

TYLin

Periwinkle Bridge Replacement

01/13/2026



Farzin Zafaranian, PE, PMP

Project Manager, Structures EOR

Experience

- 29 years of experience
- Engineer of Record, Responsible-in-Charge, Project Manager for Various Types of Bridge Projects
- Certified Project Manager (PMP) and FDOT MOT certified

Expertise

- Design of New and Rehabilitation of Major Bridges, and Widenings
- Conceptual Bridge Designs, Bridge Alternative Reports and BDRs

Major Projects

- Sunbreak Bridge Replacement for FPL, Project Manager
- FDOT District 1, Burnt Store Road Capacity Improvement, Engineer of Record
- FDOT District 2, SR23 Capacity Improvement, Engineer of Record
- RSTA Godwin Bridge Replacement for SFWMD, Engineer of Record



29

years of experience

Boon Chong, PE,

Structures Technical Advisor

Experience

- 33 years of experience
- Engineer of Record, Responsible-in-Charge, Project Manager for Various Types of Bridge Projects

Expertise

- Lead Design and EOR of more than 100 bridges with spans ranging up to 280 feet, the design of more than 50 retaining walls, the production of conceptual reports for an additional 40 bridges

Minor Projects

- SR 826 / SR 836 Interchange Replacement
- SR 292 Bayou Chico Bridge Replacement
- Flagler Memorial Bridge SR A1A from Olive Avenue to Coconut Row Bridge Replacement
- Summerlin Road and Gladiolus Drive Interchange Bridges

Minor Projects

- Periwinkle Way over Shell Harbor Canal (Unknown Foundation)
- Sarasota County Multi Bridges Scour Countermeasures
- US 98 over Kissimmee River Bridge Stability
- SR29 over Chokoloskee Bay Bridge Replacement



33

years of experience

Michael Harter, PE

Roadway Engineer of Record

Experience

- 21 Years of Experience
- PE Licenses: Florida, Georgia, Alabama, Mississippi
- Engineer of Record, Project Manager, and Construction Engineer for Various Types of Projects

Major Projects

- **Interstate 110 Drawbridge, Phase I, D'Iberville/Biloxi**
 - \$4.1 million bridge rehabilitation project; Structural Renovation of the I-110 Bascule Span, Steel Deck Replacement & Counterweight Redistribution.
- **I-10/I-110 Interchange, Phase I, D'Iberville**
 - \$35 million Interchange Project. Scope includes the demolition/reconstruction of the D'Iberville Blvd. Bridge, construction of interchange ramps and connector roads at D'Iberville Blvd, I-110 and Lamey Bridge Rd., and the implementation of the state's first Diverging Diamond Interchange (DDI), and Soil Nail Wall.
- **I-10/I-110 Interchange, Phase II, D'Iberville**
 - \$13 million Interchange Project. Scope includes the demolition/reconstruction of the Big Ridge Road Bridge, construction of interchange ramps at Big Ridge Road, and connector roads to I-10.
- **Hwy 611 Widening, Pascagoula**
 - \$14 million Widening Project. Scope includes widening Hwy 611 from two lanes to five, including a bridge that spans over an intricate system of gas pipelines belonging to the Chevron Refinery adjacent to the project.



21

years of experience

Existing Bridge Deficiencies

1. Deemed functionally obsolete by FDOT for lane, sidewalk, SUP widths
2. Hurricane Ian temporary repairs have design life of 10 years
3. Seawall narrows at the bridge
4. Stormwater funneling at bridge – increases velocity
5. Narrow navigation span
6. Shallow seawall embedment
7. Substandard north sidewalk
8. Substandard sight distance

