A. Organization and Contents of Proposal

This document includes all of the information required in the Instructions to Proposers and is organized as follows:

- A Executive Summary
- B Proposer Information, Certifications & Documents
- C Project Development Plan
- D Appendices
- E Aesthetics Plan *(separate document)*

BUILDING CORPUS CHRISTI'S NEXT COMMUNITY LANDMARK

It is not often a project comes along that provides the chance to build community while designing and constructing a landmark structure. The US 181 Harbor Bridge Replacement Project is just such an opportunity.

In response, Traylor-Zachry-Fluor Crosstown Builders has assembled the finest engineers, managers, and innovators from our three member companies. Together we have delved deep into details of the urban landscape and culture of the City of Corpus Christi, the specific desires of residents and Stakeholders, and the Texas Department of Transportation's specifications to develop the most striking, durable, and community-connecting infrastructure improvement the City has ever known.

This proposal, and the summary on the following pages, tells the story of how TZF will build Corpus Christi's next community landmark.

B. Summary of Changes to QS

Aside from the organizational revisions described below, there are no other modifications to the QS submitted on May 27, 2014, or the subsequent responses to Request for Clarifications submitted on June 5 and June 11 of 2014.

C. Changes to Traylor-Zachry-Fluor Crosstown Builders, LLC

The addition of Fluor Enterprises, Inc. as an Equity Member of the Lead Contractor and Lead Maintenance Firm resulted in the following changes:

- Traylor-Zachry-Fluor Crosstown Builders, LLC (TZF) is now the Proposer/Developer. Its members are TZF Crosstown Constructors, LLC (Lead Contractor) and TZF Crosstown Maintenance, LLC (Lead Maintenance Firm) **(Figure 1).**
- Infrastructure Corporation of America is a subcontractor to the Lead Maintenance Firm **(Figure 1).**
- Fluor Corporation is the Guarantor of Fluor Enterprises, Inc.
- Key Personnel changes and additions as described below **(Figure 2).**

Figure 2: Key Personnel Changes and Additions

Role	Key Personnel Changes
Professional Services Quality Acceptance Manager	Mirek Olmer, PE
Lead Maintenance Manager	Claudio Gigliobianco
New Harbor Bridge Maintenance Engineer	Howard Kallman, PE
Role	**Key Personnel Additions**
Environmental Manager	Eddie George
Sustainability Manager	Peter Elza, PE
Demolition Manager	Clyde Joseph

D. Summary of Management, Decision Making, Day to Day Operational Structure, and Key Personnel Commitment

The US 181 Harbor Bridge Replacement Project (Project) entails three very distinct components: a cable-stayed bridge, an urban interchange, and 25 years of maintenance for both. To provide the experience, facilities, and equipment needed to deliver the Project, we have fully integrated the three partners of our team. During design and construction, each discipline lead (with the exception of Safety and Quality, which require reporting independence) reports to Project Manager Wayne Jones for effective communication and task management. Design Manager Wil Dooley and Construction

Figure 1: TZF Organization

Manager Travis Mross will capitalize on their significant TxDOT experience to guide the team through the design-build process. Renowned Lead New Harbor Bridge Designer David Goodyear will ensure that his elegant design comes to life. As Substantial Completion approaches, Maintenance Manager Claudio Gigliobianco will begin to assume more responsibility, ultimately taking over as Project lead **(Figure 3).**

We have identified Robert Delouche as Design-Build Coordinator. Robert's proven experience performing this work will ensure the design, construction, and maintenance teams are working together to provide a thoughtful design that incorporates our construction and maintenance plans.

Our subcontractors are also an integral part of our team. We provide them with well-defined scopes of work, including quality and schedule requirements, and clearly and consistently communicate our expectations.

Our comprehensive plan of monthly, weekly, and daily meetings encourages the flow of information among staff at all levels.

"We are dedicated to the success of the Harbor Bridge Project and have committed some of our most talented and qualified individuals as Key Personnel. They will be fully available as required by their role."

