

Hualapai Tribe

REQUEST FOR PROPOSALS (RFP)
for
Independent Cost Estimator (ICE) Services

January 16, 2024

Due Date: January 26, 2024

Point of Contact:

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SECTION A. ADMINISTRATIVE INFORMATION

I. Definitions

Allowance: Item of work/quantities that the Project Team anticipates may overrun. All Allowances are budgeted within the overall GMP (i.e., under the umbrella of the GMP).

BIA: Bureau of Indian Affairs.

Bundle: A group of Projects bound together and let as a unit, for a negotiated GMP.

CEI: The Construction Engineering Inspection Firm responsible for all Independent Assurance (IA) for the Owner.

CM: The Construction Manager who is an employee of the CM-GC firm, and who serves as a member of the Project Team. The CM (along with the CM-GC firm) is contracted directly with the Owner through a separate RFP. "CM" can also refer to the entire CM-GC firm. This RFP often refers to the CM-GC firm as the CM, to avoid confusing the CM-GC firm with the CM/GC project delivery method.

CM-GC Firm: A firm that includes both the CM and the General Contractor (GC).

CM/GC: The Construction Manager/General Contractor project delivery method. CM/GC is a Federal Highway Administration (FHWA) alternative contracting method of project delivery.

Concept of Operation COO: Outlines (charts out) Early Work Packages (as well as pre-defines all Work Packages) for the entire Project Suite.

Construction Manager at Risk (CM@Risk / CMAR): A project delivery system, different than CM/GC, in which there is no Independent Cost Estimator, and the GMP is developed before selection of the CMAR.

Contingency: A specific type of allowance that allocates the potential use of funds to account for risk and uncertainty. All unused contingencies are returned to the Project Team for building more scope (within the Project Suite) or to assist with Projects that are short on budget. It is important to note that **ALL** allowance and contingencies items are budgeted within the overall GMP (as in. under the umbrella of the GMP).

Contracting Officer: Delegated by the Owner to execute contracts. The Contracting Officer is Philip Wisely, P.E., Public Services Director, Hualapai Tribe.

Contracting Officer Representative (COR): Delegated by Contracting Officer to manage all activities of the Project Team. The COR shall be the ACM Program Leader (ACM-PL). The ACM-PL is Kenneth E. Atkins.

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Cost-Based Estimating: Construction cost estimate calculated by the ICE from Project-specific costs that consider remoteness, mobilization needed, equipment to be used, labor, production rates, material supplier costs, and other special conditions of the Project. Cost-based estimating does not use historical bid or award data from other projects.

Cost Model: A cost estimate developed for each Project and Bundle within the Project Suite. The CM and the ICE each independently create their own Cost Models. The Cost Model is used to verify that the overall Project scope can be completed within the available Project budget and within the GMP.

Design Manager (DM): Serves as a member of the Project Team and provides professional engineering and surveying, environmental surveys, NEPA documents, environmental permit applications, and right-of-way acquisition, and design management services. The DM is contracted directly with the Owner through a separate RFP. The DM consists of the Lead Design Professional and all subconsultants or specialty designers, surveyors, applicable specialists, etc.

General Contractor (GC): The General Contractor that is part of the CM-GC firm. The GC constructs the Projects, Work Packages, and Bundles in the Project Suite which have GMPs contractually agreed upon between the Owner and the CM.

Guaranteed Maximum Price (GMP): A price contractually agreed upon between the Owner and the CM. Includes the direct cost of all work, indirect costs, allowances, contingencies, and CM fixed fee (i.e. profit and overhead). The CM receives no more than this figure for the work, but may receive less.

Independent Cost Estimator (ICE): Provides independent cost estimates to the Project Team and the Owner, and serves as a member of the Project Team. The ICE is contracted directly with the Owner through a separate RFP.

Linear Schedule Method (LSM): Used mainly in the construction industry to schedule resources in repetitive activities commonly found in highway, pipeline, high-rise building and rail construction projects. These projects are called repetitive or linear projects. The main advantages of LSM over Critical Path Method (CPM) are its underlying idea of keeping resources continuously at work.

Offeror: Refers to each ICE firm that may submit a proposal in response to this Request for Proposals (RFP). Used interchangeably with Proposer and ICE until the ICE contract is awarded.

Opinion of Probable Construction Cost (OPCC): An open book cost estimate for the work developed from the ICE and CM's estimating software platform that includes direct and indirect costs along with allowances and contingencies. The OPCC is supplemented by a CPM resource loaded schedule.

Owner: Hualapai Tribe is the Owner of the CM/GC project delivery program for this Project Suite, as well as the owner of the other miscellaneous Projects.

Project: An individual construction project.

Program Leader (PL): The Owner's Contracting Officer's representative who has the authority to make decisions on the Owner's behalf. Facilitates the entire Project Team and/or the CM/GC process, and is responsible for the guidance and leadership of the entire Project Team. All correspondence and communications go through the PL.

Project Suite: The unit of work, comprising multiple Projects, Bundles, and Work packages that is let under a single contract between the Owner and a CM.

Project Team: Comprised of the Owner, CM (along with the CM's subcontractors, material suppliers, surveyors, etc.), ICE, CEI, and DM (along with DM's subconsultants).

RFP: Request for Proposal. Prepared and submitted by Offeror.

Statement of Qualifications (SOQ): Represents primary component of Submittal as described in this RFP. Prepared and submitted by the Offeror.

Submittal/Submission: All documents as described and used as a basis in the CM selection process.

TERO: Tribal Employment Rights Ordinance or Office. TERO Ordinances require that all employers who are engaged in operating a business on reservations give preference to qualified Indians in all aspects of employment, contracting and other business activities. TERO Offices were established and empowered to monitor and enforce the requirements of the tribal employment rights ordinance.

VTC: Video Tele-Conferencing.

Work Package: The most basic unit of work in contractual terms. Multiple Work Packages may comprise a Project, or a Work Package may include connected work tasks that transcend multiple Projects. For instance, Work Packages that consist of tasks that must be completed early in the construction process on multiple Projects are common, such as ordering materials or products with long delivery times, ROW procurement, Utility work, mobilization, clearing and grubbing, etc. This type of Work package is called an Early Work Package. As long as all the Projects are within a single Bundle, a single Work Package (or Early Work Package) with its own GMP, can be executed for all such work. Within a single Project, a Work Package can be assembled to cover any group of tasks that may be easily grouped, such as all the pipe work, all the excavation, all the work within a certain geographic area for which permits and right-of-way (ROW) have been procured, etc.

II. Purpose

This RFP provides prospective Offerors with sufficient information to prepare and submit proposals for the Owner's consideration of ICE services for this CM/GC Project Suite as well as other miscellaneous projects. These other miscellaneous projects may be delivered utilizing a variety of delivery methods such as Design-Bid-Build, IDIQ, etc. CM/GC is a Federal Highway Administration (FHWA) alternative contracting method of construction project delivery. Offerors should read this entire RFP to understand the Owner's intent for CM/GC, Value Capture, and Project Bundling (three national FHWA Every Day Counts (EDC) initiatives) prior to developing their proposals.

The Owner intends to develop innovative cost-saving and time-saving solutions to accelerate construction and deliver Projects in the Project Suite substantially under budget while enhancing value and quality, and use the cost savings captured to complete the greatest number/scope/length of Projects possible in the Project Suite within the available funding. This may include increasing the number of Projects in the Project Suite or expanding the scope of an individual Project within the Project Suite. The Project Suite will be delivered using multiple Projects and Work Packages (including Early Work Packages) to meet the Owner's accelerated schedule (see [NCHRP 787](#) for details).

The Owner is seeking proposals from former General Contractors (GCs), construction estimating and scheduling professionals, etc. for ICE services to rapidly deliver the Project Suite. However, for these ICE services, the Owner is not seeking engineering companies, or engineering staff, etc. experienced in engineers estimates, which typically use historic cost averages from previous projects. The ICE services directly support the CM/GC project delivery method for this Project Suite as well, as other miscellaneous projects.

The selected ICE becomes a member of the Project Team to develop and deliver the Project Suite. The Project Team also includes the CM and the Design Manager (DM). The ICE works closely, i.e., early and often, with the Project Team. If the CM and the DM are meeting, the ICE is expected to be present and engaged.

The successful Offeror for the ICE position applies its professional capabilities during all phases of the Project Suite, including the pre-construction phase and the construction phase.

