



CONTRACT DOCUMENTS
FOR
CITY OF SEDONA
PUBLIC WORKS DEPARTMENT

Uptown Northbound Roadway Improvements Project

2023 - SIM 1B

City of Sedona
UPTOWN NORTHBOUND ROADWAY IMPROVEMENTS PROJECT – SIM 1B

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ADVERTISEMENT FOR BIDS
City of Sedona
Public Works Department
102 Roadrunner Drive
Sedona, AZ 86336

Sealed bids for the construction of the **Uptown Northbound Roadway Improvements Project (SIM 1B)** will be received by the Public Works Department, located at 102 Roadrunner Drive, Sedona, Arizona, until **2:00 P.M. local time, July 27, 2023.** At that time, bids will be publicly opened and read aloud in the Echo Conference Room. Bidders are invited, but not required, to be present at the bid opening.

PROJECT: Uptown Northbound Roadway Improvements Project

DESCRIPTION: Construction of roadway improvements to the northbound lanes of State Route 89A from north of the roundabout intersection of State Route 179 to south of the intersection with Jordan Road. The Project is approximately 1,400 feet in length and includes some demolition, median modifications, new flexible pavement, concrete curbing, retaining walls, shared-use path, signage, landscaping, irrigation facilities, and drainage facilities modifications.

CONTRACT TIME: 160 calendar days after the Notice to Proceed for all work within R/W; and 180 calendar days after Notice to Proceed for Project Completion.

LIQUIDATED DAMAGES: \$1,000 per day beyond the calendar day Contract duration.

MANDATORY PRE-BID MEETINGS: Failure to attend and sign attendance sheet at mandatory pre-bid meetings shall render a bid non-responsive.

Copies of the Contract Documents, including plans and specifications for use in preparing bids may be obtained from the Public Works Department, 102 Roadrunner Drive, Sedona, Arizona (phone 928-204-7111; FAX 928-282-5348). The required deposit per set of plans and specifications is \$50.00, which will be refunded to those listed plan holders not submitting bids, if returned in good and useable condition within seven (7) days after the bid opening. Contract Documents may also be downloaded from the City of Sedona's website at www.SedonaAz.gov under your Business, Doing Business, Bids & RFPs. Downloaded documents may not be returned to the City of Sedona for any deposited refund.

PRE-BID CONFERENCE: Pre-bid conference (**mandatory**) will be held on **July 13, 2023 at 2:00 pm at City of Sedona, Vultee Conference Room,** 102 Roadrunner Drive, Sedona AZ.

Each bidder's proposal shall be made on forms furnished in the Contract Documents, and must be accompanied by a security consisting of a certified check, cashier's check, or bid bond in an amount of not less than ten percent (10%) of the amount of the total bid amount, and made payable to the CITY OF SEDONA, ARIZONA. In the event the successful Bidder within ten (10) calendar days after award of the Contract fails to enter into a Contract or fails to post payment and performance bonds satisfactory to the City insuring the faithful fulfillment of the Contract as required by law, the security deposit on this bid shall be forfeited to the City.

Contract Documents, with completed Bid Proposal, must be enclosed in a sealed envelope, addressed to:

HAND DELIVERED: City of Sedona
Public Works Department
102 Roadrunner Drive
Sedona, AZ 86336

U.S. MAIL: City of Sedona
Public Works Department
102 Roadrunner Drive
Sedona, AZ 86336

AND MARKED: Bid Proposal for **Uptown Northbound Roadway Improvements Project (SIM 1B)**

AND RECEIVED: **At the Public Works Department until 2:00 P.M. local time, July 27, 2023**
(as determined by reference to www.time.gov ref Arizona area)

The successful Bidder will be required to furnish two (2) bonds. One (1) bond, to become effective upon award of the Contract, shall be a Performance Bond substantially in the form attached, and shall be in a sum of one hundred percent (100%) of the contract price including any additions to the Contract. The Bond shall be effective throughout the construction period, including a two (2) year warranty period. The successful Bidder shall also furnish a Labor and Material Payment Bond, substantially in the form attached, to become effective upon award. Said Labor and Material Bond shall be in the amount of one hundred percent (100%) of the Contract price.

The successful Bidder will be determined on the basis of the lowest responsive and responsible Proposal. The City of Sedona, Arizona reserves the right to reject any or all Proposals, to waive or not to waive any informalities, or irregularities in the Proposals received, and to accept a Proposal which in its judgment best serves the interests of the City.

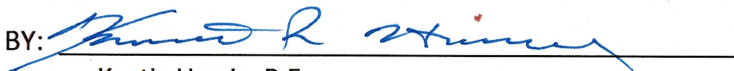
All questions should be directed in writing to John Hall, Associate Engineer, 102 Roadrunner Drive, Sedona, Arizona 86336, or email JHall@sedonaaz.gov.

FIRST ADVERTISEMENT: **July 5, 2023**

SECOND ADVERTISEMENT: **July 7, 2023**

RED ROCK NEWS

BY:



Kurtis Harris, P.E.

Public Works Director/City Engineer

INFORMATION FOR AND INSTRUCTIONS TO BIDDERS

The City of Sedona herein referred to as the "City" is defined as the City of Sedona, acting through its legally constituted officials, officers, and employees. The City may waive any informality or reject any or all bids. Any bid may be withdrawn prior to the scheduled time and date for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be opened. No Bidder may withdraw a bid within forty-five (45) days after the actual day of the opening thereof.

Bid prices shall include everything necessary for the completion of the work including but not limited to, materials, equipment, tools, other facilities, management, superintendents, labor, services, insurance, overhead, profit, and Federal, State, and Local taxes.

Each bid must be submitted on the Bid Proposal provided and must be signed by the Bidder or his duly authorized agent. All blank spaces for bid prices must be filled in, in ink or typewritten, IN BOTH WORDS AND NUMBERS where called for in the Bid Proposal. If there is a discrepancy between the price in words and the price in numbers, the price in words will govern.

In case of an error in the extension of the unit price and the total, the unit price shall govern. In the event that the product of a unit price and an estimated quantity does not equal the extended amount quoted, the unit price shall govern, and the correct product of the unit price and the estimated quantity shall be deemed to be the amount bid. If the sum of two (2) or more items in the bid schedule does not equal the total amounts quoted, the individual item amounts shall govern and the correct total shall be deemed to be the amount bid. The bid shall not contain recapitulations of the work to be done.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the Bidder, Bidder's address, and the name of the project for which the bid is submitted.

The City may, by statements in the Special Provisions or other part of the specifications, require submission of sealed Bid Documentation.

The City may make such investigations as City deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the City all such information and data for this purpose as the City may request. The City reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. Conditional bids will not be accepted.

Bidders must correctly prepare and submit the documents listed below with their bids:

1. Bid proposal
2. Bid Guaranty Bond
3. Certification of the Bidder's experience and qualification and Statement of Bidder's Qualifications, and Experience Questionnaire
4. List of all proposed Subcontractors
5. Schedule of manufacturers and suppliers, major equipment and material items

6. Non-collusion affidavit and Bidder's Affidavit
7. Certificate of insurability and Workers Compensation Insurance Certificate
8. Signed Addenda (as applicable)

Each bid must be accompanied by either a certified check made payable to the City of Sedona, a cashier's check made payable to the City of Sedona or a bid bond, duly executed by the Bidder as principal and having as surety thereon a surety company licensed to do business in Arizona, in the amount of ten percent (10%) of the bid. The City may retain such checks or bid bonds, of the three (3) apparent lowest Bidders, for a period of forty-five (45) days after the bid opening.

Simultaneously with the delivery of the executed Contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this Contract and for the payment of all persons performing labor on the project under this Contract and furnishing materials in connection with this Contract, as specified in the General Conditions included herein. The surety on such bond or bonds or contract bonds must file with each bond a certified and effectively dated copy of their Power of Attorney.

Each Bidder shall have listed, on the form entitled "Proposed Subcontractors", provided in the Proposal, the name, address, and description of the work of each Subcontractor to whom the Bidder proposes to sublet portions of the work in excess of one and one-half percent (1.5%) of the total amount of his Bid. For the purpose of this paragraph, a Subcontractor is defined as one who contracts with the Contractor to provide materials and labor, labor only, or who specially fabricates and installs a portion of the work or improvement according to drawings contained in the Contract Documents. Failure to list Subcontractors may render a Bid non-responsive and may be grounds for rejection of the Bid. Attention is called to the General Conditions Article 13, limiting the total amount of the work, which may be performed by Subcontractors. Alternate Subcontractors for the same work shall not be listed in the bid. However, substitute Subcontractors may be considered as long as they comply with the requirements of these Contract documents.

Subcontractors listed by the Bidder must be competent and experienced in the type of work which they are to perform. No Contractors shall be required to employ any Subcontractor, other person or organization against which he has reasonable objection.

As evidence of his competency to perform the work, Bidder shall complete and submit with his Bid the Bidder's Statement of Qualifications which is bound in the Contract Documents. Low Bidders may be asked to furnish additional data to demonstrate competency. Bidders must be, at the time of bidding and throughout the period of the Contract, licensed as required by the State of Arizona, thoroughly competent, and capable of satisfactorily constructing the Project. Bidder shall certify that he is skilled and regularly engaged in the general class and type of work called for in the Contract Documents. Additionally, Bidders shall comply with all provisions of Arizona Revised Statutes, Title 32, Chapter 10. Further, the Bidder certifies that he is knowledgeable of the unusual and peculiar hazards associated with the general class and type of work required to construct the specific project within the terms given in the Contract Documents. Bidder shall be competent and skilled in the protective measures necessary for the safe performance of the construction work with respect to such unusual and peculiar hazards.

The selected Bidder, upon Bidder's failure or refusal to execute and deliver the Contract and bonds required within ten (10) consecutive calendar days from and including the date Bidder received notice of the acceptance of his bid, shall forfeit to the City, for such failure or refusal, the security deposited with his bid.

Bidders are required prior to submitting a bid to inspect the site of the work and satisfy themselves by personal examination or by such other means as they may prefer, as to the location of the proposed work, and of the actual conditions.

Entrance by Bidders to the site of the work for purposes of making exploratory excavations shall be by special arrangement with the City Engineer under conditions established by the City. If, during the course of such an examination, a Bidder finds facts or conditions which appear to be in conflict with the Contract Documents, the Bidder must notify the City Engineer and may apply to the City Engineer, in writing, for additional information and explanation before submitting its bid.

Any information provided by the Design Engineer, the City, or any City personnel is not intended to be a substitute for, or a supplement to the independent verification by the Bidder to the extent such independent investigation of site conditions is deemed necessary or desirable by the Bidder. Bidder acknowledges that he has not relied upon City, City personnel, or Design Engineer furnished information regarding site conditions in preparing and submitting a bid hereunder. The Plans show conditions as they are believed to exist, but it is not intended nor is it to be inferred that the conditions as shown therein constitute a representation by the City or any of its officers that such conditions actually exist, nor shall the City or any of its officers be liable for any loss sustained by the Contractor as a result of any variance between any conditions as shown on the Plans and the actual conditions revealed during the progress of the project, or otherwise.

Any subsurface investigations, which may have been conducted at the site of the work, and the corresponding report, may be examined at the City office. Soil investigations, if performed, were conducted for design purposes, and the data shown in the reports are for subsurface conditions found at the time and location of the investigation. The Contractor shall note that there will be no separate payment for rock excavation and **no blasting** is permitted at the site.

The City disclaims responsibility for the interpretation by Bidders of data, such as projecting or extrapolating from the test holes to other locations on the site of the work, soil bearing values and profiles, soil stability and the presence, level and extent of underground water for subsurface conditions during construction operations.

The lands upon which the work is to be performed, right of way for access thereto, and other lands designated for use by the Contractor in performing the work are identified in the Supplemental Conditions or Drawings.

Submission of a bid by the Bidder shall constitute acknowledgement that, if awarded the Contract, the Bidder has relied and is relying on his own examination of (1) the site of the work, (2) access to the site, and (3) all other data and matters requisite to the fulfillment of the work and on his own knowledge of existing facilities on and in the vicinity of the work to be constructed under the Contract.

The Bidders shall examine carefully the Plans and Specifications and the site of the proposed Project and shall solely judge for themselves the nature and location of the work to be done and all the conditions; and the submission of a Bid shall be deemed as conclusive evidence that a Bidder has made the necessary investigation and is prima facie evidence that he is satisfied with the conditions to be encountered, quantity and quality of the work or materials to be performed or furnished, and the requirements and provisions of the Plans and Specifications and the Contract Documents. The Bidder agrees that if he is awarded the Contract he will make no claim against the City, the City Engineer, or any other City officials or City personnel based on ignorance or misunderstanding of any of the provisions of the Contract Documents, nor because of any unforeseen subsurface conditions except in the manner and under the circumstances as provided in the Contract Documents.

Each Bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his Contract. Insofar as possible, the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.

All applicable state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction for the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any Bidder orally. Every proper request for such interpretation shall be made in writing, and to be given consideration must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instruction will be in the form of written addenda to the Contract Documents which, if issued, will be emailed to all prospective Bidders (at the respective addresses furnished for such purposes), not later than three (3) calendar days prior to the date fixed for the opening of bids. At any time prior to an announced bid opening time, the City reserves the right to issue an addendum extending the bid opening time by one (1) or more days. Failure of any Bidder to receive any such addendum or interpretation shall not relieve such Bidder from any obligations under his bid as submitted. All Addenda so issued shall become part of the Contract Documents. It shall be the responsibility of each Prospective Bidder to verify that each addendum has been received applicable to the project. Bidders are responsible to check the City website at www.sedonaaz.gov periodically to verify if new addenda have been posted and shall ensure a reliable and accurate email address is provided to the City to be added to the Plan Holder's List. In order to be added to the Plan Holder's List, a bidder submit a request from the email address intended to be used as the bidder's contact email address, to the project manager listed on page I-3.

Before submitting a Proposal, Bidders shall carefully examine the Plans, read the specifications and all other Contract Documents, visit the site of the project, and fully inform themselves as to all existing and local conditions and limitations. It is expressly stipulated that the drawings, Specifications and other Contract Documents set forth the requirements as to the nature of the work and do not purport to control the method of performing work except in those instances where the nature of the completed work is dependent upon the method of performance.

Submission of a bid shall constitute acknowledgment, upon which the City may rely that the Bidder has thoroughly examined and is familiar with the Contract Documents. Failure or neglect of a Bidder to examine any of the Contract Documents shall in no way relieve him from any obligation with respect to his bid or to the Contract. No claim for additional compensation will be allowed which is based on a lack of knowledge of the work, or of the Contract Documents.

The quantities of the various classes of work to be done and material to be furnished under this Contract, which have been estimated as stated in the Proposal, are only approximate and are to be used solely for the purpose of comparing, on a consistent basis, the Proposals offered for the work under this Contract. The Contractor agrees that the City will not be held responsible if any of the quantities shall be found incorrect; except that in the event that the Contract price may be increased or decreased in accordance with Article 30 of the General Conditions through the issuance of the appropriate change orders to reflect the actual quantities of all items constructed, installed or incorporated in the work, the Contractor will not make any further claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or misstatement is found to occur in the estimated quantities, the same shall not invalidate the Contract or release the Contractor from the execution and completion of the whole or any part of the work in accordance with the Specifications and the Plans herein mentioned, and for the prices herein agreed upon and fixed therefore, or excuse him from any of his obligations or liabilities hereunder, or entitle him to any damages or compensation except as may be provided in this Contract.

The successful Bidder, upon award of a Contract, shall commence work on the date specified in the "Notice to Proceed" and shall complete all work in accordance with the time schedule specified. Should the Contractor fail to complete all work in the allotted time period, liquidated damages shall be assessed as specified.

The City invites bids on the forms included as part of this Document to be submitted at such time and place as is stated in the Advertisement for Bids. All blanks in the Bid Proposal must be appropriately filled in with typewriter or ink. **Bidders are instructed not to turn in Bid Proposals that have been separated from the bound Contract Documents. It is the sole responsibility of the Bidder to see that the bid is received in proper time at the time and place stipulated in the Advertisement for Bids.** Any bids received after the scheduled closing time for receipt of bids will be returned to the Bidder unopened.

The bid must be signed in the name of the Bidder and must bear the signature in long hand of the person or persons duly authorized to sign the bid. Changes in or additions to the bid forms, recapitulations of the work bid upon, alternative proposals or any other modifications of the bid which are not specifically called for in the Contract Documents may be subject to City's rejection of the bid as not being responsive to the advertisements. No oral telephone modifications or telegraphic modifications of any bid submitted will be considered.

The bid submitted must not contain erasures, corrections or changes from the printed forms as completed in typewriter or ink, unless such erasures, corrections or changes are authenticated by affixing in the margin immediately opposite the erasure, correction or change, the full signature of the person who signed the bid or the signature of such other person as may be

authorized by the Bidder to make erasures, corrections or changes in the bid, and said authorization must be evidenced by written confirmation, executed by the person authorized to sign the initial bid, attached to the bid at the time of submittal.

If the bid is made by an individual, his or her name, signature, and post office address must be shown; if made by a firm or partnership, the name and post office of the firm or partnership, a list of the partners, and the signature of at least one of the general partners must be shown; if made by a corporation, the bid shall show the name of the state under the laws of which the corporation is chartered, the name and post office address of the corporation, and the title of the person who signs on behalf of the corporation. All signatures must be made in long hand. If a corporation makes the bid, a certified copy of the By-laws or resolution of the board of directors of the corporation shall be furnished showing the authority of the officer signing the bid to execute contracts on behalf of the corporation. If the bid is made by a joint venture, a representative of each of the joint venture firms shall sign the bid. Additionally, the bid shall include a copy of the resolution or agreement empowering the representative to execute the bid and bind the firm to the joint venture.

The City reserves the right to pre-qualify all bids, post-qualify all bids, or reject all bids, not to make an award or accept the Proposal deemed most advantageous and in the best interest of the City. The City shall enter into a Contract with the lowest responsible responsive bidder whose proposal is satisfactory. A written Notice of Award will be sent to the successful Bidder(s).

OR APPROVED EQUAL CLAUSE -- Manufacturers or suppliers of materials and equipment may request that alternatives to specified products be considered equal and that inclusion of such alternatives be permitted in the bids. Such request must be made in writing and received by the City Engineer at least five (5) calendar days prior to the date bids are to be received. Granting a request that an alternative product be considered equal to those specified may be made only by the issuance of an Addendum by the City. Denial of the request during bidding does not waive the manufacturer's or supplier's right to offer the alternative product to the Contractor after Award of the Contract. After Award of Contract, the offer will be considered as a substitution as provided under Article 6 of the General Conditions and will be considered only if the Engineer believes the offer of substitution is equal to or superior in quality to the specified product.

PREPARATION OF BID

- A. City reserves the right to reject any or all Bids, to waive any or all informalities, and the right to disregard all nonconforming, non-responsive or conditional Bids.
- B. City reserves the right to reject any Bid not accompanied by specified documentation and Bid security.
- C. City reserves the right to reject any Bid if it shows any omissions, alterations of form, additions not called for, conditions or qualifications, or irregularities of any kind.
- D. City reserves the right to reject any Bid that, in his sole discretion, is considered to be unreasonable as to the amount Bid for any lump sum or unit price item.

- E. A Bidder may withdraw his Bid before the time fixed for the opening of Bids by communicating his purpose in writing to the City. Upon receipt of such written notice, the unopened Bid will be returned to the Bidder.
- F. The withdrawal of a Bid does not prejudice the right of a Bidder to file a new Bid, so long as the new Bid is submitted in conformance with the Information for and Instructions to Bidders prior to the closing time indicated for Bids in the Advertisement for Proposals.
- G. No Bidder may withdraw his Bid for forty-five (45) days after the time established for receiving Bids or before the Award and execution of the Contract unless the Award is delayed for a period exceeding forty-five (45) calendar days. The Award of the Contract to one party does not constitute a waiver of this condition.
- H. In evaluating Bids, City will consider the qualifications of Bidders; whether or not the Bids comply with the prescribed requirements; the alternatives, if any; the time or times for completion as stated in the Bid Form; and the lump sum and unit prices, if requested in the Bid Form.
- I. City may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work for which the identity of Subcontractors and other persons and organizations must be submitted.
- J. City may conduct such investigation deemed necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the work in accordance with the Contract Documents. City reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to City's satisfaction.
- K. Modification of a Bid already received will be considered only if the modification is received prior to the time established for receiving Bids. Modifications shall be made in writing, executed, and submitted in the same form and manner as the original Bid. The communication should not reveal the Bid Price, but should provide the addition or subtraction or other modifications so that the final price or terms will not be shown until the sealed Bids are opened.

CONSTRUCTION CONTRACT

THIS CONTRACT, made and entered into this ____ day of _____, 20____ by and between the City of Sedona, Arizona, hereinafter called the "Owner", and **Click here to enter text.**, hereinafter called the "Contractor."

WITNESSETH:

WHEREAS, the City has caused Contract Documents to be prepared for the construction of the **Uptown Northbound Roadway Improvements Project (SIM 1B)**, City of Sedona, Arizona, as described therein; and

WHEREAS, the Contractor has offered to perform the proposed work in accordance with the terms of the Contract; and

WHEREAS, the Contractor, as will appear by reference to the minutes of the proceedings of the City Council was duly awarded the work.

NOW, THEREFORE, the parties hereto hereby stipulate, covenant and agree as follows:

1. The Contractor promises and agrees to and with the City that it shall perform everything required to be performed and shall provide and furnish all the labor, materials, necessary tools, expendable equipment, and all utility and transportation services required to perform and complete in a workmanlike manner all of the work required in connection with construction of the Project all in strict accordance with the Specifications and Drawings, including any and all Addenda, and in strict compliance with the Contractor's Proposal and all other Contract Documents, which are a part of the Contract; and the Contractor shall do everything required by this Contract and the other documents constituting a part thereof.
2. The Contractor agrees to perform all of the work described above in accordance with the Contract Documents and comply with the terms therein for the initial estimated Contract price of \$_____, subject to increase or decrease in accordance with the Contract Documents, and the Bid Schedule set forth therein; and the City agrees to pay the Contract Prices in accordance with the Bid Schedule for the performance of the work described herein in accordance with the Contract Documents.
3. The Contractor and the City agree that the terms, conditions, and covenants of the Contract are set forth in the Contract Documents and the Plans and Technical Specifications, and the Drawings numbered 1 through 29, all defined as the Contract Documents, and by this reference made a part hereof as if fully set forth herein.
4. The Contractor and the City agree that each will be bound by all terms and conditions of all of the Plans and Technical Specifications, and Contract Documents, as if the same were fully set forth herein, and hereby incorporate all of the foregoing into this Agreement.
5. The Contractor shall abide by all the laws of the United States of America, State of Arizona, Coconino/Yavapai Counties, and the City of Sedona, including a requirement that Contractor obtain an annual Sedona Business License for every year that they do business with Sedona or within the City limits.

6. The Contractor shall carry Workers' Compensation Insurance and require all Subcontractors to carry Workers' Compensation Insurance as required by the Law of the State of Arizona, and all other insurance as set forth in the General Conditions.
7. Contractor, its agents, employees, and subcontractors, shall not discriminate in any employment policy or practice. "Discrimination" means to exclude individuals from an opportunity or participation in any activity or to accord different or unequal treatment in the context of a similar situation to similarly situated individuals because of race, color, gender, gender identity, sexual orientation, religion, national origin or ancestry, marital status, familial status, age, disability, or veteran status. (Ordinance 2015-10 (2015)).
8. Work under this Contract shall commence on the date specified in the written Notice to Proceed from the City to the Contractor. Upon receipt of said Notice, the Contractor shall diligently and continuously prosecute and complete all work under this Contract within the time specified on page A-2.
9. The Contract Document consists of the following component parts, all of which are a part of this Contract whether herein set out verbatim, or attached hereto:

Advertisement for Bids
Information for and Instructions to Bidders
Bid Proposal and Bid Guaranty Bond
Contract (this document)
Change Orders
Addenda
Performance Bond, Labor and Material Payment Bond
Special Conditions
General Conditions
Special Provisions
Notice of Award
Notice to Proceed
Plans and Drawings
Design Reports
Standard Specifications
Insurance Certificates

The above-named documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, the order of precedence is as follows:

1. Change Orders
2. Contract (this document), including addenda
3. Payment and Performance Bonds
4. Advertisement for Bids
5. Information for and Instructions to Bidders
6. Notice of Award
7. Notice to Proceed
8. Special Conditions
9. Bid Proposal

10. Special Provisions
11. Plans and Drawings
12. General Conditions
13. Bid Guaranty Bond
14. Standard Specifications

In the event there is a conflict between any of the above listed documents, the provision of the document with the lower numerical value shall govern those documents with a higher numerical value. Within a category, the last in time is first in precedence.

The Contractor shall not take advantage of any apparent error or omission in the Plans or Specifications. In the event the Contractor discovers such an error or omission, he shall immediately notify the Owner. The City will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Plans and Specifications.

10. As part of the inducement for City to enter into this Agreement, Contractor makes the following representations:

- A. Contractor has familiarized himself with the nature and extent of the Contract Documents, work, locality, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress, or performance of the work.
 - B. Contractor has studied carefully all reports of investigations and tests of subsurface and latent physical conditions at the site or those reports that otherwise may affect cost, progress or performance of the work, which were utilized by Design Engineer in the preparation of the Drawings and Specifications and which have been identified in the Contract Documents.
 - C. Contractor has made or caused to be made examinations, investigations and tests, and studies of such reports and related data as he deems necessary for the performance of the work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examinations, investigations, tests, reports or similar data are or will be required by Contractor for such purposes.
 - D. Contractor has correlated the results of all such observations, examinations, investigations, tests, reports and data with the terms and conditions of the Contract Documents.
 - E. **Contractor has given the City Engineer written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents** and the written resolution thereof by City Engineer is acceptable to Contractor.
 - F. Contractor has attended mandatory pre-bid meetings and walk-throughs.
11. A. No assignment by a party hereto of any rights under or interest in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to

the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

- B. City and Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, and its partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in the Contract Documents.
 - C. Pursuant to Arizona Revised Statutes Section 38-511, the provisions of which are incorporated by reference as if fully set forth herein, all parties are hereby given notice that this Agreement is subject to cancellation by the City if any person significantly involved in initiating, negotiating, securing, drafting, or creating the Contract or Contract Documents on behalf of the City is, at any time while the Contract or Contract Document or any extension thereof is in effect, an employee or agent of any other party to the Contract or Contract Documents in any capacity or a consultant to any other party to the Contract or Contract Documents with respect to the subject matter of the Contract or Contract Documents.
12. During the performance of this Agreement, Contractor may also be under contract with the City for performance of work on other projects. A breach in the performance of any of Contractor's obligations under this Agreement shall constitute a breach of Contractor's obligations under any other agreement with the City and the breach by Contractor under other agreement with the City shall also constitute a breach of Contractor's obligations under this Agreement. The City may offset any amounts owed by Contractor under any such other agreement from any amounts owed to Contractor under this Agreement.
13. The Contract Documents constitute the entire Agreement between the parties.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement which shall be deemed an original on the date first above written.

CITY: City of Sedona, Arizona

BY: _____

NAME: _____

TITLE: _____

(SEAL)

ATTEST:

BY: _____

NAME: _____

CONTRACTOR:

BY: _____

NAME: _____

TITLE: _____

(SEAL)

ATTEST:

BY: _____

NAME: _____

APPROVED AS TO LEGAL FORM:

BY: _____

(City Attorney)

DATE: _____

STATUTORY BID BOND
PURSUANT TO TITLE 34, CHAPTER 2, ARTICLE 1
OF THE ARIZONA REVISED STATUTES

(This bond must not be less than ten percent (10%) of the bid amount)

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned _____, (hereinafter "Principal"), as Principal, and _____, a corporation organized and existing under the laws of the State of _____, with its principal offices in the City of _____, (hereinafter "Surety"), as Surety, are held and firmly bound unto the City of Sedona, the State of Arizona, (hereinafter "Obligee"), in the amount of _____ (Dollars) (\$_____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

Uptown Northbound Roadway Improvements Project (SIM 1B)

NOW, THEREFORE, if the Obligee accepts the proposal of the Principal and the Principal enters into a contract with the Obligee in accordance with the terms of the proposal and gives the bonds and certificates of insurance as specified in the Contract Documents with good and sufficient surety for the faithful performance of the contract and for the prompt payment of labor and materials furnished in the prosecution of the contract, or in the event of the failure of the Principal to enter into the contract and give the bonds and certificates of insurance, if the Principal pays to the Obligee the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by the proposal then this obligation is void. Otherwise, it remains in full force and effect provided, however, that this bond is executed pursuant to the provisions of Section 34-201, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of the section to the extent as if it were copied at length herein.

Witness our hands this _____ day of _____, 20____.

PRINCIPAL

Seal

By: _____

Title: _____

AGENCY OF RECORD

SURETY

Seal

AGENCY ADDRESS

(Attach Power of Attorney form)

STATUTORY BID BOND
(Check to accompany bid)

(Note: The following form shall be used when a check accompanies bid)

Accompanying this proposal is a Cashier's Check payable to the order of the City of Sedona hereinafter referred to as "City," for **Uptown Northbound Roadway Improvements Project (SIM 1B)** in the amount of _____ Dollars (\$ _____), this amount being ten percent (10%) of the total amount of the Bid. The proceeds of this check shall become the property of said City provided this proposal shall be accepted by said City through action of its legally constituted contracting authorities and the undersigned shall fail to execute a contract and furnish the required Performance and Payment Bonds and proof of insurance coverage within the stipulated time; otherwise, the check shall be returned to the undersigned. The proceeds of this check shall also become the property of the City if the undersigned shall withdraw his bid within the period of forty-five (45) days after the date set for the opening thereof, unless otherwise required by law, and notwithstanding the award of the Contract to another Bidder.

Bidder

(NOTE: If the Bidder desires to use a bond instead of a check, the Bid Bond Form on the previous two (2) pages shall be executed -- the sum of this bond shall not be less than ten percent (10%) of the total amount of this Bid.)

STATUTORY PERFORMANCE BOND
PURSUANT TO TITLE 34, CHAPTER 2, ARTICLE 2,
OF THE ARIZONA REVISED STATUTES

(This Bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS:

That, _____ (hereinafter "Principal"), as Principal,
and _____, a corporation organized
and existing under the laws of the State of _____ with its principal office in the City
of _____, (hereinafter "Surety"), as Surety, are held and firmly bound unto the
City of Sedona, State of Arizona, (hereinafter "Obligee") in the amount of \$ _____
_____ (Dollars) (\$ _____) for the payment whereof, the
said Principal and Surety bind themselves, and their heirs, administrators, executors, successors
and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the
_____, dated the ____ day of _____, 20__ to

_____ which

contract is hereby referred to and made a part hereof as fully and to the same extent as if copied
at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal faithfully
performs and fulfills all of the undertakings, covenants, terms conditions and agreements of the
Contract during the original term of the Contract and any extension of the Contract, with or
without notice to the Surety, and during the life of any guaranty required under the Contract,
and also performs and fulfills all of the undertakings, covenants, terms conditions and
agreements of all duly authorized modifications of the Contract that may hereafter be made,
notice of which modifications to the Surety being hereby waived, the above obligation is void.
Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the extent as if it were copied at length in this agreement.

The prevailing party in a suit on this bond shall recover as part of the judgment reasonable attorney fees that may be fixed by a judge of the Court.

Witness our hands this _____ day of _____, 20__.

PRINCIPAL Seal

By: _____

Title: _____

AGENCY OF RECORD

AGENCY ADDRESS

SURETY SEAL

By: _____

(Attach Power of Attorney Form)

STATUTORY PAYMENT BOND
PURSUANT TO
TITLE 34, CHAPTER 2, ARTICLE 2,
OF THE ARIZONA REVISED STATUTES

(This Bond must be 100% of the Contract amount)

KNOW ALL MEN BY THESE PRESENTS:

That, _____ (hereinafter "Principal"), as Principal, and _____, a corporation organized and existing under the laws of the State of _____ with its principal office in the City of _____, (hereinafter "Surety"), as Surety, are held and firmly bound unto the City of Sedona, State of Arizona (hereinafter "Obligee") in the amount of _____ (Dollars) (\$ _____) for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee dated the _____ day of _____, 20____, _____

which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal promptly pays all monies due to all persons supplying labor or materials to the Principal or the Principal's subcontractors in the prosecution of the work provided for in contract, this obligation is void. Otherwise it remains in full force and effect.

PROVIDED HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, of the Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions, conditions and limitations of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if it were copied at length in this agreement.

The prevailing party in a suit on this bond shall recover as part of the judgment reasonable attorney fees that may be fixed by a judge of the Court.

Witness our hands this _____ day of _____, 20____.

PRINCIPAL Seal

By: _____

Title: _____

AGENCY OF RECORD

AGENCY ADDRESS

SURETY SEAL

By: _____

(Attach Power of Attorney Form)

DO NOT DETACH AND SUBMIT SEPARATE FROM OTHER CONTRACT DOCUMENTS

BID PROPOSAL

City of Sedona:

The undersigned Bidder, having examined the specifications, drawings and all other documents contained in the Contract Documents, attended all mandatory pre-bid meetings, and having examined the site where the work is being performed, and having familiarized himself with any local conditions affecting the work and having knowledge of the cost of work at the place where the work is to be done, hereby proposes to execute and perform the formal Contract set forth in these Contract Documents, of which this Proposal forms a part, and will do the work therein described on the terms and conditions therein set forth; and furnish all required labor, materials, tools, equipment, transportation and services for said work, and pay all taxes and other incidental costs, all in strict conformity with the drawings and specifications forming a part of the Contract Documents for the Unit Prices entered based on the Bidding Schedule included herein, said prices to only be amended or altered in accordance with the Contract Documents.

It is understood that any listed quantities of work to be done at unit prices are **approximate** only, and are intended to serve as a guide in evaluating bids.

It is further agreed that any quantities of work to be done at unit prices and material to be furnished may be increased or decreased as may be considered necessary, in the opinion of the City, to complete the work fully as planned and contemplated and that all quantities of work, whether increased or decreased, are to be performed at the unit prices set forth in the Bid Schedule, except as otherwise provided for in the Contract Documents.

It is further agreed that payments may be increased to cover additional work ordered by the City, but not shown on the Plans or required by the Specifications in accordance with General Condition No. 47. Similarly, payments may decrease if work is deleted or changed.

By submitting a bid, the Bidder acknowledges the understanding that the bid process is solely intended to serve the public interest in achieving the highest quality of services and goods at the lowest price, and that no right, interest, or expectation shall vest or inure to the benefit of Bidders as a result of any reliance or participation in the process.

In submitting this Proposal, it is understood that the right is reserved by the City to reject any or all Proposals and waive informalities or irregularities in Proposals. The City also reserves the right to delay the award of a contract for a period not to exceed forty-five (45) days from the date of the opening of bids.

The undersigned Bidder further agrees, if awarded the contract for the work included in this Proposal, to begin and to complete and deliver the work contemplated in accordance with all the conditions set forth in the Contract Documents.

The undersigned Bidder has carefully checked the figures inserted by him and understands that they are the Bidder's sole responsibility, and the City will not be responsible for any errors or omissions on the part of the undersigned Bidder in preparing this Proposal although City may

check and correct mathematical accuracy in evaluation of the bids.

The undersigned Bidder certifies that this Proposal is genuine, not collusive, or made in the interest or behalf of any person not named as provided in the Information for and Instructions to Bidders, and that the undersigned has not, directly, or indirectly, induced or solicited any other Bidder, or induced any other person, firm, or corporation to refrain from submitting a proposal, and the undersigned has not in any manner sought by collusion to secure for himself an advantage over any other Bidder.

Attached is a certified check without endorsement and with conditions payable to the City of Sedona in the sum of ten percent (10%) of the total bid drawn on a bank which is a member of Federal Reserve System or which is a member of the Federal Deposit Insurance Corporation, or a cashier's check for ten percent (10%) of the total bid or a Bid Bond written by an approved surety company for ten percent (10%) of the total bid.

