Project Scope

- Develop, design, construct and maintain a total project length of 6.44 miles.
- Base scope
  - New six-lane Harbor Bridge.
  - Reconstruction of approximately 1.6 miles of Interstate Highway 37 (I-37).
  - Reconstruction of approximately 1 mile of Crosstown Expressway (SH 286).
  - Demolition of the existing Harbor Bridge.
- Option work
  - #1 - Broadway Boulevard from Harbor Drive to I-37 (Requested by the City of Corpus Christi).
  - #2 - Transition of I-37 to a low-speed arterial street from the SH 286/US 181 Interchange to Mesquite Street.
- 25-year Operation and maintenance life-cycle contract.
- $984M identified in the Funding Plan.
Project Scope (Continued)

- Operations and Maintenance
  - New Harbor Bridge
  - US Highway 181 (US 181)
  - Interstate Highway 37 (I-37)
  - Crosstown Expressway (SH 286)

- 25 year obligation with fixed prices
  - Prices bid in 2015 dollars
  - Automatically escalated by inflation

- Includes:
  - Roadway Routine Maintenance
  - Preventative Maintenance
  - Capital Maintenance and Renewal

- Handback requirements at Termination
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Existing Harbor Bridge

- Construction began in 1956 and completed in 1959 as a replacement of a draw bridge.
- Original bridge Cost: $9,053,523
- Average daily traffic: 47,000 vpd
- At the time of completion, the Harbor Bridge was the single largest project in TxDOT history.
Existing Harbor Bridge

- Current bridge is fracture critical
- Current vertical clearance is 138’
- Approach has 5% grade
- Current bridge does not meet current FHWA and TxDOT roadway and bridge design standards
Existing Harbor Bridge
Public Outreach

- 4 public/agency scoping meetings from 2005 to 2011.
- 6 meetings of the Citizen Advisory Committee from 2011 to 2014.
- 5 meetings of the Technical Advisory Committee from 2011 to 2014.
- 8 neighborhood meetings prior to the DEIS in 2012.
- 8 additional neighborhood meetings prior to the public hearing in 2014.
- 2 public meetings with the City of Corpus Christi for park mitigation in 2013.
- 1 public meeting in 2012.
- Public hearing held February 18, 2014, extended formal comment period.
- In response to requests, the public comment period was extended 30 days.
Procurement History

- March 26, 2014 – issued request for qualifications (RFQ)
- June 26, 2014 – short-listed four proposers
- October 2, 2014 – issued final request for proposals (RFP)
- March 24, 2015 – received four Technical Proposals
- April 7, 2015 – received four Price Proposals
- April 30, 2015 – recommend best value proposer/conditional award
- September 28, 2015 – CDA executed
Evaluation of Proposals

- Implemented a pre-established and rigorous procedure to evaluate and select the proposal that offers the best value.
- Separate pass/fail, technical, aesthetic and price evaluations.
- Subcommittees are separate and unaware of other committee’s scores.
- Evaluation subcommittees provided scoring recommendations to the Evaluation Selection Recommendation Committee (ESRC).
- ESRC provided scoring recommendations to the Project Steering Committee.
- Project Steering Committee reviewed ESRC recommendations and made final recommendation to the Texas Transportation Commission.
Apparent Best Value Determination

- Price includes design, construction and maintenance.
- Technical and aesthetics score is based upon:
  - Aesthetic requirements.
  - Technical solutions.
  - Project Management Plan.
  - Quality Management Plan.
  - Maintenance Management Plan.
  - Sustainability Plan.

**Best Value Scoring:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>80</td>
</tr>
<tr>
<td>Technical (including aesthetics)</td>
<td>20</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

Apparent best value = **Highest** total proposal score
Flatiron/Dragados USA, JV*

Equity Members:
- Flatiron Constructors, Inc. (50%)
- Dragados USA, Inc. (50%)

Major non-equity members and other team members:
- AIA Engineers, Ltd.
- Figg Bridge Engineers, Inc.
- Iridium Concesiones de Infraestructuras, S.A. (acting through ACS Infrastructure Development, Inc.)
- DBI Services, LLC
- Austin Bridge & Road, LP
- AZTEC Engineering Group, Inc.
- Beton Consulting Engineers, LLC
- Blanton & Associates, Inc.
- D.H. Griffin of Texas, Inc.
- IEA, Inc
- Kellogg, Brown & Root Services, Inc.
- KCI Technologies, Inc.
- M2L Associates Inc.
- PaveTex Engineering and Testing, Inc.
- Pinnacle Consulting Management Group, Inc.
- Professional Service Industries, Inc.
- Randy Burkett Lighting Design, Inc.
- RJ Rivera Associates, Inc.
- The Boundary Layer Wind Tunnel Laboratory (as represented by The University of Western Ontario)
- Ware & Associates, Inc

