

## SECTION 1 – EXECUTIVE SUMMARY

### 1.1 Project Overview and Scope

Alfred Benesch & Company has been retained by the Greater Bridgeport Regional Council (GBRC) to perform a feasibility study for the construction of a new pedestrian crossing over the Ash Creek between the Black Rock neighborhood of Bridgeport and the Fairfield Metro Center in the Town of Fairfield.

The Metro Center which was opened in December of 2011 provides an important transportation link for the surrounding neighborhoods allowing residents access to Metro-North's New Haven Line. The construction of this station is consistent with the sustainability goals of the region and will lessen the areas dependence on automobile transit.



The Ash Creek – Looking North Toward Fairfield Metro Center

The Metro Center is situated between Commerce Drive and Kings Highway to the North and by the Ash Creek to the South. The Ash Creek in this location is a tidal watercourse which initiates at the Rooster River and empties into Long Island Sound. It is diverse ecosystem consisting of the creek, adjacent mudflats, low marsh, high marsh, freshwater wetland and upland coastal meadow. While the Ash Creek is an environmental asset, it also serves as a barrier to the movement of traffic in the area.

With its BGreen 2020 sustainability plan, the City of Bridgeport has looked to identify strategies that can have a positive effect on the environment, climate change, energy dependency and the national economy. In line with these goals, the GBRC has embarked on this study to consider the feasibility of the introduction of a new pedestrian bridge crossing the Ash Creek between the Black Rock Neighborhood and the Fairfield Metro Center.

This report presents the results of this study. Included in the study is the consideration of several alternate bridge crossing locations in the general area as well as several bridge structure types. Beyond the bridge structure itself, the study takes into consideration the connections to of the new bridge to the existing transportation infrastructure.

Considerations evaluated in this study include environmental impacts, project costs, permitting, hydraulic considerations, foundation impacts, accessibility and aesthetics.

## 1.2 Crossing Location Alternates

The alternate crossing locations considered in this study include the following:

- **Alternate 1: No-Build Option:** This alternate considers the continued usage of the existing pedestrian facilities at the Brewster Street Bridge over the Ash Creek.
- **Alternate 2: Fox Street:** This alternate considers a new dedicated pedestrian bridge crossing located at the extension of Fox Street on the Bridgeport side of the Ash Creek.
- **Alternate 3: Davidson Street:** This alternate considers a new dedicated pedestrian bridge crossing located at the extension of Davidson Street on the Bridgeport side of the Ash Creek.

Of the three alternates, Alternate 2 was determined to represent the most suitable improvement to the movement of non-motorized traffic in the area. Of the two options involving the construction of a new bridge, this option represents the shorter span and is significantly less expensive than the Davidson Crossing. This option also involves less impact to the environmental resources surrounding the Ash Creek. Alternate 1; though offering benefits of having no cost or environmental impact; represents no improvement to the current conditions at the site.

## 1.3 Structure Type Study

After determining the most suitable location for the crossing, this study included the evaluation of three bridge structure types. The options considered are as follows:

- **Structure Type 1: Steel Plate Girder:** This option consists of a 158' steel plate girder main span with a 65' long steel rolled beam approach span. The spans are supported on reinforced concrete piers and abutments supported on pile foundations. The estimated construction cost for this alternate is \$2,440,000.
- **Structure Type 2: Steel Truss:** This option consists of a 158' steel truss main span with two 33' long steel rolled beam approach spans. The spans are supported on reinforced concrete piers and abutments supported on pile foundations. The estimated construction cost for this alternate is \$2,600,000.
- **Structure Type 3: Cable-Stayed Bridge:** This option consists of an asymmetrical cable-stayed bridge structure. This option includes a steel trapezoidal box girder superstructure suspended from stay cables anchored to a central concrete tower located at the south bank of the Ash Creek. The estimated construction cost for this alternate is \$3,130,000.

## 1.4 Walkway Considerations

Beyond the construction of the bridge itself, this study considered improvements to the existing pedestrian / non-motorized infrastructure at each end of the bridge to facilitate the movement of pedestrians and to encourage the use of non-motorized transit.

Improvements identified on the Bridgeport side include the establishment of a new walking path along the existing Canfield Avenue Right of Way between Fox Street and Davidson Street. Improvements to Fox Street between Canfield and Fairfield Avenues are also recommended. Improvements to bicycle traffic could be achieved by extending the existing bike trail that ends at the intersection of Gilman Street and Fairfield Avenue so that it continues down Fox Street and across to the Metro-Center over the proposed bridge.

On the Fairfield side of the crossing, the proposed walkway will tie into the existing gravel trail located within the conservation easement. The existing walkway leads to a crosswalk accessing the Fairfield Metro Center Parking Lot. As there is no defined walkway within the parking lot leading pedestrian traffic to the Metro-North train platform, this study recommends the creation of a defined walkway to better guide pedestrians and improve safety. As the bridge is intended to be a multi-use path, localized improvements to the existing gravel path are recommended in order to provide a paved surface for the bicycling public wishing to access the Fairfield Metro Center.

## 1.5 Project Data

- Estimated Construction Costs:

Site Improvements:	\$845,000
Bridge (Plate Girder):	\$2,440,000
Bridge (Truss)	\$2,600,000
Bridge (Cable-Stayed)	\$3,130,000
- Estimated Construction Duration: 18 Months
- ROW Involvement: Partial Property Acquisition at 925 Brewster Street for Bridge Construction and Site Improvements
- Utilities Impacted: None Identified
- Permits Anticipated:
  - DEEP Structure and Dredging Permit
  - ACOE - Section 404 Permit
  - DEEP Tidal Wetlands Permit
  - DEEP Coastal Consistency Determination
  - Fairfield Conservation Commission Approval
  - Local Inland Wetlands Permit
  - Local Planning and Zoning Approval
  - DEEP Flood Management Certifications