The undersigned submits a bid bond pursuant to Section 34-201, Arizona Revised Statutes, payable to the City, equal to ten percent (10%) of the total amount of this proposal, and agrees that said bid bond shall be given as a guarantee that the Bidder will enter into the Contract within the time herein stated if the award is made to him by the City. In case of the Bidder's refusal or failure to do so within ten (10) days of Notice of the Award of Contract, or within five (5) days after receiving notice from the City of the rejection of any objections to the Notice of Award, the bond will be forfeited.

The Bidder grants the City the right to hold the lowest three (3) Proposals received, together with the accompanying bid securities, for a period of forty-five (45) days after the date of opening of said Proposals.

The undersigned Bidder further grants the City the right to award this Contract on the basis of any possible combinations of Base Bid and add/deduct alternate(s) (if any) that best suits the City's needs.

Bidder agrees that the City has determined that a reasonable time for the **Uptown Northbound Roadway Improvements Project (SIM 1B)** is the contract time stated in the Advertisement for Bids and issued addendum (as applicable). The Bidder agrees that this proposal is submitted on this basis, subject to provisions contained in the Contract Documents relating to extensions of time, and agrees to plan and prosecute the work with such diligence that the work shall be completed within the time specified.

Bidder agrees that the bid includes the following completed items:

- (a) Statutory Bid Bond
- (b) Bid or Proposal and Bid Schedule
- (c) Proposed Subcontractors
- (d) Schedule of Manufacturers and Suppliers
- (e) Workmen's Compensation Insurance Certificate
- (f) Non-Collusion Affidavit
- (g) Statement of Bidder's Qualifications
- (h) Experience Questionnaire

- (i) Bidder's Affidavit
- (j) Certificate of Insurability
- (k) Past Performance Questionnaire (shall be filled out by three past clients)
- (l) Signed Receipt of Addenda (if and as applicable)

Bidder agrees that the City assumes no responsibility for any understanding or representation made by any of its Council members, officers or agents during or prior to the bidding and execution of the Contract, unless (1) such understanding or representations are expressly stated in the Contract or Addenda thereto, or (2) the Contract expressly provides that responsibility therefore is assumed by the City, or (3) said understanding or representation is contained in the information supplied to Bidders by the City or the City Engineer, or as information distributed pursuant to the Information for and Instructions to Bidders. The Bidder further understands that only the Mayor and Council of the City through action taken at a properly noticed meeting, can waive any term or condition or requirement of this Contract or of the bid.

Bidder agrees that all terms set forth in the Information for and Instructions to Bidders as well as all other Contract Documents shall be binding upon the Bidder if a Notice of Award is issued in favor of said Bidder by the City.

Bidder agrees that all major equipment and suppliers shall be set forth herein on the attached "Schedule of Manufacturers and Suppliers, Major Equipment and Material Items",

Bidder understands that this project is to be constructed in compliance with all City, State and Federal laws, rules and regulations, which are applicable to the project and the Contractor and all work performed hereunder.

In making this proposal, the undersigned incorporates and acknowledges all definitions set forth in the Contract Documents.

The undersigned hereby submits this proposal and the accompanying Bid Schedule as its proposal to construct the improvements described in the Contract Documents.

The name and location of the place of business of each Subcontractor who will perform work or labor or render service to the general Contractor in or about the construction of the work or improvements in an amount in excess of one and one-half percent (1.5%) of the general Contractor's total Bid, and the portion of the work which will be done by each Subcontractor is set forth in the Proposed Subcontractor list attached hereto.

Bidder has received all Addenda before submission of Bid, and has examined the same and has included them in the Contract Documents prior to submitting the Bid and has submitted the Bid based upon them.

The Bonding company which will supply the required Performance and Payment bond is:

Base Bid Schedule

City of Sedona – Uptown Northbound Roadway Improvements Project

ITEM NO.	SECT. NO.	ITEM DESCRIPTION	UNIT	QUAN TITY	UNIT PRICE	AMOUNT
----------	-----------	------------------	------	-----------	------------	--------

1, REMOVALS / RELOCATIONS

1.1	350.1	Remove/Dispose Existing AC Pavement	SY	2,145	\$	\$
1.2	350.2	Remove/Dispose Existing Curb & Gutter	LF	991	\$	\$
1.3	350.3	Remove/Dispose Existing Concrete Sidewalk	SF	5,016	\$	\$
1.4	350.4	Remove/Dispose Existing Railing	LF	837	\$	\$
1.5	350.5	Remove Existing Pavement Striping	LS	1	\$	\$
1.6	350.6	Remove and Salvage Existing Sign	EA	4	\$	\$
1.7	350.7	Remove/Dispose Existing Sign	EA	2	\$	\$
1.8	350.8	Remove/Relocate Solar Bollard Light	EA	42	\$	\$
1.9	350.9	Remove/Relocate Existing Traffic Sign	EA	4	\$	\$
1,10	350.10	Remove/Replace Existing Conc. Pavement	SY	172	\$	\$
1.11	350.11	Remove/Dispose Existing Traffic Signal Cabinet	EA	2	\$	\$
1.12	350.12	Remove/Dispose Existing Traffic Signal Meter Pedestal	EA	2	\$	\$
Subtotal						\$

2, ROADWAY IMPROVEMENTS

2.1	310.1	10" Aggregate Base Course	SY	825	\$	\$
2.2	321.1	6" Asphalt Concrete Pavement	SY	825	\$	\$
2.3	340.1	6" Curb and Gutter, MAG Dtl. 220-1, Type A	LF	1,729	\$	\$
2.4	340.2	12" Curb & Gutter, MAG Dtl. 220-1, Type A	LF	953	\$	\$
2.5	340.3	Roll Curb & Gutter, MAG Dtl. 220-1, Type C	LF	637	\$	\$
2.6	340.4	Curb Transition, MAG Dtl. 221	EA	2	\$	\$
2.7	340.5	4" Shared Use Path Modified MAG Dt 238-3	SF	8,632	\$	\$
2.8	340.6	Curb Ramp, Custom Detail	EA	1	\$	\$
2.9	340.7	Curb Cut	EA	2	\$	\$
2.10	505.1	Modify Existing Catch Basin	EA	5	\$	\$
2.11	505.2	MSE Retaining Wall	SF	2,910	\$	\$
2.12	505.3	Retaining Seat Wall	SF	825	\$	\$

2.13	520.1	Handrail, MAG Std. Dtl. 145	LF	892	\$	\$
					Subtotal	\$

3. DRAINAGE AND UTILITY IMPROVEMENTS

3.1	345.1	Adjust Electrical Box Frame and Cover	EA	4	\$	\$
3.2	345.2	Adjust Frame and Cover, MAG Std. Dtl. 370	EA	2	\$	\$
					Subtotal	\$

4. TRAFFIC IMPROVEMENTS

4.1	402.1.1	Dual Component Pavement Symbol (Left Turn Arrow)	EA	3	\$	\$
4.2	402.1.2	Dual Component Pavement Symbol (Straight Arrow)	EA	4	\$	\$
4.3	402.1.3	Dual Component Pavement Symbol (Shared Path Bike/Ped)	EA	4	\$	\$
4.4	402.1.4	Dual Component Pavement Legend "Only"	EA	1	\$	\$
4.5	402.1.5	Dual Component Pavement Legend "89A"	EA	2	\$	\$
4.6	402.1.6	Dual Component Pavement Legend "179"	EA	2	\$	\$
4.7	402.2.1	4" White Solid Permanent Pavement Markings (Traffic Paint Stripe)	LF	699	\$	\$
4.8	402.2.2	4" White Broken Permanent Pavement Markings (Traffic Paint Stripe)	LF	1,988	\$	\$
4.9	402.2.3	18" White Stop Bar (Traffic Paint Stripe)	LF	17	\$	\$
4.10	402.2.4	Paint Median (Yellow)	LF	25	\$	\$
4.11	402.2.5	Paint Curb (Yellow)	LF	196	\$	\$
4.12	403.1	Perforated Sign Post Foundation	EA	3	\$	\$
4.13	403.2	Flat Sheet Alum. Sign Panel, Diamond Grade	EA	3	\$	\$
4.14	406.1	Controller Cabinet Assembly	EA	2	\$	\$
4.15	406.2	Controller Cabinet Foundation	EA	2	\$	\$
4.16	406.3	3-Cam Video Detection System-3 approach	EA	1	\$	\$
4.17	406.4	2-Cam Video Detection System-2 approach	EA	1	\$	\$
4.18	406.5	Service Pedestal Foundation	EA	2	\$	\$
4.19	406.6	Electrical Service Pedestal Sytem	EA	2	\$	\$
					Subtotal	\$

5. LANDSCAPE AND IRRIGATION IMPROVEMENTS

5.1	430.1	Shrub – 5 Gallon	EA	75	\$	\$
5.2	430.2	Shrub - 1 Gallon	EA	532	\$	\$
5.3	430.3	Rock Mulch	SF	15,150	\$	\$
5.4	430.4	Landscape Establishment	LSUM	1	\$	\$
5.5	430.5	Tree – 15 Gallon	EA	4	\$	\$
5.6	440.1	Irrigation Sleeve	LSUM	6	\$	\$
Subtotal						\$

6. MISCELLANEOUS

6.1		Mobilization, Bond, Insurance	LSUM	1	\$	\$
6.2		Construction Staking	LSUM	1	\$	\$
6.3		Quality Control and Testing	LSUM	1	\$	\$
6.4		Environmental Control Measures	LSUM	1	\$	\$
6.5		Public Relations	LSUM	1	\$	\$
6.6		Traffic Control	LSUM	1	\$	\$
Subtotal						\$

Total Direct Base Costs (Item Categories 1 thru 6, above): \$

CIP: COMPLETE IN PLACE

Owner reserves the right to vary the quantities shown at their discretion. The contractor will accept the quantities if no corrections are made at the conclusion of the pre-bid meeting. All facilities incidental to the item are included in the unit price estimate. Bid Prices submitted include all local, state and federal taxes.

UNIT PRICES SHALL BE USED WHEN EXTENSION OF UNIT PRICES AND TOTAL AMOUNT CONFLICT. WRITTEN UNIT PRICES SHALL BE USED WHEN WRITTEN AND NUMERICAL UNIT PRICES CONFLICT. BID PRICES SUBMITTED INCLUDE ALL LOCAL, STATE AND FEDERAL TAXES.

The City of Sedona reserves the right to reject all bids, or to award only the base bid, or to award a bid based upon the total of the Base Bid plus additive alternate(s) as selected for award from the additive alternate bid schedule, if additive alternate bid schedule is applicable.

The Additive or Alternative Bid Schedule Items are for improvement work that the City of Sedona, at its sole discretion, may authorize for inclusion in the contract as additive or alternate work following closure of bidding. Additive or Alternative Bid items are not guaranteed to be part of the awarded contract work and the City of Sedona may select any one or combination of Additive or Alternative Bid items from the Additive or Alternative Bid Schedule(s) for inclusion in the contract work.

BIDDERS MUST COMPLETE AND PROVIDE PRICING FOR BOTH THE BASE BID SCHEDULE AND ALL ADDITIVE/ALTERNATIVE BID SCHEDULES (IF APPLICABLE). FAILURE TO COMPLETE AND SUBMIT PRICING FOR THE BASE BID SCHEDULE AND ALL ADDITIVE/ALTERNATIVE BID SCHEDULES MAY RENDER A BID NON-RESPONSIVE AND MAY BE GROUNDS FOR REJECTION OF THE BID.

The undersigned is licensed in accordance with the Laws of the State of Arizona:

License Number _____ Class _____

NOW: In compliance with the Notice Inviting Bids and all the provisions hereinbefore and after stipulated, the undersigned, with full cognizance thereof, hereby proposes to perform the Work for the prices set forth in the preceding Schedule(s) upon which award of contract is made.

Individual Name: _____
Contractor Address: _____

Partnership Name: _____
Business Address: _____
By: _____, Partner
Other Partners: _____

Corporation Name: _____
Business Address: _____
By: _____, President
_____, Secretary

Organized under the Laws of the State of _____

Date: _____ Contractor: _____

(SEAL) By: _____

The undersigned Bidder acknowledges receipt of the following addendum:

Addendum #	Dated	Initial
_____	_____	_____
_____	_____	_____

Signature of Bidder

PROPOSED SUBCONTRACTORS

The following information gives the name, business address, and portion of work (description of work to be done) for each Subcontractor that will be used in the work if the Bidder is awarded the Contract. No Subcontractor doing work in excess of one and one-half percent (1.5%) of the total amount of the bid and who is not listed shall be used without the written approval of the City, which shall not be unreasonably withheld. (Additional supporting data may be attached to this page. Each page shall be sequentially numbered and headed "Proposed Subcontractors" and shall be signed.) Substitutions of Subcontractors may be made by the Bidder as long as all Subcontractors used meet all requirements for all Subcontractors and all subcontract agreements meet all requirements set forth in the Contract Documents. The total value of subcontracted work shall not exceed fifty percent (50%) of the contract work as bid. The Bidder shall perform 50% or more of the contract work using Bidder's organization, unless stated otherwise in the specifications. The subcontractor shall have the license required for the work performed. The subcontractor shall have the license required for the work performed. The subcontractor will be required to have a current City of Sedona Business License for the duration of the contract.

<u>Subcontractor Name</u>	<u>Business Address</u>	<u>Description of Work</u>

Signature of Bidder

SCHEDULE OF MANUFACTURERS AND SUPPLIERS - MAJOR EQUIPMENT AND MATERIAL ITEMS

The Bidder proposes that the named items of major equipment and materials required for work will be supplied by the manufacturers or suppliers set forth below as written in by the Bidder. Substitutions will be allowed in accordance with the Contract Documents:

Item

Manufacturer or Supplier

WORKMEN'S COMPENSATION INSURANCE
CERTIFICATE

I am aware of the provisions of Arizona Law, which require every employer to be insured against liability for workmen's compensation in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract.

Date: _____

By: _____

NON-COLLUSION AFFIDAVIT

TO BE EXECUTED BY EACH AWARDEE OF A PRINCIPAL CONTRACT IN THE

STATE OF _____)
) ss
COUNTY OF _____)

_____, being first duly sworn, deposes and says:

1. That he is _____ (sole owner, a partner, president, secretary, etc.) of _____, the party making the foregoing Bid.
2. That such Bid is not made in the interest of or on behalf of any undisclosed person, partnership, company association, organization, or corporation.
3. That such Bid is genuine and not collusive or sham.
4. That said bidder has not directly induced or solicited any other Bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or that anyone shall refrain from bidding.
5. That said Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the Bid Price of said Bidder or of any other Bidder, nor to fix any overhead, profit, or cost element of such Bid Price, nor of that of any other Bidder, nor to secure any advantage against the public body awarding the Contract or anyone interested in the proposed Contract.
6. That all statements contained in such Bid are true.
7. That said Bidder has not, directly or indirectly, submitted his Bid Price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with said Bidder in his general business.

NON-COLLUSION AFFIDAVIT

(Continued)

Name of Business

By

Title

Subscribed and sworn to before me this _____ day of _____, 20____.

(Notary Public)

My Commission expires: _____

STATEMENT OF BIDDER'S QUALIFICATIONS

If bidder is a corporation, answer the following:

- (a) Date of incorporation: _____
- (b) State of incorporation: _____
- (c) President's name: _____
- (d) Vice President's name(s): _____
- (e) Secretary's or Clerk's name: _____
- (f) Treasurer's name: _____

If bidder is a partnership, answer the following:

- (a) Date of organization: _____
- (b) Name and address of all partners. State whether it is a general or limited partnership:

If other than a corporation or partnership, describe the organization and name principals:

Major Types of Work Done by Company: _____

Principal Office: _____

Telephone Number: _____

Contractor's Bank and Local Contact: _____

EXPERIENCE QUESTIONNAIRE

1. How many years has your organization been in business as a contractor under your present business name?

2. How many years' experience in the proposed type and size of construction work has your organization had:

(a) As a general contractor?

(b) As a subcontractor?

3. Are you licensed as a General Engineering contractor, or any other title?

If "yes", in what city, county and state?

What class license and number?

4. List the most recent projects your organization has had in construction of work similar in type and size to the work proposed herein:

<u>Contract Amount</u>	<u>Class of Work</u>	<u>When Completed</u>	<u>Name, Address and Telephone No. of City</u>
----------------------------	--------------------------	---------------------------	--

5. Has any construction contract to which you have been a party been terminated by the owner; have you ever terminated work on a project prior to its completion for any reason; has any surety which issued a performance bond on your behalf ever completed the work

in its own name or financed such completion on your behalf; has any surety extended any monies in connection with the contract for which they furnished a bond on your behalf? If the answer to any portion of this question is “yes”, please furnish details of all such occurrences including the name of the owner, architect or engineer, and surety, name and date of project.

☐ YES ☐ NO

6. Has any officer or partner of your organization ever been an officer or partner of another organization that had any construction contract terminated by the owner; terminated work on a project prior to its completion for any reason; had any surety which issued a performance bond complete the work in its own name or finance such completion; or had any surety expend any monies in connection with the contract for which they furnished a bond? If the answer to any portion of this question is “yes”, please furnish details of all such occurrences including name of owner, architect or engineer, and surety, name and date of project.

☐ YES ☐ NO

7. What is the experience of the principal individuals of your organization?

Individual's Name	Yrs Exp with this Company	Present Position or Office	Years of Construction Experience	Magnitude & Type of Work	In What Capacity

8. How many municipal roadway projects having similar rock excavation requirements has your company, or the sub-contractor responsible for this work, completed in the past 12-years? (This does not include an individual’s experience, separate from the company’s experience; an individual’s experience should be listed in their resume, if provided. **List a minimum of 3 projects.**)

No.	Project Name	Owner	Contact	Contact Phone	Approx. Rock Excavation Amount (CY)
1					
2					
3					
4					

9. How many municipal projects, has your company completed in the past 10-years? (This does not include an individual's experience, separate from the company's experience; an individual's experience should be listed in their resume, if provided. List a minimum of 6 projects.)

No.	Project Name	Owner	Contact	Contact Phone	Amount
1					
2					
3					
4					
5					
6					

BIDDER'S AFFIDAVIT

The undersigned, as _____
(President, Officer of Corporation, Member of Firm) of the prospective bidder, hereby certifies that the foregoing information is, to the best of his/her knowledge and belief, true and accurate as of the _____ day of _____, 20____. Contractor, by his signature hereon, authorized the obtaining of reference information and hereby releases the party providing such information and the City of Sedona from any and all liability to Contractor as a result of such reference information being provided. Contractor further waives any right to receive copies if information so provided.

Corporate Seal
(If Corporation)

Contractor

BY: _____
Position (must be President, Officer of Corporation or member of Partnership as applicable)

STATE OF _____)
) ss
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____ as _____ for the _____.

Subscribed and sworn to before me this _____ day of _____, 20__.

(Notary Public)

My Commission expires: _____

CONTRACTOR'S FINANCIAL STATEMENT

1. Submit the most recent financial statements, including the Balance Sheet, Income Statement, sources and uses of funds, notes to the financial statement, and the auditor's opinion, that cover the most recent twelve (12) month period. These statements must have been audited by a Certified Public Accountant. However, if the prospective bidder has previously performed satisfactory work according to the City of Sedona's Engineering Department, unaudited financial statements may be allowed.

Financial statements must be submitted on an accrual basis, in a form which clearly indicates the bidder's assets, liabilities, and net worth.

2. Also submit the most recent unaudited financial statements subsequent to number 1 above.

(Financial statements shall be required of and submitted by the apparent low bidder within two (2) days after the bid opening)

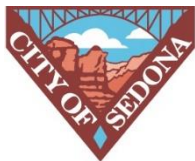
CERTIFICATE OF INSURABILITY

I hereby certify that as Bidder to the City of Sedona, Arizona, **Uptown Northbound Roadway Improvements Project**, I am fully aware of the requirements of the City insurance requirements for contractors and that by submitting this bid proposal, assure the City that I am able to produce the required minimum insurance coverage should I be selected to be the successful Bidder.

Should I be selected to be the successful Bidder and then become unable to produce the insurance coverage within ten (10) days of receipt of the Notice of Award, I understand that my bid will be rejected and that I will forfeit my bid bond.

By: _____ Date: _____

Title: _____



City of Sedona Public Works Department

102 Roadrunner Drive Sedona, AZ 86336

(928) 204-7111 • Fax: (928) 282-5348

PAST PERFORMANCE QUESTIONNAIRE

To: _____ Phone: _____

Email: _____

Subject: Past Performance Survey of: _____

Name of Company Being Surveyed

Name of Key Personnel

The City of Sedona collects past performance information (on firms and key personnel) to assist in procuring/awarding projects based on value. The firm/individual listed above is requesting reference for a past project they have completed. It would be greatly appreciated if you would take a few moments to complete the survey and return it **directly** to the City of Sedona.

Rate each of the criteria on a scale of 1 to 10, with 10 representing that you were very satisfied (and would hire the firm/individual again) and 1 representing that you were very unsatisfied (and would never hire the firm/individual again). Please rate each of the criteria to the best of your knowledge. If you do not have sufficient knowledge of past performance in a particular area, please leave it blank.

Client Name: _____ Date Completed: _____

Project Name: _____

No.	CRITERIA	UNIT	RATING
1	Ability to meet customer expectations for quality of work performed	(1-10)	
2	Ability to manage costs	(1-10)	
3	Ability to maintain project schedule	(1-10)	
4	Comfort level in hiring the firm / individual again	(1-10)	
5	Leadership ability of personnel assigned to the project	(1-10)	
6	Ability to Communicate Effectively	(1-10)	

Printed Name of Evaluator

Signature of Evaluator

Thank you for your time and effort in assisting the City of Sedona in this important endeavor.
Please email or mail the completed survey **(must be received by 2:00 p.m. on July 27, 2023)** to:

JHall@sedonaAZ.gov or

Attn: John Hall

City of Sedona, Public Works Department

102 Roadrunner Drive, Sedona, AZ 86336

SPECIAL CONDITIONS

General

Work shall be in accordance with Uniform Standard Specifications for Public Works Construction, distributed by Maricopa Association of Governments, latest edition (MAG), except to the extent that these specifications and following Special Provisions specify other procedures, processes, forms, materials, details, or other direction regarding the work, and as required to comply with local ordinances and regulations.

Whenever the term County is used it shall be held to mean the City of Sedona. Whenever the term County Engineer is used it shall be held to refer to the City Engineer.

Electrical work shall be subject to inspection by the City of Sedona Building Safety Division and compliance with its requirements.

General Provisions

The General Conditions and Specifications shall be considered as immediately following the Special Conditions in Order of Precedence and are part of the Contract Documents.

1. Project Sign

The Contractor shall install one project sign. The sign shall identify the project and the City of Sedona as the Project owner, and provide a contact person for both the City and the Contractor. The sign shall be securely mounted and placed so that the bottom of the sign does not impede vehicular or pedestrian traffic flow or otherwise become a safety concern. The Contractor shall provide the project sign for the duration of the on-site work on the project. Payment of more than 75% of mobilization shall not be payable until the sign is in place. Failure to maintain the sign erect and in legible condition may result in up to a deduction from the contract payment equal to 0.25% for each time a written notice regarding improper sign maintenance is issued by the Engineer.

The required sign shall be mounted at a location within the project limits visible to the public as it enters or moves adjacent to the project area. The Contractor shall locate the sign in a location mutually agreeable to the Project Engineer and the Contractor within the project area. The sign shall be constructed per the Project Construction Sign Detail included at the end of the Special Conditions section. Compensation for this item shall be considered as included in the price for bid item "Mobilization". The Contractor shall present the sign design as a project submittal. The Percent Complete Bar shall be filled in as the project progresses in accordance with Article 6 of the General Conditions.

2. Public Convenience and Safety

Within the City of Sedona public convenience and safety are matters to which the Contractor is expected to devote attention to at all times during the project. The Contractor shall minimize

disruption of normal vehicular and pedestrian traffic patterns and routes, the disruption of normal property services such as, but not limited to, mail delivery and garbage pick-up. Failure in making these provisions shall subject the Contractor to deductions from payments due under the contract as determined by the City Engineer.

3. Start of Construction

Construction shall not begin until the Contractor has at a minimum provided the following:

- A traffic control plan that has been approved by the City Engineer
- The Storm Water Pollution Control Plan provisions are in place per the SWPPP in the Civil Plans
- The contractor shall have a City of Sedona NOI for storm water pollution prevention
- A minimum of 2 working days written notice delivered to property owners, residents, and HOA President within and 300 feet adjacent to the work area. The notice shall state the Contractor's contact information, brief description of the project, and the project's anticipated start date
- Survey stakes and marks have been placed in the field to accommodate at least two weeks construction work and survey notes have been provided to the City as per the project specifications
- The Project Sign has been posted
- Equipment Rate Submittal as required by Section 47.D.3 of the General Conditions
- A complete project schedule as required by the General Conditions and Section 2 of the Special Conditions

This provision shall not require that the City of Sedona refrain from issuing a notice to proceed or require an extension of time to accommodate Contractor compliance with it.

4. Project Control

- The horizontal and vertical control for this project is shown on the civil drawings
- The benchmarks for this project are indicated on the civil drawings
- The Contractor shall be responsible for all survey on the project **see Section 15 of the General Conditions.**

5. Submittals

In addition to the submittals called for in the Technical Specifications and General Conditions, additional submittals are required for the following items: shoring plan, sewer pipe, manholes, concrete mix design, asphalt mix design, metal fabrications, project sign, and equipment rental rates for all equipment to be utilized for the project (as required by Section 47.D.3 of the General Conditions).

6. Various items of Work

The Contractor shall provide the City reasonable and timely notice in writing prior to exceeding quantities established in the Bid Schedule. Failure to notify the City in a timely manner prior to exceeding the contractual quantities identified in the Bid Schedule shall be sufficient reason for the City to deny such claim.

Roadway specifications shall conform (or comport with City Code Sections...) to City Code Sections 12.05.110 and 12.05.120.

Clearing and grubbing shall be subject to MAG specification Section 201 and full compensation shall be considered as provided in bid item "Mobilization". No separate payment shall be made for trees.

It is the contractor's responsibility to comply with the ADA, specifically the requirements of ADAAG, even if the project plans show an item to not meet the requirements of ADAAG.

The City of Sedona reserves the right to request a schedule of values for any of the lump sum bid items.

All guarantees shall be per Section 51 of the General Conditions.

If it is determined that import or export of earthen material in excess of 40 cubic yards (combined total) is needed, a Haul Plan shall be provided to the City Engineer. At least 5 city working days prior to the placement of fill or excavated material from a grading project within the city on other properties located within the city, Engineering Services shall be notified in writing of the intent to place the material on other property. This requirement shall apply when the total amount of material placed on other properties within the city exceeds 40 cubic yards or if the other property on which the fill is to be placed is located within 0.75 miles of Oak Creek, or lies within a city designated flood plain. The City Engineer may approve or deny permission to place such material.

The contractor shall provide copies of all required testing to Engineering Services.

The City reserves the right to require that payment requests be submitted in a format it approves.

The City may require information as necessary to verify proper work eligibility of persons, subcontractor, or others providing labor, equipment, material or services to this project. This may include but is not limited to social security numbers, driver's license numbers, and evidence of age or citizenship.

7. Permits

The Contractor shall be responsible for obtaining permits bearing on the work and adhere to provisions of said permits. The Contractor shall also adhere to requirements of Homeowner Associations or similar organizations when establishing equipment, storage or other yards within subdivisions. Evidence of such adherence shall be provided in writing, if requested by the City.

8. Utility Relocation

It shall be the responsibility of the Contractor to arrange and coordinate the relocation of any utilities found to be in conflict with the work. Utility relocation costs not identified as a bid item in the contract will be the City's responsibility.

9. Local Drainage

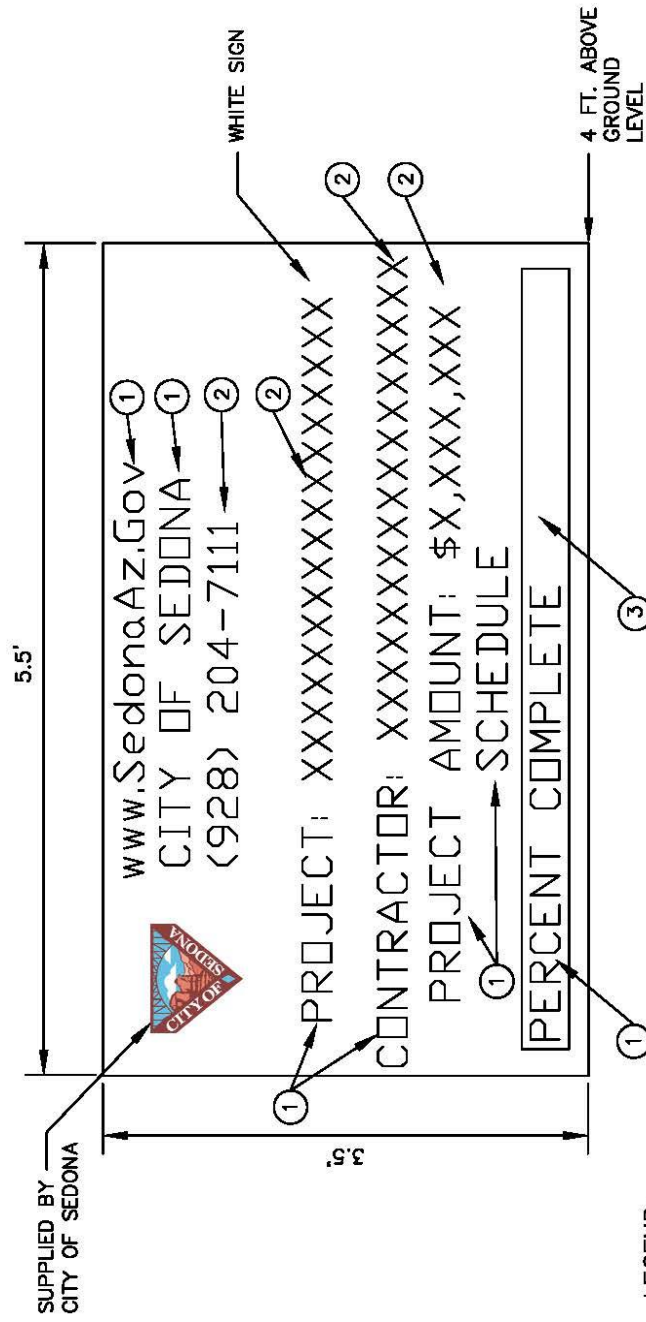
The Contractor shall reconstruct roadways, driveways, sidewalks, ditches and other surfaces at elevations that will ensure the drainage is improved or unchanged from the existing pre-construction conditions.

The Contractor shall manage any upstream flows during construction to maintain continuous conveyance and historic flow patterns through the project area.

10. Required Inspection

Work requiring inspection includes the following: testing, asphalt preparation and placement, cleanup, rebar inspection, traffic control setup and removal, trench bedding placement and backfill compaction, pipe placement, and concrete formwork prior to pouring concrete.

07.DWG



LEGEND:

- ① - 3" BLACK LETTERING
- ② - 3" BLUE LETTERING
- ③ - WHITE WITH RED INDICATOR

SCALE: N.T.S.

DRG Path: L:\Sedona Standard Detail\07.dwg Plot Date/Time: 01/21/16 09:08am

SPECIAL DETAIL NO. 07	CHECK WITH CITY ENGINEER FOR UPDATES	PROJECT CONSTRUCTION SIGN	SPECIAL DETAIL NO. 07
--------------------------	--------------------------------------	---------------------------	--------------------------

CONTRACTOR'S APPLICATION AND CERTIFICATE FOR PAYMENT

CONTRACTOR: _____ OWNER: _____ PROJECT: _____ APPLICATION#: _____
 _____ INVOICE #: _____
 _____ PROJECT #: _____ INVOICE DATE: _____
 _____ PERIOD TO: _____

APPLICATION FOR PAYMENT

1. ORIGINAL CONTRACT SUM \$ _____
2. NET CHANGE BY CHANGE ORDERS \$ _____
3. CONTRACT SUM TO DATE (Line 1 +/- 2) \$ _____
4. TOTAL COMPLETED TO DATE \$ _____
 (Column K on Continuation Sheet)
5. RETAINAGE OF COMPLETED WORK \$ _____
 a. 10% _____
6. TOTAL EARNED LESS RETAINAGE \$ _____
 (Line 4 less Line 5 Total)
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT \$ _____
 (Line 6 from prior Certificate)
8. CURRENT PAYMENT DUE \$ _____
9. BALANCE TO FINISH, PLUS RETAINAGE \$ _____
 (Line 3 less Line 6)

CHANGE ORDER SUMMARY		ADDITIONS DEDUCTIONS	
Total changes approved previously	\$	\$	\$
Total changes approved this month	\$	\$	\$
TOTAL	\$	\$	\$
NET CHANGES by Change Order		\$	\$

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: _____ Date: _____

CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Owner's Representative certifies to the Owner that to the best of the Owner Representative's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the Amount Certified.

OWNER'S REPRESENTATIVE: _____ AMOUNT CERTIFIED: \$ _____

By: _____ Date: _____
 This Certificate is not negotiable. The Amount Certified is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

CONTRACTOR: _____ OWNER: _____ PROJECT: _____ APPLICATION#: _____

PROJECT #: _____ INVOICE #: _____

INVOICE DATE: _____ PERIOD TO: _____

49

NOTICE OF AWARD

Date

Contractor Name.

Street or PO Box

City, State Zip

SUBJECT: NOTICE OF AWARD – UPTOWN NORTHBOUND ROADWAY IMPROVEMENTS PROJECT

The City of Sedona, having duly considered the bid submitted on _____, 20____ for the City of Sedona _____ as outlined in the Contract Documents and detailed on the drawings, and it appearing that your proposal for performing the work is fair, equitable, and in the City's best interest, and the bid includes price for work in the bid schedule in the estimated total amount of \$ _____ said bid is hereby accepted at the prices contained therein, and in accordance with all provisions set forth in the Contract Documents.

In accordance with the terms of the Contract Documents, you are required to execute the formal Contract and furnish the required Performance and Payment Bonds within ten (10) consecutive calendar days from and including the date of receipt of this Notice.

In addition, you are requested to furnish at the same time, the required Owner's protective liability and property damage insurance policy, and certificates of insurance in triplicate evidencing compliance with the other requirements for insurance stated in the Contract Documents. Your certificates of insurance shall be accompanied by a letter from your insurance company stating that the insurance certificate meets the entire requirements of the specifications, or shall state and describe specific exclusions.

The Bid Bond submitted with your proposal will be retained until the Contract has been executed and the required Performance and Payment Bonds have been furnished and approved. In the event that you should fail to execute the Contract or furnish the Performance and Payment Bonds within the time limit specified, the City, at its discretion, may cash the Bid Bond and proceed with steps that are in the City's best interest.

RECEIVED AND ACCEPTED:

CITY OF SEDONA, ARIZONA

Contractor

Sincerely,

By:

Name: _____

Date: _____

Kurtis Harris, P.E.

Public Works Director / City Engineer

Enclosures (3) contracts

RJW/clp

cc: Karen Osburn, City Manager

Kurt Harris, Public Works Director/City Engineer

File

NOTICE TO PROCEED

Date

Contractor Name.

Street or PO Box

City, State Zip

Attention:

SUBJECT: **NOTICE TO PROCEED- UPTOWN NORTHBOUND ROADWAY IMPROVEMENTS PROJECT**

You are hereby authorized to proceed with work effective _____, 20__ and fully complete all work within _____ consecutive days from this date. The completion date for this Project is therefore _____, 20__. Liquidated damages of \$_____ **per day** are applicable for each day past _____, 20__ for which work on this Project is not complete, unless an adjustment is authorized by a change order. Please acknowledge your receipt of this letter and agreement with the terms stated by signing in the space provided and returning to the City for our files.

CITY OF SEDONA, ARIZONA

By: _____

Kurtis Harris, P.E.

Assistant City Manager/Director of Public Works

Date: _____

Receipt Acknowledged:

By: _____

Date: _____

**City of Sedona
Public Works Department
Change Order**

This change order is not effective unless signed by the City Manager of the City of Sedona or his properly designated representative. Section 47 of the Contract General Conditions shall apply.

