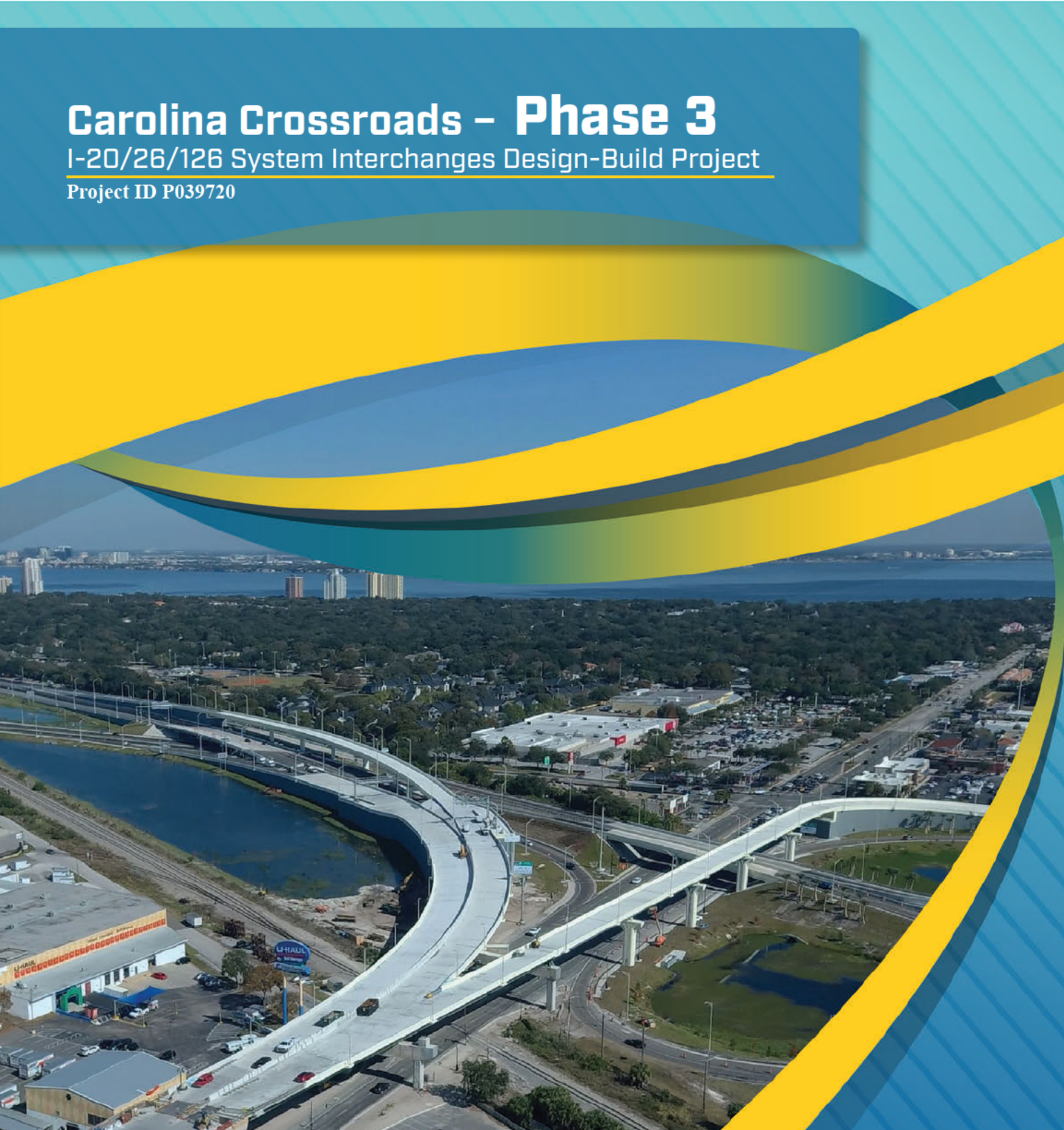
Carolina Crossroads – Phase 3

I-20/26/126 System Interchanges Design-Build Project

Project ID P039720



Submitted to:

CAROLINA CROSSROADS

SCDOT

Submitted by:

Kiewit

Navigation Page

This document includes links as requested in the RFQ. A blue border is placed around those items that link to resume or project pages.

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Bookmarks have been set at each tab for easy navigation.

Narrative

3.2 | INTRODUCTION

3.2.1 Entity Information

Kiewit Infrastructure South Co.
(a DE corporation since 1969)
Benjamin J. Carnazzo,
Sr. Vice President & District Manager
5617 North Rhett Ave
Suite 125 D & E
North Charleston, SC 29406
p: 770.487.2300 | Ben.Carnazzo@kiewit.com

3.2.2 Proposer Points of Contact

Timothy J. Cleary
Project Manager
5617 North Rhett Ave
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North Charleston, SC 29406
p: 770.487.2300
c: 404.219.9404
Tim.Cleary@kiewit.com

Authority to Sign
Benjamin J. Carnazzo,
Sr. Vice President
5617 North Rhett Ave
Suite 125 D & E
North Charleston, SC 29406
p: 770.487.2300
Ben.Carnazzo@kiewit.com

3.2.3. Legal Name of Lead Contractor & Lead Designer

Lead Contractor:
Kiewit
Infrastructure South Co.

Lead Designer:
Kiewit
Engineering Group Inc.

3.2.4 Unique Entity ID for the Lead Contractor

MMG5U7ZS2DV5

3.2.5 Confirmed Commitment of Key Individuals

Kiewit confirms the commitment of Key Individuals identified in this submittal to the extent necessary to meet SCDOT's quality and schedule expectations. Kiewit also confirms they are available for the duration of the Project.

3.3 | TEAM STRUCTURE AND PROJECT EXECUTION

3.3.1 Organizational Chart, Team Structure, and Team Integration

The Kiewit Infrastructure South Co. (KISC) / Kiewit Engineering Group, Inc. (KEGI) Design-Build (DB) Team (herein the Kiewit team) is a nationally recognized leader in design and construction of complex highway and interchange systems. Our team, which includes key design subconsultants Rummel, Klepper & Kahl, LLP (RK&K), AECOM Technical Services, Inc. (AECOM), and Greenman-Pedersen, Inc. (GPI), the Project's Independent Quality Firm (IQF), brings innovative ideas and creative solutions to deliver projects safely, on schedule, and under budget, while striving to exceed SCDOT's goals and requirements for the challenging Carolina Crossroads Corridor Phase 3 Project (the Project).

COMMITMENT TO PARTNERING

As proof of Kiewit's commitment to the partnering process, 27 Kiewit projects have won the Associated General Contractors of America's Marvin M. Black Excellence in Partnering Award. This award recognizes that the hardest part of most projects is not simply about placing concrete, but building a foundation of understanding, trust, and support with all involved.

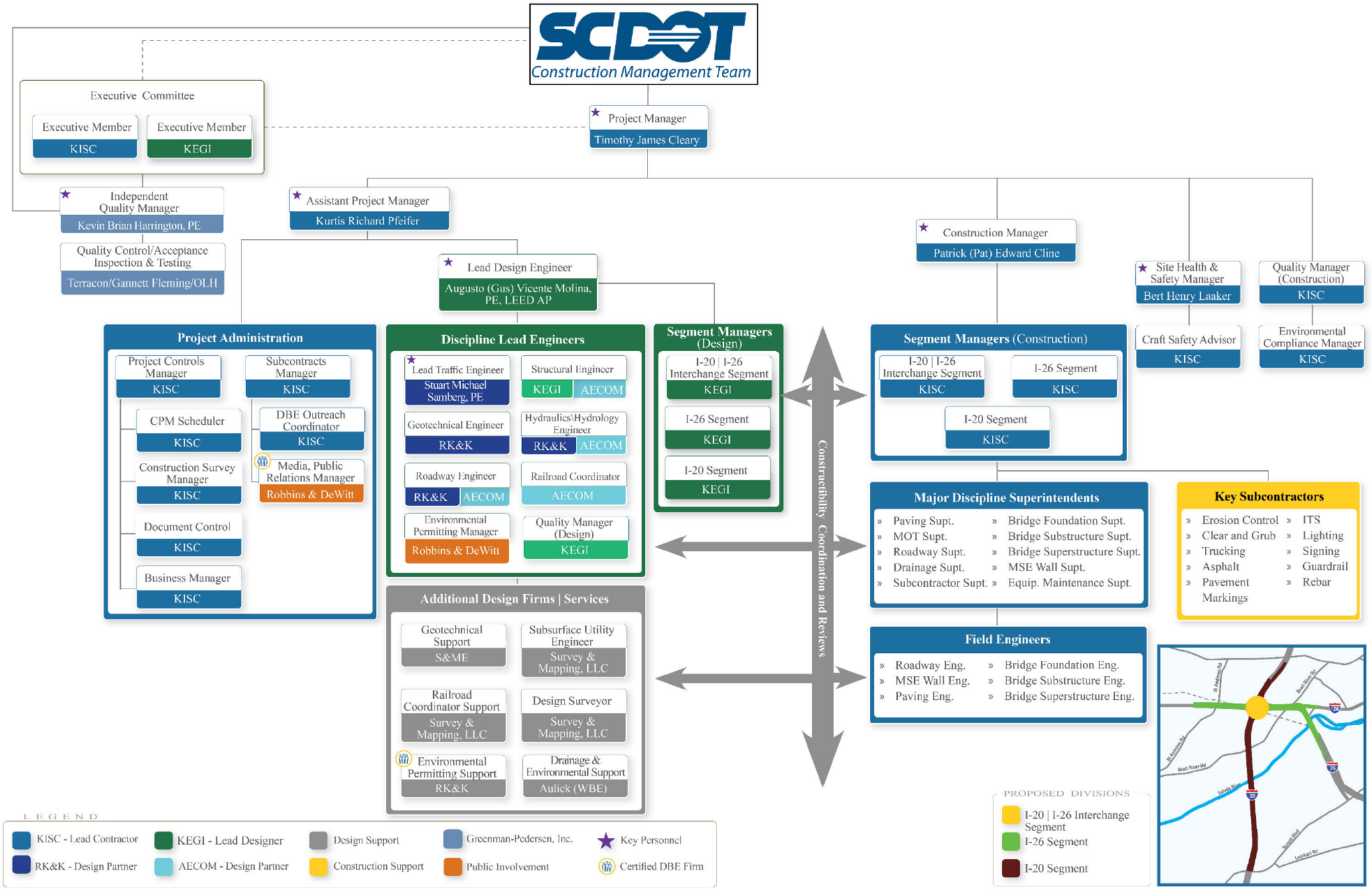
3.2.5 Confirmed Commitment Signatures of Key Individuals

Benjamin J. Carnazzo, Senior VP
Kiewit Infrastructure South Co.

Robert Allen, P.E., Design Engineering Director
Kiewit Engineering Group, Inc.

Organizational Chart

Exhibit 1-1 | Organization Chart

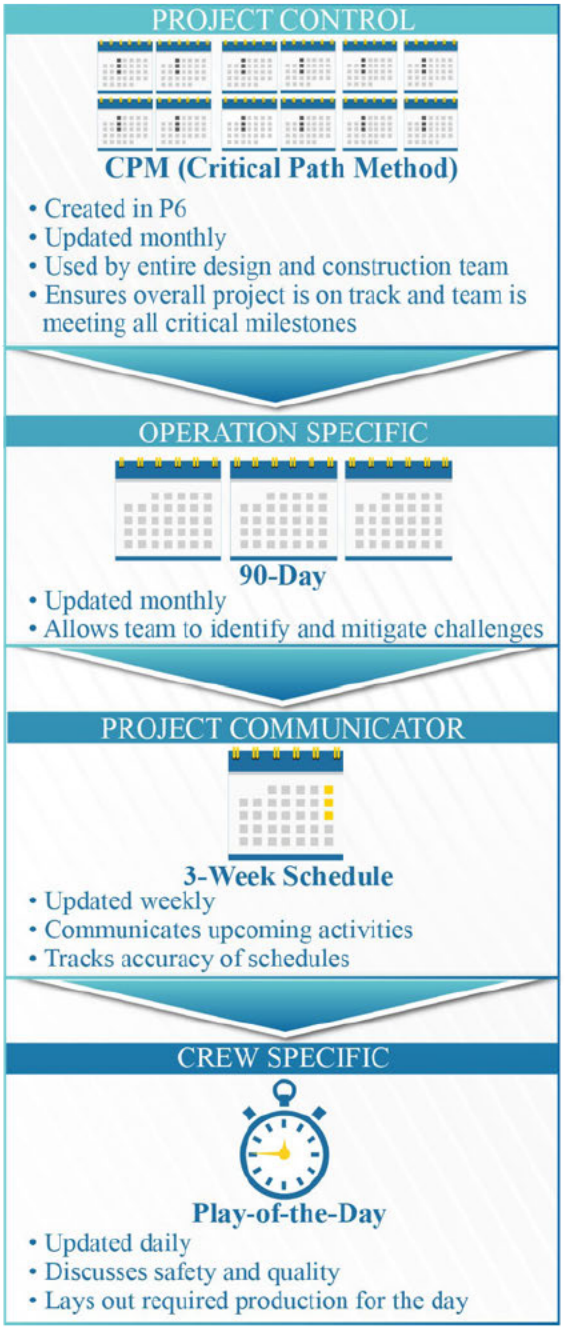


Critical Support Roles and Relationships

Offering design and construction services under one roof is unique to the industry and provides numerous benefits to SCDOT, as we manage project risks, allocate appropriate resources, and mitigate project impacts. **Project Management: Project Manager Tim Cleary** reports to SCDOT and Executive Management. A 34-year veteran of leading projects at Kiewit, Tim will provide direct oversight of our integrated design and construction teams, overseeing design progress, field operations, and schedule. Tim will be the primary person in charge for delivery of the Project, has full authority for final decisions and communicating those to SCDOT, with exception of activities associated with Construction Engineering and Inspection (CE&I) including Quality Control (QC) and Quality Acceptance (QA). Streamlined communications are critical to project success, so **Assistant Project Manager Kurtis Pfeifer and Construction Manager Pat Cline** report daily to Tim. He empowers the team's leaders to hold weekly task force meetings and report on progress for each discipline. These meetings facilitate open lines of communication among SCDOT, project stakeholders, design team members, construction team members, and subcontractors.

Project Administration: This group focuses on overall project controls and scheduling tools are used daily (see **Exhibit 1-2**) to minimize schedule risk and deliver the Project on time and to the highest quality expectations. This group includes scheduling, contract administration, survey, document control, accounting, and procurement managers.

Exhibit 1-2 | Tools for Schedule-Certainty



Executive Management: Our Executive Management team is accountable for delivering a safe and high-quality project to SCDOT's specifications. Executive Management participates in key project meetings, supports major decisions, facilitates client partnering, and provides guidance and resources to the project team. Their oversight ensures all facets of the Project consistently meet or exceed requirements.

Construction Management and Subcontractor Administration: This group will be led by **Pat Cline** who reports directly to Tim Cleary. Pat and Tim have worked together on large, urban interchange projects over two decades, including Intercounty Connector Contract B (ICC-B) and other projects totaling $2.9 billion. Pat will assign **Segment Managers for Construction** to each of the three segments shown on the organization chart. **Major Discipline Superintendents** for these segments will manage specific disciplines such as highway reconstruction, drainage, bridge replacements, and maintenance of traffic (MOT) efforts. Pat will provide input into the overall schedule, coordinate to prevent conflicts, and allocate resources for efficient field execution. A key aspect of our management philosophy is to maintain appropriate supervisor-to-craft ratios so work has proper oversight, ensuring that safety and quality are at the forefront of our operations.

Exhibit 1-3 | Benefits of Kiewit's Integrated Approach

1. A management structure with a single point of accountability
2. Evaluation and development of a range of technical solutions through a construction-focused design that is vetted and optimized for efficiency, cost, schedule, constructability, and risk mitigation
3. Fully integrated design and construction teams under one roof improves quantity accuracy, understanding of project scope, and seamless incorporation of the constructability into the design
4. Access to extensive national resources, whether equipment, personnel, or financial, all contributing to a stable, reliable team that provides the highest schedule certainty for on-time completion, enabling the team to easily add both design and construction resources to meet schedule milestones

Superintendents are responsible for managing self-perform and subcontracted crews. They monitor subcontractors' performance and confirm they meet project goals. Our subcontractors must acknowledge and agree to uphold the same standards of safety, quality, and environmental compliance Kiewit expects. Kiewit commits to meeting or exceeding SCDOT's DBE participation goal of 12.1% for the Project.

Safety, Quality Management, and Environmental Compliance: Safety Manager Bert Laaker has over 33 years of experience leading safety programs for Kiewit, and is responsible for developing the site-specific health and safety plan and providing training to our craft and staff. Bert helps foster relationships with our staff, craft, and subcontractors to develop a workplace culture where ***"Nobody Gets Hurt."*** Kiewit's on-site construction quality manager (CQM) is responsible for addressing quality issues before they impact the schedule. The CQM will oversee work to ensure components are built right the first time. The team implements a project-specific Construction Quality Management Plan (CQMP), monitors work as it progresses, and coordinates with our **Independent Quality Manager (IQM), Kevin Harrington** (GPI), and SCDOT to meet or exceed quality expectations. Our **Environmental Compliance Manager (ECM)** will coordinate with **Heather Robbins of Robbins & DeWitt LLC, our Environmental Permitting Manager,** to ensure that permanent design and temporary impacts of construction comply with all requirements of regulatory agencies. As with all Kiewit projects, safety, quality, and environmental compliance responsibility, including stop-work authority, are given to all project personnel. They are trained and directed to address any potentially unsafe condition. This bottom-up approach empowers craft workers and foremen to assume active leadership to address quality, safety, and environmental compliance issues.

Safety ratings provide ample proof of the effectiveness of our safety program and our "Why I work safe" initiative further demonstrates our commitment to sending our employees home safe each and every day.

