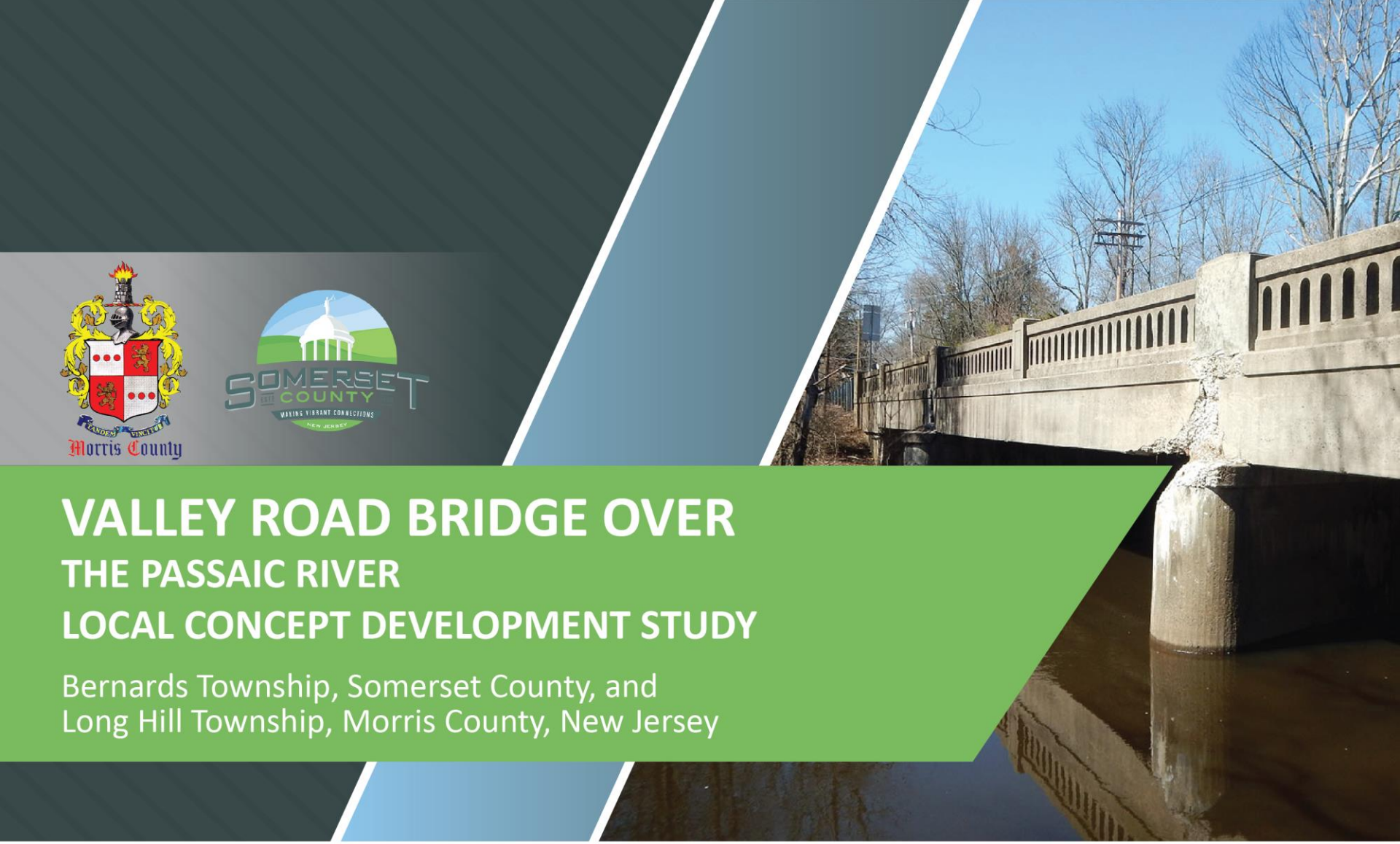


VALLEY ROAD BRIDGE OVER
THE PASSAIC RIVER
LOCAL CONCEPT DEVELOPMENT STUDY

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

PUBLIC INFORMATION CENTER #2

September 12, 2018

PROJECT TEAM

Morris County

SOMERSET COUNTY EST. 1688
MAKING VIBRANT CONNECTIONS
NEW JERSEY

DEPARTMENT OF TRANSPORTATION
THE STATE OF NEW JERSEY

NJTPA
NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

U.S. Department of Transportation
Federal Highway Administration

McCORMICK TAYLOR

AmerCom Corp.
Consulting Engineers

RGA

STOKES
Creative Group, Inc.

MEETING PURPOSE

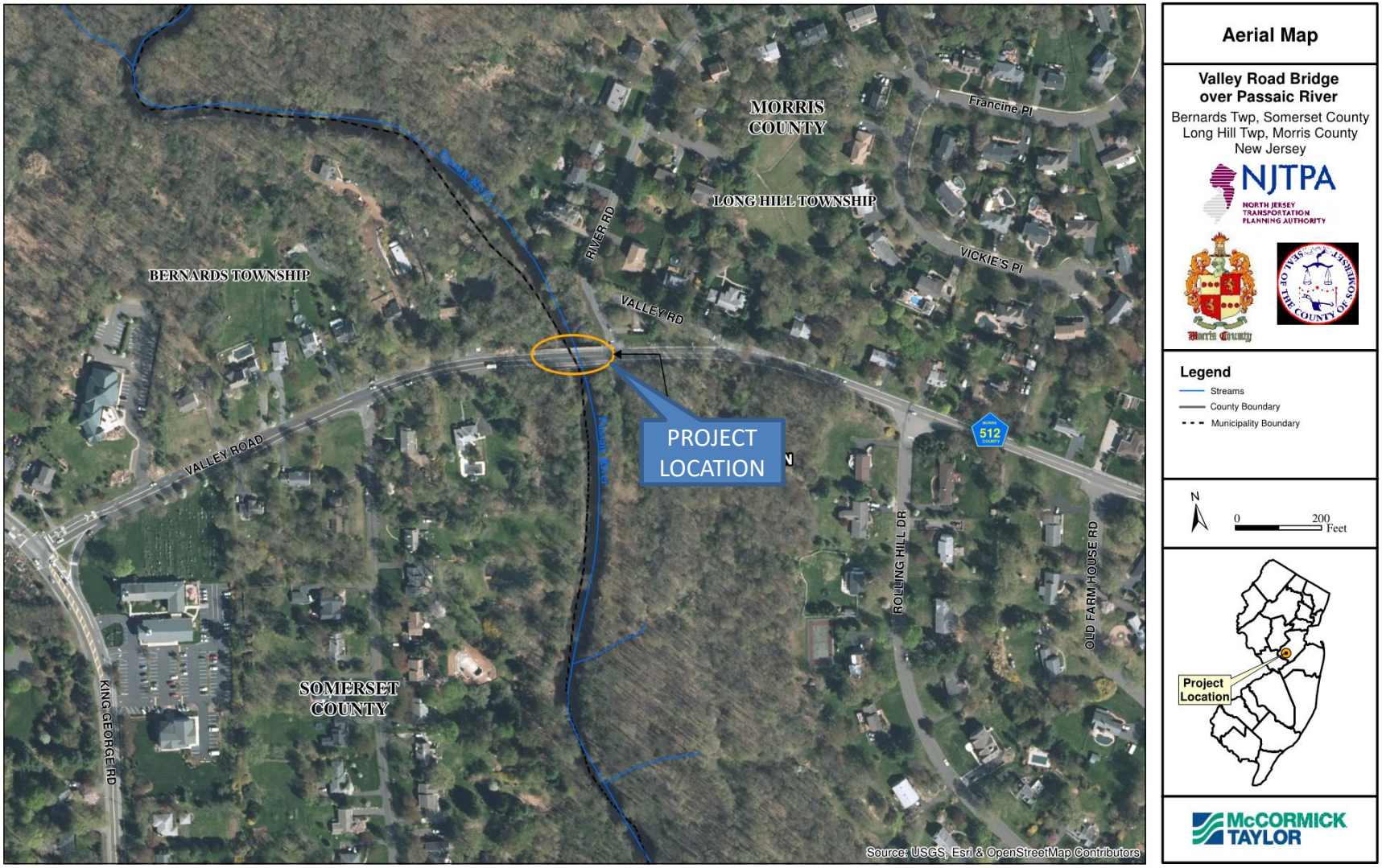
- Provide a summary of the Local Capital Project Delivery Process
- Present a brief summary of the data collection effort
- Present the Project Purpose & Need and Goals and Objectives for the project
- Present the conceptual alternatives developed for the Valley Road Bridge
- Obtain input regarding the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