THIS CHANGE ORDER CONSTITUTES FULL, FINAL, AND COMPLETE COMPENSATION TO THE CONTRACTOR FOR ALL COSTS, EXPENSES, OVERHEAD, PROFIT, AND ANY DAMAGES OF EVERY KIND THAT THE CONTRACTOR MAY INCUR IN CONNECTION WITH THE WORK DESCRIBED IN THIS CHANGE ORDER, INCLUDING ANY IMPACT ON THE DESCRIBED WORK OR ON ANY OTHER WORK UNDER THE CONTRACT, ANY CHANGES IN THE SEQUENCES OF ANY WORK, ANY DELAY TO ANY WORK, ANY DISRUPTION OF ANY WORK, ANY RESCHEDULING OF ANY WORK, AND ANY OTHER EFFECT ON ANY OF THE WORK UNDER THIS CONTRACT. BY THE EXECUTION OF THIS CHANGE ORDER, THE CONTRACTOR ACCEPTS THE CONTRACT PRICE CHANGE AND THE CONTRACT COMPLETION DATE CHANGE, IF ANY, AND EXPRESSLY WAIVES ANY CLAIMS FOR ANY ADDITIONAL COMPENSATION, DAMAGES OR TIME EXTENSIONS, IN CONNECTION WITH THE DESCRIBED WORK.

CHANGE ORDER NO. _____ DATE: _____

Project: **Uptown Northbound Roadway Improvements Project**

Contractor Name: _____

Brief description of change: _____

Plan Sheets #s affected by this change: _____

Specification Sections upon which Change Order based: _____

Change requested by (check one): _____ City _____ Contractor _____ Both

Contract Time adjustment: _____

This contract change order _____ increases _____ decreases the maximum estimated contract compensation per General Conditions Section 47 contract adjustments as follows:

\$ _____	\$ _____	\$ _____	\$ _____	=	\$ _____
Method A	Method B	Method C	Method D		Total cost adjustment

Contract Compensation:

Original contract amount

This Change Order

All previous Change Orders

Total Maximum Compensation

(including this change order)

The total Contract days based upon the same change orders is _____ calendar days.

CONTRACTOR ACCEPTANCE:

CITY OF SEDONA – PUBLIC WORKS DEPARTMENT APPROVED

BY: _____

BY: _____

DATE: _____

DATE: _____

CITY OF SEDONA - CITY MANAGER
APPROVAL

BY: _____

DATE: _____

Attach a more complete description of the change and supporting documentation to this form. Form to be signed in three copies.

General Conditions

2022

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GENERAL CONDITIONS

1. CONTENTS

The following Contract Provisions are general in scope and may refer to conditions, which will not be encountered in the performance of the work, included in this Contract and which are not applicable thereto. Any requirements, provisions or other stipulation of these General Conditions, which pertain to a non-applicable condition, shall be excluded from the scope of the Contract. Where conflict appears, "Special Condition" shall take precedence over "General Conditions". Full compensation for compliance with these General Conditions shall be considered as included in the total and various bid items of the contract and the contract time.

2. DEFINITIONS AND TERMS

When the Contract indicates that work shall be "accepted, acceptable, approve, authorized, condemned, considered necessary, contemplated, deemed necessary, designated, determined, directed, disapproved, established, given, indicated, insufficient interpreted, ordered, permitted, rejected, required, reserved, satisfactory, specified sufficient, suitable, suspended, unacceptable, unsatisfactory," it shall be understood that these expressions are followed by the words "by the City of Sedona".

Wherever the following abbreviations, terms, or pronouns are used in the specifications, plans, or other Contract Documents, the intent and meaning shall be interpreted as follows:

ABBREVIATIONS

AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADOT	Arizona Department of Transportation
AGC	Associated General Contractors of America
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ANSI	American National Standards Institute, Inc.
ARA	American Railway Association
AREA	American Railway Engineering Association
ARTBA	American Road and Transportation Builders Association
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATSSA	American Traffic Safety Services Association

A WG	American Wire Gauge
AWPA	American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute
EIA	Electric Industries Association
FHWA	Federal Highway Administration, Department of Transportation
FSS	Federal Specifications and Standards
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IMSA	International Municipal Signal Association
IPCEA	Insulated Power Cable Engineers Association
ITE	Institute of Transportation Engineers
MAG	Maricopa Association of Governments
MIL	Military Specifications
MUTCD	Manual on Uniform Traffic Control Devices
NEC	National Electrical Code
NEMA	National Electrical Manufacturers' Association
NIST	National Institute of Standards and Technology
NSF	National Sanitation Foundation (NSF)
SAE	Society of Automotive Engineers
UL	Underwriters Laboratories, Inc.

ADVERTISEMENT - A public announcement inviting proposals for work to be performed or materials to be furnished.

AWARD - The acceptance by the City of a proposal.

BASIS OF PAYMENT - The terms under which "work" is paid, as a designated pay item in accordance with the quantity measured and the pay unit.

BIDDER - Any individual, partnership, joint venture, firm or corporation submitting a proposal for the advertised work, acting directly or through a duly authorized representative.

CALENDAR DAY - Each and every day shown on the calendar, beginning and ending at midnight.

CERTIFIED INVOICE - An invoice from a supplier which has been reliably endorsed by the Contractor guaranteeing that the material was purchased and received for the project and establishing the value of the material.

CLAIM - A written demand or request for additional compensation or additional time submitted to the Engineer that:

- A. Contains the words "This is a claim...", within its Subject line or the first paragraph
- B. Cites the contractual basis for the demand or request

C. Relates the Contractual basis cited to factual events occurring or that have occurred within the project.

COMPLETION DATE - The date on which the contract work is specified to be completed

CONTRACT ITEM (PAY ITEM) - A specifically named unit of work for which a price is provided in the Contract. The description, whether general or detailed, the content of the named unit of work shall be as per the project plans and specifications.

CONTRACT CHANGE ORDER - A written order issued to the Contractor by the City covering extra work, additions or alterations to the plans and specifications, and establishing the basis of payment and time adjustment for the work affected by the changes. The Contract Change Order is the only method authorized for changing the Contract.

CONTRACT DOCUMENTS - The following comprise the Contract Documents: Advertisement for Bids, Information for and Instructions to Bidders, Bid Proposal and Bid Guarantee Bond, Construction Contract, Change Orders, Addenda, Performance Bond, Labor and Material Payment Bond, Special Conditions, General Conditions, Technical Specifications, Notice of Award, Notice to Proceed, Drawings, Plans, Standard Specifications and Certificate of insurability. All of these documents together constitute the **CONTRACT**.

CONTRACT TIME - The number of calendar days allowed for the entire completion of the Contract, including authorized time extensions and work required to be complete after substantial completion. Where a calendar date of completion is specified, the Contract shall be completed on or before that date.

CONTRACTOR - Party contracting directly with the City to furnish and perform all work and services in accordance with the Contract Documents.

COUNTY - The County in which the work is to be done.

DAY - Unless otherwise defined shall mean "calendar" day.

ENGINEER - The City Engineer; or his designated representative.

EXTRA WORK - Work not provided for in the Contract as awarded but determined by the City to be essential to the satisfactory completion of the Contract within its intended scope.

FINAL ACCEPTANCE - The acknowledgment by the City that the project or the work has been completed in accordance with the Contract Documents and provides the date at which the warranty or guarantee period begins.

INSPECTOR - A person, persons, or firm authorized by the Engineer to make detailed reviews, observations, reports and determinations of contract performance.

MAY - Used to refer to permissive actions.

METHOD OF MEASUREMENT - The manner in which a pay item is measured to conform with the pay unit.

NOTICE OF CLAIM - A written notification submitted to the Engineer that a demand or request for additional compensation or additional time may be made. The notification shall

1. Contain the words "notification of a potential claim" within its Subject line or the first paragraph
2. Describe the occurrence which is the reason that the Notice of Claim is being presented

NOTICE TO PROCEED - Written notice to the Contractor to proceed with the contract work including, when applicable, the date of beginning of contract time. Start of Construction, as defined below, may start at a later date.

PLANS - The drawings and pictures depicting the location and special orientation of the work to be done.

PROJECT - The work to be completed pursuant to this contract.

PROPOSAL - A standard form plus information supplied by the City, which contains spaces for completion by the Bidder which, when completed in its entirety and executed by the Bidder, along with all required additional documents, shall constitute the Bid. Said Bid shall constitute the Contractor's offer to perform all work required as set forth in the Contract Documents for the amount of money stated in the Bid.

PROPOSAL FORM - The documents furnished by the City on which the offer of a bidder is submitted.

PROPOSAL GUARANTY - The security furnished with a proposal to Guaranty that the bidder will enter into the Contract if the proposal is accepted.

RIGHT OF WAY - A general term denoting land, property, or interest therein, acquired for or devoted to the construction of an improvement.

SALVABLE MATERIAL - Material that can be saved or salvaged. Unless otherwise designated or directed by the City or shown on the plans, all salvable material shall become the property of the Contractor.

SAMPLES - Samples are physical examples furnished or constructed by the Contractor to illustrate materials, equipment, workmanship or finishes, and to establish standards by which the work will be judged.

SHALL - Refers to mandatory actions by either the Contractor or the City.

SHOP DRAWINGS - Drawings, diagrams, illustrations, certificates, test reports, schedules, performance charts, brochures, shop layouts, fabrication layouts, assembly layouts, foundation layouts, wiring and piping layouts, specifications and descriptive literature required by the Contract Documents which the Contractor is required to submit for approval.

START OF CONSTRUCTION – The date in which the Contractor begins physical work at the project site. Restrictions on start of construction are provided in the General Conditions and may be specified in the Special Conditions.

SUBCONTRACTOR - Party supplying labor and/or material for work at the site of the project for, and under separate contract or agreement with, the Contractor. Nothing contained in the Contract Documents shall create any contractual relationship between the City and any subcontractor.

SUBSTANTIAL COMPLETION - The date when the work is sufficiently completed so it may be safely, conveniently, and beneficially utilized by the City for all of the purposes for which it was intended. Reduced liquidated damages are chargeable for a project or portions thereof which have separately specified damages, if there are items of work remaining to be performed relative to such work once full substantial completion status has been attained. In such cases the amount of liquidated damages due shall be twenty-five percent (25%) of the unreduced liquidated damage amount stated in the contract.

SUPERINTENDENT - The Contractor's authorized representative in charge of the work.

WORK - The furnishing of all labor, materials, equipment, and all other incidentals necessary to the successful and acceptable completion of all obligations as described in the Contract Documents, and the carrying out of all of the duties and obligations imposed by the Contract.

3. CONTRACTOR'S UNDERSTANDING

A. It is understood and mutually agreed that by submitting a proposal, the Contractor acknowledges that he has carefully examined all documents pertaining to the work, the locations, accessibility, and general character of the site of the work and all existing buildings and structures within and adjacent to the site, and has satisfied himself as to the nature of the work, the condition of existing buildings and structures, the conformation of the ground, subsurface conditions, the character, quality, and equipment, machinery, plant, and any other facilities needed preliminary to and during prosecution of the work, the general and local conditions, the construction hazards, and all other matters, including but not limited to any labor situation which can in any way affect the work under the Contract. It is further mutually agreed that by submitting a proposal, the Contractor acknowledges that he has satisfied himself as to the feasibility and correctness of the Contract Documents for the construction of the work and that he

accepts all the terms, conditions, and stipulations contained therein; and that he is prepared to work in peace and harmony with other Contractors performing work on the site.

- B. No verbal agreement or conversation with any officer, agent, or employee of the City, either before or after the execution of the Contract, shall affect or modify any of the terms, conditions, or other obligations set forth in any of the Contract Documents.
- C. The Contractor understands that, unless specifically stated otherwise in the contract documents, the intent of the contract documents is to provide complete and operable facilities. The Contractor's bid amount for this project, therefore, shall be and is considered to be for completion in conformity with this understanding, regardless of whether some aspect of the work to be performed is named as a separate bid item or not.

4. DEFECTIVE WORK

- A. A City Representative, designated by the City Engineer, shall give written notice of the noncompliance to the Contractor, when, and as often as the City Representative determines through his inspection that procedures, material, equipment or workmanship incorporated in the Project does not meet the requirements of the Contract. Within five (5) working days from the receipt of such notice, the Contractor shall undertake the work necessary to correct such deficiencies, and to bring the work into compliance with the Contract Documents. Should the Contractor not agree with the City Representative's determination, and as a condition precedent to any request for either additional compensation or time extension, or both, resulting from the City Representative's determination, the Contractor shall within three (3) working days provide a Notice of Claim to the Engineer that he may claim additional compensation, time or both, and detailed explanation of the Contractor's position. The Contractor shall document the costs associated with the corrective work with daily records and cost data and shall furnish such information to the Inspector daily. Receipt of cost data shall not be construed to be an acceptance of the corrective work, or an authorization for a Change Order to cover the corrective work. Failure by the Contractor to provide the specified written notice of an intention to make a claim shall be sufficient basis to reject any related claim subsequently submitted.
- B. Prior to initial acceptance of the Project, the City may, at its option, retain work, which is not in compliance with the Contract if the City determines that such defective work is not of sufficient magnitude or importance to make the work dangerous or undesirable. The City also may retain defective work, if in the opinion of the Inspector, and with concurrence of the City Engineer, removal of such work is impractical or will create conditions, which are dangerous or undesirable. Just and reasonable value, for such defective work, shall be judged, by the Engineer and appropriate deductions shall be made in the payments due, or to become due to the Contractor. Initial acceptance shall not act as a waiver of the City's right to recover from the Contractor an amount representing the deduction for retention of defective work.

5. NOTICE AND SERVICE THEREOF

Where the manner of giving notice is not otherwise provided for in the Contract Documents, any notice to the Contractor from the City relative to any part of the Contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted to the Contractor at the address given in the Contractor's proposal, or at the last business address known to the City, or delivered in person to the Contractor or his authorized representative on the site or transmitted electronically by facsimile or electronic mail using phone numbers and addresses last provided by the Contractor. It is mutually agreed that such notice shall be sufficient and adequate. The Contractor shall provide the City, upon written request, facsimile phone numbers and electronic mail addresses, in writing.

6. MATERIAL AND EQUIPMENT SPECIFIED BY NAME

When material or equipment is specified by reference to one or more patents, brand names, or catalog numbers, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements, and that other materials or equipment, of equal capacities, quality and function may be considered. The Contractor may offer material or equipment of equal or better quality and performance in substitution for those specified which he considers would be in the City's interest to accept. After the Award of the Contract, the City will consider offers for substitution only from the Contractor and will not acknowledge or consider such offers from suppliers, distributors, manufacturers, or Subcontractors.

Substitutions

The Contractor's offer of substitution shall be made in writing to the Engineer and shall include sufficient data to enable the Engineer to assess the acceptability of the material or equipment for the particular application and requirements. If the offered substitution necessitates changes to or coordination with other portions of the work, the data submitted shall include drawings and details showing such changes. Contractor agrees to perform these changes as part of the substitution of material or equipment. Within thirty (30) calendar days after the receipt of the offer of substitution, the Engineer will review the material submitted by the Contractor and notify the Contractor if approved for use or objections, if any, to the proposed substitution or if further information is required. Upon notification by the Engineer, the Contractor shall either provide the approved material or equipment, which complies with project specifications, or furnish requested additional information. While the Engineer might not take any objections to the proposed substitution and may approve the same, such action shall not relieve the Contractor from responsibility for the efficiency, sufficiency, quality and performance of the substitute material or equipment, in the same manner and degree as the material and equipment specified by name. Any cost differential associated with a substitution shall be reflected in the Contractor's offer of substitution and the Contract Documents shall be modified by a Change Order.

When the specifications state the construction shall be performed by the use of certain methods and equipment, such methods and equipment shall be used unless other methods are authorized by the Engineer. If the contractor desires to use a method or type of equipment other than those specified, he may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the method and equipment proposed to be used and an explanation of the reasons for desiring to make the change. If approval is given it will be on the condition that the Contractor will be fully responsible for producing construction work in conformity with the Contract Documents. If material or equipment is specified by only one patent or proprietary name, or by the name of only one manufacturer, it is for the purpose of standardization, or because the City knows of no equal. If standardization is the reason for using one name to specify any material or equipment, the specifications will so state, and substitutions will not be considered. In other cases, the Contractor may offer substitutions in the same manner as requesting a Change Order for products he considers being equal to those specified.

7. CONTRACT BONDS AND GUARANTEES

- A. The Contractor shall provide two surety bonds on the forms provided, each in an amount equal to 100% of the contract price. One shall serve as security for the faithful performance of the work and the other as security for the faithful payment and satisfaction of the persons furnishing materials and performing labor on the work. The bonds shall be issued by a corporation duly and legally licensed to transact surety business in the State of Arizona. Such bonds shall remain in force throughout the period required to complete the work and thereafter for a period of 365 calendar days after final acceptance of the work, plus 365 calendar days following the repair of any work pursuant to the guarantees herein made. The surety's liability on the bonds shall not exceed the underwriting limitations for the respective surety specified in Circular 570, published by the United States Department of the Treasury.
- B. Should any surety or sureties be deemed unsatisfactory at any time by the City, notice will be given to the Contractor to that effect and he shall forthwith substitute a new surety or sureties satisfactory to the City. No further payment shall be deemed due or will be made under this Contract until the new surety shall qualify and be accepted by the City.
- C. The Contractor guarantees to the City that all materials and equipment furnished under this Contract will be new and of good and sufficient quality, free from faults and defects as is necessary to complete the project as required by the Plans and Specifications.

8. INSURANCE

- A. The Contractor, at Contractor's own expense, shall purchase and maintain the herein stipulated minimum insurance with companies duly licensed, possessing a current A.M. Best, Inc. Rating of B+6, as minimum and approved and licensed to do business in the State of Arizona with policies and forms satisfactory to the City.

- B. All required insurance herein shall be maintained in full force and effect until all work required to be performed under the terms of the Contract is satisfactorily completed and finally accepted - failure to do so may, at the sole direction of the City, constitute a material breach of this Contract.
- C. The Contractor's insurance shall be primary insurance, and any insurance or self-insurance maintained by the City shall not contribute to it.
- D. Any failure to comply with the claim reporting provisions of the policies or any breach of an insurance policy warranty shall not affect coverage afforded under the policy to protect the City.
- E. The policies, except Workers' Compensation, shall contain a waiver of transfer rights of recovery (subrogation) against the City, its agents, officers, officials and employees for any claims arising out of the Contractor's work or service.
- F. The insurance policies may provide coverage, which contains deductibles or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to the City under such policies. The Contractor shall be solely responsible for deductible and/or self-insured retention and the City, at its option, may require the Contractor to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit.
- G. The City reserves the right to request and to receive, within ten (10) working days, certified copies of any or all of the herein required insurance policies and/or endorsements. The City shall not be obligated, however, to review same or to advise Contractor of any deficiencies in such policies and endorsements, and such receipt shall not relieve Contractor from, or be deemed a waiver of, the City's right to insist on strict fulfillment of Contractor's obligations under this Contract.
- H. The insurance policies, except Workers' Compensation, required by this Contract shall name the City, its agents, officers, officials and employees as additional insured.
- I. The making of progress payments to the Contractor shall not be construed as creating an insurable interest by or for the City or be construed as relieving the Contractor or his Subcontractors of responsibility for direct physical loss, damage or destruction occurring prior to final acceptance.
- J. Any insured loss under the policies of insurance required by this Agreement shall be adjusted with the City and made payable to City for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph K of this Article of these General Conditions. City shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged work shall be repaired or replaced, the moneys so received shall be applied on account

thereof, and the work and the cost thereof shall be covered by an appropriate Change Order.

- K. City shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within ten (10) working days after the occurrence of loss to City's exercise of this power. If such objection were made, City shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If required in writing by any party in interest, City shall upon the occurrence of an insured loss, give bond for the proper performance of these duties
- L. If City finds it necessary to occupy or use a portion or portions of the work prior to substantial completion of all of the work, such use or occupancy may be accomplished as provided in these General Conditions, provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or lapse on account of any such partial use or occupancy.

M. REQUIRED COVERAGE

The Contractor shall obtain for itself and provide the City with Certificates of Insurance indicating the scope and extent of coverage as set forth below. Required coverage's may be modified by an amendment to the Contract Documents.

1. GENERAL LIABILITY

Contractor shall maintain Commercial General Liability insurance with a limit of not less than \$3,000,000 for each occurrence with a \$3,000,000 Products and Completed Operations Aggregate and \$3,000,000 General Aggregate Limit. The policy shall include coverage for bodily injury, broad form property damage, personal injury, products/completed operations and blanket contractual coverage including, but not limited to, the liability assumed under the indemnification provisions of this Contract, which coverage will be at least as broad as Insurance Service Office, Inc. Policy Form CG 000211093, or any replacements thereof. The coverage shall not exclude X, C, U.

Such policy shall contain a severability of interest provision, and shall not contain a sunset provision or commutation clause, or any provision, which would serve to limit third party action over claims.

The Commercial General Liability additional insured endorsement shall be at least as broad as the Insurance Service Office, Inc.'s, Additional Insured, Form B, CG20101185, and shall include coverage for Contractor's operations and products and completed operations.

If required by this Contract, the Contractor subletting any part of the work, services or operations awarded to the Contractor shall purchase and maintain, at all times during prosecution of the work, services or operations under this Contract, an Owner and Contractor's Protective Liability insurance policy for bodily injury and property damage, including death, which may arise in the prosecution of the Contractor's work, service or operations under this Contract. Coverage shall be on an occurrence basis with a limit not less than \$3,000,000 per occurrence, and the policy shall be issued by the same insurance company that issues the Contractor's Commercial General Liability Insurance.

2. AUTOMOBILE LIABILITY

Contractor shall maintain Commercial Business Automobile Liability insurance with a combined single limit for bodily injury and property damage of not less than \$1,000,000 each occurrence and \$2,000,000 for more than one person and property damage in the sum of not less than \$1,000,000 resulting from any one accident which may arise from the operation, actions or omissions of the Contractor or any Subcontractor in the performance of the project, and with respect to the Contractor's owned, hired, and non- owned vehicles assigned to or used in performance of the Contractor's work. Coverage will be at least as broad as coverage code 1, "any auto", (Insurance Service Office, Inc. Policy Form CA 00011293, or any replacements thereof). Such insurance shall include coverage for loading and offloading hazards. If hazardous substances, materials or wastes are to be transported, MCS 90 endorsement shall be included and \$5,000,000 per accident limits for bodily injury and property damage shall apply.

3. WORKERS' COMPENSATION

The Contractor shall carry Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of Contractor's employees engaged in the performance of the work; and, Employer's Liability insurance of not less than \$1,000,000 for each accident, \$1,000,000 disease for each employee, and \$1,000,000 disease policy limit.

In case any work is subcontracted, the Contractor will require the Subcontractor to provide Workers' Compensation and Employer's Liability to at least the same extent as required of the Contractor.

The Contractor shall furnish the City with a Certificate of Waiver of Subrogation under the terms of the Workmen's Compensation insurance. The Contractor shall defend, protect, and save harmless the City from and against all claims, suits, and actions arising from failure of the Contractor or the Subcontractor to maintain such insurance.

4. BUILDERS' RISK (PROPERTY) INSURANCE

The Contractor shall purchase and maintain, on a replacement cost basis, Builders' Risk insurance in the amount of the initial Contract Amount as well as subsequent modifications thereto for the entire work at the site. Such Builders' Risk insurance shall be maintained until final payment has been made or until no person or entity

other than the City has an insurable interest in the property required to be covered, whichever is earlier. This insurance shall include interests of the City, the Contractor, and all Subcontractors and Sub-Subcontractors in the work during the life of the Contract and course of construction, and shall continue until the work is completed and accepted by the City. The insurance shall cover work performed under the Contract and materials, equipment or other items to be incorporated therein, while the same are located at the construction site, stored off-site, or at the place of manufacture. The policy shall cover not less than losses due to fire, mischief, weather, vandalism, malicious mischief, wind, collapse, riot, aircraft, smoke or any other casualty, including but not limited to earthquakes, tornadoes or other cataclysmic events, until the date of initial acceptance of the work. For new construction projects, the Contractor agrees to assume full responsibility for loss or damage to the work being performed and to the buildings under construction. For renovation construction projects, the Contractor agrees to assume responsibility for loss or damage to the work being performed at least up to the full Contract Amount unless otherwise required by the Contract Documents or amendments thereto.

Builders' Risk insurance shall be on an all-risk policy form and shall also cover false work and temporary buildings and shall insure against risk of direct physical loss or damage from external causes including debris removal, demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's service and expenses required as a result of such insured loss and other "soft costs" as required by the Contract.

Builders' Risk insurance must provide coverage from the time any covered property becomes Contractor's control and/or responsibility, and continue without interruption during construction or renovation or installation, including any time during which the covered property is being transported to the construction installation site, and while on the construction or installation site awaiting installation. The policy will provide coverage while the covered premises or any part thereof are occupied. Builders' Risk insurance shall be primary and not contributory.

If the Contract requires testing of equipment or other similar operations, at the option of the City, the Contractor will be responsible for providing property insurance for these exposures under a Boiler Machinery insurance policy.

The maximum deductible allowable under this policy shall be \$5,000. The policies providing this insurance shall name the City, its agents and attorneys, the City Engineer, and the Design Engineer as additional insured as their respective interests shall appear.

5. BLASTING INSURANCE:

If the Contractor determines that the performance of the project will require use of explosives, the public liability and property damage insurance shall specifically cover all liability arising out of the Contractor's acquisition, storage and use of explosives. If work requiring use of explosives is not discovered until after the

commencement of the work, upon discovery, the Contractor shall immediately procure blasting insurance as required by this paragraph. The Contractor shall not undertake any blasting without submission to the City of a Certificate of Insurance covering all liability due to blasting regardless of amount. Any delays incurred by the Contractor in procuring blasting insurance shall not be grounds for an extension of time for completion of the project, nor for any additions to the contract price.

6. OTHER INSURANCE:

The Contractor shall carry and maintain all other insurance including Flood Insurance as may be required by Federal, State, County and City laws or ordinances. The Contractor may be required to, at the discretion of the City, maintain additional fire and extended coverage with an endorsement for vandalism and malicious mischief in his name and also in the name of the City in an amount of not less than \$100,000.00.

The Contractor may utilize up to \$2,000,000 in excess liability coverage to meet the above-required limits for insurance. Any deductibles shall be declared and the City may require deposits be made to it up the amount of such deduction, at its sole discretion.

7. CERTIFICATES OF INSURANCE

Prior to commencing Services under this Contract, Contractor shall furnish the City with Certificates of Insurance, or formal endorsements as required by the Contract, issued by Contractor's insurer(s), as evidence that policies providing the required coverage's, conditions and limits required by this Contract are in full force and effect.

All Certificates of Insurance required by this Contract shall be identified with a bid serial number and title. A \$25.00 administrative fee shall be assessed for all Certificates received without the appropriate bid serial number and title. Each of the Certificates of Insurance shall contain a clause substantially in the following words:

It is hereby understood and agreed that if this policy is canceled, a written notice of such cancellation shall be mailed to the City of Sedona within ten (10) working days.

Such insurance coverage obtained by the Contractor other than Workmen's Compensation Coverage, shall name the City, the City Engineer, the Design Engineer, and their directors, officers, principals, agents, attorneys, and employees as Additionally Insured.

Insurance evidenced by these certificates shall not expire, be canceled, or materially changed without fifteen (15) days prior written notice to the City.

All certificates of insurance and endorsements required to be purchased by Contractor pursuant to this Article shall be filed with the City. Certificates shall be

acceptable to City. If a policy does expire during the life of the Agreement, a renewal certificate of the required coverage must be sent to the City not less than five days prior to expiration date.

Each certificate of insurance shall include the job site and project number. Coverage shown on certificate of insurance must coincide with the requirements in the text of the Contract Documents.

9. SCHEDULE OF CONSTRUCTION

- A. The Contractor shall submit to the City within five (5) days after award of Contract, or as may be otherwise requested by the City, a schedule showing the order in which the Contractor proposes to carry on the work and at a rate sufficient to successfully construct all of the Work set forth in the Contract Documents within the Contract Period. Such schedule shall show the dates at which the Contractor will start and complete the several parts of the Work. The schedule shall identify the following items if applicable:

1. Potholing.
2. Mobilization.
3. Roadway work to be broken down at a minimum, on a street by street basis.
4. Pipeline work to be broken down on a manhole to manhole basis and individual pump station construction or abandonment.
5. Site prep.
6. Drainage improvements prep and construction.
7. Ramp prep, construction and finish.
8. Sidewalk prep, construction and finish.
9. Bridge prep, abutment construction, bridge construction, bridge placement, and finish.
10. Traffic control.
11. Demobilization
12. SWPPP.
13. Other items as applicable and/or listed in the bid schedule.

The schedule shall also show the order of construction and delivery dates at which the Contractor will start and complete the several other parts of the Work, the order of construction and delivery dates of critical materials and equipment along with monthly payment estimates, dates for submittal of working drawings and shop drawing to the Engineer for review, and the name of the project superintendent. The City shall be notified in writing of changes in the project superintendent. The schedule shall be subject to review and comment by the City as per MAG specifications section 108.4. The schedule shall be binding on the Contractor and shall be complied with by the Contractor unless, for good cause shown, a modification of the schedule shall be requested in writing to and approved by the City. The schedule shall also:

1. Be updated with each progress billing.

2. Include a detailed two week look ahead, indicate work requiring inspection, and be updated at each progress meeting.
3. Show work tasks progress in time periods of seven days or less unless otherwise approved by the Engineer.
4. Identify the critical path(s) for the work and task float.
5. Identify tasks corresponding to bid item descriptions when possible. Less comprehensive task designations may be used to comply with 2 above.
6. Conform to any time and location constraints identified in permits and the contract documents.
7. Span the current contract date to the end of the contract time.
8. Be submitted in an electronic format compatible with Microsoft Project Standard 2007, and hard copy format.
9. Identify long lead items.

The schedule format (size, color, type format) shall be such that the different tasks, durations, critical path and durations can be easily distinguished. The Contractor shall also provide a listing of tasks and durations with the schedule. If the schedule and list is being provided prior to a Notice to Proceed it need not include dates for start and completion of tasks. Any schedule and list provided after the Notice to Proceed has been issued shall include dates. A schedule and list shall be provided on the date of the Notice to Proceed. The Contractor shall begin work on the project site within five (5) working days of the Notice to Proceed, unless stated otherwise in specifications. Failure to do so is sufficient cause for termination in addition to other remedies the City may have.

- B. Where the City's operations require specific sequencing of the work, such sequencing requirements as provided for in the Contract Documents shall be followed.
- C. When progress has not kept pace within two weeks of the schedule or if otherwise requested by the City the Contractor shall update his schedule within five (5) working days of the City's written request. The revised schedule will include a description of what actions will be done by the Contractor to bring the project back on schedule. **Failure to not provide a revised schedule within one week of its request may result in the withholding of \$750 from any progress payment due.** Each written request by the City shall be considered a separate request and subject to the withholdings specified, provided it is within the following billing cycle from a previous request.
- D. The Contractor shall provide the City with a list of emergency phone numbers, addresses, pager numbers, facsimile numbers, and electronic mail addresses for contacting key personnel in the case of any after-hours emergency.
- E. The Contractor shall furnish the City with a schedule for hours of work. In it, the Contractor shall note the begin work, begin daily clean-up and daily shutdown times to be followed by the Contractor during the project unless otherwise changed. The Contractor's regular work hours on regular workdays shall be between 7:00 AM and 5:30 PM Monday through Thursday, unless otherwise stated in the specifications.

Friday work is permitted between 7:00 AM and 5:30 PM for work that does not require City inspection. This work hours timeframe shall be considered to include start-up of equipment and daily clean-up of the work area. Weekends and Holidays for the City of Sedona shall be considered non-regular work hours. Permission to work non-regular work hours shall be subject to approval by the Engineer and the provisions of General Conditions, Section 39. **The Engineer may deduct \$250 per day for work outside of approved work hours after issuance of one written warning during the course of the project.**

The City of Sedona has the following holiday schedule:

New Year's Day, January 1st

Martin Luther King/Civil Rights Day, 3rd Monday of January

President's Day, 3rd Monday in February

Memorial Day, Last Monday in May

Independence Day, July 4th

Labor Day, 1st Monday in September

Veteran's Day, November 11th

Thanksgiving Day, 4th Thursday in November AND the Friday after Thanksgiving Day

Christmas Day, December 25th

10. PROGRESS MEETINGS

Periodic meetings shall be held between the City of Sedona officials, Contractor, and other affected agencies, at a standard time and place, and at a frequency to be established during the pre-construction meeting. These meetings shall be used to discuss scheduling and matters related to the project.

11. TAXES

The Contractor shall be responsible for and shall include in his bid prices all applicable taxes, including but not limited to Federal, State, and Local Taxes.

12. ASSIGNMENTS

The Contractor shall not assign the whole or any part of the Contract or any monies due or to become due hereunder without the written consent of the City and of the Surety on the Contractor's Bond. A copy of such consent of Surety, together with a copy of the assignment, shall be filed with the City. If the Contractor assigns all or any part of any monies due or to become due under the contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims and liens of all persons, firms, and corporations for services rendered; for the payment of all materials and equipment furnished and for payment of all materials and equipment used or rented in the performance of the Work called for in the Contract; and for the payment of any liens, claims, or amounts due the Federal, State, or local government or any of their funds.

13. SUBCONTRACTING

- A. Subcontractors will not be recognized as employees or agents of the City, nor as having any privity of contract with the City. All persons engaged in the work of construction will be considered by the City to be employees of the Contractor. The Contractor will be held responsible for their work and for all materials provided by them, which shall be subject to the provisions of the Contract.
- B. Each subcontract shall contain a suitable provision for cancellation or termination thereof should the Subcontractor neglect or fail to conform to every provision of the contract.
- C. Subcontractors collectively shall not perform more than fifty percent (50%) of the value of the total work required pursuant to the Contract Documents. **The Contractor agrees that should this percentage be exceeded the City may consider the Contractor in breach of this contract and/or make deductions equal to one half of one percent of the total approved contract value for each one percent of subcontracted work beyond that allowed above.** The Contractor shall perform fifty percent (50%) of the contract work using the Contractor's own organization as construed in ADOT Standard Specifications 2000 Section 108.01.
- D. The City of Sedona encourages all contractors to utilize minority and women owned businesses whenever possible.

14. COOPERATION AND COLLATERAL WORK

- A. In general, the Contractor shall be responsible for the scheduling and coordination of his work with any other work, which may be, carried on in the construction areas for this project by other parties or by the City simultaneously with his construction work. The contractor shall include in his bid any costs, which may be involved on his part as a result of coordinating his construction with such other activity.
- B. When two or more Contractors are employed by the City in related or adjacent work, each shall conduct his operations in such manner as to not cause any delay or hindrance to the other and shall properly connect and coordinate the execution of their respective work with the other. The City will not be responsible for damage caused by such delays, and such delays will not entitle the contractor(s) to an extension of time. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work.

If the proper execution of any part of the Contractor's work depends upon the work of any other Contractor, the Contractor shall inspect and promptly report to the City Engineer any discrepancies between the executed work and the drawings or any defects in such work that render it unsuitable for such proper execution. The failure of the Contractor to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of his own work. The exception is for defects, which may develop in the other contractor's work, after the execution of the

Contractor's collateral work that would not have been discovered before the Contractor's collateral work began.

- C. The contractor shall coordinate his work, and cooperate with any other persons or entities operating on or adjacent to the site of the project.

Where persons employed by other persons or entities are engaged in or near the construction areas for this project, and where such work on the part of said parties results in a delay in performance by the Contractor, and where such delay, in the opinion of the City Engineer, is of such nature that it could not have reasonably been foreseen or anticipated by the Contractor in time for him to take steps to prevent same, then the Contractor shall be entitled to an extension of time.

The Contractor shall promptly make good any injury or damage caused by him that may be sustained by other Contractors or employees of the City. The Contractor shall join his work to that of others and perform his work in proper sequence in relation to that of others.

