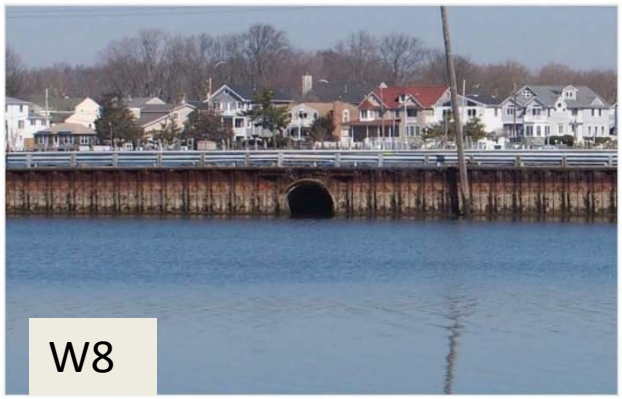
Monmouth County Three Bridges

Boroughs of Brielle and Manasquan

Bridge W-7, Green Avenue over Debbie's Creek

Structure W-8, Fisk Avenue Culvert between Debbie's Creek and The Glimmer Glass

Bridge W-9, Brielle Road Bridge over The Glimmer Glass



Stakeholder Meeting #2

The Curtis House, Brielle Borough

November 29, 2016

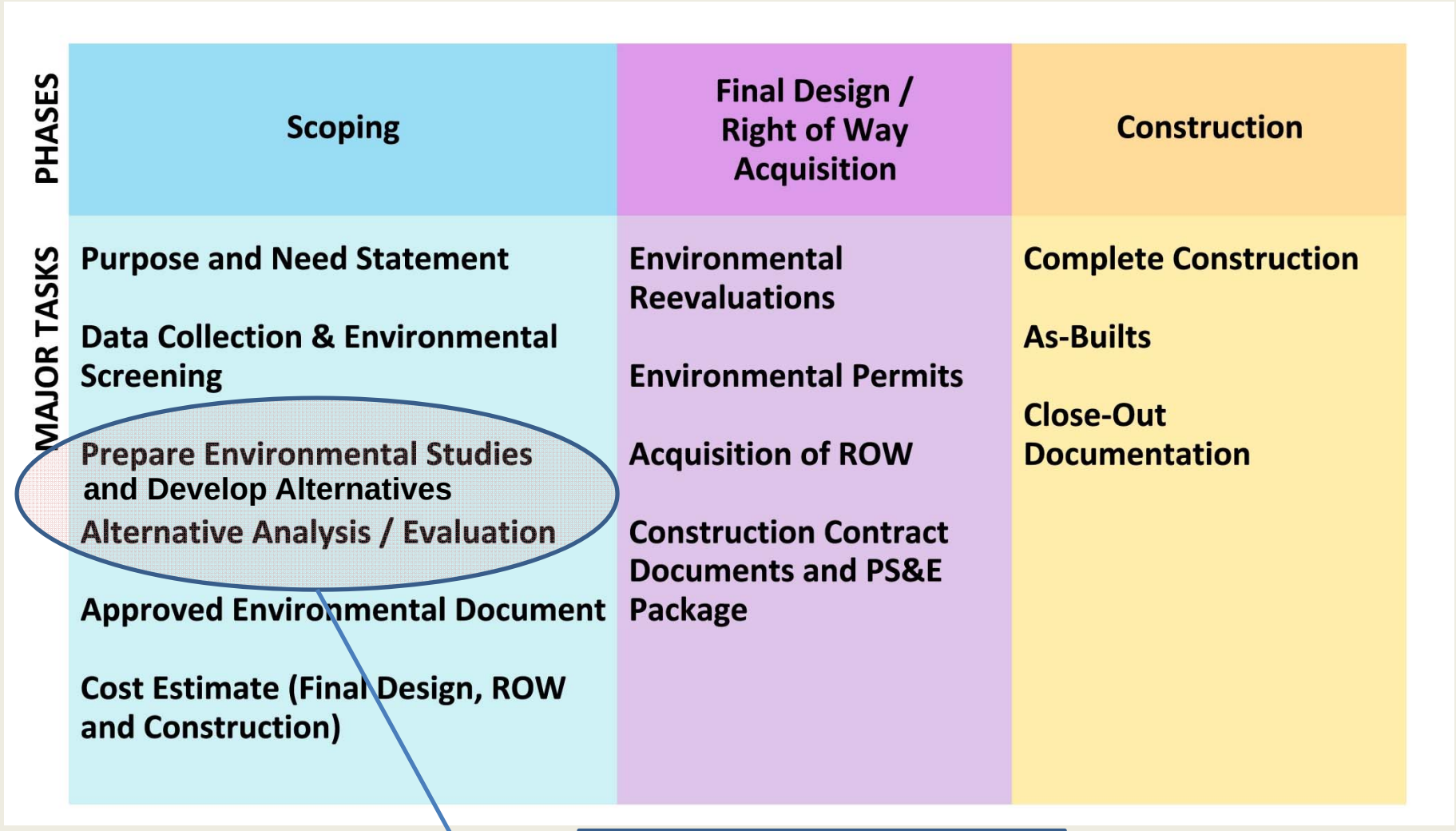
NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

U.S. Department of Transportation Federal Highway Administration

Agenda

- Welcome / Introductions
- Purpose of Meeting / Format
- Project Delivery Process
- Recap Project Site
- Review of Spring 2016 Stakeholder and PIC Input
- Review of P&N, Goals and Opportunities
- Review of Project Alternatives
- Next Steps
- Stakeholder Input

Project Delivery Process



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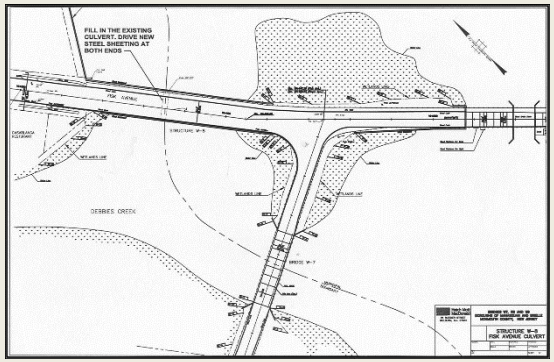
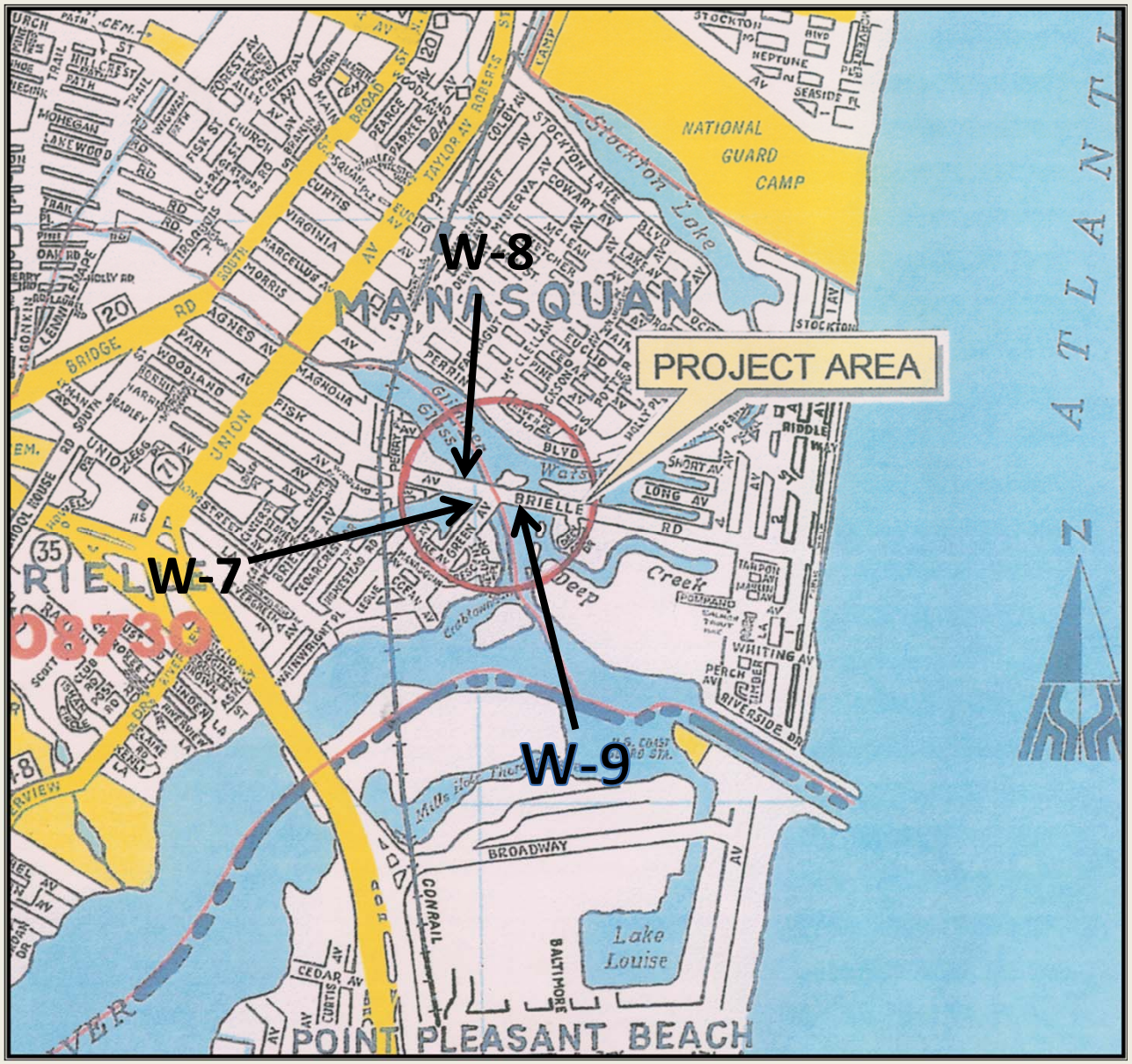
Location Map





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May 24, 2016 PIC Meeting Summary

Brielle Township: 2:00-4:00pm
Manasquan Township: 6:00-8:00pm

Purpose of PIC

- Re-introduce Project
- Solicit Public Opinion on Purpose, Needs, Goals and Objectives

PIC Notifications and Invitations

- Municipal Websites
- Notification by Mail - 324
- Email Contacts - 48
- Newspaper Legal Notices: APP and Coast Star
- Bulletin Boards/Flyers within study area
- Project Website Visits during May/June ~ 600

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May 24, 2016 PIC Meeting Summary

