FRANKFORD CREEK GREENWAY FEASIBILITY STUDY

MAY, 2014

SUBMITTED TO:

PHILADELPHIA PARKS & RECREATION

PCPC

PREPARED BY:

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WITH SUPPORT FROM:

Toole Design Group

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Acknowledgements

Special thanks are due to the members of the steering committee who gave their time and effort to make this project possible.

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Introduction

Michael Baker Jr., Inc. (Baker) worked with the Philadelphia City Planning Commission (PCPC) and Philadelphia Parks and Recreation (PPR) from May 2013 to May 2014 on the feasibility of developing the Frankford Creek Greenway. After site visits, meetings with stakeholders, and completing research in this region, this report was developed to layout the feasibility of a shared-use path along the Frankford Creek from Wingohocking Street in the north to Delaware Avenue and the East Coast Greenway in the south.

The Frankford Creek originates northwest of Philadelphia (as Tacony Creek) and drains into the Delaware River adjacent to the Betsy Ross Bridge. Sections of the creek were channelized in the mid-20th century. *Green2015: An Action Plan for the First 500 Acres (2010)* describes the Frankford Creek area as a region of Philadelphia in highest need of greening to mitigate stormwater issues and provide the surrounding community with green space. Philadelphia Water Department also lists Frankford Creek as a priority for creek restoration. Additionally, the *Philadelphia Trail Master Plan (2013)* lists a trail in along the creek as a highest priority for the City. The existing green space along the creek needs improvement and access from the adjacent neighborhoods.

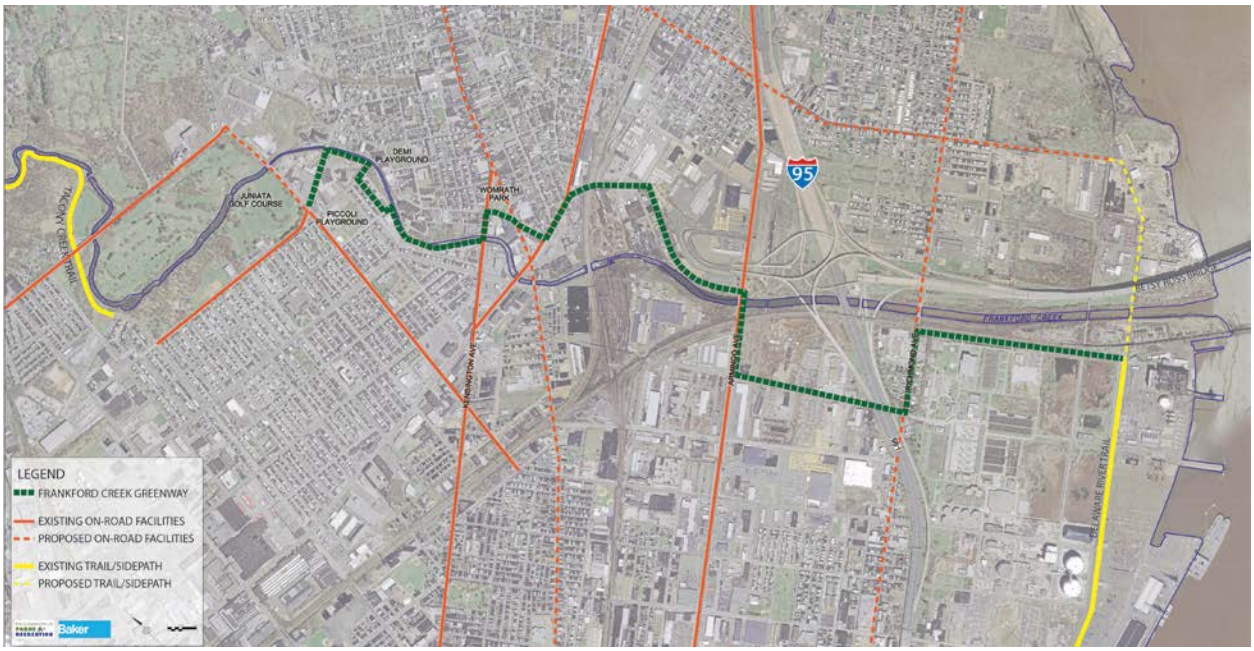


Figure 1: Frankford Creek Greenway Context Map

The Frankford Creek Greenway will transform this passive space into a linear park that could be utilized by the entire community as an active green space. The greenway will link the Tacony Creek Trail to the Delaware River Trail/East Coast greenway. While a number of existing and planned trails and on-street facilities (Figure 1) run perpendicularly to the creek, there is a lack of facilities that run parallel. With a combination of city-owned land and adequate space adjacent to the creek along much of the route, it is

possible to build the Frankford Creek Greenway with minimal property acquisition and easements. Some land acquisition/easements will be necessary in the northern section of the greenway.

This report is organized into sections that highlight opportunities and areas of concern. For the Existing Conditions Assessment and the Alignment Options, the document will be organized into from west to east-

- Segment 1: Wingohocking Street to Cayuga Street (including Wingohocking on-street facilities)
- Segment 2: Cayuga Street to Bristol Street
- Segment 3: Bristol Street to Hunting Park Avenue (including Leiper Street creek cap area)
- Segment 4: Southern end of Leiper Street cap to Kensington Avenue
- Segment 5: Kensington Avenue – Creek to Adams Avenue
- Segment 6: Adams Avenue – Kensington Avenue to Frankford Avenue
- Segment 7: Worrell Street – Frankford Avenue to Torresdale Avenue
- Segment 8: Torresdale Avenue – Adams Avenue Connector to Aramingo Avenue
- Segment 9: Aramingo Avenue – Adams Avenue Connector to Wheatsheaf Lane
- Segment 10: Wheatsheaf Lane – Aramingo Avenue to Richmond Street
- Segment 11: Richmond Street – Wheatsheaf Lane to Lewis Street
- Segment 12: Lewis Street – Richmond Street to North Delaware Avenue

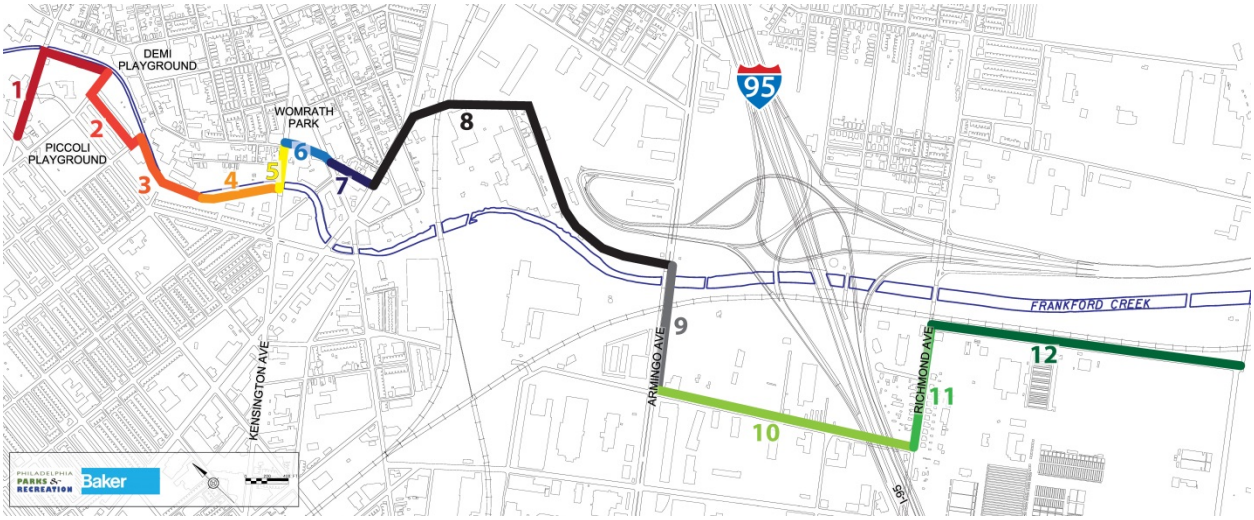


Figure 2: Segments

I. Existing Conditions Assessment

Based on several field view meetings, background research and other documentation, this section documents the existing conditions in the various sections of the corridor.

One of the preliminary tasks for this effort was to determine the existing street curb to curb widths, sidewalk widths and overall right of way widths from the City Plan. The chart on the next page summarizes the results of this investigation.

a. Existing Street Right of Ways

Street Name	From Street	To Street	Curb to Curb Width	Sidewalk Width	Total ROW
Wingohocking Street	Castor Avenue	Adams Avenue	44'	13'	70'
E. Cayuga Street	O Street	Potter Street	36'	12'	60'
E. Bristol Street	O Street	Potter Street	36'	12'	60'
Leiper Street	O Street	E. Hunting Park Avenue	26'	12'	50'
Kensington Avenue	Worrell Street	Deal Street	39'	16'	70'
Worrell Street	Frankford Avenue	Torresdale Avenue	26'	12'	50'
Worrell Street	Frankford Creek Channel	Frankford Avenue	26'	12'	50'
Adams Avenue	Kensington Avenue	Worrell Street	72'	14'	100'
Frankford Avenue	Worrell Street	Wheatsheaf Lane	40'	12'	64'
Worrell Street	Kensington Avenue	Frankford Creek Channel	26'	12'	50'
Torresdale Avenue	Frankford Avenue	E. Hunting Park Avenue	50'	15'	80'
E. Hunting Park Avenue	Torresdale Avenue	Frankford Avenue	50'	15'	80'
Aramingo Avenue	Delaware Exp Ramp D	Wheatsheaf Lane	72'	15'	102'
Wheatsheaf Lane	Aramingo Avenue	Richmond Street	40'	15'	70'
Richmond Street	Wheatsheaf Lane	Lewis Street	34'	13'	60'
Lewis Street	Richmond Street	Delaware Avenue	36'	12'	60'

Data for this table was gathered from City Plans for Wards 45 and 23 from 1951, 1968, and 1970

b. Greenway Segment Descriptions

Segment 1: Wingohocking Street to Cayuga Street

An existing gateway to Tacony Creek Park is located at the intersection of I Street and Ramona Street and is anticipated to be the destination for users at the north end of the greenway. On-road bicycle markings and sidewalks along East Cayuga Street and Wingohocking Street will lead to the start of the greenway on the south side of the Frankford Creek. The Frankford Creek is enclosed in a concrete channel at this location. The greenway is anticipated to utilize an open, vegetated parcel of land between Wingohocking Street and Cayuga Street that was set aside as part of the Twins at Powder Mill development. According to the land development for the Twins project, the vacant parcel includes a drainage right of way and a permanent Open Space Parcel to be owned and maintained by Impact Services Corporation, a community development corporation operating in Kensington and Frankford. The Philadelphia Redevelopment Authority owns six parcels immediately to the northwest of the Twins Open Space Parcel.

The 60' public right of way for Cayuga Street extends to the creek at the southern end of Segment 1.

Figure 3: Gateway at I Street and Ramona Street

Figure 4: Aerial photo of Segment 1

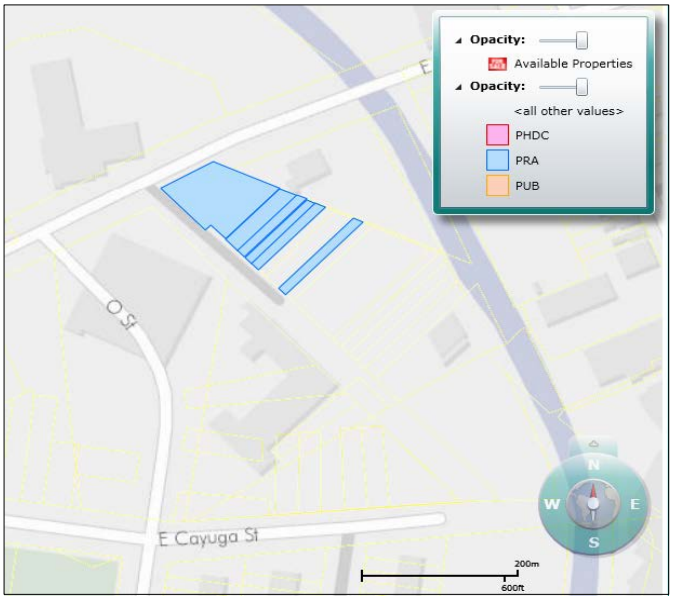


Figure 6: PRA parcels in Segment 1 area

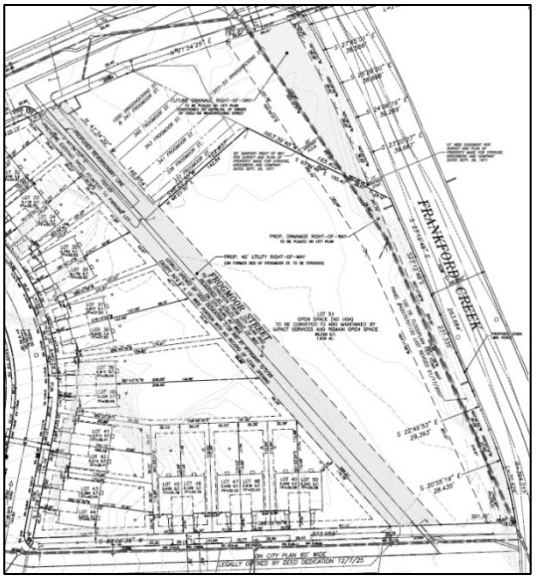


Figure 5: Land Development Plan for Twins at Powder Mill

Segment 2: Cayuga Street to Bristol Street

Between Cayuga Street and Bristol Street, there is a triangle parcel of wooded/vegetated area bounded by the channelized portion of the creek and a paved alley serving a section of row homes that front Potter Street. Although the triangle parcel is owned by the City of Philadelphia, the adjacent owners have encroached onto land they do not own, using the parcel as their personal backyards. The uses range from formal gardens to dog runs to locations for a smokehouse. Several fences are present that run perpendicular to the alley toward the Creek. Due to this encroachment, the project team anticipates investigating the use of Potter Street for the alignment as well as the ROW behind the houses. The area includes numerous large diameter trees as well.

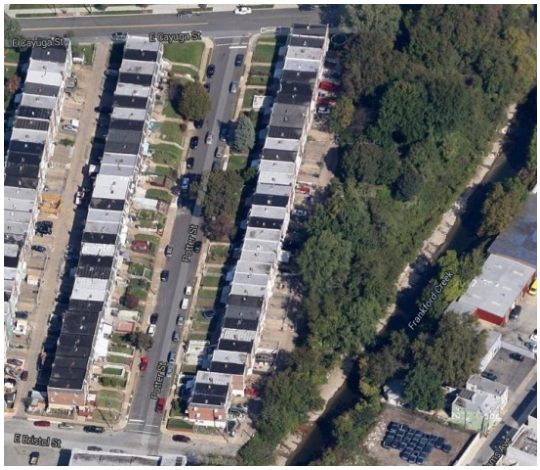


Figure 7: Aerial photo of Segment 2

Figure 8: Existing alley parallel to Potter Street

Segment 3: Bristol Street to Southern end of Leiper Street Culvert

Segment 3 includes a narrow strip of vegetated area behind a former grocery store building adjacent to the concrete channel of Frankford Creek. There is a large paved parking lot that surrounds the former grocery store and extends to the top of bank of the channelized portion of the creek. The parcel located at 1610-32 E. Bristol Street is currently for sale. The existing 1 story block building is approximately 19,000 square feet and is located on a 2.46 acre lot. The asking price is $1,150,000. A copy of the sale information sheet is included in the Appendix of this memo.

Near Leiper Street, a three cell concrete culvert carries the Frankford Creek. The culvert is approximately 50’ side and 500’ long. The area above the culvert is heavily vegetated and includes some existing dirt foot paths.

West of the box culvert, there is a section of two story row homes that front to East Hunting Park Avenue. A paved alley is present behind the homes. Beyond the alley, there is a small strip of trees and grass as well as another area of existing pavement that appears to serve for overflow parking for the homes. This narrow strip, along with the auto body shop located immediately to the southeast, is a

single parcel owned by Good Friday Investments, LLC. There is an OPA lien on this property in the amount of $10,102.63. There is also a prevalence of short dumping in this area.

Figure 9: View from top of box culvert

Figure 10: Existing 3 cell box culvert carrying Frankford Creek near Leiper Street

Figure 11: Aerial photo of Segment 3

Segment 4: Southern end of Leiper Street Culvert to Kensington Avenue

From the southern end of the Leiper Street culvert, the creek transitions back to a channelized condition with concrete side wall. An auto repair business is located along the west bank of the creek up to Kensington Avenue. A triangular portion of vacant land is fenced off to the north of the auto shop building. This land appears to be part of the same auto shop parcel. This will be verified later in the study. The paved parking area for the auto business extends to the top of bank of the creek. A steep side slope exists between the paved parking area and the top of the concrete walls lining the creek. The parking lot does not appear to have a formal layout of parking spaces.

Figure 12: Steep side slope between auto business and the creek

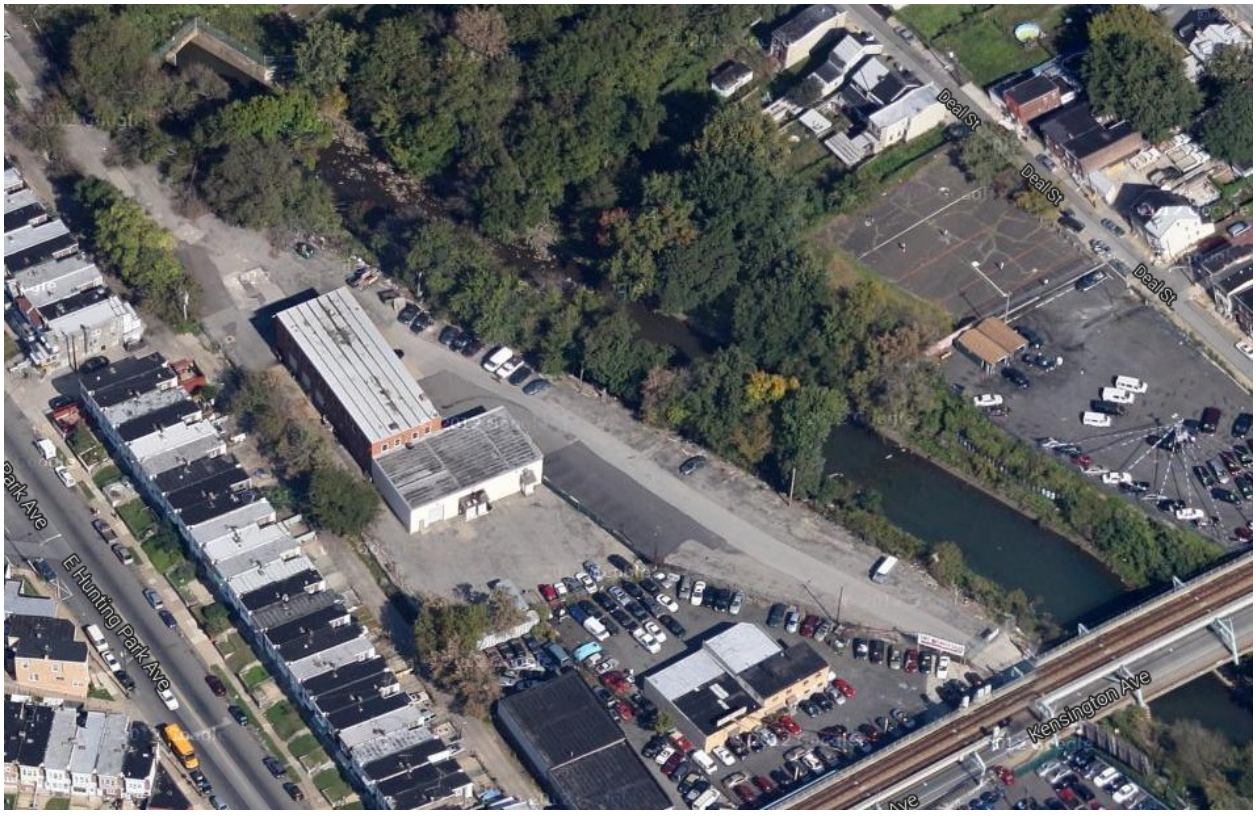


Figure 13: Aerial photo of Segment 4

Segment 5: Kensington Avenue – Frankford Creek to Adams Avenue

Figure 15: Kensington Avenue looking east

It is currently anticipated that the greenway will follow the north side of Kensington Avenue to the east to reach Adams Avenue at Womrath Park. Kensington Avenue carries one lane of traffic in each direction, one bike lane in each direction, 6'-8' of paved shoulder, and approximately 5'-8' sidewalks on each side. The paved shoulder is used as informal parking, as parking on bridges is illegal in Philadelphia. The SEPTA Market Frankford elevated railroad line also is located on structure above Kensington Avenue. In the area of the bridge that carries Kensington Avenue over the Frankford Creek, the sidewalk width is approximately 5' wide. There is an existing traffic signal and crosswalks at the intersection of Kensington Avenue and Adams Avenue.

Figure 14: Aerial photo of Segment 5 and 6

Segment 6: Adams Avenue – Kensington Avenue to Frankford Avenue

Womrath Park is located on east side of Adams Avenue between Kensington Avenue and Frankford Avenue. An existing 4'-10' width concrete sidewalk with a curb at the back edge runs along the park. Several large diameter sycamore trees are located at regular intervals in the sidewalk along Worrel Street near Kensington Avenue. Recently, PWD completed a large stormwater management improvement project within the Park.

Figure 16: Existing sidewalk area along Womrath Park

Adams Avenue, shown on the right-hand side of Figure 16, is a one way street going south. Adams Avenue carries one lane of traffic and has one parking lane on the west side. Adams Avenue is stop controlled at the intersection with Frankford Avenue. There is no crosswalk across Frankford Avenue to Worrell Street currently.

Segment 7: Worrell Street – Frankford Avenue to Torresdale Avenue

Worrell Street is a one way street traveling north from Torresdale Avenue to Frankford Avenue. The roadway carries one lane of traffic, has one lane of parking on the east side and 4'-6' sidewalks on each side. Worrell St. is stop controlled at the intersection with Frankford Avenue. We will investigate contraflow bike lane(s) or side path concept later in this study for this segment.

Figure 17: Worrell Street looking south

Segment 8: Torresdale Avenue – Adams Avenue Connector to Aramingo Avenue

Greenway users will need to use a short section of Torresdale Avenue measuring approximately 800' to reach the signalized intersection with Adams Avenue. Torresdale Avenue and the Adams Avenue Connector are being improved as part of PennDOT's I-95 reconstruction project. Torresdale Avenue currently carries one lane of traffic in each direction, one bike lane in each direction, 10'-15' wide sidewalks on each side and a parking lane on each side of the roadway. Torresdale Avenue is a densely developed commercial area with several cross streets and driveways along the route. The intersection of

Worrell Street and Torresdale Avenue is not signalized and is not currently stop controlled and does not have crosswalks. Crossings at this location may be a concern for greenway users.

Figure 18: Aerial photo of Torresdale Avenue

As part of the Adams Avenue Connector project, PennDOT will be constructing a new shared-use path parallel to the new roadway. The new sidepath will extend from Torresdale Avenue to Aramingo Avenue. A new signalized intersection will be installed where Adams Avenue Connector meets Aramingo Avenue. The new intersection will include crosswalks and pedestrian accommodations which will facilitate greenway access.

Segment 9: Aramingo Avenue – Adams Avenue Connector to Wheatsheaf Lane

Aramingo Avenue is a high traffic arterial roadway through a large commercial area known as the Aramingo Shopping District. The area to the west of the creek contains several “big box” stores and

Figure 19: Aerial photo of Aramingo Avenue between Wheatsheaf Lane and Frankford Creek

other commercial businesses. The roadway carries two lanes in each direction and additional turn lanes at major intersections. Bike lanes are present along the roadway and approximately 5’ wide sidewalks are present along both sides of the road. About half of this section of roadway will be reconstructed as a part of the I-95 reconstruction project. This includes replacement of the bridge over Frankford Creek and approximately 0.25 mile of the roadway past Adams Avenue. The existing railroad bridge over Aramingo Avenue to the west of the Creek creates a pinch point, but the existing bike lanes and sidewalks fit under the bridge in the existing condition.

Segment 10: Wheatsheaf Lane – Aramingo Avenue to Richmond Street

Wheatsheaf Lane carries one lane of traffic in each direction, has one parking lane along each side of the roadway and has 10’-15’ sidewalks along both sides of the roadway. The curb to curb width is 40’. A large scrap metal yard as well as several large industrial properties borders the roadway. One at-grade railroad crossing is present just south of Aramingo Avenue. Interstate 95 crosses over Wheatsheaf Lane near Richmond Street. The I-95 bridge is anticipated to be replaced as part of the I-95 reconstruction project. However, the roadway and sidewalk dimensions under the structure along Wheatsheaf Lane are planned to remain unchanged.

Figure 20: Aerial photo of Segment 10

Through discussions with the designers of the I-95 Section BR0 and I-95 Section AFC, modifications and reconstruction of Wheatsheaf Lane may occur between Richmond Avenue and Thompson Street. In addition, PWD has long range plans to add a major facility along Wheatsheaf Lane as well. Coordination with these groups will continue during the course of the study. It is anticipated that the greenway project will convert the sidewalk area on the east side of the roadway into a shared-use path and landscaped buffer strip.

Segment 11: Richmond Street – Wheatsheaf Lane to Lewis Street

Richmond Street carries one traffic lane in each direction, a 10'-13' concrete sidewalk on each side and one parking lane in each direction. There is a traffic signal at the intersection of Richmond Street and Wheatsheaf Lane. There are several single family homes on the east side of the roadway, several two story row homes on the west side and one large industrial property between Wheatsheaf Lane and Lewis Street. The majority of the single family homes and a few of the row homes do appear to have their own driveways and off street parking. However, on-street parking is still common. The gated entrance to the PWD Treatment Plan is located at the intersection of Richmond Street and Wheatsheaf Lane.

Figure 21: Aerial photo of Richmond Street area

Segment 12: Lewis Street – Richmond Street to North Delaware Avenue

Lewis Street forms a "T" intersection with Richmond Street and is stop sign controlled. Lewis Street is a wide, curbed roadway that has a railroad line to the north and City property to the south. The paved width of the roadway is approximately 44'. The roadway has five driveways on the west side of the street providing access to the City and PWD Treatment plant uses. One at-grade railroad crossing is present to the west of Delaware Avenue. Potential constraints include the utility pole lines that line both sides of the roadway. The roadway appears to have the opportunity for modifications similar to Delaware Avenue to accommodate the greenway. It is anticipated that the greenway will start/end at

the intersection of Lewis Street and Delaware Avenue and will connect to the North Delaware Trail at this location.

Figure 22: Lewis Street looking toward Delaware River

II. Alignment Options

Based on the information provided by the existing conditions memo and input from the steering committee, several alignment alternatives have been explored and analyzed along the proposed corridor.

For each of the segments, all alternatives are described along with the opportunities and drawbacks associated with each. Different alternatives are labeled based on the segment, and then labeled individually using letters which coincide with options in the cost estimate. For example, options in Segment 2 are labeled 2A, 2B, 2C, etc.

All recommendations are in accordance with the "Guide for the Development of Bicycle Facilities" 2012-Fourth Edition developed by the American Association of State Highway and Transportation Officials (AASHTO).

a. Segment Alternatives Descriptions

Segment 1: Wingohocking Street to Cayuga Street

The Frankford Creek Greenway will begin on Wingohocking Street directly west of the Frankford Creek. To make it more visible to the community, the first Gateway installation is planned for this entrance (See **Gateway Treatments**). To link to the Juniata Golf Course and existing bike facilities on E. Cayuga Street and Castor Avenue to the greenway, share-the-road markings (sharrows) will be placed along Wingohocking Street from Castor Avenue to Adams Avenue. The greenway in this location will run along the creek from Wingohocking Street to Cayuga Street in space that was set aside as part of the Twins at Powder Mill development. For this segment, a paved, 12' wide shared-use path with fence and a 5' buffer is planned along the creek. This design (Figure 22) is the typical design for the greenway when it follows the creek. The fence between the shared-use path and the creek is used to prevent users from falling down the embankment which becomes steep in some areas.

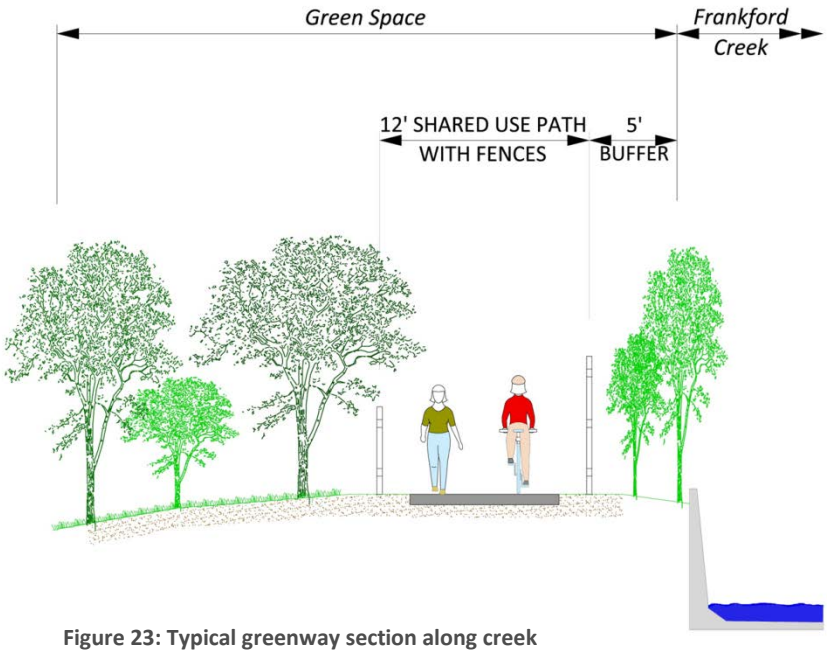


Figure 23: Typical greenway section along creek

Segment 2: Cayuga Street to Bristol Street

Between Cayuga and Bristol Streets, there is land adjacent to the creek that is owned by the City of Philadelphia that could be used for the greenway (Option 2A). In this case, the greenway will be a continuation of the 12' shared-use path from segment one with a fence and a 5' buffer. This option will require some of the residents of Potter Street to remove fences or other items to allow for space for a shared-use path. Due to the encroachment of residents on the city-owned land (see the Existing Conditions memo), alternatives are presented that avoid using the land between the houses and the creek.

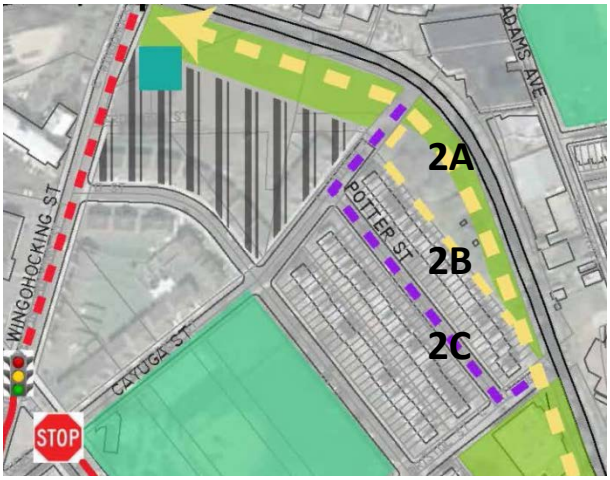


Figure 24: Options 2A-2C

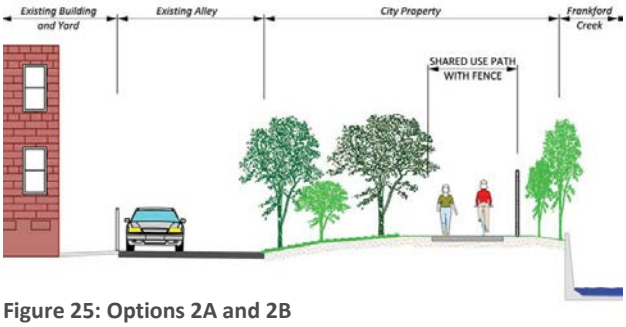


Figure 25: Options 2A and 2B

Option 2B will utilize the alley between the homes and the area owned by the city, and will be a shared roadway with "sharrow" markings to indicate that the cyclists and drivers share the road. The city-owned land is triangular bounded by Cayuga Street, the creek, and the alley. Where the alley and the creek meet, the greenway would continue along the creek. The residents of Potter Street may have some issues with using the alley for the greenway which may require additional involvement from the city.

The third option, 2C, will be on-street facilities on Potter Street again using sharrows in addition to the existing sidewalks. This requires cyclists and pedestrians to go farther out of their way, but may be the least difficult to implement. The markings will be painted on a 150' section of Cayuga St, the length of Potter Street, and a 100' section of Bristol Street to connect to the path along the creek.

Figure 26: Artistic rendering of potential shared roadway markings

Segment 3: Bristol Street to Hunting Park Avenue (including Leiper Street creek cap area)

The segment between Bristol Street and Hunting Park Avenue is a few hundred feet long and has a number of opportunities for park area and a connection between the two sides of the creek (See **Leiper Street Connection Park**). In this area, the greenway will run along the creek and potentially over it because the creek runs through a culvert. Option 3A requires purchasing the vacant property that is currently for sale at the end of Bristol Street. This would allow the city to create a larger park space along the creek.

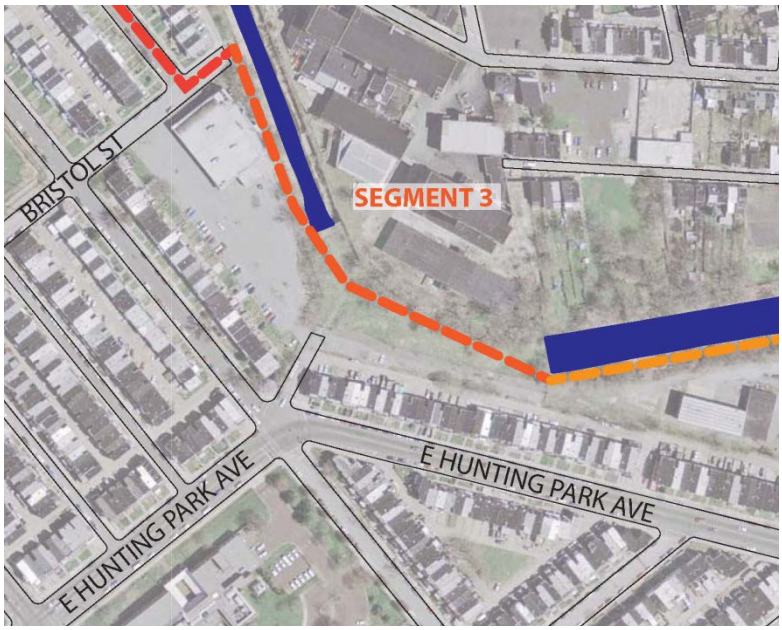


Figure 27: Segment 3 alignment

If this site is not purchased, Option 3B, an easement will be necessary from the owner to run the greenway through this area. Regardless of the purchase of the vacant property, there is some room for a park area over the creek that would allow for a formal connection between the two neighborhoods on either side of the creek by extending Leiper Street across the creek. The connection over the creek would be placed along the right-of-way for Leiper Street which currently ends on the west side of the creek, but is listed as having a 50' right-of-way (26' travel lanes and 12' sidewalks on either side) on the City's Street Right-Of-Way Plans. The park can be completed separately from the creek connection or at the same time to potentially reduce total cost.