15. LINES AND GRADES

The Contractor shall be responsible for providing all construction staking and surveying needed to construct the facilities in accordance with the Plans and Specifications, and shall include such costs in his bid for the applicable items of work. The Contractor shall employ a surveyor licensed in the State of Arizona to perform all surveying necessary to construct this project to the lines and grades provided in the plans. The Contractor shall provide to the Engineer the Surveyor's listing of lines, grades, distances, curve information and point data (including northing, easting and elevation) used to actually establish project staking at least two working days prior to establishing subgrade, setting forms, placing pre-cast facilities, pouring concrete, installing pipe, or placing asphalt. The Contractor shall provide a set of as-built plans showing manhole and inlet inverts, rim and grate elevations, gutter elevations at 50-foot intervals, changes of grade, invert and finished grade elevations of concrete structures at the center and corners, and the inlet and outlet ends of pipes. The surveyor shall seal and designate them as as-built plans. This as-built plan is in addition to the Status As-Builts and Record As-Builts required under other provisions of these specifications. The Final contract payment shall not be due until all as-built plans have been submitted and accepted. Any work performed without complying with the Survey requirements in these specifications shall be considered unauthorized work and subject to the provisions of MAG section 105.11. As-Built plans shall be submitted in the following formats: hard copy in the same size as provided by the City to the Contractor for the contract, AutoCAD (2020, or latest edition), and .pdf.

The Contractor shall pothole utility facilities and report results to the Engineer at least two (2) working days prior to excavating for installation of roadways, asphalt patches, catch basins, underground pipes, manholes, footings, vaults, and basins. The report shall indicate any conflicts or inadequate clearances as related to the work to be performed. Failure to perform potholes and report results, as required, will result in the loss of the right to make a claim for changes in compensation and time due to conflicts, interference, protection or

other costs related to the utility, as such, a claim would have been mitigated by performing the pothole timely.

16. EXCAVATIONS, UNDERGROUND FACILITIES LOCATION, AND STORMWATER POLLUTION PREVENTION.

The Contractor in the execution of the Work shall conform to all applicable Federal and State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over employment discrimination, wages and working conditions, and the construction of the Work, including but not limited to all construction codes, O.S.H.A. Requirements, and safety codes, which may apply to (1) performance of the Work; (2) protection of adjoining and adjacent property; (3) maintenance of passage-ways, guard fences or other protective facilities; and shall obtain all permits and pay for licenses and approvals necessary for the construction of the Work and give all required notices.

ARS-40-360.22 Excavations: Determining locations of underground facilities; providing information. This statute requires that no person shall begin excavation before the location and marking are complete or the excavator is notified that marking is unnecessary and requires that upon notification, the owner of the facility shall respond as promptly as practical, but in no event later than two working days. The “Arizona 811” (1-800-782-5348) (formerly Arizona Blue Stake Center) was formed to provide a more efficient method of compliance with this statute.

ARS-40-360.23 Making excavations in careful, prudent manner: liability for negligence. This statute states that obtaining information as required does no excuse any person making any excavation from doing so in a careful and prudent manner nor shall it excuse such persons from liability for any damage or injury resulting from his negligence.

ARS-40-360.28 Civil penalty: Liability. If the owner or operator fails to locate, or incorrectly locates the underground facility, pursuant to this article, the owner or operator becomes liable for resulting damages, costs and expenses to the injured party.

Licenses and Permits:

The Contractor shall be required to obtain, at his expense, the appropriate licenses and permits from the City of Sedona before the start of construction. It is the duty of the Contractor to determine that all necessary permits have been obtained. Costs associated with obtaining a license are not waived.

Arizona Pollutant Discharge Elimination System (AZPDES) Permit

A. General requirements:

The Contractor shall comply with the AZPDES Stormwater requirements for construction sites pursuant to the requirement of the Arizona Department of Environmental Quality (ADEQ). The Contractor shall be designated as permittee and shall be responsible for providing the necessary labor and materials, and for taking the appropriate measures to assure compliance with the ADEQ requirements, as well as other Federal, State and local requirements pertaining to storm water discharges. As

the permittee, the contractor is responsible for completing, in a manner acceptable to the ADEQ, all documents required including the following:

1. Storm water Pollution Prevention Plan (SWPPP) for the project including certification form. The contractor will be required to submit for approval, update and revise the SWPPP as necessary throughout the construction of the project in order to assure compliance with permit requirements. The completed SWPPP shall be kept on the project site at all times during construction of the project.
 2. Notice of Intent (NOI) to be covered by Arizona General Permit for Arizona including certification of signature.
 3. Notice of Termination (NOT) of coverage under AZPDES (upon project completion).
- B. Regardless of whether compliance with AZPDES is required the Contractor shall prepare a Storm Water Pollution Prevention Plan. That Plan shall at a minimum address the following issues:
- Designation, maintenance and clean-up of vehicle storage, fueling, lubrication and maintenance areas
 - Clean up and off-site disposal of excess construction materials including asphalt, concrete, paints, oils, and wrapping materials
 - Daily work day clean-up of debris in work area
 - Prevention of wind born debris/Dust Control Plan
 - Prevention of erosion resulting from rain or watering activities'
 - Measures to prevent silt and debris generated by this project from migrating beyond the construction site boundaries. Measures such as trapping and removing debris and dirt generated, or other measures acceptable to the Engineer, shall be taken.
 - The Contractor shall comply with the City of Sedona General Storm Water Pollution Prevention Guidelines, this includes filing the City Notice of Intent.

C. Submittals:

1. Preliminary copies of the NOI and SWPPP shall be submitted to the Engineer two days prior to the preconstruction meeting. Any necessary revisions to the SWPPP shall be subject to review by the Engineer, prior to implementation.
2. The Contractor shall submit completed, signed NOI forms at least forty-eight (48) hours prior to the initial start of construction on the project to the Arizona Department of Environmental Quality in Phoenix, Arizona (ADEQ, 1110 West Washington Street, Phoenix, AZ. 85007). Generally, projects of less than one (1) acre may not be applicable to this requirement at this time. If the project is subject to these requirements, the Contractor shall be designated the permittee.
3. Failure by the contractor (or any of its appropriate subcontractors) to submit the NOI forms within the required timeframe shall result in delay of the start of

construction, but shall not prohibit issuance of the Notice to Proceed, at the City's sole discretion. A copy of the completed NOI shall be posted on the construction and a copy of the SWPPP shall be kept on the construction site.

Contractor's Responsibilities:

1. It is the Contractor's responsibility to perform inspection of all storm water pollution control devices on the project on a monthly basis and following each rainfall. The contractor shall prepare reports on these inspections and retain these reports for a period of three years following project completion. Inspection reports shall be submitted monthly to the CITY along with payment requests. The contractor shall maintain all storm water pollution control devices on the project in proper working order, including cleaning and/or repair during the duration of the project.
 2. No condition of either the AZPDES or the SWPPP shall release the contractor from any responsibilities or requirements under other environmental statutes and regulations.
 3. Upon total project completion, acceptance, and de-mobilization, the contractor shall submit its completed, signed NOT form to the ADEQ with copies to the same agencies who received copies of the NOI, thereby terminating all AZPDES permit coverage for the project.
- D. Payment: There shall be no separate payment made to the Contractor for all material, labor, and other incidental costs relating to the provision, installation, and maintenance of items relating to this permit during project construction. Such incidental costs shall include contractor costs in order to assure proper operation of the pollution-control devices installed including all maintenance, cleaning, and disposal costs associated with clean-up and repair following storm events or other runoff or releases on the project.

17. EXISTING UTILITIES, RIGHTS-OF-WAY, EASEMENTS

A. EXISTING UTILITIES

Because of the nature of this contract, existing utilities are not shown or indicated in these specifications, except to note that their locations are within rights of way, streets and easements throughout the City of Sedona area. The fact that utilities are not shown shall not relieve the Contractor of the following responsibilities:

1. The Contractor shall be responsible for the preservation of all existing water, sewer, storm sewer, buried transmission lines or any cable or utility. If damaged, all costs for the necessary repairs shall be paid by the Contractor.
2. The Contractor shall locate and verify the location of all existing utilities prior to any excavation. This shall be done at least two (2) days prior to excavation for

installation of project facilities or ordering equipment or materials for those facilities.

3. The Contractor shall be responsible for the location of all service lines.
4. Continuation of Service - All services shall be maintained to all areas at all times during the construction period, except when it is necessary to shut down a line to make a connection with the new line. Residents shall be given twenty-four (24) hour notice when it is known that the service will be interrupted. The Fire District shall be kept advised of the status of all fire hydrants affected by any work on this Project.
5. The Contractor is responsible for as-building all existing utilities within the improvement area (location, depth, and material).

B. RIGHTS-OF-WAY AND EASEMENTS

The City will furnish land, right-of-way, or easements as shown in the Contract Documents for the performance of the Work under the Contract. Contractor shall confine his operations to the land, right-of-way or easements furnished, and will restore the same to their original conditions to the extent reasonably possible prior to final acceptance of the work. Prior to construction or entry thereon, the Contractor shall obtain copies of and become familiar with any agreements and stipulations used by the City in acquiring temporary or permanent easements.

The Contractor shall remain within easement areas and rights-of-way obtained or owned by the City or easement areas the Contractor has obtained. Disturbed areas shall be reasonably restored upon completion of installation of the project improvements and related appurtenances in the easement. The Contractor shall be responsible to adhere to easement provisions whether the easement was obtained by Contractor or City. A temporary 4-foot high orange fence shall be placed to define the work area for all easements encompassing all work that occurs outside the City right-of-way. Clearing by manual means for the purpose of defining the area to be fenced shall be the only activity allowed on the easement before the fence is placed. City shall provide the Contractor with a copy of the easement agreement with the property owner, upon request. Contractor shall be responsible for all restoration of the easement as described in the easement agreement. Trees and larger vegetation shall be preserved to the maximum extent practicable.

The Contractor shall be responsible for the preservation of all existing property pins. If disturbed or damaged the Contractor shall be responsible for all costs associated with the restoration of any property pin disturbed by the Construction activities. Any property monuments, which require resetting, shall be reset under the direction of a licensed Surveyor by the State of Arizona and proper documentation recorded with the appropriate County.

Access by Residents: The Contractor shall ensure that all residents have access from the Street to their property each night. When access to a resident's property cannot be maintained during normal working hours (week days), the Contractor must personally notify the affected residents two working days in advance of the closure. Such notification shall be documented in writing to the Engineer. Emergency access shall not be blocked, for any reason without the express written permission from the owner.

Access to Public Facilities: The Contractor shall assure that safe access to facilities including, but not limited to, parking lots, picnic shelters, playgrounds, and pedestrian ways is provided. Any disruption to the public's normal use of said facilities shall not occur without the express written permission from the City.

Intersection and Driveway Maintenance: Once work has commenced in a particular street, the Contractor shall provide and maintain access facilities to all connecting streets, intersections and private driveways by ramping or surfacing with suitable materials to ensure access at all times. If in the opinion of the City, such facilities, or materials used, are not capable of supporting traffic, the Contractor shall remove the materials and provide better-suited materials, including asphalt concrete or similar, as directed by the Engineer. This work shall be considered incidental to the Project, and all costs shall be borne by the Contractor. Failure to comply with these requirements may result in stoppage of the work until corrected as determined by the Engineer, with no time extension being granted for such delay to the Project.

18. OPERATIONS, LAYDOWN YARD AND STORAGE AREAS

- A. All operations of the Contractor (including laydown yard, storage of materials, supplies, and equipment) shall be confined to areas authorized by the City. **The City of Sedona does not have available construction staging or material lay down facilities, except as specified otherwise in the specifications.** The Contractor is responsible for arranging and providing for such facilities as is deemed necessary for carrying out the work of this contract. The City does not warrant or represent in any way the availability of staging or material lay down areas within the City or vicinity of the project. It is the Bidder's responsibility to make such determinations. The price paid for mobilization shall include all costs for and associated with providing construction staging and material lay down facilities necessary for constructing the project. If a mobilization item is not included in the specification, the cost for compliance with item shall be considered as included in the unit price (s) bid for the various items of work. The Contractor shall be liable for all and any damages caused by him to such premises.

The Contractor shall comply with the following, regarding laydown yards:

- Any use of vacant property adjacent to or near the project used for parking or servicing equipment and/or storing of material will require the Contractor to provide written approval from the property owner, homeowner associations

as applicable, and the filling of a temporary use permit from the City of Sedona.

- A copy of the property owner's approval shall be submitted to the Engineer, stating the use of the laydown yard for use during the construction of this project is acceptable.
- The Contractors yard shall be enclosed with a six (6) foot temporary fence.
- Storage of Gasoline will require Fire Department approval.
- Clearing or grading of the site in excess of fifty (50) CY of soil will require a grading permit. No grading will be allowed which changes the drainage path for the parcel without the approval of the City Engineering Department. All existing pipes and drainage facilities at the laydown yard will be maintained in working order at all times.
- A stabilized construction entrance will be required if the vacant property laydown yard is not already gravel or pavement. The laydown yard shall be adequately maintained to control dust and mud from leaving the property.
- Work in the laydown yard shall be scheduled so as to comply with any City noise or light Ordinances and these specifications.
- Equipment, materials, etc., shall be located so as to minimize impact to adjacent properties.
- Before any grading of any laydown yard, property corners will be located for the parcel. Any property pins disturbed by the Contractors operations will be replaced prior to final acceptance of the project.
- The Contractor shall obtain a written release from the property owner, homeowner's associations or similarly concerned parties after completion of use. A copy of the release shall be presented to the Engineer.
- Equipment and material shall not be stored in the right-of-way and/or street easement during non-work hours without permission of the Engineer. Such permission shall be subject to finding that it is impractical to move the equipment or material because of size or that permission has been granted to close the right-of-way to all traffic, including local traffic. Lack of construction yard or other staging area shall not be considered as reason to grant permission. Such permission, if granted, shall be subject to conditions determined at the sole discretion of the Engineer.

- B. The Contractor shall hold and save the City free and harmless from liability of any nature or kind arising from any use, trespass, or damage occasioned by his operations on the premises of third persons.
- C. The Contractor shall be wholly responsible for the care, compliance with law, and storage of materials, supplies or equipment delivered on the work site or purchased for use thereon. Stored materials, supplies, or equipment shall be carefully and continuously protected from damage or deterioration and so located so as to facilitate inspection by the City. The responsibility for the care and storage of materials, supplies, or equipment shall be with the Contractor whether such materials, supplies, or equipment are furnished by the Contractor or by the City. Storage of materials, supplies, or equipment shall not unduly interfere with the progress of the Contractor's Work or the work of any other contractor.

D. Traffic Control:

Adequate traffic flow shall be maintained at all times, all barricading and temporary signage for detours and traffic control must meet the standards set by the Manual of Uniform Traffic Control Devices (MUTCD) and the City Engineer. If traffic control is not a separate bid item; then, it is considered incidental to the work and shall be included as appropriate in the Contractors bid. The Contractor must also take responsibility for public safety, meaning:

1. That, except for alleyways, one lane of the roadway for each direction must be kept open at all times; OR
2. Certified flaggers must be provided to properly channel traffic at all times when two separate lanes (one each direction) cannot be maintained open; OR
3. Total closure of a roadway shall only occur with the written permission of the City Engineer. For all rights-of-ways requiring closure for any work therein, appropriate permits shall be obtained. Prior to start of construction, the Contractor shall provide the Engineer with planned traffic control methods and procedures for this project. A notice of closure for residents, along with a map showing the planned area of distribution shall be included as part of the planned methods and procedure. Proper traffic control and advance warning signage shall be in place prior to any road closure.
4. When detours or road closures are implemented an overall map showing anticipated flow of traffic shall be provided.
5. The Contractor shall have a designated person responsible for overall traffic control on-site at all times.
6. A Traffic Control Plan shall be submitted for review. The plan is intended to be a guide; Contractor shall submit any proposed revisions for approval by the Engineer.
7. Pedestrian traffic must be maintained at all times, on at least one side of the road.
8. The Contractor shall supply a Public Announcement showing closures and detours.

E. Water Use

1. All water used by Contractor for testing, compaction, dust control, or other uses related to construction, shall be obtained by the Contractor from an approved water source. The Contractor shall be responsible for all deposits, charges and fees.

Reclaimed water is available to the Contractor for dust control and other on-site construction uses at no cost to the Contractor (other than testing costs noted

below), according to the following limitations (any required water outside these limitations shall be provided by the Contractor from an approved source):

- a. Reclaimed water will be available for use by the Contractor Monday – Friday. It shall be the Contractor's responsibility to apply for and obtain a Type 2 General Water Reuse Permit (Class A+ Reclaimed Water) from ADEQ for dust control and other construction uses. Contractor shall also be responsible for the cost of fecal coliform testing. The cost of testing is \$50 for each day that water is taken for construction use.
- b. Water shall be provided from the effluent pump station wetwell at the Wastewater Treatment Plant using contractor-provided submersible pump.
- c. Contractor is responsible to supply conveyance and storage facilities for water made available by the City. Contractor shall record and report to the City on a weekly basis the date and amount of water used.

F. Dust and Debris Control

1. **The contractor shall cover all trucked loads of soil, rock and material that may drop from, be sifted from or blown from the vehicle. The City may require that trucks arriving with uncovered loads not be allowed to deliver material to the project, regardless of whether or not the truck is the contractor's, a subcontractor's, a service provider's, or a material supplier's vehicle. If trucks leave the site with uncovered loads the City reserves the right to do one or more of the following:**
 - a. The truck will not be allowed on the site
 - b. **The contract compensation will be reduced by \$150 per observed uncovered load. The contract time will be reduced by one day**
 - c. The Police Department may issue a citation.
2. Pine slash and/or cut down pine trees shall be removed from the City within 24 hours, including any non-working days, of being broken or cut. This measure is to minimize pine bark beetle infestation in Sedona.
3. The contractor shall take measures to prevent blowing debris and/or dust from the site.
4. Dust Control shall comply with the following:
 - a. Dust control shall be maintained at all times on the project. Spray nozzles shall be used as necessary on equipment to reduce dust. Mist shall be visible when standing adjacent to the equipment.
 - b. A Dust Control Plan shall be submitted prior to Start of Construction.
 - c. Cleanup and Dust Control shall be in compliance with MAG Section 104.1.3 and 104.1.4.
5. The contractor shall clean any dirt tracked from the project work area from streets and sidewalks using equipment and methods that will not create excessive dust. Sweeping is the preferred cleaning method. Washing of streets and/or sidewalk

and other paved areas will require special permission from the Engineer and shall be subject to conditions imposed by the Engineer. The City reserves the right to require that the Contractor to cease work that is resulting in excessive tracked mud and/or dirt from and within the project area, and to require cleaning prior to allowing the ceased work to continue. The exercise of the City's right and impacts there from shall not provide a basis for claim by the contractor. Failure of the Contractor to cease work shall be sufficient reason for the City to reduce the contract time by one calendar day per incident, at the City's sole discretion.

6. Dirt, debris, wastewater and other debris shall not be disposed of in stormwater facilities and/or natural drainage channels. The City may require inspection of stormwater facilities and/or natural drainage channels prior to and during the work to verify compliance with this requirement. The City may require the contractor to clean stormwater facilities and/or natural drainage channels if the contractor has disposed of material to them. Final Completion will not be issued until all stormwater facilities have been inspected and approved.

G. Open Trenches

MAG Specification Section 601.2.10 is modified to limit the length of open trench to 1100 feet within the project. An open trench includes any longitudinal excavated area 3 inches or more below adjacent land which has settled or been left lower intentionally. All open trenches shall properly marked and protected so as to warn pedestrians and vehicular traffic of a low area.

19. RIGHT-OF-ENTRY

Contractor shall provide to the City, Architect-Engineer, or representative of the Federal, State, County, District and Municipal governmental officials and services, the proper facilities for access to the Work, whenever it is in preparation or progress.

20. ACCESS AND DRAINAGE

The Contractor shall keep a sufficient clear area around fire hydrants to permit their full and effective use in case of fire. The Contractor shall keep natural drainage and watercourses unobstructed by spoil piles, material storage, or any other operations, or provide for other equal courses effectively placed.

21. SANITARY CONVENIENCES

The Contractor shall furnish the necessary sanitary conveniences, properly secluded, for the use of work persons during construction, and these conveniences shall be maintained in a manner that will be inoffensive and in compliance with Federal, State and local health and sanitation requirements.

22. CLEANUP PRACTICES

- A. The Contractor shall at all times during the progress of the work maintain a reasonably clean job site, this includes, but is not limited to, keeping signs clean and legible, minimizing mud, rock, and dirt on roadways, and keeping ditches free of trash and construction materials. If in the opinion of the Engineer, excessive dust, mud or debris exists at the job site, the Contractor shall immediately remove said material as directed. All costs associated with this work shall be borne by the Contractor. The location of debris and material stockpiles shall be as directed by the Engineer.
- B. The Contractor shall begin his daily clean-up process at a typical time agreed to by the City at the pre-construction meeting. If the Contractor's operations and daily shut-down exceed a forty hour work week or eight hour day then the City will be entitled to withhold a portion of the Contractor's progress payment for City "overtime" work pursuant to Section 32 and 39, unless authorized by the Engineer.
- C. The site shall be kept clean of trash and debris including but not limited to, loose construction materials, such as sand, cement, lime, wood pieces, building paper, and other miscellaneous paper. All trash and debris shall be placed in an appropriate number of approved containers and moved and disposed of off the site daily in a location where it will not be possible to be dispersed. No burning of trash or debris will be permitted on the site, except where designated by the Engineer. The laydown yard shall have a minimum of one container of appropriate size at all times.

When site daily clean-up has not been kept up as requested in writing by the City the Contractor shall bring the site into compliance with the City within 24 hours or the City shall withhold \$350 for each day out of compliance.

- D. Before final payment, the Contractor shall remove all rubbish, excess materials, temporary structures, and equipment. All parts of the work shall be left in a neat and presentable condition. Excess mounds of earth shall be leveled and ruts and depressions filled, such that the completed work is attractive. If in the opinion of the Engineer, the Contractor does not maintain the Construction Site in a safe and clean condition, or does not adequately clean up the site at the completion of the work, or rectify any valid complaints of damage to property resulting from the Construction, the City may clean up or rectify damage and charge the costs thereof to the Contractor.
- E. The Contractor shall be responsible for locating sites and making arrangements for disposal of all material removed from the site. This includes concrete, asphalt, unsuitable or unstable trench material and any other trash, rubbish or debris generated as a result of construction. Asbestos, hazardous substances or materials, hazardous waste or any other regulated substances or materials shall be disposed of in accordance with all applicable federal, state and local regulations.
- F. All vegetation and improvements removed from easements by the Contractor shall be removed or repaired by the Contractor in accordance with the easement agreement with the property owner, the same being done at no additional cost to the City.

23. PLANS AND SPECIFICATIONS

- A. The City will provide the Contractor with four (4) sets of plans, drawings, and specifications after the execution of the Contract. If additional plans, drawings, and specifications are required, the Contractor shall compensate the City for it.
- B. When, in the opinion of the City, revised partial plans, drawings and specifications are required to clarify or reflect authorized changes or additional work the City shall provide four (4) copies of such revisions to Contractor. The Contractor must pay for any additional copies. Contractor shall immediately post such revisions to his record set of Contract Documents.
- C. The plans, drawings, and specifications are the property of the City, and are furnished to the Contractor for the construction of Work under the Contract only.
- D. The data given in the specifications and shown on the plans and drawings is believed to be accurate, but the accuracy is not guaranteed. The Contractor must confirm all levels, locations, measurements, and verify all dimensions on the job site prior to construction and adapt his Work into the exact limits of construction. Scale measurements taken from plans are only for reference.
- E. Drawings showing the details of the Work specified are designated "plans" or "drawings" and together with the specifications form an integral part of the Contract Documents.

24. CORRELATION OF DOCUMENTS

- A. Plans, drawings, and specifications are cooperative and supplementary. Portions of the Work, which can best be illustrated by the plans or drawings, may not be included in the specifications and portions best described by the specifications may not be depicted on the plans or drawings. All items necessary or incidental to completely construct or erect the Work specified shall be furnished, whether called for in the specifications or shown on the plans or drawings. Unless otherwise stated the plans and specifications shall be considered to require construction or erect of a complete and operable facility.
- B. Special Conditions shall take priority over Technical Specifications, which shall take priority over General Conditions; large-scale drawings shall take precedence over small-scale drawings. In case of a disagreement between the plans, drawings, and specifications, or within a document itself, the better quality and the greater quantity of work shall be estimated and included in the bid and contract sums and the matter drawn to the City's attention for further decision, and possible issuance of an addendum.

25. SHOP DRAWINGS, SAMPLES, AND OPERATOR'S INSTRUCTION

- A. The Contractor shall furnish all Shop Drawings and Samples required by the Contract Documents. Shop Drawings of equipment and devices offered by the Contractor for approval of the City shall be in sufficient detail to adequately show construction and

operation. The above material shall be submitted to the City for review in electronic format (.pdf and/or .dwg). Shop drawings submitted as herein provided by the Contractor and approved by the City for conformance with the design concept shall be executed in conformity with the Contract Documents unless otherwise required by the City.

- B. Work performed in connection with the fabrication, manufacture, shipment, or purchase of material or equipment prior to approval as specified shall be at the Contractor's sole risk and responsibility.
- C. Shop Drawings and Samples shall be accompanied by a letter of transmittal indicating that the Contractor has reviewed and approved the submittal. The transmittal shall give a list of the numbers and dates of the submittal, and shall be in the form required by the City. Any re-submittals shall show numbers and dates of previous submittals. Shop Drawings shall be complete in every respect and bound in sets.
- D. The Contractor shall submit all Shop Drawings and Samples (submittals) sufficiently in advance of construction requirements to allow ample time for checking, correcting, resubmitting, and rechecking to avoid any delay in progress of the Work. In no case however shall this time be less than five (5) working days without the consent of the Engineer. In the case of submittals for pump installations and similarly complex equipment the minimum timeframe shall be twenty (20) working days. This timeframe shall also apply to resubmittals. If more than five (5) submittals are made in a week the minimum City review time shall be extended by five (5) days for each submittal. The Contractor shall be solely responsible for delays and costs related to resubmittals or untimely submittals.
- E. Shop Drawings or Samples submitted shall be marked with the name of the Project, numbered, and bear the stamp of approval of the Contractor as evidence that the Shop Drawings and Samples have been checked by the Contractor. Any shop drawings or samples submitted without this stamp of approval shall not be considered and shall be returned to the Contractor for resubmission. If the Shop Drawings or Samples show variation from the requirements of the Contract, the Contractor shall call such variation to the City's attention in his letter of transmittal in order that, if acceptable and City gives written approval to the variation, suitable action may be taken for proper adjustment.
- F. By approving and submitting shop drawings and samples, the Contractor thereby represents that he has determined and verified all field dimensions and measurements, field construction criteria, materials, catalog numbers, and similar data, and that he has checked, and coordinated such submittals with the requirements of the Work and the Contract Documents.
- G. If a Shop Drawing or Sample, as submitted, indicates a departure from the Contract requirements which the City finds to be in the interest of the City and to be so minor as not to involve a change in the contract price or time for performance, it may approve

the Drawings or Samples; provided, however, such departure is slight in nature and does not affect the design concept of the Work.

- H. All items of standard equipment shall be the latest model at time of delivery.
- I. When Shop Drawings are submitted for the purpose of showing the installation in greater detail, their approval shall not excuse the Contractor from requirements shown on the plans and specifications.
- J. Shop Drawing and Sample submittals not conforming completely with the above requirements shall be returned to the Contractor, without action, for re-submittal and the resulting delay shall be entirely the responsibility of the Contractor.
- K. The City's check and approval of Shop Drawings and Samples, specifications, and descriptive literature submitted by the Contractor shall be only for general conformance with design concept, as otherwise provided, and shall not be construed as:
 - 1. Permitting any departure from the Contract requirements;
 - 2. Relieving the Contractor of the responsibility for any error in details, dimensions, or otherwise that may exist in such submittals;
 - 3. Constituting a blanket approval of dimensions, quantities, or details of the material or equipment shown; or
 - 4. Approving departures from additional details or instruction previously furnished by the City. Such check or approval shall not relieve the Contractor of the full responsibility of meeting all of the requirements of the Contract Documents.
- L. One (1) electronic copy and four (4) sets of bound operator's instructions and maintenance manuals shall be furnished by the Contractor for equipment furnished under the Contract that is specially listed or that is considered to be of a special or complex nature. Operator's instruction and maintenance manuals shall include, in part, detailed lubrication drawings showing type and frequency of lubrication. Detailed parts drawings shall show location, name and catalog numbers of parts.
- M. One (1) electronic copy and four (4) sets each of bound service parts manuals shall be furnished by the Contractor for all items of standard manufacture.
- N. All operator instructions, maintenance, and parts manuals shall be bound in permanent binders satisfactory to the City and shall be furnished to the City before final acceptance of the installation by the City.
- O. Four (4) copies of any manufacturer's guaranty/warranty or certificate for any type of material or equipment provided shall be submitted to the City prior to final acceptance of the Work by the City.

26. DRAWINGS SHOWING CHANGES DURING CONSTRUCTION

Throughout the progress of construction, the Contractor shall maintain a careful up-to-date record of all changes on the plans and drawings during actual construction. *With each progress payment invoice the Contractor shall provide a "Status As-Built" showing all work completed to date.* Callouts will identify type, size and quantity of each item installed. The Contractor shall annotate all sewer taps stationing upstream to downstream using swing ties from adjacent manholes or other method the Engineer may approve in writing. Upon completion of Work, and prior to acceptance by the City, the Contractor shall file with the City one set of complete contract drawings with all changes and Contractor's field construction notes neatly and legibly recorded thereon. Such drawings shall include but not be limited to, the exact routing and clearances, if changed from drawing location, of sewer, water, gas, oxygen supply, condenser water lines, fuel oil tanks and lines, fire protection lines, and any other major buried utility lines and routing of buried electrical feeder lines and changes to routing of conduit runs which are buried or concealed in concrete slabs. The Contractor shall furnish such As-Built utility and drainage invert and rim elevations as well as gutter, top of curb shots and horizontal location of valves and hydrants placed as a part of this construction. This information is for use by the City in the preparation of record "As-Built" Drawings. Curb and gutter shots shall be spaced no further than 50 feet apart and shall include any significant bends, drops or other deviations from a straight horizontal or vertical alignment.

27. MATERIALS, EQUIPMENT, SUPPLIES, SERVICES, AND FACILITIES

- A. It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, equipment rental, water, heat, light, fuel, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the Work in a workman like manner within specified time.
- B. No materials, equipment, or supplies for the Work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.
- C. Equipment shall be properly equipped with safety devices including but not limited to spark arrestors, back up alarms, reflectors, signage, labeling, and lights.
- D. At least one (1) set of all appropriate Material Safety Data Sheets shall be maintained in a common location on the project site at an identified location during all working hours.

28. WORKMANSHIP, MATERIALS, AND EQUIPMENT

- A. All material and equipment furnished by the Contractor shall be new and unused and shall strictly conform to the Contract Documents. Competent labor, mechanics and tradesmen shall be used on the Work. Experienced manufacturer's representatives shall be used to supervise the installation of equipment as may be required by the City. Any special tools or equipment, which may be required, shall be provided by the Contractor.

- B. The acceptance at any time of materials or equipment by or on behalf of the City shall not be a bar to future rejection if they are subsequently found to be defective, inferior in quality or uniformity to the material or equipment specified, or are not as represented to the City.

29. QUALITY OF MATERIALS IN ABSENCE OF DETAILED SPECIFICATIONS

- A. Where the Contract requires that materials or equipment be provided or that construction work be performed, and detailed specifications of such materials, equipment or construction work are not set forth, the Contractor shall perform the work using materials and equipment as described in the specifications. Constructed or installed as described therein, and shall follow standard practices in the performance of construction work. The work performed shall be in conformity and harmony with the intent to secure a good, serviceable standard of construction.
- B. All tests and re-tests unless otherwise provided, shall be in accordance with the pertinent sections of the latest edition of the standards applicable to the material or devices to be tested. A partial list of the principal societies referred to and their Abbreviations follows:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
ASTM	American Society of Testing Materials
AWWA	American Water Work Association
CPI	Clay Pipe Institute
CS	Commercial Standards
FS	Federal Specifications
NEC	National Electric Code
TMCA	Tile and Marble Contractors of America

30. VARIATIONS FROM ESTIMATED QUANTITIES

When unit prices are utilized in the Contract Documents, it may be reasonably expected that there could be variations in final quantities from the estimated quantities by reason of actual conditions and/or change orders. An adjustment in compensation may be allowed only to the following extent:

- A. For a decrease greater than twenty percent (20%) in either the total cost of the contract or the total cost of a major item and when a reasonable cost analysis supports an increase in the pro rata share of fixed cost chargeable to this item in total, an adjustment in the monies due the Contractor may be made. The total amount, including any adjustment, will not exceed eighty percent (80%) of the original lump sum contract

amount or, for a unit price item, the total amount, including adjustment, will not exceed eighty percent (80%) of the original extended unit bid price.

- B. For an increase greater than twenty percent (20%) in either the total cost of the contract or the total cost of a major item, any adjustment made will only apply to that cost in excess of one hundred twenty percent (120%) of the original bidding schedule. If either party presents a reasonable cost analysis that shows a change in the pro rata share of fixed costs chargeable to this item in total, an increase or decrease adjustment may be made. This increase or decrease adjustment will be made on such basis as is necessary to cover a reasonable estimate of cost, plus an allowance, not to exceed ten percent (10%), for overhead and profit.
- C. A major item is an item whose total cost, determined by multiplying the bidding schedule quantity and the contract unit price, is equal to or greater than the amount indicated below. A major item will remain a major item unless it is completely eliminated. Compensation for a completely eliminated major item shall be limited to the amounts indicated, but not to exceed the amount demonstrated by information provided to show the cost impact of the deletion, not including anticipated profit.

Total Contract amount as awarded equal to or greater than (in dollars)	But is less than (in dollars)	A major bid item Shall be equal to or greater than the following amount (in dollars)	If the item is completely eliminated compensation shall be limited to no more than (in dollars)
\$0.00	\$1,000,000	\$50,000 or 10% of the Contract amount as awarded	\$2,000
\$1,000,000	\$5,000,000	5% of the Contract amount as awarded	\$5,000
\$5,000,000	\$20,000,000	2.5% of the Contract amount as awarded	\$7,500

- D. For either an increase or decrease in cost, no claim shall be made by the Contractor for any loss of anticipated profits.

31. PROGRESS PAYMENTS

- A. When monthly progress payments are authorized, the Contractor shall, on the date determined during the pre-construction meeting, submit to the City an itemized application for payment, supported by "Status As-Builts" and such data substantiating the Contractor's right to payment as the City may require, on forms acceptable to the City. Progress payments shall be made no more than once each calendar month and provided that there are a minimum fifteen (15) calendar days between payments, unless

otherwise authorized on a payment-by-payment basis by the City Engineer or City Manager. Progress payments are subject to retainage of ten percent (10%) with possible reduction to five percent (5%) in accordance with the provisions of Arizona Revised Statutes.

- B. The Contractor shall provide to the City at the time of payment, a waiver and release to date from the Contractor and each and every Subcontractor and material supplier whose work or materials are included in the application for payment, evidencing that said Contractor, Subcontractor or material supplier has been paid in full to date.
- C. Unless otherwise provided in the Special Provisions, payment will not be made on account of materials or equipment not incorporated in the work, at the time of a request for payment, but delivered and stored at the site. Similarly, payment will not be made for materials or equipment stored at some other location unless agreed upon in writing. If payment is allowed per the Special Conditions, payment for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the City to establish the City's title to such Materials or equipment or otherwise to protect the City's interest, including applicable insurance and transportation to the site for those materials and equipment stored off-site.
- D. The Contractor warrants that title to all materials, supplies, and equipment covered by an application for payment, whether incorporated into the Work or not, shall pass to the City, upon receipt of payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances; and that such materials, supplies or equipment furnished or installed comply with the applicable requirements of the Contract Documents.
- E. The passing of title to the City as herein provided shall not be construed as relieving the Contractor of the sole and complete responsibility for:
 - 1. The care and protection of the materials, supplies, equipment, and Work for which payment has been made.
 - 2. The restoration of any damaged or destroyed Work, materials, supplies or equipment. Such responsibility shall continue until all Work under the Contract has been completed and accepted by the City.
- F. Under no circumstances shall payment constitute a waiver of the City's right to require the Contractor to fulfill all of the terms and conditions of this Contract.
- G. INVOICE PROCESSING: The City will not accept inaccurate, illegible, or incomplete invoices (requests for payments). Invoices shall be hard copy, with original signature. Electronic or facsimile signatures are not acceptable on the invoice.
 - 1. The City distributes payments on every other Friday, beginning on 01/09/20 for calendar year 2022, unless holidays dictate otherwise.