TRAYLOR ZACHRY FLUOR

Figure 3: TZF Detailed Organization Chart

Texas Department of Transportation

Project Manager
Wayne Jones
ENR Award of Excellence Winner

EXECUTIVE COMMITTEE

Lead Maintenance Manager
Claudio Gigliobianco

New Harbor Bridge Maintenance Engineer
Howard Kallman, PE
38 years of experience managing infrastructure

Design Manager
Wil Dooley, PE
16 years with FHWA

Lead New Harbor Bridge Design Engineer
David Goodyear, PE, SE, PEng
National Academy of Engineering

Lead Roadway Design Engineer
A.J. Widacki, PE

Lead Roadway Bridge Design Engineer
Thomas Stelmack, PE

Lead Drainage Engineer
John Perez, PE, CFM

Design-Build Coordinator
Robert Delouche, PE

Construction Manager
Travis Mross
13 years constructing projects for TxDOT

Deputy Construction Manager
Skylar Lee, PE
Constructing the world's widest cable-stayed bridge

Construction Segment Superintendents
Cable-Stayed Structure
North High Level Approach
South High Level Approach
Crosstown Interchange
Bridge Removal/Restoration
600 staff in Texas available to support

Lead Demolition Manager
Clyde Joseph

Public Information Coordinator
Sonia Jimenez, JD

ROW Acquisition Manager
Thurman Black

Utility Manager
Garrett Coffin, PE
FHWA Excellence in Utility Award

Sustainability Manager
Peter Elza, PE
LEED AP BD+C

Safety Manager
Ricky Gorley

Lead Quality Manager
Brett Daniel, MBA, PE, CQM/OE
Received two Pathfinder Awards for quality

Professional Services Quality Acceptance Manager
Mirek Olmer, PE
AS9100:2009 (rev C) Lead Auditor Program Certificate

Construction Quality Acceptance Manager
Carlis Callahan, PE
40 years overseeing QA programs

Environmental Compliance Manager
Eddie George

Design Staff

Roadway Design Support
Shahriar Azad, PE

Landscape Architect
Mark Smith, PLA

Steel Corrosion Expert
Dale Doughty, PE

Concrete Durability Expert
John Gajda, PE

Geotechnical Engineer
Dan Brown, PhD, PE, D.GE

Lead Demolition Engineer
Sajid Abbas, PhD, PE

Bridge Architectural Designer
Michael Fitzpatrick

Architectural Lighting Designer
Ken Douglas, IALD, IES

Maintenance of Traffic Engineer
Barry Erlandson, PE

Soil Exploration
Clint Harris, PE

Environmental Permitting/ Hazardous Materials
Larry Cox

15,000 designers available to support

E. Summary of Project Development Plan

Technical Solutions Summary

Project-Wide Solutions

The technical elements of our design, construction, aesthetics, and communication approach result in clear benefits to the Project and the community, corridor-wide **(Figure 4)**.

LANDMARK STRUCTURE

Driven by the need for durability and the ability to withstand the elements, our slender concrete structure is also strikingly beautiful.

- Towers gently curve and resemble a ship's mast
- Cathedral of cables along the main span
- Singular visual vocabulary of the main span, approaches, and columns create a long, flowing structure
- Customizable canvas of color across the night sky
- Inviting shared-use path with a stunning view from the tallest bridge in Texas

LONG LIFE/ LOW MAINTENANCE

When it comes to durability and maintainability, the combination of small details provides big results.

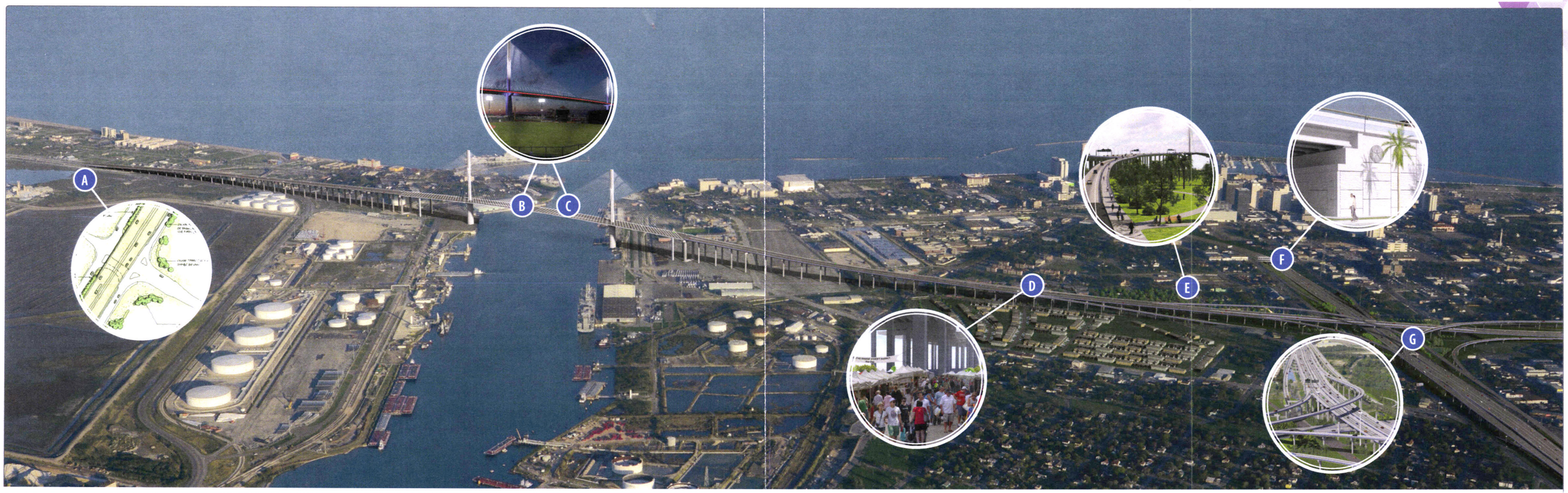
- Reinforced concrete structure
- No structural steel
- Clear cover, high performance concrete, and epoxy coated reinforcing on the main span
- Sheathed and discretely situated cable stays within high-performance anchorages
- No voids or confined spaces in our open concrete design
- Integral pier caps reduces the number of bearings and expansion joints