Aerial Map

Valley Road Bridge over Passaic River

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

NJTPA
NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

Legend

- Streams
- County Boundary
- Municipality Boundary

N

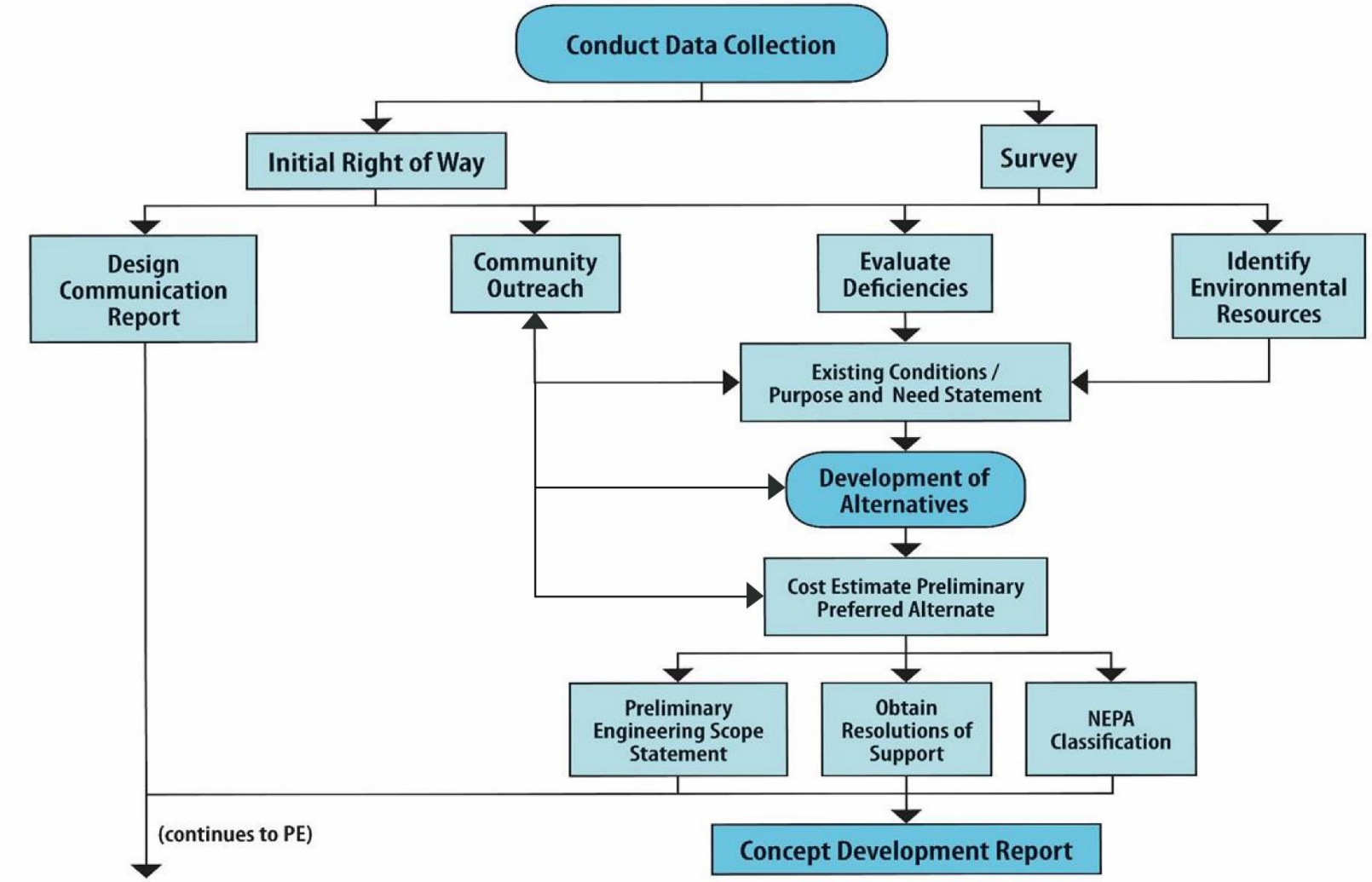
0 200 Feet

McCORMICK TAYLOR

LOCAL CAPITAL PROJECT DELIVERY PROCESS

Local Concept Development	Local Preliminary Engineering	Final Design/Right of Way Acquisition	Construction
• Data Collection	• Continue Public Outreach Efforts	• Continue Public Outreach Efforts	• Continue Public Outreach Efforts
• Initiate Public Outreach Efforts	• Preliminary Design	• Final Design	• Complete Construction
• Purpose and Need Statement	• Preliminary ROW Documents	• Final ROW Documents and ROW Acquisition	• As-Built Plans
• Alternatives Development and Analysis	• Preliminary Engineering Plans	• Final Contract Plans and PS&E Package	• Close-Out Documentation
• Select Preliminary Preferred Alternative	• Preliminary Construction Cost Estimate and Schedule	• Final Utility Relocation Schemes	
• NEPA Classification	• Approved Design Exception Report	• Secure Environmental Permits	
• Local Concept Development Report	• Approved NEPA Environmental Document	• Environmental Reevaluation	
	• Local Preliminary Engineering Report		

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 (17^{th} 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

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.

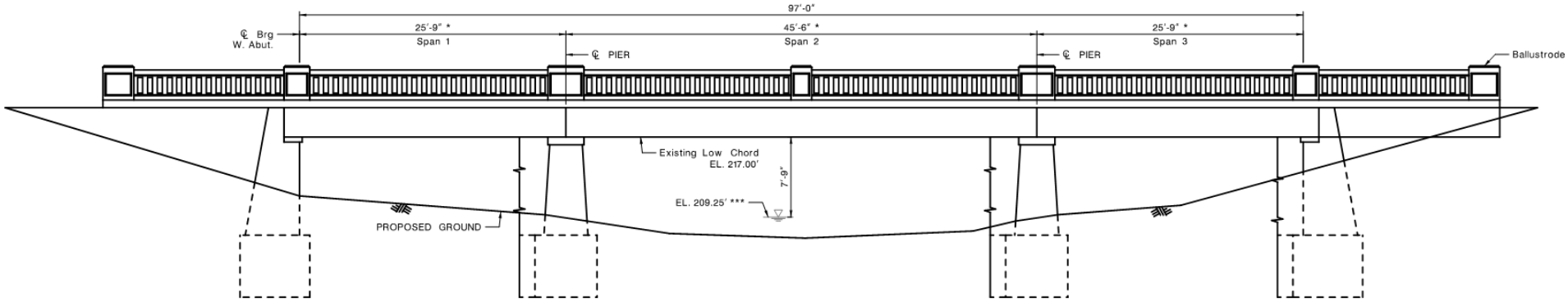
GOALS AND OBJECTIVES

- 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

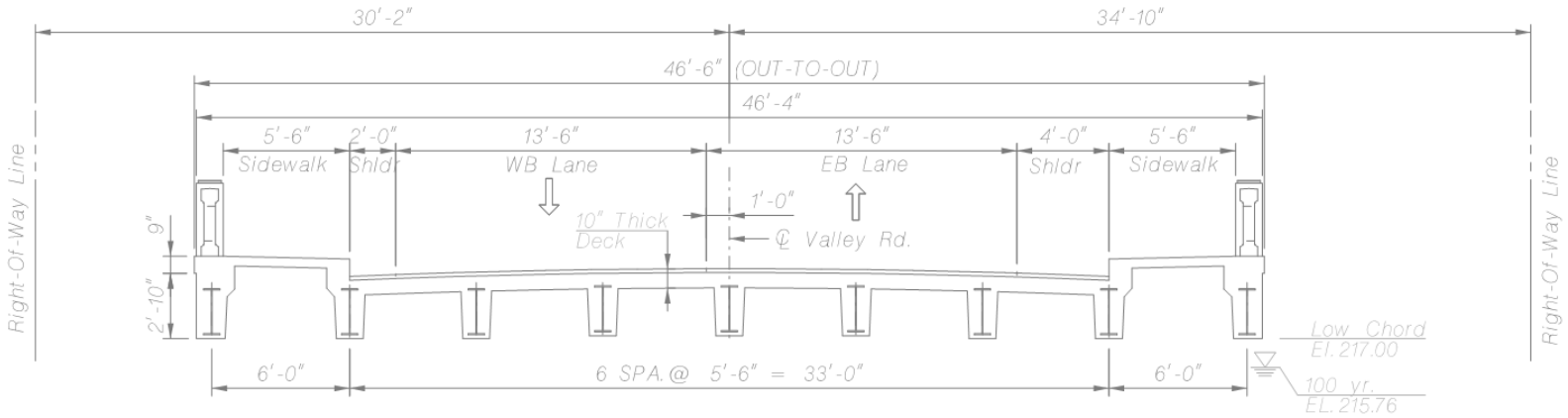
EXISTING ELEVATION



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

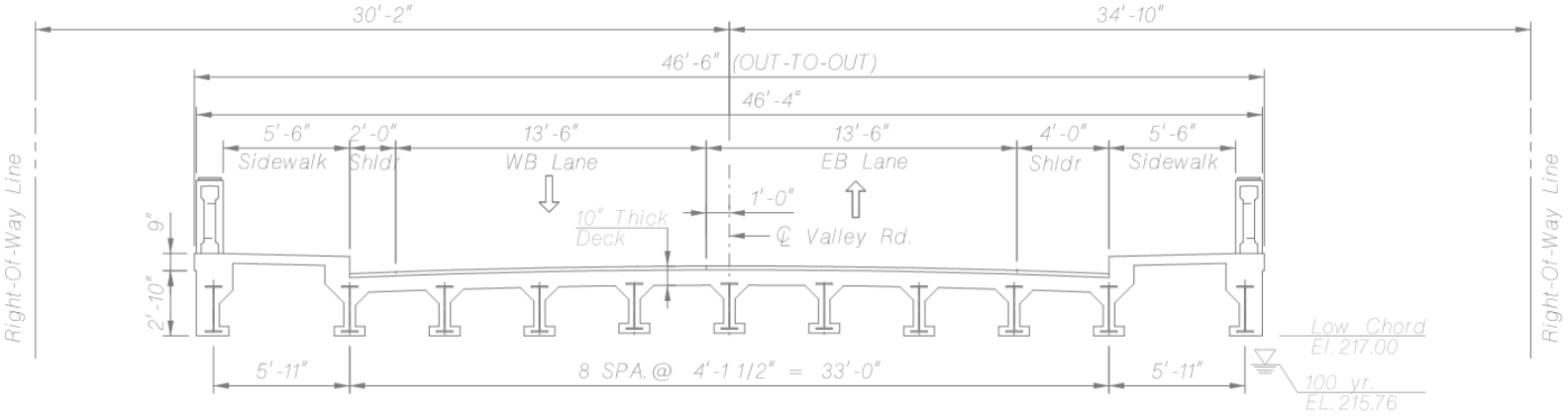
EXISTING ELEVATION

EXISTING TYPICAL SECTION



EXISTING BRIDGE TYPICAL SECTION - SPAN 1 & 3

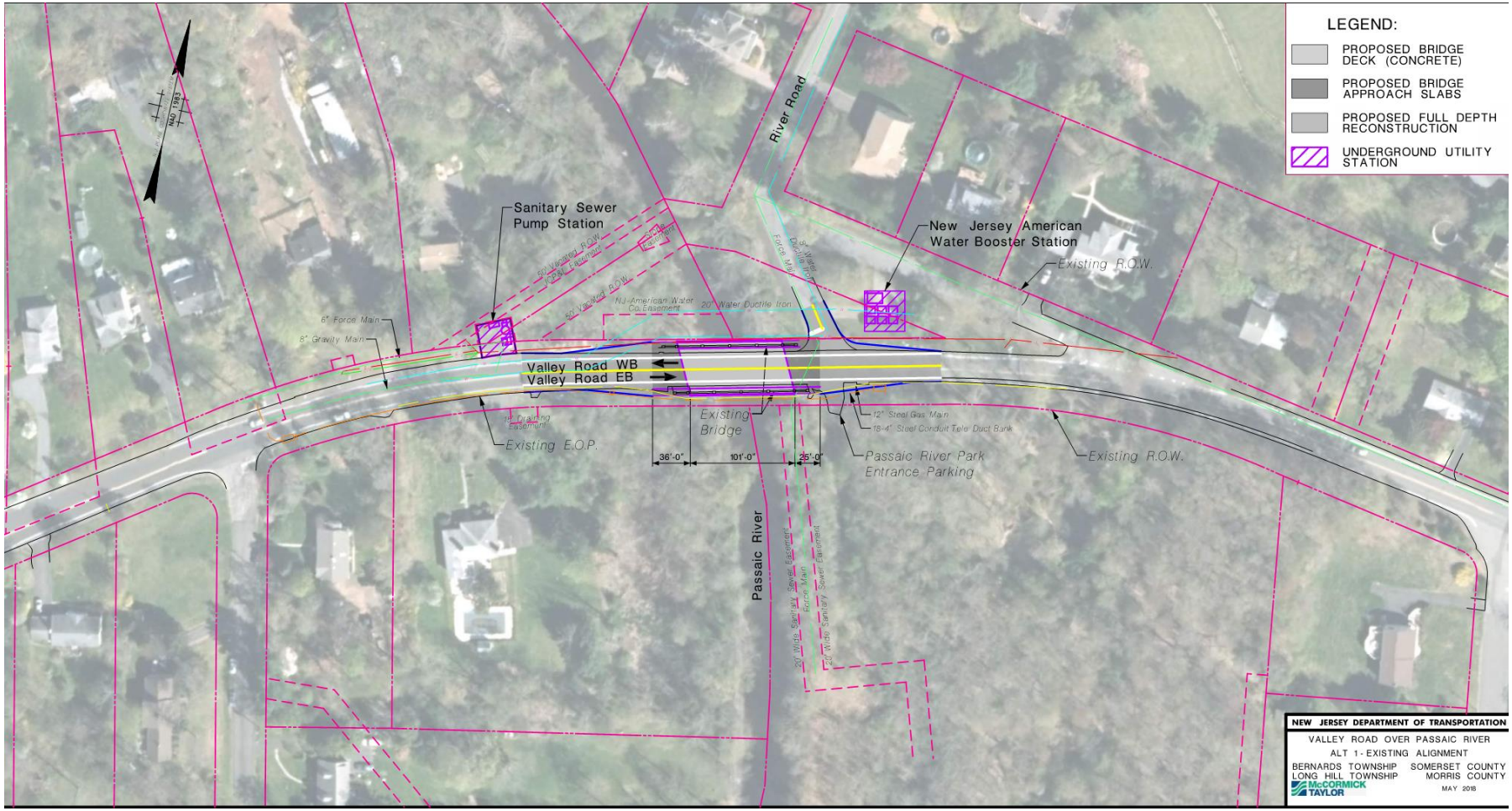
(LOOKING EAST)