84 Attendees, Excluding Project Team

- Brielle Attendees: 45
- Manasquan Attendees: 39

160 Comments Recorded by Team Members

64 Comments from Suggestion Boxes and 30-Day Period

- Suggestion Boxes: 32
- E-mail: 30
- via Mail / Fed Ex: 2

❖ **Project Website FAQ**

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Concerns Expressed During Purpose and Needs PIC (through 30 day comment period)

Six Categories: *(in no particular order)*

- Safety / Bicyclists / Pedestrians
- Operations (roadway and waterway)
- Historic Significance and Character of the Area
- Environmental and Right of Way Impacts
- Cost / Funding / Schedule
- Suggestions for Alternatives

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Concerns Expressed During Purpose and Needs PIC (through 30 day comment period)

Safety

- Safety for all users, especially for pedestrians and bicyclists
- Roads and bridges are too narrow for all users to share
- Speeding (on roadways and to get to Bridge W9)
- Truck traffic will increase if roads/ bridges are widened and load limits increased
- Safety needs of kayakers under Bridge W7

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Concerns Expressed During Purpose and Needs PIC (through 30 day comment period)

Operations

- Bridge W9 takes too long to open / close
- Traffic disruption for frequent repairs
- Need better sidewalk/ bike connectivity
- Tidal flooding impacts on traffic
- Storm/ flood evacuation
- Improve traffic signing and controls
- Access by EMS and storm evacuation vehicles
- Dredge waterways to accommodate maritime use and improve tidal circulation
- Information provided on vehicle traffic, Bridge W9 opening delays, congestion, bicycle/ pedestrian/skate board use

Concerns Expressed During Purpose and Needs PIC (through 30 day comment period)

Historic Significance and Character of Area

- Preserve aesthetics
- Area character and history is important
- Include Preservation of Bridge W9 in Purpose / Need
- Save/ Rehabilitate Bridge W9

Concerns Expressed During Purpose and Needs PIC (through 30 day comment period)

Environment and Right of Way

- Protect environment/ minimize temporary and permanent impacts/ avoid use of CCA/ AZCA timber
- Avoid/Minimize acquisition of property for project

Cost/ Funding/ Schedule

- Cost - where is funding coming from?
- Schedule - Concern over lengthy design and construction schedules, expedite construction
- Why Delay?, Resolutions of project support already provided by Manasquan and Brielle (2003, 2008, 2014)

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Concerns Expressed During Purpose and Needs PIC (through 30 day comment period)

Suggestions for Alternatives

- Replace Bridge W9 to modern standards but design it to "look same" as existing
- Build new bike/ pedestrian bridge parallel to W9
- Remove W9 and insert as part of W7, or as a fishing pier in vicinity of project
- Rehabilitation

Project Purpose and Needs
(definition)

- **Project Purpose** identifies the intent of the project undertaking
- **Project Needs** identify specific deficiencies and critical concerns to be addressed by the project
- Projects typically also have **goals and objectives** that are strived for as part of the project; not all may be achieved by the final selected alternative

Project Purpose

To provide a safe and efficient crossing for all modes of travel within the project limits by addressing the geometric,

structural,

and operational and maintenance

deficiencies of:

Bridge W-7 (Green Avenue over Debbie's Creek),

Structure W-8 (Fisk Avenue Culvert), and

Bridge W-9 (Brielle Road over the Glimmer Glass).

Project Needs

- Bridge Needs (including emergency vehicles, clearances, bridge width)
- Roadway Needs (Lane/Shoulder Widths)
- System Linkage (Emergency Response, Coastal Evacuation, Marine Access)
- Pedestrian and Bicycle Compatibility / ADA

Project Goals and Objectives

- Provide sidewalk connectivity
- Reduce the safety risks for all users
- Reduce the frequency of major bridge maintenance activities
- Maintain traffic with minimum disruption during construction

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Project Goals and Objectives

- Avoid or minimize social, economic and environmental impacts
- Avoid, minimize and, if necessary, mitigate adverse effects on the National and NJ Register of Historic Places listed Bridge W-9
- Incorporate Context Sensitive Solutions approach into the design

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Revisions to P & N, Goals and Objectives

The existing already cover many comments/ concerns. Noted are:

- Add “minimize flooding” to Project Goals
  - Issues fall outside Project Limits

- Include Preservation of Bridge W9 in the Purpose and Needs
  - Since not a Historic Bridge Preservation Project, not specific to P & N
  - Historic importance already included in two Project Goals and Objectives:
  - “Avoid, Minimize and, if necessary, mitigate adverse effects on the National and NJ Registers of Historic Places listed Bridge W-9.”
  - “Incorporate Context Sensitive Solutions approach into the design”

- Add “streamline design & construction schedules” and “Cost Effective Design” to Project Goals
  - *Will Incorporate Value Engineering into Design*

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Alternatives Considered

- Alternatives investigated generally include:
  - No-Build
  - Rehabilitation
  - Replacement
- Parallel bridge alternatives were also investigated for Bridge W-9 with several sub-alternative variations

General Definitions

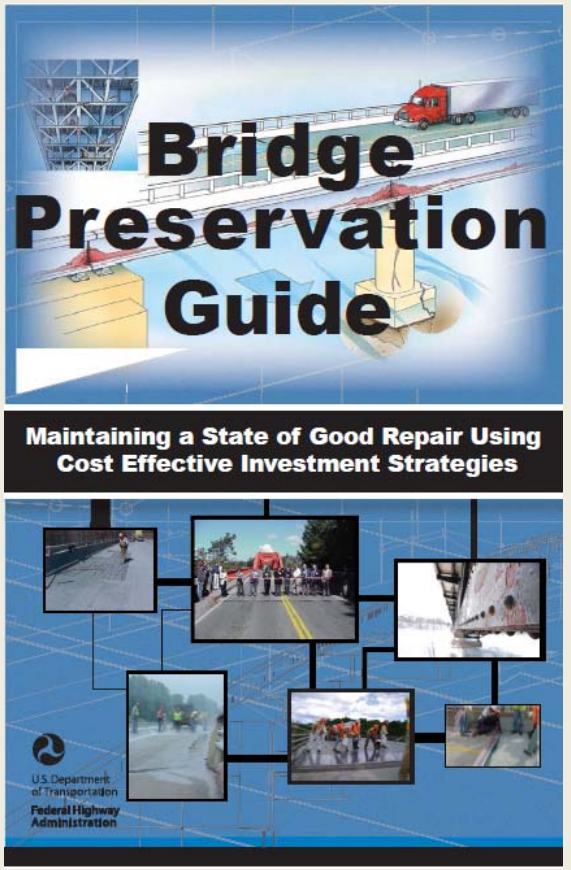
No-Build Alternative

- Required by FHWA
- Serves as baseline with which to compare alternatives
- Includes normal maintenance and repairs and can include minor safety upgrades

General Definitions

Repair vs. Rehabilitation

- Repair – generally implies regular maintenance to keep existing components functioning as intended
- Rehabilitation – generally more substantial work that restores structural integrity, corrects defects (especially safety) and may include incidental geometric changes



NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

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General Definitions

Secretary of the Interior (SOI) Standards for the Treatment of Historical Properties

- Title 36, Chapter I of the Code of Federal Regulations (CFR)
- Requires work to be “compatible with the historic materials, features, size, scale and proportions, and massing to protect the integrity of the property”

General Definitions

Structural Capacity/Load Posting

- All bridges are rated based on their as-built condition as modified by current conditions

NJ Legal Loads

15 Tons

25 Tons

40 Tons

Bridge W-7

- Bridges are rated for several legal vehicles defined by the State (2 axle, 3 axle, etc.)
- Load posting required when rated load < legal load
- Posting represents maximum permissible weight per vehicle type

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General Definitions

Widening (as it pertains to this project)

- Bridge widths are controlled by 3 main elements
  - Lanes
  - Shoulders
  - Sidewalks
- **None of the rehabilitation or replacement alternatives investigated add additional travel lanes**

General Definitions

Roadway Functional Classifications

- NJDOT classification of Fisk Ave/Brielle Road: Urban Major Collector

Imagery ©2015 DigitalGlobe, USDA Farm Service Agency, Map data ©2015 Google

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U.S. Department of Transportation Federal Highway Administration

General Definitions

Lanes

- For urban collectors: “Lanes within the traveled way should range in width from 3.0 to 3.6 m [10 to 12 ft].”

  - AASHTO Policy on Geometric Design of Highways and Streets

Shoulders

- “Shoulder width of at least 5 ft (1.5 m) is recommended from the face of a guardrail, curb, or other roadside barrier…”

  - AASHTO Guide for the Development of Bicycle Facilities

Sidewalks

- “…the continuous clear width of pedestrian access routes shall be 1.2 m (4.0 ft) minimum, exclusive of the width of the curb.”
- “…passing spaces shall be provided…” and “… shall be 1.5m (5.0 ft) minimum by 1.5 m (5.0 ft) minimum.”

  - United States Access Board Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

U.S. Department of Transportation Federal Highway Administration

General Definitions

Clear Zone

Defined as "the unobstructed, traversable area provided beyond the edge of the traveled way for the recovery of errant vehicles…includes shoulders, bicycle lanes, and auxiliary lanes"

"Where establishing a full-width clear zone in an urban area is not practical…consideration should be given to establishing a reduced clear zone or incorporating as many clear zone concepts as practical, such as removing roadside objects or making them crashworthy"

