

Exhibit A

A/E Scope of Services Lake Havasu Second Bridge & Roadway Construction Project

1. **Project Scope.** Consultant will design and prepare construction documents for a new bridge and roadway that connects mainland Lake Havasu City and the Island. The new bridge will serve as evacuation and emergency access to the Island, with primary access remaining the original London Bridge.

1.1 Roadway and Intersection Design

The alignment of the new roadway and bridge will begin just north of the intersection of Paseo del Sol Avenue at London Bridge Road and will terminate on the Island at McCulloch Boulevard. The total length between the two new intersections will be approximately 2,800 linear feet.

Additionally, improvements are anticipated north of the new roadway to improve traffic flow. These improvements include removal of center medians and restriping of London Bridge Road through the intersection with South Palo Verde Boulevard. South Palo Verde Boulevard will be improved to the east through its intersection with SR-95.

The new bridge design will consist of three vehicular lanes, as well as sidewalks and bicycle lanes that connect to existing multiuse paths on the Island.

The Project will utilize a Construction Manager at Risk (CMAR) contractual vehicle with the contractor. Consultant will team with the City to manage the CMAR from the release of the CMAR RFQ through the completion of construction of the Project.

1.2 Utility Improvements

Consultant shall base the pipeline and pressure-reducing stations on the Maricopa Association of Governments (MAG) Uniform Standards Specifications and Uniform Standard Drawings for Public Works Construction, including City-specific requirements.

- Raw Water
 - Supplement the existing 48-inch raw water line running through and under the channel with a new 36-inch redundant line running through the new bridge.
 - Northern end point: Connect to the existing 48-inch raw water line at approximately the intersection of London Bridge Road and the State Park parking lot.
 - Southern end point: Connect to the existing 48-inch raw water line near the intersection of Beachcomber Boulevard and McCulloch Boulevard.
- Potable Water
 - Install a new 18-inch water line through the new bridge. The new line will require a pressure-reducing valve.
 - Northern end point: Connect to the existing 36-inch water main running parallel and west of SR-95 near the alley north of Paseo del Sol Avenue.
 - Southern end point: Connect to the existing potable water system near the intersection of McCulloch and Beachcomber Boulevards.
 - A pressure-reducing station will be required for this system. The pressure-reducing station will be underground within a precast concrete vault with the public right-of-way.
- Wastewater
 - Supplement the existing 16-inch force main running through and under the channel with a new 18-inch redundant force main running through the new bridge. The force main conveys wastewater south to the wastewater treatment plant on the Island.
 - Northern end point: Connect at Willow Wash Lift Station just north of the new bridge alignment.
 - Southern end point: Connect to the existing 16-inch force main that runs parallel with McCulloch Boulevard near the intersection with the new road.
 - Sewer force main design will be based on the Lake Havasu City Sewer Design Standards.
- Recycled Water/Effluent
 - In order to provide a looped reclaimed water (effluent) system on the island, a new 18-inch line will be installed through the new bridge.
 - Northern end point: Connect to the existing reclaimed main running parallel and west of SR-95 near the alley north of Paseo del Sol Avenue.
 - Southern end point: Connect to the existing 18-inch reclaimed water line on the Island, near the intersection of McCulloch Boulevard and Sir Peter Gadsden Street.
 - A pressure-reducing station will be required for this system. The pressure-reducing station will be underground within a precast concrete vault with the public right-of-way.
- Dry Utilities
 - Consultant's design team will assist the City by providing site plan exhibits for the City's use in notifying dry utility agencies of the Project and coordinating dry utility needs within the new bridge. The City will lead the

process of notification. Relocations, re-alignments, designs and construction outside of the new bridge structure shall be the responsibility of the utility company.

- The inclusion of dry utilities into the new bridge's design shall be discussed during the Preconstruction Services phase.

1.3 Geotechnical Engineering

Consultant's design team will prepare a Geotechnical Evaluation for the new bridge and roadway, including coordination of access, field testing, laboratory testing, deep foundation analysis, foundation type determination, coordination with Consultant's structural engineering team on abutments and foundations, and pavement section analysis. The Geotechnical Evaluation will also include recommendations for pavement sections and utility trench backfill.

1.4 Permitting

The following permits and approvals are needed for this Project:

- U.S. Coast Guard (USCG) Bridge Permit.
 - The USCG permit will include NEPA compliance.
- 404 Nationwide NWP 15 Permit from the U.S. Army Corps of Engineers.
- Environmental Assessment and FONSI (Finding Of No Significant Impact) from the USCG.
- Section 401 Water Quality Certification or Waiver from the Arizona Department of Environmental Quality (ADEQ).
- Biological Evaluation in accordance with the U.S. Fish & Wildlife Service for submittal to the USGC. Arizona State Game and Fish will have an opportunity to review as part of this evaluation.
- Class III Cultural Resources Survey for submittal to USGC, Arizona State Land Department (ASLD) and Arizona State Parks & Trails.
- ASLD Native Plant Inventory, per ASLD.