Exhibit 1-4 | Team Integration

Team Structure – Significant Functional Relationships

The strength of our Kiewit team (see **Exhibits 1-4 and 1-5**) begins with a fully integrated design and construction organization, rare in the industry, that is focused on achieving goals for SCDOT. KEGI has overall design responsibility. Our Lead Design Engineer and the Design Engineering Team will develop the design in collaboration with the Construction Management Team. The Design Engineering Team is bolstered by engineering partners RK&K and

AECOM – along with our IQF, GPI – and other local firms. Our proposed Key Individuals bring real-world experience managing similarly complex, high dollar projects emphasizing safety, quality, schedule, risk mitigation, and innovation.

Team Integration

Exhibit 1-5 | Office Locations and Resources Available On-Demand

KISC, a subsidiary of Kiewit Corporation, will leverage its design, supervisory, and key craft resources (see **Exhibit 1-5**) throughout North America to successfully deliver this Project, led by project management personnel who live and work in the Southeast, with many in South Carolina.

KEGI, a subsidiary of Kiewit Corporation, will be lead the Design Engineering Team, providing evaluation and development of technical solutions through a construction-focused design that is optimized and vetted for efficiency, cost, schedule, constructability, and risk mitigation. KEGI employs over 2,100 professionals whose experience will be leveraged for the various scopes of work on this Project. As a truly integrated team, our construction-focused design engineers will lead the design team and manage design subconsultants, while collaborating with our construction team. **Gus Molina, PE, of KEGI is our Lead Design Engineer,** with 31 years of experience managing engineering and construction of mega projects, such as Turcot's three-level highway interchange reconstruction in Quebec, Canada. Gus will assign **Segment Managers for Design** to each of the three segments aligning with construction, as shown on the organization chart.

AECOM and RK&K offer design services as key subconsultants (see **Exhibit 1-6** for our team's experience and capabilities). RK&K has completed over $2 billion in DB work in the Carolinas alone, and has teamed with Kiewit on two transportation DB projects in the past five years. **Stuart Samberg of RK&K will be the team's proposed Traffic Engineer**. AECOM and Kiewit have teamed on more than 60 projects. AECOM and Kiewit are currently teamed on a major interchange project near Dallas, TX, the $1.6B Southeast Connector project. The design for that project

will be completed by the end of 2023. This timing will allow available staff from both firms to transition to SCDOT's Project. AECOM, RK&K, and GPI served on the owner's side of the ICC-B project, constructed by KISC. With similar design philosophies and established procedures for completing designs, **SCDOT will benefit from the deep knowledge of all of our firms, resulting in a streamlined project with potential to accelerate the schedule and optimize cost**. These proposed firms are aligned to maximize our resources providing SCDOT with a high-quality design, mitigated risks, enhanced safety, and reduced environmental and traffic impacts. This team presents to SCDOT its complementary capabilities, extensive resources, and local experience that will assure a job well done.

Exhibit 1-6 | Team Experience and Capabilities

Kiewit has selected **GPI** as the Project's **IQF.** GPI's subconsultants include Gannett Fleming, OLH, and Terracon, all with extensive SCDOT experience. As IQM, Kevin Harrington implements Construction Engineering and Inspection (CE&I) including Quality Control (QC) and Quality Acceptance (QA) components of the project-specific CQMP, inspecting work as it progresses through construction, and coordinating directly with SCDOT. Kevin has over 25 years of experience working for SCDOT and brings expertise implementing quality programs on DB projects. He has independent authority to stop construction.

Tabular Form of Team Work History

Exhibit 1-7 identifies projects where our team's firms and/or Key Individuals have worked together. This experience shortens the learning curve, as our firms have familiar lines of communication and an established understanding of the Project's functional relationship requirements.

Exhibit 1-7 | Prior Working Relationships

PROJECT NAME & OWNER | YEARS, TYPE	FIRMS / PARTICIPATION	KEY INDIVIDUALS, FIRM	REFERENCE AND CONTACTS
DFW Connector, TxDOT 2008 – 2022 | DB	KEGI: Subconsultant	**Project Manager** Patrick Cline, KISC	**N:** Michael Gage, PE; TxDOT PM **P:** 817.370.6500 | **E:** michael.gage@txdot.gov
Intercounty Connector, MDTA 2009 – 2013 | DB	KISC: Contractor, KEGI: Subconsultant RK&K: GEC, GPI: QCIF AECOM: Owner's Rep	**Project Director** Tim Cleary, KISC **Safety Manager** Bert Laaker, KISC	**N:** Robert Michael; MDTA **P:** 410-537.7813 **E:** rmichael@mdta.state.md.us
Nashville Connector, TDOT 2018 – 2020 | CMAR	KISC: Contractor KEGI: Subconsultant	**Project Manager** Patrick Cline, KISC	**N:** Clayton Markham, TDOT **P:** 931.697.0294 | **E:** clayton.markham@tn.gov
Selmon Expressway, THEA 2017 – 2021 | DB	KISC: Contractor, KEGI: Subconsultant AECOM: Designer	**Safety Manager** Bert Laaker, KISC	**N:** Brian Pickard, PE; THEA PM **P:** 813.272.5987 | **E:** brian.pickard@tampa-xway.com
Arlington Memorial Bridge, FHWA 2018 – 2021 | DB	KEGI: Subconsultant AECOM: Designer	**Project Sponsor** Tim Cleary, KISC **Safety Manager** Bert Laaker, KISC	**N:** Joseph Fabis, FHWA-EFL **P:** 703.404.6201 | **E:** joseph.fabis@dot.gov
Mountain View Corridor, UDOT 2018 – 2021 | DB	KEGI: Subconsultant AECOM: Designer		**N:** Robert Stewart, UDOT **P:** 801.440.5746 | **E:** rstewart@utah.gov
I-820 Southeast Connector, TxDOT 2022 – 2027 | DB	KEGI: Subconsultant AECOM: Designer	**Construction Manager** Patrick Cline, KISC	**N:** Justin Thomey, TxDOT **P:** 817.371.4106 | **E:** justin.thomey@txdot.gov
I-66 Nutley Street Interchange, VDOT 2017 – 2022 | DB	RK&K: Designer	**Traffic Engineer** Stuart Samberg, RK&K	**N:** Susan Shaw, VDOT **P:** 703.259.1995 | **E:** susan.shaw@vdot.virginia.gov

3.3.2 Critical Risks

Kiewit's approach to risk management is a five-step process (**Exhibit 1-8**) that enables the team to identify potential issues throughout the Project's duration, mitigating and monitoring risk for our no-surprises approach to project delivery. Assigning segment managers to both design and construction to support the team, with the responsibility of identifying, monitoring, and mitigating risks within the project yielding a constructible design for project success. In coordination with their SCDOT counterparts, these managers take ownership of the risks that develop

Exhibit 1-8 | Five-Step Risk Register

1. **Develop Risk Register** | Populate risks and opportunities into a risk register that is dynamic and updated throughout the Project's life-cycle.
2. **Quantify Risks** | Determine potential impacts and quantify the probability of each risk occurring, based on past experience or reasonable estimate.
3. **Model Risks** | Incorporate the risk into the project schedule to model the potential cumulative and compounding impacts to the Project.
4. **Prioritize and Mitigate** | Identify and prioritize risk mitigations, and establish contingency budgets (both schedule and cost). This process includes identifying contractual obligations on risk allocation defining responsibility for each risk and its mitigation measures.
5. **Monitor** | Continuously update risks throughout the Project, and formally review and discuss at design milestone workshops, in parallel with the project schedule and estimates.

and execute successful mitigation plans. This is a key benefit of our team structure and approach to risk management. We will engage SCDOT and project stakeholders early in the procurement process to refine the risk register.

Exhibit 1-9 presents the Kiewit team's strategies to mitigate SCDOT's identified critical risks and also includes additional risks our team has identified (including those associated with third party coordination, such as working with railroad owners). Risk identification, mitigation, and tracking will be a collaborative effort between SCDOT, stakeholders, and the Kiewit team. We use weekly discipline-based task force meetings to develop solutions and mitigate risks. We will update and refine the risk register on an ongoing basis throughout all phases of the Project.

Exhibit 1-9 | Risks identified by SCDOT, followed by additional ones the Kiewit team has initially identified, based on our experience with projects of similar size and scope.

RISKS	MITIGATION STRATEGIES	ROLE OF SCDOT OR OTHER AGENCIES
Utility Relocations • **Gas lines** • **Transmission lines** • **Wastewater lines** • **Water lines** • **Telecommunications**	• Drainage conflicts with gas lines crossing I-26 east of the I-20/I-26 Interchange. Early coordination, refining the interchange design, and working with preapproved contractors are steps to minimize or eliminate conflicts. • Raising pavement grades could cause conflicts with overhead transmission lines. Matching pavement grades, staking poles, and coordinating utility relocation with other highway construction will be critical. • Wastewater lines that are crumbling (outdated material integrity) or that conflict with CSX Railroad or I-26 near I-126. Conditions assessments and minimizing construction vibrations are two ways to avoid critical locations. • Materials for and relocation of water lines will likely see long-lead times. Materials will be placed on the critical path and relocation will be addressed as Early Work Packages. • Multiple telecommunications providers, including AT&T, pose potential conflicts with other utilities and the project footprint. Early coordination with telecommunication providers and design that focuses on minimizing or eliminating utility conflicts are some of the actions we will undertake. • Subconsultant, Surveying and Mapping, LLC (SAM), has well established relationships and long-term knowledge of local utilities. Their knowledge will expedite the approval process. • Kiewit places a priority on changes that affect third parties, due to the highly integrated nature within our overall CPM schedule, and will hold regular meetings with affected utility owners to discuss and develop mitigation strategies.	• Facilitate coordination with all utility companies during the design phase and construction phase to identify existing conflicts, locate unidentified utilities, and obtain plans for new utilities within the ROW • Facilitating early third party coordination will enable us to verify subsurface utility engineering (SUE) provided by SCDOT. • Provide a list of approved alternative materials that would be acceptable in instances where specified materials are not available due to market constraints or other detrimental factors.
Schedule Growth	• Dividing the Project into 3 segments to manage separately during design and construction. • Construction activities within individual areas will be planned to maximize schedule certainty. Interfaces between segments will facilitate and optimize coordination and minimize schedule impacts. • Early work packages for critical items will be identified during the proposal phase to meet critical schedule milestones. • Address schedule issues early and implement recovery measures to achieve critical milestones. • Weekly updates for SCDOT and other stakeholders are integral to develop and review the schedule.	• Early, ongoing, and continued coordination to understand design, schedule, materials, labor, contractual, and construction schedule impacts • Facilitate receipt of executed agreements with all third parties (eliminate lengthy review and approval processes)

RISKS	MITIGATION STRATEGIES	ROLE OF SCDOT OR OTHER AGENCIES
Maintenance of Traffic (MOT) • **Limited construction access** • **Excessive traffic detours** • **Reduction of speed in work zones**	• Dedicated MOT Manager will lead a task force to ensure safety to traveling public and field staff. • Review current traffic demand and patterns. • Coordinate and integrate MOT with CCR Phase 1 and Phase 2. • Engage early with SCDOT engineering staff and local emergency personnel. • Communicate consistently and frequently with the public through project website, phone application, text signup, and/or ITS work zone software. • Timely response to incidents; consistent maintenance of temporary traffic devices; and design to minimize impacts to the traveling public.	• Review/approve MOT phasing plan and integrate with Task Force • Engage in and guide the outreach plan • Involve first responders early • Provide clear and effective public communication • Reprogram ITS through the corridor to facilitate phasing shifts, equipment moves, or other construction items
Initial, additional risks the team has analyzed include:		
Third Party Coordination: • **Railroad Owner**	• Railroad Coordinator/Design & SUE Surveyor, Mark Attaway of SAM, LLC, will use relationships with CSX to provide early coordination and engagement to identify potential concerns. • Leverage AECOM's experience working with CSX on more than 250 CSX transportation rail projects	• Facilitate coordination with railroad owner (CSX) for effective decision making
Geotechnical Seismic Hazards	• Leverage S&ME's experience of working with SCDOT geotechnical engineering staff. • Drilling and testing to supplement, as needed, the seismic data included in the GDR based on preliminary geotechnical analyses and discussions with SCDOT. • KEGI geotechnical services to provide non-linear seismic site response review and liquefaction triggering potential. The low liquefaction potential for this area lends itself to deep foundations with added capacity for down drag during a seismic event. • KEGI engineering services during construction will mobilize and provide corrective actions, if needed.	• Review and approve the geotechnical report, seismic and foundation design, and installation procedures • Coordinate with IQF during installation and testing
Local Labor Market	• Implement a hiring plan for local craft and an outreach program for local subcontractor/DBE early during procurement. • Develop workforce training program to aid in entry of the local community into the contracting market. • Leverage 3,000+ current & past Kiewit skilled craft employees in South Carolina and neighbor states.	• Facilitate publicizing our proposed subcontractor/DBE outreach program • Joint participation at outreach events • Coordination in local job fairs
Supply Chain Challenges	• Design elements that source locally available materials. • Utilize Kiewit's internal supply network group to secure preferential pricing and firm schedules for materials – a unique benefit offered by our team. • Develop approved alternate list for hard to source products.	• Providing a list of approved alternates for common materials • Expedite submittal reviews and workshops for custom-fabricated or long lead items to stay on schedule

3.3.3 Project Resources, Strategies, and Execution

Team Capacity and Resources

In addition to Key Personnel, we anticipate approximately 160 designers, 90 construction staff, and up to 300 craft during peak times. We will supplement our workforce with locally hired craft and qualified subcontractors. Our team can also draw upon more than 1,000 design professionals and nearly 1,500 construction personnel in the central and southeastern U.S., if needed. RK&K and AECOM both have offices in Columbia, as well as

regional and national offices. Kiewit's South Carolina area office is in Charleston, with an extensive equipment yard so our team can mobilize and add resources on short notice.

Strategy for Implementation of Resources

Kiewit's experience enables us to use robust, proven internal processes and tools **(Exhibit 1-10)** that integrate designers, builders, and clients, providing innovative, constructible designs that often exceed project goals. This is integral for design and construction to be delivered on time while complying with all project requirements. Office and field leadership teams monitor progress daily throughout the design and construction phase.

Tasks for Self-Performance or Subcontracting

Our team has the capacity to self-perform all critical path elements on this project, but we believe that teams perform best with a good mix of self-perform and locally

Exhibit 1-10 | Kiewit's Proven Schedule Management Tools

TOOL	DESCRIPTION
Task Force Meetings	Design and constructability meetings held weekly to monitor design progress and address key concerns.
Commodity Charts	Used for major commodities such as man hours, structural concrete, excavation/embankment, and paving; depicts quantity of work performed versus preliminary project baseline schedule.
Play-of-the-Day Meetings	Daily coordination for field operations, communicated to field personnel and SCDOT.
Rolling, 3-wk. Schedule	Weekly coordination of day-to-day activities, traffic control, subcontractors, submittals, and design needs.
120-Day Look-ahead Schedule	Monthly drill-down of the updated preliminary project baseline schedule that breaks activities into day-to-day operations for further coordination and planning needs.

Exhibit 1-11 | Self-Perform vs. Subcontracted Scopes of Work

DESIGN SCOPE *(SELF-PERFORM)*

- Roadway and Walls
- Pavement
- Foundations
- Traffic/MOT
- Structures
- Geotechnical
- Drainage
- Utilities
- ROW
- Environmental
- Railroad

DESIGN SCOPE *(SUBCONSULTANT)*

- Environmental *(support for Robbins & DeWitt)* Drainage, Hydraulic Design, Geotech Design, Pavement, Noise, MOT, Roadway, Structures, Signing, Lighting, and ITS — RK&K
- Roadway and Walls, Drainage, Structures, Environmental, MOT, and Structures — AECOM
- Environmental and Public/Media/Community Relations and Information — Robbins & DeWitt
- Surveying and Subsurface Utility Engineering, Railroad Coordination, Geotech, Drilling, and Utility Coordination — SAM

CONSTRUCTION SCOPE *(SELF-PERFORM)*

- Bridge Construction
- Deep Foundations
- MOT
- Drainage/Culverts
- Utilities
- MSE Walls
- Earthwork/Grading

CONSTRUCTION SCOPE *(SUBCONTRACT)*

- Rebar*
- Asphalt
- Third party trucking*
- Concrete walls*
- Fencing*
- Clear and Grub
- Electrical/ITS
- Pavement Markings
- Utilities*
- Guardrail*

** Potential DBE scopes*

INDEPENDENT QUALITY MANAGEMENT SCOPE

- Greenman-Pedersen, Inc. — GPI

subcontracted work. This allows for the proper allocation and flattening of resource curves throughout construction, while benefiting the local community. This flexibility helps us know how to best assemble and manage work packages to attack qualified subcontractors and consultants. **This enables us to integrate subcontractor scopes of work while self-performing critical path activities.** Kiewit typically performs approximately 60% of direct work and subcontracts 40% of the specialty operations to qualified subcontractors, local contractors, and certified DBEs. Kiewit intends to self-perform design management services and engineering services during construction, and has identified initial scopes for subcontractors and subconsultants (**Exhibit 1-11**).

Environmental Coordination

Environmental Permitting Manager Heather Robbins has a rich understanding of this project and its history, from her NEPA work on the Corridor while at SCDOT from 2010-17. She is aware of current environmental risks and, in leading environmental efforts for our team, will develop opportunities and coordinate with SCDOT to honor existing commitments, helping to streamline permitting efforts so they are appropriately secured. Our team will build an environmental permitting issues and commitments matrix, including responsible parties for each item, to keep SCDOT fully informed and able to provide unified communication to stakeholders.

Utilities

Our third-party coordination efforts will focus on affected utilities. **Railroad Coordinator/Design & SUE Surveyor, Mark Attaway of SAM, LLC,** has worked closely with third parties such as the City of Columbia, AT&T, Charter, Segra, Comporium, and Dominion Energy. **Our knowledge of utility owners and their processes enables our team to efficiently manage utility issues.** Our team will hold regular one-on-one meetings with impacted utility owners to provide early opportunities to identify potential schedule impacts during the design.

