

# FLH Office of Bridges and Structures

**Presentation Number: P15-6799**

## **ABC at Federal Lands Highway Division and the Seney Bridge Replacement Project**

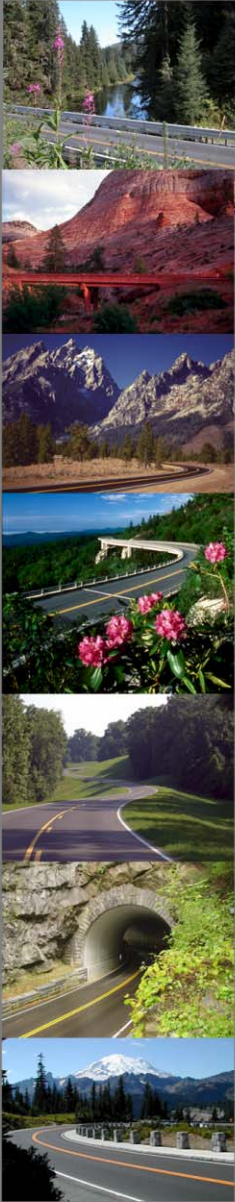
Rich Pakhchanian, PE  
EFLHD Branch Leader

Phil Boinske, PE  
Bridge Design Team Leader



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Office of Federal Lands Highway

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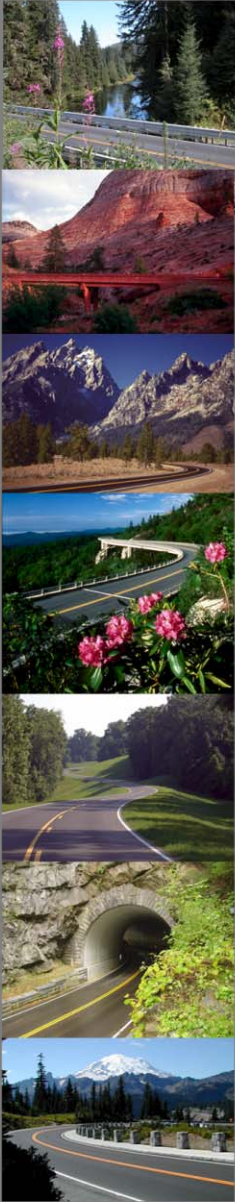
# FLH Office of Bridges and Structures

- Eastern Federal Lands Highway Division – EFLHD  
Bridge Staff - 29
- Central Federal Lands Highway Division – CFLHD  
Bridge Staff - 9
- Western Federal Lands Highway Division – WFLHD  
Bridge Staff - 4



# of PBES Structures Oct , 2014				
	Division			Total
	CFL	EFL	WFL	
<b>Under Construction</b>	8	10	3	21
<b>Under Design</b>	14	6	3	23
<b>Total</b>	22	16	6	44