COMMUNITY CONNECTION

Creative design and planning solutions will closely connect once separate neighborhoods in every direction—north to south, east to west.

- Capitalized on available open space in multiple areas to provide a framework for the public to develop gathering spaces
- Protected residential property
- Maintained local connections
- Increased open space
- Enhanced pedestrian access and experience
- Customizable aesthetics for each neighborhood

Figure 4: Technical Solutions Produce Benefits Project-Wide



NORTH

- (A) Optimizations protect the Rincon Channel Wetland
  - Well-planned construction staging keeps North Beach traffic moving
  - Roadway refinements reduces ROW needs

MAIN SPAN

- (B) Durable concrete main span
- (C) Iconic bridge structure with programmable, kinetic aesthetic lighting
  - Smaller footprint provides larger navigation channel clearances
  - Stay cable plane provides an additional six-foot buffer for pedestrians
  - Single pylon mast and dock replacement reduces impact to the Port

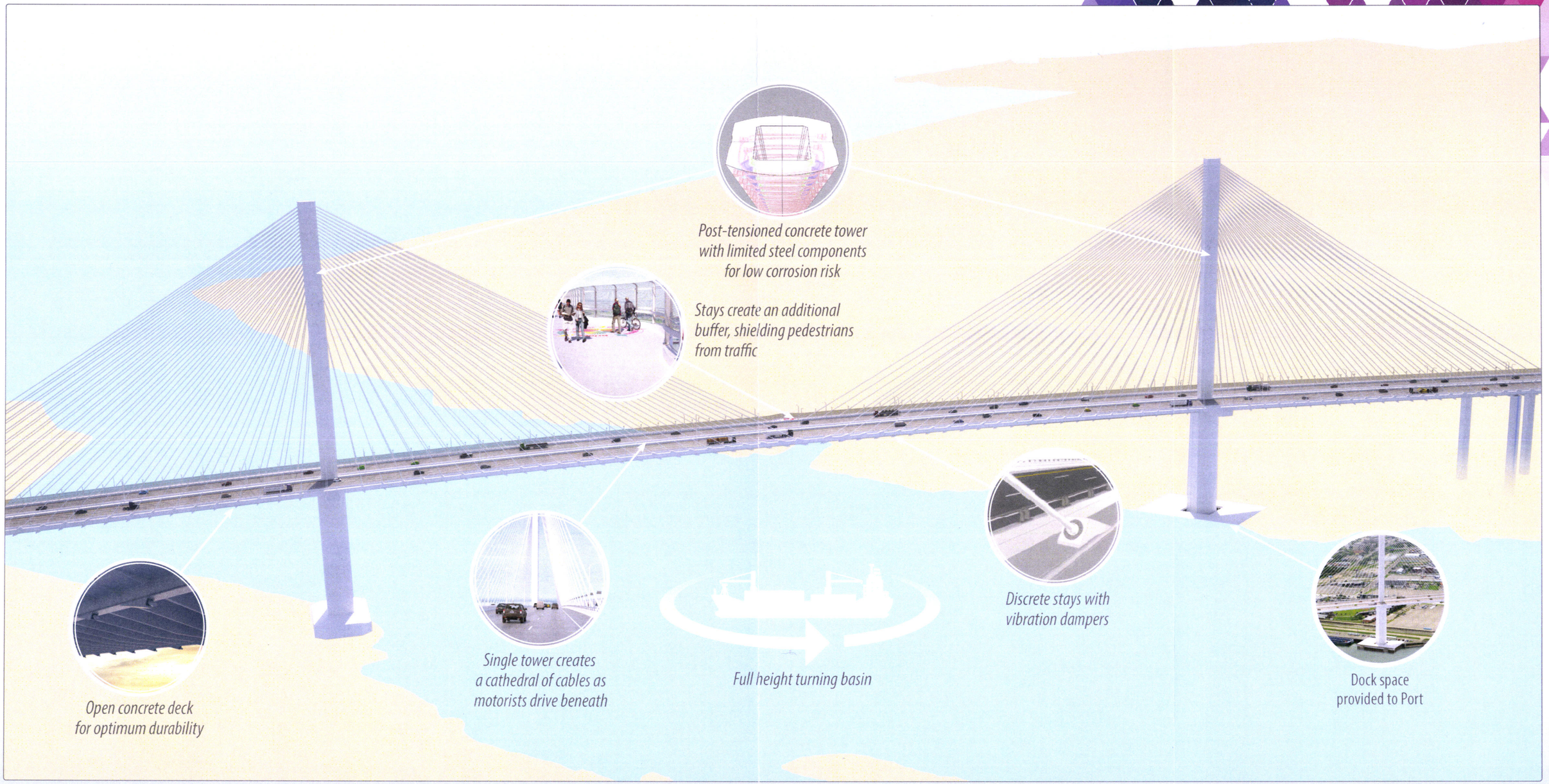
SOUTH AND INTERCHANGE

- (D) High Touch collaboration with the community to provide an inviting gathering area beneath the south approach
- (E) Shared-use path connection is safer for pedestrians
- (F) Creative neighborhood-focused aesthetics
- (G) Direct connectors maintained through construction staging
  - Low-impact design for enhanced stormwater treatment using retention ponds and bioswales
  - 40 percent of utility relocations avoided through design to lower cost to the City

Elegant, Exciting, Durable: Main Bridge Solutions

The details of our main span design reveal a structure that will withstand the elements while promoting economic activity, both through augmented Port capacity and increased tourist interest (**Figure 5**).

Figure 5: Main Span Solutions



Keeping the Community Connected: Staging, Maintenance of Traffic, and the New Crosstown Interchange

Our approach to construction sequencing helps to maintain traffic, minimizing impact to the environment, the community, and the traveling public. Because of the complexity of the Crosstown Interchange and the multiple types of traffic movement it affects, our focus addresses both regional and local connections. Regional traffic moving between the highways on the existing direct connectors are maintained with a series of temporary connectors designed to provide a similar level of service. Local traffic is maintained by thoughtfully sequencing our construction activities – for example, constructing the new Lake Street road before dismantling Winnebago Street, allowing Hillcrest residents to continually access the retirement center.