The role of the ICE is significantly different and much more involved than the Proposer may typically be used to. It is based on "best practices" taken from national research, including: [NCHRP 787](#); [NCHRP Synthesis 518](#); and, [Quantification of Cost, Benefits, and Risks associated with Alternative Contracting Methods \(DTFH61-13-R-00019\)](#).

Offerors should read this RFP in its entirety to understand the Owner's intent for the ICE's role and the intent behind utilizing CM/GC. Additionally, Offerors should understand the remoteness of these Projects, logistical challenges, limited labor and equipment, limited temporary housing/subsistence, and unusual market conditions, relative to the Hualapai Tribe.

Based on this, the ICE must recruit (or have in house estimators) with proven local estimating / bidding experience in order to accurately gauge the local challenges for such factors as local

bidding conditions, shipping, limited construction seasons, distance between projects, horizontal and vertical construction elements, etc. This cannot be overemphasized and will be a noteworthy consideration when scoring the ICE's technical proposal.

The ICE possesses the necessary resource skills, personnel, systems, and experience to perform independent cost estimates to independently generate, compare, and scrutinize costs, i.e., production rates, material supplier costs, means and methods, critically analyze and critique the CM's production-based and cost-based schedules and estimates, etc.

The ICE becomes familiar with the details of the CM's Risk Management Plan, the Risk Allowances / Contingencies, and the construction means and methods discussed during the pre-construction phase (see [NCHRP Synthesis 518](#) for details).

See **Section C – Part II. Requirements of the ICE** for further details of the ICE's roles and responsibilities.

III. Project Suite Overview

The Owner has traditionally delivered its transportation projects via a traditional Design-Bid-Build (D-B-B) project delivery method. However, because of the expected benefits associated with the CM/GC accelerated and innovative project delivery method, the Owner is including thirty-three (33) transportation and facility related Projects into the Project Suite for this solicitation. Additionally, the Owner may add other miscellaneous projects unrelated to this project suite.

This Project Suite, with CM/GC as the proposed delivery method and Value Capture as a proposed tool for innovatively financing the Project Suite, involves the strategic use of three initiatives from FHWA's Every Day Counts (EDC) program to accelerate and advance the use of technologies and processes to shorten the Project delivery process, enhance roadway safety, reduce traffic congestion, and integrate automation. It is important to note that the Federal Highway Administration (FHWA) will be closely following this ground-breaking national pilot program to ensure its success.

There are many variations of the CM/GC delivery method. As is evident, the Owner seeks best value through the engagement of highly qualified and experienced teams and individuals. This Project Suite will NOT be delivered based on a low-bid approach. Rather, the Project Suite will be delivered based on a best value approach. Accordingly, the Owner will pay the CM, CEI, ICE and Design Manager (DM) for pre-construction services on a time and materials basis, and dependent of the phased work schedule.

The proposed Project Suite consists of 33 diversified Projects that are well-suited to be delivered through this CM/GC program, as well as additional unnamed miscellaneous projects. See Section B, Part I for information on the listed Suite of Projects. The Owner anticipates that this method will allow these Projects to be delivered under budget and more quickly and efficiently than could be delivered using the conventional D-B-B method.

IV. Location / Background

The Hualapai Tribe is a federally recognized Indian Tribe located in northwestern Arizona. “Hualapai” (pronounced Wal-lah-pie) means “People of the Tall Pines.” In 1883, an executive order established the Hualapai reservation. The reservation encompasses about one million acres along 108 miles of the Grand Canyon and Colorado River. Occupying part of three northern Arizona counties: Coconino, Yavapai, and Mohave, the reservation’s topography varies from rolling grassland, to thick forests, to rugged canyons. Elevations range from 1,500 feet at the Colorado River, to over 7,300 feet at the highest point of the Aubrey Cliffs. The total population of the Hualapai Reservation is about 1,621 of whom 1,353 are tribal members (2000 U.S. Census). Total tribal membership, including members not residing on the reservation, is approximately 2,300. Most people who reside on the reservation live in the capitol town of Peach Springs, which owns its name to the peach trees that historically grew at nearby springs. The closest full-service community is Kingman, Arizona located 55 miles west of Peach Springs on historic Route 66. Peach Springs was the inspiration for the fictional “Radiator Springs” in the animated Pixar movie “Cars.” There is no casino gaming on the Hualapai Reservation. Tribal administration, public schools, and state/federal government provide the bulk of current full-time employment. The principal economic activities are tourism, cattle ranching, and arts and crafts. An outdoorsman’s paradise, the reservation is rich in hunting, fishing, and river rafting opportunities. The tribe sells guided big-game hunting permits for desert bighorn sheep, trophy elk, antelope, and mountain lion. The Hualapai River Runners, the only Indian-owned and operated river rafting company on the Colorado River, offers one and two-day trips.

Another tribal enterprise is Grand Canyon West on the Hualapai reservation at the west rim of the Grand Canyon. Offering an alternative to the Grand Canyon National Park, the enterprise offers tour packages that can include spectacular views from the “Skywalk” (a glass bridge that enables visitors to walk beyond the rim of the Grand Canyon at 4,000 feet above the Colorado River), helicopter and boat tours, and other excursions on the reservation. As a sovereign Indian nation, the Tribe is governed by an executive and judicial branch. The executive branch is composed of a nine-member Tribal Council, which includes a chairperson and vice-chairperson. Council members are elected to office by Tribal members and serve 4-year terms. The Council oversees twelve administrative departments. The judicial branch of government consists of a Tribal Court and a Court of Appeals. Judges are appointed by the Tribal Council for two-year terms. The Courts have jurisdiction over all cases and controversies within the jurisdiction of the Tribe by virtue of the Tribe’s inherent sovereignty or which may be vested in tribal courts by federal law. The Hualapai Tribal Nation is a member tribe of the National Congress of American Indians (NCAI), the Council of Energy Resource Tribes (CERT), the Inter-Tribal Council of Arizona (ITCA), and the Arizona Indian Gaming Association (AIGA).

V. Project Suite Timelines

The Owner is requesting firms to propose on the CM/GC delivery of the Project Suite using multiple Work Packages and Early Work Packages to meet the accelerated schedule. Additionally, the Owner is requesting ICE services for miscellaneous Hualapai projects. These miscellaneous projects are in addition to the projects listed in **Table 2** (project suite listing). Only those firms which have the resources to deliver Projects according to the desired dates shown in **Table 2** should respond. **Table 2** is in **Section B.1**.

VI. Schedule of Activities

Table 1

Issue ICE RFP	January 16, 2024
Deadline for questions: 1700 AST	January 22, 2024
Last day for Hualapai Tribe to issue Addenda/Clarifications	January 24, 2024
Deadline for Submittals 1700 pm AST	January 26, 2024
Interviews – ICE may utilize VTC, or attend “in-person”	Week of 28 January
Recommendation of Selection to Hualapai Tribe	2 February, 2024
Targeted Contract for Services	9 February, 2024
Targeted NTP	12 February, 2024

VII. Request for Proposals

All interested ICE firms are invited to submit a proposal in accordance with the specifications, requirements and dates set forth herein. The Owner intends to award a contract to the firm, who, following the criteria outlined below, best meets the objectives of the RFP. However, the Owner is not obligated to award a contract based on this RFP and reserves the right to reject any and all proposals.

Inquiries

Prospective firms will make written inquiries (emails are authorized) concerning this RFP to obtain clarification of requirements prior to **1700 (AST) January 22, 2024**. Inquiries will be directed to Kenneth E. Atkins, P. E., Project Leader, Hualapai Tribe.

Addendum or Supplements to Request for Proposals

In the event it becomes necessary to revise any part of this RFP, an addendum will be provided and issued to all interested parties who have notified the PL of their intent to submit by **1700 (AST) January 24, 2024**.

Submittal (Also see Section VIII – Submittal Requirements)

Each Submittal must be identified with the RFP name, Offeror name and address, due date, and time. A Submittal may be withdrawn prior to the due date and time by written request. The Offeror is responsible for all costs incurred by firms prior to issuance of a fully executed contract. All material and concepts submitted, regarding this RFP, become the property of the Owner and

will only be returned to the Offeror at the Owner's option. This also applies to firms who withdraw their proposal.