Segment 4: Southern end of Leiper Street cap to Kensington Avenue

Placing the greenway along the creek in Segment 4 requires obtaining an easement from the owner of the auto-body shop (Good Friday Investments, LLC) that occupies the triangular area adjacent to the creek. Obtaining an easement along the creek from the landowner is the most plausible option for the alignment in this segment. The greenway will likely have to be placed within the boundaries of the

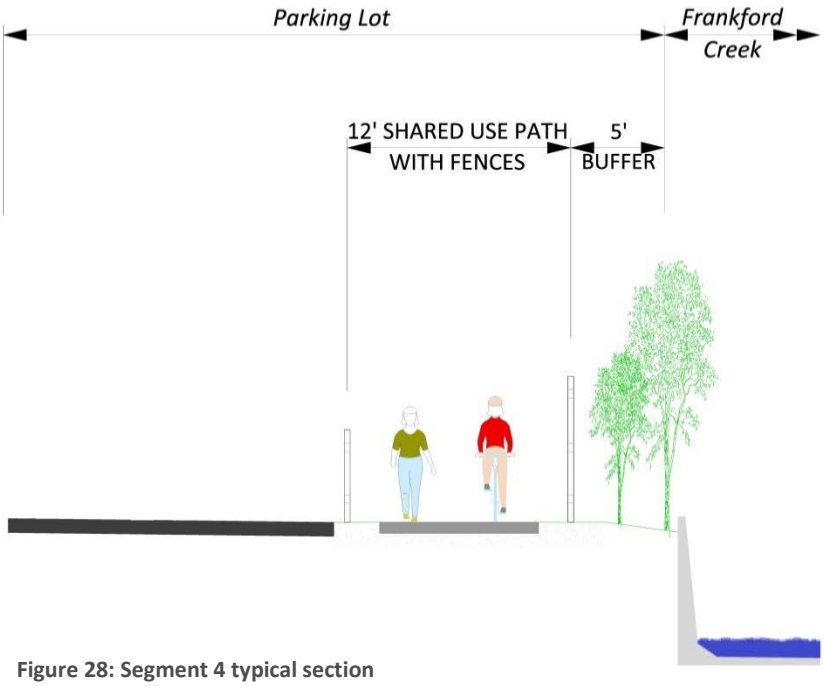


Figure 28: Segment 4 typical section

existing parking lot because of the steep slope between the edge of the parking lot and the channelized creek. Additional options include filling in some of the area and building a retaining wall to create space for the greenway. This section will consist of a 12' shared-use path with a fence along the creek and parking lot. The fence along this section is necessary to avoid people slipping down the steep slope down to the creek and to separate the parking lot from the greenway.

The entrance to the greenway at Kensington Avenue is another potential location for a gateway treatment. This could be a more compact version of the more prominent gateway treatments because of the limited available space.

Segment 5: Kensington Avenue – Creek to Adams Avenue

At Kensington Avenue, the greenway will transition from being an off-street facility to roadway-adjacent facility. On the bridge, the shared-use path will occupy space that is freed up by removing the shoulder on the southbound side that is currently used for parking. Placing the greenway on the southbound side

of the road allows users to transition from Segment 4 to Segment 5 without crossing the street unless they would like to use the bike lane traveling in the north direction. No traffic signal is planned for this location, but there is an opportunity for a small gateway or way-finding treatment to draw attention to the greenway.

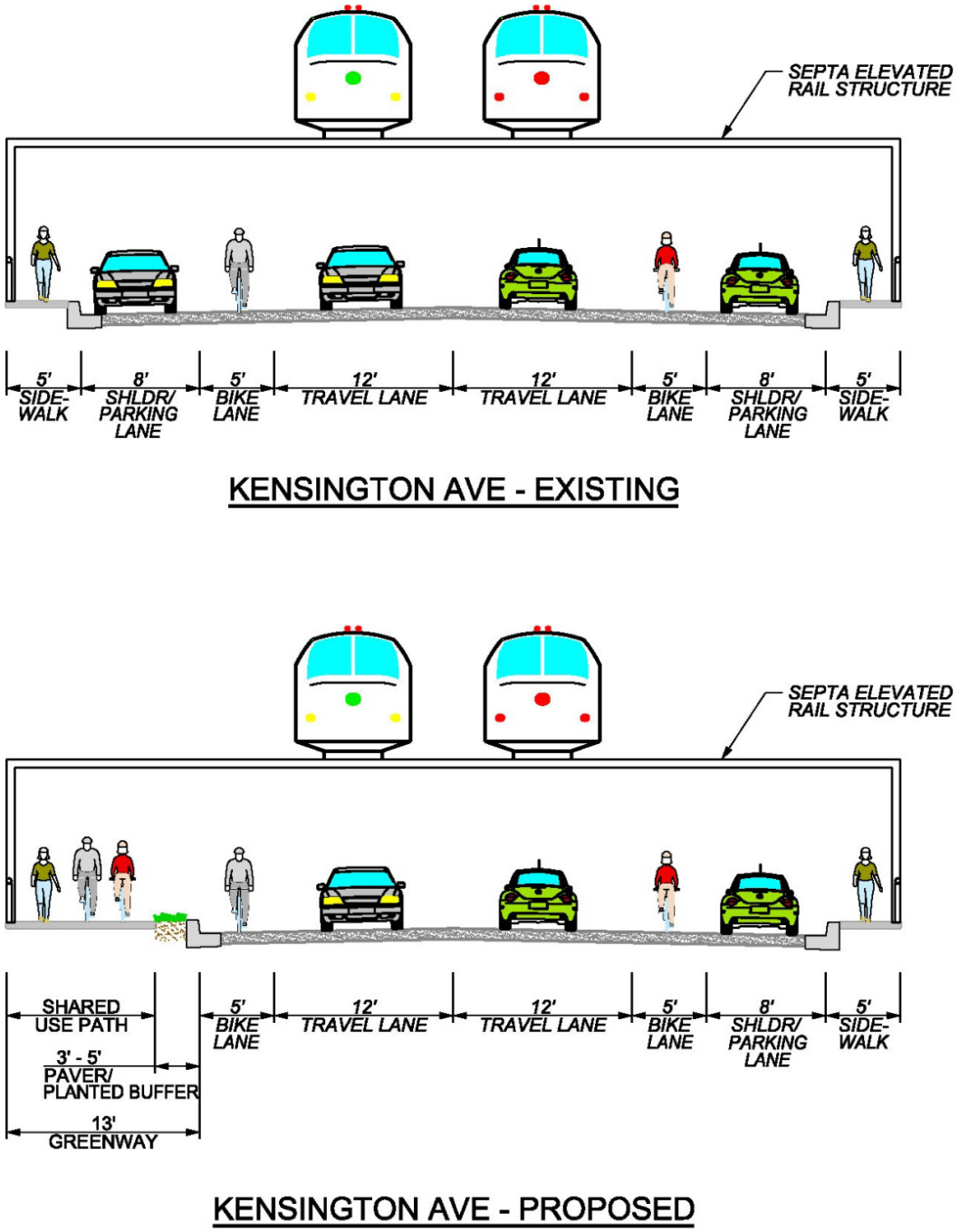


Figure 29: Kensington Avenue Cross Section (faces northeast toward Adams Avenue)

The greenway on Kensington Avenue widens the sidewalk from 5’ to 13’ by taking out the 8’ parking lane (wide shoulder on the bridge) on the north side and shifting the curb to the south by 8 feet. The 13’ greenway would include a 10’ path (at a minimum) and a 3’-5’ paver/planted buffer depending on the width of the street for that block. On the bridge, the buffer would be stamped concrete or pavers instead of a planted buffer. The two existing 5’ bike lanes remain on the street and the width of the travel lanes remains 12’. The existing sidewalk on the opposite side of the road remains the same. After greenway users pass the bridge, the cross section remains the same by removing the parking lane on the southbound side while maintaining the parking lane on the northbound side.

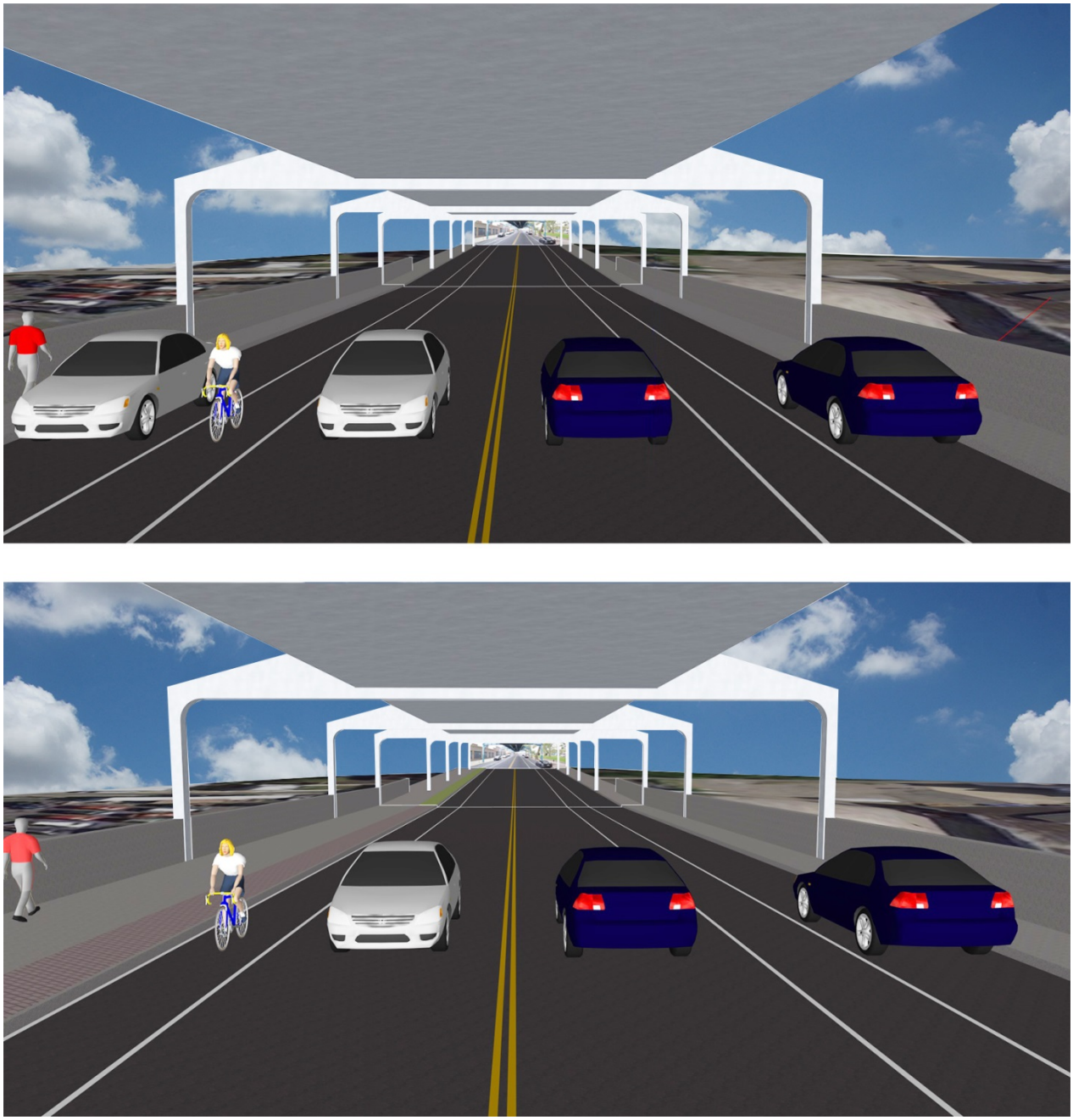


Figure 30: Kensington Avenue Bridge before and after

One concern that will need to be addressed in final design is that the elevated rail supports are on the outer edge of the sidewalk along the bridge, and then the distance between supports decreases after the bridge, which places the supports on the inner edge of the sidewalk. While the above plan works well for the majority of this segment, there is a short section that will have to be modified to avoid the elevated track supports. The two primary options are to (5A.1) place the greenway on the north side of the supports where the sidewalk is wider – potentially wide enough to allow for the entire shared-use path – and place the buffer so that the supports occupy buffer space, or to (5A.2) split the shared-use path to allow for westbound traffic on one side of the supports, and the eastbound traffic on the other.

Segment 6: Adams Avenue – Kensington Avenue to Frankford Avenue

At the intersection of Adams Avenue and Kensington Avenue, the greenway will connect users to the recently renovated Womrath Park through a signal controlled intersection. The greenway will extend along the Adams Avenue on the west edge of the park. In this section, the existing travel lane and parking lane will remain unchanged in addition to the sidewalk on the west side of Adams Avenue. The sidewalk with tree pit will be widened into the park (where there is currently grass) by 5'-7' from 10' to 15'-17' to allow for a 10-12' shared-use path and a 5' tree pit/planting buffer so the existing sycamore trees are not disturbed.

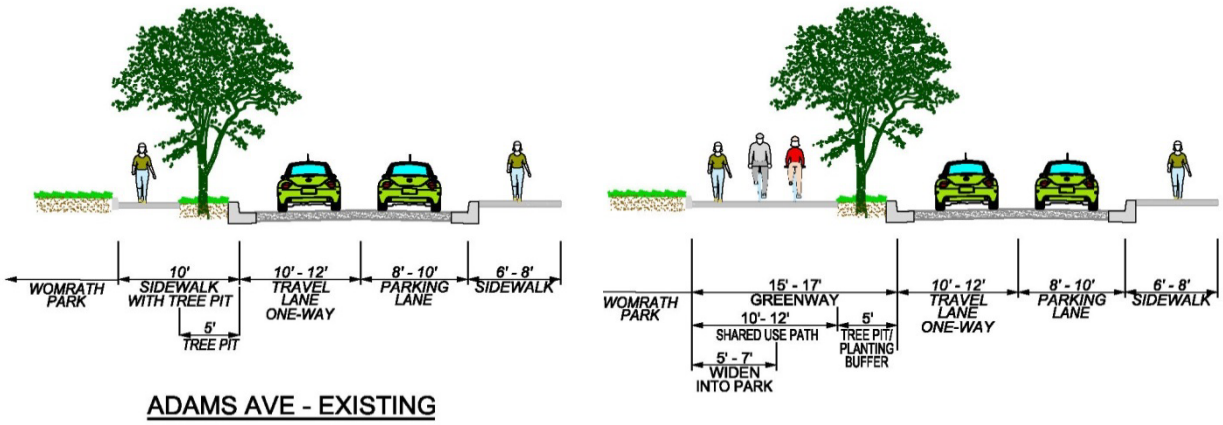


Figure 31: Adams Avenue Cross Section looking south toward Frankford Avenue

Segment 7: Worrell Street – Frankford Avenue to Torresdale Avenue

There are a few challenges that will need to be addressed for Segment 7. The first is that the connection between Segment 6 and Segment 7 is not straight across an intersection. Worrell Street is slightly offset to the south and is one way in the opposite direction of Adams Avenue. Additionally, Worrell Street is a narrow street with narrow sidewalks that contain utility poles. Finally, since it is a one-way street going away from Torresdale Avenue, there is no stop control coming from Worrell Street to Torresdale

Avenue. This will need to be addressed when bike and pedestrian traffic travels in both directions on Worrell Street.

Option 7A will remove the 8' parking lane on Worrell Street to allow for space for a greenway by widening the sidewalk on the east side of the street from 5' to 13' to allow for a 9' shared-use path with a 4' landscaped buffer. While the desired minimum shared-use path width is 10' as per the AASHTO Guidelines, it is acceptable to narrow the path to 8' under certain conditions including narrow right-of-way. For this section, it will be necessary to narrow the path to 9' which requires signage to alert cyclists and pedestrians that the path narrows ahead. This alignment will not impact the other sidewalk or the utility poles.

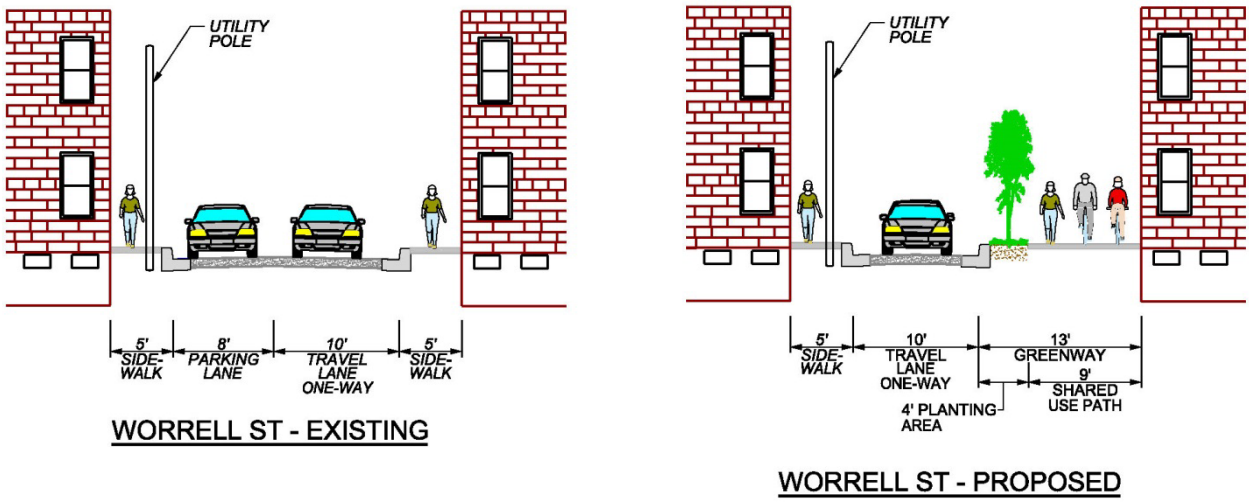


Figure 32: Worrell Street Cross Section, looking south toward Frankford Avenue

Option 7B avoids using Worrell Street because of the issues listed above. In this option, the greenway will turn right on Frankford Avenue, and then left on Torresdale Avenue. There are existing bike facilities on Torresdale Avenue and bike facilities are eventually planned on Frankford Avenue. Without removing any parking or changing the travel lanes, the only viable option will be to introduce shared-lane markings on Frankford Avenue.

If more significant changes were made to the street, one option (7C) would remove parking on one side of the street and reduce the travel lanes to 11' instead of 12' and introduce 5' bike lanes on either side of the street without changing the sidewalks. There are two main concerns with these options. The first is that Worrell Street may still be used as the informal cut-through from Frankford Avenue to Torresdale Avenue which would cause some contra-flow cycling on a narrow street. The other issue is that Torresdale and Frankford Avenues meet at a signal-controlled five-point intersection. Introducing cyclists of various ability levels into this intersection may require significant upgrades to improve safety for all users. The best way for cyclists to navigate this intersection would have to be the topic of further

analysis. Some opportunities may be possible partnering with the Edgewater Dye EPA project that is in the early planning stages and is on the northwest corner of the Torresdale and Frankford Avenues.

Segment 8: Torresdale Avenue – Adams Avenue Connector to Aramingo Avenue

Depending on the option chosen for segment 7, greenway users will be on Torresdale Avenue from the Frankford Avenue intersection or the Worrell Street intersection. This will determine which intersections will need to be improved and the length of roadway that the greenway users will occupy. The current conditions allow for bike and pedestrian traffic already in separate facilities. For this segment, the least expensive option would be to maintain the current facilities- bike lanes running in each direction and 10'-15' sidewalks on either side- and re-stripe where they have worn. While

Figure 33: Torresdale Avenue proposed plan

additional facilities for cyclists and pedestrians may not be necessary, it is recommended that current facilities are made more visible by re-striping and adding any additional signage that will provide information (wayfinding and safety information) to greenway users and drivers. There is possible coordination with PennDOT in this section in addition to the Adams Avenue Connector project for some roadway improvements, however this is not guaranteed.

The Adams Avenue Connector to Aramingo Avenue segment will be planned in coordination with PennDOT because of their Adams Avenue Connector project that is in progress as part of the I-95

reconstruction project. In this section, PennDOT is designing and building a shared-use path along the south side of the roadway that will be 10-12' wide with a 5' buffer. Additionally, there are some signal improvements that are planned as part of this project including signal timing changes and potential signal upgrades at key intersections. Coordination with PennDOT on this section is necessary to ensure continuity between greenway segments.

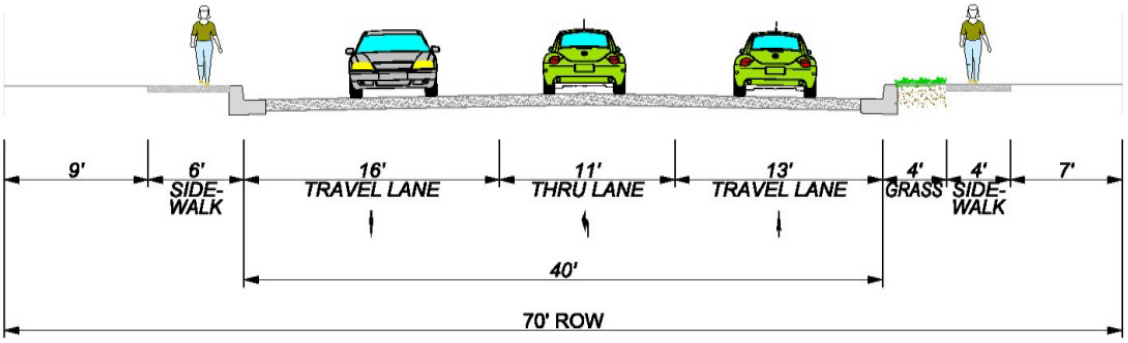
Segment 9: Aramingo Avenue – Adams Avenue Connector to Wheatsheaf Lane

On Segment 9, the greenway will continue from the Adams Avenue Connector on Aramingo Avenue. To improve the safety of the greenway users, a signalized intersection is proposed at the intersection where Aramingo Avenue and Adams Avenue Connector will meet. This signal is going to be constructed by PennDOT as part of the Adams Avenue Connector project. Additional improvements along Aramingo Avenue are also planned as part of the PennDOT project. A side path with buffer will be built from the Adams Avenue Connector to Wheatsheaf Lane. There is an abandoned lot at the intersection of Aramingo Avenue and Wheatsheaf Lane at the southeast corner which will be replaced by a Wawa. Plans for a path through the property, in coordination with Wawa, are currently in design.

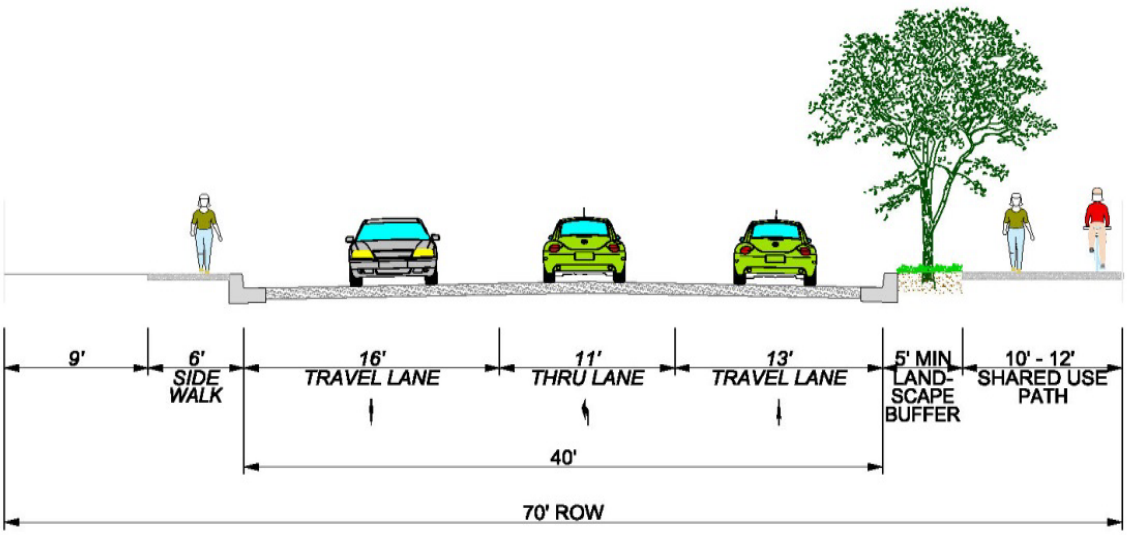
One concern with this segment is that the railroad bridge overpass will continue to be a choke point along Aramingo Avenue that will need to be addressed in later stages of this project. The other narrow section, the bridge over Frankford Creek, may be improved as part of the I-95 construction project. Coordination with PennDOT would be necessary for this project.

Segment 10: Wheatsheaf Lane – Aramingo Avenue to Richmond Street

As mentioned in the Existing Conditions Assessment section, there are wide sidewalks along Wheatsheaf Lane in addition to a significant amount of unused right-of-way which could be converted into a shared-use path without changing lane widths. Some improvements may be done along Wheatsheaf Lane as part of the I-95 construction project. Along this section, it is anticipated that the existing sidewalk will be re-paved and turned into a shared-use path with a landscaped buffer along the east side of the road. In some areas, the right-of-way exists, but a wide sidewalk does not. In these areas, the current 4' sidewalk on the east side of Wheatsheaf Lane will be widened by taking space to the east to create a 10'-12' shared-use path and to widen the landscaped buffer from 4' to 5' to meet AASHTO Guidelines. This allows for space for trees and other plantings (See Appendix C for preliminary plans).



WHEATSHEAF LANE - EXISTING



WHEATSHEAF LANE - PROPOSED

Figure 34: Wheatsheaf Lane cross section, looking northwest toward Aramingo Avenue

One major concern in this section is the at-grade rail crossing. The current crossing is not safe enough for the greenway with pavement markings only in in the southbound direction and no active warning devices (flashing lights, crossbars, etc.). During the construction of the greenway, it is recommended that the crossing safety be improved for users as well as drivers on Wheatsheaf Lane. Fortunately the train tracks run perpendicularly to the roadway, so the crossing will take place at the safest angle for greenway users on bikes or in wheelchairs.

Figure 35: Railroad crossing on Wheatsheaf Lane

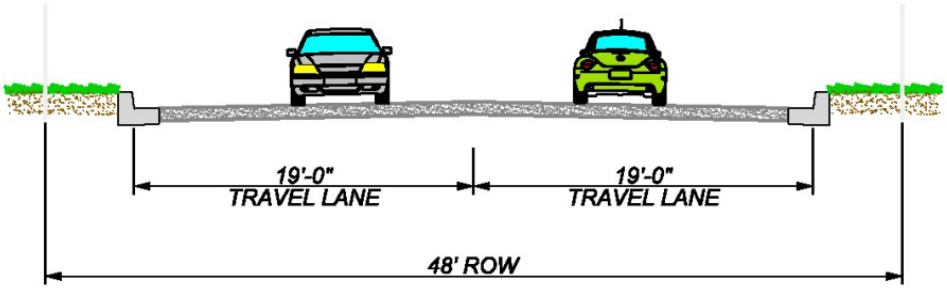
Segment 11: Richmond Street – Wheatsheaf Lane to Lewis Street

This segment is one of the tighter segments along the study area. Option 11A.1 introduces shared-lane markings, "sharrows", instead of a shared-use path from Wheatsheaf Lane to Lewis Street. Other treatments along this section of Richmond Street will likely require removing street parking which is widely used by residents. Option 11A.2 will be used if option 12B (using the maintenance road along the Betsy Ross Bridge approaches) is chosen. This option extends the sharrows across the bridge and to the bridge access road on the east side of the creek.

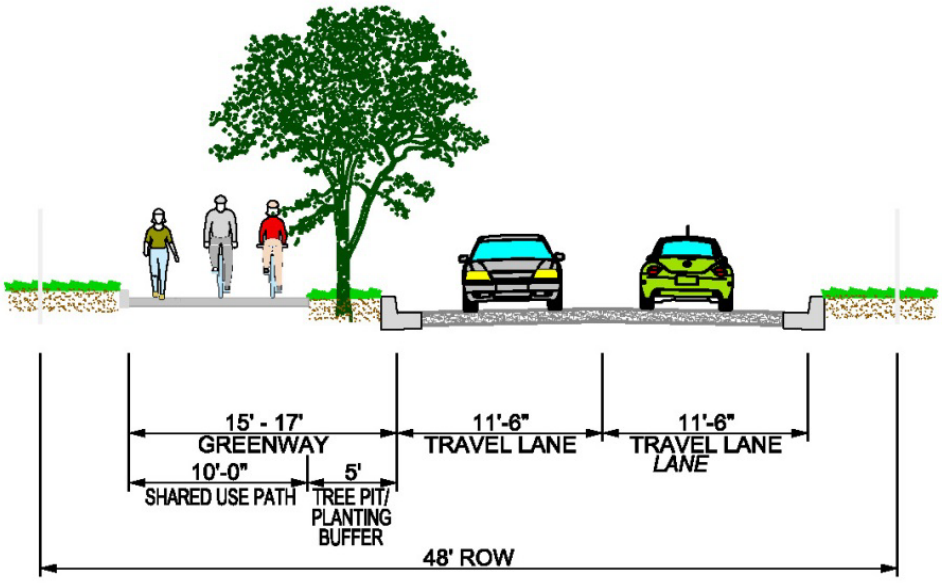
Figure 36: Richmond Street proposed plan

Segment 12: Lewis Street – Richmond Street to North Delaware Avenue

To improve safety for greenway users, intersection improvements are recommended for the "T" intersection between Richmond Street and Lewis Street, and between North Delaware Avenue and Lewis Street. Along this section, roadway changes will include reducing the current 19' travel lanes to 11'-6" travel lanes, shifting the curb over 15' on the east side of the street, and introducing a 15'-17' greenway (10'-12' shared-use path adjacent to a 5' tree pit/planting buffer) in this new space. (See Appendix C for preliminary plans of this segment). The primary safety concern that needs to be addressed is the at-grade rail crossing. This may also have design implications and would have to be coordinated with track owners (Conrail).



LEWIS STREET - EXISTING



LEWIS STREET - PROPOSED

Figure 37: Lewis Street cross section, looking southeast toward N Delaware Avenue

Figure 38: Artistic rendering of Lewis Street before and after improvements

The other primary gateway treatment is planned for the intersection of Lewis Street and North Delaware Avenue. Easements may be necessary for the northeast corner of the intersection to accommodate a gateway.

An additional option (12B) includes connecting Richmond Street northeast of the creek (11A.2) to an existing maintenance road that runs along the approaches to the Betsy Ross Bridge. In this section, the greenway will occupy space along the side of the service road and would have a 12' shared-use path and a 5' buffer. Fencing will be necessary to separate the greenway from the space below bridge approaches. If this option is to be advanced, bridge security may be an issue that would be coordinated with the Delaware River Port Authority. From this section the greenway would connect to North Delaware Avenue and the Delaware River Trail.

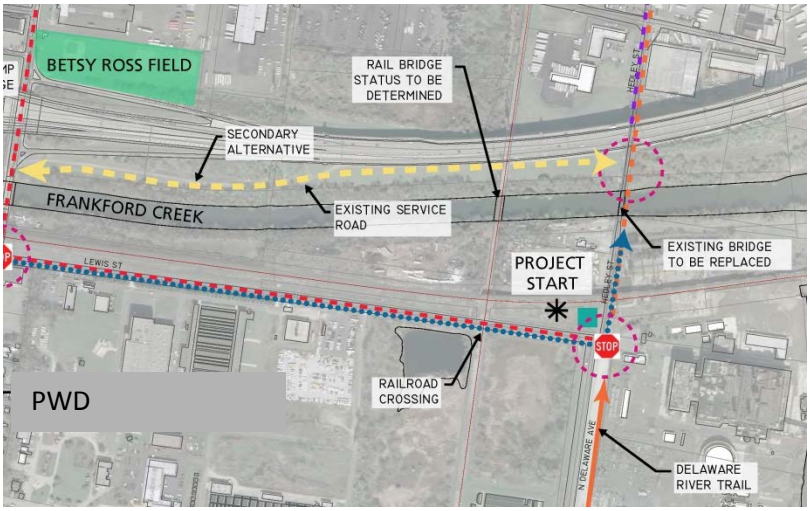


Figure 39: Option 12B alignment

b. Gateway Treatments

Gateways along the Frankford Creek Greenway will provide an aesthetically pleasing area for users to access the greenway, wayfinding information for the greenway and surrounding bike facilities, and some area history. The aesthetic character of trailhead areas create an identifiable and attractive point of access to the greenway, low-maintenance landscaping, as well as a bioswale/rain garden and porous pavers for storm water infiltration.

Two main gateway treatments are planned at either end of the greenway. The northwestern end will have a treatment on Wingohocking Street on the western side of the creek. This gateway treatment will utilize the space that has been set aside as part of the Twins at Powder Mill project. The southeastern end will have a treatment at the intersection of Hedley Street and Lewis Street. There is a small space available between the road and the railroad for a gateway treatment in this area. A third full gateway treatment is planned for the intersection of the new Adams Avenue Connector and Aramingo Avenue. Two additional, smaller, gateways are planned for the intersection of the greenway and Kensington Avenue and the intersection of Torresdale Avenue and Adams Avenue Connector. These gateway treatments will likely be vertical signage that offers more information than typical wayfinding signs, but does not take up space.

Figure 40: Gateway locations

Figure 41: Small gateway options

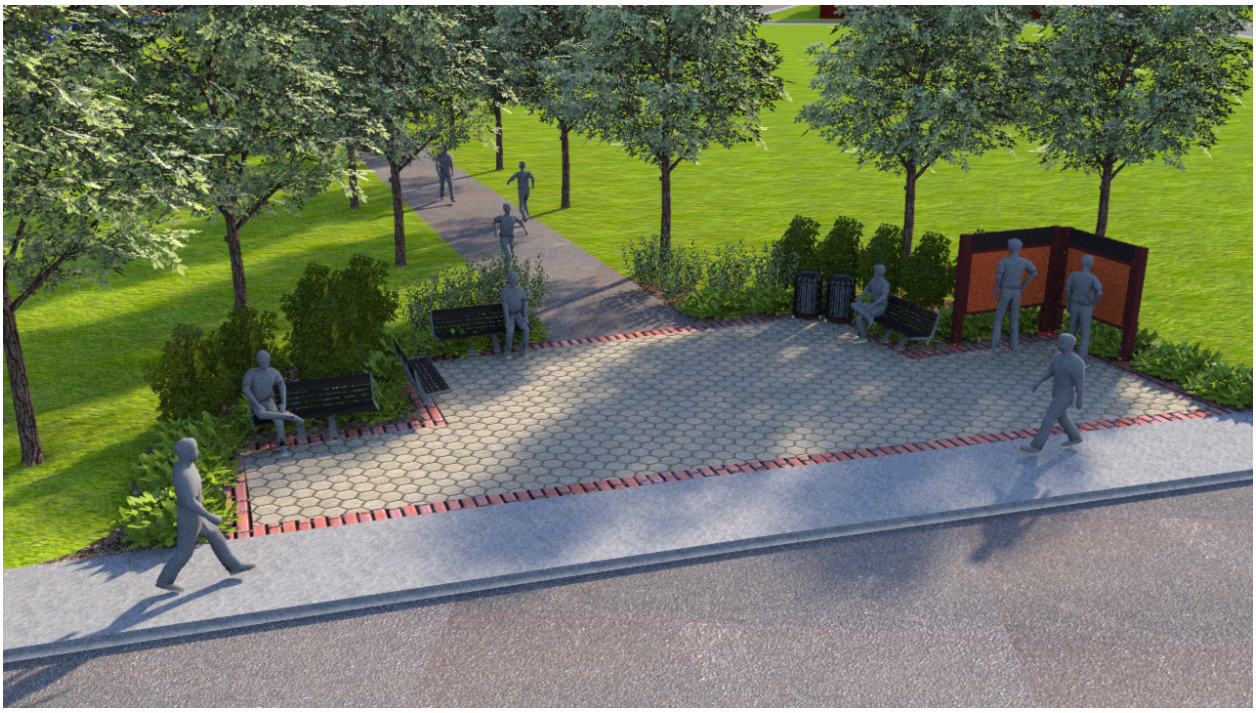


Figure 43: Gateway treatment

Most importantly, the gateway areas are designed to act as trailheads that provide an easy way to locate the greenway and information about facilities in the area. This information would include where the greenway goes and where it connects to other facilities, and potentially information about the surrounding watershed. Additionally, the gateway is used as a place to meet others or rest on benches. There are a number of options for the paved area of the gateway treatment, each with different costs and maintenance requirements including porous or traditional pavers. Finally, the gateway is surrounded by areas of low-maintenance landscaping with the possibility for stormwater management techniques including bioswales or rain gardens.