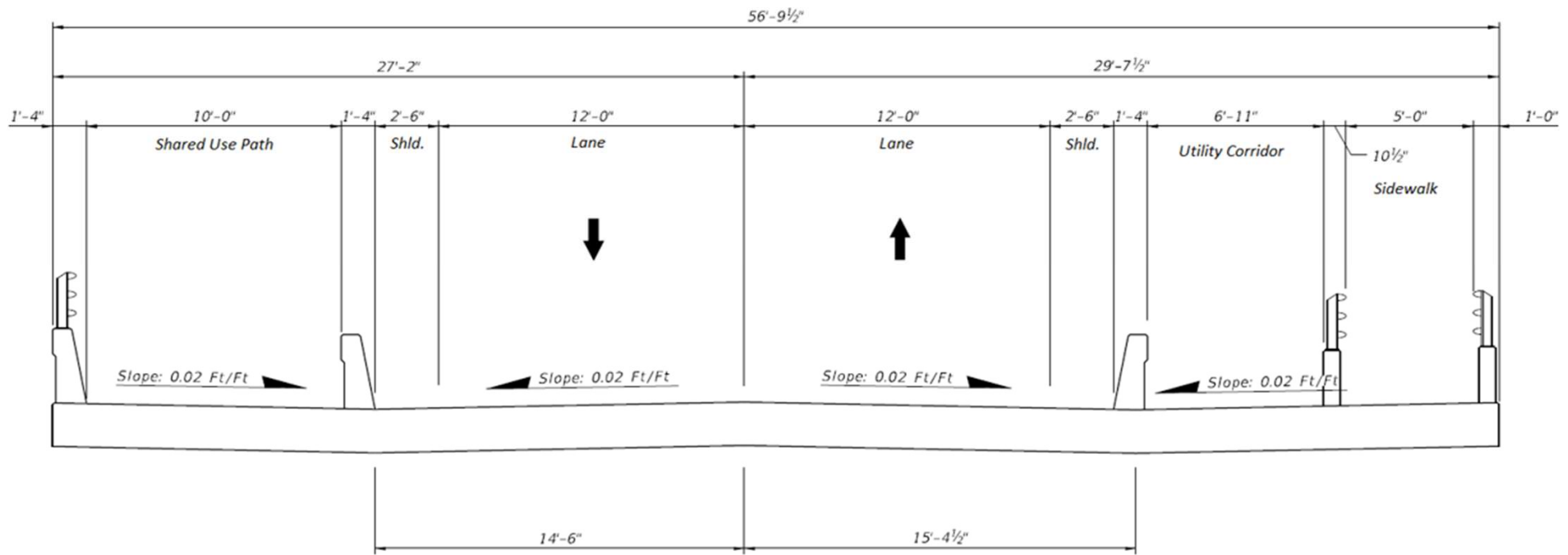


Hurricane Ian Damage

Proposed Improvements

Proposed Improvements- Increased Width

- 12'-0" lane width (existing 11'-0")
- 10'-0" Shared Use Path (existing 8'-0")
- 5'-0" north sidewalk (existing 4'-0")
- Utility Corridor



