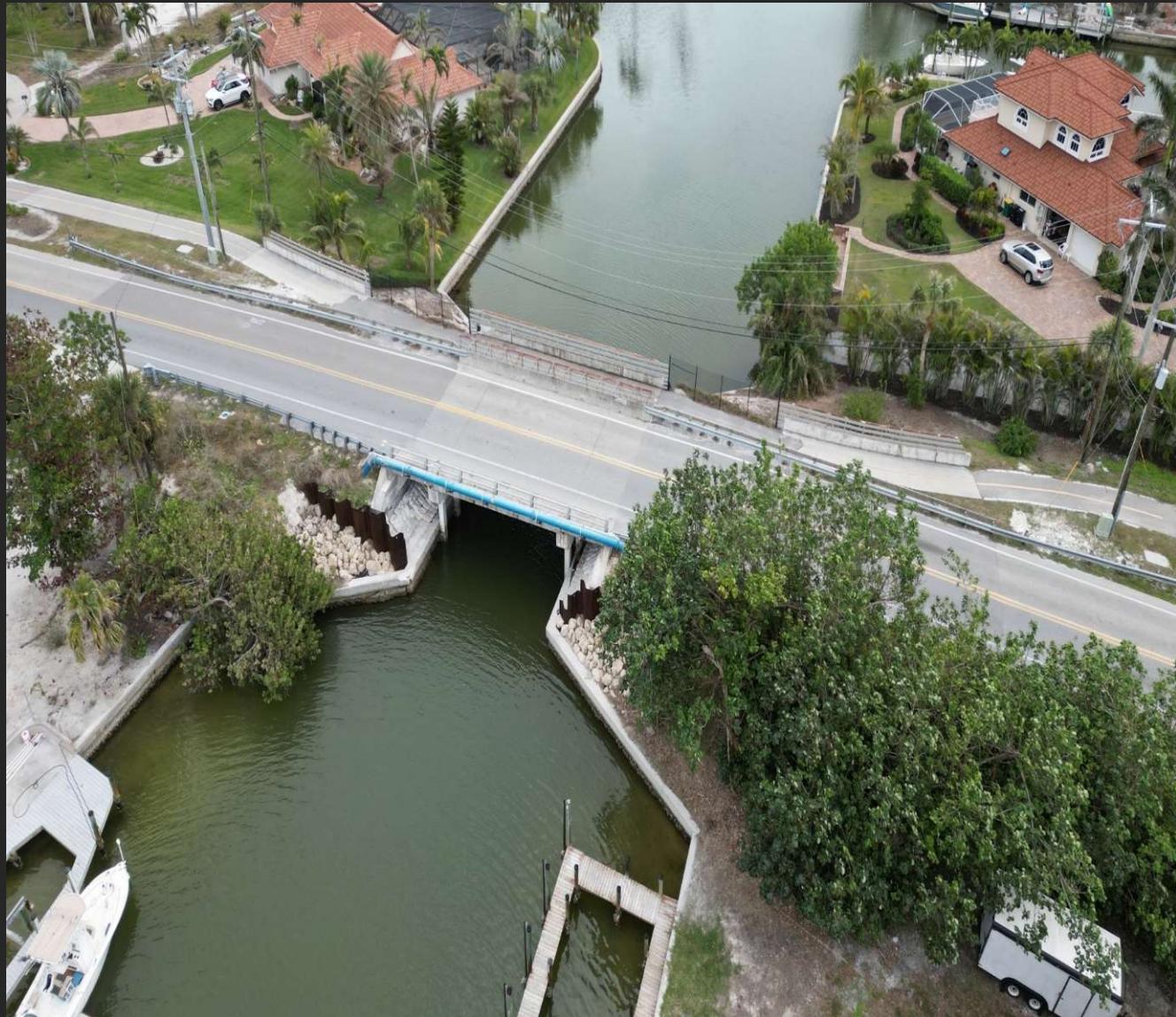


TYLin

# 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



29

years of experience

## 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

# 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

33