2. The Engineer must receive an acceptable, correct invoice with required supporting documentation not later than close of business on the Wednesday, nine (9) calendar days prior to the expected check distribution day.
3. For projects longer than sixty (60) calendar days duration, each request for payment shall be accompanied by a progress schedule, effective through the invoice period. The City shall not release a payment until the contractor provides an acceptable, accurate, and updated project schedule.

32. PAYMENT WITHHELD

- A. The City may decline to certify payment on account of subsequently discovered evidence or observations, may nullify the whole or any part of any payment certificate previously issued to such extent as may be necessary to protect the City from loss on account of any one or more of the following:
 1. Defective Work not remedied.
 2. A reasonable doubt that the Contract can be completed for the balance then unpaid.
 3. Unsatisfactory prosecution of the Work.
 4. Not maintaining a current project schedule.
 5. Not providing adequate progress payment "Status As-Builts".
 6. Deductions for not conforming to daily clean-up requirements.
 7. Deductions for reimbursement of City overtime inspection.
 8. Liquidated damages payable by the Contractor.
 9. Disputed Work or Materials.
 10. Failure to comply with other material provisions of the Contract.
 11. Third-party claims filed or reasonable evidence that a claim will be filed.
 12. Failure of the Contractor or Subcontractor to make timely payments for labor, equipment, and materials.
 13. Damage to the Owner.

In addition, the City reserves its rights under ARS Sections 32-1129.01 and 34-221I.

- B. When any of the above problems are resolved, payment shall be made for amounts withheld pursuant to Article 31.

33. MEASUREMENTS

- A. The itemized Application for Payment will be used by the Engineer as a basis for evaluating requests for payment, except in cases where unit prices have established the basis for payment shall include as a minimum the following items:
 1. Separate cost itemizations for mechanical, piping, structural, electrical instrumentation, painting, pre-engineered structures, and architectural finish work.
 2. Separate cost line items, showing both purchase and installed cost, for the major equipment items listed in the bidding schedule.

3. A separate line item for mobilization not to exceed ten percent (10%) of the total Contract amount. This limitation shall apply even when a bid item for mobilization is shown in the bid schedule, unless the Engineer has assigned a fixed cost for the item. Amounts excess of this limitation shall be included on the final payment.
 4. A separate line item for demobilization, not to exceed one-half of one percent (0.5%) of the total Contract amount. This limitation shall apply even when a bid item for demobilization is shown in the bid schedule, unless the Engineer has assigned a fixed cost for the item. Amount in excess of this limitation shall be included on the final payment.
 5. Separate line items for earthwork, demolition and clearing and grubbing, where appropriate. Measurement and payment for the various items shown by the Contract Drawings and described in the construction Specifications, and comprising the completed work, shall be subject to this Article.
- B. The contractor may subdivide any of the lump sum bid items in the proposal as necessary to identify items per (A) above, however the neither the total bid or the total of any subdivided bid item line shall exceed the total in the bid proposal as awarded.
- C. Payment for each item shall constitute payment in full for the furnishing of all materials, equipment, appurtenances, labor, plant and tools necessary to provide a complete workmanlike, finished, and satisfactory project, as shown by the Contract Drawings and described in the Specifications. Each item shall be completed with all necessary connections, testing, painting and related work accomplished to provide for the satisfactory use and/or operation of the item. No additional payment will be made for work related to each item, unless specifically noted or specified.
- D. No additional payments will be made for work related to any item unless specifically noted and called for in the Bid Proposal. Payment will be made at the unit price or lump sum price bid in the Bid Proposal.
- E. Measurement will be on the completed work in place, with no allowance for waste, and as may be more particularly described in the description of the various items set forth in the Specifications and as shown by the Contract Drawings.
- F. The quantities set forth in the Bid Proposal are used for the purpose of determining the basis of the Award of the Contract, and may be varied by the Engineer to conform to the requirements of the work as set forth in the Contract Drawings, and the Contractor agrees to perform the work on the basis of the prices bid for the items contained in the Bid Proposal regardless of whether or not the items or units are decreased or increased.**
- G. The Engineer shall have the right to order omitted from the Contract any item or a portion of the estimated quantity for any item found unnecessary to the work without violating the Contract or Performance Bond.
- H. Except in cases where unit prices form the basis for payment under the Contract, the Contractor shall, within twenty (20) days of receipt of the notice to proceed, submit a

breakdown of the Contract price showing the value assigned to each part of the work including an allowance for profit and overhead. In submitting the breakdown, the Contractor certifies that it is not unbalanced and that the value assigned to each part of the work represents his estimate of the actual cost, including profit and overhead, of performing that part of the work. The breakdown shall be sufficiently detailed to permit its use by the Engineer as one of the bases for evaluating requests for payment.

- H. Mobilization and Demobilization: Payment for Mobilization shall include the cost for setting up Project offices and moving Equipment to the site, storage facilities, obtaining permits, and all other items required to prepare the Project site for commencement of construction activities. Demobilization shall include removal of Contractor's facilities and Equipment, and final cleanup, and all other items required to complete Demobilization.

Payment for mobilization shall be in accordance with Section 901 of ADOT Standard Specifications for Road and Bridge Construction (most current edition), except as modified by this section and General Conditions Section 18, 33, and 66. Retention shall apply to mobilization payments. The first payment for mobilization shall be contingent on providing:

1. A traffic control plan that has been approved by the Engineer
2. The Storm Water Pollution Control Plan provisions are in place per the SWPPP in the Civil Plans
3. The Contractor shall have a City of Sedona or ADEQ NOI for stormwater pollution prevention
4. The Project Sign has been posted
5. A complete project schedule as required by the General Conditions, Section 9.

- I. Excavation-Generally: The excavation rates shall include the amount for working in such a manner as not to interfere with the stability of adjacent structures and properties, for the costs of all timbering or other support required, for all necessary measures to keep the excavation free from water and sewage whether affected by floods, storms or otherwise, for working space, refilling, consolidating and disposal of surplus material from temporary spoil heaps or disposal as directed by the Engineer. The rate shall apply to the excavation in any material, including rock.

No extra payment will be made if the position of the work as set out will not allow the use of a mechanical plant or necessitates the cartage to temporary spoil heaps of excavated material and the reloading and cartage back for refilling of excavations or disposal.

34. PAYMENT, USE OR OCCUPANCY OF WORK

- A. No progress or final payment, nor any partial or entire use or occupancy of the Work or improvement, nor acceptance thereof, by the City shall be evidence of the performance of the Contract or construed to be acceptance of defective work or

improper materials, either wholly or in part. The Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute.

- B. The City shall have the right to take possession of, use, or occupy any completed or partially completed portions of the Work, notwithstanding the time for completing the entire Work or any portions, may, or may not, have expired. Such taking possession, use or occupancy shall not be deemed an acceptance of any Work until all Work has been completed in accordance with the Contract Documents. If such prior use or occupancy increase the cost, or delays the Work, the Contractor shall be granted such extra compensation or extension of time, or both, as City may determine.
- C. Consent of Surety and endorsement from the insurance carrier or carriers permitting prior occupancy or use of any completed or partially completed portions of the Work by the City shall be secured by the Contractor. Contractor and his Surety and enforcement from the insurance carrier or carriers permitting prior occupancy or use of any completed or partial completed portions of the Work by the City shall be secured by the Contractor. Contractor and his Surety and insurance carrier hereby agree that such consent shall not be unduly withheld.

35. CLOSEOUT PROCEDURE

When the Contractor considers that the Work, or a portion thereof which the City has allowed to be accepted separately, is substantially complete, the Contractor shall prepare a letter stating the work, or a portion of the work, is substantially complete and submit to the City a comprehensive list of items to be completed or corrected. Substantial completion shall not operate to change the contract time to which liquidated damages are applicable. Reduced liquidated damages are chargeable for a project or portions thereof which have separately specified damages, if there are items of work remaining to be performed relative to such work once full substantial completion status has been attained. In such cases the amount of liquidated damages due shall be twenty-five percent (25%) of the unreduced liquidated damage amount stated in the contract, and shall not begin until after the contract completion date.

The Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the Contractor's list, the City will make an inspection to determine whether the Work or designated portion thereof is substantially complete. The City Engineer shall have the sole right to determine if a Work or portion thereof is substantially complete. If the City's inspection discloses any item, whether or not included on the Contractor's list, which is not in accordance with the requirements of the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the City. The Contractor shall then submit a request for another inspection by the City to determine Substantial Completion. When the Work or designated portion thereof is substantially complete, the City will prepare a certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the Contractor and City for security, maintenance, heat, utilities, damage to the Work and

insurance, and shall fix a reasonable time within which the Contractor shall finish all items on the list accompanying the Certificate. If the Contractor does not complete the items within the time fixed by the City, the City, upon ten (10) working days notice, shall have the option to complete the uncompleted Work for the Contractor and deduct the cost from any amount due to the Contractor, whether or not the contract completion date has passed.

The Contractor may request a written statement from the City Engineer of what constitutes substantial completion by writing a letter of "Notice Of Intent to Declare Substantial Completion." The letter shall be sent no later than fifteen (15) working days prior to the anticipated date of Substantial Completion. The letter shall state what items the Contractor intends to complete prior to declaring substantial completion and what date substantial completion is anticipated by. The City Engineer shall respond to the letter within ten (10) working days accepting or adding to the list of items to complete prior to substantial completion. The City Engineer's response to the list shall not prevent the City Engineer from amending the list within a reasonable time prior to the anticipated date of substantial completion, or from considering factors not known at the time the response was prepared.

36. FINAL PAYMENT

- A. Prior to receiving final payment, the work shall be completed according to the Contract Documents, as determined by the City. Retention shall be as provided in A.R.S. §34-221. This includes, but is not limited to, submittal of complete as constructed documents.
- B. The acceptance of final payment by the Contractor shall operate as a release to the City of all claims by the Contractor for all things done or furnished in connection with the Contract and for every act and neglect of the City, and others relating to or arising out of the Work under the Contract, except for claims made in writing and still unsettled, and specifically itemized at the time the final payment request is made.
- C. No payment, final or otherwise, shall operate to release the Contractor or his Surety from any obligations under the Contract or under the Performance Bond or Labor and Materials Payment Bond, including, but not necessarily limited to anyone or more of the following:
 - 1. Obligations arising from or relating to latent defects.
 - 2. Faulty or defective work or material, which does not comply with the requirements of the Contract.
 - 3. Failure of the construction, equipment, or fixtures to perform properly in accordance with the requirements of the Contract Documents.
 - 4. Unsettled claims.
 - 5. Claims for non-payment of laborers, mechanics, material men, or suppliers, or for equipment used or rented.
 - 6. Claims under the maintenance requirements of the Contract Documents or any special warranties provided for in the Contract Documents.

37. SUPERVISION BY CONTRACTOR

- A. The Contractor or his designated representative will be required to give personal attention to the fulfillment of this Contract and to keep the work under control and in accordance with the Schedule for Completion. The contractor shall provide a competent Representative with full authority to receive and execute such instructions, orders or directions as the Engineer, or his agents or representatives may issue in connection with the Contract.

The Contractor will supervise and direct the work at all times. He has the obligation to determine the means, methods, techniques, sequences and procedures of construction, except in those instances where the City, to define the quality of an item of work, specifies in the Contract a means, method, technique, sequence or procedure for construction of that item of work. The Contractor shall be responsible to perform the Work so that the quality of the Work conforms to the plans and the specifications while in progress and as finally completed.

- B. Instructions and information given by the City, Engineer, or his agents or representatives to the Contractor's representative on the work shall be considered as having been given to the Contractor. Before any work is done at the job site, the Contractor shall give written notice to the Engineer stating the name, home address and telephone number of the Contractor's representative. The Contractor shall also inform the Engineer in writing prior to any change of representative. A statement naming more than one person to be in charge depending upon which one is present at the time will not be acceptable.
- C. The Contractor shall file with the Engineer the names, addresses, and telephone numbers of representatives who can be contacted at any time in case of emergency. These representatives must be fully authorized and equipped to correct unsafe or excessively inconvenient conditions immediately on order of the Engineer.
- D. The Contractor shall pay and cause his Subcontractors to pay any and all accounts for labor, services, equipment, and materials used by the Contractor and his Subcontractors during the performance of work under this Contract, including all applicable taxes and insurance. Such accounts shall be paid as they become due and payable within the time limits set forth by law. The Contractor shall furnish proof of payment of such accounts to the City.
- E. The plan or method of work suggested by the City or the Engineer to the Contractor but not specified or required, if adopted or followed by the Contractor in whole or in part, shall be used at the risk and responsibility of the Contractor. The City and the Engineer assume no responsibility therefore and in no way will be held liable for any defects in the work which may result from or be caused by the use of such plan or method of work.**

38. WEATHER

- A. During periods when weather or other conditions are unfavorable for construction, the Contractor shall pursue only such portions of the work as shall not be damaged thereby. No portions of the work where acceptable quality or efficiency will be affected by unfavorable conditions shall be constructed while those conditions exist. It is expressly understood and agreed by and between the Contractor and the City that the Contract time for completion of the work described herein is a reasonable time taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.
- B. The Contractor shall not be assessed liquidated damages, nor the cost of engineering and inspection during any delay in the completion of work caused by Acts of God, acts of the public enemy, acts of a public agency or owner, or a utility to provide for removal or relocation of existing utilities, unless such delay is caused in whole or in part by Contractor or any of its Subcontractors.
- C. A rain, windstorm, high water or other natural phenomena for the specific locality of the work, which might reasonably have been anticipated from historical records of the general locality of the work, shall not be construed as abnormal. It is hereby agreed that rainfall greater than the following cannot be reasonably anticipated:
 - 1. Daily rainfall equal to, or greater than, one inch during a month when the monthly rainfall exceeds the normal monthly average by fifteen percent or more.
 - 2. Daily rainfall equal to, or greater than one and one-half (1-1/2) inch at any time.

Rainfall data shall be collected at the job site by the Contractor.

39. OVERTIME

Any Work necessary to be performed after regular working hours, on Sundays, or legal holidays, shall be performed without additional expense to the City unless otherwise provided in the Contract Documents.

The Contractor is responsible for completing his work activities within regular working hours. Should the Contractor elect to run his crews more than a typical 10-hour day, he may elect to with prior coordination with the City. Any inspection, which is required beyond the City of Sedona's Standard 10-hour work day due to extended work hours or late daily cleanup, is subject to a withholding by the City from the Contractors progress payment for the cost of the overtime inspection during that period. The amount withheld shall be itemized by person and reflect any overtime premiums paid.

40. INDEMNIFICATION

- A. To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the City, its agents, officers, officials and employees from and against all tortuous claims, damages, losses and expenses (including but not limited to attorney fees, court costs, and the cost of appellate proceedings), relating to, arising out of, or alleged to have resulted from the acts, errors, mistakes, omissions, work, and/or

services of the Contractor, its agents, employees or any tier of Contractor's subcontractors in the performance of this Contract. Contractor's duty to defend, hold harmless and indemnify the City, its agents, officers, officials and employees shall arise in connection with any tortuous claim, damage, loss or expense that is attributable to bodily injury, sickness, disease, death, or injury to, impairment, or destruction of property including loss of use resulting there from, caused by Contractor's acts, errors, mistakes, omissions, work or services in the performance of this Contract including any employee of the Contractor, any tier of Contractor's subcontractor or any other person for whose acts, errors, mistakes, omissions, work or services the Contractor may be legally liable. The Contractor shall, with respect to all work which is covered by or incidental to this Contract, indemnify and hold the City, Engineering Dept., all officers, employees, attorneys, agents of the City and the City Engineer, harmless from and against all of the following made by any person or entity not a party to this Agreement:

1. Any claim, liability, loss, damage, costs, expenses, including reasonable attorneys' fees, expert witness fees, court costs and other expenses of litigation, awards, fines, or judgments, arising by reason of the death or bodily injury to persons, injury to property, design defects (if design originated by Contractor only) or other loss, damage or expense, including any of the same resulting from any alleged or actual negligent or intentional acts or omissions of the Contractor, the Subcontractors, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether it is caused in part by a party indemnified by this Contract and regardless of whether said acts or omissions of such party are active or passive.
 2. Any claim, liability, loss, damage, costs, expenses, including reasonable attorneys' fees, expert witness fees, court costs and other expenses of litigation, awards, fines, or judgments, arising out of any dispute regarding the Contract or any work performed under the Contract.
 3. Any claim, liability, loss, damage, costs, expenses, including reasonable attorneys' fees, expert witness fees, court costs and other expenses of litigation, awards, fines, or judgments, arising out of any dispute regarding the Contract or any work performed under the Contract by any Subcontractor.
 4. Any loss or damage that may happen to the work or any part thereof, and any loss or damage to any of the materials or other property used or employed in performing the work, including any loss or damage during transit or storage of any property or materials, including any property or materials furnished by the City, including reasonable attorneys' fees, awards, fines, or judgments.
- B. However, the Contractor shall not be obligated under this Contract to indemnify the City with respect to the sole negligence or willful misconduct of the City or its agents or employees or Design Engineer.
- C. The indemnity obligations of this Contract shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which**

otherwise exists by statute or under the common law of the State of Arizona, except those in conflict with the express terms of these General Conditions. The law of comparative negligence, as adopted by the State of Arizona, shall be binding upon the relationship between the parties, except as set forth herein.

- D. The amount and type of insurance coverage requirements set forth herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

41. ACCIDENT PREVENTION - EMERGENCY - AUTHORITY TO ACT

After the Contract Notice to Proceed has been issued through final acceptance of the Contractor's work, it shall be the Contractor's responsibility for protection and safety of the public and workers twenty-four (24) hours a day, seven (7) days a week. This responsibility will also be placed on the Contractor after final acceptance when the Contractor is on site performing any Guaranty/Warranty work.

Whenever, in the opinion of the Engineer, the Contractor has not taken sufficient precaution for the safety of the public or the protection of the work to be constructed under this Contract, or of adjacent structures or properly, and whenever, in the opinion of the Engineer, an emergency has arisen and immediate action is considered necessary, then the City, with or without notice may provide suitable protection by causing work to be done and materials to be furnished and placed. The cost of such work and materials shall be borne by the Contractor, and if the same is not paid on presentation of the bills, such costs will be deducted from any amounts due or to become due to the Contractor. The performance of such emergency work shall not relieve the Contractor of responsibility for any damage that may occur.

42. PROTECTION OF WORK

The Contractor, at no additional expense to City, shall at all times safely guard and protect his own Work; provide, erect, and maintain suitable barriers around all improvements, work areas, excavations, or obstructions to prevent accidents; and provide, place, and maintain during the night sufficient lights, signals, and signs for this purpose on or near the Work. The Contractor shall at all times, until its completion and final acceptance, protect his Work apparatus, equipment, and material from accidental or any other damage; and make good any damages thus occurring at no additional cost to the City.

43. PROTECTION OF PROPERTY

- A. The Contractor, at no additional expense to the City, shall at all times (1) safely guard the City's property and abutting or adjacent property from injury, loss, or damage in connection with the Contract; (2) protect by false work, braces, shoring, or other effective means all buildings, foundations, walls, fences, property pins and other property along his line of Work, or affected directly by his Work, including, but not limited to the City's property, against damage; (3) cover or otherwise protect stockpiles of materials to avoid damage to any property from such materials; and/or (4) repair,

- replace, or make good any such damage, loss or injury, unless such is caused directly by the City or his duly authorized representatives.
- B. The Contractor shall exercise care to protect from injury all water lines, sanitary sewer lines, gas mains, telephone cables, electric cables, services pipes, and other utilities or fixtures which may be encountered during the progress of the Work. All utilities and other service facilities or fixtures if damaged, shall be repaired by the Contractor without additional compensation.
 - C. The Contractor shall personally check and verify utility information on the plans. Where existing utilities or structures are shown on the plans or drawings, they are believed to be accurate but are not guaranteed to be such or that these are the only utilities or structures in the construction area. Protection is completely the responsibility of the Contractor and he must satisfy himself as to the existence and location of all utilities and structures.
 - D. The Contractor shall give written notice of at least forty-eight (48) hours before breaking ground, to all persons, superintendents, inspectors, or those otherwise in charge of property, streets, water, gas, or sewer pipes, telephone or electrical cables, railroads, or otherwise who may be affected by the Contractor's operation in order that they may remove any obstruction for which they are responsible and have a representative on the site to see that their property is properly protected.

44. PROTECTION OF PERSONS

- A. The Contractor shall:
 - 1. At all times protect the lives and health of his employees under the Contract.
 - 2. Take all necessary precautions for the safety of all persons on or in the vicinity of the Work site.
 - 3. Comply with all applicable provisions of Federal, State, and Municipal safety laws and building codes.
 - 4. Comply with all pertinent provisions of the "Manual of Accident Prevention on Construction" issued by the Associated General Contractors of America, Inc., latest edition, to prevent accidents or injury to persons, on, or adjacent to the premises where the Work is being performed. The Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for the protection of persons and shall post danger signs warning against the hazards created by such features of construction as protruding nails, rod hoists, well holes, elevator hatchways, scaffolding, window openings, stairways, and falling materials; and he shall designate a responsible member of his organization on the Work site whose duty shall be the prevention of accidents.
- B. The Contractor shall comply with all provisions of the "Occupational Safety and Health Act" (OSHA), including any amendments thereto and rules and regulations issued pursuant thereto, applicable to the Work and performance of the Contract. Whereas state in which Work is performed has passed legislation bearing on Occupational Safety

and Health, such legislation and amendments thereto, together with rules and regulations issued pursuant thereto shall be complied with by the Contractor.

45. POTENTIALLY DANGEROUS WORK

- A. When the use of explosives, driving, or removal of piles, wrecking, excavation Work or other similarly potentially dangerous Work is necessary for the prosecution of the Work, the Contractor shall exercise the utmost care so as not to endanger life or property. The Contractor shall be fully responsible for any and all damages, claims, and for the defense of any actions against the City resulting from the prosecution of such Work in connection with or arising out of the Contract.
- B. The Contractor shall notify each private and public utility company or other owner of property having structures or improvements in proximity to the site of the Work, of his intent to perform potentially dangerous Work. Such notice shall be given sufficiently in advance to enable the companies or the owners of property to take such steps as they may deem necessary to relieve the Contractor of responsibility for all damages, claims, or the defense of any actions against the City resulting from the performance of such Work in connection with or arising out of the Contract.
- C. All explosives shall be stored in a secure manner and all storage places shall be marked clearly "EXPLOSIVES-KEEP OUT", and shall be in the care of competent watchmen at all times. Blasting Permits must be obtained from the Sedona-Oak Creek Fire District, 2860 Southwest Drive, Sedona, AZ 86336 (602) 282-6800.
- D. If blasting is required, building inspection reports must be conducted for properties within 150-feet of the proposed blasting area. For affected structures that are to remain after the construction, the report shall consider and document the existing structural and architectural condition of those structures. The intent of this report is to document the condition of such structures before construction, obtain agreement with the property owner, and use for comparison purposes after construction is completed, to ensure the structure was not damaged from construction activities. Blasting will only be considered if rock excavating equipment equal to or better than that provided by "drum-cutters" (see www.drumcutters.com), would not be effective for excavation.

46. PATENTS, COPYRIGHTS, AND ROYALTIES

- A. The Contractor shall assume all costs arising from the use of any patented article, material, device, equipment or process used or furnished by him in connection with, or incorporated in the Project. The Contractor shall save, and hold harmless the City and all officers and agents thereof from all damages, costs and expenses in law or equity (including attorneys' fees, expert witness fees, court costs, and other expenses of litigation) that may come at any time, arise or be set up by reason of any infringement or alleged infringement of any patent rights as a consequence of the installation or use of any such article, material, device, equipment or process in or about the Project. The Performance Bond required by Arizona Revised Statutes Section 34-221 shall be deemed to apply expressly to this provision of the Contract.

- B. Should the Contractor, his agent, employer or any of them be enjoined from furnishing or using any invention, article, material or plans supplied or required to be supplied or used under this Contract, the Contractor shall promptly pay such royalties and secure the requisite licenses; or, subject to acceptance by the City, substitute other articles, materials or appliances in lieu thereof which are of equal efficiency, quality, finish, suitability and market value to those planned or required under the Contract. Descriptive information of these substitutions shall be submitted to the Engineer for determination of general conformance to the Design concept and the Construction Contract. Should the City elect to refuse a substitution, the Contractor agrees to pay such royalties and secure such valid licenses as may be requisite for the City, his representatives, agents and employees or any of them, to use such invention, article, material or appliance without being disturbed or in any way interfered with by any proceeding in law or in equity on account thereof.

47. CHANGE ORDERS FOR CHANGED OR EXTRA WORK

- A. The City reserves the right at any time during the progress of the Work to make necessary alterations of, deviations from, additions to, or deletions from the Contract, or may require the performance of extra Work neither covered by the specifications nor included in the Proposal, but forming a part of the Work contracted for; provided however, the Contractor shall not proceed with any such change or extra Work without a written Change Order approved by the City. Until a resolution is reached by the City and the Contractor, the Contractor is to continue work on the project. Additional time may or may not be added to the projected (and approved) contract end date. Such changes or extra Work shall in no way injuriously affect or invalidate the Contract or the Contractor's bond, but the difference in cost shall be added to or deducted from the amount of the Contract, as the case may be. Adjustments, if any, in the amounts to be paid to the Contractor by reason of any such change or extra work shall be determined by one of the following methods in the order as listed:
1. Method A Unit prices contained in the Contract Documents for the same type or class of work.
 2. Method B By an acceptable unit price proposal from the Contractor.
 3. Method C By an acceptable lump sum price proposal from the Contractor.
 4. Method D If neither Method "B" or "C" can be agreed upon before the change or extra work is started, then the Contractor shall be paid the "actual field cost" of the work plus eighteen percent (18%) or twelve percent (12%) as stated herein below.
- B. Whenever any change or extra work is to be done, for which unit prices for the same type or class of work are contained in the Contract Documents, such work shall be done and shall be measured and paid for pursuant to Method A herein above set forth and the other applicable portions of the Contract Documents, subject to Article 30 of the General Conditions. Full compensation for taxes, overhead and other costs shall be considered as included in the unit prices bid.

- C. Methods B and C shall include an itemized cost breakdown including overhead and profit. In determining the amount payable to the Contractor, an additional five percent (5%) may be added to the amount payable to a Subcontractor, but no "pyramiding" or additional percentage shall be authorized for any work done by a Subcontractor. This percentage may be increased to seven percent (7%) if the Contractor provides proof that it is paying transaction taxes for the subcontractor. The subcontractor percentage shall be considered as compensation for taxes paid on the subcontracted work, and any other costs or profit associated the subcontracted work. The taxes shall not be separately shown as a cost in the amount to which the seven percent (7%) is applied. Full compensation for taxes, overhead and other costs shall be considered as included in the unit price or lump sum price accepted whether such items are explicitly itemized or not.
- D. When any change or extra work is performed under "Method D", the term "actual field cost" of such change or extra work is hereby defined to be and shall include:
1. The actual wages paid to all the Contractor's workmen such as foremen, equipment operators, mechanics, and laborers, for the time actually performing the change or extra work. Superintendents are considered as compensated for in the overhead.
 2. All of the Contractor's materials and supplies incorporated in the change or extra work, unless the total cost for a particular material or supply is less than twenty dollars (\$20). Materials and supplies with a total cost of less than twenty dollars (\$20) will be considered as compensated for in the overhead and profit allowance.
 3. All machinery and equipment for the time actually employed or used in the performance of the changed or extra work shall be based on the submitted and approved schedule of equipment rates, unless the hourly cost for the machinery or equipment is less than twenty-five dollars (\$25.00) per hour or one hundred fifty dollars (\$150) per day. Items with rates less than twenty-five dollars (\$25.00) per hour or one hundred fifty (\$150) per day will be considered as compensated for in the overhead and profit allowance. The contractor shall submit machinery and equipment rates for approval prior to Start of Construction.
 4. Any transportation charges necessarily incurred in connection with any equipment authorized by the City for use on said change or extra work, but which is not already on site provided the transportation cost exceeds twenty-five dollars (\$25.00).
 5. All power, fuel, lubricants, water, and similar operating expenses as well as other expendable materials.
 6. Incidental expenses incurred as a direct result of such change or extra work, including payroll taxes and a pro rata portion of premium in the Performance Bond and Labor and Materials Payment Bond, and where the premiums therefore are based on payroll costs, on Public Liability and Property Damage insurance, Workmen's Compensation insurance, and Occupational Disease Disability insurance, Builder's Risk, and other insurance required by the Contract. **In order to be allowed these amounts shall be provided in writing when submitting the first request for a progress payment. These amounts payable by the City shall not change for the duration of the contract. The twelve percent (12%) mark-up shall not apply to these items.**

7. No repairs, replacements, or other forms of overhead expense shall be included in "actual field costs".
 8. The Engineer may adjust the amount due under this method based upon a reasonable estimate of the actual cost of performing deleted work in the case of a change in work method or work material. In this case the amount due shall be the difference between the estimated cost to perform work per the original method based on conditions known at the time of the change to the extent such conditions are not the basis for a change, and the method proposed to be used plus the unit bid price for the original method.
- E. The Engineer may direct the form in which the accounts of the actual field costs shall be kept and may also specify in writing, before the work commences, the method of doing the work and the type and kind of machinery and equipment, if required, which shall be used in the performance of any change or extra work under method "D". In the event that machinery and heavy construction equipment are required for such change or extra work, the authorization and basis of payment for the use thereof shall be stipulated in the written Change Order.
- F. The twelve percent (12%) or eighteen percent (18%) of the "actual field cost" to be paid to the Contractor shall cover and be full compensation for the Contractor's profits, overhead, superintendence, and field and home office expense, and all other elements of cost not embraced within the "actual field cost" as defined herein. Eighteen percent (18%) shall be payable for Contractor costs for that portion of total change orders less than or equal to thirty thousand dollars (\$30,000). For that portion exceeding thirty thousand dollars (\$30,000) the twelve percent (12%) factor shall be applied to Contractor costs. In determining the amount payable to the Contractor, an additional percentage per C above may be added to the amount payable to a Subcontractor, but no "Pyramiding" or additional percentage shall be authorized for any work done by Subcontractors.
- G. No claim for any change or extra work of any kind shall be allowed unless the work is ordered and approved in writing by the City in the form of a Change Order.
- H. No anticipated profits shall be allowed for work deleted.
- I. If the City has work accomplished by other sources due the Contractor's failure to perform required work it may deduct an additional five hundred dollars (\$500) or five percent (5%) of the cost of accomplishing the work, whichever is greater, in addition to the cost of accomplishing the work using other sources. The City shall consider this additional amount as compensation for overhead and administration.
- J. The Contractor shall furnish satisfactory bills, payrolls, and vouchers covering all items of cost and when requested by the City, give the City access to accounts relating thereto.
- K. Any Change or extra work shall be considered a part of the Contract, subject to all of its terms, conditions, stipulations, review, guaranties, and tests may be performed

without notice to the surety on the Contractor's bond. The Contractor and surety hereby agree to these provisions.

- L. The following language shall apply to all change orders:
“THIS CHANGE ORDER CONSTITUTES FULL, FINAL, AND COMPLETE COMPENSATION TO THE CONTRACTOR FOR ALL COSTS, EXPENSES, OVERHEAD, PROFIT, AND ANY DAMAGES OF EVERY KIND THAT THE CONTRACTOR MAY INCUR IN CONNECTION WITH THE WORK DESCRIBED IN THIS CHANGE ORDER, INCLUDING ANY IMPACT ON THE DESCRIBED WORK OR ON ANY OTHER WORK UNDER THE CONTRACT, ANY CHANGES IN THE SEQUENCES OF ANY WORK, ANY DELAY TO ANY WORK, ANY DISRUPTION OF ANY WORK, ANY RESCHEDULING OF ANY WORK, AND ANY OTHER EFFECT ON ANY OF THE WORK UNDER THIS CONTRACT. BY THE EXECUTION OF THIS CHANGE ORDER, THE CONTRACTOR ACCEPTS THE CONTRACT PRICE CHANGE AND THE CONTRACT COMPLETION DATE CHANGE, IF ANY, AND EXPRESSLY WAIVES ANY CLAIMS FOR ANY ADDITIONAL COMPENSATION, DAMAGES OR TIME EXTENSIONS, IN CONNECTION WITH THE DESCRIBED WORK.”
- M. The Contractor shall not be entitled to adjustments in contract price or contract time related to submittal of any cost estimates.

48. PROCEDURE FOR REQUESTING CHANGE ORDERS –EXTRA

- A. In case any instructions, either oral or written, appear to the Contractor to involve a change or extra work for which, in his opinion, he should receive extra compensation, he shall make a written request to the Engineer for a written Change Order authorizing such change or extra work. Should a difference of opinion arise as to what does or does not constitute a change or extra work, or concerning the payment thereof, and the City insists on conformance, the Contractor shall proceed with the work after presenting written notice of claim for extra cost to the City and shall keep an accurate account of the "actual field cost" thereof as provided for in Method "D" under "Changed or Extra Work". The Contractor shall thereby not waive any right he might have to compensation for the claimed "extra cost" in connection with a change or extra work. The matter shall be submitted to the City for final determination as to whether or not a change or extra work was involved, and if so, the amount due to the Contractor.
- B. Any claims for extra cost pursuant to this section, together with supporting documents and receipts, must be filed within ten (10) consecutive calendar days after performing the work for which extra cost is claimed. The City shall have the right to reject any claim for extra cost if the foregoing procedure is not followed.
- C. In giving instructions, the Engineer shall have the authority to make minor changes that do not involve extra cost or time of performance and are not inconsistent with the design concept and purposes of the contracted work; but otherwise, except in an emergency endangering life or property, no change or extra work shall be performed unless authorized by a written "Change Order" approved by the City Council or its

designee in accordance with the City Code, and no claim for extra cost shall be valid unless so approved, except as otherwise provided herein.

49. PROCEDURE FOR REQUESTING CHANGE ORDERS--EXTRA TIME

- A. The Contract time may be changed only by a change order either alone or in conjunction with other changes. Any claim for an extension of Contract time shall be based on written notice delivered to the Engineer within seven days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence unless Engineer allows an additional period of time to ascertain more accurate data. Notice of the extent of the claim must state the cause of the delay, the date of occurrence causing the delay, and the amount of additional time requested. Requests for extensions of time shall be supported by all evidence reasonably available or known to the Contractor, which would support the extension of time requested. If the Contractor is requesting an extension of time because of weather, he shall supply daily written reports to the Engineer describing such weather and the work which could not be performed that day because of such weather or conditions resulting there from and which he otherwise would have performed. The Engineer's acceptance of the daily reports shall not be deemed an admission of the Contractor's right to receive an extension of time or waiver of the City's right to strictly enforce the time provisions contained in the Contract Documents. Requests for extensions of time failing to include the information specified in this Article and requests for extension of time which are not received within the time specified above shall result in the forfeiture of the Contractor's right to receive any extension of time requested. Any change in the Contract time resulting from any such claim shall be incorporated in a change order. The percentages specified in Section 38 and 47 G above shall be considered to include full compensation for each day or portion thereof of extra time.
- B. The Contract time will be extended in an amount equal to time loss due to delays beyond the control of Contractor if a claim is made there for as provided in paragraph A. Such delays shall include, but not be limited to, acts or neglect by City or others performing additional work, or to fires, floods, labor disputes, epidemics, abnormal weather conditions, or act of God. No extension of the Contract time will be granted where the delay is attributable to a Subcontractor, manufacturer, fabricator, supplier or distributor or any other party performing services or furnishing material or equipment on behalf of the Contractor unless such party's delay is attributable to one of the above enumerated causes. Time limits concerning substantial completion and final completion as stated in the Contract Documents are of the essence.
- C. An extension of time may be granted by the City after the expiration of the time originally fixed in the Agreement or as previously extended, and the extension so granted shall be deemed to commence and be effective from the date of such expiration. However, such extension shall not be deemed to be a release of any of the City's rights under the Contract Document unless expressly stated as such.

