



VALLEY ROAD BRIDGE OVER THE PASSAIC RIVER LOCAL CONCEPT DEVELOPMENT STUDY

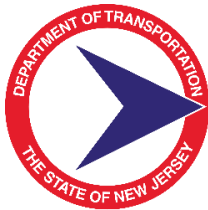
Bernards Township, Somerset County, and
Long Hill Township, Morris County, New Jersey

PUBLIC INFORMATION CENTER #2

September 12, 2018



PROJECT TEAM



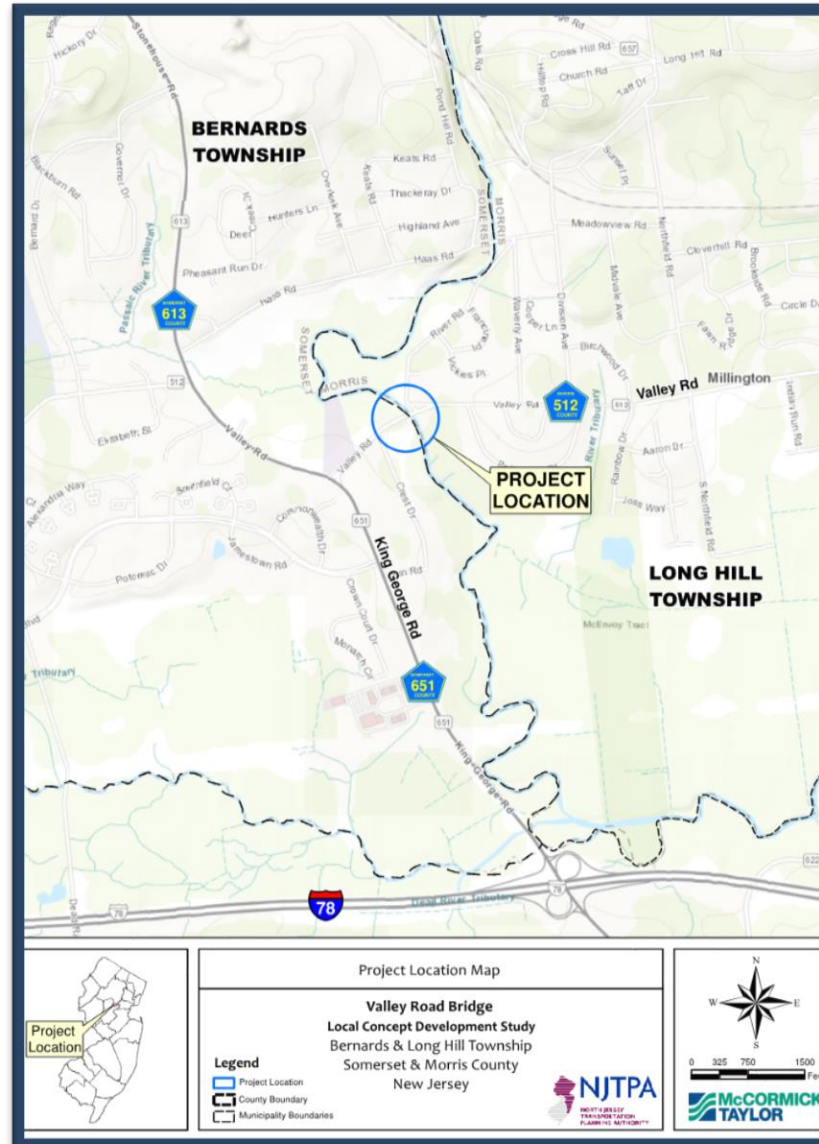
MEETING PURPOSE

- Provide a summary of the Local Capital Project Delivery Process
- Present a brief summary of the data collection effort
- Present the Project Purpose & Need and Goals and Objectives for the project
- Present the conceptual alternatives developed for the Valley Road Bridge
- Obtain input regarding the conceptual alternatives

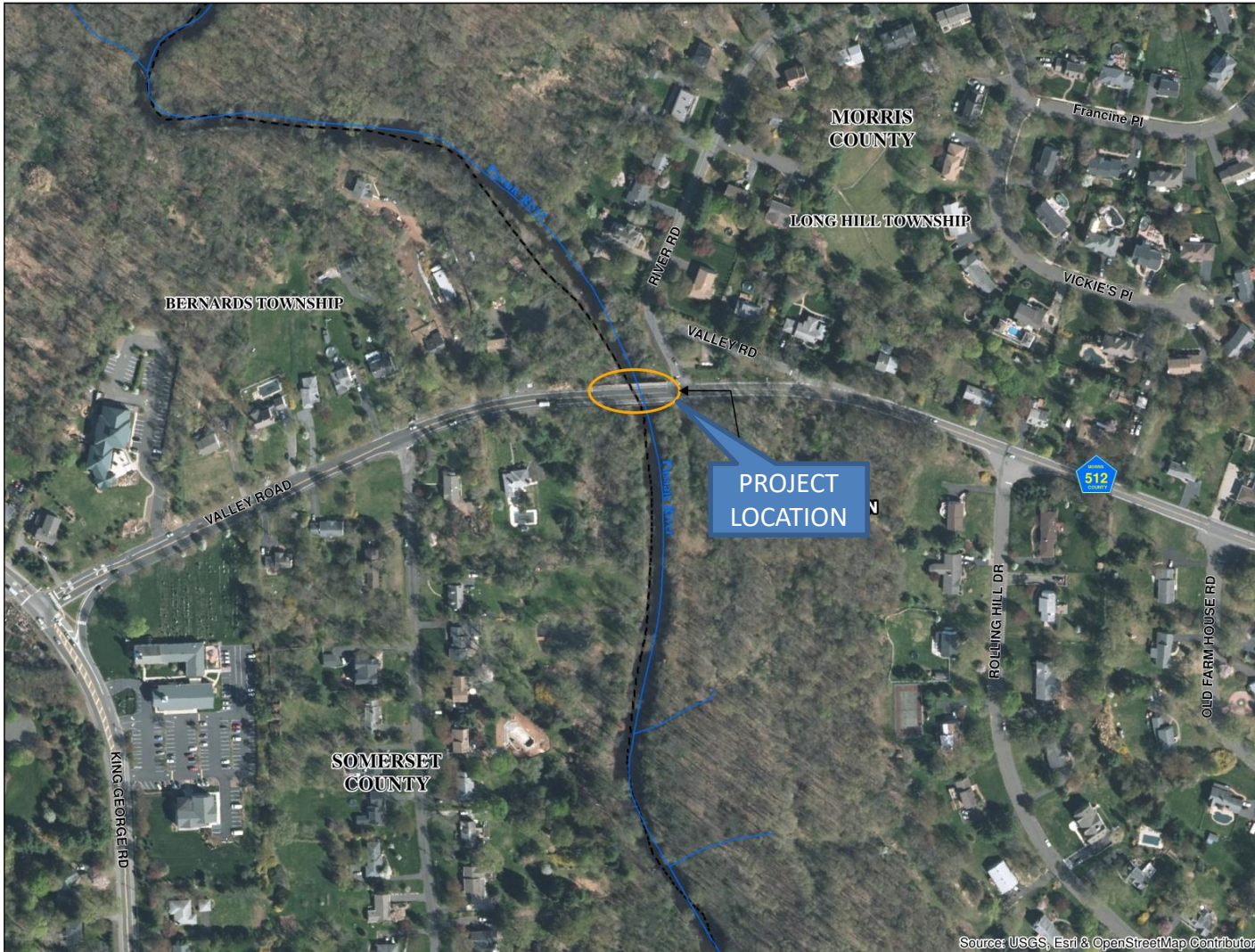
PROJECT OVERVIEW & BACKGROUND

- Valley Road (CR 512) Bridge over Passaic River is located in Bernards Township, Somerset County and Long Hill Township, Morris County
- Bridge was built in 1931
- Bridge is in need of rehabilitation or replacement
- NJTPA, Somerset County and Morris County - Local Concept Development Study was initiated in November 2017
- Local Capital Project Delivery Process provides the opportunity to advance this project with public input and agency collaboration

PROJECT LOCATION MAP



AERIAL MAP



Source: USGS, Esri & OpenStreetMap Contributors

Aerial Map

Valley Road Bridge over Passaic River

Bernards Twp, Somerset County
Long Hill Twp, Morris County
New Jersey



Legend

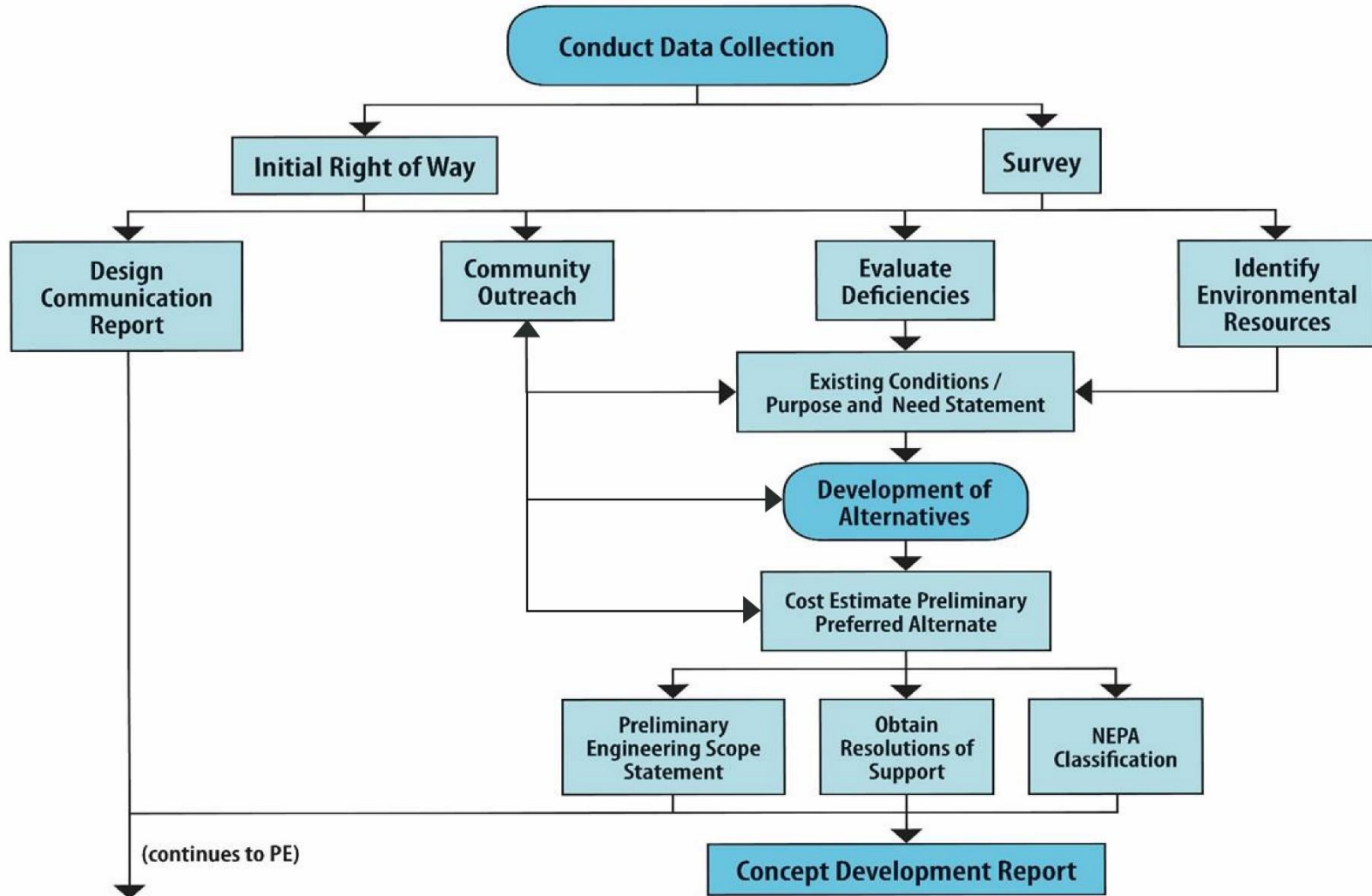
- Streams
- County Boundary
- Municipality Boundary