*alphabetical order
US 181 Harbor Bridge Aesthetics — Blue Ribbon Panel

- “Blue Ribbon Panel” developed aesthetics requirements
- Blue Ribbon Panel Members
  - Nelda Martinez, Corpus Christi Mayor
  - Judy Hawley, Port of Corpus Christi Commission Chair
  - Terry Simpson, San Patricio County Judge
  - Loyd Neal, Nueces County Judge
- Aesthetics requirements of the panel were provided to proposers.
- Aesthetics Subcommittee evaluated proposals based upon requirements in the RFP.

Aesthetics Subcommittee Meeting
April 14, 2015
Aesthetics

- Shared Use Path
- Bridge/Pedestrian Belvedere
- Exotic Bridge Structure
- Lighting Concept

The landscape design will complement aspects of mobility — automobile, transit, and pedestrian — to enhance community connectivity.

- Create landscaped gateways.
- Connect community parks.
- Complement the City’s mobility plan.
- Connect the community.
- Enhance the City’s “Sense of Place.”
- Provide community recreation areas for local neighborhoods.
- Provide safe and attractive entrances/exits locations for the shared use path.
- Utilize xeric/native vegetation.
- Celebrate the movement of nature seen in oceans, animal life, and wind through the sweeping forms of plants, breezes, and wells.
- Integrate local streets into the landscape.
Aesthetics – Shared Use Path
Aesthetics – Shared Use Path

NORTHBOUND BRIDGE LANDSCAPE GATEWAY

RECYCLED, CRUSHED, STAINED CONCRETE

RECYCLED, CRUSHED, CONCRETE SHAPED BAND. BLUE ECO-STAIN WITH NANOTECHNOLOGY THAT CLEANS THE AIR

SHARED USE PATH ENTRANCE (SEE SKETCH)

NORTHBOUND BRIDGE LANDSCAPE GATEWAY

SOUTH BRIDGE SHARED USE PATH GATEWAY ENTRANCE

BIKE RACK

TRAIL MAP

WALL BENCH

CTB PLANTER
Aesthetics – Shared Use Path

- Community Plaza (See Sketch)
- Wind Energy Sculpture (See Sketch)
- Shared Use Path
- Padre St
- Nueva St
- landscape Gateway
- Berm
- Native Vegetation
- Trail Head
- 137

US 181 Harbor Bridge

October 13, 2015
Aesthetics – Shared Use Path

COMMUNITY PLAZA CONCEPT

- XERISCAPE
- WATER FEATURE
- ENERGY GENERATING WIND SCULPTURE
- WIND HARP
- THEMATIC BIKE RACK
- SOLAR BRICK PAVER ACCENTS WITH LED LIGHTS
- THEMATIC BIKE RACK

CORPUS CHRISTI

US 181 Harbor Bridge
Aesthetics - Belvedere

**Shared Use Path, Belvedere & Fencing**

- West-facing views of the starring towers & cable stays
- A field trip to the stars with constellations laser-cut in metal, galvanized and powder-coated finish for protection
- LED lighting to frame the sculpture at night
- Educational plaques
- Bike racks will be placed near belvedere entrances
- Eco-friendly bench of recycled composite material

**Bridge Railing Aesthetic Panel Options**

Contemporary panel designs inspired by coastal beauty. Panels will be used at the belvedere and select locations along the bridge's shared use path. These and other designs are proposed to be presented at a design charrette to determine community preferences.
Aesthetics – Exotic Bridge Structure
Aesthetics – Exotic Bridge Structure
Aesthetics – Exotic Bridge Structure
Aesthetics – Lighting Concepts

US 181 Harbor Bridge

October 13, 2015
New Harbor Bridge

- New Harbor Bridge will be located 3,750’ west of existing Harbor Bridge
- Bridge will be concrete segmental
- Main Span will be 1,655’ (between pylons)
- End Spans will be 815’
- Total span of the New Harbor Bridge will be 3,285’
- Pylon height will be 538’
- Clearance between low chord and MHW is 205’
- North approach will be 3,760’
- South approach will be 5458’
- Total bridge length will be 12,503’
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New Harbor Bridge

