

# **Rehabilitation of Governors Bridge Road Bridge Alternates**

## **Alternate 1 - No-Build alternative**

Estimated Construction Cost (\$200,000)

### ***Advantages:***

- Low cost.
- Existing historic structure would not be impacted.
- No impacts to the surrounding parks, historic or environmental site features.
- No impacts to the Patuxent River.
- Existing structure could be used by pedestrians, bikers, fisherman, and other non-vehicle based users with minimum repair of the structure.
- No additional right-of-way required.
- No utility impacts.

### ***Disadvantages:***

- Bridge will remain structurally deficient, will not be opened to vehicular traffic.
- Roadway remains closed and detour route stays in effect.
- The Prince George's County approach would still be subject to frequent closings due to flooding.

## **Alternate 2 - Rehabilitation of the existing structure**

Estimated Construction Cost (\$2,200,000)

### ***Advantages:***

- Structure retains its historic integrity.
- Least expensive "build" alternate.
- No additional right-of-way is required.
- No impacts to the Patuxent River.
- No impacts to the surrounding parks, historic or environmental site features.
- No utility impacts.

### ***Disadvantages:***

- Does not improve the horizontal or vertical alignment of the roadway.
- The Prince George's County approach would still be subject to frequent closings due to flooding.
- Structure would be posted for load restrictions and limited to lightweight vehicles.
- Continual maintenance of bridge structure due to continuing deterioration.

### **Alternate 3 - (Existing Alignment – 1 Lane Bridge)**

Estimated Construction Cost (\$6,000,000)

#### ***Advantages:***

- No load restrictions on the bridge for lightweight or heavyweight vehicles.
- Portions of existing bridge would be retained for historical context.
- Improved horizontal & vertical sight distance on the Prince George's County approach.
- Reduced frequency of flooding during minimal storm event.
- Least expensive new bridge alternative.
- Minimal impacts to the Patuxent River compared to Alternates 4, 5 and 6.
- Less right-of-way impacts compared to Alternates 4,5 and 6 due to improved horizontal & vertical sight distance on west approach road and two-lane bridge structure.

#### ***Disadvantages:***

- Impacts to parks, historic, and environmental site features due to Prince George's County approach roadway horizontal and vertical sight distance improvements.
- Right-of-way is required to improve the roadway alignment.
- Aerial utility pole impacts adding time and cost.
- Prince George's County approach roadway would flood during higher storm events.

### **Alternate 4 - (Existing Alignment – 2 Lane Bridge)**

Estimated Construction Cost (\$6,850,000)

#### ***Advantages:***

- Installation of 22-foot wide two-lane bridge would replace one-lane bridge and would allow two lanes of traffic.
- No load restrictions on the bridge for lightweight or heavyweight vehicles.
- Improved horizontal & vertical sight distance on Prince George's County approach.
- Reduced frequency of flooding during minimal storm event.

#### ***Disadvantages:***

- Modification of the bridge to accommodate two traffic lanes would modify the historic context of the existing historic structure.
- Increased impacts to the Patuxent River compared to Alternate 3 due to roadway horizontal and vertical sight distance improvements and two-lane bridge structure.
- Increased right-of-way impacts compared to Alternate 3 due to improved horizontal & vertical sight distance on west approach road and two-lane bridge structure.
- Aerial utility pole impacts adding time and cost.
- Prince George's County approach roadway would flood during higher storm events.

### **Alternate 5 -(Shifted Alignment – 1 Lane Bridge)**

Estimated Construction Cost (\$6,900,000)

#### ***Advantages:***

- No load restrictions on the bridge for lightweight or heavyweight vehicles.
- Existing historic bridge would remain in place for historical context.
- Improved horizontal & vertical sight distance on Prince George's County's and Anne Arundel County's approach roadways.
- Reduced frequency of flooding during minimal storm event.

#### ***Disadvantages:***

- Increased impacts to parks, historic and environmental site features compared to Alternatives 3 & 4 due to improved horizontal & vertical sight distance on Prince George's County and Anne Arundel County approach roadways on the shifted alignment.
- Additional impacts to the Patuxent River due to construction of new bridge abutments for the shifted alignment.
- Prince George's County approach roadway would flood during higher storm events.
- Increased right-of-way impacts compared to Alternate 3 & 4 due to shifted alignments and roadway geometric improvements.
- Aerial utility pole impacts adding time and cost.
- Higher cost than Alternate 3.
- Permitting would be more difficult than Alternates 3 & 4.

### **Alternate 6 -(Shifted Alignment – 2 Lane Bridge)**

Estimated Construction Cost (\$7,700,000)

#### ***Advantages:***

- New 22-foot clear roadway width two-lane bridge to the south of existing bridge on shifted road alignment to avoid impact on exiting historic bridge.
- No load restrictions on the bridge for lightweight or heavyweight vehicles.
- Existing historic bridge would remain in place for historical context.
- Improved horizontal & vertical sight distance on Prince George's County's and Anne Arundel County's approach roadways.
- Reduced frequency of flooding during minimal storm event.

#### ***Disadvantages:***

- Increased impacts to parks, historic and environmental site features compared to Alternates 3, 4 & 5 due to improved horizontal & vertical sight distance on Prince George's and Anne Arundel County approach roadways on shifted alignment.
- Additional impacts to the Patuxent River due to construction of new bridge abutments for the shifted alignment.
- Prince George's County approach roadway would flood during higher storm events.
- Increased right-of-way impacts compared to Alternatives 3, 4 & 5 due to shifted alignments and roadway geometric improvements.
- Aerial utility pole impacts adding time and cost.
- Highest cost of all alternates.
- Permitting would be more difficult than Alternates 3, 4 & 5.