Public Relations Support

The team is committed to building trust by implementing HDR's public outreach and strategic communications plan that supports SCDOT by minimizing impacts to the traveling public, businesses, and stakeholders. Collaborating with SCDOT and HDR, we will minimize inconvenience

for drivers through frequent, clear, and concise communication about construction progress, closures, and lane shifts. Our MOT plan will avoid putting extra traffic through local neighborhoods. We will coordinate with SCDOT, the City of Columbia and other impacted municipalities, neighborhood associations, and stakeholders to maximize traffic flow for special events. Prior to major MOT changes, we will communicate with first responders, schools, and businesses, and integrate our construction MOT Plans for HDR to have accurate, updated information.

Permitting

Kiewit will prepare and submit a modification to the individual 404 Permit covering wetland and stream impacts from the Project. The team's environmental permitting manager will help prepare other necessary permit applications to be tracked in our matrix as well as on the project schedule, facilitating timely submissions for review. Kiewit will obtain necessary permits or licenses that must be obtained in SCDOT's name.

Successful Communication Processes for Project Execution and Issue Resolution

Tim Cleary will lead our team with a **proactive communications approach built on the foundation of Partnering** between the DB team, SCDOT, and project stakeholders. Our team will coordinate with SCDOT during the design process via weekly task force meetings early-on, to ensure:

- All **ROW acquisition** efforts by SCDOT, including parcels to be acquired, will be supported by Kiewit and aligned with our schedule
- SCDOT's **OTVI processes** are incorporated into our quality program led by our IQM
- **Third-party utility relocations** will be executed by the subsurface utility manager in conjunction with our segment design and construction managers
- Any **USACE permit modifications** will be coordinated with SCDOT and aligned with our schedule, minimizing costly schedule delays

3.3.4 Quality Assurance Program

GPI, as the IQF for the Project, will comply with the Quality Assurance Program (QAP) for the Carolina Crossroads Program, finalized Sept. 29, 2020, along with direction from RFQ Addendum 1 dated Oct. 7, 2022. The IQF will also comply with Code of Regulations (23 CFR 637, Subpart B), FHWA Technical Advisory 6120.3, and other guidance documents.

Our team understands all components of the QC/QA Project requirements. GPI performs Construction Engineering and Inspection (CE&I) including Quality Control (QC) and Quality Acceptance (QA) functions. GPI will be supported by **Terracon, OLH, and Gannett Fleming.** GPI is highly experienced with the IQF model, recently on the $3.1B Tappan Zee Bridge Replacement project in New York as well as the $560M ICC-B project in Maryland. Owner Verification will be performed by SCDOT and the Department's **Owner Verification Firm**.

In coordination with the Department and their OVF, our team will develop a procedure for the use and exercise of **Engineering Judgement** (EJ) on the Project, including development of a detailed EJ list. The IQM will consult with the Department when utilizing EJ, and will implement an automated system to track and report EJ utilization. **Kevin Harrington, our IQM,** was routinely required to exercise EJ in his previous role as State Construction Engineer for SCDOT. Kevin will work with the Department and their OVF to develop and implement an effective EJ process which, with Department approval, will be used in extraordinary circumstances only, and in no way serve to waive or modify contract specifications on a project-level basis. As IQM, Kevin reports independently to Kiewit's Executive Management team and SCDOT.

Terracon will perform laboratory testing for the IQF, providing an **AASHTO-accredited laboratory** that will meet all specified testing requirements, including locating the laboratory within five miles of the Project, unless otherwise approved. We will comply with the QAP and its terms, and the CE&I team of GPI, Terracon, OLH, and Gannett Fleming are highly capable and well-resourced to perform certified inspection and testing to support the Project and its schedule.

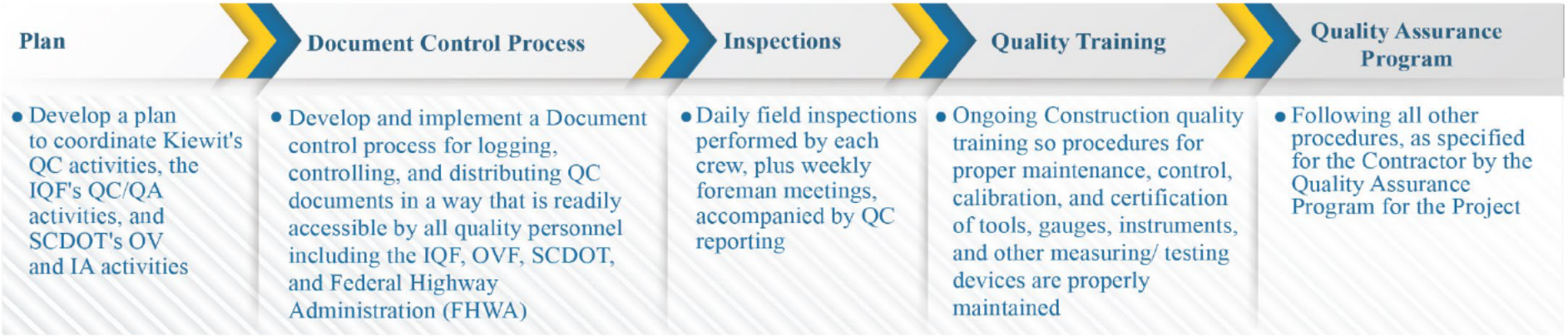
Quality Control

The team's quality management plan (ISO 9001:2018 certified quality standards) will detail quality control and quality assurance (QC/QA) consistent with SCDOT's requirements. Kiewit's quality objectives are to meet contract requirements and SCDOT's expectations, lowering costs through continuous improvement and ensuring work is **built right the first time.** In addition to the IQF for QC/QA, Kiewit adds an additional level of project support within the job team. The team's design and construction quality managers will act as liaisons between the entire project team and IQM. This

provides a culture of quality, top-down and bottom-up. Kiewit's QC/QA program on the Project uses proven processes, allowing for the efficient integration of quality in all work performed. Kiewit will have weekly meetings with representatives of the Contractor's QC, the IQF, the OVF, and the Construction Engineer from SCDOT's DB Group. This consistent communication allows the parties to collaboratively discuss and plan for upcoming construction activities, addressing any challenges that may have arisen for timely and accurate solutions. We will identify and communicate inspection needs or hold points to the independent IQF and SCDOT. Overall, Kiewit's quality activities will adhere to SCDOT's requirements.

Implementing these procedures, we will verify successful project delivery for SCDOT. Our core operational processes are supported by a wide array of activities creating a cycle of continuous improvement. Kiewit's construction quality process follows in **Exhibit 1-12**.

Exhibit 1-12 | Kiewit's Construction Quality Process



3.4 | EXPERIENCE OF KEY INDIVIDUALS

Completed Key Individual Resume Forms are in **APPENDIX A**.

3.6 | LEGAL AND FINANCIAL

A declaration on letterhead regarding financial capacity, notarized officer's certificate on behalf of ***the lead contractor, Kiewit Infrastructure South Co.***, and a bond letter, are in **APPENDIX D**. No additional organizational agreements are required.

3.7 | Disclosure of Potential Conflict of Interest Certification

The required form is located in **APPENDIX E**.

3.5 | PAST PERFORMANCE OF TEAM

3.5.1 Experience of Proposer's Team

Completed Work History and Quality Forms are included in **APPENDIX B**.

3.5.2 Quality of Past Performance

No individual or firm of the proposed team has been suspended, debarred, disqualified from bidding, or declared ineligible for work by any entity nor are such actions pending against them in the last five years.

A Table with completed Y/N questions is included in **APPENDIX C**.

Appendix A

Key Individual Resume Forms

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.

a. Name & Title:

Timothy (Tim) James Cleary
Area Manager / Vice President

b. Role of Key Individual for this Project:

Project Manager

c. Name of Firm with which you are now associated:

Kiewit Infrastructure South Co. (KISC)

d. Years of Experience: With this Firm 34 Years With Other Firms 0

KISC: Vice President – Responsible for nearly $4.9B worth of transportation construction operations in the mid-Atlantic and Southeastern United States, 2009 – present
KISC: Project Sponsor – Responsible for safety, quality, compliance, and estimating projects, 2005 – 2009
KISC: Project Director – Responsible for customer interface, executive oversight, and project direction, 2000 – 2005

e. Education:

University of West Florida / Pensacola, FL / Bachelor of Science / 1988 / Building Construction

f. Active Registrations:

N/A

g. Document the extent and depth of your experience and qualifications relevant to the Project.

Tim will leverage his 34 years in the industry from managing infrastructure and highway transportation projects with similar scope, magnitude, and complexity. He has over 15 years of project management experience on 21 transportation projects valued at over $4.86B, examples of which are shown below.

Kosciuszko Bridge, Maspeth, NY | Design-Build

Key Personnel Role: Area Manager / Vice President
Experience with Current Firm: KISC
Project/Assignment Duration: Project 05/2014 – 05/2018, Assigned 05/2014 – 05/2018
Owner Contact Information: NY State Department of Transportation, Snehal Shah, snehal.shah@dot.ny.gov, 718.392.0995
Design/Construction Value: $569 Million
Project Description: The project replaced an existing steel truss bridge with a new cable main span bridge. The scope included construction of new connectors and approaches for both the new 6 lane bridge as well for the future twin main span to be constructed at a later date. The existing bridge main span is roughly 300' and the proposed is bridge is planned to be 600.' Work includes reconstruction of several local surface streets in the vicinity of the bridge as well as improvements and additions to existing park space. The site is currently home to many subsurface environmental contaminants including an oil plume, chlorinated solvent plume, heavy metals etc. The river sediment is highly contaminated as well. Project includes demolition of existing bridge once traffic was switched to the new bridge.

As Area Manager, Tim Cleary led the design-build preconstruction process including proposal development, kickoff meetings, partnering workshops, public outreach meetings, weekly task force meetings, supported permitting and utility coordination, reviewed all project designs, provided input on accelerated techniques, constructability, value engineering and alternative technical concepts. During construction, Tim met with project management teams regularly to review progress and ensure they had the right resources.

Inter-County Connector Contract B, Montgomery and Prince George's Counties, MD | Design-Build

Key Personnel Role: Project Manager/Director
Experience with Current Firm: KISC
Project/Assignment Duration: Project 06/2008 – 03/2013, Assigned 06/2008 – 01/2012
Owner Contact Information: MTA, Robert Michael, rmichael@mdta.state.md.us, 410.537.7813
Design/Construction Value: $561 Million
Project Description: This award-winning project involved the construction of a six-mile segment of an overall 19-mile Toll Road Project. The project required the construction of more than seven miles of new six-lane divided highway within a right-of-way that included some of the most environmentally sensitive and heavily populated areas in the Baltimore/Washington corridor. The project also included the construction of 15 bridges and two new interchanges.

Tim Cleary led the entire design-build process including proposal development, kickoff meetings, partnering workshops, public outreach meetings, weekly task force meetings, risk mitigation, fully integrated design and construction schedule, supported permitting and utility coordination, reviewed all project designs, provided input on accelerated techniques, constructability, involved with the initial project estimate, value engineering and alternative technical concepts. Located in an environmentally sensitive area, Tim led complex permitting and coordination with Maryland Department of the Environment (MDE) to gain approvals to start construction. During construction, Tim managed the project team, equipment and material procurement, planning, subcontract negotiation/coordination, monitored schedules and budgets, continued design coordination, progress meetings, managed field changes, and oversaw safety and quality.

Arlington Memorial Bridge Rehabilitation, Washington D.C. | Design-Build

Key Personnel Role: Project Sponsor
Experience with Current Firm: KISC
Project/Assignment Duration: Project 11/2017 – 07/2021, Assigned 11/2017 – 07/2021
Owner Contact Information: FHWA, Joseph Fabis, joseph.fabis@dot.gov, 703.404.6201
Design/Construction Value: $199 Million
Project Description: This high-profile project consisted of full deck replacement. The bridge is 2,162-feet-long and 94-feet-wide and consists of ten reinforced concrete arch approach spans and a double-leaf bascule span at the bridge's center. Eight of the ten approach spans convey the Potomac River. Two smaller concrete arches span the George Washington Memorial Parkway (GWMP) and Ohio Drive, SW, at each end of the bridge. The bridge has sidewalks on each side nearly 14 feet, and the roadway measures 60 feet from curb to curb, providing six 10-foot-wide vehicle travel lanes.

Tim was responsible for the initial project start-up and operations planning/review and met with owner representatives on a regular basis to ensure effective communication on this large-scale project.

Telegraph Road Interchange, Alexandria, VA | Design-Bid-Build

Key Personnel Role: Project Sponsor
Experience with Current Firm: KISC
Project/Assignment Duration: Project 02/2008 – 06/2013, Assigned 02/2008 – 01/2012
Owner Contact Information: VDOT, Jalal Masumi, jalal.masumi@vdot.virginia.gov, 703.259.2215
Design/Construction Value: $269 Million
Project Description: The project entailed a complete interchange reconstruction, widening and reconstruction of approximately 2.5 miles I-95/I-495, west of Route 1 to the Eisenhower Connector exit. Improvements along Telegraph Road included roadway/bridge reconstruction, intersection improvements, and utility relocations. This project was the largest project undertaken by VDOT at the time.

Tim was responsible for the initial project start-up and operations planning/review and met with owner representatives on a regular basis to ensure effective communication on this large-scale project.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Tim Cleary will be available to be on-site during all construction activities, attend and lead weekly status meetings during the design and construction phases, and be available at the request of the SCDOT.

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.

a. Name & Title:

Kurtis Richard Pfeifer
Project Director

b. Role of Key Individual for this Project:

Assistant Project Manager

c. Name of Firm with which you are now associated:

Kiewit Infrastructure South Co. (KISC)

d. Years of Experience: With this Firm 14 Years With Other Firms 0

KISC: Project Sponsor – Responsible for providing resources, equipment, and personnel for projects, 2020 – present
KISC: Project Director – Responsible for customer interface, executive oversight, and project direction, 2017 – 2020
KISC: Project Manager – Responsible for managing having civil projects, 2013 – 2017
KISC: Project Engineer / Superintendent – Responsible for managing roadway and structures crews, 2009 - 2013

e. Education:

University of Arizona / Tucson, AZ / Bachelor of Science / 2009 / Civil Engineering

f. Active Registrations:

OSHA 30
USACE CQM-C (expires 5/4/2025)
South Carolina Commercial Contractors License – Water and Sewer Plants
South Carolina Commercial Contractors License – Boring & Tunneling
South Carolina Commercial Contractors License – Highway Incidental
South Carolina Commercial Contractors License – Structural Shapes

g. Document the extent and depth of your experience and qualifications relevant to the Project.

Kurtis has served as project director, project manager, project engineer, superintendent and field engineer on multiple jobs ranging from $2 million to $213 million throughout his career. These projects varying in disciplines from major highway reconstruction to utility replacements and even taxiway reconstruction work at the World's Busiest Airport. This experience have given him the opportunity to work with many alternative delivery projects including design-build and CMAR contract models. He has a strong background in roadway, utility and drainage, structures and grading operations.

Herbert Hoover S-284 (HP5), Moore Haven, FL | Best Value

Key Personnel Role: Project Director
Experience with Current Firm: KISC
Project/Assignment Duration: Project 05/2019 – 05/2020, Assigned 06/2019 – 02/2020
Owner Contact Information: USACE, Glenn Gannon, Glenn.A.Gannon@usace.army.mil, 561-212-7530
Design/Construction Value: $24.8 Million
Project Description: This project included the installation of a sheet pile and earthen cofferdam system, mass excavation, cast-in-place concrete construction, zoned embankment and the ITS system.

Kurtis was responsible for the startup and overall management of this dike rehabilitation project with the goal of replacing the aging HP-5 culvert in the Herbert Hoover Dike system. This project included coordination with local stakeholders, the Seminole Tribe of Florida and the client to provide for a seamless reconstruction effort with little impacts to the surrounding community.

Herbert Hoover S-288 (HP1), Moore Haven, FL | Best Value

Key Personnel Role: Project Director
Experience with Current Firm: KISC
Project/Assignment Duration: Project 09/2018 – 05/2019, Assigned 09/2018 – 05/2019
Owner Contact Information: USACE, Glenn Gannon, Glenn.A.Gannon@usace.army.mil, 561-212-7530
Design/Construction Value: $17.5 Million
Project Description: This project included the installation of a sheet pile and earthen cofferdam system, mass excavation, foundation improvements, cast-in-place concrete construction, zoned embankment and the ITS system.

Kurtis was responsible for the startup and overall management of this dike rehabilitation project with the goal of replacing the aging HP-1 culvert in the Herbert Hoover Dike system. This project included coordination with local

stakeholders and the client to provide for a seamless reconstruction effort with little impacts to the surrounding community.

Bear Cut Bridge Rehabilitation, Miami, FL | Design-Build

Key Personnel Role: Project Manager
Experience with Current Firm: KISC
Project/Assignment Duration: Project 05/2014 – 08/2015, Assigned 05/2014 – 08/2015
Owner Contact Information: Miami-Dade County Public Works and Waste Management, Antonio Cotarelo, cotara@miamidade.gov, 305-375-1918
Design/Construction Value: $32.9 Million
Project Description: This fast-tracked emergency design-build project for Miami-Dade County rehabilitated the Bear Cut and West Bridges leading from mainland Miami to the island of Key Biscayne. During a routine inspection in early 2014 it was noted that the bridge suffered extreme corrosion and was shut down that day to traffic. The County let a construction contract to design-build the new bridge while widening for pedestrians all within 365 CD from NTP. This project included over 3,500 LF of bridge rehabilitation and had a significant marine component and environmental concerns. The project finished 2 days ahead of schedule and on budget.

Kurtis managed all day-to-day efforts, coordinated all engineering discipline work, procurement efforts, and acted as the primary liaison for engineering with construction, the major OEMs, and start up teams.