LOCAL CAPITAL PROJECT DELIVERY PROCESS



LOCAL CONCEPT DEVELOPMENT PROCESS



VALLEY ROAD BRIDGE DATA

- Year Built: 1931
- Bridge Type: Three-span concrete encased multi-stringer
- Overall Bridge Length = 103 feet
- Bridge Roadway Width = 33'-4"
- Posted Speed Limit = 40 MPH
- Posted Weight Limit = 16 Tons
- One lane in each direction
- Outside shoulders: 2' wide WB, 4' wide EB
- 5'-6" Sidewalks in each direction
- 2018 AADT = 9,329 vehicles per day

VALLEY ROAD



*Valley Road east approach to bridge,
looking west*



*Valley Road west approach to bridge,
looking east*

EXISTING BRIDGE CONDITION

- The bridge is in overall poor condition due to the condition of the substructure and low inventory ratings
- The substructure is in poor condition due to scaling and efflorescence throughout.
- The bridge is structurally deficient due to poor substructure condition and low inventory ratings (posted for 16 tons weight limit)
- Sufficiency Rating is 45.5 out of 100 (17th Cycle)

EXISTING BRIDGE PHOTOS



North fascia, looking southwest



South fascia, looking west

EXISTING BRIDGE CONDITION



Top of deck, looking northeast



*Concrete Pylon @
southeast corner*

EXISTING BRIDGE CONDITION



South fascia @ east pier



Under bridge, looking at north pier

EXISTING BRIDGE CONDITION



North fascia @ east pier



West abutment, looking southwest

ENVIRONMENTAL CONSTRAINTS MAP



ENVIRONMENTAL CONSTRAINTS MAP

Valley Road Bridge over Passaic River
Bernards Twp, Somerset County
Long Hill Twp, Morris County
New Jersey



NORTH JERSEY
TRANSPORTATION
PLANNING AUTHORITY

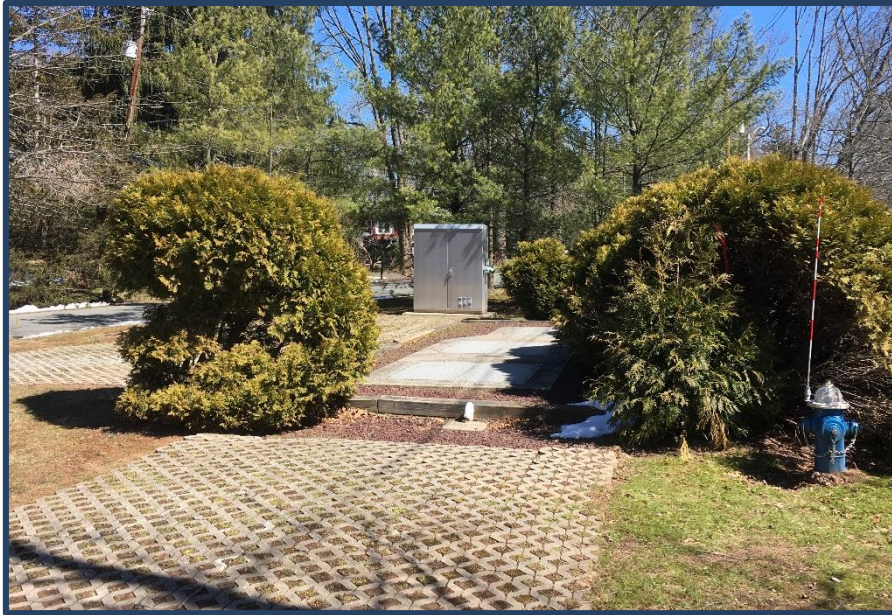


Legend

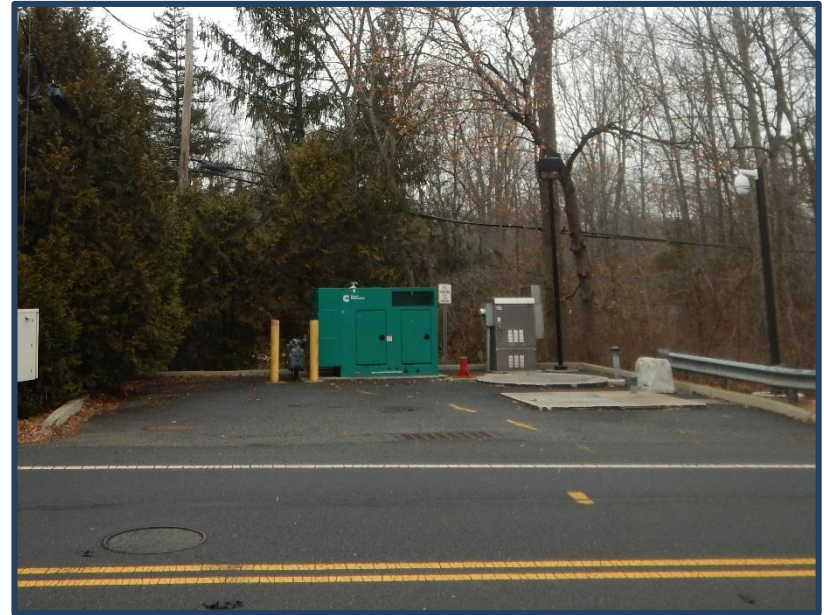
- Streams
- Municipality Boundary
- Highlands Planning Area
- Freshwater Wetlands
- Passaic River Park



SITE CONSTRAINTS



*NJ American Water Booster Station
located east of bridge*



*Wastewater Pump/Generator located
west of bridge*

SITE CONSTRAINTS



Passaic River Park entrance



Trail entrance in Passaic River Park

PROJECT STATUS

- November 2017 – LCD Study initiated
- Spring 2018 – Data Collection completed
- Spring 2018 – Held Local Officials Briefing #1, Stakeholders Meeting #1 and Public Information Center #1
- July 2018 – Project Purpose and Need Statement finalized
- Summer 2018 – Developed Conceptual Alternatives
- September 5, 2018 – Local Officials Briefing #2
- September 12, 2018 – Stakeholders Meeting #2 and Public Information Center #2

PURPOSE AND NEED

- The purpose of this project is to address the deficiencies of the Valley Road Bridge over the Passaic River and to provide an upgraded structure that meets current standards and maintains a safe means of transportation across the Passaic River for all users.

PURPOSE AND NEED

- The Valley Road Bridge is a Bi-County bridge connecting Somerset and Morris Counties. The bridge provides an important transportation link for residents and commuters connecting to major routes such as I-78 and I-287.
- The bridge is in overall poor condition due to the condition of the substructure and has been posted for 16 tons gross load since 1993. Due to low inventory ratings, the bridge is categorized as Structurally Deficient. The bridge has a Sufficiency Rating of 45.5 out of 100.

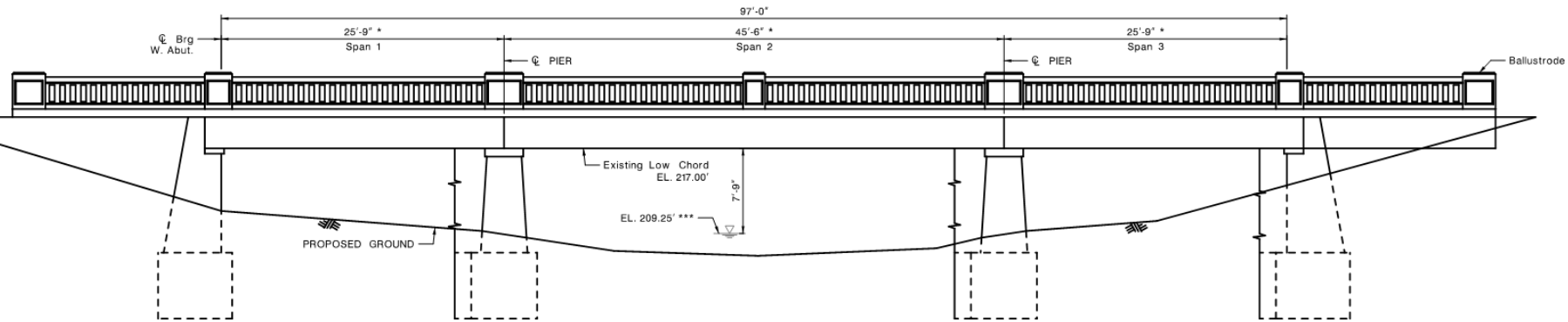
GOALS AND OBJECTIVES

- Upgrade the bridge structural capacity to meet AASHTO and NJDOT design standards
- Upgrade bridge and approach roadway conditions to meet AASHTO and NJDOT safety standards, including new parapets and guide rail
- Minimize environmental, social and economic impacts
- Minimize impacts to the Passaic River Park
- Minimize impacts to existing utilities including water and gas mains, aerial electric, as well as the water booster and pump stations
- Minimize disruptions to traffic operations during construction
- Maintain access to adjacent properties at all times during construction
- Minimize the use of detours; if detours are required, utilize the state and county roadway network to the greatest extent feasible
- Provide pedestrian and bicycle compatibility on the bridge and approach roadways
- Maintain the existing aesthetics of the bridge to the extent feasible

CRITICAL DESIGN PARAMETERS FOR STRUCTURAL ALTERNATIVES

- **STRUCTURAL LIFE CYCLE**
 - Strong durability, cost effective, and minimal maintenance
- **HYDROLOGY & HYDRAULICS**
 - No flood water increases greater than 0.04'
- **BRIDGE GEOMETRY**
 - Wider bridge to include outside shoulder
- **WILDLIFE PASSAGES**
 - Provide wildlife passage under bridge