- AASHTO Policy on Geometric Design of Highways and Streets

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General Definitions

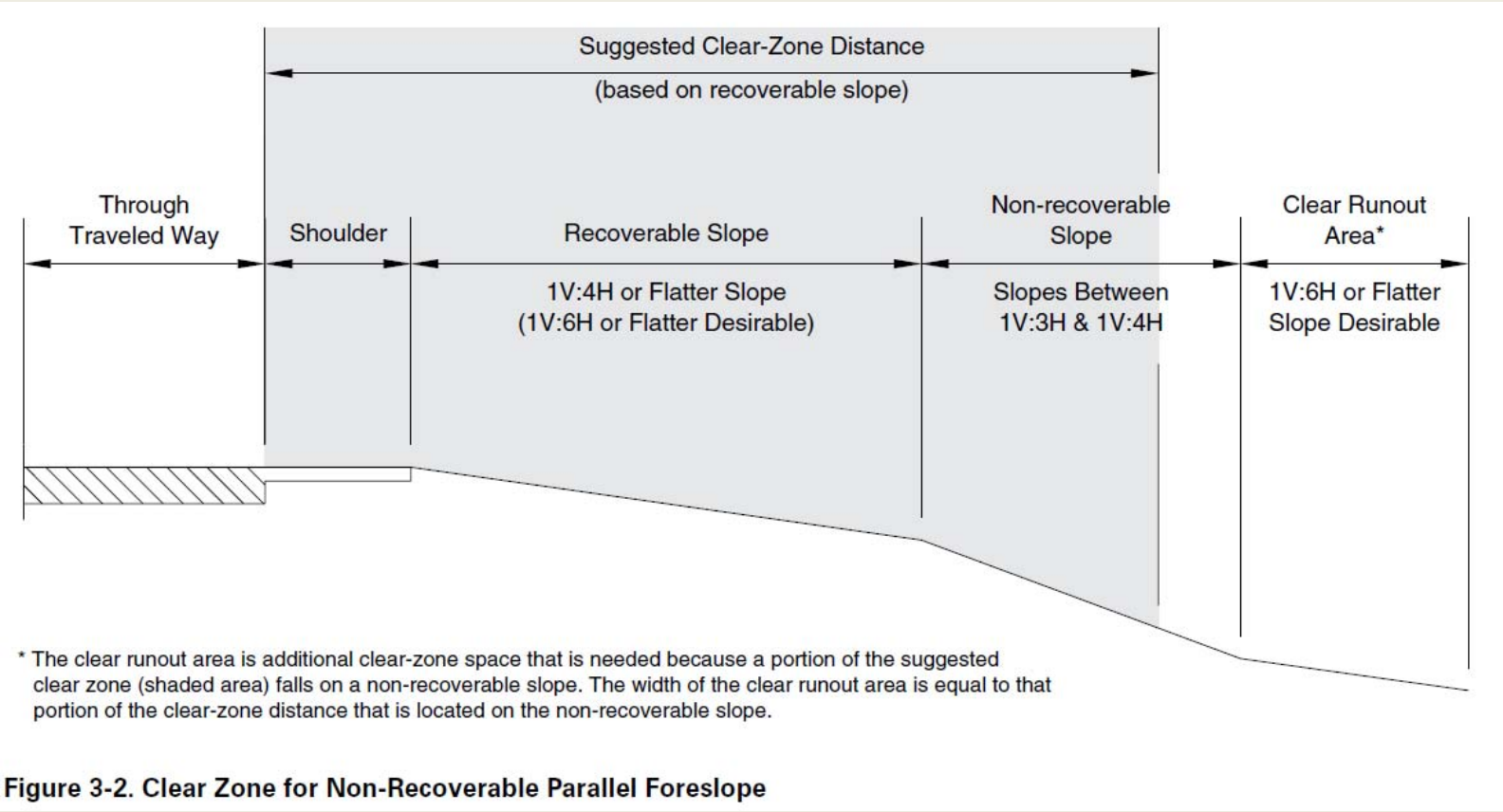

Figure 3-2. Clear Zone for Non-Recoverable Parallel Foreslope

For the design speed and traffic volume on Fisk Avenue/Brielle Road, the AASHTO suggested minimum clear zone distance is 12 feet.

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W-7: Green Avenue over Debbie's Creek

EXISTING CONDITIONS:

- **NARROW BRIDGE ROADWAY WIDTH (21.7')**
- **SUBSTANDARD LIVE LOAD CAPACITY**
- **SUBSTANDARD RAILINGS**
- **2013 NBIS REPORT SUFFICIENCY RATING OF 18.7 OUT OF 100**

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W-7: Green Avenue over Debbie's Creek

Alternatives Considered

Monmouth County Bridge W-7

Green Avenue over Debbie's Creek

- Alternative 1 – No-Build
- Alternative 2 – Rehabilitation
- Alternative 3 – Replacement with Wider Bridge

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

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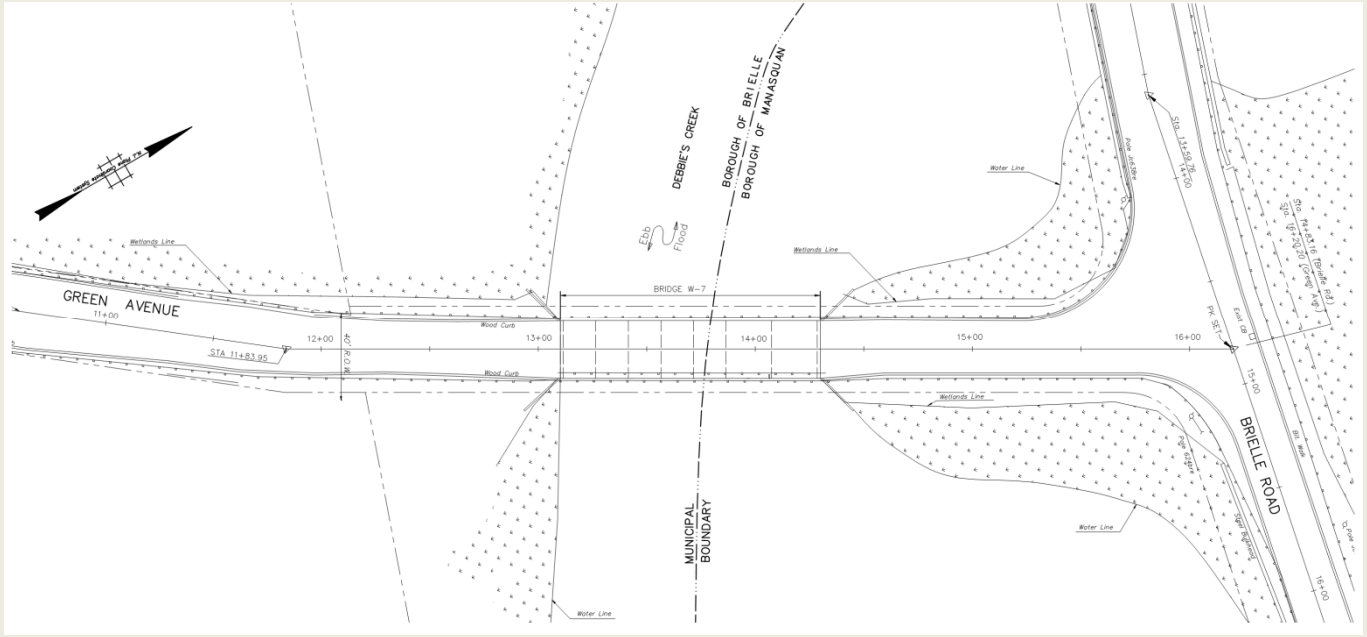
Alternatives Considered

Monmouth County Bridge W-7

Green Avenue over Debbie's Creek

Alternative 1: No-Build

- Perform regular maintenance and repairs only



Alternatives Considered

Monmouth County Bridge W-7

Green Avenue over Debbie's Creek

Alternative 2: Rehabilitation

- Rehabilitate with like materials/components (timber)
- Increase structural capacity
- Maintain span arrangement
- Maintain existing curb-to-curb roadway width
- Widen bridge slightly to accommodate standard ADA compliant sidewalk
- Upgrade roadside safety features (railings, end treatments, etc.)

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

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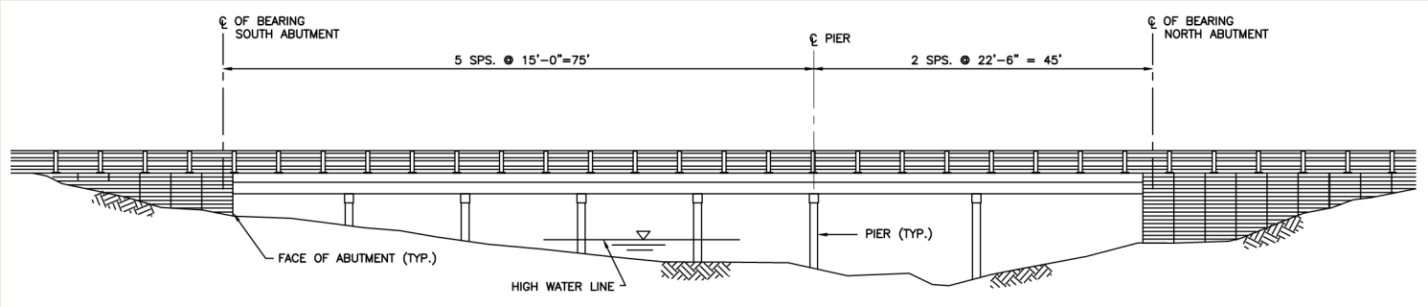
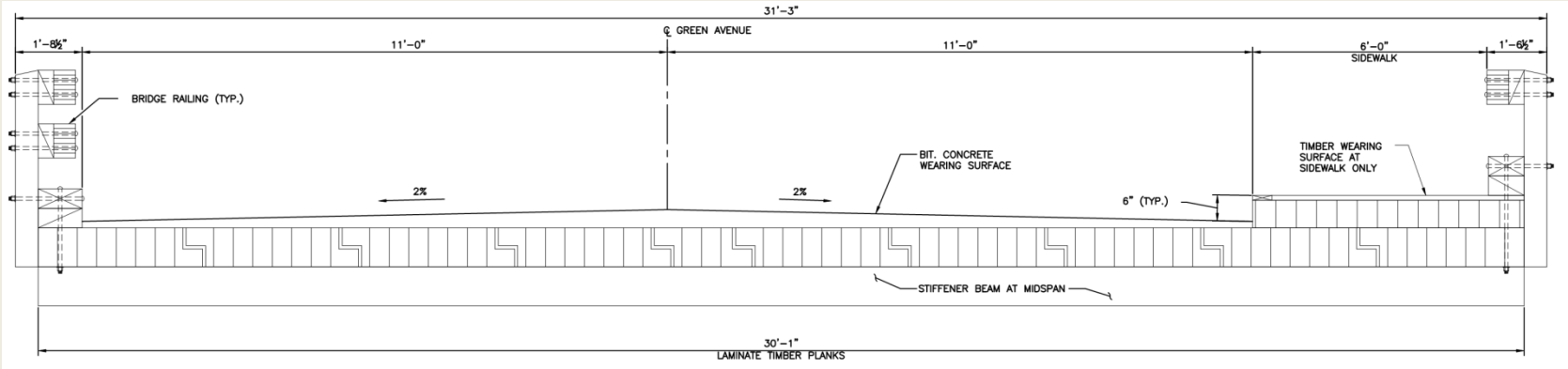
Alternatives Considered