I-10 Widening, Tucson, AZ | Design-Bid-Build

Key Personnel Role: Project Engineer / Superintendent
Experience with Current Firm: KISC
Project/Assignment Duration: Project 09/2007 – 02/2010, Assigned 05/2008 – 02/2010
Owner Contact Information: Arizona Department of Transportation, Roderick Lane, rlane@azdot.gov, 520-388-4200
Design/Construction Value: $213.0 Million
Project Description: This project included the full reconstruction and widening of 6.5 miles of I-10 through Tucson, Arizona. The project had multiple stakeholders and required the earthwork, MSE wall, bridge construction, concrete paving and utilities operations to take place within a congested corridor between the frontage roads which carried the local traffic. The project was completed over 6 months early, earning the entire schedule bonus for the A+B procurement and was completed on budget and without any major safety issues.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Kurtis Pfeifer is currently assigned to estimates, client coordination, and risk management for the southeastern and south central states. Although not required to be on-site full-time he will be available to attend and lead all on-site, segment-related meetings.

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.

a. Name & Title:
Augusto (Gus) Vicente Molina, P.E., LEED AP
Senior Design Engineering Manager

b. Role of Key Individual for this Project:
Lead Design Engineer

c. Name of Firm with which you are now associated:
Kiewit Engineering Group Inc. (KEGI)

d. Years of Experience: With this Firm 2 Years With Other Firms 29

KEGI: Senior Design Engineering Manager – Responsible for all infrastructure design management, 2020 – present
HDR: Senior Project Manager, Alternative Delivery – Responsible for alternative delivery design management of infrastructure pursuits and projects, 2017 – 2020
Dewberry: Bridge Department Manager – Operational responsibility over all bridge projects and pursuits in New York state, 2016 – 2017
Parsons: Bridge Department Manager – Responsible for 80 staff on 40+ bridge projects, 2000 – 2016

e. Education:

University of Tennessee / Knoxville, TN / Master of Science / 1996 / Structural Engineering
Villanova University / Villanova, PA / Bachelor of Science / 1991 / Civil Engineering

f. Active Registrations:

2022 / SC / Civil / 40606
2001 / NY / Civil / 79105
1997 / TN / Civil / 103026
2017 / MD / Civil / 51604
2015 / PA / Civil / 83520
2011 / NJ / Civil / 24GE04947400
2010 / RI / Civil / 09484

Leadership in Energy and Environmental Design (LEED AP) Accreditation
OSHA 10-hour

g. Document the extent and depth of your experience and qualifications relevant to the Project.

Augusto (Gus) Molina is a senior structural engineer and design manager specializing in alternative delivery of transportation infrastructure projects. He has over 30 years of engineering experience including the inspection, design, and construction of complex, urban interchanges. A few examples of his previous experience include:

Lincoln Tunnel Helix Replacement, Stage 1 Conceptual Design, Weehawken, NJ | Design Services

Key Personnel Role: Project Manager
Experience with Prior Firm: HDR
Project/Assignment Duration: Project 03/2020 – ongoing, Assigned 03/2020 – 10/2020
Owner Contact Information: Port Authority of NY and NJ, Ramesh Panchalan, rpanchalan@panynj.gov, 347.924.7149
Design/Construction Value: $1.2 Billion
Project Description: This project involved conceptual design for the replacement of Lincoln Tunnel approach viaduct. The existing helix was constructed in 1937 and widened by one lane in 1957. It provides a connection between the Lincoln Tunnel portals in Weehawken and NJ Route 495. The helix's 7-lane roadway carries over 87,000 vehicles per day along with an eastbound Exclusive Bus Lane carrying an estimated 1,800 daily buses and 70,000 daily commuters. Stage 1 conceptual design services included 1) evaluating three replacement alternatives to identify a preferred alternative and 2) advancing the preferred alternative to a 15% design.

Gus was responsible for daily communication with the Port Authority's Project Manager, coordination with design discipline leads and subconsultants, and coordination with Port Authority design discipline leads, and quality assurance.

Turcot Interchange Reconstruction, Montreal, Quebec, Canada | Design-Build

Key Personnel Role: Engineering Manager
Experience with Prior Firm: Parsons/Kiewit
Project/Assignment Duration: Project 03/2015 – 03/2021, Assigned 03/2015 – 11/2016
Owner Contact Information: Ministry Transportation of Quebec, sandra.sultana@transports.gouv.qc.ca, 514.873.3838
Design/Construction Value: $3.7 Billion
Project Description: This three-level highway interchange project reconstructed 4 interchanges that were originally built between 1965 and 1967: Turcot, Montreal West, Angrignon and De La Vérendrye and sections of provincial Highways 15, 20 and 720. Elements of the project include a 350 meter signature single-tower cable

stay bridge over the Lachine Canal, nearly 20 km of reserved lanes for public transit, 145 km of road reconstruction, and a reduction in surface area and therefore maintenance costs.

Gus managed contractor submittal reviews, including shop drawings; means and methods statements; catalog cuts; requests for information; field change requests; field change notices; attending, monthly progress meetings; performing periodic field visits to review work progress and conformance; quality control; and preparation of monthly progress reports.

Preliminary Design for Bruckner Expwy. Viaduct Deck Replacement, Bronx, NY | Design-Build

Key Personnel Role: Preliminary Design Project Manager
Experience with Prior Firm: Dewberry
Project/Assignment Duration: Project 02/2017 – 05/2018, Assigned 02/2017 – 11/2017
Owner Contact Information: NYDOT, Tariq Bashir, tariq.bashir@dot.ny.gov, 718.482.4691
Design/Construction Value: $193 Million
Project Description: This project replaced 1.2 miles of existing bridge deck on six bridges of the Bruckner Expressway in the Bronx between East 141st Street and the entrance ramps to the RFK Bridge. Project scope included staged deck replacement, bridge deck joint replacement, concrete substructure repairs, steel superstructure repairs, and steel superstructure repainting.

Gus served as Project Manager and JV Deputy PM for preliminary design, preparation of Design-Build RFP indicative plans and directive plans and review of the Design-Build RFP requirements. His responsibilities included technical oversight and quality assurance of the design and detailing for all structural rehabilitation work including construction cost estimates; review of the Design-Build requirements; and attending progress meetings to review design progress and to discuss design issues and client review comments.

Cross Bronx Expressway Rehabilitation of Six Bridges, Bronx, NY | Design-Bid-Build

Key Personnel Role: Bridge Design Quality Assurance Oversight
Experience with Prior Firm: Dewberry
Project/Assignment Duration: Project 12/2016 – 11/2017, Assigned 12/2016 – 11/2017
Owner Contact Information: NYDOT, Tariq Bashir, tariq.bashir@dot.ny.gov, 718.482.4691
Design/Construction Value: $26 Million
Project Description: This project included in-depth inspection, preliminary design, and final design for replacement of six bridges located on or spanning the Cross Bronx Expressway from Boston Road to Bronx River Parkway. This contract included preliminary and final design of the Cross Bronx Expressway over the Bronx River Parkway bridge.

Gus provided technical oversight and quality assurance for bridge final design and detailing of the Cross Bronx Expressway over the Bronx River Parkway bridge. The existing five-span steel girder bridge will be completely replaced with a two-span steel girder superstructure supported by integral and semi-integral abutments and an integral pier.

Goethals Bridge Replacement, Staten Island, NY to Elizabeth, NJ | Design-Build P3

Key Personnel Role: Main Span Lead Design Engineer
Experience with Prior Firm: Parsons Transportation Group/Kiewit
Project/Assignment Duration: Project 05/2013 – 09/2018, Assigned 05/2013 – 12/2016
Owner Contact Information: Port Authority of NY and NJ, Ramesh Panchalan, rpanchalan@panynj.gov, 347.924.7149
Design/Construction Value: $990 Million
Project Description: This project replaced the existing 1.2-mile toll bridge over the Arthur Kill Waterway. This corridor provides a critical link between the New Jersey Turnpike, Route 1&9 to the west, and the Staten Island Expressway. The replacement bridge features twin 6,600-foot structures with a 900-foot cable-stayed main spans, designed to accommodate future transit loading.

Gus served as the Approach Span Lead Bridge Design Engineer during the proposal phase and the Main Span Lead Bridge Design Engineer for the final design of the cable-stay spans. He coordinated the design; detailed and developed special provisions for the cable-stay span components; coordinated and scheduled quality assurance audits; coordinated with the independent bridge check engineer; responded to review comments from the Client, other design disciplines, and the independent bridge check engineer; and attended task force meetings to review design progress and discuss design issues and responses to comments.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

N/A

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.

a. Name & Title:
Stuart Michael Samberg, P.E., PTOE, PTP, RSP, DBIA
Director, Traffic

b. Role of Key Individual for this Project:
Traffic Engineer

c. Name of Firm with which you are now associated:
Rummel, Klepper & Kahl, LLP (RK&K)

d. Years of Experience: With this Firm 13 Years With Other Firms 5
RK&K: Director, Traffic – Responsible for managing the firm's traffic engineering and ITS department in the Southeast, including management of projects and key roles on large design-build projects, 2009 – Present
URS Corporation: Traffic Engineer – Responsible for analysis and design of transportation projects, 2005 – 2009

e. Education:
University of Washington / Seattle, WA / Master of Science / 2014 / Sustainable Transportation
North Carolina State University / Raleigh, NC / Bachelor of Science / 2006 / Civil Engineering

f. Active Registrations:

2015/SC/Civil/32724	2014/MD/Civil/46322	2015/VA/Civil/54707	2015/NC/Civil/42960
2015/FL/Civil/79913	2015/WA/Civil/52998	2015/DC/Civil/908260	2016/WV/Civil/21909
2016/GA/Civil/41063	2016/TN/Civil/119165	2018/AL/Civil/37518	2019/LA/Civil/43906
2019/MS/Civil/30335	2019/TX/Civil/135353	2021/AZ/Civil/73510	2021/PA/Civil/92953
2022/CO/Civil/60199	Prof. Transp. Planner, #615	Professional Traffic Operations Engineer, #3870	
Road Safety Planner, #68	Design-Build Professional (DBIA)		

g. Document the extent and depth of your experience and qualifications relevant to the Project.
Stuart has 18 years of experience in traffic design of projects of similar scope, magnitude, and complexity.

I-66 Outside the Beltway Improvements, Fairfax and Prince William Counties, VA | Design-Build

Key Personnel Role: Lead Traffic Engineer (Project-wide); D-B Project Manager (3 interchanges)
Experience with Current Firm: RK&K
Project/Assignment Duration: Project 2017 – 2022, Assigned 2017 – 2022
Owner Contact Information: VDOT, Susan Shaw, susan.shaw@vdot.virginia.gov, 703.259.1995
Design/Construction Value: $2.7 Billion
Project Description: RK&K is serving as a design consultant to the design-build JV for the Transform I-66 Outside the Beltway P3 Project. As Lead Designer, RK&K is providing design services for the I-66 and Nutley Street roundabout interchange, including traffic modeling and documentation for an Interchange Modification Report.

Stuart serves as the lead traffic engineer for the project-wide efforts, where he provides oversight for the development of the Traffic Forecasts utilizing the concessionaires Toll & Revenue Model, development of VISSIM models, and documentation for a **System-to-System Interchange Modification Request** (including 24 miles of I-66 with nine interchanges). Each interchange location provides adequate access to/from the Express lanes, while maintaining/improving access. Stuart also led the development of project-wide MOT plans for all 24-miles and nine interchanges and developed a Traffic Management Plan. He also oversaw the development of project-wide roadway signing, roadway lighting, and ITS plans.

Stuart also served as D-B PM for three interchanges, including Virginia Route 123, Nutley Street, and I-495. In this role he oversaw the development of construction plans for each interchange. Specifically, at the I-66 / Nutley Street, Stuart led the redesign which replaced the existing cloverleaf interchange with a dual roundabout ("dog bone") design. The unique element of the dog bone was the loops serving heavy movements and incorporating those as bypass lanes at the upstream roundabout. This concept was presented instead of the originally planned diverging diamond design and was found to operate as well or better than the DDI in all areas and saved the project $30M.

I-64 Southside Widening and High Rise Bridge, City of Chesapeake, VA | Design-Build

Key Personnel Role: Lead Traffic Engineer
Experience with Current Firm: RK&K
Project/Assignment Duration: Project 2017 – 2022, Assigned 2017 – 2022
Owner Contact Information: VDOT, Rick Correa, rick.correa@vdot.virginia.gov, 757.494.5486
Design/Construction Value: $410 Million
Project Description: RK&K is the Lead Designer for this I-64 widening and new High Rise Bridge over the Elizabeth River. This project included the widening the existing interstate from four lanes to six lanes and accommodates General Purpose lanes and HOT/HOT lanes.

Stuart served as the lead traffic engineer and was responsible for overseeing the development of the Transportation Management Plan (TMP), including a detailed work zone traffic analysis, using **TransModeler**, MOT Plans including the bridge phasing, Signing/Marking, Lighting, Signals, ITS, and Civil Toll Infrastructure. Lighting included

development of continuous freeway lighting photometrics and construction plans, including voltage drop calculations and electrical wiring details. The project involved overlapping technologies for peak hour shoulder lane use, and HOT lane infrastructure for express lane congestion pricing, with overhead gantries for both, and also separate ITS systems.

Route 29 Solutions, Albemarle County, VA | Design-Build
Key Personnel Role: Lead Traffic Engineer
Experience with Current Firm: RK&K
Project/Assignment Duration: Project 2015 – 2018, Assigned 2015 – 2018
Owner Contact Information: VDOT, David Covington, david.covington@vdot.virginia.gov, 540.332.9093
Design/Construction Value: $140 Million
Project Description: RK&K served as the Lead Designer for the entire project, which consisted of three elements, including: Route 29 and Rio Road Grade Separated Intersection; Route 29 Widening Polo Grounds Road to Town center Drive; and 2.3-miles of Berkmar Drive new alignment.

Stuart served as the lead traffic engineer responsible for overseeing all traffic analysis and design. Most notably, Stuart was responsible for overseeing the signal timing development for 17 signals over a 7.5-mile section of Route 29. Signals were required to provide a continuous green band during and after construction. This was achieved through detailed efforts to coordinate the signals and provide appropriate offsets. VISSIM Econolite ASC/3 was used to model the signals. For the seven (7) construction phases and final condition, Stuart and his team were responsible for field implementation and verification of all timing plans at the 17 corridor-wide signals. Field adjustments were made at the controller box and the project was accepted by VDOT within contract a month ahead of schedule.

Route 460 Commonwealth Connector, Petersburg to Suffolk, VA | Design-Build
Key Personnel Role: Lead Traffic Engineer
Experience with Current Firm: RK&K
Project/Assignment Duration: Project 2013 – 2015, Assigned 2013 – 2015
Owner Contact Information: VDOT, Bruce Duvall, bruce.duvall@vdot.virginia.gov, 757.956.3000
Design/Construction Value: $1.4 Billion
Project Description: This 55-mile limited access freeway on a new location connecting the two towns involved developing three **Interchange Modification Reports (IMR)** including one document which was being written for 7 proposed interchanges. Tasks on this project included traffic forecasting, using the Super-Regional Model, and post-processing per NCHRP standards, traffic analysis per VDOT specifications and microsimulation using CORSIM. A major component of the forecasting element of this project was modeling the paths and usage of long-haul freight emanating from the Port of Virginia and attempting to optimize the corridor to divert trips from I-64 and US 58 onto the proposed Route 460 to increase toll revenue and provide regional congestion relief.

As the traffic technical lead, Stuart was responsible for performing all necessary traffic analysis in support of the Environmental Document and the IJR. Each IJR included a proposed signage plan with toll signage and proposed offsite signs to direct traffic to and from the proposed toll road.

I-24 SMART Corridor, Davidson and Rutherford Counties, TN | Design-Build
Key Personnel Role: Project Manager
Experience with Current Firm: RK&K
Project/Assignment Duration: Project 2020 – 2024, Assigned 2020 – 2024
Owner Contact Information: TDOT, Greg Dyer, greg.dyer@tn.gov, 615.253.0046
Design/Construction Value: $1.2 Million (Design)
Project Description: This phase of the project includes the preliminary planning, and final design for connections along the corridor, along US 41, and along the parallel and connecting arterial routes. Initial planning efforts analyzed the ramp metering in VISSIM and selected the appropriate algorithm. Later phases include the development of a Systems Engineering document for the entire I-24 SMART Corridor, a Concept of Operations for the technologies deployed, and integration of all systems back to a central system. The ramp metering elements of the project include ramp and interstate widening to accommodate appropriate acceleration lanes, and provide two lane on-ramps where demand dictates. Stuart has overseen the roadway, traffic, and MOT design elements for this. As part of the signal upgrades, communication from locality signals will be provided to TDOT for incident management, with redundant elements and security features to maintain individual functionality for each agency.

Stuart was responsible for Phase III, a 32-mi. span connecting Downtown Nashville and Murfreesboro. He designed continuous CCTV coverage for I-24 and arterial network, Dynamic Message Signs along I-24 and arterial for incident notification/diversion, ramp metering, arterial signal timings, arterial signal upgrades, and project-wide fiber for communications. Part of the project also included the development of an **Interchange Modification Report (IMR)** at I-24 and Briley Pkwy (SR 155)

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Stuart Samberg will not be required to be on-site full-time but will attend all routine project meetings in person and will be primarily dedicated to design of the Project.

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.

a. Name & Title:

Patrick (Pat) Edward Cline
Civil Manager

b. Role of Key Individual for this Project:

Construction Manager

c. Name of Firm with which you are now associated:

Kiewit Infrastructure South Co. (KISC)

d. Years of Experience: With this Firm 25 Years With Other Firms 2

KISC: Project Sponsor – Responsible for overseeing project safety, quality, compliance, and budgets, 2014 – present
KISC: Construction Manager – Responsible for overseeing roadway projects on site as assigned, 2008 – 2014
KISC: Superintendent – Responsible for initial project set-up on site as assigned, 1997 – 2008

e. Education:

Texas A&M University / College Station, TX / Bachelor of Science / 1997 / Construction Science

f. Active Registrations:

N/A

g. Document the extent and depth of your experience and qualifications relevant to the Project.

Pat's responsibilities in construction management demonstrate his growth and expertise in roles on major infrastructure and highway transportation projects valued at over $2B in total, examples of which are shown below.