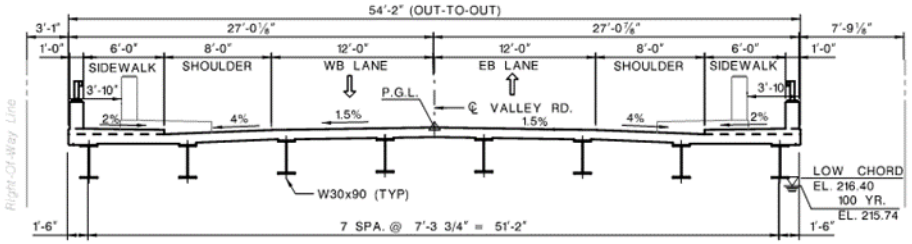
EXISTING BRIDGE TYPICAL SECTION - SPAN 2

(LOOKING EAST)

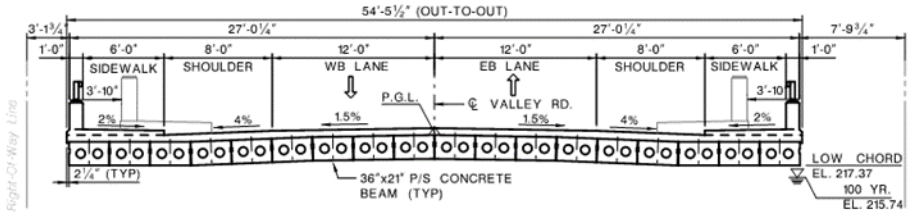
ALTERNATIVE 1 – EXISTING ALIGNMENT FULL DETOUR



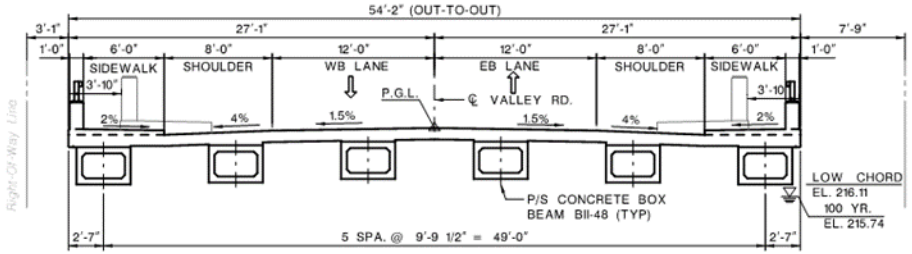
ALTERNATIVE 1 – PROPOSED TYPICAL SECTION ALTERNATIVES



TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)

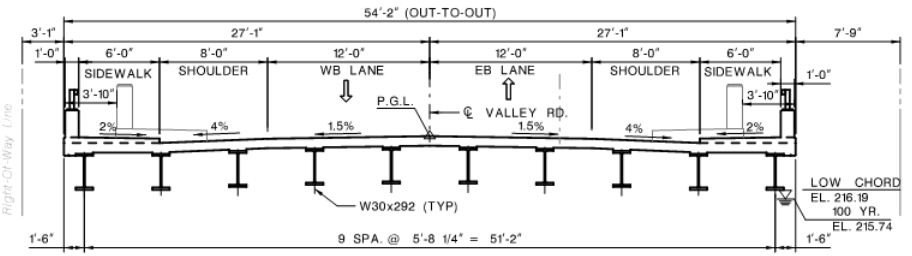


TYPICAL SECTION - CONCRETE SLAB BEAM ALTERNATIVE
(LOOKING EAST)



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

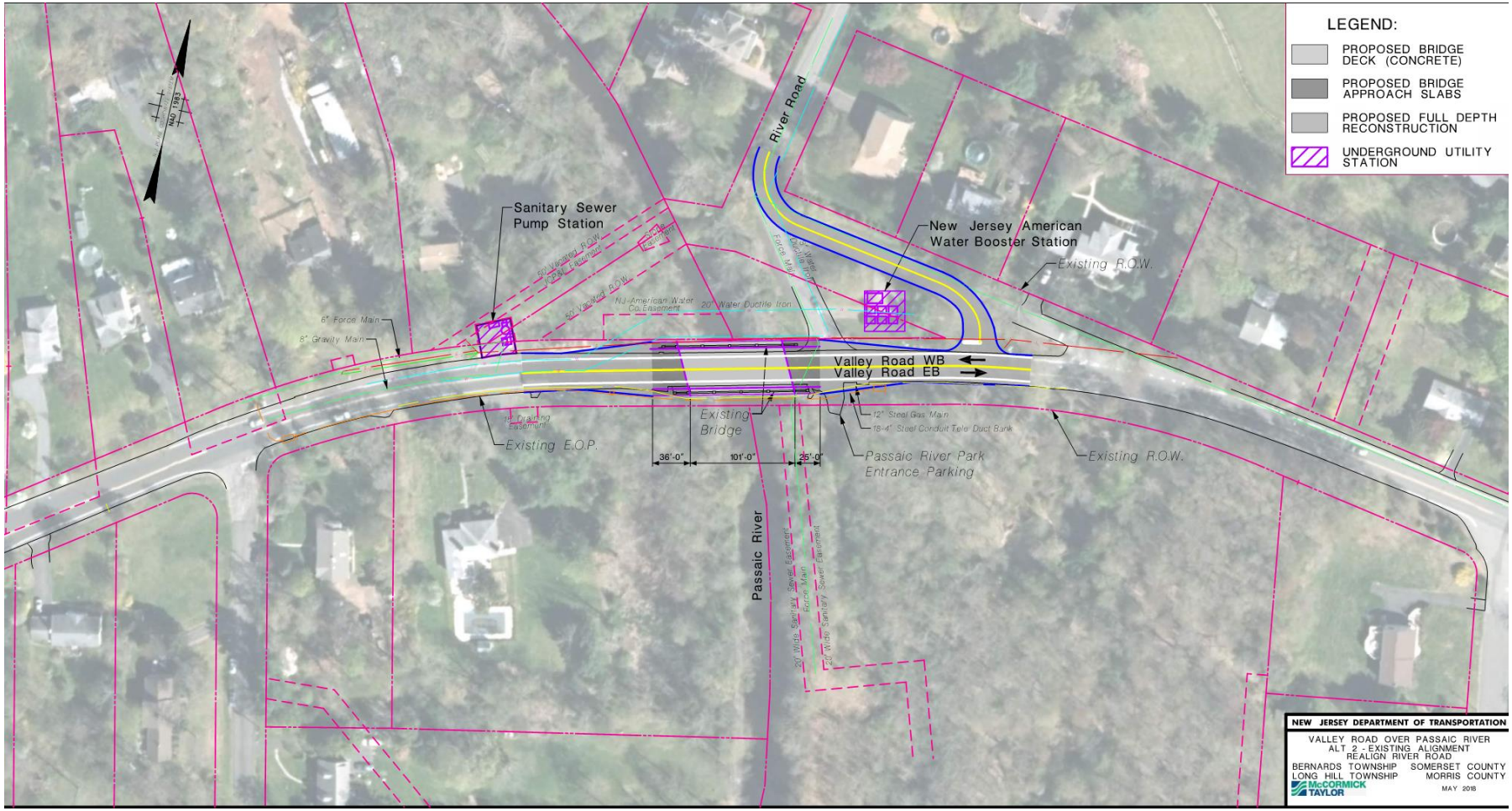
2-SPAN (50′-6″ - 50′-6″) CONFIGURATION



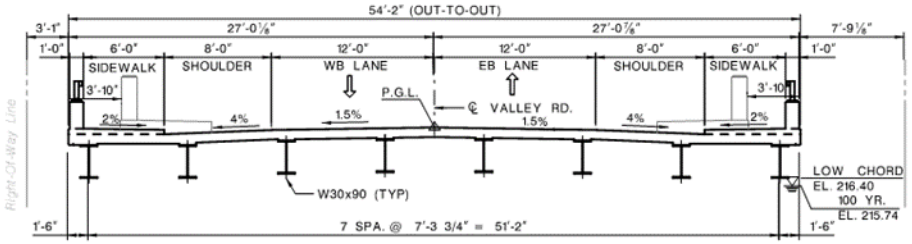
TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)

SINGLE SPAN CONFIGURATION (101′-0″)

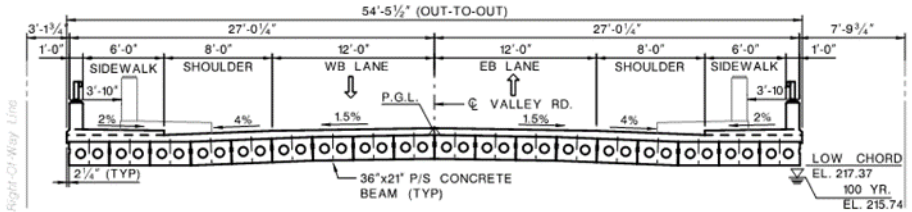
ALTERNATIVE 2 – EXISTING ALIGNMENT
REALIGN RIVER ROAD FULL DETOUR



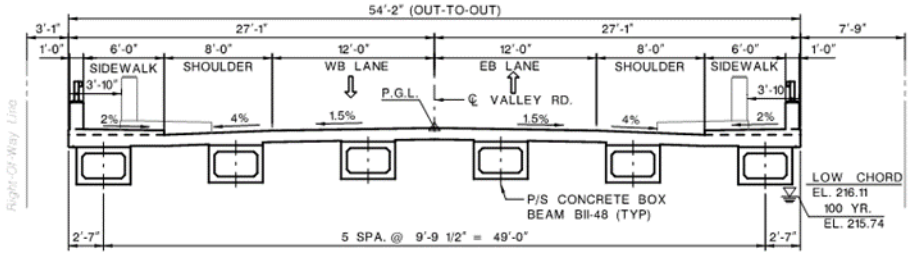
ALTERNATIVE 2 – PROPOSED TYPICAL SECTION ALTERNATIVES



TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)