Dividing the Project into blocks is the best way to address both regional and local connections. Staging is customized according to the needs of each area **(Figure 6).**

Notable improvements to the adjacent neighborhoods will be evident once the Project is finalized **(Figure 7).** Through our refinements to TxDOT's schematic design, traffic operations will be improved and local and regional connections will be made permanent. Beyond traffic considerations, our design enhances pedestrian and park/community gathering facilities to draw residents to the outdoors, and aesthetic features that promote neighborhood pride.

Figure 6: Project Areas, or "Blocks"

Figure 7: Notable Interchange Improvements

NOTABLE IMPROVEMENTS

A. Efficient precast girder design lowers long-term maintenance costs for TxDOT

B. Smaller footprint provides more open space for the community park

C. Detailed plan to work with neighborhoods and provide a high functioning park and community gathering space

D. Longer IH 37 structure for friendlier pedestrian connection between Washington-Coles and Downtown Corpus Christi

E. Enhanced stormwater treatment that follows low impact development guidelines

F. Enhanced North Port Avenue overpass to improve entrance into Washington-Coles

G. Coordinated design spans railroad tracks, levee system, and salt flats wetland to lessen construction impact

H. Safer access to shared-use path by removing street crossing

I. Construction staging maintains direct connector movements

J. Slight alignment shifts to reduce parcels needing to be acquired

Project Management Plan Summary

At the core of TZF's Project Management philosophy is our High Tech-High Touch method of communication at all levels. Starting with Project Manager Wayne Jones all the way through our organization, we have prioritized the proactive, open, current, and accurate communication that will foster an atmosphere of trust and accountability and ultimately result in a successful Project **(Figure 8).**

