



## ALTERNATIVES SUMMARY SHEET

The following are written descriptions of each of the Resist alignments for the three build Alternatives moving forward, which will be discussed further at the community meeting to be held on February 18, 2016 from 6:00 PM to 9:00 PM at the Wallace School Gymnasium (1100 Willow Avenue, Hoboken, NJ). Additional information can be found on the project website at [www.rbd-hudsonriver.nj.gov/](http://www.rbd-hudsonriver.nj.gov/).

The Delay, Store, Discharge (DSD) component of the project is included in each of the three Alternatives, but not discussed here. The DSD component does not vary among the Resist alignments described.

Dewberry Engineers has completed the concept screening phase of this project, and based on comment from the public, the local governments, and other key stakeholders, Concepts C and D will not advance for further study.

The project screening criteria used to develop the original five concepts were reevaluated and applied to develop the three build Alternatives described below. As a result, each of the remaining Concepts A, B, and E has been modified. The three Alternatives described below will be evaluated further against a “no-build” scenario to ultimately arrive at the Preferred Alternative.

Below is a description of the Resist alignments for each alternative.

## ALTERNATIVE 1

Characteristics of **Alternative 1**:

- Provides greatest level of coastal flood risk reduction benefits.
- Potentially least amount of transportation network (roadway and parking) disruption
- Highest cost and complexity to construct compared to the other alternatives
- Most impact on existing waterfront views/access

Alternative 1 (which was developed from the earlier Concept B) will be included within the EIS to maintain a full range of reasonable alternatives pursuant to the National Environmental Policy Act (NEPA). Furthermore, to maintain this alternative as the “waterfront” option, components of the southern alignment of Concept E were incorporated into this alternative. This alternative provides coastal flood risk reduction to approximately 98% of the population within the study area.

Alternative 1 provides the greatest level of flood risk reduction by locating the resist structures primarily along the waterfront. This alternative’s Resist structure generally follows the waterfront from the Lincoln Tunnel in Weehawken south to Weehawken Cove where it is envisioned that a boathouse, using alternate funding, will be incorporated into the structure. In addition, a bermed or terraced park will be incorporated into the southwest corner of Weehawken Cove. The alignment continues around the waterside of the Tea Building and Maxwell Place communities in North Hoboken, and then south along the waterfront to the intersection of Sinatra Drive North and Frank Sinatra Drive, just south of Maxwell Place Park. There will be a series of gates along the waterfront to allow access onto piers and across road intersections during non-flood conditions. Some possible designs for the Resist structure may include elevated walkways, raised paths, bermed park area etc., however, the design is still to be determined. The Resist structure also has a component along Sinatra Drive from 4<sup>th</sup> Street to 1<sup>st</sup> Street, in South Hoboken, where the design may consist of an elevated walkway that potentially ties into a deployable system running east/west on 1<sup>st</sup> Street. In the southern portion of the project area, there will be two options will be analyzed: Option 1 features an alignment south of Observer Highway, within the rail yard (south of the proposed Hoboken Yard Redevelopment Area), whereas Option 2 includes an alignment along Observer Highway from Washington Street to Marin Boulevard, on an alignment that runs behind NJ Transit offices. The alignment includes gates for access at various locations including at the Marin Boulevard, Grove Street and Newark Avenue underpasses beneath the rail lines, as well as protection where Hudson Bergen Light Rail (HBLR) tracks pass below the NJ Transit overpass in the southwest corner of the project area.