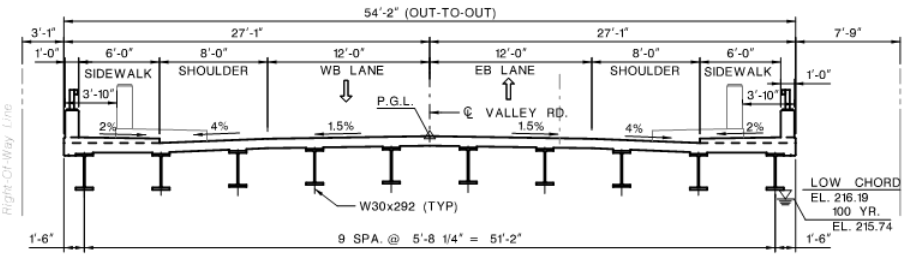


TYPICAL SECTION - CONCRETE SLAB BEAM ALTERNATIVE
(LOOKING EAST)



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

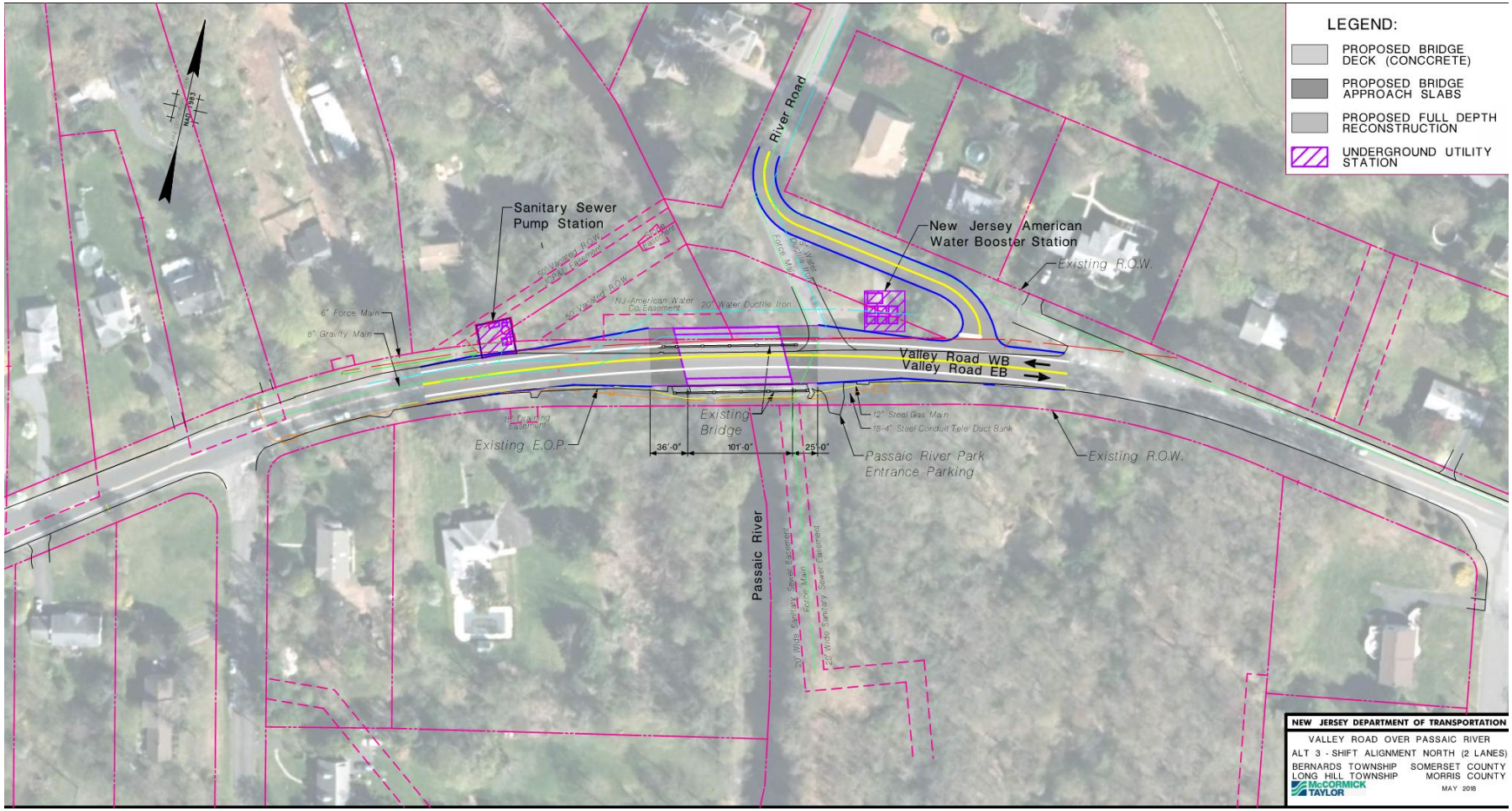
2-SPAN (50′-6″ - 50′-6″) CONFIGURATION



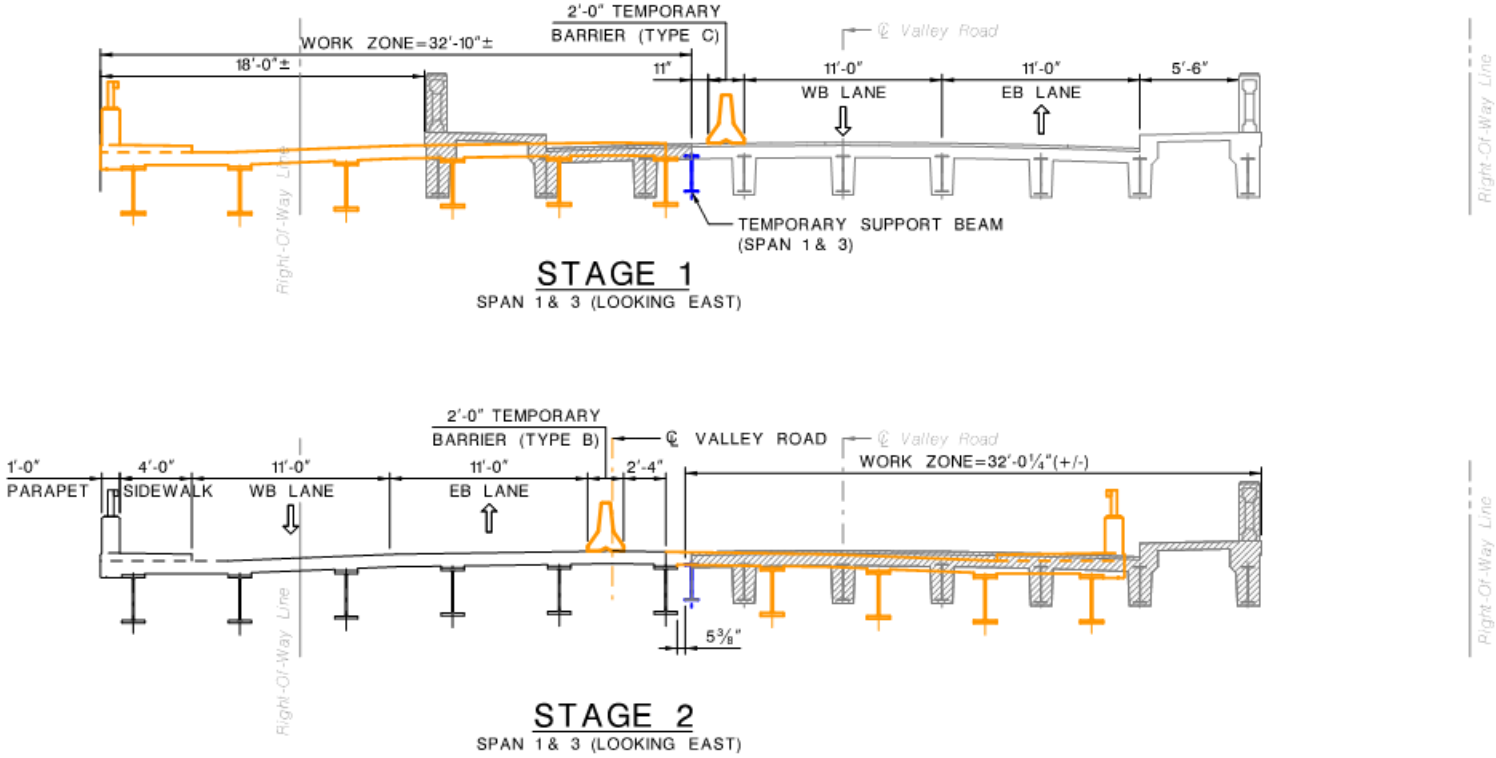
TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)

SINGLE SPAN CONFIGURATION (101′-0″)