One (1) original and six (6) copies of the typewritten Submittal (if mailed) must be received on or before **1700 (AST), January 26, 2024**. Electronic originals/submittals are also authorized. Offerors mailing their proposals must allow sufficient mail delivery time to ensure receipt of the Submittal by the time specified. Electronic proposals are allowed and must be submitted to the e-mail address shown. The Submittal should be delivered or sent to:

Kenneth E. Atkins, P.E.

KennethAtkins@AtkinsEngineeringAssoc.com

Cell: (863) 232-7083

Hualapai Tribe

Peach Springs, AZ 86434

Acceptance of Proposal Content

The contents of the Submittal of the successful Offeror, and the RFP may become all or part of the Scope of Work, and as such, contractual obligations. Failure of the successful Offeror to accept these obligations in a contract may result in cancellation of the award.

Selection / Procurement Process

The successful Offeror will be selected solely through a qualification-based selection process. A selection panel will evaluate each RFP according to the selection criteria set below. The Owner will conduct mandatory formal interviews. Virtual or in-person interviews are up to the proposer. The Owner will select the firm based on the RFPs received and formal interviews if conducted.

The Owner will enter into negotiations with the selected Offeror and attempt to execute a contract upon completion of negotiation of fees and contract terms. If the Owner is unsuccessful in negotiating a contract with the best qualified firm, the Owner may then negotiate with the next qualified firm until a contract is executed, or the Owner may decide to terminate the selection process. Once a contract is executed with the successful firm, the procurement is complete.

Award of RFP/Right to Reject

The contract will be awarded to the Offeror whose proposal conforms to the RFP, and is most advantageous to the Owner. The Owner reserves the right to reject any and all proposals, and to waive informalities and irregularities in the proposals received, and to accept any portion of any proposal, or all items proposed, if deemed in the best interest of the Owner.

Work Force

The work performed under this contract is subject to Hualapai Tribe's procurement policies and Hualapai Tribe's TERO.

The Owner's Right to Termination

The Owner has the right to terminate the ICE contract at any time and is under no obligation to proceed with construction or additional Work Packages. Upon termination, the ICE will be paid for all services rendered to date.

If the ICE and the Owner are unable to reach agreement on a fair and reasonable price for the professional services agreement contract or any related amendment, the Owner reserves the right not to exercise the contract/amendment and to solicit DM services in a new procurement, which could take the form of any delivery system that the Owner deems to be in its best interest.

Ownership of Documents

All innovations, ideas, plans, phasing, bids, Cost Models, schedules, risk matrices, manuscripts, specifications, data, maps, materials, etc., submitted with the SOQ or presented during the interview become the property of the Owner. Proprietary cost information will not be shared with other Offerors.

Sufficient Capacity

The Owner is requesting the Project Team use the CM/GC project delivery method to develop the Project Suite potentially using multiple Early Work Packages in an effort to meet an accelerated schedule. **Only those Offerors that have the resources to simultaneously price multiple Work Packages necessary to deliver several different types of Projects on or before the set deadlines, should respond.**

VIII. Submittal Requirements

Overview

Each Offeror shall submit an SOQ that fully addresses the evaluation factors contained in this solicitation and complies with the preparation and submission instructions contained in this provision. Offerors shall carefully review this section and its relationship to the selection criteria prior to commencing SOQ preparation.

Offerors shall base their SOQ on performing all work in accordance with this RFP. The SOQ shall provide appropriate exhibits, graphics, risk matrices, schedules, drawings, schedules, cost models, and text to reflect consideration of the evaluation factors and RFP requirements. Discussion information should be concise and specific to this Project Suite. Excessive detail will not be considered positively in the evaluation.

Key Personnel

When an Offeror lists administrative and/or discipline-specific personnel, the Offeror agrees to make the personnel available to complete work on the contract at whatever level the Project Suite requires. Personnel changes must be reviewed and approved in advance by the COR to assure the replacement is equally qualified and has comparable experience. The COR will only allow changes in key personnel only when caused by circumstances outside the control of the Offeror (e.g.,

employee leaves company). Changes in key personnel for the convenience or benefit of the ICE will not be allowed.

Submission Contents

Proposals shall not exceed seven (7) single-sided pages of 8-1/2" x 11" size using Times New Roman 12-point font. All pages must be numbered.

Submittals shall be organized as follows and meet the section page limits depicted below:

- 1) ICE Project Approach
- 2) Key Personnel Qualifications, Experience, and Capabilities (organizational charts and resumes are not included in the page limit)
- 3) Past Performance and Experience with Similar Work
- 4) Appendix A - Resumes (One page per position-does not count towards 7 page limit)

IX. Evaluation Process and Award

The evaluation process and award is comprised of two parts (Part 1 and Part 2):

Part 1: Technical Proposals – 130 points:

Based on technical proposals, ICE firms may be shortlisted for interviews. The Hualapai Tribe has the right to shortlist as many, or as few, ICE firms as it determines are suitable for the next interview stage.

Note: Part 1 scores are used only to shortlist firms.

A. Approach to Project Suite (50 points)

Project Suite approach will address each of the following:

- Approach to utilizing local contractors or ICE firms with experience in developing estimates in rural / remote areas.
- Understanding of the CM/GC delivery method, innovative financing options (Value Capture), and Project Bundling, which are Every Day Counts (EDC-5) Initiatives / techniques.
- Approach to developing independent cost estimates, cost models, and develop actual pricing (based on cost-based estimating) at the same time as the CM, comparing the CM's cost-based estimating, cost models, and subcontractor quotes, ensuring that the CM's costs and proposed schedules are accurate, fair and reasonable, and the "best value" for the Owner. Note: Estimates based on real costs directly obtained, versus utilizing "historical" bid averages.
- Approach to / developing independent ICE master Critical Path Method (CPM) master schedules, while analyzing and critiquing the CM's production based CPM schedules, CM's production rates, cost-based estimates, material costs, CM's subcontractor production rates / costs, etc.

- Advising the Owner on successfully utilizing the “full-power” of the ICE, i.e., how to effectively engage and use the ICE for such things as developing RFPs for the CM and DM, determining in-direct costs, innovations in costing, scheduling and risk assessment, being a true “Owner’s rep” concerning estimating, reducing and retiring risks, and completing the Project Suite significantly under budget.
- Innovations – List potential innovations relating to the Project Suite, i.e., work packaging, innovative means and methods, etc.
- Risk Reductions, Retirement, Mitigations – List major risks from your perspective and proposed potential solutions.
- Approach to Scheduling – Prepare a Master Schedule based on your experience on the smartest way to bundle and construct the Project Suite using such things as Early Work Packages, ordering long lead items, grouping similar types of work, etc.

B. Key Personnel Qualifications, Experience, and Capabilities (50 points)

The Owner is seeking established ICE firms with proven “national” CM/GC experience. It is important to note that the ICE (or their direct “named” subconsultants”) must demonstrate they have the expertise, or have access to the expertise, for all of the Project types within the Project Suite.

The following are required:

- Must demonstrate significant previous contracting experience as a General (Prime) Contractor and / or as professional upper-level staff with significant experience in generating production-based and cost-based estimates.
- Demonstrate successful experience estimating construction, maintenance projects, and vertical construction projects.
- Demonstrate a thorough knowledge of construction means, methods, equipment, estimating, bidding, and preparing production-based estimates. Only an Offeror that demonstrates significant current or previous experience pricing and scheduling relevant activities will be considered for work under this RFP. Engineering firms will not be considered under this RFP.
- Demonstrate an understanding of the remoteness of the Projects, logistical challenges, limited labor and equipment, etc., as well as the unusual local market conditions. The ICE must recruit subconsultants (or have in-house) estimators with proven local estimating / bidding experience in order to accurately gauge the local challenges for such factors as local bidding conditions, shipping, limited construction seasons, distance between Projects, horizontal and vertical construction elements, etc. This cannot be overemphasized and will be a critical consideration when scoring the ICE’s technical proposal.
- Provide a graphic organizational chart of the Offeror’s firm that identifies position titles, names, and the Offeror’s estimated number of hours that each of the key

personnel will be dedicated to the Program. This includes subconsultants. Ensure individuals assigned to this project are clearly identified.