Wayfinding signage will be important along the length of the greenway. At intersections where it is not very clear where the greenway continues, wayfinding signs will be necessary. The current wayfinding signs used by the city will be used for this project (except at small gateway locations where additional information will be provided).

Figure 42: Wayfinding signs

c. Leiper Street Connection Park

The area above the Leiper Street culvert is currently under-utilized vacant land that could provide green space for the community in addition to a formal connection between the neighborhoods on either side of the creek. Providing a connection between these two neighborhoods has the potential to significantly increase usage along the greenway because more homes and businesses will have access. A park could be constructed at the same time as the greenway, or could be a part of a longer-term project. This land is owned by Philadelphia Water Department and coordination between agencies would be necessary for the construction and maintenance of a park.

This land above the culvert consists of a potential area to create an enhanced park area over the Frankford Creek with multiple features and amenities. As a linear area of interest along the greenway, the park area could consist of low-maintenance meadow areas, an overlook of the creek, a small neighborhood playground, and an enhanced gathering space with a gazebo. As an attractive destination along the greenway, the Leiper Street Connection Park could create an amenity for neighborhood events, and enhance the interpretation and history of the greenway. Two concepts are illustrated below with varying landscape and hardscape designs for consideration.

In this area, the 10'-12' shared-use path will follow the river with a 5' buffer. Fencing will be used next to steep slopes. Each of the park options include meadows with low-maintenance landscaping that can reduce runoff in addition to some paved areas where there will be heavier pedestrian and bike traffic. These areas could either be a continuation of the paved path or could use the porous pavers that will be used in the gateway treatments. The primary differences between the two options are the additional amenities- the gazebo or the playground.

Figure 44: Leiper Street green space options

d. Formliners

Formliners are recommended for structures (bridges, wingwalls, retaining walls, etc.) that cross the greenway or are within the view shed of the greenway. These formliners are the responsibility of PennDOT as part of the I-95 project. They will meet the city's guidelines on Architectural Surface Treatment for Concrete Surfaces. The formliners will look like natural stone with a random pattern and coloring. This is designed to improve the look of the structures around the greenway to enhance the presence of the greenway. Locations are marked in red in Figure 45 and described below.

Locations for formliners:

- Aramingo Avenue Bridge over Frankford Creek
- Ramp JJ bridge over Aramingo Avenue
- Ramp D bridge over Aramingo Avenue
- Ramp F bridge over Aramingo Avenue
- Ramp D bridge over Frankford Creek
- Ramp B bridge over Frankford Creek
- I-95 and Ramp A&C over Wheatsheaf Lane

Figure 45: Formliner locations

III. Challenges and Partnership Opportunities

For each segment, specific challenges and opportunities are explained in the Existing Conditions and Alignment Options sections of this report. This section of the report focuses on potential challenges and partnerships that may be available to capitalize on concurrent property and roadway development, or to anticipate potential barriers to project completion. Baker has identified key contact people for each partnership opportunity who can help with future development of the greenway.

The following opportunities exist through PennDOT's I-95 reconstruction project that is ongoing and scheduled to begin in approximately 2018-

- Aramingo Avenue shared-use path and gateway
    - SR 95 Section BR0 PM: Paul Shultes, (610)757-1885, c-pshultes@pa.gov
    - Designer: Robert Kocher from CDM Smith, (717)541-4019, kocherrs@cdmsmith.com
- Adams Avenue Connector shared-use path and lighting
    - PM: Paul Shultes, (610)757-1885, c-pshultes@pa.gov
    - Designer: Antoinette MacIntyre from URS, (215)390-2137, Antoinette.macintyre@urs.com
- Formliners on bridges and other structures in view shed
    - SR 95 Section BR0 PM: Paul Shultes, (610)757-1885, c-pshultes@pa.gov
    - SR 95 Section AFC Consultant PM: Pamela Conti from Parsons Brinckerhoff, (215)209-1249, conti@pbworld.com, c-pconti@pa.gov

There are a number of other potential partnerships that may provide opportunities for this project-

- Shared-use path through Delaware River Port Authority property from Richmond Street to Delaware Avenue along the bridge approaches. Some challenges may arise with this opportunity due to security of bridge approaches
- Shared-use path construction completed by Wawa at the corner of Aramingo and Wheatsheaf Avenues
    - Frank Montgomery from Traffic Planning & Design Inc., (856)966-4242, fmontgomery@trafficpd.com
- Potential cost sharing with Philadelphia Water Department for stormwater improvements constructed as part of the greenway project as part of the Green City Clean Waters Program

- Jessica Brooks of Philadelphia Water Department, jessica.k.brooks@phila.gov

- For Segment 7, if a Frankford-Torresdale connection is chosen instead of using Worrell St for the path, there may be an opportunity to work with the brownfield site- Edgewater Dye- EPA project that is located at the Frankford-Torresdale intersection.

IV. Implementation Strategies

Based on the length of the greenway and the plan for the I-95 reconstruction project, designing and constructing the greenway over time is more practical than completing it at one time. The Adams Avenue Connector project (and improvements associated with this project on Aramingo Avenue and Torresdale Avenue) is not scheduled to start construction until 2017. Until this section is complete, the north and south sections of the greenway will not connect. Instead of waiting until the Adams Avenue Connector is complete to construct the greenway, an implementation plan was created to connect residents with the existing trail network and local points of interest over time. To achieve this, the first section of the greenway will be built between the existing Delaware River Trail and the existing bike lanes on Aramingo Avenue (which will later become a shared-use path as part of the Adams Avenue Connector project). The next section will begin at the north end of the greenway and connect the existing facilities on Castor Avenue and E Cayuga Street to Womrath Park. Finally, the middle of the greenway will be finished to connect the entire greenway when the Adams Avenue Connector project is complete. Breaking up design and construction in this way also allows the city to obtain funding for smaller sections of the greenway that will still have a positive impact on connectivity of the area.

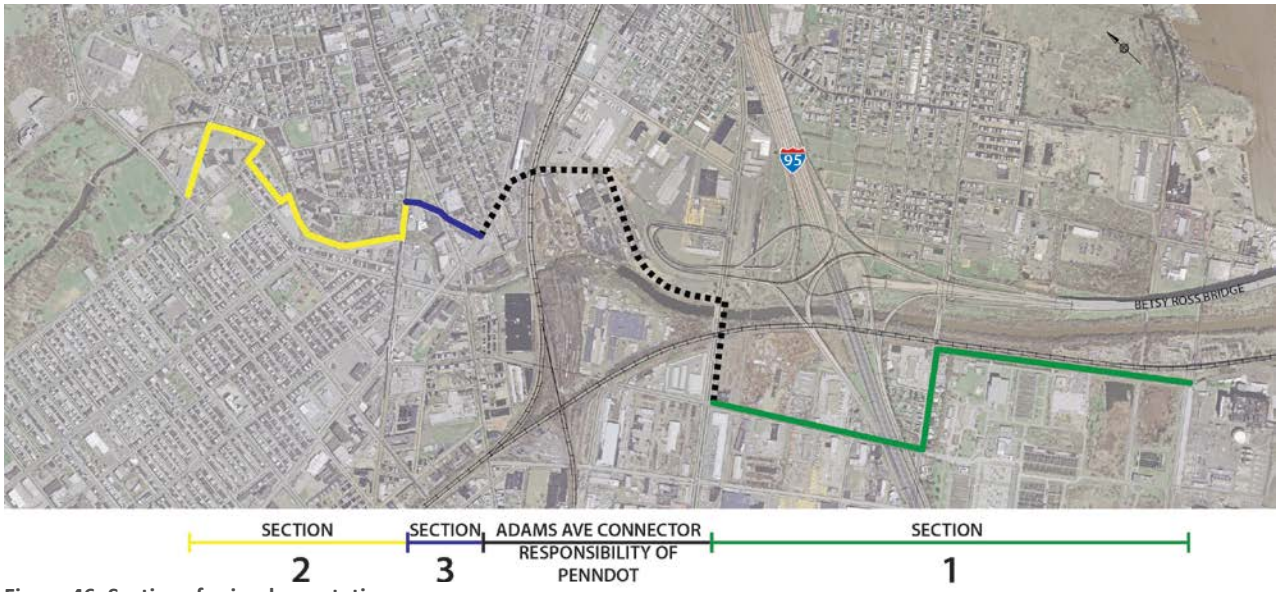


Figure 46: Sections for implementation

a. Short-Term Plan (1-4 years)

Design and construction: During the first 4 years of the implementation plan, the section from Delaware Avenue to Aramingo Avenue, Section 1, will be focused on for design and construction. No land acquisition is necessary for this section. This section will connect two existing facilities along Delaware Avenue (Delaware River Trail/East Coast Greenway) and on-street facilities on Aramingo Avenue. In addition to connecting existing facilities, this section will also connect the Aramingo Shopping District and the Riverfront allowing the surrounding neighborhoods to access both of these community assets

without driving. For these reasons, it is possible to start design immediately and there will also be an immediate positive impact on the connectivity of the area when the section is finished. The gateway in this section will be completed during the construction of the greenway.

Land Acquisition: In addition to starting design and construction on the first segment, it will be necessary to acquire land for the second section of the project. There are only two properties that will require easements for the second section and none for the third section. In the second section, along the creek from Cayuga Street to Kensington Avenue, easements will be required from two properties. The first is a vacant grocery store (currently for sale) at 1610-32 E. Bristol Street, BRT/OPA #884091050, which is currently owned by Yoon Won Ju. The second property is an auto business at 4066-70 Kensington Avenue, BRT/OPA #884110800, which is owned by Good Friday Investments, LLC.

b. Medium-Term Plan (4-6 years)

Design and construction: Once the necessary land is acquired along the creek, it will be possible to start construction on Section 2. Section 2 will connect the Tacony Creek Trail to Womrath Park. Part of this section will include on-road improvements on Wingohocking Street to make the connection to Cayuga Street along Juniata Golf Club which connects to the Tacony Trail. The second gateway will be constructed during at the same time as well. The greenway segments in Section 2 are not all located on city right-of-way, but should not present any problems once the land is acquired along the creek. The bridge improvements on Kensington are part of this section and will likely be the most difficult to schedule and construct.

c. Long-Term Plan (6-10 years)

Design and construction: The segments that are PennDOT's responsibility will not likely be finished until after 2020. Finishing the first two sections of the greenway before that time is reasonable and beneficial to the surrounding areas. However, the north and south sections will not be connected until the Adams Avenue Connector is complete. Design of segments 6 (Adams Avenue) and 7 (Worrell Street) can wait until after the other sections are in construction. Ideally, the third section will be complete around the same time as the Adams Avenue Connector. This would complete the greenway and connect the whole community to the larger trail network.

d. Very long term (10+ years)

There are two alignment options that are plausible in the long term if funding and space becomes available. These two include a bike/pedestrian bridge along Ramp JJ that bypasses segments 9-11, and a shared-use path along the Betsy Ross Bridge approach. The first alignment option will require significant coordination with PennDOT. The path along the bridge approach would utilize an existing maintenance road and will require significant coordination with Delaware River Port Authority.

e. Maintenance, Operations, Security Plan

Similar to any other recreation or transportation facility, periodic and regular maintenance of the greenway corridor will be required. The costs associated with these activities should be incorporated into the long range budget of the city. The following is a list of the key maintenance activities and the anticipated effort involved:

- Shared-use path Surface (Paved) – repaving every 10-12 years
- Bridges – inspected every two years by a certified professional
- Drainage structures- cleaned annually
- Mowing of trailside areas- minimum of 4 times / year
- Tree Trimming – annually
- Litter Pickup/Trash Collection – biweekly and as needed
- Signage/Gates/Bollards – repair/replace as required

Based on our experience and data from other existing trails, annual maintenance costs range from approximately $1000-$5000 per mile. Once the greenway is open, future budgets should be based on actual costs from the first few years of operation.

Research on existing trail facilities has shown that safety, vandalism and liability have not been significant problems. However, certain basic measures should be taken to safeguard against potential issues. The following is a brief list of recommendations for the safe and efficient operation of the greenway:

- Design the greenway according to accepted engineering standards such as AASHTO and PENNDOT
- Provide measures to allow regular patrolling by law enforcement and access by emergency vehicles
- Provide regular safety inspections and maintenance
- Provide emergency contact numbers and information at kiosks and on greenway maps
- Provide greenway rules at kiosks and on greenway maps
- Provide appropriate warning signs along the greenway

It is anticipated that the greenway will be maintained by Philadelphia Parks and Recreation. More formalized “adopt a trail” volunteer groups and events could be organized for future efforts to support the maintenance and operation of the greenway.

f. Operations

It is anticipated that Philadelphia Parks and Recreation will take the lead for implementation of the greenway. This department, and the city as a whole, has indicated their long term commitment to trail development and maintenance.

g. Public Feedback

There were two public meetings during this study, one in fall 2013, and the other in spring 2014. In addition to the public meetings, there was a public information survey for the residents of Potter Street to gather feedback on the alignment options in Segment 2 (either on Potter Street, the alley, or along the creek). Residents of Potter Street were most interested in the alignment option on Potter Street and were least interested in the alignment option along the creek.

Members of the general public have mentioned various maintenance and operations recommendations for the greenway. A preference for low maintenance and more durable surfaces such as asphalt has been recommended by several individuals. They indicated that an asphalt surface serves a majority of users, can be used in almost all weather conditions and minimizes additional on-going repairs and maintenance costs in the future. The surface also allows for better access by emergency services and police patrols as needed. Fencing along private property and along the creek was mentioned for safety reasons.

h. Funding Options

Finding the funding for the design and construction of these types of projects can be a challenge, but the following is a list of possible funding sources for this project:

Pennsylvania Transportation Alternatives Program

There will be one solicitation for two years of TAP funding totaling $7.5 million in the DVRPC Pennsylvania counties (Bucks, Chester, Delaware, Montgomery and Philadelphia) for bicycle and pedestrian facilities, conversion of abandoned railway corridors to trails, and stormwater management projects. Concurrently the statewide TAP will have $26 million available for all eligible project types. There will be one application and projects may be selected as either regional or statewide priorities. Local governments, regional transportation authorities, transit agencies, natural resource or public land agencies, school districts, local education agencies, or schools, and tribal governments are eligible to apply for the competitive TAP funds.

http://www.dvrpc.org/TAP/

Robert Wood Johnson Foundation

The mission of the Robert Wood Johnson Foundation is to improve the health and health care of all Americans. Our goal is clear: To help our society transform itself for the better.

http://www.rwjf.org/en/grants.html

National Parks Service – Trails Assistance Program

The Rivers, Trails, and Conservation Assistance Program is the community assistance arm of the National Park Service. RTCA supports community-led natural resource conservation and outdoor recreation projects. RTCA staff provides technical assistance to communities so they can conserve rivers, preserve open space, and develop trails and greenways.

http://www.nps.gov/ncrc/programs/rtca/

PA Department of Conservation and Natural Resources – Keystone Grant Program and Recreational Trails Program

Established on July 1, 1995, the Pennsylvania Department of Conservation and Natural Resources is charged with maintaining and preserving the 117 state parks; managing the 2.1 million acres of state forest land; providing information on the state's ecological and geologic resources; and establishing community conservation partnerships with grants and technical assistance to benefit rivers, trails, greenways, local parks and recreation, regional heritage parks, open space and natural areas.

Local governments, county governments and non-profit organizations can apply for Community Conservation Partnerships Program (C2P2) funding to assist them with addressing their recreation and conservation needs as well as supporting economically beneficial recreational tourism initiatives.

http://www.dcnr.state.pa.us/applyforgrants/index.htm

Contact:

Southeast Regional Office: (Region 1)

Jeffrey Knowles.....215-560-1182.....jeknowles@pa.gov

Drew Gilchrist.....215-560-1183.....agilchrist@pa.gov

DCED Act 13 Grants: Greenways, Trails and Recreation Program (GTRP)

Act 13 of 2012 establishes the Marcellus Legacy Fund and allocates funds to the Commonwealth Financing Authority (the “Authority”) for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks and beautification projects using the Greenways, Trails and Recreation Program (GTRP). Application deadline is July 21, 2014.

http://www.newpa.com/find-and-apply-for-funding/funding-and-program-finder/greenways-trails-and-recreation-program-gtrp

The following local funding sources may also be available:

- County, City, and Philadelphia Parks and Recreation funds
- Private sponsorships, local fund raisers, etc.
- William Penn Foundation

V. Cost Estimates

For the majority of the greenway, there is one alignment option that is preferred over the others based on cost, if there is land acquisition required, etc. The cost estimate lays out the cost of the preferred alignment and creates a cost breakdown for each segment so they can be treated as separate projects. It is possible to combine segments for design and construction (as outlined in the Implementation Strategies). The cost of each segment is listed below; a detailed breakdown of each segment is attached to this document. Each segment cost includes the construction, design, erosion and sediment control, construction management/construction inspection, surveying, traffic control, mobilization, and contingency.

Section Total Segment 1:	$259,966.63
Section Total Segment 2:	$176,794.40
Section Total Segment 3:	$332,761.43
Section Total Segment 4:	$262,506.62
Section Total Bridge:	$540,000.00
Section Total Segment 5:	$82,767.55
Section Total Segment 6:	$67,198.77
Section Total Segment 7:	$146,613.68
Section Total Segment 8:	$0.00
Section Total Segment 9:	$0.00
Section Total Segment 10:	$555,417.65
Section Total Segment 11:	$3,840.00
Section Total Segment 12:	$844,080.02
PRELIMINARY TOTAL COST ESTIMATE:	**$3,271,946.75**
Say	**$3,272,000.00**

The segments can be easily divided into sections for design and construction that allow the project to be implemented over time while increasing connectivity throughout the community.

Section	Segments	Estimated Cost
1	10,11, 12	$1,403,337.67
2	1,2,3,4,5	$1,487,602.24
3	6,7	$213,812.44

APPENDIX A:
PROPERTY INFORMATION

4066-70 Kensington Avenue

Property Description

BRT/OPA Account Number: 884110800

Land Area: 107,250 ft^2

Zoning: I-2, Medium Industrial

Current Land Use: Industrial

Structures on Parcel: One, AutoCare USA Auto Body and Mechanical Repairs (7,360 ft^2)

Stormwater Management Information

Impervious Area: 38,521 (35.9%)

Monthly Stormwater Charge, 2013: $319.24

Estimated Increase, 2013-2015: 56.4%

Status of Stormwater Bill Payment: Paid as of 9/6/13

OPA Ownership and Financial Information

Owner: Good Friday Investments, LLC.

Sale Date: 12/13/2005

OPA Market Value of Parcel: $400,000

OPA Assessed Land Value: $311,000

OPA Assessed Improvement Value: $89,000

2013 Gross Tax: $12,506.88

OPA Liens on Property: RL01219433

Lien Year: 2012

Lien Amount: $10,102.63

Lien Status: Pursued by Collections Agency

Property is in a certified redevelopment area.

Environmental Information

Property stores chemicals related to auto body shop on-site in metal drums.

Property is not identified as a RCRA storage or production site.

Property is not on the EPA's Toxic Release Inventory.

Property has no known leaking storage tanks.

Property is located almost entirely in the 0.2% annual chance flood zone. Approximately 2% of property is located within 1% annual chance flood zone.

Property Location along Greenway

1610-32 E. Bristol Street

Property Description

BRT/OPA Account Number: 884091050

Land Area: 82,889 ft^2

Zoning: I-2, Medium Industrial

Current Land Use: Vacant

Structures on Parcel: One, former Acme supermarket. Now vacant (18,565 ft^2)

Stormwater Management Information

Impervious Area: 67,458 (81.4%)

Monthly Stormwater Charge, 2013: $471.91

Estimated Increase, 2013-2015: 57%

Status of Stormwater Bill Payment: Paid as of 9/6/13

OPA Ownership and Financial Information

Owner: Yoon Won Ju

Last Sale Date: 5/30/2012

OPA Market Value of Parcel: $384,300

OPA Assessed Land Value: $240,400

OPA Assessed Improvement Value: $143,900

2013 Gross Taxes: $17,196.96

OPA Liens on Property: None.

Property is for sale with an ssking price is $60.53 per ft^2 of structure, total price $1.15M. Includes parking lot.

Property is in a certified redevelopment area.

Environmental Information

Property has no known environmental issues according to the ASTM Standard Practice for Environmental Site Assessments.

Property is not identified as a RCRA storage or production site.

Property is not on the EPA's Toxic Release Inventory.

Property has no known leaking storage tanks.

Approximately 50% of property is located in the 0.2% annual chance flood zone. The remaining 50% is not in a flood zone.

Property Location along Greenway

1601 E. Cayuga Street (Twins at Frankford Creek)

Property Description

BRT/OPA Account Number: 332109910

Land Area: 85,221 ft^2

Zoning: I-2, Medium Industrial

Current Land Use: Vacant – open space

Structures on Parcel: None

Stormwater Management Information

Impervious Area: 0

Monthly Stormwater Charge, 2013: $65.61

Estimated Increase, 2013-2015: 57.1%

Status of Stormwater Bill Payment: Outstanding balance of $1,474.70. Balance has not been paid since 2011.

OPA Ownership and Financial Information

Owner: Impact Community Development Corp.

Sale Date: 12/10/2007

OPA Market Value of Parcel: $100

OPA Assessed Land Value: $100

OPA Assessed Improvement Value: $0

2013 Gross Taxes: $3.13

OPA Liens on Property: None

Property is in a certified redevelopment area.

Environmental Information

Property has no known environmental issues according to the ASTM Standard Practice for Environmental Site Assessments.

Property is not identified as a RCRA storage or production site.

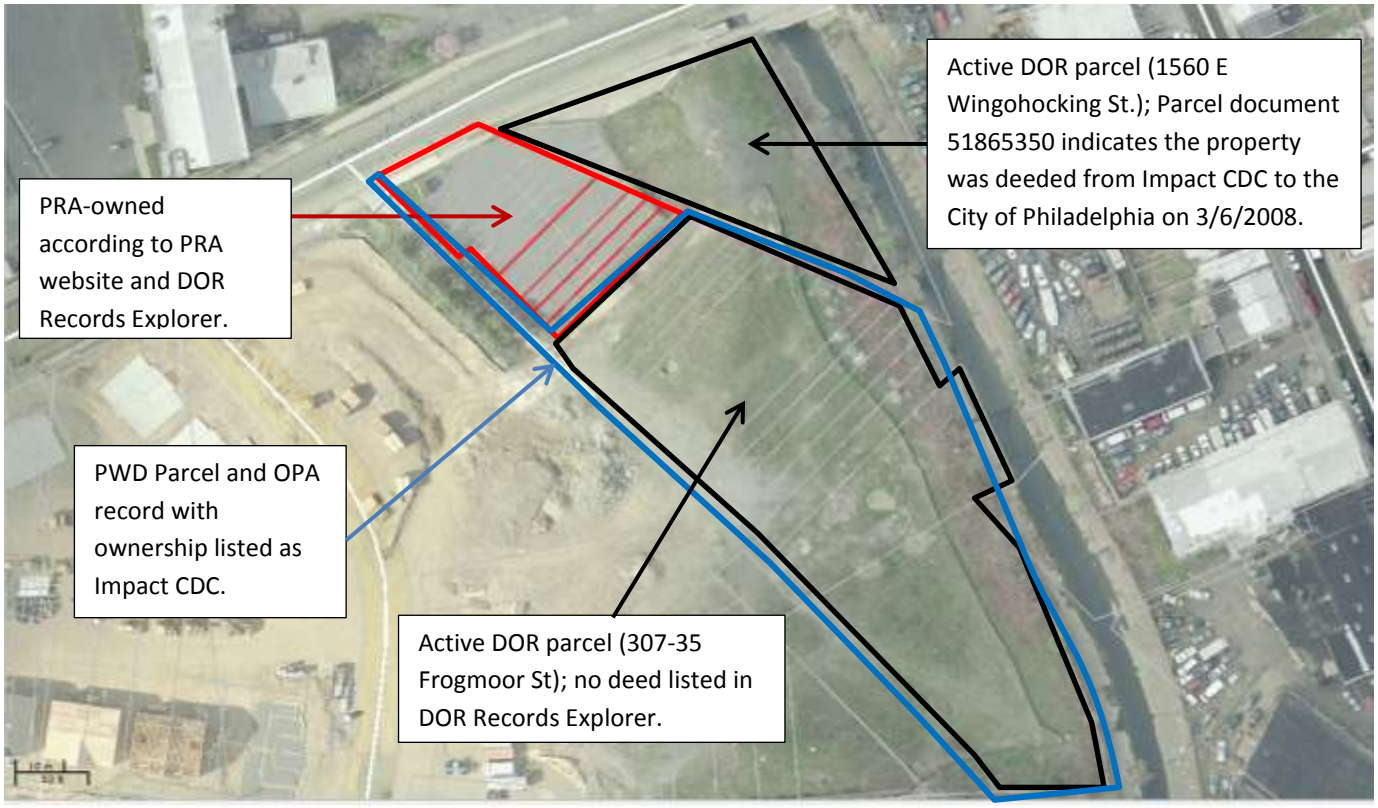
Property is not on the EPA's Toxic Release Inventory.

Property has no known leaking storage tanks.

Approximately 80% of property is located in the 0.2% annual chance flood zone. Approximately 5% to the east and southeast is located in the 1% annual chance flood zone. The remaining portion is not located in a flood zone.

Property Location along Greenway

Further Property information for the Twins at Frankford Creek Area



The property research in this document used the following resources:

- City of Philadelphia Department of Records Parcel Explorer (https://secure.phila.gov/parcelexplorerauth/)
- City of Philadelphia DOX (http://philadox.phila.gov/picris/splash.jsp)
- City of Philadelphia Office of Property Assessment Property Information Database (http://www.phila.gov/OPA/Pages/PropertyInformation.aspx)
- Philadelphia Water Department Stormwater Map (http://www.phila.gov/water/swmap/)
- City of Philadelphia Zoning Maps (http://citymaps.phila.gov)
- Environmental Data Resources, Inc. EDR Radius Map Report. EDR Radius Map Report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

APPENDIX B:
DETAILED COST ESTIMATE

Frankford Creek Greenway
Option 1- trail along road for segment 2

	Description	Quantity	Unit	Cost/Unit	Total Cost
Segment 1	**Wingohocking St to Cayuga St (0.11 miles)**				
12' Paved Shared Use Path	6" Subbase, 3" Bit. Base Course, 1" Wearing Course	800	SY	$35.00	$28,000.00
Excavation	Excavation - Class 1	222	CY	$25.00	$5,555.53
Fencing		600	LF	$40.00	$24,000.00
Clearing and Grubbing		1	LS	$20,000.00	$20,000.00
Signing and Pavement Markings	From Castor Ave to Greenway	1	LS	$25,000.00	$25,000.00
Gateway	Paving, signing, furniture	1	LS	$55,000.00	$55,000.00
				subtotal	$157,555.53
E&S Control (5%)		1	LS		$7,877.78
Design (15%)		1	LS		$23,633.33
CM/CI (10%)		1	LS		$15,755.55
Survey (5%)		1	LS		$7,877.78
Traffic Control (5%)		1	LS		$7,877.78
Mobilization (5%)		1	LS		$7,877.78
Contingency (20%)		1	LS		$31,511.11
				Section Total Segment 1:	**$259,966.63**

Segment 2	**Cayuga St to Bristol St option 2B&C (0.17 miles)**				
Sharrows with green paint	every 250 feet	8	EACH	$750.00	$6,000.00
Design (15%)		1	LS		$900.00
CM/CI (10%)		1	LS		$600.00
Survey (5%)		1	LS		$300.00
Traffic Control (5%)		1	LS		$300.00
Mobilization (5%)		1	LS		$300.00
Contingency (20%)		1	LS		$1,200.00
				Section Total Segment 2:	**$9,600.00**

Segment 3	**Bristol St to Hunting Park Ave- including Leiper St cap area (0.17 miles)**				
12' Paved Shared Use Path	6" Subbase, 3" Bit. Base Course, 1" Wearing Course	1,153	SY	$35.00	$40,366.67
Excavation	Excavation - Class 1	320	CY	$25.00	$8,009.23
Fencing		865	LF	$40.00	$34,600.00
Clearing and Grubbing		1	LS	$25,000.00	$25,000.00
Leiper St cap	Improvements	1	LS	$100,000.00	$100,000.00
				subtotal	$207,975.89
E&S Control (5%)		1	LS		$10,398.79
Design (15%)		1	LS		$31,196.38
CM/CI (10%)		1	LS		$20,797.59
Survey (5%)		1	LS		$10,398.79
Mobilization (5%)		1	LS		$10,398.79
Contingency (20%)		1	LS		$41,595.18
				Section Total Segment 3:	**$332,761.43**

Segment 4	**Southern end of Leiper St cap to Kensington Ave (0.14 miles)**				
12' Paved Shared Use Path	6" Subbase, 3" Bit. Base Course, 1" Wearing Course	960	SY	$35.00	$33,600.00
Excavation	Excavation - Class 1	267	CY	$25.00	$6,666.64
Fencing		720	LF	$40.00	$28,800.00
Clearing and Grubbing		1	LS	$25,000.00	$25,000.00
Modifications at Auto Business		1	LS	$50,000.00	$50,000.00
Small Gateway		1	LS	$20,000.00	$20,000.00
				subtotal	$164,066.64
E&S Control (5%)		1	LS		$8,203.33
Design (15%)		1	LS		$24,610.00
CM/CI (10%)		1	LS		$16,406.66
Survey (5%)		1	LS		$8,203.33
Mobilization (5%)		1	LS		$8,203.33
Contingency (20%)		1	LS		$32,813.33
				Section Total Segment 4:	**$262,506.62**

Segment 5	**Kensington Ave - Bridge (0.03 miles)**				
Bridge	sidewalk barrier, hand railing, deck and sidewalk placement		LS		$300,000.00
				subtotal	$300,000.00
E&S Control (5%)		1	LS		$15,000.00
Design (20%)		1	LS		$60,000.00
CM/CI (10%)		1	LS		$30,000.00
Survey (5%)		1	LS		$15,000.00
Traffic Control (15%)		1	LS		$45,000.00
Mobilization (5%)		1	LS		$15,000.00
Contingency (20%)		1	LS		$60,000.00
				Section Total Bridge:	**$540,000.00**

	Description	Quantity	Unit	Cost/Unit	Total Cost
Segment 5	**Kensington Ave - Bridge to Adams Ave (0.05 miles)**				
12' Paved Shared Use Path	6" Subbase, 3" Bit. Base Course, 1" Wearing Course	261	SY	$35.00	$9,138.89
Excavation	Excavation - Class 1	73	CY	$25.00	$1,813.26
Sawcut	Sawcut existing pavement	235	LF	$1.00	$235.00
Curb	Concrete curb with exist curb removal and pavement restoration	235	LF	$55.00	$12,925.00
Drainage	Move 1 inlet	1	EACH	$9,000.00	$9,000.00
Landscaping	top soil, seeding, trees (50' spacing)	235	LF	$30.00	$7,050.00
Signing and Pavement Marking		1	LS	$10,000.00	$10,000.00
				subtotal	$50,162.15
E&S Control (5%)		1	LS		$2,508.11
Design (15%)		1	LS		$7,524.32
CM/CI (10%)		1	LS		$5,016.22
Survey (5%)		1	LS		$2,508.11
Traffic Control (5%)		1	LS		$2,508.11
Mobilization (5%)		1	LS		$2,508.11
Contingency (20%)		1	LS		$10,032.43
				Section Total Segment 5:	**$82,767.55**

Segment 6	**Adams Ave - Kensington Ave to Frankford Ave (0.05 miles)**				
12' Paved Shared Use Path	6" Subbase, 3" Bit. Base Course, 1" Wearing Course	453	SY	$35.00	$15,866.67
Excavation	Excavation - Class 1	178	CY	$25.00	$4,459.86
Curb	Plain Cement Concrete Curb, Including Removal of Existing Curb	340	LF	$30.00	$10,200.00
Landscaping	top soil, seeding, trees (50' spacing)	340	LF	$30.00	$10,200.00
				subtotal	$40,726.53
E&S Control (5%)		1	LS		$2,036.33
Design (15%)		1	LS		$6,108.98
CM/CI (10%)		1	LS		$4,072.65
Survey (5%)		1	LS		$2,036.33
Traffic Control (5%)		1	LS		$2,036.33
Mobilization (5%)		1	LS		$2,036.33
Contingency (20%)		1	LS		$8,145.31
				Section Total Segment 6:	**$67,198.77**

Segment 7	**Worrell St - Frankford Ave to Torredale Ave (0.08 miles)**				
12' Paved Shared Use Path	6" Subbase, 3" Bit. Base Course, 1" Wearing Course	356	SY	$35.00	$12,444.44
Excavation	Excavation - Class 1	160	CY	$25.00	$4,012.33
Curb	Concrete curb with exist curb removal and pavement restoration	400	LF	$55.00	$22,000.00
Sawcut	Sawcut existing pavement	400	LF	$1.00	$400.00
Drainage	Move 2 inlets	2	EACH	$9,000.00	$18,000.00
Landscaping	top soil, seeding, trees (50' spacing)	400	LF	$30.00	$12,000.00
Intersection Improvements	Both ends of Worrell- signing and pavement markings	1	LS	$20,000.00	$20,000.00
				subtotal	$88,856.77
E&S Control (5%)		1	LS		$4,442.84
Design (15%)		1	LS		$13,328.52
CM/CI (10%)		1	LS		$8,885.68
Survey (5%)		1	LS		$4,442.84
Traffic Control (5%)		1	LS		$4,442.84
Mobilization (5%)		1	LS		$4,442.84
Contingency (20%)		1	LS		$17,771.35
				Section Total Segment 7:	**$146,613.68**

Segment 8	**Torresdale Ave, Adams Ave Connector to Aramingo Ave (0.75 miles)**				
Maintenance	Part of PennDOT project	0	0	$0.00	$0.00
Small Gateway	Part of PennDOT project	0	0	$0.00	$0.00
				Section Total Segment 8:	**$0.00**

Segment 9	**Aramingo Ave - Adams Ave Connector to Wheatsheaf Ln (0.24 miles)**				
Signal at Adams Ave	Part of PennDOT project	0	0	$0.00	$0.00
Shared-Use Path	Part of PennDOT project	0	0	$0.00	$0.00
Small Gateway	Part of PennDOT project	0	0	$0.00	$0.00
				Section Total Segment 9:	**$0.00**

Segment 10	**Wheatsheaf Ln - Aramingo Ave to Richmond St (0.46 miles)**				
12' Paved Shared Use Path	6" Subbase, 3" Bit. Base Course, 1" Wearing Course	2,933	SY	$35.00	$102,666.67
Excavation	Excavation - Class 1	815	CY	$25.00	$20,370.29
Curb	Plain Cement Concrete Curb, Including Removal of Existing Curb	1,000	LF	$80.00	$80,000.00
Landscaping	top soil, seeding, trees (50' spacing)	2,200	LF	$15.00	$33,000.00
Signing and Pavement Marking		1	LS	$45,000.00	$45,000.00
Railroad Crossing		1	LS	$75,000.00	$75,000.00
				subtotal	$356,036.96
E&S Control (2%)		1	LS		$7,120.74
Design (20%)	Railroad crossing coordination and design	1	LS		$53,405.54
CM/CI (10%)		1	LS		$35,603.70
Survey (5%)		1	LS		$17,801.85
Traffic Control (5%)		1	LS		$17,801.85
Mobilization (4%)		1	LS		$14,241.48
Contingency (15%)		1	LS		$53,405.54
				Section Total Segment 10:	**$555,417.65**

	Description	Quantity	Unit	Cost/Unit	Total Cost
Segment 11	**Richmond St - Wheatsheaf Ln to Lewis St (0.22 miles)**				
Sharrows to Lewis St	every 250 feet	10	EACH	$250.00	$2,400.00
Design (15%)		1	LS		$360.00
CM/CI (10%)		1	LS		$240.00
Survey (5%)		1	LS		$120.00
Traffic Control (5%)		1	LS		$120.00
Mobilization (5%)		1	LS		$120.00
Contingency (20%)		1	LS		$480.00
				Section Total Segment 11:	**$3,840.00**

