

AGENDA

CITY COUNCIL REGULAR MEETING

January 25, 2022

5:00 PM, City Council Chambers
130 S Galena Street, Aspen



WEBEX MEETING INSTRUCTIONS

WEBEX MEETING INSTRUCTIONS

TO JOIN ONLINE:

Go to www.webex.com and click on "Join a Meeting"

Enter Meeting Number: 2559 972 1254

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Call: 1-408-418-9388

Enter Meeting Number: 2559 972 1254

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I. CALL TO ORDER

II. ROLL CALL

III. SCHEDULED PUBLIC APPEARANCES

IV. CITIZENS COMMENTS & PETITIONS

(Time for any citizen to address Council on issues NOT scheduled for a public hearing. Please limit your comments to 3 minutes)

V. SPECIAL ORDERS OF THE DAY

a) Councilmembers' and Mayor's Comments

b) Agenda Amendments

c) City Manager's Comments

d) Board Reports

VI. CONSENT CALENDAR

(These matters may be adopted together by a single motion)

VI.A. Resolution #009 and Resolution #013, Series of 2022 - Red Mountain Waterline Improvements Construction Contract.

VII. NOTICE OF CALL-UP

VIII. FIRST READING OF ORDINANCES

VIII.A. Ordinance #1, Series of 2022 - Liquor & Marijuana Code Amendments

IX. PUBLIC HEARINGS

X. ACTION ITEMS

X.A. Resolution #014, Series of 2022 - Aspen Mini Storage Annexation Petition

XI. ADJOURNMENT



MEMORANDUM

TO: Mayor and City Council

FROM: Andy Rossello, Project Manager III

THROUGH: Ryan Loebach, Sr. Project Manager
Tyler Christoff, Director of Utilities

MEMO DATE: January 25th, 2022

MEETING DATE: January 25th, 2022

RE: Resolution #009, Series of 2022 – Red Mountain Waterline Improvements -- Construction Contract

REQUEST OF COUNCIL: Staff requests a contract award to The Aspen Digger, Inc. in the amount of \$296,504.65 for the construction of water distribution infrastructure in the Red Mountain Area on Hunter Creek Road. Staff also requests the approval of a contingency budget of \$66,227.23 to be released under the administrative authority of the City Manager.

PREVIOUS COUNCIL ACTION: Council has reviewed funding for the project through the 2022 budget approval process.

BACKGROUND: The City of Aspen serves water customers in the Red Mountain area along Hunter Creek Road through one, dead-end pipeline. The city's 2013 Long-Range Asset Management Plan identified the need to add a redundant pipeline to reliably convey water to these customers. This project was further validated by the City's 2015 Wildland Urban Interface Fire Mitigation Plan. The 2015 plan identified areas in which looped waterlines would increase fire flow capacity at local fire hydrants and remove system dead-ends. Staff hired professional engineers Merrick and Company in 2021 to design construction documents for Red Mountain waterline improvements.

DISCUSSION: City staff solicited bids from qualified construction companies to construct these waterline improvements. All construction activities for this project will meet current Water Distribution Standards, and Pitkin County ROW Standards. Staff has also solicited a quote for inspection services via Merrick and Company. Merrick and Company will be responsible for construction inspection services including, submittal review, daily job site monitoring, pay application review, and commissioning of mechanical systems.

FINANCIAL/BUDGET IMPACTS: Bids received from all bidders to construct the proposed waterline improvements are summarized below:

The Aspen Digger, Inc	\$ 296,504.65
PRT Builders, LLC	\$ 526,009.19

Staff recommends awarding the construction contract to The Aspen Digger, Inc. based on their qualifications and responsiveness to the Invitation to Bid. This project has the potential to encounter large rock, cobble, and potentially bedrock. Staff requests a contingency budget be reserved and approved for release by staff. The proposed project funding and expenditures are outlined below:

Total Project Expenditures	
The Aspen Digger: Construction Contract	\$296,504.65
Merrick and Company: Inspection Contract	\$ 34,631.50
Contingency (20% of subtotal of contracts above)	\$ 66,227.23
Total	\$397,363.38
Funding Budgeted	
Utilities 2022 Funding	
Project 51133-Hunter Creek Pipeline Loop	\$501,050.00
Total	\$501,050.00

ENVIRONMENTAL IMPACTS: Maintaining and improving the City’s water distribution system creates a more efficient and resilient water system for customers. These improvements ultimately assist the community in their use and access to this important but finite resource. Infrastructure reinvestment allows the utility to minimize losses and continue to provide a high-level of customer service to the community.

ALTERNATIVES: Resiliency and redundancy are fundamental goals in planning and implementing a public water system. Staff believes this project is an important step in addressing system deficiencies. Council can elect to forgo this contract and use existing infrastructure to serve customers within the Red Mountain system using a non-redundant, dead-end pipeline.

RECOMMENDED ACTION: Staff requests the council approve the contract with The Aspen Digger, INC. for \$296,502.65 for the construction of water distribution infrastructure. Additionally, staff requests the approval of a contingency budget of \$66,227.23 to be released under the administrative authority of the City Manager.

PROPOSED MOTION: I move to approve Resolution #009 and #013 of 2022.

CITY MANAGER COMMENTS: _____

- ATTACHMENTS:**
- A. Contract with The Aspen Digger, Inc.
 - B. Resolution #009 of 2022

C. Resolution #013 of 2022

RESOLUTION # 009
(Series of 2022)

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ASPEN, COLORADO, APPROVING A CONTRACT BETWEEN THE CITY OF ASPEN AND THE ASPEN DIGGER, INC. AUTHORIZING THE CITY MANAGER TO EXECUTE SAID CONTRACT ON BEHALF OF THE CITY OF ASPEN, COLORADO.

WHEREAS, there has been submitted to the City Council a contract for the construction of waterline infrastructure on Hunter Creek Rd., between the City of Aspen and The Aspen Digger, Inc., a true and accurate copy of which is attached hereto as Exhibit “A”;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ASPEN, COLORADO,

That the City Council of the City of Aspen hereby approves that Contract for construction of waterline infrastructure on Hunter Creek Rd., between the City of Aspen and The Aspen Digger, Inc., a copy of which is annexed hereto and incorporated herein, and does hereby authorize the City Manager to execute said agreement on behalf of the City of Aspen.

INTRODUCED, READ AND ADOPTED by the City Council of the City of Aspen on the 25th day of January, 2022.

Torre, Mayor

I, Nicole Henning, duly appointed and acting City Clerk do certify that the foregoing is a true and accurate copy of that resolution adopted by the City Council of the City of Aspen, Colorado, at a meeting held, January 25th, 2022.

Nicole Henning, City Clerk

RESOLUTION # 013
(Series of 2022)

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ASPEN, COLORADO, AUTHORIZING THE CITY MANAGER TO EXERCISE ADMINISTRATIVE OVERSIGHT OF CHANGE ORDERS THAT ARE WITHIN THE APPROVED 2022 BUDGET FOR CITY PROJECT #51133 AND AUTHORIZING THE CITY MANAGER TO EXECUTE SAID CHANGE ORDERS ON BEHALF OF THE CITY OF ASPEN COLORADO.

WHEREAS, there has been submitted to the City Council a contract for the construction of waterline infrastructure on Hunter Creek Rd., between the City of Aspen and The Aspen Digger, Inc., in the amount of 296,504.65 (Reso. #009 of 2022).

WHEREAS, City Council has determined it is in the best interest of the City of Aspen to authorize the City Manager to exercise administrative oversight of change orders for an amount not to exceed \$66,226.23 and execute said change orders on behalf of the City of Aspen, Colorado.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ASPEN, COLORADO,

That the City Council of the City of Aspen does hereby authorize the City Manager to exercise administrative oversight of any change orders for an amount not to exceed \$66,226.23 and execute said change orders on behalf of the City of Aspen, Colorado.

INTRODUCED, READ AND ADOPTED by the City Council of the City of Aspen on the 25th day of January, 2022.

Torre, Mayor

I, Nicole Henning, duly appointed and acting City Clerk do certify that the foregoing is a true and accurate copy of that resolution adopted by the City Council of the City of Aspen, Colorado, at a meeting held, January 25th, 2022.

Nicole Henning, City Clerk



2021 Red Mountain Water System Improvements



City Project Number: 2021-219

BID DOCUMENTS & CONSTRUCTION SPECIFICATIONS

**OPENING:
12/1/2021**

**City of Aspen
130 S. Galena Street
Aspen, Colorado 81611
(970) 429-1999
Andy Rossello**

INVITATION TO BID

Sealed bids will be received by the City of Aspen, Colorado, through the Bidnet Direct website, www.bidnetdirect.com, until, 2:00pm, December 1st, 2021 , at which time the bids will be publicly opened and read aloud, for the following City of Aspen project:

2021-219: Red Mountain Road Water System Improvements

Complete bid packages are available to download or from www.bidnetdirect.com. Vendors must be registered to view the bid packages. There is no charge to register. Call 800-835-4603 if you need assistance registering for free access.

A pre-bid conference will be held at **The City's Water Treatment Plant at 500 Doolittle Drive, at 1:30 P.M., October 28th, 2021.** Attendance at the pre-bid conference is essential to convey the bidder's questions regarding the plans and specifications to the Engineering Department. The pre-bid conference is **NON-MANDATORY**.

The City reserves the right to reject any or all bids or accept what is, in its judgment, the bid which is in the City's best interest. The City further reserves the right, in the best interests of the City, to accept a late submittal or to waive any technical defects or irregularities in any and all bids submitted. The City cannot accept faxed or emailed bids.

Pursuant to the Colorado Open Records Act, C.R.S. Section 24-72-200.1 (CORA), any and all of the documents that are submitted to the City of Aspen may be deemed public records subject to examination and inspection by third parties. The City of Aspen reserves the right, at its sole discretion, to release for inspection or copying any document, plan, specification, proposal or other writing submitted pursuant to this request.

Bids must be submitted, as a single Word or .PDF document, electronically through the Bidnet Direct website and named: "2021-219 2021 Red Mountain Water System Improvements submitted by XYZ Company (enter company name)".

Maintenance, Performance, and Payment bonds will be required for this project.

In addition to price, the criteria set forth in the Instruction to Bidders and any specific criteria listed below may be considered in judging which Bid is in the best interests of the City.

No bid may be withdrawn within a period of sixty (60) calendar days after the date fixed for opening bids.

By: Asal Vojdani
Purchasing



130 South Galena Street
Aspen Colorado 81611
(970) 920-5079

Project Title: Red Mountain Water System Improvements

Project No.: 2021-219

BID PACKAGE
(Contract Documents)

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Note: *Page Markings;* * Pages to be executed prior to submitting sealed bids.
 ** Pages to be executed upon notice of award and prior to pre-construction conference.
 *** Pages to be executed during final stages or completion of work and prior to release of retainage.



INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION PROJECTS

1. The City of Aspen has advertised to invite Bidders to submit sealed Bids for a construction project which is fully described in the Contract Documents accompanying these instructions. The following instructions have been prepared to assist Bidders in the preparation of their Bids.

2. The Contract Documents for this project shall consist of the following documents:
 - A. Invitation to Bid (Public Notice).
 - B. Instructions to Bidders.
 - C. Bid Proposals
 - D. Addenda, if any.
 - E. General Conditions.
 - F. Special Conditions.
 - G. Bid Bond.
 - H. Notice of Award.
 - I. Contract for Construction.
 - J. Payment Bond.
 - K. Performance Bond.
 - L. Maintenance Bond.
 - M. Drawings, identified in General Conditions.
 - N. Specifications identified in General Conditions.
 - O. Affidavit of Compliance form.
 - P. Liquidated damages form.
 - Q. Contractor's License form.
 - R. Daily Construction Log form.
 - S. Progress Pay Estimate form.
 - T. Change Order Form
 - U. Claim Release form.
 - V. Insurance Certificates.

3. Information contained in the Contract Documents, as completed during the bidding and contract award process, shall be the basis for the bids, and nothing shall be deemed to change or supplement this basis except for written revisions to the above documents issued by the City of Aspen.

4. The City of Aspen reserves the right to reject any or all bids or accept what is, in its judgment, the best bid. The City further reserves the right, in the best interests of the City, to waive any technical defects or irregularities in any and all bids submitted, and to negotiate contract terms with the Successful Bidder, and the right to disregard all non-conforming, non-responsive or conditional Bids. Discrepancies between words and figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
5. The cost of bid preparation shall be borne solely by the persons or entities submitting bids.
6. The following procedures or steps shall be followed after the issuance or publication of Invitation for Bids:
 - A. Reference is made to the Invitation for Bids to determine if a pre-bid conference will be scheduled, and if so, where and when. If a pre-bid conference is scheduled, attendance at the pre-bid conference is mandatory unless prior authorization is given by the Bid Coordinator. The costs of attendance at a pre-bid conference shall be borne entirely by the Bidder.
 - B. Reference is made to the Invitation for Bids to determine how complete Bid Packages may be obtained.
 - C. Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site, if any, to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize himself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect costs, progress or performance of the Work; (d) familiarize himself with the unique weather conditions of the City of Aspen and surrounding area that may affect costs, progress or performance of Work; and (e) study and carefully correlate Bidder's observations with the Contract Documents.
 - D. Reference is made to the Special Conditions and the Invitation for Bid for the identification of those specific requirements of the project or otherwise affecting cost, progress or performance of the Work which have been relied upon by the City of Aspen or a consultant in preparing any Drawings or Specifications. These special provisions supersede the General Conditions in the Contract Documents. Before submitting the Bid, each Bidder will, at his/her own expense, make such additional investigations and tests as the Bidder may deem necessary to determine his Bid for performance of the Work in accordance with the time, price and other terms and conditions of the Contract Documents.
 - E. Reference is made to the Invitation for Bids to determine the place, date, and time for delivering sealed Bid proposal for this project.

- F. Bids shall be submitted at the time and date indicated in the Invitation for Bids and other required documents. Bids submitted by facsimile machine (FAX) or email shall not be accepted or considered.
- G. Each Bid must be accompanied by Bid Security made payable to the City of Aspen, in an amount of five percent (5%) of the maximum Bid price or as set in the Invitation for Bids and in the form of a certified or bank check or a Bid Bond (on form attached).

The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Contract for Construction and furnished the required Payment, Performance, and Maintenance Bonds, or other Bonds if any are required by the Special Conditions, whereupon it will be returned; if the Successful Bidder fails to execute and deliver the Contract for Construction and furnish the required bonds and insurance certificates, within seven (7) days of the hand delivery or fax transmittal of the Notice of Award, the City of Aspen may annul the Notice of Award and the Bid Security of that Bidder shall be forfeited. The Bid Security of any Bidder whom the City of Aspen believes to have a chance of receiving the award may be retained by the City of Aspen until the day after the "effective date of the Contract for Construction" (which term is defined in the General Conditions) or the sixty first (61) day after the Bid opening, whichever is later in time. Bid Security of other Bidders will be returned within ten (10) days of the Bid award by the City Council.

- H. Reference is made to the Contract Documents for any Bid Forms that may be required to be completed as part of the Bid. Bid Proposal Forms, as required, must be completed in ink or by a printer/typewriter. The Bid price must be stated in words and numerals; in case of a conflict, words will take precedence. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature. Bids by partnerships must be executed in the partnership named and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- I. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids. No Bid may be withdrawn for a period of sixty (60) days after the date fixed for opening of bids.

- J. At the place, date and time fixed for opening bids, all bids received prior to that time shall be publicly opened and read aloud. All bids shall remain open for a period of thirty (60) days, but the City may, in its sole discretion, release any Bid and return the Bid Security prior to that date.
- K. The City shall then evaluate each bid in the best interests of the City of Aspen. The bids shall be evaluated to determine which are the lowest responsive and responsible bids. In making that evaluation, total price, the evaluation criteria set forth in the Invitation for Bids, and the following specific criteria shall be considered:
 - 1. The ability, capacity and skill of the bidder to perform the contract or provide the Service or Construction required;
 - 2. Whether the bidder can perform the contract or provide the Construction promptly, or within the time specified, without delay or interference;
 - 3. The character, integrity, reputation, judgment, experience and efficiency of the bidder;
 - 4. The quality of performance of previous contracts or Construction;
 - 5. The previous and existing compliance by the bidder with laws and ordinances relating to the contract or Construction;
 - 6. The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the Construction;
 - 7. The affirmative action goal preferences set forth at Chapter 4.04 of the Aspen Municipal Code.
 - 8. Any other criteria for evaluating Bids set forth in the Invitation for Bids.
- L. Prior to accepting a bid, the City may decide to interview one or more bidders to negotiate final contract terms for inclusion in the Agreement.
- M. To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within five (5) days of a request written evidence of additional information, such as financial data, previous experience or evidence of authority to conduct business in the state of Colorado.
- N. Upon determining the successful bidder, the City of Aspen shall send to the successful bidder a Notice of Award notifying the recipient of the City's acceptance of the bidders proposal, subject to City Council or City Manager

approval of the Contract Documents. The Notice of Award shall also forward to the presumptive successful bidder an electronic copy of the Agreement with instructions to execute and return the same to the City within seven (7) consecutive calendar days or risk having their bid declared abandoned. If the City Council approval is required pursuant to Section 3-11 of the Aspen Municipal Code, then the City Council at its next regularly scheduled meeting following receipt by the City of the duly executed copies of the Contract for Construction shall be asked to consider approval of the Agreement and authorize the Mayor of the City of Aspen to execute the same. If City Council approval is not required, then the Contract for Construction shall be executed by the City Manager.

- O. Upon receipt of Performance, Payment, and Maintenance Bonds, or other bonds when required by the Special Conditions, the City shall send to the Successful Bidder a Notice to Proceed duly executed by the Purchasing Officer and hold a mandatory Pre-construction conference.
7. All purchases of construction or building materials shall not include Federal Excise Taxes or Colorado State or local sales or use taxes. The City of Aspen's State of Colorado tax identification number is 98-04557. The City of Aspen's Federal Tax Identification Number is 84-6000563.
 8. Reference is made to the Special Conditions for the nature and amount of any required Maintenance, Payment or Performance Bonds.
 9. There are specific indemnity and insurance requirements which the Successful Bidder must comply with prior to the start of Work for this project. These requirements are set forth in detail in the General Conditions.
 10. The submission of a Bid will constitute an incontrovertible representation by the Bidder that he/she has complied with every requirement of these instructions and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.
 11. Reference is made to the Invitation for Bids for the identity of the City of Aspen's Purchasing Officer who will coordinate all aspects of the bidding and awards process. All questions about the meaning or intent of the Contract Documents shall be submitted to the Coordinator in writing. Replies will be issued by Addenda posted on the City's designated website for publishing solicitations or delivered to all parties recorded by the Purchasing Officer as having received a Bid Package. Questions received less than seven (7) days prior to the date of Bid openings may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
 12. All City procurements, source selection, contract formation, legal and contractual remedies, and standards of conduct relating to procurements with the City of Aspen are subject to the City's Procurement Code, Chapter 4 of the Municipal Code.

13. By submitting a bid, Contractor certifies and represents that at this time:
- (i) Professional shall confirm the employment eligibility of all employees who are newly hired for employment in the United States; and
 - (ii) Professional has participated or attempted to participate in the Basic Pilot Program in order to verify that it does not employ illegal aliens.



General Conditions for Construction Contracts

(Version GC-97-2)

CITY OF ASPEN, COLORADO

GENERAL CONDITIONS
FOR
CONSTRUCTION CONTRACTS
 (Version GC-97-2)

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INTRODUCTION

The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all, unless certain services or equipment are specifically excluded. These General Conditions have been prepared to be incorporated by reference into the Contract entered into between the City and the Contractor. In the event of conflict or inconsistency among the Contract Documents, the order of precedence set forth in the Contract for Construction shall govern the interpretation of the Contract between the City of Aspen and the Contractor. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with their recognized meanings, provided however that those terms required to be defined in the Proposal by the Contractor shall have the meaning given to them in the Proposal to the extent that they are not in conflict with any other part or term of the Contract Documents.

ARTICLE 1 - DEFINITIONS

1.1. Whenever the words, forms, or phrases defined herein, or pronouns used in their place occur in the Contract Documents, the intent and meaning shall be interpreted as follows:

ASCE	American Society of Civil Engineers
NACE	National Society for Corrosion Engineers
SSPC	Special Society for Paint Council
AASHTO	American Association of State Highway and Transportation Officials
AIA	American Insurance Association
SICS	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute (formerly ASA and USASI)
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWG	American Wire Gauge
AWS	American Welding Society
BAFO	Best and Final Offer
CDOT	Department of Transportation, State of Colorado
O&M	Operations and Maintenance
DHA	Detailed Hazards Analysis
EBD	Escrow Bid Documents
EIA	Electronic Industries Association
EPA	United States Environmental Protection Agency
FCC	Federal Communications Commission
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	Heating, Ventilation, and Air Conditioning
NBS	National Bureau of Standards
NEC	National Electric Code
NTP	Notice to Proceed
NESC	National Electric Safety Code
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PHA	Preliminary Hazards Analysis
SAE	Society of Automotive Engineers
UL	Underwriter's Laboratories, Inc.
UMTA	United States Department of Transportation, Urban Mass Transportation Authority
UD&FCD	Urban Drainage and Flood Control District
MUTCD	Manual on Uniform Traffic Control Devices

1.2. Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Addenda - Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents, Contract Documents, drawings, details or specifications.

Bid - The offer or proposal of the bidder submitted on the prescribed form(s) setting forth the prices for the Work to be performed.

Bidder - Any qualified responsible and responsive firm or corporation submitting a Bid for the Work.

Bid Package - All information and standard Contract Documents prepared by the City to assist potential bidders to prepare their bids.

Bonds - Bid, performance, payment, maintenance bonds and other acceptable instruments of financial security, furnished by the Contractor and his/her surety in accordance with the Contract Documents.

Change Order - A written order to the Contractor authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time, issued on or after the Effective Date of the Contract for Construction.

City or Owner - The City of Aspen in Pitkin County, Colorado.

Contract - All contract documents attached to the Contract for Construction and made a part thereof as provided herein.

Contract Documents - The Contract including Invitation to Bid, Instructions to Bidders, Bid Proposal, Addenda, General Conditions, Special Conditions, Contract for Construction, Bid Bond, Notice of Award, Payment, Performance, and Maintenance Bonds, Drawings identified in the Contract Documents or attached as part of the Bid, and Specifications identified in the invitation to Bid or attached as part of the Bid, Affidavit of Compliance form, Liquidated Damages form, Contractor's License form, Daily Construction Log form, Progress Pay Estimate form, and Insurance Certificates.

Contract for Construction - The written agreement between City and Contractor covering the Work to be performed.

Contractor - The qualified responsible and responsive firm or corporation with whom the City has entered into the Contract for Construction.

Contract Price - The moneys payable by the City to the Contractor under the Contract Documents as stated in the Contract for Construction (subject to the provisions of paragraph 11.4.), except for the Minor Contract Revisions item(s) which are subject to the City's written authorization for expenditure.

Contract Time - The number of the consecutive calendar days or the working days and/or the deadline set in the Contract Documents for the completion of the Work.

Daily Construction Log - The form furnished by the City Engineering Department, used by the City Project Inspector to record the Contractor's daily work quantities and project events. Daily construction log is the only verified justification for payment to the Contractor.

Defective - An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to the Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by the City at Substantial Completion in accordance with paragraph 14.5 or 14.6).

Drawings - The part of the Contract Documents which show the character and scope of the Work to be performed and which have been prepared or approved by the Engineer.

Effective Date of the Contract for Construction - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

Engineer - The person, firm, corporation or the City Engineer, named as such in the Contract Documents.

Field Order - A written order affecting a change in the Work not involving an adjustment in the Contract Time, issued by the Engineer to the Contractor during construction.

Hazardous Materials - The term "Hazardous Materials" shall have the meaning set forth at 42 U.S.C. ' 9601(14) and regulations promulgated pursuant thereto.

Laws and Regulations; Laws or Regulations - Laws, rules regulations, ordinances, procurement code and/or orders.

Notice of Award - The written notice by the City to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, the City will sign and deliver the Contract.

Notice to Proceed - A written notice given by the City to the Contractor fixing the date on which the Contract Time will commence to run and on which Contractor shall start to perform Contractor's obligations under the Contract Documents.

Partial Utilization - Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

Procurement Code - Title 4 of the City of Aspen Municipal Code.

Progress Pay Estimate - The form furnished by the City Engineering Department, which is to be used to record, approve, and process payment when the Contractor requests progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

Project - The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Project Inspector - The authorized Civil Engineer or Civil Engineering Technician, designated by the City Engineer to observe construction, materials placement and testing and to prepare the Daily Construction Logs and field reports.

Punch List - A form or letter that lists all incomplete or deficient Bid items, and is prepared upon substantial completion of the Work by the City Project Inspector.

Shop Drawings - All drawings, diagrams, illustrations, brochures, schedules and other data which are specifically prepared by or for the Contractor and the sub-contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the Contractor and the Sub-contractor to illustrate material or equipment for some portion of the Work.

Specifications - Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

Subcontractor - A firm or corporation having a direct contract with the Contractor or with any other Sub-contractor for the performance of a part of the Work at the site.

Substantial Completion - The Work (or a specified part thereof) has progressed to the point where, in the opinion of the Engineer as evidenced by the Engineer's acceptance, is sufficiently complete, in accordance with the Contract

Documents, so that the Work can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to any Work refer to Substantial Completion thereof. The term Substantial Completion shall mean one hundred percent (100%) completion of the Work.

Special Conditions or Special Provisions - The part of the Contract Documents which amends or supplements these General Conditions.

Supplier - A manufacturer, fabricator, supplier, distributor, material-man or vendor who supplies materials or equipment for the Work including that fabricated to a special design but who does not perform labor at the site.

Underground Facilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services for materials; electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater and surface runoff removal, traffic or other control systems.

Unit Price Work - Work to be paid for on the basis of unit prices.

Work - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents and those not specifically mentioned but necessary for successful completion of the Bid items.

Written Notice or Written Notice of Amendment - A written amendment of the Contract Documents, signed by the City and the Contractor on or after the Effective Date of the Contract for Construction and normally dealing with the non-engineering or non-technical rather than strictly Work-related aspects of the Contract Documents

ARTICLE 2 - PRELIMINARY MATTERS

2.1 Delivery of Bonds:

When Contractor delivers the executed Contracts to the Purchasing Department, the Contractor shall also deliver such Bonds as the Contractor is be required to furnish in accordance with paragraph 5.1.

2.2 Copies of Documents:

The City shall furnish to the Contractor up to three copies (unless otherwise specified in the Special Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

2.3 Commencement of Contract Time, Notice to Proceed:

Prior to the City issuing a Notice to Proceed, either the City Manager or the Mayor of the City of Aspen shall approve the Contract Documents and shall execute the same. Notwithstanding any representations to the contrary made by City's employees, either directly, indirectly, or by implication, no Contract shall be in effect nor shall be binding upon the City until such time as the Contract is executed by the City pursuant to authority granted in accordance with Section 4-08-040 of the Procurement Code. The City shall issue a Notice to Proceed after either (a) the City Manager has executed the Contract, or (b) The City Council has authorized the execution of the Contract, and the Contractor has executed the Contract and other Contract Documents, and has delivered the specified bonds, Certificates of Insurance, as are required, and any other documents required to be delivered by the Special Conditions and Addenda(s) if any issued. The Contract Time will commence to run on the day indicated in the Notice to Proceed.

2.4 Starting the Project:

The Contractor shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run and prior to a mandatory pre-construction conference conducted by the City.

2.5 Before Starting the Project:

Before undertaking each part of the Work, the Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. The Contractor shall promptly report in writing to the Engineer any conflict, error or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from the Engineer before proceeding with any Work affected thereby.

2.5.1. Within Three Days after the Effective Date of the Contract (unless otherwise specified in the Special Conditions or General Requirements), the Contractor shall submit to the Project Manager for review:

- 2.5.1.1. An estimated progress schedule indicating the starting and completion dates of the various stages of the Work;
- 2.5.1.2. A preliminary schedule of Shop Drawing submissions; and
- 2.5.1.3. Quality Control and Quality Assurance (QA/QC) plan and policy to identify the specific steps the Contractor will take to ensure the highest quality in the constructed Bid items.
- 2.5.1.4. A Work Zone Safety Implementation & Enforcement Plan with specific action process.

2.5.2. Before any Work at the site is started, the Contractor shall deliver to the City and Purchasing Officer, copies of certificates (and other evidence of insurance requested by the City) which the Contractor is required to purchase and maintain.

2.6 Pre-construction Conference:

Within *Seven (7) Consecutive Calendar Days* after the Effective Date of the Bid Award, and before the Contractor starts the Work at the site, he/she and all of his/her sub-contractors and suppliers shall attend a mandatory pre-construction conference, conducted by the Engineer and others as appropriate to discuss coordination of construction activities, procedures for handling Shop Drawings and other issues, and to establish a working understanding among the parties as to the Work.

2.7 Project Progress Meetings

The City and the Contractor shall meet *once a week* to review the construction activities, rate of progress, and other project related issues to ensure efficient and smooth progress of work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.1 *Intent:*

The Contract Documents comprise the entire agreement between the City and the Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the State of Colorado.

3.1.1. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Contract if there were no Bids) except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the City, the Contractor or the Engineer, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to the Engineer, or any of the Engineer's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 9. Clarifications and interpretations of the Contract Documents shall be issued by the Engineer as provided in section 9.4.

3.1.2. If, during the performance of the Work, Contractor finds a conflict, error or discrepancy in the Contract Documents, the Contractor shall so report to the engineer and the City in writing at once and before proceeding with the Work affected thereby and shall obtain a written interpretation or clarification from the Engineer.

3.2 *Amending and Supplementing Contract Documents:*

The contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

3.2.1. A formal Amendment of the Contract for Construction;

3.2.2. A Change Order pursuant to paragraph 10.3. As indicated in Article 11 Contract Price and Contract Time may only be changed by a Change Order or a Written Notice of Amendment.

3.2.3. In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

3.2.3.1. A Field Order (pursuant to paragraph 9.5);

3.2.3.2. The Engineer's approval of a Shop Drawing or sample (pursuant to paragraphs 6.18.5 and 6.18.6); or,

3.2.3.3. The Engineer's written interpretation or clarification (pursuant to paragraph 9.4).

3.3 *Reuse of Documents:*

Neither the Contractor nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with the City shall have or acquire any title to or ownership rights in any of the design details, drawings or specifications.

3.4 *Precedence of Contract Documents:*

The Contract governs over the Contract Documents. A Change Order governs over all other Contract Documents impacted by change. The Special Conditions govern over the General Conditions.

ARTICLE 4 - AVAILABILITY OF LANDS: PHYSICAL CONDITIONS: REFERENCE POINTS

4.1 Availability of Lands:

The City shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto. The Contractor shall have full responsibility with respect to any conditions or provisions contained in applicable easements relating to the lands upon which the Work is to be performed.

4.2 Physical Conditions:

4.2.1. **EXPLORATIONS AND REPORTS:** Reference is made to the Special Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by the Engineer in preparation of the Contract Documents. The Contractor may reasonably rely upon the accuracy of the technical data contained in such reports, but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for the Contractor's purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6. the Contractor shall have full responsibility with respect to subsurface conditions at the site. Contractor shall not, by virtue of this paragraph, be relieved from exercising ordinary skill and competence with respect to reliance upon the accuracy of the technical data contained in such reports.

4.2.2. **EXISTING STRUCTURES:** Reference is made to the Special Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities referred to in paragraph 4.3) which are at or contiguous to the site that have been utilized by the Engineer in preparation of the Contract Documents. The Contractor may reasonably rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for the Contractor's purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6. the Contractor shall have full responsibility with respect to physical conditions in or relating to such structures. The Contractor shall not, by virtue of this paragraph, be relieved from exercising ordinary skill and competence with respect to reliance upon the accuracy of the technical data contained in such drawings.

4.2.3. **REPORT OF DIFFERING CONDITIONS:** If the Contractor believes that:

4.2.3.1. Any technical data on which the Contractor is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate; or

4.2.3.2. Any physical condition uncovered or revealed at the site differs materially from that indicated, reflected or referred to in the Contract Documents,

Then, the Contractor shall promptly, after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 6.22) notify the City and the Engineer in writing about the inaccuracy or difference.

4.2.4. **ENGINEER'S REVIEW:** The Engineer will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise the City in writing (with a copy to the Contractor) of the Engineer's findings and conclusions.

4.2.5. **POSSIBLE DOCUMENT CHANGE:** If the Engineer concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change in the Contract Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.2.6. **POSSIBLE PRICE AND TIME ADJUSTMENTS:** In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that

they are attributable to any such inaccuracy or difference as described in Section 4.2.3. The Contractor shall meet and obtain approval from the City Engineer or his/her designee prior to implementing any such change in the Work.

4.3 Physical Conditions - Underground Facilities:

4.3.1. **SHOWN OR INDICATED:** The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to the City or the Engineer by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Special Conditions:

4.3.1.1. The City and the Engineer shall not be responsible for the accuracy or completeness of any such information or data; and,

4.3.1.2. The Contractor shall have full responsibility for determining the existence of all Underground Facilities, for reviewing and checking and potholing for all such information and data, for locating all Underground Facilities shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction, for the safety and protection thereof as provided in paragraph 6.20 and for repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price or approved as a Change Order.

4.3.2. **NOT SHOWN OR INDICATED:** If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of, Contractor shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 6.17.1), identify the owner of such Underground Facility and give written notice thereof to that owner and to the City and the Engineer. The Engineer will promptly review the Underground Facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.16.1. The Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and of which the Contractor could not reasonably have been expected to be aware of such Underground Facility and subject to acceptance and approval by the Engineer.

4.4 Reference Points:

4.4. The City shall provide engineering surveys to establish reference points for construction which in the Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work (unless otherwise specified in the General Requirements), shall protect and preserve the established reference points and shall make no changes or re-locations without the prior written approval of the City. The Contractor shall report to the Engineer whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by a Registered Professional Land Surveyor Licensed in the State of Colorado.

4.5 Protection and Restoration of Property and Landscape:

4.5.1. The Contractor shall be responsible for the preservation of all public and private property and shall protect carefully from disturbance or damage all land and property and shall protect carefully from disturbance or damage all land and monuments and property marks until the Engineer has witnessed or otherwise referenced their location and shall not remove them until directed.

4.5.2. The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the Work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the Work, or at any time due to defective Work or materials, and said responsibility shall not be released until the project shall have been completed and accepted.

4.5.3. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct by the Contractor in the execution of the Work, or in consequence of the non-execution thereof by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner.

4.5.4. State Highway 82 and the streets within the corporate limits of the City of Aspen are viewed by the City as a community asset which enhances the tourism industry. The City, therefore, desires to save all vegetation and other environmental features except for those which have been specifically identified for removal in the Contract Documents.

4.5.5. Materials storage, equipment parking, vehicle parking and stockpiling excavated materials shall be allowed only in those areas designated by the Engineer.

4.5.6. Specific areas of vegetation and other environmental features to be protected shall be staked, fenced, or otherwise marked in the field by the Engineer. However, the fact that areas of vegetation and other environmental features are not marked shall not necessarily mean that those items are expendable. The Contractor shall perform all his activities in such a manner that the least environmental damage shall result. Any questionable areas or items shall be brought to the attention of the Engineer for approval prior to removal or any damage activity. Damage or destruction of unmarked trees or shrubs which could reasonably have been saved shall therefore be subject to the provisions these General Conditions.

4.5.7. If the fence, staking or marking is knocked down or destroyed by the Contractor, the Architect shall suspend the Work in whole or in part, until the fence or other protection is repaired to the Engineer's satisfaction at the Contractor's expense. Time lost due to such suspension shall not be considered a basis for adjustment of Contract Time or for compensation to the Contractor.

4.5.8. If the Contractor disturbs any of the landscape not called for removal, he/she shall restore those areas as directed at the Contractor's expense.

4.5.9. The City may require that the Contractor replant an area that is damaged. The Work shall be done as directed by the Engineer. If the Contractor is deemed to be responsible, then the replanting shall be done by the Contractor at his/her expense. If the City is responsible, the costs will be reimbursed on a minor contract revisions (MCR) basis unless existing cost proposal covers the Work.

4.5.10. With respect to replacement of trees and shrubs that have been damaged or destroyed, the following conditions shall apply:

4.5.10.1. Trees or shrubs of replaceable size shall be replaced by the Contractor at his/her expense. If he/she fails to do so within a reasonable length of time as determined by the Engineer and prior to the end of the contract time, the replacement value of the trees or shrubs will be deducted from any money due to the Contractor. These values shall be based upon averages derived from current prices of nurseries growing the plants, plus the cost for planting and a guarantee for the first growing season.

4.5.10.2. When trees or shrubs beyond replaceable size have been damaged or destroyed, the value of such trees or shrubs shall be calculated as per square yard of surface area measured at the ground level.

4.5.10.3. Any deduction assessed as liquidated damages under this section shall not relieve the Contractor from liability for any damages or costs resulting from delays to the City, traveling public or other contractors.

4.6 Hazardous Materials

4.6.1. Prior to commencement of any Work and as a condition precedent to payment by the City of any costs for it, the Contractor shall at no additional cost to the City conduct tests the Contractor deems necessary to determine the existence of Hazardous Materials by appropriately licensed Subcontractors or entities. The City shall reimburse the Contractor for the invoice costs of the tests, only in the event that the Contractor furnishes the City with certified test data and results which confirm the existence of Hazardous Materials.

4.6.2. If Hazardous Materials are discovered on or under real property which is owned by the City before the date of Substantial Completion and Acceptance in accordance with Article 14 herein, which property is within the Project right-of-way, the City shall, upon the request of the Contractor, and at the City's sole cost and expense, cause any such Hazardous Materials to be encapsulated, treated or removed from such real property and transported for final disposal in accordance with all Laws and Regulations, and shall cause such real property to be restored to its condition existing prior to such removal (except for the absence of Hazardous Materials), including, to the extent required, any grading and reinforcement necessary to restore the weight-bearing capacity of such real property prior to such event. The City shall remove the Hazardous Materials and restore the real property in such a manner as not to interfere with the Contractor's construction or operation of the Project.

4.6.3. If Hazardous Materials are present on or under the Project right-of-way as a result of any discharge, dumping or spilling on the Project right-of-way during the term of the Contract by any party, including the Contractor, other than an agency of the executive branch of State or Federal Government, the Contractor shall at the Contractor's sole cost and expense, cause any such Hazardous Materials to be encapsulated, treated or removed from the Project right-of-way and transported for final disposal in accordance with all applicable Laws and Regulations, and shall cause the Project right-of-way to be restored to its condition existing prior to such removal (except for the absence of the Hazardous Materials), including, to the extent required, any grading and reinforcement necessary to restore the weight-bearing capacity of the Project right-of-way prior to such event.

4.6.4. The City shall not be responsible for the cost of and the removal or clean-up of Hazardous Materials found in any materials brought to the Project Site, after the Project Site is turned over to the Contractor.

4.6.5. The Contractor shall provide the Engineer with a written certification each time materials or equipment is brought onto the Work site that such materials or equipment do not contain Hazardous Materials.

4.6.6. The Contractor and the City shall cooperate with each other in the prosecution of any claim against or defense of any claims made by third parties in connection with Hazardous Materials present on the Project right-of-way or contiguous properties owed or controlled by the City.

4.7 Contractor Representations

By executing the Contract, the Contractor represents that he/she has visited the site, familiarized him/herself with the local conditions under which the Work is to be performed (including weather conditions which can be expected), and correlated his observations with the requirements of the Contract Documents.

ARTICLE 5 - BONDS, INDEMNIFICATION AND INSURANCE

5.1 Performance, Payment, and Maintenance Bonds:

5.1.1. Contractor shall furnish performance, payment, and maintenance Bonds, each in an amount specified in the Special Conditions as security for the faithful performance and payment of all the Contractor's obligations under the Contract Documents. These Bonds shall remain in effect until the job is advertised and closed except for the Maintenance Bond which shall remain in full force and effect for *Two Years* from the date of project closure, except as otherwise provided by the Contract Documents. The Contractor shall also furnish such other Bonds as are required by the Special Conditions. All Bonds shall be in the forms prescribed by Law or Regulation or by the Contract Documents and be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

5.1.2. If the surety on any Bond furnished by Contractor is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state or it ceases to meet the requirements of paragraph 5.1, Contractor shall within five days thereafter substitute another Bond and Surety, both of which must be acceptable to the City.

5.2 Indemnification:

Professional agrees to indemnify and hold harmless the City, its officers, employees, insurers, and self-insurance pool, from and against all liability, claims, and demands, on account of injury, loss, or damage, including without limitation claims arising from bodily injury, personal injury, sickness, disease, death, property loss or damage, or any other loss of any kind whatsoever, which arise out of or are in any manner connected with this contract, to the extent and for an amount represented by the degree or percentage such injury, loss, or damage is caused in whole or in part by, or is claimed to be caused in whole or in part by, the wrongful act, omission, error, professional error, mistake, negligence, or other fault of the Professional, any subcontractor of the Professional, or any officer, employee, representative, or agent of the Professional or of any subcontractor of the Professional, or which arises out of any workmen's compensation claim of any employee of the Professional or of any employee of any subcontractor of the Professional. The Professional agrees to investigate, handle, respond to, and to provide defense for and defend against, any such liability, claims or demands at the sole expense of the Professional, or at the option of the City, agrees to pay the City or reimburse the City for the defense costs incurred by the City in connection with, any such liability, claims, or demands. If it is determined by the final judgment of a court of competent jurisdiction that such injury, loss, or damage was caused in whole or in part by the act, omission, or other fault of the City, its officers, or its employees, the City shall reimburse the Professional for the portion of the judgment attributable to such act, omission, or other fault of the City, its officers, or employees.

5.3 Contractor's Insurance:

5.3.1. The Contractor agrees to procure and maintain, at its own expense, a policy or policies of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the Contractor pursuant to Section 5.2 above. Such insurance shall be in addition to any other insurance requirements imposed by this contract or by law. The Contractor shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to Section 5.2 above by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, duration, or types.

5.3.2. Contractor shall procure and maintain, and shall cause any subcontractor of the Contractor to procure and maintain, the minimum insurance coverages listed in the Supplemental Conditions. If the Supplemental Conditions do not set forth minimum insurance coverage, then the minimum coverage shall be as set forth below. Such coverage shall be procured and maintained with forms and insurance acceptable to City. All coverage shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by the Contractor pursuant to Section 5.2 above. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

5.3.2.1. *Worker's Compensation* insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this contract, and *Employers' Liability* insurance with minimum limits of ONE MILLION DOLLARS (\$1,000,000.00) for each accident, ONE MILLION DOLLARS (\$1,000,000.00) disease - policy limit, and ONE MILLION DOLLARS (\$1,000,000.00) disease - each employee. Evidence of qualified self-insured status may be substituted for the Worker's Compensation requirements of this paragraph.

5.3.2.2. *Commercial General Liability* insurance with minimum combined single limits of TWO MILLION DOLLARS (\$2,000,000.00) each occurrence and THREE MILLION DOLLARS (\$3,000,000.00) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground hazards. The policy shall contain a severability of interests provision.

5.3.2.3. *Comprehensive Automobile Liability* insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000.00) each occurrence and ONE MILLION DOLLARS (\$1,000,000.00) aggregate with respect to each Contractor's owned, hired and non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision. If the Contractor has no owned automobiles, the requirements of this Section 5.4.2.3 shall be met by each employee of the Contractor providing services to the City under this contract.