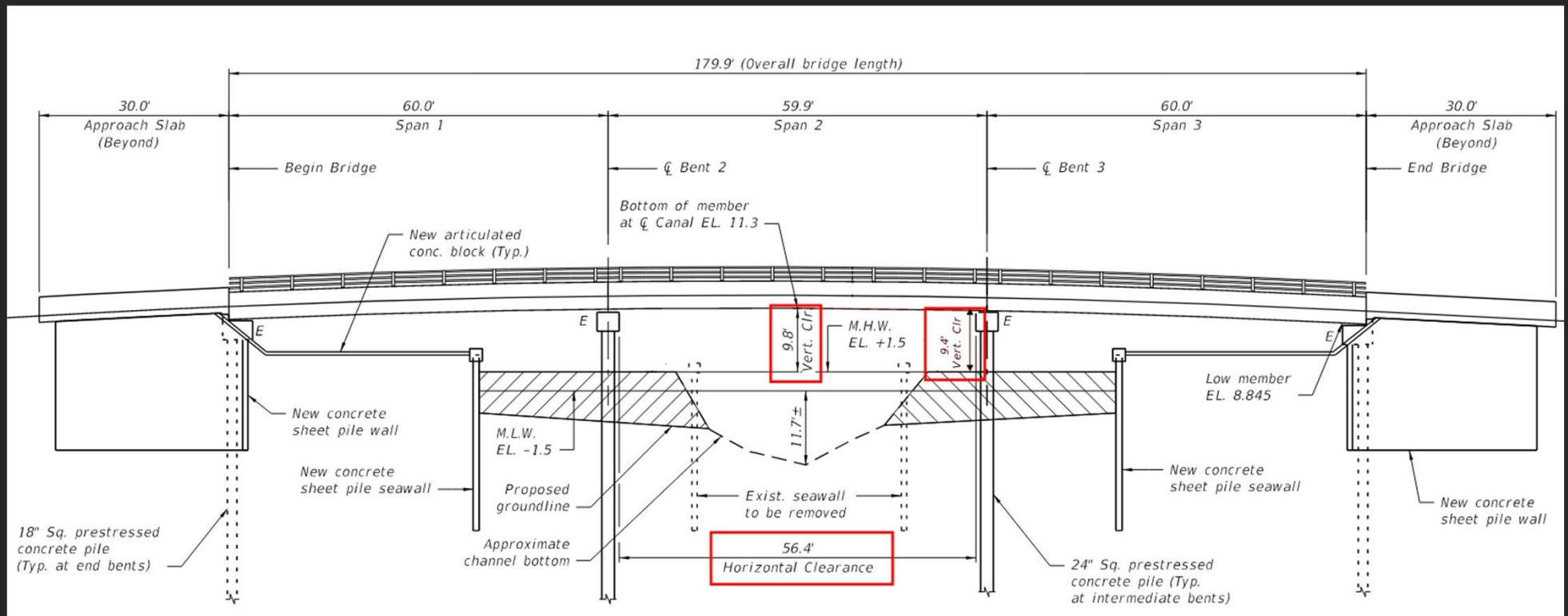
Proposed Improvements- Improve Profile

- Reduce Speed from 35 MPH to 25 MPH to Improve Stopping Distance due to increase in vertical profile



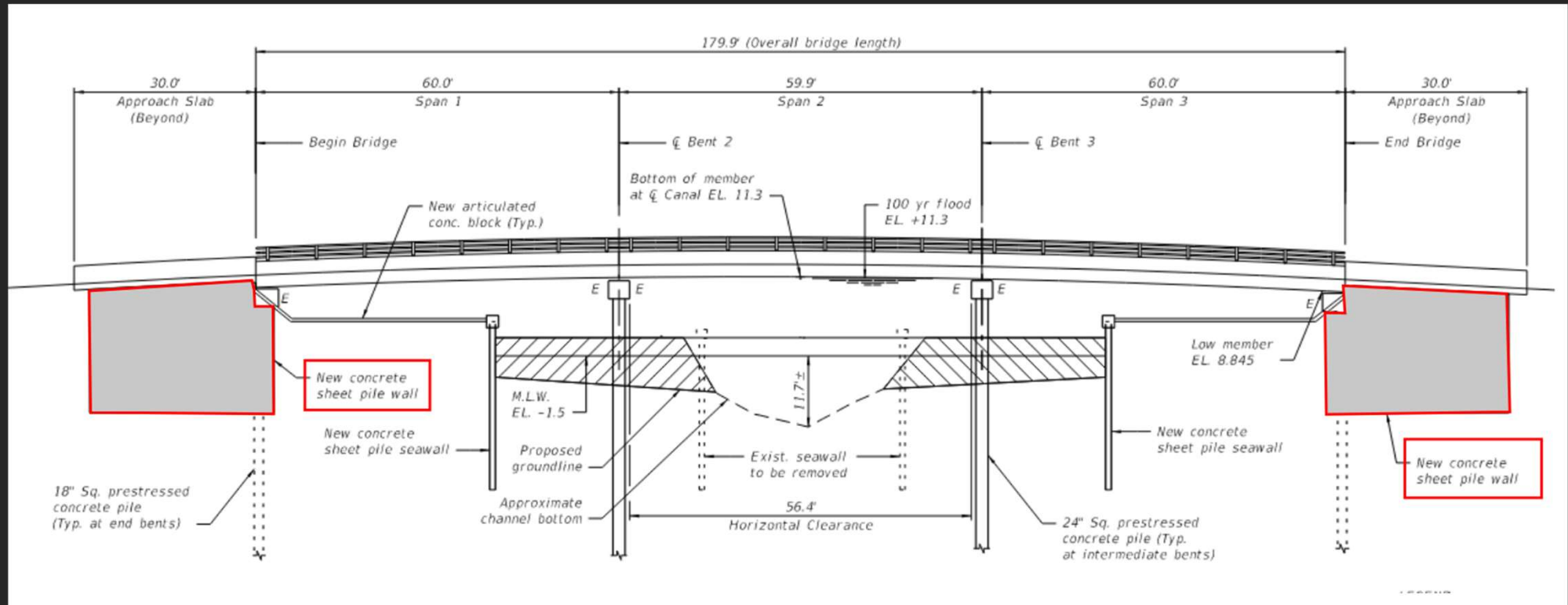
Proposed Improvements- Improve Channel Clearance

- Horizontal Clearance 56.4 feet (existing 28.5 feet)
- Vertical Clearance:
 - Minimum 9.4 feet (existing 8.4 feet)
 - Maximum 9.8 feet (existing 8.8 feet)



Proposed Improvements- Improve Resilience

- Deeper Seawall Embedment improves scour protection
- Seawall aligns with existing neighborhood seawall
- Wider clearance = lower velocity for scour reduction
- Bridge ends protected by addition of a concrete sheet pile wall