50. DIFFERING SITE CONDITIONS

If conditions or objects are encountered at the site which are (1) sub-surface or otherwise concealed and which differ materially and substantially from those indicated or anticipated in the Contract Documents or (2) are of an unusual nature, which differ materially and substantially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice, in writing, by the Contractor shall be given to the City promptly before conditions are disturbed and in no event later than 24 hours after first observance of the conditions. The City shall promptly investigate such conditions and, if they differ materially and substantially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the work, shall provide an equitable adjustment in the Contract Amount or Contract Period, or both as per Sections 47 through 49 of these General Conditions. If the City determines that the conditions at the site are not materially and substantially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the City shall so notify the Contractor in writing, stating the reasons. No claim by the Contractor for an equitable adjustment shall be allowed if asserted after final payment has been made under this agreement. Weather, and the effects of weather on surroundings, surface, or subsurface are to be anticipated and do not constitute a differing condition. No contract change, which results in a benefit to the Contractor, shall be allowed unless the contractor has provided the required written notice. No contract adjustment will be allowed under this section for any effects caused on unchanged work.

51. WARRANTY PERIOD

- A. Besides guarantees required elsewhere, the Contractor shall and hereby does guarantee all work for a period of two (2) years after the date of final acceptance of the work by the City and shall repair and replace any and all work together with any other work, which may be displaced in so doing, that may prove defective in workmanship or materials within the two-year period from the date of final acceptance, without expense whatsoever to the City, ordinary wear and tear and unusual abuse or neglect excepted. If the Contractor is required to repair or replace any portion of the Project pursuant to the two-year guarantee provided by this section, the repair or replacement shall similarly be guaranteed for an additional one-year period from the date of completion of the repair. In the event of failure to comply with the above-mentioned conditions, within a week (seven consecutive days) after being notified in writing by the City, the City is hereby authorized to proceed to have the defects repaired and made good at the expense of the Contractor, who hereby agrees to pay the cost and charges therefore immediately upon demand by the City. In case of emergency, where, in the opinion of the City, delay could cause serious loss or damage, repairs may be made without notice being sent to the Contractor and the expenses in connection therewith shall be charged to the Contractor.
- B. The Contractor guarantees to the City that all materials and equipment furnished under this Contract will be new and of good and sufficient quality, free from faults and defects as is necessary to complete the project as required by the plans and specifications.

- C. The City and the Contractor agree that the guarantee on the equipment possessed and used by the City, in accordance with Article 34 of these General Conditions, shall commence on the date that the City takes possession of the equipment and so notifies the Contractor in writing. City and Contractor further agree that such taking possession and use shall not be deemed as acceptance of any part of the work. Take-over of equipment may occur when such equipment can be put into routine service on a permanent basis at City's discretion.

52. AUTHORITY OF ENGINEER

- A. The Engineer shall furnish engineering services during construction of the work to the extent provided in the Contract Documents. He shall observe and review the work in the process of construction or erection. Compliance with the Contract Documents shall be the Contractor's responsibility notwithstanding such observation or review. The Engineer has authority to recommend suspension of the work when it appears such suspension may be necessary to accomplish the proper implementation of the intent of the Contract Documents. The authority to observe, review, or recommend suspension of all or any portion of the work, or exercise such other authority as may be granted by the Contract Documents, shall not be construed or interpreted to mean supervision of construction, which is the Contractor's responsibility, nor make the Engineer responsible for providing a safe place for the performance of work by the Contractor or by the Contractor's employees or those of suppliers or subcontractors or for access, visits, use, work, travel, or occupancy by any other person. The provisions of MAG Sections 104.1.4 and 104.2.5 as contained in the 2012 edition apply to this contract.
- B. The Engineer shall have authority to reject any or all work, materials, or equipment, which do not conform to the Contract Documents, and to decide technical questions, which arise in the execution of the work. The Engineer shall determine the amount, quality, acceptability, and fitness of the several kinds of work, materials, equipment, and supplies which are to be paid for under the Contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as otherwise expressly provided. In case any question shall arise between the parties to the Contract relative to the Contract Documents, the determination or decision of the Engineer shall be a condition precedent to the right of the Contractor to receive any money or payment for work under the Contract affected in any manner or to any extent by such question.

53. DECISIONS OF THE CITY

If the Contractor is not in agreement with any final decision of the Engineer, then he may appeal, in writing, such decisions to the City Manager, who shall within a reasonable time after presentation, make decisions in writing on claims properly made by the Contractor. The appeal shall contain the final decision of the Engineer as an attachment, or in the absence of such final decision a copy of a certified letter sent to the Engineer, at least fifteen (15) working days prior to the appeal, requesting such a final decision in writing. The decision of the City Manager shall be regarded as final.

54. TEMPORARY SUSPENSION OF THE WORK

- A. The City Manager may, upon the recommendation of the Engineer, or by the Manager's own determination, suspend the work.
- B. Should the discovery of a potential archaeological or historic resource occur during construction, the Contractor shall cease work at that site, immediately notify the Engineer, and shall not proceed until instructed to do so by the City. In the event such a suspension of the work occurs, the provisions of Article 49 shall apply to extend the time for final completion of the work.

55. AUTHORITY AND DUTIES OF CITY'S FIELD REPRESENTATIVE

- A. Inspectors may be placed on the work to keep the City informed as to the progress of the work and the manner in which it is being done; to keep records; act as liaison between the Contractor and the City; and to call the attention of the Contractor to any deviations from the Contract Documents. However, failure of the inspector to call the attention of the Contractor to faulty work or deviations from the Contract Documents shall not constitute acceptance of said work.
- B. The inspector cannot control how the material is used; therefore, the responsibility for its safety and proper use shall be the Contractor's. Until the job is finally completed, the Contractor may do work that changes or modifies work previously done, and even though at any given time, a piece of work might be well done and acceptable in quality, the responsibility for keeping it in that condition until the work is complete is the sole responsibility of the Contractor. For this reason, it is impossible to accept, finally, any portion of a project until the project as a whole is accepted and control of said project is transferred from the Contractor by final official written acceptance by the City.
- C. Any personal assistance which an inspector may give the Contractor will not be construed as the basis of any assumption of responsibility in any manner, financial or otherwise, by the inspector or the City.**
- D. The inspector is not and does not purport to be a Safety Engineer and is not engaged in that capacity by the City and shall have neither authority nor the responsibility to enforce construction safety laws, rules, regulations, procedures, or the safety of persons on and about the construction site.
- E. The presence or absence of an inspector on any job will be at the sole discretion of the City, and such presence, or absence of an inspector will not relieve the Contractor of his responsibility to obtain the construction results specified in the Contract Documents.
- F. The inspector is not authorized to approve or accept any portion of the work or to issue instructions contrary to the Contract Documents. Approvals, acceptance or instructions, when given, must be in writing and signed by the City. The inspector shall have

authority to reject defective materials; however the failure of the inspector to reject defective material or any other work involving deviations from the Contract Documents shall not constitute acceptance of such work.

- G. Nothing in this subsection shall in any way be so construed as to require or to place responsibility for the method, manner or supervision of the performance of the work under this Contract upon the inspector, or the City. Such responsibility rests solely with the Contractor.

56. CHARACTER OF WORKERS, METHODS, AND EQUIPMENT

- A. The Contractor shall at all times employ sufficient skilled labor in accordance with Federal, State and local labor laws; and the proper equipment for completing the project in the manner and time required by the Contract. All equipment, which is proposed to be used on the project, shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the project shall be used such that it will not damage property adjacent to the work area.
- B. Any person employed by the Contractor or any Subcontractor who, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed from the work by the Contractor or Subcontractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer. Should the Contractor or Subcontractor fail to remove such person as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until such orders by the Engineer are followed by the Contractor. The Contractor or Subcontractor shall hold the City harmless from damages or claims for compensation that may occur in the enforcement of this section.
- C. The City may require submittal of Certified Payrolls at any time from the Contractor showing the employee names, addresses, Social Security Numbers, rates of pay, payments received, payroll deductions, occupational classification(s), and hours per day worked in such classification(s) for work performed on this project by employees. The contractor shall retain such records for the minimum time required by law or three (3) years after project completion, whichever is longer. The Contractor shall also be responsible to produce upon request from the City such payroll records from its subcontractors.

57. WARRANTY OF COMPLIANCE WITH STATE AND FEDERAL LAW

CONTRACTOR understands and acknowledges the applicability to it of the Americans with Disabilities Act, the Immigration Reform and Control Act of 1986 and the Drug Free Workplace Act of 1989. CONTRACTOR must also comply with A.R.S. § 34-301, "Employment of Aliens on Public Works Prohibited," and A.R.S. § 34-302, as amended, "Residence Requirements for Employees."

- A. Under the provisions of A.R.S. § 41-4401, CONTRACTOR hereby warrants to CITY that CONTRACTOR and each of its subcontractors will comply with, and are contractually obligated to comply with, all Federal Immigration laws and regulations that relate to their employees and A.R.S. § 23-214(A) (hereinafter "Contractor Immigration Warranty").
- B. A breach of the Contractor Immigration Warranty shall constitute a material breach of this contract and shall subject CONTRACTOR to penalties up to and including termination of this contract at the sole discretion of CITY.
- C. CITY retains the legal right to inspect the papers of any contractor or subcontractor employee who works on this contract to ensure that the contractor or subcontractor is complying with the Contractor Immigration Warranty. CONTRACTOR agrees to assist CITY in regard to any such inspections.
- D. CITY may, at its sole discretion, conduct random verification of the employment records of CONTRACTOR and any subcontractors to ensure compliance with Contractor's Immigration Warranty. CONTRACTOR agrees to assist CITY in regard to any random verification performed.
- E. Neither CONTRACTOR nor any subcontractor shall be deemed to have materially breached the Contractor Immigration Warranty if CONTRACTOR or any subcontractor establishes that it has complied with the employment verification provisions prescribed by sections 274A and 274B of the Federal Immigration and Nationality Act and the E-Verify requirements prescribed by A.R.S. § 23-214, Subsection A.
- F. The provisions of this article must be included in any contract that CONTRACTOR enters into with any and all of its subcontractors who provide services under this contract or any subcontract. "Services" are defined as furnishing labor, time or effort in the State of Arizona by a contractor or subcontractor. Services include construction or maintenance of any structure, building or transportation facility or improvement to real property.

58. QUALITY CONTROL AND TESTING

- A. The Contractor will support the Testing Company when contracted by the City for Quality Control and testing for specification compliance and assurance.
- B. During the progress, the work shall be subject to the review and observation of the City. The Contractor shall afford every reasonable facility and assistance to the City to make such review. If any work is covered up without approval or consent of the City, it will be uncovered for examination at the Contractor's expense.
- C. The fact that the City is on the job site shall not be taken as an acceptance of the Contractor's work or any part of it. The Contractor shall notify the City upon completion of his Contract, and the work shall be given final construction review by

the City, and any tests and re-tests shall be witnessed by the City or his representative. If all parts of the work are acceptable and substantially comply with the intent of the Contract Documents, initial acceptance shall be made by the City. If parts of the work are not acceptable and require additional work or rework by the Contractor to complete the Project, such costs shall be borne by the Contractor.

- D. Contractor shall submit to the City, ten (10) days in advance of construction and without charge, samples or specifications of materials he proposes to use and shall not use these materials until he has received approval from the City.
- E. Contractor shall furnish tests and reports on tests of all materials, equipment and installations called for in the Contract Documents. The testing laboratory must be approved by the City and the Contractor shall pay the cost of the tests, and necessary re-tests, including all transportation charges unless otherwise provided by the Contract Documents.
- F. Required certificates of inspection, testing, or compliance shall be secured by the Contractor and promptly delivered by him to the Engineer. Certificates shall be provided within five (5) working days after the test is conducted. Each report shall indicate compliance with the specifications.
- G. The City reserves the right to perform additional inspections and testing deemed appropriate with their own forces or with outside consultants or testing agencies. Should such inspection or testing reveal work that is not in compliance with Contract Documents, such costs of inspection or testing, and any required rework shall be borne by the Contractor.
- H. Following is a summary of minimum frequency of testing the city shall require. If there are conflicts in the frequency of testing between this Section and the Technical Specifications, the stricter of the two will govern. This list is a partial list of major items of work, if an item is a part of the project and not listed the Contractor shall provide testing for that item. The Contractor shall provide the appropriate tests for the activities a part of the project. The City reserves the right to request a greater frequency for the testing.

The following frequencies are based on a maximum of 8" lifts. When the lifts are greater than 8", the frequency of testing shall increase proportionately with the increased depth of lift.

Activity	Frequency
Roadway Fills	1 each 300 ft per lift
AB Subgrade	1 each 300 ft per lift
AC Pavement	1 each 300 ft per lift
Trench Backfill	1 each 300 ft per lift
Concrete Curb & Gutter	4 cylinders per 50 cy concrete
Concrete Sidewalk	4 cylinders per 50 cy concrete

59. TERMINATION OF CONTRACT

- A. The City may, at any time, terminate the Contract at the City's convenience and without cause. Such termination shall be effective upon receipt by Contractor of written notice from the City of such termination for the City's convenience. Contractor shall cease operations as directed by the City in the notice of termination and take actions necessary, or that the City may direct, for the protection and preservation of the work. In the event of a termination for convenience, the Contractor shall be paid only the direct value of its completed work and materials supplied as of the date of termination, and Contractor shall not be entitled to anticipated profit or anticipated overhead or any other claim of damages from the City. Further, in the event a termination of the Contractor for cause is determined to have been without legal right, then the termination shall be deemed to have been a termination for convenience.
- B. If the Contractor refuses or fails to prosecute the work or any separable part thereof with such diligence as will ensure its completion within the time specified herein, or any extension thereof granted in the manner specified herein, or fails to complete the work within such time, or if the Contractor fails to comply with any written order of the Engineer or the City or fails to timely pay Subcontractors, material, men, or laborers, or if the Contractor should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he or any of his Subcontractors should violate any of the provisions of the Contract, then the City may serve written notice upon the Contractor and his surety of its intention to terminate the Contract and, unless within ten (10) days after the service of such notice such violations of the Contract cease and satisfactory arrangements for the corrections thereof are made, the Contract shall without further notice, upon the expiration of said ten (10) days or such extensions thereof as may be expressly granted by the City in writing, cease and terminate.
- C. In the event of any such termination, the Contract shall be deemed terminated and not rescinded. Following such termination of the Contract, the City will take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the Project by whatever method the City may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the work is finished, or completion is permanently suspended by the City. If the unpaid balance of the Contract price exceeds the direct and indirect costs of completion of the project, including compensation for additional professional service, including but not limited to fees charged by the City's attorney, such excess shall be paid to the Contractor. If such costs or liquidated or actual damages as provided by this Contract exceed such unpaid balance, the Contractor shall pay the difference to the City. Such additional costs and any liquidated or actual damages due to the City under this Contract will be determined by the City Manager and be submitted to the City Council in the form of a Change Order to the Contract.
- D. Any extensions of time granted by Change Order or other extensions granted by the Council do not constitute a waiver of the City's right to terminate the Contract pursuant to this section for the Contractor's failure to complete the Project within the time

specified in the Contract and any authorized extensions thereto, nor do such extensions constitute a waiver of the City's right to collect liquidated damages.

- E. If the work is stopped by order of a court, public authority, or the City for a period of ninety (90) calendar days or more, through no act or fault of the Contractor, anyone employed by such Contractor or his Subcontractors, then the Contractor may terminate the Contract in accordance with these Contract Documents.

60. TIME IS OF THE ESSENCE

It is mutually understood and agreed by and between the parties to the Contract that in the execution of the same, time is an essential element of the Contract, and it is important that the work progress vigorously to completion.

61. LIQUIDATED DAMAGES

For each and every calendar day that work shall remain uncompleted after the time specified for the completion of the work in the Contract, or as adjusted by a change order, the sum per calendar day, as stipulated in the Advertisement for Bids, shall be deducted from any money due or to become due to the Contractor, not as forfeit or penalty, but as liquidated damages. This sum is fixed and agreed upon between the parties because the actual loss to the City and to the public caused by delay in completion will be impractical and extremely difficult to ascertain and determine. It is agreed that the City has made a good faith attempt to estimate the loss caused by any delays and that the estimate is incorporated in the sum, which is agreed to be reasonable. If the City allows the Contractor to complete or attempt to complete the work subsequent to the date of completion specified herein, such action shall not constitute a waiver by the City of the imposition of the liquidated damages provision as specified herein.

62. CITY'S REMEDIES CUMULATIVE AND NONWAIVER

No right or remedy conferred upon or reserved to the City by the Contract shall be considered exclusive of any other remedy or contractual right, but the same shall be distinct, separate, and cumulative, and shall be in addition to every other remedy existing at law or in equity or by statute; and every remedy given by the Contract to the City may be exercised from time to time as often as the occasion may arise, or as may be deemed expedient. No delay or omission on the part of the City to exercise any right or remedy arising from any default on the part of the Contractor shall impair such right or remedy or shall be construed to be a waiver of any such default or an acquiescence thereto, or otherwise affect the right of the City to enforce the same in the event of any subsequent breach or default by the Contractor.

63. SEVERABILITY CLAUSE, DISPUTE RESOLUTION, APPLICABLE LAW

- A. This Contract shall be governed by the laws of the State of Arizona, and venue for any litigation arising out of this Contract shall be in the Superior Court of the State of Arizona in and for the County of Coconino or the County of Yavapai, depending upon

the location of the work, if the amount in dispute is in excess of \$5,000.00. If the amount in dispute is less than \$5,000.00, jurisdiction and venue shall lie in the nearest Justice of the Peace Court of the appropriate county. Arbitration shall not be an alternative method of settling disputes unless separately agreed upon in writing by the parties. This Contract shall not be construed to create any contractual relationship of any kind between the Engineering Dept., and the Contractor or any Subcontractor, or between the City and any Subcontractor. During any dispute arising hereunder, the Contractor shall continue to perform all work in accordance with the Contract Documents. In the event of any dispute arising hereunder, the prevailing party in the resolution of such dispute shall be entitled to recover its attorney's fees and costs incurred.

- B. The provisions of this Contract shall be deemed to be severable, and if any term, phrase or portion of the Contract shall be determined to be unlawful or otherwise unenforceable, the remainder of the Contract shall remain in full force and effect.
- C. Any and all disputes relating to this Contract shall be subject to the provisions of Chapter 3.10 of the Sedona City Code. The City Code can be viewed on the City of Sedona website, as well as, the City Clerk's Office, City Hall, Sedona, Arizona.
- D. Notwithstanding the mediation provisions set forth in Paragraph 62.C above, either party may submit, by demand letter, correspondence or notice, to the other party, any claim, counterclaim, dispute or other matter in question between the Contractor and the City arising out of or relating to this Contract, the Contract Documents, the Plans, the Project or the work, or breach thereof, and such claim, counter claim, dispute or other matter in question shall be subject to and decided by arbitration in accordance with the Rules for Non-Administered Arbitration of Business Disputes (the "Rules") of the Center for Public Resources ("CPR") currently in effect, except as provided herein and except where modified by the provisions hereof.
- E. Any arbitration arising out of this Contract, the Contract Documents, the Plans, the Project or the work, or any breach thereof may include, by consolidation or joinder, or in any other manner, at the discretion of either the Contractor or the City, any other entities or persons whom the Contractor or the City, as the case may be, believes to be substantially involved in a common question of law or fact.
- F. All demands for arbitration and all responses thereto that include any monetary claim, must contain a statement that the total sum or value in controversy as alleged by the party making such demand or response is not more than \$150,000.00 (exclusive of interest and arbitration fees and costs). The arbitrators will not have jurisdiction, power or authority to consider or make findings except the denial of their own jurisdiction concerning any controversy where the amount at issue is more than \$150,000.00 (exclusive of interest and arbitration fees and costs) or to render a monetary award in response thereto against any party which totals more than \$150,000.00 (exclusive of interest and arbitration fees and costs). Notwithstanding the foregoing provisions, the parties may mutually agree to waive the jurisdictional limitations set forth in this sub-

paragraph. In the event of such mutual waiver, all other provisions in this sub-paragraph shall apply.

- G. Demand for arbitration shall be filed with the other party in accordance with Rules. A demand for arbitration shall be made within a reasonable time after the claim, dispute, or other matter in question has arisen. In no event shall the demand for arbitration be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question could be barred by the applicable statute of limitations.
- H. In the event the amount in controversy is less than \$50,000.00 a sole arbitrator shall be appointed in accordance with Rules. In the event the amount in controversy is \$50,000.00, the demanding party shall appoint one party-appointed arbitrator in its notice demand for arbitration. The responding party may within ten (10) days, appoint a second party-appointed arbitrator. The party-arbitrators shall appoint a third arbitrator in accordance with the Rules. If the party-arbitrators fail to appoint a third arbitrator, the third arbitrator shall be appointed in accordance with the Rules. If the responding party fails to appoint a second party-appointed arbitrator within the time so provided, selection of the second arbitrator shall be in accordance with the Rules.
- I. The decision of the arbitrators shall be in accordance with laws of the State of Arizona and the United States. The arbitrators shall prepare written findings of fact and conclusions of law upon which the decision and award shall be based. The arbitrators may award compensatory damages and attorneys' fees and costs to the prevailing party. The arbitrators shall have no authority to award consequential damages or punitive damages, and the parties hereby waive any claim to those damages to the fullest extent allowable by law.
- J. The demanding party shall select the locale of arbitration, but shall not choose a location greater than twenty-five (25) miles from the Project site.
- K. This agreement to arbitrate shall be specifically enforceable by either party under the prevailing laws of the State of Arizona and the United States. Any award rendered by the arbitrators shall be final and enforceable by any party to the arbitration, and judgment shall be made upon it in accordance with the applicable laws of any court having jurisdiction thereof. The arbitrators' decision shall be final and conclusive as to the facts. Either party may appeal manifest errors of law to a court of competent jurisdiction within fifteen (15) days of the award.
- L. Unless otherwise agreed in writing, and notwithstanding any other rights or obligations of either of the parties under the Contract, the Contractor and the City shall carry on with the performance of their respective duties, obligations and services hereunder during the pendency of any claim, dispute or other matter in question giving rise to arbitration or mediation, as the case may be. The City shall be under no obligation to make payments to the Contractor on or against such claims, disputes or other matters in question giving rise to arbitration or mediation, during the pendency of such

arbitration or mediation or other proceedings to resolve such claims, disputes or other matters in question.

64. POTHOLING REQUIREMENTS

The Contractor shall pothole all existing utilities 1,000 feet ahead of trenching activities to allow adequate time and distance to allow for the adjustment of grade or location of the construction activities. The contractor shall pothole at least two (2) working days ahead of installing facilities such as manholes, sidewalks, storm drainage inlets, footing, headwalls, and similar non-longitudinal installations. The Contractor shall backfill the pothole after verifying the depth, size and location of the utility. If a potential conflict is encountered, temporarily plating the potholed utility will be allowed for review and coordination of a resolution of the conflict with the City and affected utilities representatives.

The City requests a minimum of five (5) working days notification of a potential conflict for marked utilities. This requirement does not relieve the Contractor of the responsibility to make the City aware of conflicts timely of the Contractor's awareness. If potholing 1,000 feet in advance of trenching activities has not been kept up and a conflict creates down time or delays in work no extension of time or compensation for down time will be considered for that conflict.

65. UNMARKED UTILITY REPAIR

If in the course of work, a conflicting utility line that was not shown on the plans is discovered, the Contracting Agency will either negotiate with the owner of the Utility for relocation, change the alignment and grade of the trench or roadbed, provide encasement or sleeving, relocate the utility, or as a last resort, declare the conflict as "extra work" to be accomplished by the Contractor in accordance with Section 47 of these General Specifications. In the case of unmarked or incorrectly marked utilities the Contractor shall consider that responsibilities are per Arizona State Statutes Section 40 –360.

The Contractor shall contact the City and utility affected immediately upon damaging or breaking an unmarked utility. If an unmarked utility is found the Contractor shall take every precaution to not damage the utility and work around the conflict with the City and Utility representatives. No interpretation of this provision that changes the responsibility for non-located and improperly located utilities per Arizona State Statutes Section 40 –360 shall be valid.

66. UTILITY SEPARATION

The Contractor shall maintain as a minimum one (1) foot of vertical clearance and three (3) feet of horizontal clearance for all utility crossings. Water/sewer minimum separations will be two (2) feet vertical clear and six (6) feet horizontal clear. If less than one (1) foot but more than six (6) inches clearance is all that can be accommodated concrete encasement shall be provided.

67. NOTIFICATION TO RESIDENTS & COMMUNITY RELATIONS

The Contractor shall inform the residents along the construction area of the proposed work. This notification and community relations shall include, but not necessarily be limited to:

A. Mailings

The Contractor shall prepare a letter for mailing to the residents located adjacent to the project. This mailing will include a description of work to be done, work hours, date's for begin and end construction, Contractor representative contact name and phone number. The cost for the mailings shall be incidental to the project.

B. Informational Signage

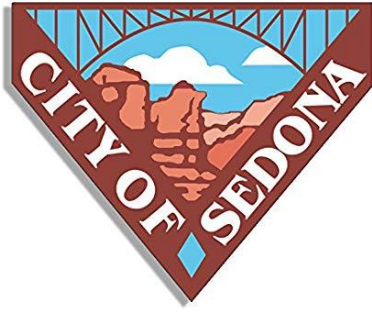
The Contractor shall provide and install advance information signs and project information signs before beginning construction to inform the public of the forthcoming project, construction dates, and suggested alternate routes. Sign layout shall be as approved by the Engineer. Signs shall not be constructed or installed prior to approval by the Engineer for the designs, sizes and locations. The Contractor shall maintain the signs as necessary and update the information as requested by the Engineer. The information signs shall be shown on the traffic control plan. The cost for this work shall be included in the unit bid price for Mobilization.

C. Meetings

The Contractor may be requested to attend and participate in a pre-construction public meeting if deemed necessary by the Engineer. Meeting time, location and agenda will be determined by the Engineer. The cost for this meeting if held shall be incidental to the project.

D. Driveway impact notification

The Contractor shall notify any resident or business of any access restrictions at least 48 hours prior to access restriction. Notification to residents is considered incidental to the projects activities and included in the unit price of the various activities.



CIP: SIM-1B
Uptown NB Improvements

Project Special Provisions (Table of Content)

SPONSOR:
CITY OF SEDONA, ARIZONA
DEPARTMENT OF PUBLIC WORKS

ENGINEER:
KIMLEY-HORN
101 WEST GOODWIN STREET
SUITE 303
PRESCOTT, AZ 86303

June 2023



THE SPECIAL PROVISIONS SHALL MODIFY AND SUPERSEDE THE VARIOUS SECTIONS OF
THE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD
SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION, TECHNICAL
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SPECIAL PROVISIONS

ADD the following Sections:

104 SCOPE OF WORK

TS104: ADD the following:

B. Project Description and Location:

1. The Project consists of roadway improvements in Uptown Sedona. The improvement will include an additional northbound travel lane, raised median, and 10' shared use path along SR-89A from approximately 1000' south of Forest Road to the Jordan Roundabout.

104.1.2 Maintenance of Traffic: ADD the Following

Within all residential areas, flaggers and construction warning signage shall be used during all work, unless otherwise approved by the Public Works Department. A minimum of one lane shall be provided at all times during construction in order to provide access to the adjacent properties. Flaggers shall be equipped with radio communication when not in full view of each other. Traffic control shall be maintained in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), which is published by ATSSA/ITE/AASHTO, and approved by USDOT and the Federal Highway Administration (current edition). All construction signs shall have high intensity sheeting with black legend on an orange fluorescent background unless approved by the City Public Works. The mounting height for post mounted signs shall be a minimum of seven feet, and the mounting height of portable stand mounting signs shall be a minimum of five feet, measured from the bottom of the sign to the near edge of pavement elevation. A temporary traffic control plan shall be submitted to the City a minimum of 7 days prior to the commencement of any work. The temporary traffic control plan shall conform to Part 6 – Temporary Traffic Control, in the MUTCD. It is the Independent Contractor's responsibility to comply with the temporary traffic control plan. The City may stop work on a project until traffic safety concerns have been corrected.

105 CONTROL OF WORK

105.6 Cooperation with Utilities: ADD the following

Comply with the requirements of MAG Section 105.6 and as modified herein.

The locations of existing underground utilities have been shown on the plans to the best of the Design Engineer's knowledge; however, it shall be the Contractor's responsibility to field verify all utility locations and to coordinate in a timely manner with the pertinent utility companies so that any obstructing utility installation may be adjusted without delay to the Contractor's project schedule. In addition, The City of Sedona will not consider additional compensation requests from the Contractor to perform any potholing, utility company coordination, etc. needed to locate/verify utility location, to adjust contract work items as necessary to avoid utility line conflict, to cooperate with utilities in adjusting schedule as needed to allow for utility company work, relocations, etc.

To aid in the relocation of the power and communication lines, the contractor shall construct a joint trench with utility supplied conduit and sweeps as shown on the project plans. All trenching shall follow Section 601 of the MAG Specifications and will meet the power and communication provider requirements. The Contractor shall plate any open trenches outside of construction hours.

The Contractor shall be responsible for potholing all utility conflicts in a timely manner.

Contacts: The following table lists the various utility contact personnel:

Company	Name	Phone Numbers
CenturyLink	Kevin Wagner	(602) 430-9388
UniSource Energy Services	Taylor Mathe	(928) 203-1214
APS	Matt Herrera	(928) 274-9659
Sudden Link	Jason Quinlan	(928) 203-1270
Arizona Water Company	Casey Goff	(928) 282-7092
City of Sedona Wastewater	Andy Dickey	(928) 203-5039

No measurement or payment will be made for the needed coordination and providing access to utilities for work.

310 PLACEMENT AND CONSTRUCTION OF AGGREGATE BASE COURSE

310.5 Payment: Add the following

Pay Item: 310.1 10" Aggregate Base Course (SY)

317 ASPHALT MILLING

317.3 Measurement and Payment: Add the following

Pay Item: 317.1 Remove by Milling Asphalt 3" Deep, 3" Thick ½" Mix Asphalt Pavement Overlay (SY) (BID ALTERNATIVE A)

321 ASPHALT CONCRETE PAVEMENT

321.13 Payment: Add the following

Pay Item: 321.1 6" Asphalt Concrete Pavement (SY)

340 CONCRETE CURB, GUTTER, SIDEWALK, SIDEWALK RAMPS, DRIVEWAY, & ALLEY ENTRANCE

340.6 Payment: Add the following

- | | | |
|------------------|--------------|---|
| Pay Item: | 340.1 | 6" Vertical Curb and Gutter, MAG Std. Dtl. 220-1 (Type A) (LF) |
| | 340.2 | 12" Vertical Curb and Gutter, MAG Std. Dtl. 220-1 (Type A) (LF) |
| | 340.3 | Concrete Roll Curb and Gutter, MAG Std. Dtl. 220-1 (Type C) (LF) |
| | 340.4 | Curb Transition, MAG Std. Dtl. 221 (EA) |
| | 340.5 | 4" Concrete Shared Use Path, Modified MAG Std. Dtl. 238-3 (SF) |
| | 340.6 | Curb Ramp, Custom Dtl. (EA) |
| | 340.7 | Curb Cut (EA) |

345 ADJUSTING FRAMES, COVERS, VALVE BOXES, WATER METER BOXES AND PULL BOXES

345.5 Payment: ADD the following:

- | | | |
|------------------|--------------|--|
| Pay Item: | 345.1 | Adjust Electrical Box Frame and Cover (EA) |
| | 345.2 | Adjust Existing Frame and Cover, MAG Std. Dtl. 270 (EA) |
| | 345.3 | Adjust Existing Manhole Frame and Cover, MAG Std. Dtl. 422 (EA)
(BID ALTERNATIVE A) |

350 REMOVAL OF EXISTING IMPROVEMENTS

350.4 Payment: ADD the following:

- | | | |
|------------------|---------------|---|
| Pay Item: | 350.1 | Remove and Dispose Existing AC Pavement (SY) |
| | 350.2 | Remove and Dispose Existing Curb and Gutter (LF) |
| | 350.3 | Remove and Dispose Existing Concrete Sidewalk (SF) |
| | 350.4 | Remove and Dispose Existing Railing (LF) |
| | 350.5 | Remove Existing Pavement Striping (LS) |
| | 350.6 | Remove and Salvage Existing Sign (EA) |
| | 350.7 | Remove and Dispose Existing Sign (EA) |
| | 350.8 | Remove and Relocate Existing Solar Bollard Light (EA) |
| | 350.9 | Remove and Relocate Existing Traffic Sign (EA) |
| | 350.10 | Remove and Replace Existing Concrete Pavement (SY) |
| | 350.11 | Remove and Dispose Existing Traffic Signal Cabinet (EA) |
| | 350.12 | Remove and Dispose Existing Traffic Signal Meter Pedestal (EA) |

402.1 DUAL COMPONENT PAVEMENT MARKINGS

- A. Unless otherwise approved by the City Engineer (Sedona R/W) or ADOT Engineer (ADOT R/W), all final striping shall be reflectorized dual component epoxy placed over the existing striping 30 days after completion of the final pavement surface, or as directed by the Engineer. Work under this item shall be performed in accordance with ADOT Specifications Section 709 (Dual Component Pavement Markings).
1. Stop Bars and Crosswalks - Work under this item shall consist of the application of dual component pavement marking material at the locations noted on the project plans. All stop bars shall be 18 inches in width and crosswalk striping shall be 12 inches in width.
 2. Pavement Markings, Symbols, and Legend – Work under this item shall consist of the application of dual component pavement marking material at the locations noted on the project plans.

Measurement and Payment:

Measurement and Payment for pavement marking symbols or legend shall be at the per each basis for each symbol or legend installed in accordance with ADOT section 709-4 and 709-5.

- Pay Item:**
- 402.1.1 Dual Component Pavement Symbol (Left Turn Arrow)**
 - 402.1.2 Dual Component Pavement Symbol (Straight Arrow)**
 - 402.1.3 Dual Component Pavement Symbol (Shared Path Bike/Ped Symbol)**
 - 402.1.4 Dual Component Pavement Legend “Only”**
 - 402.1.5 Dual Component Pavement Legend “89A”**
 - 402.1.6 Dual Component Pavement Legend “179”**

402.2 PERMANENT PAVEMENT MARKINGS

- A. Work under this item shall be performed per ADOT Specifications Section 708.

Measurement and Payment:

Measurement shall be in accordance with ADOT Section 708-4 (Width times Length divided by 4 inches equals LF as shown in bid schedule).

Payment shall be in accordance with ADOT Section 708-5.

- Pay Item:**
- 402.2.1 4” White Solid Permanent Pavement Markings (Traffic Paint Stripe) (LF)**
 - 402.2.2 4” White Broken Permanent Pavement Markings (Traffic Paint Stripe) (LF)**
 - 402.2.3 18” White Stop Bar (Traffic Paint Stripe) (LF)**
 - 402.2.4 Paint Median (Yellow) (LF)**
 - 402.2.5 Paint Curb (Yellow) (LF)**

403 PERMANENT SIGNING, SIGN POSTS AND DELINEATORS

TS403.4 Measurement and Payment: ADD the following:

Measurement and payment shall be the unit price per each for posts and sign panels, complete and in place including the sign post foundations.

Payment for the removal and reinstall of the existing signs shall be at the unit price of each and shall include the removal and disposal of existing foundation and post.

- Pay Item:** **403.1 Perforated Sign Post and Post Foundation (EA)**
 403.2 Flat Sheet Aluminum Sign Panel, Diamond Grade (EA)

406 TRAFFIC SIGNALS

406.1 Construction Requirements

All traffic signal work shall conform to the latest editions of ADOT's Traffic Signals and Lighting Standard Drawings and ADOT's Standard Specifications for Road and Bridge Construction. The extensions on the existing video detection shall be salvaged and reused for the new video detection system. Additionally, the existing cabinet foundations are to remain and be utilized for the new cabinet at each location.

All Other work shall be per MAG Specifications and Details in Appendix B.