5.3.2.3 *Pollution Liability* insurance with a minimum combined single limit for bodily injury, property damage, defense, and cleanup as a result of pollution conditions (sudden/accidental and gradual) arising from contracting operations performed by on behalf of the contractor of not less than TWO MILLION DOLLARS (\$2,000,000.00) each occurrence and THREE MILLION DOLLARS (\$3,000,000.00) aggregate.

5.3.2.4 *Builder's Risk* insurance with a minimum combined single limit for all improvements above ground in the full contract value for those above ground improvements.

5.3.3. Except for any Professional Liability insurance that may be required, the policy or policies required above shall be endorsed to include the City of Aspen and the City of Aspen's officers and employees as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the City of Aspen, its officers or employees, or carried by or provided through any insurance pool of the City of Aspen, shall be excess and not contributory insurance to that provided by Contractor. No additional insured endorsement to the policy required above shall contain any exclusion for bodily injury or property damage arising from completed operations. The Contractor shall be solely responsible for any deductible losses under any policy required above.

5.3.4. The certificate of insurance provided by the City of Aspen shall be completed by the Contractor's insurance agent as evidence that policies providing the required coverage, conditions, and minimum limits are in full force and effect, and shall be reviewed and approved by the City of Aspen prior to commencement of the contract. No other form of certificate shall be used. The certificate shall identify this contract and shall provide that the coverage afforded under the policies shall not be canceled, terminated or materially changed until at least thirty (30) days prior written notice has been given to the City of Aspen.

5.3.5 In addition, these Certificates of Insurance shall contain the following clauses:

Underwriters and issuers shall have no right of recovery or subrogation against the City of Aspen, it being the intention of the parties that the insurance policies so effected shall protect all parties and be primary coverage for any and all losses covered by the above-described insurance. To the extent that the City's insurer(s) may become liable for secondary or excess coverage, the City's underwriters and insurers shall have no right of recovery or subrogation against the Contractor and issuers shall have no right of recovery or subrogation against the City of Aspen, it being the intention of the parties that the insurance policies so effected shall protect all parties and be primary coverage for any and all losses covered by the above-described insurance. To the extent that the City's insurer(s) may become liable for secondary or excess coverage, the City's underwriters and insurers shall have no right of recovery or subrogation against the Contractor.

The insurance companies issuing the policy or policies shall have no recourse against the City of Aspen for payment of any premiums or for assessments under any form of policy insurance companies issuing the policy or policies shall have no recourse against the City of Aspen for payment of any premiums or for assessments under any form of policy.

Any and all deductibles in the above-described insurance policies shall be assumed by and be for the amount of, and at the sole risk of the Proposer and all deductibles in the above-described insurance policies shall be assumed by and be for the amount of, and at the sole risk of the Proposer.

Location of operations shall be: "All operations and locations at which work in connection with the referenced project is done "of operations shall be: "All operations and locations at which work in connection with the referenced project is done."

Certificates of Insurance for all renewal policies shall be delivered to the Architect at least fifteen (15) days prior to a policy's expiration date except for any policy expiring on the expiration date of this agreement or thereafter.

5.3.6. Failure on the part of the Contractor to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which City may immediately terminate this contract, or at its discretion City may procure or renew any such policy or any extended reporting period

thereto and may pay any and all premiums in connection therewith. All moneys so paid by City shall be repaid by Contractor to City upon demand, or City may offset the cost of the premiums against moneys due to Contractor from City.

5.3.7. City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

5.4 City's Liability Insurance:

5.4.1. The parties hereto understand that the City is a member of the Colorado Intergovernmental Risk Sharing Agency (CIRSA) and as such participates in the CIRSA Property/Casualty Pool. Copies of the CIRSA policies and manual are kept at the City of Aspen Finance Department and are available to Contractor for inspection during normal business hours. City makes no representations whatsoever with respect to specific coverage offered by CIRSA. City shall provide Contractor reasonable notice of any changes in its membership or participation in CIRSA.

5.4.2. The parties hereto further understand and agree that City is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, Section 24-10-101 *et seq.*, C.R.S., as from time to time amended, or otherwise available to City, its officers, or its employees. Further, nothing in the Contract Documents shall be construed or interpreted to require or provide for indemnification of the Contractor by the City for any injury to any person or any property damage whatsoever which is caused by the negligence or other misconduct of City or its agents or employees.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.1 General Responsibilities:

6.1.1. The Contractor shall perform all of the Work in conformance with the Contract Documents.

6.1.2. The Contractor covenants and warrants that it shall be responsible for performing the Work, and that it shall do or cause to be done the Work and services as required in the Contract Documents and any additional, collateral, and incidental Work and services as may be necessary in order to complete the Project in accordance with the requirements of the Contract Documents, shall be responsible for providing completed Work which meets the results required by the Contract Documents, and shall achieve Substantial Completion (100% of the Work) by the Contract Time.

6.1.3. Construction services shall be performed in accordance with those professional standards listed in the Special Conditions for quality and scope and shall be performed by the entities and persons, Subcontractors and specific personnel identified in the Contractor's Proposal in accordance with their respective degrees of participation provided and represented to City. Other construction services shall be performed by qualified construction Subcontractors and Suppliers, selected and paid by the Contractor. Nothing contained in the Contract Documents shall be construed to create any obligation or contractual liability running from the City to any of these persons or entities.

6.2 Supervision and Superintendence:

6.2.1. The Contractor shall supervise and direct the Work competently and efficiently devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.

6.2.2. The Contractor shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to the City and the Engineer except under extraordinary circumstances. The superintendent will be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor.

6.3 Labor, Materials and Equipment:

6.3.1. The Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. The Contractor shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and the Contractor will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without the City's written consent given after prior written notice to the Engineer.

6.3.2. Unless otherwise specified in the Specific Conditions or Specific Provisions, the Contractor shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

6.3.3. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by the Engineer, the Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to the Engineer, or any of the Engineer's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.10.1. or 9.10.2.

6.4 - 6.6 Reserved

6.7. Work Schedule:

6.7.1. The Contractor shall submit to the Engineer for acceptance such schedule of work progress reports, estimates, records, and other data as the City may require concerning work performed or to be performed.

6.7.2. Prior to beginning of Work and or before the Pre-construction Conference, the Contractor shall submit schedules showing the order in which he/she proposed to carry on the Work, including dates at which he/she will start the various parts of the Work, estimated date of completion of each part.

6.8 Substitutes of "or-equal" Items:

6.8.1. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by the engineer if sufficient information is submitted by the Contractor to allow the Engineer to determine that the material or equipment proposed is equivalent or equal to that named. The Engineer will include the following as supplemented in the General Requirements. Requests for review of substitute items of material and equipment will not be accepted by the Engineer from anyone other than the Contractor. If the Contractor wishes to furnish or use a substitute item of material or equipment, the Contractor shall make written application to the Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice the Contractor's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with the City for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by Architect in evaluating the

proposed substitute. The Engineer may require the Contractor to furnish at Contractor's expense additional data about the proposed substitute.

6.8.2. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Engineer. The procedure for review by the Engineer shall be similar to that provided in paragraph 6.8.1.

6.8.3. The Engineer will be allowed a reasonable time within which to evaluate each proposed substitute. The Engineer will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without the Engineer's prior written acceptance which will be evidenced by an approved Shop Drawing. The City may require the Contractor to furnish at the Contractor's expense a special performance guarantee or other surety with respect to any substitute. The Engineer will record time required by the Engineer and the Engineer's consultants in evaluating substitutions proposed by the Contractor and in making changes in the Contract Documents occasioned thereby. Whether or not the Engineer accepts a proposed substitute, the Contractor shall reimburse the City for the charges of the Engineer and the Engineer's consultants for evaluating each proposed substitute.

6.9 Subcontractors, Suppliers and Others:

6.9.1. The Contractor shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to the City and the Engineer as indicated in paragraph 6.9.2), whether initially or as a substitute, against whom the City or the Engineer may have reasonable objection.

6.9.2. If the Special Conditions require the identity of certain Subcontractors, Suppliers or other persons or organizations including those who are to furnish the principal items of materials and equipment to be submitted to the City in advance of the specified date prior to the Effective Date of the Agreement for acceptance by the City and the Engineer and if the Contractor has submitted a list thereof in accordance with the Special Conditions, the City's or the Engineer's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case the Contractor shall submit an acceptable substitute, the Contract Price will be increased by the difference in the cost occasioned by such substitution and an appropriate Written Notice of Amendment signed. No acceptance by the City or the Engineer of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of the City or the Engineer to reject Defective Work.

6.9.3. The Contractor shall be fully responsible to the City and the Engineer for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between the City or the Engineer and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the City or the Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

6.9.4. The divisions and sections of the Specifications and the identifications of any Drawings shall not control the Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.9.5. All Work performed for Contractor by a Subcontractor will be pursuant to an appropriate agreement between the Contractor and the Subcontractor which specifically binds the Subcontractor to the Applicable terms and conditions of the Contract Documents for the benefit of the City and the Engineer and contain waiver provisions as required by Section 5.3. The Contractor shall pay each Subcontractor a just share of any insurance moneys received by the Contractor on account of losses.

6.10 Subcontracting and Percentage of Work Awarded to Subcontractor(s):

6.10.1. The Contractor may utilize the services of specialty Subcontractors on those parts of the Work, which under normal contracting practices, are performed by specialty Subcontractors.

6.10.2 The Contractor shall not award Work to Subcontractor(s) in excess of forty nine percent (48%) of the Contract Price. This condition shall be a minimum standard for a qualified Prime Contractor to perform within the City rights of way.

6.11 Patent Fees and Royalties:

The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. Contractor shall indemnify and hold harmless the City and the Engineer and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorney's fees and court costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

6.12 Permits:

Unless otherwise provided in the Special Conditions, the Contractor shall obtain and pay for all construction permits and licenses. The City shall assist the Contractor, when necessary, in obtaining such permits and licenses. The Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids on the Effective Date of the Contract. The Contractor shall pay all charges of utility City's for connections to the Work, and the City shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

6.13 Laws and Regulations:

6.13.1. the Contractor shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither the City nor the Engineer shall be responsible for monitoring the Contractor's compliance with any Laws or Regulations.

6.13.2. If the Contractor observes that the Specifications or Drawings are at variance with any Laws or Regulations, the Contractor shall give the Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If the Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, and without such notice to the Engineer, the Contractor shall bear all costs arising therefrom.

6.14 Taxes:

The Contractor shall pay all existing and future applicable Federal, State and local sales, consumer, use and other similar taxes whether direct or indirect. Federal excise tax may not apply to materials purchased by the City. The Contract Price shall include all other Federal, State, and/or local direct or indirect taxes which do apply. The Contract Price shall include the cost of compliance with all other Federal Laws and Regulations at no additional cost to the City (except as provided in the Contract Documents). The Contractor shall not be reimbursed separately for any taxes which may apply except as provided in the Contract Documents and the Contractor shall be responsible for all taxes which may apply. The City is tax exempt from Federal Excise Tax under Chapter 32 of the Internal Revenue Code. The City is exempt from such taxes under registration numbers 98-02624. The Contractor and its Subcontractors shall apply to the Colorado Department of Revenue for a Certificate of Exemption indicating that the Contractor or Subcontractor's purchase of construction material or building materials is for use in a building, structure, or other public work owned and used by the City.

6.15 Use of Premises:

6.15.1. The Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in, and permitted by, the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. The Contractor shall assume full

responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against the City or the Engineer by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by agreement or otherwise resolve the claim by law. The Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold the City and the Engineer harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against the City or the Engineer to the extent based on a claim arising out of the Contractor's performance of the Work.

6.15.2. During the progress of the Work, the Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, the Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by the City. The Contractor shall restore to original condition all property not designated for alteration by the Contract Documents.

6.15.3. The Contractor shall not load or permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall the Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.16 Record Documents:

The Contractor shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Directive Changes, Field Orders and written interpretations and clarifications in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to the Engineer for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to the Engineer for the City.

6.17 Safety and Protection:

6.17.1. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.17.1.1. All employees on the Work and other persons and organizations who may be affected thereby;

6.17.1.2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

6.17.1.3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.17.1.2 or 6.17.1.3 caused, directly or indirectly, in whole or in part, by the Contractor, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by the Contractor. The Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and the Engineer has issued a notice to the City and the Contractor in accordance with Section 14.5 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.17.2. The Contractor shall designate a person competent in OSHA safety related matters at the site at all times during construction whose duty shall be the prevention of accidents including confined space entry and work in the confined spaces.

6.18 Emergencies:

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Engineer or the City, is obligated to act to prevent threatened damage, injury or loss. The Contractor shall give the Engineer prompt written notice if the Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If the Engineer determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a written order will be issued to document the consequences of the changes or variations.

6.19 Shop Drawings and Samples:

6.19.1. After checking and verifying all field measurements and after complying with applicable procedures specified in the Contract Documents, the Contractor shall submit to the Engineer for review and approval in accordance with the approved schedule of Shop Drawing submissions prior to Pre-construction Conference, or for other appropriate action if so indicated in the Special Conditions, three (3) copies (unless otherwise specified) of all Shop Drawings, which will bear a stamp or specific written indication that the Contractor has satisfied the Contractor's responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as the Engineer may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable the Engineer to review the information as required.

6.19.2. The Contractor shall also submit to the Engineer for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that the Contractor has satisfied the Contractor's responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

6.19.3. Before submission of each Shop Drawing or sample, the Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto; and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

6.19.4. At the time of each submission, the Contractor shall give the Engineer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to the Engineer for review and approval of each such variation.

6.19.5. The Engineer will review and approve with reasonable promptness Shop Drawings and samples, but the Engineer's review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. The Contractor shall make corrections required by the Engineer, and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review and approval. The Contractor shall direct specific attention in writing to revisions other than the corrections called for by the Engineer on previous submittals.

6.19.6. The Engineer's review and approval of Shop Drawings or samples shall not relieve the Contractor from responsibility for any variation from the requirements of the Contract Documents unless the Contractor has in writing called the Engineer's attention to each such variation at the time of submission as required by paragraph 6.19.4 and the Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by the Engineer relieve the Contractor from

responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.19.3.

6.19.7. Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to the Engineer's review and approval of the pertinent submission will be the sole expense and responsibility of the Contractor.

6.20 Mechanics' Liens:

6.20.1. The Contractor covenants and agrees that, to the extent permitted by law, no claims or mechanics' liens against public funds (mechanic's liens) or claims of any kind, will be permitted to arise, be filed or maintained against the Project or any part of it, any interest in it or any improvements on it, against any moneys due or to become due from the City to the Contractor, for or on account of any work, labor, services, materials, equipment or other items performed or furnished for or in connection with the Project, and the Contractor for itself, its Subcontractors, laborers and material suppliers and employees does waive, release and relinquish these claims or liens and all rights to file or maintain these liens and agrees further that this waiver of liens and waiver of the right to file or maintain liens shall be independent covenant and shall apply also to work, labor, services performed, materials, equipment and other items furnished under any Change Order or supplemental agreement for extra or additional work in connection with the Project. The Contractor agrees to defend, indemnify, protect and save harmless the City from and against any and all claims or liens and actions brought or judgments rendered, and from and against any and all loss, damages, liability, costs and expenses, including legal fees and disbursements, which the City may sustain or incur in connection with the Project.

6.20.2. The Contractor also agrees as above for all of its Subcontractors, including but not limited to suppliers and employees. If any of the Contractor's Subcontractors, suppliers, employees or any other person directly or indirectly acting for, through or under its authority or any of them files or maintains a lien or claim as described above, the Contractor agrees to cause claims or liens to be satisfied, removed or discharged at its own expense by bond, payment or otherwise within thirty (30) consecutive calendar days from the date of the filing, and upon the Contractor's failure to do so the City shall have the right, in addition to all other rights and remedies provided under this Contract or by law, to cause the liens or claims to be satisfied, removed or discharged by whatever means the City chooses, at the entire cost and expense of the Contractor, the expense to include legal fees and disbursements. The Contractor shall give a copy of Claim Release form to all Subcontractors and suppliers and shall include these provisions in all written contracts with Subcontractors, or give written notice to all Subcontractors, suppliers or other persons having oral agreements with the Contractor.

6.20.3. The Contractor agrees that moneys received for the performance of this Contract shall be used first for payment due for labor, material, and services for the Project and taxes, and the moneys shall not be diverted to satisfy obligations of the Contractor on other accounts or contracts. The Contractor shall pay Subcontractors within Ten (10) consecutive calendar days of receipt of a progress payment from the City. The Contractor shall furnish sworn affidavits in accordance with the form furnished by the City, which shall state that amounts due or to become due, amounts paid, and any other information necessary to indicate the financial condition of the Contractor, insofar as it relates to services, labor and material furnished, and to be furnished, under this Contract. The City may take steps it may deem necessary to protect itself against any claims.

6.21 Continuing the Work:

The Contractor shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with the City. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted herein or as the Contractor and the City may otherwise agree in writing.

6.22 Contractor Facilities:

All temporary contractor facilities shall be in accordance with regulations and codes governing such construction. The types of temporary construction facilities required for the Project may include, but are not necessarily limited to, the following: (a) job site office space, (b) construction water distribution, (c) temporary closures, (d) temporary heat, (e) hoists and temporary cranes, (f) temporary roads and paving, (g) construction aids and miscellaneous facilities, (h) temporary power distribution, (i) temporary lighting, (j) temporary toilet facilities. All operations of the Contractor, including storage of materials, upon the City's premises shall be confined to areas authorized or approved by Owner in

writing. Temporary buildings, storage sheds, shops, offices, may be erected by the Contractor only with the written approval of the City and shall be built or provided with labor and materials furnished by the Contractor without expense to the City. Such temporary buildings and utilities shall remain the property of the Contractor and shall be removed by it at its expense upon completion of the Work.

ARTICLE 7 - OTHER WORK

7.1 Related Work at Site:

7.1.1. The City may perform other work related to the Project at the site by the City's own forces, have other work performed by utility owners or let other direct contracts therefor which shall contain General Conditions similar to these. The Contractor shall perform and coordinate his/her activities with other Contractors to avoid conflict and minimize disruptions.

7.1.2. The Contractor shall afford each utility owner and other contractor who is a party to such a direct contract (or the City if the City is performing the additional work with the City's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. The Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. The Contractor shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of Architect and the others whose work will be affected. The duties and responsibilities of Contractor under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of the Contractor in said direct contracts between the City and such utility owners and other contractors.

7.1.3. If any part of the Contractor's Work depends for proper execution or results upon the work of any such other contractor or utility owner (or the City), the Contractor shall inspect and promptly report to the Engineer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. The Contractor's failure to report such conditions will constitute an acceptance of the other work as fit and proper for integration with the Contractor's Work except for latent or non-apparent defects and deficiencies in the other work.

7.2 Coordination:

If the City contracts with others for the performance of other work on the Project at the site, the person or organization of the activities among the various prime contractors may be identified in the Special Conditions, and the specific matters to be covered by such authority and responsibility may be itemized, and the extent of such authority and responsibilities may be provided, in the Special Conditions. Unless otherwise provided in the Special Conditions, neither the City nor the Engineer shall have any authority or responsibility in respect of such coordination.

ARTICLE 8 - CITY'S RESPONSIBILITIES

8.1. The City shall issue all communications to the Contractor through the Engineer or his/her designated person.

8.2. The City shall furnish the data required of the City under the Contract Documents promptly and shall make payments to the Contractor through processing of the monthly Progress Pay Estimate forms within 30 days from the cut-off date for a pay estimate form.

8.3. The City represents that an amount of money equal to the Contract Price has been duly appropriated in accordance with the Municipal Code of the City of Aspen, under a purchase order. The City shall not issue any Change Order or execute a Written Amendment requiring additional compensable work, which work causes the aggregate amount appropriated by the City, unless the Contractor is given a written assurance that a lawful appropriations to cover the costs of the additional work shall be made.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.1 City's Representative:

The Engineer shall be the City's representative during the construction period. The duties and responsibilities and the limitations of authority of the Engineer as the City's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of the City and the Engineer.

9.2 Visits to Site:

The Engineer shall make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. The Engineer shall make on-site inspections to observe the quality or quantity of the Work. The Engineer's efforts will be directed toward providing for the City a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations, the Engineer will keep the City informed of the progress of the Work and will endeavor to guard the City against defects and deficiencies in the Work.

9.3 Project Representation:

If the City and the Engineer agree, the Engineer will furnish a Resident Project Representative to assist the Engineer in observing the performance of the Work. The duties, responsibilities and limitations of authority of any such Resident Project Representative and assistants will be to ensure conformance of work with specifications provided in the Special Conditions. If the City designates another agent to represent the City at the site who is not the Engineer's agent or employee, the duties, responsibilities and limitations of authority of such other person will be as provided in the Special Conditions.

9.4 Clarification and Interpretations:

The Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as the Engineer may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If a written clarification or interpretation justifies an increase in the Contract Price or an extension of the Contract Time, the Contractor shall meet with the Engineer and resolve the issue. All such requests or claims shall be submitted to the City Engineer.

9.5 Authorized Variations in Work and Minor Contract Revisions:

The City Engineer may request or authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a written request or a field order and will be binding on the City, and also on the Contractor who shall perform the Work involved promptly. If the Contractor believes that a field order justifies an extension of the Contract Time and the parties are unable to agree as to the extent thereof, the Contractor may make a claim therefor as provided herein.

9.6 Rejecting Defective Work:

The Engineer will have authority to disapprove or reject Work which the Engineer believes to be Defective, and will also have authority to require special inspection or testing of the Work as provided herein below, whether or not the Work is fabricated, installed or completed.

9.7. Shop Drawings, Change Orders and Payments:

9.7.1. In connection with the Engineer's responsibility for Shop Drawings and samples, see paragraphs 6.19.1. through 6.20.1. inclusive.

9.7.2. In connection with the Engineer's responsibilities as to Change Orders, see Article 10 and Article 11.

9.7.3. In connection with the Engineer's responsibilities in respect of request for Payment, etc., see Article 14.

9.8 Decisions on Disputes:

9.8.1. The Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters raised by Contractor relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 11 and 12 in respect to changes in the Contract Price or Contract Time shall be referred initially to the Engineer in writing with a request for a formal decision in accordance with this paragraph, which the Engineer will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter by the Contractor will be delivered to the Engineer promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to the Engineer and the City within sixty days after such occurrence unless the Engineer allows an additional period of time to ascertain more accurate data in support of the claim.

9.8.2. The rendering of a decision by the Engineer pursuant to paragraph 9.8.1. with respect to any such claim, dispute or other matter shall be a condition precedent to any exercise by the Contractor of such rights or remedies as the Contractor may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute or other matter. The City shall not be bound by any initial interpretation by the Engineer of the requirements of the Contract Documents, judgment on the acceptability of the Work thereunder, or formal decision made by the Engineer in accordance with paragraph 9.8.1. Any dispute not resolved by the initial decision of the Engineer shall be decided by the City, who shall reduce the decision in writing and furnish a copy thereof to the Contractor and the Engineer. The decision of the City shall be final subject to review by the Pitkin County District Court in Pitkin County, Colorado. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Work and in accordance with the Engineer's interpretation.

9.9 Reserved

9.10 Limitations on Engineer's Responsibilities:

9.10.1. Neither the Engineer's authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by the Engineer in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the Engineer to the Contractor, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

9.10.2. Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of the Engineer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to the Engineer any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the Contract Documents.

ARTICLE 10 – CHANGES IN THE WORK

10.1 City Initiated Changes

10.1.1. The City may require, without notification to sureties, the Contractor to perform changes, additions or deletions to the Work at anytime after execution of the Contract without invalidating the Contract. Changes shall be accomplished as set forth in Section 3.2, above.

10.1.2. The Contractor shall promptly perform changes in the Work in accordance with applicable provisions of the Contract Documents, unless otherwise provided in a Change Order or Amendment to the Contract for Construction.

10.1.3. The following procedure shall be followed for the City notifying the Contractor of proposed City initiated changes. The Engineer shall issue a notice informing the Contractor of a planned change in the Work and its scope, and requesting the Contractor's detailed price proposal. The Contractor, at no expense to the City, shall submit a priced proposal for performing the proposed change in the Work. The Contractor, within Ten (10) consecutive calendar days after receiving the Notice of Change, or such longer time which the Engineer in his/her discretion has granted, shall provide the Engineer with a complete and itemized proposal which includes the estimated increase or decrease in the Contract Price and/or in the Contract Time attributable to the planned changes on the criteria and methods described in Article 11. The Contractor shall be responsible for delays to the Work and any additional costs incurred by the City caused by its failure to submit complete pricing information within the time provided above. The Contractor shall participate with the City in prompt joint analysis and negotiations to finalize a Change Order, if necessary.

10.2 Written Notice of Change

10.2.1. A Written Notice of Change may be used when:

- a) The City determines that the Contractor must proceed immediately to perform a change in the Work in order to avoid an adverse impact on the schedule or other unchanged Work, and sufficient time is not available to negotiate an adjustment to the Contract Price or Contract Time; or
- b) The City and Contractor have not completed their negotiation and reached agreement on all of the terms of a Change Order, but the City requires the Contractor to proceed without such agreement.

10.2.2. Upon receipt of a Written Notice of Change the Contractor shall promptly proceed with performing the change in the Work. Additionally, the Contractor shall comply with all the requirements of 10.3 of these General Conditions.

10.3 Change Order

When the Contractor and the City reach agreement on the adjustments to the Contract Price and/or Contract Time, such agreements shall be promptly recorded in an executed Change Order.

10.4 Contractor Change Request

10.4.1. If the Contractor: (i) receives any oral or written instructions, directives or interpretations of Contract Documents, or determinations from the Engineer or, (ii) identifies what it believes are design errors or omissions in the Contract Drawings or Specifications, or (iii) encounters a differing site condition; or, (iv) is delayed in the progress of the Work; or, (v) becomes aware of any other matter or circumstance which it believes would require a change in the Contract Price or Contract Time, the Contractor shall give the Engineer prompt written notice of such matters in a letter or notice denominated "Contractor Change Request".

10.4.2. All Contractor Change Requests shall be dated, numbered sequentially, and shall describe the action or event which the Contractor believes may require an extension in time or price. The Contractor shall also provide descriptions of possible Contractor actions or solutions to minimize the cost of the Contractor Change Request and, provide an estimate of the adjustment in the Contract Price and/or Contract Time which it believes is appropriate.

10.4.3. With respect to orders, instructions, directives, interpretations, determinations, or the discovery of any errors or omissions in the Contract Documents, a Contractor Change Request shall be submitted before the Contractor acts on them, but in no event more than Ten (10) consecutive calendar days after they were received or discovered.

10.8.4. With respect to any differing site conditions, a Contractor Change Request shall be submitted before the conditions are disturbed, but in no event more than Ten (10) consecutive calendar days after the conditions are first discovered.

10.4.5. With respect to delays, a Contractor Change Request shall be submitted as soon as the Contractor has knowledge of the delay, but in no event more than Ten (10) consecutive calendar days therefrom.

10.8.6. With respect to any matters or circumstance which the Contractor believes would require a change, including delays, a Contractor Change Request shall be submitted as soon as the Contractor has knowledge of the matter or circumstance, but in no event more than Ten (10) consecutive calendar days after the Contractor becomes aware of such circumstance or matter.

10.5 Down Time:

The Contractor may be granted time extension for down time. No other compensation of any kind shall be made to the Contractor for down time. Equipment failure, lack of adequate labor or tools or materials to perform the Work shall not constitute down time.

10.6 Submittal Requirements and Waiver of Claims

10.6.1. If the Contractor does not submit a Contractor Change Request within the time required above, any action by the Contractor related to such order, direction, instruction, interpretation, determination, design error or omission, or other matter, including delays or differing site conditions, will not be considered by the City as a change to the Work and the Contractor waives any claim for an adjustment on the Contract Price or the Contract Time.

10.6.2. The Contractor shall, within Ten (10) consecutive calendar days submit in detail, a Contractor Change Request, and provide the Engineer a complete and itemized proposal which contains the information described in Article 11. The proposal shall also contain a detailed explanation, citing all applicable provisions in the Contract Documents, which supports the Contractor Change Request. If the Contractor does not submit its itemized proposal within the time described above or within such extension which the Engineer, in his/her discretion may have granted in writing, it waives any claim for an adjustment in the Contract Price or Contract Time arising out of the act or event described in the Contractor Change Request.

10.6.3. If a Contractor Change Request is denied by the Engineer, in whole or in part, any claim for an increase in the Contract Price or Contract Time arising out of the act or event described in the Contractor Change Request is waived unless the Contractor timely complies with the provisions of paragraphs 10.4.1. through 10.4.6.

ARTICLE 11. CHANGE OF CONTRACT PRICE OR CONTRACT TIME

11.1 Contract Price Adjustments.

All adjustments to the Contract Price shall be determined by using one or more of the following methods:

11.1.1 A negotiated lump sum for work items that cannot be itemized. The Contractor shall promptly provide sufficient substantiating data, including calculations, measurements, cost records, production rates, equipment types and capacity, labor costs by craft and other information which the City may reasonably require the Contractor to produce in order to permit the City to evaluate the Contractor's lump sum change order proposals. In pricing this proposal, the Contractor shall include estimates of the type of costs described in Section 11.4 below.

11.1.2 Unit prices stated in the Contract Documents or subsequently agreed upon multiplied by final verified quantities of work performed;

11.1.3 Cost to be determined in a manner agreed upon by the parties which includes markups that do not exceed those set forth in Section 11.4 below.

11.1.4 Costs to be determined in the manner described in Section 11.3.1.

11.2 Contract Time Adjustments.

11.2.1. Any extension of the Contract Time must be requested in a Contractor Change Request which complies with all of the requirements of paragraphs 10.4.1 through 10.4.6. Failure to strictly comply with the timing and submittal requirements shall constitute a waiver of any request or claim.

11.2.2. If the Contractor is delayed at any time in the progress of the Work and such delay was caused, in whole or in part, by the act or omission of the City, or by changes ordered in the Work pursuant to strikes, lockouts, fire, unusual delay by common carriers, unavoidable casualties, or any other causes beyond the Contractor's control, then the Contract Time shall be extended by the City. Such extensions will be for a period of time as the City may in its discretion determine, provided however that such delay could not have been avoided by the exercise of due diligence by the Contractor and did not result from the acts or omissions of the Contractor and, provided further, that they Contractor has taken reasonable actions to mitigate or prevent further delays resulting from such causes.

11.2.3. If abnormal weather conditions are the basis for a claim for an extension of the Contract Time, such claim shall be documented on the City of Aspen Engineering Department's Daily Construction Log forms substantiating that weather conditions were unusually severe for the period of time, and could not have been reasonably anticipated. Regardless of actual weather conditions, any day in which the Contractor is able to work Sixty Percent (60%) or more of its scheduled work force shall not be counted as an abnormal weather day for purposes of calculating weather related time extensions.

11.2.4. The Contractor agrees that delays resulting from any causes other than acts or omissions of the City, its employees, agents or officials shall be considered fully compensated by a time extension only and agrees to make no claim for monetary damages for such delays. In no event shall the Contractor be entitled to recover any delay costs caused by the acts or omissions of the Contractor, its employees or agents.

11.2.5. If the Contractor believes that it has suffered delays in performing the Work that are caused by acts or omissions of the City, the Contractor may submit a Contractor Change Request with detailed justifications acceptable to the Engineer. Failure of the Contractor to comply with all requirements shall constitute a waiver of any claim for damages resulting from such delays.

11.3 Force Account Work.

11.3.1 In situations where the cost or time for performing a required change cannot be adequately defined or agreed upon but the changed Work must proceed, the City may direct the Contractor to perform the Work on a Force Account basis. Adjustment shall be determined on the basis of reasonable expenditures and savings of those performing the change in the Work including, in case of an increase in the Contract Amount, an allowance for overhead and profit which shall not exceed the allowance described in 11.4.7 below. In such case, the Contractor shall keep and present, in such form as the City may prescribe, an itemized detailed accounting together with appropriate supporting data of all of the costs described in Section 11.4.1 through Section 11.4.4 which clearly distinguishes the cost of changed Work from base contract Work. Information that shall be required on these forms includes an itemization of all costs for labor, materials and equipment rental and total costs to date for force account work. The Contractor shall include hours worked, rates of pay, names and job classifications for all workers and size, type, identification number, rental rate and hours of operation for equipment.

11.3.2 Unless otherwise provided in the Contract Documents, costs for the purposes of Force Account Work shall be itemized daily on Daily Force Account Forms provided by the Engineer which are signed by the Contractor and the Engineer. Such costs shall form the basis for determining the maximum amount to be paid the Contractor, but this amount may be reduced where necessary to take into account the cost of base contract Work, Work included in approved Change Orders, Work described in Work Directive Changes, idle time for workers and/or equipment when work could have been performed in other locations or the number of workers or amount of equipment provided exceeds the number or amount required to perform the Work, unsatisfactory Work or Work which may be performed concurrently with the changed Work and which cannot be easily segregated from the changed Work. The worker hours, equipment hours, and materials installed shall be logged on the City of Aspen Engineering Department's Daily Construction Log form for every day the work is performed.

11.4 Contract Sum Determination

11.4 In no event shall the charge or credit to the City associated with any change exceed the sum of the following:

11.4.1 Direct Labor. Actual net direct increase or decrease in the cost of the Contractor's labor for all work associated with the change. Contractor's labor shall be limited to Davis-Bacon Act work categories or other labor (including salaried field personnel) that perform the individual change in Work full-time. For shop work, the direct labor includes workers who work directly on the item being manufactured or operators of equipment being used to handle items being manufactured.

11.4.2 Labor Burden. Contractor's actual costs for workers compensation and liability insurance, payroll taxes, social security and employees fringe benefits (including employer paid health insurance) imposed on the basis of payrolls. This burden must reflect the variability of some burdens, i.e., social security. The burden shall include all small tools which cost less than \$200 apiece.

11.4.3 Direct Material, Supplies, Installed Equipment. Actual net direct cost of materials, supplies and equipment incorporated in or consumed by the Work. If actual costs are not available, the cost shall be the lowest commercially available price including all discounts and rebates and all applicable taxes. Cost shall be based on buying the material, supplies and equipment in the largest practical quantity to receive quantity discounts.

11.4.4 Equipment. Actual net cost to the Contractor of owned and/or rented equipment other than small tools, to be determined using the following method(s):

- (1) Owned equipment operating costs shall be determined using accepted industry standard forms and methods for "Owning and Operating Equipment" as described by the U.S. Army Corps of Engineers (COE) in its latest edition of the "Construction Equipment Ownership and Operating Expense Schedule, Region V" (Document No. EP 1110-1-8, Volume 5).
- (2) Rental equipment costs shall be determined using actual invoiced rates less all discounts for bare equipment rental. Operating costs will be determined based on rates in the above-cited C.O.E. manual.
- (3) Mobilization/demobilization costs will be paid if the equipment is mobilized exclusively for Work described in a change requested by the Engineer or a Change Order. If the equipment is used on base contract work, no mobilization or demobilization cost will be paid. Mobilization/demobilization cost will be based on using the least expensive means to mobilize or demobilize. Equipment shall be obtained from the nearest available source. When the least expensive methods are used, then costs shown in the actual invoice will be the basis for pricing.

11.4.5 Bonds, Insurance, Permits and Taxes. Actual increases or decreases in the cost of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work.

11.4.6 Subcontract Costs. Net cost of subcontractor work at any tier, provided that the cost of the subcontractor is determined in accordance with the above requirements. When possible, the Contractor shall obtain quotes from two or more subcontractors.

11.4.7 Overhead and Profit.

- (1) Ten percent (10%) of the sum of Section 11.4.1 through Section 11.4.5 above, to cover a profit for Work performed by that Contractor or subcontractor.
- (2) Two percent (2%) of Section 11.4.6 above to cover Contractor's and subcontractor's overhead and profit for work performed by the Contractor or subcontractor.

- (3) Neither the Contractor nor any subcontractor, nor the City in the case of a credit, will attempt to apply these percentage adjustments in a way which would pyramid either the cost or credit because a subcontractor or subcontractors at any tier are involved.

11.4.8 Totals as Equitable Adjustment. The Contractor agrees that the total of the above constitutes an equitable adjustment for any and all damages resulting from a change or due to delay or disruption caused by the City. The Contractor's choice of idling and Down Time shall not constitute an City's cause for delay or disruption.

11.5 Cost and Pricing Data

11.5.1 Certificate of Current Cost or Pricing Data. The Contractor shall submit a Certificate of Current Cost or Pricing Data with any agreed upon Contract Price adjustment, but prior to the execution of a Change Order for the work, in the following format:

Certificate of Current Cost and Pricing Data

This is to certify that, to the best of my knowledge and belief, the cost of pricing data submitted in writing to the City in support of _____* are accurate, complete, and current as of _____** and represent the best prices available from suppliers and subcontractors. This certification includes the cost of pricing data supporting any advance agreements and forward pricing rate agreements between the offer or and the City that are part of the proposal.

Firm _____
 Name _____
 Title _____
 Date _____

* Identify the appropriate number of the Change Notice.

** Date when pricing negotiations were concluded and price agreement was reached.

*** Date of signing, which should be as close as practicable to the date when the price negotiations were concluded and price agreement reached.

11.5.2 Vendor Statements. The Contractor shall submit in support of all items which are not unit prices or lump sum prices established by the Contract, statements by the affected vendors that the prices are not in excess of those previously charged to the City or the supplier's regular commercial customers for the same items.

11.5.3 Price Reductions for Defective Costs or Pricing Data. If it is later determined that pricing adjustments to the Contract were not correct due to incomplete or inaccurate pricing data by the Contractor or any subcontractor or supplier or that lower prices were readily available, the price shall be reduced accordingly and the Contract modified by a Change Order.

11.6 Variation in Quantity of Unit Priced Items:

Where the quantity of a unit-priced item in this Contract is an estimated quantity and the actual quantity of the unit-priced item varies more than 25 percent above or below the estimated quantity, an equitable adjustment in the Contract Price may be made by a written Change approved by the Contractor and the Engineer. The equitable adjustment shall be based upon any increase or decrease in cost due solely to the variation above 125 percent or below 75 percent of the estimated quantity. The City at any time after the award of the Contract, may delete Bid items, provided that the total of such deletions does not exceed twenty five percent (25%) of the total Contract Price, and such deletions will not justify an increase in other Bid prices. If the quantity variation is such as to cause an increase in the time necessary for completing the Work the Contractor may request in writing, an extension of time only.

ARTICLE 12 - Reserved

ARTICLE 13 - WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1 *Warranty:*

13.1.1. The Contractor warrants and guarantees to City that all Work, whether supplied, furnished, installed, provided, or performed by Contractor, a Subcontractor, or Supplier, will be in accordance with the Contract Documents and will not be Defective. All Defective Work, whether or not in place, must be rejected, corrected or accepted as provided in this Article 13. Work shall be performed in a skillful and workmanlike manner. Except where longer periods of warranty are indicated for certain items, Contractor warrants Work, whether furnished, installed, provided, performed or supplied by Contractor, a Subcontractor or Supplier, to be free from faulty materials and workmanship for a period of not less than **One Year** from date of Substantial Completion, which **One Year** period shall be covered by the Maintenance Bond and Payment Bond as specified in the Contract Documents. Landscaping replacement shall be warranted for two growing seasons.

13.1.2. The Contractor, at no additional expense to the City, shall remedy damage to equipment, the site, or the buildings or the contents thereof that is the result of any failure or defect in the Work, and restore any work damaged in fulfilling the requirements of the Contract Documents.

13.1.3. With respect to all warranties, express or implied, from Subcontractors, manufacturers, or Suppliers for Work performed and materials furnished under the Agreement, the Contractor shall:

13.1.3.1. Obtain all warranties that would be given in normal commercial practice. To the extent that the Subcontractor's, manufacturer's, or Supplier's, standard warranty exceeds the minimum City requirements as set forth in this Article or elsewhere in the Contract Documents, the Subcontractor's, manufacturer's, or Supplier's standard warranty shall apply. Otherwise, the Contractor shall be responsible for a *Two Year* term under the Maintenance Bond.

13.1.3.2. Require all warranties to be executed, in writing, for the benefit of the City, if directed by the Engineer or.

13.1.3.3. Enforce all warranties for the benefit of the City, if directed by the Engineer.

13.1.3.4. Assign all warranties and guarantees in writing to the City upon the request of the City.

13.1.4. Notwithstanding anything to the contrary above, the Contractor shall warrant that all equipment which are incorporated into the Work or any subsystem shall be new, free from liens and defects in design, have clear title, be free from faulty materials and workmanship, and shall conform in all aspects to the terms of the Contract Documents, to the drawings issued for manufacture by the Contractor, and shall be in conformance with the Technical Specifications and Contractor's Proposal (except in those instances where the Contractor's Proposal has been amended by subsequent Technical Specifications). Unless the warranty period is otherwise extended or modified, the following warranty shall apply. If within *Five (5) Years* from the date each piece of equipment incorporated into the Work or any subsystem is accepted by the City, it appears that the equipment or any part thereof does not conform to the above warranty and guarantee provisions, and the City so notifies the Contractor within a reasonable time after its discovery, the Contractor shall thereupon promptly correct such nonconformity to the satisfaction of the City, at the Contractor's sole expense; failing which the City may reject the item and cover by purchasing substitute items or the City may proceed to make corrections or accomplish the Contractor's performance by the most expeditious means available, the cost of cover or correction shall be charged to the Contractor.

13.1.4.1. The preservation, packaging, packing, and marking, and the preparation for, and method of, shipment of such equipment shall conform with the requirements of the Contract Documents.

13.1.4.2. When return, corrections, or replacement is required, transportation charges and responsibility for the supplies and equipment while in transit shall be borne by the Contractor.

13.1.5. In addition to the foregoing, in the event that any single component in the Work experiences failures during the warranty period such that the number of failures under normal service conditions exceeds ten percent (10%) of the Work population of that component, the Contractor shall perform a design defects analysis. If the analysis shows the component design to be defective, the component shall be redesigned, and the entire population of that component shall be replaced and/or retrofitted.

13.1.6. Whenever there is a conflict between the warranties required by the Contract Documents and the warranty provided by a Subcontractor, manufacturer or Supplier, the terms and conditions of the warranty that affords the City the greatest protection shall be binding upon the Contractor.

13.1.7. The above warranties or other warranties agreed to by Contractor shall not limit the City's rights under other provisions of this Article with respect to latent defects, gross mistakes, or fraud.

13.1.8. Neither the foregoing nor any provision in the Contract Documents, nor any special guarantee time limit, shall be held to limit the Contractor's liability for defects, to less than the legal limit of liability in accordance with the law of the place of building.

13.1.9. Any supplies or equipment, or parts thereof, corrected or furnished in replacement under this Article, shall also be subject to the terms of the warranty provisions herein to the same extent as supplies and equipment initially delivered. The warranty, with respect to supplies, equipment, or parts thereof, shall be equal in duration as if initially delivered and shall run from the date of delivery of the corrected or replaced supply, or upon the date it is placed in service, whichever is later.

13.2 Access to Work:

The Engineer and the Engineer's representatives, other representatives of the City, testing agencies and governmental agencies with jurisdictional interests shall have access to the Work, at any time for their observation, inspecting and testing. Contractor shall provide proper and safe conditions for such access.

13.3 Tests and Inspections:

13.3.1. The Contractor shall cooperate with material testing persons and firms, and for required inspections, and compliance and approval tests for the Work performed by the Contractor or his/her Subcontractor(s).

13.3.2. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, the Contractor shall assume full responsibility therefore, pay all costs in connection therewith and furnish the Engineer the required certificates of inspection, testing or approval. The Contractor shall also be responsible for and shall pay all costs in connection with any inspection or Re-testing required in connection with the City's or the Engineer's acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to The Contractor's purchase thereof for incorporation in the Work. The cost of all inspections, testing, re-testing and approvals in addition to the above that are required by the Contract Documents shall be paid by the Contractor (unless otherwise specified). The City will conduct and pay for the conformance tests on materials installed in-place, and the Contractor shall pay for re-testing of all failing and non-conforming materials thereafter.

