



Upper Rio Grande Flood Control Projects

International Boundary and Water Commission
United States Section
Engineering Services Division

July 17, 2013



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United States Section

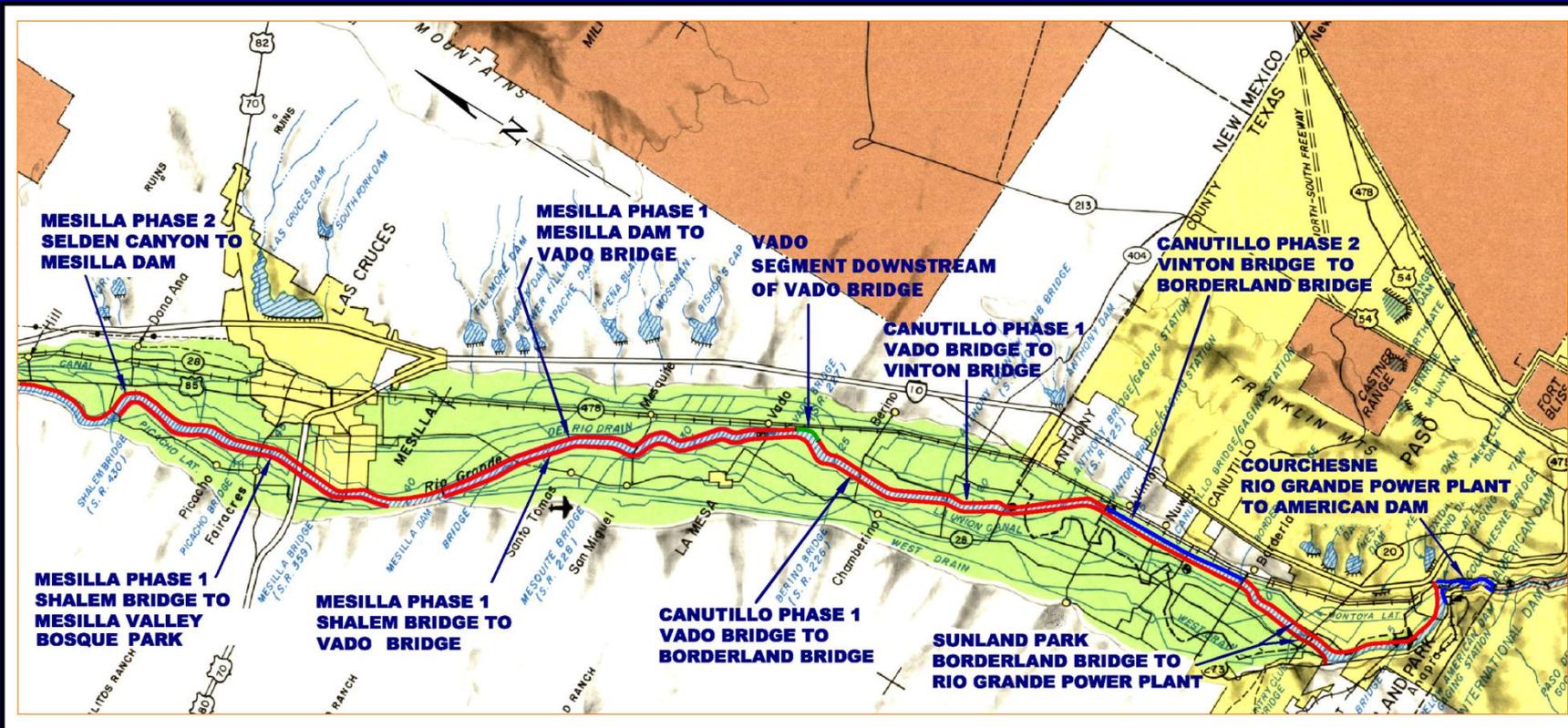
CURRENT AREA PROJECTS

- Mesilla Levee Improvements, Phase 2
- Vado Levee Design
- Canutillo Levee Design, Phase 2
- Courchesne & NEMEXAS Levee Design
- American Canal Re-Lining Design
- American Dam Soil Remediation
- American Dam Gate Replacement