ALTERNATIVE 3 – SHIFT ALIGNMENT NORTH MAINTAIN ALL LANES DURING CONSTRUCTION

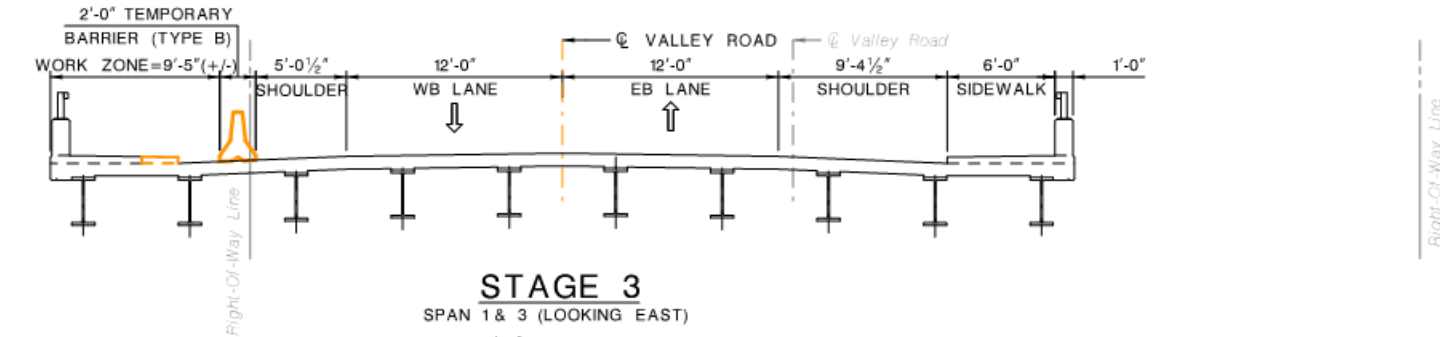


ALTERNATIVE 3 – PROPOSED STAGING PLAN
PART 1 OF 2

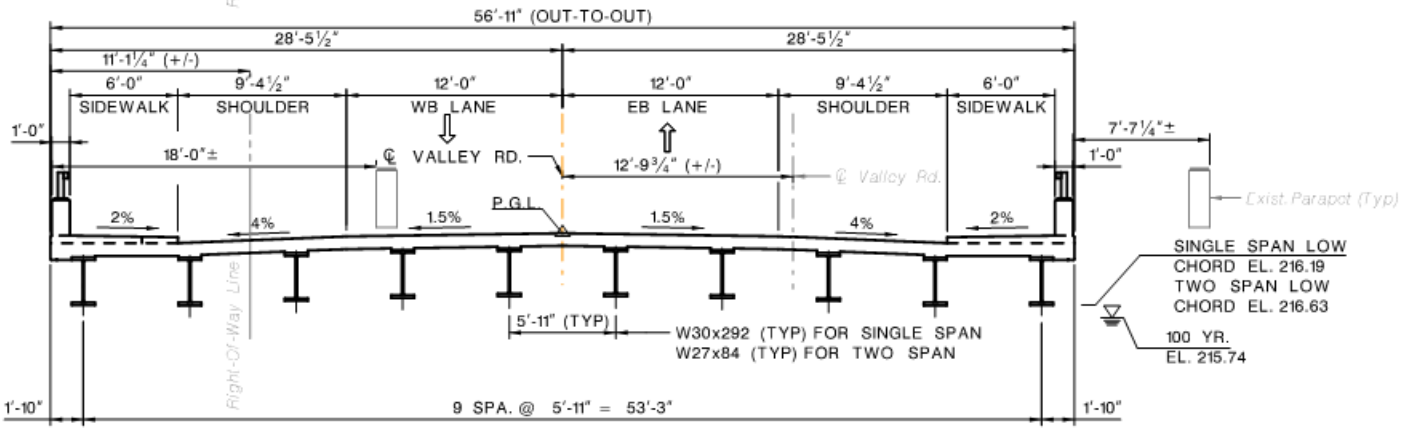


SINGLE SPAN CONFIGURATION (101'-0")
2-SPAN (50'-6" - 50'-6") CONFIGURATION

ALTERNATIVE 3 – PROPOSED STAGING PLAN
PART 2 OF 2



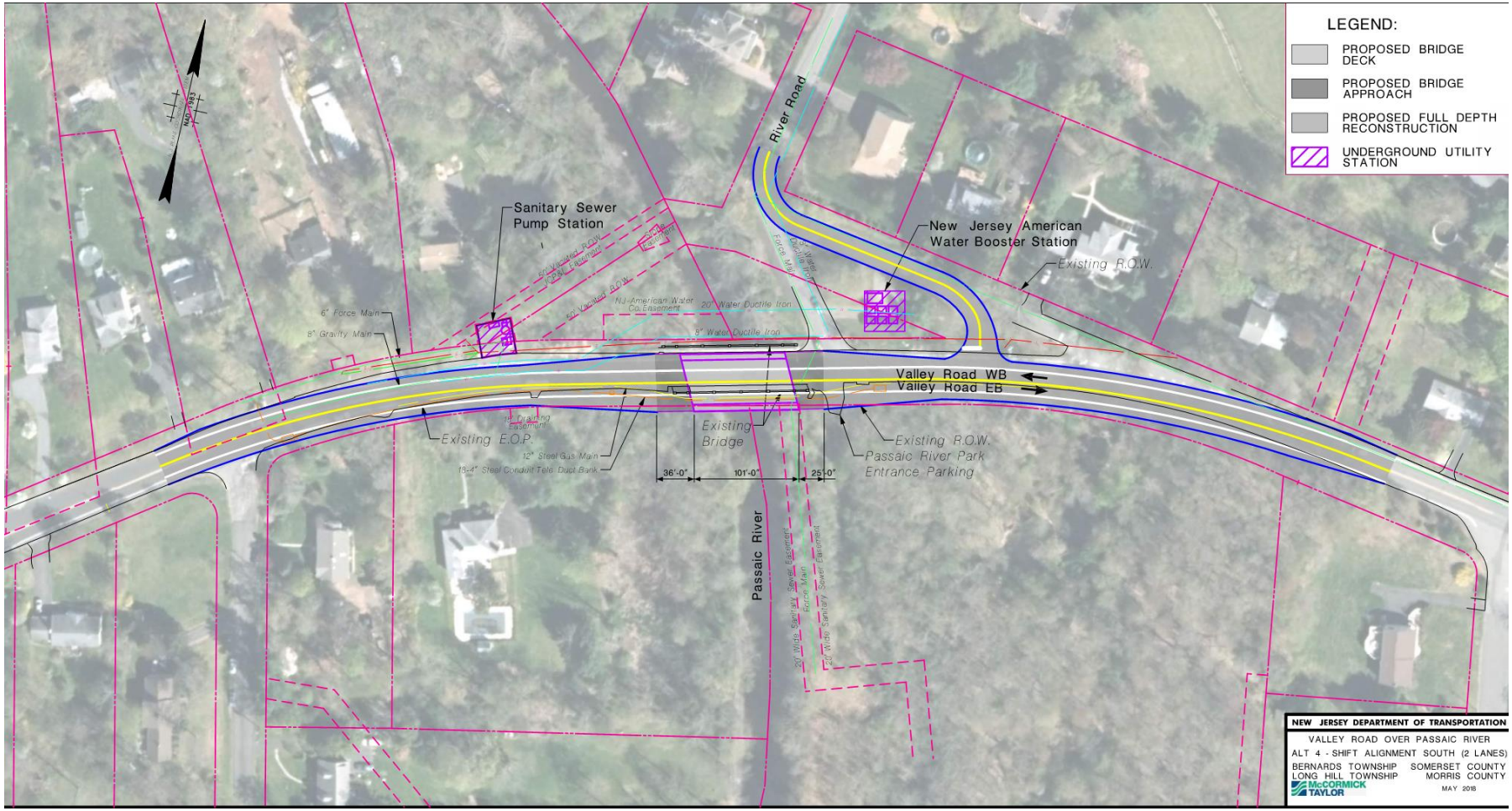
STAGE 3
SPAN 1 & 3 (LOOKING EAST)



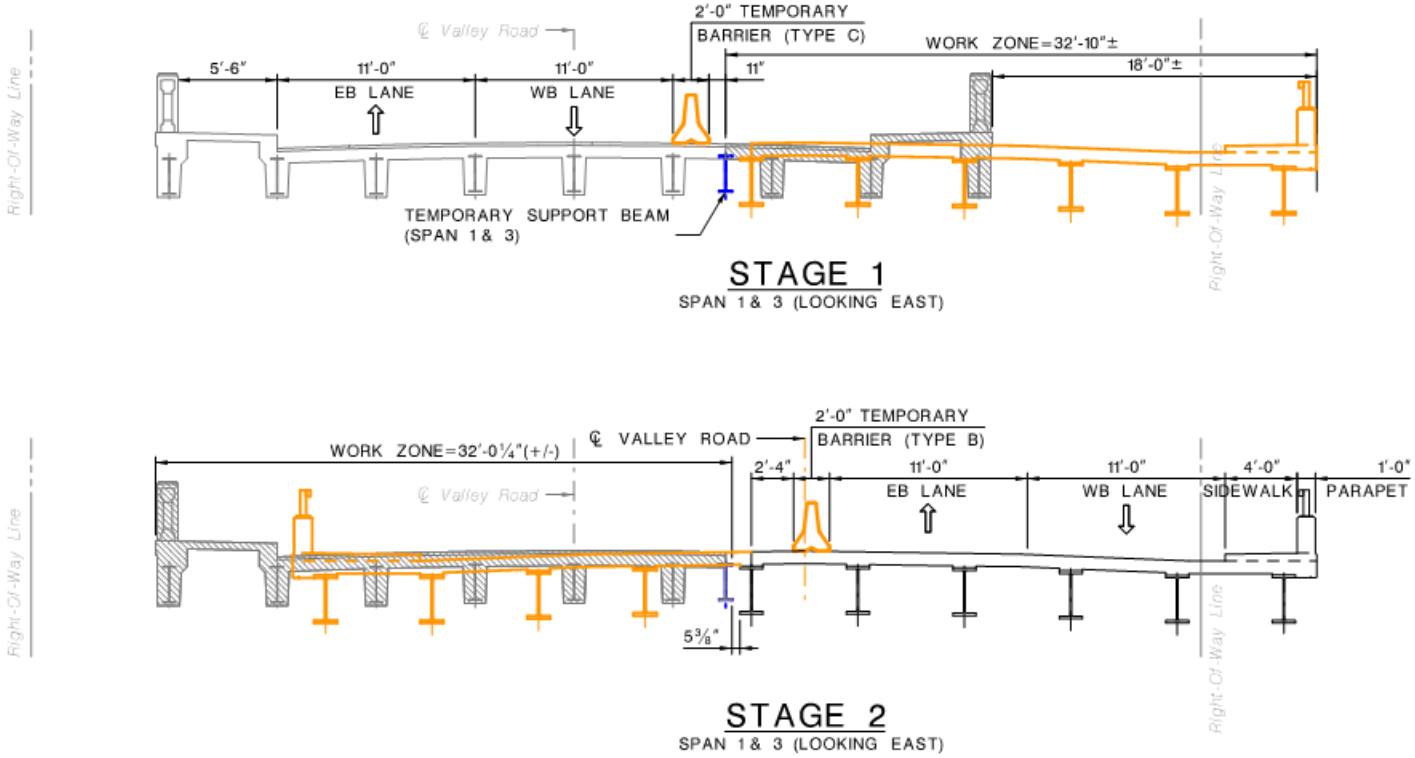
TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)