Figure 8: High Tech-High Touch Approach Impacts all Areas of Project Management

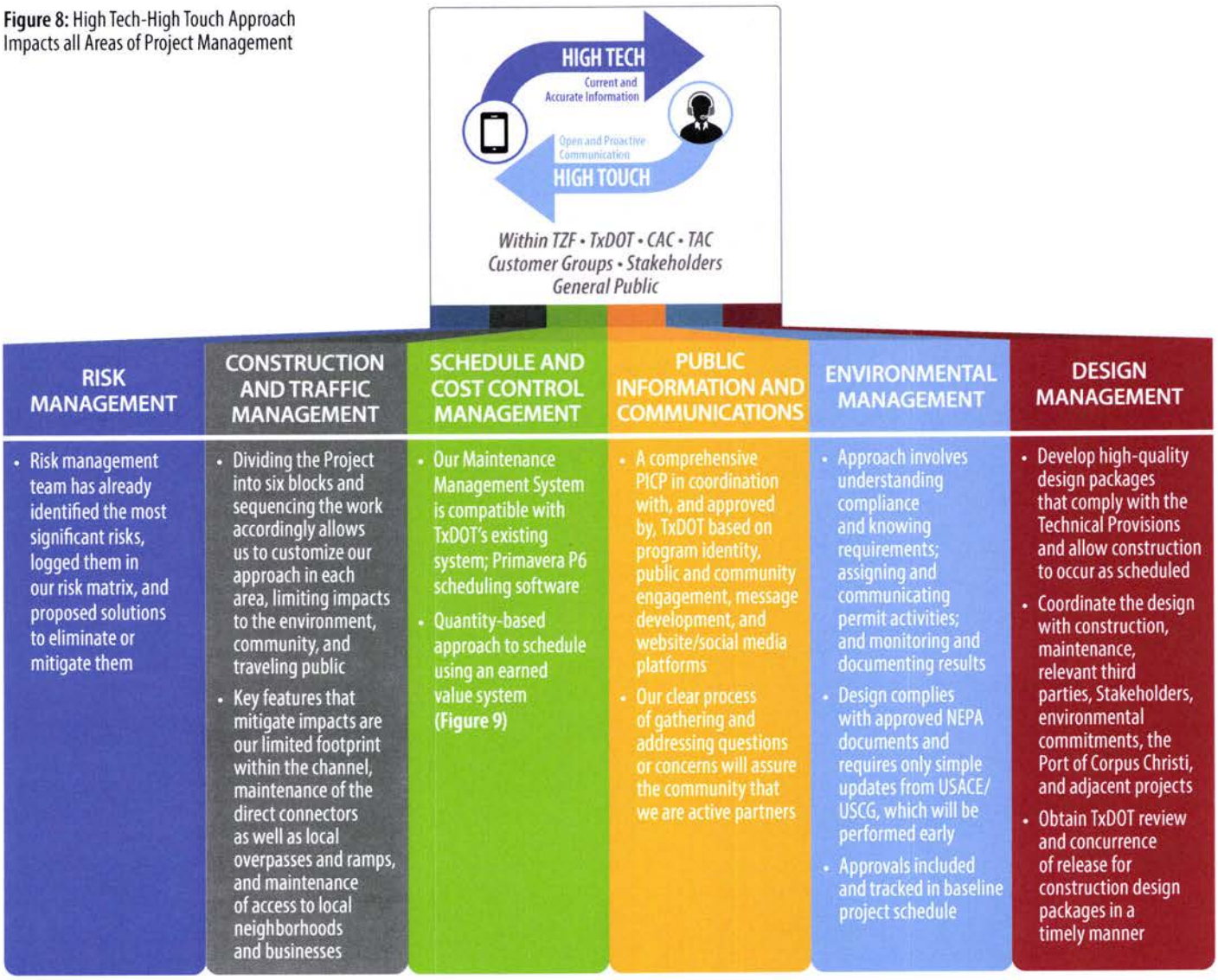
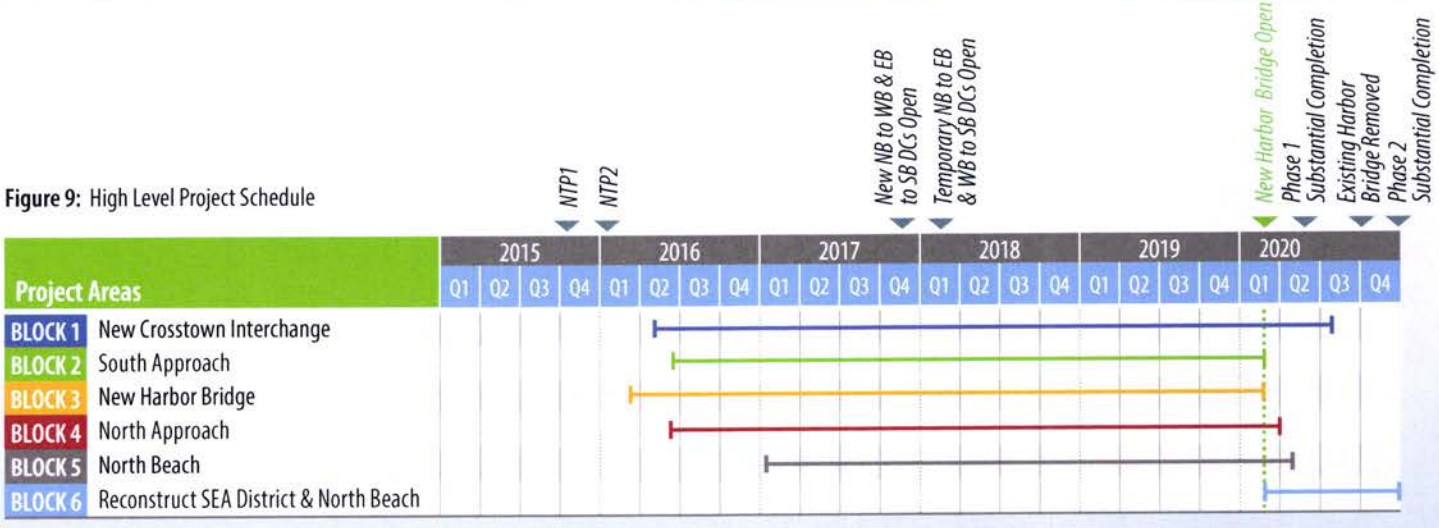