## ALTERNATIVE 2

### Characteristics of **Alternative 2**:

- Does not impact waterfront views or existing waterfront access
- Less costly to construct compared to Alternative 1
- May require reduction in space along Washington Street for structure footprint
- May have impact on roadway/traffic flow on 15<sup>th</sup> Street

Alternative 2 was developed from the earlier Concept E with two modifications. First, to maintain a distinction between the waterfront option (Alternative 1), the northern Hoboken portion of the alignment along the Tea Building waterfront walkway was moved to 15<sup>th</sup> Street (south of the Tea Building). Second, because of the length and height of structure required along Hudson Street or Shipyard Lane, as well as the significant number of gates required for each, the alignment was moved to Washington Street. Washington Street was chosen due to the width of the street to accommodate the necessary structure and potential to blend structural amenities into the commercial nature of the area. This alternative provides coastal flood risk reduction to approximately 86% of the population within the study area.

This alternative's Resist structure begins near the HBLR Lincoln Harbor station at Waterfront Terrace, traveling south towards Harbor Boulevard, and then south along Weehawken Cove where it is envisioned that a boathouse, using alternate funding, will be incorporated into the structure. In addition, a bermed or terraced park will be incorporated into the southwest corner of the Weehawken Cove. The alternative continues to 15<sup>th</sup> Street. It will then travel east along 15<sup>th</sup> Street from the northern end of Garden to Washington Street, and then south along Washington Street, where it will gradually taper off between 14<sup>th</sup> and 13<sup>th</sup> Streets. Street crossings will feature gates to allow for access during non-flood conditions. Consideration will be given to adapting the use of structures in a way to provide urban amenities and landscape enhancements. There will then be two options in the south, along the Hoboken Terminal rail yard: Option 1 will feature an alignment south of Observer Highway, within the rail yard (south of the proposed Hoboken Yard Redevelopment Area), whereas Option 2 will include an alignment along Observer Highway from Washington Street directly to Marin Boulevard. The alignment includes gates for access at various locations including at the Marin Boulevard, Grove Street and Newark Avenue underpasses beneath the rail lines, as well as protection where HBLR tracks pass below the NJ Transit overpass in the southwest corner of the project area.

## ALTERNATIVE 3

### Characteristics of **Alternative 3**:

- Does not impact waterfront views or existing waterfront access
- Less costly to construct and maintain compared to Alternative 1
- Reduced traffic and circulation impacts compared to Alternative 2 by using alleyway for portion of alignment.
- May enhance the urban design and existing use of public space within the alleyway
- May require reduction in space along Washington Street for structure footprint

Alternative 3 was developed from the earlier Concept A, which was revised to relocate portions of the Resist alignment to areas that would minimize impacts on the community. The Alternative utilizes a private alleyway that parallels 14<sup>th</sup> Street to extend to Washington Street to meet the same flood resist goals. Washington Street was again chosen due to the width of the street to accommodate the necessary structure and potential to blend structural amenities into the commercial nature of the area. This alternative provides coastal flood risk reduction to approximately 85% of the population within the study area.

This alternative's **Resist** structure begins near the Hudson Bergen Light Rail (HBLR) Lincoln Harbor station at Waterfront Terrace, traveling south towards Harbor Boulevard, and then continuing south along Weehawken Cove towards Garden Street. It is envisioned that a boathouse, using alternate funding, will be incorporated into the structure. In addition, a bermed or terraced park will be incorporated into the southwest corner of the Weehawken Cove. The structure then will travel down the alleyway midway between 15<sup>th</sup> and 14<sup>th</sup> Streets from Garden to Washington Street, and then south along Washington Street, where it will gradually taper off between 14<sup>th</sup> and 13<sup>th</sup> Streets. Street crossings will feature gates to allow for access during non-flood conditions. Consideration will be given to adapting the use of structures in a way to provide urban amenities and landscape enhancements. There will then be two options: Option 1 will include an alignment south of Observer Highway, within the rail yard (south of the proposed Hoboken Yard Redevelopment Area), whereas Option 2 will feature an alignment along Observer Highway from Washington Street directly to Marin Boulevard. The alignment includes gates for access at various locations including at the Marin Boulevard, Grove Street and Newark Avenue underpasses beneath the rail lines, as well as protection where HBLR tracks pass below the NJ Transit overpass in the southwest corner of the project area.