>1</sub></b>				<b>\$12,326,080.00</b>

SEGMENT 2D <sub>1</sub>				
TYPE 1 WALKWAY ON PIERS	LINEAR FOOT	1,435	\$2,920.00	\$4,190,200.00
TYPE 2 WALKWAY BUILT-UP RIP-RAP	LINEAR FOOT	1,625	\$620.00	\$1,007,500.00
TYPE 3 WALKWAY RETAINING WALL	LINEAR FOOT	540	\$1,100.00	\$594,000.00
SUBTOTAL				\$4,190,200.00
30% CONTINGENCY				\$1,257,060.00
<b>TOTAL SEGMENT 2D<sub>1</sub></b>				<b>\$5,447,260.00</b>

Note: Engineer's estimate of probable Construction Cost is based on a feasibility study and not based on any design work and excludes any and all potential soft costs, including railroad support costs. Engineer's opinion of probable Construction Cost is made on the basis of Engineer's experience and qualifications and represent Engineer's best judgment as an experienced and qualified professional engineer generally familiar with the construction industry. However, since Engineer has no control over the costs of labor, materials, equipment, or other services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding and market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary.

**FIGURE 3.3: ESTIMATED PROBABLE COST OF CONSTRUCTION FOR ALIGNMENT 2**

## CONCLUSION

The Bronx Greenway Feasibility Study investigates the potential for constructing a multi-use recreational trail along the Hudson River, west of the railroad tracks, in the Bronx and Yonkers, New York. In conjunction with data presented in Volume 1 of the Feasibility Study (Existing Conditions Inventory and Preliminary Findings), Volume 2 presents the results of the Opportunities and Challenges Assessment for potentially constructing a trail in the project area, as well as summarizes the Evaluation of Feasible Trail Route Alternatives.

The results of the Bronx Greenway Feasibility Study show that developing a trail in the project area would be feasible; however, the design and construction of a potential walkway would have to overcome the serious locational and engineering challenges presented by the project area. The Feasibility Study identifies pressing safety, security and access concerns raised by locating a trail next to busy rail lines that are vital to the region's mobility. The trail design would have to sufficiently address these issues, while also accounting for the limited area available along the shoreline, the presence of several pinch points, and multiple property owners.

This Feasibility Study can be used as a guidance tool for future planning efforts to develop a potential trail in the project area. The study identifies trail alignment alternatives and options that the ultimate responsible party for developing the walkway can select to best meet their project goals. No engineering design work was undertaken as part of this Feasibility Study and the ultimate responsible party seeking to advance the project to subsequent phases, would have to undertake the engineering design efforts necessitated by a project of this scale.

To aid in determining the potential funding that may be required to construct a project in this location, estimates of probable construction costs for the feasible trail alignments have been identified as part of this study. Whatever the final alignment chosen for the project area, the cost for the project has been determined to be substantial and funding sources would need to be identified and pursued. The cost estimates presented in the Feasibility Study represent the potential construction costs only. Additional costs for property agreements, design and construction support services or other potential project "soft costs" are not factored in the estimated construction costs. In addition, the construction costs are projected without the benefit of any engineering design work performed for the project.

The ultimate responsible party for the trail would need to assume the obligation associated with the operation and maintenance of the trail, including ensuring all safety, security and access concerns are addressed. Any effort to develop a trail in this location would require coordination and approvals from Amtrak, Metro-North Railroad, local community stakeholders and property owners along the potential trail corridor.