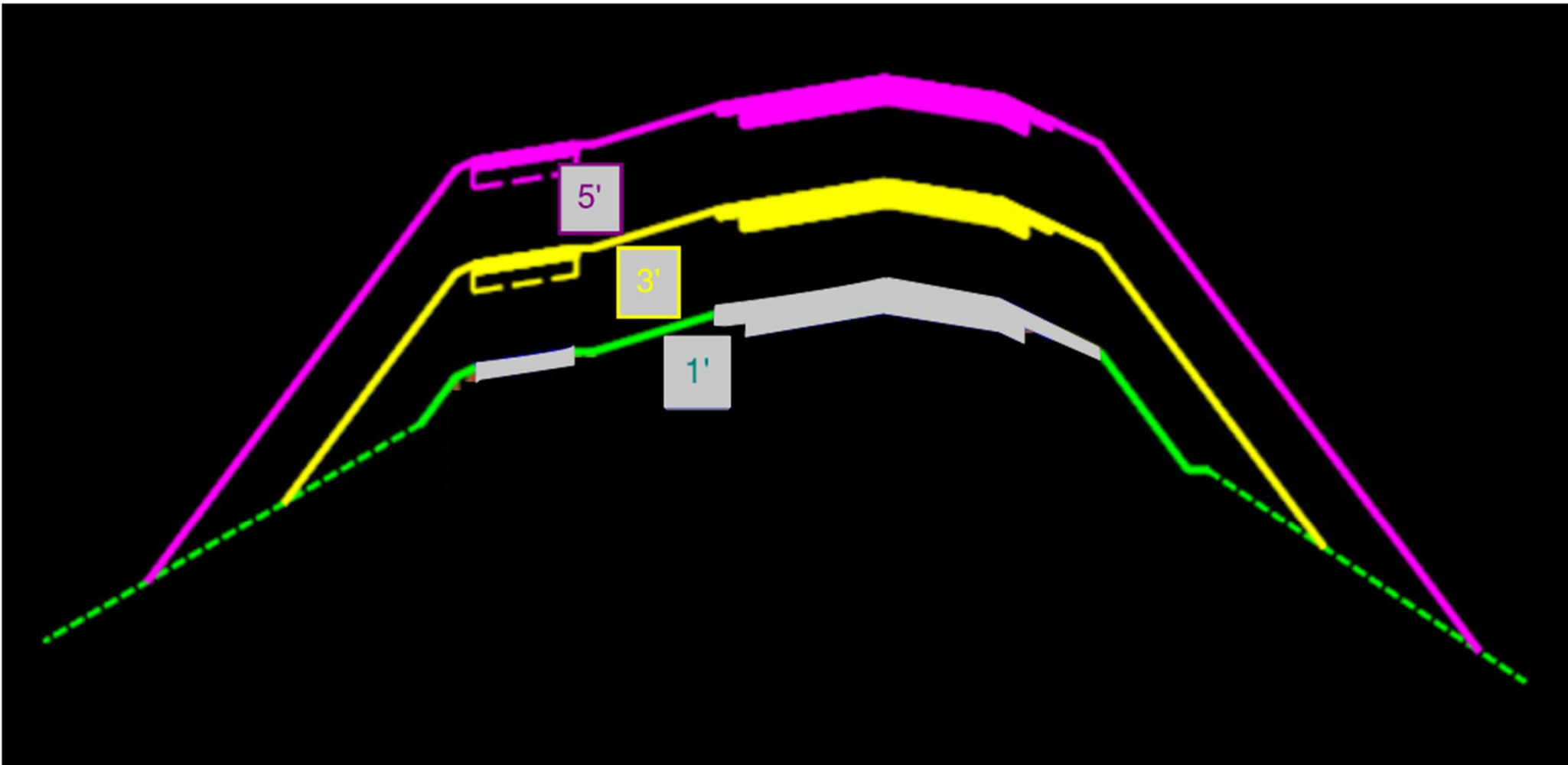


ROADWAY TYPICAL SECTIONS