406.2 Measurement and Payment

- Pay Item:** **406.1 Controller Cabinet Assembly (EA)**
 406.2 Controller Cabinet Foundation (EA)
 406.3 3-Camera Video Image Detection System – Detection for 3 Approaches (EA)
 406.4 2-Camera Video Image Detection System – Detection for 2 Approaches (EA)
 406.5 Service Pedestal Foundation (EA)
 406.6 Electrical Service Pedestal System (EA)

430 LANDSCAPE AND PLANTING

430.8 Plant Guarantee and Maintenance: REMOVE AND REPLACE with the following:

The Contractor shall insure that all plant materials (shrubs and trees) are in a sound, healthy, vigorous condition free from insects, bark abrasions, or other objectionable disfigurements at time of planting. Contractor shall immediately replace any shrub which is unacceptable at any time up to and including final acceptance of the project or completion of the plant establishment period whichever occurs later. The Contractor is responsible for hand-watering the shrubs for the duration of the landscape establishment period to promote establishment and maintain plant health. The Contractor is not responsible for the guarantee or maintenance of the trees that are planted as part of this project. The care and maintenance of the trees, including watering, is the responsibility of the adjacent property owners once the trees are planted by Contractor.

When the termination of the plant establishment period extends beyond the final acceptance date for the project, this additional period of time for plant establishment may be considered as a special warranty period within the standard 1-year guarantee period and the Engineer may authorize final payment in accordance with Section 109. Unless otherwise authorized by the Engineer, the Contractor shall maintain all landscaped areas on a continuous basis as they are completed during the course of work and until final project acceptance or the termination of the plant establishment period, whichever occurs later.

Maintenance shall include keeping the landscape/seeded areas free of debris, weeding, and cultivating the planted areas at intervals acceptable to the Engineer. The Contractor shall provide adequate personnel to accomplish the required maintenance. Pruning of shrubs shall be as directed by the Engineer.

430.9 Plant Establishment Period: REMOVE AND REPLACE with the following:

The Contractor shall request an inspection by the Engineer whenever substantial completion of the planting and related work has been accomplished. After this initial inspection, and subject to his approval of the work, the Engineer will issue a written field notification to the Contractor setting the effective, beginning date for plant establishment. The plant establishment period shall be for a period of 730 calendar days, but is subject to extension by the Engineer if the landscape areas are improperly maintained, appreciable plant replacement is required, or other corrective work becomes necessary. At final project acceptance or at the end of the plant establishment period, a final acceptance inspection of the planted areas will be made by the Engineer.

430.10 Payment: ADD the following:

Measurement and payment shall be the unit price per each for each solar bollard per First Light PLB Series Solar Powered LED Bollard specification, Appendix B complete and in place including the foundations.

- Pay Item:**
- 430.1 Shrub – 5 Gallon (EA)**
 - 430.2 Shrub – 1 Gallon (EA)**
 - 430.3 Rock Mulch (SY)**
 - 430.4 Landscape Establishment (LS)**
 - 430.5 Tree – 15 Gallon (EA)**

440 SPRINKLER IRRIGATION SYSTEM INSTALLATION

440.11 Payment: ADD the following:

- Pay Item:**
- 440.1 Irrigation Sleeve (LS)**

505 CONCRETE STRUCTURES

505.12 Payment: ADD the following:

- Pay Item:**
- 505.1 Modify Existing Catch Basin (EA)**
 - 505.2 MSE Retaining Wall (SF)**
 - 505.3 Retaining Seat Wall (SF)**

520 STEEL AND ALUMINUM HANDRAILS

520.5 Payment: ADD the following:

- Pay Item:**
- 520.1 Handrail, MAG Std. Dtl. 145 (LF)**

725 PORTLAND CEMENT CONCRETE

725.9 Acceptance: ADD the following:

Portland Cement Concrete shall be Class B concrete with a minimum compressive strength of 2500 psi. The slump of the concrete, specified to be between 3-6 inches, shall have a tolerance of – 2 ½ inches. The concrete is specified to have 6% air entrainment. The tolerance allowed for the air entrainment shall be +/- 1.5% of the specified value.

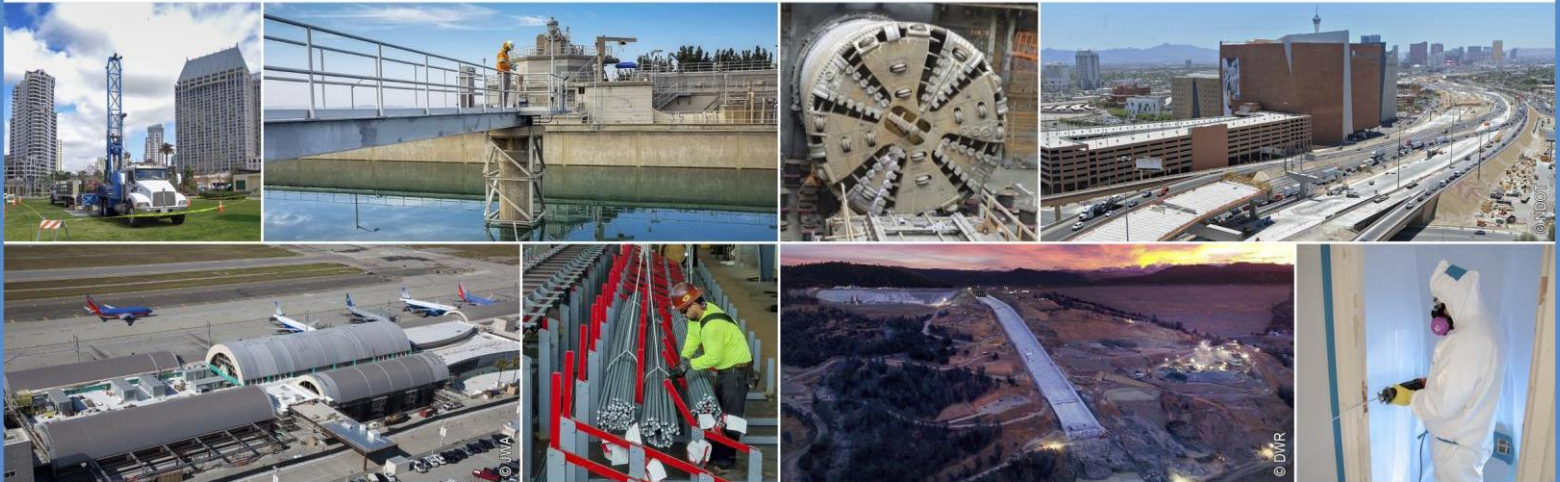
APPENDIX A
Geotechnical Reports

Geotechnical Evaluation Uptown Northbound Improvements Shared Use Path Retaining Wall Sedona, Arizona

Kimley-Horn

101 West Goodwin Street, Suite 303 | Prescott, Arizona 86303

June 26, 2023 | Project No. 607727001



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants



June 26, 2023
Project No. 607727001

Mr. Andrew Baird, PE
Kimley-Horn
101 West Goodwin Street, Suite 300
Prescott, Arizona 86303

Subject: Geotechnical Evaluation
Uptown Northbound Improvements
Shared Use Path Retaining Wall
Sedona, Arizona

Dear Mr. Baird:

In accordance with our proposal dated May 17, 2023 and your authorization, Ninyo & Moore has performed a geotechnical evaluation for the above-referenced site. The attached report presents our methodology, findings, conclusions, and recommendations regarding the geotechnical conditions at the project site.

We appreciate the opportunity to be of service on this project.

Sincerely,
NINYO & MOORE

A handwritten signature in black ink, appearing to read "Stephen V. Hargus".

Stephen V. Hargus, PE
Senior Engineer



A handwritten signature in black ink, appearing to read "Steven D. Nowaczyk".

Steven D. Nowaczyk, PE
Managing Principal Engineer



SVH/SDN/jom

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A – Seismic Refraction Survey

1. INTRODUCTION

In accordance with your request, Ninyo & Moore has conducted a geotechnical evaluation for the proposed Uptown Northbound Improvements project located in Sedona, Arizona. The purpose of our evaluation was to assess the subsurface conditions at the project site and provide geotechnical recommendations for design and construction. This report presents the results of our evaluation and our geotechnical conclusions and recommendations regarding the proposed construction.

2. SCOPE OF SERVICES

Our scope of services for the project included the following:

- Reviewing available published and in-house geotechnical reports, topographic information, soil surveys, geologic literature, and aerial photographs of the project area.
- Obtaining permission from the City of Sedona to conduct our field work.
- Conducting a site visit to conduct a geologic reconnaissance.
- Conducting one seismic refraction survey in order to elevate the seismic profile of the underlying soil / bedrock at a specific location. The geophones were spaced such that a total depth of at least 30 feet bgs was evaluated.
- Preparing this report presenting our findings, conclusions, and recommendations regarding the design and construction of the project.

Our scope of services did not include environmental consulting services such as hazardous waste sampling or analytical testing at the site. A detailed scope of services and estimated fee for such services can be provided upon request.

3. SITE DESCRIPTION

The project site is located along the east side of State Route (SR) 89A south of Forest Road and north of L'Auberge Lane in Sedona, Arizona (Figure 1). SR 89A is four-lane road paved with asphaltic concrete (AC). Along the east side of SR 89A is a concrete sidewalk adjacent to an approximately 2:1 (horizontal to vertical) cut slope. At the base of the cut slope is an AC paved driveway (L'Auberge Lane) leading to private resort.

According to the Sedona, Arizona 7.5-Minute United States Geological Survey Topographic Quadrangle Map (2021), the project site elevation varies between approximately 4,320 to 4,290 feet relative to mean sea level, slope downward from the northeast to the southwest.

4. PROJECT DESCRIPTION

The project includes the design and construction 6-foot-high retaining wall along the existing hillside slope between SR 89A and L'Auberge Lane. The wall will consist of a modular block, mechanically stabilized earth wall (MSE). In some areas, the existing slope will need to be cut back to accommodate the shared use path. The backfill above the MSE wall along with new cuts into the slope will provide space for a 10-foot wide, concrete shared use path.

5. REVIEW OF AERIAL PHOTOGRAPHS

Aerial photographs of the project site dated between 1974 through 2019 were reviewed on a historical aerial photograph website (2023) for this project. As of 1974, SR 89A had been constructed and consisted of one-lane in each direction. By 1980, some commercial development had occurred north of the site and L'Auberge Lane had been constructed. By 2003, significant development west of SR 89A had been completed. By 2005, SR 89A had been expanded to two-lanes in each direction. By this time the site and surrounding area had been fully built out, similar to the current condition.

6. FIELD EXPLORATION AND LABORATORY TESTING

The following sections summarize our field exploration and laboratory testing activities.

6.1. Seismic Refraction Survey

Ninyo & Moore collected seismic refraction data along one survey line as part of our field survey. Data was collected on June 1, 2023. The geophysical survey layout of the seismic line is depicted in Figure 2. Due to access issues and safety concerns the survey was run along L'Auberge Lane but provides a reasonable representation of the near surface alluvium identify further up on the slope. Further description of the methodology and the results of our geophysical survey are presented in Appendix A.

7. GEOLOGY AND SUBSURFACE CONDITIONS

The following sections describe the site geology and subsurface conditions.

7.1. Geologic Setting

The project site is located in the Transition Zone physiographic province, an approximately 50-mile wide mountain belt that traverses northwest-southeast through central Arizona. This province is the physiographic transition between the Colorado Plateau province and Basin and Range province in Arizona. The province is characterized by the presence of Proterozoic (1.7 billion years) granitic

and metamorphic rocks that were exposed as the sedimentary Paleozoic (510 million years) and Mesozoic (245 million years) rocks were eroded away. High-angle normal faults and block faulting occurred during the Mid-Tertiary which also coincided with an increase in volcanic activity during this time (Kamilli and Richard, 1998).

The surficial soils in the project areas consists of unconsolidated to strongly consolidated alluvial deposits. This unit includes: coarse, poorly sorted alluvial fan and terrace deposits on middle and upper piedmonts and along large drainages; sand, silt and clay on alluvial plains and playas (Richard, SM, et al., 2000).

7.2. Subsurface Conditions

Our knowledge of the subsurface conditions at the project site is based on the results of our seismic refraction survey and our understanding of the general geology of the area. The seismic refraction survey figure contains our field test results, as well as our interpretation of the conditions observed at the site. Therefore, the seismic refraction survey figure contains both factual and interpretive information. Lines delineating subsurface strata on seismic refraction survey figure are intended to group soils having similar engineering properties and characteristics. They should be considered approximate, as the actual transition between soil types may be gradual.

7.2.1. Alluvium

Based on our geologic reconnaissance and seismic refraction survey the existing hillside slope consist of native alluvial soils. The alluvium generally consisted hard clay (CL), dense clayey gravel (GC) with sand and dense silty gravel with sand (GM). Cobbles and boulders are visible at the surface of the existing hillside slope, and in some cases consist of thick interbedded layers. Relatively shallow bedrock may be present near the project's north side.

7.2.2. Groundwater

Groundwater was not encountered in our boring at the time of drilling. Well data from the Arizona Department of Water Resources (ADWR) Groundwater Site Inventory database (2023) indicates that regional groundwater has been historically encountered at greater than 50 feet bgs within the site. Seasonal variations could cause fluctuations in the surrounding groundwater depths. Perched water tables may be encountered, especially after flood events.

8. GEOLOGIC HAZARDS

The following sections describe regional geologic hazards, including land subsidence, earth fissures, and faults.

8.1. Land Subsidence and Earth Fissures

Based on our field reconnaissance and information accessed at Arizona Geologic Survey website (2023), the site is not located in area with documented earth fissures. The project site is not in an area with a measured land subsidence based on information accessed at from the ADWR e-Library (2023).

8.2. Faulting and Seismicity

The site lies within the Sonoran zone, which is a relatively stable tectonic region located in southwestern Arizona, southeastern California, southern Nevada, and northern Mexico (Euge et al., 1992). This zone is characterized by sparse seismicity and few Quaternary faults. Based on our field observations, review of pertinent geologic data, and analysis of aerial photographs, Quaternary faults are not located on or adjacent to the property.

The closest known Quaternary fault to the site is the Casner Cabin fault zone, located approximately 12 miles to the north of the site. The Casner Cabin fault zone forms two fairly sharply defined, narrow grabens on Paleozoic bedrock and Pliocene volcanic rocks. Total vertical displacement is at least 40 m. Middle to late Quaternary faulting is likely because a middle Pleistocene alluvial fan in one of the grabens is probably displaced at least 3 m. (Pearthree, 1998). Seismic design considerations are provided in Section 10.2.

9. CONCLUSIONS

Based on the results of our subsurface evaluation and our review of available geotechnical data, it is our opinion that the proposed construction is feasible from a geotechnical standpoint, provided that the recommendations of this report are incorporated into the design and construction of the proposed project, as appropriate. Geotechnical considerations include the following:

- The near surface site soils can generally be excavated or ripped using heavy-duty earthmoving or excavation equipment. However, shallow zones of hard clay, dense gravel, cobbles and boulders, as well as bedrock should be anticipated and may result in difficult and/or slower excavation rates. Bedrock materials may need specialized excavation equipment.
- The proposed MSE wall should be designed using the recommendations provided in this report.

- The proposed flatwork area (shared use-path) should be founded on a zone of adequately moisture-conditioned and compacted engineered fill.
- Imported soils and soils generated from on-site excavation activities, that exhibit a relatively low plasticity index (PI) can generally be used for engineered fill.
- Groundwater was not observed in our borings. Based on ADWR well data, the regional groundwater table has been historically measured at depths greater than 50 feet bgs. In general, groundwater is not expected to be a constraint to the design and construction of this project.
- No documented geologic hazards are present underlying or immediately adjacent to the site.

10. RECOMMENDATIONS

The following sections present our geotechnical recommendations and were developed based on our understanding of the proposed construction (Section 4), the observed subsurface conditions (Section 7), and our experience. Given the project location, recommendations and guidelines outlined the Maricopa Association of Governments (MAG), and/or any City of Sedona supplement should be used unless recommended differently herein. If the proposed construction is changed from that discussed herein or subsurface conditions other than those shown on the boring logs (Appendix A) are observed at the time of construction, Ninyo & Moore should be retained to conduct a review of the new information and to evaluate the need for additional recommendations.

10.1. Earthwork

The following sections provide our earthwork recommendations for this project. If the site grade is planned to change by more than 3 feet with engineered fill, Ninyo & Moore should be contacted for additional recommendations.

10.1.1. Pre-Construction Survey

Prior to construction activities, it may be desirable to recognize the condition of the existing utilities, underground structures, or other features that are near the planned construction and to survey or document (e.g., photographs, video, official documentation, etc.) their pre-construction condition. The findings of the survey could be used to document any damage that might result from this project.

10.1.2. Site Preparation

Vegetation, unsuitable materials, or debris from the clearing operation should be removed from the site and disposed of or placed in non-structural areas (e.g., landscaping).

Obstructions that extend below finish grade, if present, should be removed and the resulting voids filled with moisture-conditioned and compacted engineered fill.

After rough grade has been achieved and prior to further earthwork, the exposed subgrade should be proof-rolled and visually observed for the presence of debris, organic matter and other unsuitable materials. If unsuitable soils are encountered at subgrade level during earthwork operations, these soils should be removed to their full depth, and be replaced with engineered fill.

The geotechnical consultant should carefully evaluate any areas of loose, soft, or wet soils prior to placement of fill or other construction. Drying or over-excavation of some materials may be appropriate.

10.1.3. Excavations

Our evaluation of the excavation characteristics of the on-site materials is based on our review of the results of the seismic refraction survey, site observations, and experience with similar materials. Excavation of the near surface materials can generally be accomplished with heavy-duty earthmoving equipment. However; shallow zones of hard clay, dense gravel, cobbles and boulders, as well as bedrock should be anticipated and may result in difficult and/or slower excavation rates. The contractor should be prepared to use more aggressive excavation methods (e.g., dozer ripping, pneumatic hammering, etc.) for excavations within the bedrock.

10.1.4. Temporary Slopes

The contractor should provide safely sloped excavations or an adequately constructed and braced shoring system in compliance with Occupational Safety and Health Administration (OSHA) Regulations for employees working in an excavation that may expose them to the danger of moving ground. Based on the soil conditions at the site, we recommend that OSHA Soil "Type C" classification be used for excavations within the alluvium soils at the site. This corresponds to temporary slopes of 1.5:1 (horizontal: vertical). This side slope is for excavations that are less than 20 feet deep. If material is stored or equipment is operated near an excavation, stronger shoring should be used to resist the extra pressure due to superimposed loads.

If the proposed construction extends deeper than 20 feet in any part of this project, Ninyo & Moore should be contacted for additional consultation and possible further evaluation of the subsurface materials.

10.1.5. Permanent Slopes

Permanent cut slopes and constructed embankment fill slopes should be no steeper than 2:1 (horizontal to vertical). New embankment fills should be benched into existing embankments, where appropriate. Benches should be level and wide enough to allow operation of and compaction by, construction equipment. Fill slopes should be constructed in a manner (e.g., overfilling and cutting to grade) such that the recommended degree of compaction is achieved to the finished slope face. Cut and fill slopes should be protected from erosion. This should promote re-vegetation and a stable slope. Periodic maintenance of exposed slopes should be anticipated.

Unprotected slopes may rill and erode if exposed to running water. Silty soils and soils containing fine sand are more susceptible in this regard. Laying slopes back to 3:1 (horizontal to vertical) will decrease runoff velocity and decrease the likelihood of serious erosion. Steeper slopes will need additional maintenance. Adequate drainage and temporary erosion protection covering could minimize erosion problems and promote post-construction vegetation. Plating the slopes with gravelly material will reduce precipitation impact and slow the rate of erosion. Along longer slopes, brow ditches should be considered to reduce the amount of surface flow on the slope face. Where feasible, the existing vegetation should be salvaged and replaced.

10.1.6. Subgrade Preparation

We recommend that the proposed leveling pad or spread or continuous footings, if needed, with anticipated loading not in excess of 2,000 pounds per square foot (psf) be supported on a zone of engineered fill that extends 1 foot below the bottom of the MSE wall leveling pad or footing. The engineered fill should be placed as discussed in this report. This overexcavation zone should extend a horizontal distance from the edge of the new foundation that is equal to the depth of the overexcavation.

We further recommend that flatwork areas be founded on engineered fill extending 1 foot below the bottom of the flatwork.

After the overexcavation described above is finished and prior to the placement of engineered fill, exposed surfaces from excavations should be carefully evaluated by the geotechnical consultant for the presence of soft, loose, or wet soils that were not removed as part of the improvement process. This evaluation should consist of probing and visual observation of the excavation bottom. Based on this evaluation, additional remediation may be needed. This could include further scarification, moisture-conditioning and compaction of the exposed

surface. This additional remediation, if needed, should be addressed by the geotechnical consultant during the earthwork operations.

10.1.7. Bottom Stability and Dewatering

The surface exposed at the bottom of an excavation should be stable for the purpose of the planned construction. However, if excavations are open during a heavy rain event, the bottom of the excavation may become saturated and unstable. Excavations that encounter seepage or surface run-off could be dewatered by pumping the water out and away from the excavation. However, heavily saturated soils or perched groundwater zones, if encountered, may call for more aggressive means of dewatering and consultation with a qualified expert may be needed. Discharge of water from the excavations to natural drainage channels, if needed, may entail securing a special permit.

10.1.8. Engineered Fill

On-site and imported soils that exhibit low plasticity indices and very low expansive potential are suitable for use as engineered fill. Low plasticity indices, as evaluated by ASTM D4318, are defined as a PI of 15 or less for this project. Low expansive potential soils are defined as having a swell potential of less than 1.5 percent when evaluated in accordance with ASTM D4546 with a load of 144 psf.

In addition, suitable fill should not include construction debris, organic material, or other non-soil fill materials. Clay lumps and rock particles should not be larger than 2 inches in dimension within the upper 5 feet of finished grade. Unsuitable fill material should be disposed of off-site or in non-structural areas.

Imported fill, if used, should consist of soils with a relatively low PI (15 or less). Import material in contact with ferrous metals should preferably have low corrosion potential (minimum resistivity more than 2,000 ohm-cm, chloride content less than 25 parts per million). In lieu of this, corrosion protection techniques (e.g., cathodic protection, pipe wrapping, etc.) can be implemented. A corrosion specialist should be consulted for recommendations of an appropriate corrosion protection technique. Imported material in contact with concrete should have a soluble sulfate content of less than 0.1 percent. The geotechnical consultant should evaluate such materials and details of their placement prior to importation.

10.1.9. Re-use of On-Site Soils

Based on our evaluation, additional screening of materials will be necessary to produce a well-graded material that meets the requirements for engineer fill. Additional field sampling and laboratory testing should be conducted by the contractor either prior to or during construction to better screen for any unsuitable materials. Engineered fill may be utilized as embankment fill and retained fill, but not reinforced fill.

10.1.10. Fill Placement and Compaction

Engineered fill should be moisture-conditioned within the moisture range shown below in Table 1 and mechanically compacted to the percentage shown. Engineered fill should generally be placed in 8-inch-thick loose lifts such that each lift is firm and non-yielding under the weight of construction equipment.

Engineered fill used to raise grade will settle a portion of its height due to its own weight prior to construction of the foundation systems. The magnitude of this settlement will depend on the type of fill used. In general, the engineered fill recommended in this report is expected to settle about 1 percent of its height.

Placing new fill against the existing slope will call for some keying into the existing slope. Care should be taken to avoid undermining the roadway during this operation.

Table 1 – Compaction Recommendations

Engineered Fill Description	Minimum Compaction per ASTM D698	Moisture Content
Leveling Pad Subgrade	95 percent	±3 percent of optimum
Embankment fill, Retained Fill, Engineered Fill	95 percent	±2 percent of optimum
Reinforced Fill, Below Flatwork	98 percent	±2 percent of optimum

An earthwork (shrinkage) factor of 15 to 25 percent is estimated for the on-site soils given the potential amount of oversized material. This shrinkage factor range is an estimate and assumes that materials excavated from the site will be placed as fill. Potential bidders should consider this in preparing estimates and should review the available data to make their own conclusions regarding excavation conditions.

10.1.11. Site Drainage

The long-term performance of the foundation system depends, in part, on maintaining positive surface drainage during the life of the structure. Adequate drainage should be provided to reduce variations in the moisture content of foundation soils. Finished grade within 5 feet of the top of the wall should be adjusted to slope away from the wall at a slope of 2 percent, or more.

10.2. Seismic Design Parameters

Design of the proposed improvements should be performed in accordance with the requirements of the governing jurisdictions and applicable building codes. Table 2 presents the seismic design parameters for the site in accordance with the American Society of Civil Engineers (ASCE 7-22) guidelines and adjusted maximum considered earthquake spectral response acceleration parameters evaluated using the ASCE Hazard Tool (web-based):

Table 2 – Seismic Design Criteria (ASCE 7-22)	
Seismic Design Factors	Value
Seismic Design Category	C
Site Coefficient, F_a	1.565
Site Coefficient, F_v	2.4
Mapped Spectral Acceleration at 0.2-second Period, S_s	0.36g
Mapped Spectral Acceleration at 1.0-second Period, S_1	0.096g
Spectral Acceleration at 0.2-second Period Adjusted for Site Class, S_{MS}	0.51g
Spectral Acceleration at 1.0-second Period Adjusted for Site Class, S_{M1}	0.26g
Design Spectral Response Acceleration at 0.2-second Period, S_{DS}	0.34g
Design Spectral Response Acceleration at 1.0-second Period, S_{D1}	0.17g
Site Modified Peak Ground Acceleration, PGA_M	0.21g

10.3. Foundations

Based on the results of the field and laboratory evaluations, it is our opinion that the proposed wall can be founded on a leveling pad, spread or continuous footings. Recommendations for these foundation systems are presented in the following section of this report.

Leveling pads, spread or continuous footings, if utilized, should bear at a depth of 24 inches or more below the existing grade or adjacent finished grade whichever is deeper. The footings should be supported on compacted engineered fill, as described in this report. Continuous footings should have a width of 18 or more inches, and isolated spread footings should have a width of 24 or more

inches. Spread or continuous footings should be reinforced in accordance with the recommendations of the structural engineer.

Leveling pads, spread or continuous footings supported on engineered fill may be designed using a net allowable bearing capacity of 2,000 psf for static conditions. Total and differential settlement of up to about 1 inch and ½ inch respectively, may occur.

These settlement estimates are based on the assumption that the foundations act as isolated foundations, that is, the clear spacing between the foundation elements are the width of the largest adjacent foundation or more, and the settlement associated with fill soils has already occurred. As described in this report, fill used to raise grade will settle a portion of its height due to its own weight prior to construction of the foundation systems. The magnitude of this settlement will depend on the type of fill used. In general, the fill recommended in this report is expected to settle about 1 percent of its height.

Foundations bearing on moisture-conditioned, compacted engineered fill that are subject to lateral loadings may be designed using an ultimate coefficient of friction of 0.40 (total frictional resistance equivalent to the coefficient of friction multiplied by the dead load). A passive resistance value of 360 psf per foot of depth can be used. The lateral resistance can be taken as the sum of the frictional resistance and passive resistance, provided that the passive resistance does not exceed one-half of the total allowable resistance. The passive resistance may be increased by one-third when considering loads of short duration such as wind or seismic forces. The foundations should preferably be proportioned such that the resultant force from lateral loadings falls within the kern (i.e., middle one-third).

10.4. Retaining Walls

Retaining walls can be supported on shallow spread or continuous footings as discussed in this report. Drainage should consist of free-draining granular material and could be accompanied by weepholes through the wall or corrugated, perforated pipe placed parallel to the wall or abutment bottom, wrapped in a filter fabric, and surrounded by 6 inches or more of granular filter material (e.g., pea gravel). In lieu of the wrapped open-graded gravel, a geocomposite drainage mat attached to the wall and discharging to a drain pipe or weepholes may be considered. Retaining wall should be designed using the applicable lateral earth pressures. The earth pressures provided assume level backfill at the top of the wall.

10.4.1. Active Conditions

Active earth pressure occurs when the wall moves away from the soils and the soil mass stretches horizontally, sufficient to mobilize its shear strength, and a condition of plastic equilibrium is reached. For a drained granular backfill, an equivalent fluid active earth pressure of 43 psf per foot (psf/ft) of wall height should be used for design of cantilevered, yielding walls. An outward lateral movement of about $0.001H$ (where H is the height of the wall) at the top of the wall is generally needed to mobilized the active earth pressure condition.

Unrestrained retaining walls should also be designed to resist a horizontal earth pressure of $0.33q$. The value for “ q ” represents the vertical surcharge pressure induced by adjacent light loads, slab, or traffic loads plus any adjacent footing loads.

10.4.2. At-Rest Conditions

A soil mass that is neither stretched nor compressed is said to be in an at-rest state. If the wall is rigidly restrained, so that it does not rotate sufficiently to reach the active earth pressure condition, at-rest earth pressure condition will exist. An equivalent fluid at-rest earth pressure of 65 psf/ft should be used for the drained condition. Restrained retaining walls should also be designed to resist a horizontal earth pressure of $0.50q$. The value for “ q ” represents the vertical surcharge pressure induced by adjacent light loads, slab, or traffic loads plus any adjacent footing loads.

10.4.3. Passive Conditions

Passive earth pressure occurs when the wall or foundation moves into the soil and the soil mass is compressed horizontally, mobilizing its shear strength. For below-grade portions of the walls with granular backfill (derived from on-site soils) in front of the toe of the wall, an equivalent fluid passive earth pressure of 360 psf/ft can be used. This value assumes that the ground is horizontal for a distance of 10 feet or more in front of the wall or three times the height generating the passive pressure, whichever is more. We recommend that the upper 12 inches of soil not protected by pavement or a concrete slab, or any soil subject to possible future scour or excavation, be neglected when calculating passive resistance.

10.5. Mechanically Stabilized Earth Walls

Vertical MSE walls, to be designed by others, are planned near the base of existing hillside slope. To improve the subgrade below the MSE walls and reduce post-construction settlement, the MSE wall footprint, including the leveling pad, and the MSE reinforced backfill zones, should be overexcavated 1 or more feet below the exiting site grades. The exposed soils at this depth should then be sacrificed, moisture conditioned, and compacted as detailed in this report. The overexcavation zone should be backfilled with compacted engineered fill.

The MSE walls should be designed using the soil parameters provided in Table 3.

Table 3 – MSE Wall Soil Parameters			
Soil Type	Unit Weight (pcf)	Internal Friction Angle	K _a
Reinforced Backfill	120	28	0.36
Foundation Material	120	30	0.33
Retained Backfill	130	30	0.33

Reinforced backfill material should consist of a manufacture material and be tested prior to use. Testing may vary based on the type of reinforcement being used. Assuming geosynthetic reinforcement, the material should meet the gradation requirements presented in Table 4 when tested per ASTM D136.

Table 4 – Reinforced Backfill Gradation Requirements	
Sieve Size	Percent Passing ¹
1-Inch	100
No. 4	20 - 100
No.40	0 – 60
No 200	0 – 15
Note: ¹ Depending on the gradation, the Engineer may require direct shear tests per ASTM D3080 to verify the internal friction angle used in design.	

The material should also meet the requirements provided in Table 5:

Table 5 – Additional Reinforced Backfill Requirements		
Soil Property	Requirement	Test Method
Plasticity Index	5 or less	ASTM D4318
Soundness	Less than 15 percent ¹	AASHTO T104
pH	Between 5 and 10	ARIZ 236
Resistivity	Greater than 3,000 ohm-cm	ARIZ 236
Sulfates	Less than 200 ppm	ARIZ 733
Chlorides	Less than 100 ppm	ARIZ 736
Organic Content	Less than 1 percent	AASHTO T267
Note: ¹ Less than 30 percent after 4 cycles of magnesium sulfate soundness, or less than 15 percent after 5 cycles of sulfate soundness.		

The MSE wall should be designed with an internal drainage system to prevent hydrostatic pressures from forming. In addition, an external drainage system should be incorporate with the overall site drainage to prevent moisture infiltration in and around the wall.

10.6. Pre-Construction Conference

We recommend that a pre-construction conference be held. Representatives of the owner, civil engineer, the geotechnical consultant, and the contractor should be in attendance to discuss the project plans and schedule. Our office should be notified if the project description included herein is incorrect, or if the project characteristics are significantly changed.

10.7. Construction Observation and Testing

During construction operations, we recommend that a qualified geotechnical consultant perform observation and testing services for the project. These services should be performed to evaluate exposed subgrade conditions, including the extent and depth of over-excavation, to evaluate the suitability of the on-site materials for use as fill and to observe placement and test compaction of fill soils. If another geotechnical consultant is selected to perform observation and testing services for the project, we request that the selected consultant provide a letter to the owner, with a copy to Ninyo & Moore, indicating that they fully understand our recommendations and they are in full agreement with the recommendations contained in this report. Qualified subcontractors utilizing appropriate techniques and construction materials should perform construction of the proposed improvements.

11. LIMITATIONS

The field evaluation, and geotechnical analyses presented in this geotechnical report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please also note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of structural issues, environmental concerns, or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended for design purposes only. It does not provide sufficient data to prepare an accurate bid by contractors. It is suggested that the bidders and their geotechnical consultant perform an independent evaluation of the subsurface conditions in the project areas. The independent evaluations may include, but not be limited to, review of other geotechnical reports prepared for the adjacent areas, site reconnaissance, and additional exploration and laboratory testing.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. If geotechnical conditions different from those described in this report are encountered, our office should be notified and additional recommendations, if warranted, will be provided upon request. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

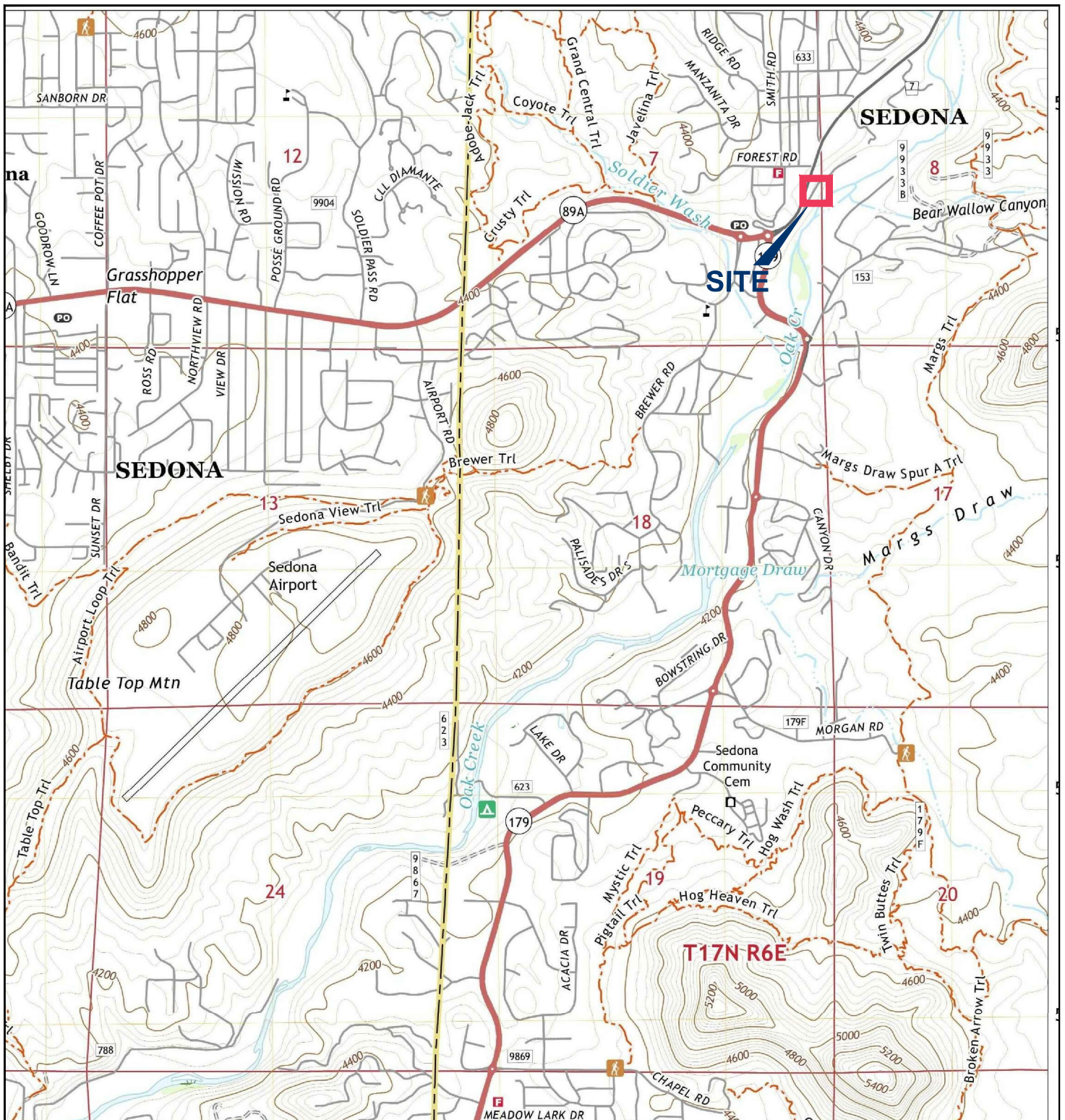
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FIGURES

607650001_SL.dwg 5/23 BSM



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: USGS, 2021.