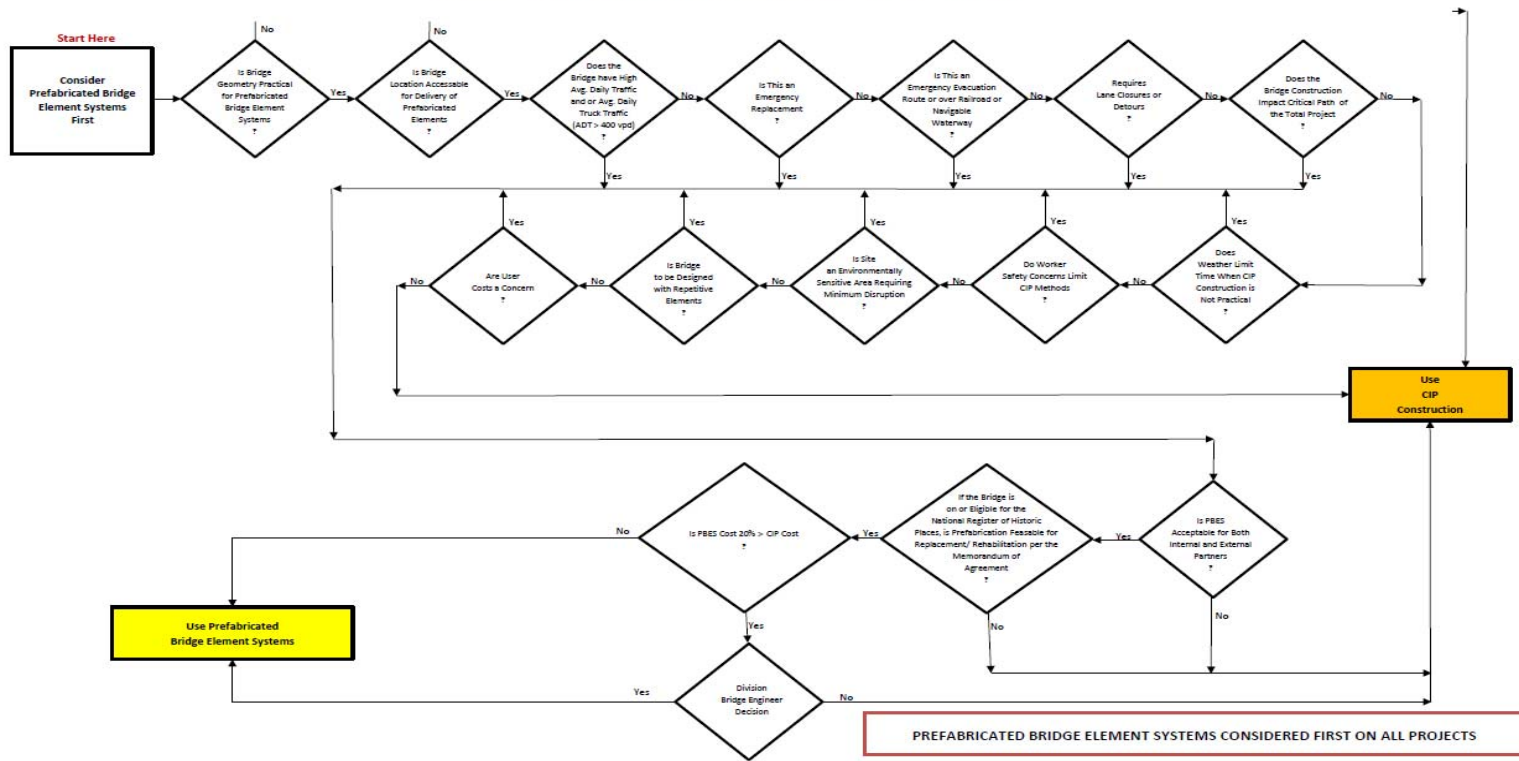


# Federal Lands Highway Office of Bridges and Structures Policy

## Prefabricated Bridge Element Systems considered first on all projects!

### PREFABRICATED BRIDGE ELEMENT SYSTEMS - PBES

#### FLH DECISION FLOW CHART – PREFABRICATION VS. CAST IN PLACE (CIP)

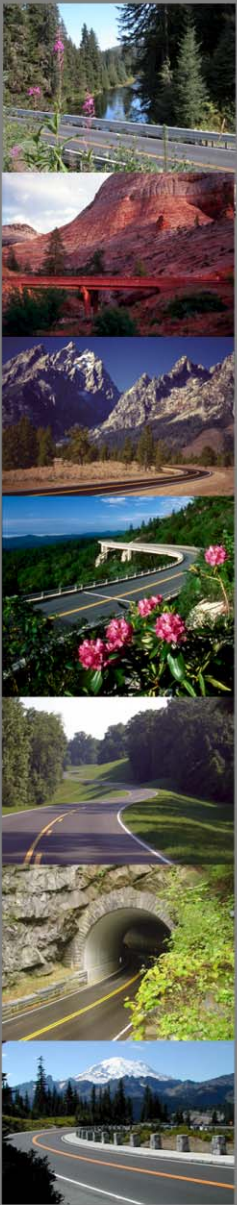


EFL-IN-STR-03(01)



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## Sabine National Wildlife Refuge, LA

- Emergency Relief Funding – Hurricane damage
- 2 Bridges – Bridge length 70' (3 spans each)
- HPC in remote location
- 1 week to drive piles
- 2 weeks to erect superstructures



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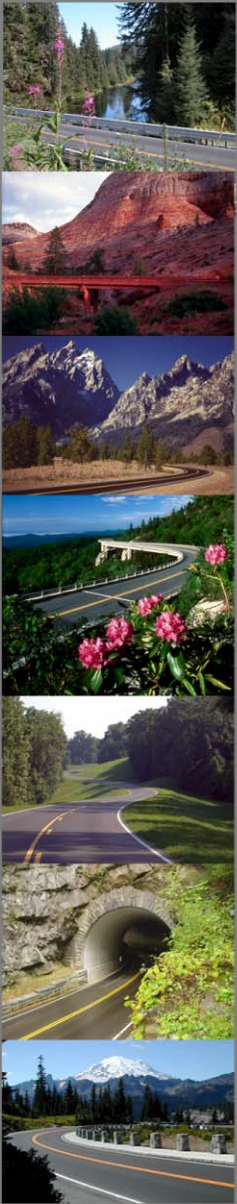


# Sabine National Wildlife Refuge, LA



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## Sequoia National Park, Ca.