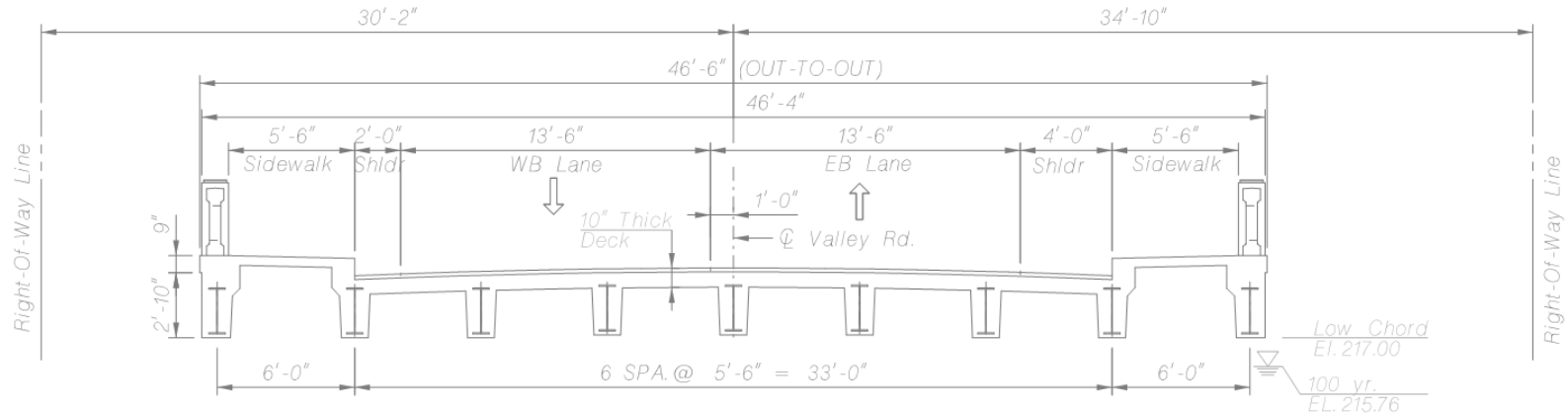
EXISTING ELEVATION



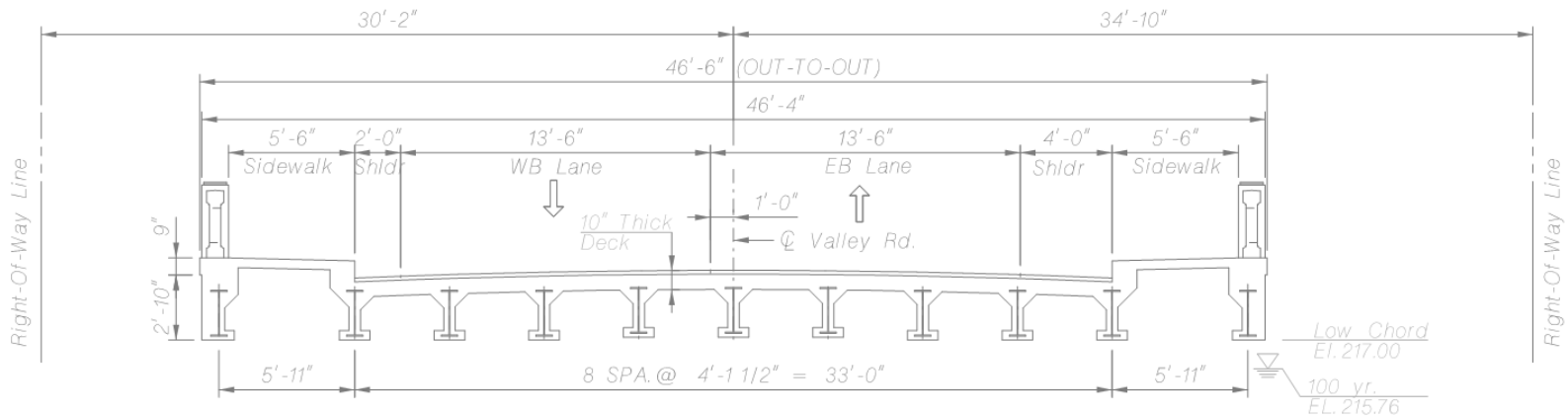
* DIMENSION IS MEASURED ALONG BRIDGE SKEW
** WILD LIFE PASSAGE - 4'(+/-) MEASURED NORMAL TO ABUTMENT
*** FROM 17th CYCLE INSPECTION REPORT 2015

EXISTING ELEVATION

EXISTING TYPICAL SECTION

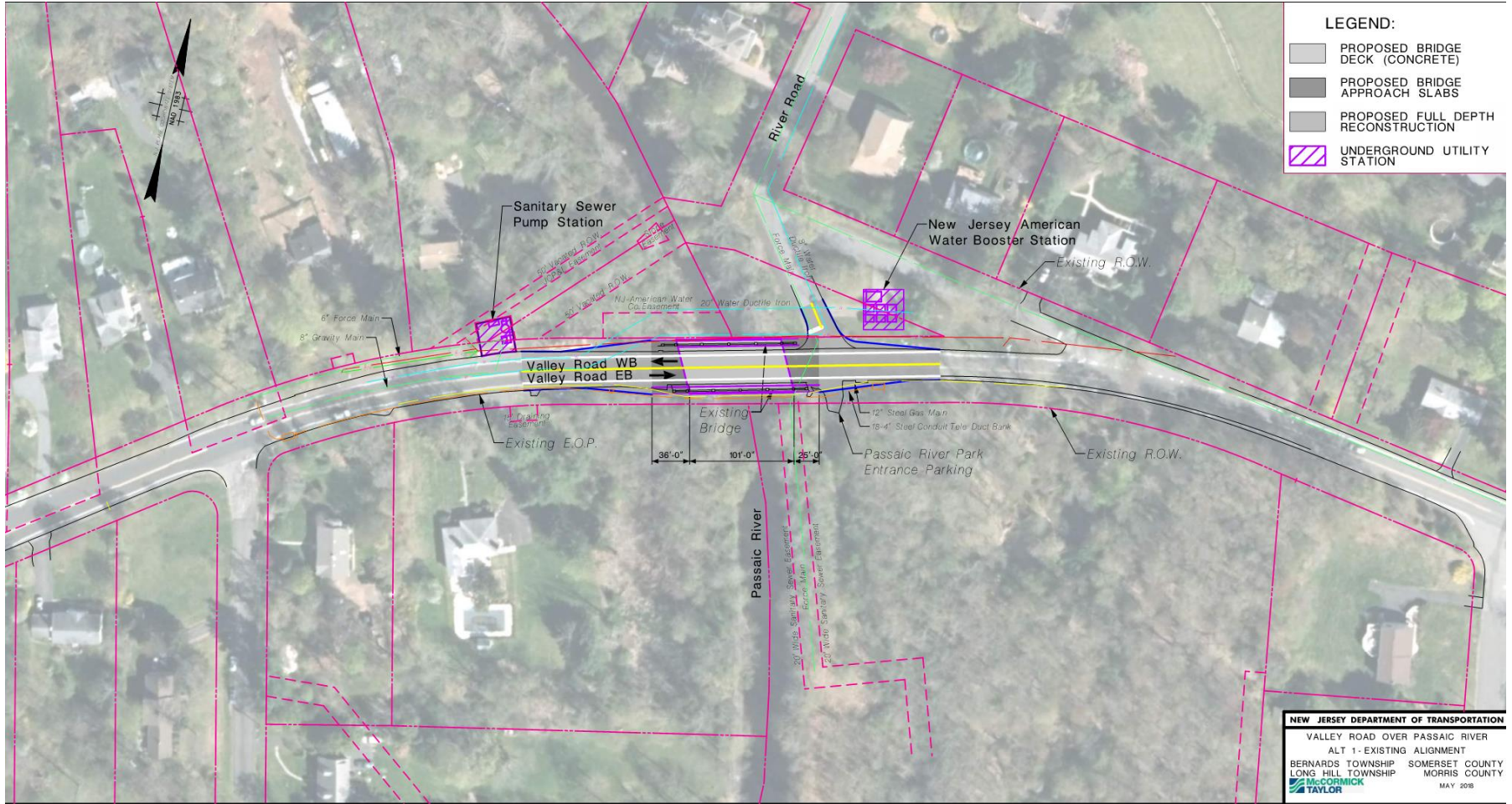


EXISTING BRIDGE TYPICAL SECTION - SPAN 1 & 3
(LOOKING EAST)

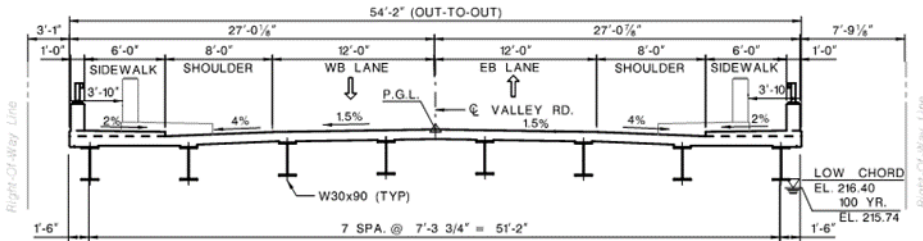


EXISTING BRIDGE TYPICAL SECTION - SPAN 2
(LOOKING EAST)

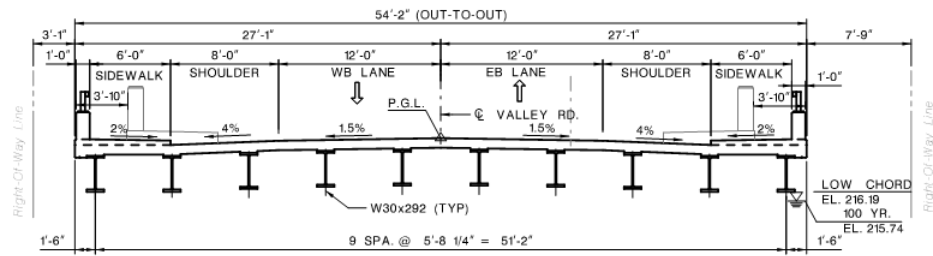
ALTERNATIVE 1 – EXISTING ALIGNMENT FULL DETOUR



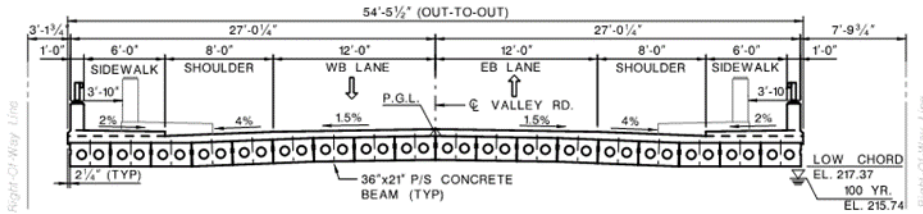
ALTERNATIVE 1 – PROPOSED TYPICAL SECTION ALTERNATIVES



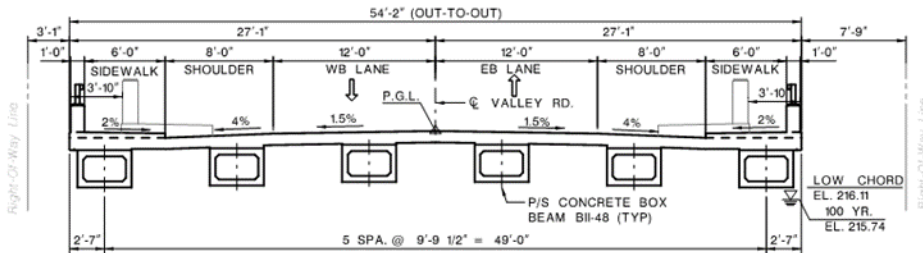
TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)



TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)



TYPICAL SECTION - CONCRETE SLAB BEAM ALTERNATIVE
(LOOKING EAST)

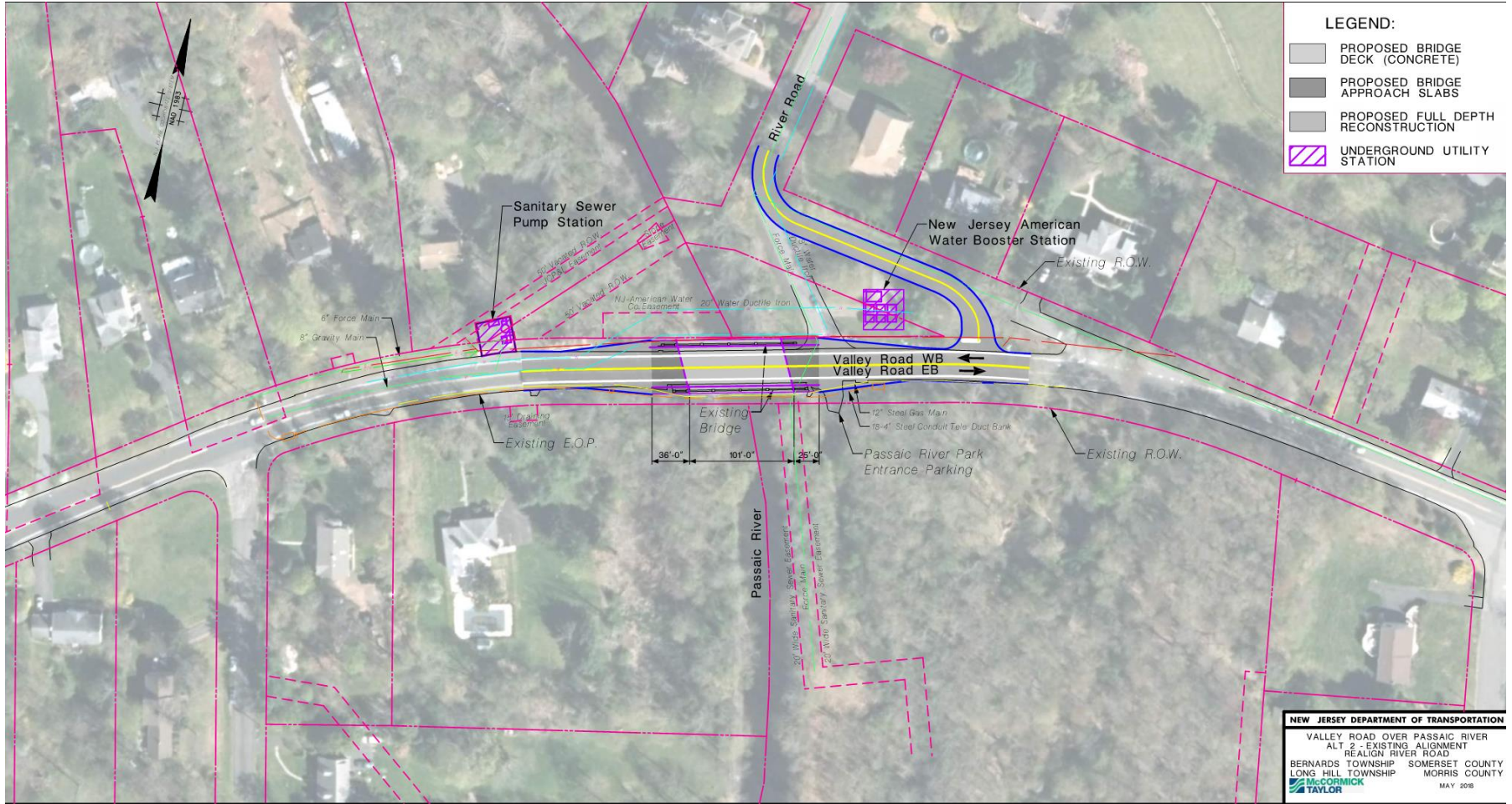


TYPICAL SECTION - CONCRETE SPREAD BOX BEAM ALTERNATIVE
(LOOKING EAST)

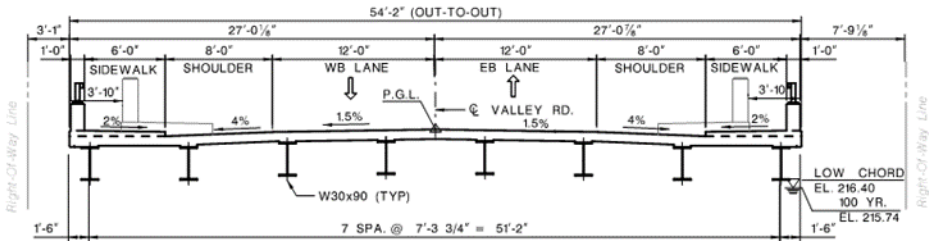
2-SPAN (50'-6" - 50'-6") CONFIGURATION

SINGLE SPAN CONFIGURATION (101'-0")

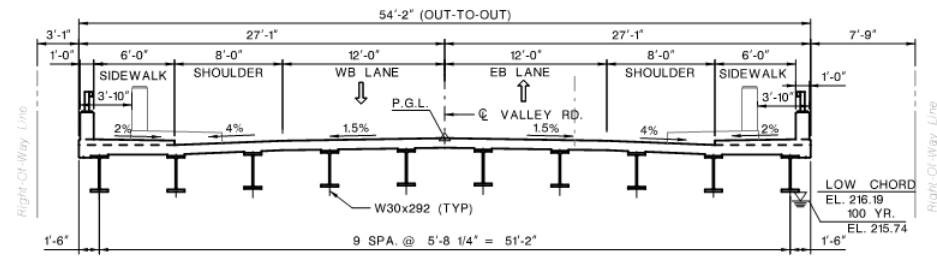
ALTERNATIVE 2 – EXISTING ALIGNMENT REALIGN RIVER ROAD FULL DETOUR



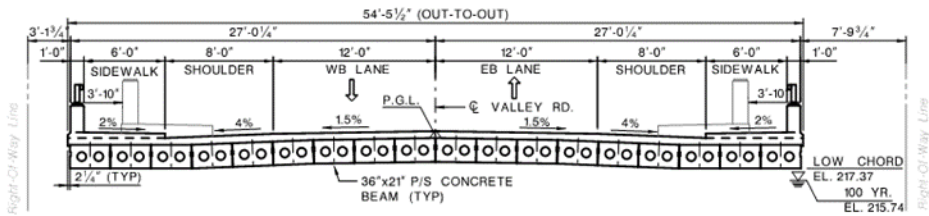
ALTERNATIVE 2 – PROPOSED TYPICAL SECTION ALTERNATIVES



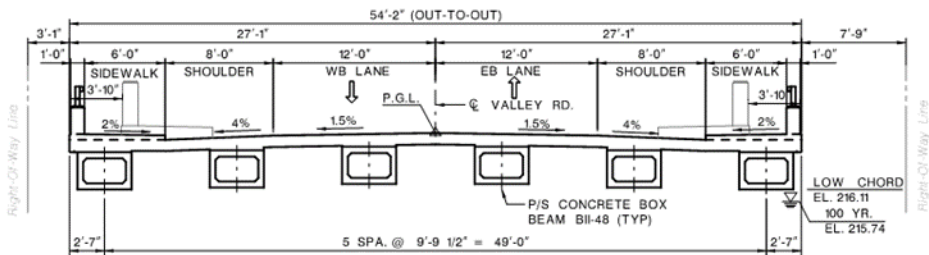
TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)



TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)



TYPICAL SECTION - CONCRETE SLAB BEAM ALTERNATIVE
(LOOKING EAST)

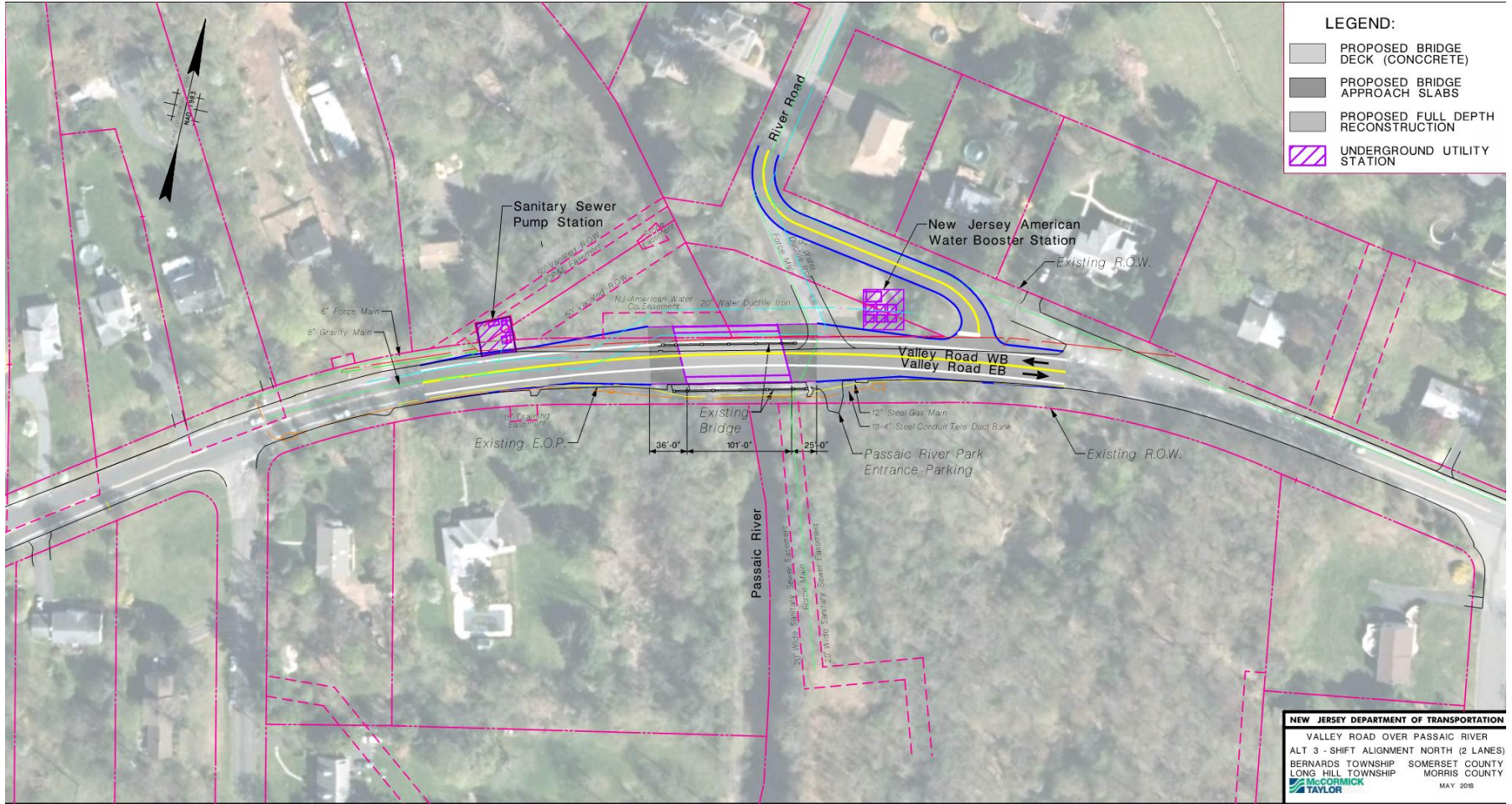


TYPICAL SECTION - CONCRETE SPREAD BOX BEAM ALTERNATIVE
(LOOKING EAST)