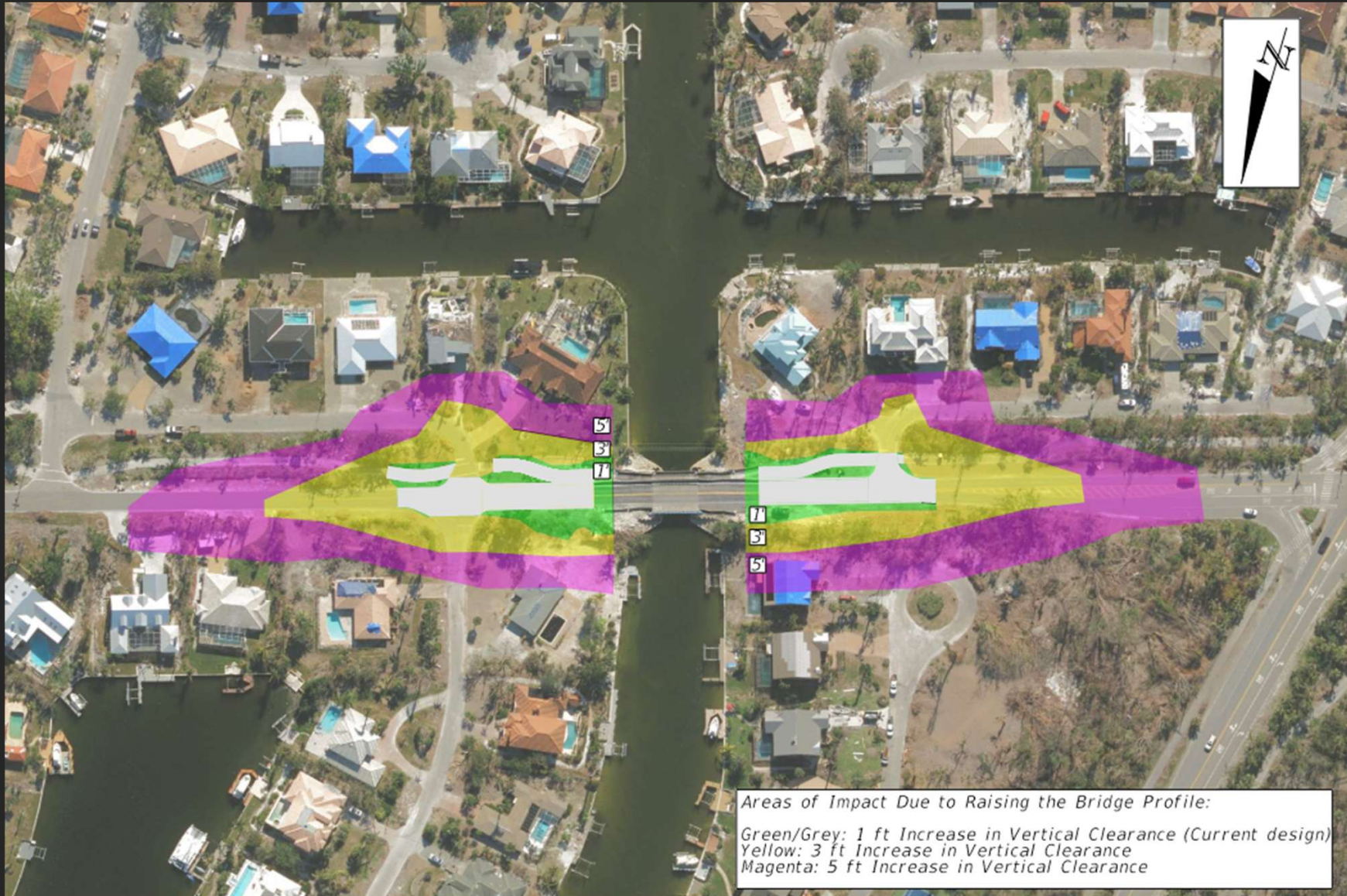
Grey/Green: 1 ft increase in vertical clearance (current design)