Figure 9: High Level Project Schedule



Maintenance Management Plan Summary

Effective maintenance begins in design. Ours includes durable, low maintenance solutions that will reduce TxDOT's costs even after the 25-year O&M period is complete. These solutions maximize the use of concrete to improve corrosion resistance within our structures and provide highly durable concrete pavement.

Once we enter the O&M period, TZF's Maintenance Management Plan (MMP) provides the processes and procedures needed. It will comply with the Technical Provisions, assure a smooth transition, and maintain a safe and pleasant experience for customers. Maintenance needs have been considered from day one of the proposal process, ensuring final design results in an asset that will meet TxDOT's requirements for service and handback.

Team Continuity

Our team is led by maintenance professionals Lead Maintenance Manager Claudio Gigliobianco and New Harbor Bridge Maintenance Engineer Howard Kallman. Their 10-plus years of maintenance experience working together on similar roadways and structures provides the right experience for the Project. They will lead a maintenance team that will be assembled during the design and construction period and continue into O&M.

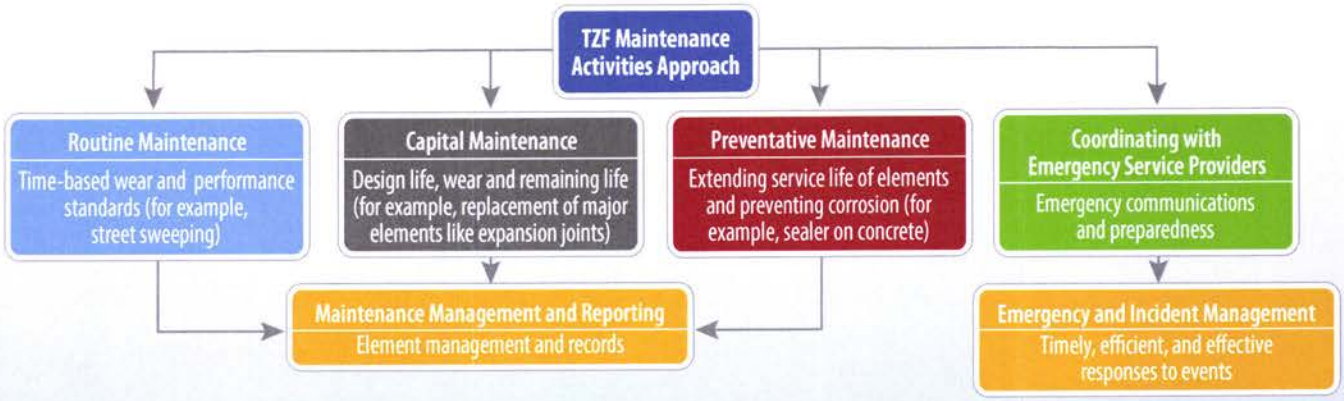
The most important benefit to our team, however, is in our structure. The member firms of TZF are partners from design to construction and through the O&M period. This consistency means that there will be no significant transition period between construction and maintenance, since the team has been on board since NTP1. It also means that TxDOT will enjoy a firm commitment from the same three fully invested companies all the way through the 25-year maintenance period.