years of experience

### 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

# 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

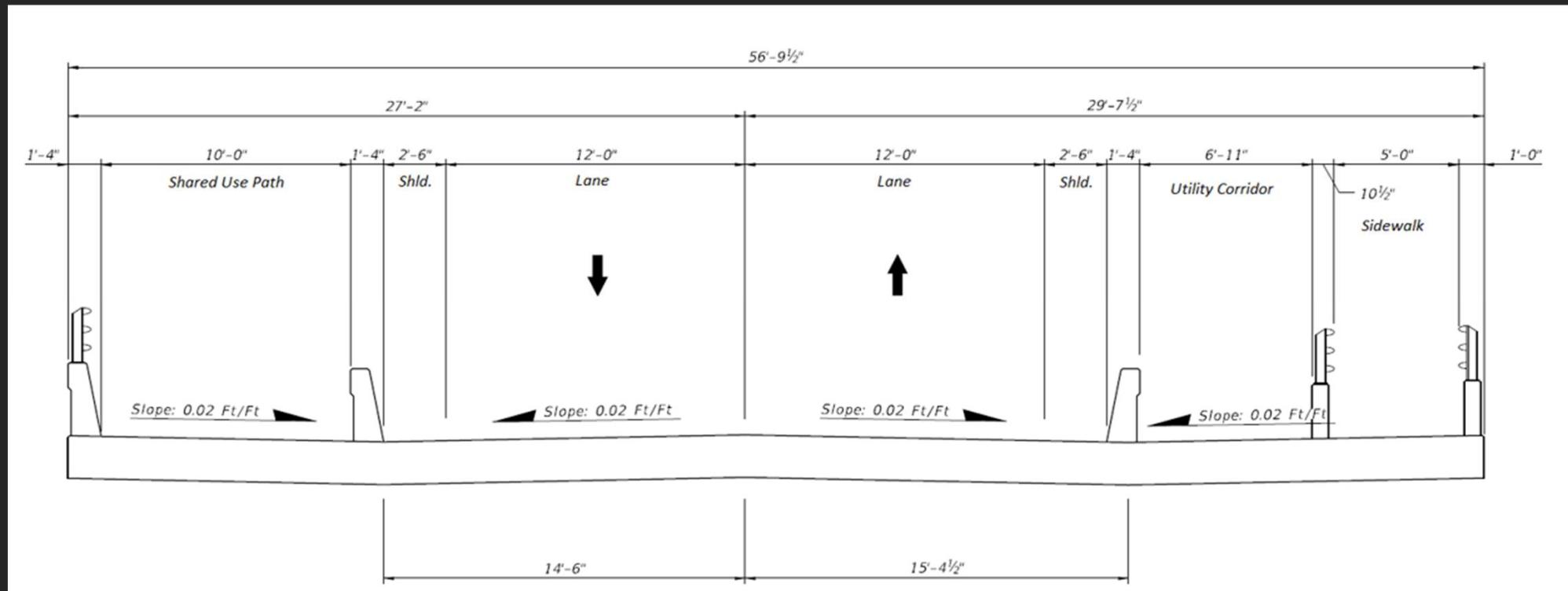


Hurricane Ian Damage

# 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