SINGLE SPAN CONFIGURATION (101'-0")
2-SPAN (50'-6" - 50'-6") CONFIGURATION

ALTERNATIVE 4 – SHIFT ALIGNMENT SOUTH MAINTAIN ALL LANES DURING CONSTRUCTION

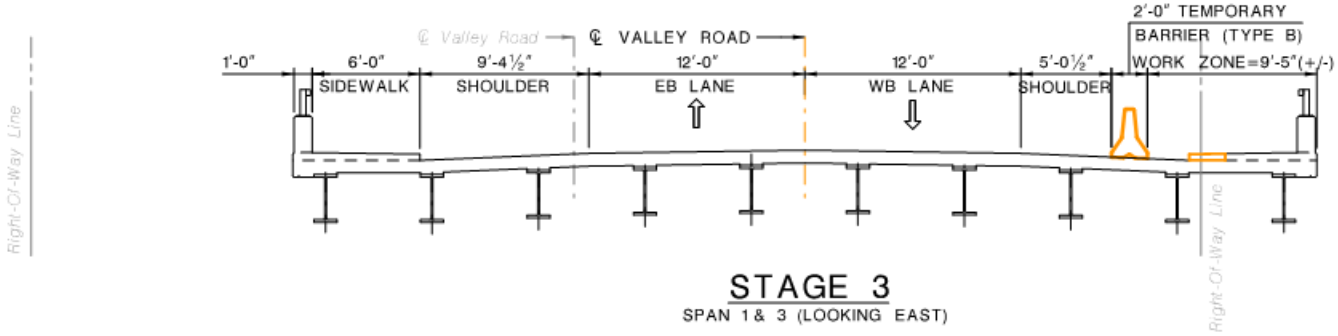


ALTERNATIVE 4 – PROPOSED STAGING PLAN
PART 1 OF 2

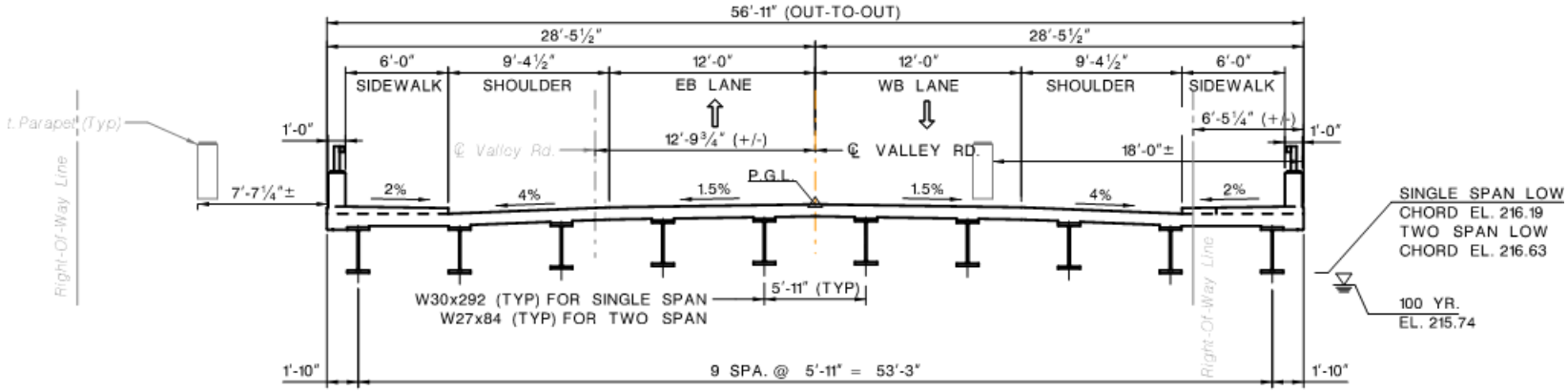


SINGLE SPAN CONFIGURATION (101'-0")
2-SPAN (50'-6" - 50'-6") CONFIGURATION

ALTERNATIVE 4 – PROPOSED STAGING PLAN
PART 2 OF 2



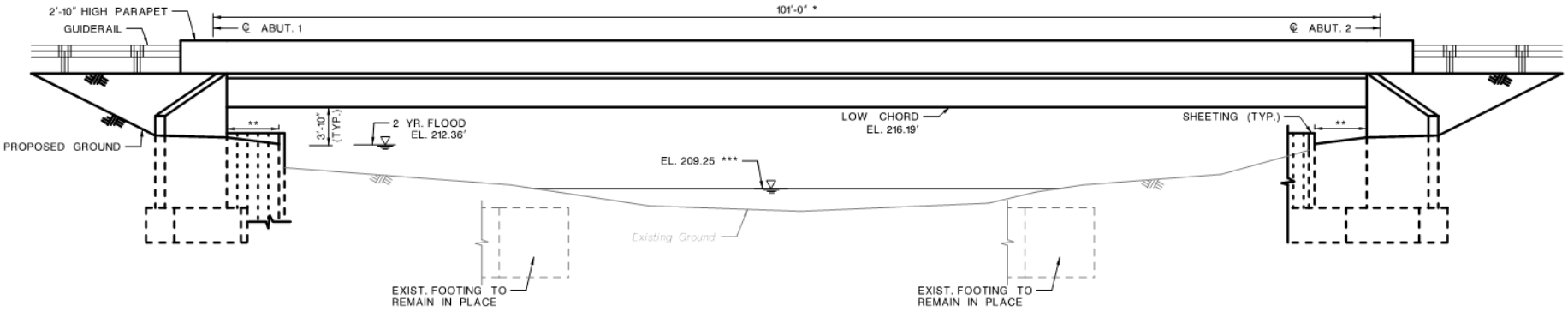
STAGE 3
SPAN 1 & 3 (LOOKING EAST)



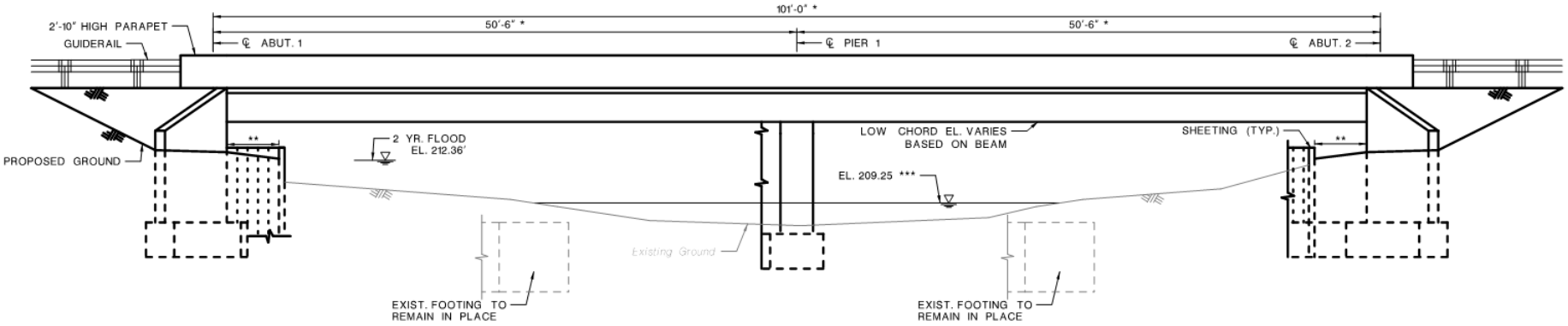
TYPICAL SECTION - STEEL ROLLED BEAM ALTERNATIVE
(LOOKING EAST)