- Identify individual(s) by name that will be committed to consistently attend the regular Project progress meetings, partnering “kick-off” meetings, ICE meetings, other critical meetings, etc.
- Provide resumes for the following personnel:
 - Principal of the Company — The Offeror must show a significant commitment of the principal to the Project Suite. The principle will actively participate in all critical Project Team meetings and any executive team progress meetings (held between top leadership of the Owner, CM, subcontractors, subconsultants, ICE, construction inspectors, and the DM).
 - Project Lead Estimator (LE) – The Project LE must be an experienced ICE with a history of working as an ICE on CM/GC projects.

Resumes should specifically address the following:

- Direct experience in bidding and estimating quantities and pricing relevant to Projects within the Project Suite, as well as the ability to assess the reasonableness of the assumptions supporting cost and schedule estimates.
- Working knowledge of engineering, construction complexities, and market conditions that can affect the costs of the Projects. This includes the ability to understand the local market conditions, which include the local challenges for such factors as local bidding conditions, shipping, limited construction seasons, distance between Projects, horizontal and vertical construction elements, etc.
- Thorough understanding of CM/GC and the independent cost estimating process.
- Provide two references for key personnel assigned to this Project Suite. References must have been directly involved, as a representative of the Owner, in work performed by the key personnel in the last ten years.

Subconsultants – The subconsultants must have relevant experience on their specialty work of similar scope, nature, and complexity. The ICE firm shall select subconsultants based on qualifications, versus low bid. The Owner has final approval authority for all subconsultants. The Owner may also recommend subconsultants for the ICE’s consideration. The Owner has the right to remove any subconsultant, at will, and with no cause. The Owner must approve all replacements of subconsultants.

C. Past Performance and Experience with CM/GC Delivery Method (30 Points)

The Owner is seeking Offerors with demonstrated performance in bidding, and estimating CM/GC projects.

The following are required:

- Provide up to three examples of your most relevant CM/GC projects of similar size and scope estimated and bid in the last 3 to 5 years, where one or more of your proposed team members were involved. Preferred examples are projects in which your firm was the ICE. The project narrative should confirm your breadth and depth of experience for work similar or larger than this Project Suite.
- Provide a detailed history of the proposed team’s experience with estimating construction projects of a horizontal and vertical nature. Failing this, provide your plan for procuring expertise and experience with both types of construction.
- Provide a detailed history of the proposed team’s experience with estimating projects within the Project Suite’s geographical area. Failing this, provide your plan for procuring expertise and experience in estimating projects in this geographic area.
- Explain how your team’s past ICE and CM/GC experience enables successful delivery of the Project Suite.
- Explain how you will perform independent cost estimates using entities with direct local construction bidding experience.

Part 2: Interview – 100 points:

Interviews for the short-listed firms may be conducted by the Owner. During the interview, the offeror will have the opportunity to demonstrate the key question as to “how they will make the Owner successful” in delivering the Project Suite.

The Owner shall coordinate the interviews with each shortlisted Offeror. At the request of the Offeror, interviews may be conducted via VTC. The order of the interviews for the Offerors will be random and will be determined prior to the interview date. The notification will include information about location; set limits on the number of people attending (based on room size, occupancy comfort, and safety); state the amount of time for each interview; and include any other scheduling or room constraints.

The maximum number of points for the interview will be 100. After scoring the interview, the firm with the highest interview score will be selected. The shortlisted Offerors will then be ranked from highest to lowest. As mentioned, the technical score does not count towards the final award.

The interview will not be used to fill in missing or incomplete information that was required in the written proposal. The interview will not be used as an opportunity by the Offerors to improve or supplement their proposals. The interview typically lasts an average of 2 hours.

The interview will consist of the following:

Part 1: Presentation by the ICE – Topics such as innovations, risks, challenges, scheduling, best practices, lessons learned, keys to success, CM RPP development ideas, etc. ~ 1 Hour.

Part 2: Open Discussion between the ICE and Owner’s interview panel. – Questions and comments about ICE presentations, innovations, recommended next steps, keys to success, etc., will be discussed ~ 1 Hour.

X. Compensation for ICE Services

The selected Offeror will be paid a negotiated fee based after ICE selection. These fees can be broken down via individual work orders, addressing numerous misc. project(s) in the planning, design, and construction stages, as well as broken down by both preconstruction & construction services for the listed (Section B - Table 2) suite of thirty-three (33) projects.

SECTION B - SCOPE OF WORK

I. Project Suite Information

General Description

The selected ICE will successfully partner with the Owner and the entire Project Team to rapidly deliver the Project Suite, thereby creating an economic stimulus package for the local community, as well as rapidly completing these Projects to take them “off its books” to enable the Owner to focus on future work. Bundling of Projects has numerous advantages. It will permit the Project Team to strategically plan, fund, permit, design, and to build the Projects simultaneously in a manner which constructs the greatest amount and length of Projects within the Project Suite and available funding. The goal is to stretch the existing funding by capturing savings gained through innovations and risk reductions to efficiently complete the construction of the listed Projects ahead of schedule and under budget. Bundling also creates an economy of scale: significantly reducing individual Project overhead, mobilization costs, equipment costs, staff time, and required design details and levels. Bundling also reduces the need for inspection personnel who are traditionally required when using the standard design-bid-build (D-B-B) method.

Table 2 – Project Suite List

The Project Suite listed in Table 2 is in varying stages of the design, permitting, ROW acquisition, and funding processes. Some have no NEPA; some have funding agency approvals, while others lack funding agency approvals at this time; etc.

CS – Community Streets project

W&S – Water & Sewer project

* Hualapai Tribe’s No. 1 Priority Project.

** Scope, ROM, Schedule, and Unit Items to be generated / verified by the ICE upon contract award.

Table 2 – Project Suite List

Project Name	Dist.	Design	Estimated Costs	Permitted	Status of Funding	Desired & Required & Desired Start	Remarks
Youth Camp Rd.	3.8 mi.	0%	\$3.5M	No	Obtained	TBD	Re-Alignment Anticipated
R/R Overpass	0.2 mi.	0%	\$8M	No	Obtained	TBD	Preliminary Concept
Box Canyon Streets	1 mi.	~40%	\$930k	No	Obtained	TBD	
Peach Springs Rd. (Safety Project)	2.7 mi.	0%	\$270k	No	Obtained	TBD	
* Diamond Bar Rd. (Safety Project)	13 mi.	0%	\$800k	No	Obtained	TBD	State & Fed Funds
Nelson Rd.	1 mi.	0%	\$1M	No	Obtained	TBD	
Buck & Do Rd.	40 mi.	0%	\$1M (Design)	No	Design \$ Only	TBD	Make Shovel Ready – apply for Construction Funds
Diamon Creek Rd. (Walking Paths)	1 mi.	0%	\$510k	No	Obtained	TBD	
Transportation Complex	10 acres	0%	\$1.7M	No	Obtained	TBD	No. 6 & No. 9 are joint projects
Road Inventory, Pavement Management System & Road Program SOPs, Manuals, etc.	660 mi.	0%	\$390K	N/A	Obtained	TBD	Develop SOPs & Road Maint. & Constr. Manuals

Project Name (Cont.)	Dist.	Design	Estimated Costs	Permitted	Status of Funding	Desired & Required & Desired Start	Remarks
Public Services Annexes	NA	0%	TBD	N/A	Partial	TBD	Plan, Design, and Construct PS Annexes
Local Roadways	10 mi.	0%	\$1.8M	CAT-X	Obtained	TBD	Poor Condition Roads
Baseline Roadway Maintenance	TBD	0%	TBD	CAT-X	Obtained	TBD	Bring Local Roads to Standard
Transportation Planning Assistance	N/A	0%	TBD	N/A	TBD	TBD	LRTP / Safety Plan
West Water / Peach Sp. Cross Con.	15 mi.	10%	\$12M	IN NEPA	40%	TBD	Preliminary Engineering Report Completed
Box Canyon Underground Infra.	N/A	100%	\$320k	Obtained	Obtained	Prior to No. 3	Punch Lists/Constr. Conflicts/Bring to Standard
Peach Springs Spr.	6 mi.	0%	\$13M	IN NEPA	No	TBD	Prelim. Eng. Report / USDA / WIFA
Sports Complex	EA	0%	\$20M	No	No	TBD	
Tribal Admin. Building	EA	0%	\$15M	No	No	TBD	
Truxton Aquifer Well	EA	0%	\$22M	No	No	TBD	
Alert Weather Gauges	12-15	0%	\$60k	CAT-X	Partial	TBD	
GC Water Rights Pipeline	70 mi.	0%	\$312M	No	No	TBD	Preliminary Design (very detailed) - Dowl
New HIP Homes (Water & Sewer)	1/YR	0%	300-500k	NA	No	TBC	IRC/IBC 2018