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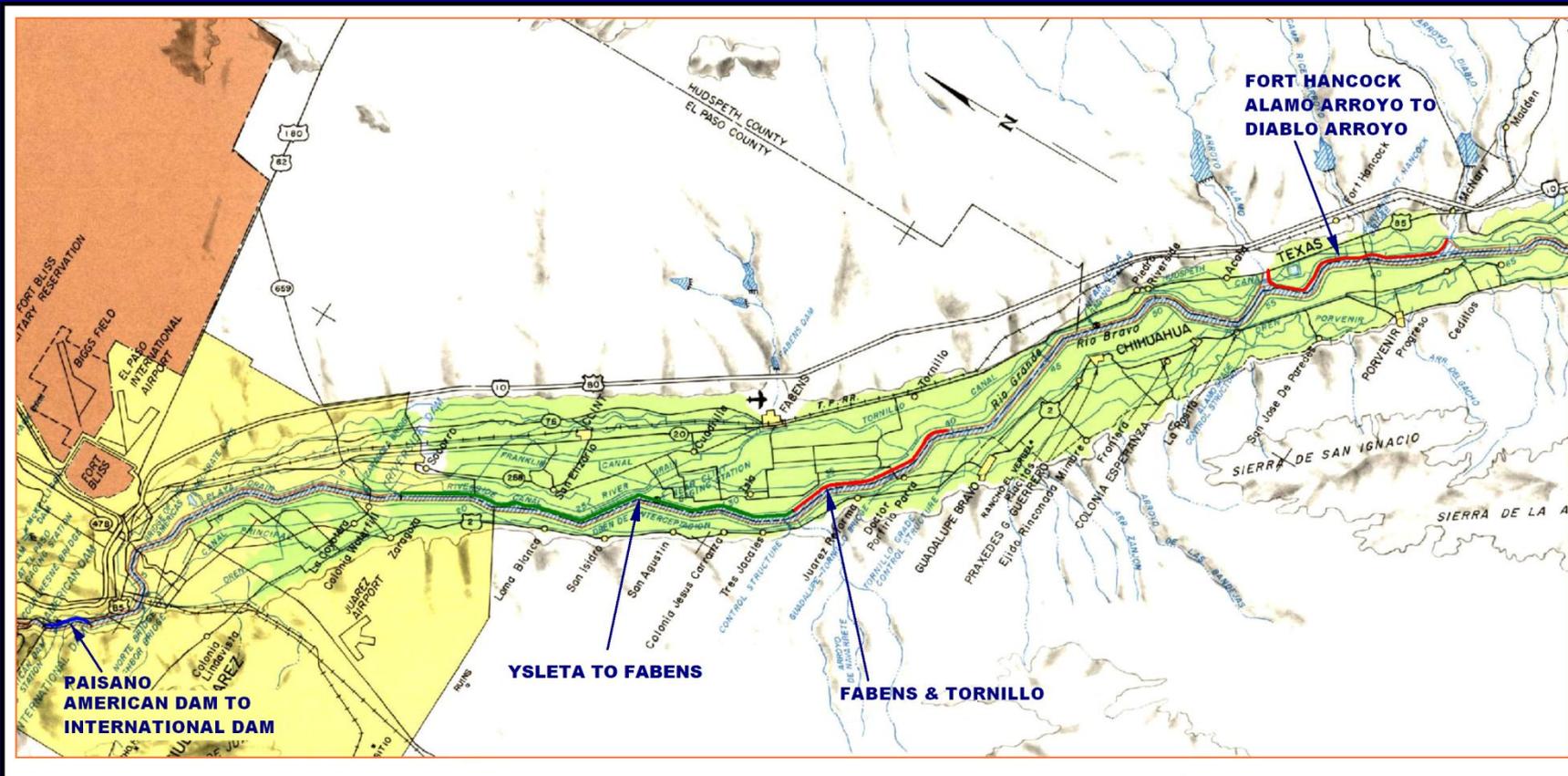
CANALIZATION PROJECTS