- 34' single span
- Cost effective design
- NPS forces built bridge
- Construction – 3 months with 6 people

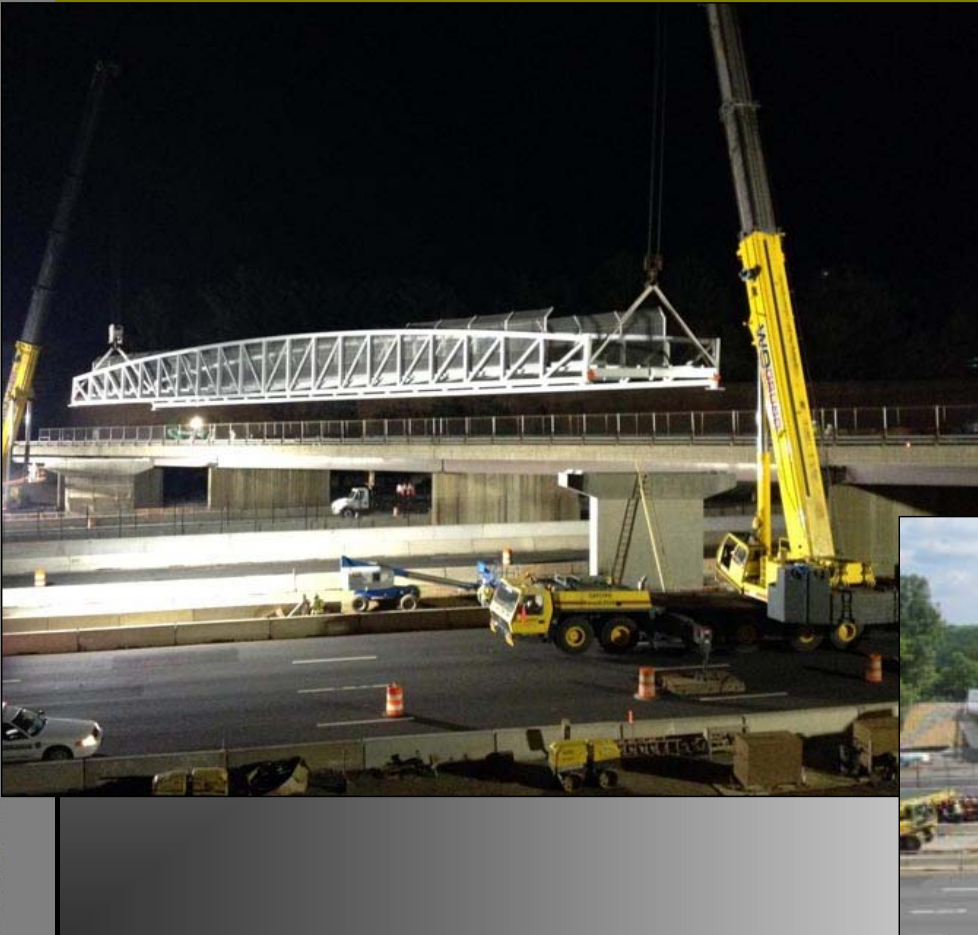


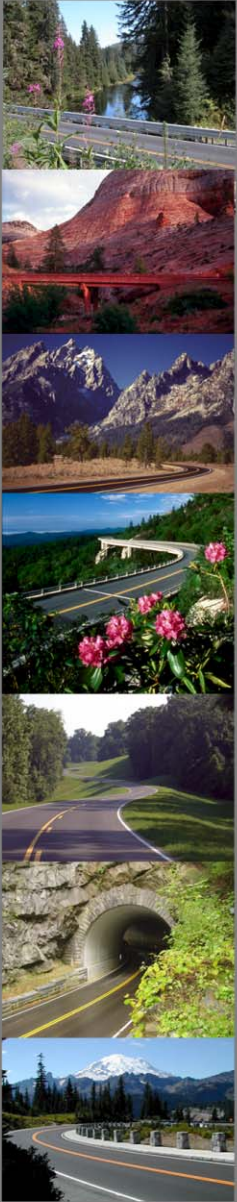
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## Wolf Trap National Park Pedestrian Bridge Wolf Trap National Park for the Performing Arts, Virginia

- Prefabricated in 3 sections
- 15 minute full closure
- Main span erected in 4 hours
- Normal construction – 25 days





## Vieques National Wildlife Refuge, Virgin Islands



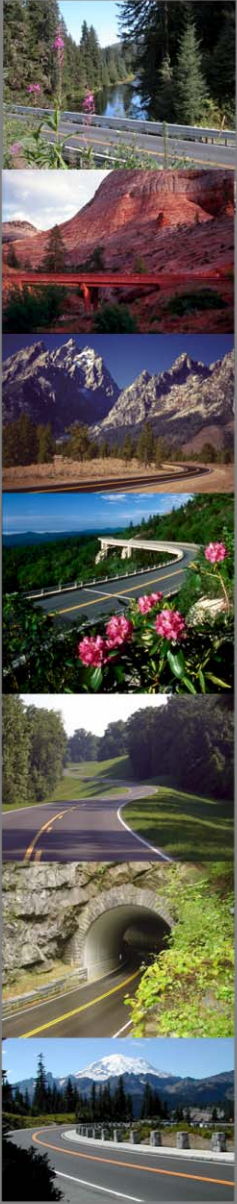
- 70' Span
- Precast worked well for the remote location
- GRS-IBS Abutments
- Voided slabs