2. **Project Services.** Consultant agrees to perform professional services for a project known and described as Lake Havasu Second Bridge & Roadway Construction Project ("Project"). The Services are described in the following phases:

2.1 Phase 1: Preconstruction Services

This phase consists of efforts required to achieve 30% design and to submit to both the U.S. Coast Guard (USCG) and Army Corps of Engineers (ACOE) for permitting. See the Permitting section above for more details on the specific permits that will be pursued for this Project. 30% Construction Documents will be included with this phase. Assistance with the selection of the CMAR is included with this phase. This phase also includes:

- Kickoff meeting with the City.
- Meetings every two weeks with the City. One meeting per month will be in-person with at least one member of the design team present.
- Development of the project schedule.
- Outline of funding source conditions.
- Preparation of a topographical survey tied to local survey control and the Arizona State Plane Coordinate System 1983 and NAVD88 vertical datum. The deliverable will be a CAD file that includes property lines and 1-foot contours of the project area. The deliverable will also include horizontal locations of utilities as marked out by a utility locating firm.
- Preparation of a utility potholing recommendation exhibit for the CMAR. Note that potholing investigations are expected to be included with the CMAR's contract.
- Geotechnical Evaluation field work and preliminary evaluation report.
- Utility locating within the areas of the new roadway and bridge.
- Consultant will analyze the following eight intersections, utilize peak traffic data and prepare a review of existing conditions to determine the level of improvements, if any, that are required. All eight evaluations will be documented in a memo for City approval.
 - New Roadway & McCulloch Boulevard
 - New Roadway & London Bridge Road
 - London Bridge Road & Paseo del Sol Avenue
 - London Bridge Road & South Palo Verde Boulevard
 - South Palo Verde Boulevard & SR-95
 - McCulloch Boulevard & Beachcomber Boulevard
 - London Bridge Road / Mesquite Avenue & SR-95
 - London Bridge Road & Marlboro Drive
- For the new bridge's structural section, Consultant's design team will look at options provided in the Final Feasibility Study dated July 2024, and work to determine the best direction forward, based upon the Project budget and schedule. Consultant's design team will provide the City with up to three options for the new bridge design during the preliminary design phase. The City's preference will be used moving forward. Consultant's design team will work side by side with the CMAR and design to the CMAR's strengths, which should help expedite the construction schedule.
- Preparation of project scope exhibits and descriptions for inclusion in the CMAR selection RFQ. Assistance in the CMAR selection process.

- Intermittent 10% and 20% design submittals for the City's review. It is assumed that the 20% design submittal will be the basis for the scoping exhibits for the CMAR RFQ. The City will have one (1) week to review and comment on each of the 10% and 20% submittals.
- Assistance in the selection of the CMAR.

2.2 Phase 2: Design Services

Based upon approval of the 30% submittal package, Consultant shall proceed with the Design Services phase. This phase includes design packages, delivered for City review, at 60%, 90% and 100% levels of design. The 100% submittal will be the "Issued for Construction" set. This phase also includes:

- Meetings every two weeks with the City. One meeting per month will be in-person with at least one member of the design team present.
- Geotechnical Preliminary Evaluation at 60% design and a Final Evaluation at 100% design.
- Structural engineering drawings and specifications for the new bridge design.
- Roadway improvement drawings and specifications for the 2,800 LF of new roadway between London Bridge Road and McCulloch Boulevard (including across the new bridge).
- Engineering design drawings and specifications for improvements to the following existing roadways:
 - London Bridge Road between Paseo del Sol Avenue and South Palo Verde Boulevard.
 - South Palo Verde Boulevard between London Bridge Road and SR-95 .
- Wet utility design drawings will be provided with all submittal packages. A complete set of design calculations performed by NV5 in conjunction with pipeline design shall be submitted to the City.
- Lighting design engineering drawings and specifications for the new bridge.
- Engineering design drawings and specifications of the signalized or roundabout (to be determined prior to 30% design) intersection between the new roadway and London Bridge Road.
- Engineering design drawings and specifications of the signalized or roundabout (to be determined prior to 30% design) intersection between the new roadway and McCulloch Boulevard.
- Engineering design drawings and specifications for improvements to the following existing intersections:
 - London Bridge Road & Paseo del Sol Avenue
 - London Bridge Road & South Palo Verde Boulevard
 - South Palo Verde Boulevard & SR-95
- Improvement drawings and specifications for the adjustment of Lake Havasu State Park's parking lot and entry driveway. The parking lot will require reconfiguration to allow room for the new roadway.
- If requested by the CMAR, the Consultant team will work with the CMAR to prepare a single Early Construction Set that consists of utility relocations and/or improvements to existing roadways far outside the boundary of the channel.
- Included with this phase is coordination with the CMAR to maximize what can be delivered within the Project budget.
- Consultant's design team will work with the CMAR to identify construction items that require long lead times so that they can be incorporated into the Project schedule.
- A drainage study and stormwater management plan will be prepared by the Consultant to confirm that improvements comply with the City's requirements for stormwater treatment and flood control. It is not anticipated that this Project will require construction of any flood control facilities for existing flows through the Project area.
- A new plat and legal description for property line adjustment that will be required between the City and Lake Havasu State Park to allow for the new roadway to be constructed. Consultant will also provide a record of survey for the land acquisition of this survey.
- A new plat and legal description for property line adjustment that will be required between the City and a private owner at the northeast corner of the intersection of London Bridge Road and South Palo Verde Boulevard to allow for South Palo Verde to add an additional right turn lane (driving west). Consultant will also provide a record of survey for the land acquisition of this survey.

