

# TECHNICAL PROPOSAL SECTION A.

## Executive Summary

ENERGY SECTOR  
Roadway Repair Project

## EXECUTIVE SUMMARY

The Kiewit Infrastructure South Co. (Kiewit) design-build team has investigated the challenges specific to the Energy Sector Roadway Repair Project (Project) and has developed an approach to meet the Texas Department of Transportation's objectives of fast, safe, high performance roadway reconstruction. Our resources and proven collective experience enable us to deliver the Project on budget and within **420 days** with the highest regard for safety, quality and the environment.

### (a) Changes to QS

Larry Parks will replace Tim Dutton as Safety Manager. With nearly 30 years of industry experience, Larry has managed safety programs for two mega design-build transportation infrastructure projects, the \$1.3 billion I-25 Transportation Expansion (T-REX) in Denver and, most recently, the \$1 billion DFW Connector. Aside from this change, the design-build team and its key personnel remain intact.

### (b) Proposed Management, Decision-Making, Operational Structure

#### Cooperation and Coordination through a Fully Integrated Management and Operational Structure

The Kiewit team has integrated its project management and operational structure to include the Texas Department of Transportation (TxDOT) in all phases of design and construction, which will be critical to project success. Participation of TxDOT representatives and other stakeholders will be incorporated into the operational structure through shared communication and documentation technologies, participation in task forces and in coordinated meetings. Our approach, depicted below, shows how the design-build team will partner with TxDOT at every step of project management: project, area and location.



**Project Management:** Collaborating with the TxDOT CDA Program Director, Jay Knez will provide senior executive oversight of this Project. Jay served as the project manager of the DFW Connector, which reached substantial completion nearly one year ahead of the original schedule.

TxDOT's project manager will coordinate with industry veteran Troy Heckmaster. He successfully managed the Missouri Department of Transportation (MoDOT) Safe & Sound Bridge Improvement Program, which rehabilitated 554 bridges across the state. Our approach to the Project will be based on this similar program.

David Williams with H.W. Lochner Inc. (Lochner) will serve as the project design manager, overseeing the integration of design concepts. He will serve as TxDOT's single point of contact for design reviews and approvals.

Kiewit's Gordon Peterson will manage construction quality control. With more than 30 years of experience, Gordon's strengths lie in quality acceptance and control for heavy civil infrastructure projects.

Bill Compton of Lamb-Star Engineering LP (Lamb-Star) will handle independent quality acceptance, following TxDOT requirements such as those outlined in the TxDOT Procedures and Guide Schedule for Testing.

**Area Management:** Four experienced area managers with direct oversight of jobsites in each TxDOT district will report to Randy Martin, who will serve as construction manager. These area managers will communicate and coordinate with their respective TxDOT district representatives through task forces and meetings.

**Location Management:** Location superintendents who oversee craft superintendents will report to their respective area manager, ensuring that information about each location is communicated to TxDOT and Kiewit area and project management.

### Decision-Making

Decisions are made and issues are resolved at the lowest level, beginning with craft and location superintendents on individual jobsites. The Kiewit design-build team will implement a proven “step” approach to escalate decision-making appropriately. Mirroring our project management approach, the escalation process will include TxDOT representatives at every step. Troy Heckmaster has the authority to make all decisions on behalf of Kiewit. Should decisions need to be brought to a higher management level, Jay Knez will work directly with TxDOT’s Frank Holzmann or other appropriate counterpart.

### Key Personnel Commitment

Kiewit and Lochner are providing TxDOT with a team of experts in design-build delivery and have provided required commitment letters for all key personnel. The firms also have committed to providing 100% participation of required key personnel.

## (c) Project Development Plan

### Achieving Earliest Possible Completion Safely

Kiewit’s Project Development Plan takes a strategic, regional approach that dedicates resources and management teams to each of the four TxDOT districts. As stated, the approach is modeled after MoDOT’s Safe & Sound Bridge Improvement Program. The team repaired or replaced 554 bridges 14 months ahead of schedule using this approach.

Our technical solutions and management plan expedite construction while maintaining mobility and minimizing negative impacts associated with the Project.

### Technical Solutions

Kiewit’s design-build team has the resources and construction sequencing plan to achieve substantial completion of this 12-county, four-district Project on budget and within **420 days**.