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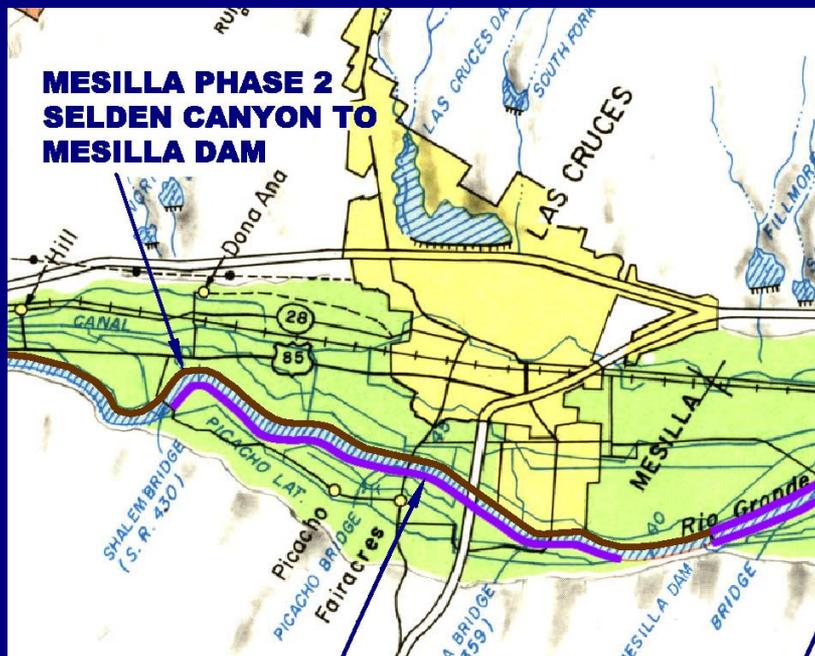
RECTIFICATION PROJECTS





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MESILLA PHASE 2



Mesilla Phase 2 – Brown Line
Leasburg to Mesilla Dam
(east levee)

- 19.6 miles of levee
- \$17.1 million contract to Briston Construction LLC
- Notice to Proceed issued September 25, 2010
- Anticipated completion December 2013
- 16.1 miles of embankment complete – 85%
- Reworking 3.5 miles



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FLOODGATE NOISE STUDY

- Based upon citizen complaints, USIBWC has released a task order to collect and study noise caused by floodgates
- HDR Engineering performing study
- Canutillo Bridge (FM 259) and Country Club Bridge
- Data collected June 18 through June 28
- Analysis complete by September 30, 2013



04/05/2012

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06/13/2012



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VADO LEVEE DESIGN



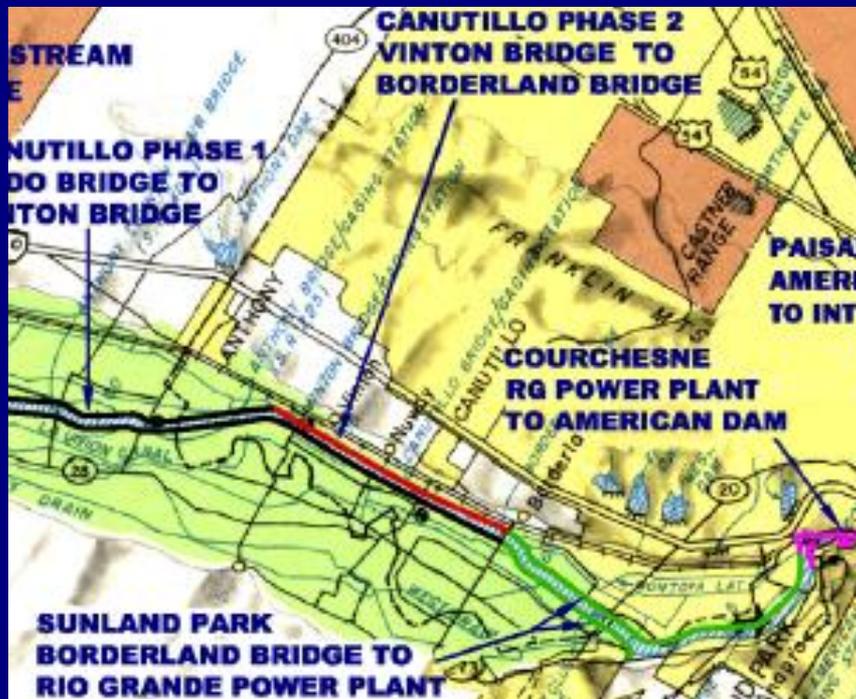
Vado – Orange Line
(east levee)