2-SPAN (50'-6" - 50'-6") CONFIGURATION

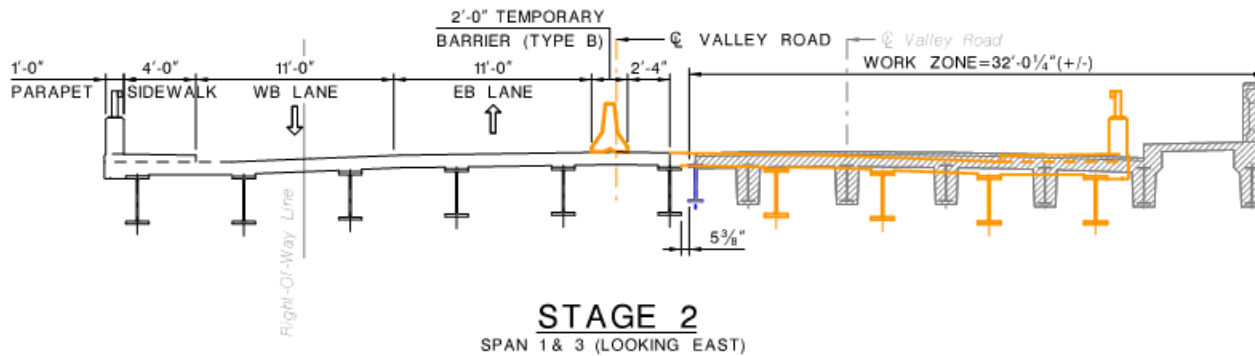
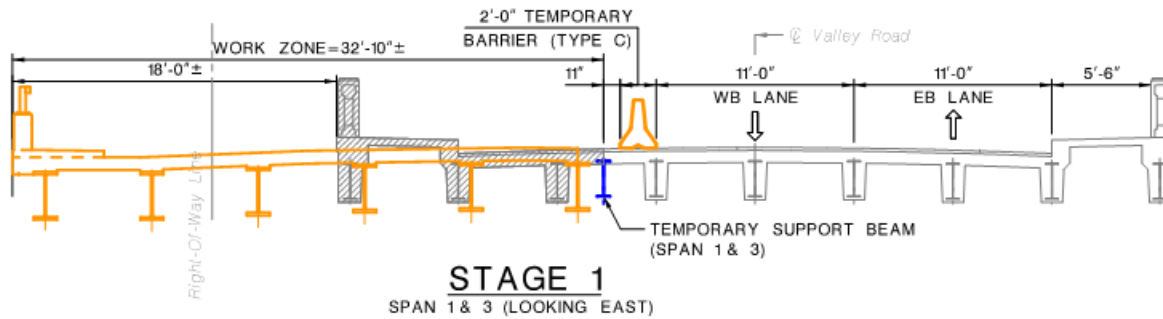
SINGLE SPAN CONFIGURATION (101'-0")

ALTERNATIVE 3 – SHIFT ALIGNMENT NORTH MAINTAIN ALL LANES DURING CONSTRUCTION



ALTERNATIVE 3 – PROPOSED STAGING PLAN

PART 1 OF 2

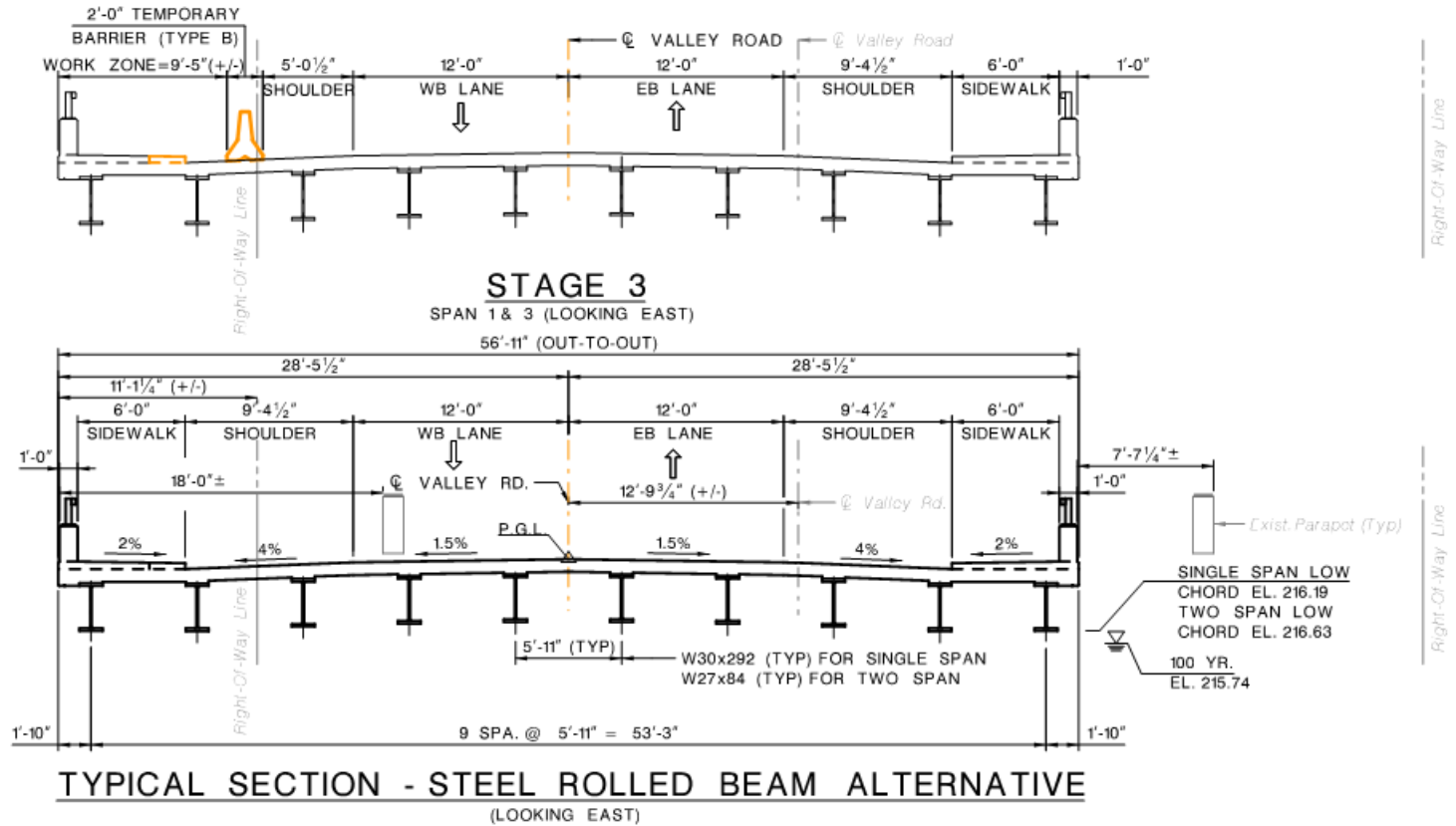


SINGLE SPAN CONFIGURATION (101'-0")

2-SPAN (50'-6" - 50'-6") CONFIGURATION

ALTERNATIVE 3 – PROPOSED STAGING PLAN

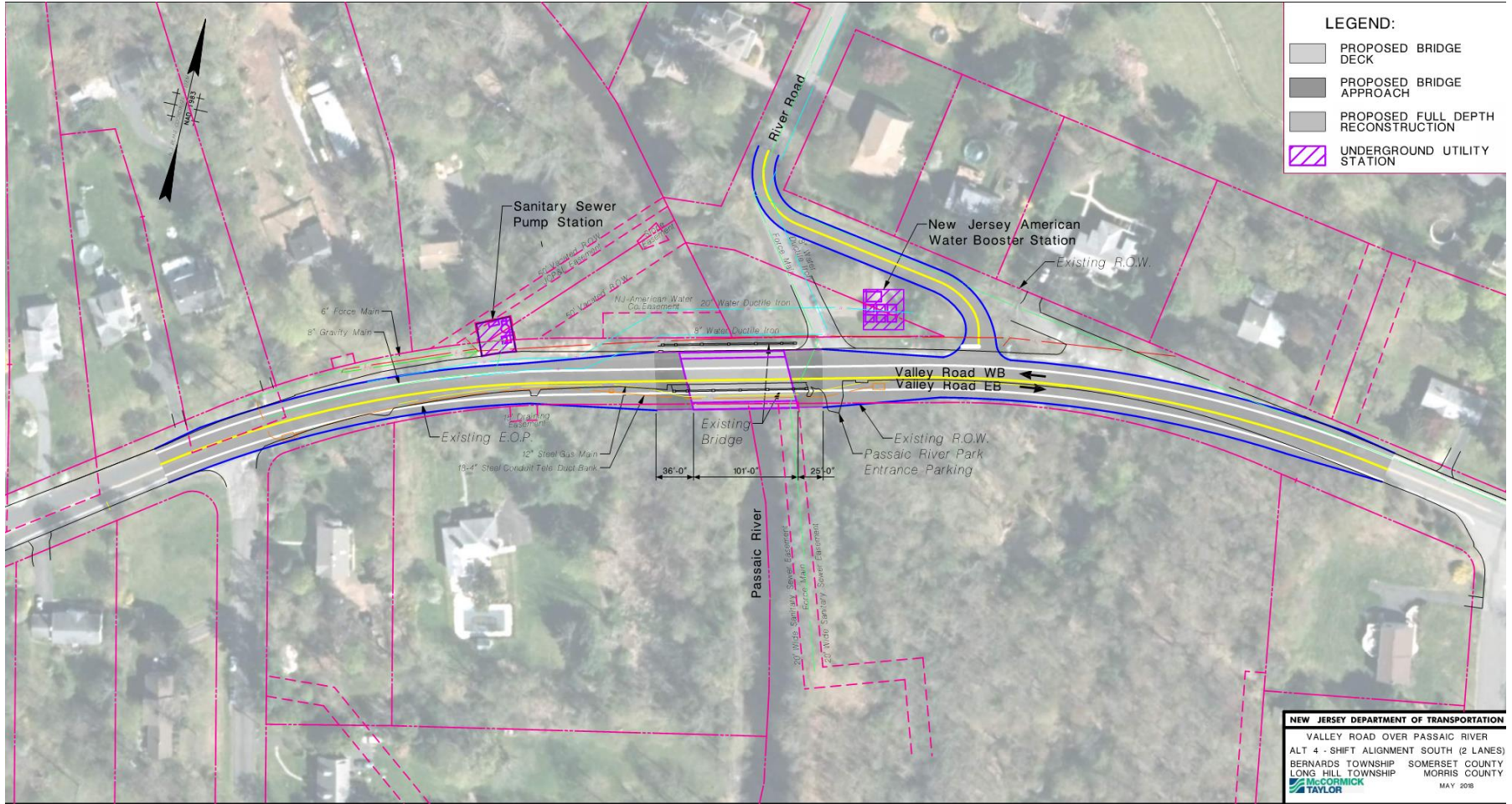
PART 2 OF 2



SINGLE SPAN CONFIGURATION (101'-0")