Each district’s unique jobsite requirements are considered in Kiewit’s staging and sequencing approach, even as construction is launched simultaneously at multiple locations. This area-specific approach, with local management and sufficient resources, will expedite construction while minimizing impact to the traveling public and the environment.

Construction will be accomplished in seven steps or less at each jobsite. These steps will take place one after the next, eliminating construction-related downtime.

Maintenance of traffic plans will be developed in coordination with TxDOT through joint pre-construction inspections to determine each jobsite’s maintenance score, as well as daily traffic volume and parameters.

Laydown/maintenance yards at each jobsite, supplied with equipment and materials, will avoid downtime and reduce the amount of construction-related traffic. Each site’s crews will maintain night operations, working at off-peak hours as much as possible. TxDOT-approved alternate routes and traffic control devices will further improve safety and mobility in the work zone.

Project design and construction will stress avoidance and mitigation of impacts to the environment within the Project’s geographical limits.

### Project Management Plan

Kiewit’s regional strategy establishes four area offices, near TxDOT offices, in Cotulla, Nixon, Tilden and Karnes City (which will also serve as a central hub office).

Each area office will operate under a dedicated area manager who will report to Randy Martin. Randy and area managers will report to Troy Heckmaster.

Innovative technologies will further expedite construction while providing TxDOT and other stakeholders with the accurate reporting and documentation to meet regulatory requirements and track Project progress.

### Communication and Documentation

Proven technologies and methods that will allow for effective communication and accurate documentation across multiple locations include:

- SharePoint for document control and management
- Field Tablets for real-time updates to all work plans and quality and maintenance inspections from any location
- Virtual Plan Tables for linking document folders to the document control site
- Integrated task forces
- Coordinated internal meetings

TxDOT representatives and other stakeholders will be able to participate directly in task forces and meetings.

Superintendents and managers will use industry-leading technologies, such as equipment and material management application FiveCubits, to monitor and document field productivity. Using these technologies, TxDOT will have access to relevant data and will receive accurate Project management reports.

### Minimizing Impacts to People and Property

Kiewit's plan is to minimize impacts to people and property by expediting construction. We will provide each of the four districts with sufficient equipment and skilled personnel to launch roadway repair work simultaneously across multiple Project locations.

Grading, drainage and paving crews will be sequenced concurrently, yet differently, based on individual jobsite needs for a customized approach. Crews will maintain night operations, work at off-peak hours, and coordinate material delivery.

Our approach to traffic management will ensure safe mobility through each location, while minimizing inconvenience to people, businesses and communities.

In developing the traffic management plan (TMP), we considered critical factors such as specific energy sector traffic patterns, constructability of designs, roadside safety, separation of work from traffic, access to work zones, and impacts

to schools, businesses, neighborhoods and emergency services.

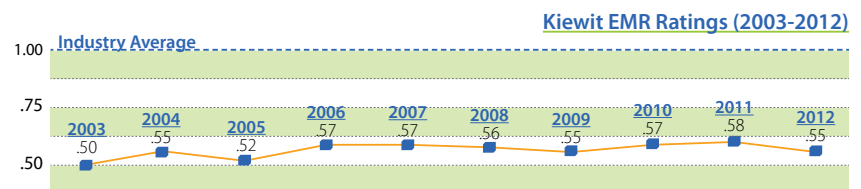
The TMP will be based on TMUTCD guidelines and will include the following:

- Proactive public information using a variety of media
- Multiple shifts to limit lane closure times
- Approved traffic control devices
- TxDOT-approved alternate routes
- Coordination of work with school schedules, emergency services, special events and other community-related activities

Kiewit will use detailed work plans that include access points and haul routes to ensure right of way (ROW) and adjacent properties will be protected.

### Safe Construction, Safe Mobility

Kiewit has consistently held one of the best safety records in the industry. With a ten-year average of .55, Kiewit's Experience Modification Rate (EMR) is consistently lower than the Industry Average of 1.0, shown below. TxDOT can have confidence the Project will benefit from our comprehensive approach to work zone safety for both construction staff and the traveling public.



In addition to assigning Safety Manager Larry Parks to the Project, we will incorporate safety accountability at every level through our two key programs: Behavior Based Safety Management (BBSM) and Craft Voice in Safety (CVIS).

BBSM trains and empowers all employees to take responsibility not only for their own safety, but for the safety of others at all times. Employees are trained to observe safe behaviors, offer feedback, address safety concerns, measure safety data and reinforce good safety behaviors.