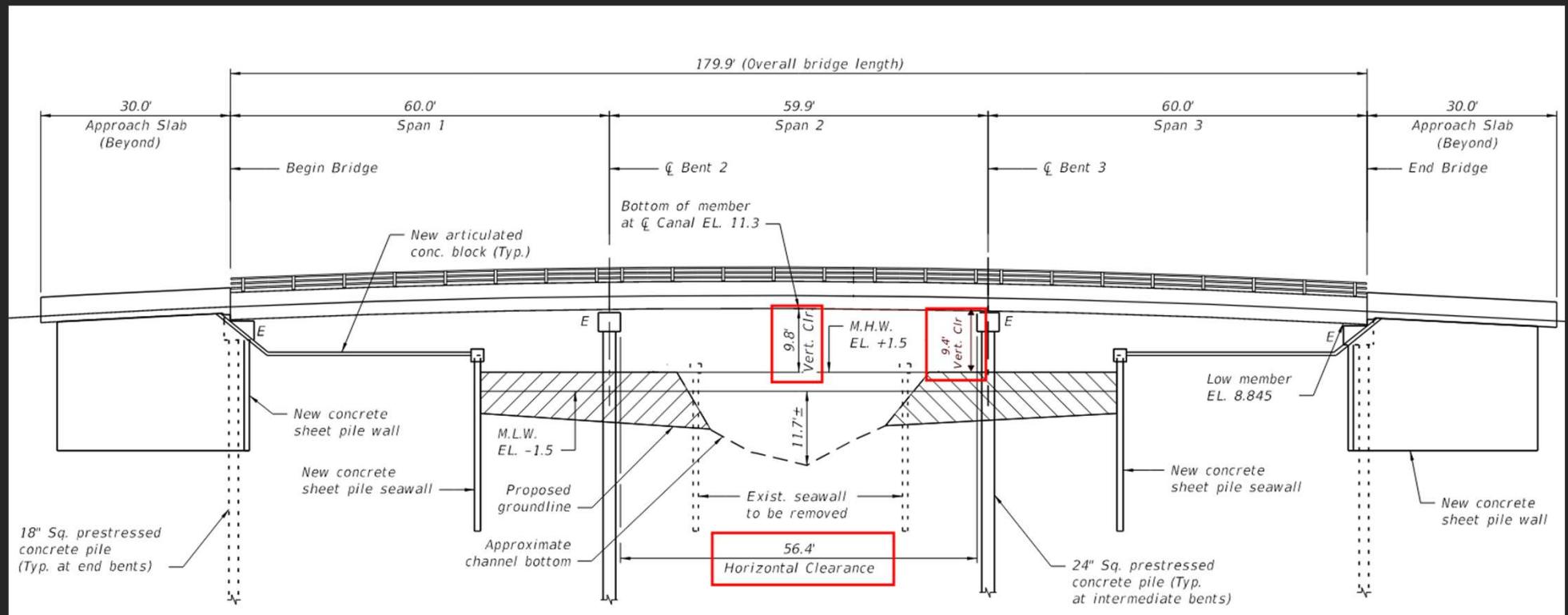
# Proposed Improvements- Improve Profile

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



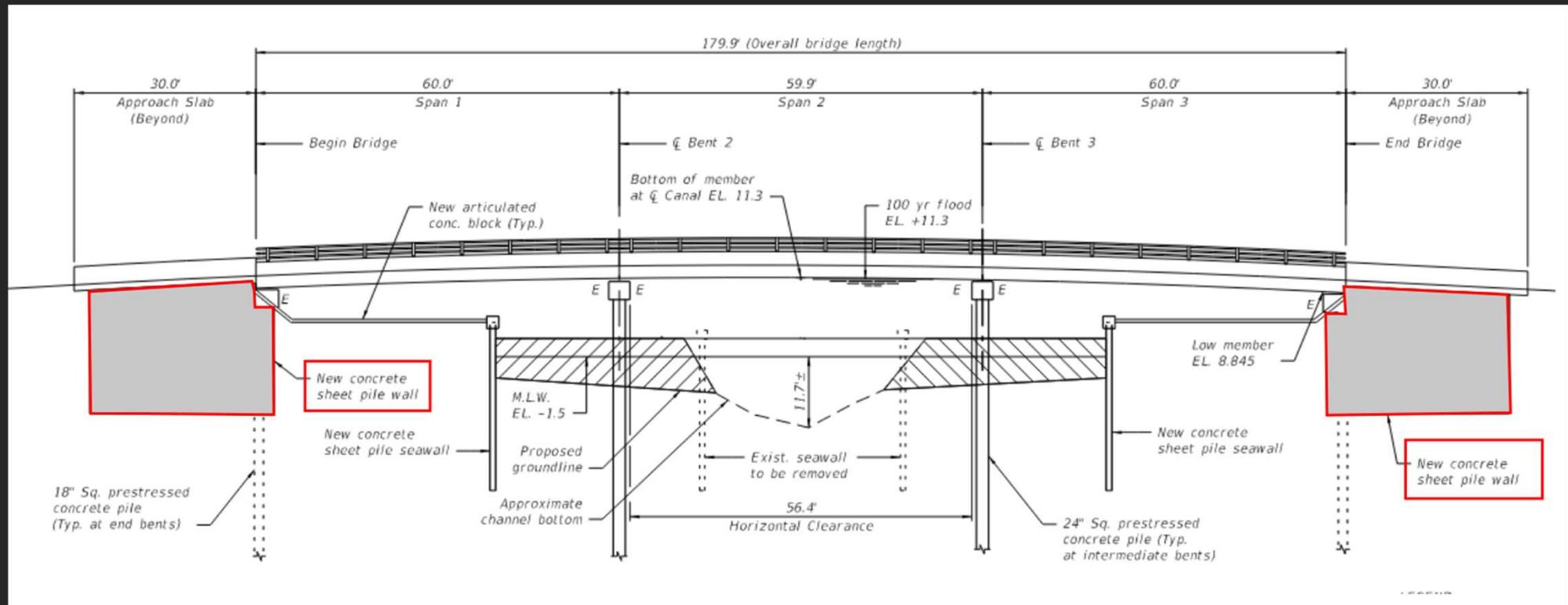
# Proposed Improvements- Improve Channel Clearance