Project Name (Cont.)	Dist.	Design	Estimated Costs	Permitted	Status of Funding	Desired & Required & Desired Start	Remarks
Develop CIP Water Program	NA	0%	TBD	NA			
Reinforcement of Concrete Structures	~70	0%	TBD	No	No	TBD	
Structural Improvements for Bridge to Pop's Laundry	1	0%	TBD	CAT-X	No	TBD	
Public Safety Complex	1	50%	TBD	No	No	TBD	
Sewer Lagoon No. 6	1	100%	700k	Obtained	70%	TBD	
Well No. 1 Piping Replacement	1000 ft.	100%	200k	Obtained	100%	TBD	
Re-purpose Exist. Station 1	1	0%	TBD	No	0%	TBD	
Hualapai Entrance	1	0%	TBD	No	0%	TBD	
Water Storage Tanks	2	0%	\$1M	No	0%	TBD	
Hydrant Maint., Installation, Piping & Coverage Plan	NA	System Map Avail.	TBD	CAT-X	Partial	TBD	
Safety Master Plan & Improvements (Sidewalks, ADA, Street Lighting, Cameras, etc.)	NA	0%	TBD	No	No	TBD	

SECTION C – THE OWNER’S STRATEGIC PLAN FOR CM/GC

I. Project Suite Goals

Specific Project goals are as follows:

- Use a cost-effective approach to design and construction to deliver the Project Suite under budget and ahead of schedule;
- Work cooperatively with the Owner, the Project Team, and stakeholders to maintain a cost-effective and timely schedule;
- Honor all grant funding procedures to obtain 100% grant reimbursement; conform to DBE requirements;
- Use innovation to provide improved quality and performance and generate significant Project savings;
- Maintain a strong positive relationship with major stakeholders, cultivate a partnering attitude, promote a creative environment, and be proactive in addressing Project needs;
- Provide a context-sensitive Project Suite using smarter construction methods for low maintenance and long-term performance, such as solar energy and water recycling;
- Provide a safe working and traveling environment that minimizes the potential for injuries to the public and construction workers;
- Minimize inconvenience to the public by minimizing construction time and delays;
- Deliver Early Work Packages to ensure early construction is quickly underway after Notice to Proceed; and
- Measurably track and demonstrate how this specific CM/GC program “outperformed” traditional methods (such as Design-Bid-Build) (D-B-B), i.e., competitive low-bid.

II. Requirements of the ICE

The ICE works closely, i.e., early and often, with the overall Project Team. If the DM and the CM are meeting, the ICE is expected to be present and engaged.

The ICE is actively involved in the pre-construction phase of the Project Suite, and also during the construction phase as needed.

The ICE becomes familiar with the details of the CM’s Risk Management Plan, the Risk Allowances / Contingencies, and the construction means and methods discussed during pre-construction (See NCHRP Synthesis 518 for details).

The ICE furnishes all labor, materials, equipment, services, and support facilities, etc., required for the ICE to provide Project Suite elements, which include but is not limited to the following:

- Project Team Meetings – Participate in all Project Team meetings. Partner with the entire Project Team to develop innovative and streamlined Work Packages, Projects, and Bundles. Analyze innovative means and methods, discuss current innovative design options, and provide associated real-time independent cost estimate pricing and Cost Models throughout the pre-

construction phase. Provide independent schedules to determine the most efficient phasing for the overall Project Suite.

Plan relevant aspects of the independent cost estimates, schedule, and Cost Models.

Discuss current innovative design options, GMPs, schedules, OPCCs, etc.

Meet with the CM to review, discuss, and compare the current Cost Models developed by the ICE and CM and discuss current innovative design options, potential Work Packages, schedules, OPCCs, etc.

Note: the ICE has the option to attend Project Team meetings via VTC, vs. in-person. Although, once a month in-person attendance is required.

- Market surveys for design decisions — Furnish designers with innovative alternative means and methods, materials and/or equipment along with current real-time actual prices and availability of resources in order to jointly make informed design decisions (early in the process) to eliminate future changes to the proposed designs and reduce Project costs.
- Master Schedule — Prepare a Master Schedule while analyzing and critiquing the CM's production based CPM schedules, CM's production rates, cost-based estimates, material costs, CM's subcontractor production rates / costs, etc. Utilize experience on the smartest way to bundle and construct this Project Suite using such things as Early Work Packages, ordering long lead items, grouping similar types of work, etc. Provide input on the overall Project schedule, phasing, constructability, material availability, and cost throughout the design phase of the Project.
- Design Options — Prepare independent cost estimates for, and evaluate all, proposed design options, Projects, Bundles, Work packages, and Early Work Packages as identified by the Project Team and agreed to by the Owner. and details for constructability and feasibility.
- Risks — Identify all potential Project risks (including financial risk) and methods to mitigate/share/eliminate them. Provide guidance for significantly mitigating / eliminating these Project risks, while also assisting with developing allowance items and contingencies, and for preparing for / conducting the Risk Assessment Meeting during the Project Team's Kick-off / Partnering Meeting. Track all risk reductions/mitigations, innovations, cost savings, and time-savings throughout the program.
- Cost Model — Provide an accurate and up-to-date, detailed independent overall Cost Model for each Project and Bundle within the Project Suite. At each Project Team meeting, review and discuss with the CM the CM's current Cost Model. The Cost Model addresses design, permitting, construction, inspection, right-of-way, mitigation, proposed and current GMPs, early work packages, expenses to date, pre-construction services, construction services, etc. The Cost Model is defined as an open book cost estimate for the project from the agreed upon estimating software platform that includes such things as labor and equipment rates, production rates, trucking costs, fuel costs, worker-hour assumptions (hours planned per shift,

hours planned per day, days per week), material costs, subcontractor costs, overhead assumptions, proposed profit, and contingency.

Prior to the CM submitting a GMP for the first Work Package, submit a Cost Model for the Project or Bundle that the Work Package is associated with.

- Independent Cost Estimates - Develop and submit to the Owner independent cost estimates, Cost Models, risk matrices and independent schedules, for each Work Package, Project, or Bundle. Develop properly executed independent cost estimates that use the cost-based estimating method, and never use historical bid figures or statewide averages (data). Develop own quotes, independent from those developed by the CM. The cost-based estimates produced by the ICE generates both the direct and indirect costs of each Project. Analyze the CM's GMPs, prices, suppliers/subcontractor quotes, methods, schedules, production rates, and estimates to ensure that the CM's GMP and schedule is **fair and reasonable**. If the ICE believes the other suppliers/subcontractors may provide better value to the Owner than those recommended by the CM, the ICE is expected to suggest to the Owner these other suppliers/subcontractors. Assist the Owner in comparing the ICE's independent cost estimates, Cost Models, and schedules against those submitted by the CM. The cost-based estimate prepared by the ICE are used by the Project Team to reconcile cost for Early Work Packages and by the Owner for acceptance or rejection of the GMP.
- Real Time Actual Costs—Provide real-time actual costs relating to innovative concepts, multiple Work Packages, and design details, ensuring the Project is constructible under budget. ICE provides actual pricing while also focusing on the aspect that “time equals money” relating to design and construction projects. It is a requirement that the ICE formulates the rough and final GMPs based on real bids and quotes, not estimates by the DM, the CM firm, or any engineer not experienced as a contractor. Obtaining real costs at the earliest possible concept phases of scoping and rough plans is essential to remaining under budget and to generate constructible Projects within the schedule.
- Value Analysis—Identify aspects of the design or specifications that do not add value or whose value may be enhanced. Based on this, identify changes that would not necessarily reduce the cost, but may actually increase constructability or speed production, reduce design requirements, decrease life-cycle costs, etc.
- Material Cost Forecasting –ICE uses contacts within the industry to develop costs while considering construction material price escalation to assist in making decisions regarding material selection, advanced ordering, and Early Work Packages.
- Meetings – Actively participate in all Project meetings held with the CM, the Owner, the DM, permit agencies, internal and external stakeholders, etc.
- Innovations, Schedule Acceleration, and Cost Savings - Propose and price significant innovations, schedule acceleration, and cost savings throughout the pre-construction and construction phases.