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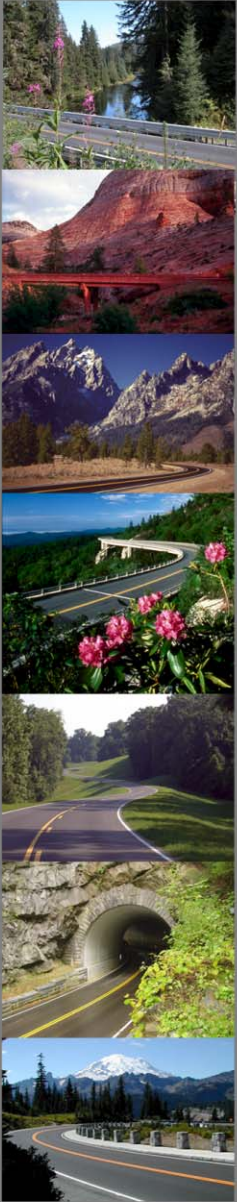
## Glacier National Park, Montana

- Bridge length: 85'-0"
- Precast due to extreme weather conditions
- Entire bridge precast
- Construction –  
Sept 29 – Nov. 11, 2014

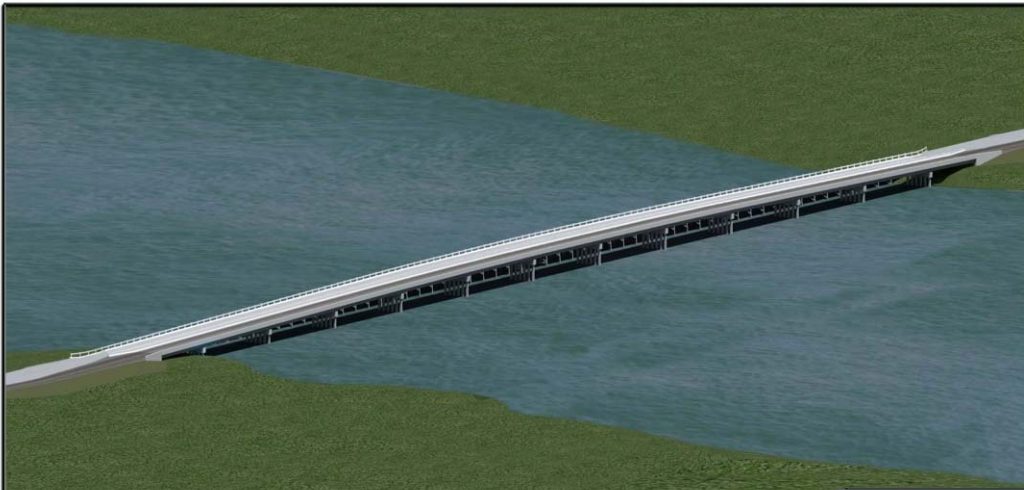


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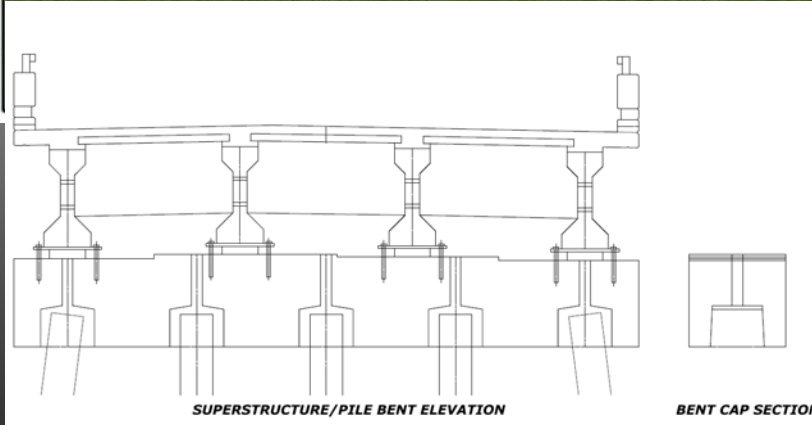
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## Fort Pulaski Bridge, Georgia