- 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

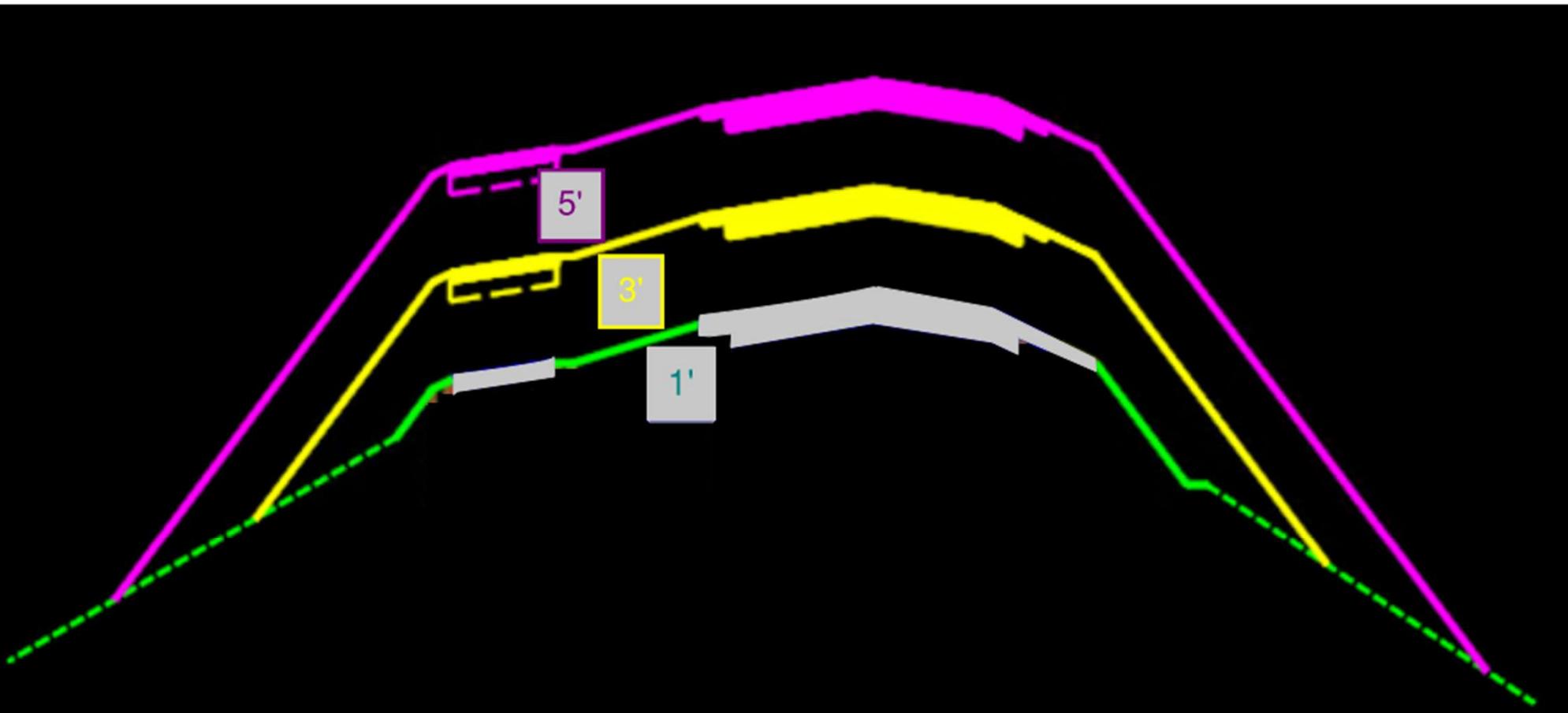


## ROADWAY TYPICAL SECTIONS

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