Segment 12	**Lewis St - Richmond St to North Delaware Ave (0.55 miles)**				
12' Paved Shared Use Path	6" Subbase, 3" Bit. Base Course, 1" Wearing Course	3,867	SY	$35.00	$135,333.33
Excavation	Excavation - Class 1	1,522	CY	$25.00	$38,039.97
Curb	Concrete curb with exist curb removal and pavement restoration	2,900	LF	$55.00	$159,500.00
Sawcut	Sawcut existing pavement	2,900	LF	$1.00	$2,900.00
Landscaping	top soil, seeding, trees (50' spacing)	2,900	LF	$15.00	$43,500.00
Railroad Crossing		1	LS	$75,000.00	$75,000.00
Signing and Pavement Marking		1	LS	$20,000.00	$20,000.00
Gateway		1	LS	$50,000.00	$50,000.00
				subtotal	$524,273.30
E&S Control (2%)		1	LS		$10,485.47
Design (20%)	Railroad crossing coordination and design	1	LS		$104,854.66
CM/CI (10%)		1	LS		$52,427.33
Survey (5%)		1	LS		$26,213.67
Traffic Control (5%)		1	LS		$26,213.67
Mobilization (4%)		1	LS		$20,970.93
Contingency (15%)		1	LS		$78,641.00
				Section Total Segment 12:	**$844,080.02**

Section Total Segment 1:	**$259,966.63**
Section Total Segment 2:	**$9,600.00**
Section Total Segment 3:	**$332,761.43**
Section Total Segment 4:	**$262,506.62**
Section Total Bridge:	**$540,000.00**
Section Total Segment 5:	**$82,767.55**
Section Total Segment 6:	**$67,198.77**
Section Total Segment 7:	**$146,613.68**
Section Total Segment 8:	**$0.00**
Section Total Segment 9:	**$0.00**
Section Total Segment 10:	**$555,417.65**
Section Total Segment 11:	**$3,840.00**
Section Total Segment 12:	**$844,080.02**
PRELIMINARY TOTAL COST ESTIMATE:	**$3,104,752.35**
Say	**$3,105,000.00**

Option 2- trail along river for segment 2

	Description	Quantity	Unit	Cost/Unit	Total Cost
Segment 2	**Cayuga St to Bristol St option 2A (0.17 miles)**				
12' Paved Shared Use Path	6" Subbase, 3" Bit. Base Course, 1" Wearing Course	933	SY	$35.00	$32,666.67
Excavation	Excavation - Class 1	259	CY	$25.00	$6,481.46
Fencing		700	LF	$40.00	$28,000.00
Clearing and Grubbing		1	LS	$40,000.00	$40,000.00
				subtotal	$107,148.12
E&S Control (5%)		1	LS		$5,357.41
Design (15%)		1	LS		$16,072.22
CM/CI (10%)		1	LS		$10,714.81
Survey (5%)		1	LS		$5,357.41
Traffic Control (5%)		1	LS		$5,357.41
Mobilization (5%)		1	LS		$5,357.41
Contingency (20%)		1	LS		$21,429.62
				Section Total Segment 2:	**$176,794.40**

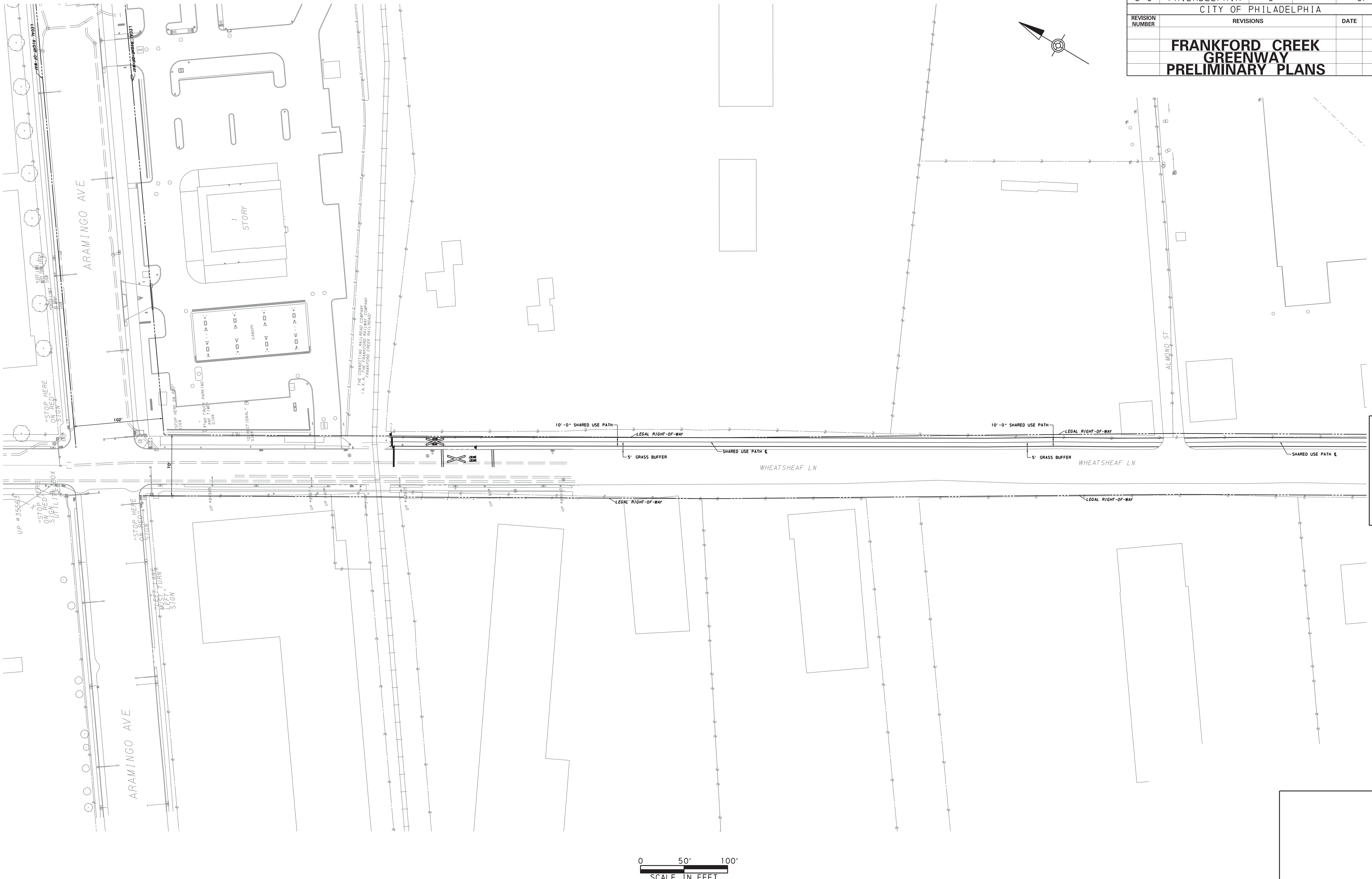
Section Total Segment 1:	**$259,966.63**
Section Total Segment 2:	**$176,794.40**
Section Total Segment 3:	**$332,761.43**
Section Total Segment 4:	**$262,506.62**
Section Total Bridge:	**$540,000.00**
Section Total Segment 5:	**$82,767.55**
Section Total Segment 6:	**$67,198.77**
Section Total Segment 7:	**$146,613.68**
Section Total Segment 8:	**$0.00**
Section Total Segment 9:	**$0.00**
Section Total Segment 10:	**$555,417.65**
Section Total Segment 11:	**$3,840.00**
Section Total Segment 12:	**$844,080.02**
PRELIMINARY TOTAL COST ESTIMATE:	**$3,271,946.75**
Say	**$3,272,000.00**

APPENDIX C: PRELIMINARY PLANS FOR SECTION 1

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0		OF 12
CITY OF PHILADELPHIA				

REVISION NUMBER	REVISIONS	DATE	BY

FRANKFORD CREEK GREENWAY PRELIMINARY PLANS



SEE SHEET XX

29-APR-2014

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0		0F 12
	CITY OF PHILADELPHIA			

REVISION NUMBER	REVISIONS	DATE	BY
	FRANKFORD CREEK GREENWAY PRELIMINARY PLANS		

SEE SHEET XX

SEE SHEET XX

29-APR-2014

E:\Frankford Creek Trail Study\Plot\Plans\XX-FC_trail_Plan_05.dgn

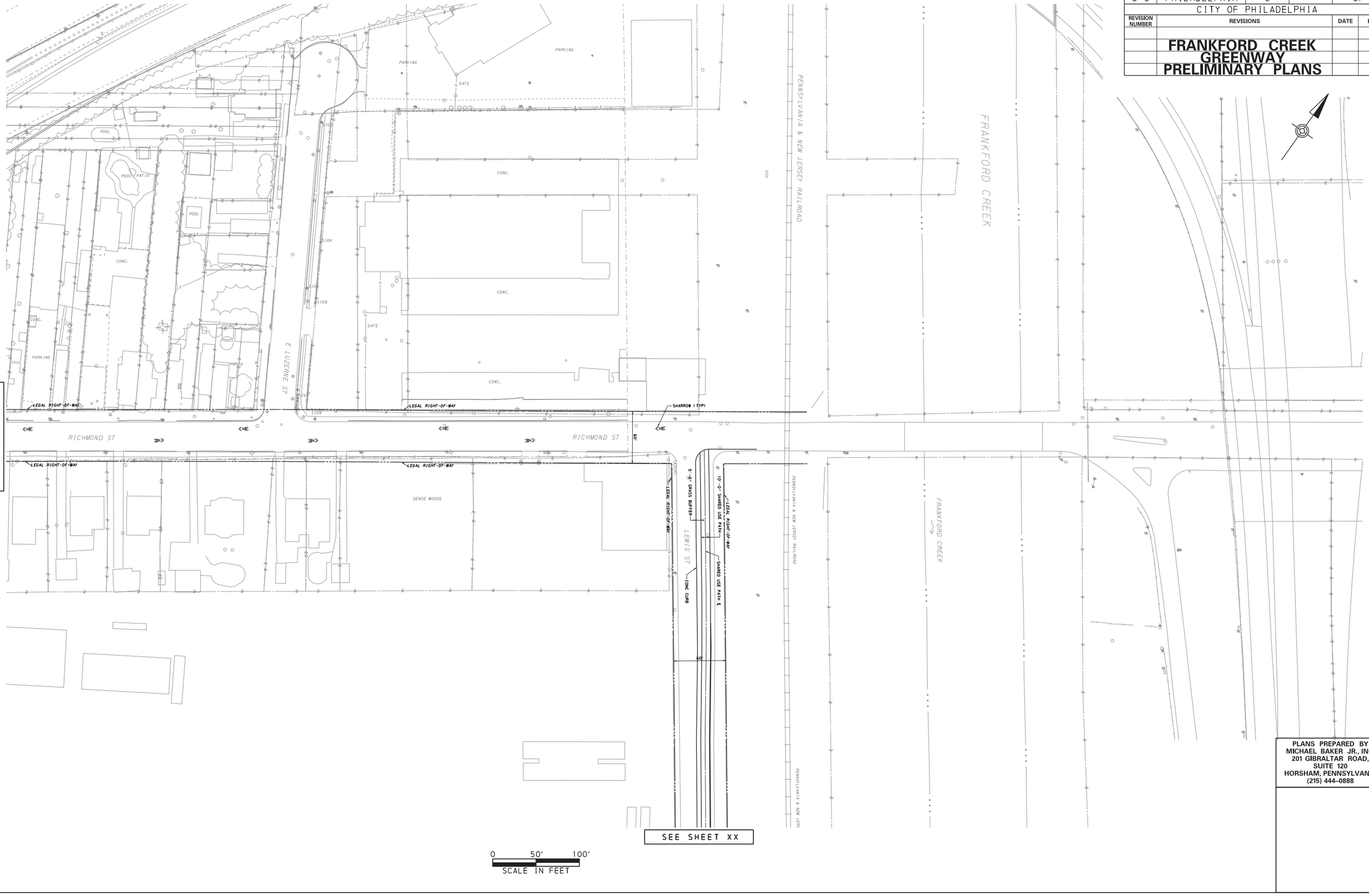
SHARED USE PATH ℄
LEGAL RIGHT-OF-WAY
10'-0" SHARED USE PATH
5' GRASS BUFFER
SHARED USE PATH ℄
WHEATSHEAF LN
LEGAL RIGHT-OF-WAY
E THOMPSON ST
OVERHEAD SIGN
DENSE VEGETATION
PARKING
PATIO
SIGN
DELAWARE EXP RMP D
SB DELAWARE EXP
NB DELAWARE EXP
DELAWARE EXP RMP C
C.O.P.
DENSE WOODS
CONC.
POOL
RUINS
FLAGPOLE
RICHMOND ST
LEGAL RIGHT-OF-WAY
10'-0" SHARED USE PATH
5' GRASS BUFFER
SHARED USE PATH ℄
SHARROW (TYP.)
60'
70'
GATE
DEBRIS
DENSE VEGETATION

0 50' 100'
SCALE IN FEET

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0		0F 12
	CITY OF PHILADELPHIA			

REVISION NUMBER	REVISIONS	DATE	BY

FRANKFORD CREEK GREENWAY PRELIMINARY PLANS



PLANS PREPARED BY
MICHAEL BAKER JR., INC.
201 GIBRALTAR ROAD,
SUITE 120
HORSHAM, PENNSYLVANIA
(215) 444–0888

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0		0F 12
	CITY OF PHILADELPHIA			

REVISION NUMBER	REVISIONS	DATE	BY
	FRANKFORD CREEK GREENWAY PRELIMINARY PLANS		

FRANKFORD CREEK

PENNSYLVANIA & NEW JERSEY RAILROAD

DRAINAGE RIGHT-OF-WAY RESERVED FOR CONSTRUCTION, RECONSTRUCTION, REPAIR AND MAINTENANCE OF SEWERS. ORDINANCE DECEMBER 19, 1951 SEWER

DRAINAGE RIGHT-OF-WAY RESERVED FOR CONSTRUCTION, RECONSTRUCTION, REPAIR AND MAINTENANCE OF SEWERS. ORDINANCE DECEMBER 19, 1951 SEWER

SEE SHEET XX

LEGAL RIGHT-OF-WAY

10'-0" SHARED USE PATH

SHARED USE PATH ℄

5'-0" GRASS BUFFER

CONC CURB

LEWIS ST

LEGAL RIGHT-OF-WAY

10'-0" SHARED USE PATH

SHARED USE PATH ℄

5'-0" GRASS BUFFER

CONC CURB

LEWIS ST

LEGAL RIGHT-OF-WAY

SEE SHEET XX

0 50' 100'

SCALE IN FEET

29-APR-2014

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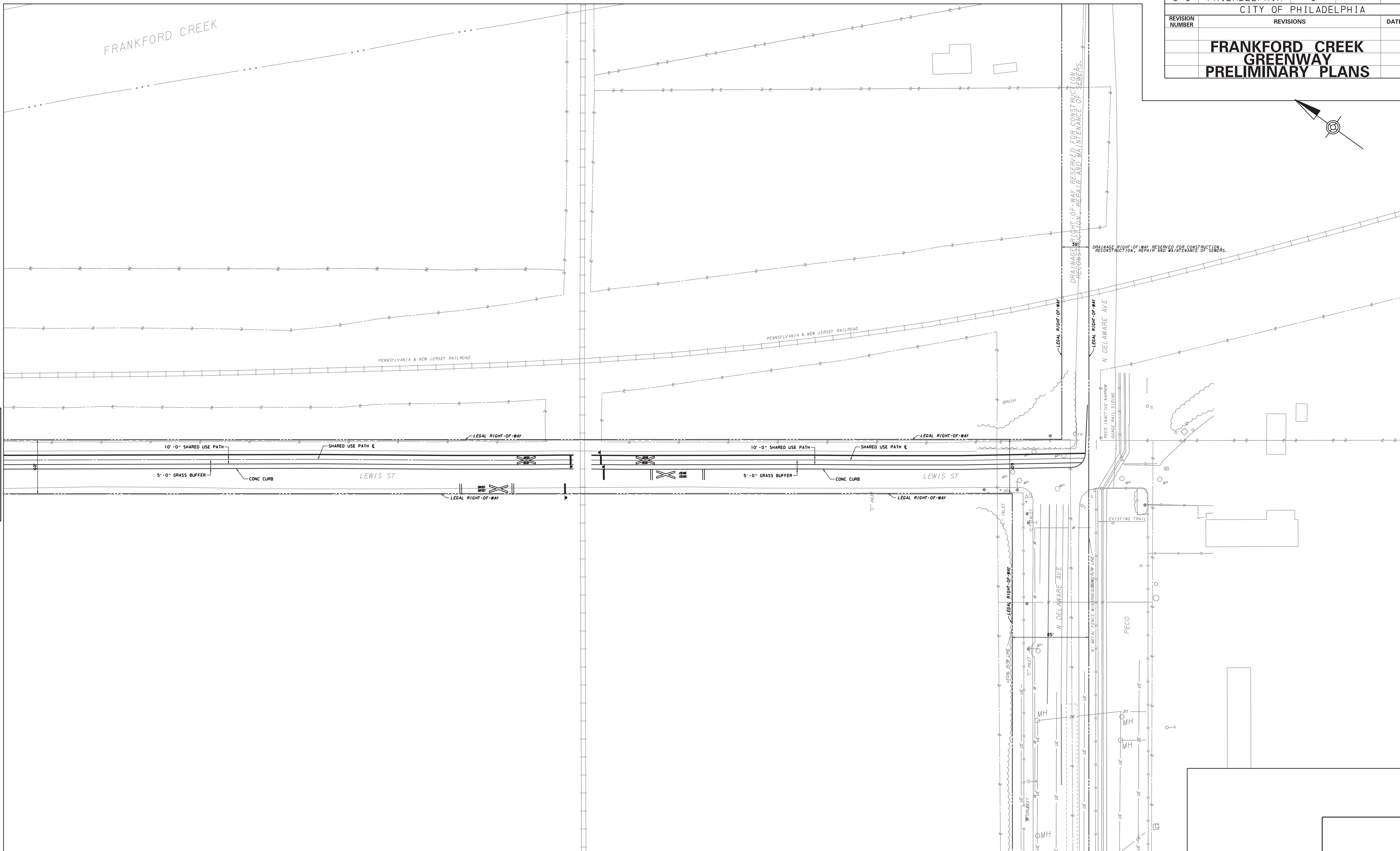
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0		OF 12
CITY OF PHILADELPHIA				

REVISION NUMBER	REVISIONS	DATE	BY
	FRANKFORD CREEK GREENWAY PRELIMINARY PLANS		



SEE SHEET XX

0 50' 100'
SCALE IN FEET

29-APR-2014

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APPENDIX D:
MEETING DOCUMENTATION

Meeting Minutes

Project:	Frankford Creek Greenway Study	**Date:**	May 2, 2013
Subject:	Kick-off Meeting	**Time:**	9:00 AM
		Place:	Parks and Rec. Dept.

Attendee	Representing	Phone Number	Email Address
Jeannette Brugger	PCPC	215.643.4653	Jeannette.brugger@phila.gov
Rob Armstrong	Parks & Recreation	215.683.0229	Rob.armstrong@phila.gov
Tom Branigan	DRCC	215.519.8100	tbranigan@drcc-phila.org
Dan Dunphy	Councilwoman Sanchez	215.686.3448	daniel.dunphy@phila.gov
Charles Carmalt	MOTU	215.686.6835	charles.carmalt@phila.gov
Leigh Jones	Phila. Redevelopment Authority	215.320.7880	leigh.jones@pra-phila.gov
Valessa Souter-Kline	Phila. Water Dept.	215.609.0185	Valessa.souter-kline@phila.gov
Stephanie Craighead	Parks & Recreation	215.683.0210	Stephanie.craighead@phila.gov
Charles Mottershead	Dept. of Public Property	215.683.4466	Charles.mottershead@phila.gov
Julie Slavet	TTFWP	215.380.5380	Julie@hjwatershed.org
Ian Litwin	PCPC	215.683.4609	ian.litwin@phila.gov
Dan Biggs	Toole Design Group LLC	301.927.1900 x109	Dbiggs@tooledesign.com
Liz Gabor	PIDC	215.496.8142	egabor@pidc-phila.org
Chris Stanford	Michael Baker Jr., Inc.	215.442.5333	cstanford@mbakercorp.com

Purpose of Meeting:

This was the kick-off meeting for this feasibility study. The goal of the meeting was to gain background information on the study, outline roles and responsibilities determine exact goals and lay out a schedule for future meetings.

Discussion:

1. **Roles and Responsibilities**

   The project will be jointly managed by PCPC and the PPR. Baker will be the lead consultant with support of Toole Design Group. The attendees at the meeting will serve as the Steering Committee for the study. The consultant team will look to the Steering Committee for input and feedback on the various elements of the study.

2. **Scope and Schedule**

   The scope of the project is to determine the feasibility of constructing a greenway and trail network to connect the Juniata Park area to the East Coast Greenway near the Delaware River along the Frankford Creek corridor. The main tasks involved with the study include understanding existing conditions, developing an understanding of challenges and opportunities, identifying

partnership opportunities, identifying trail alignment options, and developing an implementation strategy. It was noted that the starting point of study will be Wingohocken Avenue and modifications of the Juniata Golf Course are not included in the scope of the study.

The study is anticipated to be completed over the course of 12 months. A detailed schedule is attached to these meeting minutes.

3. Discussion of Previous Efforts

a. 2007 PWD Frankford Creek Greenway Master Plan – A brief overview of the results of the Master Plan was provided. This study was completed by PWD and included 3 levels of development. Joanne Dahme (joanne.dahme@phila.gov) from PWD was the manager of that study. This project will follow most closely to scenario 3 (attached).

b. 2011 – PCPC Frankford Creek Greenway: Land Acquisition Strategy. This document was prepared by City Staff and identified many of the critical properties/owners needed along the Greenway. It was noted that property values/appraisals were approximate and would need to be verified.

c. Other projects in the area – It was noted that a trailhead is located at Ramona and I streets. PWD is working on a stormwater improvement in the concrete island at Castor Ave/ Cayuga Street.

4. Coordination with On-going Projects

a. Trail alongside Ramp JJ – The City has been in detailed discussions with PennDOT and DRPA regarding the potential widening of an on-ramp between Aramingo Avenue and the Betsy Ross Bridge with a barrier separated area for the trail. This elevated ramp would pass over top of I-95 and would eliminate numerous conflict points for the trail and would provide a direct connection between Aramingo Avenue and Richmond Avenue. PennDOT has agreed to design and construct the ramp if maintenance and ownership of the ramp is accepted by others. A preliminary sketch of this option is attached.

   The City requested that the Baker team explore alternate trail alignments in case agreement on the trail along Ramp JJ cannot be completed.

   It was noted that DRPA has agreed to a 30’ trail easement between Richmond Street and Delaware Avenue.

b. Sidepath along Adams Avenue Connector – PennDOT has agreed to design and construct a 10’ wide sidepath with 5’ grass buffer along Adams Avenue. This trail will connect Aramingo Avenue to Torresdale Avenue. A graphic showing this area is attached.

c. Delaware Avenue Extension – The City is completing roadway and trail construction for extension of Delaware Avenue from Lewis Street to Orthodox Street. This work is anticipated to start construction in the spring of 2014. Phase 1B from Orthodox St. to Buckius Street is

also anticipated. A future study for continuation of Delaware Avenue from Buckius St. to Bridge St. is anticipated to be advanced by the City in the near future.

d. EPA Brownfields Grant – PCPC has been awarded a grant to study redevelopment of the brownfield areas between Bridge St. and the former location of the mouth of the Frankford Creek. The study is anticipated to start in late 2013.
e. Imaging Frankford – there is an ongoing mural arts program in the area as well.
f. Scrapyard Task Force – The City has an on-going effort to ensure scrapyards in the City are following appropriate laws and ordinances. Vince Dougherty (vince.dougherty@phila.gov 215-683-2021) is the contact for this effort.

5. Available Resources / GIS Data Discussion

Members of the Baker Team will contact the City project managers to coordinate acquisition of available data for the corridor.

6. Next Steps

An approximate timeline for Steering Committee Meetings is included in the project schedule attached to these minutes. A field view of the project corridor with the steering committee will be held in the next few weeks. Baker will coordinate with the committee for the best date.

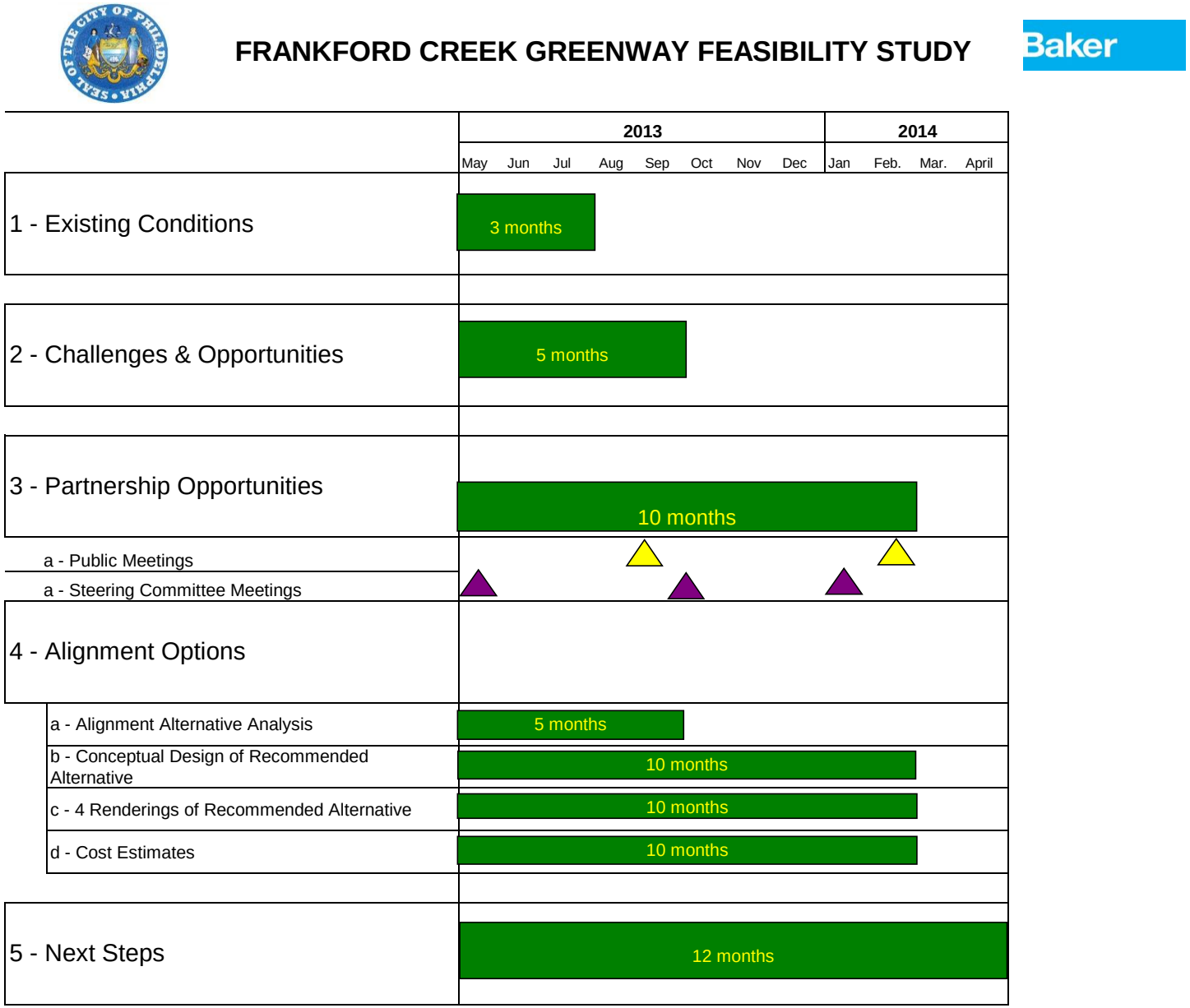
Any additions and/or corrections to these meeting minutes are to be submitted to the author within five (5) days of receipt or the minutes will be considered the final record of the meeting as written.

Sincerely,

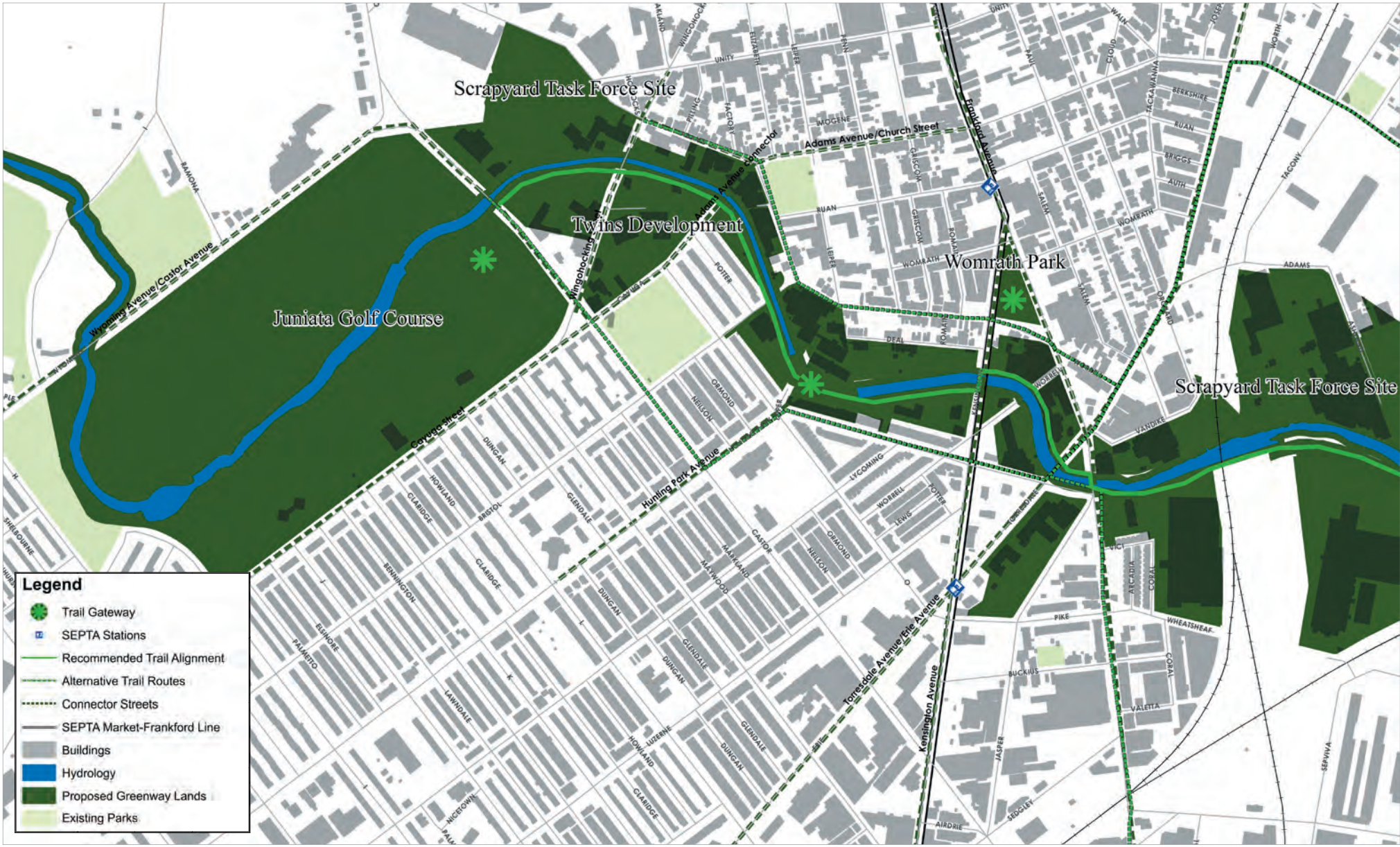
Chris Stanford, P.E., PTOE, PMP

Michael Baker Jr., Inc.
Project Manager

FRANKFORD CREEK GREENWAY FEASIBILITY STUDY



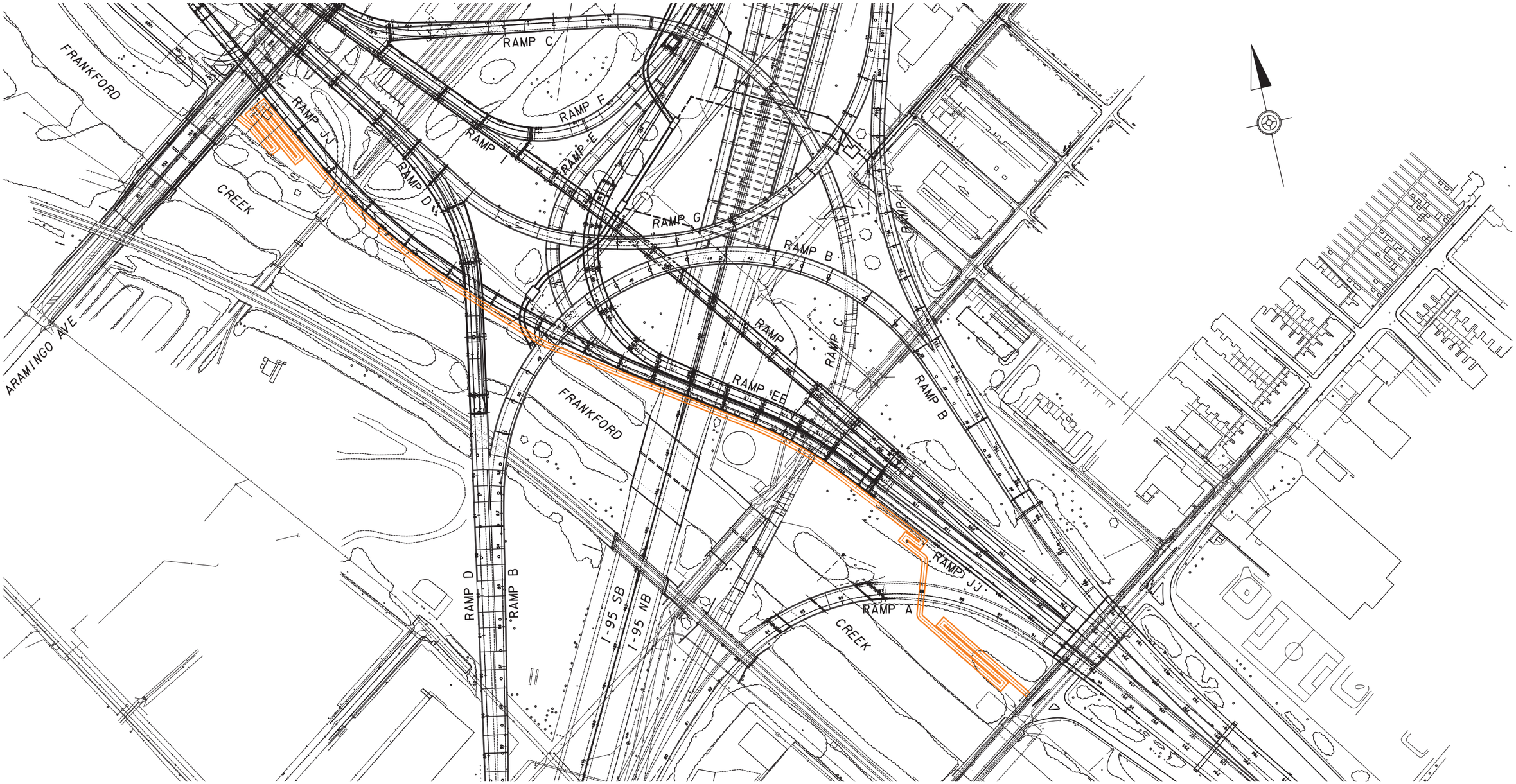
Map 3.3: Scenario 3




N. Del. Riverfront Greenway
Scrapyard Task Force Site
Scrapyard Task Force Site
DELAWARE EXP
WILMOT
GILLINGHAM
SELLERS
BRISTOL
CROYDON
EDDINGTON
ALRESFORD
JUNIATA
BERKSHIRE
BETSY ROSS BRIDGE
Richmond Street
Aramingo Avenue
LEWIS
LUZERNE
ALMOND
WHEATSHEAF
Delaware Avenue Extension
95