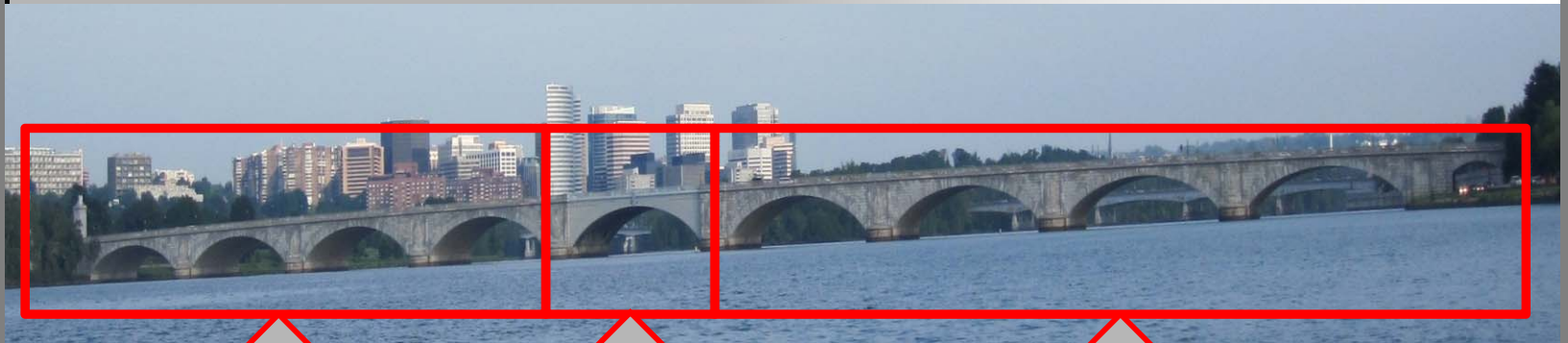


- Bridge length: 1295'  
70'/105' spans
- Entire bridge precast
- Partial depth deck panels
- Railing precast (under study)
- Construction – 1 Calendar year



## Arlington Memorial Bridge, Washington DC

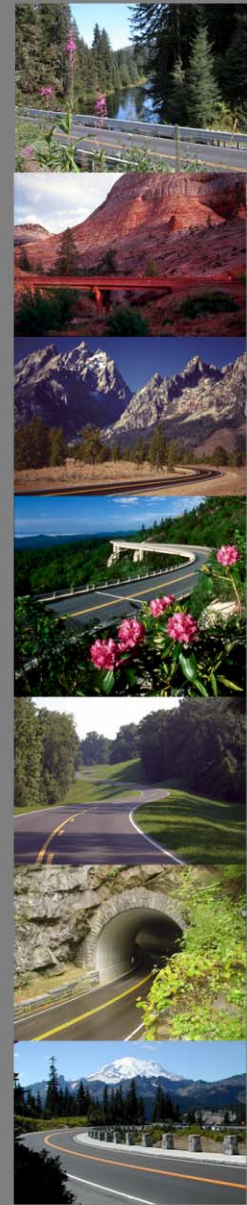
- ◆ Movable Steel Truss Bascule Span
- ◆ Total length of the bridge: 2,108 feet
- ◆ Bascule span:
  - 216 feet (Main Trunnion to Main Trunnion)
- ◆ Approach Spans:
  - 10 Total (5 on each side of bascule)
- ◆ Curb to curb: 60 feet (6 lanes)
- ◆ Sidewalk width 17 feet