13.3.3. All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by professional firms or certified materials laboratories acceptable to the Engineer.

13.3.4. If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of the Engineer, it must, be uncovered for observation. Such uncovering and testing when required by the Engineer shall be at the Contractor's expense.

13.3.5. Neither observations by the Engineer nor inspections, tests or approvals by others shall relieve the Contractor from the Contractor's obligations to perform the Work in accordance with the Contract Documents.

13.4 Uncovering Work:

13.4.1. If any Work is covered contrary to the written request of the Engineer it must, if requested by the Engineer, be uncovered for the Engineer's observation and replaced at the Contractor's expense.

13.4.2. If the Engineer considers it necessary or advisable that covered Work be observed by the Engineer or inspected or tested by others, the Contractor, at the Engineer's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is Defective, the Contractor shall bear all direct; indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys and other professionals), and the City shall be entitled to an appropriate decrease in the Contract Price.

13.5 City May Stop The Work:

If the Work is defective, or the Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, the City may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the City to stop the Work shall not give rise to any duty on the part of the City to exercise this right for the benefit of the Contractor or any other party.

13.6 Correction or Removal of Defective Work:

If required by the Engineer or the City, the Contractor shall promptly, as directed, either correct all Defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the Engineer or the City, remove it from the site and replace it with non-defective Work. The Contractor shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

13.7 Correction Period:

If within Two Years after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be Defective, the Contractor shall promptly without cost to City and in accordance with City's written instructions, either correct such Defective Work, or, if it has been rejected by City, remove it from the site and replace it with non-defective Work. If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the City may have the Defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by the Contractor. In special circumstances where a particular item of equipment or portion of Work is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment. Landscaping replacement shall be warranted for two growing season.

13.8 Acceptance of Defective Work:

If, instead of requiring correction or removal and replacement of Defective Work, the City prefers to accept it, the City may do so. The Contractor shall bear all direct, indirect and consequential costs attributable to the City's evaluation of and determination to accept such Defective Work. All accepted defective Work shall be subject to significant price reduction acceptable to the City and the City Engineer.

13.9 City May Correct Defective Work:

If the Contractor fails within Ten (10) consecutive calendar days after written notice of the Engineer or the City to proceed to correct and to correct Defective Work or to remove and replace rejected Work as required by the Engineer or the City in accordance with paragraph 13.6., or if the Contractor fails to perform the Work in accordance with the Contract Documents, or if the Contractor fails to comply with any other provision of the Contract Documents, the City may, after seven days' written notice to the Contractor, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph the City shall proceed expeditiously to the extent necessary to complete corrective and remedial action. The City may exclude the Contractor from all or part of the site, take possession of all or part of the Work, and suspend the Contractor's services related thereto, take possession of the Contractor's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere. The Contractor shall allow the City, the City's representatives, agents and employees such access to the site as may be necessary to enable the City to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of the City in exercising such rights and remedies will be charged against the Contractor, and a Change Order will be issued by the City incorporating the necessary revisions in the Contract Price. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of the Contractor's Defective Work. The Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by the City of the City's rights and remedies hereunder.

13.10 Unauthorized Work:

Work performed beyond the lines and grades on the Drawings or approved Design Documents, Construction Documents or Shop Drawings and extra work done without written authorization, will be considered as unauthorized work, and the Contractor will receive no compensation therefore. If required by the City, unauthorized work will be remedied, removed, or replaced by the Contractor at the Contractor's expense.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 Determination of Work Value:

The Work quantities recorded on the City of Aspen Engineering Department's Daily Construction Log forms shall serve as the basis for preparation and justification of the progress payments. Payments to the Contractor shall be prepared on the City of Aspen Engineering Department's Progress Pay Estimate Form on account of Unit Price Work based on the number of units actually installed complete in place and transferred from the Daily Construction Logs.

14.2 Application for Progress Payment:

14.2.1. Progress payments shall be made once each month as the Work progresses, when the Contractor is performing satisfactorily under the terms of the Contract Documents. Said payments shall be based upon progress estimates prepared by the Engineer, of the value of work performed and materials placed in accordance with the Contract Documents and the value of materials on hand in accordance with these General Conditions. The amount of the progress estimate to be paid to the Contractor shall be subject to the following:

14.2.1.1 STANDARD RETAINMENT. The City shall make a deduction from the progress estimate in the amount considered necessary to protect the interests of the City, pursuant to Section 24-91-103, CRS. That amount to be retained shall be as follows: for contract price over \$150,000.00 the retained amount shall be 5% of the value of the completed work. No further retainment shall be withheld if the Contractor makes satisfactory progress in the Contract Work. The amount retained shall be in effect until such time as final payment is made, with the following exceptions:

- a) When one hundred Percent (100%) of the Work has been complete, the Project Manager may, at his/her discretion, reduce the retained amount by fifty percent (50%) of the required retainage.

b) Upon one hundred percent (100%) completion and acceptance of the project, the Project Manager may reduce the retainment to fifty percent of the required retainage. In addition to standard retainment, the City shall withhold funds for claims against the Contractor filed by Subcontractors and Suppliers, pursuant to Section 38-26-107, CRS.

14.2.2. NO PAYMENT. A progress payment shall not be made when the total value of the work done since the last estimate amounts is less than \$500.00.

14.2.3. LUMP SUM ITEMS. All lump sum Bid items shall be paid on a pro-rata basis determined by the percentage of the total Work completed or if the Bid item is installed or completed One Hundred Percent (100%) in place and accepted by the Engineer.

14.2.4. SUBCONTRACTOR PAYMENTS. In addition to the other requirements regarding subcontracting the Work, the Contractor is responsible for prompt payments to all Subcontractors. As a minimum, the Contractor is responsible for prompt payments to all Subcontractors. As a minimum, the Contractor shall incorporate provisions in all subcontracts to satisfy the following requirements:

14.2.4.1. The Contractor shall make payments to all Subcontractors at least once each month as the Work progresses, when the Subcontractor is performing satisfactorily under the terms of the Contract Documents between the Contractor and Subcontractor;

14.2.4.2. Payments to Subcontractors shall be based on all moneys due the Subcontractor under the terms of the contract between the Contractor and Subcontractor;

The Contractor shall make payments to Subcontractors within 10 days of receipt of the City's payment to the Contractor;

Subcontractors and lower tier subcontractors shall make payments to their subcontractors, according to the requirements above and shall make payments within 10 days of receipt of payment from the next higher tier.

14.3 Contractor's Warranty of Title:

The Contractor warrants and guarantees that title to all Work, materials and equipment covered by any progress pay estimate approved for Payment, whether incorporated in the Project or not, will pass to the City no later than the time of payment free and clear of all Liens.

14.4 Engineer's Review of Progress Payments.

14.4.1. The Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by the Engineer to the City, based on the Engineer's on-site observations of the Work in progress and on the Engineer's review of the pay estimate form and the accompanying data and schedules that the Work has progressed to the point indicated; that to the best of the Engineer's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work in the Bid Proposal form, and to any other qualifications stated in the recommendation); and that the Contractor is entitled to payment of the amount recommended. However, by recommending any such payment the Engineer will not thereby be deemed to have represented that exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to the Engineer in the Contract Documents or that there may not be other matters or issues between the parties that might entitle the Contractor to be paid additionally by the City or the City to withhold payment to Contractor.

14.4.2. The Engineer may refuse to recommend the whole or any part of any payment if, in the Engineer's opinion, it would be incorrect to make such representations to the City. The Engineer may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any

such payment previously recommended, to such extent as may be necessary in the Engineer's opinion to protect the City from loss because:

- 14.4.2.1. The Work is Defective, or completed Work has been damaged requiring correction or replacement;
- 14.4.2.2. The Contract Price has been reduced by Written Amendment or Change Order;
- 14.4.2.3. The City has been required to correct Defective Work or complete Work in accordance with paragraph 13.9.; or,
- 14.4.2.4. Of the Engineer's actual knowledge of the occurrence of any of the events enumerated in Article 15.

The City may refuse to make payment of the full amount recommended by the Engineer because claims have been made against the City on account of the Contractor's performance or furnishing of the Work or Liens have been filed in connection with the Work or there are other items entitling the City to a set-off against the amount recommended, but the City must give the Contractor immediate written notice (with a copy to the Engineer) stating the reasons for such action.

14.5 Substantial Completion:

14.5.1. The date accepted by the City when the construction of all Work items in the project or a specified part thereof is One hundred percent (100%) completed, in accordance with the Contract Documents, so that the project or specified part can be utilized for the purpose for which it is intended shall establish substantial completion for the project or for a specified part.

14.5.2. When the Contractor considers the entire Work ready for its intended use, the Contractor shall coordinate with the City an inspection of the Work and conduct such tests as required to ensure the Work meets or exceeds all Performance Standards to help determine the status of completion. If the City does not consider the Work satisfactorily complete, the Engineer shall notify the Contractor in writing giving the reasons therefore. There shall be a Punch List of the items to be completed before final inspection and final payment. At the time of delivery of the completed punch list items, the City must conduct a final inspection and upon acceptance by the City, the Contractor shall deliver a fully executed Claim Release form to facilitate the project closure.

14.6 Partial Utilization:

Use by the City of any finished part of the Work, which has specifically been identified in the Contract Documents, or which the City, the Engineer and the Contractor agree constitutes a separately functioning and useable part of the Work that can be used by the City without significant interference with the Contractor's performance of the remainder of the Work, may be accomplished prior to Final Completion of all the Work subject to the following:

14.6.1. The City at any time may request the Contractor in writing to permit the City to use any such part of the Work which the City believes to be ready for its intended use and substantially complete. If the Contractor agrees, the Contractor will certify to the City and the City Engineer that said part of the Work is substantially complete.

14.7 Final Inspections:

Upon written notice from the Contractor that the entire Work or an agreed portion thereof is complete, the City will make a final inspection with the Engineer and the Contractor and will notify the Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or Defective. The Contractor shall immediately take such measures as are necessary to remove and eliminate all such deficiencies. All deficiencies or incomplete Work items shall be recorded by the City Project Inspector on a Punch List Sheet(s) and distributed to the Contractor and the Engineer immediately.

14.8 Final Progress Payment:

14.8.1. After the Contractor has completed all such corrections to the satisfaction of the City and delivered all maintenance and operating instructions, schedules, guarantees, as-built documentation (as provided in paragraph 6.12) and other documents - all as required by the Contract Documents, and after the City has indicated that the Work is acceptable, the Contractor shall deliver to the Engineer a fully executed and notarized Claim Release Form and the City Engineering Department will advertise for project closure and release of the final retainment. The final pay estimate will consist of retainment amount only. Final payment will be released following a thirty (30) day waiting period from the date of the second publication of the advertisement for final settlement and closure if no verified claim has been filed with the City.

14.9 Settlement Date, Notice to Subcontractors, Acceptance and Final Payment:

If, on the basis of the Engineer's observation of the Work during construction and final inspection, and the Engineer's review of the final progress Payment and accompanying documentation - all as required by the Contract Documents, the Engineer represents to the City that the Work has been completed and the City is satisfied that the Work has been completed and the Contractor's other obligations under the Contract Documents have been fulfilled, the City shall cause to be published on two (2) consecutive weeks in the weekly editions of the *Aspen Times*, a public notice setting a final settlement date; which said settlement date shall be at least ten (10) days after the second publication. Said notice shall advise all persons, co-partnerships, associations of persons, companies, or corporations that have furnished labor, provisions, materials, team hire, sustenance, or other supplies used or consumed by Contractor or his subcontractor(s), that they may file a claim with the City, at any time up to and including the time of final settlement. Upon filing of any such claim, the City shall withhold from retainment withheld in accordance with the Contract Documents, to insure the payment of said claims until the same have been paid or such claims as filed have been withdrawn, such payment or withdrawal to be evidenced by filing with City a receipt in full or an order for withdrawal in writing and signed by the person filing such claim or his duly authorized agents or assigns. Such funds shall not be withheld longer than Ninety Days following the date fixed for final settlement as published unless an action is commenced within that time to enforce such unpaid claim and a notice of *Lis Pendens* is filed with the City. At the expiration of such ninety day period, the City shall pay to Contractor such moneys and funds as are not subject of suit and *Lis Pendens* notices and shall retain thereafter, subject to the final outcome thereof, only such balance of funds to insure the payment of judgments which may result from such suit.

14.8.2. If, the remaining balance to be held by the City for Work not fully completed or corrected is less than the retainage set forth at paragraph 14.2., and if Bonds have been furnished as required in Article 5, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Engineer. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

14.10 Contractor's Continuing Obligation:

The Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by the Engineer, nor the issuance of a certificate of Substantial Completion, nor any payment by the City to the Contractor under the Contract Documents, nor any act of acceptance by the City nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor the issuance of a notice of acceptability by the Engineer pursuant to paragraph 14.9, nor any correction of Defective Work by the City will constitute an acceptance of Work not in accordance with the Contract Documents or a release of the Contractor's obligation to perform the Work in accordance with the Contract Documents.

14.11 Liquidated Damages:

14.11.1. TIME FOR COMPLETION: It is hereby understood and mutually agreed, by and between the Contractor and the City, that the date of beginning Work and the time of completion as specified herein are essential conditions of the Agreement. The Contractor agrees that said Work shall be prosecuted regularly, diligently, and at such rate of progress as will ensure completion within the time(s) specified. It is expressly understood and agreed, by and between the Contractor and the City, that the time(s) for completion of the Work described herein are reasonable time(s) for the completion of the Work, taking into consideration the average climatic conditions prevailing in the locality of the Work.

14.11.2. **TIME IS OF THE ESSENCE TO THE AGREEMENT:** It is further agreed that time is of the essence in completing the Work, and that the Project Work Schedule referenced at paragraph 6.9. and the Submittal Schedule referenced at paragraph 6.3. and all dates set forth therein and where in the Contract Documents, an additional time is allowed for the completion of the Work, the new time limit fixed by such extension shall be of the essence of the Contract.

14.11.3. **LIQUIDATED DAMAGES:** Substantial Completion of the Construction Phase are of paramount importance to the City. If any portion of the Work is not completed in accordance with any time extensions granted by the City, the City will suffer damage, the extent of which will be impractical and extremely difficult to estimate accurately. Therefore, as part of the consideration for executing the Contract, it is hereby agreed that the Contractor shall pay to the City the amounts specified in the Liquidated Damages Form included in the Contract Documents. This particular provision shall not be construed as a penalty upon said Contractor for failing fully to complete said Work as agreed in the Proposal and Contract Documents nor is it intended, but as Liquidated Damages to compensate the City for all costs incurred as a result of such breach of Contract.

14.11.4. **DELAYS IN WORK COMPLETION OF CONSTRUCTION PHASE:** Subject to the terms of "Excusable Delays", as contained in Section 14.11.6. of the General Conditions, the Contractor expressly agrees to pay the City as a reasonable estimate of just compensation for damages contemplated with the clause, the amount set forth in the Liquidated Damages Form for each consecutive calendar day that Substantial Completion is delayed in the Construction of the project. In no event shall the total amount of liquidated damages exceed Twenty Percent (20%) of the total Contract Price for the Construction.

14.11.5. **DELAYS IN SUBMITTAL OF AS-BUILT DOCUMENTATION:** Should the Contractor fail to make delivery of the as-built documentation covered in the Contract Documents prior to release of the final payment, it shall pay liquidated damages to the City the amounts equal to preparation cost of the As-Built drawings by the City and its Engineers and Surveyors.

14.11.6. **EXCUSABLE DELAYS - FORCE MAJEURE:** If, by reason of Force Majeure, any party hereto shall be rendered unable wholly or in part to carry out its obligations under this Agreement then such party shall give notice and full particulars of such Force Majeure in writing to the other party within a reasonable time after occurrence of the event or cause relied upon, and the obligation of the party giving such notice, so far as it is affected by such Force Majeure, shall be suspended during the continuance of the liability then claimed, but for no longer period, and any such party shall remove or overcome such inability with all reasonable dispatch. The term Force Majeure as employed herein, shall mean acts of God, strikes, lockouts, or other industrial disturbances, acts of public enemy, orders of any kind of the Government of the United States or the State of Colorado or any political subdivision, except the City, or any civil or military authority, insurrection, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, washouts, droughts, arrests, restraint of government and people, civil disturbances, explosions, breakage or accidents to machinery, pipelines, or canals, or other causes not reasonably within the control of the party claiming such inability. It is understood and agreed that the settlement of strikes and lockouts shall be entirely within the discretion of the party having the difficulty, and that the above requirement that any Force Majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes and lockouts by acceding to the demands of the opposing party or parties when such settlement is unfavorable to it in the judgment of the party having the difficulty.

14.11.7. **CUMULATIVE REMEDY:** The liquidated damages referred to herein are intended to be and are cumulative and shall be in addition to every other remedy now or hereafter enforceable at law, in equity, by statute, or under contract.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.1 City May Suspend Work:

The City may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to the Contractor and will fix the date on which work will be resumed. The Contractor shall resume the Work on the date so fixed. The Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both if the Consecutive Calendar Days are used to complete the Work, directly

attributable to any suspension if the Contractor makes an approved claim therefor as provided in Article 11. Other Work suspensions such as delayed start or phased construction shall not entitle the Contractor to any compensation of payment or time.

15.2 City May Terminate:

Upon the occurrence of any one or more of the following events:

15.2.1. If the Contractor commences a voluntary case under any chapter of the Bankruptcy Code (Title II, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

15.2.2. If a petition is filed against Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

15.2.3. If the Contractor makes a general assignment for the benefit of creditors;

15.2.4. If a trustee, receiver, custodian or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;

15.2.5. If the Contractor admits in writing an inability to pay its debts generally as they become due;

15.2.6. If the Contractor persistently fails to perform the Work in accordance with the Contract Documents (including but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.9 as revised from time to time);

15.2.7. If the Contractor disregards Laws or Regulations of any public body having jurisdiction;

15.2.8. If the Contractor disregards the authority of Architect; or,

15.2.9. If the Contractor otherwise violates in any substantial way any provisions of the Contract Documents:

The City may, after giving the Contractor (and the surety, if there be one) seven days written notice and to the extent permitted by Laws and Regulations, terminate the services of Contractor, exclude the Contractor from the site and take possession of the Work and of all the Contractor's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by the Contractor (without liability to the Contractor for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which the City has paid the Contractor but which are stored elsewhere, and finish the Work as the City may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) such excess will be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor shall pay the difference to the City. Such costs incurred by the City will be approved as to reasonableness by the Engineer and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph the City shall not be required to obtain the lowest price for the Work performed.

15.2.10. Where the Contractor's services have been so terminated by the City, the termination will not affect any rights or remedies of the City against the Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due the Contractor by the City will not release the Contractor from liability.

15.2.11. Upon seven days' written notice to the Contractor, the City may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Contract. In such case, the Contractor shall be paid for all Work executed and any expense sustained plus reasonable termination expenses.

15.3 Contractor May Stop Work or Terminate:

If, through no act or fault of the Contractor, the Work is suspended for a period of more than ninety days by the City or under an order of court or other public authority, then the Contractor may, upon seven days written notice to the City and the Engineer, terminate the Contract and recover from the City payment for all Work executed and installed in place and any expense sustained plus reasonable termination expenses. The provisions of this paragraph shall not relieve the Contractor of the obligations under Article 6 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with the City.

ARTICLE 16 - MISCELLANEOUS

16.1 Nondiscrimination

During the performance of this Contract, the Contractor agrees as follows:

16.1.1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, marital status, sexual orientation, being handicapped, a disadvantaged person, or a disabled or Vietnam era veteran. The Contractor will take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, sex, age, sexual orientation, handicapped, a disadvantaged person, or a disabled or Vietnam era veteran. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

16.1.2. The Contractor, with regard to the Work performed by it during the Contract, shall not discriminate on the grounds of race, color, religion, sex, national origin, sexual orientation, age, marital status, being handicapped, a disadvantaged person, or a disabled or Vietnam era veteran in the selection and retention of Subcontractors, including procurements of materials and leases of equipment.

16.1.3. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, sexual orientation, age, marital status, being handicapped, a disadvantaged person, or a disabled or Vietnam era veteran.

16.1.4. In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential Subcontractor or Supplier shall be notified by the Contractor of the subcontractor's obligations under this Contract and the regulations relative to nondiscrimination on the grounds of race, color, religion, sex, national origin, sexual orientation, age, marital status, being handicapped, a disadvantaged person, or a disabled or Vietnam era veteran.

16.1.5. The Contractor will send to each labor union or representative of workers, with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

16.2 Giving Notice:

Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for

whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

16.3 Computation of Time:

16.3.1. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

16.3.2. A consecutive calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day. A working day is any day; Monday through Friday of each week, also called business day.

16.4 General:

Should the City or the Contractor suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage.

The provisions of this paragraph shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

16.4.1. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon the Contractor by the General Conditions, and all of the rights and remedies available to the City thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

16.5 Independent Contractor Status:

It is expressly acknowledged and understood by the parties that nothing in this agreement shall result in, or be construed as establishing an employment relationship. The Contractor shall be, and shall perform as, an independent the Contractor who agrees to use his best efforts to provide the Work on behalf of the City. No agent, employee, or servant of the Contractor shall be, or shall be deemed to be, the employee, agent or servant of the City. The City is interested only in the results obtained under the Contract Documents. The manner and means of conducting the Work are under the sole control of the Contractor. None of the benefits provided by the City to its employees including, but not limited to, worker's compensation insurance and unemployment insurance, are available from the City to the employees, agents or servants of the Contractor. The Contractor shall be solely and entirely responsible for its acts and for the acts of the Contractor's agents, employees, servants and subcontractors during the performance of the Contract.

THE CONTRACTOR, AS AN INDEPENDENT CONTRACTOR, SHALL NOT BE ENTITLED TO WORKERS' COMPENSATION BENEFITS AND SHALL BE OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON ANY MONEYS EARNED PURSUANT TO THE CONTRACT.

16.6 Prohibited Interest:

No member, officer, or employee of the City of Aspen, Pitkin County or the Town of Snowmass Village shall have any interest, direct or indirect, in this Agreement or the proceeds thereof.

16.7 Warranties Against Contingent Fees, Gratuities, Kickbacks and Conflict of Interest:

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingency fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business.

16.7.1. The Contractor agrees not to give any employee or former employee of the City a gratuity or any offer of employment in connection with any decision, approval, disapproval, recommendation, preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to this Contract or to any solicitation or proposal therefor.

16.7.2. It shall be a material breach of the Contract for any payment, gratuity, or offer of employment to be made by or on behalf of a Subcontractor under a contract to the prime Contractor or higher tier Subcontractor or any person associated therewith, as an inducement for the award of a Subcontract or order. The Contractor is prohibited from inducing, by any means, any person employed under this Contract to give up any part of the compensation to which he/she is otherwise entitled. The Contractor shall comply with all applicable local, state and federal "anti-kickback" statutes or regulations.

16.8 Payments Subject to Annual Appropriations:

If the contract awarded extends beyond the calendar year, nothing herein shall be construed as an obligation by the City beyond any amounts that may be, from time to time, appropriated by the City on an annual basis. It is understood that payment under any contract is conditional upon annual appropriation of funds by said governing body and that before providing services, the Contractor, if it so requests, will be advised as to the status of funds appropriated for services or materials and shall not be obligated to provide services or materials for which funds have not been appropriated.

16.9 Contractor Acceptance:

16.9.1. The acceptance by the Contractor of any payment made on the final completion of Work under these General Conditions, or of any final payment due on termination, shall constitute a full and complete release of the City from any and all claims, demands and causes of action whatsoever which the Contractor, has or may have against the City under the provisions of these Contract Documents.

16.9.2. No action shall be maintained by Contractor, its successors or assigns, against the City or the Engineer on any claims based upon or arising out of this Contract or out of anything done in connection with this Contract unless such action shall be commenced within 180 days after the date approval of the final progress payment hereunder, or within 180 days of the termination of this Agreement.

16.10 Successors and Assigns

This Contract and all of the covenants hereof shall inure to the benefit of and be binding upon the City and the Contractor respectively and their agents, representatives, employees, successors, assigns and legal representatives. Neither the City nor the Contractor shall have the right to assign, transfer or sublet his or her interest or obligations hereunder without the written consent of the other party.

16.11 Third Parties

This Contract does not and shall not be deemed or construed to confer upon or grant to any third party or parties, except to parties to whom the Contractor of the City may assign this Agreement in accordance with the specific written consent, any rights to claim damages or to bring suit, action or other proceeding against either the City or the Contractor because of any breach hereof or because of any of the terms, covenants, agreements or conditions herein contained.

16.12 Waiver

No waiver of default by either party of any terms, covenants or conditions hereof to be performed, kept and observed by the other party shall be construed, or operate as, a waiver of any subsequent default of any of the terms, covenants or conditions herein contained, to be performed, kept and observed by the other party.

16.13 Contract Made in Colorado

The Parties agree that this Contract was made in accordance with the laws of the State of Colorado and shall be so construed. Venue is agreed to be exclusively in the courts of Pitkin County, Colorado.

16.14 Attorney's Fees

In the event that legal action is necessary to enforce any of the provisions of this Contract, the prevailing party shall be entitled to its costs and reasonable attorney's fees.

16.15 Waiver of Presumption

This Contract was negotiated and reviewed through the mutual efforts of the parties hereto and the parties agree that no construction shall be made or presumption shall arise for or against either party based on any alleged unequal status of the parties in the negotiation, review or drafting of this Contract.

16.16 Severability Clause:

If any provision of the Contract is subsequently declared by legislative or judicial authority to be unlawful, unenforceable, or not in accordance with applicable laws, statutes, and regulations of the United States of America or the State of Colorado, all other provisions of the Contract shall remain in full force and effect.

16.17 Audit and Records

The Contractor shall maintain all data and records pertinent to the Work performed under this Contract, in accordance with generally accepted accounting principles, and shall preserve and make available all data and records until the expiration of three (3) years from the date of final payment under this Contract, or for such longer period, if any, as is required by applicable statute or by other articles of the Contract Documents. The authorized representatives of the U.S. Department of Transportation, Comptroller General of the United States, the State of Colorado and the City shall have access to all such data and records for such time period to inspect, audit and make copies thereof during normal business hours. The Contractor covenants and agrees that it shall require that any Subcontractor utilized in the performance of this Agreement shall permit the authorized representatives of the United States Department of Transportation, the State of Colorado, and the City, to similarly inspect and audit all data and records of said Subcontractors relating to the performance of said Subcontractors under this Agreement for the same time period.

16.18 Audit

16.18.1. **COST OR PRICING DATA:** If the Contractor has submitted cost or pricing data in connection with the pricing of any modification to the Contract, unless the pricing was based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, the Engineer or a representative of the City shall have the right to examine and audit all books, records, documents, and other data of the Contractor (including computations and projections) related to negotiating, pricing or performing the modification, in order to evaluate the accuracy, completeness, and currency of the cost and pricing data. In the case of pricing any modification, the authorized representatives of the U.S. Department of Transportation, and the State of Colorado shall have the same rights.

16.18.2. **AVAILABILITY:** The Contractor shall make available at its offices at all reasonable times the materials described in the Contract Documents, for examination, audit, or reproduction, until three (3) years after final payment under the Contract, or for any period, if any, as is required by applicable statute or by other articles of this Contract.

16.18.3. If this Contract is completely or partially terminated, the records relating to the Work terminated shall be made available for three years after any resulting final termination payment.

16.18.4. Records pertaining to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to the performance of this Contract shall be made available until disposition of such appeals, litigation, or claims.

Rev. 1/19/01 (Secs. 14.2.1.1 & 13.1.1)

gc1-971

THE CITY OF ASPEN

SPECIAL CONSTRUCTION PROVISIONS

For

2021 RED MOUNTAIN WATER SYSTEM IMPROVEMENTS

Merrick #-65420911

City of Aspen Project No. # 2021-219

1.0 GENERAL:

- 1.01 ***Clarification of Terms:*** The Special Construction Provisions (SCP) are intended to supplement, specify, and provide additional description, clarification, or conditions that are applicable to this Contract. These SCP amend or supplement the City of Aspen's General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect. These Special Construction Provisions (SCPs) provide additional descriptions, clarifications, or conditions that are applicable to this Contract. Should any portion of other information, Instructions to Bidders, General Conditions or Technical Specifications, be in conflict with these SCPs, the SCPs shall apply.

Contractor shall use and refer the most recent Pitkin County Engineering Standards and City of Aspen Water Department Distribution Standards for all construction and work related to these documents. It shall be the responsibility of the contractor to obtain and use the most recent approved applicable Pitkin County and City of Aspen Documents. These documents may be related to, but not limited to: Erosion and Sedimentation Control, Asphalt Replacement and Repair, Construction Management Plans, and others.

Here after the City of Aspen Water Department will be referred to as the City of Aspen, City, or COA. All references to the City of Aspen Project Engineer or Project Manager shall be referred to as the "Project Manager".

The City of Aspen's on-site construction representative shall be referred to as he "Designated Inspector".

Pitkin County representative will be determined at the Preconstruction meeting and will be referred to as the "County"

Project Site shall refer to the area (2021 Red Mountain Water System Improvements) as shown on the drawing 1-4 where the actual construction will take place. This project will be referred to as "2021 Red Mountain Water System Improvements" or "RMW". All work is within the Pitkin County ROW and City of Aspen Water Line Easements.

All references to the Design Engineer will refer to Merrick-McLaughlin Water Engineers.

All references to the ORC shall refer to the City of Aspen's Operator Responsible in Charge of the water system.

Contractor is to use Best Construction Practices and Methods for all construction, traffic control, erosion and sedimentation control, management, dust control, and all other work related items under this contract.

Project to include the following, but not limited to the following. Work to be completed in the same order:

Schedule A:2021 RMW– Dwgs #2 and #4

1. ~ 200' of 6" and 8" DIP piping n Hunter Creek Road
2. Demo and repiping of the existing Hunter Creek PRV

2.0 CONTRACT TIME

All work at the 2021 Red Mountain Water System Improvements Project site shall be 100% completed by October 31, 2022, or dates approved in writing by the City of Aspen Water Department. The Contractor shall be responsible for implementing all underground utility improvements, the PRV Repiping, and restoration by October 31, 2022. Coordination of pipeline shutdowns and new line commissioning with City of Aspen Operations Staff is essential. All underground pipelines, electrical conduits, or exterior grading and revegetation shall be installed by October 31, 2022.

All work shall be coordinated in a format that provides minimal downtime for the existing facilities, including pipelines, existing PRV valve vault. The contractor shall provide a Construction Management Plan "CMP" to the City of Aspen Project Manager and Pitkin County for review and approval within 30 days for Notice of Award. The CMP in these documents is meant to be used for base information only. Contractor shall also submit a project schedule to the Project Manager prior to the Pre-construction meeting and any construction that will be reviewed and approved by the Project Manager.

3.0 EXPLORATION REPORTS & MATERIALS TESTING:

No soils tests were performed for this project. If the contractor wishes more soils information, the contractor can perform such subsurface soils investigations when deemed necessary through a certified materials lab at their own costs. All soil sampling & compaction, concrete paving, structural concrete testing, quality control, and hot mixed asphalt paving related testing and re-testing will be performed by a certified material testing laboratory acceptable to the City of Aspen Engineering per the most recent excavation standards. The cost of all material testing and re-testing shall be paid by the contractor. If the City of Aspen deems it necessary to obtain more testing information than provided by the contractor, the City may request or require additional testing through the contractor's testing company or its own testing company at its own cost.

4.0 PROJECT ENGINEER AND THE DESIGNATED INSPECTOR:

The City's Representatives for this project shall be a Project Manager, and/or a City of Aspen Water Department Staff member and/or a Designated Inspector/field personnel and the designated County Representative. The Designated Inspector and field staff maybe changed as necessary by the Project Manager.

Unless provided in writing by the City of Aspen Water Department, Project Manager, Designated Inspector, County, any on-site inspector or Representative of the City representative shall not have the authority to render any binding decision nor make any binding judgments to the Contractor pertaining to any work which may change the Contract price or time of completion, or change the quality of Work, or change the manner in which the Work is being performed, or make design changes. The Project Manager is the only person who can perform these actions.

The Project Manager and the Designated Inspector shall serve as a means of communication between the City, County, Contractor, and shall monitor the Work for the City.

A County representative will have access to the site at all times and may attend all site and construction meetings and review all changes or modifications to the contract at their discretion. The County shall have no authority to make any decisions or give direction to the contractor.

5.0 MANDATORY PRE-CONSTRUCTION CONFERENCE & WEEKLY PROGRESS MEETINGS:

A pre-construction conference shall be held within fourteen (14) Consecutive Calendar Days after the Notice of Proceed by the City Council. The purpose of such meeting shall be to explain and coordinate, as required, to the Contractor, the requirements of the Contract Documents, the procedures to be used in the administration of the Contract, and to discuss any item of concern to the work. The Contractor, Project Manager, Construction Project Supervisor, Pitkin County, City of Aspen Project Manager, Designated Inspector, City of Aspen ORC and Distribution Staff, and other authorized representatives of each, shall be required to attend such meetings as a condition of the Contract. The time and the day for Mandatory Weekly Progress Meetings shall be scheduled at the pre-construction conference. The Contractor shall Provide the Construction Schedule prior to Preconstruction Meeting.

Please provide a 1 week notice prior to commencing construction, for any and all inspections, or preconstruction meetings. Once work starts, a minimum of a 48 hour notice is required for all inspections and City of Aspen locates, tests, and sampling. Connections to the Existing System "CES" and work around COA facilities shall be discussed at the weekly meetings in advance and obtain timing and sequencing approvals for all work in advance of the 48 hour notice requirements.

Contractor to provide a construction schedule and sequencing summary prior to the Pre-construction meeting and both are required to be updated weekly and presented at all subsequent weekly meetings.

6.0 PROGRESS SCHEDULE AND SEQUENCE OF OPERATIONS:

- 6.01 Within seven (7) days of the date of the bid award by the City Council, and prior to the pre-construction conference, the Contractor shall submit for review to the Water

Department a critical-path chart showing the estimated progress for the component divisions of the Work and a balanced time breakdown, showing the estimated progress schedule for the entire Project. For purposes of comparison, the Contractor shall submit with each progress pay estimate a form showing the actual rate of progress to date for the component divisions and for the Project as a whole. The actual rate of progress shown on the form shall only include Work completed and shall not include stored materials.

- 6.02 It is mandatory that the Contractor submit for approval, prior to the pre-construction meeting. A narrative of the planned sequence of construction indicating the approximate date and time duration of any road or street restrictions or closures, utility interruptions, etc., as applicable to this project. The contractor should review and confirm the City supplied Traffic Control Plan and Construction Management Plan are constructable and appropriate for construction.
- 6.03 In the event that the rate of actual progress of the work does not meet the estimated progress schedule indicated on the approved critical-path chart and in the absence of time extensions if any granted by the Water Department, the Contractor shall accelerate the Work by placing additional forces and equipment on the Project so that the Project will be completed within the Contract Time. The Contractor shall be capable and make available more crews as needed to perform the work on time.
- 6.04 The Contractor shall provide a list of emergency (24 hour) contact name(s), addresses and phone numbers to the Water Department a minimum of 48 hours prior to the pre-construction conference. Emergency phone calls must be responded to in 1 hour or less and action must be taken on the emergency condition immediately. Such emergency calls shall be project related and at the Contractor's cost. The Owner may initiate such corrective work at Contractor's cost if the Contractor fails to perform the required task within one hour of an emergency call. This information shall be in the Construction Management Plan as well.
- 6.05 The Contractor shall provide the City of Aspen a detailed schedule and connecting sequence for all Connections to the Existing System "CES" - (CES 1 and 2), and existing Hunter Creek PRV vault repiping. The COA will require that the contractor shall submit a testing program for the connections as well as testing protocol and installation protocol for all work near to with the COA existing system. This document will be reviewed and approved by the COA.

7.0 SURVEY CONTROL:

The City will provide 1 control point near the project for layout survey and asbuilt purposes. All other surveying, layout, and other surveying including asbuilts will be the responsibility of the Contractor. Contractor shall contact the Project Manager to arrange the installation and setting of the control points prior to construction.

8.0 VERIFICATION OF EXISTING UTILITIES

Any known underground utilities and structures are indicated on the Drawings. This information is shown as a convenience to the Contractor and is not guaranteed to be accurate or complete. The contractor is required to verify the elevation of all existing utility elevations by potholing or other means prior to installation of conduits, connections to the existing lines, and work around the proposed construction. Based upon the verification of the elevation of the existing utilities, minor adjustments in the alignment, profile, and elevation of the proposed pipelines and conduits may be required. In case of conflict in elevations of the new lines and existing utilities, the contractor will provide the City of Aspen Project Manager and/or its representatives the utility elevations and the City of Aspen will direct the contractor to make any field adjustments in alignment or elevations of the pipelines or conduits. The Contractor shall not make any elevation adjustment of the new lines without consent of the City of Aspen, the Design Engineer, or its representatives. No extra compensation will be granted for the location of existing utilities, required potholing, or minor alignment or elevation adjustments of the new lines.

It shall be the Contractor's responsibility to contact proper authorities, (calling 811) or other utilities if not covered under 811, for location, horizontal and vertical, and take any precautions necessary to protect the utilities. It shall be the Contractor's responsibility to locate and maintain all utilities in proper working order at all times. The Contractor shall use extreme caution when working around the existing utilities. The City of Aspen Water Department line locate policy of 48 hr. minimum notice for located or service interruptions shall be strictly adhered to. Call 920-5110 to schedule locates or work near a potable water line.

9.0 PROTECTION OF PUBLIC FACILITIES, UTILITIES AND OTHER ADJOINING PROPERTY:

The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to other property at the site or adjacent thereto, and they shall be liable for any and all claims for such damage on account of their failure to fully provide such protection. The Contractor shall notify all public utility companies at least forty-eight (48) hours prior to commencement of any Work in the vicinity of the utilities. No work shall commence until the utilities have been located and marked by the utility company. If utility service must be interrupted, the Contractor shall coordinate with the respective utility provider at least forty-eight (48) hours prior to interruption.

Existing vegetation and trees shall be protected to the extent possible at all times. No trees shall be removed without specific written consent from the City and/or County. The Contractor shall designate and receive approval from the City or County for all trees to be saved, protected, removed, and replaced. Trees to be saved and protected shall be fenced and not disturbed during any construction unless written approval is given, or it presents a dangerous trench condition. All trees that are approved for removal will be replaced in kind with same size and species. Replacement of smaller aspen trees or those outside of newly proposed easements will be included in the revegetation.

The removal of any trees, shrubs, fences, or other improvements outside of the limits of work, if necessary, for the Contractor's choice of means and methods, shall be arranged with the Project

Manager, and shall be removed and replaced, at no additional cost to the City, County, or individual property owner.

All tree removal and replacement, and all revegetation shall meet ANSI – American Standard for Nursery Stock requirements, ANSI Z60.1 and ANSI Nursery Stock Standards 2014.

All trees shall be replaced with in kind size and species. Species and size shall be reviewed and agreed upon by the County, City of Aspen, and the contractor. Prior to tree replacement and based on the actual trees removed, the Contractor shall provide a planting plan showing location, size and species to be replaced.

The Hunter Creek Subdivision Rock entrance gates are not to be disturb for any reason. Contractor will fence around the gate or provide other means to protect the entrance gates. Contractor will be responsible for all damages.

The facilities at the entrance to 312 Hunter Creek Road shall be protected at all times. Contractor will be responsible for all damages.

10.0 USE OF EXISTING HUNTER CREEK PARKING LOT and 10TH MTN TRAILHEAD:

The City of Aspen has obtained permission to use the area around the existing Hunter Creek Water Treatment Plant for staging and material storage. The required CMP shall address all uses, constraints, and details. The area is not to be used for daily parking by employees. The Contractor will be responsible for any damage to the parking area and will be required to repair or replace all damaged areas. The Contractor shall fence off the work area, storage and staging area properly for safety and liability concerns.

The 10th mtn Trailhead Parking area shall not be used by the contractor for any uses, (parking, material storage or Staging). No construction parking is allowed on Hunter Creek Road.

Traffic Control, signage, and traffic flaggers: As required by the County and City of Aspen and as necessary for the safety the safety of the public, Contractor, Red Mountain Residents, and City employees and representatives. Work shall include delivery, pickup, installation, maintenance, protection & replacement of damaged devices, defective steady burn or flashing beacons, signs, and adjusting the number of channelizing devices and signs as necessary to maintain safe traffic flows on Hunter Creek Road and 10th MTN Parking Lot, and all other locations for the duration of this project. Work shall also include all required labor and equipment to provide flaggers and signage as required and necessary to control all vehicle and pedestrian traffic throughout the Project boundaries. The traffic control plan and selected devices and signs shall be based on the MUTCD.

A County approved Traffic Control Plan for Hunter Creek Roads has been provided by the Project Manager.

- Limiting delays to 5 minutes
- 7-day notice on closures
- Roadway plating at night and for emergency access if required from Aspen Fire Protection District

A silt fence will be required around the designated work area and staging and storage areas. See Erosion and Control Drawing Dwg # 4

11.0 ACCESS TO SITE:

Access to the site shall be from Hunter Creek Road.

- 11.01 ACCESS ROAD: Parking shall be addressed in the Traffic Control Plan. Limited on-site parking is available. Construction Parking at this time will be extremely limited.
- 11.02 STAGING AREAS: Due to limited staging areas at the construction site, the contractor shall coordinate deliveries and storage of material. All deliveries shall be left at designated storage areas. Staging and storage areas are very limited to the approved area in WTP area. See drawing # 2 for more information on staging area. All staging and storage will be provided by the contractor. Contractor shall be aware of this limitation prior to the bid process. Other staging areas will be reviewed at the Mandatory Pre-Bid meeting and finalized at the Preconstruction meeting. Disturbance shall be maintained with the installation of a silt and construction fencing around the staging areas designated by the Erosion and Sedimentation Control Plan on site. The contractor is responsible for all other offsite storage or staging areas and shall coordinate deliveries to limit the amount of material onsite. Contractor shall manage and remove these materials offsite at his own cost. The COA will not pay for any offsite storage or trucking costs associated with this project.

Due to limited vehicle parking on site the contractor shall limit vehicles on site to those only absolutely required for construction each day. Parking on Hunter Creek Road will not be permitted unless approved in writing from the County and City. The contractor and all subcontractors shall park off site and carpool or bus workers to the site. Contractor shall provide a staging and storage plan, which will be reviewed and approved by City.

Access to 312 Hunter Creek Driveway, structures, facilities is to be maintained at all times. Short periods of closure, (less than 5 min) are allowed. Contractor not to disturb irrigation system or other facilities around the access to 312 HC Road.

- 11.03 Hunter Creek Road will require dust control and the contractor will perform the dust control on all roads on a continual basis.

- 11.04 A silt fence will be required around the designated work area and staging and storage areas. See Erosion and Control Drawing sht # 4.

12.0 DAMAGE TO CONSTRUCTION:

The Contractor shall safeguard, until all work in the contract is formally accepted, all construction, both complete and incomplete, against damage and destruction, and should damage result, the contractor will be required to reconstruct at their expense in a manner conforming to the Plans and Specifications, reconstruction shall be in a manner suitable to the Water Department, City, County, and Property Owners. No repair or mitigating option for damaged work will be accepted by the City.

13.0 JOB SITE RESTRICTIONS:

All materials to be removed from the project site or demolished on site shall be disposed of by the Contractor off the project site unless requested otherwise by the City.