Monmouth County Bridge W-7

Green Avenue over Debbie's Creek

Alternative 2: Rehabilitation





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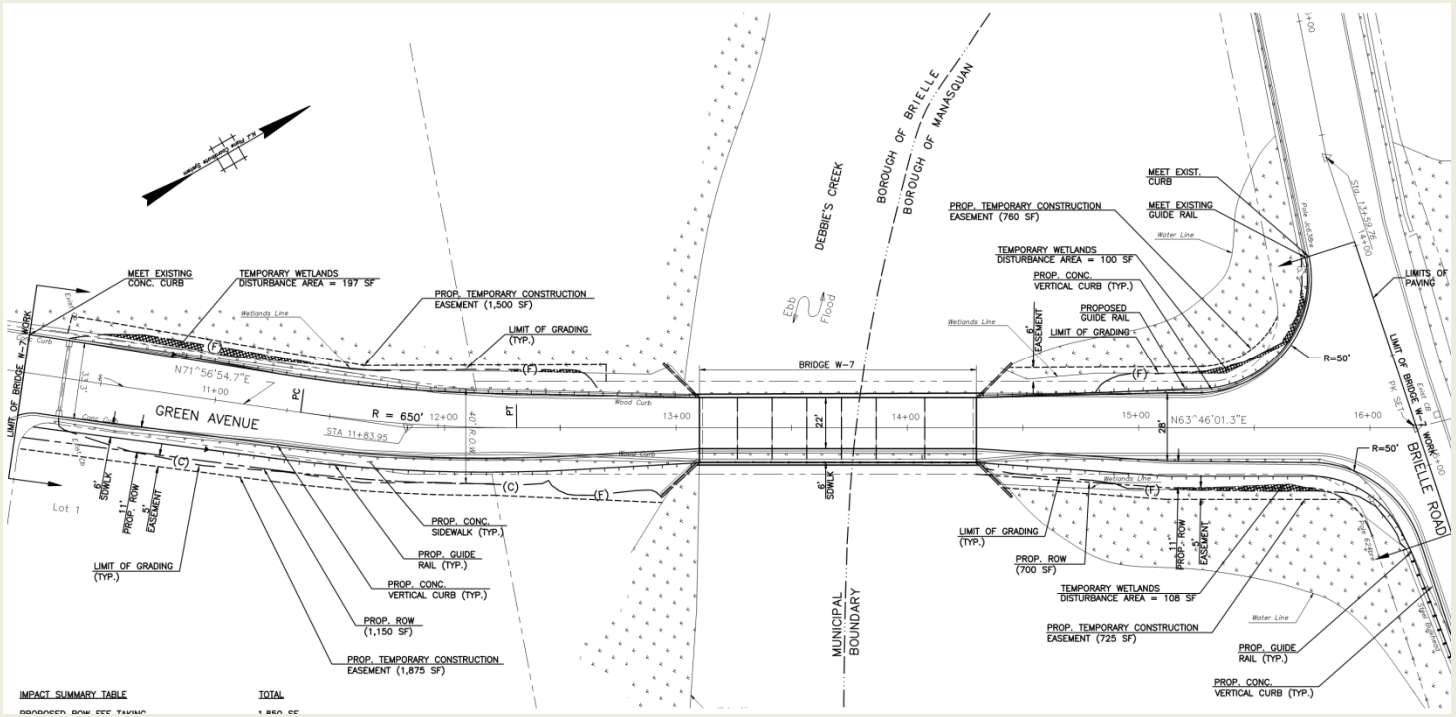
Alternatives Considered

Monmouth County Bridge W-7

Green Avenue over Debbie's Creek

Alternative 2: Rehabilitation



Alternatives Considered

Monmouth County Bridge W-7

Green Avenue over Debbie's Creek

Alternative 3: Replacement with Wider Bridge

- Provide new bridge with more durable materials (concrete)
  - Architectural treatments can be explored in final design
- Reduce number of piers/spans
- Widen bridge to provide standard width lanes with bicycle compatible shoulders and standard ADA compliant sidewalk

➢ *Public comment: Consider providing sidewalks on each side and consider adding additional sidewalk width to accommodate fishing*

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

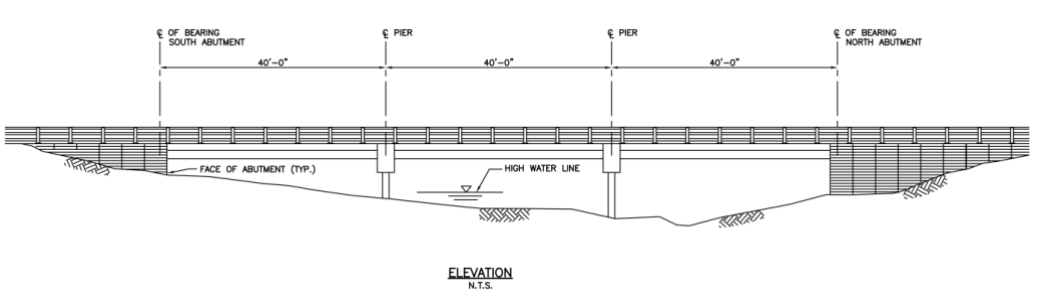
U.S. Department of Transportation Federal Highway Administration

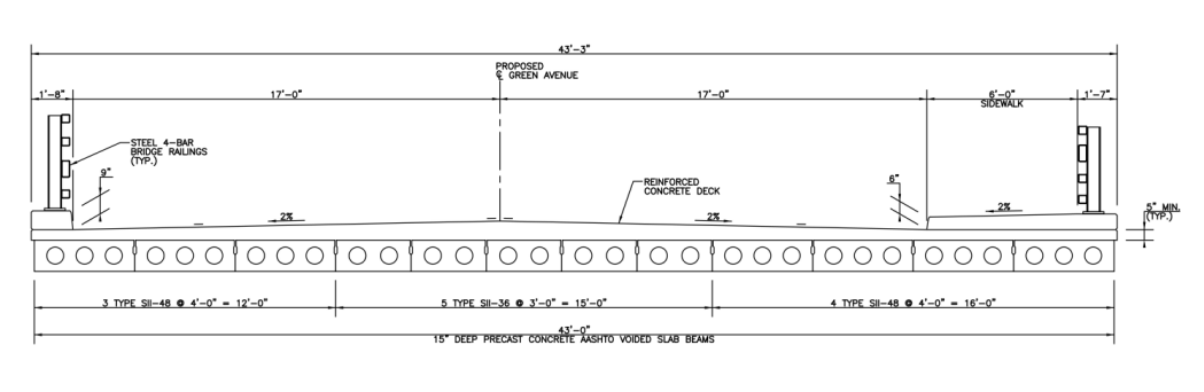
Alternatives Considered

Monmouth County Bridge W-7

Green Avenue over Debbie's Creek

Alternative 3: Replacement with Wider Bridge





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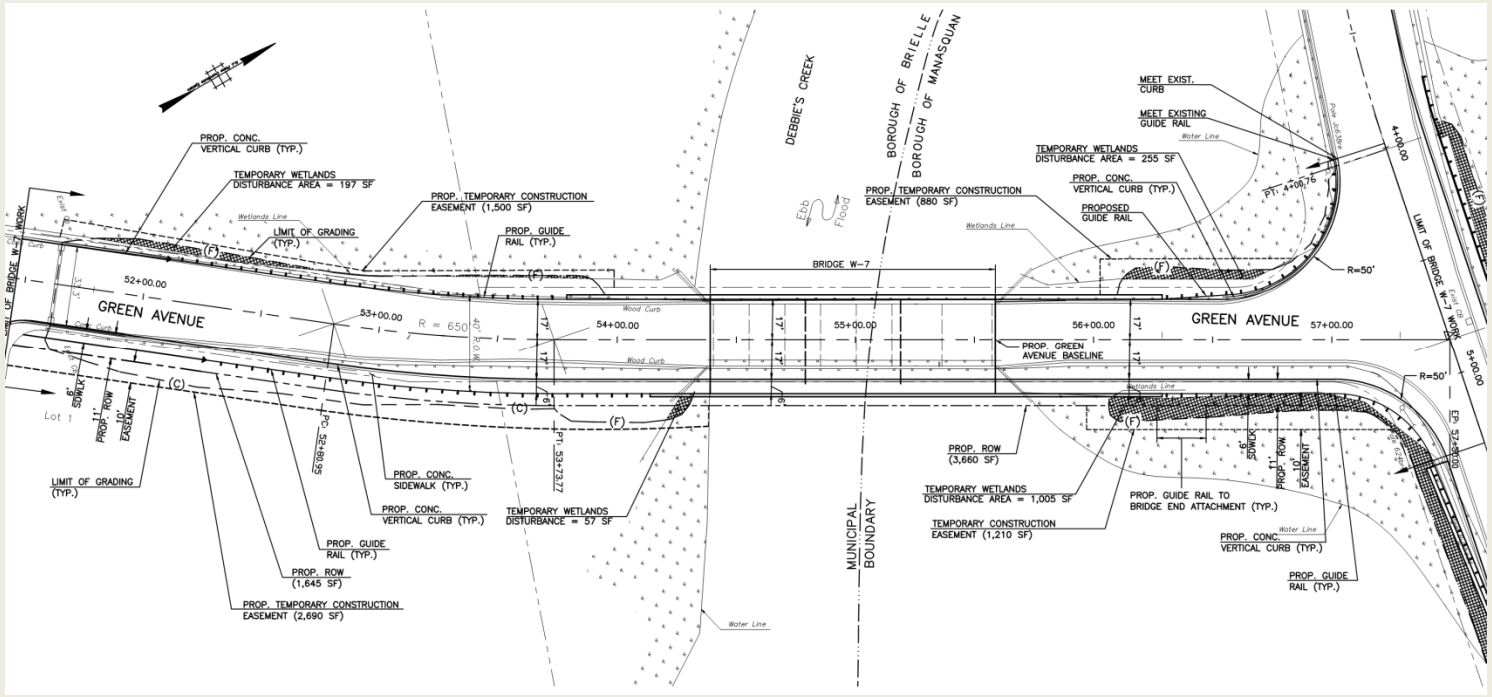
Alternatives Considered

Monmouth County Bridge W-7

Green Avenue over Debbie's Creek

Alternative 3: Replacement with Wider Bridge



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W-8: Fisk Avenue Culvert

EXISTING CONDITIONS:

- **CULVERT SUBMERGED AND PARTIALLY SILTED**
- **DETERIORATED STEEL SHEETING RETAINING WALLS AND CULVERT PIPE**

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W-8: Fisk Avenue Culvert

Fisk Avenue, looking west

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Alternatives Considered

Monmouth County Bridge W-8

Fisk Avenue Culvert

- Alternative 1 – No-Build
- Alternative 2 – Rehabilitation
- Alternative 3 – Elimination of the Culvert
- Alternative 4 – Replacement of Culvert