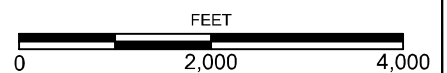


FIGURE 1

SITE LOCATION

UPTOWN NORTHBOUND IMPROVEMENTS
SHARED USE PATH RETAINING WALL
SEDONA, ARIZONA

607727001 | 6/23



LEGEND

L-1 SEISMIC SURVEY

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: GOOGLE EARTH 2022.

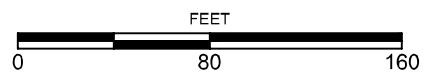
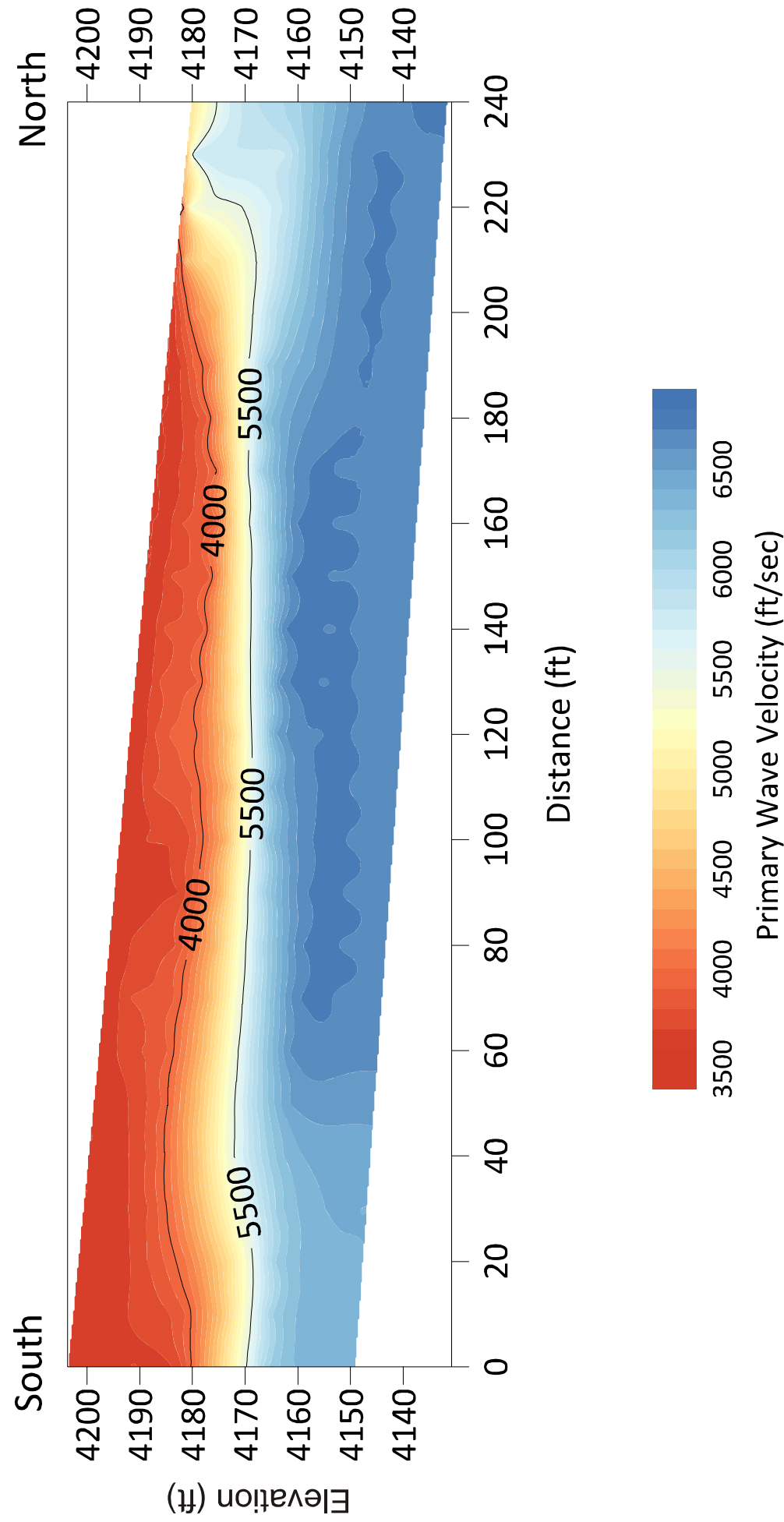


FIGURE 2





APPENDIX A

Seismic Refraction Survey

APPENDIX A

Seismic Refraction Survey

GEOPHYSICAL TESTING

Seismic refraction data was acquired along a single survey line as part of our geotechnical investigation. The geophysical survey layout of the seismic line is depicted in Figure 2. A further description of the methodology and the results of our geophysical survey are presented in the following sections.

Methods and Equipment

Ninyo & Moore personnel acquired seismic refraction data along a single survey line (Figure 2). The seismic data was acquired with a 24-channel Geode exploration seismograph (Geometrics, Inc, San Jose, CA) using 24 vertical component, 14 Hertz resonant frequency geophones. A 16-pound sledge hammer striking a metal strike plate the energy source for the survey. Field data acquisition included stacking multiple records of data at each shot location in order to increase signal-to-noise and enhance overall data quality.

The seismic refraction method utilizes the recording of first-arrival travel times of refracted seismic waves along the survey line to facilitate the determination the thickness and seismic velocities of subsurface layers. Seismic body waves generated by the hammer impacting the ground surface at a given “shot” point are refracted at boundaries separating materials of contrasting material velocities. These refracted seismic waves are then sensed by a series of surface geophones and digitally recorded at the seismograph. Each hammer shot is recorded as time zero. The elapsed time, in milliseconds, that the seismic compressional wave (P-wave) signals take to travel to each geophone is recorded through the record length. This information is used in conjunction with the known shot-to-geophone horizontal distances to obtain the approximate thickness and velocity information about the subsurface materials.

An underlying assumption of the refraction method is that subsurface velocities (and therefore material densities and modulus of rigidity increase with depth. Violations of this assumption (a layer having a velocity lower than that of the layer above it) can lead errors in the depth calculations of subsequently deeper layers. This is known as a “velocity inversion” problem. In addition, relatively significant lateral variations in velocity, such as those which occur at open, or tightly spaced jointed or fractured rock, discontinuous caliche deposits, and nested subsurface cobbles and boulders, can also result in misinterpretation of the subsurface conditions when using this method

Seismic Velocities and Rippability

In general, seismic wave velocities can be correlated to material density and/or rock hardness. The relationship between rippability and seismic velocity is empirical and assumes a homogenous mass for each layer in the seismic model. Possible areas of differing composition, texture, or structure may affect both the measured data and the actual rippability of the mass. The rippability of a mass is also dependent on the excavation equipment used and the skill and experience of the equipment operator. The rippability characteristics in Table A-1 are based on our experience with similar materials. The rippability of a particular material assumes that a Caterpillar D-9 dozer ripping with a single shank is used. We emphasize that the cutoffs in this classification scheme are approximate and that soil characteristics can play a significant role in estimating excavation rates and rippability. In addition, where excavations encounter or penetrate weathered, fresh bedrock or cemented bedrock, the degree of weathering, degree of cementation (if any), or the presence or absence of fractures and/or joints, and fracture/joint spacing and orientation, also play a significant role in evaluating rock rippability. These soil and rock characteristics may also vary with location and depth. Our evaluation did not characterize the presence and nature of bedrock fractures, joints, or bedding planes which can have an effect on rippability rate and excavation efforts.

Table A-1 – Qualitative Rippability Classification	
P-Wave Velocity Range (Feet/Second)	Qualitative Rippability
0 to 2000 ft/s	Easy Ripping
2000 to 4000 ft/s	Moderate Ripping
4000 to 5500 ft/s	Difficult Ripping, Possible Blasting
5500 to 7000 ft/s	Very Difficult Ripping, Probable Blasting
Greater than 7000 ft/s	Blasting Generally Needed

It should be noted that the rippability estimates presented in Table C-1 are slightly more conservative than those published in *Edition 41 of the Caterpillar Performance Handbook* (Caterpillar, 2011). Accordingly, the above classification scheme should be used with discretion, and contractors should not be relieved of making their own independent evaluation of the rippability of the onsite materials prior to submitting their bids. It should also be noted that, as a general rule of thumb, the effective depth of evaluation for a seismic refraction traverse is approximately one-third to one-fifth the length of the refraction line.

Data Analysis

The obtained refraction data were processed using SeisImager processing software. Initially, data were grouped as all shot points in each line and first arrival picks were made manually in Pickwin™ v. 7.1.0.1. Once data were grouped as first arrival picks, a travel time curve was

constructed and calculations were performed to derive approximate minimum and maximum velocities. Relative topography data collected in the field were incorporated with travel time data to account for topography effects. An initial velocity model of the surface was developed for each profile using a delay-time technique and velocity inversion in Plotrefa™ v. 5.0.0.4. These models were used for each profile to develop a more detailed tomographic profile depicting approximate lateral and vertical changes in P-wave velocity across each seismic line.

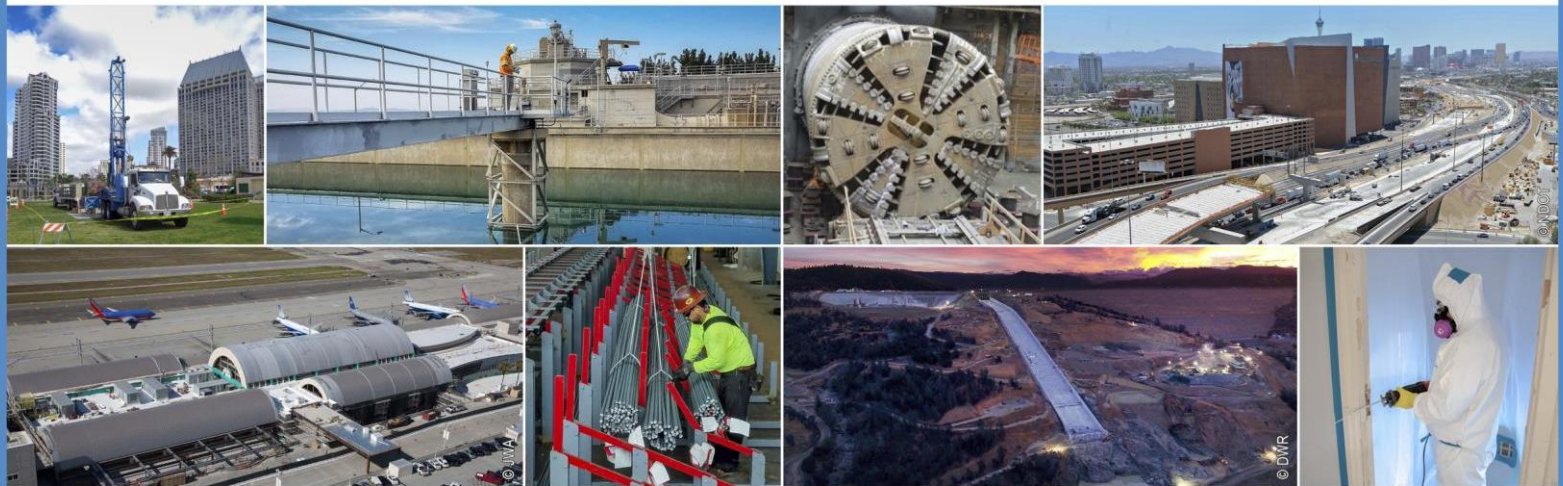
Seismic Results

The tomographic model generally indicates relatively dense alluvial overburden across most of the survey transect. However, due to the northward sloping topography, the overburden thickness diminishes to the north giving way to higher velocity (>5500 ft/sec) material at the north end of the survey transect. The velocity profile is presented in Figure A-1. Table A-2 summarizes the findings of the velocity survey.

Table A-2 – Refraction (P) Wave and Shear (S) Wave Velocity Survey Results			
Location	Approximate Depth (ft)	Approximate P-wave Velocity Range (ft/s)	Comments
L-1	0 - 10	3,500-4,000	Moderate Ripping
	10 - 20	3,500-4,000	Moderate Ripping
	20 - 30	3,500-4,000	Moderate Ripping

CONCLUSIONS

Based on the velocity model results, the seismic refraction survey performed at the site indicates that the moderate to difficult ripping conditions should be expected in the upper 30 feet in the southern portion of the survey area. However, some difficult ripping may likely be encountered at depths exceeding 30 feet and along the northern end of the survey area. Variability in rippability of subsurface materials situated at lateral distances away from seismic traverses could be expected.



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Geotechnical & Environmental Sciences Consultants

APPENDIX B

Controller and Video Detection Specifications

Autoscope® Vision

EVO RADAR™

AccuSense®



High-Definition for Superior Video Quality

Overview

Autoscope Vision is an integrated high-definition (HD) camera-processor sensor solution that delivers the highest levels of accuracy and performance for stop bar vehicle detection, pedestrian detection, bicycle detection and differentiation, advance vehicle detection, traffic data collection, and HD video surveillance.

Autoscope Vision builds on more than 30 years of proven above-ground video detection expertise. Its built-in local WiFi provides quick and simple set up – using the Supervisor Software - an entire intersection can be programmed in just minutes. Installation and integration is also simple with 3-wires-only.

Autoscope Vision provides high performance vehicle, pedestrian, bicycle detection and differentiation using state-of-the-art algorithms and a high definition video sensor. It delivers full ITS capabilities for traffic engineers to use in strategically managing their traffic infrastructure. Autoscope Vision helps improve safety, reduce vehicle emissions, and mitigate traffic congestion.



Key Features

- **Traffic Video Detection Camera**
- **Highest levels of accuracy and performance for the Advanced Traffic Management System**
- **Built-in local WiFi for quick and simple set up**
- **Program an entire intersection in just minutes**
- **Easy to install with 3-wires-only**
- **Simple integration to all traffic cabinets**
- **High Definition (HD) camera for superior video images**
- **2 gore breathers**

Description

Autoscope Vision is an integrated camera-processor sensor solution that provides high performance stop bar vehicle detection, pedestrian detection, bicycle detection and differentiation, advance vehicle detection, traffic data collection, and HD video surveillance. It also supports local WiFi and streaming video to mobile computing devices.

Autoscope Vision utilizes an ITO faceplate heater and hydrophilic coated lens to maintain optimal performance during inclement weather while reducing the frequency of cleaning.

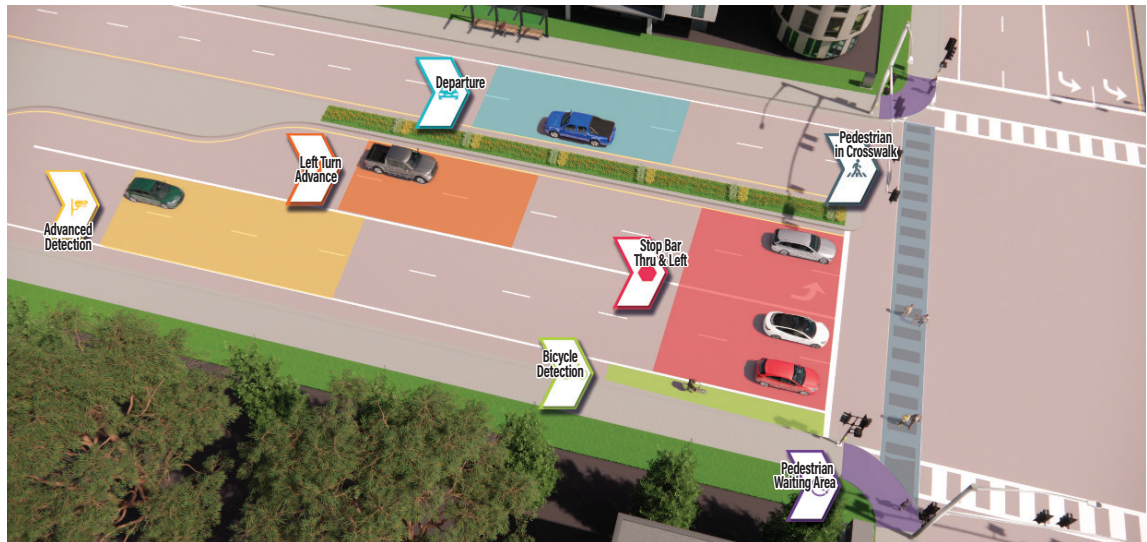
Power and communication to Vision sensors is conducted via the Vision Comm Manager™. Vision Comm Manager supports SDLC and wired I/O interface.

Application

Autoscope Vision is capable of simultaneously satisfying multiple transportation management objectives:

- Stop bar vehicle detection
- Bicycle detection and differentiation
- Pedestrian Waiting Area Detection
- Pedestrian in Crosswalk Detection
- Advance vehicle detection up to 600 feet
- Traffic data collection
- HD video surveillance

	Camera - Specifications
Video	• HD streaming video, H.264 720p (1280 x 720) • 10x optical zoom, 16:9 wide screen aspect ratio
Communications	• Local view wired 10/100 MB Ethernet Port or WiFi • System/WAN via separate wired 1/100 MB Ethernet Port
Temperature	• -34° C to +60° C (-29° F to 165°F) • Meets TS2 standards • Relative humidity of 0 to 95%, non-condensing
Power	• 16W typical, 18W maximum • 89 to 265 VAC • 60/50 Hz • Indium Titanium Oxide (ITO) and hydrophilic faceplate
Environmental	• Temperature range: -40° to +60°C (-40° to 140°F) • 10 to 100% (no condensation)
Dimensions & Weight	• H x W x L (with sunshield and bracket) • 7" x 5.5" x 22.5" (177.8 mm x 140 mm x 571.5mm) • 6.5 lbs (2.95 kg)
Regulatory	• FCC Part 15, Class A, ICES, NEMA TS2-2016
Warranty	• Three-year warranty • Extended warranty packages available to six years



Learn more about additional
Sensor products



www.econolite.com



1250 N. Tustin Avenue, Anaheim, CA 92807



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*Everything you need in a high-quality
ready to ship cabinet*



BLUE SERIES

C A B I N E T S



 **ECONOLITE**



Econolite Blue Series Cabinets offer the following...

- The most commonly asked-for traffic cabinet configurations
- Cabinets from the ATCC, NEMA, and 332 product lines
- Ready-to-ship cabinets for every market
- A standard platform for customers, allowing for simplified training and troubleshooting
- Cost-effective for agencies of any size
- Cabinets designed to meet and exceed UL508 standards and built by IPC certified technicians in a UL approved factory that is ISO 9001 certified

BLUE SERIES

C A B I N E T S



ATCC Standard

Part Number: ATCC1052

Benefits

- Safer, smarter, greener
- Flexible mounting options
- Touch-safe
- Rework without going dark
- Future-proof
- Room for expansion
- ATC 5301-compliant
- Manufacturer interchangeability

Features

- Compact & modular design
- UL, ISO, & IPC
- ATCC1052 Design
- 16x channels of output
- 24x channels of input
- 120 VAC utility & signals
- 332L Aluminum enclosure
- Natural exterior – white interior

Included Plugins

- 1x HDFU
- 8x HDSPs, FTRs, red and yellow flash program blocks
- 2x SIU
- 1x ADU
- 4x 2-channel detectors
- 2x 2-channel DC isolators
- 32 channel CMU
- Input and output surge arrestors
- 1x rack mount power supply

Blue Series 332L

Part Number: STCAB3575-77

Benefits

- Standard rack mount design
- Most common enclosure mounting features
- Workhorse industry standard specification
- Leverage Caltrans 2009 TEES "L" series
- Most used configuration with Red Monitoring

Features

- UL, ISO, & IPC
- LED lights
- I & J file 28 channels
- 12x loadswitch connectors
- Red Monitoring installed
- Plug-ins ordered separately (*See options pg 6*)



TS2 Type 1 – P44 / Plug-n-Go

Part Number: CAB18036

Benefits

- Most common enclosure and mounting features
- Wide main panel for plenty of room to clear shelf
- Easy to replace parts with Plug-n-Go
- Easy to configure - reprogram in software instead of moving wires

Features

- UL, ISO, & IPC
- Horizontal Main Panel
- SDLC Serial Bus replaces A, B, C, & D cable harnesses of TS1 Plug-ins ordered separately (*See options pg 6*)

Benefits of SDLC

- Load switches and detectors interfaced via Bus Interface Unit (BIU)
- Decreased failure potential
- MMU retains point to point wiring to monitor signals
- Included Components
- Detector rack and main panel with BIUs



TS2 Type 1 – R77 / Plug-n-Go

Part Number: CAB18037

Benefits

- Large enclosure
- Narrow main panel for more room to work with side panel features
- Ample space for equipment

Features

- UL, ISO, & IPC
- Vertical Main Panel
- SDLC Serial Bus replaces A, B, C, & D cable harnesses of TS1
- Same bolt pattern as P44
- Plug-ins ordered separately (See options pg 6)

Benefits of SDLC

- Load switches and detectors interfaced via BIU
- Decreased failure potential
- MMU retains point to point wiring to monitor signals

Included Components

- Detector rack and main panel with BIUs



TS2 Type 2 – P44

Part Number: CAB18038

Benefits

- Easier to switch from TS1 to TS2-2 than to TS2-1
- Most common enclosure
- Wide main panel for plenty of room to clear shelf

Features

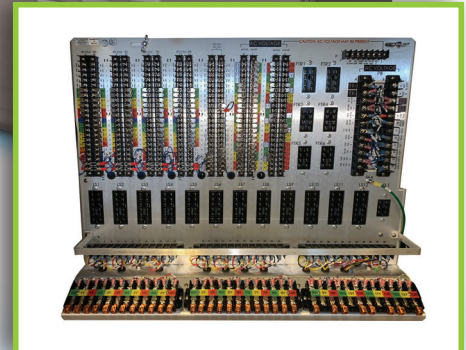
- UL, ISO, & IPC
- Horizontal Main Panel
- Plug-ins ordered separately (See options pg 6)

Benefits of SDLC

- Detectors interfaced via BIU
- Decreased failure potential
- MMU retains point to point wiring to monitor signals
- Standardization & multiple sourcing

Included Components

- Detector rack and main panel with BIUs





AVAILABLE BLUE SERIES PLUG-INS

DESCRIPTION	PLUG-IN	CAB18036	CAB18037	CAB18038	STCAB3575-77	ATCC1052
		NEMA	NEMA	NEMA	STS 332L	ATCC
FLASHER - EDI MODEL 810	44623P5	1	1	1		*
LOADSWITCH - MODEL PDC SSS-86-3	31095G20	16	16	16		*
FTR - S/D MODEL 21XBXP-120VAC	0767104805	6	6	6		*
MMU - EDI MODEL MMU2-16LEiP-E	1133-141	1	1	1		*
CAB PS - MODEL PS250-E	1084-046	1	1	1		*
DET - MODEL LM622E	44665G55	8	8	8		*
FLASHER - PDC MODEL SSF-88	0724500290				2	*
FTR - SD MODEL 21ACPX-120	0767104800				4	*
CMU - EDI MODEL 210 (CALTRANS)	44693G50					*
CMU - EDI MODEL 2010ECL	0712010610				1	*
LOADSWITCH - PDC SSS-88	0754100270				12	*
ISOLATOR - PDC MODEL 242L	1133-399					*
ISOLATOR - PDC MODEL 242	0744500010				2	*
DET - EDI MODEL LM222-SF	0756700010				18	*

**Plug-ins Included*

How agencies use Blue Series Cabinets

- The Blue Series offers a variety of standard cabinet configurations to suit different customer needs.
- The ATCC Standard is well-suited for customers looking to future-proof their intersections.
- The NEMA TS2 Type 1 and TS2 Type 2 cabinets are a great fit for customers looking for the security of a product line with a history of safety and reliability.
- The Caltrans 332LS is an excellent choice for customers who want the certification of a Caltrans-approved design and manufacturer.
- The 332L cabinet has been proven to be a workhorse of the Caltrans style cabinets for many years and come with the most used red monitoring circuits.

How Blue Series Cabinets benefit the driving public



- Econolite's traffic control cabinets ensure the highest levels of intersection safety and traffic management capabilities.
- Our traffic cabinets are designed with the agency in mind to meet their traffic management and ITS program needs now and the connected vehicle and smart city objectives of the future.
- Econolite also provides unparalleled access to virtually all the peripheral components any agency may need.

BLUE SERIES

C A B I N E T S

Econolite is the Leader in One-Stop-Shop Traffic Management Solutions.

From policy, system-planning, and design to system and sensor products, integration, implementation, operation, maintenance and support, as well as consulting services for Connected and Automated Vehicles (CAVs).



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Cobalt Shelfmount
Cobalt Rackmount
2070 Series

Next-Gen Advanced Transportation Controllers



Overview

Cobalt is the next-generation in Advanced Transportation Controller (ATC) specifically designed for the mobile computing environment. Fully meeting ATC standards, Cobalt features a breakthrough hardened seven-inch touchscreen Graphical User Interface (GUI) matched with Linux-based OS that makes programming and access to functions the easiest in the industry.

Cobalt is designed to support Connected and Automated Vehicle (CAV) programs. Combined with the Connected Vehicle Co-Processor (CVCP) module, Cobalt fully supports Signal Phase and Timing (SPaT)/MAP data messaging capabilities, providing a fundamental Vehicle-to-Infrastructure (V2I) element for connected vehicle applications.

Helping to ensure safety, the traffic signal controller represents one of the most important intelligent technology and communication components of a signalized intersection. The Cobalt ATC family of controllers are designed to increase safety and traffic signal operations for years to come.

Key Features

- **Revolutionary traffic signal controller, large seven-inch color TFT LCD display**
- **Touch-screen display for intuitive, graphical programming**
- **High brightness and contrast display for better outdoor readability than any other controller on the market**
- **Linux, open architecture real-time multi-tasking operating system**

Cobalt Rackmount Hardware

Cobalts Rackmount ATC controllers can be configured with Econolite's robust Cobalt touch application software package, or other prequalified ATC/Linux software application software meeting current ATC standards. OS and software upgrades can be made easily by USB memory stick.

Cobalts Rackmount ATC controllers include an advanced, Linux-based engine board that is compliant with ATC 6.25 and 6.34 standards and provides connectors that support integration into 33x, ITS, or NEMA TS2 Type-1 cabinets, four Ethernet ports, two USB ports, and an SD card slot. Additionally, Cobalt's seven-inch color, high brightness TFT LCD module with touchscreen capabilities is readable in direct sunlight, can be operated with gloved hands, and is not affected by condensation or water drops. Optional cards can be purchased for twisted-pair copper (FSK) or serial (RS232) system interconnect.

Hardware Details

- Caltrans C1/C11 cabinet interface to replace 170 or 2070 controllers in 33X cabinets
- Synchronous Data Link Communications (SDLC) for hybrid or NEMA standard TS2 Type-1 cabinets
- Supports Econolite Linux-based software or other prequalified ATC/Linux software
- ATC Engine Board:
 - Fully compliant with the ATC Standard version 6.25 and proposed ATC Standard 6.34
 - 266MHz PowerQUICC II Pro-processor that provides 10 times more processing power than our previous generation controller processor
 - 128Mbytes of DDR2 DRAM memory for application and OS program execution
 - 64 Mbytes of FLASH for storage of OS Software and user applications
 - 2MB of SRAM memory for non-volatile parameter storage
- Two Ethernet switches provide additional ports and some level of management for networks ENET1 and ENET2
- Advanced Graphics Controller:
 - Enables Cobalt's enhanced graphics user interface
 - Touch screen capability means the keyboard never has to be used
 - Replaces traditional text menu selection with graphical selection
- Two USB 2.0 ports used to:
 - Update application software
 - Upload or download configuration
 - Upload logged data
- Datakey socket for an optional 3.3V Datakey, 8MB
- SD Memory Card socket:
 - The SD Card stores configuration and logs and provides automatic backup of configuration
- CPU Active LED
- Built in speaker for enhanced audio controller feedback
- Recessed front panel AUX switch
- Serial Ports:
 - Front panel mounted, 9-pin, C50s / Console port
 - Rear panel mounted
 - 15-Pin NEMA Port 1, SDLC
 - 25-Pin, NEMA, Port 2, Terminal
 - 25-Pin ATC, C12S
 - One slot for optional ATC / 2070 communications module for access to SP1 and SP2
- Parallel Ports:
 - Rear panel mounted
 - C1S
 - C11S
- Power Supply:
 - Meets all requirements of ATC standard 6.34
 - Recessed front panel AC power switch
- Operating System:
 - Linux 3.12 or later kernel and Board Support Package (BSP)
 - Compliant to ATC Standard 6.25 Annex B specifications

Hardware Options

- Two user interface options:
 - *Advanced Display with graphics and touch-screen (Standard)*
 - *Basic Display with text and textual menus only—no touch or graphics*
- Power Connection options:
 - *A permanently attached cable and cable wraps for use in 170 or 2070 replacement applications*
 - *A NEMA TS2-Type-1, "A", MS connector which facilitates a detachable power cord for use in Econolite Hybrid cabinets*
 - *A 220VAC assembly*
- Communications module options:
 - *FSK Module that can be configured for RS232 operation and use a 9 or 25 pin D connector*
 - *2070 TEES 2009 standard 6A, 6B, and 7A plug-in modules*
- Optional datakey 3.3V, 8MB
- Fixed or floating exception day programs that override the day plan event on a specific day
- 16 day plans that can use any of the 100 event plans

Control Features

- 16 phases, 8 configurable concurrent groups in 4 timing rings
- 16 vehicle overlaps that can be configured as normal, green/ yellow, PPLT/FYA or Econolite
- 16 pedestrian phases that can be configured as pedestrian overlaps
- Exclusive pedestrian operation
- Dynamic max operation
- Extendable walk and pedestrian clearance
- Advanced Walk
- Bike input and green timing
- Adaptive red clearance
- Transit Signal Priority

Coordination Features

- 120 coordination event plans, each with its own cycle, offsets, split timing, coordinated phases, vehicle and pedestrian recall and phase omits
- Offset and split entries displayed in percent or seconds



- Automatic permissive periods
- Fixed or floating force-off
- Crossing arterial coordination
- Quick-sync feature

Preemption Features

- Ten preemption sequences. Each may be configured as priority, first-come-first-serve, or bus preemption operation
- ECPI interlock to provide added monitoring
- Railroad gate-down input and timing
- Conditional delay when entering preemption
- Multiple exit preemption options

Time-Based Features

- 200 schedule programs, configurable for any combination of months, days of the week, and days of the month
- Fixed or floating exception day programs that override the day plan event on a specific day
- 16 day plans that can use any of the 100 event plans

Status Display Features

Touch selection of detailed dynamic status display for the main controller unit functions including: controller, coordinator, preemptor, time base, detectors, and MMU

Logging Features

- Separate buffers for detector activity, detector failures, controller events, and MMU events
- Logged data can be:
 - *Viewed on front panel*
 - *Retrieved via a RS-232 terminal port, USB*
 - *Transferred via communications to a traffic management center*

Detector Features

- 64 vehicle detectors
- 16 system or speed detectors
- Unique detector types and operation
- Individually assignable to phase and functions
- Lock/non-lock function by detector
- 4 detector plans
- 4 detector diagnostic plans
- Logging of volume and/or occupancy assignable by any or all of the 64 detector
- 4 pedestrian diagnostic plans

Systems

- NTCIP level 2 compliance
- Supports CentraCS® and TS2 NTCIP Level 2-compliant pre-qualified central applications

Cobalt RM Software

- Software features, plus the following:
 - Full-color graphic interface with touch-screen capability
 - Provides menu selection using touch selections
 - Programming uses touch data entry allowing touch gestures to select yes/no, select enable/disable, pull-down list selections and more
 - Screen can be swiped to advance to another screen
 - Naming of timing plans, Event plans, Day plans, and Week plans
- Allows for an agency-specific default database
- Automatic backup of controller database to optional Datakey or manual back up to USB flash drive

- Context sensitive help
- 100-statement logic processor to test inputs, outputs or timers and take actions based on the results
- Cobalt Mobile remote tablet interface
- Peer-to-Peer operation is a feature that allows controllers to share information with other controllers, independent of the central system. One controller can communicate with up to 15 other controllers through Ethernet

Software Options

- EOS
- ASC/3-LX

Specifications

- **Temperature:**
 - -34.6°F to +165°F (-37°C to +74°C)
- **Power:**
 - 110VAC @ 50/60 HZ or optional 220/240 VAC @ 50/60 HZ
 - Fuse protection for either 110 or 220/240V
 - Protection for the 24VDC supply is provided by a resettable electronic fuse
- **Dimensions:**
 - 19" W x 7" H x 11.5" D



Learn more
about additional
Controller products



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EOS

ASC/3

Adaptive

Breakthrough Controller Software



Overview

EOS is Econolite's new breakthrough in ATC controller software. Designed to power Econolite Cobalt (and other properly configured ATC controllers), EOS provides improved core traffic controller operation, enhanced features, and improved usability, helping prepare transportation agencies, cities, MPOs, and others for support of Connected and Automated Vehicles (CAV) and Smart City applications.

EOS provides a user interface that has been designed to maximize usability of traditional displays, as well as incorporating a new web user interface. EOS has improved real-time decision-making, allowing dynamic changes to nearly all features and timing 'on-the-fly.' It also provides operational benefits of adaptive control without the need for a separate adaptive system.

EOS' improved traffic control capabilities combined with its ease-of-use helps ensure that transportation agencies can provide the safest and most efficient intersections for its driving public. It is also designed with the future in mind, supporting the demands of Smart City and connected vehicle applications for the next level in intersection safety.

Key Features

- ***Features a brand new coordinator design, enabling immediate coordination decisions***
- ***Includes adaptive split balancing using the Purdue GOR/ROR5 metric for phase failure***
- ***Supports localized adaptive splits***
- ***Operational benefits of adaptive control, without the need for a separate adaptive control system***

Description

Econolite EOS' user interface has been designed to maximize usability of traditional displays, as well as incorporating a new web user interface that includes a virtual suitcase tester. EOS can be accessed via a network interface, which can be local or remote, wired or wireless, and allows monitoring or programming of the controller through any web-enabled device, including smart phone, tablet, laptop, or desktop computer.

Improved Traffic Control

EOS has improved real-time decision-making, allowing dynamic changes to nearly all features and timing 'on-the-fly'. EOS supports the configuration of phase and overlap timing in predefined tables that can be swapped to meet immediate needs. Dynamic-sequencing is achieved by updating prior phase-next selections at the end of a red clearance and even allows phase-sequence swaps in the middle of active phase timing.

EOS features a brand new coordinator design, enabling immediate coordination decisions rather than awaiting a cycle endpoint. This coordinator includes adaptive split balancing using the Purdue GOR/ROR5 metric for phase failure. This coordinator goes a step further by supporting localized adaptive splits. Adaptive splits perform a split re-allocation, balancing splits per the newly published GOR/ROR5 metric. This feature brings many of the operational benefits of adaptive control, without the need for a separate adaptive control system.

Preparation for the Future

EOS' improvements to the core traffic controller operation, enhanced features, and improved usability, helps prepare transportation agencies, cities, MPOs, and others for support of Connected and Autonomous Vehicles (CAV) and Smart City applications. EOS currently supports SPaT, MAP, and BSM messages per the latest SAE J2735 standards.



Learn more
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