CVIS is a program that recognizes craft workers are on the front line of safety. The program establishes teams of craft workers empowered to perform inspections, tour the work, interview other crew

members for input on how to improve safety, and enact practical changes in day-to-day activities.

Attention to work zone safety ensures safer, faster mobility for the public. Consideration and planning for public safety is the focus of Kiewit's "Play of the Day," a meeting of all jobsite personnel, including traffic maintenance personnel, that focuses on safety and makes them aware of equipment and material deliveries, weather conditions, traffic switches and any other anticipated events that could impact safety and mobility through work zones.

### Minimizing Environmental Impact

In collaboration with TxDOT, the team will develop and implement a comprehensive environmental protection program with the objective of avoiding, minimizing or mitigating environmental impact. Of the 15 potential environmental-related risks identified, only one is ranked as a high risk – lead time to receive a stormwater pollution prevention plan permit (SW3P). To stay on schedule with construction start dates, we will review any MS4 requirements and prepare an SW3P that complies with Texas Pollutant Discharge Elimination System (TPDES) General Permit for Construction, including SW3P best management practices.

TxDOT representatives will be included in environmental compliance team meetings and training for Project personnel.

### Quality That Exceeds Expectations

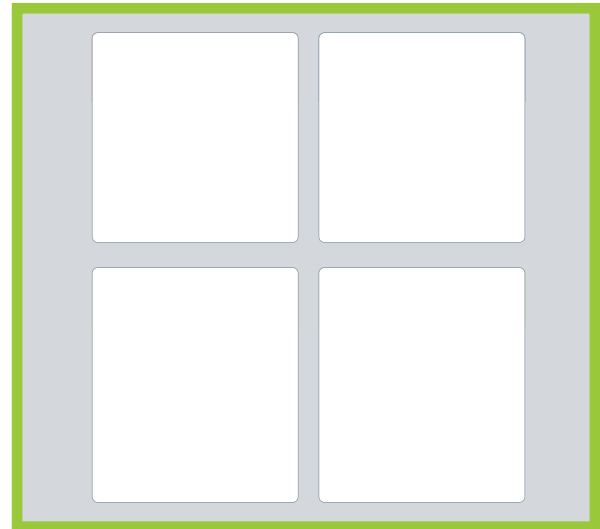
Our comprehensive Quality Management Plan (QMP) is compliant with ISO 9001:2008 standards, such as strong customer focus, direct involvement of top management, a quality process approach and continual improvement.

Construction Quality Control Manager (CQCM) Gordon Peterson will lead implementation of the plan and will serve as TxDOT's main point of contact on quality issues. He will ensure quality documentation is made available to TxDOT through SharePoint. TxDOT and other stakeholders will have the opportunity to participate in quality task forces and meetings.

QA inspectors will verify that QC procedures are followed and will independently inspect work. Our QMP includes multiple levels of auditing by quality managers, Kiewit upper management, and

third-party auditors. However, *all quality managers will have the ability to stop work, effect changes in procedures and issue nonconformance reports.*

One tool that will be key to the Project's quality program will be the four-square quality matrix, shown below. This matrix will ensure that Kiewit and TxDOT management work together to identify, track and mitigate issues before they become risks.



### Dedicated to DBE Success

Kiewit has a proven track record of commitment to DBE and small business success. Kiewit alone has paid out \$270 million of \$388 million committed to over than 180 minority and business in the past four years.

We are committed to meeting or exceeding the 7 percent DBE requirement for this Project. Our commitment is exemplified in that we have already included four DBE firms with excellent track records on TxDOT projects in the team: Lamb-Star, Corsair Consulting LLC (Corsair), CivilCorp and Cox|McLain Environmental Consulting (CMEC). We have identified nine more services for potential DBE involvement, such as trucking, drainage, signage, and striping.

On Nov. 4, we held an outreach event in San Antonio that attracted 35 small businesses, and we are considering each one to determine those most appropriate to add value to the Project. We will also tap suppliers in each district to provide as many local opportunities as possible.

Work packages will be subdivided to encourage DBEs to bid. Capabilities and capacities of local companies are taken into account, along with the scope of the work. Subcontractors will report to designated Kiewit managers for local, direct support and supervision.

Our DBE mentoring program includes educational workshops and training. Since subcontractors are held to the same safety, quality, environmental and compliance standards as employees, they are integrated into our own staff meetings and trainings as well.