- Design - 1.1 miles of levee
- \$0.61 million awarded to Tetra Tech, Inc.
- Design complete
- Construction estimated in early 2014



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CANUTILLO PHASE 2 DESIGN



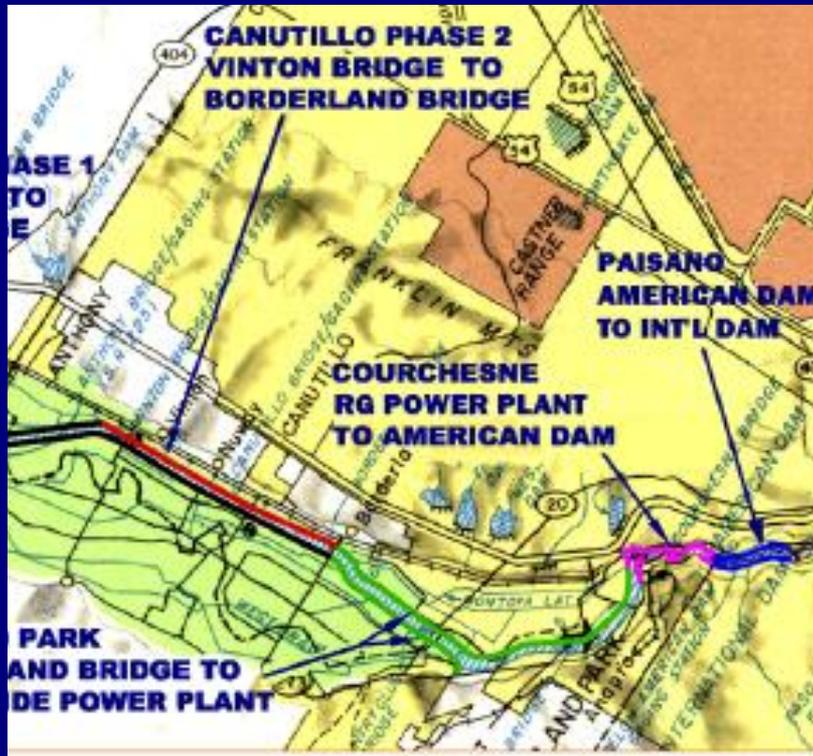
Canutillo Phase 2 – Red Line
Vinton Bridge to Borderland Bridge
(east levee)

- Design - 5.7 miles of levee
- \$1.8 million design contract awarded to URS Group, Inc.
- Notice to Proceed issued on June 17, 2010
- Anticipated completion September 30, 2013
- 90% design complete
- Construction estimated in 2014 through 2017



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COURCHESNE & NEMEXAS REACH DESIGNS



Courchesne – Pink Line
(east levee)

- Design - 3.8 miles of levee
- \$1.2 million design contract awarded to URS Group, Inc.
- Notice to Proceed issued September 17, 2010
- Anticipated completion to be determined
- 90% design complete
- Construction estimated in 2018 through 2020



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AMERICAN CANAL RE-LINING DESIGN



American Canal – Red Line

- Design - 1.6 miles of canal
- \$2.3 million design contract awarded to URS Group, Inc.
- Notice to Proceed issued September 6, 2011
- Anticipated completion to be determined
- 90% design complete
- Construction estimated in 2014 or 2015



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AMERICAN DAM SOIL REMEDIATION

