POST-WAR BRIDGES

What makes these bridges eligible for the National Register of Historic Places?

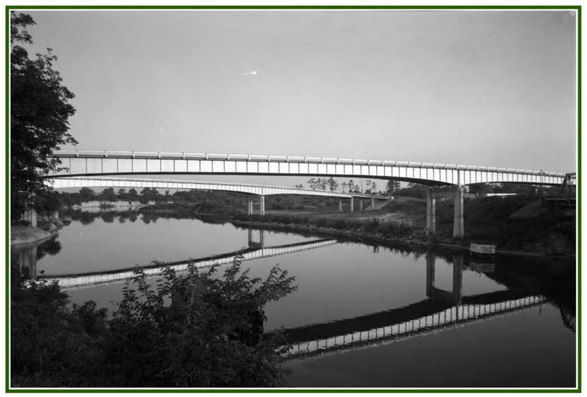
1 **Important Program Initiatives**
All-weather durable bridges
First generation 3-and 4-level interchanges
International bridges

US 281 at Rio Grande International Bridge
(Laredo)

2 **Innovative features and design**
Award-winning designs
Directly associated with research projects
Early use of high-tensile bolts, all-welded connections, neoprene pads, and standard plans

Award-winning SH 35 at Lavaca Bay Bridge
(Calhoun County)

3 **Work of a master bridge engineer**
Designed award-winning and landmark bridges
Contributed to the development of innovative design or construction techniques



US 90A at Buffalo Bayou Bridges designed by
Farland Bundy and Charles Matlock
(Houston)

4 **Exceptional span or overall length**
Difficult and complex to design
Used to carry traffic over larger features such as navigable waterways or multi-lane freeways

5 **Early use of a bridge type**
Examples include:
Prestressed concrete bridges
Pan-formed girder bridges
FS slab bridges

6 **Uncommon bridge type**
Examples include:
Rigid frame bridges
Variable depth slab and tee beam bridges

7 **Possess high artistic value**
Characteristic examples include:
Slender columns
Clean lines

US 79-US 190 over Brazos River
(Robertson County)

FM 535 at Piney Creek FS Slab Bridge
(Bastrop County)

Saunders Avenue at SH 31 Ridge Frame Bridge
(Tyler)

US 87 at Brady Creek
(Brady)

POST-WAR BRIDGE GROUPS

Group I

SH 35 at Lavaca Bay
(Calhoun County)

- Exceptionally important bridges significant in more than one evaluation category
- Bridges requiring full review and mitigation under federal law

Group II

SH 105 at Brazos River
(Brazos County)

- Important bridges significant in comparison to other bridges of the same type
- Bridges proposed for programmatic mitigation efforts developed in collaboration with others

Group III

Nogalitos Street at San Pedro Creek
(San Antonio)

- Representative bridges significant primarily for their technological innovations
- Bridges for which existing documentation suffices as mitigation

Example Bridges In Group I

Group I: Full Section 106 and 4(f) reviews Required
Highly Significant Bridges Built Between 1945 and 1965

COUNTY	THUMBNAIL	FACILITY	CROSSING	STATEMENT OF SIGNIFICANCE
Bexar		West Martin St.	Alazan Creek	This early example of a continuous prestressed concrete slab was bilt in 1964 and is the only example of it's type constructed between 1945 and 1965
Bosque		FM 927	Bosque River	One of only two cantilevered prestressed concrete girder bridges constructed in Texas between 1945-1965
Brazos		FM 2038	Bowman Creek	This bridge is the product of research project. It will require an intensive survey to determine eligibility and character-defining features if a project arises.
Calhoun		SH 35	Lavaca Bay	Part of a significant Texas Gulf Coast transportation initiative, this award winning bridge has exceptional overall length and is the work of an innovative Texas bridge designer.
Cameron		FM 106 Lift	Arroyo Colorado	Significant as a rare bridge type as the only extant vertical lift bridge in Texas built between 1945 and 1965

Example Bridges In Group II

Group II: Programmatic Mitigation Required
Historic Bridges Built Between 1945 and 1965