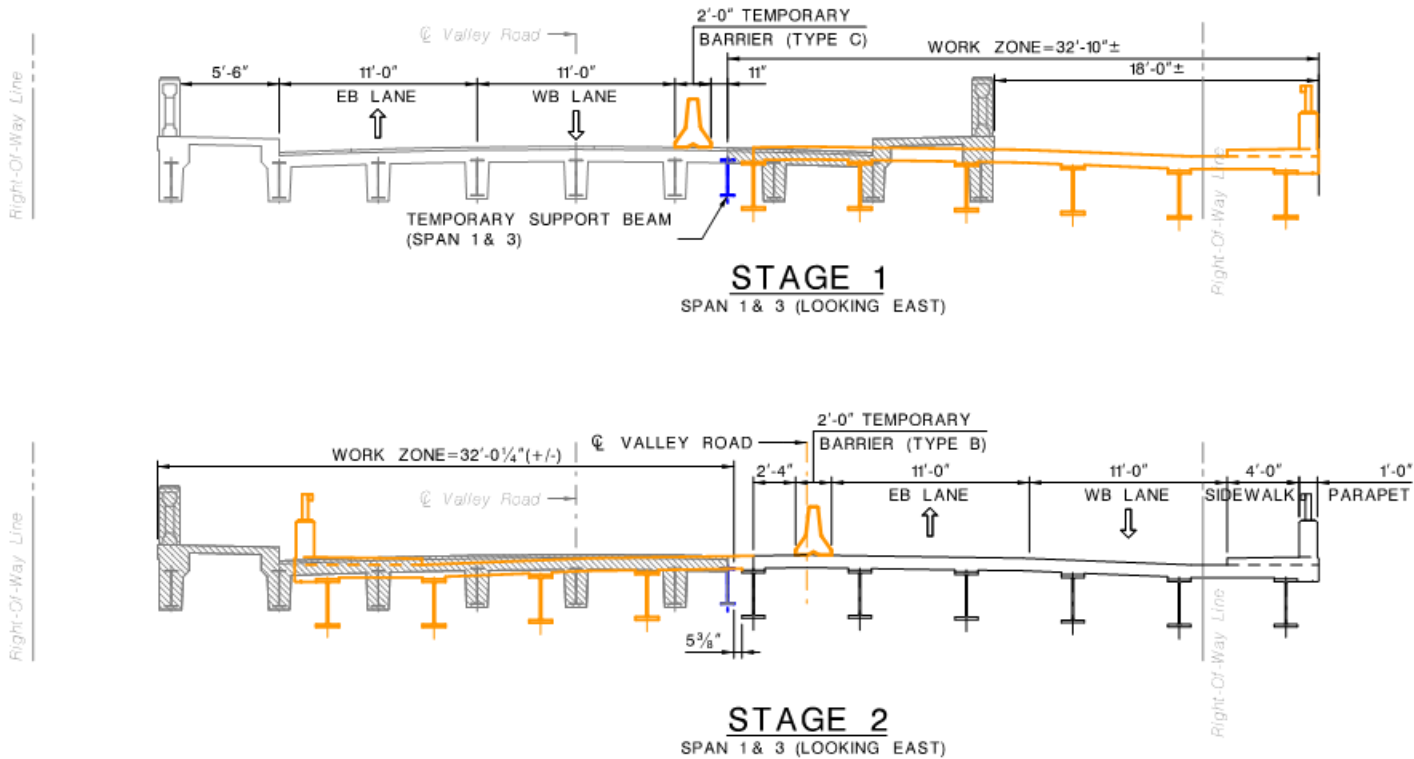
2-SPAN (50'-6" - 50'-6") CONFIGURATION

ALTERNATIVE 4 – SHIFT ALIGNMENT SOUTH MAINTAIN ALL LANES DURING CONSTRUCTION



ALTERNATIVE 4 – PROPOSED STAGING PLAN

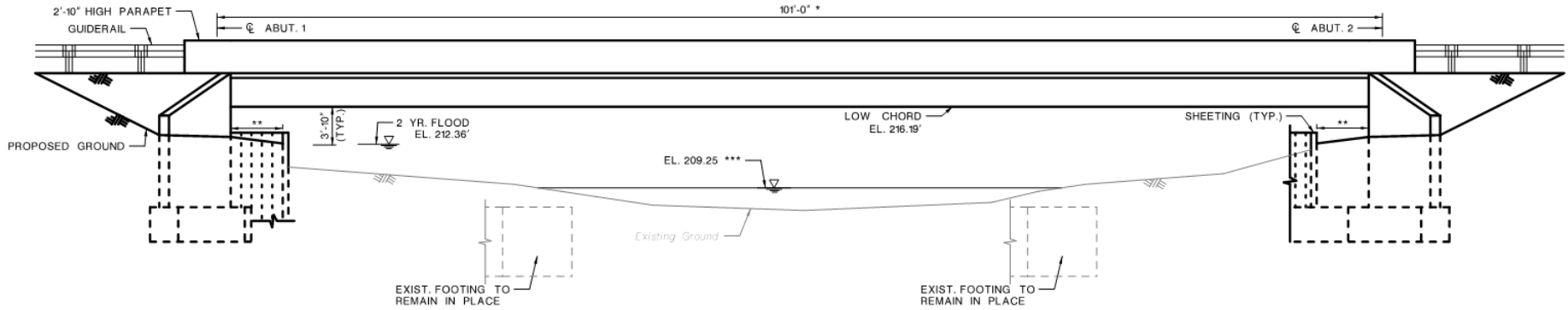
PART 1 OF 2



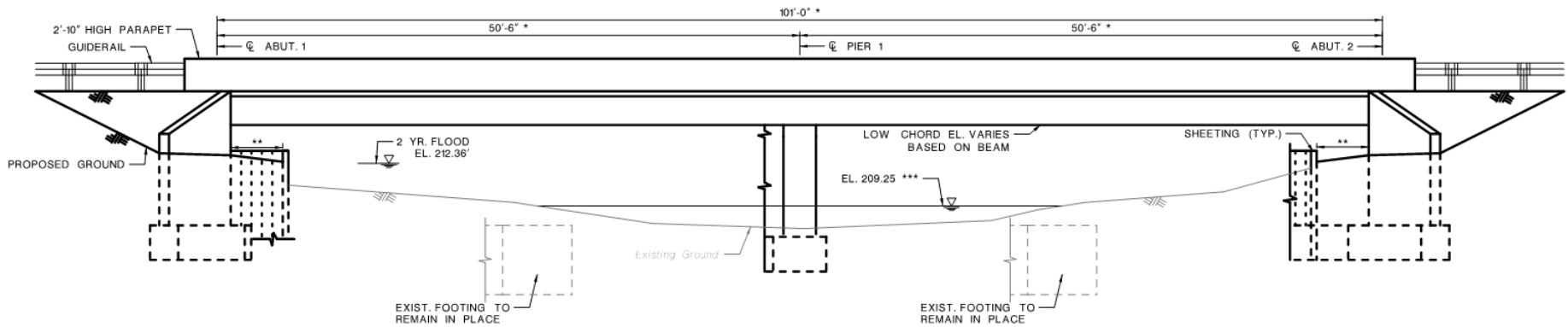
SINGLE SPAN CONFIGURATION (101'-0")