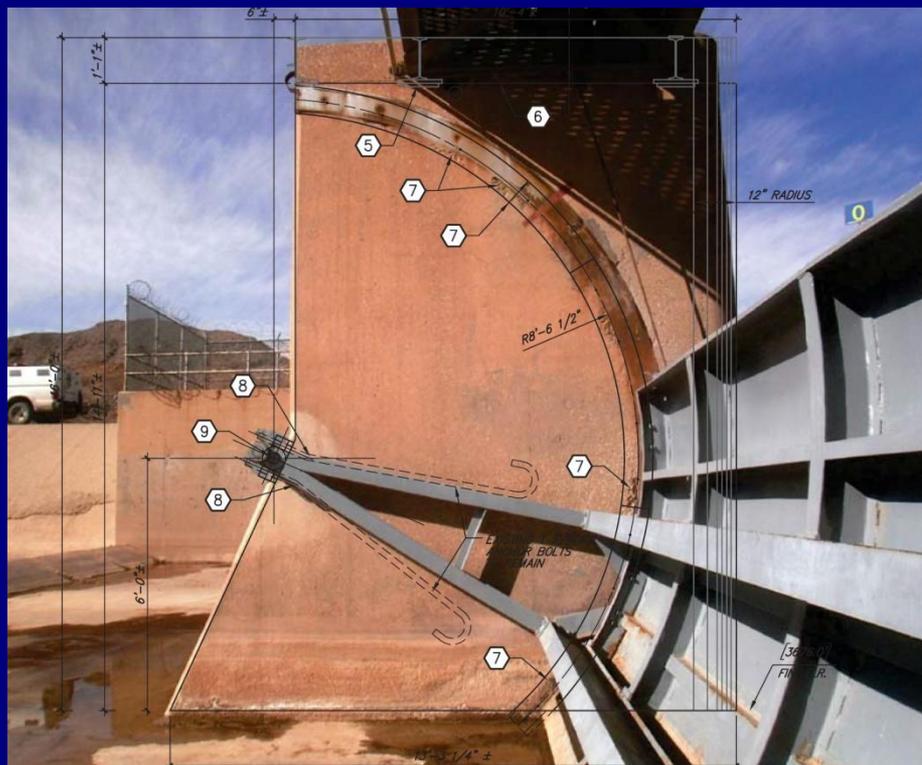


- Settlement of the bankruptcy case for ASARCO
- Environmental cleanup of American Dam/Carlos Marin Field Office complex
- Remove and replace top two 2 feet of soil
- Bids received June 14
- Awaiting Contract award



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AMERICAN DAM GATE REPLACEMENT



American Dam Radial Gate

- Design-Build Contract
- \$2.3 million Design-Build Contract to Aztec Contractors, Inc.
- Notice to Proceed issued October 24, 2012
- Anticipated completion February 15, 2014
- 100% design complete June 17, 2013



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FEMA Definitions

- Levee – A man-made structure, usually an earthen embankment, designed and constructed with sound engineering practices to contain, control or divert the flow of water in order to provide protection from temporary flooding. (44 CFR 59.1)
- A levee is a flood risk reduction structure.



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FEMA Definitions, continued

- Levee System – A flood hazard-reduction system that consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices. (44 CFR 59.1)



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FEMA Definitions, continued

- Accredited Levee System - A FEMA accredited levee system is a levee system that meets the requirements of 44CFR65.10 and therefore is shown on the FIRM as providing protection from the 1-percent-annual-chance flood.



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FEMA Accreditation

- FEMA does not own, operate, maintain, or inspect levee systems or develop certified levee-related data for accreditation purposes.
- As the levee owner, USIBWC will evaluate (certify) that the levees have been constructed to required design standards and are operated appropriately.



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FEMA Accreditation, continued

- For FEMA to accredit a levee system with 1%-annual-chance flood hazard reduction capability on a Flood Insurance Rate Map (FIRM), the levee owner/local project sponsor must submit a package containing the required data and documentation to show that the levee system meets all design and operation requirements of 44CFR 65.10.