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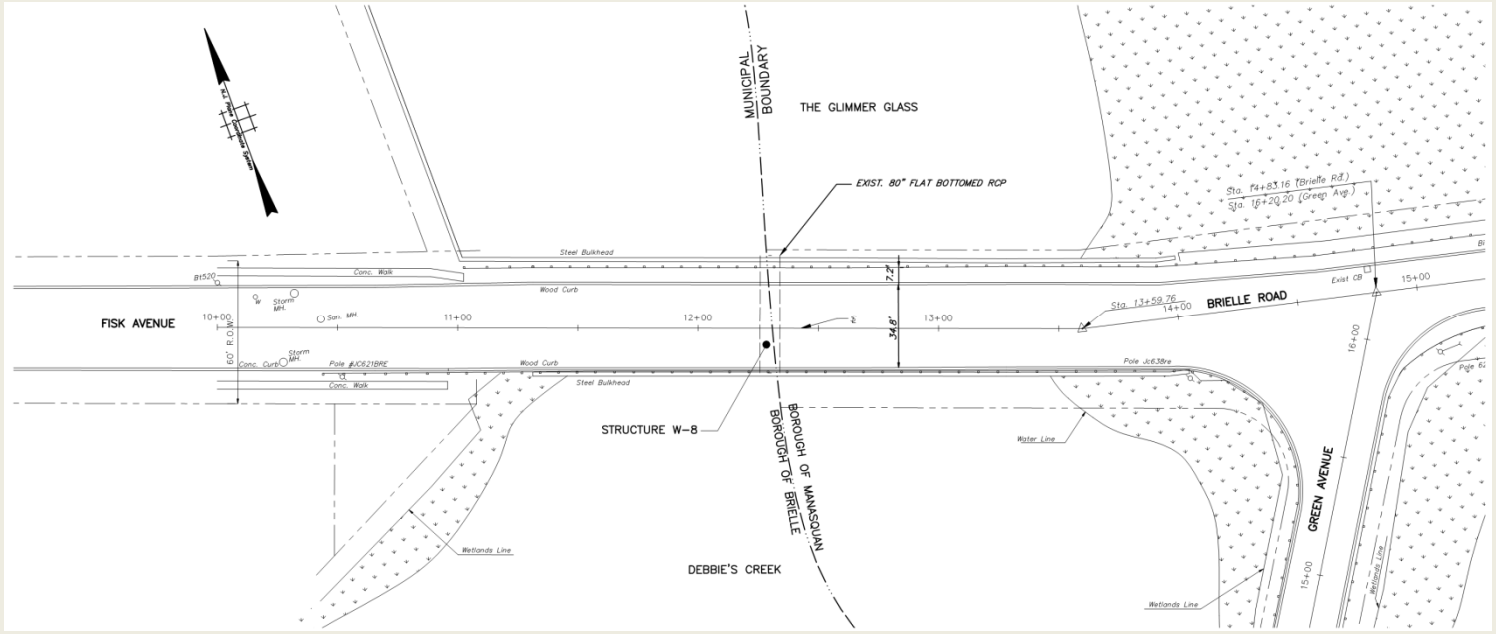
Alternatives Considered

Monmouth County Bridge W-8

Fisk Avenue Culvert

Alternative 1: No-Build

- Perform regular maintenance and repairs only



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Alternatives Considered

Monmouth County Bridge W-8

Fisk Avenue Culvert

Alternative 2: Rehabilitation

- Rehabilitate culvert with like materials/components
  - Repair spalls
  - Consider use of a pipe liner
- Remove debris and reestablish inlet and outlet
- Rehabilitate steel bulkhead and headwalls at each end
- Maintain existing roadway width

➢ *Public comment: Consider replacing steel bulkhead along full length of causeway (both sides)*

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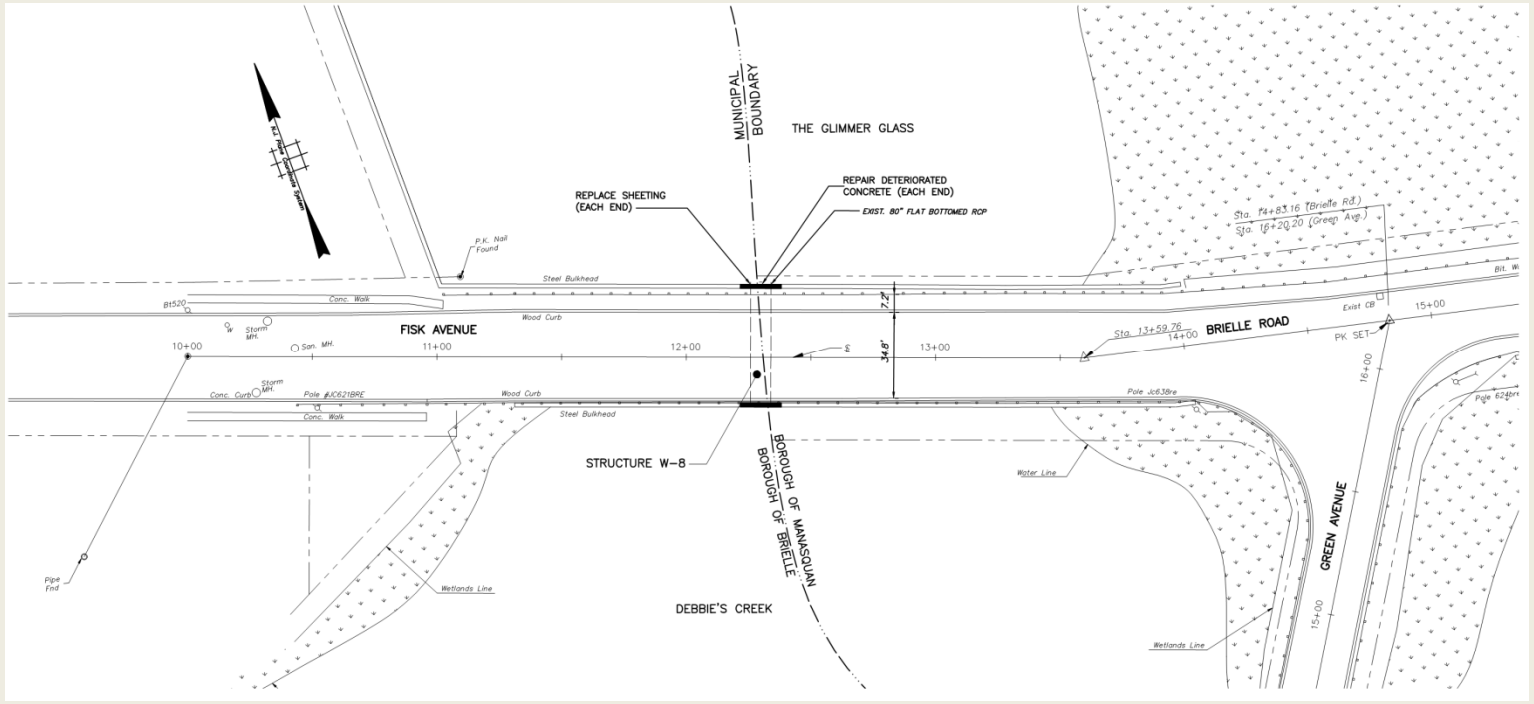
Alternatives Considered

Monmouth County Bridge W-8

Fisk Avenue Culvert

Alternative 2: Rehabilitation



Alternatives Considered

Monmouth County Bridge W-8

Fisk Avenue Culvert

Alternative 3: Elimination of the Culvert

- Completely remove culvert
- Fill void
- Maintain existing roadway width
- Drive new steel sheeting at both ends

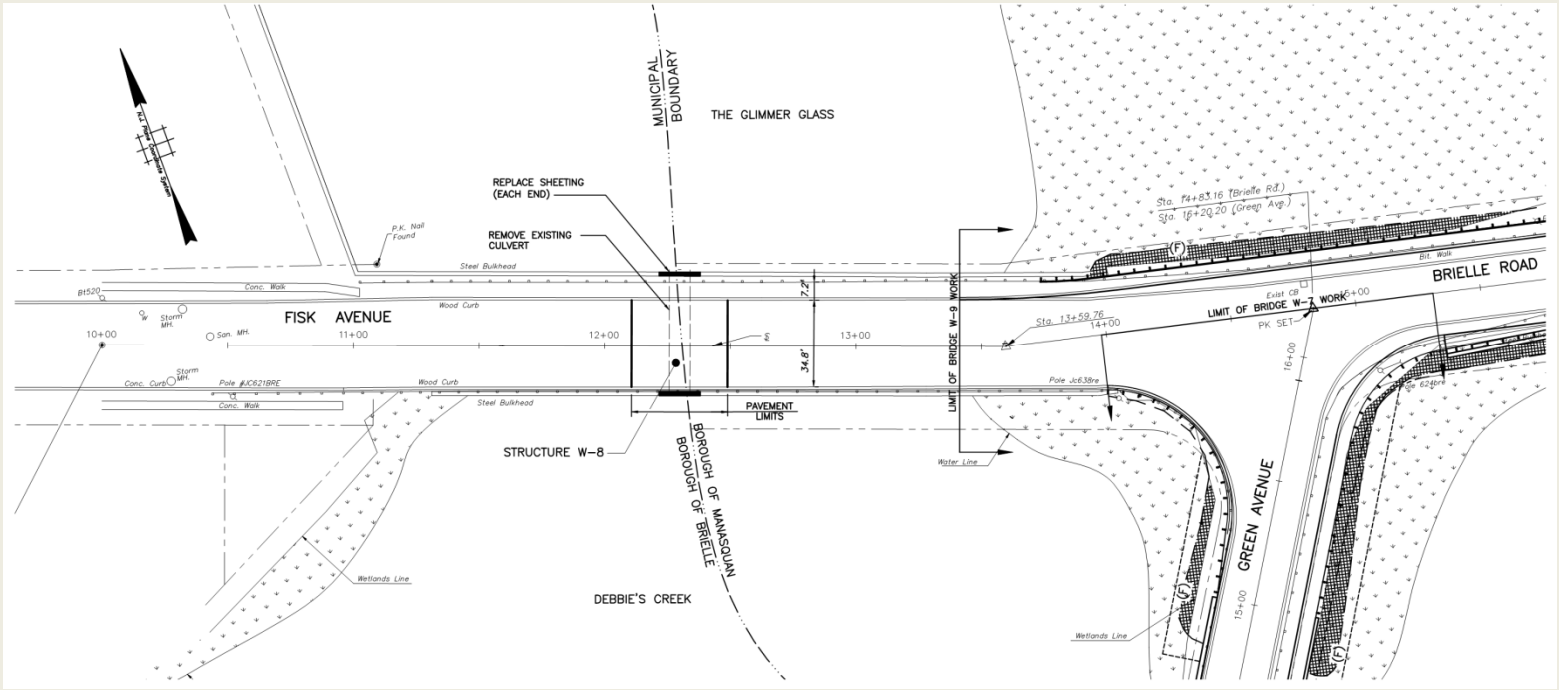
➢ *Public comment: Elimination of culvert would have strong negative effect on Debbie's Creek*