The County and City of Aspen have agreed to the following restrictions:

- A trench box shall be used on all excavations unless approved in writing by the Project Manager, Designated Inspector in advance and can be shown not to disturb additional area.
- 4" minimum Asphalt replacement – Match existing depth
- 18" Class 6 road base under all Asphalt areas.

14.0 WORKING HOURS:

Work will normally be permitted between Monday -Friday 8:00 a.m. and 5:00 p.m or as designated by the County Codes and in the approved CMP or as stated in the ROW Permit. All other work hours must be approved by the City and County in writing. No work will be permitted on Sunday, except with 48 hours prior written notice to the City and County to allow notification of the public.

15.0 DISPOSAL OF HAZARDOUS MATERIALS:

The disposal of any hazardous materials shall be the sole responsibility of the Contractor.

16.0 SALVAGE:

City of aspen existing water system piping, and PRV piping, stone masonry, concrete, steel, timber and other items removed from the site are the property of the City of Aspen, unless otherwise noted in the project documents. Those items that the City of Aspen does not wish to keep shall be disposed of off-site by the Contractor at the Contractor's expense.

17.0 MATERIAL TESTS AND CERTIFICATES:

- 17.01 All materials to be incorporated into the Work may be subject to additional sampling, testing by the City per Section 4.0 of these SCP, and approval and samples furnished shall be representative of the material to be used.
- 17.02 Tests required to guard against unsuitable materials or defective workmanship and to

demonstrate that materials comply with the provisions of the Contract Documents shall be paid for by the Contractor.

- 17.03 The procedures and methods used to sample and test materials shall be as specified or as determined by the Project Manager. Unless otherwise specified in these SCP, samples and test shall be made in accordance with the latest standard methods of ASTM, AWWA, AASHTO, CDOT's current edition of *Standard Specifications for Road and Bridge Construction*, or most recently approved City of Aspen Standards.
- 17.04 The Contractor shall furnish at least 1 copies of test results to both the Water Department and Designated Inspector.
- 17.05 All material testing is the responsibility of the Contractor and is to include, but not limited to soil and subsurface testing and inspections, Standard Proctor Density for backfill material, compaction testing, all concrete testing and quality control.

If the Pitkin County ROW Permit deems it necessary to obtain more testing information above than provided by the contractor, the City may request or require additional testing through the Contractor's testing company or its own testing company at its own cost.

18.0 SUBCONTRACTORS AND SUPPLIERS:

Contractor shall identify in his/her sealed bid the name and address all Subcontractors, Suppliers, and other persons or organizations that will furnish the principal items of materials, equipment or labor for this project.

19.0 WAIVER:

It is expressly understood and agreed that any waiver granted by the City of Aspen Water Department of any term, provision or covenant of this Contract shall not constitute a precedent nor breach of same or any other terms, provisions or covenants of this Contract. Neither the acceptance of the Work by the Owner nor the payment of all or part of the sum due the Contractor hereunder, shall constitute a waiver by the Owner of any claim which the Owner may have against the Contractor or otherwise.

20.0 PRECEDENCE OF THE CONTRACT DOCUMENTS:

The City of Aspen's current Water Distribution System Standards or the most recent version (attached) take precedence over the Contract Documents, except as noted. If any issue arises or if the contractor suspects that there may be a discrepancy prior to bidding the contract issue between the Water Distribution System Standards and the Contract Documents, the contractor shall request in writing clarification of the discrepancy prior to construction or bidding. The order of precedence of Contract Documents shall be as follows:

- 1. Addenda
- 2. Drawings, if any
 - a. Detailed Drawings
 - b. Standard Drawings
- 3. Current COA Distribution Standards
- 4. SCP's

5. Referenced Technical Specifications
6. Contract for Construction
7. Instruction to Bidders
8. Standard General Conditions
9. Most current COA ROW and Engineering Standards

21.0 PERFORMANCE, PAYMENT AND MAINTENANCE BONDS:

The Contractor shall furnish Performance, Payment, and Maintenance Bonds, each in an amount equal to one hundred percent (100%) of the total Contract price as security for the faithful performance, payment, maintenance obligations of all Contractor's Work under the Contract Documents. Reference is made to the General Conditions for further requirements for Performance, Payment and Maintenance Bonds.

22.0 WARRANTY:

The Contractor will warranty to the City and County for all work in this Contract for a period of two years from date of substantial completion. Substantially complete date shall be defined as the pipeline and Hunter Creek PRV Vault its appurtenances and facilities being installed, tested, operating as a final product, and being operated by the City of Aspen Staff per the design.

Final Acceptance will be when all work is 100% complete, approved by the County, operational, and being used by the City of Aspen, including all punch list work, asbuilts, and release of Final Retainage.

At the City's discretion, a warranty inspection will be held during sixty (60) calendar days prior to the expiration of the warranty period under the Maintenance Bond. The Contractor shall provide an authorized representative at such inspection to represent the Contractor's interests. All defects identified during inspection shall be corrected at Contractor's expense at the direction of the City immediately. Corrective Work shall be commenced within five (5) consecutive calendar days after written notice to Contractor.

23.0 PERMITS:

The Contractor is responsible for obtaining all County, State, and Federal Permits and any submittals pertaining to such construction permits. Contractor is to obtain a Pitkin County Contractor's license. The cost of the permits required for construction of the project will be covered and paid for by the City upon submittal of permit costs to the City Project Manager.

The City is NOT responsible to research, pursue, and obtain all required permits. The City has submitted CMP and Traffic Control as well as other information and plans to Pitkin County to obtain permits. The City will pay all permitting fees associated with Pitkin County ROW. The Contractor will need to sign for the permit.

Refer to the Pitkin County for more information on required information on permits.

24.0 POWER and WATER:

The City of Aspen will provide all water required for testing of the project. Contractor shall provide all materials needed for temporary water. Coordination to obtain water from the existing pipelines or other City of Aspen facilities such as a filler hydrant shall be the Contractor's

responsibility. The City will operate any existing valves and hydrants and the Contractor will schedule with the City when water is required at least 48 hours in advance through the main water department office 920-5110.

The Contractor shall be responsible for providing power requirements during construction. The Contractor shall furnish a portable toilet for his workers use. Contractor is not allowed to operate or use City of Aspen facilities or equipment at any time.

The City of Aspen Water Department staff are the only personnel that can operate City of Aspen water facility valves. The contractor shall not operate any valve at any time for any reason. Please contact the Aspen Water Department at 920-5110 to schedule an operation or for any water line emergency.

25.0. Materials Supplied:

The City will not provide any materials or labor on this project except as noted on the drawings. All materials to be used in this project shall be new. The contractor shall not reuse any materials unless specifically approved in writing by the City of Aspen Water Department.

The contractor is to insure that all new and existing lines are thoroughly cleaned and disinfected prior to any connections. Contractor shall obtain inspections of the proposed connection by City Staff and Designated Inspector prior to any connections.

26.0 CONSTRUCTION MANAGEMENT PLAN:

No construction permit will be issued until the CMP is submitted and approved.

The City has provided a draft Construction Management Plan. The contractor should review and confirm the approach is appropriate. The Contractor may, at its own cost, provide an alternative Construction Management Plan for Staff and County review and approval.

27.0 Erosion and Sedimentation Control Plan:

An Erosion and Sedimentation Control Plan is attached, (Dwg #4) for this project; however, the contractor is required to ensure the extent of the erosion and control plan meets all County Erosion and Control requirements as presented in the 2021 Construction Management Plan Requirements. A silt fence will need to be installed and maintained around the construction perimeter. An Erosion and Sediment Control Drawing, (Dwg # 4) is attached to help the contractor meet City requirements. In

addition to Dwg # 4 of the Construction Documents, the contractor is required to provide an Erosion and Sedimentation Control Plan Submittal to the County meeting all aspects of the County Construction Management Plan Requirements Manual

28.0 ATTACHED DRAWINGS:

INDEX OF DRAWINGS

DWG 1 -	COVER AND LOCATION PLAN
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CITY OF ASPEN 2021 Red Mountain Water System Improvements by Merrick and Company

PROJECT # 2021-219
MWE # (65420911)

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- END OF SECTION -

CITY OF ASPEN
DRAFT CONSTRUCTION MANAGEMENT PLAN
2021 Red Mountain Water System Improvements

1. **GENERAL:** When the term OWNER or Project Manager is used in these specifications, it will refer to the City of Aspen. When the term CONTRACTOR is used in these specifications, it refers to the Contractor under contract to construct the facilities discussed in these Contract Documents. When the term ENGINEER is used, it will refer to the City of Aspen chosen Engineer and its representatives. When the Term County is used, it shall refer to Pitkin County.

The Special Construction Provisions (SCP) of the Contract Documents also contain required information for the CMP. The SCPs' will be used in conjunction with the CMP and take precedence over the CMP. Contractor is required to provide a CMP for construction using the Contract Documents and SCP's as a basis for his CMP. Contractor to follow and meet all aspects of the Pitkin County's 2021 Construction Management Plan Requirements Manual.

This Contract covers the installation of new 8" water line in Hunter Creek Road and PRV replacement in the existing Hunter Creek PRV. Included are pipelines, water fittings, Asphalt, and other appurtenances.

The work is as follows:

2021 Red Mountain Water System Improvements consists of, but not limited to the following work items

- 300' 8" DIP water line
- Fire Hydrants, new isolation valves, and other water appurtenances
- Replacement of interior piping inside the existing Hunter Creek PRV and exterior new gate valve

2. **EMERGENCY CONTACTS:**

- Designated Inspector – Merrick and Company, G Dean Derosier PE 970-925-1920
- City of Aspen – Project Manager – Andy Rossello– 970-429-1999
- City of Aspen – Emergencies – 970-920-5110
- After Hours (8:00-4:00) on non-emergencies call 911
- Contactor – TBD

3. **HOURS OF OPERATION:** Normal working hours: Monday – Friday 8:00 to 5:00 daily, 9:00 to 4:00 on Saturdays by request only, no work on Sundays or Holidays. Working Hours and days will

RMW 644209111 062921

CMP

conform to Pitkin County ROW Permit. Unless an unanticipated problem arises, water outages or feeds to the Water System will be limited to 8 hours during the day (8:00 AM to 4:00 PM).

4. PROPERTY OWNERSHIP: All work is within Existing Hunter Creek Road ROW.
5. LOCATION AND SITE ACCESS: Location of the Project is on Hunter Creek Road between 309 and 312 Hunter Creek Road
6. SANITATION: Contractor shall provide and maintain sanitary facilities on site at all times.
7. DISTURBANCE AREA: Area of disturbance shall be delineated by the silt fence as shown on the Erosion and Sediment Control Drawing and Revegetation drawing #'s 4 of the contract documents.
8. BEST CONSTRUCTION AND MANAGEMENT PRACTICES (BMP): Contractor shall use Best Construction Practices at all times for all portions of the project.

Schedule of activities, prohibitions or practices, maintenance procedures, and other management practices to prevent or reduce pollution of water of the state shall be used at all times.

9. SCHEDULES and NOTIFICATIONS: The Contractor shall provide a list of emergency (24 hour) contact name(s), addresses and phone numbers to the Water Department a minimum of 48 hours prior to the pre-construction conference. Emergency phone calls must be responded to in 1 hour or less and action must be taken on the emergency condition immediately. Such emergency calls shall be project related and at the Contractor's cost. The Owner may initiate such corrective work at Contractor's cost if the Contractor fails to perform the required task within one hour of an emergency call. This information shall be in the Construction Management Plan as well.
10. INSPECTION: A Designated Inspector chosen by the City of Aspen will provide all inspections during the proposed work. The Contractor will provide proper facilities for and access to City's Project Manager, Designated Inspector, or his authorized representative. No work will proceed in the absence of the Designated Inspector or his representative unless previously agreed. Any buried construction in the absence of the Designated Inspector will be uncovered for review and observation. The Contractor will be responsible for all costs associated with exposing work in place and backfilling, compaction, and restoration.
11. Safety: Contractor shall use safety precautions for all work so as not to endanger any public in or near the construction site.
12. PRECONSTRUCTION CONFERENCE AND WEEKLY MEETINGS: The contractor will be required to schedule a Preconstruction Conference to review the project schedules, timing, construction

access, staging and storage, use of Hunter Creek WTP area, emergency access, and other contract issues prior to construction. The meeting will be scheduled a minimum of 7 days prior to the scheduled start date. The contractor will also schedule a weekly site meeting to discuss progress, contract issues, and other construction items. The meeting will be scheduled at the same time and day every week so the Project Manager, Foreman, Pitkin County, City of Aspen, Design Engineer, Designated Inspector, County, and its representatives, Inspector, as well as the City of Aspen Operators.

13. PROJECT FENCING: The project is already within a fenced and gated area. Additional fencing outlines the disturbance area. See Drawing 4 of contract set for fencing, erosion and sediment control and access.
14. MATERIAL STORAGE: The existing Hunter Creel WTP area shall be used for all material storage and staging.
15. WARRANTY: The contractor will warranty all work in this contract for a period of two years from the date of Substantial Completion, including two full (2) winter seasons. Substantial completion shall be defined as the project being completed, cleaned, tested, disinfected, placed into service by City of Aspen Personnel. Easement will apply to Hunter Creek Road for Pitkin County.
16. GEOTECHNICAL INVESTIGATIONS: No reports have been made or are needed for this project
17. EXISTING LANDSCAPING AND RESEEDING: Protection of existing landscaped areas inside and outside the disturbance area will be minimize as outlined by the silt fence. See drawings 4 of the construction set for details on tree protection, disturbance limitations revegetation and other landscaping items.
18. PROJECT MANAGEMENT AND SCHEDULING: The City's Project Manager, Andy Rossello, will be the designated contact for the Contractor. Contractor shall provide a CPM scheduling chart at the preconstruction meeting and update it weekly for the weekly meetings. All communication shall go through the PM from the Contractor and vice versa. The City will have a Designated Inspector on site during construction.
19. CONTRACT TIME: Following the *Notice to Proceed*, the Contractor shall execute with due diligence and shall fully complete in every detail the Work to be done under this Contract and shall start as soon as the site is accessible after scheduling and attending the *Pre-Construction Conference*. The effective date of the start of the Contract Time is the date set for a *Mandatory Pre-construction Conference*, plus any extensions to the Contract Time if authorized by the Project Manager

All Work shall be one hundred percent (100%) complete for this project on or before October 31,

2021, or as approved by the City of Aspen. The Contractor shall be responsible for implementing all improvements by this date.

20. PARKING AND SITE: Staging, material storage and parking will be extremely limited on site to the Hunter Creek WTP area, and the contractor is asked to provide shuttles or carpooling to limited traffic on the access road. No parking will be allowed on the sides of the road before or after the construction area.
Material storage will be limited on site to the Hunter Creek WTP, and the Contractor is asked to schedule deliveries to limit storage of materials on site. The Contractor may not install an office trailer for operations.
21. FUGITIVE DUST CONTROL PLAN: Contractor will provide dust mitigation on a continual basis using water trucks or street sweeping from the Site to and through the work site.
22. MUD CONTROL: The contractor will perform mud control on the site. See Erosion and Sediment Control Plan, see Drawing 4.
23. 10th MTN TRAILHEAD PARKING ACCESS: The contractor shall maintain continuous access to the 10th Mtn Trailhead Parking lot which is adjacent to the start of the project at CES 1. Traffic may be delayed for 5 minutes or less during construction hours.
24. EMERGENCY VEHICLE ACCESS: The contractor shall maintain or provide emergency access through the construction area at all times. After working hours, both lanes of Hunter Creek Road will be open from 5:00 PM to 7:00 AM.
A Traffic Control Plan for Hunter Creek Road has been provided to Pitkin County to review and approval.

CITY OF ASPEN
Testing Plan
2021 Red Mountain Water System Improvements

Contractor shall Test and disinfect the project as follows: If the Contractor desires to change or modify testing plan, they shall do so by submitting a plan to the City of Aspen for review and approval.

1. Perform CES 1 – Remove existing fire hydrant and water cap or plug per City Standards. Install new tee, valves, fire hydrant and water line and connect to the existing 6" DIP. Disinfection shall be performed by swabbing the pipe.
2. Charge new fire hydrant for fire protection and return existing water line below CES 1 back into service
3. Install new 8" DIP in Hunter Creek Road to CES 2.
4. Install tee, valves, water line, and fire hydrant at CES 2
5. Remove existing fire hydrant and valve and plug existing line (temp plug)
6. Disinfect and test line from CES 1 to CES 2.
7. Upon successful bacti test perform CES 2
8. CES 2 – Install line from fire hydrant tee to 90 degree bend and connect to existing 6" DIP. Remove existing and valve toward old fire hydrant. Swab disinfection of lines for CES 2

PART 1 -- DESCRIPTION

The Contractor shall submit submittal information to the Project Manager and Designated Inspector as stated in the following Technical Specification sections. The information must be thorough (drawings, descriptions, samples, manufacturer catalog sheets, etc.) enough for the Project Manager and Designated Inspector to determine compliance with Specification requirements of Contractor proposed equipment, materials, and methods of work. When catalog sheets are submitted, the items for review must be clearly marked.

PART 2 -- PROCEDURE

2.1 The Contractor shall submit to the Project Manager and Designated Inspector, four hard copies, or one electronic copy and one hard copy of each submittal item. The Contractor must allow two weeks for approval. However, for this project, for critical path items, if so noted, the Project Manager and Designated Inspector will endeavor to minimize review time. Submittals of related items shall be delivered as a package for a coordinated review.

2.2 The submittals shall be submitted with a transmittal form for each separate item listed for review. The submittal shall be marked with the appropriate title and Section reference for filing. A sequential numbering system shall be assigned to the submittals with a position for marking resubmittals.

2.3 Prior to sending to the Project Manager and Designated Inspector, the Contractor must review all submittal materials and shall mark his approval and recommendations. Items received without Contractor review shall be returned without review. All O&M information must be submitted separately from the original submittal and shall be so marked.

PART 3 -- REVIEW REQUIREMENTS

3.1 The Contractor is responsible for ensuring compliance with the methods and materials required in the Technical Specifications. Approval of a submittal by the Project Manager and Designated Inspector does not alleviate the responsibility of the Contractor. The Contractor shall maintain responsibility for any errors or omissions, and review by the Owner or the Project Manager and Designated Inspector does not remove any liability or risk of the Contractor. The Contractor can make no claim of failure of the work, material or equipment against any item reviewed.

3.2 If a submittal represents equipment or methods that are different from those specified, the Contractor is responsible for demonstrating the relevance to the specifications. All variations must be shown in writing for review and must be approved by the Project Manager and Designated Inspector. If the variation creates a change in the Contract Price, a Change Order modification will be generated.

PART 4 -- OPERATION AND MAINTENANCE MANUALS

The Contractor shall furnish three paper copies and one electronic copy of Operation and Maintenance information for the pressure reducing valves. The information shall be labeled as an O&M Manual and be bound in a three-ring binder. The sections shall be clearly labeled and tabbed with permanent covers. They shall include information on required maintenance,

SUBMITTALS – SECTION 01300

installation, operations, electrical and hydraulic systems, lubrication and spare or necessary parts.

PART 5 -- CERTIFICATES

When certification of an item or an individual performing the work is required, three copies of the certificates shall be supplied demonstrating that the material and work are being provided in accordance with the Specifications.

- END OF SECTION -

PART 1 -- GENERAL:**1.1 REQUIREMENTS:**

- A. Provide such equipment and facilities as are required for conducting field tests and for collecting and forwarding samples. Do not use any materials or equipment represented by samples until tests, if required, have been made and the materials or equipment found to be acceptable. Any product which becomes unfit for use after the approval thereof shall not be incorporated into the work.
- B. Tests shall be made by an accredited testing laboratory. Except as otherwise provided, sampling and testing of all materials and the laboratory methods and testing equipment shall be in accordance with the latest standards and tentative methods of the American Society for Testing Materials (ASTM).
- C. Where additional or specific information concerning testing methods, sample sizes, etc., is required, such information is included under the applicable sections of the Specifications. Any modification of, or elaboration on, these test procedures which may be included for specific materials under their respective sections in the Specifications shall take precedence over these procedures.

1.2 OWNER'S RESPONSIBILITIES: The Owner shall be responsible for and shall pay all costs in connection with the following testing:

- A. Tests not called for by the Specifications of materials delivered to the site but deemed necessary by the Owner.

1.3 CONTRACTOR'S RESPONSIBILITIES: In addition to those inspections and tests called for in the General Conditions, Contractor shall also be responsible for and shall pay all costs in connection with the testing required for the following:

- A. Concrete materials and mix designs.
- B. Soil tests including All performance and field work, except those called for under Submittals thereof, including all road compaction and structural subgrade.
- C. Concrete tests, except those called for under submittals thereof. Including slab, wall and roof cylinders, number per concrete specification
- D. Gradation tests for pipe embedment, fill and backfill materials.
- E. All performance and field work or materials found defective or unsatisfactory, including tests covered under 1.2 above.

1.4 TRANSMITTAL OF REPORTS: Written reports of tests and engineering data furnished by Contractor for Project Manager review of materials and equipment proposed to be used in the work shall be submitted as specified for Shop Drawings.

The testing laboratory retained by the Owner will furnish three copies of a written report of each test performed by laboratory personnel in the field or laboratory. Two copies of each test report will be transmitted to the Project manager, Designated Inspector and one copy to the Contractor within three days after each test is completed.

- END OF SECTION -

PART 1 -- GENERAL

POWER: Power for heating, lighting, operation of the Contractor's plant or equipment, or for any other reasonable use by the Contractor will be furnished by the Contractor. The Contractor shall furnish necessary cable and connections and shall perform all necessary labor. Temporary heat and lighting shall be maintained until the Work is accepted.

SANITARY FACILITIES: The Contractor shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and others performing work or furnishing services on the Project.

Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each 20 men. The Contractor shall enforce the use of such sanitary facilities by all personnel at the site. Facilities shall be located at the Tiehack parking area.

1.1 DAMAGE TO EXISTING PROPERTY: The Contractor will be held responsible for any damage to existing structures, work, materials, or equipment because of his operations and shall repair or replace any damaged structures, work, materials, or equipment to the satisfaction of, and at no additional cost to, the Owner.

The Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other work necessary for such protection.

The Contractor shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by construction activities and/or transporting equipment, materials, or men to or from the work. The Contractor shall make satisfactory and acceptable arrangements with the agency or individual having jurisdiction over the damaged property concerning its repair or replacement.

1.2 SECURITY: The Contractor shall be responsible for protection of the site, and all work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons.

No claim shall be made against the Owner by reason of any act of an employee or trespasser, and the Contractor shall make good all damage to the Owner's property resulting from his failure to provide security measures as specified.

Security measures shall be at least equal to those usually provided by the Owner to protect its existing facilities during normal operation, but shall also include such additional security fencing, barricades, lighting, and other measures as required to protect the site.

USE OF EXISTING HUNTER CREEK WTP AREA: The City of Aspen has obtained permission to use the area around the existing Hunter Creek Water Treatment Plant for material storage and staging. The area is shown on the Drawing.

- END OF SECTION -

PART 1 -- GENERAL

The scope of the work for this section includes the clearing of vegetation and topsoil; removal of roots, and debris; disposal of unutilized materials; and related incidentals required, including salvaging of materials and backfilling of resulting trenches, holes, and pits, to prepare the site for the contract work for the entire project.

1.1 REQUIREMENT: The Work of this Section includes procedures required during the Contractor's initial move onto the Site to protect existing fences, structures and associated improvements, road surfaces, and utilities in construction areas from damage; clearing, grubbing and/or stripping; and regrading of certain areas. It shall be the Contractor's responsibility both to maintain safe working conditions and to protect the entire project area and adjacent properties that could be damaged by storms, floods, caving of trenches and embankments, and sloughing of material, until final acceptance by the Owner.

Contractor shall video Hunter Creek Road prior to any construction activity

1.2 SITE INSPECTION: Prior to moving onto the Site, the Contractor shall inspect the Site conditions and review drawings of the existing site. The Contractor shall satisfy himself as to the nature and location of the work, condition of the existing ground surface, and the type of equipment needed to perform the work. Any discrepancies between the Drawings and the actual site conditions must be brought to the attention of the Project Manager and Designated Inspector in writing immediately for clarification. Contractor shall video the project prior to construction to establish an existing condition record for both the contractor and City of Aspen.

1.3 SOILS INVESTIGATION REPORT: No Soils Investigation Report was made for the site.

PART 2 -- PRODUCTS - NOT USED**PART 3 -- EXECUTION**

3.1 PRIMARY SITE ACCESS: The Contractor shall develop any necessary additional access to the Site, including access barriers to prohibit entry of unauthorized persons. Work area shall be coordinated with the Project Manager and Designated Inspector and the Contractor so as to avoid conflicts.

3.2 UTILITY INTERFERENCE: Where existing utilities interfere with the Work, notify the Project Manager and Designated Inspector or Owner before proceeding in accordance with the General Conditions. Utility lines and structures shown on the Drawings which are to remain in service shall be protected by the Contractor from any damage as a result of his operations. Where utility lines that are not shown on the Drawings are encountered, the Contractor must report them to the Project Manager and Designated Inspector before proceeding with the work. The Contractor shall repair or replace any utility damaged by his operations.

3.3 CLEARING AND GRUBBING: Construction areas shall be cleared of grass and weeds to at least a depth of six inches and cleared of structures, concrete or masonry debris, trees, logs, upturned stumps, loose boulders, and any other objectionable material of any kind which would interfere with the performance or completion of the Work, create a hazard to safety, or impair the subsequent usefulness of the Work, or obstruct its operation. The Contractor shall be

SITE PREPARATION – SECTION 02100

responsible for all lighting, temporary barricades, fencing, etc., required for work on the Owner's property.

Within the limits of clearing, in areas that encounter the natural ground surface, the ground shall be grubbed to a depth necessary to remove all stumps, roots, buried logs, and all other objectionable material. Any underground structures, debris or waste shall be removed if found on the Site as directed by the Project Manager and Designated Inspector. All objectionable material from the clearing and grubbing process shall be removed from the Site and wasted in approved safe locations.

Stripped materials shall be stockpiled and incorporated into the Work areas or other non-structural embankments.

The Contractor shall designate and receive approval from the Project Manager and Designated Inspector for all trees to be saved, protected, removed, and replaced. Trees to be saved and protected shall be fenced and not disturbed during any construction unless written approval is given.

The removal of any trees, shrubs, fences, or other improvements outside of the limits of work, if necessary, for the Contractor's choice of means and methods, shall be arranged with the Project Manager and Designated Inspector, and shall be removed and replaced, at no additional cost to the Owner.

- END OF SECTION -

PART 1 -- GENERAL

1.1 THE REQUIREMENT: The Contractor shall perform all earthwork indicated and required for construction of the Work, complete and in place, in accordance with the Contract Documents to include, but not limited to, excavation and embankment construction, structural excavation and backfill, compaction, disposal of extra or unsuitable materials, dust and drainage control, and cleanup. The Contractor shall take every step possible to prevent and reduce dust arising from the construction activity. He shall have adequate water trucks on the site at all times and shall water, as necessary, the areas where dust may arise and water immediately, when asked to do so.

The Contractor shall provide and maintain adequate erosion control measures during all phases of construction to protect surface waters from run-off transporting eroded materials. The erosion control measures shall be inspected during and after each run-off event, with repairs being made and excess sediment removed as needed. The Contractor is responsible for preventing sediment from traveling off-site or to nearby water sources.

1.2 CONTRACTOR SUBMITTALS: The Contractor shall acquire all required permits by each relevant governmental entity and provide copies to the Engineer prior to commencing with work.

1.3 DEFINITIONS:

FILL: Fill is defined as earthen material excavated from the channel and used in the construction of the embankment.

BACKFILL: Earthen materials collected onsite, remixed to a specific gradation and used in the reconstruction of the channel bottom.

EMBANKMENT: The placement of fill material systematically to the grades and elevations shown on the plans.

PART 2 -- PRODUCTS**2.1 SUITABLE REQUIREMENTS:**

- A. General: Fill, backfill, and embankment Materials shall be selected or processed clean, fine earth, rock, or sand, free from grass, roots, brush, or other vegetation. Only topsoil at the backfill surface may include organic matter.
- B. Suitable Materials: Materials not defined as suitable or unsuitable below are classified as undefined and they need to be accepted for use by the Engineer. Material defined as suitable may be used for backfilling and constructing fills, and embankments. In addition, when acceptable to the Engineer, some of the material listed as unsuitable may be used when thoroughly mixed with suitable material to form a stable composite.
- C. Suitable materials may be obtained from on-site excavations, may be processed on-site materials, or may be imported if required. If imported materials are required by this Section or to meet the quantity requirements of the project, the Contractor shall provide the imported materials at no additional expense.

On site material used for embankments or fills may contain a high percentage of coarse-grained material. Unless approved by the Engineer, backfill in the upper 2 feet or within 2 feet of a structure should contain no rocks larger than 3 inches in greatest dimension.

Rock greater than 12 inches but less than 36 inches in greatest dimension may be placed in non-structural backfills deeper than 2 feet below finish grade. Disperse the large rock throughout the fill and compact soil around the rocks as necessary to prevent voids and nesting.

Rocks larger than 36" should be segregated and used for other appropriate portions of the project if applicable, or removed from the site.

2.2 UNSUITABLE MATERIAL

A. Unsuitable materials include the materials listed below.

1. Soils which, when classified under ASTM D 2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System), fall in the classifications of Pt, OH, CH, MH, or OL.
2. Soils which cannot be compacted sufficiently to achieve the density specified for the intended use.
3. Materials that contain hazardous or designated waste materials including petroleum hydrocarbons, pesticides, heavy metals, and any material which may be classified as hazardous or toxic according to applicable regulations.
4. Topsoil, except as allowed below.

2.3 USE OF FILL, BACKFILL, AND EMBANKMENT MATERIAL TYPES

- A. The Contractor shall use the types of materials as designated herein for all required fill, backfill, and embankment construction hereunder.
- B. Fill and backfill types shall be used in accordance with the following provisions:

Embankment fills shall be constructed of material obtained from excavations onsite.

2.4 CLASSIFIED EXCAVATION: Excavation will be classified as "Earth" or "Rock." The cost for all "Earth" excavation is to be included in the installed pipe unit price, as provided in the Proposal. "Rock" excavation will be paid for separately, over and above the cost of earth excavation, when rock removal conforms to the stipulations included herein.

Excavation shall be categorized for payment purposes according to the following criteria:

- A. Earth Excavation shall include all material not having properties required for classifications as rock excavations; shall include all loose, broken, and/or laminated rock or stones and boulders which can be reasonably broken, plowed, and removed with skillfully operated, power-driven excavating equipment and having comparable capabilities of a normal excavating machine. Unless otherwise stipulated, a "normal excavating machine" shall be assumed to be a Caterpillar 330 or equivalent using a single ripper tooth.

Soft sandstone or similar material which can be reasonably broken and removed by a backhoe or trencher will not be classified or paid for as "Rock" excavation.

- B. Rock Excavation shall include all solid rock masses which cannot be reasonably broken, plowed and removed with power-driven equipment specified above in "Earth Excavation" and boulders or stones which, because of size or position in the trench, require blasting for removal. Payment for blasted rock excavation shall only be made for volumes within trench limits specified below; except that payment for any one blasting operation, which is successful in the opinion of the Engineer, shall be for not less than one cubic yard.

For payment purposes, the maximum authorized trench width shall not exceed the trench width given in the table in Specification 02500 Section 1,8 and the depth shall be 4 inches beneath the established elevation of the pipe invert.

For blasting operations, suitable weighted coverings shall be provided to confine all materials lifted by the blasting to within the limits of the trench or other excavation. The Contractor shall comply with all laws, ordinances and applicable safety code requirements and regulations relative to the handling, storage and use of explosives and the protection of life and property and he shall be responsible for all damage thereto caused by his blasting operations.

As rock excavation is encountered, the Inspector and the Contractor must agree that such material to be excavated is rock. At the end of each day's work, the Inspector, upon request, will calculate and inform the Contractor of the amount of rock excavated for payment purposes. If the Contractor does not agree to the Inspector's quantities, he shall notify the Engineer and Owner within one day's time.

PART 3 -- EXECUTION

3.1 EXCAVATION - GENERAL

- A. General: Except when specifically provided to the contrary, excavation shall include the removal of all materials of whatever nature encountered, including all obstructions of any nature that would interfere with the proper execution and completion of the Work. The removal of said materials shall conform to the lines and grades indicated or ordered. The entire construction site shall be stripped of all vegetation and debris, and such material shall be removed from the site prior to performing any excavation or placing any fill. The contractor shall be responsible for the stability of all temporary slopes, including, but not limited to furnishing, placing, and maintaining all supports and shoring that may be required for the sides of the excavations. Excavations shall be sloped or otherwise supported in a safe manner in accordance with applicable State safety requirements and the requirements of OSHA Safety and Health Standards for Construction (29CFR1926) and RSHS.
- B. Removal and Exclusion of Water: The Contractor shall remove and exclude water, including stormwater, groundwater, irrigation water, and wastewater, from all excavations. Dewatering wells, well points, sump pumps, or other means shall be used to remove water and continuously maintain groundwater at a level at least two feet below the bottom of excavations before the excavation work begins at each location. Water shall be removed and excluded until backfilling is complete and all field soils

testing have been completed. Unless the water table is kept well below the base of the excavation, the soils may become “quick” and unsuitable for foundation material. Any sumps, drain trenches, or other over-excavation for dewatering facilities shall be backfilled as required. The Contractor is responsible for proper disposal and silt removal of the pumped water as required.

- C. Structural Excavation: Except where prohibited by existing structures, provide 18-inches of minimum clear working space between exterior lines of the structure foundations and the face of the excavation or shoring. In all cases, extend to solid bearing and below frost line. Excavated materials approved for reuse as structural backfill or for embankments shall be stockpiled by the Contractor. The bottom of the excavation shall be the bottom of the foundation or slab as shown on the drawings. When excavation and water control operations have been completed for a structure, the Contractor shall notify the Engineer, who will contact the Soils Engineer to inspect the excavation to verify the condition and bearing capacity of undisturbed soil or bedrock. No backfill, concrete or forms shall be placed until the excavation is approved. If it is determined by the Soils Engineer that the natural soils are not suitable, the Contractor shall over-excavate and re-compact with rock stabilization materials to the limits directed by the Soils Engineer.

3.2 OVER-EXCAVATION NOT ORDERED OR INDICATED: Any over-excavation carried below the grade ordered or indicated, shall be backfilled and compacted to the required grade with the indicated material by the Contractor at the Contractor’s expense. The backfill shall be placed in layers no greater than 8 inches in loose depth and then compacted with mechanical equipment capable of penetrating and compacting the loose depth layers. Compaction requirements shall be to receive minimum relative density of 95 percent within 2 percent of optimum moisture content. Payment for authorized over-excavated and replacement materials shall be at a price agreed upon prior to commencement of the work.

3.3 BACKFILL – GENERAL

- A. Backfill shall be placed after all water is removed from the excavation, and the trench sidewalls and bottom have been prepared for compaction per these specifications and approved by the Engineer. Sloping sides of the excavated space shall be stepped to prevent wedging action of the backfill against the structure. No backfill shall be placed around or upon any structure until it is proven that the concrete has attained satisfactory strength and that the structure as a whole is adequate to receive backfill. Water leakage tests on tanks shall be acceptable before backfill.

3.4 PLACING AND SPREADING OF FILL MATERIALS

- A. Fill materials shall be placed and spread evenly in horizontal layers. When compaction is achieved using mechanical equipment, the layers shall be evenly spread so that each compacted layer does not exceed 6 inches in thickness.
- B. During spreading, each layer shall be thoroughly mixed as necessary to promote uniformity of material in each layer.
- C. Where the fill material moisture content is below the optimum moisture content, water shall be added before or during spreading until the uniform moisture content is 2% *below to 1% above optimum moisture content*.

- D. Where the backfill material moisture content is greater than 1% above optimum the material shall be dried until the moisture content is within 2% *below to 1% above optimum moisture content*.

3.5 COMPACTION OF FILL, BACKFILL, AND EMBANKMENT MATERIALS

- A. Each layer of fill material shall be mechanically compacted. Equipment that is consistently capable of achieving the required degree of compaction shall be used and each layer shall be compacted over its entire area while the material is at the required moisture content. Permission to use specified compaction equipment shall not be construed as guaranteeing or implying that the use of such equipment will not damage adjacent ground, existing improvements, or improvements installed under the Contract. Flooding, jetting, or ponding will not be allowed for the compaction of any structure backfill.
- B. *Compaction Requirements For Soils With Less Than 5 % Of Particles Smaller Than #200 Screen:* The following compaction test requirements shall be in accordance with ASTM D 4253 - Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table *and in accordance with ASTM D 4254 – Standard Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.* Where agency requirements govern, the highest compaction standards shall apply.

<u>Location or Use of Fill</u>	<u>Percentage of Relative Density</u>
Subgrade, Embankments and Fills (Not Under Structures)	70
Subgrade, Embankments and Fills (Under Structures)	70
Channel Bottom Reconstruction, Subgrade and fills	70
Topsoil	N.A.

- C. *Compaction Requirements For Soils With Greater Than 5 % Of Particles Smaller Than #200 Screen:* The following compaction test requirements shall be in accordance with ASTM D 698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft³ (600 kN-m/m³)) or ASTM D 1557 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft³ (2,700 kN-m/m³)) as specified on the construction drawings or elsewhere in these specifications. Where agency requirements govern, the highest compaction standards shall apply.

<u>Location or Use of Fill</u>	<u>Percent Compaction ASTM D 698</u>	<u>Percent Compaction ASTM D 1557</u>
<i>Subgrade, Embankments and Fills. (Not Under Structures)</i>	98	93
<i>Subgrade, Embankments and Fills (Under Structures)</i>	98	93
<i>Channel Bottom Reconstruction, Subgrade and fills</i>	98	93
<i>Topsoil</i>	90	85

3.6 FILL AND EMBANKMENT CONSTRUCTION

- A. The area where a fill or embankment is to be constructed shall be cleared of all vegetation, roots and foreign material. Following this, the surface (except when placed on rock) shall be moisture conditioned within 2% of optimum, scarified to a depth of 6 inches, and mechanically compacted. Embankment and fill material shall be placed and spread evenly in approximately horizontal layers. Each layer shall be moistened or aerated, as necessary. Unless otherwise approved by the Engineer, each layer shall not exceed 12 inches of compacted thickness within 10 feet of structures, the top 12 inches of roadways, or over pipelines. The embankment, fill, and the scarified layer of underlying ground shall be compacted to 90 percent of maximum density elsewhere as determined by ASTM D698.
- B. When an embankment or fill is to be made and compacted against hillsides or fill slopes steeper than 3:1, the face of the slopes should be benched. Benches should extend a minimum of 2 feet into the side of the slope for every 2 feet (measured vertically) of fill placed. This does not apply to hillsides composed of hard rock. Material removed to construct the benches shall be incorporated into the fill as the embankment is brought up in layers. To achieve adequate compaction on the face of fill slopes, they should be over-built and then cut back to the design grade. Track-walking is not an adequate method to compact the face of slopes. Hillside or fill slopes 4:1 or flatter shall be prepared in accordance with Paragraph A, above.
- C. All fill slopes shall be terraced as directed by the Engineer to promote vegetation growth and minimize surface erosion. Supplemental water, if required, shall be added by uniform sprinkling on the embankment and will be mixed uniformly throughout the layers. Compaction shall be accomplished by sheepsfoot rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers or other types of acceptable compacting equipment. Compaction shall be continuous over the entire area and the equipment shall make

sufficient passes over the material to ensure that the desired density has been obtained. Contractor shall maintain embankments and slopes until the project is complete.

3.7 GRADES: Rough graded surfaces ready to receive top soil, sod, or seed, crushed rock, or aggregate base shall be graded to ± 0.2 feet of the plan elevation, except where meeting curbs, walks, or building entrances, grade to ± 0.1 feet of plan. However, the acceptance of such irregularities shall not be constructed to reduce the thickness of topsoil, sod, or pavement specified. Permanent surface water courses shall be constructed to average plan grades and shall drain completely throughout their length. Finish surfaces shall be ± 0.1 feet of the plan elevation, and all areas shall be finished so as to drain readily.

3.8 CLEAN-UP: Stockpiled topsoil shall be spread uniformly across all disturbed areas except roads, and the estimated quantity of topsoil available shall be considered by the Contractor to set elevations for rough grading of the disturbed areas prior to placing the topsoil.

- END OF SECTION -

PART 1 -- GENERAL

1.1 DESCRIPTION: The work of this section consists of temporary measures for the control of erosion, sedimentation, and other pollutants during construction. Work includes installation of such measures in accordance with the Dwg and any permits for the project, maintenance during the contract period to assure proper function, and removal of temporary measures in coordination with installation of permanent erosion control measures.

1.2 SUBMITTALS: Samples of all materials specified in this section and submittals certifying these materials meet the specification requirements shall be submitted in accordance with Section 01300. Contractor shall be responsible to provide all information, including the contract Dwg # 4 and all other items required in addition to the Dwg # 4 and these specifications to obtain construction permits.

Erosion and Sediment Control shall meet all requirements of the most recently approved Pitkin County for Erosion and Sedimentation Control. The contractor may use Dwg 4 as the basis for their own erosion and sediment control submittal to the City. In addition to Dwg # 4 of the Construction Documents, the contractor is required to provide an Erosion and Sedimentation Control Plan Submittal to the County meeting all aspects of the County's 2021 Construction Management Plan Requirements Manual

PART 2 -- PRODUCTS

2.1 CHANNEL SLOPES AND OTHER DISTURBED AREAS: Materials for use as temporary measures include straw bales, loose mulch, mulch blankets, silt fence, sod buffer strips and other stabilization materials.

2.2 STORM SEWER OUTFALLS/POINT DISCHARGES: Materials for temporary erosion control on slopes downstream of storm sewer or swale outfalls may be pipe, concrete rubble, riprap, cast-in-place concrete, plastic sheeting, synthetic erosion control matting or other functional material that is not hazardous to water quality. Construct riprap apron at end of drainpipes, as shown on the Drawings.

Classification and gradation of riprap shall be as follows:

<u>Riprap Designation</u>	<u>% Smaller Than Given Size by Weight</u>	<u>Intermediate Rock Dimension (Inches)</u>	<u>Approximate* Min. Rock Weight (Pounds)</u>	<u>d₅₀** (Inches)</u>
Type M	70-100	21	455	12
	50-70	18	287	
	35-50	12	85	
	2-10	4	3	

*Based on Specific Gravity = 2.60; **d₅₀ = Mean particle size

Unless otherwise noted on the Drawings, riprap shall be placed in the following minimum thicknesses (not including bedding thickness):

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Riprap Designation

Riprap Layer Thickness (inches)

Type M

21

2.3 INLETS AND GUTTER WATTLES OR STRAW BALES: Wattles or Straw bales shall be installed per the Erosion and Sediment DWG # 7 on all storm sewer inlets and along Hunter Creek Road. Wattles shall be 9" in diameter minimum and consist of wheat straw and synthetic PP netting by Erosion Control Products or similar.

PART 3 -- EXECUTION

3.1 GENERAL: The specific practices and measures to be implemented depend on the Contractor's construction procedures, sequencing, and general approach to the project.

3.2 CONSTRUCTION IN WATERWAYS: To the extent possible, movement of construction equipment within the flowing portion of channels or waterways should be minimized.