Concrete Spans

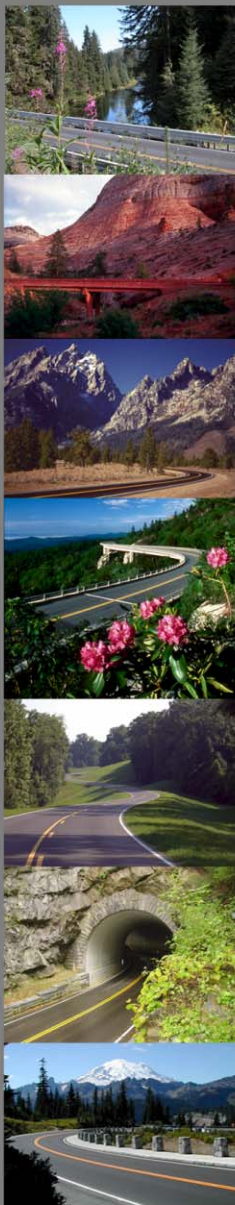
Bascule span

Concrete Spans

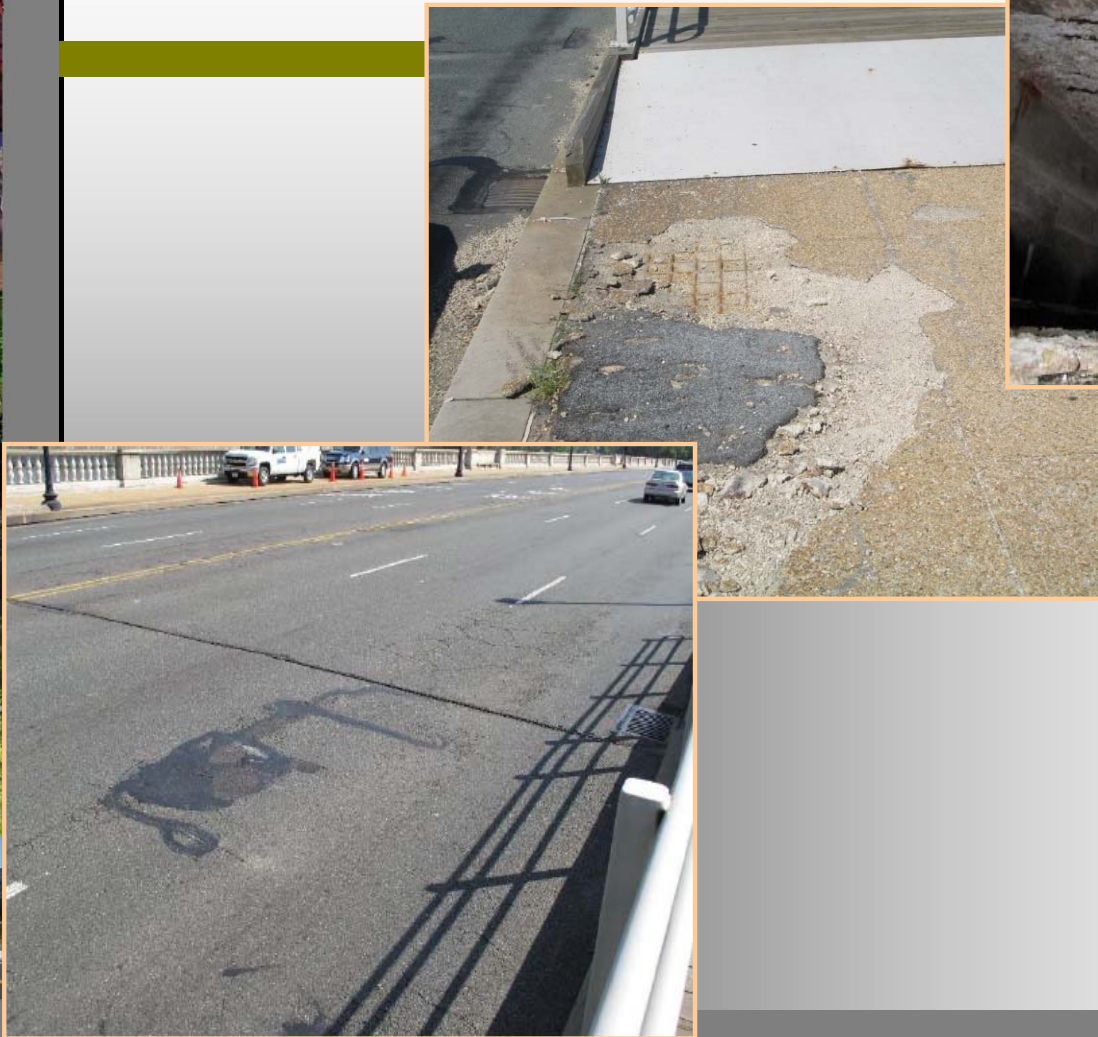


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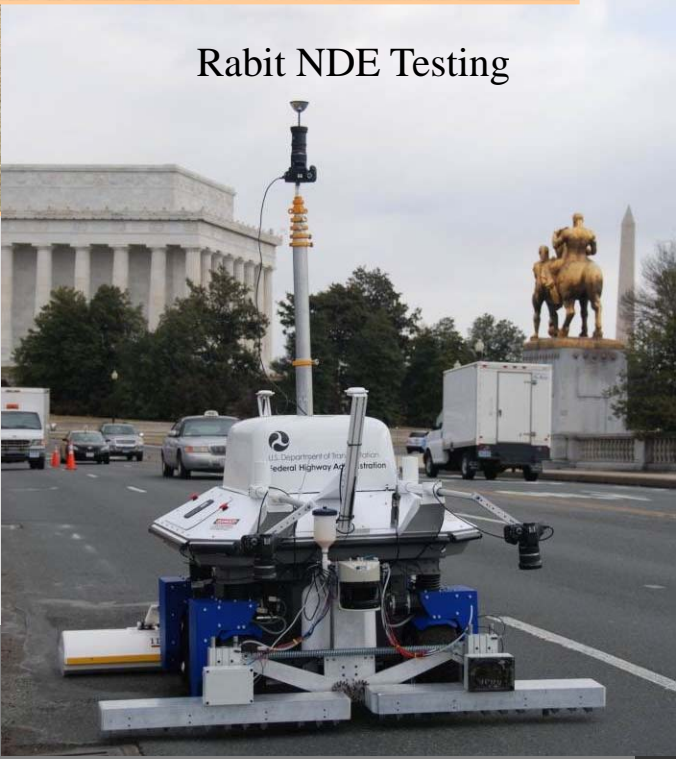
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## Arlington Memorial Bridge, Washington DC