SINGLE SPAN CONFIGURATION (101'-0")
2-SPAN (50'-6" - 50'-6") CONFIGURATION

PROPOSED ELEVATIONS



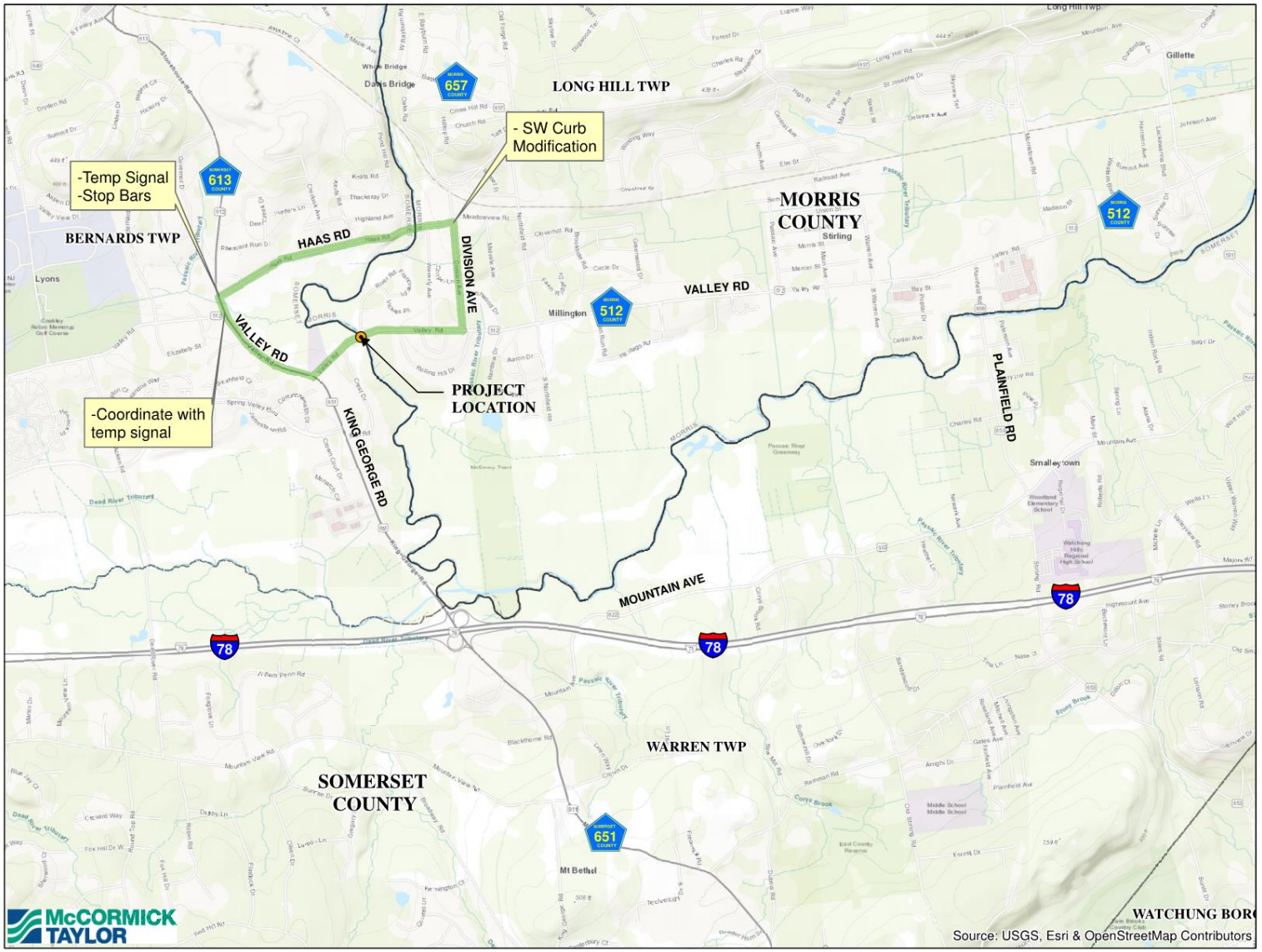
PROPOSED SINGLE SPAN ELEVATION



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

NJTPA
NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

Legend

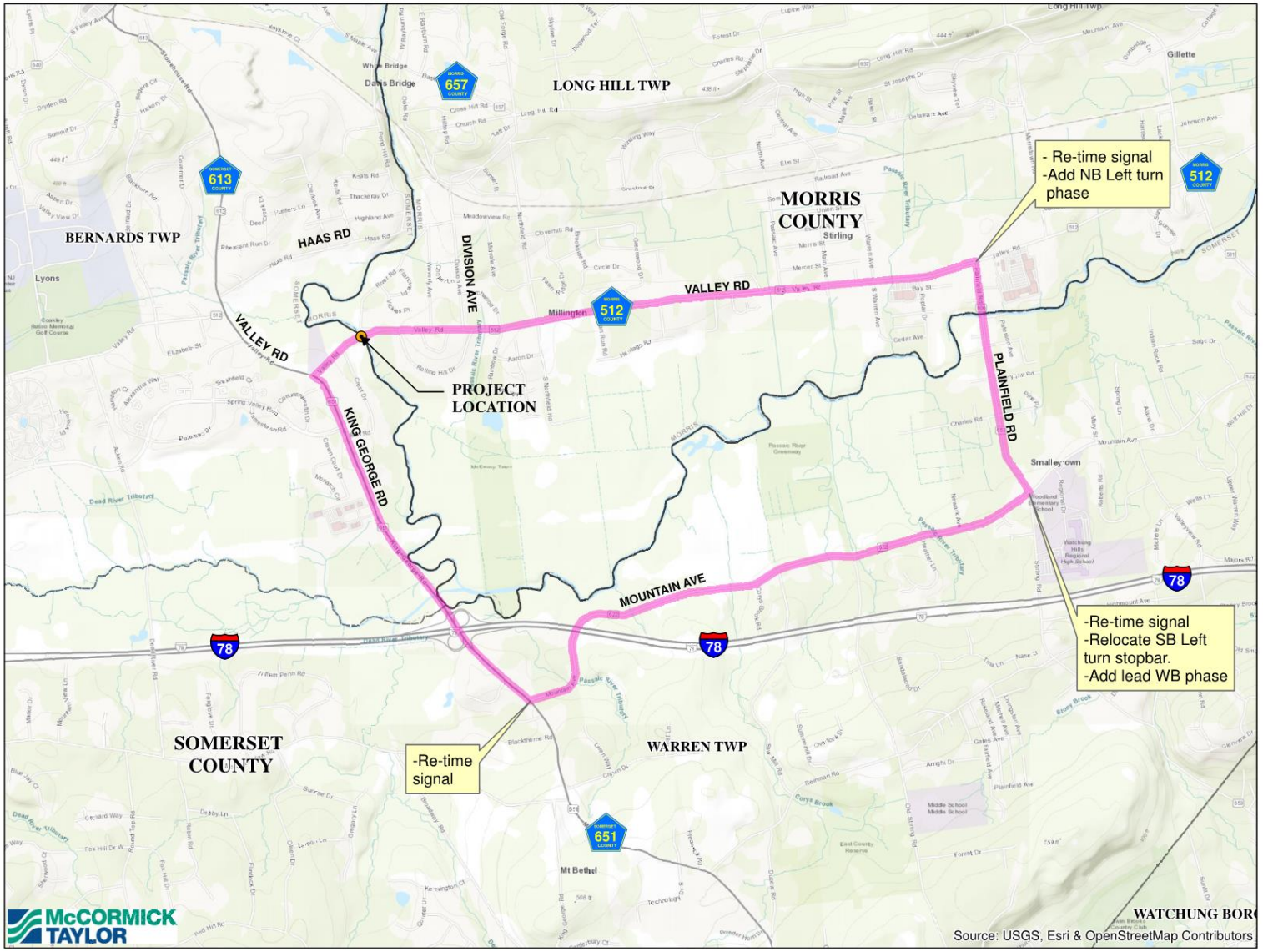
- Detour Route - Option 1
  Total Detour Length : 2.63 Miles
- Municipality Boundary
- County Boundary