- Development of a CM Contingency, the Owner’s Contingency, and Allowance Items – Working with the Project Team, assist in establishing all contingencies and allowances. The two types of contingencies to be used are as follows:
 - CM’s Contingency is an allowance that is tailored to the scope of work for each GMP that may not have been finalized/defined/specified, as part of the finalization of the drawings and specifications. The CM Contingency is approved and used by the CM at the sole discretion of the Owner. The amount of the GMP Contingency is approved by the Owner prior to the execution of the GMP and is based upon risk modeling. When establishing the CM Contingencies, the CM requests and provides the Owner adequate reasoning as to why they are to be spent. The Owner must authorize the use of any portion of the CM Contingency. If the CM Contingency is not fully used, the unspent amount is used for additional work for the Project Suite.
 - The Owner’s Contingency is an amount, determined by the Owner, included in the overall Project budget to properly account for potential scope changes, made at the discretion of the Owner, that were not anticipated by the Owner and are beyond the control of the Owner and the CM at the start of the Project.
 - Allowances are specified amounts included in the GMP for certain items of work that are known but final quantities may be impacted by final site conditions. For example, based on borings the **Project Team** recognizes there are sections of the base course that need to be replaced and estimates have been made based on the best available geotechnical data. However, the reality is that until the asphalt is removed from the roadway, an exact quantity cannot be confirmed. Therefore, an estimate/price is included in the GMP along with an allowance priced for that item of work. If additional material is needed, the allowance covers the cost of additional material. The costs for labor, overhead, profit and other expenses with respect to the allowance item are included in the GMP but not in the allowance amount. If the quantity under runs the estimate made in the GMP, the balance is used towards new work within the scope of the Project.

III. Two-Day “Kick-off” Meeting

Once the entire Project Team is assembled, **all members** of the Project Team attend a two-day “Kick-off” meeting. **Attendance by all parties is mandatory.** This includes the DM (and sub-consultants), the CM (and all subcontractors), the ICE, the Project Lead (PL), the Owner (and staff), stakeholders, funding organizations, permitting agencies, and other organizations, etc., required for the success of the Project Suite. The meeting schedule is yet to be determined. The first day of the meeting focuses on forming a highly effective Project Team for delivery of this Project Suite. The second day is a program-specific discussion. This two-day “Kick-off” meeting generally follows the draft outline below:

Two-Day “Kick-Off” Agenda:

1. Welcome and Introductions
2. Hualapai Tribe’s / FHWA’s Top Leadership Briefing (Strategic Vision, Goals, End State, Challenges, etc.)
3. Project Team and Project Lead Introductions and roles of each Project Team member
4. Hualapai Tribe’s Transportation Director’s Vision, Goals, Budget, Challenges, at the Program Level
5. CM/GC Performance Targets - FHWA briefs the latest national research and “what right looks like”
6. DM’s Briefing - DM’s perspective: innovations, alternative means and methods, time savings, cost savings, risk mitigations, critical issues, challenges, and highlights etc., from DM’s proposal.
7. CM Briefing - CM’s perspective: innovations, alternative means and methods, time savings, cost savings, risk mitigations, critical issues, challenges, and highlights etc., from CM’s proposal.
8. ICE Briefing - ICE’s perspective: innovations, alternative means and methods, time savings, cost savings, risk mitigations, critical issues, challenges, and highlights etc., from ICE’s proposal.
9. Group Critical Thinking Session
10. Risk Matrix Overview / Discussion
11. ICE’s Cost Model
12. Schedule Development
13. Integrated master development/review – design, R/W, utilities, estimate, etc.
14. CM’s Master Schedule Overview
15. Cost Model development/review and estimate alignment
16. Identification / discussion of first Work Packages
17. Action Items/Set up Meeting times/Set up task force groups

IV. Concept of Operation (COO)

Prior to the Kick-off meeting, the CM and ICE each independently develop a Concept of Operation (COO). This COO outlines (charts out) Early Work Packages (and pre-defines all Work Packages) for the entire Project Suite, recognizing that the first Work Package must go to construction within 30 days from the NTP. One goal is to quickly get the CM out to construction i.e., first breaking ground on the Owner’s highest priority Project. The Project Team updates the COO at each weekly Project progress meeting prior to proceeding with the first Work Package, i.e. the Project Team must ensure that the accumulation of all work cost does not exceed the total Project Suite budget (maximum GMP).

The COO must be modeled for the individual Work Packages and Bundles as well as for the overall Project Suite. Each Project within the Project Suite has specific individual accounting requirements. Based on these accounting requirements, quantities are individually tracked by Project for each specific pay item. For example, fine grading may span three different projects within one Work package, the quantities must be measured and tracked for each individual Project separately, by accounting code.

V. Project Team Meetings

Members of the Project Team schedule and attend all Project Team meetings. Project Team meetings are held once per week during the pre-construction phase of Projects and Bundles, and on an as-needed basis during the construction phase. The Project Team promptly reviews and provides any comments on the minutes to use at the next Project Team meeting. Project Team meetings present general Project progress, address design options that arise during the design process, and help to provide input and direction from the Owner.

The Project Team develops and schedules innovative and streamlined Early Work Packages that complete the Projects well under budget and ahead of schedule.

Additionally, the ICE recommends efficient means and methods to accomplish and streamline Project delivery.

The Project Team plans relevant aspects of the cost estimate, schedule, and OPCCs. This includes a cost estimate narrative; detailed assessment of the Projects' limitations of operations; reconciliation of the quantities, crew sizes, COO, and production rates; review of subcontractor plug numbers and actual costs, labor rates, and material costs; and the planned method of measurement, the basis of payment, and a description of the CM's and ICE's planned means and methods for constructing the Project Suite.

The ICE may attend these weekly meetings via VTC, although, mandatory in-person attendance may be required monthly.

VI. Project Budget

Budget control is critical to the success of the Projects. The Project Team members actively participate in clearly defining the scope of each Project, the design, and means and methods to bring the Project Suite well under the Project budget. These cost savings are then applied to additional work / scope within the Project Suite. The ICE shall provide current market pricing as a basis of its open-book cost estimates. This includes all expenditures related to the Project (construction, construction management, permitting, local fees, right of way, allowances, contingencies, mitigation, material costs, subcontractor costs, testing, etc.).

VII. Project Schedule

The ICE is responsible for developing and maintaining an independent overall master Project schedule for the design, construction, permitting, etc., of the Project Suite using a cost- and resource- loaded CPM schedule.

During the pre-construction phase, the schedule includes all detailed coordination efforts to optimize the design, including all DM activities (including permitting / environmental), all CM activities, all third-party/stakeholder activities, BIA right-of-way activities, construction, and all the Owner's activities. The obligation of the Owner, BIA, FHWA, stakeholders, etc., to complete specific submittal reviews is also included in the Project schedule.

VIII. Design Parameters and Criteria

The Project Team identifies which design criteria it follows to design and construct each Project. This includes construction standards, testing, specifications, etc.

IX. Guaranteed Maximum Price (GMP)

As part of pre-construction phase services, when construction documents are sufficiently complete to establish a price and a clearly defined scope, the CM submits a formal GMP proposal to the Owner for an entire Project, Work Package or Bundle..

The GMP includes the direct cost of all work, indirect costs, allowances items, contingencies, and construction managers set fee (i.e. profit and overhead). Any remaining allowances or unused contingencies are used to complete other Project work within the Project Suite. The CM guarantees to complete the scope of work for that GMP amount (i.e. the contract amount for the construction phase contract) and agrees to be solely responsible for any difference between the actual cost of work and the GMP amount.

All GMP proposal(s) are reviewed and approved by the Project Team and the Owner prior to moving forward. Upon signing of the Phase 2- Construction Services Option, the CM-GC firm takes full responsibility for delivering the Project within the GMP.

Compensation for construction services within a GMP is as follows:

- For Lump Sum Items in the GMP: Paid as a lump sum.
- For Allowance items in the GMP: Paid based on the actual prices agreed to in the GMP and all spending of allowances are pre-approved by the owner. Quantities are based on field measurement. All unused contingencies and allowances are returned to the Project for additional work within the Project.
- For Contingencies in the GMP: Paid based on the actual prices agreed to in the GMP and all spending of contingencies are pre-approved by the owner. Quantities are based on field measurement. All unused allowances are returned to the Project for additional work within the Project.
- For Unit Price items in the GMP: Paid based on the agreed upon unit prices in the GMP. Quantities are based on field measurement. All unused unit items are returned to the Project for additional work within the Project.