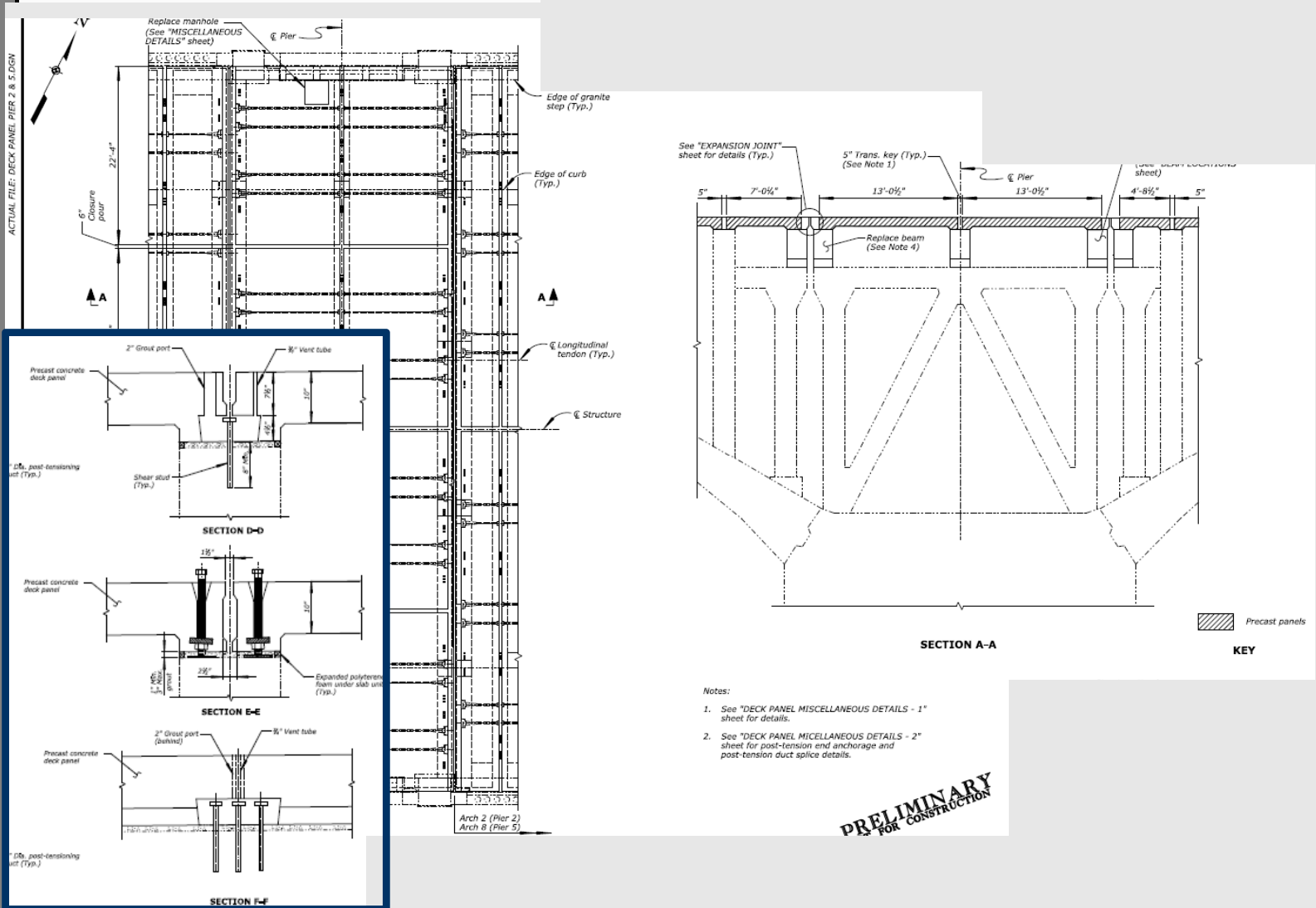
## Rabit NDE Testing



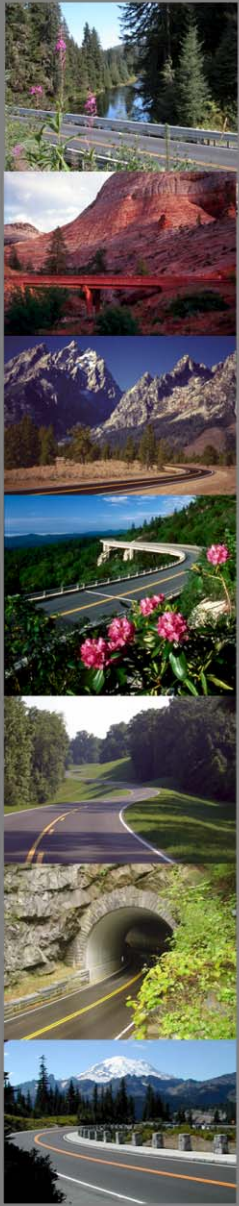
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# Arlington Memorial Bridge, Washington DC