2.3 Phase 3: Construction Services

This phase includes construction supervision and inspection, including special inspection. This phase includes weekly construction progress reporting and Project documentation. Substantial completion identification and punch-list confirmation as well as project closeout is included.

This phase also includes construction services by the design term to review submittals and respond to RFIs. Construction management will be led by the Consultant and it is assumed that the Consultant will have a full-time inspector and a part-time (20 hours/week) inspector on-site for the duration of the Project. Additionally, Consultant's design team manager and assistant manager will each be committed for 12 hours per week.

3. Assumptions and excluded services include:

- All submittals shall be delivered electronically, in PDF format.
- Construction phasing plans and traffic control plans will be prepared by the CMAR.
- Construction staking is the responsibility of the CMAR. Consultant will transfer electronic files of the design to the contractor for purposes of both cost estimating and staking.
- No demolition of structures is anticipated as part of this Project.
- Field work is not subject to prevailing wages.

- Permitting fees for this Project are currently projected to be minimal. They may potentially be zero dollars. But if permitting fees are required at any point, it is expected that they will be paid by the City.
- A multimodal connection alignment to the Havasu Shoreline Trail, shall be conceptualized only. The Consultant will provide concepts for access points and connections for use by the City for future project. The full design and construction will not be included within this Project budget.
- If archaeological sites are found within the Project limits, additional time/fees may need to be required. The billable rate for this effort, if required, is \$150/hr.
- An Environmental Impact Statement will not be required.
- The City will have 10 working days to review the 30%, 60%, 90% and 100% milestone design packages.
- Construction cost estimating will be handled by the CMAR.
- Consultant's design team will prepare an internal QA/QC check on this Project at both 60% and 90%. This includes a licensed Structural Engineer performing a check on the new bridge design and a licensed Civil Engineer performing a check on both the intersection design and the utility design. These reviews will be recorded electronically and made available to the City.
- During construction, CMAR shall provide soil and material testing under their contract. Consultant's contract includes third-party approval of the testing reports.
- Design of modifications to the existing lift station are not included in this scope of services.
- The City shall complete hydraulic modeling (if required) and provide design hydraulic grade lines (HGL) for the utilities.
- Designing or evaluating changes to the wastewater pump station upstream of the new force main is not included in the scope of services.
- The need for relocation of utilities not listed above within the Project limits is not known at this time. Design of relocation of other utilities, including to accommodate City pipelines, is not included in this scope of services.
- Coordination with consultants outside of the Consultant's design team and the City is excluded from this scope of services.
- Soil Corrosivity and Corrosion Risk Analysis, if needed, will be provided by the City.

4. Project Schedule. The Services will commence upon receipt of an executed Agreement and will take approximately 34 months to complete as more fully described in the tables below.

4.1. Phase 1: Preconstruction Services

Lake Havasu 2nd Bridge Preliminary Schedule		2024			2025												2026												2027										
Task	Duration	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Project NTP	1 Day																																						
Project Kickoff Meetings	1 Week																																						
Topographical Survey	3 Weeks																																						
Geotechnical Investigation	3 Weeks																																						
10% Design	3 Weeks																																						
Geotechnical Report	6 Weeks																																						
City Coordination/Review	1 Week																																						
20% Design	2 Weeks																																						
Release of CMAR RFQ	1 Day																																						
CMAR RFQ Selection	30 Days																																						
CMAR Contracting	45 Days																																						
30% Design	2.5 Months																																						

4.2 Phase 2: Design Services

Lake Havasu 2nd Bridge Preliminary Schedule		2024			2025												2026												2027										
Task	Duration	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
U.S. Coast Guard Permitting	1 Year																																						
60% Design / GMP	3 Months																																						
City Review	2 Weeks																																						
90% Design	8 Weeks																																						
City Review	2 Weeks																																						
Contractor Early Start	6 Months																																						
100% Design	8 Weeks																																						

4.3 Phase 3: Construction Services

Lake Havasu 2nd Bridge Preliminary Schedule		2024			2025												2026												2027										
Task	Duration	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Construction	14 Months																																						
Substantial Completion	1 Day																																						