Yellow: 3 ft increase in vertical clearance

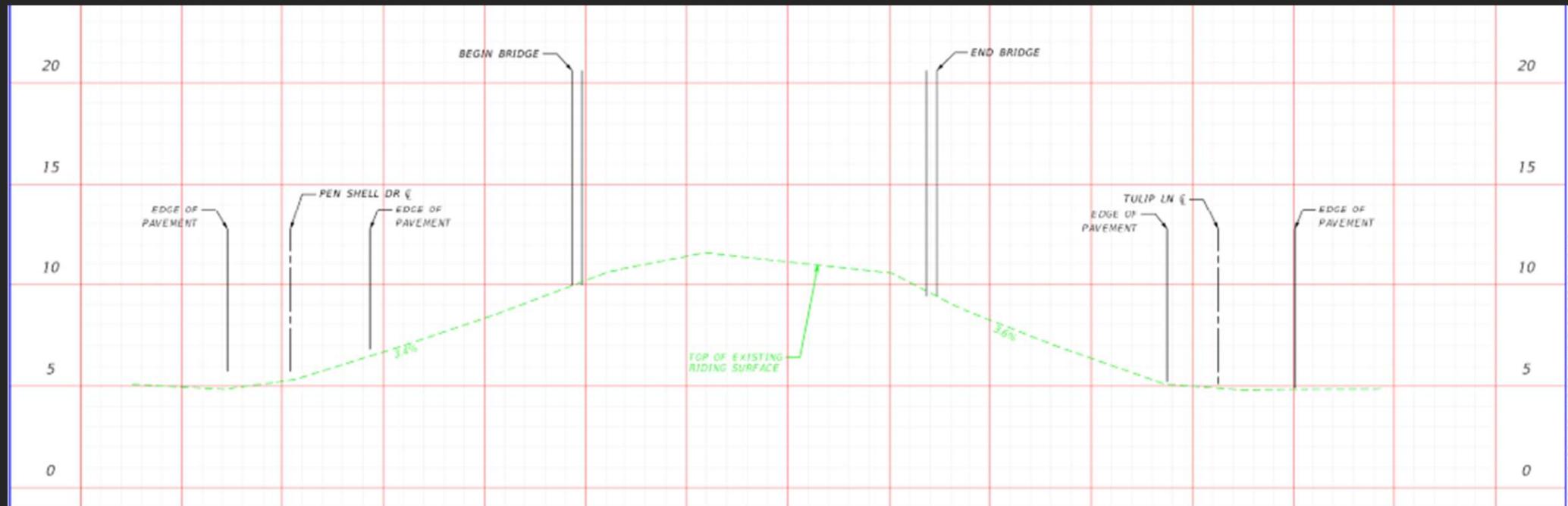
Magenta: 5 ft increase in vertical clearance