Yellow: 3 ft increase in vertical clearance

Magenta: 5 ft increase in vertical clearance

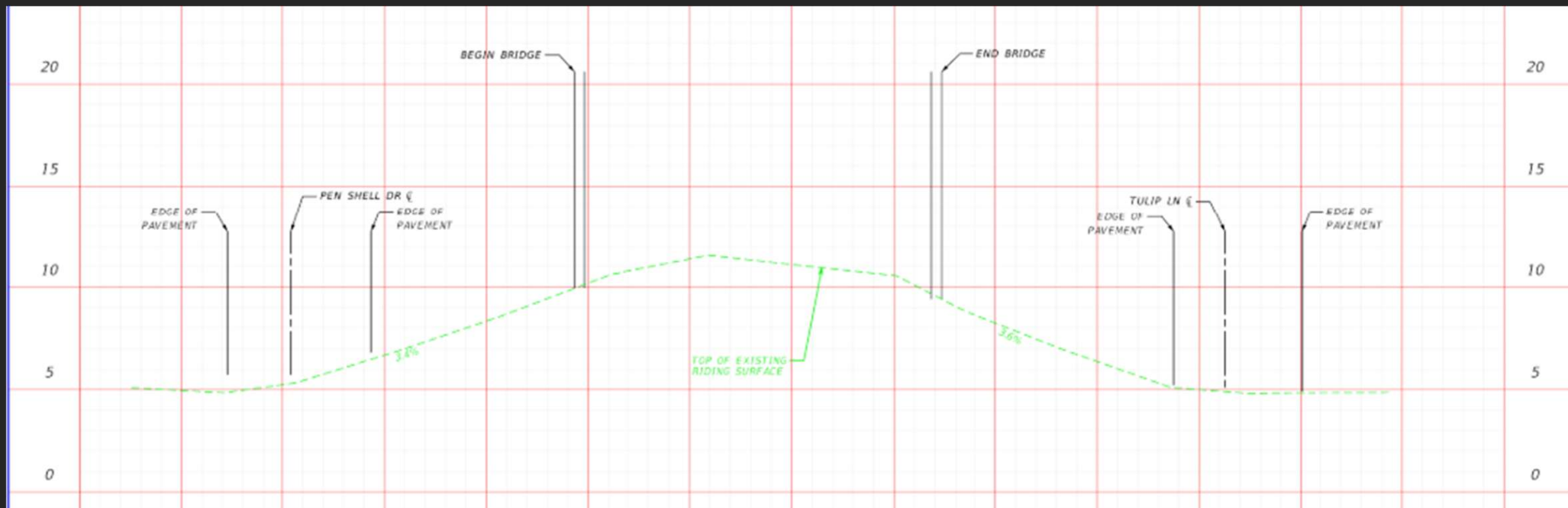


Estimated areas of impact (without retaining walls) Bridge Structure Raised 1 ft, 3ft and 5 ft