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	PHILADELPHIA	0095	BRO	1 OF 9
CITY OF PHILADELPHIA				

REVISION NUMBER	REVISIONS	DATE	BY

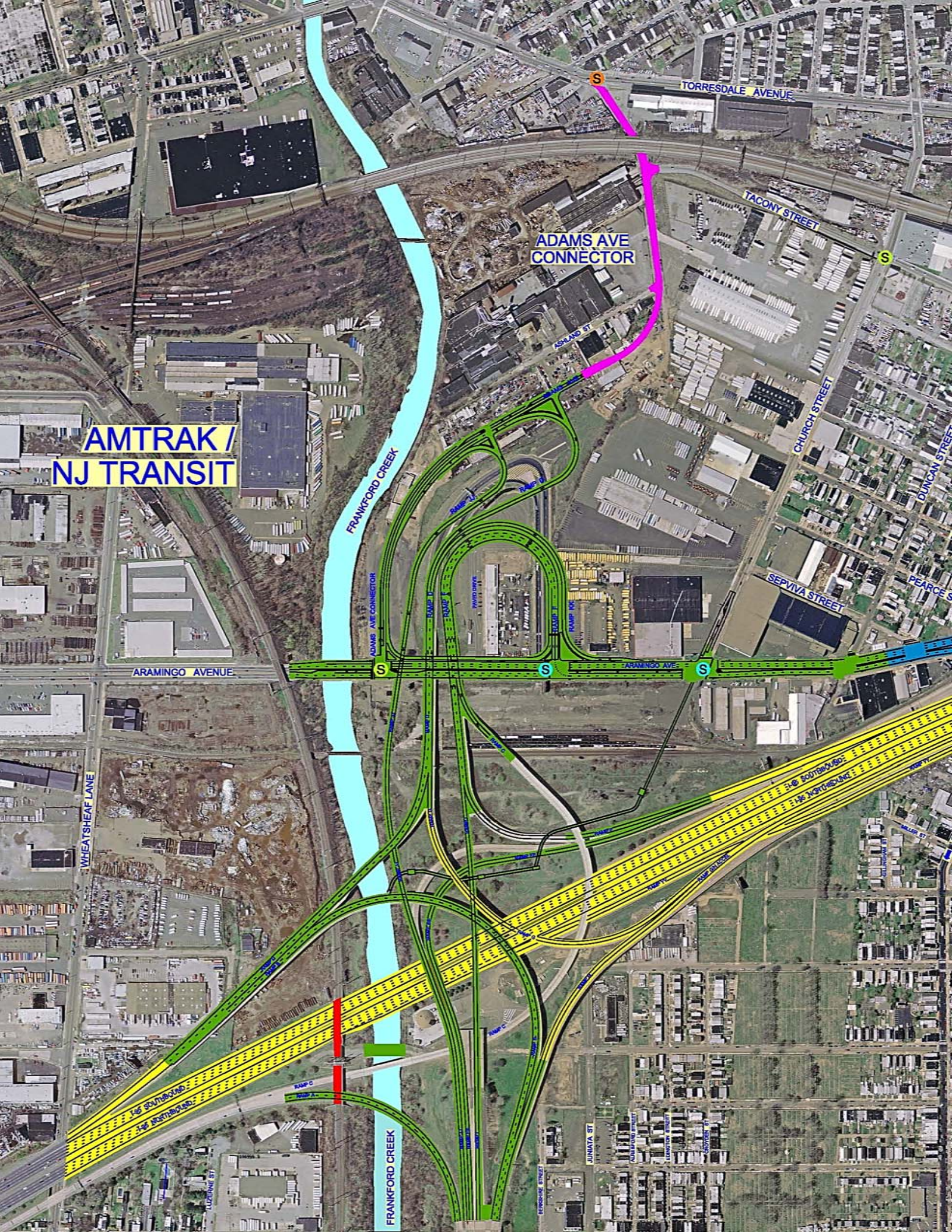


AUGUST 2012
PEDESTRIAN ACCESS RAMP
CONCEPTUAL PLAN

PRELIMINARY
(SUBJECT TO CHANGE)

STV

$FILE$
$DATE$
$TIME$
$USER$


TORRESDALE AVENUE
TACONY STREET
ADAMS AVE CONNECTOR
ASHLAND ST
CHURCH STREET
DUNCAN STREET
AMTRAK / NJ TRANSIT
FRANKFORD CREEK
SEPVIVA STREET
PEARCE S
ARAMINGO AVENUE
WHEATSHEAF LANE
I-95 SOUTHBOUND
I-95 NORTHBOUND
JUNIATA ST
FRANKFORD CREEK

Meeting Minutes

Project:	Frankford Creek Greenway Study	**Date:**	June 17, 2013
Subject:	PennDOT Coordination Meeting	**Time:**	1:00 PM
		Place:	PennDOT

Attendees:

Charles Davies	PennDOT D-6	
Paul Shultes	AECOM	D-6 Consultant - Project Manager
Len Smith	STV	Designer – I-95 Section BR0
Geoffrey Stryker	STV	Designer – I-95 Section BR0
Bob Kocher	CDM Smith	Designer – I-95 Section BS3 – Aramingo Ave.
Paul Linahan	Gannett-Fleming	Designer – I-95 Section AFC
Rob Armstrong	Phila. Parks & Recreation	Owner – Frankford Creek Greenway
Jeannette Brugger	Phila.City Planning	Owner – Frankford Creek Greenway
Chris Stanford	Michael Baker	Designer – Frankford Creek Greenway
Tom Kerins	Urban Engineers, Inc	CM –I-95 Sections BRI/BSR/AFC
Nora Kerins	Urban Engineers, Inc	CM –I-95 Sections BRI/BSR/AFC

Paul Shultes opened the meeting with introductions and explained that the purpose of the meeting was to continue coordination efforts between PennDOT and the Philadelphia Parks and Recreation Department regarding the Frankford Creek Greenway and I-95 Section BRO and the Adam's Ave. Connector.

II. ROLES AND RESPONSIBILITIES

- Phila. Parks and Recreation: Owner/Administrator for the Frankford Creek Greenway; Co-management of the study
- Phila. City Planning: Co-management of the study
- Michael Baker: Design Consultant for Parks & Recreation for the Frankford Creek Greenway
- PennDOT: Reconstructing I-95 from Girard Ave to Cottman Ave. and will work with Parks and Recreation to incorporate portions of the Greenway into the I-95 Projects where appropriate.
- STV Inc: PennDOT's Design Consultant for I-95 Section BR0, which includes a portion of the proposed Frankford Creek Greenway area
- CDM Smith: PennDOT's Design Consultant for I-95 Section BS3 (Aramingo Avenue) which includes a portion of the proposed Frankford Creek Greenway area
- Gannett Fleming: PennDOT's Design Consultant for I-95 Section AFC, including utility relocations along Wheatsheaf Lane. A portion of the Frankford Creek Greenway is proposed to run along Wheatsheaf Lane.

III. SCOPE AND SCHEDULE

Mr. Stanford presented an aerial graphic of the project that showed the latest route for the proposed Frankford Creek Greenway. Within the limits of Section BR0, the Greenway would run along the south side of the Adams Ave. Connector up to Aramingo Ave; turn right onto Aramingo Ave. and head toward

Wheatsheaf Lane; turn left onto Wheatsheaf Lane and head toward Richmond St; turn left onto Richmond St and head to Lewis St; turn right onto Lewis St and continue east towards the Delaware River. Mr. Shultes noted that Section BR0 is now in final design and final plans are expected to be complete a year from now. The Frankford Study is anticipated to be completed by Spring of 2014.

IV. WHEATSHEAF LANE

The Frankford Ave Greenway was originally being planned along Ramp JJ. When the DRPA did not accept that plan, Baker was directed to find an alternate route. One alternate route under consideration is to have the Greenway run from the Adams Avenue Connector to Aramingo Ave and from there to Wheatsheaf Lane. The trail would turn onto Richmond St. and then onto Lewis St.

It is anticipated that Section BR0 and potentially AFC and PWD will have major utility/reconstruction work that will impact Wheatsheaf Lane. Full width reconstruction is anticipated. It would be beneficial to include the ultimate configuration for the Greenway in any reconstruction plans. Mr. Stanford indicated one potential option along Wheatshead is to convert the existing sidewalk area into a 10' shared use path with a 5' buffer down the Northeastern side of Wheatsheaf Lane. Wheatsheaf Lane appears to be about 40' wide with 8' for parking on either side, and a 12' to 14' sidewalk on one side. Mr. Kocher noted that Wheatsheaf Lane right of way is shown to be 70' wide on the plan at the intersection.

The bridge on Thompson Street over Frankford Creek is being removed as part of Section BR0. The PGW utilities that currently run along the Thompson St Bridge will be relocated to Wheatsheaf Lane between Richmond and Thompson St. Two 24" gas lines are anticipated to be relocated into Wheatsheaf Lane. Mr. Linahan noted that the Water Department is also interested in adding a new large facility on Wheatsheaf Lane. PWD has two large existing facilities that go at least as far as Aramingo Ave. PWD is in planning for a third. Mr. Shultes will contact Mr. Mohammad from PennDOT's Utility Unit to set up a utility coordination meeting to coordinate the PGW and PWD designs.

There's not much room for a bike path along Richmond St. and it's anticipated that bicycles and motorists will "Share the Road." The entire area below Richmond St. is owned by the PWD, so it might be possible to put a trail there.

Mr. Shultes noted that there needs to be a discussion about a Trail Agreement with PennDOT. Mr. Armstrong from PPR commented that the trail would be part of the Frankford Greenway, so the park will ultimately be responsible for maintaining it. Mr. Shulties will contact Maryann Long about getting a Trail Agreement.

Mr. Shultes noted that Synterra is on the CDM Smith team and will be preparing the Landscaping Plans for Section BRO. Mr. Shultes suggested that PPR provide them with a conceptual design for a typical section of the trail. Baker will provide a typical section. Mr. Armstrong said that PPR would be glad to provide a conceptual landscape concept. Mr. Shultes asked PPR to provide their conceptual layouts by the end of August.

Mr. Armstrong asked if PennDOT would be willing to install pedestrian scale lighting along the trail. Lighting would help trail users to feel more welcome and safer. Standard City "brown round" or Center

City District lights may be an option. Mr. Shultes suggested a dual lighting system for the roadway and trail. Mr. Davies said that PennDOT could build two lighting systems as long as PPR would maintain the lighting for the trail. Mr. Armstrong asked to see a design plan for a dual lighting system so he can present both options to PPR director, Mark Focht.

V. ARAMINGO AVE. GATEWAY / ARCH AT ADAMS CONNECTOR TRAIL

Mr. Stanford suggested adding an archway or a gateway entrance treatment for the trail where the Greenway along the Adams Ave Connector meets Aramingo Ave. A map kiosk/signage could also be added at this location. PPR has designed some gateways before and will provide Mr. Stanford with a plan. The Department agreed to install a gateway treatment. PPR will provide PennDOT with a conceptual design for incorporation into BR0. PPR also request that bikeway signage for the Greenway be installed. The Department agreed to install this signage if PPR provided the sign locations/messages. Baker/PPR will provide a concept sign plan for the Adams Ave/Aramingo intersection area.

The upper portion of the Adams Ave Connector that extends from Ashland Ave. to Tacony St and up to Torresdale Ave won't be constructed as part of BR0 and it's unlikely to be built before 2017.

VI. POTENTIAL ARAMINGO AVE. SIDEPATH

The concept of a potential sidepath along Aramingo Ave. to Wheatsheaf was discussed. The current Aramingo Ave over Frankford Creek bridge design includes bike lanes and a 6' sidewalk. The existing railroad overpass to the west of Frankford Creek has a narrow sidewalk area that may preclude a full width shared use path at that small area. There appears to be space outside the roadway for a shared use path from the railroad over pass to Wheatsheaf. This option will be explored further as part of the Greenway Study.

VII. OPEN SPACE / BASIN LOCATIONS

PPR would like to see more areas for passive green space along the Frankford Greenway and Adams Avenue Connector. There are some areas along Adams Ave. that could be used for green space. As Adams Ave gets closer to Aramingo Ave, the distance between the roadway and Frankford Creek narrows considerably. There are less opportunities to use the space between the road and the creek because of the flood plain. At the upper end of the Adams Ave connector near Ashland Street, there may be space to allow the trail alignment to meander away from the roadway. An overlook to the Frankford Creek may be feasible in that area as well. PPR will supply a sketch of this area.

VIII. AESTHETIC IMPROVEMENTS

Mr. Armstong asked if aesthetic improvements could be made to the Aramingo Ave. Bridge over Frankford Creek and other structures near the greenway. Mr. Shultes responded that no commitments have been made thus far, but there needs to be a discussion about aesthetic improvements to the bridges/structures. Mr. Armstrong said he'd like to incorporate the concrete form liners and staining that he and Mr. Kerins were able to incorporate into PennDOT's Gustine Lake Interchange Project. Mr. Kerins noted that these types of aesthetic improvements should be easy to incorporate into the project. The Aramingo Bridge over the Creek is being replaced as a part of BR0, so improvements such as form-liners

and staining could be used there. The bridge on Richmond St. isn't included in the project and neither is the AMTRAK Bridge over Adams Ave. Baker will get back to PPR on aesthetic recommendations for the bridges. Mr. Shultes noted that there is a Sustainable Action Committee (SAC) field view of the project on Wed. morning and he will advise them of these discussions.

IX. BIKE DESTINATION SIGNS

There are about 390 bike destination signs citywide. Jeanette from City Planning would like five or six signs incorporated at the intersections of this project. Baker will come up with a list of potential intersections to place signs.

X. NEXT STEPS

- Mr. Shultes will contact Utility Unit about coordinating PGW and PWD work on Wheatsheaf Lane.
- Mr. Shultes will contact Maryanne Long regarding initiating a Trail Agreement with PPR.
- PPR/Baker will provide PennDOT with a typical section for the trail, landscaping concepts, trail materials, and a conceptual plan for the archway/gateway. PPR/Baker will provide recommendations for formliners.
- PPR and PennDOT will coordinate on pedestrian scale lighting along Adams Ave. Connector
- Mr. Shultes will contact KSK and update them on the discussions held today.

Any additions and/or corrections to these meeting minutes are to be submitted to the author within five (5) days of receipt or the minutes will be considered the final record of the meeting as written.

Sincerely,

Chris Stanford

Chris Stanford, P.E., PTOE, PMP

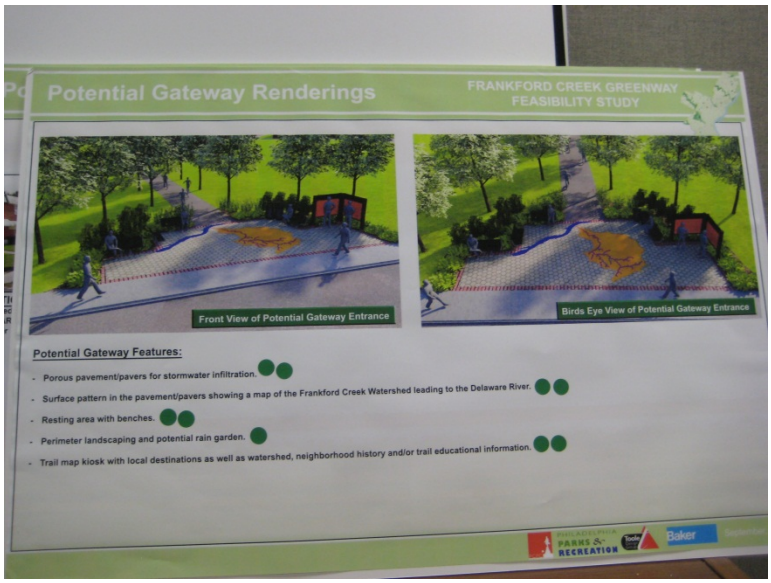
Michael Baker Jr., Inc.
Project Manager

Frankford Creek Greenway Feasibility Study

Public Meeting Sept. 30, 2013

Summary:

23 people signed in (including the project team.)



Sticker Results:

1. Gateways–

- 2 positive votes for porous paver
- 2 positive votes for surface pattern in pavement of the watershed
- 2 positive votes for benches
- 1 positive vote for perimeter rain garden and landscaping
- 2 positive votes for trail map/ educational kiosk
- No negative votes

2. Potter Street Area Options:

- 1 positive vote and 2 negative votes for sharrows on Potter St.
- 2 postive votes for sharrows on alley
- 3 positive votes for SUP on the City property

Written Comments

- 1 written comment received indicating preference to have the trail/greenway close to the Creek as much as possible and away from homes.

Frankford Creek Greenway Feasibility Study

PHILADELPHIA PARKS & RECREATION

First Public Meeting

Juniata Golf Course
September 30, 2013

Name	Address	Email	Phone
Alix Howard	4500 North Street 19124	alix@thfriendshed.org	(215) 744-4453
Laura Ahramjian	123 S. Broad St, #2250 19109	lahramjian@rosti.com	(215) 790-1050
Tim Gunner	1700 Market St. Phila. 19103	timothy.gunner@aecom.com	(215) 789-2118
J. Loftus	NE Times		215 354 3110
Lisa Borline	Senator Tartaglione 19124	LBorline@PASenate.com	215-533-0440
Walt Wesolowski	Juniata Golf Club		215-535-6523
Maryanne Seifert	1347 Foulkrod St. 19124	Maryanne Seifert @ verizon.net	
Janice Casino	4214 Markland St 19124	Jancas@comcast.net	
Tom Branigan	5301 Tacony St 19154	tbranigan@dvcc-phila.org	215-519-8100
J. Sandman	19143	SANDMAN8352@GMAIL.COM	(215) 580-3241
B Smiley	4699 Penn		2158475306
Jim Smiley	1128 Foulkrod St 19124	jim@frankfordgazette.com	2677389559
Joseph Beddis	34 Radburn Road N. Valley, 19006	tuf30801@temple.edu	215-380-2644
Chris Beddis	34 Radburn Rd 19006	cbeddis@yahoo.com	215-407-7276
Christine Fisher	1916 Banbridge Apt 2	cfisher@planphilly.com	603-315-8891

Frankford Creek Greenway Feasibility Study

PHILADELPHIA PARKS & RECREATION

First Public Meeting

Juniata Golf Course
September 30, 2013

Name	Address	Email	Phone
Robin Dominick	3407 Baring Street Philo, 19104	robin.dominick@aecom.com	(215) 222-7036
ED FAGAN	1515 ARCH ST 19102	ED.FAGAN@PHILA.GOV	
DAN ADAIR	4413 Garden St 19137	Foreverfresh44@aol.com	(215) 535-5576
Chris Stanford	BAKER		
Jason Bowen	↓		
Christina Grigiane	↓		
Jeannette Brugger	PCPC		
Rob Ackerling	PPR		

Frankford Creek Greenway Feasibility Study

First Public Meeting
Juniata Golf Course
September 30, 2013

COMMENT FORM

Dear Community Member:

Thank you for attending tonight's meeting on the proposed Frankford Creek Greenway. We are interested in your comments on the greenway proposals presented tonight. Staff members are available to record your opinions, and you may also complete this comment form to provide feedback.

Comments:

I don't live in the areas impacted, but as an environmental/watershed educator, the closer you can get people to the water, the better! Moving trails closer to water might appeal to homeowners who are concerned about increased traffic if the path is near their house. (maybe?)

Name: Alix Howard

Address: 4500 Worth 19124

Phone/Email: alix@ttfwatershed.org

Please return completed forms to the staff tonight, or mail/fax completed form to either:

Jeannette Brugger
City Planner, Planning Division
Philadelphia City Planning Commission
One Parkway Building
1515 Arch Street, 13th Floor
Philadelphia, PA 19102
tel: (215) 683-4637
fax: (215) 683-4630
e-mail: jeannette.brugger@phila.gov

Rob Armstrong
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e

Alix Howard
Education and Outreach Director

Tookany/Tacony-Frankford
Watershed Partnership, Inc.

4500 Worth Street | Philadelphia, PA 19124
ph 215.744.1853 **e** alix@ttfwatershed.org
web www.ttfwatershed.org

Thank you for completing this comment form and for your interest in the Greenway!

Frankford Creek Greenway Feasibility Study
Steering Committee Meeting
Philadelphia City Planning Commission
October 11, 2013
2:00 PM

MINUTES

Attendees: Jeannette Brugger, Ian Litwin, Clint Randall (PCPC); Rob Armstrong, Stephanie Craighead (PPR); Nicole Hostettler (PWD); Charles Carmalt (MOTU); Christine Caggiano, Chris Stanford (Baker)

Jeannette opened the meeting with status updates on project partners: Rachel Brooks will be the PRA point person for the project, and Clint Randall will be the PCPC point of contact while Jeannette is on leave.

I. Existing Conditions Memo

The Steering Committee briefly reviewed the Existing Conditions and property ownership information by segment. PRA has been engaged to figure out the ownership and property lines for the Twins property. That information is expected before the end of October. Rob stated that while the area is largely open, they are interested in a 30-foot easement and space for a gateway at the end of the property. Nicole reminded the group that the bulk of PWD's stormwater management funding must go to projects that pull runoff from the CSO in order to get credit from the EPA. This area is fuzzy in terms of where the CSO boundary is and PWD would need to do a site visit to determine where exactly the area drains to. PWD stated they would check into that within the next month. Chris and Jeannette reviewed the three options available for Potter Street. For the 4066-70 Kensington Ave property, Rob asked PWD about acquiring an easement from the property owner to green some of his impervious area. Nicole stated that PWD grant funding is given to take public run-off, not to help private property owners. Rob stated that he isn't looking to have the site take public run-off; he sees the reduction in stormwater bills as potential leverage to get an easement. He requested that Nicole look into any other locations where that kind of exchange has occurred. Nicole also requested the development plat for Twins via email to help guide her research.

ACTION ITEMS: Email Twins plans to Nicole. PWD to follow up on CSO boundary and on examples of greening private property to get an easement. Jeannette and Rob to continue working with PRA on Twins ownership.

II. Results of the September 30 Public Meeting

Chris reviewed the results of the public meeting. The meeting was lightly attended by local residents, but did get positive press. While dots were used to try to gauge feedback for key areas like Potter Street, it indicated general support for adding bicycle and pedestrian infrastructure rather than strongly favoring a single intervention. The only written

comment form received thus far indicated a preference to keep the trail/greenway close to the creek as much as possible. The Steering Committee expressed concern about not having the Potter Street residents at the meeting. Stephanie suggested extra, targeted flyering to Potter Street residents now providing information and asking for comments and to invite them to the final public meeting at Globe Dye Works in January.

ACTION ITEMS: Create flyer for Potter Street residents with project information, the Potter Street alignment options, and an opportunity to submit comments.

III. Potential Alignment and Inter-agency coordination

Jeannette reviewed the alignment options for the length of the greenway. Ian asked about the timing of Adams Avenue, and Jeannette stated it is a two stage project with completion in 2020. Jeannette also said that Wheatsheaf may be rebuilt with later stages of I-95 reconstruction, and there would be continued coordination for Wheatsheaf. She also stated that DRPA has okayed the alignment under the Betsy Ross Bridge to dead-end at the Delaware Avenue Trail. The Steering Committee agreed with the overall alignment, but Ian brought up the Edgewater Dye site and the EPA Brownfields Areawide study. He suggested looking at using Frankford between Worrell and Torresdale rather than going down Worrell to capitalize on the EPA study and to green a space that is more used than Worrell. Jeannette brought up the signalization and safety issues that might come with using Frankford, which is much more heavily trafficked than Worrell. Ian agreed that those were legitimate issues, but it might be worth study.

The Steering Committee then reviewed the draft gateway renderings. Chris stated they would be larger at the start and end of the greenway with a few smaller gateway features along the greenway, such as the Leiper Street cap area and Kensington Avenue. General comments were that the renderings needed curb cuts, the group was very supportive of the idea of the watershed map in the pavement, and that it was appropriate to have some education and orientation included on the signage.

Finally, the Committee reviewed draft cross sections for Kensington Avenue, Adams Avenue at Womrath Park, and Worrell Street. At Kensington Avenue, the proposal is to keep the bike lane and convert the parking lane into more space for the greenway. There would be a landscaped or paver buffer between the greenway and traffic. On the bridge, it anticipated that the buffer are would be texturized pavement or pavers rather than planted. Off the bridge, a landscape buffer and street trees could be incorporated. Ian did not think removing the parking at this location would be an issue. For Adams Avenue at Womrath, the proposal is to take several feet of space for a full side path from the park rather than the street. On Worrell, the proposed concept is to take the parking lane, have one lane of traffic, and the side path. Stephanie asked about the land uses on that stretch, stating that taking parking in a more residential street would be more controversial. Upon looking at photos, she recommended not planting along this street since there is a significant green investment already at Womrath Park.

IV. Next Steps

The immediate next steps for the project are to continue to coordinate with PRA and PWD as well as PennDOT as construction plans continue. Baker will continue to refine the proposed alignment options and cross sections, as well as continue property and

environmental research. Coordination meetings with PWD, Streets, and PennDOT are planned in the near future. Jeannette and Rob also informed the Steering Committee that the final public meeting would be in January at Globe Dye Works.

Any additions and/or corrections to these meeting minutes are to be submitted to the author within five (5) days of receipt or the minutes will be considered the final record of the meeting as written.
Sincerely,

Chris Stanford, P.E., PTOE, PMP
Michael Baker Jr., Inc.
Project Manager

Frankford Creek Greenway Feasibility Study

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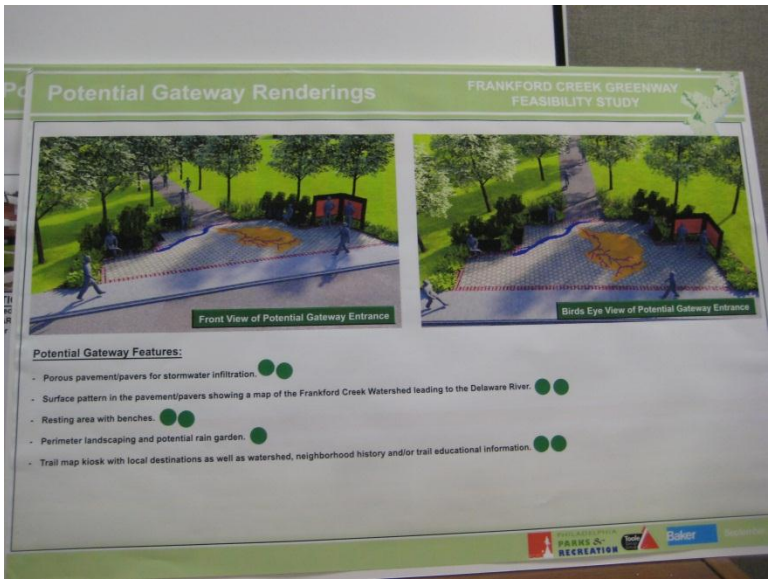

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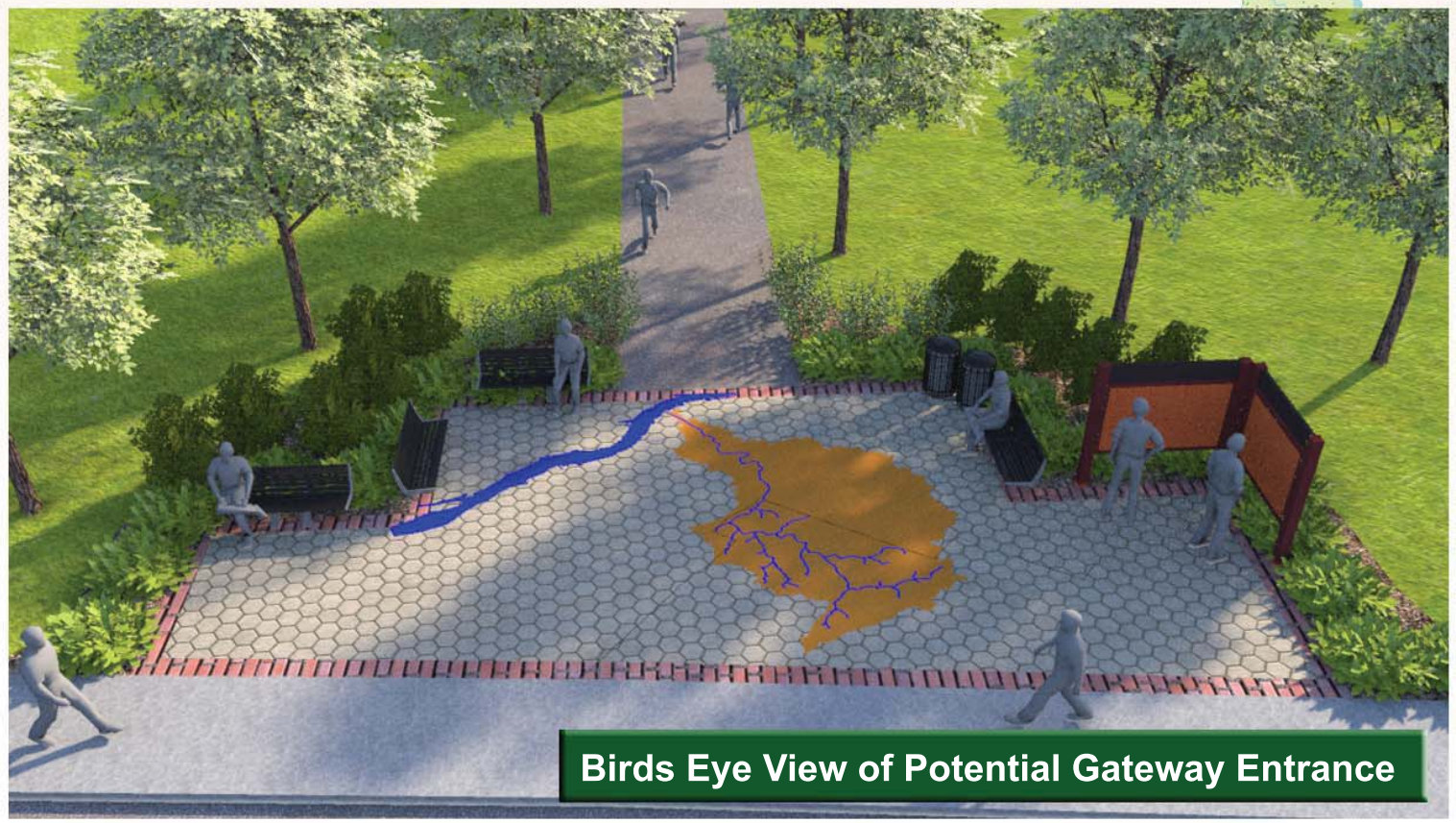
Potential Gateway Renderings

Front View of Potential Gateway Entrance



Birds Eye View of Potential Gateway Entrance

Potential Gateway Features:

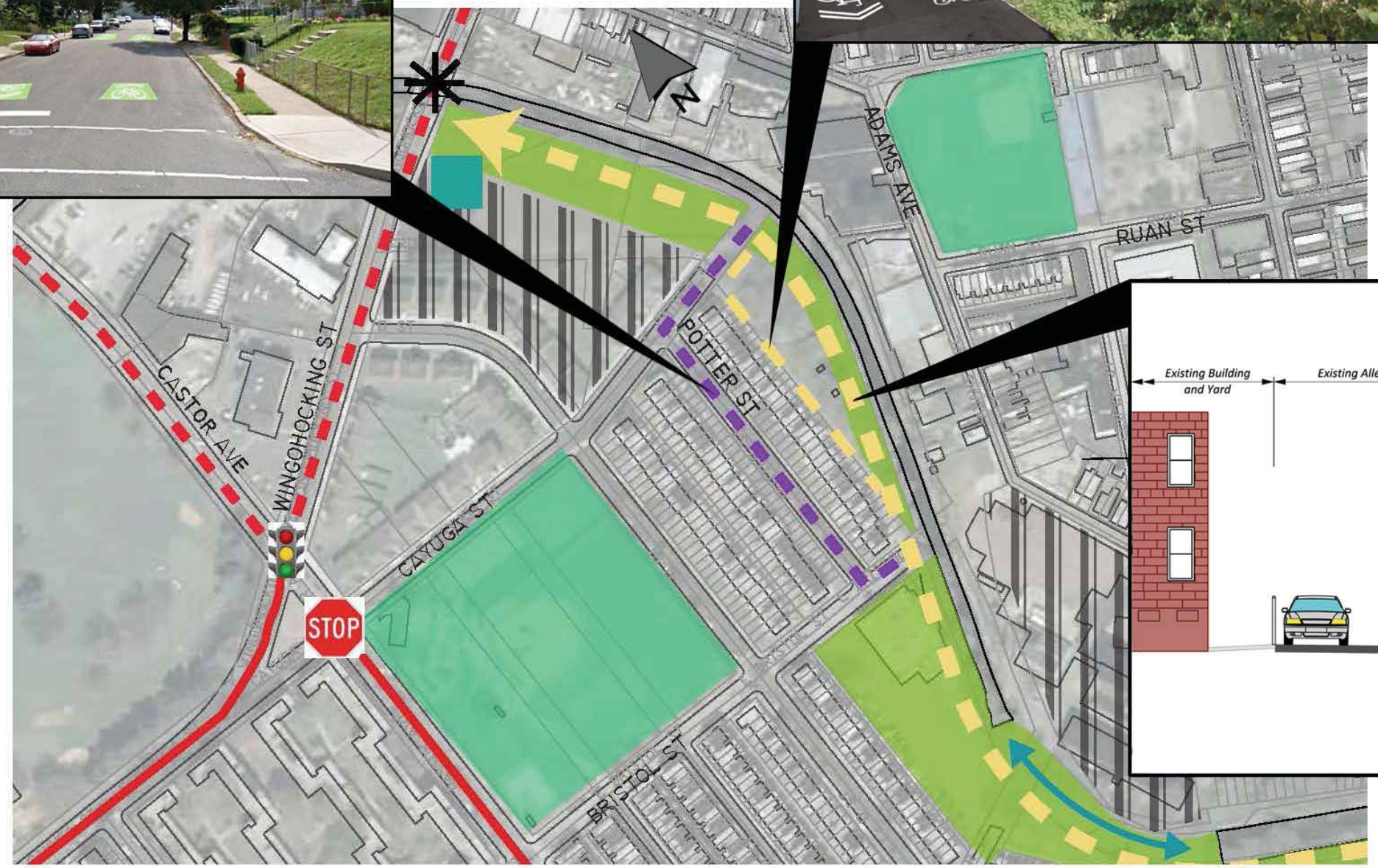
- Porous pavement/pavers for stormwater infiltration.
- Surface pattern in the pavement/pavers showing a map of the Frankford Creek Watershed leading to the Delaware River.
- Resting area with benches.
- Perimeter landscaping and potential rain garden.
- Trail map kiosk with local destinations as well as watershed, neighborhood history and/or trail educational information.

