



U.S. INTERNATIONAL BOUNDARY AND WATER COMMISSION

**LEVEE IMPROVEMENTS
RIO GRANDE RECTIFICATION PROJECT
EL PASO AREA**

Mr. Al Riera, P.E.

**RIO GRANDE CITIZENS' FORUM
NOVEMBER 7, 2007**



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Levee Raising Objectives

- Comply with FEMA levee certification requirements
 - Provide three feet of freeboard (100 Yr. Flood)
 - Improve flood protection
 - Protect densely populated areas
 - Complete project in 2007
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Levee Raising Reaches

- End of Chamizal to Old Riverside Dam - 8.4 mi.
- Int'l Dam to Beginning of Chamizal - 0.6 mi.
- Paisano Drive to International Dam - 0.5 mi.

Total: 9.5 mi.



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LEGEND

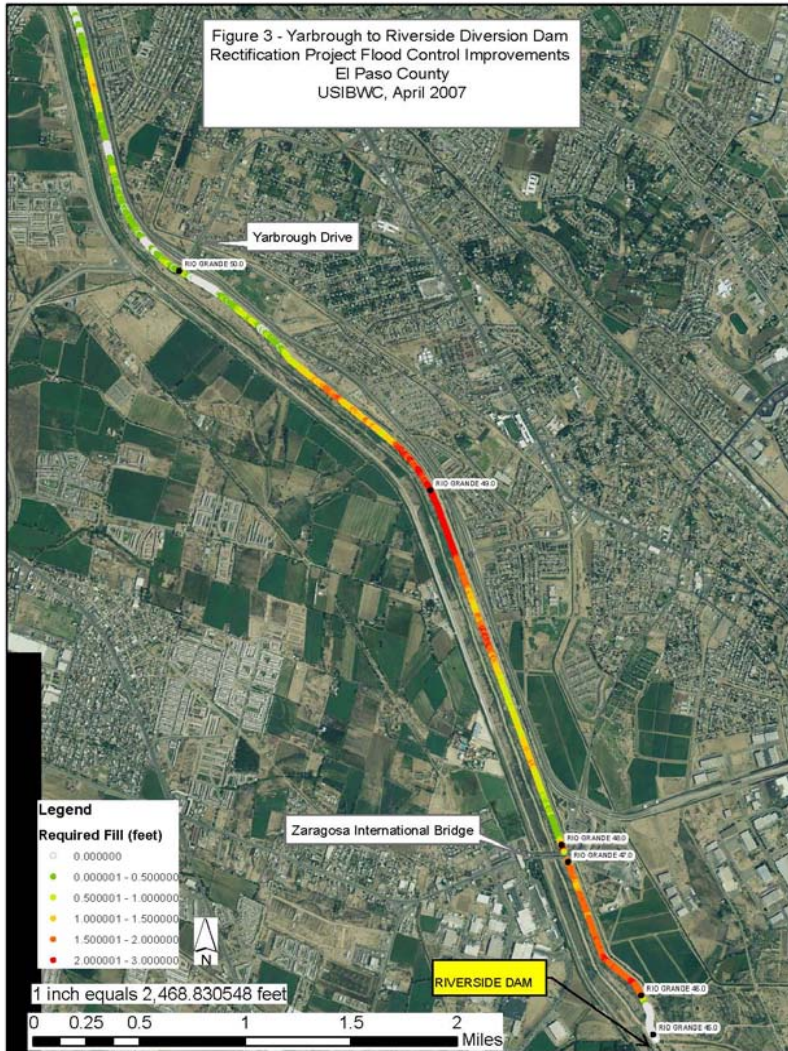
Required Fill (feet)

Grey	0.0
Green	0.0 - 0.5
Light Green	0.5 - 1.0
Light Orange	1.0 - 1.5
Orange	1.5 - 2.0
Red	2.0 - 3.0



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Figure 3 - Yarbrough to Riverside Diversion Dam Rectification Project Flood Control Improvements
El Paso County
USIBWC, April 2007



LEGEND

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Levee Raising Work

- Work Started: May 17, 2007
 - Work Completed: August 30, 2007
 - Equipment Used:
 - 2 Graders
 - 2 Scrapers
 - 2 Pad Drum Vibratory Rollers
 - 2 Smooth Drum Vibratory Rollers
 - 3 Water Trucks/1 Service Truck
 - 2 Water Pumps
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Levee Raising Work (Cont.)

- USIBWC Field Personnel
 - 1 Supervisor
 - 6 Heavy Equipment Operators
 - 1 Mechanic
 - 2 Light Equipment Operators
 - 1 Heavy Equipment Servicer
 - 56,400 Tons of Embankment Material Used
 - 30,900 Tons Total Surfacing Material Used:
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Levee Raising Work (Cont.)

- Costs
 - Embankment Material \$ 293,579.00
 - Surfacing Material \$ 209,183.00
 - Rental Equipment (4 mos.)
 - 1 Water Truck \$ 15,140.00
 - 2 Rollers \$ 22,000.00
 - 2 Water Pumps \$ 15,600.00
 - Soil Testing Laboratory \$ 8,036.00
 - Labor \$ 180,000.00
 - Materials/Fuel \$ 65,125.00
 - TOTAL \$ 808,663.00**



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Scraping top of levee road



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Placement of embankment material



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Compacting embankment material using pad drum roller



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Placement of surfacing material



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Compacting surfacing material using smooth drum roller



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Before



After

Downstream of International Dam



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QUESTIONS?