Progress payments for work are paid according to the resource loaded linear schedule as well as verification through measurement in the field.

If the CM and the Owner are unable to reach agreement on a fair and reasonable price for the Phase 2- Construction Services Option, the Owner reserves the right not to exercise the Option and to solicit construction services in a new procurement, from which the CM would be excluded.

X. Ownership of Documents

All ideas and plans proposed as part of this RFP process become the property of the Owner.

All tracings, bids, plans, manuscripts, specifications, data, maps, materials, etc. prepared or obtained by the Offeror as a result of working on this contract, become the property of the Owner.

XI. Basic Tenets of CM/GC

A. Introduction

The purpose of these basic tenants is to communicate key aspects of CM/GC to the construction industry and design community. Even though CM/GC is used by many agencies, this document details the Owner's understanding and implementation of the delivery method.

B. CM/GC Contrast to CM@Risk / CMAR

CM/GC has a long history in both public and private sectors, particularly for vertical construction, federal sector projects, and related construction projects. While there are potential differences in how CM is implemented for vertical construction, some of the same fundamental characteristics apply to highway or multi-modal transportation projects. CM/GC is a system modeled after CM@Risk (CMR) that allows, or in most cases compels, the CM to self-perform a portion of the work.

C. The Project Team

With the CM/GC project delivery method, an Owner "custom-builds" its entire Project Team, including subcontractors and subconsultants, to properly fit the specific needs and objectives of each Project. A partnership is formed between the Owner and the Project Team (ICE, CM, DM, subconsultants, and subcontractors) shortening overall Project completion duration, improving risk identification and mitigation responses, increasing utilization of innovative design/construction techniques, and improving construction conflict identification and management.

The Project Team shall meet once per week during the pre-construction phase of a Project or Bundle, and on an as-needed basis during the construction phase of a Project or Bundle.

D. Pre-construction Phase

Bundling of Projects and Work Packages allow the Project Team to strategically and innovatively plan, fund, permit, design, and build in a manner which constructs the greatest amount of Projects within the current available funding.

The Project Suite will be delivered using multiple Early Work Packages and Work Packages to meet the Owner's accelerated schedule (See NCHRP 787 for details).

Under the CM/GC delivery method, it is possible for Projects to be designed “around a table” during regular Project meetings (with the entire Project Team present). The emphasis of the design process changes in this scenario from traditional bid sets of plans to construction sets. The intensity of the design effort shifts from traditional plans production to Project Team planning – that is, critical design decisions are made during regular meetings with all decision-makers present. CM/GC projects do not need a fully developed design package, as with Design-Bid-Build projects, or a complex performance specification as with Design Build projects.

The fast-track nature of CM/GC requires a short-term need for increased plan production rate. The Designer must keep pace with the acceleration and changes proposed by the Project Team as well as multiple Early Work Packages.

The CM/GC method delivers Projects using one CM. This allows the Project Team to strategically and innovatively plan, fund, permit, design, and build in a manner which constructs the greatest amount within the current available funding.

The Project Team’s initial focus should be to identify and begin construction on Projects or portions of Projects that are potentially “shovel ready” and/or can quickly be made “shovel ready” while simultaneously working on other Projects within the Project Suite that are awaiting items as: NEPA clearance, permitting, right-of-way, funding, third-party approvals (i.e., BIA, FHWA, Resource Agencies, etc.).

Pre-construction services consist of addressing and managing agency desires that may encompass a wide range of services, such as scheduling, estimating, bidding and procuring labor and materials, supporting early public outreach, coordinating environmental permits, generating alternative design and construction means and methods, or developing relocation plans for businesses and landowners. Pre-construction includes vital “over-the-shoulder” reviews; which are informal reviews of the design conducted by the CM, literally looking “over the shoulder” of the DM while the DM is in the process of designing the Project. The concept is extended to include non-literal settings where the CM is very closely involved in the design, to the point that the CM can raise questions and make design changes as the design progresses instead of only at designated times. Typically, the pre-construction phase continues until the last Work Package is approved and released for construction.

E. Pre-construction Phase Collaboration, Coordination, and Communication

The Project Team has the common goals of producing a quality Project under budget, maximizing the value of the work to the Owner, achieving completion without undue inconvenience to the public, producing the work at a reasonable cost to the Owner, and with a reasonable compensation to the CM, ICE, and the DM. In promoting these goals, it is expected that the CM cooperate and collaborate with the Design Manager in reviewing design documents, preparing cost estimates, limitations of operations, sequencing suggestions, constructability reviews, and other items required by the contract. The CM works with the

Project Team, and Agencies as needed, when considering alternatives. The CM actively provides input for alternatives, improved methods, and other ways to maximize the quality of the Project. The CM maintains constant communication with the Project Team.

The CM's pre-construction services are not intended to include the performance of design work. The DM remains responsible for the Engineering of all aspects related to finalization of the design documents and remains the Designer(s)-of-Record throughout the construction phase.

As part of pre-construction phase services, the Project Team holds regular meetings to plan relevant aspects of the cost estimate organization and breakdown for a specific scope of work. This includes a cost estimate narrative, a detailed assessment of the Projects' limitations of operations, reconciliation of the quantities, crew sizes, production rates, labor rates, and material costs, the planned 'method of measurement' and 'basis of payment,' and a description of the CM's planned 'means and methods' for constructing the Project scope. During the development of the GMP, the Project Team considers why costs may be out of range, if the Project is overdesigned, if the specifications are more stringent than needed, whether the CM is carrying unnecessary risks, if the Owner is asking for more than they can afford, and if contingencies and allowances are needed. With this process, each pay item is treated like an individual GMP and the entire Project Team agrees to a reasonable cost to pay for each item, prior to moving forward with the design detail. This enables real-time adjustments to each pay item, as well as each design detail, prior to proceeding to an overall GMP very early in the design process. Costs should thereby remain in control because they are controlled and adjusted during each regular production meeting.

F. Opinion of Probable Cost (OPCC)

Prior to the CM submitting a GMP for each Work Package, the ICE and CM independently and continuously develop / review both informal and formal OPCCs. The OPCC is defined as an open book cost estimate for the work developed from the ICE and CM's estimating software platform that includes direct and indirect costs along with allowances and contingencies. The OPCC is supplemented by a CPM resource loaded schedule.

The OPCC represents a good faith open book estimate from the ICE, of the Project costs required to complete all Work Packages required for the Project. It is used to verify that the overall Project scope can be completed under the available Project budget. This model enables the Project Team to properly plan, and effectively monitor and control the cash flow, costs, and funds available in comparison to the budget, estimates and total commitments for the Project. This cost model is not contractual but a guide for the Project Team in gauging the Project in relation to an allowable budget.

Throughout the CM/GC process, the entire Project Team should be aware of the targeted, versus the actual, on-going costs of the Project, as it is being designed and innovations are implemented, to assure that the overall Project costs are kept under budget. In addition, the

entire Project Team (including the ICE) discusses the actual bid estimates/prices, received directly from the subcontractors, during the regular Project meetings and determine if costs may be out of range, and why; i.e., is the Project overdesigned? Are the specifications more stringent than needed? Are the CM pricing risks included in the unit items versus carrying them on the risk matrix? Is the owner asking for more than they can afford? Are contingencies and allowances needed, etc.? With this process, each pay item is treated as an individual GMP and the entire Project Team agrees to a reasonable cost to pay for each item, prior to moving forward with the design detail. This enables real-time adjustments to each pay item, as well as each design detail, prior to proceeding to an overall GMP very early in the design process. Costs should thereby remain under control because they are adjusted during each regular production meeting.

G. Linear (Resource Loaded) Schedules

Linear (resource loaded) schedules are to be utilized by the CM. A Linear Schedule Method (LSM) is used mainly in the construction industry to schedule resources in repetitive activities commonly found in highway, pipeline, high-rise building and rail construction projects. These projects are called repetitive or linear projects. The main advantages of LSM over Critical Path Method (CPM) are its underlying idea of keeping resources continuously at work. In other words, it schedules activities in such a way that:

1. Resource utilization is maximized;
2. Interruption in on-going process is minimized, including hiring-and-firing; and
3. The effect of the learning curve phenomenon is minimized.