Southeast Connector, Fort Worth, TX | Design-Build

Key Personnel Role: Construction Manager
Experience with Current Firm: KISC
Project/Assignment Duration: Project 03/2022 – 08/2027, Assigned 03/2022 – present
Owner Contact Information: TxDOT, Justin Thomey, justin.thomey@txdot.gov, 817.371.4106
Design/Construction Value: $1.6 Billion
Project Description: This project is approximately 16.6 miles of non-tolled improvements to I-20 from Forest Hill Drive to Park Springs Boulevard, to I-820 from I-20 to Brentwood Stair Road, and to US 287 from Bishop Street to Sublett Road. The base scope includes general purpose lanes, four-lane collector-distributors, improvements to adjoining and connecting roadways, frontage roads, interchanges, reconstruction, realignment, and related transition work.

Pat is responsible for overseeing all field operations. He is actively involved in coordination of the project, leading daily coordination meetings for designers, TxDOT representatives, and members from each discipline, as well as safety, quality, and maintenance leaders. His project responsibilities are scheduled to be completed prior to the beginning of construction of this SCDOT Carolina Crossroads Phase 3 Project.

DFW Connector, Grapevine, TX | Design-Build

Key Personnel Role: Superintendent
Experience with Current Firm: KISC
Project/Assignment Duration: Project 10/2009 – 06/2017, Assigned 10/2009 – 09/2013
Owner Contact Information: TxDOT, Christopher Weber, christopher.weber@txdot.gov, 432.837.3391
Design/Construction Value: $1.1 Billion
Project Description: This $1.1 billion reconstruction/rehabilitation project involved 150 lane miles and 37 bridge structures adjacent to DFW Airport. Challenges included the design and construction of two major, multi-level interchanges, complex urban traffic phasing, and a dense existing utility footprint. The project reduced congestion at the confluence of two of the area's most heavily traveled highways, easing access to DFW International Airport.

Pat was responsible for grading, walls and drainage. He was actively involved in coordination of the project, leading daily coordination meetings for designers, TxDOT representatives, and members from each discipline, as well as safety, quality, and maintenance leaders. Along with the 4.1 million cubic yards of excavation and 2.9 million square yards of limed subgrade, Pat's teams completed 723,000 square feet of MSE, soil nail wall retaining walls, 159,000 feet of RCP and precast and cast-in-place box culverts for this landmark project.

I-440 Pavement Replacement, Nashville, TN | Design-Build

Key Personnel Role: Construction Manager
Experience with Current Firm: KISC
Project/Assignment Duration: Project 08/2018 – 07/2020, Assigned 09/2018 – 02/2020
Owner Contact Information: TDOT, Clayton Markham, clayton.markham@tn.gov, 931.698.0294
Design/Construction Value: $155 Million
Project Description: This $155 million project was a full reconstruction of 7.5 miles on the I-440, replacing existing concrete pavement with asphalt pavement for the entire mainline alignment, and it included three bridge locations, with one being a fourth-level complex bridge spanning I-65. Design was completed in just eight months, four months ahead of schedule.

Pat led the team and collaborated with TDOT and key stakeholders to develop a plan to complete the work early due to this roadway being a main southern bypass for Downtown Nashville, carrying 110,000 vehicles daily. Pat oversaw all aspects of the field operations and coordinated scheduling to ensure the project was on schedule along with all quality and safety standards being met.

Midtown Express (SH-183), Irving, TX | Design-Build

Key Personnel Role: Construction Manager
Experience with Current Firm: KISC
Project/Assignment Duration: Project 12/2014 – 08/2020, Assigned 12/2014 – 02/2018
Owner Contact Information: TxDOT, Buzz Kyler, buzz.kyler@txdot.gov, 817.370.6952
Design/Construction Value: $834 Million
Project Description: The design-build project covered approximately 27.8 miles of roadway spanning five cities and two counties in Texas, and reconstructed portions of SH 183, SH 114, and Loop 12 to include rehabilitation of frontage roads, general purpose roads, 44 bridges, and 4 connectors.

Pat was responsible for overseeing all grading and earthwork, walls and structures, and drainage. He was actively involved in coordination of the project from the beginning, leading daily coordination meetings for designers, owner representatives, and members from each discipline, as well as safety, quality and maintenance leaders.

RGV-04, Rio Grande City, TX | Design-Build

Key Personnel Role: Grading Superintendent
Experience with Current Firm: KISC
Project/Assignment Duration: Project 08/2019 – 04/2022, Assigned 08/2019 – 04/2022
Owner Contact Information: USACE, Erin Williams, erin.k.williams2@usace.army.mil, 402.578.8139
Design/Construction Value: $322 Million
Project Description: This project was comprised of 11.1 total miles of border fence using existing International Boundary and Water Commission (IBWC) earthen levees. A total of 8.4 miles of retaining wall is composed of concrete walls ranging from 10 ft. to 18 ft. tall, on top of which are integrated 18-ft. steel bollard panels. The remaining 2.7 miles of trench wall, while still on the levee, have 18-ft. steel bollard panels placed within a trench in the existing levee.

Pat was responsible for overseeing all grading and earthwork, walls and structures, and drainage.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Pat Cline is currently assigned to I-820 Southeast Connector project. His other project responsibilities are scheduled to be completed prior to the beginning of construction of this Project. He will be dedicated to the Project, onsite during construction and available for weekly status meetings during the construction phase.

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.

a. Name & Title:

Kevin Brian Harrington, P.E.
Director for South Carolina Construction Services

b. Role of Key Individual for this Project:

Independent Quality Manager

c. Name of Firm with which you are now associated:

Greenman-Pedersen, Inc. (GPI)

d. Years of Experience: With this Firm 1 Years With Other Firms 24

GPI: Construction Director – 2021 – present

- ✓ leading all CEI operations for GPI in South Carolina
- ✓ CEI budget management
- ✓ Recruits and hires CEI staff for construction projects
- ✓ Provides construction engineering reviews
- ✓ Coordinates all CEI certification training in SCDOT

SCDOT: State Construction Engineer – 2018 – 2021

- ✓ Routinely utilized **Engineering Judgement** in resolving complex material and quality issues
- ✓ **Led the Road and Bridge Construction Division of the SCDOT's Director of Construction Office** which was responsible for supporting District and Headquarters personnel in all matters related to Road and Bridge Construction Statewide
- ✓ Represented the Director of Construction Office on **various AGC, Research, and Quality Improvement Committee**.
- ✓ Provided **expert testimony for SCDOT in litigation** matters
- ✓ Performed reporting and represented the Director of Construction office on **Title VI matters**
- ✓ **Provided guidance for alternative Design-Build projects** during the preconstruction phase to include assistance in the development of RFQ and RFP documents
- ✓ **Resolved complex contract administration and material quality issues**, and when necessary developed written position papers for claims heard by the standing Dispute Resolution Board
- ✓ **Approved all Final Estimates for construction projects**

SCDOT: Road Engineer – 2007 – 2018

- ✓ Utilized Engineering Judgement in resolving complex material and quality issues
- ✓ Wrote specifications and special provisions, evaluated, and approved proposed project completion dates, evaluated, and approved DBE and OJT goals.
- ✓ Served on numerous preconstruction value engineering committees; reviewed and approved contractor value engineering proposals.
- ✓ Performed constructability reviews on upcoming projects when there were complex staging and/or construction processes.
- ✓ Supported District personnel in the evaluation and resolution of material and quality issues.
- ✓ Reviewed and approved change orders and requests for time extensions.
- ✓ Performed Road User Cost calculations and wrote innovative contract language incentivizing expedited contract completion

e. Education:

Florida State University / Tallahassee, FL / Bachelor of Science / 1997 / Civil Engineering

f. Active Registrations:

2002 / SC / Civil / 21943
SCDOT Earthwork and Base Course Technician
SCDOT Concrete Field Technician Certification (Pending ACI)
SCDOT Asphalt Roadway Technician
SCDOT Nuclear Gauge Hazmat Certification
OSHA 10-hour Construction Safety and Health

g. Document the extent and depth of your experience and qualifications relevant to the Project.

Kevin served SCDOT in key engineering roles for highway transportation projects in South Carolina from 2006 to 2021. In Kevin's last three years with SCDOT he served in the role of State Construction Engineer, leading the Road and Bridge Construction Divisions of SCDOT's Director of Construction Office. Kevin was responsible for leading District and Headquarters personnel in all matters related to Road and Bridge Construction Statewide. Average annual Construction work performed during this period was $1.6B annually. Kevin also served in a key role supporting District 6 during Construction of the $220M Port Access Road project.

Port Access Road, Charleston, SC

Key Personnel Role: State Construction Engineer (2018-2021); Road Construction Engineer (2016-2018)
Experience with Prior Firm: SCDOT
Project/Assignment Duration: Project 05/2016 – 02/2022, Assigned 05/2016 – 09/2021
Owner Contact Information: SCDOT, Daniel Burton, burtond@scdot.org, 843.740.1667
Design/Construction Value: $220 Million
Project Description: This major interchange project includes a new fully directional interchange on I-26, the reconstruction of two I-26 exits, a three-level flyover interchange and local roadway enhancements. The Port Access Road project was a Design-Build project.

Kevin was responsible for supporting project staff in resolving complex issues in contract administration, material quality, sampling and testing, environmental compliance, and traffic control.

Volvo Interchange, Charleston, SC

Key Personnel Role: Road Construction Engineer
Experience with Prior Firm: SCDOT
Project/Assignment Duration: Project 12/2016 – 02/2019, Assigned 12/2016 – 06/2019
Owner Contact Information: SCDOT, Daniel Burton, burtond@scdot.org, 843.740.1667
Design/Construction Value: $44 Million
Project Description: This major interchange project includes a new three-leg directional interchange which provides access to the new Volvo vehicle manufacturing facility as well as the Camp Hill Commerce Park in Berkeley County. The Volvo Interchange project was a Design-Build project.

Kevin was responsible for supporting project staff in resolving complex issues in contract administration, material quality, sampling and testing, environmental compliance, and traffic control.

I-26/Remount/Aviation Interchange Widening and Reconstruction, Berkeley County, SC

Key Personnel Role: Road Construction Engineer
Experience with Prior Firm: SCDOT
Project/Assignment Duration: Project 09/2007 – 06/2011, Assigned 09/2007 – 06/2011
Owner Contact Information: SCDOT, Tim Henderson, hendersotr@scdot.org, 843.740.1667
Design/Construction Value: $62 Million
Project Description: The I-26/Remount/Aviation Interchange Widening and Reconstruction project reconstructed the Remount Road and Aviation Avenue Interchanges with I-26 in Charleston County. This was a Design-Bid-Build project.

Kevin was responsible for supporting project staff in resolving complex issues in contract administration, material quality, sampling and testing, environmental compliance, and traffic control.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Kevin Harrington is currently assigned as the Director of Construction Services for Greenman-Pedersen in South Carolina. Kevin has no current obligations that would prevent compliance with the required full-time commitment to the Carolina Crossroads, Phase 3 project.

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.

a. Name & Title:

Bert Henry Laaker
Senior Safety Manager

b. Role of Key Individual for this Project:

Safety Manager

c. Name of Firm with which you are now associated:

Kiewit Infrastructure South Co. (KISC)

d. Years of Experience: With this Firm 35 Years With Other Firms 0

KISC: Senior Safety Manager – Responsible for training, programs, and procedures within region (KISC has an average of 4,535,739 MH | Kiewit's overall EMR is 0.41 while the national average is 1.00), 2012 – present
KISC: Safety Manager – Responsible for overseeing the overall safety plans for projects as assigned, 2008 – 2012
KISC: Safety/Environmental Coordinator – Responsible for training, programs, and procedures, 2005 – 2008

e. Education:

Midland University / Fremont, NE / Bachelor of Science / 1987 / Business Administration

f. Active Registrations:

OSHA 500 Certified	First Aid/CPR	Crane Training
Explosives Safety	Supervisory Conference	Transportation and Traffic Control Training
Field Engineer School	Environmental Compliance	Stormwater, Erosion, & Sediment
Temporary Structures and Construction	Trenching & Excavation and Confined Space Entry Training	

g. Document the extent and depth of your experience and qualifications relevant to the Project.

Bert has served as safety manager for KISC on a variety of infrastructure and highway transportation projects over his 35-year career. His experience as a district safety manager comprises over **30 years** of helping develop and overseeing safety on **highway projects** across the U.S.; 17 of those years were on projects located in the southeast. **Safety training and enforcement** are part of Kiewit's core values and Bert delivered those aspects on every project. All of Bert's highway work has incorporated **work zone safety and OSHA regulations**.

Inter-county Connector (ICC) Contract B, Montgomery and Prince George's Counties, MD | Design-Build
Key Personnel Role: Safety Manager
Experience with Current Firm: KISC
Project/Assignment Duration: Project 06/2008 – 03/2013, Assigned 06/2009 – 11/2009
Owner Contact Information: MTA, Robert Michael, rmichael@mdta.state.md.us, 410.537.7813
Design/Construction Value: $561 Million
Project Description: The work on this seven-mile-long, six-lane toll road included 2.4 million CY of excavation, 1.7 million CY of embankment, 500,000 SY of new pavement section, 20 retaining walls or 3000 LF ranging from 5 to 28' tall, over 80,000 LF of drainage, and 15 bridges totaling over 600,000 SF of deck over environmentally sensitive land.

Bert was responsible for more than 400 craft and staff and more than 100 subcontractors. He implemented and supported the safety programs, policies, procedures, and training for all staff.

Selmon Expressway Western Extension, Tampa, FL | Design-Build
Key Personnel Role: Safety Manager
Experience with Current Firm: KISC
Project/Assignment Duration: Project 09/2017 – 05/2022, Assigned 06/2018 – 04/2021
Owner Contact Information: Tampa-Hillsborough Expressway Authority (THEA), Brian Pickard, brian.pickard@tampa-xway.com, 813.272.5987
Design/Construction Value: $235 Million
Project Description: This project involved the design and construction of a 1.9-mi. elevated tollway extension connecting Lee Roy Selmon Expressway to Gandy Bridge. The new roadway is located in the median of the existing Gandy Boulevard, so that vehicles can either use the boulevard for local destinations or go directly to the Expressway / Bridge. The new elevated roadway included 42-in. dia. drilled shafts and 18-in. dia. ACIP piles.

Bert was responsible for all the safety programs, policies, procedures, and training for all staff, craft, and subcontractors.

Arlington Memorial Bridge Rehabilitation, Washington D.C. | Design-Build

Key Personnel Role: Project Sponsor
Experience with Current Firm: KISC
Project/Assignment Duration: Project 11/2017 – 07/2021, Assigned 11/2017 – 07/2021
Owner Contact Information: FHWA, Joseph Fabis, joseph.fabis@dot.gov, 703.404.6201
Design/Construction Value: $199 Million
Project Description: This high-profile project consisted of full deck replacement. The bridge is 2,162-feet-long and 94-feet-wide and consists of ten reinforced concrete arch approach spans and a double-leaf bascule span at the bridge's center. Eight of the ten approach spans convey the Potomac River. Two smaller concrete arches span the George Washington Memorial Parkway (GWMP) and Ohio Drive, SW, at each end of the bridge. The bridge has sidewalks on each side nearly 14 feet, and the roadway measures 60 feet from curb to curb, providing six 10-foot-wide vehicle travel lanes.

Bert was responsible for ensuring a safe work environment for all craft and staff.

HJAIA Airfield Repairs 2015, Atlanta, GA | Design-Bid-Build

Key Personnel Role: Safety Manager
Experience with Current Firm: KISC
Project/Assignment Duration: Project 05/2015 – 12/2017, Assigned 07/2015 – 01/2016
Owner Contact Information: City of Atlanta, Department of Aviation, Norma Click, norma.click@atlanta-airport.com, 404.530.5838
Design/Construction Value: $9.68 Million
Project Description: This project involved correcting deficiencies associated with existing airfield pavements and other airfield-related issues. Scope included spall repairs, joint and crack sealing, full-depth slab replacement of airfield and roadway pavements, trench drain repairs, pipe and void repair, slope repairs, application of sealer/rejuvenator, and development of permanent staging area at Gate 69.

Bert was the Safety Manager on Airfield Repairs 2015 and was responsible for the development and execution of safety protocols such as: site safety inspections, safety meetings, loss control and ensuring compliance.

HJAIA Airfield Repairs 2013, Atlanta, GA | Design-Bid-Build

Key Personnel Role: Safety Manager
Experience with Current Firm: KISC
Project/Assignment Duration: Project 05/2013 – 10/2013, Assigned 05/2013 – 10/2013
Owner Contact Information: City of Atlanta, Department of Aviation, Norma Click, norma.click@atlanta-airport.com, 404.530.5838
Design/Construction Value: $3.3 Million
Project Description: This project involved correcting deficiencies associated with the existing airfield pavements including full-depth slab repairs, road replacements, trench drain replacements and spall repairs. With all these scopes, the grading and drainage work in the gore areas between the taxiways and runway played a crucial role in the project's success.

Bert was responsible for the development and execution of safety protocols.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Bert Laaker is currently assigned to the Tampa, Miami, and Orlando area projects. His other project responsibilities are scheduled to be completed prior to the beginning of construction of this Project. He will be dedicated to the Project, onsite during construction and available by phone during the construction phase.

Appendix B

Work History and Quality Form – Contractor/Designer *(Section 3.5.1)*

WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER
Kiewit Infrastructure South Co. (KISC)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify **KISC's** responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by **KISC** (in thousands)
Name: DFW Connector Design-Build Location: Grapevine, TX	Name: Northgate Constructors, a Joint Venture Lead Designer: WSP (As Parsons-Brinckerhoff) Design Support: KEGI (Overall support); Lead Designer for a $381M added scope component: KEGI Lead Contractor: Kiewit Infrastructure West Co. (affiliate of KISC and KEGI)	Name of Owner: TxDOT Project Manager: Michael Gage Phone: 817.370.6500 Email: michael.gage@txdot.gov	10/2008 (Design) 01/2022 (Construction)	$1,540,000	$702,042 (KISC) $3,873 (KEGI)

g. Narrative describing the work performed by **KISC**. If submitting work completed by an affiliated / subsidiary of A, identify the full legal name of the affiliate or subsidiary and their role on the Project.