Alternatives Considered

Monmouth County Bridge W-8

Fisk Avenue Culvert

Alternative 3: Elimination of the Culvert



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U.S. Department of Transportation Federal Highway Administration

Alternatives Considered

Monmouth County Bridge W-8

Fisk Avenue Culvert

Alternative 4: Replacement of Culvert

- Provide new culvert with similar materials (concrete)
  - Match existing hydraulic opening
- Rehabilitate steel bulkhead at each end

- *Public Comment: Consider increasing the hydraulic opening to improve flow between the Glimmer Glass and Debbie's Creek*
- *Public Comment: Consider replacing steel bulkhead along full length of causeway (both sides)*

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

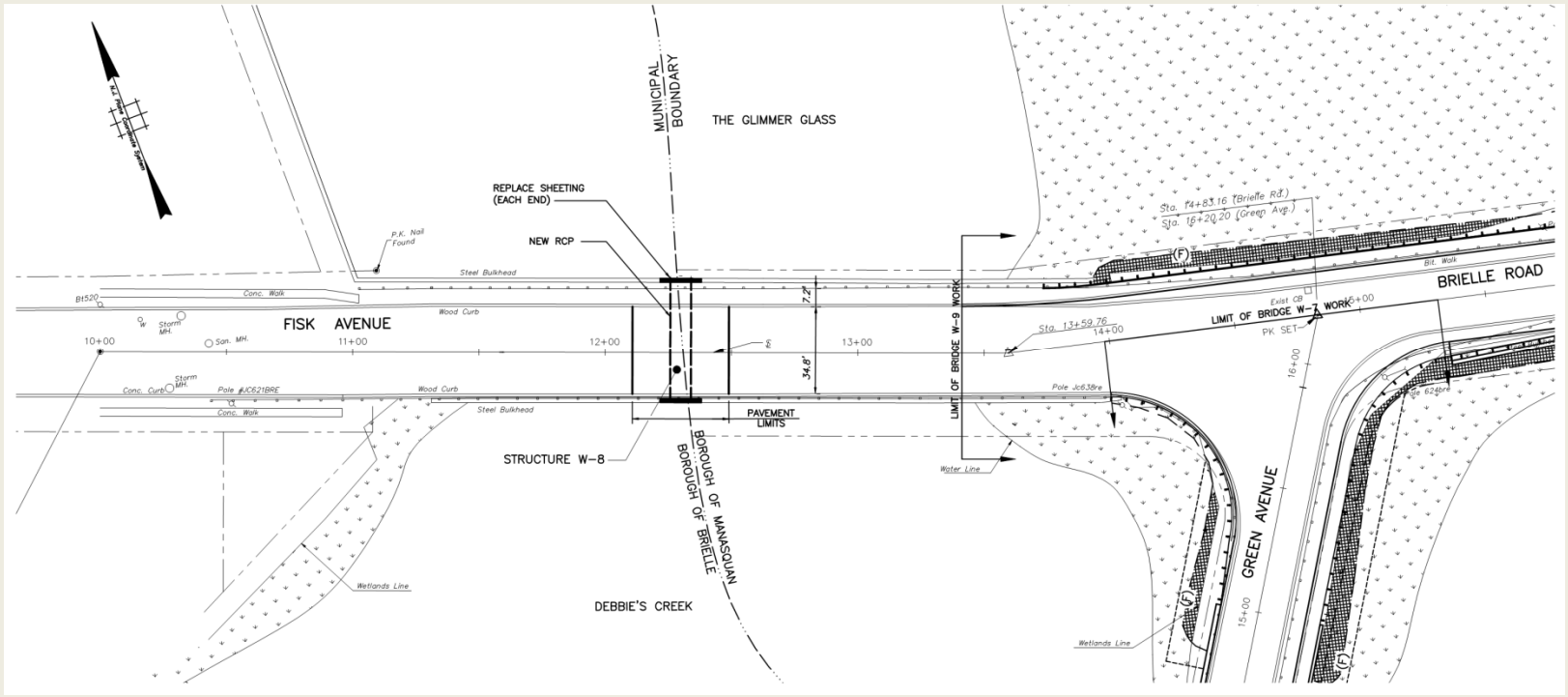
U.S. Department of Transportation Federal Highway Administration

Alternatives Considered

Monmouth County Bridge W-8

Fisk Avenue Culvert

Alternative 4: Replacement of Culvert



W-9: Brielle Road over The Glimmer Glass

EXISTING CONDITIONS:

- NARROW BRIDGE ROADWAY WIDTH (20' & VARIES)
- SUBSTANDARD LIVE LOAD CAPACITY
- SUBSTANDARD RAILINGS
- SUBSTANDARD VERTICAL CLEARANCE
- SUBSTANDARD & NON-REDUNDANT MECHANICAL & ELECTRICAL SYSTEMS
- 2013 NBIS REPORT SUFFICIENCY RATING OF 2.0 OUT OF 100

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

U.S. Department of Transportation Federal Highway Administration

2014 Failure

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W-9: Brielle Road over The Glimmer Glass

Video Clips of Underwater Pile Inspections

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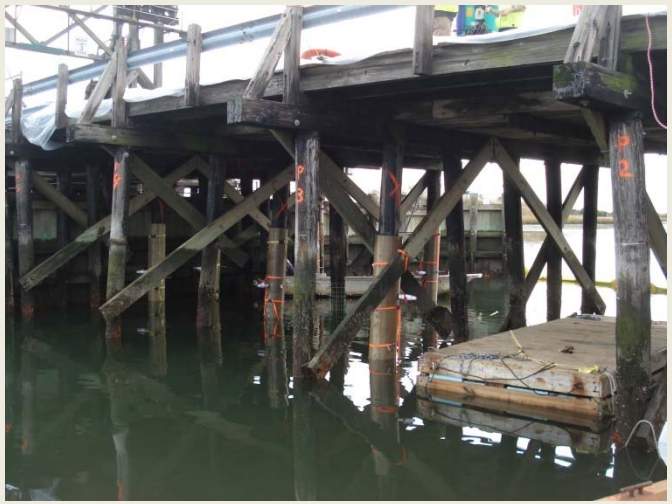
U.S. Department of Transportation Federal Highway Administration

2014-2015 Emergency Repairs

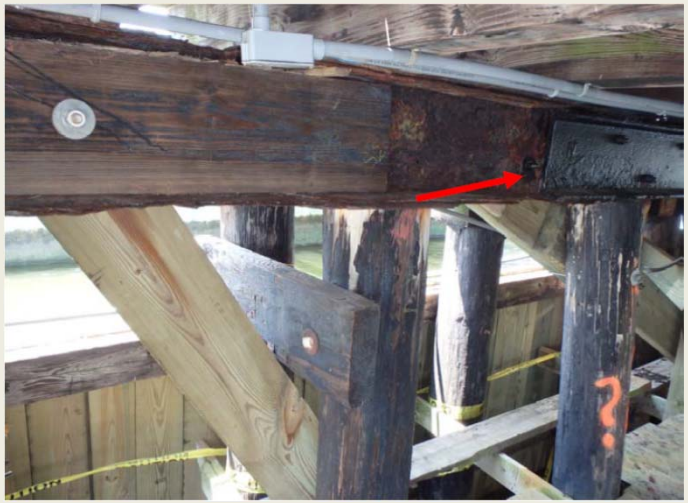


NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

COUNTY OF MONMOUTH NEW JERSEY

U.S. Department of Transportation Federal Highway Administration

W-9: Brielle Road over The Glimmer Glass



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Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

- Alternative 1 – No-Build
- Alternative 2 – Rehabilitation (3 sub-alternatives)
- Alternative 3 – Retain Existing Bridge and Build Parallel Bridge (3 sub-alternatives)
- Alternative 4 – Replace Bridge (4 sub-alternatives)

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

U.S. Department of Transportation Federal Highway Administration

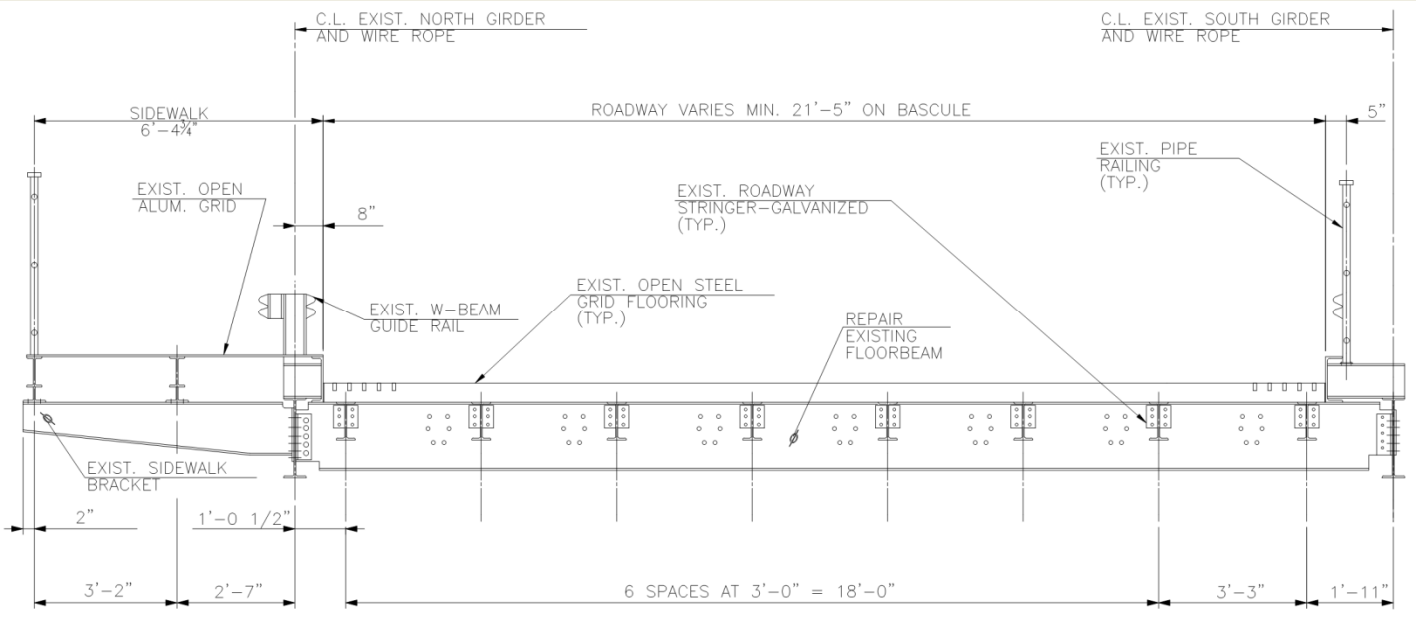
Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 1: No-Build

- Perform regular maintenance and repairs only



Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 2: Rehabilitation Sub-Alternatives:

- Alternative 2A – Rehabilitation in Accordance with SOI Standards (Historic Restoration)
- Alternative 2B – Rehabilitation not in Accordance with SOI Standards with Replacement of the Approach Spans

- *Variation: Alternative 2C – Rehabilitation of Movable Span in Accordance with SOI Standards with Replacement of the Approach Spans (Hybrid of Alternatives 2A and 2B)*

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

U.S. Department of Transportation Federal Highway Administration

Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 2A: Rehabilitation in Accordance with the Secretary of the Interior Standards

- Rehabilitate with like materials/components (timber/steel) of similar dimensions
- Increase structural capacity marginally
- Maintain existing geometry (span arrangement, roadway width, and bridge width)
- Upgrade mechanical/electrical systems
- Upgrade roadside safety features (railings, end treatments, etc.)