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

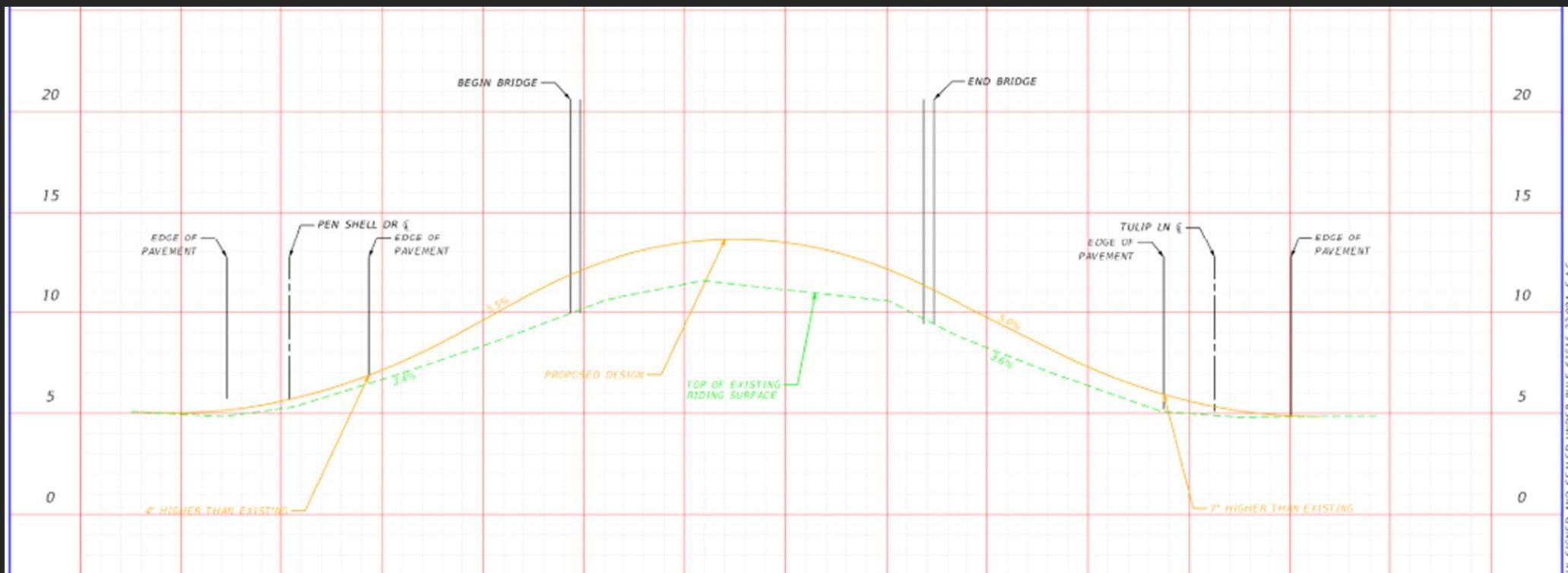


# Roadway Profile Existing Bridge



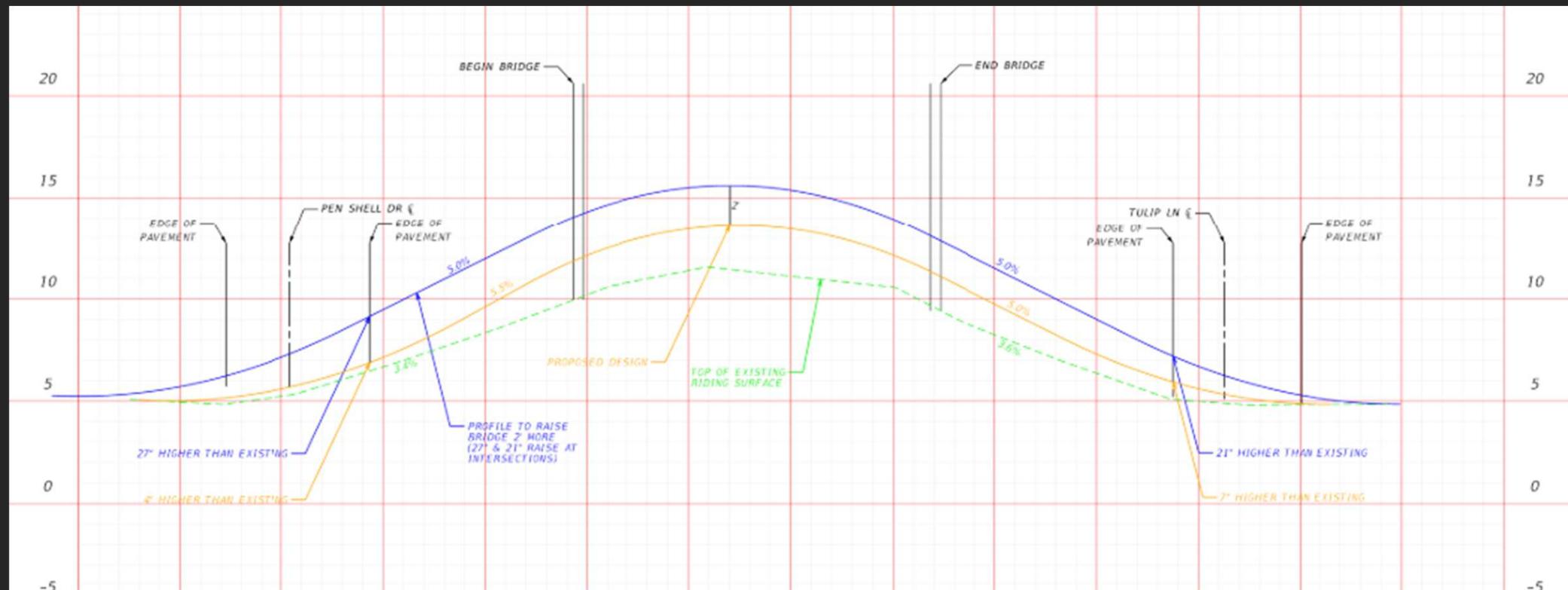
# Roadway Profile

## Existing and Proposed Bridges



# Roadway Profile

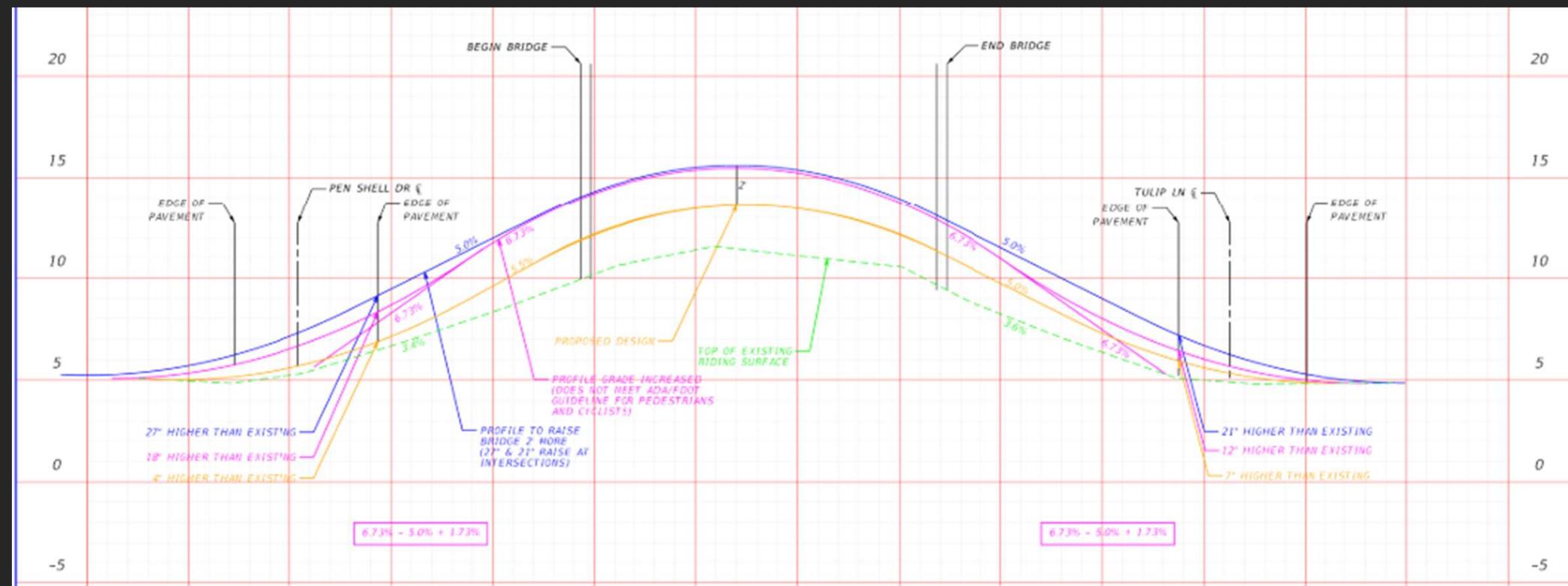
Existing and Proposed Bridges  
(current design + Alternate design 3 ft above existing bridge)



# 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	\$750,000
Design Services	\$750,000
Total cost	<b>\$8,750,000</b>

### 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
	<b>Subtotal</b>			<b>\$1,498,000</b>
Construction Contingency	1	LS	30%	\$449,000
	<b>Subtotal</b>			<b>\$1,947,000</b>
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
			<b>Total Additional Cost</b>	<b>\$4,054,000</b>
			<b>Total Cost for Scenario 2: Raise Bridge 3 Feet Above Existing</b>	<b>\$12,804,000</b>

# 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



TYLin