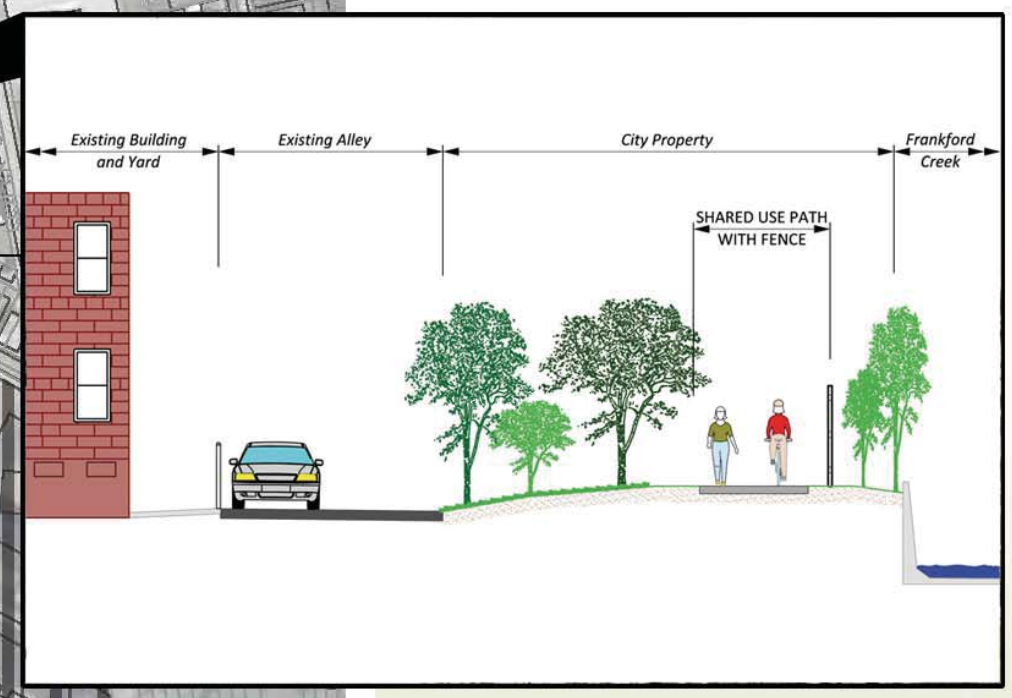
Potter Street Area - Greenway Options

FRANKFORD CREEK GREENWAY FEASIBILITY STUDY

OPTION 1:
Shared roadway with green back "SHARROW" markings along Potter street.

OPTION 2:
Shared roadway with "SHARROW" markings along existing alley.

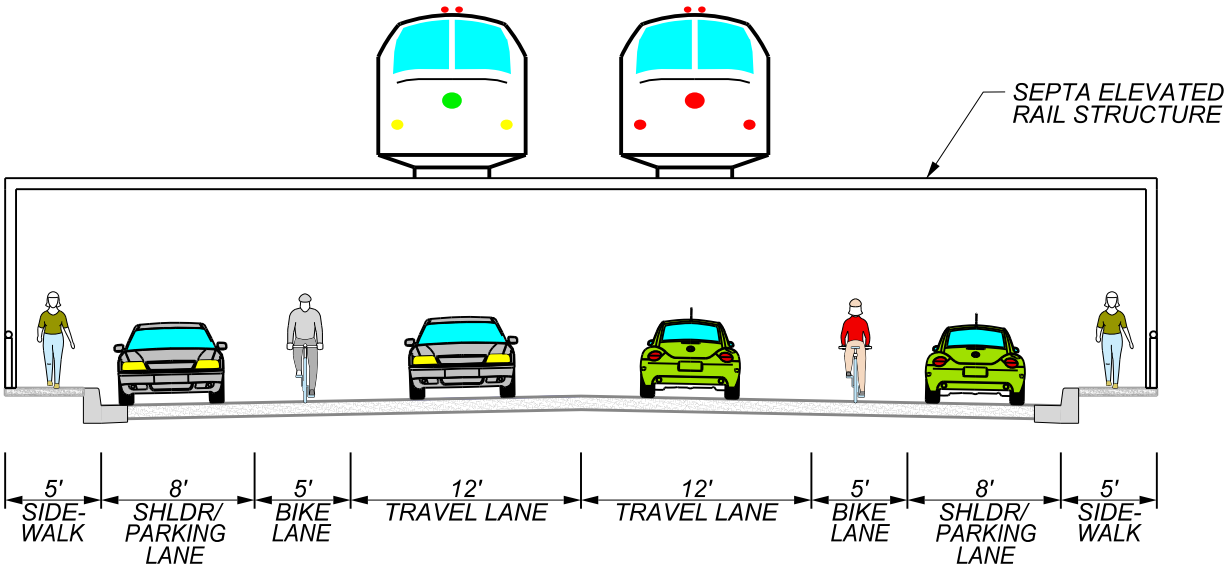




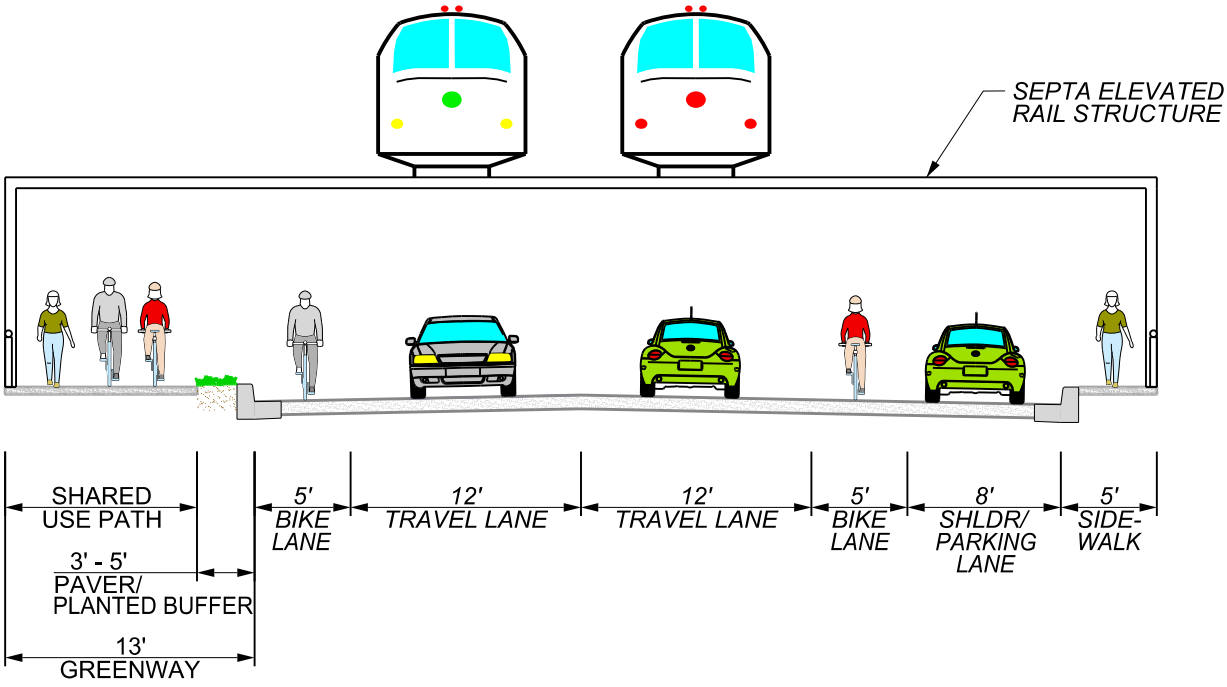
OPTION 3:
Shared Used Path through City property.

PCPC PHILADELPHIA PARKS & RECREATION Toole Design Group Baker

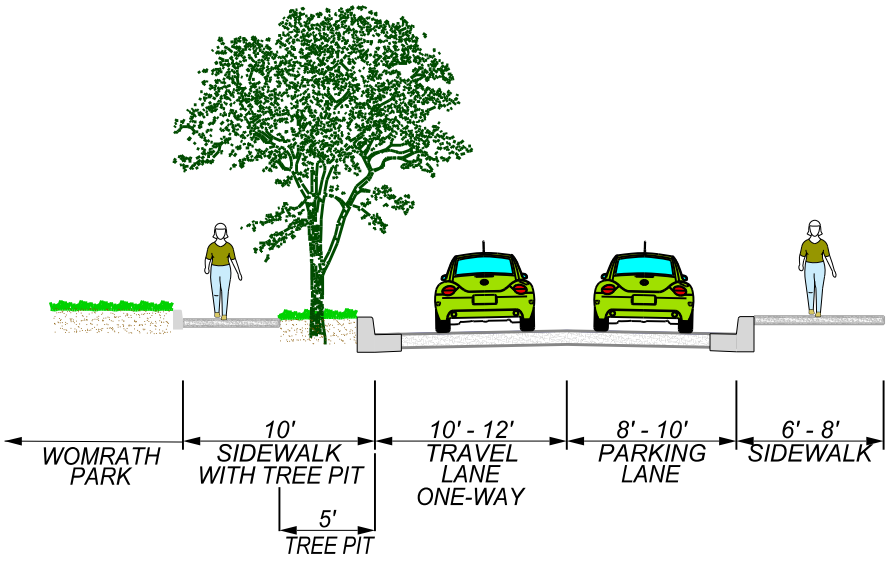
September, 2013



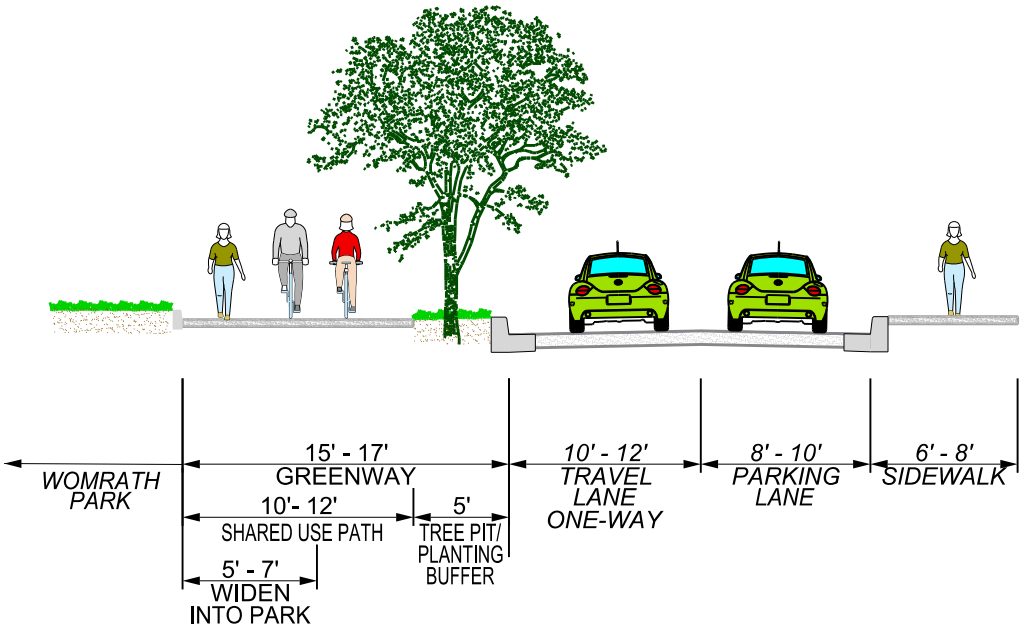
KENSINGTON AVE - EXISTING



KENSINGTON AVE - PROPOSED



ADAMS AVE - EXISTING



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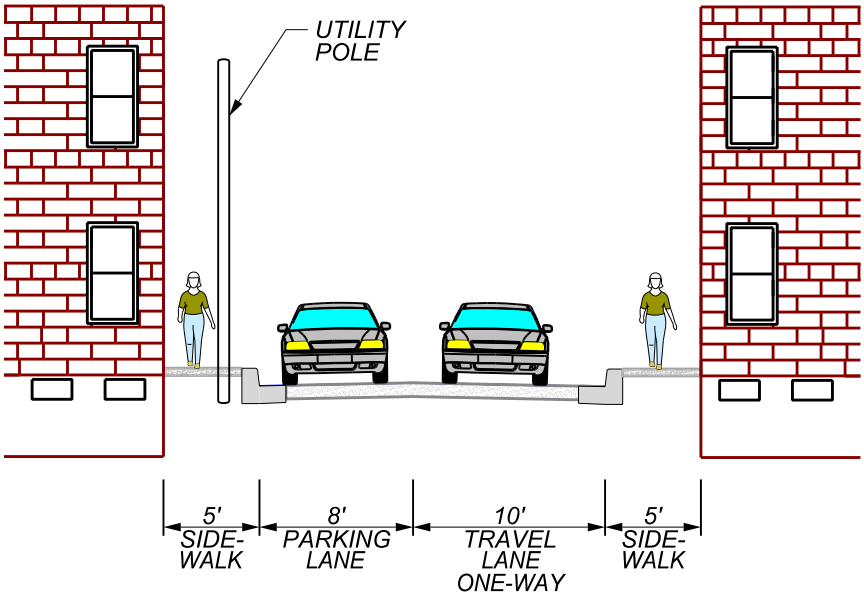
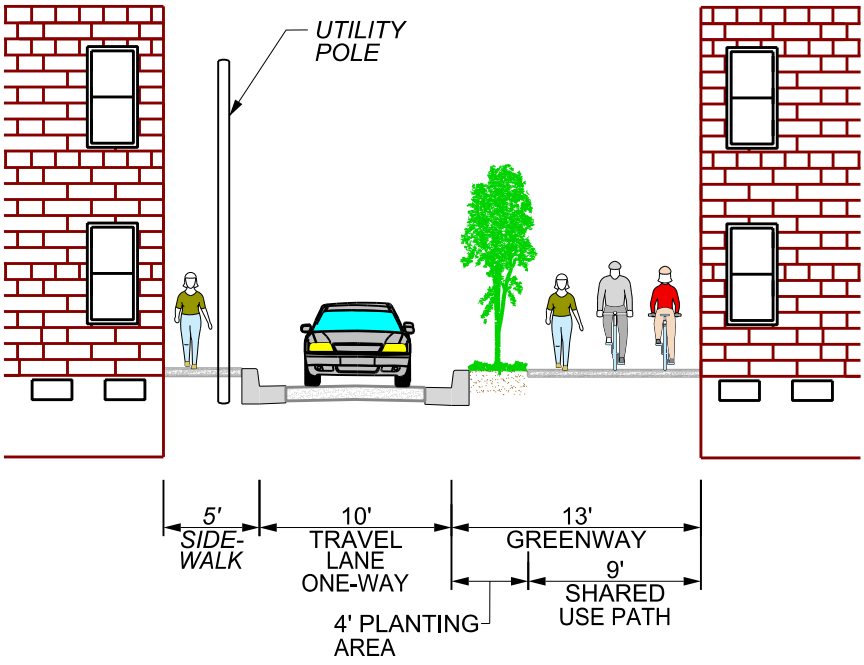


WORRELL ST - EXISTING



WORRELL ST - PROPOSED

Frankford Creek Greenway Feasibility Study
Coordination Meeting
October 8, 2013
2:30 PM

MINUTES

Attendees:
Jeannette Brugger (PCPC) – 215-683-4637
Rachel Brooks (PRA) – 215-209-8673
Chris Stanford (Baker)-215-442-5333

The purpose of the meeting was to provide Philadelphia Redevelopment Authority (PRA) with an overview of the project study and get PRA's assistance with property ownership questions associated with the Twins at Powder Mills development project.

Overview – Jeannette presented a brief overview of the goals and scope of the feasibility study.

Twins at Powder Mills – The majority of the meeting was spent reviewing the plans and property information we had gathered related to this development project. See attached. The project is located near Wingohocking Street and was completed in approximately 2007. There are three parcels as well as a PWD easement that are involved with the potential greenway area near the Frankford Creek. The current ownership of those parcels and the status of the PWD easement is unclear. PRA will use their resources to find out what documentation they have on these three parcels and the PWD easement. Rachel indicated that she would try to have someone investigate these parcels and respond back to Jeannette within approximately 2 weeks.

LOT AREA TABLE

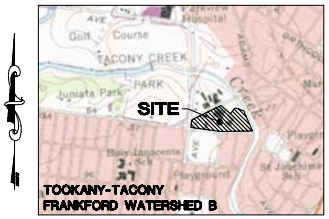
Lot No.	Lot Sq. Ft.	Occ. SF	% Occ. Area	% Open Area
LOT 1	3884	940	24.20	75.80
LOT 2	2612	940	35.99	64.01
LOT 3	3656	1385	37.88	62.12
LOT 4	3656	1385	37.88	62.12
LOT 5	2927	940	32.11	67.89
LOT 6	3515	940	26.74	73.26
LOT 7	3642	940	25.81	74.19
LOT 8	3642	940	25.81	74.19
LOT 9	3907	940	24.06	75.94
LOT 10	4484	940	20.96	79.04
LOT 11	4408	940	21.32	78.68
LOT 12	3075	940	30.57	69.43
LOT 13	3696	1385	37.45	62.55
LOT 14	3370	1385	41.10	58.90
LOT 15	3452	940	27.23	72.77
LOT 16	3415	940	27.53	72.47
LOT 17	4448	1385	31.14	68.86
LOT 18	4903	1385	28.26	71.75
LOT 19	3682	940	25.67	74.33
LOT 20	3423	940	27.46	72.54
LOT 21	3183	940	29.53	70.47
LOT 22	4508	940	20.85	79.15
LOT 23	4861	940	19.34	80.66
LOT 24	4579	940	20.53	79.47
LOT 25	4264	940	22.05	77.95
LOT 26	3633	940	25.87	74.13
LOT 27	3318	940	28.33	71.67
LOT 28	3318	940	28.33	71.67
LOT 29	3003	940	31.30	68.70
LOT 30	5315	940	17.68	82.31
LOT 31	3609	940	26.05	73.95
LOT 32	3078	940	30.56	69.44
LOT 33	3118	940	30.13	69.85
LOT 34	3322	940	27.88	72.12
LOT 35	3783	940	24.85	75.15
LOT 36	4179	940	22.49	77.51
LOT 37	4877	940	19.27	80.73
LOT 38	5595	940	16.84	84.16
LOT 39	6941	940	13.54	86.46
LOT 40	9326	940	10.08	89.92
LOT 41	3014	940	31.19	68.81
LOT 42	3214	940	29.25	70.75
LOT 43	3384	940	27.78	72.22
LOT 44	3923	940	23.96	76.04
LOT 45	3429	940	27.41	72.59
LOT 46	3429	940	27.41	72.59
LOT 47	3429	940	27.41	72.59
LOT 48	3429	940	27.41	72.59
LOT 49	3429	940	27.41	72.59
LOT 50	5693	940	17.78	82.72
LOT 51	85220	0	0.00	100.00

GENERAL NOTES

1. ATTENTION IS CALLED TO THE ZONING REQUIREMENTS IN THE PHILADELPHIA CODE AS AMENDED.
2. ALL DISTANCES ARE PHILADELPHIA DISTRICT STANDARD (EXCEPT BUILDING DIMENSIONS WHICH ARE IN U.S. STANDARD) UNLESS OTHERWISE NOTED.
3. ALL INTERIOR LINES ARE PROPOSED LINES OF SUBDIVISION.
4. PLAN MADE AS PER INSTRUCTIONS OF OKKS DEVELOPMENT/ IMPACT SERVICES.
5. THIS PLAN IS NOT TO BE USED FOR LEGAL DESCRIPTIONS OR TITLE PURPOSES.
6. SUBDIVIDER/DEVELOPER:

OKKS DEVELOPMENT, L.P.
ONE WESTWOOD SQUARE
SUITE 101
BENSALEM, PA 19020

IMPACT SERVICES
1852 EAST ALLEGHENY AVENUE
PHILADELPHIA, PA 19134



LOCATION MAP
SCALE: 1"=1000'

PROPOSED ZONING DISTRICT REGULATIONS

1. ZONING DISTRICT CLASSIFICATION:
   EXISTING: G-2 DISTRICT , PROPOSED: R-9 DISTRICT
2. PROPOSED USE:
   SEMI-DETACHED DWELLING (FEE SIMPLE- NO HOA)
3. LOTS 1 AND 30 TO BE DEED RESTRICTED FOR RESIDENTIAL USE (NO COMMERCIAL)
4. ZONING REQUIREMENTS TABLE:

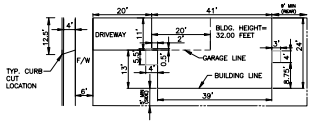
	REQUIRED
MINIMUM LOT WIDTH	15 FT
MINIMUM LOT AREA	1,440 SQ. FT
MAX. OCCUPIED AREA (INTERIOR LOTS)	70%
MAX. OCCUPIED AREA (CORNER LOTS)	80%
MIN. OPEN AREA (INTERIOR LOTS)	30%
MIN. OPEN AREA (CORNER AREA)	20%
BUILDING SETBACK	8 FT
MINIMUM FRONT YARD DEPTH	8 FT
MINIMUM SIDE YARD WIDTH	5 FT
MINIMUM REAR YARD DEPTH	9 FT
MINIMUM REAR YARD AREA	144 SQ. FT
MAXIMUM BUILDING HEIGHT	35 FT

SURVEY NOTES

1. SURVEY PERFORMED BY SCHOOR DEPALMA, INC. MAY/JUNE 2006.
2. BENCHMARK:
   2-INCH SQUARE CUT IN TOP OF SOUTHEAST CORNER OF WINGOHOCKING STREET BRIDGE WALL, APPROXIMATELY 2.3 FEET ABOVE SIDEWALK.
   FEMA RM33: ELEVATION 30.73 – NGVD-29.
   CITY ELEVATION 29.425 – CITY OF PHILADELPHIA DATUM.
   ALL DATA SHOWN REFERENCES CITY OF PHILADELPHIA DATUM.
3. LOCATIONS OF ALL WATER, SANITARY SEWER AND STORM WATER SEWER LINES SHOWN ARE INTERPOLATED FROM PLANS PROVIDED BY PHILADELPHIA WATER DEPARTMENT, DRAINAGE UNIT & LOCATIONS OF PA-1-CALL FIELD MARKINGS. LOCATIONS ARE APPROXIMATE.
4. LOCATIONS OF ALL GAS LINES SHOWN ARE INTERPOLATED FROM GAS TRANSMISSION & DISTRIBUTION PLANS PROVIDED BY PHILADELPHIA GAS WORKS & LOCATIONS OF PA-1-CALL FIELD MARKINGS. LOCATIONS ARE APPROXIMATE.
5. LOCATIONS OF ALL UNDERGROUND ELECTRICAL LINES SHOWN ARE INTERPOLATED FROM CABLE & CONDUIT MAPS PROVIDED BY PECO ENERGY COMPANY & LOCATIONS OF PA-1-CALL FIELD MARKINGS. LOCATIONS ARE APPROXIMATE.
6. LOCATIONS OF ALL UNDERGROUND TELEPHONE LINES SHOWN ARE INTERPOLATED FROM CABLE & CONDUIT PLANS PROVIDED BY A.T.&T. & LOCATIONS OF PA-1-CALL FIELD MARKINGS. LOCATIONS ARE APPROXIMATE.
7. 100 YEAR & 500 YEAR FLOOD PLAIN LIMITS TAKEN FROM F.E.M.A. FLOOD INSURANCE RATE MAP NUMBER 42075700134-F, BEING PANEL 113 OF 230, CITY OF PHILADELPHIA, PHILADELPHIA COUNTY, PENNSYLVANIA.
8. SOIL DATA SHOWN PER PHILADELPHIA COUNTY SOIL SURVEY.
9. REFERENCE PLANS: VARIOUS CITY PLANS (DEPICTING STREET RIGHT-OF-WAYS AND BLOCK DIMENSIONS AS WELL AS CURB ELEVATIONS) PROVIDED BY THE CITY OF PHILADELPHIA, 33RD WARD, 5TH SURVEY DISTRICT, BUREAU OF SURVEYS & DESIGNS, CITY PLANS UNIT.
10. ALL DIMENSIONS ARE PHILADELPHIA DISTRICT STANDARD UNLESS OTHERWISE NOTED. (1'= DISTRICT STANDARD * 1.00359)

NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DETAILS AND DIMENSIONS.

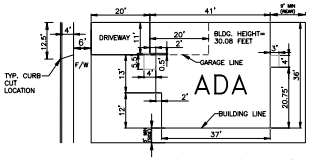
TWO-STORY
1ST FL:730 SF
2ND FL:940 SF
TOTAL:1670 SF



TYPICAL LOT DETAIL (US STD. DIM.)-SCALE 1"=20'
(NOTE: ALL LOTS TO HAVE GARAGE; LOT DIMENSIONS VARY; BUILDING SETBACK AND YARD REQUIREMENTS UPHELD IN ALL CASES – SEE PLANS)

NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DETAILS AND DIMENSIONS.

TWO-STORY
1ST FL:1175 SF
2ND FL:577 SF
TOTAL:1752 SF



TYPICAL ADA LOT DETAIL (US STD. DIM.)-SCALE 1"=20'
(NOTE: ALL LOTS TO HAVE GARAGE; LOT DIMENSIONS VARY; BUILDING SETBACK AND YARD REQUIREMENTS UPHELD IN ALL CASES – SEE PLANS)

NOT FOR BID OR CONSTRUCTION

ATTENTION ALL CONTRACTORS: LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE-GROUND INSPECTION OF THE SITE COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND FACILITIES OR STRUCTURES CANNOT BE GUARANTEED. PURSUANT TO REQUIREMENTS OF PENNSYLVANIA LEGISLATIVE ACT NUMBER 38, CONTRACTORS MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO START OF WORK. SERIAL NO. 1525832, 1525854, 1525968, 1525936, & 1525970

REVISION NO.	DATE	REVISION
7	4/11/07	REV. PER PWD COMMENTS
6	4/10/07	REV. PER PWD COMMENTS
5	3/27/07	REV. PER DISTRICT SURVEYOR COMMENTS
4	3/5/07	REV. PER PWD COMMENTS
3	2/28/07	REV. FOR CITY PLAN CHANGES
2	2/20/07	REV. PER SUBDIVISION PLAN REQUIREMENTS
1	2/2/07	REV. PER PWD COMMENTS

40 0 40 80
GRAPHIC SCALE IN FEET

KRAIG HEINRICH DIENER
PROFESSIONAL LAND SURVEYOR, PA. LIC. No. SU-049360-E

KRAIG HEINRICH DIENER
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
LAND SURVEYOR
No. SU-049360-E

SCHOOR DEPALMA
Engineers and Consultants
NEW JERSEY • PENNSYLVANIA • NEW YORK • FLORIDA • ARIZONA • MARYLAND
DAMIANO LONG • a division of SCHOOR DEPALMA

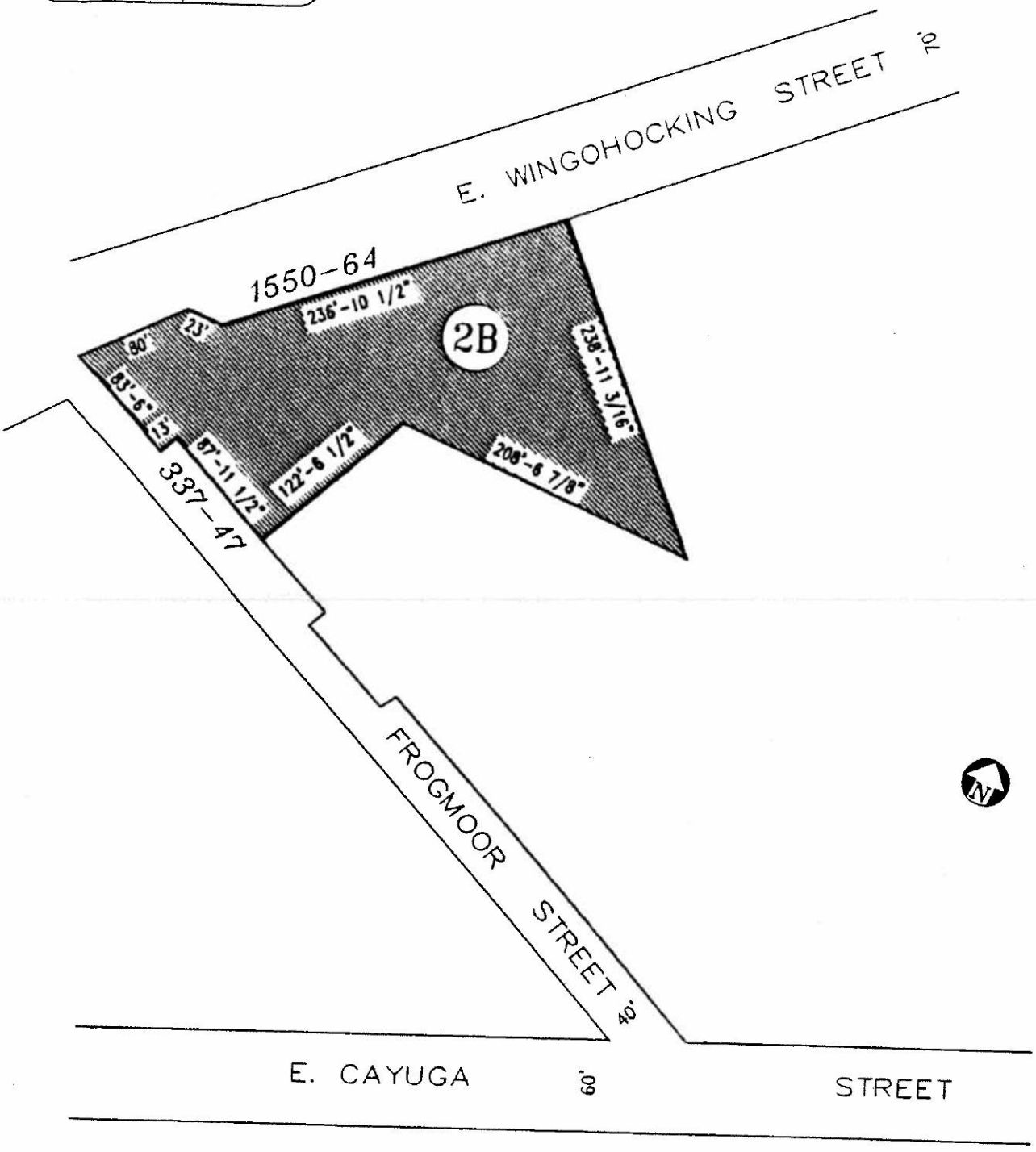
102 PICKERING WAY
SUITE 501
EXTON, PA 19341
TEL (610)594-3500
FAX (610)594-3503

PRELIMINARY PLAT
MADE FOR OKKS DEVELOPMENT/IMPACT SERVICES
TWINS AT FRANKFORD CREEK
PRELIMINARY SUBDIVISON AND LAND DEVELOPMENT PLAN
PHILADELPHIA PHILADELPHIA COUNTY, 33RD WARD PENNSYLVANIA

PROJECT NO	050011302
DATE	01/08/07
DRAWN BY	SMM
DESIGNED BY	CWJ
SCALE	1" = 40'
CHECKED BY	KAL
	SCHOOR DEPALMA
SHEET NO.	R-1

SQ. FT.	ACRES
43804.2	1.0056

Exhibit "E-1"



NOT TO BE USED FOR TITLE
OR CONSTRUCTION PURPOSES

REDEVELOPMENT AUTHORITY of the CITY OF PHILADELPHIA

FRANKFORD CREEK URA - REVESTMENT

REDEVELOPMENT ENGINEERING SERVICES	Drawn by: LB	Date: 06-01-07
	Checked: RLB	
	Scale: 1"=100'	Parcel 2B

Exhibit "E-1"

FRANKFORD CREEK URA

Revestment

Parcel 2B

ALL THAT CERTAIN lot or piece of ground situated in the 33rd Ward of the City of Philadelphia and described as follows:

BEGINNING at a point in the bed of Frogmoor Street (40 feet wide) and the bed of Wingohocking Street (70 feet wide).

THENCE extending Eastwardly through the said bed of Frogmoor Street the distance of 83 feet 6 inches to a point,

THENCE extending Northward through the said bed of Frogmoor Street the distance of 13 feet to a point on the Northerly side of Frogmoor Street,

THENCE extending Eastward along the said side of Frogmoor Street the distance of 87 feet 11 ½ inches to a point,

THENCE extending Northward on a line at right angles to the said Frogmoor Street the distance of 122 feet 6 ½ inches to a point,

THENCE extending Eastward the distance of 208 feet 6 7/8 inches to a point,

THENCE extending Northwestward the distance of 238 feet 11 3/16 inches to a point on the South side of the said Wingohocking Street,

THENCE extending Southwestward along the said side of Wingohocking the distance of 236 feet 10 ½ inches to a point,

THENCE extending Westward into the bed of the said Wingohocking Street the distance of 23 feet to a point,

THENCE extending Southwestwardly through the bed of the said Wingohocking Street the distance of 80 feet to the point of intersection with the bed of the said Frogmoor Street being the first mentioned point and place of beginning.

BEING KNOWN AS: 337-47 FROGMOOR STREET
(Including 1550-64 E. WINGOHOCKING STREET)

CONTAINING IN AREA: 43,804.2 Sq. Ft. or 1.0056 Acres

5/14/2014 Public Meeting

A public meeting was held on Wednesday, May 14th from 5:30-7:00 PM in the Tookany/Tacony-Frankford Watershed Partnership Offices at Globe Dye Works (4500 Worth St, Philadelphia, PA 19124). 7 people were in attendance including consultants and city agency representatives. One member of the public came- the community outreach organizer for Mariana Bracetti Academy Charter School. The school is located near the trail and a discussion was started about getting the school and its students involved in community outreach and possibly some volunteering for clean-up etc. along the trail before construction.

Comments and questions focused on what opportunities existed to get students involved in the future and the safety of certain sections of the trail (Womrath Park especially).

Attached are the boards and powerpoint that were presented.