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

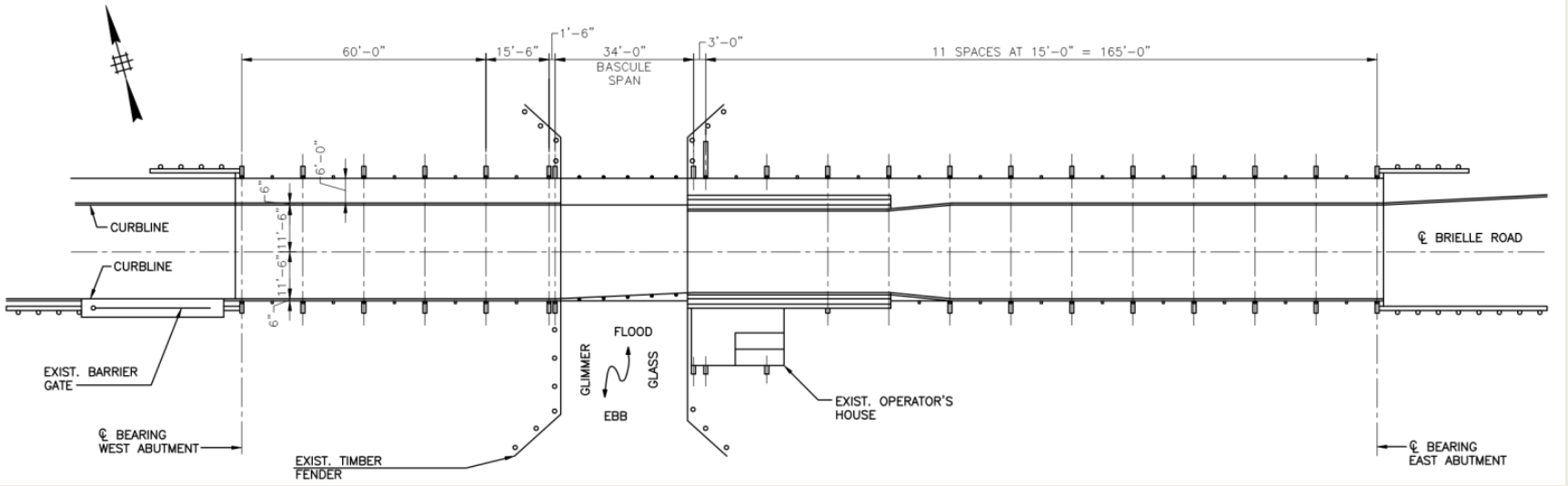
U.S. Department of Transportation Federal Highway Administration

Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

<u>Alternative 2A: Rehabilitation in Accordance with the Secretary of the Interior Standards</u>



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Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 2B: Rehabilitation not in Accordance with the Secretary of the Interior Standards

- Rehabilitate with like materials/components (timber/steel) of similar dimensions
- Increase structural capacity
- Add additional piers between existing ones
- Maintain existing roadway and bridge widths
- Upgrade mechanical/electrical systems
- Upgrade roadside safety features (railings, end treatments, etc.)

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Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 2C: Rehabilitation of Movable Span in Accordance with SOI Standards with Replacement of the Approach Spans

- Hybrid of alternatives 2A and 2B
- Rehabilitate movable span with like materials/components (timber/steel) of larger dimensions, replace approach spans
- Maintain existing bridge width for movable span, improve geometry on approach spans
- Upgrade mechanical/electrical systems
- Upgrade roadside safety features (railings, end treatments, etc.)

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Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 3: Parallel Bridge Sub-Alternatives:

- Alternative 3A – Retain Existing Bridge (Close to Vehicular Traffic) and Build New Bridge on a Parallel Alignment – High Level Fixed Span Bridge
- Alternative 3B – Retain Existing Bridge (Close to Vehicular Traffic) and Build New Bridge on a Parallel Alignment – Movable Bridge, Vertical Lift
- Alternative 3C – Retain Existing Bridge (Convert to One-Way Traffic) and Build New Bridge on a Parallel Alignment – Movable Bridge, Vertical Lift

➢ *Public Suggested Variation – Rehabilitate Existing Bridge and Build New Parallel Bridge for Pedestrians/Bicyclists Only*

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Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 3A: Retain Existing Bridge (Close to Vehicular Traffic) and Build New Bridge on a Parallel Alignment – High Level Fixed Span Bridge

- Build taller, non-moveable, parallel bridge to North
  - Tall enough to accommodate all marine traffic
- Provides standard lane and shoulder widths on new bridge
- Retain existing bridge for pedestrians/bicyclists only

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Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 3B: Retain Existing Bridge (Close to Vehicular Traffic) and Build New Bridge on a Parallel Alignment – Movable Bridge, Vertical Lift

- Build vertical lift, parallel bridge to North
- Provide standard lane and shoulder widths on new bridge
- Retain existing bridge for pedestrians/bicyclists only

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Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 3C: Retain Existing Bridge (Convert to One-Way Traffic) and Build New Bridge on a Parallel Alignment – Movable Bridge, Vertical Lift

- Build one-directional, vertical lift, parallel bridge to North
- Provide standard lane and shoulder widths on new bridge
- Rehabilitate existing bridge as per Alternative 2A and convert existing bridge to one-directional

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Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 4: Bridge Replacement Sub-Alternatives:

- Alternative 4A – Build New Bridge on Current Alignment – High Level Fixed Span Bridge
- Alternative 4B – Build New Bridge on Current Alignment – Movable Bridge, Vertical Lift
- Alternative 4C – Build New Bridge on Current Alignment – Movable Bridge, Trunnion Bascule
- Alternative 4D – Build New Bridge on Current Alignment – Movable Bridge, Rolling Counterweight

Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 4A: Build New Bridge on Current Alignment – High Level Fixed Span Bridge

- Remove existing bridge
- Build new, taller, non-moveable bridge in same location
  - Tall enough to accommodate all marine traffic
- Provide standard lane and shoulder widths, and ADA compliant sidewalks

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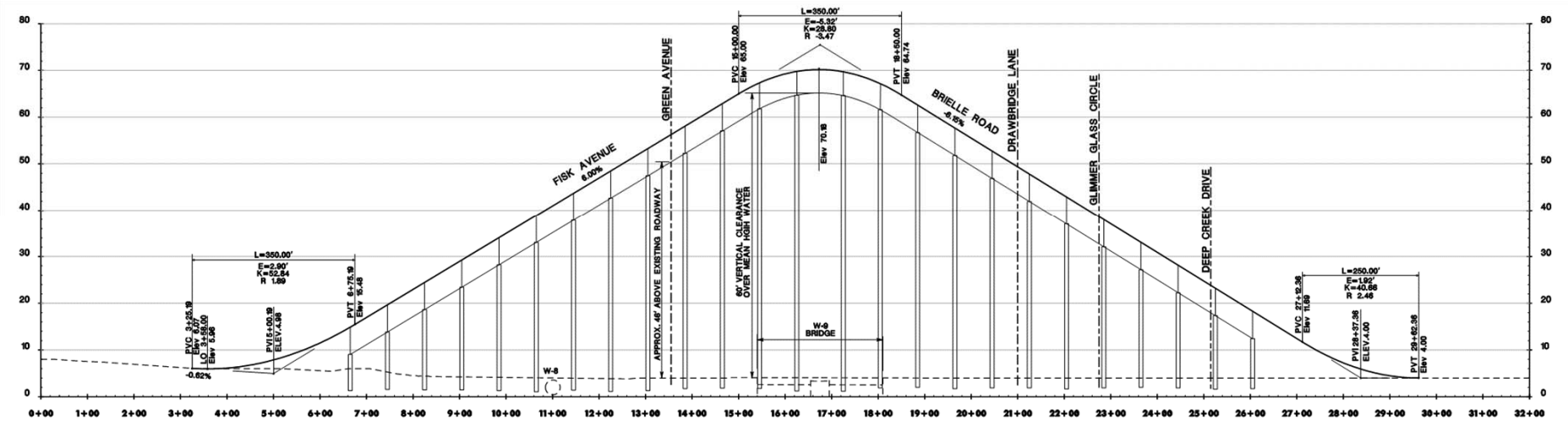
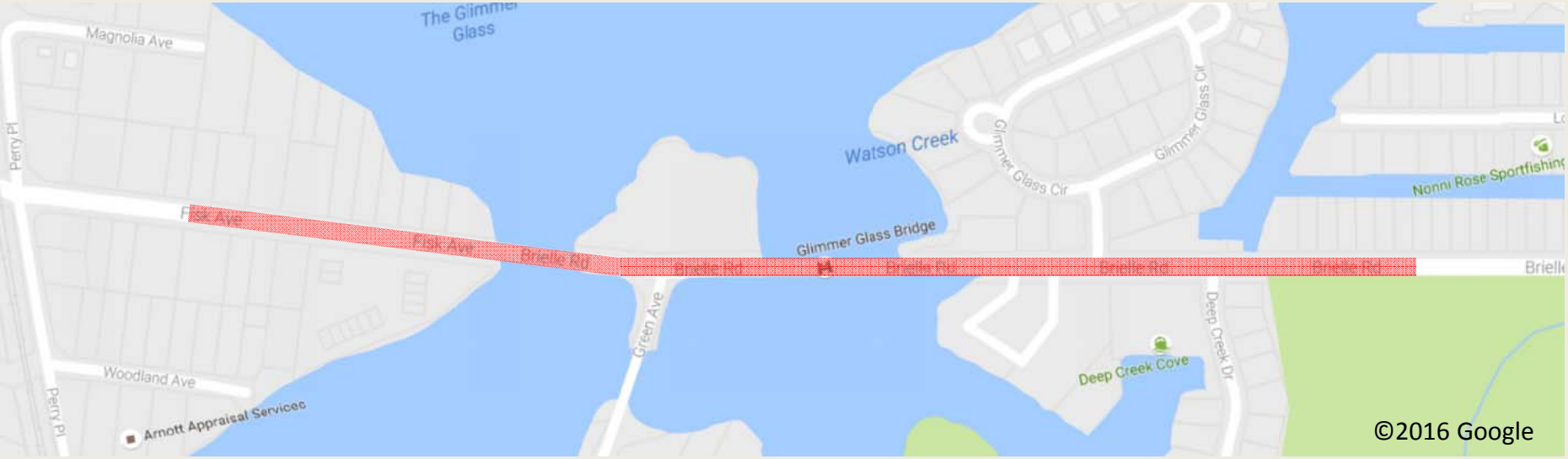
Alternative 4A: Build New Bridge on Current Alignment – High Level Fixed Span Bridge