2-SPAN (50'-6" - 50'-6") CONFIGURATION

PROPOSED ELEVATIONS



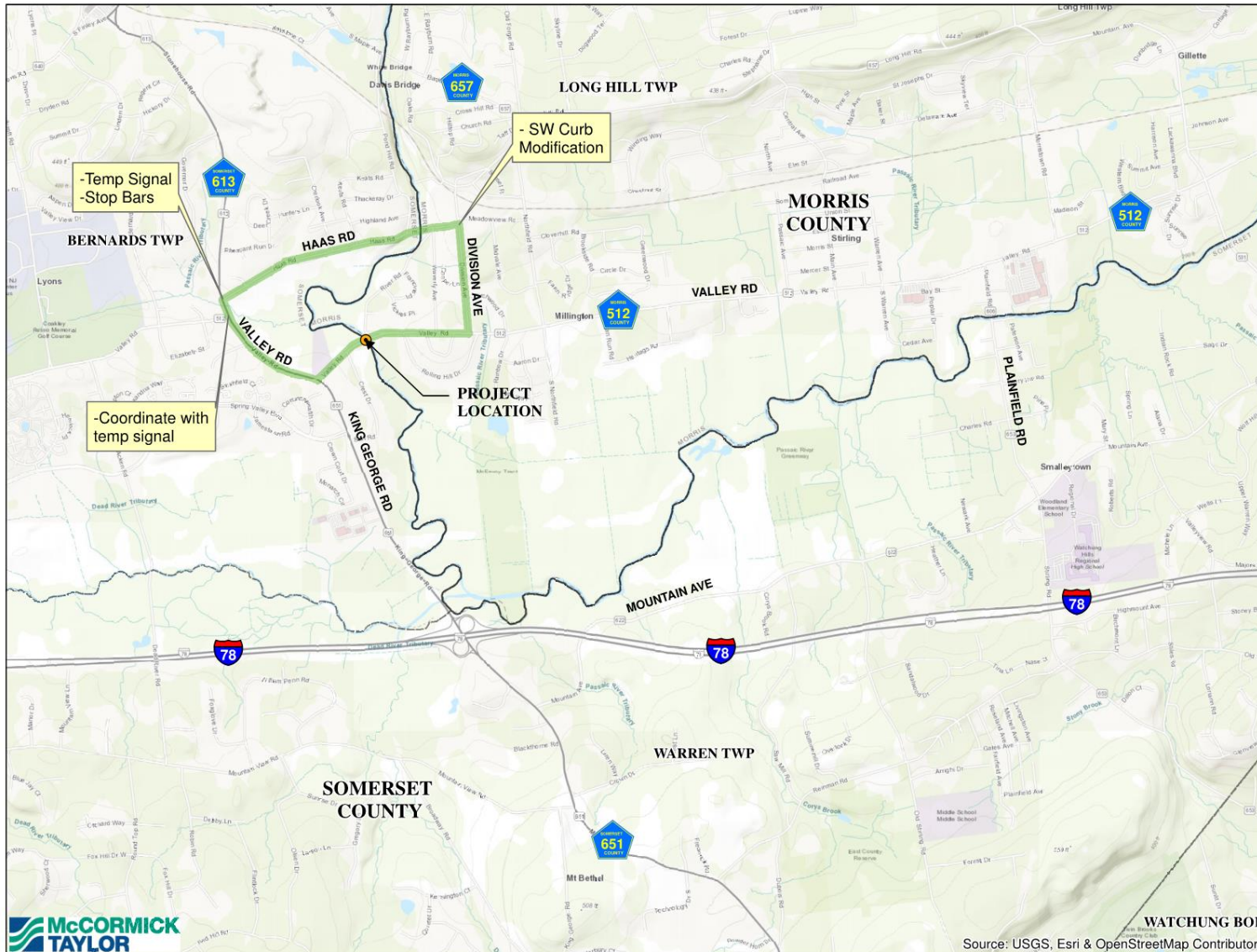
PROPOSED SINGLE SPAN ELEVATION



PROPOSED TWO SPAN ELEVATION

* DIMENSION IS MEASURED ALONG BRIDGE SKEW
 ** WILD LIFE PASSAGE - 4'(+/-) MEASURED NORMAL TO ABUTMENT
 *** FROM 17th CYCLE INSPECTION REPORT 2015

POTENTIAL DETOUR ROUTE #1



DETOUR MAP

Valley Road Bridge
Local Concept Development Study
Bernards & Long Hill Township
Somerset & Morris County
New Jersey

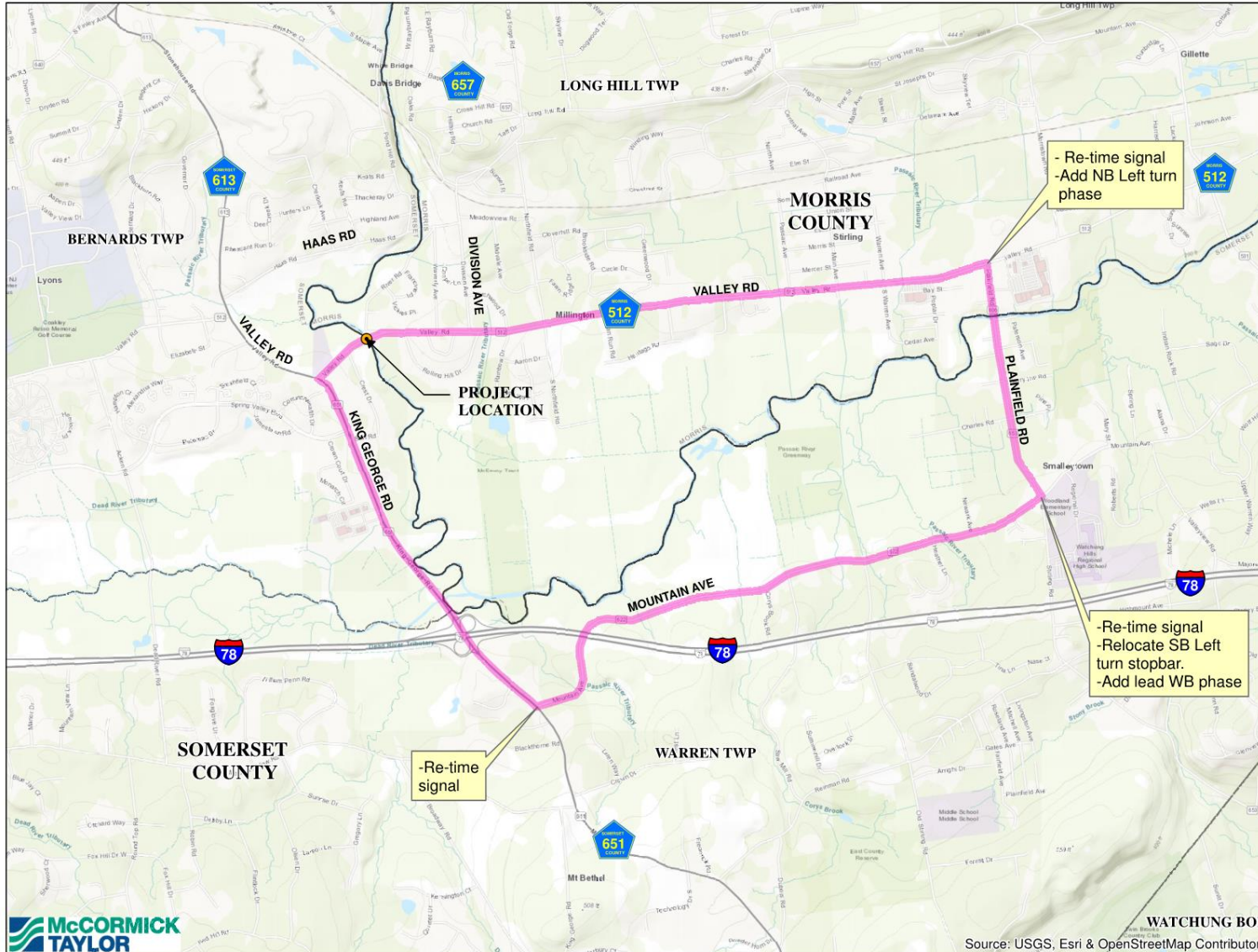


Legend

- Detour Route - Option 1
Total Detour Length : 2.63 Miles
- Municipality Boundary
- County Boundary



POTENTIAL DETOUR ROUTE #2



DETOUR MAP

Valley Road Bridge
Local Concept Development Study
Bernards & Long Hill Township
Somerset & Morris County
New Jersey

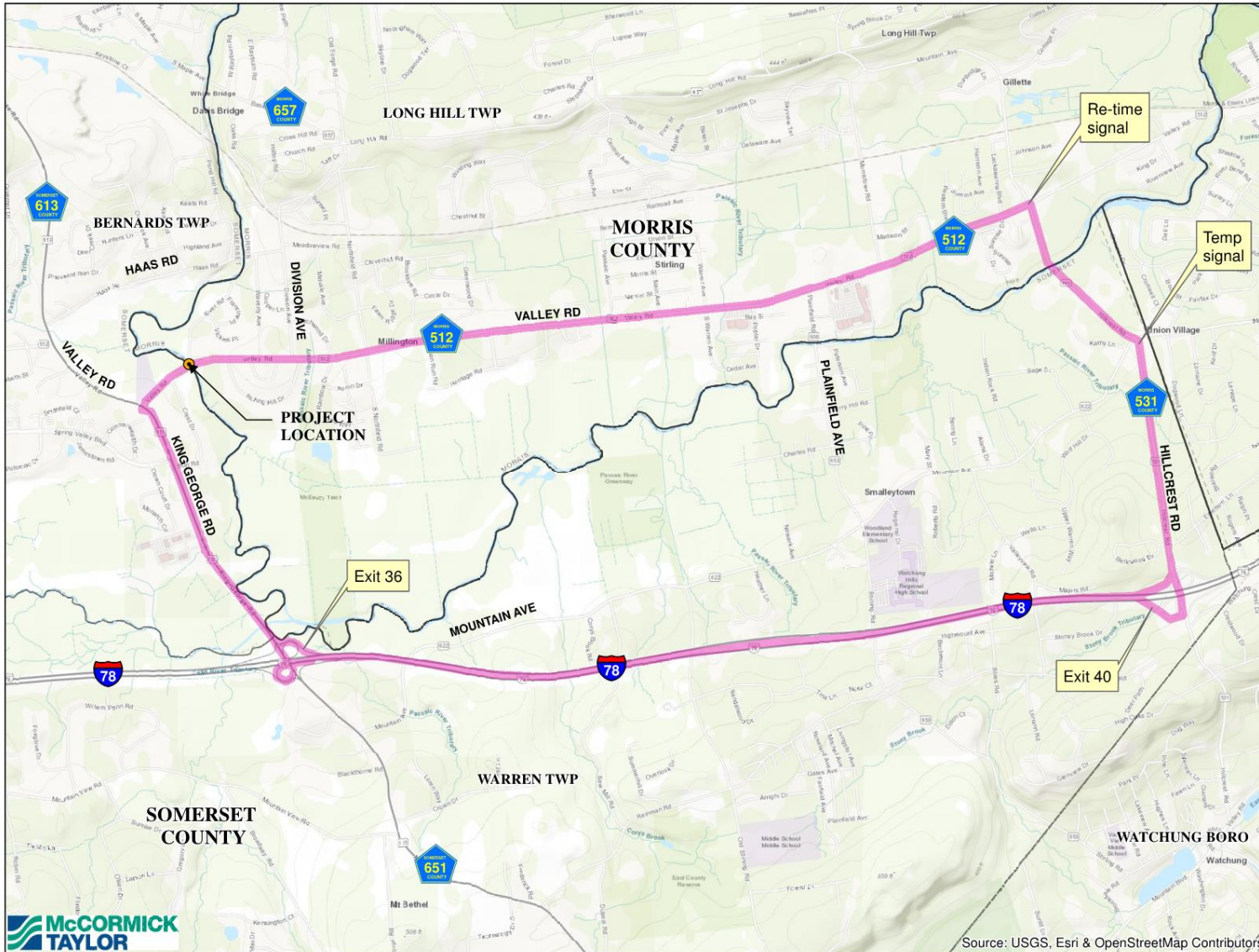


Legend

- Detour Route - Option 2
Total Detour Length : 7.67 Miles
- Municipality Boundary
- County Boundary



POTENTIAL DETOUR ROUTE #3



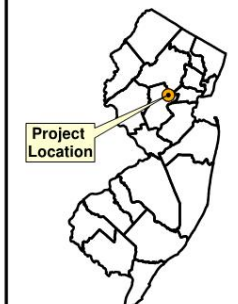
DETOUR MAP

Valley Road Bridge
 Local Concept Development Study
 Bernards & Long Hill Township
 Somerset & Morris County
 New Jersey