Frankford Creek Greenway Feasibility Study

Tonight's Agenda:

5:30-6:00 PM Open House

6:00-6:30 PM Presentation/Q&A

6:30-7:00 PM Open House

PCPC
PHILADELPHIA CITY PLANNING COMMISSION

PHILADELPHIA
PARKS & RECREATION

Baker

Frankford Creek Greenway Feasibility Study

PUBLIC MEETING – May 14, 2014

PCPC
PHILADELPHIA CITY PLANNING COMMISSION

PHILADELPHIA
PARKS & RECREATION

Baker

Presentation Overview

- **Overview of goals/objectives**
- **Scope of the study**
- **Review existing conditions and preferred alignment recommendations**
- **Implementation Strategy**
- **Short and Long Term Plans**

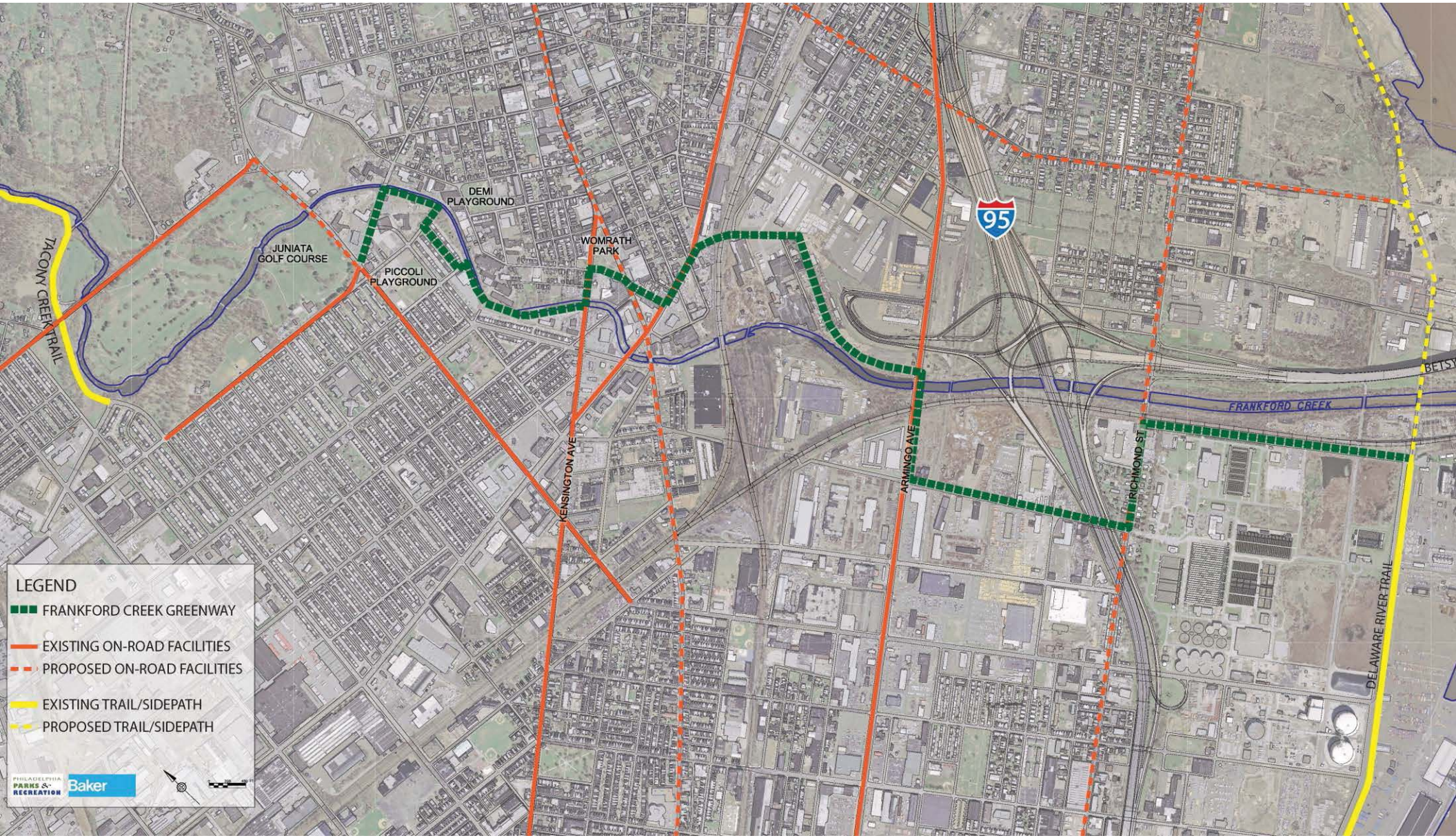
Goals and Objectives

- Develop series of alignment options
- Determine the preferred route for the Greenway
- Collect feedback from residents and incorporate into recommendations

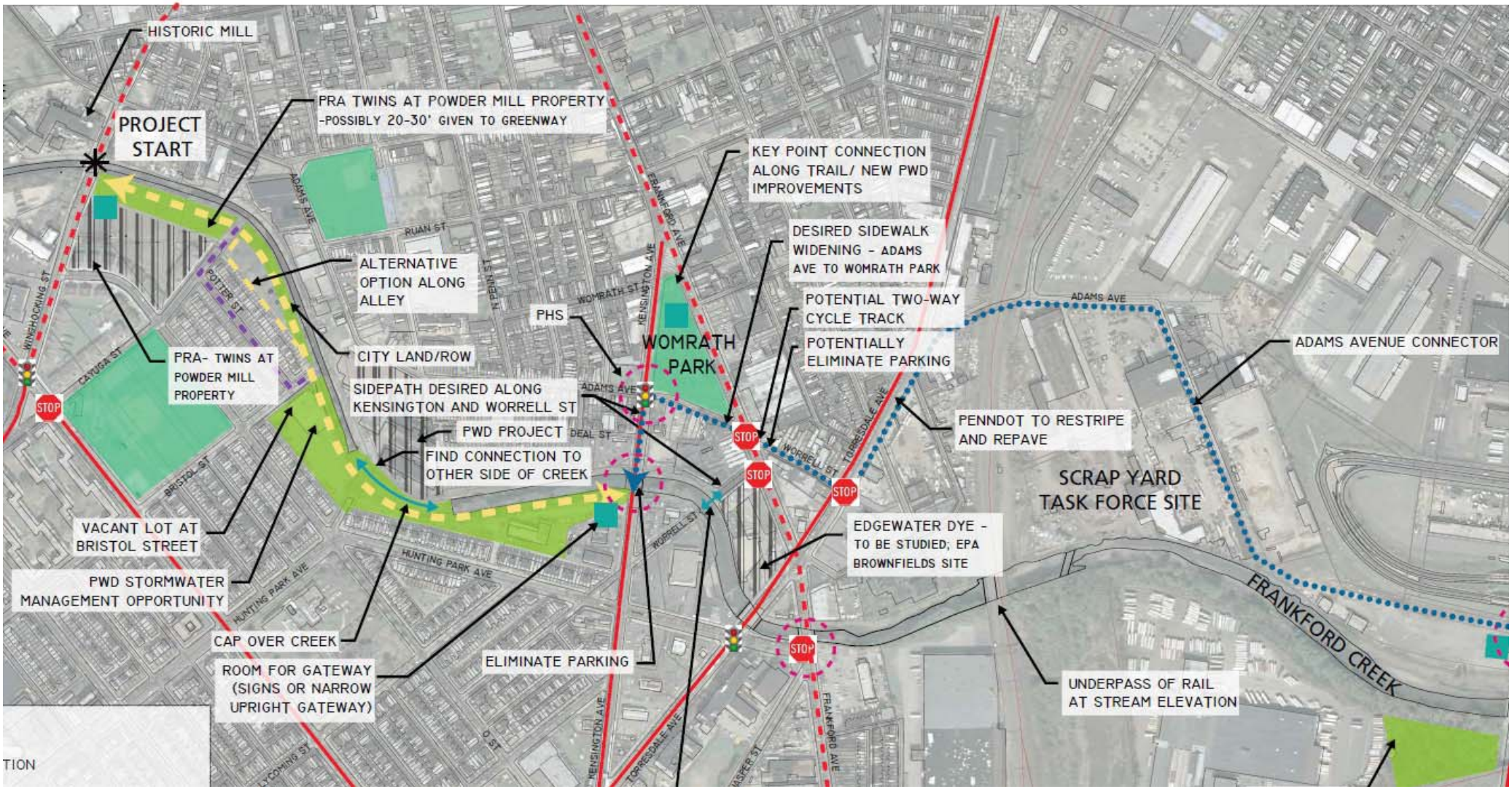
Scope of the Study

- Castor Avenue to Orthodox Street (west to east) and Juniata Golf Course to Delaware Avenue (north to south)
- Planning and alternatives analysis only (no detailed design plans)

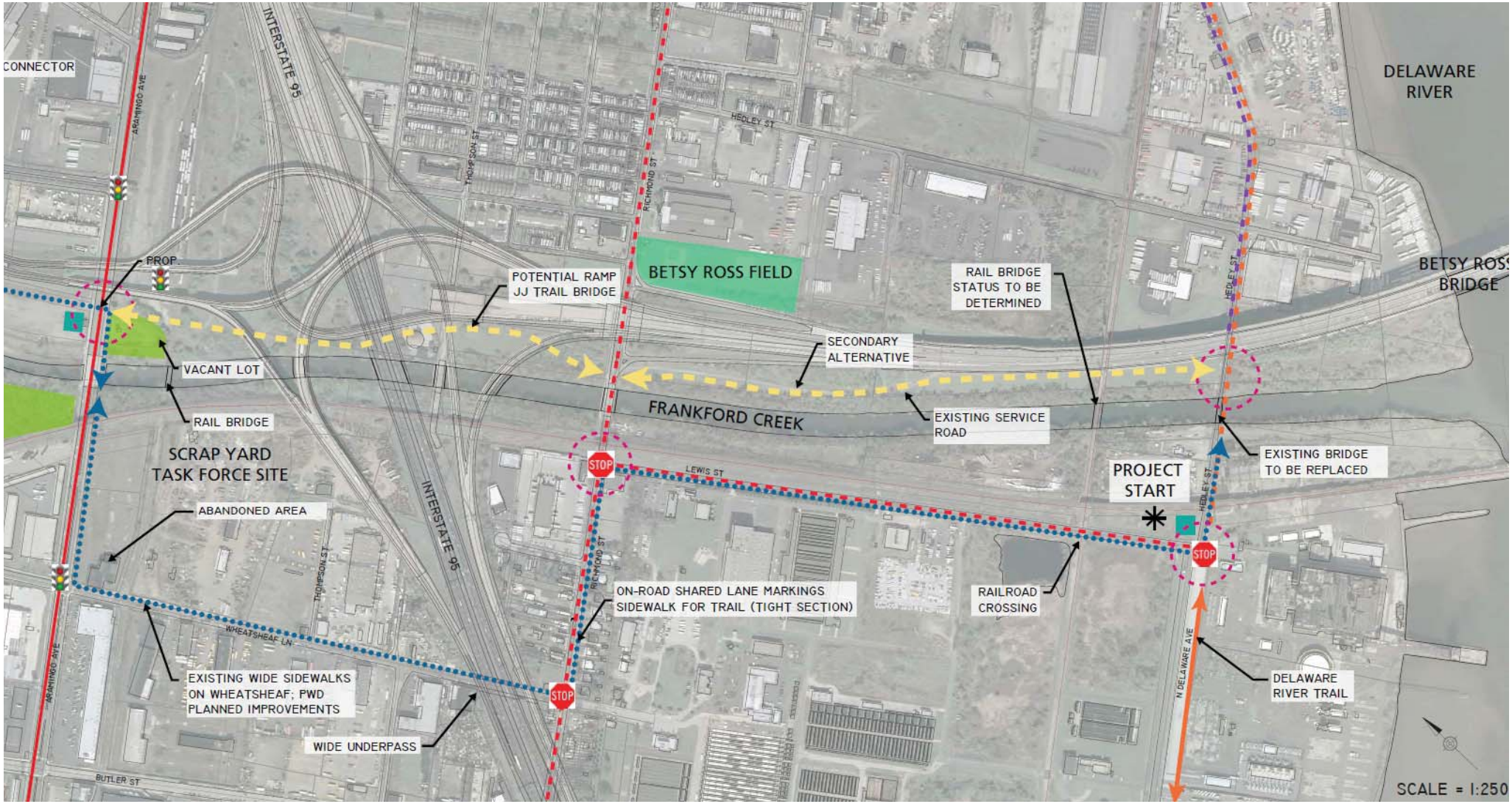
Existing/Proposed Bike Facilities



Alignment Location - North



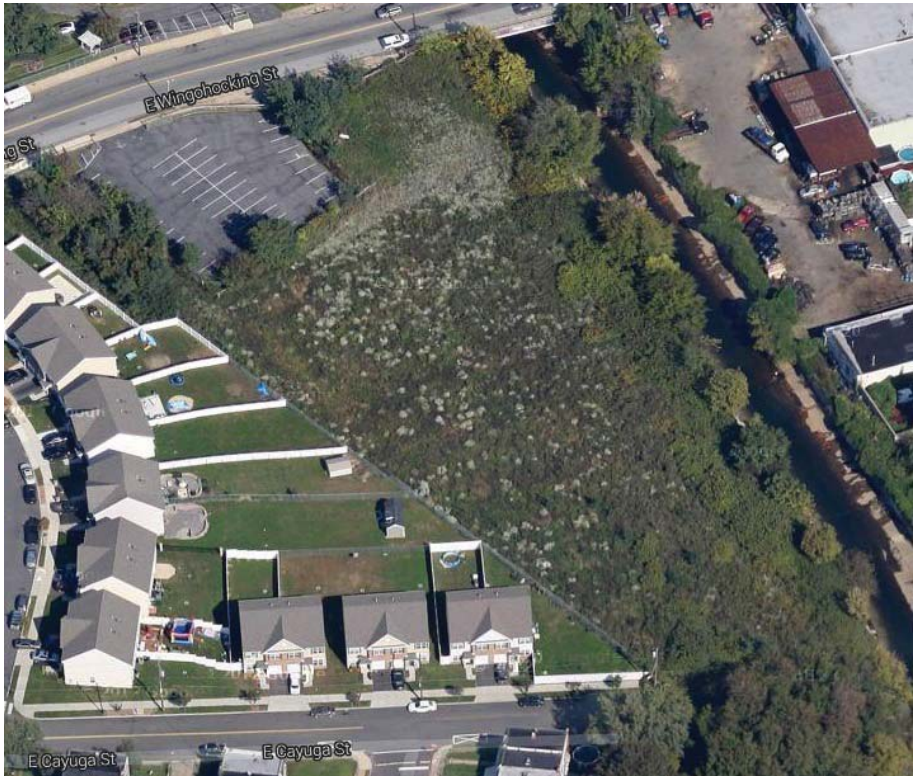
Alignment Location – south



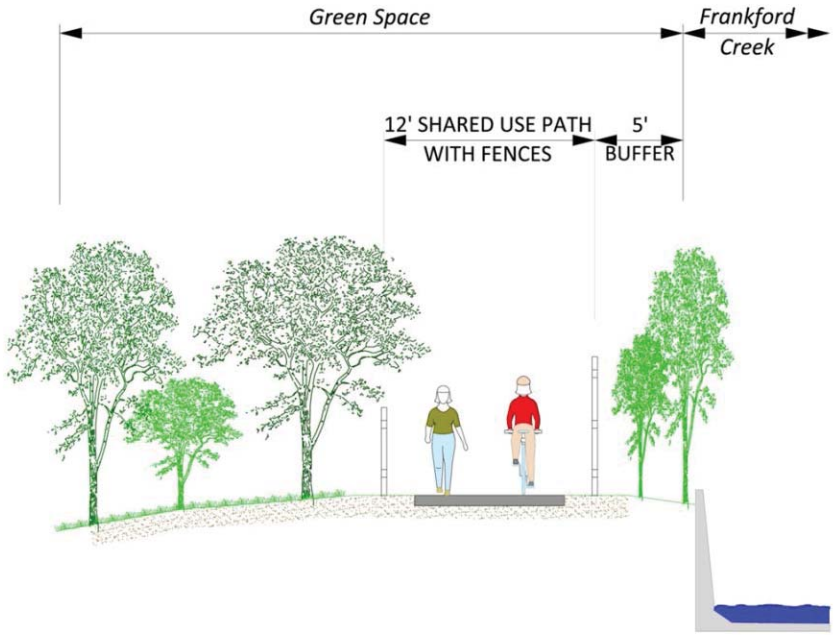
Segment 1

Wingohocking St. to Cayuga St.

Existing



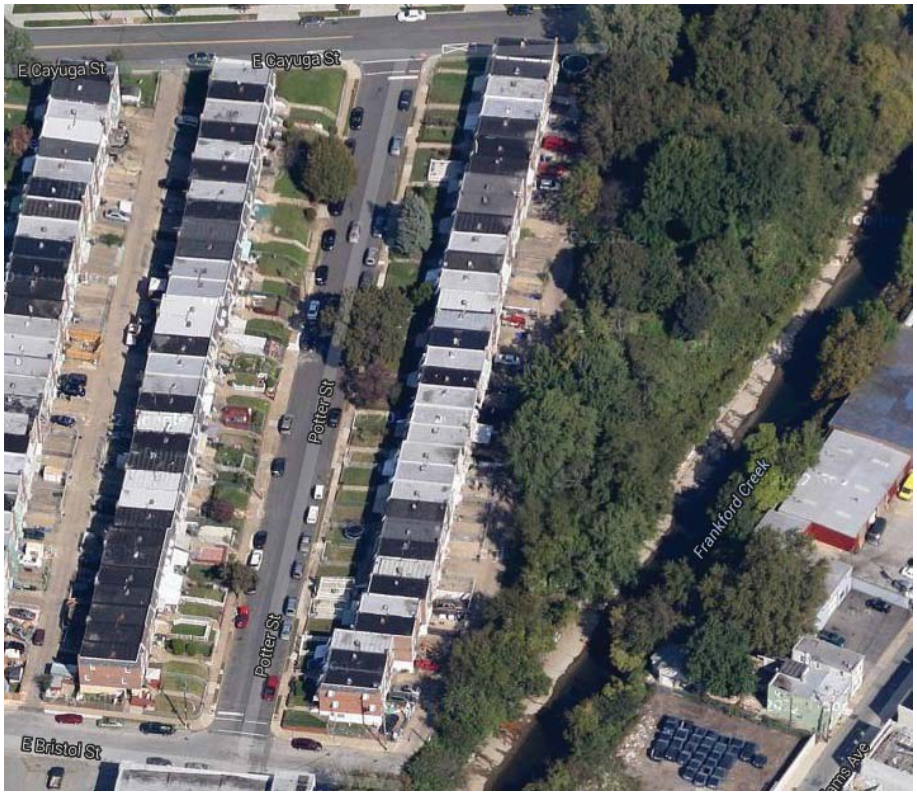
Proposed



Segment 2

Cayuga St. to Bristol St.

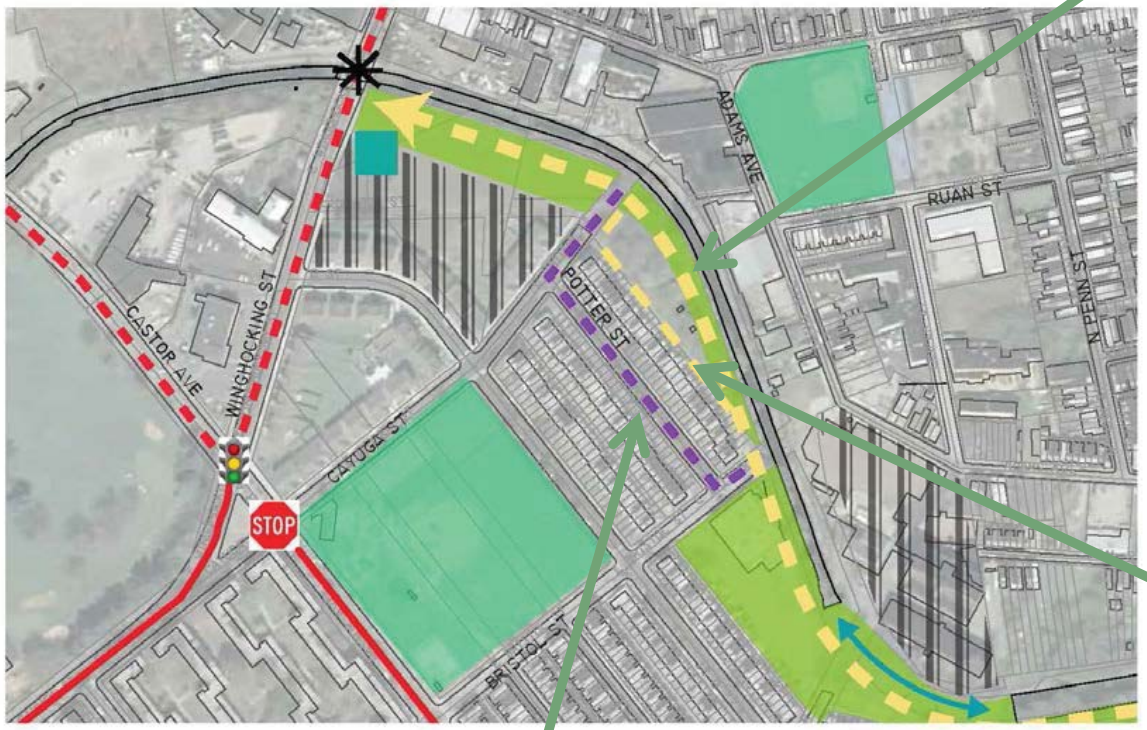
Existing

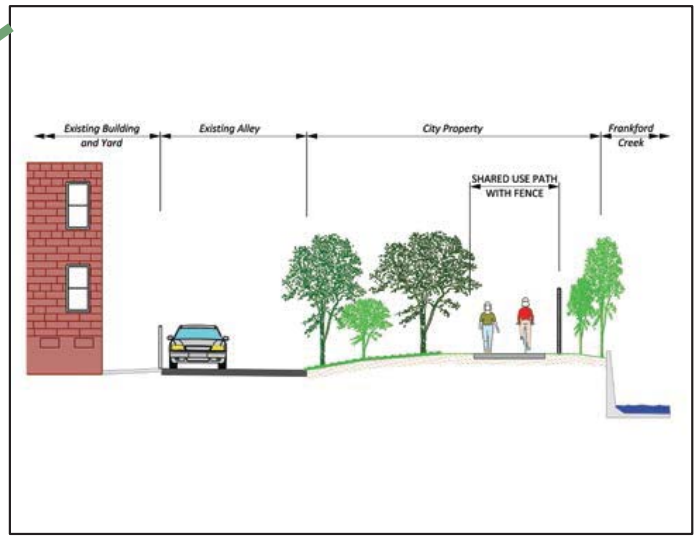


Proposed Alignment Options

- Shared use path along creek
- Shared lane within rear alley
- Shared lane along Potter Street

Potter Street Area options



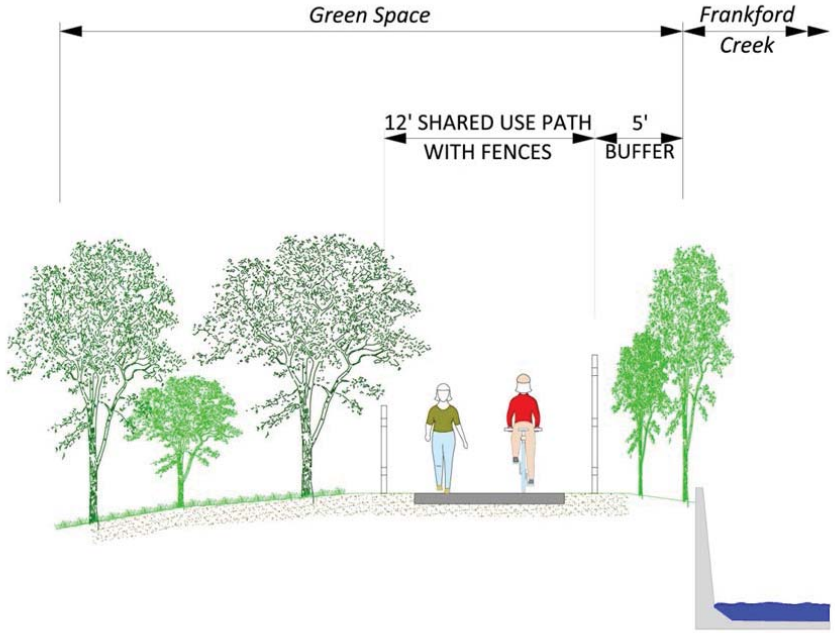


Segment 3

Bristol St. to Leiper Street Culvert

Existing

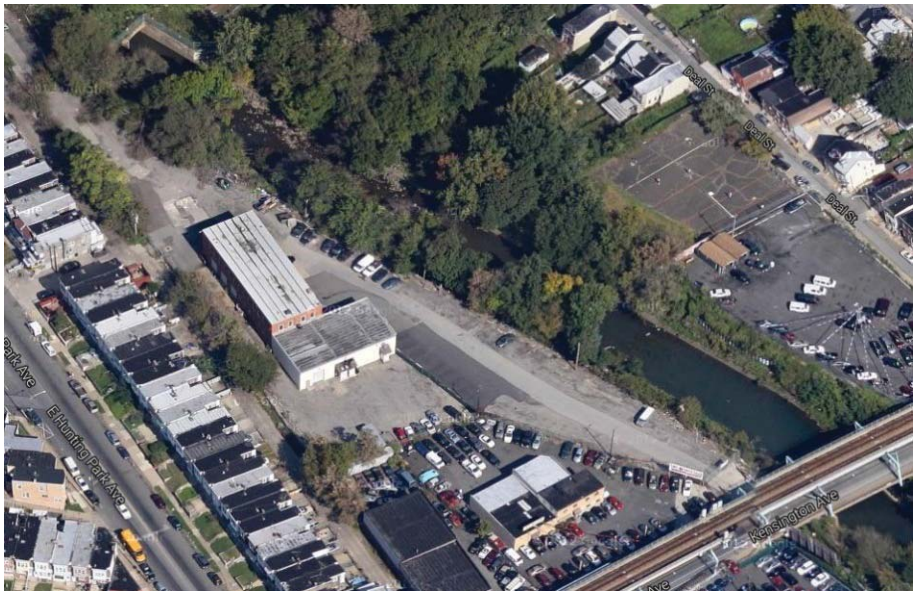
Proposed



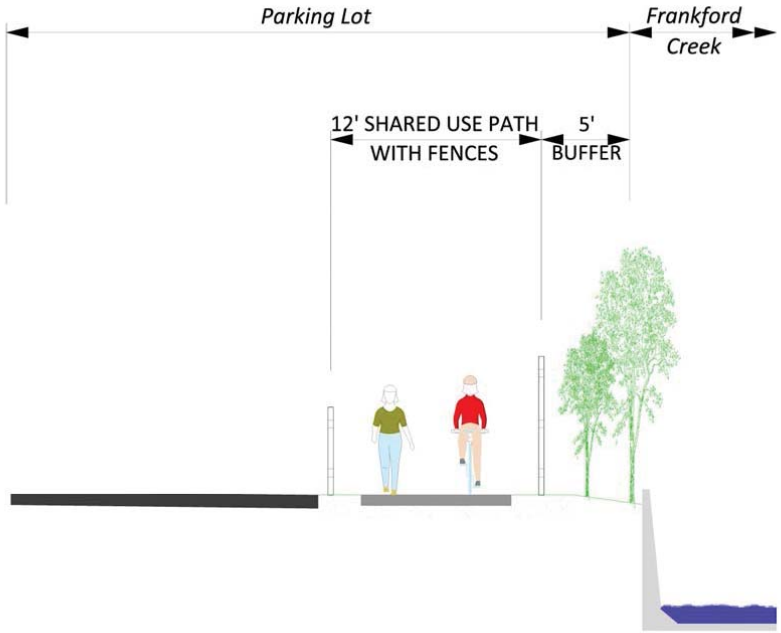
Segment 4

Southern end of Leiper St. culvert to Kensington Ave.

Existing



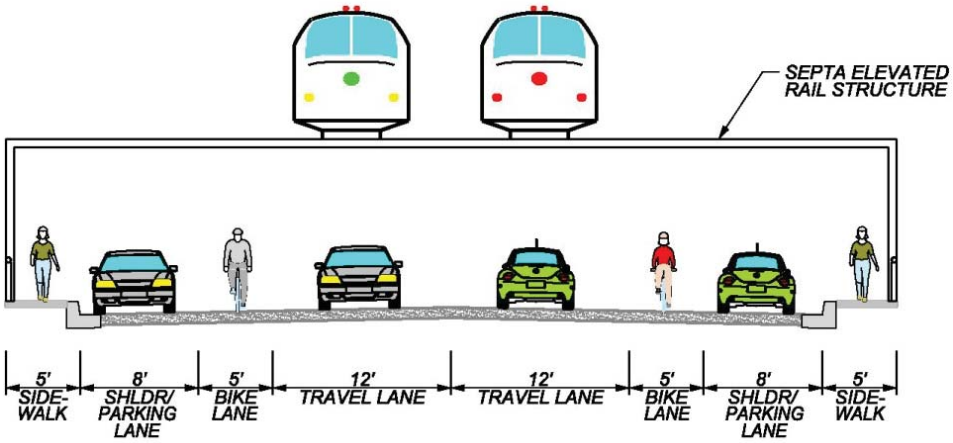
Proposed



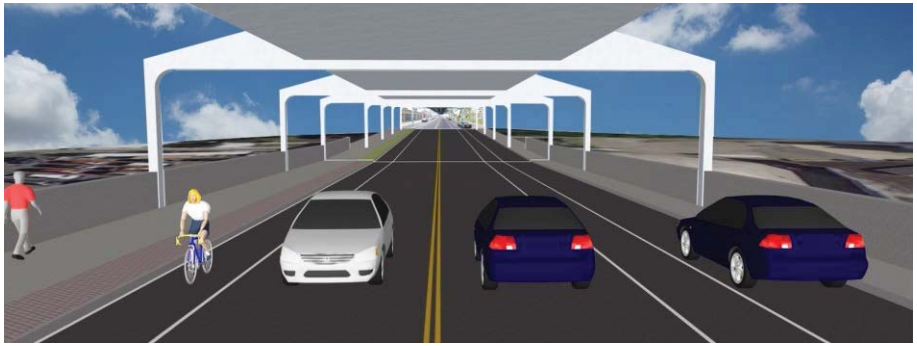
Segment 5

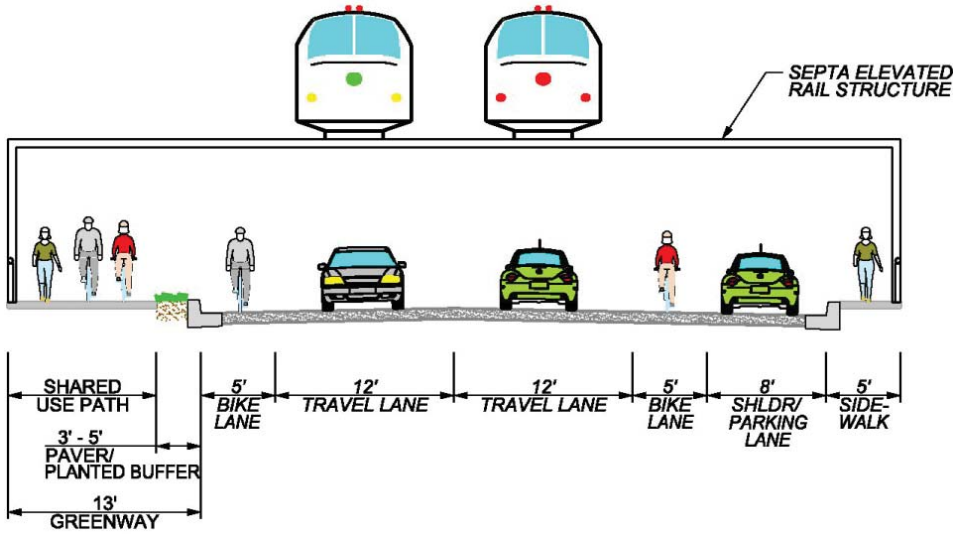
Kensington Ave. from creek to Adams Ave.

Existing



Proposed

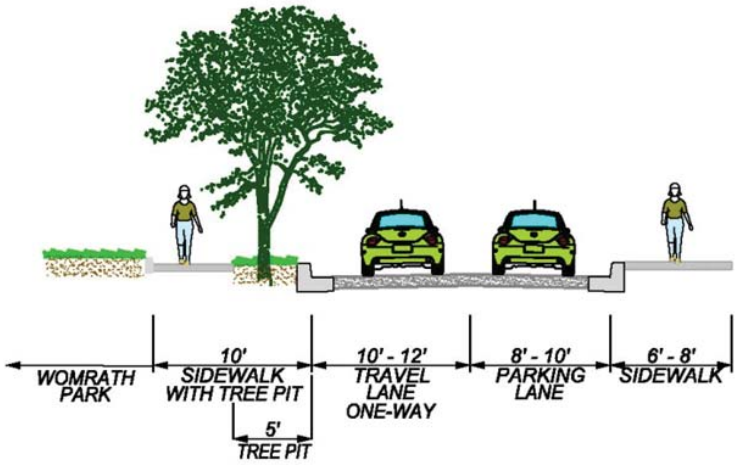




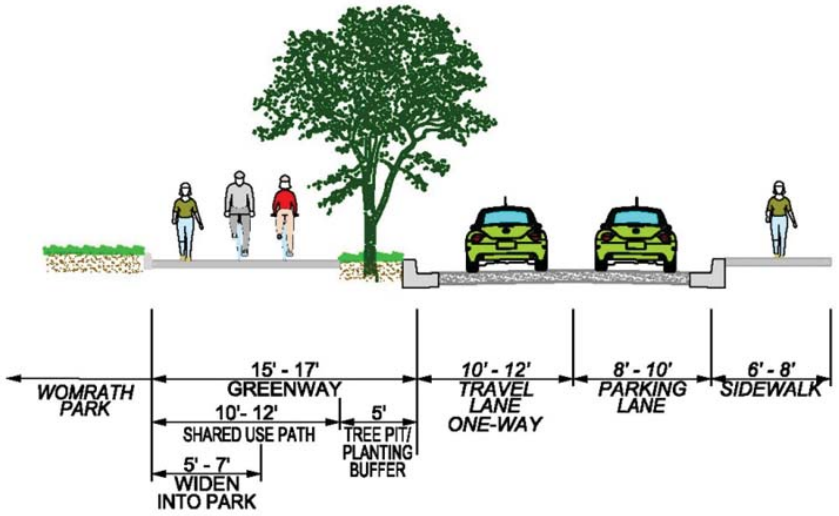
Segment 6

Adams Ave. from Kensington Ave. to Frankford Ave.

Existing



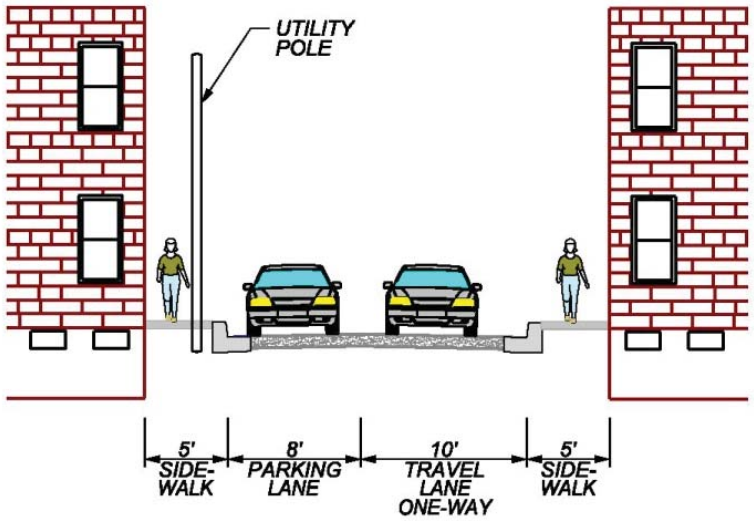
Proposed



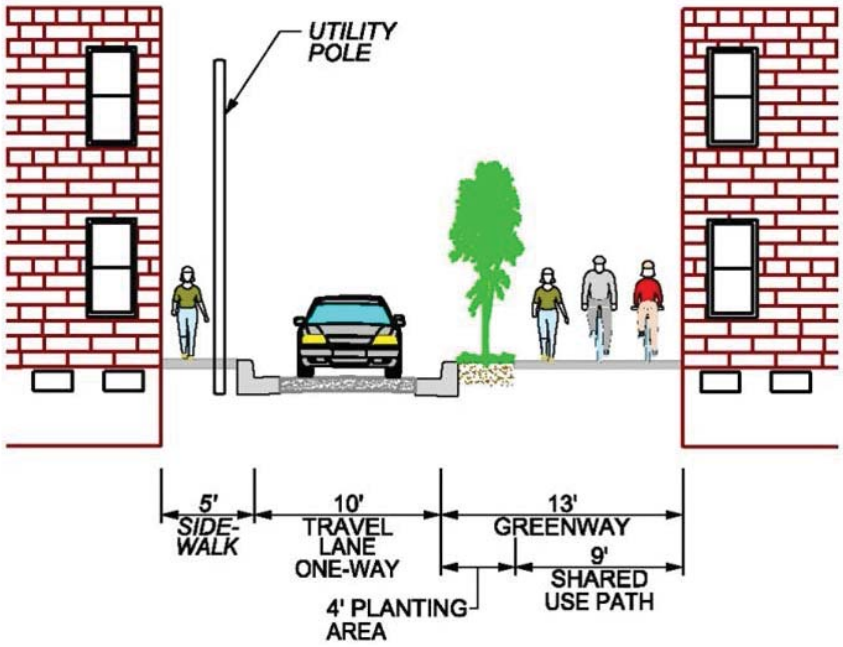
Segment 7

Worrell St. from Frankford Ave. to Torresdale Ave.

Existing



Proposed



WORRELL ST - PROPOSED

Segment 8

Torresdale Ave. and Adams Ave. Connector to Aramingo Ave.