The project enhanced capacity, mobility, and safety improvements along an 8.4-mile highway connecting major roadways. Serving as a vital connection for the economic viability of north Texas' business, commercial, and recreational interests, the improvements along State Highways 114 and 121 resulted in an expanded urban freeway with new managed lanes and new access to Dallas Fort Worth International Airport (DFW). NorthGate Constructors, a Kiewit-led joint venture, was the design-builder on this project. The joint venture self-performed 65% of the total work including grading; 2.9M CY of excavation; 130,000 ft. of drainage installation with reinforced concrete pipe; 2.1M CY of embankment; 725,00 SF of MSE wall installation; construction of 100 retaining walls; 43 new bridge structures; 1.6 million SY of concrete paving; and maintenance. The scopes of work for the overall project involved roadway reconstruction and widening, including 4 highways; 2 multi-level interchanges; 5 overpasses; continuous frontage roads; and new direct-connect ramps. Constructing the work and demolishing the existing bridge structures, while maintaining existing traffic volumes through the high-volume corridor, proved to be one of the biggest challenges to the project. The base contract finished ahead of schedule and in close to half the time it would have taken to construct under traditional contracting methods. One of the keys to completing the project on time was the Kiewit ROW task force. Kiewit's goals for ROW acquisition and maintaining communication with property owners ensured construction was not delayed. The task force targeted a 14-month time frame to achieve 100% right of entry and use. Through collaboration at all levels the goal was successfully reached, and workers were able to build on all properties without any impacts to the construction schedule. The project incorporated cost-saving, innovative solutions that resulted in reduced scope and better water quality. Altogether, traffic control innovations reduced travel delays, saved the client $8M, and reduced the schedule by 6 months. To improve project safety, the project team held regular coordination meetings with the fire departments and first responders for the cities of Grapevine and Southlake to review Fire and Life Safety access points both during construction (as part of regular MOT meetings) and for final design. This input from the local Fire and Life Safety representatives led to design modifications, adding more access points to the barrier-separated managed lanes.

Design Location Dallas, TX

Key Individual Participation
Pat Cline, Superintendent, 07/2009 – 12/2013

Highlights
1. Over 200,000 average daily travelers
2. Achieved DBE participation of 12.7% (12% goal)
3. 3 years RECORDABLE-FREE (no safety incidents)
4. Use of flexible paving, MSE walls, sidewalks, street lighting, ATMS, and underground utilities
5. Railroad coordination was required with Fort Worth and Western Railroad (the Cotton Belt) and the Dallas Area Rapid Transit (DART) agency

The project required five overpasses and 37 bridges that included two interchanges, five overpasses, and 2,000 girders

h. Self-Assessment. The information provided in this section should be a self-assessment of **KISC's** performance on the project to identify **KISC** with firms or personnel that have successfully completed projects on time and on or under budget, and to identify **KISC** that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

Kiewit's proficiency in executing design-build contracts allowed the team to accelerate the ROW, design, and construction phases, thereby minimizing impacts to both businesses and the traveling public. Altogether, traffic control innovations reduced travel delays, saved the client $8 million, and reduced the schedule by 6 months. Co-location, community outreach, dedicated managers, early close-out planning, and guarding against complacency helped the team stay focused on the project's success and early completion; we will do the same for the Project.

i. Quality Initiatives. Discuss **KISC's** quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Since the work was near the airport, the team coordinated extensively with DFWIA staff to obtain airport related permits and incorporate FAA clearance requirements in the design. FAA also prohibited detention ponds as part of the storm drainage system because of the potential of waterfowl which could interfere with aviation. As a result, all drainage systems near DFWIA were designed to be self-draining within 24 hours. Utilities were relocated to a shared use utility corridor to further minimize the right-of-way impacts. The project team identified more than 1,000 potential utility conflicts. Through coordinated design efforts, the Kiewit-led JV re-phased portions of the work, limiting the number of utility relocations to 41.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, **KISC** shall provide a detailed explanation below.

Kiewit Infrastructure South Co. answers "No" to all questions in Section 3.5.2 for this project.

WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER
Kiewit Infrastructure South Co. (KISC)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify **KISC's** responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by **KISC** (in thousands)
Name: Intercounty Connector Contract B Design-Build Location: Montg. & Prince George's Counties, MD	Name: MD 200 Constructors Joint Venture Lead Designer: Parsons Corporation Design Support: KEGI Lead Contractor: Kiewit Infrastructure South Co. (affiliate of KEGI)	Name of Owner: Maryland Transportation Authority Project Manager: Robert Michael Phone: 410.537.7813 Email: rmichael@mdta.state.md.us	03/2013 (Design) 03/2013 (Construction)	$560,700	$560,700 (KISC) $8,417 (KEGI)

g. Narrative describing the work performed by **KISC**. If submitting work completed by an affiliated / subsidiary of A, identify the full legal name of the affiliate or subsidiary and their role on the Project.

At the time, the Intercounty Connector, Contract B project was the largest design-build project ever undertaken by the State of Maryland. RK&K was the Owner's General Engineering Consultant, AECOM was the Owner's Representative, and GPI was the IQF. The team worked with each firm regularly throughout this project, with RK&K and KISC co-locating. As the Lead Contractor, KISC cleared more than 325 acres, constructed eight large stormwater management ponds and two large underground stormwater containment structures, moved more than 2.4 million CY of earth, constructed more than 54,000 LF of drainage systems, placed more than 500,000 tons of new asphalt pavement, and built more than 65,000 SF of MSE retaining walls. Multiple utilities required relocation throughout the corridor, including water mains at 12 locations, sewers and natural gas at six locations, and overhead electricity at five locations. Each utility required in-house design, which was approved by the project owner, then the utility owner. Coordination with the utility owners was crucial to keep them informed of the design and work progress, allowing them to schedule the tie-ins to minimize impacts. Maintenance and protection of traffic, together with alternative routing, was an essential part of this project. The team created stringent maintenance and protection of traffic plans, which we followed. Detour routing, crane placement and storage, and material delivery were all coordinated and were key factors in the success of our traffic handling. As a cornerstone of team culture, they spent significant time and effort planning work to ensure that it was performed safely and to the highest quality standards.

Design Location Silver Spring, MD

Key Individual Participation
Tim Cleary, Project Manager, 06/2008 – 01/2012
Bert Laaker, Safety Manager, 06/2009 – 11/2009

Relevancy
1. Familiarity between Kiewit, RK&K, AECOM, and GPI
2. The new east-west highway limits access and accommodates moving passengers and goods
3. Two miles of special protection area
4. First all-electronic toll facility constructed in MD
5. Achieved DBE participation of 23.7%; goal was 20%
6. Maintained grading operations throughout winter for on-time completion

Community outreach was an essential part of the ICC. The Project donated more than $2.5 million in topsoil to a nearby community, power washed homes, filled in a swimming pool for a senior center, and donated gently used sheds and equipment.

The team developed a site-specific safety plan that identifies all procedures required to perform work in accordance with OSHA requirements. Work zones were carefully supervised and monitored to control traffic flow and ensure motorist safety. Key project elements included a diamond interchange at MD 182, a single point urban interchange at MD 650, and 10 new bridges that included precast concrete and steel girders. The project also featured intelligent transportation systems, electronic toll collection, traffic signals, signing and pavement marking, more than 80 acres of reforestation, 12,938 LF of hiking and cycling trails, and the relocation of six side roads. In addition to the bridge structures, the project had more than seven miles of sound barriers. KISC also performed several stream restoration tasks throughout the project, including working around stream restriction windows and multiple permitting agencies and stakeholders. For the stream work, the team installed reinforced bed material, imbricated rock walls, log vanes, root wads, boulder riffles, step pools, plunge pools and rock sills. Approximately 1,100 trees were carefully removed and replanted near adjacent streams, and 36 acres of nontidal wetlands were monitored to ensure they weren't damaged during construction. All personnel had to attend the Environmental Compliance and Training Program before accessing the job site.

h. Self-Assessment. The information provided in this section should be a self-assessment of **KISC's** performance on the project to identify **KISC** with firms or personnel that have successfully completed projects on time and on or under budget, and to identify **KISC** that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

The ICC project experienced numerous delays after start-up (including an eight-month, owner-initiated delay), in the approval and issuance of grading permits by the Maryland Department of the Environment (MDE). The team was able to shorten the MDE permit approval process by 7 months. Grading permit issues were overcome by breaking the project into select areas that allowed work to begin in some areas while issues in other areas were addressed as the design advanced. SHA was able to open the roadway to traffic as planned. The team implemented an extensive sediment and erosion control system, receiving an "A"(Excellent) rating from MDOT SHA and MDE throughout construction, and minimized equipment idle time to reduce emissions.

i. Quality Initiatives. Discuss **KISC's** quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

A total of 27 enhanced value change proposals (EVCP) were presented and approved on the project. These EVCPs were allowed as part of the design-build philosophy. One example of innovation was the concrete barrier walls on the bridges. Originally, due to the inset form liner, the concrete barrier walls were not intended to be slip formed. Through the partnering process, the team worked together to create a technique that was not in the original contract specification, but allowed for a superior product plus a significant advantage in the construction schedule.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, **KISC** shall provide a detailed explanation below.

Kiewit Infrastructure South Co. answers "No" to all questions in Section 3.5.2 for this project.

WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER
Kiewit Infrastructure South Co. (KISC)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify **KISC's** responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by **KISC** (in thousands)
Name: I-440 Pavement Replacement (Nashville Connector) Location: Nashville, TN	Name: Lead Designer: WSP Design Support: KEGI (Design Refinements) Lead Contractor: Kiewit Infrastructure South Co. (affiliate of KEGI)	Name of Owner: Tennessee Department of Transportation Project Manager: Clayton Markham Phone: 931.697.0294 Email: clayton.markham@tn.gov	03/2019 (Design) 07/2020 (Construction)	$155,756	$155,756 (KISC) $15,576 (KEGI)

g. Narrative describing the work performed by **KISC**. If submitting work completed by an affiliated / subsidiary of A, identify the full legal name of the affiliate or subsidiary and their role on the Project.

Recognized as the largest contract and design-build in TDOT's history, this approximately 7.5-mile widening project involved a full reconstruction of I-440 between the I-40 and I-24 junctions. The project required coordination with CSX for multiple railroad crossings and NES for three major utility relocations in a narrow corridor. Work was built in two major phases, minimizing the need to use temporary pavement. The project included completely shutting down the I-65 interchange for one weekend of bridge work; careful planning for the closure began months in advance, including four meetings with TDOT to review plans and scheduling. Stakeholders, including CSX Railway, had their own unique concerns; all of which were considered and addressed through regular coordination meetings. Team members took a global view to understand how they would be disrupting traffic, and first responders helped plan alternate routes. TDOT and Kiewit identified the railroad agreement as a critical path item. The team first met with CSX and their consultant, STV, one week after award to coordinate the railroad agreement. The teams met monthly as the design was finalized and interim and final submittals made. This continual communication created a streamlined comment and resolution process and, ultimately, a fully executed railroad agreement by July 2019, ahead of the required date. The Kiewit DB team resolved unforeseen conditions for TDOT with minimal cost while maintaining schedule. The I-440 Widening project had an existing steel tub girder bridge, designed as two separate bridges, that spanned over I-65. The base contract involved widening that bridge in the center by adding some additional piers and deck. After analyzing the ability of the existing bridge to handle the additional weight of the center widening, as well as temporary construction loading, they determined the existing bridges could not meet HS20 loading. KEGI led an executable and affordable solution to a complex existing condition. To accommodate structural steel erection on the bridge the Kiewit team developed an innovation utilizing two 100-ton gantry cranes spanning the existing bridges. This minimized impacts to traffic on I-65 below and the active CSX Railroad. Kiewit widened the existing corridor into the median, adding a third lane in each direction, separated by a concrete median wall. During the procurement phase, our team conducted additional soil sampling and developed an ATC to develop innovative rubble material utilization which crushed, recycled, and reused the existing concrete pavement for the new road base. Applying the innovative approach of rubblizing and recycling the existing PCCP pavement yielded a reduction of over 25,000 truckloads of material either coming into or out of the very busy corridor and surrounding interstates, greatly reducing the impacts on traffic and the safety of the traveling public. This resulted in schedule efficiencies and nearly $3 million in cost savings.

Design Location Nashville, TN

Key Individual Participation
Pat Cline, Construction Manager, 09/2018 – 02/2020

Relevancy
1. Design-Build project completed in 22 months
2. Roughly 110,000 cars and 8% of heavy truck traffic
3. Added Railroad Agreements to the Critical Path, as there were multiple crossings along the project alignment
4. Completed under live traffic environment
5. Major interchanges on the eastern and western ends

"The contractor met significant milestones for this project by utilizing available resources to keep the project on schedule, along with effective onsite management...Kiewit's safety programs were very impressive, and they took all necessary precautions for the safety of their employees and provided the necessary protection to prevent damage, injury or loss."
−Steve Sellers TDOT Deputy Director of Construction

h. Self-Assessment. The information provided in this section should be a self-assessment of **KISC's** performance on the project to identify **KISC** with firms or personnel that have successfully completed projects on time and on or under budget, and to identify **KISC** that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

TDOT's main goal was to accelerate construction and minimize traffic impacts to the I-440 corridor and the three connecting interstates. To meet the goal, Kiewit bid 22 months to design and build the entire project. Design on this schedule-driven job was completed in just eight months – four months ahead of schedule – and construction was completed within budget and two months ahead of schedule.

i. Quality Initiatives. Discuss **KISC's** quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Through daily collaboration with TDOT and key stakeholders, Kiewit developed a plan to complete the work early. To meet that goal, the team was committed to completing design and construction in 22 months. From day-one, the team developed and used an integrated design and construction schedule to guide the work and meet the aggressive milestones. The project reached early substantial completion due to these efforts. Utilizing the full breadth of KEGI, Kiewit was able to refine the structure and pavement design, as well as staging plans, to optimize crane lifts. Our review of high-risk operation work plans allowed for design refinement that further contributed to delivering the large design-build project ahead of time and under budget.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, **KISC** shall provide a detailed explanation below.

Kiewit Infrastructure South Co. answers "No" to all questions in Section 3.5.2 for this project.

WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER
Kiewit Infrastructure South Co. (KISC)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify **KISC's** responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by **KISC** (in thousands)
Name: Project Turcot (Turcot Interchange) Location: Montreal, Québec, Canada	Name: KPH Turcot (a Kiewit led JV) Lead Designer: Parsons Overseas Co. of Canada Design Support: KEGI Lead Contractor: Peter Kiewit Sons ULC (83%) (affiliate of KISC and KEGI)	Name of Owner: Transports Québec Project Manager: Sandra Sultana, P3 Director Phone: 514.873.3838 Email: sandra.sultana@transports.gouv.qc.ca	03/2021 (Design) 03/2021 (Construction)	$1,777,308	$1,777,308 (KISC) $34,124 (KEGI)

g. Narrative describing the work performed by **KISC**. If submitting work completed by an affiliated / subsidiary of A, identify the full legal name of the affiliate or subsidiary and their role on the Project.

The Turcot interchange is an essential link between the airport and downtown, and a major transportation crossroad in the Montreal area, connecting autoroutes 15, 20, and 720 and facilitating access to the Champlain bridge. The Turcot Interchange reconstruction project involved the reconfiguration of Quebec's most urban interchange, with a traffic volume of more than 300,000 vehicles per day. The Client awarded a total of 20 contracts for associated works on the Turcot Interchange site, requiring Kiewit to manage these moving parts daily to ensure that access in and out of the site was maintained while also ensuring that local construction labor regulations were followed. The project is surrounded by four densely populated neighborhoods (in the boroughs of Côte-des-Neiges-Notre-Dame-de-Grâce and Sud-Ouest, such as St-Henri, Montréal-Ouest, and the City of Westmount). Kiewit engaged with these impacted communities early through regular public committee meetings and a direct phone line. Kiewit completed the construction of 42 bridges, including both multi-span bridges and gates built in several construction phases, 145 km (90 mi.) of highway lanes, 17 km (4 mi.) of transit lanes, 7 km (4 mi.) of pedestrian and bike paths, more than 65,000 sq. m. of retaining walls (190 retaining walls), the construction of a new cable-stayed bridge over the Lachine Canal, the relocation of highways 15, 20, and 720, the relocation of 16 km of Canadian National (CN) railway tracks. Railway track relocation and extensive protection of four active railways were a key component in deconstructing old infrastructure and construction of new overpasses directly over or near railways. In addition, design and construction had to accommodate, protect, or relocate 270 utility conflicts. The project's biggest challenge was maintaining mobility for the 300,000 vehicles that pass through the interchange daily, including public, commercial, and railway traffic. Several monitoring efforts were required for construction of new structures and demolition of existing structures in this seismically sensitive area characterized by compressible soils layers, with capacities far too low to be used as adequate foundations. The city's busiest hub remained open for business throughout construction.

Design Location Québec, Montreal, Canada

Key Individual Participation
Gus Molina, Design Manager, 03/2015 – 11/2016

Relevancy
1. Managed 44 material suppliers, 173 services suppliers, and 87 subcontractors
2. Overcame labor shortages
3. Continuous traffic flow for 300,000 daily vehicles
4. Four active railways carry over 50 trains per day
5. Resolved more than 270 utility conflicts

The interweaving of the existing highways, height of differentials between new and existing structures, proximity to newly built structures, the presence of active railways, and a tight schedule were some of the challenges the team successfully overcame.

h. Self-Assessment. The information provided in this section should be a self-assessment of **KISC's** performance on the project to identify **KISC** with firms or personnel that have successfully completed projects on time and on or under budget, and to identify **KISC** that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

Hiring craft during the ramp-up periods was challenging for the team. To meet this challenge, Kiewit met with the business managers from all five unions to explain the nature of the project, schedule, hiring needs, and recruiting methods. Kiewit created and advertised an email address within the unions where candidates could forward their resumes. As the project evolved with work occurring in multiple areas, Kiewit broke the project up by sector (East, South, Central, West, and CN Railway) and staffed each sector with an area construction manager. The area construction managers were tasked with coordinating the work and resource needs between sectors, while the discipline managers (superintendents and field engineers) took care of the day-to-day construction operations within various sectors as needed. In addition to the project hub, three field offices were set up in various sectors to facilitate field planning and collaboration. Maintaining mobility for the 300,000 vehicles as well as managing the interweaving of existing highways, heigh differentials between new and existing structures, proximity to newly built structures, adjacent active railways, and a tight schedule where some of the challenges the team successfully overcame.

i. Quality Initiatives. Discuss **KISC's** quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Kiewit optimized the use of local contractors and self-performance capabilities. The ability to self-perform was critical to managing the critical path, but utilizing local contractors allows the team to benefit from local expertise. To ensure the best value for our clients, Kiewit uses a competitive approach to subcontracting work, and local subcontractors and suppliers provide prices for components to determine whether they provide a cost or schedule benefit over self-performing the work. Kiewit self-performed approximately 50 percent of the work that was on the critical path of the project and subbed out the remaining 50 percent to over 90 different subcontractors. Major subcontract scopes include electrical, signage, demolition, rebar and deep foundations, support of excavation, drainage, structural steel erection, and MOT.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, **KISC** shall provide a detailed explanation below.