3.3 TEMPORARY CONTROLS DURING SITE WORK:

- A. All dewatering flows that carry sediment or other deleterious material shall not be directly introduced to the storm sewer. Such flows shall be routed to a sediment basin(s) or trap(s) for treatment prior to discharge to the storm sewer. The intent is to trap material disturbed by construction activities and prevent the discharge of this material into the storm sewer. Sediment basins or traps shall be monitored and maintained no less than weekly (including removal of sediment and/or repair of basin dike or filter material) or whenever the basin fills with sediment to 50 percent of capacity.
- B. Properties and roadways adjacent to the site shall be protected from sediment deposition. This may be accomplished by leaving a sod buffer strip around the lower perimeter of the land disturbance, by installing perimeter controls such as sediment barriers, filters, or dikes, or by a combination of such measures. Construction ingress and egress routes should be stabilized by gravel or other means to prevent tracking sediment, mud, or debris onto adjacent thoroughfares.
- C. Sediment basins and traps, perimeter dikes, sediment barriers (such as straw bale barriers or silt fencing), and other measures intended to trap sediment on-site, must be constructed as a first step in grading and be made functional before upslope land disturbance takes place.
- D. Diversion channels must be stabilized against erosion by use of riprap, or other measures.
- E. Roughened soil surfaces are preferred to smooth surfaces on slopes during initial grading operations. Diversion dikes should be constructed at the top of long or steep slopes which have significant drainage areas above the slope. Diversions or terraces may also be used to reduce slope length.

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- F. Concentrated storm water should not be allowed to flow down cut or fill slopes unless contained within a stabilized temporary or permanent channel, flume or slope drain structure.
- G. Wherever a slope face crosses a water seepage plane which endangers the stability of the slope, adequate drainage or other protection should be provided.

3.4 DUST ABATEMENT: During the performance of the work required by these Specifications or of any operation appurtenant thereto, the Contractor shall furnish all the labor, equipment, materials and means required, and shall carry out proper and efficient measures whenever and as often as necessary to reduce the dust nuisance and to prevent dust which has originated from his operations from damaging dwellings or causing a nuisance to persons. The Contractor shall be liable for any damage resulting from dust originating from his operations under these Specifications.

Dust abatement shall be performed on a continuous basis.

Contractor shall install Tracking Pads at all exits from construction site location where dust or mud maybe tracked onto the roadway. Ages Mud Mats, approximately 15'X8" or similar shall be used at all applicable locations.

3.5 DISPOSITION OF TEMPORARY MEASURES: All temporary erosion and sediment control measures shall be removed and disposed of as permanent measures are being installed. Both operations shall be coordinated to prevent erosion or other damage to the channel or finished grading. Trapped sediment or other disturbed soil areas shall be permanently stabilized to prevent further erosion and sedimentation.

- END OF SECTION -

MATERIALS FOR BURIED PIPELINES – SECTION 02505

1. **GENERAL:** This Specification shall govern all pipeline and appurtenant materials used for water infrastructure under the jurisdiction of the City of Aspen. All materials shall be new and the best available. All material used shall be manufactured and supplied according to the latest revised standards of the American Water Works Association, the American National Standards Institute, and the American Society for Testing and Materials, or as mentioned hereinafter. Miscellaneous valves and fittings shall be as called out on the Drawings.

Also refer to 2020 City of Aspen Distribution System Design Standards, which take precedence over Specifications 02500, 02505 and 02510.

2. **DUCTILE-IRON PIPE, FITTINGS, AND APPURTENANCES:** Unless revised on the Drawings or in the Special Construction Provisions the pipe shall be ductile-iron pipe, conforming to ANSI A21.51, AWWA C151, Class 52 thickness for minimum 350-psi pressure. The interior of each length of pipe shall have a cement-mortar lining, conforming to the requirements set forth in ANSI A21.4, of standard thickness. The exterior of the pipe shall be coated with standard bituminous coating approximately one mil thick.

Unless otherwise specified the pipe, joint shall be a push-on type, made in accordance with ANSI A21.11, and the gaskets shall be standard for buried water service and as provided by the pipe manufacturer. Provide conductivity straps on all pipe.

The fittings shall be ductile-iron or cast-iron conforming to the requirements set forth in ANSI A21.10, AWWA C110 or AWWA C153. Cast-iron fittings 12-inch size and smaller shall be Class 250, and fittings larger than 12 inches shall be Class 250. The interior of the fittings shall be cement-mortar lined, as is required for the pipe with a 1 mil bituminous exterior coating. The fittings shall have mechanical joints in accordance with ANSI A21.11. The gaskets for the joints shall be suitable for potable water service.

All pipe and fittings shall have straps and No. 4 copper wire welded across joints to insure conductivity. To resist pipe corrosion the use of 8-mil polyethylene wrap with tapered joint(s) shall be required in areas of high soil conductivity as determined by the soils report provided by the developer.

All fittings will have mega lug fittings in addition to concrete thrust blocks with appropriate bond breaker. The City of Aspen will not allow any plastic pipe/PVC pipe in its potable water system. This includes private systems attached to the City of Aspen Water Distribution system.

All bolts to be used under water for the intake piping from the screen to and including the wet well wall penetration shall be 316 SS.

- a. **Thrust Restraint.** Megalugs are required in addition to Concrete thrust blocks that shall be formed and poured-in-place on all fittings including taps 4" or larger to resist hydraulic thrust. Thrust blocks shall be sized based on sound Project Manager and Designated Inspecting judgments, subject to review by the project Manager and

MATERIALS FOR BURIED PIPELINES – SECTION 02505

Designated inspector. Poly wrap bond breaker shall be installed between concrete and all pipes and associated appurtenance.

- b. Where designated on the Drawings or where existing conditions do not permit the use of concrete thrust blocks and/or megalugs, fitting restraints shall be made with tie rods and pipe clamps or special fitting bolts. Tie rod restraint systems shall have a minimum of 2 bolts or rods per joint or clamp. Minimum tie bolt sizes are as follows:

c.

<u>Pipe Size</u>	<u>Bolt Diameter</u>
4" - 8"	5/8"
10" - 14"	3/4"
16"	1"
18" - 20"	1-1/4"
24"	1-1/2"

The tie bolts shall be fabricated from a Cor-Ten@ steel or equal according to the requirements of ASTM A242 with a minimum yield stress of 46,000 psi. Retainer clamps shall be equal to a socket clamp@, Figure 595, as manufactured by ITT-Grinnell.

- d. Mechanical Joint Retainer Glands. Where designated on the Drawings, fitting restraints shall be made with mechanical joint retainer glands. Mechanical joint retainer glands used shall be cast from 60-40-12 ductile iron and shall have bolt circles, bolt holes, and dimensions which will permit the glands to be used with standard mechanical joint bells and standard-length bolts, as per ANSI A21.11 and AWWA C111. All special tools recommended by the manufacturer shall be used during installation and shall be supplied to the Owner. Mega-Lug Retainer glands shall be as manufactured by EBAA Iron, Inc., Series 100, or approved equal.
- e. Restrained Joint Pipe. If required by from the Project Manager or Designated inspector; Restrained joint pipe shall be ductile iron manufactured in accordance with the requirements of ANSI/AWWA C151/A21.51. Push-on joints for such pipe shall be in accordance with ANSI/AWWA C111/A21.11. Pipe shall be Griffin Snap-Lok or equal. Unless otherwise shown on the Drawings the pipe shall be Class 53 thickness minimum.

Restrained joint fittings shall be ductile iron in accordance with applicable requirements of ANSI/AWWA C110/A21.10 with the exception of the manufacturer's proprietary design dimensions. Push-on joints for such fittings shall be in accordance with ANSI/AWWA C111/A21.11. Fittings shall be provided by the pipe manufacturer.

Cement mortar lining for pipe and fittings shall be in accordance with ANSI/AWWA C104/A21.4. Bituminous outside coating shall be in accordance with ANSI/AWWA C110/A21.10 for fittings.

Restrained push-on joint pipe and fittings shall be capable of being deflected after assembly. Any special assembly tools recommended by the manufacturer will be supplied to the Owner.

2.0 POLYVINYL CHLORIDE PIPE and HDPE: The pipe shall be similar and equal to Sch 40 PVC, and shall conform to ASTM D-1784, Type 1 Grade 1 Cell Class 1245B, 4-inch through 12-inch, unless otherwise designated on the Drawings or Special Construction Provisions.

Pipe and fittings shall be made from clean, virgin, NSF Approved Class 12454-A or 12454-B PVC conforming to requirements of ASTM D1784 (latest revision).

Pipe for sub drain around PRV building to be perforated Sch 40 PVC, 3/8" holes, 3" on center, 2 rows 90 degrees apart and 45 degrees off center. AASHTO M278.

3. **GATE VALVES AND BOXES:** Where designated on the drawings, gate valves for buried pipelines two inches and larger shall be a Mueller or preapproved equivalent iron-body, bronze-mounted, Resilient seat, conforming to AWWA C509 for buried service, open CCW, non-rising stem, 2-inch operating nut, for a working pressure of 250 psi.

The joints for valves connected to the ductile-iron shall be mechanical joints in accordance with ANSI A21.11. All gaskets shall be for standard water service.

Valves greater than 12" will be specified on a case-by-case basis, depending on the pressures which will be accommodated by the valves. In zones which have static pressures greater than 80 psi the valve application will be a Class 250 butterfly valve of the above mentioned manufacturers with epoxy interior and exterior. The 14-16" valves will have MDT3S actuators (30 turns), the 18-20" shall have the MDT4S (40 turns), and the 20-30" shall have MDT5 actuators (44 turns), these shall open by turning to the left, counter-clockwise. These valves shall be of Mueller Line Seal XP 250 PSI M.J. ENDS or preapproved equivalent model valve. Zones less than 80 psi will have gate valves as previously described.

Valve box assemblies

Tyler Pipe Cast Iron Valve boxes, THREE-PIECE. Accommodate 4" through 12" valves. 5.25-inch shafts, Screw type 6850 Series-668-S and/or 6865 Series-F Complete extension 62-82 inches. The difference between the boxes is primarily in the base type. The parts for these *must be* interchangeable for the different valve boxes. Lids to be marked with WATER.

Valve key extensions

For valves that are *greater than 9 feet* deep, extension rods may be requested with centering ring and set screw. Where the valves are *greater than 9 feet* deep, solid pipe *may* be requested instead of sectional valve boxes.

4. **FIRE HYDRANTS:** Fire hydrants shall be Mueller A-403 Super Centurion with the 40" top barrel, painted Glass-Black or a preapproved equivalent with a minimum of 7'

burial. Hydrants shall have one 4 ½" pumper connection and two 2½" hose connections. No other type of hydrant connections will be accepted. Hydrants shall have National Standard Thread, open to the left (counterclockwise), and have a standard five-sided operating nut. The main valve opening shall be 5¼" minimum. Hydrants shall be designed to operate under less than 250 psi working pressure. Tees for fire hydrant laterals shall be mechanical-joint on the run and 6" flanged on the branch (a swivel tee is acceptable). Valves on fire hydrant laterals shall be 6" flanged x mechanical joint. Megalugs will be installed on all branch and run connections. Megalugs and concrete thrust blocks will be accepted where virgin soil is available. Megalugs and tie rods will be installed where soil disturbance has occurred. Two ¾" zinc-coated, high-strength steel tie rods (or preapproved equivalents), nuts, and bolts shall be installed from the mechanical-joint side of the fire hydrant valve. A minimum 2 cubic feet of 1/2" screened-rock drain bed, 12" deep, shall be provided at the base of each fire hydrant and covered with a double thickness of plastic sheeting for a distance of at least 3' around the barrel of the hydrant. All fire hydrants should be verified for proper operation and witnessed by City staff prior to acceptance. A minimum of 4' of clear area (with no fences, shrubs, trees, or bushes) shall be kept around all hydrants. Hydrants shall be installed in accordance with manufacturer's installation instructions and be buried to the manufacturer's bury line indicated on the hydrant column. Hydrant laterals shall be installed as straight possible with minimal number of joints.

Inlet: 6-inch with mechanical joint
Trench Depth: 7 feet minimum cover
Operating Nut: 12" Pentagon or as required by Fire Department
Open: CCW
Nozzles: 2 – 2-1/2-inch, 1 – 5-1/4-inch pumper nozzle
Threads: National Standard
Working Pressure: 250 psi

All nozzle caps shall have nut identical to operating nut. Hydrant shall be provided with indicating arrow for opening direction.

Two operating wrenches, two valve seat wrenches, one collision repair kit, and one set of tools required for repair of hydrant shall be provided for this Contract.

5. **COUPLINGS:** The pipe couplings shown on the Drawings to be used when connecting new pipes or pipes into existing buried pipelines with varying outside diameters shall be similar and equal to a Smith Blair@ 441 cast-iron transition coupling for sizes up to 16 inches and a Smith Blair@ 413 steel transition coupling for larger diameters. Couplings shall have an interior coating of an epoxy suitable for use with potable water. Exterior coating shall be equivalent to the attached new pipeline.

Couplings for use with new pipe of the same outside diameter shall be a Smith Blair@ 441 cast iron for 16-inch and smaller or steel for larger sizes. Coatings shall be the same as the transition couplings listed above.

Coupling bolts shall be high strength, low alloy steel meeting the requirements of ASTM A325, Type 3.

6. **AIR RELEASE/VACUUM VALVES:** When required by the Drawings, the Contractor shall install combination air release/vacuum valves or Air Release Valves as shown on the drawings. The valves shall be contained within a precast concrete manhole section as detailed. Combination Valves shall be "Cla-Val" Series 36, 2-inch inlet size, combination air release and vacuum valves as manufactured by Cla-Val Corporation. Where called for on the drawings ARV only valves shall be Cla-Va; Series 36. Orifice discharge size on the ARV shall be per the manufacturer's recommendations.
7. **LINE LOCATOR TAPE:** The location of ID tape for the pipe will be ~24-inches above the water line, on top of the bedding zone. Water Line Warning tape shall be 6-inch wide detectable aluminum foil plastic backed tape indicating buried water line installed below. Tape shall be blue in color and manufactured by Thortec or equal.

Tracer Wire:

A tracer wire is to be installed along all DIP pipelines. A number # 10 shielded copper wire is attached or taped to the water line along its entire alignment. Wire should run into and out of the box to continue the tracer wire along the pipe alignment. Max distance is 1,000 feet between locator boxes

Locator Wire Box: At all high points, low points, service tees, and other location shown on the drawings or as required or requested by the City. All tracer wires are to be connected to a combination cast iron & ABS tamper proof tracer wire access box. The cover is to be manufactured of cast iron and ABS components produced in the USA ASTM A-126-B requirements. The ABS is to be manufactured in accordance with ASTM D 1788. The cover shall be lettered "Tracer Wire or Tracer Test Location" and shall have a standard AWWA size cast-in lid-locking pentagonal bolt. Box shall be designed to be easily detected by magnetic and electronic locators even when box is covered by a minimum of four (4) inches of soil, sod and / or paving material. A magnet shall be securely attached at the top of the upper tube of the box for locating purposes. Material used to retain magnet in place shall remain effective at minus 15 degrees Fahrenheit. A Brass screw running through brass wire harness will be used as connection for locator transmitter hook-up. Brass wire harness shall be used to secure tracer wire leads to brass screw enabling locator equipment hoop-up. Petrolatum wax tape incorporated with magnetized tracer box to encapsulate tracer wire leads and brass wire harness. Petrolatum wax tape must be formed around brass wire harness connection after tracer wire leads are connected to prevent oxidation of wire ends.

In order to ensure proper long term locatability and signal strength, the petrolatum wax tape must be utilized to prevent oxidation. Access Box shall be designed for operational access to underground tracer wire systems.

This unit is to be manufactured by Copperhead Snake Pit Magnetized Tracer Box or approved equal. Tracer box shall be installed inside a 3-1/2" ID SCH 80 PVC pipe installed to the depth of ~5 foot or top of reuse/irrigation line. PVC is installed inside a

typical top section only Tyler Pipe Cast Iron Valve box, 5.25-inch shafts, Screw type 6850 Series-668-S and/or 6865 Series-. Valve box lid shall say "WATER"

8. **REMOVAL OF WATER:** The Contractor shall provide and maintain at all times ample means and devices with which to remove promptly and to properly dispose of all water entering the trench excavation.

Water shall be disposed of in a suitable manner without damage to adjacent property or without being a menace to public health and convenience. No water shall be drained into work built or under construction without prior consent of the Project Manager and Designated Inspector.

Dewatering shall be accomplished by well points, sumping, or any other acceptable method which will ensure an unwatered trench to a sufficient depth below trench bottom, so that the contractor's operations will not disturb the trench bottom. Any dewatering method shall be subject to review by the Project Manager and Designated Inspector. Dewatering by overexcavation and installation of crushed rock or any other method shall not be paid and considered incidental to various other items.

9. **PIPELINE BEDDING AND BACKFILLING:**

- a. **Trench Zones.** For the purposes of this Specification, the terms a Bedding Zone@, a Pipe Zone@ and a Backfill Zone@ shall refer to the trench zones identified on the Pipe Trench Details shown on the Dwg # 6.
- (1) **Bedding/Pipe zone.** The Bedding Zone shall consist of all material placed below the pipe invert and to 12" minimum above the pipe. USE ¾" STONE
- (2) **Backfill zone.** The Backfill Zone shall consist of all material above the Pipe Zone. Install fabric between stone and all other backfill material.
- b. **Material.** All bedding and backfill material shall have the approval of the Project Manager and Designated Inspector and shall be included in the unit price for the pipe unless otherwise specified and indicated in the Proposal. All bedding and backfill material shall be free of frozen material, organic material and debris. The materials to be used in each trench zone are indicated on the Pipe Trench Details shown on the Drawings and these materials are described below. All materials may be subject to gradation tests and compaction tests prior to approval of the use of that material. The test results shall be submitted to the Project Manager and Designated Inspector for approval and verified as to their accuracy. The cost of these tests shall be borne by the Contractor.
- (1) **Roadbase bedding material or roadbase backfill.** This material shall be Class 6 aggregate base course as specified by the State of Colorado Department of Highways; and shall meet the following gradation:

Total Percent

MATERIALS FOR BURIED WATER PIPELINES**COA SECTION 02505**

<u>Sieve Size</u>	<u>Passing by Weight</u>
3/4-inch	100
No. 4	30 - 65
No. 8	20 - 55
No. 200	3 - 12

- (2) Granular bedding or granular backfill material. This material shall be imported crushed rock or angular surfaced gravel and meet the following gradation (ASTM D448, m 67):

<u>Total Percent Sieve Size</u>	<u>Passing by Weight</u>
3/4-inch	100
3/8-inch	20-55
No. 4	10
No. 8	5

- (3) Trench stabilization material. This material shall be crushed rock, concrete aggregate and shall meet the requirements listed in Paragraph 12, a Trench Preparation.@
- (4) Backfill material. Backfill material shall consist of suitable material from the excavated earth, meeting all the requirements of this Specification in a Backfill Installation@ and a Backfill Installation in Roads and Streets@.

No boulders over 3 inches in any dimension shall be allowed in the top 12 inches of the trench. All boulders shall be carefully placed so that no damage will be done to the pipeline. No backfill material shall have boulders larger than 12 inches in any dimension. Boulders larger than 8 inches in any dimension shall be carefully lowered into the trench until the backfill is 4 feet over the top of the pipe.

c. Pipeline Bedding and Backfill Installation:

- (1) General. Unless accurate results cannot be obtained after review by the Project Manager and Designated Inspector, compaction requirements shall conform to measurements of maximum dry density according to ASTM D698, Moisture-Density Relations of Soils (Standard Proctor). Should ASTM D698 not be suitable for material placed, the percentage compaction requirements shall conform to ASTM D2049, Test for Relative Density of Cohesionless Soils.

When required by the Project Manager and Designated Inspector, the Contractor shall excavate backfilled trenches for the purpose of performing compaction tests at locations and depths required by the Project Manager and Designated Inspector. The Contractor shall be responsible for

reinstalling and compacting the test excavations at no additional cost to the Owner.

- (2) Bedding and Pipe zone installation. Use $\frac{3}{4}$ " screened rock on all water line bedding 3" under to 12" over top of pipe. Bedding material shall consist of the material on which the pipe is placed in accordance with the COA Pipe Trench Details. Bedding material shall be placed to the required elevation of the pipe invert. Tamping equipment shall be used to thoroughly tamp the bedding material to a minimum of 95 percent maximum dry density or to 75 percent relative density. The moisture content of the material shall be within 2 percent of optimum.
- (3) Backfill zone installation. Compaction shall be by mechanical tamping in 8-inch maximum loose lifts using mechanical tampers, or vibratory rollers. All other means must be approved in writing by the Project Manager and Designated Inspector. All backfill shall be compacted to 95% of maximum laboratory dry density (ASTM D698) or 70 percent relative density (ASTM D2079). The material shall be within 2.0 percent of optimum moisture content.

The Contractor may request approval of alternate means of compaction. Such request must be submitted to the Project Manager and Designated Inspector in writing. Approval of the compaction method will be made by the Project Manager and Designated Inspector only in writing. Use of specified or approved compaction methods does not relieve the Contractor from providing a completed project meeting the intent of this Specification.

INSTALLATION OF BURIED PIPELINE – SECTION 2510

1. **GENERAL:** This Specification shall govern installation and placing into service all buried pipeline facilities involved under the jurisdiction of the City of Aspen. In the absence of specific wording to the contrary, the Contractor shall follow normal good construction practice in accordance with materials manufacturer's printed instructions. This specification includes the installation of several different pipeline materials. Refer to other specifications, the Drawings, and the Proposal for the type of pipe included in this Contract. Pipelines shall be installed in trenches described in the Specification, Excavation and Backfill for Buried Pipelines. The depth of bury is 7 foot minimum and 10 foot maximum unless otherwise approved in writing.

Also refer to 2019 City of Aspen Distribution System Design Standards, which take precedence over Specifications 02500, 02505 and 02510.

1.3 **CONTRACTOR SUBMITTALS:** The Contractor shall submit certified gradation test data verifying that the material and gradation of imported materials meet the requirements of this Section. Particle size analysis of soils and aggregates shall be determined in accordance with ASTM D422.

1.4 QUALITY ASSURANCE:

A. All soils testing will be done by a testing laboratory of the Owner's choice at the Owner's expense except under the following condition:

In the instance that tests of fill or backfill show non-compliance with the required density, gradation, or other physical properties, the Contractor shall complete the requirements to accomplish compliance. Subsequent testing to demonstrate compliance shall be by a testing laboratory selected by the Owner and shall be at the Contractor's expense.

B. Where soil material is required to be compacted to a percentage of maximum density, the maximum density at optimum moisture content will be determined in accordance with ASTM D698. Where granular, cohesionless material is required to be compacted to a percentage of relative density, the calculation of relative density will be determined in accordance with ASTM D4253 and D4254. Field density tests will be performed in accordance with ASTM D1556, ASTM D2922, or by other means acceptable to the Project Manager and Designated Inspector.

1.5 **GENERAL REQUIREMENTS:** Except as shown otherwise on the Drawings, all excavation shall be made by open cut. Permission may be granted to tunnel under driveways, crosswalks, curbing, walkways, and utility installations, but such tunnels shall not exceed 10 feet in length.

The length of trench permitted to be open at any one time may be limited when, in the opinion of the Project Manager and Designated Inspector, such limitation is necessary for protection of the work or the convenience of the public.

When excavations are through lawns, cultivated fields, pastureland, or areas having grass cover, the Contractor must stockpile separately all topsoil, which shall be replaced on top of the backfilling in the trench. All surfaces that have grass shall be reseeded by the Contractor. All lawns and other

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grass-covered areas, not excavated, on which excavated material is placed, shall be protected from damage by placing burlap over the grass. Where indicated on the Drawings or required herein, removed grass shall be replaced with sod.

It is the general intent that the Contractor leave the work area in a similar and equal condition as it was preceding the Contract work.

1.6 PROTECTION OF EXISTING FACILITIES:

- A. General: Existing power lines, telephone lines, 2-inch and greater diameter trees, six feet or more from the pipe centerline, shrubbery, fences, water mains, gas mains, sewers, cables, conduits, ditches, embankments, and other structures in the vicinity of the work not authorized to be removed, shall be supported, and protected from injury by the Contractor during the construction and until completion of the work affecting them. The Contractor shall be liable for all damages done to such existing facilities and structures, as herein provided and he shall save the Owner from any liability or expense for injuries, damages, or repairs to such facilities.
- B. Underground Facilities: The type, size, location, and number of all known underground facilities have been shown on the Drawings; however, no guarantee is made as to the true type, size, location, or number of such facilities. It shall be the responsibility of the Contractor to verify the existence and location of all underground utilities along the route of the work. The omission from, or the inclusion of, utility locations on the Drawings is not to be considered as the nonexistence of, or a definite location of, existing underground utilities.

The Contractor shall notify the owner or owners of the existing utilities, whether aboveground or underground, 48 hours prior to proceeding with trench excavation whenever such trenching operations are within ten feet of the possible location of any existing utility. The notification shall also include a request for field staking any such underground facility that may be in the area of influence by the construction.

Should any such utility be damaged in the trenching operations, the Contractor shall immediately notify the owner of such utility and, unless authorized in writing by the owner of utility, the Contractor shall not attempt to make repairs except to prevent further damage to property. Duplicate copies of any written authorization given to the Contractor to make repairs shall be filed with the Project Manager and Designated Inspector and shall be so worded as to save the Owner from any responsibility whatsoever relative to the sufficiency of the repairs.

If a conflict that is not shown on the Drawings develops between an existing utility and the work required by this Contract, the Contractor shall notify the owner of the utility and the Project Manager and Designated Inspector immediately in writing. Such conflict may be considered, by the Project Manager and Designated Inspector, to be a change in the work. The Contractor may request a change in the Contract amount for such change in the work, subject to the General Conditions.

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If during construction any underground utility conduit, including sewers, water mains, gas mains and drainage structures, or any aboveground utility facilities are required to be relocated, the Contractor shall notify the utility owner well in advance of his approach to such utility so that arrangements with the owner or owners of the affected utility can be completed without delay to the work.

Except as otherwise provided in the Proposal, the cost of relocating both underground and aboveground utilities, exclusive of house water and sewer service connections, will be borne by the Owner.

1.7 SUBSURFACE INFORMATION: Except as may be shown on the Drawings or set forth in the “Special Construction Provisions,” no additional subsurface exploration has been made along the pipeline alignment as a part of this project.

1.8 CLASSIFIED EXCAVATION: Excavation will be classified as “Earth” or “Rock.” The cost for all “Earth” excavation is to be included in the installed pipe unit price, as provided in the Proposal. “Rock” excavation will be paid for separately, over and above the cost of earth excavation, when rock removal conforms to the stipulations included herein.

See Earthwork Section 02200 for information on Classified Excavation

PRODUCTS

2.1 GENERAL: All backfill material shall be approved before use. Material from project excavations may be used for backfilling under the Project Manager and Designated Inspectors approval. The backfill material shall be free from rubbish, large stones, clods, roots, brush, debris, frozen lumps of earth, or other objectionable material, and shall be moistened as required.

The Contractor is responsible for the stability of slopes during construction. Excavation and fill operations shall be coordinated with water control and stabilization measures to prevent unstable conditions.

- A. Water shall be clean and free from harmful substances. The amount of water used in compaction shall be sufficient to obtain the percent of compaction required.

Topsoil is defined as the existing material nominally within a 6-inch depth beneath the existing ground surface. The Project Manager and Designated Inspector shall verify the suitability of this material as topsoil prior to stockpiling.

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PIPELINE BEDDING AND BACKFILL:

- A. Backfill material. Backfill material shall consist of suitable material from the excavated earth, meeting all the requirements of this Specification in “Backfill Installation” and “Backfill Installation in Roads and Streets.”

No boulders over 6 inches in any dimension shall be allowed in the top 12 inches of the trench. All boulders shall be carefully placed so that no damage will be done to the pipeline. No backfill material shall have boulders larger than 24 inches in any dimension. Boulders larger than 8 inches in any dimension shall be carefully lowered into the trench until the backfill is 4 feet over the top of the pipe.

It is anticipated that all backfill material will be obtained from the site by screening the excavated material. If acceptable to the soils Project Manager and Designated Inspector, hand screening will be allowed.

Material to be used for backfilling shall be tested and approved for use by a qualified soils Project Manager and Designated Inspector prior to construction and continuously throughout construction.

- C. Special Cutoff Zones: Where designated to prevent piping along pipeline trenches use all clay soil (CL per unified classification system). Prepare material to allow good bedding conditions and backfill for pipe.

EXECUTION

3.1 PREPARATION:

- A. Ground Surface Preparation: Prior to excavating, complete all clearing and grubbing and demolition operations. See Section 02102.
- B. Topsoil: In natural areas where excavation will occur, strip all topsoil, or in the absence of topsoil, strip the top surface material and store separately from other excavated materials.
- C. Concrete Walks, Roadways, Parking Areas, and Road Crossings: Cut existing pavement full depth to a true line before excavation.
- D. The Contractor is to field-verify by excavation the location of all utility crossings, service connections, and connections to existing lines before proceeding with trenching operations.

3.2 TRENCH EXCAVATION:

- A. TRENCH WIDTH: The minimum clear trench width measured at the top of the pipe barrel shall be not less than the outside pipe diameter, plus 16-inches.

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For all pipe, the maximum clear trench width measured at a point 12-inches above the top of the pipe barrel shall be not greater than the trench width shown on the following table.

MAXIMUM TRENCH WIDTH TABLE				
Pipe Diameter	Maximum Trench	Pipe Diameter	Maximum Trench	
(inches)	(inches)	(inches)	(inches)	
4	24	24	48	
6	26	27	52	
8	28	30	56	
10	30	33	60	
12	33	36	68	
14	35	39	72	
15	36	42	75	
16	37	48	82	
18	40	54	89	
20	42	72	110	
21	44			

If the above-stated maximum trench widths are exceeded, either through accident or otherwise, and if the Project Manager and Designated Inspector determines that the combined dead and live loads will exceed the design loadings on the pipe, the Contractor shall either cradle the pipe in concrete, or use a pipe of a stronger class, as required by the Project Manager and Designated Inspector. The cost of such remedial measures shall be entirely at the Contractor's expense.

- B. **TRENCH WALLS:** The Contractor may slope or bench the trench sidewalls. Such sloping or benching shall terminate at a depth not lower than one foot above the top of the pipe barrel, and from that point down, the trench wall shall be vertical. The trenching operation, including the spoil bank and sloping of the trench sidewalls shall be confined to the width of the permanent and temporary rights-of-way, if any.

A clear area shall be maintained a sufficient distance back from the top edge of the excavation to avoid overloading which may cause slides or caving of the trench walls. The excavated material shall be kept trimmed in such a manner as to be of as little inconvenience as possible to the public and adjoining property owners. Unless otherwise authorized by the Project Manager and Designated Inspector, all public thoroughfares and crossroads shall be kept open to traffic. Bridging shall be used when authorized by the Project Manager and Designated Inspector at street crossings, sidewalks, and other points where necessary, to prevent serious interruption of travel and to provide access to fire hydrants and public and private premises.

- C. **TRENCH DEPTH:** The trenches shall be excavated to such depths that the pipeline can be laid at the elevation of the grade lines shown on the Drawings, or at depths or covers specified on the Drawings. Minimum depth is 7' within the City of Aspen unless otherwise approved in writing by the City of Aspen Project Manager

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1. Ductile-Iron Pipe (ASTM C76 and C361). The trench shall be excavated to the depth required to install the pipe on firm, undisturbed, soil, with the approval of the Project Manager and Designated Inspector, the Contractor may over excavate the trench to a depth as shown on the drawings and the trench bottom brought to the pipe invert with Granular Bedding Material.

For areas where large stones or rock excavation are required, so that hand-shaping of the trench is impractical, the trench shall be over excavated to a depth as shown on the drawings and the trench bottom brought to the pipe invert with Granular Bedding Material.

2. All Other Pipe Materials. The pipe trench shall be excavated to a depth as shown on the drawings below the bottom of the pipe and backfilled with the specified Granular Bedding Material and compacted to the requirements of Section 3.6.

- D. TRENCH PREPARATION: The trench shall be excavated only so far in advance of pipe laying as permitted by the Project Manager and Designated Inspector. The trench wall shall be so braced that the workmen may work safely and efficiently. All trenches shall be drained so that pipe laying may take place in unwatered conditions. Trench preparation shall also conform to the details shown on the Drawings.

A trench box is required to be used at all times.

Bell holes in the trench bottom shall be provided at each joint to permit the jointing to be made properly and to prevent the pipe from bearing on the bells.

After excavation, the trench bottom shall be uniformly graded and hand-shaped so that the pipe barrel (exclusive of the joint) will have uniform and continuous bearing on firm, undisturbed trench bottom (when permitted), or thoroughly compacted granular bedding or sand material, throughout the length of the pipe. The trench grade shall permit the pipe spigot to be accurately centered in the preceding laid pipe joint, without lifting the pipe above the grade and without exceeding the permissible joint deflection. If it is necessary to raise the pipe subgrade, approved, compacted granular bedding material shall be used at the Contractor's cost.

If unstable foundation is encountered, the Contractor shall excavate the unstable material and backfill the over excavation with 12-inch uniformly-graded, crushed rock concrete aggregate. If larger material is needed, it must be approved by the Project Manager and Designated Inspector prior to placement. Payment for over excavation for unstable bedding and supplying and installing of crushed rock concrete aggregate that has been authorized by the Project Manager and Designated Inspector will be negotiated by Change Order.

3.3 SHORING:

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- A. As needed, all trench sidewalls shall be properly shored or braced to meet Federal, State, and local laws in regard to safe working conditions. The shoring shall be arranged so as not to place any stress on portions of the completed work until the general construction thereof has proceeded far enough to provide ample strength. Any damage to pipes or structures resulting from settlements, heaving, water or earth pressures, slides, caving, or other causes, due to lack of shoring, sheeting, or bracing, or due to failure of shoring, or due to improper shoring, or due to any other negligence on the part of the Contractor, shall be repaired by the Contractor at his own expense.
- B. Shoring shall be removed as the work progresses, unless left in place by written order of the Project Manager and Designated Inspector. The Contractor will be paid for shoring so ordered left in place on the basis of invoice material cost only.
- C. If the Project Manager and Designated Inspector is of the opinion that at any point the trench walls are not properly supported to protect the work, he may order the placement of additional supports by, and at the expense of, the Contractor. Compliance with such order shall not relieve or release the Contractor from his responsibilities for the safety of the work.

3.4 WATER CONTROL AND DEWATERING: For all excavation, the Contractor shall provide suitable equipment to divert and/or remove water, and he shall keep the excavation dewatered so that pipeline construction and backfill operations can be carried on under dewatered conditions. Refer to Section 02530. Contractor is responsible for all dewatering under the pipeline installation, no separate payment shall be made.

3.5 STORAGE OF EXCAVATED MATERIALS:

- A. Generally excavated material will be stockpiled near the immediate construction area so as not to interfere with other work.
- B. In natural areas, place excavated materials close to the excavation and in as confined a configuration as possible. Where adjacent slopes are too steep to stockpile, transport materials to special stockpile locations in nearby areas. All transportation to and from (including loading) stockpile is included in the work.

3.6 TRENCH BACKFILL:

- A. General: Unless accurate results cannot be obtained, the compaction requirements shall conform to maximum dry density according to ASTM D698, Moisture-Density Relations of Soils (Standard Proctor). When the ASTM D698 test is not applicable, the percentage compaction requirements shall conform to ASTM D2049 Test for Relative Density of Cohesionless Soils.

When required by the Project Manager and Designated Inspector the Contractor shall excavate backfilled trenches for purposes to perform compaction tests at locations and depths required by the Project Manager and Designated Inspector. The Contractor shall be responsible to reinstall and compact the test excavations at no additional cost to the Owner.

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- B. Bedding Zone Installation: Bedding material shall consist of the material on which the pipe is placed (refer to part 2-4). Bedding material shall be placed to the required elevation of the pipe invert. Tamping equipment shall be used to thoroughly tamp the bedding material to a minimum of 95 percent maximum dry density, or to 70 percent relative density. The moisture content of the material shall be within 2 percent of optimum.
- C. Pipe Zone Installation for Pipe Materials Other Than Ductile-Iron and Reinforced Concrete: After bedding material has been placed and has been approved and after the pipe has been installed and approved, the special backfill shall be installed to an elevation 12-inches above the top of the pipe.

This backfill shall be imported Granular Backfill Material and shall be placed and compacted in distinct, separate lifts not to exceed 6-inches of loose depth; except that the first loose lift shall not be higher than the pipe centerline (springline). If native Select Backfill Materials are permitted in this zone but acceptable Select Backfill Material (suitable for placement within 12-inches of the pipe barrel) is not available at any particular location, the Contractor shall use imported Granular Backfill Material. Compaction shall meet the requirements of "Bedding Zone Installation," utilizing T-bars or mechanical tamping equipment.

- D. Pipe Zone Installation for Ductile-Iron Pipe and Reinforced Concrete Pipe: After the specified bedding material has been placed and approved, the Select Backfill Material shall be installed to an elevation 12-inches above the top of the pipe. This backfill shall be placed and compacted in distinct, separate lifts not to exceed 6-inches of loose depth; except that the first loose lift shall not be higher than the pipe centerline (springline). Compaction shall meet the requirements of "Bedding Zone Installation," utilizing T-bars or mechanical tamping equipment.

When acceptable Select Backfill Material (suitable for placement within 12-inches of the pipe barrel) is not available at any particular location, the Contractor shall screen out rocks and stones larger than 2-inches or shall provide acceptable screened material from excavations at other locations of the work under this Contract. No extra cost will be paid for moving and handling of this Select Backfill Material.

- E. Backfill Zone Installation: All backfill above the pipe zone shall be carefully placed and compacted. Compaction shall be by mechanical tamping in 8-inch maximum loose lifts using mechanical or hand tampers, weighing not less than 20 pounds, or vibratory rollers. All other means must be approved in writing by the Project Manager and Designated Inspector. All backfill shall be compacted to 95% of maximum laboratory dry density or 70 percent relative density. The material shall be within 2.0 percent of optimum moisture content.

The Contractor may request approval of alternate means of compaction. Such request must be submitted to the Project Manager and Designated Inspector in writing. Approval of the compaction method will be made by the Project Manager and Designated Inspector only in

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writing. Use of specified or approved compaction methods does not relieve the Contractor from providing a complete project meeting the intent of this Specification.

3.7 OVEREXCAVATION OF UNSUITABLE MATERIAL: In areas where unsuitable or unstable material is encountered, the Contractor shall over excavate the unsuitable material and backfill and compact with material approved by the Project Manager and Designated Inspector. Over excavation and replacement of unsuitable material will be done only upon authorization by the Owner. Payment for authorized work will be negotiated by Change Order.

3.8 RESTORATION:

- A. Streets and Roadways: Any pavements disturbed during construction shall be repaired in accordance with the requirements of the City of Aspen and the ROW Permit.
- B. Concrete Structure Walks and Curbs: Restore all existing concrete structures to conditions equal to or exceeding existing structures and according to the requirements of the governing municipality.
- C. Landscape Restoration: Finish all slopes in accordance with the lines, cross-sections, and slope rounding shown. Grade to produce a well-drained surface. Replace turf in grassed areas.
- D. Other Items: The Project Manager and Designated Inspector will clarify restoration of other minor items as construction proceeds. Such items must be restored to equal or exceed existing conditions.

3.9 CLEANUP: Prior to final inspection and acceptance, remove all rubbish and excess materials and leave area in a neat, satisfactory condition.

3.10 MAINTENANCE OF BACKFILL: All backfill shall be maintained in a satisfactory condition and all places showing signs of settlement shall be filled and maintained during the life of the Contract and for a period of one year following the date of final acceptance of all work performed under the Contract. When the Contractor discovers or is notified by the Project Manager and Designated Inspector or the Owner that any backfill is not in compliance with the provision of this Contract, the Contractor shall correct such conditions at once. Any utilities and road surfacing damaged by such settlement shall be repaired by the Contractor to the satisfaction of the Owner and Project Manager and Designated Inspector. In addition, the Contractor shall be responsible for the cost to the Owner of all claims for damages filed with the Court, actions brought against the said Owner for, and on account of, such damage.

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INSTALLATION

1. The Contractor must conform to the amended Rules and Regulations of Construction Standards for Excavations, CFR 29, Part 1926, Subpart P of Title 29 including appendices of the Occupational Safety and Health Administration, Labor, including revisions thereto.
2. **HANDLING OF MATERIAL:** Pipe, fittings, valves, hydrants, and all other accessories shall be loaded and unloaded by lifting with hoists or skidding so as to avoid shock or damage to them. Under no circumstances shall any materials be dropped. Pipe handled on skidways shall not be skidded or rolled against pipe already on the ground. Skidding which damages protective coatings will not be permitted.

In distributing the material at the site of the work, each piece shall be unloaded opposite or near the place where it is to be laid in the trench to prevent moving more than once.

All pipe and fittings shall be so handled that the coating and lining will not be damaged. If, however, any part of the coating or lining is damaged, the repair shall be by the Contractor at his expense in a manner satisfactory to the Project Manager and Designated Inspector. Any area damage beyond repair must be cut off and discarded.

3. **INSTALLATION OF DUCTILE-IRON PIPELINES:** Except as specified herein or unless specifically authorized by the Project Manager and Designated Inspector, all installation of pipe shall conform to the recommendations contained in AA Guide for Installation of Ductile-Iron Pipe, published by the Ductile Iron Pipe Research Association. A copy shall be available at the job site.
 - a. **Pipe Laying.** Pipe shall be laid with bell ends facing in the direction of laying, unless directed otherwise by the Project Manager and Designated Inspector. Pipe shall be laid on the bedding with support over the full length of the pipe barrel.

Pipe joint deflections shall not exceed the amount recommended by the manufacturer.

The information in the columns referring to the deflection and the approximate radii shall be adjusted for pipe lengths different than 18-foot lengths. To lay pipelines on curved alignment with shorter radius if called for on the Drawing, the Contractor will be required to use shorter pipe lengths. No increase in the proposal unit price shall be allowed for use of shorter pipe lengths. Double hubs may be used to lay pipelines on curved alignment.

Vertical deflections shall not exceed any of the above values.

When pipe laying is not in progress, the open ends of pipe shall be closed by a watertight plug or by other means approved by the Project Manager and Designated Inspector.

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The cutting of pipe for inserting valves, fittings, or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe or cement lining so as to leave a smooth end at right angles to the axis of the pipe. The flame cutting of pipe by means of an oxyacetylene torch will not be allowed. The pipe end shall be beveled and free of sharp edges that could damage the gasket during installation.

- b. **Jointing of Mechanical Joints.** Use Mega Lugs in place of typical gland rings on all fittings. The last 8 inches of the pipe spigot and the inside of the bell of the mechanical joint shall be thoroughly cleaned to remove oil, grit, tar (other than standard coating), and other foreign matter from the joint, and then painted with a soap solution made by dissolving one-half cup of granulated soap in one gallon of water. The cast-iron gland shall then be slipped on the spigot end of the pipe with the lip extension of the gland toward the spigot end. The gasket shall be painted with the soap solution and placed on the spigot end of the pipe to be laid, with the thick edge toward the gland.

The entire section of the pipe being laid shall be pushed forward to seat in the spigot end of the bell of the pipe in place. The gasket shall then be pressed into place within the bell, being careful to have the gasket evenly located around the entire joint. The cast-iron gland shall be moved along the pipe into position for bolting, all of the bolts inserted, and the nuts screwed up tightly with fingers. All nuts shall then be tightened with a suitable (preferably torque-limiting) wrench. The torque for various sizes of bolts shall be as follows: Range of Torque

<u>Size (Inches)</u>	<u>ft. - lb.</u>
5/8"	45 - 60
3/4"	75 - 90
1	100 - 120
1-1/4"	120 - 150

Nuts spaced 180 degrees apart shall be tightened alternately in order to produce an equal pressure on all parts of the gland. Provide continuous conductivity around all fittings.