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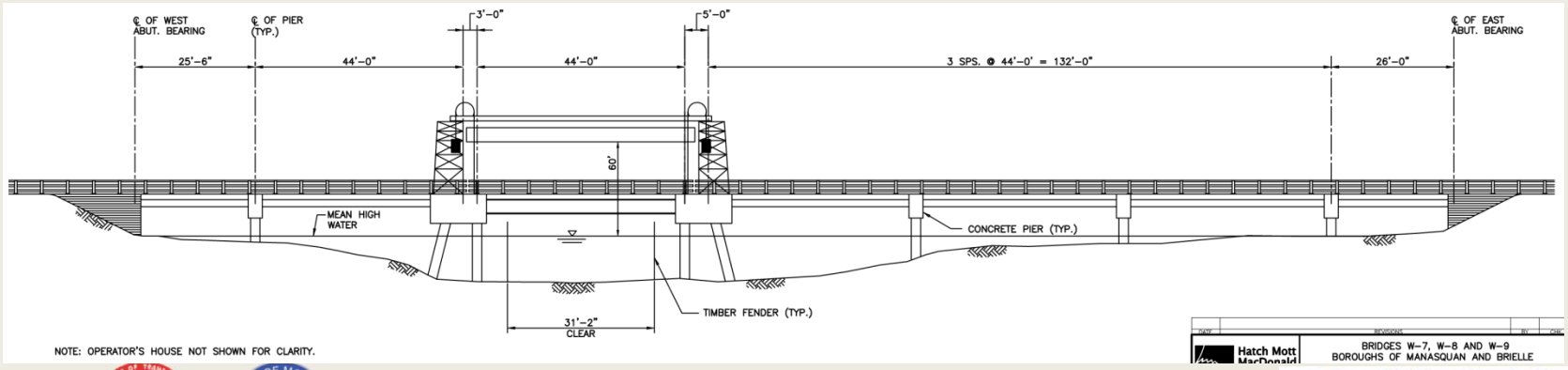
Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 4B: Build New Bridge on Current Alignment – Movable Bridge, Vertical Lift

- Remove existing bridge
- Build new, vertical-lift bridge in same location
- Provide standard lane and shoulder widths, and ADA compliant sidewalks



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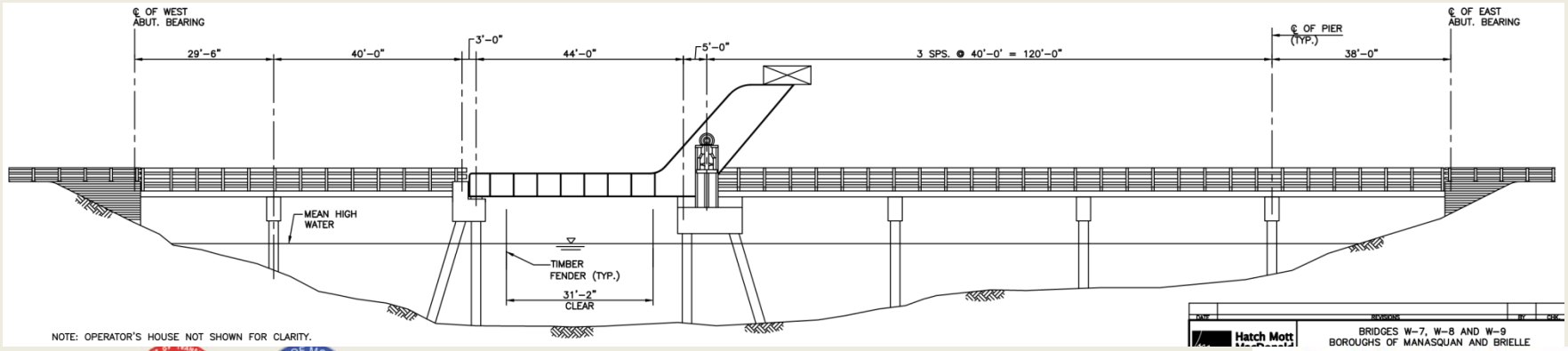
Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

Alternative 4C: Build New Bridge on Current Alignment – Movable Bridge, Trunnion Bascule

- Remove existing bridge
- Build new, trunnion bascule bridge in same location
- Provide standard lane and shoulder widths, and ADA compliant sidewalks



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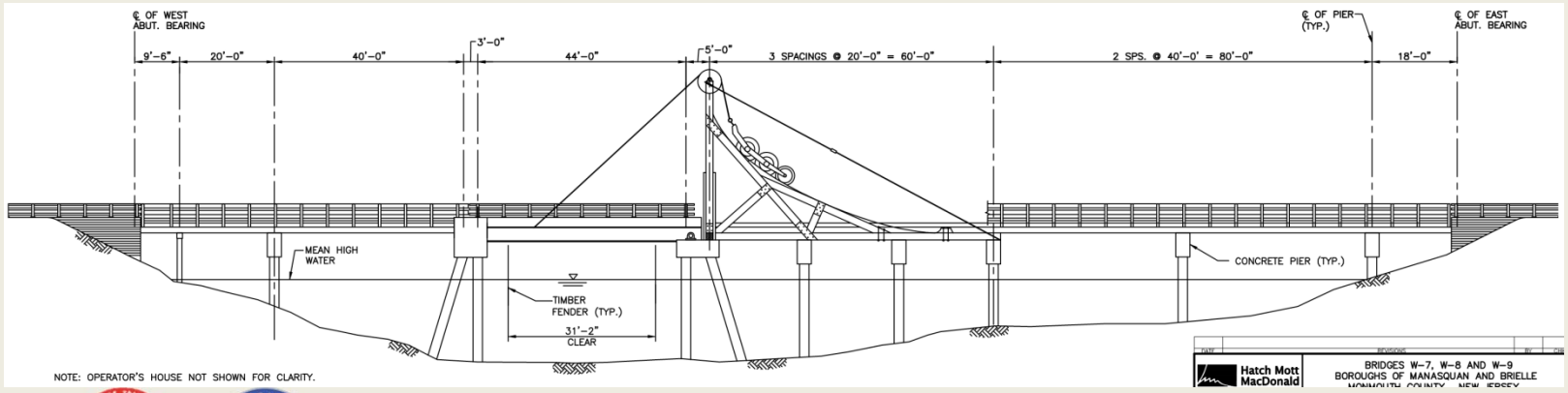
Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

<u>Alternative 4D: Build New Bridge on Current Alignment – Movable Bridge, Rolling Counterweight</u>

- Remove existing bridge
- Build new, rolling counterweight bridge in same location
- Provide standard lane and shoulder widths, and ADA compliant sidewalks



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Alternatives Considered

Monmouth County Bridge W-9

Brielle Road over the Glimmer Glass

<u>Public Suggested Alternative 5: Relocate Bridge and Build New Bridge on Current Alignment</u>

- *Alternative 5A: Relocate Bridge W-9 to Location of Bridge W-7 (openings no longer required) and Build New Bridge as per Alternative 4*
- *Alternative 5B: Relocate Bridge W-9 to Fishing Pier (Block 136, Lot 26.01) and Build New Bridge as per Alternative 4*

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Assessment of Alternatives

Alternatives will be evaluated based on the following criteria:

- Meeting Project Purpose
- Achieving Project Needs
  - Bridge Needs
  - Roadway Needs
  - System Linkage
  - Pedestrian/Bicyclist Compatibility, ADA Compliance
- Achieving Goals and Objectives
  - Sidewalk Connectivity
  - Environmental Impacts
  - Historic Resources Impacts
  - Safety Improvements
  - Long Term Maintenance
  - Traffic Impacts & Detour

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Assessment of Alternatives

Additional Considerations:

- Construction / Life Cycle Costs
- Various Environmental Impacts
- Required permitting
- ROW Impacts and Costs
- Construction Duration and Detours

Next Steps

- **Continued Public Outreach**

  Round #2 – Project Alternatives

  - Local Officials Briefings **November 10, 2016**
  - Stakeholder Meeting **November 29, 2016**
  - Public Information Center (Manasquan & Brielle) **December 15, 2016**
    - Two Meetings
    - 30 day Post Comment Period

- **Consider Comments**
- **Prepare Alternative Analysis**

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Next Steps

- **Identify Preliminary Preferred Alternative (PPA) for Each Structure**
- **Continued Public Outreach**

  Round 3 – Present PPA

  - Local Officials Briefings **Q1 2017**
  - Stakeholder Meeting **Q1 2017**
  - Public Information Center (Manasquan & Brielle) **Q1 2017**
    - Two Meetings
    - 30 day Post Comment Period
- **Incorporate Comment Responses**
- **Prepare / Submit Draft AA Report**

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Next Steps

- **Cultural Resource / Section 106 Process**
  - **New Jersey Register Authorization**
- **Final Alternatives Analysis Report**
- **NEPA Process / Section 4(f)**
- **Federal Authorization For Final Design**

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Input

? Comments ?

Additional Opportunity to Comment

- after this Meeting
- at PIC's on **December 15, 2016**
  - 2-4 PM, Curtis House
  - 6-8 PM, Manasquan Borough Hall
- after PIC during 40 Day Comment Period / extended from 30 days due to holidays – to January 24, 2016