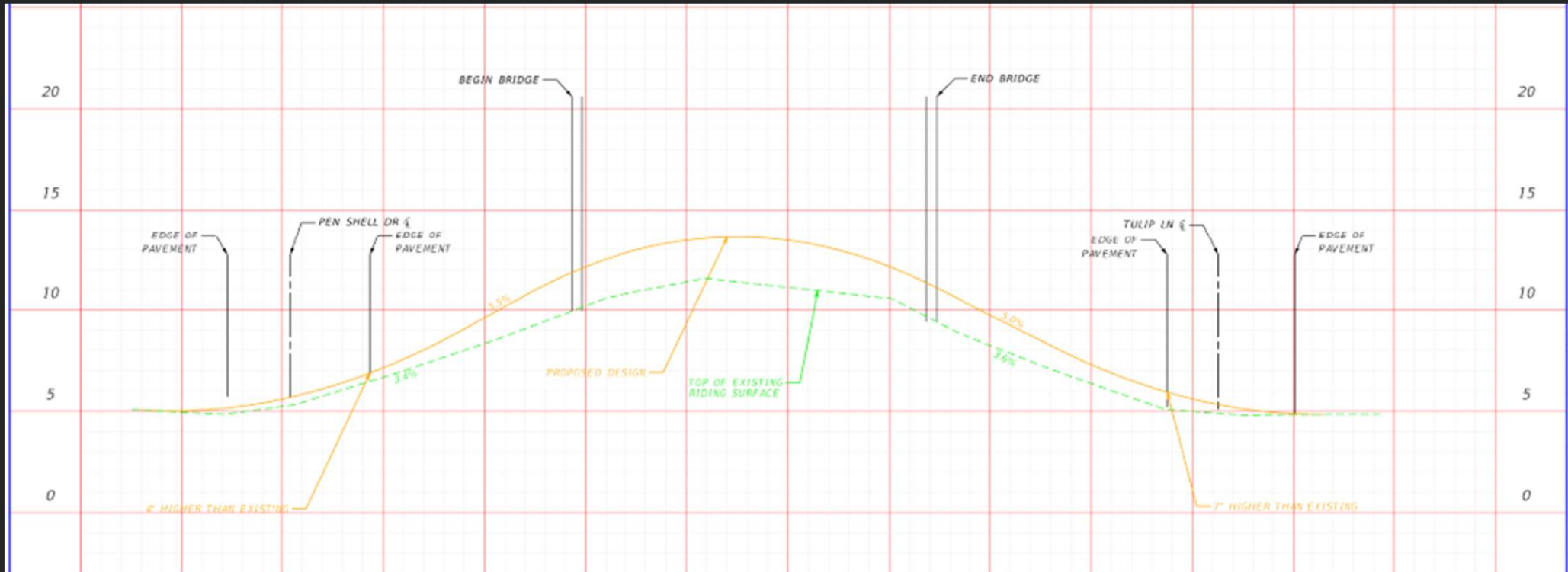
Roadway Profile

Existing Bridge



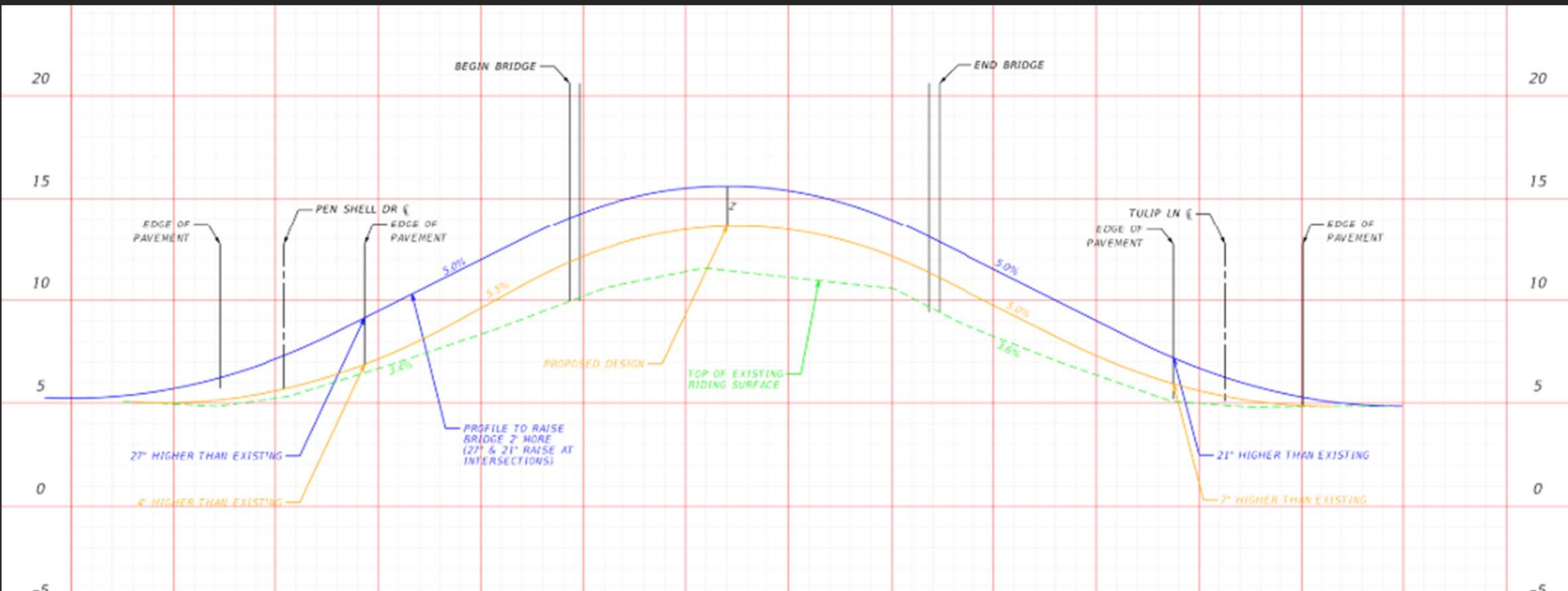
Roadway Profile

Existing and Proposed Bridges



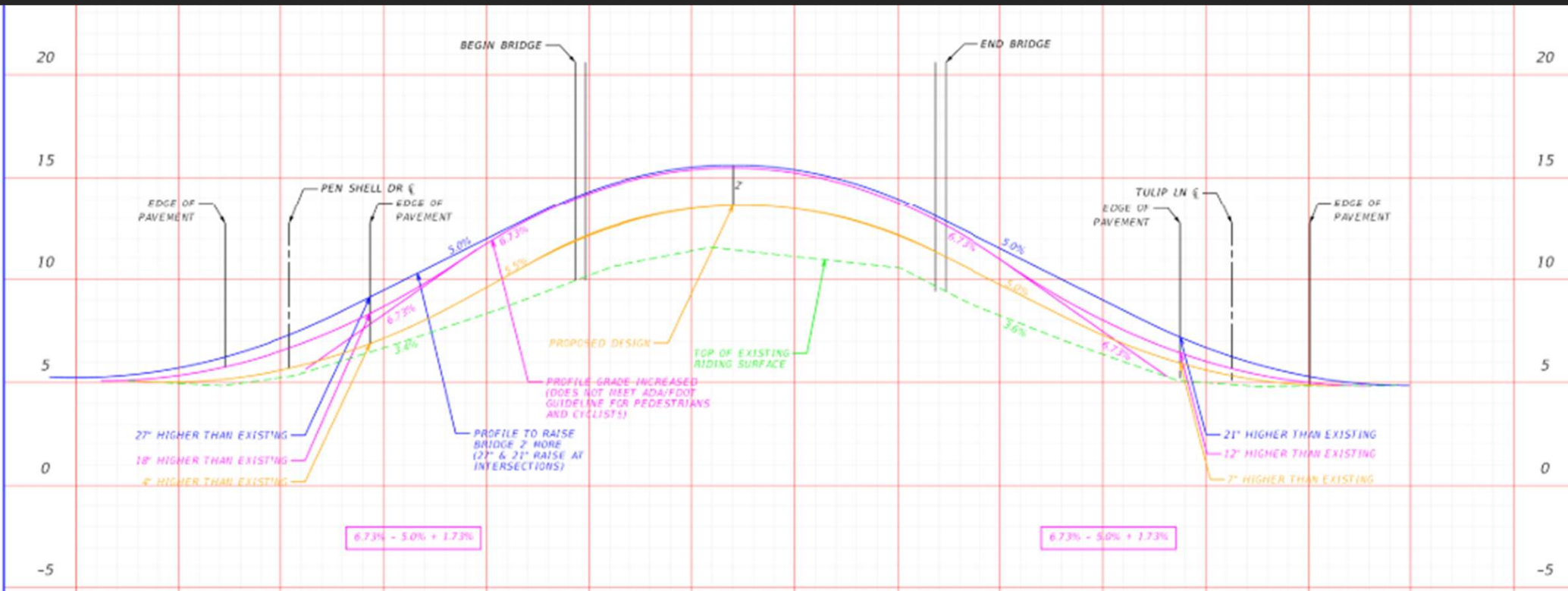
Roadway Profile

Existing and Proposed Bridges
(current design + Alternate design 3 ft above existing bridge)



Roadway Profile

Existing and Proposed Bridges
(current design + Alternate design 3 ft above existing bridge)



Periwinkle Bridge Replacement Cost Comparison

Scenario 1: Current Design - Raise Bridge 1 Foot Above Existing

| | |
|---|--------------------|
| Construction Cost Including MOT, MOB, CEI | \$8,000,000 |
| Services | |
| Design Services | \$750,000 |
| Total cost | \$8,750,000 |

Scenario 2: Raise Bridge 3 Feet Above Existing

| Additional Quantities and Cost Beyond Scenario 1 | | | | |
|---|----------|------|------------|---------------------|
| | Quantity | Unit | Unit Price | Total |
| Concrete Sheet Pile | 210 | SF | \$115 | \$24,150 |
| Retaining Wall | 410 | CY | \$1,000 | \$410,000 |
| Pile 18" | 36 | LF | \$190 | \$6,840 |
| Pile 24" | 36 | LF | \$250 | \$9,000 |
| Drainage Structure Inlet | 14 | EA | \$15,000 | \$210,000 |
| Concrete Barrier Wall with Junction Slab | 1,400 | LF | \$415 | \$581,000 |