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FEMA Accreditation, continued

- 44 CFR 65.10 requires: levee design (freeboard, closures, erosion protection, seepage, and settlement), interior drainage, operation plans, and maintenance plans.
- USIBWC developed levee designs based upon best criteria available in 2009 (44 CFR 65.10).
- In October 2010, FEMA added additional requirements such as requiring levees to tie in to high ground.



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Current FEMA Status

- FEMA new Levee Analysis and Mapping Procedures (LAMP) released July 12, 2013
- LAMP replaces without levee approach
- Allows mapping behind non-accredited levees
- FEMA will only accredit levee systems, not individual levee reaches
- FEMA plans to release additional guidance on the practical definition of levee systems soon.



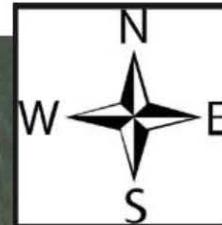
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Rio Grande Canalization

- 29 bridges within system that intersect with levees.
- Road intersections not addressed in levee designs.
- FHWA does not intend that highway embankments act as a flood control structure.
- FHWA recommends that DOTs decline any certification of highway embankments as levees.

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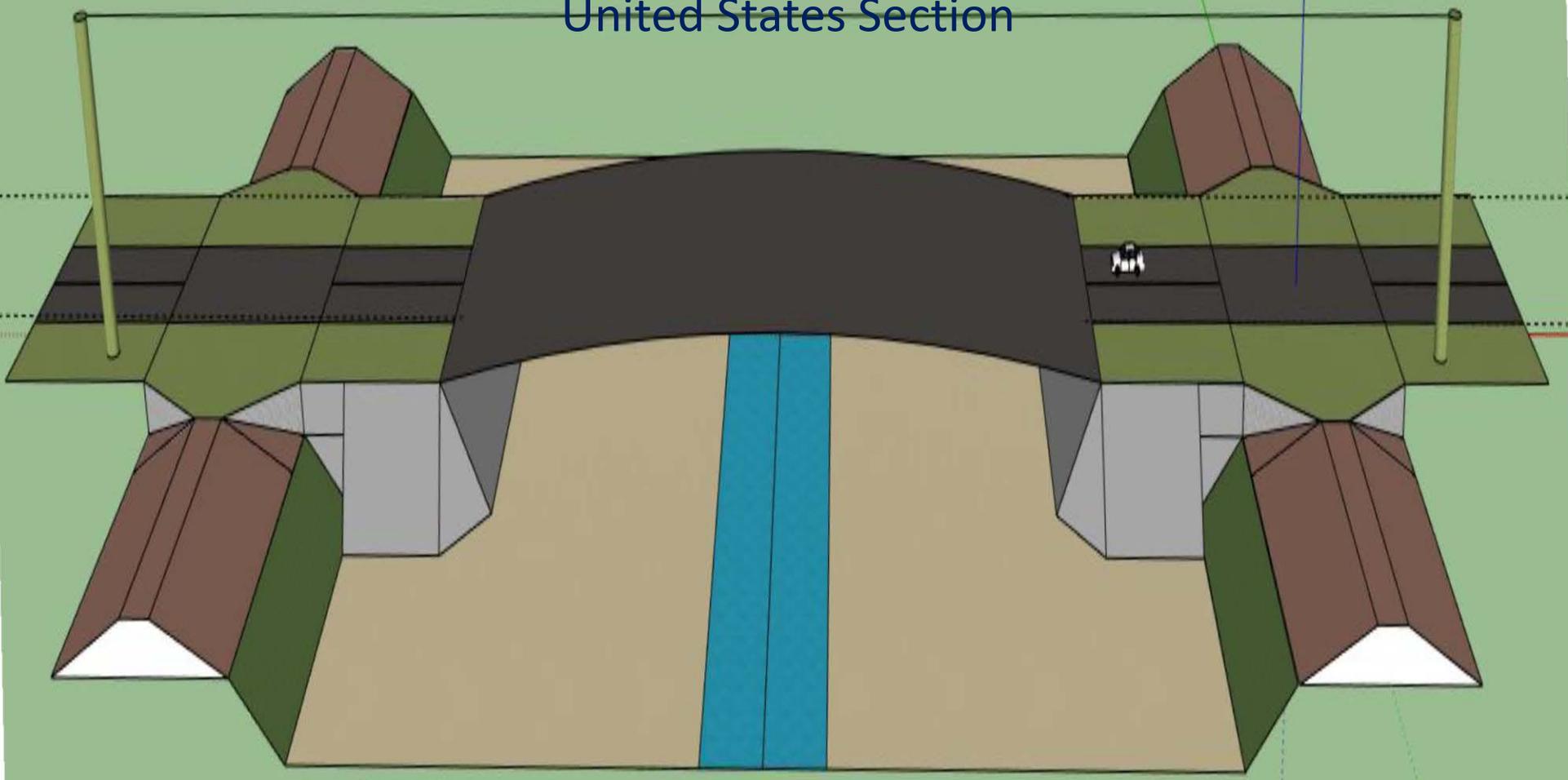
LEVEE BREAK ACROSS
ROADWAY – LEVEE
CONSTRUCTION WAS NOT
CONTINUOUS ACROSS
ROADWAY.