- c. **Jointing of Push-On Joints.** In jointing the pipe, the exterior 4 inches of the pipe at the spigot end and the inside of the adjoining bell and particularly the groove for the gasket shall be thoroughly cleaned to remove oil, grit, tar (other than standard coating), and other foreign matter. The proper gasket supplied with the pipe shall be placed in the bell as described by the pipe manufacturer so it will spring into its proper place inside the pipe bell. A thin film of the pipe manufacturer's joint lubricant shall be applied to the gasket over its entire exposed surface. The spigot end of the pipe shall then be wiped clean and inserted into the bell to contact the gasket. Then the pipe shall be forced all the way into the bell by crowbar, or by jack and choker slings. The location of the gasket shall be checked with a gauge or tool designed for that purpose to assure that the gasket is in the proper position. Provide connections to conductivity straps on each end of each pipe.

- d. **Installation of Special Restrained Joints.** Restrained-joint pipe and ductile-iron retainer glands shall be installed according to manufacturer's recommendations. Torque wrenches and any recommended special tools shall be used during installation. Any special tools shall be supplied to the Owner.
4. **INSTALLATION OF VALVES AND BOXES:** Valves shall be installed where shown on the Drawings or as directed by the Project Manager and Designated Inspector in the field and shall be set with the operator plumb. Valves shall have the interior cleaned of all foreign matter before installation. Stuffing boxes shall be tightened, and the valves shall be operated to opened and closed positions to ensure that all parts are in working condition before installation. Installation and jointing procedures shall be similar to the attached piping installation. Special piping shall be used when required because of conflict with butterfly valve discs.

Unless otherwise noted, a valve box shall be provided for every valve. The box shall not transmit shock or stress to the valve or operator and shall be centered and plumbed over the operating nut of the valve, with the box cover flush with the surface of the finished grade or such other level as may be directed by the Project Manager and Designated Inspector. The adjustable valve box shall permit at least 3 inches of adjustment either direction when in place. Provide continuous conductivity around all fittings and valves.

5. **INSTALLATION OF FIRE HYDRANTS:** Fire hydrants and auxiliary gate valves shall be installed at the locations shown on the Drawings or as directed by the Project Manager and Designated Inspector in the field. The exact location will be determined by the Project Manager and Designated Inspector in the field. Concrete thrust blocks shall be installed at the hydrant and at the line branch tee. The hydrant shall be set on a base as shown on the detail Drawings, and a gravel drain provided. Fire hydrants shall be set plumb at the finished grade line, unless otherwise instructed by the Project Manager and Designated Inspector.

No part of the fire hydrant assembly shall protrude over the edge of sidewalks. Unless in the opinion of the Project Manager and Designated Inspector it is not practical to do so, the pumper nozzle (which shall be facing the street) shall be 12 inches behind the edge of the sidewalk. The hydrant shall be set with the traffic flange from 2-6 inches above finished grade. Each hydrant shall be operated to opened and closed positions prior to installation.

Flow testing of the fire hydrants and new lines to be performed by the contractors with the fire department or other certified fire protection agency present to certify flows.

6. **SEWER ENCASEMENTS:** Whenever any sewer lines are crossed such that they are above or less than 18 inches below the water lines, the sewer line shall be

At all crossings, the water main shall be at least 18" above the sewer. If this cannot be obtained, the sewer shall be replaced with C-900 class 200 water pipe for a distance of at least 10 feet on each side of the water main. The replacement sewer pipe shall be Class 200 Ring-Tite, SDR 18, "Blue Brute" water pipe or pre-approved equivalent. All connections between the existing sewer pipe and the "Blue Brute" pipe shall be made with solid sleeve type couplings or preapproved equivalent. Fernco couplings not allowed.

7. **EXTRA DEPTH EXCAVATION:** In order to facilitate crossing under existing pipelines and other utilities, or as shown on the Drawings, the Contractor may be required by the Project Manager and Designated Inspector to increase the depth of burial of new pipelines beyond design depth. 12 feet max.
8. **INSTALLATION OF THRUST RESTRAINT:** The movement of fitting shall be restrained by use of concrete thrust blocks and megalugs, or with approval of Project Manager and Designated Inspector or if required by the drawing, steel clamp and tie bolt assemblies. The thrust blocks shall be poured between undisturbed solid ground and the fitting to be anchored; the area of bearing on the undisturbed trench wall shall be that shown on the thrust block detail or directed by the Project Manager and Designated Inspector. The concrete shall be so placed that the pipe or fitting joints will be accessible for repair. Thrust blocks or other thrust restraint where thrust blocks cannot be used shall be required at all the fittings unless otherwise shown on the Drawings. A bond breaker shall be placed over the fitting before placing concrete. Megalugs shall be used in addition to thrust blocks and shall be used in place of normal gland rings.

Thrust restraint clamps and tie bolts shall be assembled using clamps on each side of pipe bells with tie rods extending full pipe length for the dimensions shown on the detail drawings each direction from the restrained fitting. Clamp shall be installed tight enough to prevent twisting around the pipe. Two tie bolts per clamp with washer at clamp shall be located on side of pipe. Tighten tie bolt nut to hand tight@ with 12-inch wrench (approximately 50-100 foot - pounds torque). Threaded tie rod ends shall extend two full threads past nut in final position.

9. **FLUSHING, TESTING, AND DISINFECTING:** See AWWA C651 for all testing and disinfection. As a normal procedure, new pipelines shall be flushed, tested, and disinfected before connection to the existing system. When new pipelines are allowed to be connected to an existing pipeline the following sequence shall be followed: (1) Disinfection; (2) Flushing; (3) Bacteriological Test; (4) Leakage and Pressure Tests, and (5) Conductivity Tests. Failure of any step shall require each item to be repeated until all are accepted. The Project Manager and Designated Inspector shall be notified at least 48 hours before the pipe is to be tested so that he may be present during the test. Contractor shall provide a detailed summary of the testing methods and protocol for all testing flushing and disinfection procedures to the COA for approval prior to performing the work.
 - a. **Pipeline Flushing.** The Contractor shall flush the pipelines as the work progresses by a means in accordance with good practice to ensure that sand, rocks, or other foreign material are not left in any of the pipelines. If possible, the flushing shall be made through an open pipe end; otherwise, use of a fire hydrant may be acceptable, but only on approval of the Project Manager and Designated Inspector. (Min of 2.5 f/s velocity shall be achieve for proper flushing). Contractor shall be responsible for all calculations regarding the size of orifice needed for flushing at the min of 2.5 f/s.
10. **CONNECTIONS TO THE EXISTING SYSTEM:** The existing City of Aspen system must at all times remain under the control of the City of Aspen. The Contractor shall not operate any valves or hydrants on the system. City of Aspen will operate these facilities.

All points at which the existing water systems are to be disconnected and connected to the new mains are shown on the Drawings. Connections to the existing City of Aspen system shall be completed after new pipeline, valves, thrust blocks and other appurtenances are installed and tested. Connections shall be done in accordance with the details given for each point of disconnection or reconnections. At each point of connecting new pipes to existing pipes, the Contractor shall expose the existing pipe and locate a good sound point at which to cut the existing pipe off square. He shall then provide and install a transition coupling which has been designed and manufactured explicitly for the purpose of joining together the two types and sizes of pipe which he must connect. The use of poured concrete collar connectors around two dissimilar sizes or types of pipes without the use of the proper transition couplings will not be permitted.

All existing pipe, new pipe, valves, fittings, and couplings that have not been included in disinfection procedures shall be disinfected during the connection. The interior of pipe, fittings and other appurtenances shall be swabbed or sprayed with a one percent solution of hypochlorite solution before the connection.

The Contractor shall take precautions as necessary to minimize interruption of all utility services and will be responsible for restoration of service.

Unless otherwise specified, at any time that a customer on the existing system will be deprived of a supply of water, the Contractor shall advise such customer at least 48 hours in advance when the supply will be discontinued and when the supply will again be available.

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PART 1 -- GENERAL

1.1 SCOPE: The work to be performed in accordance with this Specification consists of furnishing all materials, equipment, supplies, and accessories, and of performing all operations needed for the construction of all interior piping, piping under structures and through walls, and piping to the outside of a wall pipe of any structure, or as shown on the Drawings.

Due to the small scale of the Drawings, not all offsets, fittings, etc. which may be required may be shown. The Contractor shall furnish, install, and test pipe, pipe supports, fittings, specials, and all required appurtenances as shown on the Drawings and as required to make the entire piping system operable. Space requirements and locations of connections of equipment the Contractor proposes to furnish shall be investigated by him prior to ordering. The Contractor shall not scale off the drawings to cut pipe or make connections to equipment selected. Equipment which will not enter the openings, or which will not fit the assigned space will not be acceptable. All drawings relating to the construction, including architectural, structural, electrical, plumbing, piping, heating, and ventilating, together with these specifications shall be considered collectively.

1.2 REFERENCES:

- A. American Society for Testing and Materials (ASTM)
- B. American National Standards Institute (ANSI)
- C. American Water Works Association (AWWA)
- D. Federal Specifications (FS)
- E. Uniform Plumbing Code

1.3 CONTRACTOR SUBMITTALS: In accordance with Section 01300. Submit certificates of compliance with manufacturer's literature. Submit shop drawings, complete with material, grade and class on all pipe, fittings, and couplings and on all joints, coatings, and appurtenances. Submit detailed catalog and engineering data sheets for all components such as flexible couplings, rubber gaskets and insulating joints. Submit a proposed pipe support plan for all piping, except where pipe supports are specifically detailed on the Drawings. Submit a proposed schedule for delivering and installing the pipe.

1.4 PRODUCT HANDLING:

- A. Pipe, fittings, valves, and all other accessories shall be loaded and unloaded by lifting with hoists or skidding so as to avoid shock or damage to them. Under no circumstances shall any materials be dropped. Pipe handled on skidways shall not be skidded or rolled against pipe already on the ground. Skidding which damages protective coatings or primers will not be permitted.

All pipe and fittings shall be so handled that the coating and lining will not be damaged. If, however, any part of the coating or lining is damaged, the repair shall be by the Contractor at his expense in a manner satisfactory to the Engineer. Any area damaged beyond repair must be cut off and discarded.

- B. Do not store materials directly on the ground.

PART 2 -- PRODUCTS

2.1 GENERAL:

- A. All pipe, fittings, couplings, and appurtenant items shall be new, free from defects or contamination, and wherever possible shall be the standard product of the manufacturer. They shall be furnished in pressure or thickness classes as specified or shown. All pipe shall have joints as called for in the specifications or indicated on the Drawings.

2.2 DUCTILE IRON PIPE:

- A. Joints. Ductile iron pipe shall be either flanged, push-on or mechanical joint as shown on the Drawings. Unless otherwise shown on the drawings, ductile iron pipe shall be Thickness Class 52. Class 54 to be used for all piping under the floor slab and wall pipes. In general, flanged joint pipe shall be used for exposed pipe, while push-on or mechanical joints with mega-lugs will be used for lines below grade. Flanged joints shall conform to ANSI A21.10 and mechanical joints shall conform to ANSI A21.11. Flanges shall be accurately shop faced and drilled true. Where tap or stud bolts are shown or otherwise required, flanges shall be tapped. Flanged pipe joints shall be made with full face gaskets of cloth inserted rubber compound. Mechanical joint gaskets shall be neoprene. Flanged and mechanical joints and fittings shall be manufactured by U.S. Pipe and Foundry, Clow Corporation, or equal.
- B. Ductile Iron Pipe Fittings and Flanges. All flanged ductile-iron pipe shall conform to ANSI Specification A21.15 and, unless otherwise shown on the plans, be faced, and drilled to a 125-pound template. Joints in flanged pipe shall have inserted therein red rubber ring gaskets, full face width and not less than 1/8-inch thickness. All push-on and mechanical joints and accessories shall conform to ANSI Specification A21.11. Grooved end joint fittings shall be an approved substitute for flanged fittings. Grooved joints shall conform to ANSI/AWWA C606. Grooved end fittings shall be ductile iron conforming to ASTM A536, Grade 65-45-12, with center-to-end dimensions conforming to ANSI A21.10/AWWA C-110, and radius cut grooved ends. Joint couplings shall consist of two or more ductile iron housings conforming to ASTM A536, Grade 65-45-12, pressure-responsive, synthetic rubber gasket, and plated steel bolts and nuts. Couplings shall be similar and equal to Victaulic Style 31. Flange adapters shall be ductile iron, flat faced, and designed for incorporating flanged components with ANSI Class 125 bolt-hole patterns to a grooved piping system. Flange adapters shall be similar and equal to Victaulic Style 341. The exterior surfaces of all ductile-iron pipe and fittings to be painted shall not have foundry coated with a bituminous coating. The interior shall be Portland-cement lined in accordance with ANSI Specification A21.4, except for compressed air piping which shall be unlined. Exposed pipe shall be provided with flanges and buried pipe shall be provided with mechanical joints unless otherwise shown on the Drawings. Where exposed pipe is to be painted, the bituminous exterior coat is not allowed. Exposed pipe shall have factory applied shop primer for field finish.
- C. Wall Pipes. DIP wall pipes shall be Class 54 and shall have an integrally cast intermediate collar and have mechanical joint, drilled flange or plain end connections as indicated on the Drawings, and shall be similar and equal to Clow figure numbers F-1426, F-1428, or F-1431, as required. All wall pipes shall be cast in place in the walls. Installation of Walls pipes after the walls have been poured will not be allowed.

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- D. Wall Piece. Ductile iron pipe with an annular ring attached and sealed around the pipe barrel. End connections as indicated on the Drawings. Wall pieces shall not be used for high pressure pipes and shall not be substituted for wall pipes where the latter are specified or shown on the Drawings. None to be used on this project

2.3 COPPER TUBING AND FITTINGS:

- A. Materials: Copper piping shall be seamless copper tubing, hard-drawn conforming to the requirements of ASTM Designation B88, Type L where exposed, and Type K for buried service. Connection between pipes of dissimilar materials shall be made with the appropriate transition coupling including insulation for jointing pipes with potential galvanic reaction.
- B. Fittings: Fittings shall be compression and hard-solder type as required. Flared type shall be Parker-Hannefin Triple-Lock, American Brass Anaconda, Imperial-Eastman High-Seal, or equal. Hard solder fittings shall be wrought copper or cast brass conforming to the requirements of ASTM Designation B62.
- C. Hangers: Where copper piping is in direct contact with metal pipe supports, a protective copper saddle shall be soldered to the underside of the pipe. Saddles may be of split copper pipe.

2.4 BRASS AND BRONZE PIPE/FITTINGS:

- A. Threaded nipples, brass pipe and fittings shall conform to ASTM B 43, regular wall thickness. Threads shall conform to ANSI B1.20.1. Fittings shall be compression type. Brass pipe shall not contain lead material.
- B. Bronze Appurtenances: Corporation stops, curb stops, meter and angle meter stops, meter flange adapters, and bronze bodied service saddles shall be selected from the Approved Materials List in accordance with the Standard Drawings.
 - 1. Fittings shall be threaded type.
 - 2. All items specified herein shall be manufactured of bronze conforming to ASTM B 62.
 - 3. Service saddles shall be the double strap type. Service saddles shall be used on all service and appurtenance connections on PVC piping. For piping materials other PVC, service and appurtenance connections shall be performed in accordance with the Approved Drawings.

2.5 FLEXIBLE COUPLINGS: Flexible couplings shall be the types below as shown on the Drawings or as otherwise permitted by the Engineer. The flexible couplings shown on the Drawings are the minimum required; the Contractor may add as many as required to expedite the work subject to approval by the Engineer. They shall provide the requisite pipe flexibility without jeopardizing pipe joint integrity due to hydraulic thrust and shall have the same pressure-rating as the pipe. Couplings shall have all metal bearing surfaces and shall be provided with galvanized steel bolts and nuts. Flexible couplings shall be restrained unless the Engineer has given his approval to omit this feature for specific cases.

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- A. Sleeve Type Couplings shall be properly gasketed and shall be of a diameter to fit the pipe. Each coupling shall consist of a steel middle ring, 2 steel followers, 2 gaskets, and the necessary steel bolts and nuts to compress the gaskets. The couplings shall be Dresser Style 138-38, Smith-Blair Model 411, Romac 501, or approved equal.
- B. Split-Sleeve Type Coupling Adaptors shall be of the sleeve type, consisting of steel middle ring, steel followers, gaskets, and steel bolts and nuts to compress the gaskets. The couplings shall contain anchor studs of strength adequate to hold the pipe together under a pull equal to the longitudinal strength of the pipe at a tensile stress of 20,000 psi, and shall be Smith-Blair Model 913, Dresser Style 128, or equal. Couplings to be installed underground shall be hot-dipped galvanized.
- C. Flanged Coupling Adapters. Shall have a cast iron body and be provided with restraint lugs as shown on the drawings. Victaulic joint type adapters are acceptable. Coupling adapters shall be Smith – Blair Model 912, Victaulic/Depend-O-Lok® FxE or equal.

2.6 PIPE SLEEVES:

- A. Pipe Sleeves. Shall be schedule 40 steel pipe with a shop welded seepage ring on the outside of the barrel as shown on the drawings. Sleeves shall have factory applied shop primer for field finish.
- B. The annular space between pipe and pipe sleeves shall not be sealed.

2.7 EXPANSION JOINTS: Rubber Spool Type Expansion Joints: Rubber expansion joints shall be provided for movement and for isolation but not for misalignment of piping ends. The single piece, leak-proof tube, corrugated with one or more corrugations shall be made of compounds of oil resistant synthetic rubber for water, sewage, and sludge. Flanges shall be made of fabric reinforced rubber to resist stresses set up when flange bolts are tightened. Flange bolt holes shall be coated with a sealer to prevent absorption, leaking of moisture and corrosion. Stainless steel retaining rings shall be placed against the flange of the expansion joint and bolted through it to the metal flange of the pipe. Two ¾-inch stainless steel retaining bolts shall be installed to limit expansion movement. The two expansion joints shall be Proco Style 231/BB Butyl, Single Arch Expansion Joint 200 psi-rated with 150 lb. flanges, retaining rings and restraint rods, or approved equal.

2.8 FLOOR DRAINS: Floor drains are to be installed at the locations shown on the Drawings. Floor drains shall be similar and equal to Josam type No. 30004 with 6-inch adjustable bronze strainer, inside caulk outlet with gasket for watertight connection to 4" pipe.

2.9 SMALL PIPING VALVES: In general, small piping valves shall be suitable for use with liquid being transported. Water piping valves under 3 inches shall be bronze complying with ASTM B62 with screwed end connections.

- A. Gate valves shall be bronze of rising stem solid wedge disc type. Stuffing box repackable while under pressure, 125-pound rating. Gate valves shall be similar and equal to Stockham Fig B 100C.
- B. Globe valves shall be of bronze disc type with 125-pound rating and repackable while under pressure and shall be similar and equal to Stockham Fig B 13TC.
- C. Check valves shall be bronze swing check disc type with integral disc and hinge, and 125-pound rating. Use Stockham B 319C or approved equal.

- D. Corporation stops to be all bronze with tapered inlet threads with pipe outlet depending on service line materials. Stops shall be approved equal to Ford Series F-1000. Saddles will be required in all PVC pipe. Saddles will be required on ductile-iron pipe in accordance with the standards established by the Ductile-Iron Pipe Research Association.

2.10 PIPE HANGERS AND SUPPORTS: Pipe hangers, brackets, saddles, clamps, and other supports shall be adjustable type conforming to the requirements of ANSI B31.1, Section 6. Supports shall have ample strength and rigidity to resist the hydraulic thrusts at changes in direction and at dead ends as well as the dead weight loads and the load carried. Supports shall maintain required grade, prevent vibration, and allow expansion and contraction. Supports shall be hot-dip galvanized, including all bolts, nuts, and threaded parts. Computations showing adequacy of hangers and supports to meet these requirements shall be submitted with the shop drawings.

- A. General: Hangers and supports shall include all hanging and supporting devices of metallic construction shown, specified, or required for pipelines, apparatus, and equipment other than electrical equipment. The Contractor's working drawings, as required herein, shall show the quantity, type, design, and location of all hangers, and supports required under the various contract items.

Where specified or shown, bolts, stud bolts, rods, yokes, and nuts of hangers and supports shall be of steel. Where submerged in process fluids or where located in covered manholes, bolts, stud bolts, rods, yokes, and nuts of hangers and supports shall be of silicon bronze. Bolts shall not be less than 2-inch diameter unless otherwise called for on the Drawings. Chain or perforated strap hangers will not be permitted.

Except where otherwise shown, specified, or required, hangers, supports, anchors and concrete inserts shall be the standard types as manufactured by Crane Co., Grinnel Co., Fee and Mason Manufacturing Co., or equal meeting the requirements specified herein. Unless otherwise approved by the Engineer, all hangers, supports, and concrete inserts shall be listed with the Underwriters' Laboratory.

- B. Design: Hangers and supports shall be adequate to maintain the pipelines, apparatus, and equipment in proper position and alignment under all operating conditions. Supports shall be provided so that no weight shall be transmitted to any equipment to which the piping is connected and have springs where necessary. Hangers and supports shall be of standard design where possible, and be best suited for the service required, as approved by the Engineer. Where required, they shall be screw adjustable after installation. Supporting devices shall be designed in accordance with the best practice and shall not be unnecessarily heavy. Sufficient hangers and supports shall be installed to provide a working safety factor of not less than 12 for each hanger, assuming that the hanger is supporting 12 feet of pipe filled with water.
- C. Saddle Stands: Saddle stands shall be of adjustable type. Each stand shall consist of a length of wrought pipe fitted at the base with a standard screw threaded cast iron flange and at the top with an adjustable saddle or roll. The base flange shall be bolted to the floor or foundation. Stanchions shall be of similar construction to the saddle stand, except that they shall be fitted at the top with cast iron pipe saddle supports or with pipe stanchion saddles with yokes and nuts. Where adjustable supporting devices are not required, pipelines 3 inches in diameter and smaller may be supported on approved cast iron, malleable iron, or wrought steel hooks, hook plates, ring, or ring plates.

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- D. Anchors: Anchors shall be furnished and installed where specified, shown, or required for holding the pipelines and equipment in position or alignment. Anchors shall be designed for rigid fastening to the structures, either directly or through brackets. The design of all anchors shall be subject to approval by the Engineer.

Anchors for piping shall be of the ductile iron type with wrought steel strap, except where anchors form an integral part of pipe fittings or where an anchor of special design is required.

- E. Inserts: Inserts for concrete shall be furnished galvanized and shall be installed in the concrete structures where required for fastening supporting devices. They shall be designed to permit the rods to be adjusted to hang vertically. Nail slots shall be provided in the exposed flanges of the insert. Inserts shall be designed to carry safely the maximum load that can be imposed by the rod which they engage.

- F. Materials: Hangers and supports of metallic construction shall conform to the requirements specified herein and to the following standards:

- | | | |
|-----|--|--------------------|
| 1. | Structural Steel | ASTM A36 and A283 |
| 2. | Steel Bars (Grade 1022) | ASTM A575 |
| 3. | Steel Castings (Grade N-1) | ASTM A27 |
| 4. | Wrought Steel Pipe (Grade A, Schedule 40) | ASTM A53 |
| 5. | Cast Iron Pipe Fittings (Class 125) | ANSI B16.1 |
| 6. | Malleable Iron Castings | ASTM A47 |
| 7. | Bolting Materials, Steel | |
| a. | Bolts, Yokes and Stud Bolts | ASTM A307 |
| b. | Nuts | ASTM A563 |
| c. | Physical requirements: | |
| (1) | Tensile strength | 60,000 psi minimum |
| (2) | Yield strength | 48,000 psi minimum |
| (3) | Elongation | 27 percent maximum |
| (4) | Reduction of area | 35-55 percent |
| 8. | Bolting materials, silicon bronze | |
| a. | Bolts, stud bolts yokes and nuts (alloy A) | ASTM B98 |
| b. | Physical requirements: | |
| (1) | Tensile strength | 70,000 psi minimum |
| (2) | Yield strength | 38,000 psi minimum |
| (3) | Elongation | 17 percent maximum |
| 9. | Bolting materials, stainless steel | |
| a. | Bolts, stud bolts and nuts (type 316) | ASTM A276 |
| b. | Physical requirements: | |
| (1) | Tensile strength | 75,000 psi minimum |
| (2) | Yield strength | 30,000 psi minimum |

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(3)	Elongation	35 percent maximum
(4)	Reduction of area	45 percent maximum

10. Where specified or shown, bolts, stud bolts, rods, yokes, and nuts of hangers and supports shall be of silicon bronze or stainless steel as specified above with dimensions, threads, and sizes equivalent to those specified in steel.
- G. Brackets for Piping: Brackets for support of piping from walls and columns shall be made of welded wrought steel. When brackets are designed to support 1500 lbs. or more, back plates of adequate size and thickness shall be furnished and installed to distribute the load against the wall. When used on concrete walls the back plates shall be cast in the concrete. Where the use of back plates is not practicable, the brackets shall be fastened to the wall in such a manner that the safe bearing strength of the wall will not be exceeded. Pipe rolls or chairs shall be of the cast iron type. Pipe rolls shall be provided with threaded rods.
- H. Spacing of Hangers: In some cases, more stringent requirements are indicated on the Drawings or elsewhere in these Specifications, but in no case shall the spacing of hangers exceed ten feet.
- I. Where concentrations of valves, fittings and equipment occur, closer spacing of supports will be required. In no case shall any total hanger load (weight of piping, insulation, and contents) exceed the following (load carrying capacities of hot rolled steel rod ASTM A575).

<u>Nominal Rod Diameter-inches</u>	<u>Maximum Safe Load-Pounds</u>	<u>Nominal Rod Diameter-inches</u>	<u>Maximum Safe Load-Pounds</u>
1/4	1,130	1-1/8	6,230
3/8	1,810	1-1/4	8,000
1/2	2,710	1-3/8	9,470
3/8	3,770	1-1/2	11,500
1	4,960	1-3/4	15,400

- K. Thrust Restraint. Where designated on the Drawings, fitting restraints shall be made with tie rods, special fitting bolts or flange lugs. Tie rod restraint systems shall have a minimum of two rods per fitting. The rods shall be $\frac{3}{4}$ - inch diameter, fabricated from "Cor-Ten" steel or Type 304 Stainless Steel in accordance with the requirements of ASTM A242 with a minimum yield stress of 46,000 psi. Threaded nuts shall be ASTM designation A194, grade 2H.
1. For exposed interior piping, flange lugs shall be made of $\frac{3}{4}$ - inch thick, high strength steel, fabricated to fit the flange spacing for the piping size being restrained with the center tie rod $2\frac{1}{4}$ - inches from the center of the bolts on a six - inch flange and $2\frac{3}{4}$ - inch for eight - inch flanges.

PART 3 -- EXECUTION

3.1 GENERAL:

- A. Care and Handling of Materials: All materials shall be carefully handled in all steps of fabrication, storing, loading, transporting, unloading, storing at the site, and installation, using the means and following the procedures approved with the shop drawings. All

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steel and reinforced concrete pipe over 14-inch size shall be fitted after fabrication with internal bracing at both ends as a protective measure against deformation and injury to mortar lining.

Pipe slings used during handling, and tie-down straps during transit shall be not less than 4-inch wide flat fiber or plastic straps. During storage and in transit, pipe 8-inches and larger shall be rested on saddles or on another support system approved by the Engineer, which will insure freedom from damage of the barrel, interior lining, and exterior coating. Not less than 3 saddles or other longitudinal pipe supports shall be used during transit. Mortar lined pipe shall be kept sufficiently moist to prevent drying out of the mortar lining before installation.

B. Installation:

1. The different kinds of buried and above ground piping shall be installed in accordance with the Drawings, these specifications, and the procedures and methods approved with the shop and erection Drawings. Piping carrying liquids shall be installed without high points which could trap gasses and shall be kept below the static water level of the items which they connect. The interior of pipe, fittings, and couplings shall be clean and free from contamination when installed and effective means shall be taken to prevent the entrance of foreign matter during progress of the work. The types and sizes of pipes and fittings to be used shall be as specified herein and as shown on the Drawings. Where required fittings are omitted from the Drawings, they shall be the same size as the piping and in all cases shall conform to the plumbing code requirements.
2. All pipe shall be carefully placed and supported at the proper lines and grades and where practicable shall be sloped to permit complete drainage. Piping runs shown on the Drawings shall be followed as closely as possible, except for minor adjustments to avoid architectural and structural features or to suit the type or make of approved equipment purchased by the Contractor. If relocations are required, they shall be subject to the approval of the Engineer. Provisions for maximum flexibility are not always shown and the Contractor may add flexible joints where required and approved by the Engineer. Exposed pipe shall be run parallel with or at right angles to the adjacent walls and floors, unless shown differently on the Drawings.
3. All piping shall be installed as closely as possible to walls, ceilings, columns, beams, and equipment (consistent with proper space requirements for maintenance and operational appurtenances) so as to occupy the minimum of space, and all offsets, fittings, etc., required to accomplish this must be furnished by the Contractor at his own expense.

C. Joints: In erecting the pipe, a sufficient number of screw unions or flanged joints shall be used to allow any section or run of pipe to be disconnected without taking down adjacent runs. Screw unions may be employed on pipelines 3 inches in diameter and under. Flanged joints shall be employed on pipe 4 inches in diameter or larger unless otherwise shown on the Drawings. Dielectric unions are to be installed at the junction of dissimilar metals.

D. Verification of Dimensions: All dimensions essential to the correct location of the pipe, or fit of piping at equipment and valves, or to the proper location and orientation of pipe sleeves and wall castings, or to the avoidance of obstructions or conflict with other

improvements, shall be accurately determined by the Contractor prior to fabrication of the piping involved. Any required change from the nominal locations shown of the Drawings shall be made by the Contractor and shall be included as a part of the work hereunder and be subject to the approval of the Engineer.

3.2 INTERIOR PIPING:

- A. Interior Pipe Installation: All piping shall be installed in accordance with the erection drawings and the erection procedure submitted with the approved shop or erection drawings. The horizontal piping shall be run parallel to the building walls and shall be level except where otherwise shown or specified; parallel lines shall be grouped on the same horizontal or vertical plane wherever possible. Vertical piping shall be plumb, and the entire piping configuration shall allow adequate clearances for convenient access for painting and preventive maintenance of valves. Piping shall clear obstructions, preserve headroom, and keep openings and passageways clear. If structural difficulties or other work prevent the running of pipes or the setting of equipment at the point indicated on the Drawings, the necessary minor deviations as determined by the Engineer, will be allowed, and shall be shown on the erection drawings to be furnished. Except as otherwise shown or specified, piping installation work shall conform to the requirements of ANSI B31.1.0 and the printed or written recommendations of the manufacturer of the product involved for the given conditions.
- B. Joint Installation: Installation of joints and couplings shall conform to the following requirements:
1. Joints and Couplings: Joints and couplings shall be made in accordance with the specified requirements made part of the erection procedure submitted by the Contractor.
 2. Pipe Threads: Pipe threads shall be in accordance with the requirements of ANSI B2.1 and shall be cut full and free from torn or ragged surfaces. No more than three threads on the pipe at any joint shall remain exposed after installation. Threaded joints shall be established with joint compound applied to the male ends only. The use of thread cement or caulking of threaded joints to stop or prevent leakage will not be permitted. Sharp-toothed pipe wrenches or similar wrenches shall not be used in making up copper or brass pipe.
 3. Flanged Joints: Flanged joints shall be made with gaskets suitable centered in the joint, suitable for the fluid in the pipeline. Bolts studs, and nuts shall be lubricated with graphite and oil so that the nuts can be turned by hand. Care shall be taken to prevent excessive initial tension to the bolt and studs and so that the tension applied is as nearly uniform as possible. The rust preventive compound applied to the faces of flanges before shipment shall be removed before installation. Where slip-on flanges are used, they shall be fillet welded to the pipe on both front and back sides. Where raised faced and flat faced flanges are joined, the raised face flange shall be ground smooth and full-face gaskets shall be used.
 4. Grooved joint piping systems shall be installed in accordance with the manufacturer's guidelines and recommendations. All grooved couplings, fittings, valves, and specialties shall be the products of a single manufacturer. Grooving tools shall be of the same manufacturer as the grooved components. The gasket style and elastomeric material (grade) shall be verified as suitable for the

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intended service as specified. Gaskets shall be molded and produced by the same grooved joint system manufacturer. Grooved end shall be clean and free from indentations, projections, and roll marks in the area from pipe end to groove for proper gasket sealing. A factory-trained field representative from the manufacturer shall provide on-site training for contractor's field personnel in the proper use of grooving tools and installation of grooved piping products. Factory-trained representative shall periodically review the product installation. Contractor shall remove and replace any improperly installed products.

5. Tubing:
 - a. Tubing which is to be soldered shall be cut square and all burrs shall be removed. Both the inside of the fitting and the outside of the tubing shall be cleaned with steel wool before sweating. Care shall be taken to prevent annealing of fittings or hard-drawn tubing when making connections. Joints for soldered fittings shall be made with a non-corrosive, paste flux and solid string or wire solder composed of 95-5 tin-antimony solder. Soft solder or cored solder will not be permitted. Tubing to be coupled with flared compression type fittings shall conform to the applicable provisions of the Joint Industry Conference (JIC) Standards and the recommendations of the manufacturer.
 - b. All concealed piping shall be tested in the presence of the Engineer before concealing. Changes in direction shall be made with fittings. Kinks and wrinkles shall not be acceptable.
 6. Flexible Type Joints of the sleeve, split sleeve, and flanged coupling adapter types of flexible couplings shall be made in accordance with the printed instructions of the manufacturer. The pipe ends to receive the couplings shall be finished to the outside diameter and surface finish required by the coupling manufacturer. Prior to assembly, all surfaces which will be inaccessible after installation shall be given protective coating.
 7. Joint Restraint Harnesses shall be provided at flexible type joints where shown on the Drawings and as required. The harnesses shall be tightened just sufficiently to preclude displacement of the downstream piping under hydraulic thrust.
- C. Pipe Sleeves: All piping which will pass through walls, slabs, footings, or beams shall be provided with specified pipe sleeves or with wall castings as shown on the drawings. The Contractor shall provide the pipe sleeves and castings for insertion in the concrete work covered in Section 03300, Cast in Place Concrete, and shall verify their correct setting prior to concrete placement. No pipe joint will be allowed to occur in the sleeve.

3.4 INSTALLATION OF DUCTILE IRON PIPE:

- A. Pipe Laying:
1. Inspection: All pipe shall be carefully inspected by the Engineer for defects before installation. Such inspection shall include light tapping with a hammer while the pipe is suspended in the air. No pipe or fittings which are cracked, or which show defects excluded by the Specifications for such pipe or fittings shall be used. Any injuries to the protective coating of the pipe or fittings shall be carefully repaired by the Contractor.

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2. Cleanliness of Material: All pipes, valves, and fittings shall be carefully leaned before installation. Every open end of a pipe shall be carefully plugged or capped before leaving the work.
- B. Anchorage: Tie rods shall be used above ground where there is a possibility of pulling the joint under pressure.
- C. Piping Through the Walls and Floors: Where pipes pass through walls or floors, care shall be exercised to ensure joints being watertight. The pipe shall be free of all dirt and grease to secure a tight bond with the concrete.
- D. Flanged Joints: Flanged pipe shall be cut true to length. Joints shall be made up square, with even pressure upon the gaskets and shall be perfectly watertight. Gaskets shall fit the inside dimension of the pipe accurately, so that no surplus material projects out into the flow area. The completed joint shall be smooth and properly aligned.
- E. Grooved End Joints: Prepare pipe and install joints per manufacturer recommendations.

3.5 TESTING AND CLEANUP:

- A. After each of the systems has been installed, the Contractor shall thoroughly clean all parts of the installation. All equipment, piping, valves, and fittings shall be cleaned of grease, metal cuttings, and other debris. Any stoppage, discoloration, or other damage to any of the work due to the Contractor's failure to properly install or to thoroughly clean the systems shall be repaired without cost to the Owner.
- B. Following the cleaning, each system shall be completely tested in the presence of the Engineer and to his satisfaction, and all equipment shall be adjusted to operate in the most efficient and satisfactory manner. Only such tests shall be made as will demonstrate that each line will be leakfree.
- C. Pipe Flushing: The Contractor shall flush the pipes as the work progresses by a means in accordance with good practice to ensure that sand, rocks, or other foreign material are not left in any of the pipes. The flushing shall be made through an open pipe end.
- D. Pressure Test: After each section of pipeline has been installed the pipe shall be slowly filled with water and tested. All pipe shall be tested at a pressure of 150 psi at the lowest point in each section. Each section shall be tested separately. The duration of each pressure test shall be at least one continuous hour. All water used in testing the pipelines shall be taken from a potable water supply.

Each section of pipeline being tested shall be slowly filled with water and all air removed. The specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Engineer. The Contractor shall furnish all necessary labor, equipment, and connection corporation stops to the pipeline to perform the test.

No testing shall be permitted against valves or fittings that are a part of the existing system unless specifically approved by the Engineer.

All exposed pipes, fittings, valves, meters, and joints will be carefully examined during the test. Any cracked or defective pipe, fittings, valves, or meters discovered during the

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pressure test shall be removed and replaced by the Contractor with sound material. The test shall be repeated until it is satisfactory to the Engineer.

- E. All potable lines shall be disinfected in accordance with AWWA C601. Chlorine is to be added to form a 50 ppm free chlorine residual, left for not less than 24 hours, all valves shall be operated to disinfect. After 24 hours, bacteriological tests are to be performed by the local health authority. After approval, the Contractor shall flush the new system until residual is 0.3 ppm and clear water tests are made.

- 3.6 CONNECTIONS TO THE EXISTING SYSTEM:** The existing system must at all times remain under the control of the Owner. The Contractor shall operate no valves or hydrants on the system without permission of the Owner.

All points at which the existing water systems are to be disconnected and connected to the new piping are shown on the Drawings. Connections to the existing system shall be completed after new pipelines, valves, and other appurtenances are installed and tested. Connections shall be done in accordance with the details given in the Special Construction Provisions.

- END OF SECTION -

PART 1 --**PART 2 -- GENERAL**

1.1 SCOPE: The work to be performed in accordance with this specification consists of providing and installing all valves and accessories as specified, indicated, and required.

1.2 REFERENCES:

- A. American Society for Testing and Materials (ASTM)
- B. American Water Works Association (AWWA)

1.3 CONTRACTOR SUBMITTALS: In accordance with Section 01300. Submit certificates of compliance with manufacturer's literature.

1.4 GENERAL DESCRIPTION:

- A. Above-ground and vault-installed valves shall be handwheel or lever operated with indicators, except where indicated or specified as motor or cylinder operated. Valves shall have pressure rating not less than the adjacent piping unless otherwise indicated. Valves over 2-inch size shall be provided with pipe supports on either side of the valve. Assemblies of valves, operators, and accessories shall be complete and adequate for the intended purpose and shall include all essential components of equipment together with all mountings and other appurtenances normal and necessary for proper installation, whether or not indicated or specified. Direction of rotation to open each valve shall be to the left (counter-clockwise). Each valve body or operator shall have cast thereon the work "OPEN" and an arrow indicating the direction to open.
- B. All valves identified by a number on the drawings shall be tagged with a permanent, stamped, non-corroding metal tag. Handwheel actuators shall be designed to produce the required torque with a minimum pull of 80 pounds. The handwheel shall be manufactured of cast-iron.
- C. All taps for pressure gauges, and bypass shall be made with a tap at the main line, an isolation valve, and a tee with valve for sampling prior to pressure gauge or ARV.
- D. Tap for pressure sensor shall be coordinated with the Controls contractor for size and location

PART 3 -- PRODUCTS

2.1 GENERAL: All valves shall have a finish coating on the valve interior and prime coat on the exterior including operator housing. The interior coating shall be acceptable for potable water in accordance with AWWA C-550. Exterior surfaces of interior, exposed valves except finished or bearing surfaces, shall be prime coated in accordance with the requirements of the Specification, Painting.

VALVES AND ACCESSORIES – SECTION 15215

2.2 CHECK VALVES: Check valves shall be silent globe style type with a cast iron body and 125-pound ANSI B 16.1 flanges. The valves shall be FLOMATIC Model 402BT, VAL-MATIC Series 1800, CLA-VAL Series 581, Milliken Series 821A or approved equal.

2.3 AIR RELIEF VALVES: The air release valve shall be APCO Model 50 with a ½" threaded inlet or approved equal.

2.4 BUTTERFLY VALVES: Butterfly valves shall be similar and equal to BAW style flanged valves by DeZurik, American by Val-Matic or approved equal, with cast iron body, ductile iron disc with stainless steel edge and stainless steel shaft

The valve operators shall be designed and sized for the required torques, based on the operating conditions, and calculated as outlined in AWWA C-504 except where requirements are herein revised. Each valve shall have a permanent identification plate providing valve serial number and size.

All valves shall be supplied by the same manufacturer. Valve operators, levers, handwheels, chainwheels and tee handled wrenches to manually operate valve shall be supplied by the valve manufacturer.

Handwheel Actuators. Handwheel actuators shall be designed to produce the required torque with a maximum pull of 80 pounds. The handwheel shall be manufactured of cast-iron. Unless shown otherwise on the Drawings, all valves shall have Handwheel operators.

2.5 SMALL PIPING VALVES: In general, small piping valves shall be suitable for use with liquid being transported. Water piping valves under 3 inches shall be bronze complying with ASTM B62 with screwed end connections. Valves shall permit repacking while under pressure.

Corporation stops shall be used for pressure gauge and surge anticipator valve drain line taps shown on the Drawings. The corporation stops shall be ½-inch size with tapered inlet treads and outlet depending on connecting pipe/appurtenance type. The corporation stops shall be manufactured and tested according to AWWA C800 and made of cast bronze. Corporation stops shall be Mueller Co. "H" Series, Ford Meter Box Company, Inc. "F" Series, or approved equal. Galvanized pipe is not permitted.

2.6 HOSE BIBBS: The hose bibb shall be no-kink, quarter turn style and have a brass body, PTFE valve seat, brass ball, zinc handle, Nitrile O-ring, and standard thread garden hose connection. The hose bibbs shall be similar and equal to Model QT55X as manufactured by NIBCO.

2.8 PRESSURE GAUGES: Pressure gauges shall have 4-1/2" dial with white face, 1/2" NPT bottom connection, black fiberglass-reinforced thermoplastic turret case with lower mount stainless steel pressure connection and 316L stainless steel C-type bourdon tube. Accuracy shall be 0.5 percent of full scale, which shall be 0 to 200 psi. Gauges shall be dry case Type 232.34 stainless steel Xsel Model by WIKA or approved equal. Each gauge installation shall include the gauge, Type 910.11 stainless steel shutoff valve by WIKA, or approved equal, and stainless steel snubber Type 910.12.100 by WIKA, or approved equal. All gauges and accessories shall be supplied by the same manufacturer.