Kiewit Infrastructure South Co. answers "No" to all questions in Section 3.5.2 for this project.

WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER
Lead Designer – Kiewit Engineering Group, Inc. (KEGI)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify **KEGI's** responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by **KEGI** (in thousands)
Name: I-15 Tropicana Design-Build Location: Paradise, NV	Name: Lead Designer: Kiewit Engineering Group, Inc. Lead Contractor: Kiewit Infrastructure West Co. (affiliate of KEGI and KISC)	Name of Owner: Nevada Department of Transportation Project Manager: Lynnette Russell Phone: 702.671.6601 Email: lrussell@dot.nv.gov	07/2024 (Design) 11/2024 (Construction)	$307,249	$28,600

g. Narrative describing the work performed by **KEGI**. Include the office location(s) where the design work was performed and whether **KEGI** was the lead designer or a sub-consultant.

The interchange of Interstate 15 (I-15) and Tropicana Avenue serves as one of the main gateways to the resort corridor and provides an essential connection for some of the Las Vegas Valley's largest employment centers. Since the NFL opened a new stadium in Las Vegas to house the newly relocated "Raider Nation," there is significant travel demand on the I-15 Tropicana Avenue interchange, feeder roads, and on- and off-ramps, and the existing interchange has become insufficient and unsafe. The early feasibility study recommended a 3-level Tight Diamond Interchange (TDI) with flyover, four EB thru lanes on Tropicana Avenue with one left lane drop at Las Vegas Boulevard and 2-lane entrance from the flyover to Tropicana. This configuration consists of a tight diamond interchange at Tropicana Avenue and a flyover from southbound I-15 to eastbound Tropicana with minimal right-of-way impact. East of the interchange, the right-of-way impact is due to Dean Martin Drive realignment and the flyover. The southbound I-15 exit ramp at Tropicana will include three right turn lanes only. There will be four eastbound thru lanes on Tropicana with one left most eastbound lane trapped left at Las Vegas Blvd and a two-lane entrance from the flyover to Tropicana. There will be one lane exit from northbound I-15 to Frank Sinatra Drive. This project will replace the interchange and structures to widen and lengthen the Tropicana Avenue Bridge over I-15 for: 1) Increased capacity and 2) future space on the bridge for added through lanes and turn lanes to I-15. Scope elements include replacing the existing flyover to allow the widening of the Tropicana Avenue bridge over I-15 and maintain existing connectivity; separating the though movements of Dean Martin Drive from the Tropicana Avenue intersection via a grade-separation. The new configuration will direct drivers to pass north-south under Tropicana Avenue, with the existing Dean Martin Drive roadway connecting to and from Tropicana Avenue. The intersection at Tropicana Avenue will be converted to two right in right-out intersections. Other improvements include replacing the existing flyover to allow for the widening of Tropicana Ave. over I-15 and to maintain existing connectivity; adding HOV ramps to and from the south at Harmon Ave., allowing HOV direct access to the Las Vegas Strip; modifying signalized intersection and configuration of Dean Martin Dr. and Tropicana Ave. to limit access to right-in and right-out; and modifying and/or add active traffic management (ATM) sites along I-15.

Design Location
Las Vegas, NV

Key Individual Participation
N/A

Relevancy
1. Large, complex, highly-phased design-build project
2. Urban environment
3. High-profile project
4. Many high-profile stakeholders
5. MOT and Utility Relocation are paramount
6. As many of 170,000 visitors on any given day

Rendering overlay of the planned final interchange (design phase)

h. Self-Assessment. The information provided in this section should be a self-assessment of **KEGI's** performance on the project to identify **KEGI** with firms or personnel that have successfully completed projects on time and on or under budget, and to identify **KEGI** that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

This travel corridor is in a unique location with a lot of high-profile stakeholders including MGM Resorts International (MGMRI), Allegiant Stadium, Station Casino, Fédération Internationale de l'Automobile (FIA) Formula One, In-n-Out Burger, and utility owners, to name a few. Specifically, In-n-Out is busiest location in the nation, T-Mobile Arena is the busiest year-round arena in the world, F1 Racing will shut down portions of town for 4 days in November 2023 (experts believe the race could have a $500 million economic impact on Southern Nevada), and Allegiant Stadium will host the 2024 Superbowl just as this project will be nearing completion. With the relocation of natural gas, telecommunication, power, water, sanitary sewer lines, and transmission lines for the entire Las Vegas "Strip", successful MOT is paramount.

i. Quality Initiatives. Discuss **KEGI's** quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

The Kiewit Design Quality Management Plan (DQMP), based on the Kiewit quality management system, is impactful due to opportunities for training on QA audits, internal audits, and client audits of every deliverable. As part of Kiewit's process of continual improvement, we have incorporated quality update meetings, discussions of real-time quality issues, one-on-one client feedback meetings, and implemented just-in-time training for understanding and implementing construction phase procedures. Every submittal to the client undergoes several quality checks and a Quality Assurance audit. To measure the project's milestone successes, Kiewit conducts client satisfaction interviews with the client, and KEGI's most recent client satisfaction score was **96.65% satisfaction**. As noted by the Client's Contract Compliance team, *"Even though Kiewit was the highest bidder, Kiewit submitted the best proposal and was the right contractor to select*."

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, **KEGI** shall provide a detailed explanation below.

Kiewit Engineering Group, Inc. answers "No" to all questions in Section 3.5.2 for this project.

WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER
Lead Designer – Kiewit Engineering Group, Inc. (KEGI)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify **KEGI's** responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by **KEGI's** (in thousands)
Name: Mountain View Corridor Design-Build Location: Salt Lake City, UT	Name: Mountain View Corridor Constructors, a Kiewit-Clyde Joint Venture Lead Designer: Parsons Transportation Group, Inc. Design Support: Kiewit Engineering Group, Inc. Lead Contractor: Kiewit Infrastructure West Co. (affiliate of KISC and KEGI) 65% JV Member	Name of Owner: Utah Department of Transportation Project Manager: Robert Stewart Phone: 801.440.5746 Email: rstewart@utah.gov	12/2018 (Design) 06/2021 (Construction)	$228,978	$3,418

g. Narrative describing the work performed by **KEGI**. Include the office location(s) where the design work was performed and whether **KEGI** was the lead designer or a sub-consultant.

Constructed in phases, the Mountain View Corridor (MVC) project provides an alternative route to Interstate 15 in Utah. Kiewit created a 35-mile-long freeway from I-80 to SR-73 including a high-occupancy toll lane in each direction. The team conducted and participated in weekly task force meetings for KEGI's design scope with the owner and third parties including stakeholder cities and utilities. The project design was a truly collaborative effort, with KEGI managing the design of one segment, while a different firm designed the other segment, requiring frequent communication between designers to ensure constructability of the project. KEGI held weekly meetings with the North segment designer and client to work through issues, integrate construction and design, and eliminate errors. Kiewit also met monthly with the stakeholder Community Coordination Team (CCT) to discuss upcoming work and mitigate impacts wherever possible; and provided post design services including submittal reviews, design changes, non-conformance reports, and as-built drawings. Kiewit's scope included: 4 miles of two-lane freeway in each direction from 4100 South to SR-201, ramps to California Avenue, widening approximately 5 miles of SR-201, a grade-separated single-point urban interchange, on- and off-ramps, improvements to crossing roads, 12 bridges (including a new arterial bridge over mainline), 1.3 miles of freeway and about one mile total of arterials, including roadway, drainage, retaining and noise walls, pavement, MOT for cross streets, abutments and piers for prefabricated pedestrian bridges at two locations, and a total of 6 shared-use path bridges.

Design Location Draper, UT

Key Individual Participation
N/A

Relevancy
1. Design and construction
2. Tight corridor
3. 50 separate stakeholders
4. Strict environmental requirements
5. Coordination with adjacent contractors

"The project was able to be substantially completed ahead of schedule and within budget, even despite the challenges of a global pandemic."
– Robert Stewart, UDOT Region Two Director

h. Self-Assessment. The information provided in this section should be a self-assessment of **KEGI's** performance on the project to identify **KEGI** with firms or personnel that have successfully completed projects on time and on or under budget, and to identify **KEGI** that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

Throughout the project, KEGI constantly investigated ways to optimize the design, reduce costs, and compress the schedule. One significant cost and schedule reducing innovation that was implemented on this project was reconfiguring the bridges at Cilma Drive. The client's original design called for the freeway to pass over the existing Cilma Drive on two bridges, one northbound and one southbound. KEGI, in coordination with UDOT, redesigned this section of the alignment so Cilma Drive passes over the new freeway. This required construction of only one bridge for Cilma Drive, instead of two bridges as originally planned, reducing the quantity of bridges being constructed and saving UDOT considerable time and expense. Once KEGI completed the design, Kiewit performed as lead contractor.

i. Quality Initiatives. Discuss **KEGI's** quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

The team conducted extensive upfront planning and worked together to prepare a comprehensive environmental compliance approach. The team implemented the following mitigation measures to minimize geotechnical challenges on the project: surcharging, over excavation, and utilization of geogrid. The team was also able to eliminate the use of two stage MSE walls through a collaborative brainstorm effort during task force meetings. Kiewit worked with the regulatory agencies to acquire and maintain a SWPPP permit during project construction without issues or delays to the project schedule. Kiewit also took measures to prevent damage to the surrounding environment. They developed an environmental management plan to address environmental concerns on the project and participated in weekly environmental compliance walks to ensure we were compliant with regulations.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, **KEGI** shall provide a detailed explanation below.

Kiewit Engineering Group, Inc. answers "No" to all questions in Section 3.5.2 for this project.

WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER
Design Consultant – AECOM Technical Services, Inc. (AECOM)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify **AECOM's** responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by **AECOM** (in thousands)
Name: Southeast Connector Design-Build Location: Fort Worth, TX	Name: South-Point Constructor a Kiewit-Austin Bridge & Road Joint Venture Lead Designer: AECOM Design Support: KEGI (Overall support) Lead Contractor: Kiewit Infrastructure South Co.	Name of Owner: TxDOT Project Manager: Justin Thomey Phone: 817-371-4106 Email: justin.thomey@txdot.gov	09/2023 Est. (Design) 08/2027 Est. (Construction)	$1,589,820 (Base Scope)	$38,000

g. Narrative describing the work performed by **AECOM**. Include the office location(s) where the design work was performed and whether **AECOM** was the lead designer or a sub-consultant.

AECOM is the lead design firm with major subconsultants being KEGI and Bridgefarmer. The primary design offices performing the work are Denver CO, Fort Worth TX, Dallas TX, and Austin TX. Scopes of work for the Southeast Connector project include:

Design, construction, and maintenance of approximately 16.6 miles of non-tolled improvements to I-20 from Forest Hill Drive to Park Springs Boulevard, to I-820 from I-20 to Brentwood Stair Road, and to US 287 from Bishop Street to Sublett Road.

The scope of the project is dependent on various factors, including funding availability. The project includes the "Base Scope" and at TxDOT's option may also include three additional elements Deferred Work Component ("DWC") 1, DWC 2 and DWC 3.

The Project Base Scope includes:

- For I-20 from Forest Hill Drive to Little Road: the construction of one additional general-purpose lane ("GPL"), plus four-lane collector-distributors, in each direction; the reconstruction and realignment of existing GPLs, frontage roads, US 287/I-20 interchange, on- and off-ramps, and Transition Work.
- For I-820 from I-20 to Ramey Avenue: the construction of two additional GPLs, plus one additional frontage road lane, in each direction; the re-construction and realignment of existing GPLs, frontage roads, I-20/I-820 interchange, and Transition Work.
- For US 287 from Village Creek Road to Sublett Road: one additional GPL in each direction; the reconstruction and realignment of existing GPLs, frontage roads, US 287/I-820 interchange, on- and off-ramps, and Transition Work.

Design Location Fort Worth, TX

Key Individual Participation
Patrick Cline, Construction Manager, 03/2022 – current

Relevancy
1. Prior teaming experience with KISC and KEGI
2. System to System Interchange Reconfiguration
3. Complex MOT
4. Heavily Congested Roadway
5. Utility Relocation
6. Design will be complete prior to the beginning of the Carolina Crossroads Phase 3 Anticipated Design

Overview Rendering of I-820/US-287/I-20

h. Self-Assessment. The information provided in this section should be a self-assessment of **AECOM's** performance on the project to identify **AECOM** with firms or personnel that have successfully completed projects on time and on or under budget, and to identify **AECOM** that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

The Southeast Connector corridor is a highly utilized freeway that services the Dallas Fort Worth Metroplex. The project will completely reconstruct I-20, I-820, and US 287. This reconstruction is necessary as this thruway presents some of the highest accident rates in the Metroplex area. AECOM leads the maintenance of traffic design on the project, and is working with KEGI to develop a design that will minimize the number to traffic switches while maximizing the available construction area.

i. Quality Initiatives. Discuss **AECOM's** quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Quality is governed by the project's Professional Services Quality Management Plan (PSQMP). This plan is based on the Kiewit Design Quality Management Plan (DQMP) and defines the QC and QA process for all submittals. The entire submittal process is monitored by the independent Professional Services Quality Assurance Firm. The process is revised via QA audits, internal audits, and client audits. Based on findings from the audits and client feedback, the PSQMP will be updated as necessary to further advance the quality of design. Weekly assessment to design advancement (claiming) monitors the design project with regards to cost and schedule control. Any deviation can be identified early and adjusted as necessary to minimize or eliminate any impact to the construction schedule. Quantities developed during the proposal stage are evaluated against the various design submittals to ensure design supports the construction budget. A global, holistic approach is utilized when evaluating cost, schedule, and quantities. With a strong emphasis on quality, weekly monitoring to cost and schedule, and an eye on quantities the design team is focused on developing a quality design on time and on budget.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, **AECOM** shall provide a detailed explanation below.

AECOM Technical Services, Inc. answers "No" to all questions in Section 3.5.2 for this project.

WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER
Major Subconsultant – Rummel, Klepper & Kahl, LLP (RK&K)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify **RK&K's** responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by **RK&K** (in thousands)
Name: I-40 Widening and Improvements Design-Build Location: Wake and Johnston Counties, NC	Name: Lead Designer: RK&K (Rummel, Klepper & Kahl, LLP) Lead Contractor: S.T. Wooten Corporation	Name of Owner: North Carolina Department of Transportation Project Manager: Malcolm Watson, P.E. Phone: 919.707.6614 Email: mcwatson@ncdot.gov	07/2020 (Design) 06/2022 (Construction)	$408,000	$22,514

g. Narrative describing the work performed by **RK&K**. Include the office location(s) where the design work was performed and whether **RK&K** was the lead designer or a sub-consultant.

Operating from Raleigh, NC, RK&K served as the Lead Designer for the widening and improvements of I-40 from the I-40 / I-440 / US 64 interchange in Wake County to just north of SR 1525 (Cornwallis Road) in Johnston County. As one of the most heavily traveled and congested transportation facilities in the Raleigh, North Carolina area, this project provides a higher level of service on I-40 and relieves present and future congestion. The 12.8-mile-long project consisted of ten-lane, eight-lane, and six-lane sections and was designed to meet 70 and 75 mph vehicle speeds for freeway interstate standards. In addition to widening, this much-needed project included modifying six interchanges (partial cloverleaf, freeway to freeway, diamond, and diverging diamond), 15 bridges, replacing and extending numerous box culverts, and adding sound barriers and retaining walls. To ensure initial design was effective, all design submittals (including those from subconsultants) underwent an Interdisciplinary Review process where all disciplines reviewed the submittal and gave comments. At the same time, the plans were sent to the contractor for a constructability review. This process minimized the likelihood of conflicts between the different design disciplines and gave the contractor a chance to assess constructability, thus avoiding time-consuming resubmittals of the plans and costly constructability issues in the field. To monitor their progress against the design schedule, RK&K prepared a CPM schedule and updated it regularly to include actual versus projected submittal dates.