H. Guaranteed Maximum Price (GMP)

A GMP is the CM's guaranteed price to deliver a collaboratively developed and mutually agreed upon scope of work for an entire Project, Work Package or Bundle.. The CM guarantees that in no event shall the sum of the CM fixed fee, direct cost of the work, and the Owner's and CM's allowances and contingencies exceed the GMP. It includes, but is not limited to all direct and indirect contractor costs associated with the construction, contracting, self-performance and management of the Project, including the preparation of the construction schedules, shop drawing preparation, construction labor, material costs, equipment costs, all traffic control, quality testing, survey, replacement of rejected work or materials, all punch-list work, certain public information and coordination costs, all overhead costs, general condition costs, and fees.

The GMP cost excludes the fees that are paid for services under the pre-construction services phase. GMPs are not subject to price escalation or de-escalation as a result of inflation (time value of money) costs. This issue is considered on a case-by-case basis as part of GMP Contingency discussions within each GMP. In such instances, an escalation study that is specific to the elements of work may be used as a basis of comparison and setting of the contingency costs for escalation and de-escalation.

Each GMP includes the CM Fixed Fee, a pricing element that was bid competitively as part of the CM selection, which is a fixed rate percentage for home office overhead and profit that is applied to the total of all direct costs, Project overhead, and indirect costs. Home office overheads are NOT included in the GMP pricing.

A Project's overall GMP is typically comprised of a series of smaller GMPs. When the design for an individual Work Package achieves 60-90% completion, the CM provides a GMP for construction of that scope. It is critical for the CM and subcontractors to formulate the rough and final GMPs based on real bids, not estimates by the DM and/or CM firms. Getting real costs at the earliest possible rough concept phases of scoping and rough plans is essential to coming in under budget and generating constructible Projects within schedule. Throughout pre-construction, the CM furnishes real-time cost proposals received directly from the CM and Sub-contractors as the design progresses. A transparent, open books form, of cost accounting is used and the CM's profit, general conditions, and indirect costs are known along with any contingencies that the Project Team agrees to be appropriate. The Owner is given an opportunity to question the CM's proposals as well as direct the Project Team to revise its approach to meet budget constraints.

After successfully agreeing on the construction contract amount, a GMP contract option is executed and the CM-GC firm functions like a General Contractor and is responsible for completing the work on schedule at the guaranteed maximum price for that scope.

Although the selected CM is contracted for both the pre-construction and construction services of this Project through this selection process, should the Owner and the CM be unsuccessful in agreeing to a GMP, the CM loses the rights to perform the work associated with that GMP, which can be re-procured using a Design-Bid-Build or any other lawful procurement method selected by the Owner. The CM will be prohibited from participating on the re-procured work. If the GMP is not accepted, the Owner, in its sole discretion, reserves the right to end the CM's participation in the Project development process at any time during the pre-construction phase. The CM would be entitled to receive the cost attributable to the completed pre-construction phase services. In this case, the CM would not be entitled to any further additional compensation from the Owner, i.e., damages or lost profits on portions of work not performed.

I. Contingency / Allowances

Contingencies and allowances are required to successfully cover the design and construction aspect of the Project and to accelerate the entire process. Contingencies are the difference between success and failure on a Project as they enable real-time decisions to be made and paid for and the Project to move forward rapidly. Contingency is the part of the cost estimate that covers all the uncertain costs of the Project.

The two types of contingencies used in the CM/GC delivery are as follows:

- CM Contingency - The CM Contingency is an allowance tailored to the scope of work for each GMP that may not have been finalized/defined/specified, as part of the finalization

of the drawings and specifications. The CM Contingency is approved and used at the sole discretion of the Owner. The amount of GMP Contingency is approved by the Owner prior to the execution of the GMP and is based upon risk modeling. When establishing the CM Contingencies, the CM requests and provides the Owner adequate reasoning as to why they are to be allowed. The Owner must authorize the use of any portion of the CM Contingency. If the CM Contingency is not fully used, the unspent amount is used for additional work in the Project Suite.

- Owner Contingency - The Owner's Contingency is an amount, determined by the Owner, and inclusive in the overall Project budget, to properly account for potential scope changes, made at the discretion of the Owner, that were not anticipated by the Owner and are beyond the control of the Owner and the CM at the start of the Project.

An allowance is a specified amount included in the GMP for certain items of work that are known but final quantities may be impacted by final site conditions. For example, based on borings the Project Team recognizes there are sections of the base course that need to be replaced and estimates have been made based on the best available geotechnical data. However, the reality is that until the asphalt is removed from the roadway an exact quantity cannot be confirmed.

Therefore, an estimate/price is included in the GMP along with an allowance priced for that item of work. If additional material is needed, the allowance covers the cost of additional material. The CM's costs for labor, overhead, profit and other expenses with respect to the allowance item are included in the GMP but not in the allowance amount. If the quantity under runs the estimate made in the GMP, the balance is used towards new work within the scope of the Project.

J. Independent Cost Estimate

An independent cost estimate is developed by the ICE using the cost-based estimating method to compare with the GMP submitted by the CM to ensure that the GMP is reasonable and fair. Only a firm that includes construction estimators experienced in cost-based estimating should be considered for work as an ICE. A properly executed independent cost estimate should never use historical figures (data). The ICE should be contacting the same people that the CM is contacting. This introduces another potential problem, however. The subcontractors and suppliers, if not contacted by the CM and/or owner and "encouraged" to support the ICE, will almost assuredly not do so—rendering erroneous prices or none at all. Subcontractors and suppliers should be told in advance that they will be contacted by the ICE, and should be strongly encouraged to work with them. Preferably, the ICE should engage the CM's estimators throughout this process. By allowing the parties to talk through their disagreements, the process becomes much more efficient. Conceivably, this does not present any potential conflict through these discussions. Since any differences have to be reconciled eventually, it is a good idea to let the individuals that produce these estimates sort things out directly, and as early as possible.

Throughout the independent cost estimate process, the entire Project Team should be aware

of the targeted, versus the actual, on-going costs of the Project, as it is being designed and innovations are implemented to assure that the overall Project costs are kept under budget. The independent cost estimate should be performed using CM's/entities with direct local construction bidding experience. In addition, the entire Project Team (including the ICE) discusses the actual bid estimates/prices, received directly from the subs, during the regular Project meetings and determines if and why costs may be out of range, i.e., is the Project overdesigned? Are the specifications more stringent than needed? Is the CM carrying too many risks? Is the owner asking for more than they can afford? Are contingencies and allowances needed, etc.? With this process, each pay item is treated as an individual GMP and the entire Project Team agrees to a reasonable cost to pay for each item, prior to moving forward with the design detail. This enables real-time adjustments to each pay item, as well as each design detail, prior to proceeding to an overall GMP very early in the design process. Costs should thereby remain in control because they are controlled and adjusted during each regular production meeting.

K. Construction Phase

The CM enters into a single contract with the Owner for each Project, Work Package, or Bundle, each contract initiated with an individual Notice-To Proceed (NTP). The first NTP is issued to engage pre-construction services and ultimately the development of the GMP. Offerors are required to name their proposed Subcontractors, if any, in their proposal. Subsequent NTPs are issued after the parties agree to an option that provides a GMP for the selected scope of work. Each subsequent contract option has its own NTP. The terms and conditions for construction services are based on the Owner's Standard Construction Contract with modifications that are tailored to specific Project requirements.

Once construction begins, the CM becomes the General Contractor (GC) while retaining their duties as construction manager (CM). It is essential that the CM stays fully engaged as a member of the Project Team, so as not to lose the benefits and risk time and effort achieved during the pre-construction phase. This phase begins when the Project Team releases its first Work Package for construction. Typically, construction consists of multiple Work Packages. The CM retains management assistance of the Project as well as acting as prime Contractor (GC) delivering the labor, equipment and materials to complete each Work Package successfully. The initial Project Team and structure remain intact throughout both the pre-construction and construction phases. Construction services consist of purchasing, on-site and off-site construction and fabrication of components, contract administration, and general implementation of the contract requirements through Project closeout. The CM runs frequent progress meetings and produces progress schedules, shop drawings, payment applications, record documents, and as-builts.