2.10 PRESSURE CONTROL VALVES: Pressure control valves shall be Singer; valve bodies to be 106 Series.

- A. The main valve shall be a Singer 106 -PG single chamber, diaphragm actuated full port model.
- B. Main valve shall provide smooth frictionless motion to ensure a low flow stability to ~1,800 GPM, achieved using SRD-Single Rolling Diaphragm technology.
- C. The main valve, bonnet and removable stem cap shall be constructed of ASTM A536 (Grade 65/45/12) ductile iron.
- D. Main valve shall have a removable stem cap for access to the main valve stem for alignment check, spring installation and ease of service and assembly.
- E. The main valve trim, consisting of seat ring and stem shall be constructed of AISI 316 stainless steel.
- F. The main valve shall provide a drip-tight seal using a mechanically retained resilient disc against the stationary AISI 316 stainless steel seat ring.
- G. All internal and external ferrous components, including all mating surfaces, shall be coated with an NSF-61 approved fusion bonded epoxy to a minimum of 8mils DFT-Dry Film Thickness.
- H. The main valve elastomers: diaphragm, resilient disc, and seals, shall be of EPDM or Buna-N.
- I. All main valve fasteners (bolts, nuts, studs, cap screws) shall be supplied as AISI 18-8 or 304 stainless steel. All bonnet bolts shall be fitted with stainless steel washers to prevent damage to the bonnet coating.
- J. Valve shall have flanged, threaded, or grooved end connections. Flanged connections shall be *ANSI/ASME B16.42 Class 150#* flange drilled, faced and 300# rated. Threaded connections shall be NPT

Pilot Controls

- A. The pressure relief/sustaining pilot shall be a Singer Model 81-RP normally closed pilot with a spring to adjust the pressure setting.
- B. The pilot trim, consisting of a seat ring, stem, and inner valve, shall be constructed of AISI 316 stainless steel.
- C. The pilot elastomer: diaphragm, inner valve, and seals, shall be of EPDM or Buna-N.
- D. The adjustable pilot spring range shall be supplied with a spring range of (20 to 200psi). The pilot shall be factory preset at 50 psi.
- E. The pilot body and spring casing shall be constructed of ASTM A351 CF8M stainless steel.
- F. A fixed restriction shall be supplied as AISI 303 stainless steel with an orifice bore selected by the manufacturer based on the valve size and operation.
- G. An adjustable needle valve closing speed control shall be supplied as AISI 316 stainless steel.
- H. The pilot fittings shall be supplied as AISI 316 stainless steel.
- I. The pilot tubing shall be supplied as AISI 316 stainless steel
- J. Provide (3) pilot isolation ball valve(s) shall be supplied. Pilot isolation ball valves shall be constructed of 316 Stainless Steel with handle operator.

- 2.11 GATE VALVES:** Gate valves shall be the tapered, solid wedge, disc type with a resilient rubber seal ring on the disc. The valve body shall be cast iron in the configuration to permit the disc to seat against a machined surface. Opposite the seating surface shall be a machined guide surface to accurately locate the disc and assure positive sealing. The seal ring shall be rubber with an encapsulated stainless steel reinforcing ring and stainless steel retaining screws. Valve stem shall have replaceable O-ring seals to prevent either process or external water from passing through. The gate valve shall be similar and equal to those manufactured by the Mueller Co.

3.1 INSTALLATION OF VAULT-INSTALLED VALVES: Valves shall be rigidly held in place using supports and hangers. The stem orientation of valves in elevated piping shall be as approved by the Engineer for accessibility. Supports shall be of rugged construction providing at least 120° under-support for the valve body, shall be adjustable, and shall be anchored to the foundations using stainless anchor bolts. Valves shall be operated and adjusted before installation. Valves shall be tested with adjacent piping.

- END OF SECTION -

WATER DISTRIBUTION STANDARDS

The Water Distribution Standards provide policies, design and construction guidelines to governmental agencies, design professionals, private developers, and community groups. These standards maintain the public welfare; ensure safe, reliable service for all customers; and promote efficient development within the water service area.



CITY OF ASPEN

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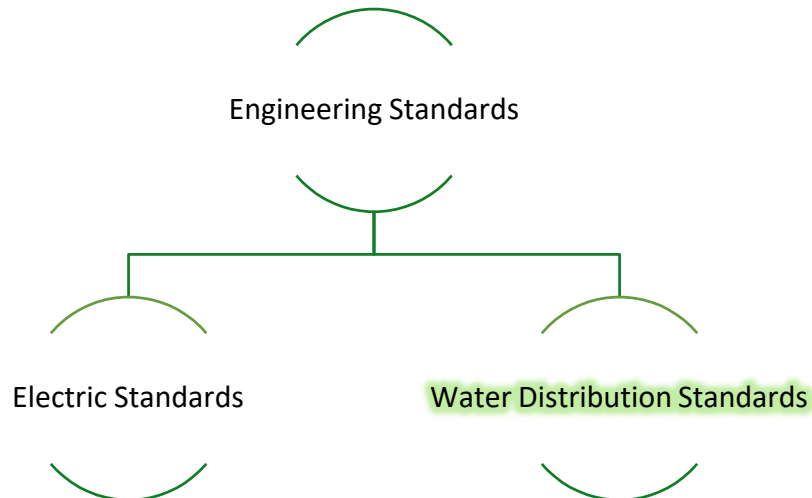
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Introduction

Objective

The *Water Distribution Standards* provide policies, design, and construction guidelines for governmental agencies, design professionals, contractors, private developers, and community groups. These standards strive to maintain the public welfare, ensure safe and reliable service for all customers, and promote efficient development within the water service area. Below is a chart that shows how the standards correspond to the Utilities Department's other requirements.



The *Water Distribution Standards* are intended to supplement rather than replace existing engineering, environmental, and public water works standards and requirements, including but not limited to those of the American Water Works Association (AWWA) and Colorado Department of Public Health and Environment (CDPHE).

References

American National Standards Institute (ANSI)

American Society for Testing and Materials (ASTM)

Aspen Consolidated Sanitation District: Pipeline and Manhole Design and Construction Specifications

American Water Works Association (AWWA)

City of Aspen Electric Standards and Specifications for Electric Installation and Use

City of Aspen Engineering Standards

City of Aspen Municipal Code

City of Aspen Urban Runoff Management Plan

City of Aspen Construction Mitigation Plan

Colorado Department of Public Health and Environment (CDPHE)

Ductile-Iron Pipe Research Association (DIPRA)

Environmental Protection Agency (EPA)

International Fire Code (IFC)

National Fire Protection Association (NFPA)

National Science Foundation (NSF)

Chapter 1: Purpose

1.1 Applicability and Definition

1.1.1 Purpose

This document establishes the City of Aspen Utilities Department's minimum standards for working with potable, reuse, and raw water. All proposed work submitted for approval shall conform to the criteria set forth herein.

1.1.2 Standards Intent

The City of Aspen, under the direction of the City of Aspen Deputy Director of Utilities, publishes the *Water Distribution Standards* to provide minimum design and construction criteria for any distribution system component installed within the community water system service area and for similar components installed outside the service area if eventual connection to the City's system is contemplated. Where any provision of these *Water Distribution Standards* is inconsistent with the provisions of the City of Aspen's Municipal Code, that Municipal Code – or the water policies adopted by the City Council (Resolution No. 9, Series of 1996) – will take precedence.

This design standard is intended as a manual containing the minimum standards for the design and construction of water distribution systems. It is intended to supplement the conditions contained in the water service agreements adopted by city ordinance, which define the standards that new water systems must meet prior to acceptance.

A utility plan shall be submitted when improvements, connections, or abandonments are proposed. A utility plan is also required when conflicts with existing utilities occur that require the redesign and/or relocation of existing infrastructure. Other utilities must be designed in accordance with their respective utility provider standards.

All public utilities – including without limitation water, wastewater, raw water, electric, and storm drainage systems – shall be located within public right-of-way (ROW) or public utility easements. If, during the building permit process, it is discovered that a public utility is not located within an easement, the City shall require that an easement be created for that utility. Additionally, existing prescriptive easements for water, electric, and raw water will require the dedication of an easement for the prospective utility.

Chapter 2: Design and As-Built Guidelines

2.1 General Criteria

This section includes guidance for furnishing and installing pipe, valves, meters, vaults, controls, and fittings for potable water lines. All materials shall be new and of the best available quality. All materials used shall be manufactured and supplied according to the latest revised standards of the American Water Works Association (AWWA), the American National Standards Institute (ANSI), and the American Society for Testing and Materials (ASTM), or as specified hereinafter.

If a development requires the installation, replacement, or upgrading of any public utilities, including water, wastewater, storm drainage, gas, electric, raw water and telecommunication system infrastructure, then the scope of this work must conform to the minimum clearance standards each utility provider mandates.

All improvements proposed to the City's public utilities system shall conform to the City's goals, policies, and standards – including those for water distribution, wastewater collection, storm water, raw water, and electric – as well as all applicable City department guidelines. All plans and specifications shall be approved prior to construction through the City's development review process. A Colorado-registered professional engineer shall prepare and stamp all such plans and specifications. The City of Aspen will charge reasonable fees for the city's review, or a designee to review, these plans and specifications. The City's review, however, shall not relieve any owner, developer, engineer, or contractor from the ultimate responsibility of assuring full compliance with the requirements imposed by the Municipal Code, these Water Distribution Standards, the CDPHE, the AWWA, or any other valid law or regulation.

Whenever a non-potable conduit and a water main or service line are proposed to cross, the existing line shall be potholed (or otherwise exposed) and physically surveyed to ensure proper separation during the design process.

2.1.3 Approved Drawings

Construction shall not begin until the contractor has received the reviewed and signed drawings from the City of Aspen or its designee. The contractor shall possess, at all times, a physical copy of the reviewed plans and specifications. Any changes to the project after the review and signature of the City of Aspen will require a new submittal and review process.

2.1.4 Ability to Serve

The City of Aspen's water system will maintain sufficient water production capacity to adequately serve every property within the City's limits as well as those properties outside the City that are under the purview of the water service agreements. However, each property owner who is requesting water service is responsible for extending approved facilities to the point of service – and to the far end of the property if a future system expansion can be anticipated (at the sole discretion of the Water Department). These extensions are subject to the minimum standards outlined in this document.

2.1.5 Water Main Sizing

The minimum-size water main shall be 8" in diameter; water main sizes shall be increased, at the cost of the developer, to meet the minimum requirements for simultaneously conveying fire and peak-hour flows. Water mains shall be extended in a looped fashion to the farthest point in each development or area that is to be served, and a fire hydrant shall be installed at the end of any non-looped water main if a future system expansion can be anticipated (at the sole discretion of the Water Department).

2.1.6 Pressure Range

Water tanks shall be sited or pressure reducing valves shall be set to provide water customers with a water pressure ranging from a maximum working pressure of 150 pounds per square inch (psi) and a minimum working pressure of 40 psi during peak hour demand.

2.1.7 Looping

All main-feed water supplies to developments shall be looped for dependability and to meet flow requirements of peak water usage plus fire flows while maintaining 20 psig at any point within that pressure zone. Looping shall be such that an interruption of service due to a water main failure will put no more than 500' of main and no more than two fire hydrants out of service, all while maintaining adequate flows and pressure in the remaining portion of the system.

2.1.8 Utility Easements

Potable, reuse, and raw water pipelines and infrastructure shall be installed within dedicated public ROWs or centered within an easement across private property. All easements shall be at minimum 25' wide for pipelines that are 12" in diameter or smaller, and 30' wide if the pipe is larger or the land has a grade steeper than 25%. Fire hydrants require a square easement with dimensions of 10' by 10' with the Hydrant located in the Center of the Easement. If a property re-develops and there are prescriptive easements the easements should be described, dedicated and recorded based upon the above dimensional criteria.

Public utility easements shall comply with the standards set forth in Title 21 and 25 of the Municipal Code, which includes the Water Distribution Standards, Electric Standards, and Engineering Standards. For public utility easement requirements see the latest revision of the City of Aspen's Engineering Standards.

2.1.9 Valves

Main-line valves shall be installed on each line at all street intersections, with a maximum line distance between valves of 350' in commercial and residential areas and 500' in open-space areas. Valves shall also be installed on all fire hydrant branches. When connecting to existing valves, the Water Department may require the replacement of older valve installations to provide for "as new" conditions. Additional valves may also be required at the discretion of the Water Department and to isolate the new system from older sections to enable the newly completed lines to be tested separately from the existing system.

2.1.10 Oversized Mains

The City may, at its option, require the installation of mains larger than the sizes required by the above criteria. In such cases, the City shall pay the additional cost above the amount required for mains that meet the above criteria. The method and basis for such payment shall be per the applicable City policies in effect at the time or as established through the Water Service Agreement.

2.1.11 Fire Protection

Fire flows shall be determined in accordance with the Insurance Services Office's "Guide for Determination of Required Fire Flow," utilizing the standard method of calculation.

All flows for commercial, multi-family, and single-family residential areas will be met according to the current International Fire Code and reviewed by the Fire Marshal and a City of Aspen representative.

Fire hydrants shall be installed at each street intersection and at intermediate points for maximum spacing of 350' in commercial and multi-family areas and of 400' in single-family residential areas. Prior to submittal for design approval, the location and height of fire hydrants shall be approved by the Aspen Fire Protection District with a signature on an approved site plan that shows the water system layout.

Fire flow calculations will be required for a water service line greater than 2" or at the request of the Water Distribution Manager. This is an effort by the City of Aspen Water Department to minimize the demand and negative impacts on the water distribution system. Fire flow calculations should show:

- That a 2" service line size is not adequate for the necessary demand.
- A summary specifying proposed design and why the two inch line failed.
- Signature block certifying calculations are correct.

2.1.12 Pumping Stations and Storage Tanks

Any extensions that will necessitate a pump station or water storage tank are subject to special, detailed engineering review. They are also subject to the terms of the Water Service Agreement, the AWWA Standards, and the Design Criteria for Potable Water Systems adopted by the CDPHE's Water Quality Control Division. All requirements of the design standards shall apply, and additional easements shall be required for the pump stations, storage tanks, access, and appurtenances. All materials, equipment, piping, valves, and associated appurtenances must be reviewed and approved by the Water Department.

Pumping Station Requirements:

- All pump stations shall have a common meter, electromagnetic-type.
- All pump stations will be designed to provide controls that interface with the centralized supervisory control and data acquisition (SCADA) system currently in use at the City of Aspen's Water Treatment Plant.

- All 110 outlets shall be ground-fault circuit interrupted (GFCI) and protected by either a GFCI circuit breaker or outlet GFCI receptacles. The stations shall use galvanized rigid steel or waterproof flex conduits.
- Lifting equipment shall be incorporated into the building for required future maintenance.
- All isolation valves shall be flange-by-flange, counter-clockwise, non-rising stem, Mueller-resilient seat gate valves. Openings shall be to the left. Each gate valve shall have an operating wheel that indicates the open and closed directions. Valve operators at heights above 5' in elevation shall be outfitted with a chain operator to assist in closing the valve without the aide of a ladder.
- All pump stations shall be designed to be exempt from confined space regulations by incorporating stairs or walk-in access and utilize automatic ventilation.
- All pump stations shall have a check valve or electric pump control valves on the discharge or each pump.
- All pump motors shall be driven by soft starts or variable frequency drives subject to approval by the Water Department.

2.2 As-Built Drawings and Approvals

2.2.1 General

As-built drawings are accurate, scaled representations of appurtenances and infrastructure as they exist in the field at the time of the project's completion. As-built drawings of waterline system infrastructure submitted to the City of Aspen Water Department for final acceptance shall be in accordance with the sections below. As-built drawings of waterlines shall include at minimum the requirements specified below.

The following are not considered as-constructed drawings and will not be accepted:

- Construction plans.
- Freehand drawings or sketches.
- Drawing measurements that are based on water line locations after the installation work has been buried.

Designation of all abandonments will be included as a separate layer on as-constructed drawings and labeled as abandoned with the date of abandonment and the pipe material. Details shall be drawn out where abandoned systems are within a 20' radius of a water-system valve cluster.

The design engineer of record for the project submitting the reviewed and approved construction plans shall certify in writing that the installation has been accomplished in accordance with the plans and specifications approved by the City.

A complete list of installed items shall be submitted to the City with an inventory of pipe sizes and lengths, bends, valves, valve boxes, fire hydrants, copper lines, blow offs, and any additional appurtenances installed with the new systems.

2.2.2 As-Built Formats

Two hard copies of all as-built drawings and a saved version of the drawings in ArcView format shall be given to the Water Department.

- 2 hard copies (on standard 24" x 36" sheets) with the engineer's stamp and signature; labeled "As-Constructed".
- 1 disk with the ArcView drawing in both .mxd and PDF formats.
- As-built survey shots in .mxd form.

2.2.3 As-Built Certification

A Colorado-licensed professional land surveyor (PLS) shall survey the potable water system installations. The locations of all mains, service lines, fittings, bends, valves, tracer wire locator boxes, ARVs, restraint and all other appurtenances shall be surveyed, located, and identified.

2.2.4 As-Built Plan Drawing Requirements

- The plan view must be drawn to a scale that displays the plan in a way that is clearly legible. Recommended scale(s) are 1-inch equals 5, 10, or 20 feet.
- Existing and installed improvements and structures; including, without limitation, all grading, transportation, landscaping, City-operated and non-City-operated public utilities (including storm sewer, telephone, gas, electric, cable television, fiber optics, raw water, water and sewer); floodways, floodplains, driveway locations, street lights, roadways, sidewalks, curbs, and gutters; traffic signal poles and controllers; and pavement edges, trees, and other significant features.
- Match lines that connect information between drawings.
- Utility information is required according to following (for installed unless otherwise noted):

- Pipe type, size, class, and joint, thrust restraint, valves, and valve type(s), fittings and fitting type(s), corporation and curb valves.
- Angles at alignment changes.
- Horizontal locations of structures.
- Special notation where waterline is buried less than 7' or greater than 10' in depth.
- Existing and proposed contours of at least 1-foot intervals (steep slopes may have alternate intervals as approved by the City Project Manager).
- Existing and proposed storm drainage facilities, including storm sewers, inlets, manholes, culverts, swales, detention ponds, and drainage ways.
- Horizontal and vertical locations and sizing of utility covers, surface appurtenances, inlets for storm drainage, potable water, and the electric system.
- Horizontal and vertical location of drainage outfall points.
- Horizontal and vertical location of all utility crossings identified (surveyed) during construction.
- Any installed insulation (type and horizontal alignment).
- Abandoned infrastructure left in place. These should be field located items identified during construction.

2.2.5 As-Built Profile Drawing Requirements

- The profile view is to be located directly below the plan view along a matching survey line and stationing and is to be drawn at a horizontal scale that matches the plan view and a vertical scale of 1-inch equals 5 feet. The profile view shall contain the following information:
 - Finished grade ground elevations.
 - All fittings.
 - Insulation (elevation installed above the infrastructure)
 - Stationing sequence, preferably left to right.

- Finished grade elevation(s)
- Match lines.
- Elevations for invert of pipe. (Top of pipe is acceptable only for existing utilities observed during construction.)
- Crossings of existing and proposed utilities. Crossing call out and specific dimensioning from outside of conduit to outside of conduit.
- Elevations of inlets, inverts, and connection locations.
- Interference drawings that show all crossings for any utilities identified during design or construction.
- Finished grades over utilities.

2.3 Utilities and the Public Right-of-Way

2.3.1 Colorado Department of Transportation Right-of-Way

All work within the Colorado Department of Transportation (CDOT) right of way shall meet all CDOT requirements and standards in addition to these Distribution Standards. All work occurring within the CDOT ROW shall require a permit. To determine the appropriate permitting, contact CDOT for specific requirements.

2.3.2 City of Aspen Right-of-Way

All work within the City of Aspen ROW shall meet all City of Aspen Engineering Department requirements and standards in addition to these Distribution Standards. All work occurring within the City of Aspen ROW shall require a ROW permit. To determine the appropriate permitting, contact the City of Aspen Engineering Department for specific requirements: 970-920-5080.

2.4 Variances

The City may grant variances to the Water Distribution Standards when practical difficulties or unnecessary hardships exist that cause inconsistencies with the purpose and intent of the construction standards. These issuances shall not compromise the operation or safety of the potable water distribution system.

Requests for variances from the standards, policies, or submittal requirements of this document shall be submitted in writing with appropriate documentation and justification to the Deputy Director of Utilities. Variance requests must, at a minimum, contain the following:

- Benefit to the City of Aspen and the existing water system and customers.

- Criteria under which the applicant seeks a variance.
- Written justification for non-compliance with the standards, cost is not a compelling reason for a variance.
- Proposed alternate criteria or standards to comply with the intent of the criteria.
- Supporting documentation, including necessary calculations.
- The proposed variance's potential adverse impacts for adjacent landowners.
- An analysis of the variance request, signed and stamped by a Professional Engineer who is licensed in Colorado.

Upon receipt of a complete application for a variance, the Deputy Director of Utilities shall prepare a statement of recommendation or denial.

Chapter 3: Water Distribution Construction Standards

3.1 Pipes and Fittings

3.1.1 General

The City of Aspen Water Department requires correct installation of main lines, utilizing AWWA-approved pipes, and appurtenances; the line or system must be inspected by registered Professional Engineer (PE), the design engineer of record, and a City of Aspen Water Department representative (the Engineering Inspector or a Water Department staff member).

3.1.2 Construction Timeframe

All water-line construction shall take place between April 1st and October 31st. Outside of this construction window, no excavation, testing, or other valve operations shall be allowed, except when the Distribution Supervisor/Operator in Responsible Charge determines such operations to be necessary for safety reasons.

3.1.3 Pipe Classification

All water mains shall be Class 52 ductile iron pipe (DIP), be thin-cement-lined, use slip joints or mechanical joints with rubber gaskets, and conform to AWWA specification C151 for minimum pressure of 350 psi. All fittings shall be thin-cement-lined, and use mechanical joints in accordance with AWWA C111. All pipes and fittings shall have copper straps or No. 4 solid copper wire welded across joints to ensure conductivity. All welds shall be protected with tar. To resist pipe corrosion, the use of 8-mil polyethylene wrap shall be required in areas of high soil conductivity, as determined by the soils report provided by the developer. When polyethylene wrap is used, additional restraint shall be provided to account for the loss of pipe wall friction.

The City of Aspen will not allow any plastic or polyvinyl chloride (PVC) pipe in its potable water system. This includes private systems attached to the City of Aspen's system.

3.1.4 Testing

Chlorination/bacteriological, hydrostatic/leakage, and conductivity tests shall be required on all new lines and systems before acceptance by the Water Department. These tests shall be performed in accordance with the latest revision of ANSI/AWWA Standard C651.

3.2 Installation

3.2.1 General

Construction shall not begin until the contractor has received the approved and signed drawings from the City of Aspen. The contractor shall possess a physical paper copy of the approved plans and

specifications at all times. Any changes to the project after the City of Aspen's approval and signature will require a new submittal and review process.

The contractor shall notify the City of Aspen Water Department through the front office (phone 970-920-5110) at least 2 full working days prior to the start of construction. Voicemail messages left outside hours of operation will not count towards the 2 full working days of prior notice. No other point of contact will result in a work order to document the adequacy of the notice.

The contractor shall take all precautions with the interior of the water line to be installed, the existing water line, and the valves and appurtenances to keep them dry, clean, and clear of debris. If the pipe is dirty, has gravel or debris inside, or has sat unused for a long-period of time, flushing and/or cleaning the line prior to installation may be required.

Please refer to latest revision of AWWA Standard C600, Installation of Ductile-Iron Water Mains and Their Appurtenances.

3.2.2 Excavation and Potholing Definitions

Excavation is defined as any earth moved by mechanical means. Such as track mounted excavator or rubber tire-mounted backhoe.

Pot-holing is defined as any earth moved by hydro-excavation utilizing a high-pressure water nozzle and vacuum such as a Vac-Trailer or Vac-Truck.

3.2.3 Water Shutdown Requests

The contractor shall notify the City of Aspen Water Department through the front office (phone 970-920-5110) at least 2 full working days prior to the any requested shutdown of an active water main for extension or modification. Voicemail messages left outside hours of operation will not count towards the 2 full working days of prior notice. No other point of contact will result in a work order to document the adequacy of the notice. Only the Aspen Water Department, unless otherwise specified, will develop and deliver notices to prepare affected customers for a planned temporary shutdown of an active water main. Water main shutdowns are not permitted for service line work without the written permission of the Operator in Responsible Charge (ORC).

3.2.4 Excavation, Bedding, and Backfill

3.2.4.1 General

Trench excavation shall be performed in accordance with the requirements of the latest revision of the City of Aspen's Engineering Standards.

All bedding and backfill material shall be free of frozen material, organic material, and debris. The materials to be used in each trench zone are indicated on the Water Main Trench Cross-Section Detail as shown on the Water Distribution System Standards Installation Details drawing; these materials are described herein.

3.2.4.2 Bedding/Pipe Zone

The bedding zone shall consist of all material placed below the pipe invert. The pipe zone shall consist of all material placed above the pipe invert to the specified elevation. The bedding/pipe zone material shall be placed for the full length of the pipeline. The bedding/pipe zone material shall be $\frac{3}{4}$ " screened rock that has been hauled in for bedding – not native excavated material. The material shall extend from 6" below the pipe and bells to 12" above the top of the pipe and bells, and it shall extend for the full width of the excavated trench. Tamping equipment shall be used to thoroughly tamp the material to a minimum of 95% maximum dry density or 75% relative density. The moisture content of the material shall be within 2% of optimum.

3.2.4.3 Backfill zone

The backfill zone shall consist of all material above the pipe zone. Fabric shall be installed between the screen rock and all other backfill material. Follow CDOT, Pitkin County, and City of Aspen ROW specifications for backfill and compaction within the ROW or where asphalt is to be placed above the pipeline trench.

Compaction shall be completed by mechanical tamping of 12"-maximum loose lifts using mechanical tampers or vibratory rollers. All other means must be approved in writing by the engineer. All backfill shall be compacted to 95% of maximum laboratory dry density (ASTM D698) or to 75% relative density (ASTM D2079). The material shall be within 2% of optimal moisture content.

The contractor may request approval of alternate means of compaction. Such a request must be submitted to the engineer in writing. The engineer will approve the compaction method in writing only. Use of specified or approved compaction methods does not relieve the contractor from providing a completed project that meets the intent of this specification.

Native backfill material shall consist of suitable material from the excavated earth. No rocks or boulders shall be allowed in the first 24" of the trench above the pipeline. The backfill material above the first 24" of the trench shall have no boulders larger than 6" in any dimension and shall be carefully placed so that no damage will be done to the pipeline. Native backfill shall be used to finished grade if trench excavation occurs in open-field conditions.

Engineered backfill material shall be road-base, Class 6 aggregate base course.

3.2.4.4 Testing and Inspection

Prior to backfilling, all waterlines and appurtenances shall be inspected and approved by the City.

All materials shall be subject to gradation and compaction tests prior to approval. The test results shall be submitted to the City for approval and verification of their accuracy. The contractor shall bear the costs of these tests.

Compaction requirements shall conform to the measurements of maximum dry density according to ASTM D698 (Moisture-Density Relations of Soils [Standard Proctor]). Should ASTM D698 not be suitable for the material placed, the compaction requirements shall conform to ASTM D2049 (Test for Relative Density of Cohesionless Soils).

When the City requires it, the contractor shall excavate backfilled trenches for the purpose of performing compaction tests at the required locations and depths. The contractor shall be responsible for reinstalling and compacting the test excavations at no additional cost to the City.

Minimum compaction testing frequency for pipelines shall be one compaction test per 150 linear feet of piping and wherever piping is within 2-feet of structures. A compaction single test shall contain two samples per lift.

3.2.4.5 Road-Base Material Specification

The road-base material shall be Class 6 aggregate base course, as specified by the State of Colorado Department of Transportation (CDOT); the material shall meet the following gradation:

Aggregate Base Course – CDOT Class 6 Gradation	
Sieve Size	Total Percentage Passing By Weight
3/4"	100%
# 4	30% – 65%
# 8	20% – 55%
# 200	3% – 12%

3.2.4.6 Screened Rock Material Specification

Granular or granular backfill material shall be imported crushed rock or angular surfaced gravel and shall meet the following gradation (ASTM D448, m 67):

Granular Bedding Gradation	
Sieve Size	Total Percentage Passing By Weight
3/4"	100%
3/8"	22% – 55%
# 4	10%
# 8	5%

3.2.5 Depth

New lines and systems installed in the City of Aspen’s water system must be at least 7’ deep from the top of the pipe to the finished grade. The maximum depth at the finished grade will not exceed 10’. Additional fill placed on the line beyond 10’ in depth will require removing the fill or moving the main at the property owner’s expense. The City may require a survey and/or potholing, at the property owner’s expense, to determine the depth of bury after final grades are established. Insulation shall not be used as a substitute for the full 7’ of cover for new construction. If necessary, water mains shall have extra depth of cover at tie-ins so that the tie-ins can be made without vertical bends.

3.2.6 Thrust Restraint

City of Aspen requires two forms of thrust restraint at all bends and fittings to resist hydraulic thrust. Allowable forms of thrust restraint are concrete thrust blocks, zinc-coated steel tie rods, or Mega-Lug retainer glands. Concrete thrust blocks shall be formed and poured in place on all fittings, including taps that are 4” or larger. A poly wrap bond breaker shall be installed between concrete and fittings. Concrete shall only be in contact with the fitting and not the pipe that is attached to the fitting. Concrete shall have a minimum 28-day compressive strength of 3,000 psi.

3.2.7 Clearances

Water mains shall be located at least 10’ horizontally from any non-potable pipe system, including manholes. At all perpendicular crossings, the water main shall be at least 18” above the non-potable pipe as measured from outside diameter and bottom of the water pipe to outside diameter and top of non-potable pipe. In addition, a full length of water pipe must be located so both water pipe joints will be as far from the non-potable pipe as possible. All other crossing circumstances shall require a variance (see Section 2.4 above). Also, the contractor must consult the Aspen Consolidated Sanitation District to determine where sanitary sewer crossings exist.

3.2.8 Identification

Potable water systems shall be marked with blue identification tape. Tape shall be installed 2’ above the pipe (non-potable systems will be marked with purple identification tape). Where there are potable and raw water lines in the same area, as defined by the City of Aspen or its designee, the pipe being laid at the tie (whether raw or potable) will also be wrapped with the appropriate identification tape.

3.3 Gate Valves and Valve Boxes

3.3.1 Gate Valve Operation

City of Aspen Water Department employees are the only people authorized to operate valves on the water distribution system. (Note: The service line starts after the corporation valve; it is the responsibility of the property owner and is not part of the water distribution system.) It is unlawful for any persons other than Water Department personnel to operate any City of Aspen Water Department water system appurtenances, per City Ordinance 25.08 ("City of Aspen Water Utility Operation and Control"). The contractor shall notify the City of Aspen Water Department through the front office, (phone 970-920-5110), at least 2 full working days prior to any requested operation of a water system valve for either main line extensions or testing. Voicemail messages left outside hours of operation will not count towards the 2 full working days of prior notice. No other point of contact will result in a work order to document the adequacy of the notice.

3.3.2 Gate Valve Size and Type

Gate valves shall be installed for all valves 12" and smaller. Gate valves shall be Mueller or a pre-approved equivalent, have a resilient seat, be epoxy-coated, use a mechanical joint or flange (as required), have a non-rising valve stem, and open by turning to the left (counterclockwise). Gate valves shall conform to latest revision of AWWA Specification C509 and be certified by ANSI/NSF 61.

Valves greater than 12" shall be Mueller or a pre-approved equivalent butterfly valves, with the model selected depending on the working pressure that they will be accommodating. Water Department shall evaluate valve selection for valves greater than 12" on a case-by-case basis.

3.3.3 Installation at Intersections

At intersections, gate valves shall be installed within 3' of a tee, cross, or bend. All connections shall have Mega-Lug® followers on the fittings. All mechanical joint fittings shall have the appropriate restraint as required in section 3.2.5 above.

3.3.4 Valve Box Assemblies

Valve boxes shall be three-piece Tyler Pipe cast-iron (or preapproved equivalent) valve boxes to accommodate 4" through 12" valves. The shaft size shall be 5.25", and the screw type shall be 6850 Series-668-S and/or 6865 Series-F. Complete extension shall be 62" to 82". Parts shall be universally interchangeable for other valve boxes within the system. Lids shall be flat-shallow or ribbed-regular and are to be marked with the word "WATER." The top of the valve boxes shall be set recessed below the existing or future asphalt surface. In areas that are not to be paved, the valve box shall extend 6" above the finished grade and be protected by a metal fence post or other means as approved by the Water Department.

For valves that are on lines deeper than 9', extension rods and a rod-centering ring are required. A solid 6" DIP shall be required in place of the sectional valve boxes. This alternate riser shall incorporate valve box tops with standard water lids, as specified above.

At completion, the contractor – in the company of the City or its representative – shall inspect the valve boxes to ascertain that they are plumb, that the valve-operating nuts are centered in the valve boxes, that the key will fit over all the operating nuts, and that all valve boxes are clean of obstacles that might prevent operation. If any of these conditions are not met, the installation will not be accepted.

3.4 Pressure-Reducing Valve Installation and Vaults

Design and installation of pressure reducing valves and associated vaults must be approved by the Water Department and will be evaluated on a case-by-case basis.

3.5 Fire Hydrants

Fire hydrants shall be Mueller A-403 Super Centurion with the 40" top barrel, painted Glass-Black or a preapproved equivalent with a minimum of 7' burial. Hydrants shall have one 4 ½" pumper connection and two 2½" hose connections. No other type of hydrant connections will be accepted. Hydrants shall have National Standard Thread, open to the left (counterclockwise), and have a standard five-sided operating nut. The main valve opening shall be 5¼" minimum. Hydrants shall be designed to operate under less than 250 psi working pressure. Tees for fire hydrant laterals shall be mechanical-joint on the run and 6" flanged on the branch (a swivel tee is acceptable). Valves on fire hydrant laterals shall be 6" flanged x mechanical joint. Megalugs will be installed on all branch and run connections. Megalugs and concrete thrust blocks will be accepted where virgin soil is available. Megalugs and tie rods will be installed where soil disturbance has occurred. Two 3/4" zinc-coated, high-strength steel tie rods (or preapproved equivalents), nuts, and bolts shall be installed from the mechanical-joint side of the fire hydrant valve. A minimum 2 cubic feet of 1/2" screened-rock drain bed, 12" deep, shall be provided at the base of each fire hydrant and covered with a double thickness of plastic sheeting for a distance of at least 3' around the barrel of the hydrant. All fire hydrants should be verified for proper operation and witnessed by City staff prior to acceptance. A minimum of 4' of clear area (with no fences, shrubs, trees, or bushes) shall be kept around all hydrants. Hydrants shall be installed in accordance with manufactures installation instructions and be buried to the manufacturer's bury line indicated on the hydrant column. Hydrant laterals shall be installed as straight possible with minimal number of joints.

Fire hydrants will not be used for purposes other than authorized Fire Department and Water Department use.

Aspen Water Department personnel and Aspen Fire Department personnel are the only people authorized to operate the system's fire hydrants, per Municipal Code 25.08.

3.6 Fill Station

Contractors who require fill station water must contact the Water Department's front office at 970-920-5110, fill out a Fill Station Permit, and use the fill station to fill their trucks. The fill station permit sticker must be in the cab of the truck and visible to vehicular traffic. An approved and certified backflow device or adequate air gap is required on all commercial water-transport systems.

3.7 Air/Vacuum Valve and Vaults

Design and installation of air release valves and associated vaults must be approved by the Water Department and will be evaluated on a case-by-case basis.

3.8 Abandonment of System Appurtenances

3.8.1 Abandonment of Main Lines

All main lines scheduled to be abandoned shall be removed where applicable. Main lines that are to be left in place shall be plugged/capped at both ends of abandonment unless otherwise specified by the City of Aspen.

3.8.2 Abandonment of Fire Hydrants

Fire hydrants, associated valves, and laterals shall be removed. The tee on the main waterline where the hydrant lateral began shall be removed and replaced with two restrained solid sleeves and a similar-sized ductile iron pipe pup.

3.8.3 Abandonment of Service Lines

Service lines shall be abandoned at their source prior to the tapping of a new service. Abandonment shall include turning off the corporation valve, cutting the old service above the compression nut, and crimping the abandoned service line. In the event the corporation valve leaks, a non-lead solder end-cap or repair clamp shall be utilized. This shall be inspected by Water Department Staff before the work is backfilled and buried. The contractor shall notify the City of Aspen Water Department through the front office (970-920-5110) at least 2 full working days prior to the day the service is to be abandoned. Voicemail messages left outside hours of operation will not count towards the 2 full working days of prior notice. No other point of contact will result in a work order to document the adequacy of the notice.

3.8.4 Abandonment of Tees

Tees shall be removed and replaced with two restrained solid sleeves and a similar-sized ductile iron pipe pup.

3.8.5 Abandonment of Valves

Valves shall be removed and replaced with two restrained solid sleeves and a similar-sized ductile iron pipe pup.

3.8.6 Abandonment of Pressure-Reducing Valves and Vaults

PRVs and PRV vaults shall be removed including all associated appurtenances, including the vault. Prior to abandonment of PRV vault the Water Department shall determine which appurtenances shall be salvaged and turned over to the Water Department. Electric and telecom service to the physical vault shall be properly disconnected and abandoned according to the specifications of the service provider.

PRVs shall be removed and replaced with two restrained solid sleeves and a similar-sized ductile iron pipe pup.

3.8.7 Abandonment of Meter Pits

Meter pits shall be abandoned by removing all metering equipment and associated metering pit infrastructure.

3.8.8 Thrust Restraint of Abandoned Appurtenances

All capped or plugged pipe ends or fittings shall be restrained with a properly installed concrete thrust block and Megalug joint.

3.8.9 City of Aspen Inspection of Abandonments

A City of Aspen Water Department representative shall visually inspect and witness any and all infrastructure scheduled to be abandoned. The City of Aspen Water Department shall be notified through the front office (970-920-5110) at least 2 full working days prior to the day any infrastructure is to be abandoned. Voicemail messages left outside hours of operation will not count towards the 2 full working days of prior notice. No other point of contact will result in a work order to document the adequacy of the notice.

Chapter 4: Inspection, Disinfection, and Testing

4.1 City of Aspen Inspection

Backfill shall not be done until the main and its services (where applicable) have been inspected by the City's designated representative for alignment, depth, and proper bedding. Inspections of water system improvements shall be made each day prior to the trench backfill.

4.2 Disinfection

4.2.1 Main Line Disinfection – General Considerations

A disinfection plan, provided by the contractor or design engineer of record, conforming with AWWA C-651 is required for submittal, review and approval prior to delivery of potable water to customers. Disinfection of main lines shall start with a clean line. Disinfection by chlorination of the pipe shall be performed prior to its acceptance by the City. Flushing, chlorination agent, and method of application shall be approved by the City of Aspen or its designee in accordance with latest revision of ANSI/AWWA Standard C651. The City will not provide labor, material, or test kits for disinfection to contractors installing mains. The chlorine level shall be at least 25 mg/L at the pipe extremities and at other respective points, and this level shall be retained in the line for at least 24 hours. The main shall be flushed as soon as possible after the chlorination is accepted by the City of Aspen. Chlorine residuals greater than 200 mg/L are detrimental to the lining of the pipe; therefore, the City will not accept lines with higher than 200 mg/L residuals. The contractor shall test the chlorine residual and flush water with an appointed City of Aspen representative to witness the testing. Copies of the test results shall be provided to the City of Aspen Water Department. Care shall be taken in flushing the pipeline to prevent property damage, danger to the public, and stream contamination. Please refer to ANSI/AWWA Standard C655, Field Dechlorination. The chlorination, flushing, and bacteriological testing of the finished pipeline shall be done prior to hydrostatic testing. All valves connecting to the City of Aspen's water system shall be operated by City of Aspen Water Department personnel only.

The City of Aspen Water Department recognizes all disinfection methods presented in ANSI/AWWA Standard C651. The Water Department *prefers* the disinfection of new water lines be accomplished using the tablet chlorination method. Should alternate disinfection methods be desired by designer/contractors, a written request shall be submitted to justify use of alternate method to disinfect the pipeline(s).

4.2.2 Tablet Method

Just prior to the pipe's installation in the trench, tablets shall be attached to the inside top of the pipe with Permatex Form A Gasket No. 2, Permatex Clear RTV Silicone Adhesive Sealant, or food-grade adhesives that have USDA and NSF 61 approval. A base dose of 25 mg/L shall be in the line for a minimum of 24 hours and tested for concentration. If the water temperature is less than 41°F, leave the line to soak for 48 hours to dissolve tablets. The 48 hours soak period shall not be exceeded and cannot occur over a weekend. If the concentration is at least 25 mg/L or greater after the required holding period, then flush the line and proceed to take a bacteriological test.

4.2.3 Bacteriological Sampling and Testing

Water samples shall be collected for bacteriological examination and residual chlorine content testing before the pipe is pressure tested. This sampling will be done by the contractor and witnessed by the City of Aspen representatives assigned to the project. The testing shall conform to AWWA Standards C651, Section 5.1.1.1, Option B:

Before approving a main for release, let it sit for a minimum of 16-hr without any water use. Then collect, using the sampling site procedures outlined in the Standard and without flushing the main during this period, two sets of samples a minimum of 15-min apart while sampling taps are left running. Both sets of samples must pass for the main to be approved for release.

The state-certified laboratories in the immediate area are:

Snowmass Water and Sanitation District (970-923-2056) Aspen

Consolidated Sanitation District (970-920-7262, ext. 14)

4.2.4 Storage Tank Disinfection

Refer to AWWA Standard C652, Disinfection of Water-Storage Facilities for complete tank disinfection procedures and guidance. Storage tank disinfection procedures shall be evaluated by the Water Department on a case-by-case basis.

4.3 Testing

4.3.1 Pressure Tests

In the presence of the City of Aspen's designated representative, the contractor shall pressure test all pipelines and piping to 150 psi or 150% of the static pressure, whichever is greater (to a maximum of 350 psi), for 2 continuous hours. No hydrostatic test shall be conducted on any portion of the pipeline

until all field-placed concrete has properly cured, the line has been chlorinated, and the bacteriological test has been passed.

Prior to testing, the pipeline shall be filled at a rate that will neither cause surges nor exceed the rate at which air can be released through the air valves at a reasonable velocity. All the air within the pipe shall be properly purged. If no air valves are installed on the pipeline, air shall be released through fire hydrants and blow offs. Where blow offs or hydrants are not available – or where they are not effective in purging air from the line – the Water Department or its inspector shall require a tap to purge the line. The location of the tap shall be at the inspector's discretion – preferably at the highest point on the line. The size of the tap will be determined by a Water Department representative. The tap will be removed, and a stainless steel full-circle clamp will be placed over the pipe penetration after the testing is complete. In the event that a blow off needs to be maintained on the pipe, the tap will be made on top of the main, with a curb valve installed to control the flow. The curb box and associated blow off pipe will reside inside a 5.25" valve box embedded in 12" of gravel. Materials for the blow off will consist of a Type-K copper pipe and a 1" Mueller curb box.

The contractor shall furnish the water, pump, and means of measuring water volume associated with pressure testing at testing locations designated by the Water Department. The contractor shall also furnish all labor, bulkheads, and miscellaneous material. The contractor will do all work (except operating the valves on the City's water system) to test the pipeline, maintain the required test pressure, and relieve the pressure in the pipeline after testing.

The filling of the pipeline and the proper disposal of chlorinated or other water shall be done only with approval of the City of Aspen's designated representative.

All valves connected to the City system shall be operated solely by City of Aspen Water Department Personnel.

All testing procedures shall be conducted in accordance with the latest revision of ANSI/AWWA C600 Section 5.2.1.2.

4.3.2 Conductivity Tests

The pipeline shall also be tested for electrical conductivity in the presence of the City of Aspen's designated representative. Connectors or bonds shall be installed so that the pipeline will act as a conductor. To be sure that all installed bonds are effective, no more than 1000' of pipeline will be electrically tested at one time. The line shall be tested after the trench is backfilled and compacted but before any street surfacing or seeding has taken place. The line shall be tested by connecting a low-voltage source to be sure that the pipe acts as a conductor. House services and fire hydrants shall be tested on a section-by-section basis. If the pipeline does not conduct an electrical current, the bonds or connectors will be checked and repaired until the defect is found.