| Additional Asphalt | 290 | TN | \$210 | \$60,900 |
| Base | 1,800 | SY | \$40 | \$72,000 |
| Backfill | 3,000 | CY | \$8.0 | \$24,000 |
| Private Property Restoration | 1 | LS | \$100,000 | \$100,000 |
| Subtotal | | | | \$1,498,000 |
| Construction Contingency | 1 | LS | 30% | \$449,000 |
| Subtotal | | | | \$1,947,000 |
| | | | | |
| Design Revisions (Roadway, Stormwater, Utility Relocation, Bridge Structure, Survey, Geotech) | 1 | LS | \$520,000 | \$520,000 |
| Easements/ROW acquisition | 1 | LS | \$100,000 | \$100,000 |
| Additional CEI | 1 | LS | \$250,000 | \$250,000 |
| Inflation Due to Project Delay | 1 | LS | 8% | \$750,000 |
| Additional MOT | 1 | LS | 15% | \$292,000 |
| Additional Mobilization | 1 | LS | 10% | \$195,000 |
| Total Additional Cost | | | | \$4,054,000 |
| Total Cost for Scenario 2: Raise Bridge 3 Feet Above Existing | | | | \$12,804,000 |

Previous Construction Schedule

(Not accounting for the current two month pause since November 2025)

- Had Anticipated Contract Award April 2026
- Material Acquisition – 4 months – August 2026
- Initial mobilization – 1 month – September 2026
- Phase 1 – 9 months – June 2027
- Phase 2 – 9 months – March 2028
- Phase 3 – 9 months – December 2028
- Phase 4 – 2 months – February 2029

Thank you