NEW ANTHONY BRIDGE,
NEW MEXICO

USIBWC TYPICAL
EXAMPLE OF LEVEE
BREAK ACROSS
ROADWAY



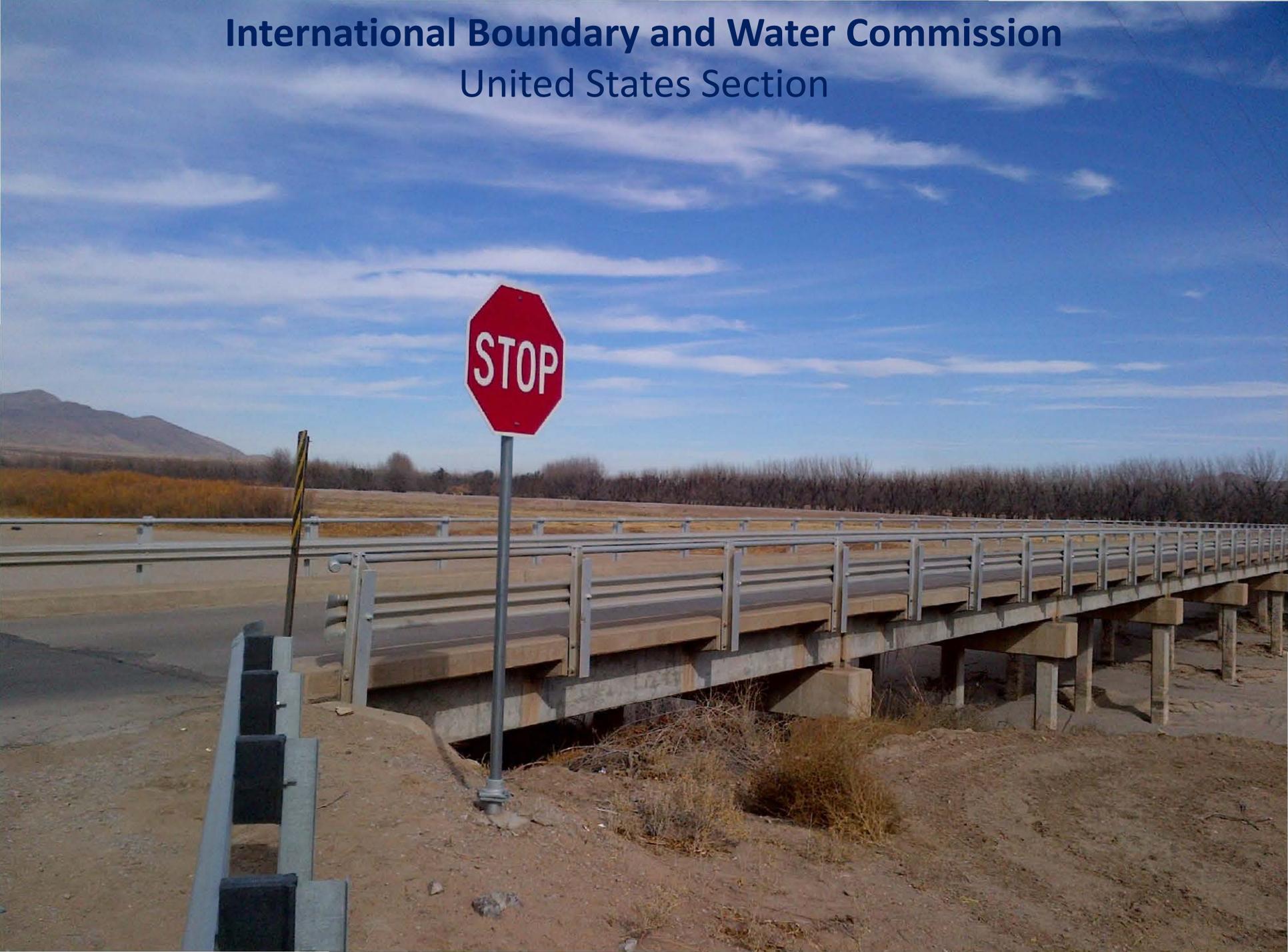
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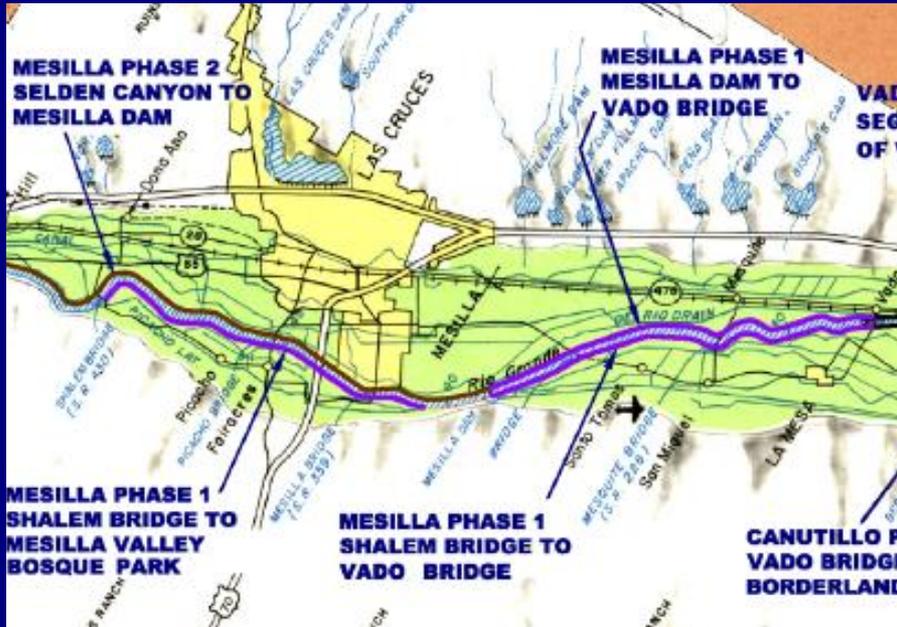


11/08/2011



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MESILLA PHASE 1



- 33.4 miles of levee
- Record drawings being reviewed by surveyor of record

Mesilla Phase 1 – Purple Line
Shalem Colony Bridge to Mesilla Dam
(west levee)
Mesilla Dam to Vado Bridge
(east and west levee)



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Accreditation Speed Bumps

- Interior Drainage - FEMA requires an Interior Drainage Analysis. To date, no analysis exists. USIBWC is only authorized to do work on the levees within USIBWC ROW and does not have authority in assessing the interior drainage issues.
- Levees need to tie into high ground
- Levee/Roadway intersections



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Accreditation Speed Bumps

- FEMA Region 6 should be providing direction as to how LAMP will be used to complete the FIRMS within the next couple of months.
- When will FEMA complete FIRMs? FEMA has FIRMs on hold until FEMA completes revising its “Levee Analysis and Mapping Approach (LAMP)”, and such date is currently unknown to the USIBWC.



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