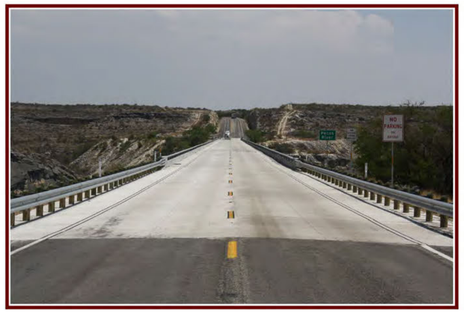
COUNTY	THUMBNAIL	FACILITY	CROSSING	STATEMENT OF SIGNIFICANCE
Bee		FM 2441	Medio Creek	Uncommon bridge type: I-beam cantilevered with suspended span
Bexar		West Commerce St	RRs, Medina, Comal, Etc.	Innovative technological feature: early use of neoprene bearing pads.
Brazoria		CR 210	Austin Bayou	Innovative technological feature: early use of neoprene bearing pads.
Brazos		SH 105	Brazos River	Exceptionally long main span
Dallas		US 175 Southbound	Metropolitan	Uncommon bridge type: variable depth rigid frame tee beam

Example Bridges In Group III

Group III: NO Further Mitigation Required
Historic Bridges Built Between 1945 and 1965

COUNTY	THUMBNAIL	FACILITY	CROSSING	STATEMENT OF SIGNIFICANCE
Bexar		Nogalitos St Mainlaines	San Pedro Creek	Innovative technological feature: early use of neoprene bearing pads. Features ornamentation.
Bosque		SH 174	Steele Creek	Innovative technological feature: early use of neoprene bearing pads. Features ornamentation.
Brazoria		FM 522	San Bernard River	Innovative technological feature: early use of neoprene bearing pads.
Coke		SH 70 Northbound	US 277 Southbound	Innovative technological feature: early use of neoprene bearing pads.
Dallas		Cedar Hill Road	Ten Mile Creek	Uncommon bridge type: reinforced box girder

POST-WAR BRIDGE MITIGATION OPTIONS



Rehabilitation

Fixes the bridge so it can stay open for vehicular traffic

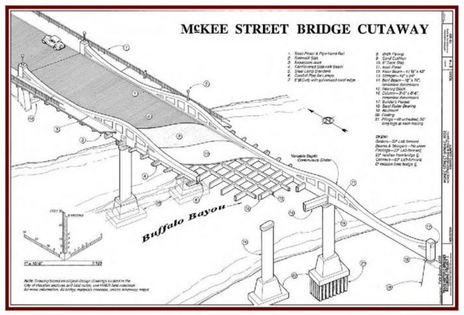
Does not impact the bridge's important features

May require weight restrictions limiting or prohibiting certain types of vehicles from using the bridge

Reuse

Repairs the bridge for pedestrian use only

Reuse can be at the current location or relocated to a park or other public space



Documentation

Photographs, measured drawings, and/or historical reports created in accordance with the National Park Service for the Historic American Engineering Record (HAER)

Suitable for bridges when rehabilitation or reuse is not an option

Public Engagement

Focused on connecting the public with the history of the bridge

May include website content, interpretive signage, and educational displays

HISTORIC BRIDGES IN TEXAS

Metal truss bridges

- Built between 1870 and 1920
- Bridge innovations included:
  - Standard designs
  - Pre-fabricated
  - Easy-to-assemble pin connnectors
- 1900: transition from pin connections to all-riveted connections

WHAT HAPPENS NEXT

- Inventory and evaluation complete
- Next step: Develop management planning options

Concrete bridges

- Result of Good Roads Movement and establishment of the Texas Highway Department in 1917
- Development of standard bridge designs for steel I-beam and concrete bridges
- Urban areas often had concrete arch bridges with City Beautiful Movement ornamentation

WHAT HAPPENS NEXT

- Proposed for re-evaluation of previous study
- Next step: Conduct re-evaluation after completion of post-war bridge study

Masonry bridges

- Constructed during the 1930s and 1940s
- Usually federally funded and overseen by federal Depression-era agencies such as the Works Progress Administration
- Bolstered local employment and provided new skills to workers
- Labor-intensive construction

WHAT HAPPENS NEXT

- Proposed for update of existing inventory
- Next step: Conduct field assessments of bridges

Innovative bridges

- Constructed between 1945 and 1965
- Widespread use of standard bridge designs
- Texas was national leader in innovative bridge design
- Texas Highway Department engineers created new construction materials, bridge types, and fabrication techniques

WHAT HAPPENS NEXT

- Currently seeking public input and feedback
- Next step: Compile information from open houses

WHAT HAPPENS NEXT FOR POST-WAR BRIDGES?

WE ARE HERE

Public Open Houses

Conduct public open houses

Gather public input and feedback

Compile Information

Compile feedback and input received from public open houses

Use feedback to inform next steps and programmatic agreement

Implement Agreement

Execute a programmatic agreement between Texas Department of Transportation, Texas Historical Commission, Historic Bridge Foundation, and Federal Highway Administration

Develop Materials

Develop materials to be used for public engagement such as:

- Website content
- School curricula
- Museum exhibits