- Proposed main span of 1,655'
- This would make the New Harbor Bridge
  - **Longest** main span cable-stayed bridge in the US (previous was Audubon at 1581')
  - **Longest** main span **concrete** cable-stayed bridge in the US (previous was Dames Point at 1300')
  - 3rd longest main span cable-stayed bridge in the western hemisphere (longest is currently the Baluarte in Mexico at 1706' completed in 2012; 3rd Panama Canal Crossing currently under construction will be the longest when complete at 1739')
  - 2nd longest main span **concrete** cable-stayed bridge in the western hemisphere (longest will be the new 3rd Panama Canal Crossing when complete at 1739'; the current longest is the Centennial Bridge (2nd Panama Canal Crossing completed in 2004) in Panama at 1378')
  - 3rd longest main span **concrete** cable-stayed bridge in the world behind the Skarnsund Bridge in Norway and the new 3rd Panama Canal Crossing when completed. Both at 1739'
“The Sustainable Highways Initiative supports programs and activities conducted across the Federal Highway Administration to facilitate balanced decisionmaking among environmental, economic, and social values—the triple bottom line of sustainability.”

– U.S. DOT FHWA

Source: www.sustainablehighways.org
What is INVEST?

Infrastructure Voluntary Evaluation Sustainability Tool (INVEST)

- Voluntary, web-based tool designed to help transportation agencies integrate sustainability into programs and projects
- Three modules designed to evaluate the full lifecycle of transportation programming:
  - Systems Planning
  - Project Development
  - Operations and Maintenance

Source: [www.sustainablehighways.org](http://www.sustainablehighways.org)
INVEST Modules

- **Systems Planning**
  - Evaluates an agency’s system-wide transportation planning and programming efforts such as:
    - Statewide Long Range Transportation Plans
    - Metropolitan Transportation Plans
    - Unified Planning Work Program

- **Project Development**
  - Applicable to all phases of project development:
    - Early planning
    - Alternatives analysis
    - Environmental documentation
    - Preliminary and final design
    - Construction

- **Operations & Maintenance**
  - Applicable to an agency’s internal and system operations
  - Criteria related to asset management and maintenance activities

Three modules for evaluating full lifecycle of transportation services.
INVEST and the Harbor Bridge Project Timeline

- July 2014 – Harbor Bridge Project developer teams attend INVEST Workshop in Corpus Christi, TX
- August 2014 – INVEST Project Development pre-scoring workshop
- August - October 2014 – RFP and Technical Provisions updated for consistency with INVEST criteria
- October 2014 – Final RFP issued
### Project Development Achievement Levels

<table>
<thead>
<tr>
<th>Achievement Level</th>
<th>Fraction of Total Points Possible</th>
<th>Points Required</th>
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<tbody>
<tr>
<td>Platinum</td>
<td>60%</td>
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<tr>
<td>Gold</td>
<td>50%</td>
<td>29</td>
</tr>
<tr>
<td>Silver</td>
<td>40%</td>
<td>23</td>
</tr>
<tr>
<td>Bronze</td>
<td>30%</td>
<td>17</td>
</tr>
</tbody>
</table>

*Source: [www.sustainablehighways.org](http://www.sustainablehighways.org)*
 Describe the proposer’s approach and commitment to sustainable design, construction, operational, and maintenance practices;

 Describe how a “Platinum” rating will be achieved for the INVEST Project Development module;

 Describe how a minimum of a “Silver” rating will be achieved for the INVEST Operations and Maintenance module; and

 Describe how the following sustainability categories will be addressed: Energy and Energy Efficiency; Community and Environmental Justice; Waste Reduction and Recycling; Green Project Administration; Materials and Resources; Construction Practices; and Demonstration of Energy Efficiency.
INVEST and Harbor Bridge

- Commitments incorporated into contract
- During construction, monitor commitments included in sustainability plan
  - Flatiron/Dragados JV committed to achieving “Platinum” INVEST rankings for Project Development and Operations & Maintenance
- Post development scoring of Harbor Bridge Project
  - Attainment of “Platinum” INVEST ranking for Project Development
  - Attain minimum of “Platinum” INVEST ranking for Operations & Maintenance
Sustainability Plan

- All lighting fixtures LED
- Solar powered path lighting with solar brick pavers and solar markers on shared use path
- Energy-generating wind sculpture
- Use of high strength, low permeability concrete mix
- Waste reduction and recycling
  - Benches at belvedere and landscaped areas made from recycled materials
  - Re-use of concrete from interchange bridges as crushed stone in landscape
Questions?

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