Design Location Raleigh, NC

Key Individual Participation
N/A

Relevancy
1. DB Delivery
2. Freeway/Interstate/Complex MOT
3. Interstate interchange
4. Staged construction
5. Environmental permitting
6. Right-of-Way acquisition
7. Construction over active traffic
8. Utility conflicts
9. Coordination with adjacent projects

The team has been able to identify problem areas using the CPM to track parcels, and adjust design and construction work areas to accommodate where the right-of-way is obtained.

h. Self-Assessment. The information provided in this section should be a self-assessment of **RK&K's** performance on the project to identify **RK&K** with firms or personnel that have successfully completed projects on time and on or under budget, and to identify **RK&K** that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

With an innovative design concept and aggressive construction schedule, RK&K and the design-build team received the highest technical score of 95 during the design-build selection process. One of the most unique innovations included utilizing an overhead conveyor system to deliver asphalt, Type I Stone, and ABC to the median from the contractor's local asphalt plant site on Cleveland Road. The use of this system greatly minimized traffic impacts by eliminating approximately 7,600 truckloads of materials from entering / exiting the roadway median. The design-build team also utilized the NCDOT-owned Smart Work Zone System to monitor traffic flow and provide advanced notice to motorists to utilize alternate routes when there were delays. The CPM schedule is a valuable tool used to identify the critical path for all projects, including this one. The CPM schedule allowed the design team to allocate resources to the critical tasks to ensure they were completed on time. The CPM tool was especially important as the final design and right-of-way acquisition ramped down because COVID-19 occurred and impacted the project. The global pandemic forced the design team to work remotely and eliminate all in-person meetings. COVID-19 also impacted right-of-way procedures due to revised court rules that hindered meeting with owners face to face, etc.

i. Quality Initiatives. Discuss **RK&K's** quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Three quality improvements came from interdisciplinary reviews: 1) During the review process of the bridges, the contractor noted areas where construction may be difficult. The team held a separate meeting to discuss these areas and specific design changes were made to ensure constructability. 2) The Team worked closely with NCDOT and the Agencies to determine if large retaining walls adjacent to streams/wetlands were needed because of the possibility of scour and maintenance issues. After coordination the walls were removed, with the Agencies' approval, which reduced possible maintenance issues in the future. 3) Existing and proposed utilities, as well as storm drainage for all submittals, were checked for conflicts. It was important to verify that there were no conflicts for any type of foundations (sign, bridge, lighting, etc.).

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, **RK&K** shall provide a detailed explanation below.

Rummel, Klepper & Kahl, LLP answers "No" to all questions in Section 3.5.2 for this project.

Appendix C

Work History and Quality Form – Contractor/Designer *(Section 3.5.2)*

Appendix D

Legal and Financial

Kiewit

October 20, 2022

Mr. Nick Pizzuti
Office of Professional Services Contracting
South Carolina Department of Transportation
955 Park Street, Room 128
Columbia, SC 29201

RE: SCDOT / Design-Build Project #P039720
Carolina Crossroads Phase 3 – I-20/26/126 System Interchanges Design-Build Project
Kiewit Infrastructure South Co. Financial Capacity Letter

Dear Mr. Pizzuti:

In accordance with the provisions in the Request for Qualifications ("RFQ") for the Design-Build Project Carolina Crossroads Phase 3 – I-20/26/126 System Interchanges Design-Build Project – Section 3.6.1 – Financial Capacity, Kiewit Infrastructure South Co. ("KISC") is to provide a notarized statement that declares it has the financial capacity and resources necessary to complete the above-referenced project as proposed in the RFQ.

Please find our Notarized Officer's Certificate attached herewith.

Sincerely,
Kiewit Infrastructure South Co.

James M. Nolan
Controller

KIEWIT INFRASTRUCTURE SOUTH CO.
1550 Mike Fahey St., Omaha, NE 68102
(402) 342-2052

OFFICER'S CERTIFICATE
OF
KIEWIT INFRASTRUCTURE SOUTH CO.

I, the undersigned, hereby certify that I am an Assistant Secretary of Kiewit Infrastructure South Co., a Delaware corporation (the "Corporation"), and further certify on behalf of the Corporation that:

1. Benjamin J. Carnazzo ("Signing Officer") is a duly appointed and acting Senior Vice President of the Corporation.

2. Thomas J. Boyle is a duly appointed and acting Assistant Secretary of the Corporation

3. The Corporation intends to submit a bid proposal (the "Proposal") to [South Carolina Department of Transportation] for the [Carolina Crossroads Phase 3 – I-20/26/126 System Interchanges Design-Build Project]in [Richland and Lexington Counties, SC] (the "Project").

4. The Signing Officer, as a Senior Vice President, is authorized to execute and deliver the Proposal on behalf of the Corporation, and upon award of the Project, to execute and deliver the Project contract and any related documents for the Project, and Thomas J. Boyle, as an Assistant Secretary of the Corporation, is authorized to witness such execution of documents and further certify on behalf of the Corporation that the foregoing information provided in the Proposal is true, full and correct

SIGNED on behalf of the Corporation on this 20th day of October, 2022.

KIEWIT INFRASTRUCTURE SOUTH CO.

By: _____
Name: Thomas J. Boyle
Title: Assistant Secretary

STATE OF Georgia)
)ss.
COUNTY OF Coweta)

The foregoing instrument was acknowledged before me this 20th day of October, 2022, by Thomas J. Boyle, Assistant Secretary of Kiewit Infrastructure South Co., a Delaware corporation, on behalf of the corporation.

_____
Notary Public

My commission expires: 1.27.2024

JESSICA WOLFE
Notary Public, Georgia
Coweta County
My Commission Expires
January 27, 2024

Travelers
Bond, Home Office

(860) 277-9355
(860) 277-3931 (fax)

One Tower Square
Hartford, CT 06183

October 18, 2022

South Carolina Department of Transportation
Office of Professional Services Contracting
955 Park Street, Room 128
Columbia, SC 29201

RE: Design-Build Project Page 20 of 32 Carolina Crossroads Phase 3 – I-20/26/126 System Interchanges
Richland & Lexington Counties, South Carolina; Project ID P039720
Kiewit Infrastructure South Co.

Dear Sir or Madam:

We have had the pleasure of extending surety credit to the Kiewit companies since 1958 in connection with contracts aggregating billions of dollars. As a Kiewit operating subsidiary, it is our opinion that Kiewit Infrastructure South Co. is one of the outstanding and reputable construction organizations in North America. Its skill, integrity, and financial responsibility are unquestioned.

As part of an overall work program commitment, we have authorized Kiewit Infrastructure South Co. to bid individual contracts up to $1.5 billion in size. The total program capacity for all Kiewit companies is $10 billion. Total bonded backlog of $6.99 billion with an available bonding capacity of $3.01 billion. It is our intention to furnish Kiewit Infrastructure South Co. with Performance and Labor and Material Payment Bonds, if awarded the above-referenced project.

Travelers Casualty and Surety Company of America possess certificates of authority as an acceptable surety authorized to do business as published annually in the current United States Secretary of the Treasury, Fiscal Service, Department Circular 570. This commitment is subject to our standard underwriting at the time of the bond request, including a review of acceptable bond forms, contract financing and our standard underwriting considerations.

If you have any other questions, please feel free to contact me at (402) 271-2956.

Travelers Casualty and Surety Company of America,
A.M. Best Rating A++, XV

Deanne Jones
Attorney-in-Fact

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA
HARTFORD, CONN.

TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Philip G. Dehn, Tammy Pike, Paul A. Foss, Marie Huggins, Traci Sutton, and Deanne Jones of Omaha, Nebraska**, their true and lawful Attorney (s)-in-Fact tosign, execute, seal and acknowledge any and allbonds, recognizances, conditional undertakings and other writings obligatory in the naturethereof on behalf of the Companies in the,r business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st** day of **April, 2021.**

State of Connecticut

By: _____
Robert L. Raney, Senior Vice President

City of Hartford ss.

On this the **21st** day of **April, 2021**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June, 2026**

_____
Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 18th day of October , 2022 .

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.

Appendix E

Organizational Conflict of Interest

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

✓ Determined that no potential organizational conflict of interest exists.

_____ Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

   N/A

2. Describe measures proposed to mitigate the potential conflict(s):

   N/A

Signature

10/04/2022
Date

Benjamin J. Carnazzo
Print Name

Kiewit Infrastructure South Co.
Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

N/A
Name

N/A
Phone

N/A
Company

Appendix F

Confidential or Proprietary
Information Summary List

Appendix F (RFQ 5.2.4)

Confidential or Proprietary Information Summary List

At this time, Kiewit wishes to hold the entirety of Appendix C of this SOQ as confidential information.

Appendix G

Addendum Receipt Form(s)

South Carolina
Department of Transportation

NOTICE TO PROPOSERS

Carolina Crossroads Phase 3 – I-20/26/126 System Interchanges Design-Build Project
Design-Build – Project ID P039720
Richland and Lexington Counties

October 7, 2022

NOTICE TO PROPOSERS - Enclosed is **Addendum 1** to the Request for Qualifications (RFQ) for the Carolina Crossroads Phase 3 – I-20/26/126 System Interchanges Design-Build Project. The information provided in this notice and the addendum shall be made part of the contract documents.

The yellow highlights identify the revisions associated with Addendum 1.

This addendum is being issued in order to provide clarification and additional information for the project. The following sections of the RFP contain revisions:

- Section 2.2
- Section 2.7
- Section 3.1
- Section 3.2
- Section 3.4
- Section 3.5
- Section 5.2
- Section 6

Post Office Box 191
Columbia, South Carolina 29202-0191

Phone: (803) 737-2314
TTY: (803) 737-3870

South Carolina
Department of Transportation

NOTICE OF RECEIPT

Carolina Crossroads Phase 3 – I-20/26/126 System Interchanges Design-Build Project
Design-Build – Project ID P039720
Richland and Lexington Counties

Addendum 1

The information in this addendum shall be made part of the contract documents. PROPOSERS are instructed to incorporate the information into the previously provided RFQ documents.

PROPOSERS are required to sign this document and enclose it with their Statement of Qualifications. Receipt of this signed document by The South Carolina Department of Transportation serves as confirmation that the PROPOSER has received and incorporated this Addendum into the contract documents.

Confirmation Statement:

I, the PROPOSER confirm that I have received this addendum package and have incorporated the information provided in the addendum into the contract documents.

Benjamin J. Carnazzo
PROPOSER's Signature

10/07/2022
Date

Benjamin J. Carnazzo
Printed Name

Kiewit Infrastructure South, Co. /
Kiewit Engineering Group, Inc.
For: design-build (D/B) team
Design-Build Team Name

Appendix H

Key Individual and Contractor/
Designer Reference Form(s)

South Carolina
Department of Transportation

Email	Phone Number	First Name	Last Name	Company Name	Project Name	Team
References from Work History and Quality Forms						
michael.gage@txdot.gov	817.370.6500	Michael	Gage	Texas Department of Transportation	1 DFW Connector	KIWC/ WSP
rmichael@mdta.state.md.us	410.537.7813	Robert	Michael	Maryland Transportation Authority	2 Intercounty Connector	KISC/ Parsons
clayton.markham@tn.gov	931.697.0294	Clayton	Markham	Tennessee Department of Transportation	3 I-440 Pavement Replacement (Nashville Connector)	KISC/ WSP
sandra.sultana@transports.gouv.qc.ca	514.873.3838	Sandra	Sultana	Transports Québec	4 Project Turcot (Turcot Interchange)	Peter Kiewit Sons ULC/Parsons
lrussell@dot.nv.gov	702.671.6601	Lynette	Russell	Nevada Department of Transportation	5 I-15, Tropicana Interchange	KIWC/ KEGI
rstewart@utah.gov	801.440.5746	Robert	Stewart	Utah Department of Transportation	6 Mountain View Corridor	KIWC/ Parsons
justin.thomey@txdot.gov	817.371.4106	Justin	Thomey	Texas Department of Transportation	7 I-820 Southeast Connector	KISC/ AECOM
tbruton@ncdot.gov	919.707.6610	Teresa	Bruton	North Carolina Department of Transportation	8 I-40 Widening	S.T. Wooten /RK&K
References from Previous Working Relationships Table						
michael.gage@txdot.gov	817.370.6500	Michael	Gage	Texas Department of Transportation	1 DFW Connector	KIWC/ WSP
rmichael@mdta.state.md.us	410.537.7813	Robert	Michael	Maryland Transportation Authority	2 Intercounty Connector	KISC/ Parsons
clayton.markham@tn.gov	931.697.0294	Clayton	Markham	Tennessee Department of Transportation	3 I-440 Pavement Replacement (Nashville Connector)	KISC/ WSP
brian.pickard@tampa-xway.com	813.272.5987	Brian	Pickard	Tampa Hillsborough Expressway Authority	4 Selmon Expressway Western Extension	KISC/ AECOM
joseph.fabis@dot.gov	703.404.6201	Joseph	Fabis	Federal Highway Administration (Eastern Federal Lands Highway Division)	5 Arlington Memorial Bridge	KIC/ AECOM
rstewart@utah.gov	801.440.5746	Robert	Stewart	Utah Department of Transportation	6 Mountain View Corridor	KIWC/ Parsons
justin.thomey@txdot.gov	817.371.4106	Justin	Thomey	Texas Department of Transportation	7 I-820 SEC Connector	KISC/ AECOM
susan.shaw@vdot.virginia.gov	703.259.1995	Susan	Shaw	Virginia Department of Transportation	8 I-66 Nutley Street Interchange	FAM Construction /RK&K

KEY: KISC – Kiewit Infrastructure South Co; KEGI – Kiewit Engineering Group, Inc.; KIWC – Kiewit Infrastructure West Co; RK&K – Rummel, Klepper & Kahl, LLP; AECOM – AECOM Technical Services, Inc.; GPI – Greenman Pedersen, Inc.

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South Carolina
Department of Transportation

Email	First Name	Last Name	Key Individual Name	Project Name	Role of Key Individual	Team
snehal.shah@dot.ny.gov	Snehal	Shah	Timothy James Cleary	Kosciuszko Bridge	Project Manager	KISC
rmichael@mdta.state.md.us	Robert	Michael	Timothy James Cleary	Inter-County Connector Contract B	Project Manager	KISC
joseph.fabis@dot.gov	Joe	Fabis	Timothy James Cleary	Arlington Memorial Bridge Rehabilitation	Project Manager	KISC
jalal.masumi@vdot.virginia.gov	Jalal	Masumi	Timothy James Cleary	Telegraph Road Interchange	Project Manager	KISC
glenn.a.gannon@usace.army.mil	Glenn	Gannon	Kurtis Richard Pfeifer	Herbert Hoover S-284 (HP5)	Assistant Project Manager	KISC
glenn.a.gannon@usace.army.mil	Glenn	Gannon	Kurtis Richard Pfeifer	Herbert Hoover S-288 (HP1)	Assistant Project Manager	KISC
cotara@miamidade.gov	Antonio	Cotarelo	Kurtis Richard Pfeifer	Bear Cut Bridge Rehabilitation	Assistant Project Manager	KISC
rlane@azdot.gov	Roderick	Lane	Kurtis Richard Pfeifer	I-10 Widening	Assistant Project Manager	KISC
rpanchalan@panynj.gov	Ramesh	Panchalan	Augusto Vicente Molina	Lincoln Tunnel Helix Replacement, Stage 1 Conceptual Design	Lead Design Engineer	Previous Firm (now with KEGI)
sandra.sultana@transports.gouv.qc.ca	Sandra	Sultana	Augusto Vicente Molina	Turcot Interchange Reconstruction	Lead Design Engineer	Previous Firm (now with KEGI)
tariq.bashir@dot.ny.gov	Tariq	Bashir	Augusto Vicente Molina	Preliminary Design for Bruckner Expwy. Viaduct Deck Replacement	Lead Design Engineer	Previous Firm (now with KEGI)
tariq.bashir@dot.ny.gov	Tariq	Bashir	Augusto Vicente Molina	Cross Bronx Expressway Rehabilitation of Six Bridges	Lead Design Engineer	Previous Firm (now with KEGI)
rpanchalan@panynj.gov	Ramesh	Panchalan	Augusto Vicente Molina	Goethals Bridge Replacement, Staten Island, NY to Elizabeth, NJ	Lead Design Engineer	Previous Firm (now with KEGI)
susan.shaw@vdot.virginia.gov	Susan	Shaw	Stuart Michael Samberg	I-66 Outside the Beltway Improvements	Traffic Engineer	RK&K
rick.correa@vdot.virginia.gov	Rick	Correa	Stuart Michael Samberg	I-64 Southside Widening and High Rise Bridge	Traffic Engineer	RK&K
david.covington@vdot.virginia.gov	David	Covington	Stuart Michael Samberg	Route 29 Solutions	Traffic Engineer	RK&K
bruce.duvall@vdot.virginia.gov	Bruce	Duvall	Stuart Michael Samberg	Route 460 Commonwealth Connector	Traffic Engineer	RK&K
greg.dyer@tn.gov	Greg	Dyer	Stuart Michael Samberg	I-24 SMART Corridor	Traffic Engineer	RK&K
christopher.weber@txdot.gov	Christopher	Weber	Patrick Edward Cline	DFW Connector, Grapevine, TX	Construction Manager	KISC
clayton.markham@tn.gov	Clayton	Markham	Patrick Edward Cline	I-440 Pavement Replacement	Construction Manager	KISC
justin.thomey@txdot.gov	Justin	Thomey	Patrick Edward Cline	I-820 Southeast Connector	Construction Manager	KISC
buzz.kyler@txdot.gov	Buzz	Kyler	Patrick Edward Cline	Midtown Express (SH-183)	Construction Manager	KISC
erin.k.williams2@usace.army.mil	Erin	Williams	Patrick Edward Cline	RGV-04	Construction Manager	KISC
burtond@scdot.org	Daniel	Burton	Kevin Brian Harrington	Port Access Road Interchange	Independent Quality Manager	Previous Firm (now with GPI)

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Columbia, South Carolina 29202-0191

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South Carolina
Department of Transportation

Email	First Name	Last Name	Key Individual Name	Project Name	Role of Key Individual	Team
burtond@scdot.org	Daniel	Burton	Kevin Brian Harrington	Volvo Interchange	Independent Quality Manager	Previous Firm (now with GPI)
hendersotr@scdot.org	Tim	Henderson	Kevin Brian Harrington	I-26/Remount/Aviation Inderchange Widening and Reconstruction	Independent Quality Manager	Previous Firm (now with GPI)
rmichael@mdta.state.md.us	Robert	Michael	Bert Henry Laaker	Inter-County Connector Contract B	Safety Manager	KISC
brian.pickard@tampa-xway.com	Brian	Pickard	Bert Henry Laaker	Selmon Expressway Western Extension	Safety Manager	KISC
norma.click@atlanta-airport.com	Norma	Click	Bert Henry Laaker	HJAIA Airfield Repairs 2015	Safety Manager	KISC
norma.click@atlanta-airport.com	Norma	Click	Bert Henry Laaker	HJAIA Airfield Repairs 2013	Safety Manager	KISC
joseph.fabis@dot.gov	Joe	Fabis	Bert Henry Laaker	Arlington Memorial Bridge Rehabilitation	Safety Manager	KISC

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