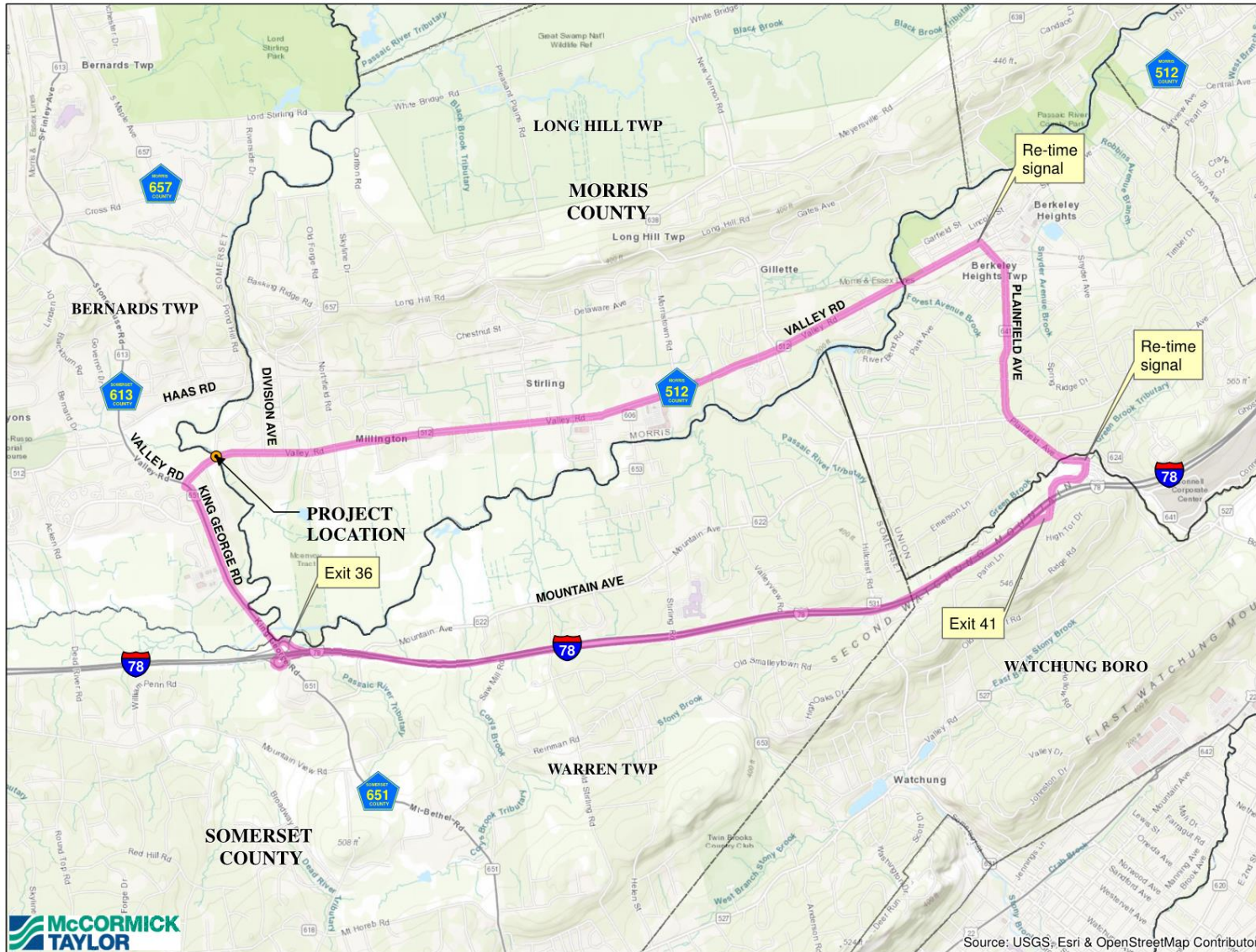


Legend

- Detour Route - Option 3
Total Detour Length : 10.5 Miles
- Municipality Boundary
- County Boundary



POTENTIAL DETOUR ROUTE #4



DETOUR MAP

Valley Road Bridge
 Local Concept Development Study
 Bernards & Long Hill Township
 Somerset & Morris County
 New Jersey



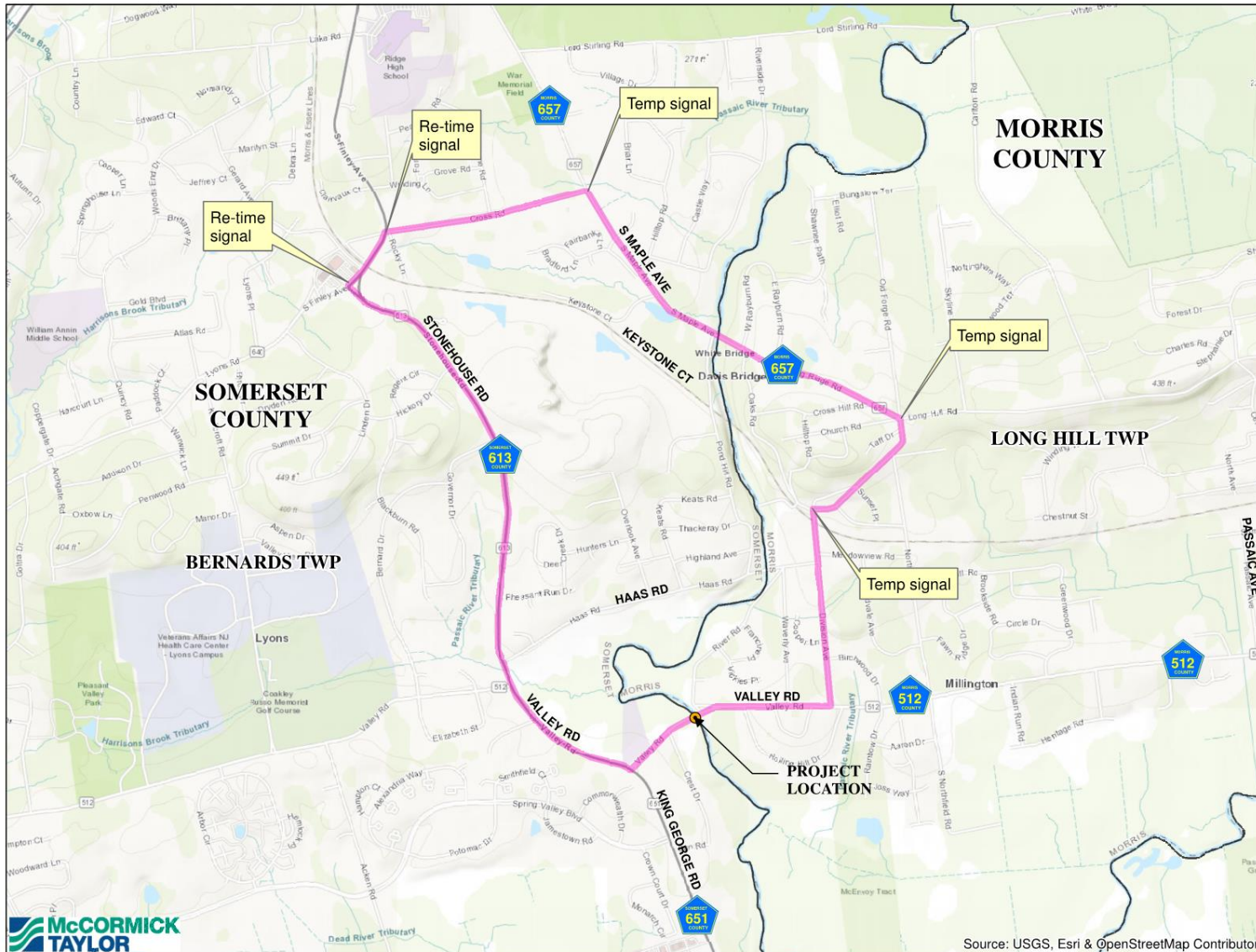
Legend

- Detour Route - Option 4
Total Detour Length : 13.0 Miles
- Municipality Boundary
- County Boundary



Source: USGS, Esri & OpenStreetMap Contributors

POTENTIAL DETOUR ROUTE #5



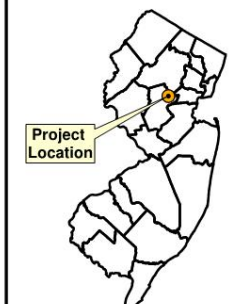
DETOUR MAP

Valley Road Bridge
 Local Concept Development Study
 Bernards & Long Hill Township
 Somerset & Morris County
 New Jersey



Legend

- Detour Route - Option 5
Total Detour Length : 5.55 Miles
- Municipality Boundary
- County Boundary



PROJECT SCHEDULE

- 18 month completion schedule
- **Major Milestones**
 - Purpose and Need Statement – July 2018
 - Development of Conceptual Alternatives – August/Sept. 2018
 - Selection of Preliminary Preferred Alternative – Dec 2018/Jan 2019
 - Submission of Draft Local Concept Development Report – March 2019
 - Completion of Local Concept Development Phase – June 2019

COMMUNITY INVOLVEMENT SCHEDULE

Project Introduction and Purpose & Need

- Local Officials Briefing #1 – April 26, 2018
- Stakeholders Meeting #1 – June 7, 2018
- Public Information Center #1 – June 7, 2018

Obtain Input on Conceptual Alternatives

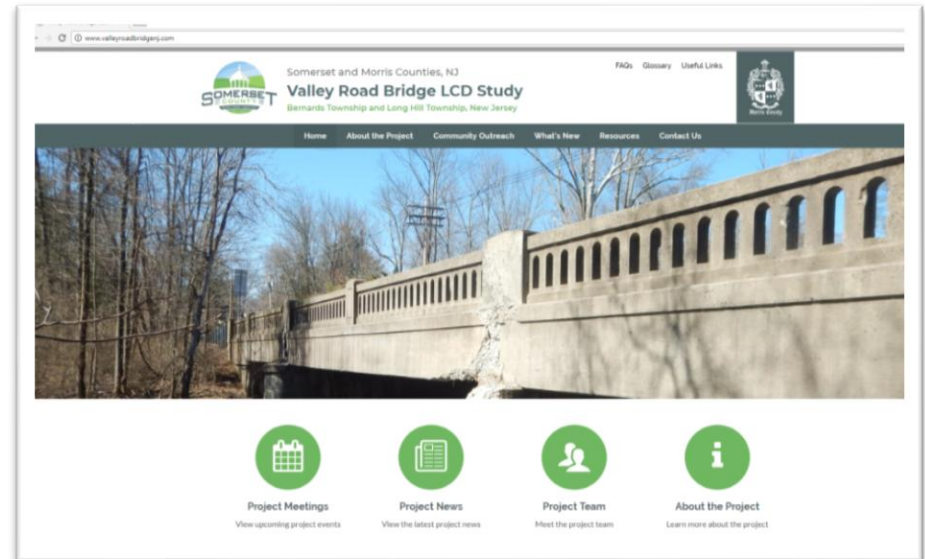
- Local Officials Briefing #2 – September 5, 2018
- Stakeholders Meeting #2 – September 12, 2018
- Public Information Center #2 – September 12, 2018

Selection and Presentation of Preliminary Preferred Alternative

- Local Officials Briefing #3 – Fall/Winter 2018
- Public Information Center #3 – Fall/Winter 2018

PROJECT WEBSITE AND SOCIAL MEDIA

- PROJECT WEBSITE
 - <http://www.valleyroadbridgenj.com/>
- TWITTER
 - @ValleyRdBridge
 - <https://twitter.com/ValleyRdBridge>
- POWERPOINT PRESENTATION
 - will be posted on the project website



PROJECT CONTACT INFORMATION

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THANK YOU

For more information
or to contact us:



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