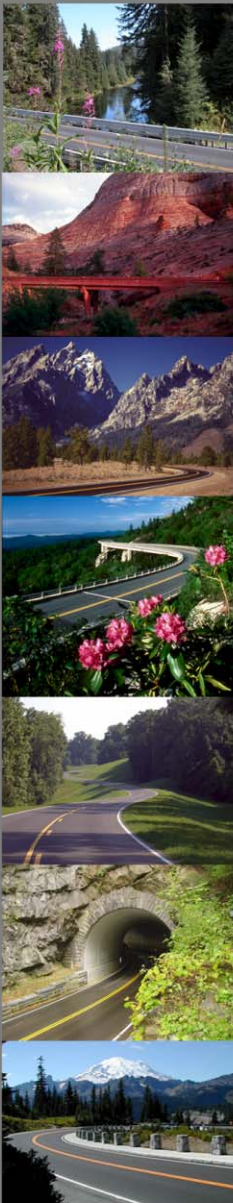


**PRELIMINARY**  
FOR CONSTRUCTION



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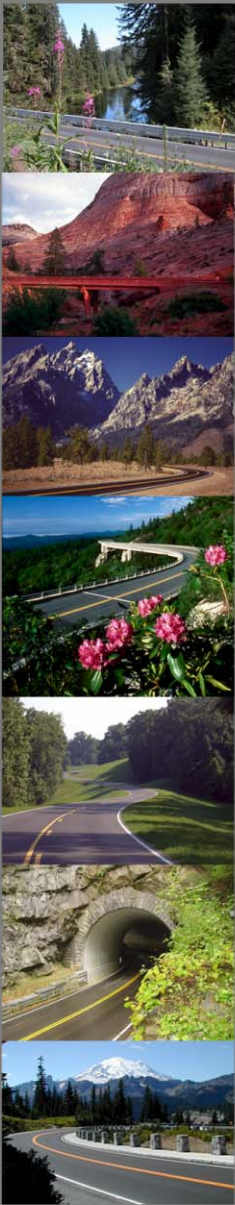
## GWMP Dead Run and Turkey Run Bridges

- Constructed in the year 1998
- ADT 20,000
- Weekend closures
- 100'-150' erected per weekend
- Construction – 1 season for 3 bridges. 300'-400' in length (Each)



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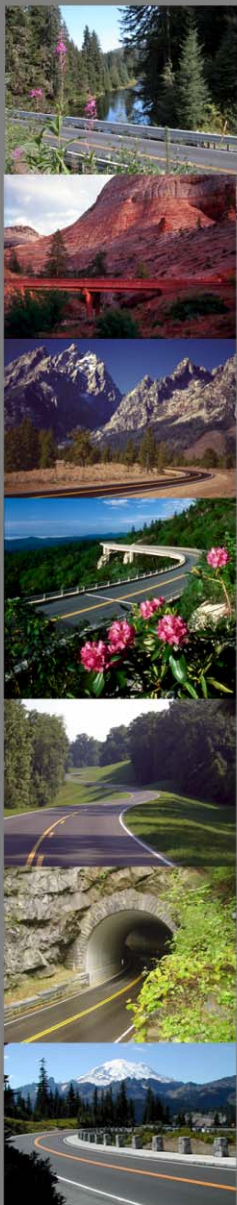


## Foothills Parkway Bridge 2 Great Smoky Mountains National Park, Tennessee



- ✓ 2013 American Segmental Bridge Institute (ASBI) Award of Excellence
- ✓ Roads & Bridges Magazine — Number 2 of the 2013 Top 10 Bridges
- ✓ 2014 PCI Design Award – Best Bridges with Main Span More than 150'





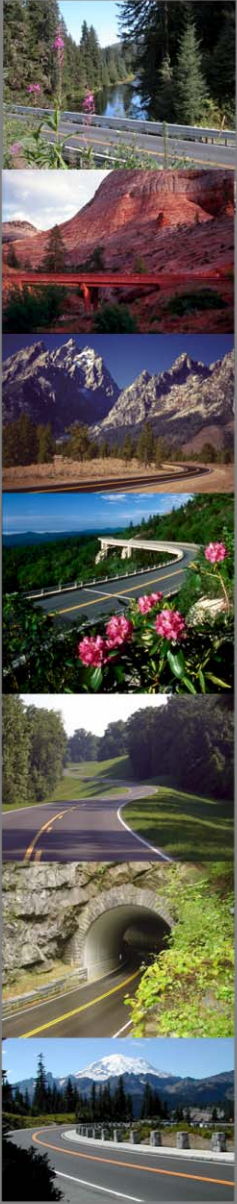
## Foothills Parkway Bridge 2 Great Smoky Mountains National Park, Tennessee



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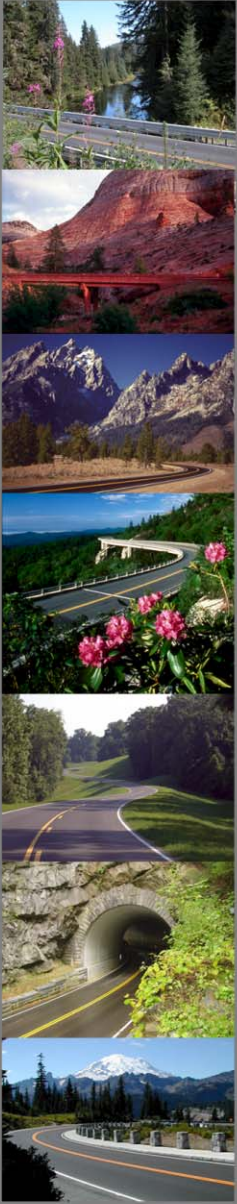


## Blue Ridge Parkway over I26



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# FEDERAL LANDS HIGHWAY BRIDGE

Questions?



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