Existing

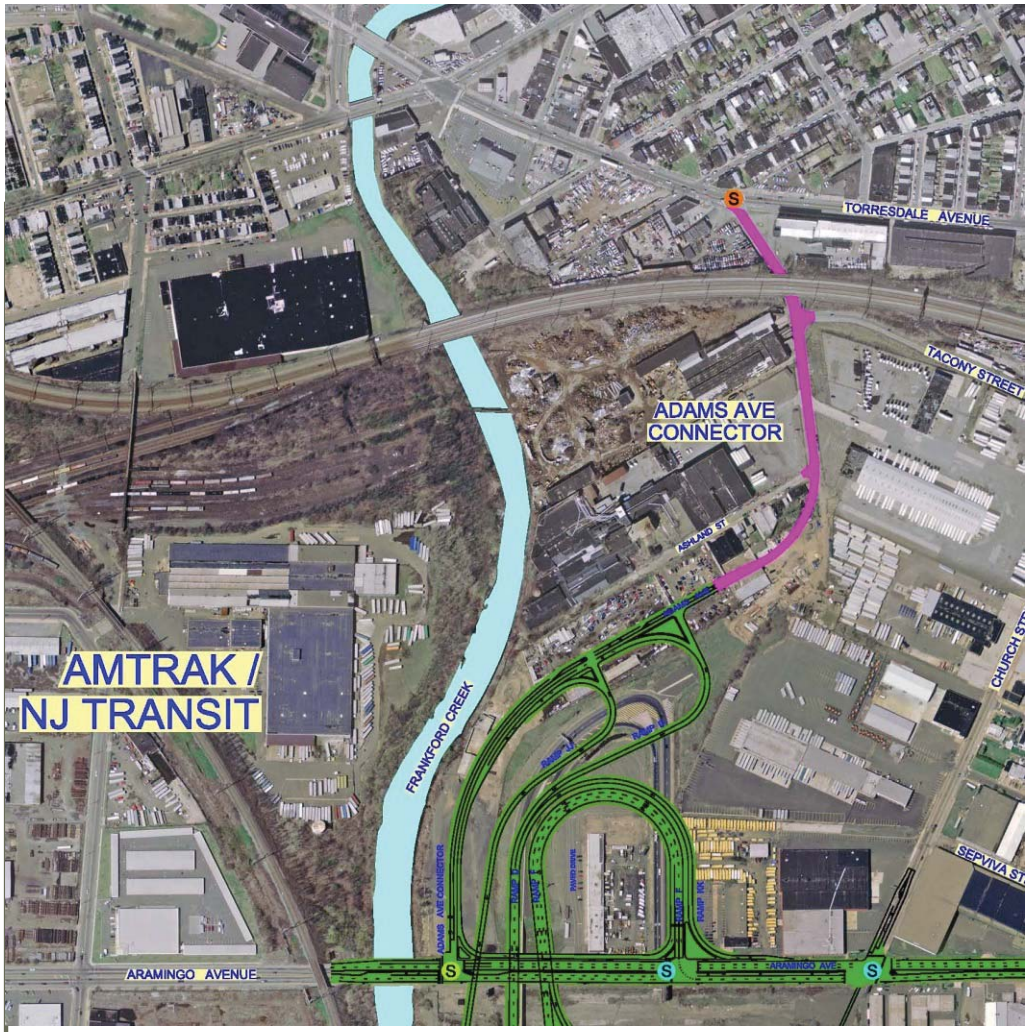
Proposed

Segment 9

Aramingo Ave. from Adams Ave. Connector to Wheatsheaf Ln.

Existing

Proposed

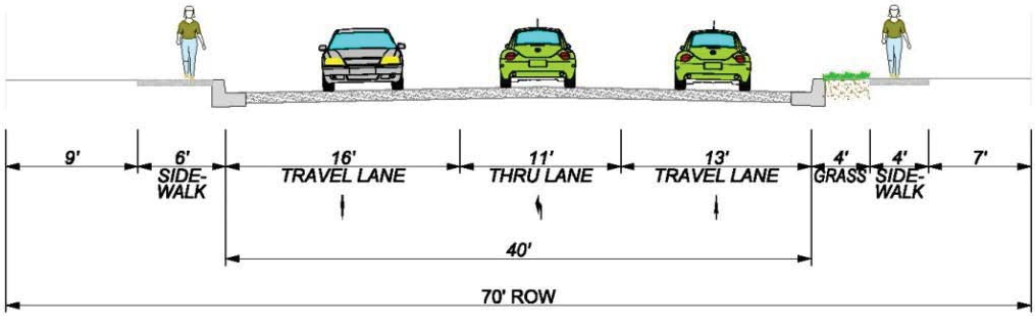


- Part of PennDOT I-95 project
- 12’ wide path with 5’ buffer on Aramingo Ave
- Connection to planned shared-use path on Wawa property corner of Wheatsheaf

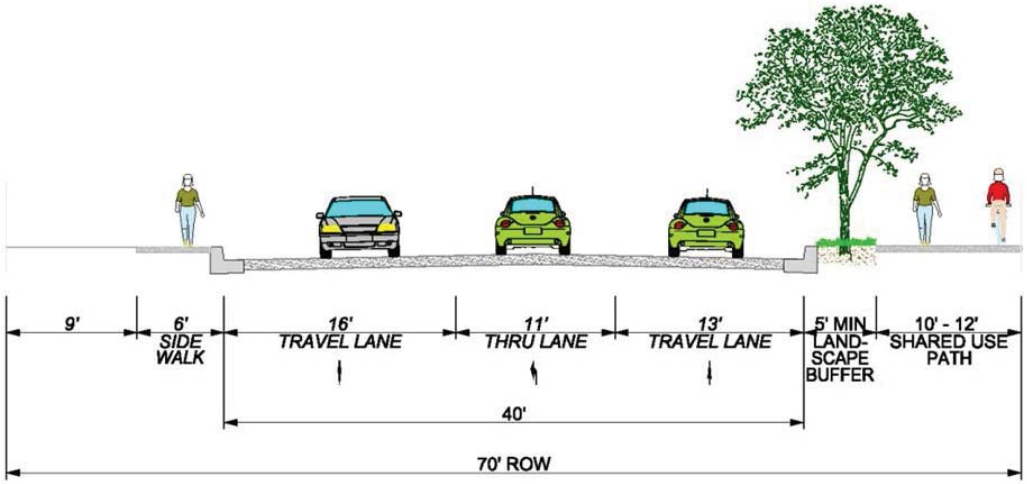
Segment 10

Wheatsheaf Ln. from Aramingo Ave. to Richmond St.

Existing



Proposed



Segment 11

Richmond St. from Wheatsheaf Ln. to Lewis St.

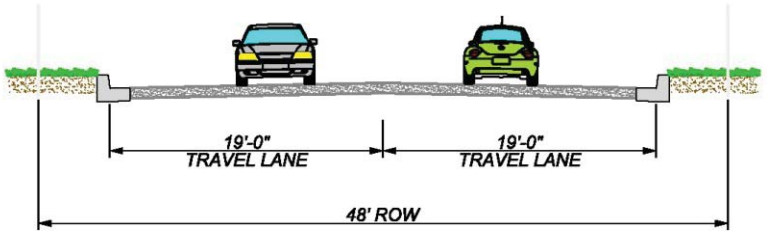
Existing

Proposed

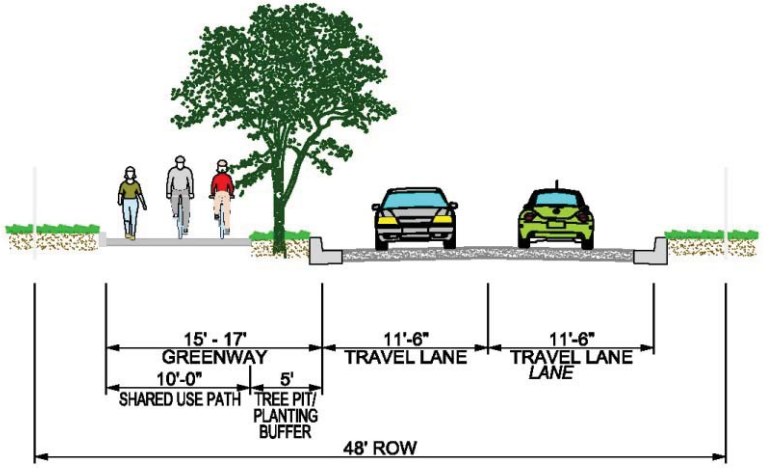
Segment 12

Lewis St. from Richmond St. to North Delaware Ave.

Existing



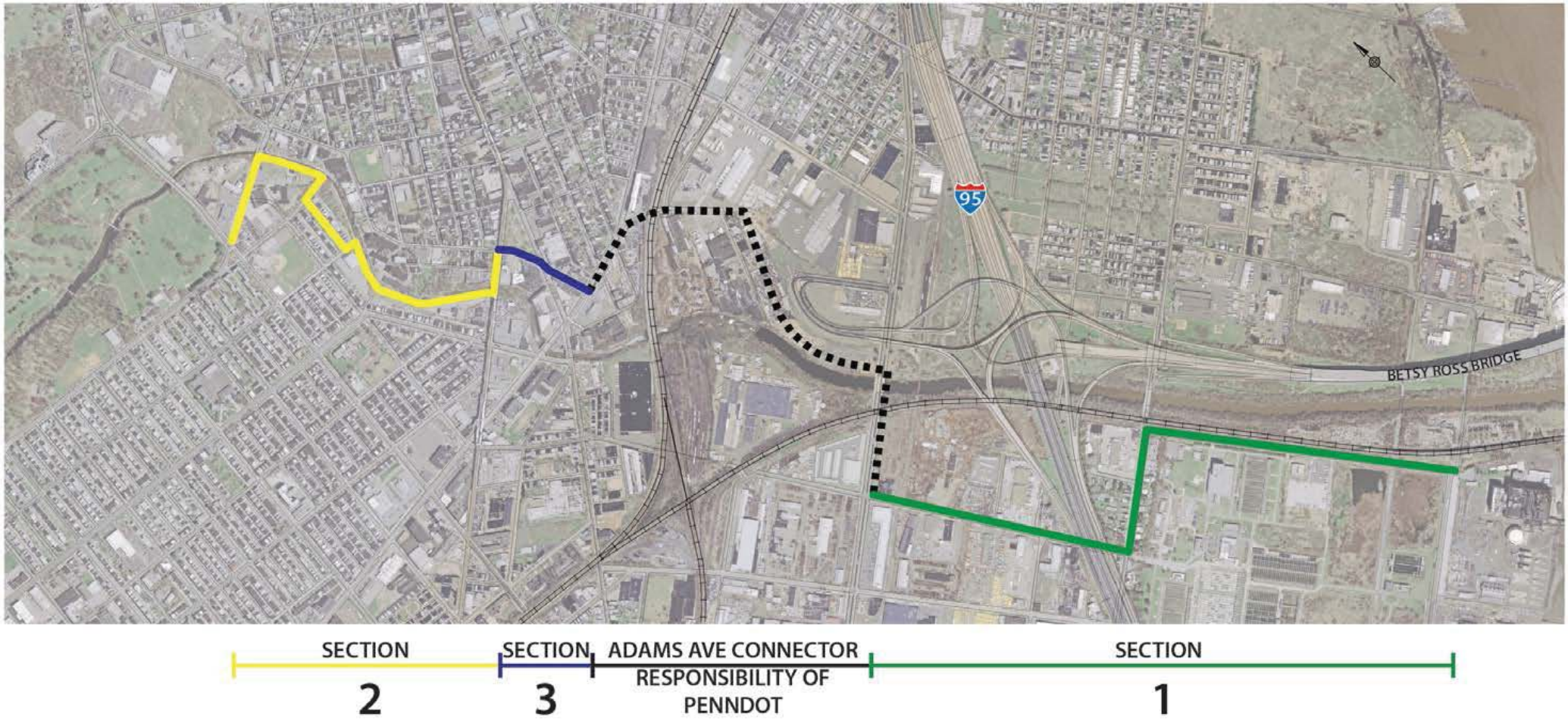
Proposed



Greenway Amenities

- Trail Gateways
- Wayfinding signage
- Landscaping / Street trees

Implementation Strategy



Short and Long Term Plans

- 1-4 years
  - Design and build Section 1
  - Acquire property in Section 2
- 4-6 years
  - Design and build Section 2
- 6-10 years
  - Design and build Section 3
  - PennDOT Adams Ave Connector Project anticipated construction

THANK YOU!

QUESTIONS/ANSWERS

Contacts:

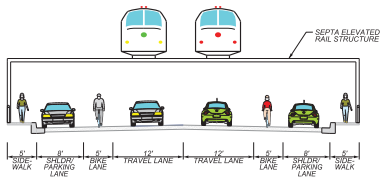
Jeannette Brugger
215-683-4637
jeannette.brugger@phila.gov

Rob Armstrong
215-683-0229
rob.armstrong@phila.gov

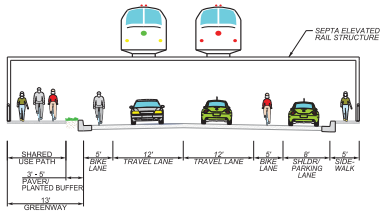
PROPOSED IMPROVEMENTS
BEFORE AND AFTER

FRANKFORD CREEK GREENWAY FEASIBILITY STUDY

KENSINGTON AVENUE

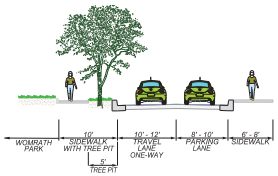


KENSINGTON AVE - EXISTING

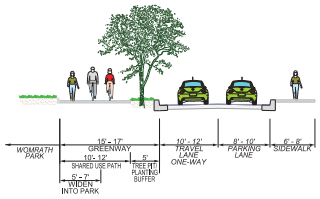


KENSINGTON AVE - PROPOSED

ADAMS AVENUE

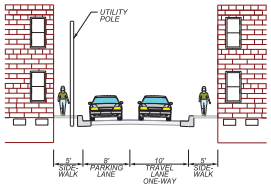


ADAMS AVE - EXISTING

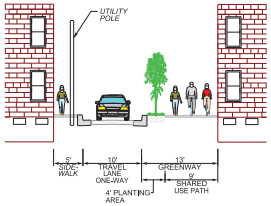


ADAMS AVE - PROPOSED

WORRELL STREET

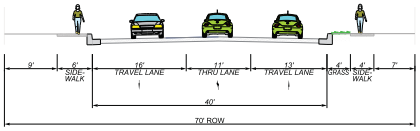


WORRELL ST - EXISTING

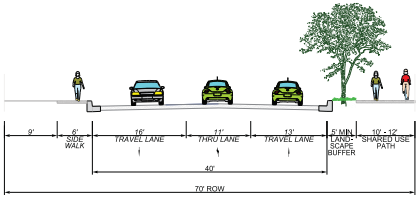


WORRELL ST - PROPOSED

WHEATSHEAF LANE



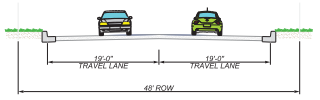
WHEATSHEAF LANE - EXISTING



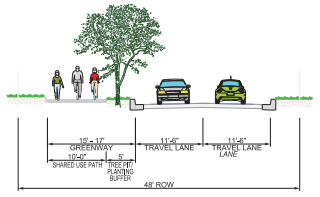
WHEATSHEAF LANE - PROPOSED

RICHMOND STREET

LEWIS STREET



LEWIS STREET - EXISTING



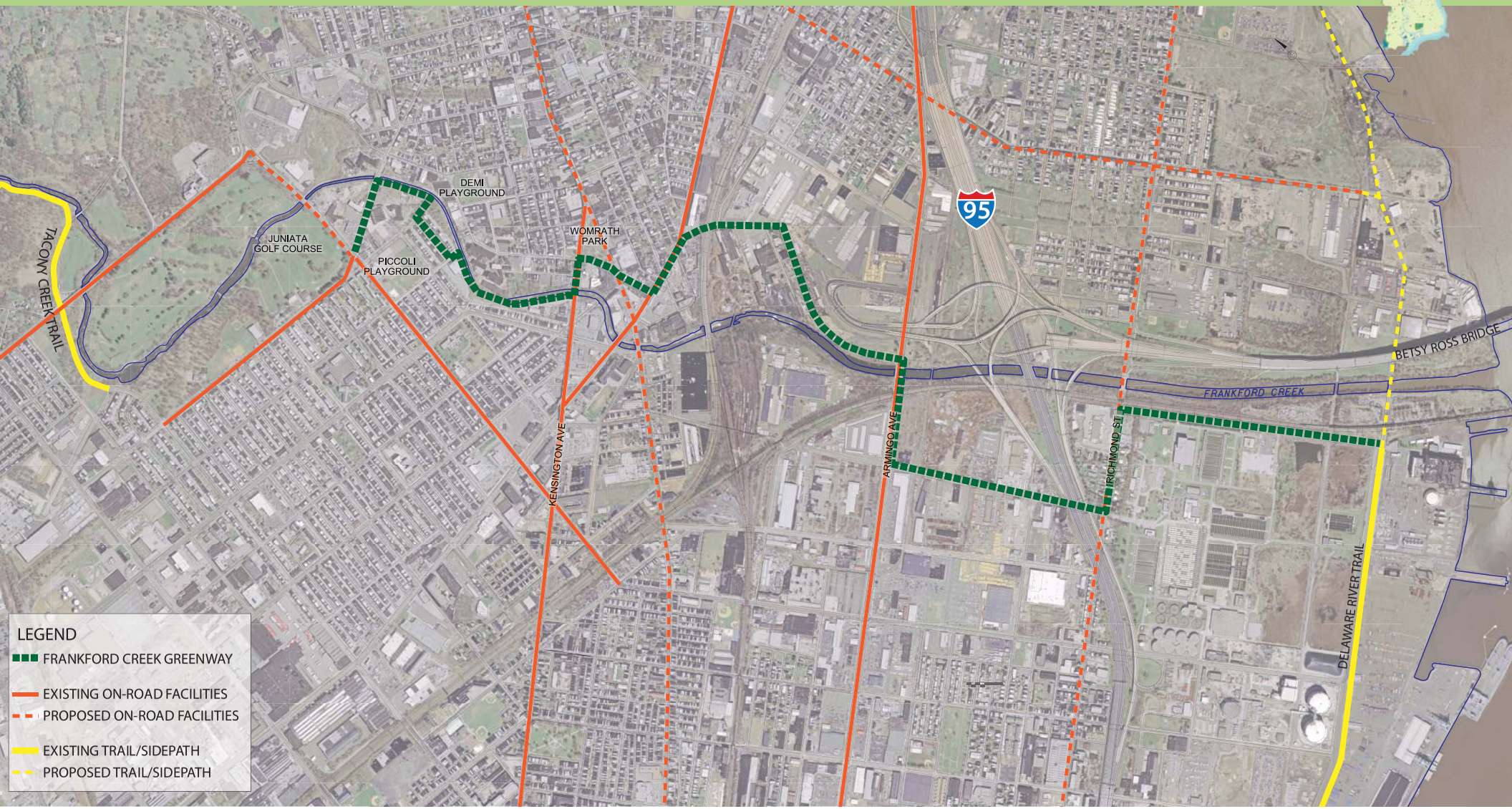
LEWIS STREET - PROPOSED

PCPC Philadelphia City Planning Commission | PHILADELPHIA PARKS & RECREATION | Baker | TooleDesignGroup

PUBLIC MEETING | MAY 14TH, 2014

CONTEXT MAP

FRANKFORD CREEK GREENWAY FEASIBILITY STUDY



PCPC Philadelphia City Planning Commission | PHILADELPHIA PARKS & RECREATION | Baker | TooleDesignGroup

PUBLIC MEETING | MAY 14TH, 2014

IMPLEMENTATION STRATEGY

FRANKFORD CREEK GREENWAY
FEASIBILITY STUDY

SECTION 2

YEARS 4-6

COMPLETE FROM JUNIATA GOLF COURSE TO WOMRATH PARK

SECTION 3

YEARS 6-10

COMPLETE FROM WOMRATH PARK TO ADAMS AVENUE CONNECTOR

PENNDOT

COMPLETE 2020

PART OF I-95 RE-CONSTRUCTION: SIDE PATH ALONG ADAMS AVENUE AND ARAMINGO AVENUE

SECTION 1

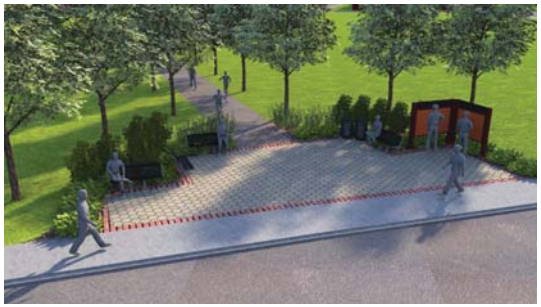
YEARS 1-4

COMPLETE FROM DELAWARE RIVER TRAIL TO BIKE LANES ON ARAMINGO AVENUE

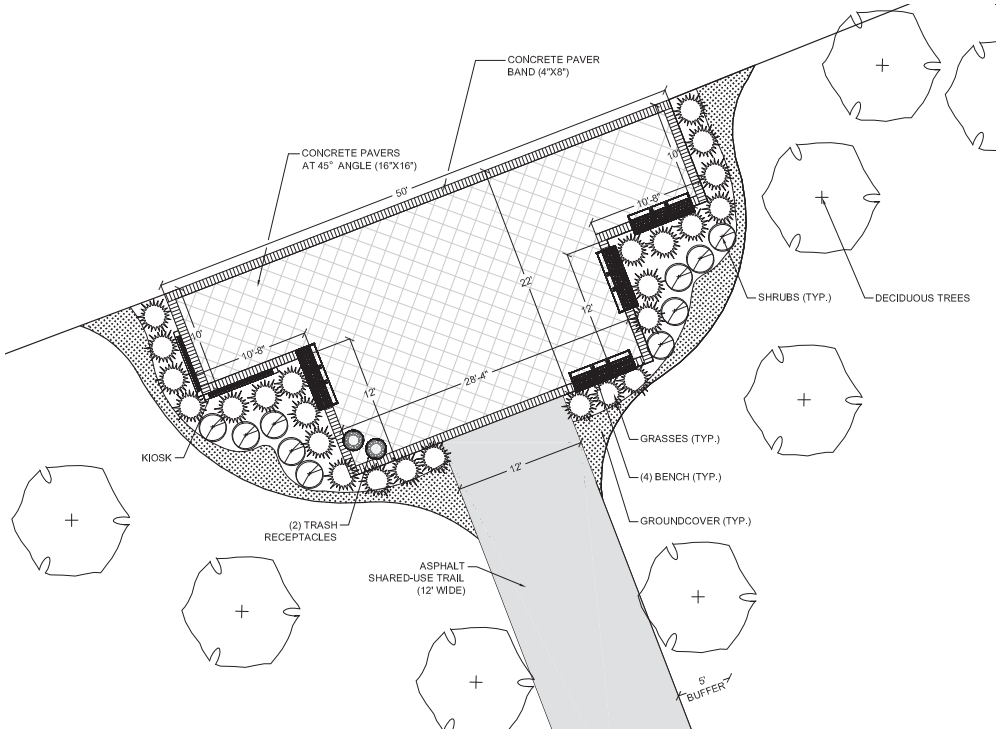
ADDITIONAL AMENITIES

FRANKFORD CREEK GREENWAY
FEASIBILITY STUDY

TRAIL GATEWAY



INFORMATION AND WAYFINDING



CULVERT PARK OPTIONS

Examples of Similar Trails


Delaware River Trail at Penn Street


North Delaware Trail under construction


Sidepath Trail Design - 58th Street Greenway


SRT in East Falls along Kelly Drive


Delaware River Trail at Penn Street


Shared Roadway Design with Sharrow markings - 59th Street


Schuylkill River Trail

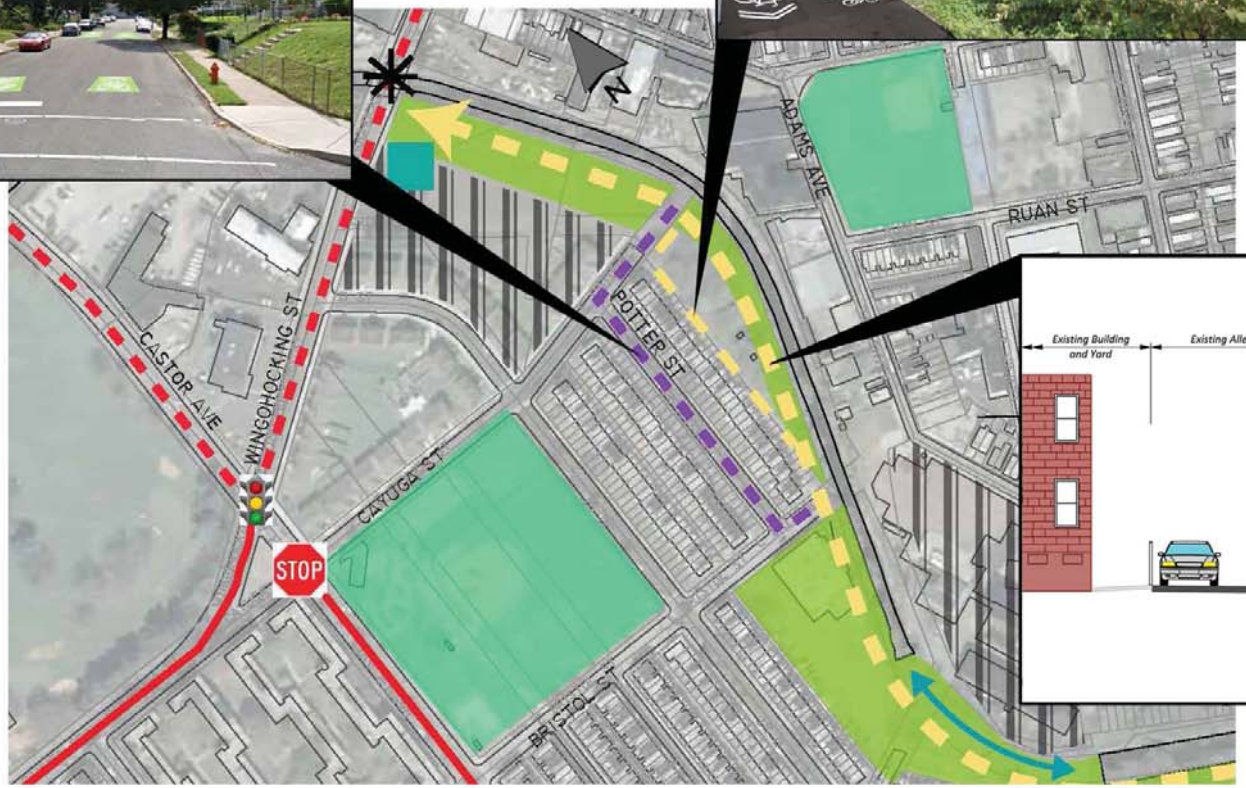

SRT along Kelly Drive

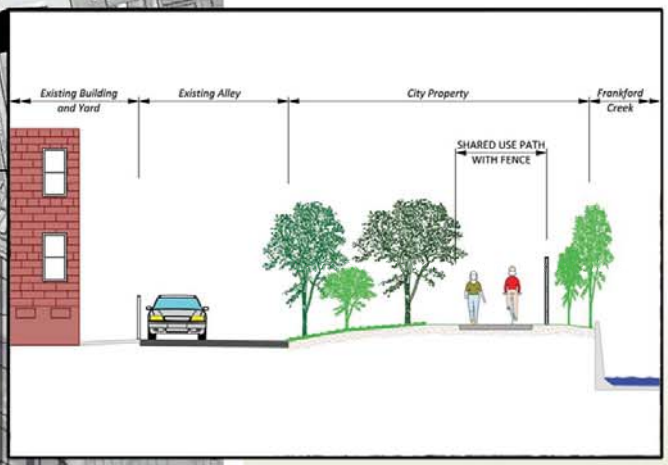
Potter Street Area - Greenway Options

FRANKFORD CREEK GREENWAY
FEASIBILITY STUDY

OPTION 1:
Shared roadway with green back "SHARROW" markings along Potter street.

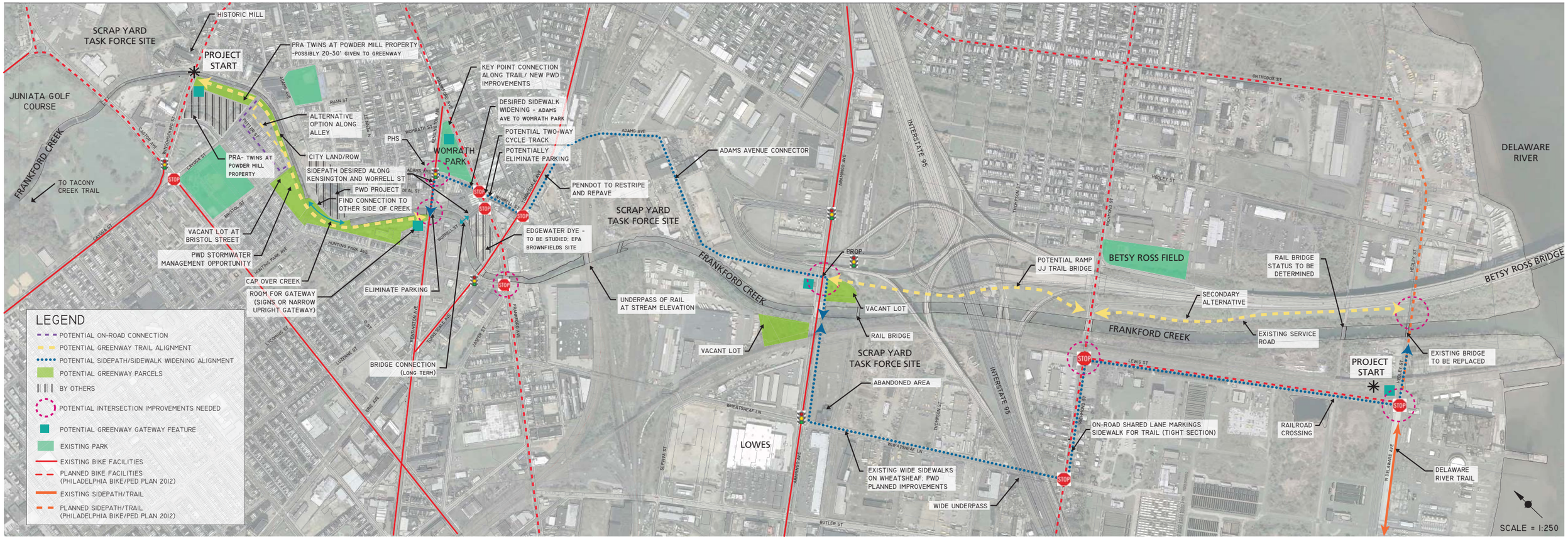
OPTION 2:
Shared roadway with "SHARROW" markings along existing alley.





OPTION 3:
Shared Used Path through City property.

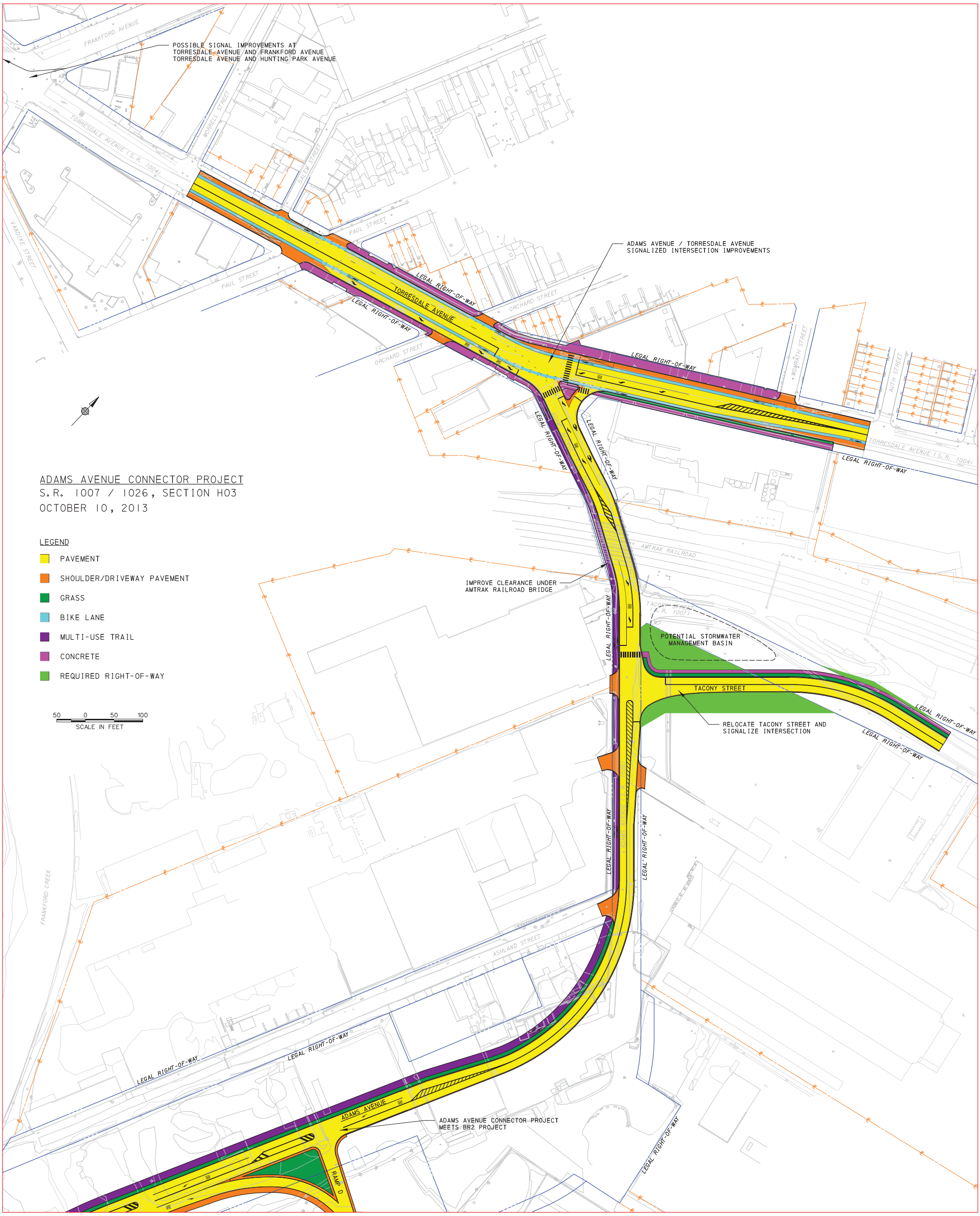
APPENDIX E:
SITE ANALYSIS MAP



FRANKFORD CREEK GREENWAY EXISTING CONDITIONS / ALTERNATIVES ANALYSIS

SEPTEMBER 2013

APPENDIX F:
ADAMS AVENUE CONNECTOR MAP


POSSIBLE SIGNAL IMPROVEMENTS AT
TORRESDALE AVENUE AND FRANKFORD AVENUE
TORRESDALE AVENUE AND HUNTING PARK AVENUE
ADAMS AVENUE / TORRESDALE AVENUE
SIGNALIZED INTERSECTION IMPROVEMENTS
IMPROVE CLEARANCE UNDER
AMTRAK RAILROAD BRIDGE
POTENTIAL STORMWATER
MANAGEMENT BASIN
TACONY STREET
RELOCATE TACONY STREET AND
SIGNALIZE INTERSECTION
ADAMS AVENUE CONNECTOR PROJECT
MEETS BR2 PROJECT
FRANKFORD AVENUE
TORRESDALE AVENUE (S.R. 1004)
WORRELL STREET
SALEM STREET
PAUL STREET
VANDIKE STREET
ORCHARD STREET
WOMRATH STREET
AUTH STREET
AMTRAK RAILROAD
TACONY STREET (S.R. 1007)
ASHLAND STREET
FRANKFORD CREEK
ADAMS AVENUE
RAMP D
LEGAL RIGHT-OF-WAY
TORRESDALE AVENUE
ADAMS AVENUE CONNECTOR PROJECT
S.R. 1007 / 1026, SECTION H03
OCTOBER 10, 2013
LEGEND
PAVEMENT
SHOULDER/DRIVEWAY PAVEMENT
GRASS
BIKE LANE
MULTI-USE TRAIL
CONCRETE
REQUIRED RIGHT-OF-WAY
50 0 50 100
SCALE IN FEET