Maintenance Activities

The MMP, updated annually, will include the timing and approach for O&M work and the anticipated schedule for routine maintenance, preventative maintenance, capital maintenance, renewal work, and operational services to be provided during the year **(Figure 10).** The entire maintenance staff has responsibility for monitoring maintenance conditions and inspection in their daily work. Findings will be reported to the MMS, and Claudio will have the responsibility to ensure work orders are developed to meet response times and work efficiencies. The plan for routine, preventative, and renewal work is based on asset management techniques combined with life cycle analysis.

The selection of elements such as concrete pavement means less overall maintenance will be required.

Figure 10: Maintenance Management Approach



Quality Management Plan Summary

TZF's Executive Committee has empowered the quality management team to develop and operate the quality program, effect change, and provide input to the managers responsible for production. To provide the appropriate checks and balances required, TZF has established direct lines of authority and communication between the Executive Committee and the corresponding quality management staff **(Figure 11 & 12).**

Figure11: Design-Build Quality Management Organization

Figure12: Design-Build O&M Organization

Lead Quality Manager Brett Daniel will develop and manage the QMP. The QMP has three component quality plans: (1) the Professional Services Quality Management Plan (PSQMP), (2) the Construction Quality Management Plan (CQMP), and (3) Operations and Maintenance Quality Management Plan (OMQMP).

Professional Services Quality Management Plan

The PSQMP establishes the quality control policies and procedures for all design elements. These quality procedures specifically address internal and external reviews, formal checking, certificates of compliance, and release for construction (RFC) drawings and specifications. The PSQMP establishes a comprehensive quality program for design with traditional design and specification checking for engineering designs, and an independent design check for structures.

Construction Quality Management Plan

The CQMP defines QC inspection checklists, QA inspection and test reports, and non-conformance reports (NCR). It also includes procedures for managing document control, undertaking procurement activities, obtaining permits, documenting safety performance, responding to owner directives, submitting shop drawings, developing as-built documents, and processing closeout documents.

Operations and Maintenance Services Quality Control Plan

The OMQMP details procedures to provide an ongoing safe facility, preserve capital investment, and maintain the quality of the facility. The OMQMP also contains procedures for design quality, should a particular maintenance element require design work. Major procedures include performance measurement, emergency response, and scheduled inspections. The Maintenance QC Manager will prepare an annual report for TxDOT that includes an assessment of maintenance service achievements, shortcomings, traffic control compliance, and corrective actions.

Acceptance Testing and Inspection

TZF and Volkert will develop a Project-specific inspection and testing plan prior to the start of construction. This plan establishes written procedures and identifies both the on- and off-site testing and inspection requirements. Acceptance reports will be recorded in the document control system and be accessible to TxDOT, Volkert, and TZF. Inspectors will independently inspect work at either defined hold points or through regular observation and monitoring according to our inspection and testing plan.

Quality Management Documentation Procedures

The QMP establishes detailed procedures that define the controls needed for the identification, retrieval, retention, and disposition of all quality records generated during the Project. We will use innovative technology to provide instant access to current design and quality documents. Quality records will be kept in a centralized document control system and made available in electronic and hard copy formats.

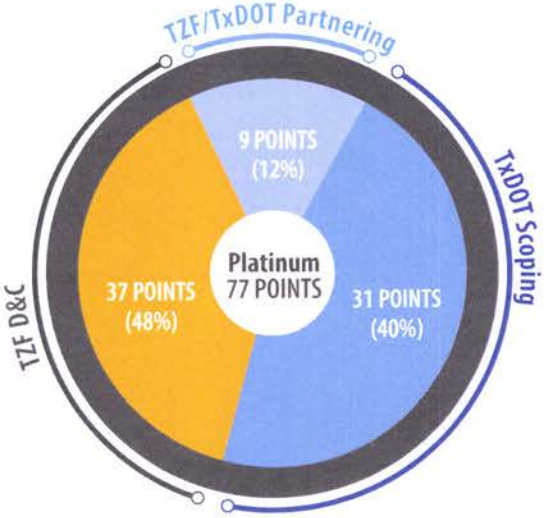
Documenting and Curing Construction Deficiencies

TZF's priority is to prevent noncompliant work. The QMP will include detailed preventative processes and procedures to promote planning of the work and to identify and communicate potential quality issues so adjustments can be made as appropriate. Preventative actions occurring concurrently include detailed work planning, continual design improvement, identification of potential issues, and ongoing training.