N

0 2,000 Feet

McCORMICK TAYLOR

POTENTIAL DETOUR ROUTE #2



DETOUR MAP

Valley Road Bridge

Local Concept Development Study

Bernards & Long Hill Township
Somerset & Morris County
New Jersey

NJTPA
NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

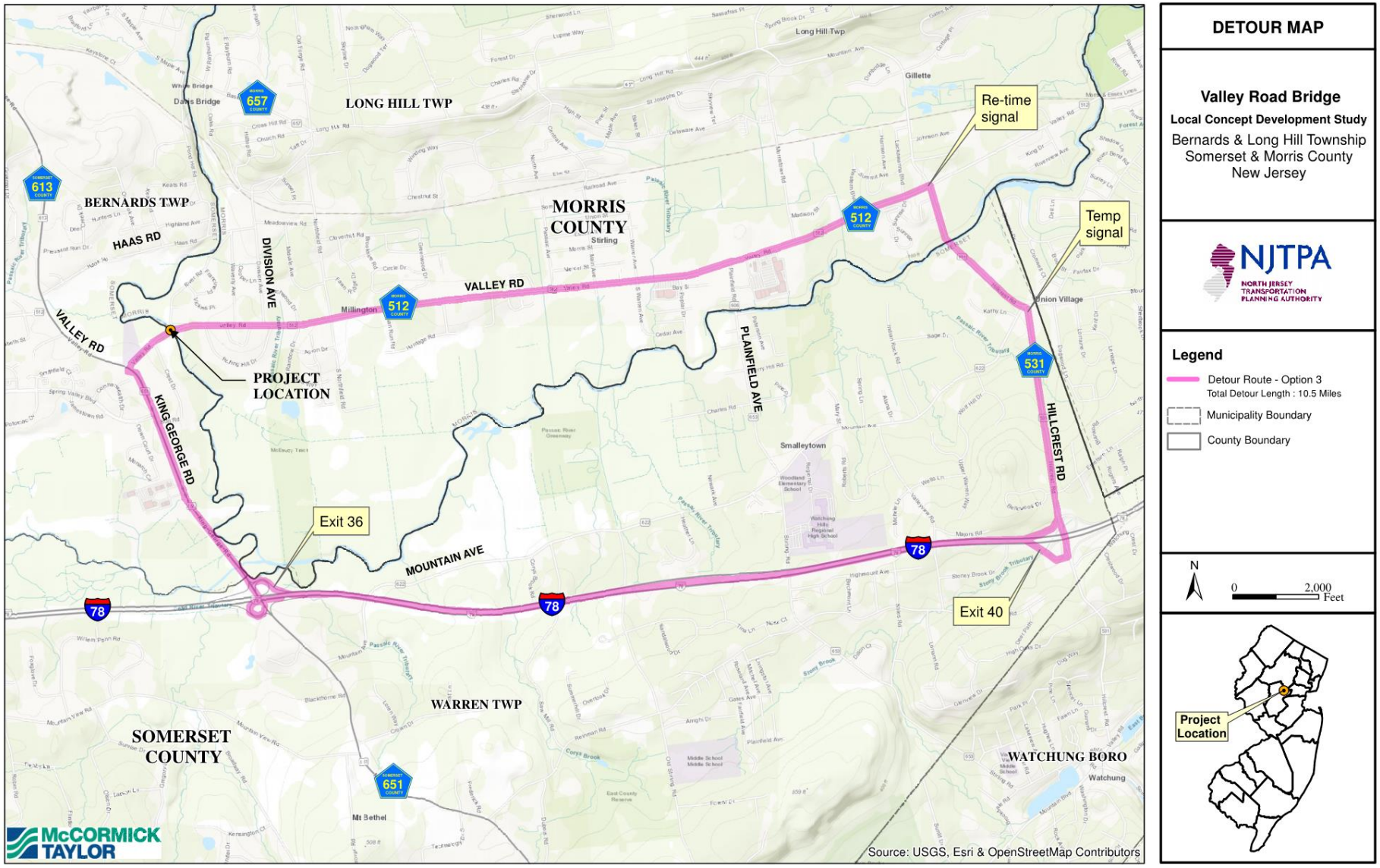
Legend

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

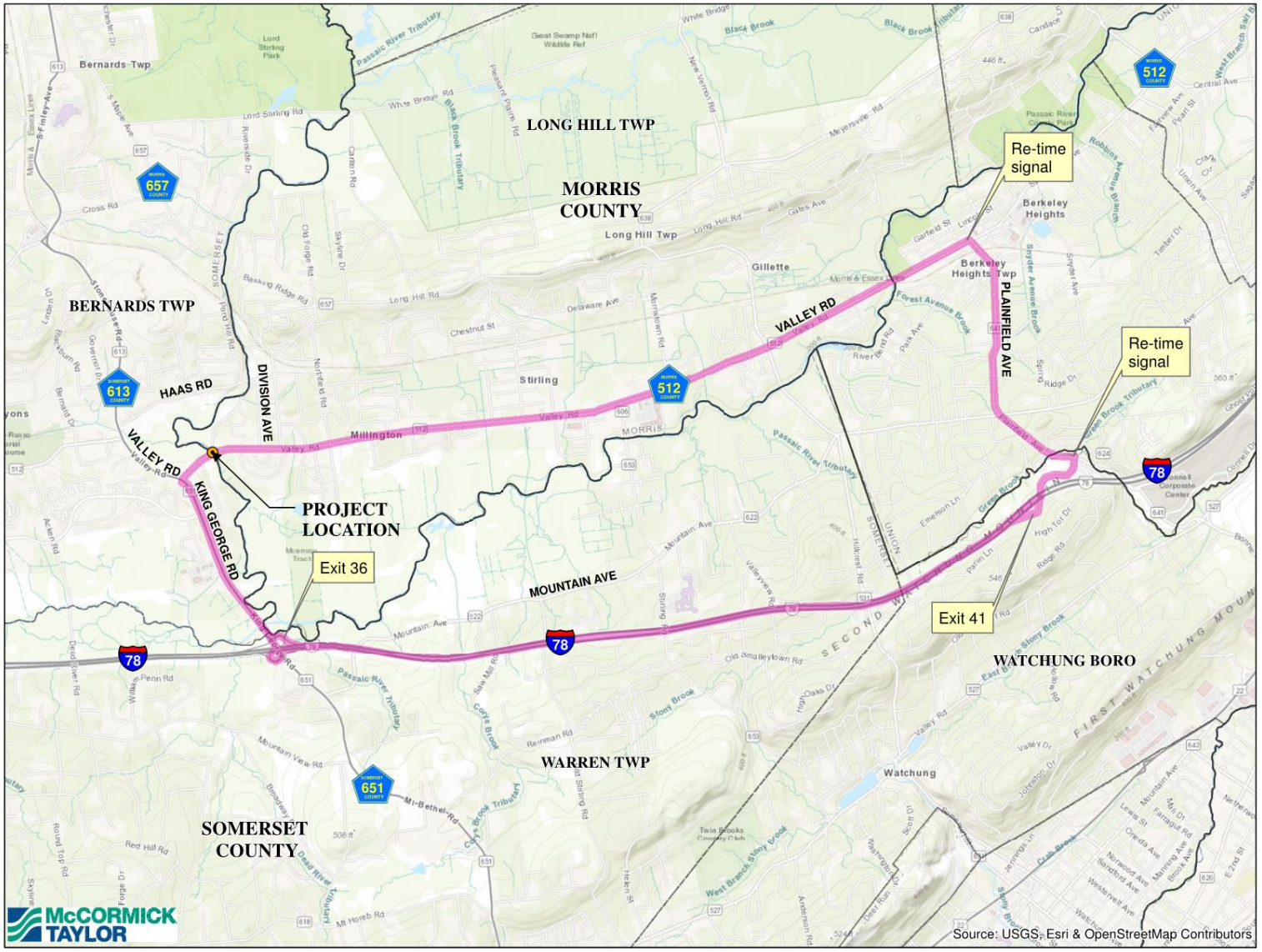
N

0 2,000 Feet

POTENTIAL DETOUR ROUTE #3



POTENTIAL DETOUR ROUTE #4



DETOUR MAP

Valley Road Bridge

Local Concept Development Study

Bernards & Long Hill Township
Somerset & Morris County
New Jersey

NJTPA
NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

Legend

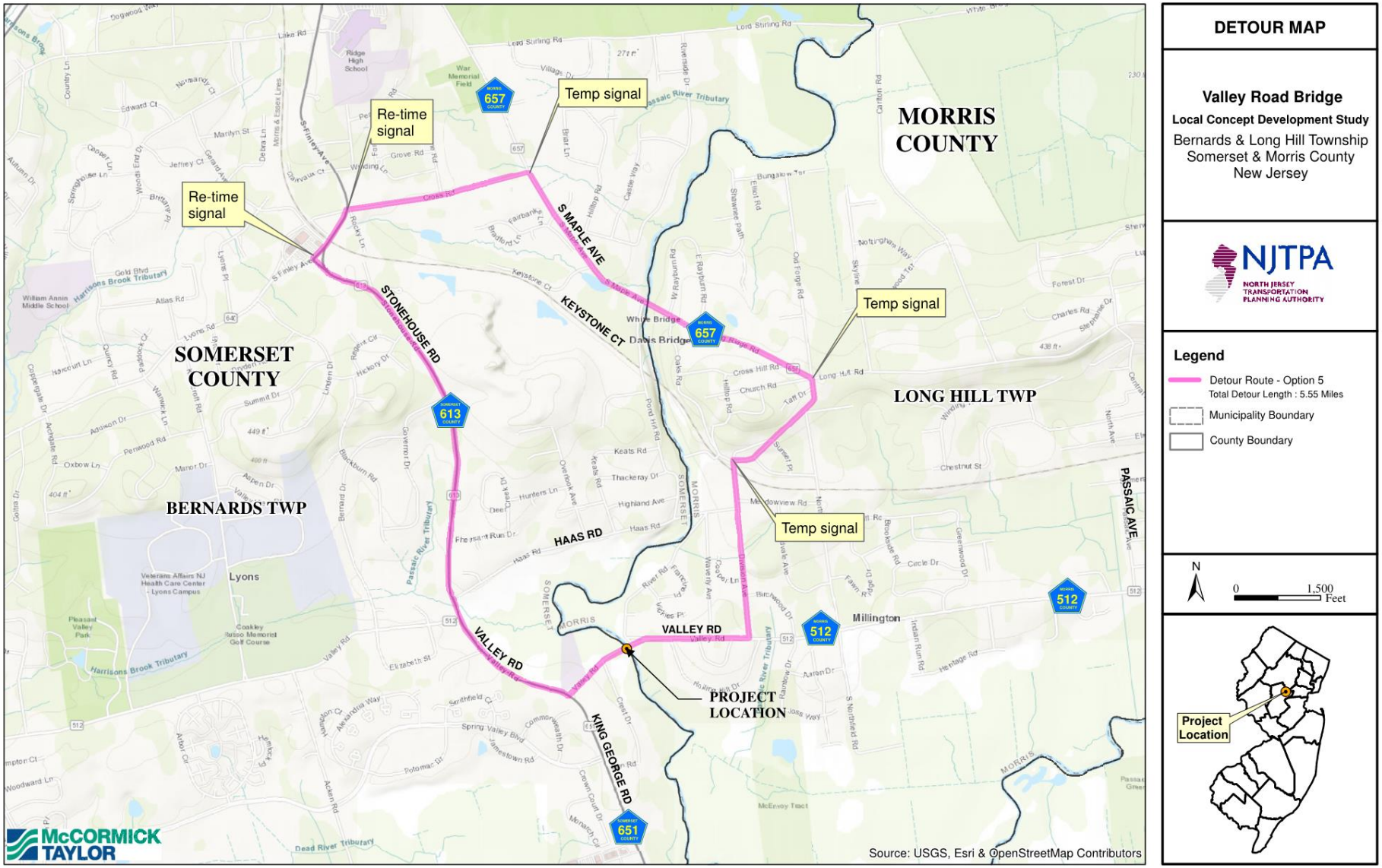
- Detour Route - Option 4
  Total Detour Length : 13.0 Miles
- Municipality Boundary
- County Boundary

N

0 3,000 Feet

McCORMICK TAYLOR

POTENTIAL DETOUR ROUTE #5



DETOUR MAP

Valley Road Bridge

Local Concept Development Study

Bernards & Long Hill Township
Somerset & Morris County
New Jersey

NJTPA
NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

Legend

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

N

0 1,500 Feet

DRAFT ALTERNATIVES MATRIX

ALTERNATIVES COMPARISON MATRIX

Local Concept Development Study for Valley Road Bridge over the Passaic River
Bernards Township, Somerset County and Long Hill Township, Morris County, NJ

Alternatives	No Build	Bridge Rehabilitation	Replace In-Kind	Concept 1 New Bridge on Existing Alignment, Full Detour				Concept 2 New Bridge on North Alignment, Full Detour				Concept 3 New Bridge on North Alignment with Staging				Concept4 New Bridge on South Alignment with Staging			
				Alternative 1A - Single Span	Alternative 1B - 2-Span	Alternative 1C - 2-Span	Alternative 1D - 2-Span	Alternative 1A - Single Span	Alternative 1B - 2-Span	Alternative 1C - 2-Span	Alternative 1D - 2-Span	Alternative 1A - Single Span	Alternative 1B - 2-Span	Alternative 1C - 2-Span	Alternative 1D - 2-Span	Alternative 1A - Single Span	Alternative 1B - 2-Span	Alternative 1C - 2-Span	Alternative 1D - 2-Span
Superstructure Type	Concrete encased multi-stringer	Concrete encased multi-stringer	Steel Multigirders	Steel Rolled Beams; W30x292	Steel Rolled Beam; W30x90	Prestressed Slab Beam; 36"x21"	Prestressed Spread Box Beam; 48"x33"	Steel Rolled Beams; W30x292	Steel Rolled Beam; W30x90	Prestressed Slab Beam; 36"x21"	Prestressed Spread Box Beam; 48"x33"	Steel Rolled Beams; W30x292	Steel Rolled Beam; W30x90	Prestressed Slab Beam; 36"x21"	Prestressed Spread Box Beam; 48"x33"	Steel Rolled Beams; W30x292	Steel Rolled Beam; W30x90	Prestressed Slab Beam; 36"x21"	Prestressed Spread Box Beam; 48"x33"
Criteria																			
Meets Project Purpose and Need	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Maintenance and Protection of Traffic																			
Number of lanes provided during construction	2	1	1	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2
Is Detour Required?/Length of detour	No	No	No	Yes, length varies from 2.6 to 13 miles	Yes, length varies from 2.6 to 13 miles	Yes, length varies from 2.6 to 13 miles	Yes, length varies from 2.6 to 13 miles	Yes, length varies from 2.6 to 13 miles	Yes, length varies from 2.6 to 13 miles	Yes, length varies from 2.6 to 13 miles	Yes, length varies from 2.6 to 13 miles	No	No	No	No	No	No	No	No
Roadway																			
Controlling Substandard Design Elements Remaining	9	4	3	3	3	3	3	2	2	2	2	2	2	2	2	3	3	3	3
Improves Lane Widths	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Improves Shoulder Widths	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Improves Sight Distance at River Road intersection	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Profile Raise at the Bridge	No	No	No	No	No	No	No												
Traffic Operations & Bicycle/Pedestrian																			
Accommodates design year traffic volumes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bicycle/Pedestrian compatibility provided with connectivity to approach roadways	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sidewalks provided	2	2	2	2	2	2	2	2	2	2	2	2 final / 1 during construction	2 final / 1 during construction	2 final / 1 during construction	2 final / 1 during construction	2 final / 1 during construction	2 final / 1 during construction	2 final / 1 during construction	2 final / 1 during construction
Construction Duration																			
Duration (Month)	0	3	12	12	14	14	14	12	14	14	14	24	28	28	28	24	28	28	28
Right of Way Impacts																			
Required ROW (Acres)	0	0																	
Number of Temporary construction easements	0	0																	
Number of partial property acquistions	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2	2
Number of entire property acquistions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Access																			
# of Access Impacts to adjacent properties during construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# of Permanent Access Impacts to adjacent properties	0	0	0	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1
Structural Design																			
Accelerated Bridge Construction Methodology	N/A	N/A	N/A	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Bridge opening meets design year storm (H&H)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Seismic Design addressed	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bridge Approach Safety Upgraded	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
75 yr. Bridge Life Cycle	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wildlife Passage Compatible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Environmental Impacts																			
Passaic River County Park - Green Acres & Section 4(f)	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes
Total Wetlands Impacts (acres)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Threatened and Endangered Species Habitat	No	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Floodplain (acres)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Riparian Zone (acres)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historic Resources (# of sites)	No	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Hazardous Waste/Contaminated Sites	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Seasonal restrictions	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Utilities																			
Anticipated relocations	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cost																			
Construction Cost	$0	$1,175,000	$2,350,000	$4,160,000	$3,440,000	$3,707,000	$3,307,000	$4,230,000	$3,510,000	$3,777,000	$3,377,000	$5,405,000	$4,606,000	$4,360,000	$3,960,000	$5,815,000	$5,016,000	$5,068,000	$4,668,000
Estimated Utility Relocation Cost																			
Estimated Right of Way Cost																			
Life Cycle Cost (Present Value)																			
Detour Cost																			
Total Project Cost																			

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

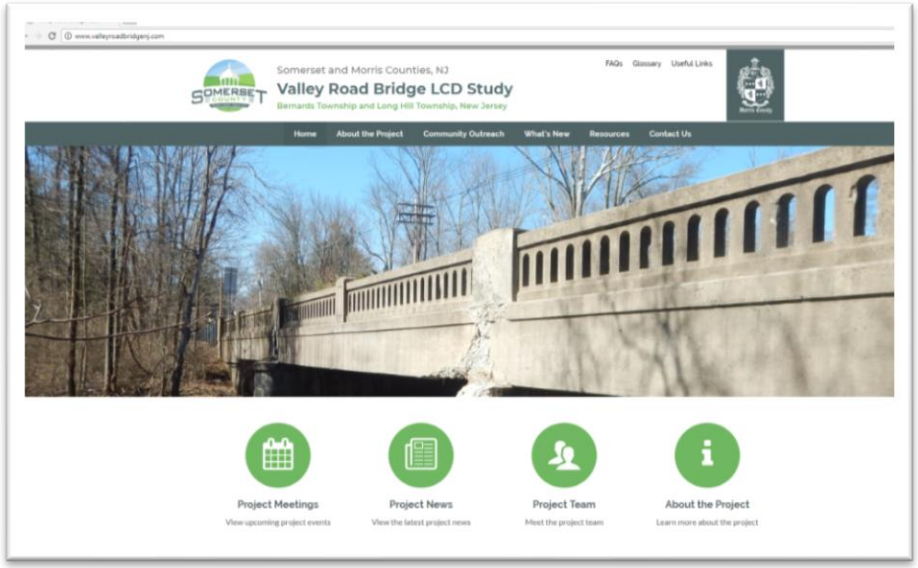
Selection and Presentation of Preliminary Preferred Alternative

- 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



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THANK YOU

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