Approach to Sustainability

TZF is fully committed to designing, building, and maintaining the Project in a sustainable manner. We expect to achieve the sustainability ratings requested by TxDOT using Federal Highway Administration's (FHWA) Infrastructure Voluntary Evaluations Sustainability Tool (INVEST) 1.1 program. Based upon the series of sustainability charrettes we have already held, we created a Sustainability Plan that identifies 77 achievable points for the Project Development module and 110 points for the O&M module. Working together, TZF and TxDOT will achieve a Platinum rating for the Project Development module **(Figure 13).**

Figure 13: Approach to Obtaining Platinum Rating



TZF's emphasis is on optimized design (building the right solution), maintaining community linkages, and using efficient construction techniques and equipment. This is a natural extension of the values embodied by each team member.

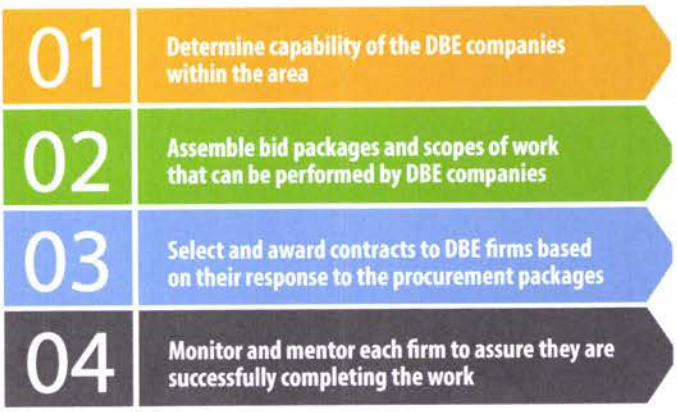
Reducing the carbon footprint of the Project is a way to significantly decrease impact to the environment. Doing so requires understanding the energy used for construction, as well as the energy embodied in the material we use. To establish an effective program, TZF will track the amount of electricity and fuel expended and compare it to the number of man hours spent constructing the work. Use of this metric will ensure we understand our carbon footprint and provide information that will allow further development of processes for reduction.

Finally, the use of continually reinforced concrete pavement (CRCP) as the predominate roadway surface significantly reduces the amount of renewal work required during the maintenance period. This further reduces material quantities and the energy expended over the next 30 years.

TZF's strategy for a sustainable O&M period is based on a well developed O&M Plan and an assessment of our performance throughout the contract term to ensure procedures and goals are being met. Serving as the "local agency" for purposes of evaluating INVEST, our team's strategy identifies enough points to achieve INVEST Gold for the O&M Module, providing us the ability to exceed TxDOT's INVEST Silver requirement.

F. Approach to Satisfying DBE Requirements

Figure14: Approach to Working with DBEs



All three members of TZF have consistently demonstrated an unyielding commitment to the growth and development of disadvantaged business enterprises (DBEs). Our team will be proactive in exceeding the level of participation identified by TxDOT. We have an in-depth understanding of the local DBE subcontractor and vendor markets and are committed to providing maximum opportunity for these businesses to participate in the execution of the work **(Figure 14).**

Our commitment to promoting DBEs will be demonstrated by a series of programs, initiatives, and mentor-protégé alliances. TZF will implement mentor-protégé relationships and on-the-job training programs to facilitate the development of the DBEs in their field of expertise. As part of the mentor program, we will host educational workshops, provide assistance and support, and maintain an open door policy with DBEs to ensure their success on the Project.

It is our firm commitment to exceed the Project's goals of nine percent DBE participation while helping each firm succeed in a meaningful role on the Project.

G. Approach to Satisfying On-the-Job Training Requirement

TZF will implement an on-the-job training (OJT) program sponsored by the Texas Chapter of the Associated General Contractors of America (AGC of Texas), approved by TxDOT, and compliant with the federal OJT program to develop the skills and capabilities of personnel, including training opportunities for entry-level employees. The program will help underserved populations, including females and minorities, gain access to long-term career opportunities. All subcontractors working on the Project will also be encouraged to participate in the OJT program. Due to the length of the O&M period, TZF is committed to providing these services to embark on a 25-year job creation that will benefit the local community.