The contractor shall notify the City of Aspen Water Department through the front office (970-920-5110) at least 2 full working days prior to the start of any testing. Voicemail messages left outside hours of operation will not count towards the 2 full working days of prior notice. No other point of contact will

result in a work order to document the adequacy of the notice. All tests, including pressure and electrical tests, shall be performed in the presence of the City of Aspen's designated representative.

Please refer to latest revision of AWWA Standard C600, Installation of Ductile-Iron Water Mains and Their Appurtenances.

Chapter 5: Water Service

5.1 Water Taps

5.1.1 Responsibility for Tapping

Tapping of mains shall be the responsibility of the City of Aspen Water Department. A Mueller corporation stop (or a preapproved equivalent) with CC threads and copper compression fittings shall be used. An appropriately sized gooseneck shall be made in all copper service lines to prevent them from being pulled from the main during backfill and compaction operations.

All coupons and shavings from taps shall be removed from the main line to protect the system from future damage.

The homeowner, contractor, or developer owns the service lines from the corporation valve to the home or business.

5.1.2 Tapping Availability and Prerequisites

Water service taps to the City of Aspen's water mains will be made only from April 1st through October 31st. Taps will not be made on Fridays or on the days before holidays. Billing for utility hookup charges will be done after the work is completed.

Existing taps that are to be replaced will be abandoned prior to the installation of a new tap (see Abandonment of System Appurtenances Section 3.7). The Water Department requires at least 2 full working days of notice through the Water Department Front Office (920-5110) prior to service abandonments and new taps. No other point of contact will result in a work order to document the adequacy of the notice.

Service taps, curb stops, and service lines shall be located within 10' of the primary access to the property (either the driveway or the sidewalk to the front door) unless the Water Department recommends and approves a different location based on the availability of water mains. Curb stops should be located outside of the Public ROW and in a location open and accessible to the Homeowner, locations should be reviewed and approved by the Engineering Department and Water Departments prior to the City scheduling any taps.

Prior to tapping 3/4" to 2" services, the main shall be exposed for a minimum of 4' in length, with a 2' clearance around the pipe and 6' of clear trench on the side of the main where the tap is to be made. The proposed tap location must be at least 18" away from any other fitting, tap, or pipe disturbance. Prior to tapping services of 4" and larger, the main shall be exposed for a minimum of 4' in length, with a 3' clearance around the main and 10' of clear trench on the side of the main where the tap is to be made. Taps that are 4" and larger shall also have a concrete thrust block installed. In every case, the excavation shall meet all OSHA requirements.

5.1.3 Pre-Tapping

To avoid disruption of a roadway surface, pre-tapping of a system may be permitted for new subdivisions only through a prior written pre-tap agreement.

The written pre-tap agreement will specify the following:

- Standards for mapping service lines and curb-box locations
- Responsibility for maintaining connections until service is initiated
- Procedures for setting up an account when water service is desired at a pre-tapped location
- Penalties for failure to comply with the agreement or to connect new uses to the municipal system
- Water Department charges for tap installations and inspections

For private systems, the City of Aspen Design Standards will be followed for materials and construction.

The Water Department will provide, at the customer's expense, the tapping saddle and the corporation valve. The contractor will provide and install the approved pipe, fittings, curb valve, curb box with rod, thaw wire, and clamp. The curb valve shall be a Mueller-type (or preapproved equivalent) copper compression type. The curb box shall be a 1" Mueller type with a rod and saddle (or a preapproved equivalent).

5.1.4 Service Line Materials

Each water-service line shall be a continuous tube of Type-K copper from the tap on the main to the curb box and from the curb box to the building/structure, unless otherwise authorized in advance by the Water Department. A solid #4, or larger, copper thaw wire shall be connected to the service line at the corporation valve with a bronze clamp and laid in the service trench, separated from the service line and the curb box by a horizontal distance of 12", and attached only at the top of the curb box.

A compression-type Mueller ball-curb valve and 1" Mueller-type curb fire hydrants

box with a rod and saddle (or a preapproved equivalent) shall be installed. Services that are 1.5" to 2" will have enlarged curb box bases and use a 1" curb box. Services that are located within a pressurized system (i.e., a portion of the water distribution system not connected to a storage tank is open to the atmosphere) shall include backflow prevention that is rated for a high degree of cross-connection hazard.

Dissimilar metals or materials containing lead will not be allowed.

5.2 Installation

5.2.1 Installation of Service Lines (3/4" to 2")

All 3/4" through 2" water services shall be installed after the water mains have been installed unless they are placed as part of a pre-tapping agreement. All water services shall be placed at least 10' away from any non-potable conduit from the main to the building. All plumbers and contractors are advised to perform a pressure test on all services. Where pre-tapping is permitted, the pressure test will include the service lines connected to the main and include the entirety of the service line from corporation stop to within the building/structure. All service lines shall be inspected by Water Department prior to backfill.

New service lines must be buried a minimum of 7' deep. The Aspen Water Department requires correct installation of service lines in full compliance with AWWA Standards. All services from 3/4" through 2" will be connected to the building using Type-K copper.

Each water-service line shall consist of a continuous tube of Type-K copper from the tap on the main to the curb box and from the curb box to the building unless otherwise approved by the Water Department.

All service lines shall be bedded with road base or washed sand from 6" below to 6" above the service line. A compression-type Mueller ball curb valve and 1" Mueller-type curb box with a rod and saddle (or a preapproved equivalent) shall be installed. Services that are 1.5" to 2" will have enlarged curb-box bases and use a 1" curb box. Services that are located within a pressurized system (i.e., a portion of the water distribution system not connected to a storage tank is open to the atmosphere) shall include backflow prevention that is rated for a high degree of cross-connection hazard. Backfill shall not be done until the line is inspected by the City's designated representative for alignment, depth, and proper bedding. Inspections of all water-system improvements shall be made each day prior to the backfill of the trench.

A solid, bare #4 copper thaw wire must be installed from the corporation stop to the top of the curb box. The thaw wire shall make contact with the water line only at the corporation stop and at the top of the curb box.

Saddle taps shall be a Mueller series DR2A with double alloy-steel straps, epoxy-coated ductile iron body, and high-strength alloy nuts and bolts (or a pre-approved equivalent).

5.2.2 Installation of Service Lines (4"+)

Services that are 4" and larger will be of DIP, and the specifications for installation will be the same as those for the main lines except that as-built drawings may be omitted at the utility's discretion. Separation from non-potable water conduits shall be the same as for water mains.

All service lines shall be bedded with road base or washed sand from 6" below to 6" above the service line. Backfill shall not be done until the line is inspected for alignment, depth, and proper bedding by the City's designated representative. Inspections of all water-system improvements shall be made each day prior to the backfill of the trench.

All service lines 4" and larger shall be reviewed, tested and inspected in the same manner as the main lines. The line shall be restrained to the first fitting inside the building, this can be accomplished via wall flanges, tie rods or other methods to be reviewed during the submittal process. All parts for service-line installations must be available for inspection prior to the start of construction. Private systems will abide by the system's pre-tap agreement.

5.2.3 Service Line Inspection

All new service lines installed within the City of Aspen Water Distribution System shall be inspected and approved by a State of Colorado certified water professional. Upon approval, service line will be allowed back filled. Inspection must be complete before service line has been back filled.

5.3 Direct Taps

Direct taps to potable water pipelines are not allowed by the Water Department, no exceptions.

5.4 Service Line Sizing

Domestic service lines without oversizing for fire flows will use the same size pipe as the tap (source) on the main line to the discharge side of the meter. This includes all fittings and appurtenances.

Combined fire-flow and domestic service will be the same size from the main to the domestic service junction and will use a common line with a single penetration into the building. For purposes of utility billing (demand charges and tap fees), tap size will then be determined by the sizes of the meter and the piping on the domestic side.

Fire flow calculations will be required for a water service line greater than 2" or at the request of the Water Distribution Manager. This is an effort by the City of Aspen Water Department to minimize the demand and negative impacts on the water distribution system. Fire flow calculations should show:

- That a 2" service line size is not adequate for the necessary demand.
- A summary specifying proposed design and why the two inch line failed.
- Signature block certifying calculations are correct.

5.5 Common Service Lines

When separate accounts are supplied by a common service line, the Water Department must approve and record a common service line agreement. Separate controls to each service must be installed in a mechanical room, which will remain accessible to the Water Department and to emergency workers. In the event that it is not feasible to locate separate controls, meters, and any required backflow devices in an accessible mechanical room, a special review may be made by the Water Department to meet the intent of these standards.

5.6 Owner Responsibility

It is the responsibility of the owner to maintain and repair the service line in its entirety, including the curb stop valve. Leaking service lines are the responsibility of the owner to fix and shall be repaired within 48-hours of notice by the Water Department to repair those leaking fixtures or be subject to immediate shutdown of water service in accordance with the latest revision of the City of Aspen Municipal Code.

City customers with service lines 4" and larger are responsible for service line and the first valve off of the mainline tee that connects and isolates their service from the City's water system.

5.7 Utility Investment Charge

Utility investment charges (commonly known as tap fees) must be paid before the tap will be scheduled. The tap permits and accompanying work order will state the size of the permitted tap. The Water Department requires at least 2 full working days' notice through the front office (970-920-5110) to locate a service or main line. Voicemail messages left outside hours of operation will not count towards the 2 full working days of prior notice. Taps will not be made on Fridays or on days before holidays. Billing for utility-hookup charges will be done after the work is completed.

5.8 Meter Installations

All potable and raw water services shall be metered.

Installation of water meters and remotes will be the responsibility of the property owner. All meters installed will be inspected and meet the standards as specified by the City of Aspen Water Department.

Specifications are as follows:

- All meters will be set as close as possible to the point where the service enters the building.
- Meters shall be protected from freezing.
- The installation shall be readily accessible for servicing and repairs. If a meter is installed in a crawlspace, an access panel or trap door will be provided for quick and safe access.
- All meters will be installed no more than 36" above the floor or work surface with a minimum clearance of 12" above or in front of the meter for easy visual inspection of register face.
- Meters 3" and larger will be Honeywell Elster evoQ4 electromagnetic stainless steel meters with epoxy-coated iron flanges using stainless steel nuts and bolts.

- The meter will be the same size as the domestic service line on both the inlet and outlet sides of the meter. A 3/4" meter is the smallest meter allowed.
- Bypass piping around existing or future water meters shall be accepted on a limited case-by-case basis and can only be implemented if a customer has received written approval from the Aspen Water Department. Bypass piping materials and configuration shall be installed in accordance with the latest edition of the City's Water Standards.
- All commercial applications will install an approved reduced pressure principle backflow device on both the service line and the bypass. Backflow devices shall be downstream from the meter and installed according to current or amended Colorado Department of Health regulations (Colorado Primary Drinking Water Regulations Section 12.2).

Meter vaults, meter pits, and areas defined as confined spaces are unacceptable locations for meter installations. Meter and backflow devices will be placed aboveground **inside a structure** when the water service is specifically for irrigation purposes. The owner of the account will be responsible for winterization of the service.

All installations will be set up in the following order:

- 1st – Ball valve
- 2nd – Water cop if desired
- 3rd – Pressure-reducing valve set at 80 pounds or less
- 4th – Bypass. Note: when a bypass is required, it will have a sealable valve
- 5th – Meter
- 6th – Ball valve
- 7th – Backflow preventer. Note: Second assembly may be required with a ball valve following this second assembly.

8th – Jumper wire from the inlet side of the pressure-reducing valve to the outlet side of the meter using N.E.C. standards and from the outlet side of the backflow (if a backflow is required). Note: A "water cop" device may need to be installed after the pressure-reducing valve. Do not exceed the maximum operating pressure recommended by the manufacturer.

Sealed valves shall be maintained closed. Removal of seal will be considered evidence of unauthorized water usage (City of Aspen Municipal Code 25.16.030). All new installations, as well as “substantial remodels” (as defined by City of Aspen Municipal Code 25.12.070), shall be made to comply with current City of Aspen Standards. In addition, “old” installations that are currently non-compliant shall be made to comply as equipment fails and needs repair.

It will be the responsibility of the installer to notify the Water Department to conduct an inspection when installation has been completed.

The City of Aspen is moving in the direction of automated meter reading (AMR). We have chosen a fixed area network that will allow us to obtain meter readings via the internet. Data collector units (DCU) installed within our community allow us to obtain meter readings from meter transmitting units (MTUs) installed at individual properties. The MTUs will replace the remote reader that is currently on the exterior of every home and business and that is read manually each month.

Please read the following meter standards carefully, as there are several changes from prior years. The most notable changes include:

- Replacing a pulse meter register with a digital encoder meter register.
- Adding a second meter brand, Elster AMCO, to our meter standards.
- The elimination of the compound series meters for large meter installations.

Water meters will be installed and meter registers secured on the meter body. City of Aspen Water Department personnel will install the MTU at the time of inspection.

A minimum of three low voltage wires (thermostat wire) shall installed from the area where the water meter is located to the exterior of the property. Preferably by electric and/or gas meters.

The MTU will be supplied by the City of Aspen Water Department. If the MTU is physically damaged, the property owner will be charged for the replacement MTU.

Specifications are as follows:

All meters shall be Badger, Kamstrup or Elster AMCO brand meters.

(1) Badger Water Meter Specifications for the City of Aspen (Approved for Horizontal Installation ONLY)

- ¾” Badger Recordall disc meter in cast bronze and cast iron bottom with an absolute digital encoder (HR-E) register with 3 bare wires from register for connection to the Aclara Meter Transmitting Unit (MTU).

- 1.0" Badger Recordall disc meter in cast bronze and cast iron bottom with an HR-E register with 3 bare wires from register for connection to the Aclara MTU.
- 1.5" Badger Recordall disc meter in cast bronze with an ADE register with 3 bare wires from register for connection to the Aclara MTU.

For Technical Briefs please visit www.badgermeter.com

(2) Kamstrup Water Meter Specifications for the City of Aspen (Approved for Horizontal or Vertical Installation in upward flow)

- ¾" Kamstrup Water Meter flowIQ 2100 Smart Ultrasonic Water Meter with Encoded Output (EO) with 3 bare wires from register for connection to the Aclara MTU.
- 1.0" Kamstrup Water Meter flowIQ 3101 Smart Ultrasonic Water Meter with Encoded Output (EO) with 3 bare wires from register for connection to the Aclara MTU.
- 1.5" Kamstrup Water Meter flowIQ 3101 Smart Ultrasonic Water Meter with Encoded Output (EO) with 3 bare wires from register for connection to the Aclara MTU.
- 2.0" Kamstrup Water Meter flowIQ 3101 Smart Ultrasonic Water Meter with Encoded Output (EO) with 3 bare wires from register for connection to the Aclara MTU.

For Technical Briefs please visit www.kamstrup.com

All large meter applications (3.0" thru 8.0") shall use the EvoQ4 electromagnetic stainless steel water meter.

For Technical Briefs please visit www.elsteramcowater.com.

5.9 Fire Sprinkler Systems

Where a common service line is used for domestic and fire suppression systems, a separate isolation valve and backflow prevention device will be recommended for each side of the water system. For the domestic side, the requirement for backflow prevention is dependent on the presence and type of hazard based on the uses connected to the domestic side of the system. For the fire suppression side, a backflow preventer that meets the current requirements of the State of Colorado Department of Public Health is recommended. Current State Standards permit a double check valve for class 1, 2, and 3 fire suppression systems. When fire systems are filled with Glycol or any material other than air or domestic water (class 4 or 5 fire suppression systems), a reduced pressure principal device will be the standard used for connections to the City of Aspen water system. External connections for fire pumper trucks will only be provided downstream of the backflow device to prevent introduction of unknown sources of water into the municipal water system. The fire line size will be of uniform size from the corporation

stop through the backflow device. Tap fees are not assessed for increased service sizes recommended for fire sprinkler systems when recommended by the Aspen Fire Marshal. Where tap fees are waived for increased service line sizes, documentation from the manufacturer or engineer will be required to determine the minimum line size necessary to provide fire suppression. All backflow assemblies shall include isolation valves on both sides of the backflow device.

5.10 What is a Cross Connection?

A cross-connection is an unprotected direct connection or an indirect connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome and potable. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices, or other devices through which backflow could occur shall be considered cross-connections.

5.11 Cross-Connection Control Standards

Backflow prevention devices are now required on all commercial, industrial, institutional, and irrigation connections. Once installed, these devices must be tested annually. The Backflow Prevention Education Council of Colorado provides a listing of testers by region on their website.

Cross-connections occur when the public drinking water supply is physically connected to contaminated sources (e.g., a hose submerged in a bucket or lying on the ground). Cross-connections provide a pathway for the backflow of polluted or contaminated water into the drinking water system.

Backflow can also occur when the pressure in the public distribution system drops. Normally this pressure is high enough to prevent backflow; but certain events – such as main breaks, flushing, or firefighting – can lower the pressure enough to allow the water to flow backwards.

5.12 Prevention Devices

The type of backflow prevention device or assembly needed on a system is determined by the level of hazard posed by the owner's water use. Note: Assemblies are in-line, testable components, whereas devices are not testable system components.

In general, the City requires the following in-line testable backflow prevention assemblies:

- **Main Water Service:** reduced pressure principal backflow prevention assembly or double check valve backflow prevention assembly.
- **Fire Systems:** double check backflow prevention assembly or RP backflow prevention assembly.

- **Irrigation Systems:** vacuum breaker backflow prevention assembly or RP backflow prevention assembly.

5.13 Containment/Isolation

A backflow prevention assembly on the incoming line or service is called a containment. The assembly comes after the water meter, but before any branches or connections to the service line. Containment assemblies have been installed on service lines of multi-family and commercial accounts for the past three decades. The State of Colorado regulations require containment assemblies be tested at the time of installation, repair, relocation, and/or at least once annually thereafter, or more often when required by the authority having jurisdiction.

A backflow device installed on a residential lawn sprinkler system is an example of an isolation device. This device prevents lawn sprinkler water from getting back into the home.

5.14 Two Types of Backflows:

Backsiphonage. A negative pressure that can be caused by water main breaks, fire hydrant flushing or firefighting. Backsiphonage can draw all the water from a private water system. If this water is used for boilers, sprinkler systems, etc., it could contain contaminated water.

- ⊖ **Backpressure.** This is caused by the pressure in the private water system exceeding that of the City's water system, usually because a privately owned pump is being used to increase pressure inside a single structure. This causes water to be forced back into the City's system.

5.15 Mechanical Backflow Prevention

1. Pressure Vacuum Breaker Assembly – ASSE 1020 Standard

This assembly is used mainly on lawn irrigation systems. It has a one-way check and a spring-loaded air inlet valve that closes when City water main pressure drops.

Requirements:

- No backpressure
- 12" above high point of use
- Protect from freezing

2. Double Check Valve Assembly – ASSE 1015 Standard

This assembly consists of 2 tightly closing shut-off valves, 2 independently acting check valves force-loaded to a closed position, and 4 properly located test cocks.

- Used in low-hazard applications
- The DVCA provides backpressure and backsiphonage protection
- The DVCA can be used on fire sprinkler systems that do not contain chemicals – i.e., antifreeze, corrosion inhibitors, or other chemicals.

3. Reduced Pressure Principal Assembly – ASSE 1031 Standard

This assembly is used for high-hazard and low-hazard applications. The RP assembly consists of 2 tightly closing shut-off valves, 2 independently acting check valves, 4 properly located test clocks, and 1 relief valve.

- The RP assembly provides backpressure and backsiphonage protection.

Installing backflow prevention assemblies prevents the possibility of contaminated water returning to the distribution line. Please consult the Backflow Prevention Reference Manual or the Plumbing Code for installation requirements and limitations.

5.16 Backflow Prevention Overview

If you do not have a backflow device:

1. Call a plumber licensed to do work in the City of Aspen and schedule an installation.
2. Obtain a building and/or plumbing permit.
3. After the device is installed, it must be tested. Your tester is required to submit test reports to the City of Aspen. Test reports should be sent in pdf format to backflow@cityofaspen.com.

Now that the device is installed:

1. Contact a company qualified to perform backflow testing and repair. These companies are listed at the Backflow Prevention and Education Council of Colorado website, as well as being available from the City of Aspen Water Department, main phone # 970-920-5110.
2. Ask the backflow tester to send a copy of the test report to the City of Aspen Water Department, 130 South Galena Street, Aspen, CO 81611.

Next year:

1. The device must be retested. Prior to the anniversary of your test date, you will receive a reminder notice from the City of Aspen. Contact a qualified backflow tester and return the test results to the City of Aspen Water Department.

For more information about the program, please email backflow@cityofaspen.com or call 970.920.5110.

Additional Links:

[American Backflow Prevention Association](#)
[List of Approved Assemblies](#)

Chapter 6: Reuse and Irrigation Construction Standards

6.1 General

6.1.1 Purpose

This section covers providing and installing the following for reuse water lines: buried pipes, valves, meters, vaults, controls, and fittings. All materials shall be new and of the best available quality. All materials used shall be manufactured and supplied according to the latest revised standards of the AWWA, the ANSI, and the ASTM, or as mentioned hereinafter. Miscellaneous valves and fittings shall operate as called out in the drawings.

The City of Aspen publishes this Standard, which is prepared under the direction of the City of Aspen's Deputy Director of Utilities, to provide minimum design and construction criteria for any covered distribution system component that is installed within the reuse water system service area and for similar components installed outside the service area when eventual connection to the City's system is contemplated.

This design standard is intended as an engineering reference manual that contains the minimum standards for the design and construction of reuse water systems. It is intended to supplement conditions contained in reuse water service agreements adopted by City ordinances to define the engineering standards that new water systems must meet prior to acceptance.

6.1.2 Source

Similar to raw water, reuse water will be delivered via a contract to customers, who will be required to sign reuse water usage agreements.

6.1.3 Reuse and Irrigation Review

The City of Aspen or its designee will review all system design plans for the reuse water system.

6.2 Reuse System

6.2.1 Installation

Bury depth shall ensure positive drainage to a low-point drain line. This system shall be placed with a positive slope to facilitate easy draining for winterization.

6.2.2 Reuse System

The City's reuse water will be delivered through the City's reuse system. All reuse installations will be marked with purple identification tape labeled "Reuse" 2' above the line. Tracer wire will be installed for ease of location. Where there are potable and raw water lines in the same area, the new pipe (raw or potable) that is being laid at the time will also be installed with the appropriate identification tape.

Similar to raw water, reuse water will be delivered via a contract to customers, who will be required to sign reuse water usage agreements.

6.2.3 Reuse Connections

All connections will require the installation of a main line tee (to meet the main line sizing), a three-valve complex (a main-line valve on each side of the tee and a branch isolation valve), a branch sized to meet the approved flow requirements, a meter with a remote flow-control valve, and a vault for the meter and valve. The City will own the tap, main-line valves, and isolation valve. The user will own the meter vault, meter, control valve, and any additional control features. The City will have the ability to read the meter and adjust the timer on the control valve to ensure that the agreed-upon water delivery quantities are met. The user shall pay for all labor, material, and installation costs for the reuse tap and controls.

6.2.4 Customer Use

The user shall abide by State regulations pertaining to use of reclaimed or reuse irrigation water provided by the City of Aspen. The City of Aspen shall not be responsible for the user's use of the water.

6.3 Pipe Fittings and Appurtenances

6.3.5 Ductile-Iron Pipe (DIP), Fittings, and Appurtenances

DIP shall be used in vaults, pump stations, PRV vaults, in or under other reuse facilities, or where specifically approved. DIP is used with written approval from the Director or Deputy Director of the Water Department only, as specifically addressed in the Special Construction Provisions. All DIP fittings used with mechanical joints (MJs) shall have HDPE-to-MJ adaptors where applicable. All HDPE-to-DIP fittings shall be restrained with MJ adaptors or Thermo-Weld couplings. In specifically approved installations, DIP material will be specified at the time of the proposed use and will require DIP fittings to be installed with megalugs.

6.3.6 Polyvinyl Chloride Pipe

This material is to be used for controls only. The pipe shall be similar or equal to Schedule 40 PVC and shall conform to ASTM D-1784 (Type 1 Grade 1 Cell Class 12454B, 1" through 4") unless otherwise designated in the drawings or Special Construction Provisions. The pipes and fittings shall be made from clean, virgin, NSF-approved Class 12454-A or 12454-B PVC and conform to requirements of ASTM D1784 (latest revision).

6.3.7 High-Density Polyethylene Pipe

The pipe shall meet the requirements of AWWA C901/C906, ASTM D2239, ASTM D2737, ASTM D3035, ASTM F714, and ANSI/NSF-14; have a cell class per ASTM D3350; and use Plastic Pipe Institute (PPI) listed material (TR-4) PE 4710. The pipe shall be DIP size SDR 11.0, as shown in the drawings. The pipe material shall meet the requirements of ASTM 3350 cell classification 445574C/E and have a pressure rating of 200 psi (DR 11) or greater. The pipe shall be JM Eagle HDPE PE4710 or equivalent. Depending on location and previous design standards, the specification will generally use DIP-size HDPE. Some

locations will use IPS sizing, however. The contractor shall confirm the existing DIP or IPS sizing prior to design approval and make connections by potholing or by another form of identification prior to ordering materials.

The fittings shall be standard commercial products manufactured through injection molding or extrusion and machining, or they shall be fabricated from AWWA C901/C906 pipe conforming to this specification. For each project, all fittings shall be provided or recommended by the pipe manufacturer. The fittings shall be manufactured from the same (or better) resin, grade, and cell classification as the pipe itself. The fittings shall be fully pressure-rated by the manufacturer to provide a working pressure equal to that of the pipe. The manufacture of the fittings shall be in accordance with good commercial practice to provide fittings that are homogeneous throughout and free from cracks, holes, foreign inclusions, voids, and other injurious defects. The fittings shall be as uniform as commercially practicable in color, opacity, density, and other physical properties. The minimum quick-burst strength of the fittings shall not be less than that of the pipe with which the fitting is to be used. All fittings shall be pressure tested by the pipe/fitting manufacturer to the specifications and requirements of AWWA C901/C906.

Alternative fittings that will be accepted for construction with high-density polyethylene pipe include:

- 1) Epoxy-lined (polyethylene-encased) ductile fittings used in combination with welded MJ adapters (provided at the contractor's expense), as manufactured by Central Plastics or Chevron Phillips (or an approved equivalent)
- 2) Electro-fused fittings as manufactured specifically for HDPE pipe by JM Eagle, Drisco Pipe, Frialen, or Central (or an approved equivalent)
- 3) Fused, welded HDPE fittings welded directly onto the existing pipe

6.3.8 Transitions

Transitions from HDPE to DIP may be accomplished through the use of the following products:

- 1) Epoxy-lined (polyethylene encased), cast iron, or ductile reducers used in combination with a welded MJ adapter as manufactured by Central Plastics or Chevron Phillips (or an approved equivalent)
- 2) HDPE-fused diffusers, welded MJ transition adapters, or Drisco pipe (or an approved equivalent)

Use of megalugs on HDPE pipe is not allowed.

6.3.9 Pipe Identification

Each length of pipe and all fittings shall have marked on the exterior the following:

1. Manufacturer's name or trademark

2. Nominal pipe size and dimension ratio
3. HDPE cell classification (e.g., PE 345434C)
4. Legend – Type C901/C906 pressure pipe
5. PE 4710 or other applicable designations
6. Color-coded stripe (e.g., purple to designate raw or reuse irrigation)

6.3.10 Pipe Jointing

Joints shall be made through heat fusion or MJ adaptors. Use welded MJ adaptors (DIP to HDPE fittings) at all required tees, bends, and transitions from HDPE to DIP. HDPE-welded bends or tees are allowed. HDPE pipeline requires # 10 tracer wire to be installed with the pipeline along with locator boxes and locator tape. See the Reuse Water System Standard Detail Drawing, which is part of these specifications, for more information regarding installation information and details.

6.3.11 Thrust Restraint

Mega-Lugs as defined in section 6.3.8 and one other form of restraint are required for any and all fittings. Concrete Thrust Blocks as defined below are preferable, however where disturbed soils or space constraints exist Cor-Ten Rods (or equivalent) will be reviewed as a second form of restraint.

Concrete thrust blocks shall be formed and poured in place as a second form of restraint on fittings, including taps 4" or larger, to resist hydraulic thrust. Thrust blocks shall be sized based on sound engineering judgments and will be subject to review by the City of Aspen if needed. A poly wrap bond breaker shall be installed between concrete and all pipes or associated appurtenances.

Where designated in the drawings and where existing conditions do not permit the use of concrete thrust blocks, fitting restraints shall be made with tie rods and either pipe clamps or special fitting bolts. Tie-rod restraint systems shall have a minimum of 2 rods per joint or clamp subject to review during the permit process.

The tie bolts shall be fabricated from a Cor-Ten steel or equivalent, according to the requirements of ASTM A242, with a minimum yield stress of 46,000 psi. Retainer clamps shall be equal to socket clamp Figure 595, as manufactured by ITT-Grinnell or equivalent.

6.3.12 Mechanical-Joint Retainer Glands

On all fittings, restraint shall be made with MJ retainer glands. These glands shall be cast from 60-40-12 ductile iron and shall have bolt circles, bolt holes, and dimensions that will permit the glands to be used with standard MJ bells and standard-length bolts, as per ANSI A21.11 and AWWA C111. All special tools recommended by the manufacturer shall be used during installation, supplied to the owner, and designated in the required operations and maintenance manual. Mega-lug retainer glands shall be manufactured by EBAA Iron, Inc., Series 100 (or approved equivalent).

6.4 Gate Valves

Gate valves for buried pipelines 2" and larger shall use a Mueller (or preapproved equivalent) iron-body, bronze-mounted, resilient seat; conform to AWWA C509 for buried service; open counterclockwise; have a non-rising stem and 2" operating nut; and use a working pressure of 250 psi.

The joints for valves connected to the ductile iron shall be MJs in accordance with ANSI A21.11. All gaskets shall be for standard water service.

Valves greater than 12" will be specified and evaluated by the Water Department on a case-by-case basis.

6.5 Valve-Box Assemblies

Valve-box assemblies shall use Tyler Pipe 3-piece cast iron valve boxes. Assemblies shall accommodate 4" through 12" valves. Valve shaft shall be 5.25" shafts and screw types 6850 Series-668-S and/or 6865 Series-F with complete extension of 62" to 82". The difference between the boxes is primarily in the base type. The parts for the different valve boxes must be interchangeable. Lids for reuse or irrigation shall be marked "REUSE." Where the valves are greater than 9' deep, solid pipe must be used instead of sectional valve boxes.

6.6 Valve-Key Extensions

All reuse system valves shall have extension rods with centering rings and set screws. Extensions shall be to within 12" of the finished grade on all valves.

6.7 Air/Vacuum Valves and Vaults

Design and installation of air release valves and associated vaults must be approved by the Water Department and will be evaluated on a case-by-case basis.

6.8 Reuse and Raw Water Meters

Meters shall be magnetic meters as manufactured by Badger (or equivalent). Connections shall be 150-pound flanges. The meters shall have an accuracy of 0.5% of the measured reading. A Badger Recordall® Reclaimed-Disc Turbo Meter with Remote Readout shall be provided. The meter shall be supplied with a lavender lid with the word "RECLAIMED" cast or engraved on the meter's body, printed on the register dial, and cast or engraved on the bronze covers or bottoms. A non-potable symbol shall be placed on the register lid, and the chamber assembly shall be designated as non-potable only. The signal converter shall be remotely mounted up to 300' from the meter. A local indication shall be displayed on the flow computer. The meter shall be sized to meet the flow demands for accurate readings.

The meter shall be capable of having a control signal installed to deliver the meter reading to a remote location through radio signals. The output shall be from 4 to 20 mA. Due to system requirements, no equivalent shall be accepted.

6.9 Excavation, Bedding, and Backfill

6.9.1 General

Trench excavation shall be performed in accordance with the requirements of the latest revision of the City of Aspen's Engineering Standards.

All bedding and backfill material shall be free of frozen material, organic material, and debris. The materials to be used in each trench zone are indicated on the Water Main Trench Cross-Section Detail as shown on the Water Distribution System Standards Installation Details drawing; these materials are described herein.

6.9.2 Bedding/Pipe Zone

The bedding zone shall consist of all material placed below the pipe invert. The pipe zone shall consist of all material placed above the pipe invert to the specified elevation. The bedding/pipe zone material shall be placed for the full length of the pipeline. The bedding/pipe zone material shall be ¾" screened rock that has been hauled in for bedding – not native excavated material. The material shall extend from 6" below the pipe and bells to 12" above the top of the pipe and bells, and it shall extend for the full width of the excavated trench. Tamping equipment shall be used to thoroughly tamp the material to a minimum of 95% maximum dry density or 75% relative density. The moisture content of the material shall be within 2% of optimum.

6.9.3 Backfill Zone

The backfill zone shall consist of all material above the pipe zone. Fabric shall be installed between the screen rock and all other backfill material. Follow CDOT, Pitkin County, and City of Aspen ROW specifications for backfill and compaction within the ROW or where asphalt is to be placed above the pipeline trench.

Compaction shall be completed by mechanical tamping of 12"-maximum loose lifts using mechanical tampers or vibratory rollers. All other means must be approved in writing by the engineer. All backfill shall be compacted to 95% of maximum laboratory dry density (ASTM D698) or to 75% relative density (ASTM D2079). The material shall be within 2% of optimal moisture content.

The contractor may request approval of alternate means of compaction. Such a request must be submitted to the engineer in writing. The engineer will approve the compaction method in writing only. Use of specified or approved compaction methods does not relieve the contractor from providing a completed project that meets the intent of this specification.

Native backfill material shall consist of suitable material from the excavated earth. No rocks or boulders shall be allowed in the first 24" of the trench above the pipeline. The backfill material above the first 24" of the trench shall have no boulders larger than 6" in any dimension and shall be carefully placed so that no damage will be done to the pipeline. Native backfill shall be used to finished grade if trench excavation occurs in open-field conditions.

Engineered backfill material shall be road-base, Class 6 aggregate base course.

6.9.4 Testing and Inspection

Prior to backfilling, all waterlines and appurtenances shall be inspected and approved by the City. All materials shall be subject to gradation and compaction tests prior to approval. The test results shall be submitted to the City for approval and verification of their accuracy. The contractor shall bear the costs of these tests.

Compaction requirements shall conform to the measurements of maximum dry density according to ASTM D698 (Moisture-Density Relations of Soils [Standard Proctor]). Should ASTM D698 not be suitable for the material placed, the compaction requirements shall conform to ASTM D2049 (Test for Relative Density of Cohesionless Soils).

When the City requires it, the contractor shall excavate backfilled trenches for the purpose of performing compaction tests at the required locations and depths. The contractor shall be responsible for reinstalling and compacting the test excavations at no additional cost to the City.

Minimum compaction testing frequency for pipelines shall be one compaction test per 150 linear feet of piping and wherever piping is within 2-feet of structures. A compaction single test shall contain two samples per lift.

6.9.5 Road-Base Material Specification

The road-base material shall be Class 6 aggregate base course, as specified by the State of Colorado Department of Transportation (CDOT); the material shall meet the following gradation:

Aggregate Base Course – CDOT Class 6 Gradation	
Sieve Size	Total Percentage Passing By Weight
3/4"	100%
# 4	30% – 65%
# 8	20% – 55%
# 200	3% – 12%

6.9.6 Screened Rock Material Specification

Granular or granular backfill material shall be imported crushed rock or angular surfaced gravel and shall meet the following gradation (ASTM D448, m 67):

Granular Bedding Gradation	
Sieve Size	Total Percentage Passing By Weight
3/4"	100%
3/8"	22% – 55%
# 4	10%
# 8	5%

6.10 Testing and Flushing

6.10.1 Fusion Quality

The contractor shall ensure the field setup and operation of the fusion operator's fusion equipment and procedure while on site. Upon the owner's request, the contractor shall verify field fusion quality by making and testing a trial fusion. The trial fusion shall be allowed to cool completely; test straps shall then be cut out and bent-strap tested in accordance with ASTM D 2657. If the bent-strap test of the trial fusion fails at the joint, the field fusions represented by the trial fusion shall be rejected. The contractor, at his or her expense, shall make all necessary corrections to the equipment and the setup, operation, and fusion procedures; the contractor shall then remake the rejected fusions.

6.10.2 Leak Testing

As a normal procedure, new pipelines shall be flushed and tested before connection to the existing system. When new pipelines are allowed to be connected to an existing pipeline, the following sequence shall be followed: flushing, leakage and pressure tests, and conductivity tests. Failure at any step shall require that each item be repeated until all are accepted. The engineer shall be notified at least 48 hours before the pipe is to be tested so that he or she may be present during the test. Lines shall be tested to a minimum of 150% the anticipated working pressure of the line, with a minimum test pressure of 150 psi. The contractor shall remove all air prior to testing the line. Testing shall be performed at the high point of the line unless otherwise approved.

6.10.3 Pipeline Flushing

The contractor shall flush the pipelines as the work progresses in accordance with good practices to ensure that sand, rocks, and other foreign materials are not left in the pipelines. If possible, the flushing shall be made through an open pipe end; otherwise, use of the service line may be acceptable – but only with the engineer's approval.

Chapter 7: Ditches

7.1 Alteration of Ditches

Ditches may not be altered or restricted without the approval of the City Engineering, Water Department, Aspen Parks Department, and/or Golf Department. This includes but is not limited to the rerouting of a ditch, the addition or removal of culverts, and the creation of ponds for a home irrigation system that uses a stilling well as its water source.

7.2 Clear Ditch Bottom

With the exception of ditches located in the west end of Aspen, where 12" of clear ditch bottom shall be required, it shall be unlawful for any person to place any material in a ditch so as to create a ditch with less than 24" of clear ditch bottom.

7.3 Landscaping along Ditches

A ditch in the public ROW may not be newly landscaped, and current landscaping may not be altered, unless a landscaping plan is submitted to the City of Aspen and a landscaping permit is issued by the Aspen Parks Department, Water Department, or Golf Department.

7.4 Culverts and Ditch Liners

Prior to installation, culverts and ditch liners shall be approved by the Parks Department, Water Department, or Golf Department. Culvert installation and replacement shall be completed at the expense of the homeowner. No culverts or ditch liners shall be approved near large trees. Any pipe that is to be used for replacement or new installation shall be ADS-N-12 or equivalent. The pipe shall be installed with a minimum slope of .50. The size shall be determined by flow-capacity charts; however, the pipe shall not be smaller than 8" in diameter. In no situation can culverts, ditch crossings and/or bridges reduce the potential flow, either by grade change or sizing, of a ditch. Whenever possible, ADS-N-12 installation specifications shall be met for bury depth and compaction. When specifications cannot be met, flow-fill shall be used. Pipes shall be installed with water-tight couplings.

7.5 Access by City Employees

Landowners shall provide City employees with free, unrestricted access to all ditches for reasonable maintenance of the ditches. The City shall not be legally responsible for damage to landscaping resulting from either reasonable maintenance or emergency repairs.

7.6 Violations and Work Done: Liability Therefor

(a) In the event of any person failing to comply with this chapter's ditch ordinance provisions, COA staff may – as soon as practicable after such failure – correct the situation.

(b) The COA Staff shall ascertain and keep a record of the exact cost of all work that he or she initiates in accordance with this section on account of each act or the omission of each responsible party. The COA Staff shall also identify the responsible party with particularity.

(c) The cost of work done in accordance with this section, plus a penalty of 100% of such cost, shall be charged against the land abutting the ditch where such work was done as a municipal lien; this lien shall be collected in the same manner as City taxes. Alternatively, such costs and penalty may be recovered by the City in a lawsuit against the owner or the person whose act or omission made it necessary for such work to be done.

City of Aspen Qualification Statement

Project No.: 2021-219 Red Mountain Water System Improvements

1. Firm Name, Business Address, Contact Person & Telephone Number:		2. Year Present Firm Established:	3. Date This Form Prepared:	
		4. Type of Ownership:	A. Small Business B. Minority Owned C. Women Owned	
5. Names of not more than two principals to contact: Title/Telephone: a) b)				
6. Project Examples, Last 5 Years:				
Project Name, Location & Brief Description:	Owner's Name, Address & Telephone:	Cost of Work (X \$1,000)	Date Completed	
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

BID PROPOSAL FORM

PROJECT NO.: 2021-219

BID DATE: See Notice for Bidding for Date

PROJECT: **2021 RED MOUNTAIN WATER SYSTEM IMPROVEMENTS**

PROPOSAL SUBMITTED BY: Aspen Digger Inc. CONTRACTOR

CONTRACTOR'S PROPOSAL

TO: The Governing Body of the City of Aspen, Colorado

The undersigned responsible bidder declares and stipulates that this proposal is made in good faith, without collusion or connection with any other person or persons bidding for the same work, and that it is made in pursuance of and subject to all the terms and conditions of the advertisement for bid, the invitation to bid and request for bid, all the requirements of the bid documents including the plans and specifications for this bid, all of which have been read and examined prior to signature. The bidder agrees to keep this bid open for **Sixty (60) consecutive calendar days** from the date of bid opening.

The Contractor agrees that construction shall start immediately following a mandatory pre-construction conference held by the Engineering Department, which also constitutes the *Notice to Proceed*. Submission of this proposal will be taken by the City of Aspen as a binding covenant that the Contractor will finish construction within the time specified in the Special Conditions of this contract document.

The City of Aspen reserves the right to make the award on the basis of the bid deemed most favorable to the City, to waive any informalities or to reject any or all bids.

The City shall not pay the Contractor for defective work and/or for repairs or additional work required for successful completion of the project. All work not specifically set forth as a pay item in the bid form shall be considered a subsidiary obligation of the Contractor and all costs in connection therewith shall be included in the prices bid for the various items of work. Prices shall include all costs in connection with furnishing the proper and success completion of the work, including furnishing all materials, equipment and tools, and performing all labor and supervision to fully complete the work to the City's satisfaction.

Poor quality and/or workmanship shall not be paid for by the City. Such work product must be removed immediately and replaced properly at no cost to the City.

All quantities stipulated in the bid form at unit prices are approximate and are to be used only as a basis for estimating the probable cost of work and for the purpose of comparing the bids submitted to the City. The basis of payment shall be the actual amount of materials furnished and work done. The Contractor agrees

to make no claims for damages, anticipated profit, or otherwise on account of any differences between the amount of work actually performed, and materials actually furnished and the estimated amount of work.

The City reserves the right to increase or decrease the amount of work to be done on the basis of the bid unit price and up to plus or minus ***Twenty Five (25) Percent*** of the total bid.

By signing this document, Contractor certifies and represents that at this time:

- (i) Professional shall confirm the employment eligibility of all employees who are newly hired for employment in the United States; and
- (ii) Professional has participated or attempted to participate in the Basic Pilot Program in order to verify that it does not employ illegal aliens.

I hereby acknowledge receipt of ADDENDUM(s) numbered 1 through 3

PROPOSAL: The undersigned Bidder for the above named project, and being familiar with all contractual requirements, hereby proposes to furnish all labor, furnish (except those items specifically listed to be furnished by the Owner) and install materials, tools, supplies, equipment, plant, transportation, services, permits and all other things necessary for the completion of the contractual work and pay all taxes, and perform the work in accordance with the requirements and intent of the Contract Documents, including Drawings and Specifications, within the time of completion set forth herein, for and in consideration of the following unit and lump sum prices:

2021 RED MOUNTIAN FWATER SYSTEM IMPROVEMENTS

Item #	Description, Approximate Quantity, and Unit Price	Amount of Bid
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1. EXISTING HUNTER CREEK PRV REPIPING

Work to include labor, equipment and materials for removal and disposal off site of all existing piping, valves, couplings, and piping as shown on sht 2. All salvaged piping and valves to City of Aspen Water Department, all labor, materials, dewatering, and equipment to install new piping, PRV and BF Valves, bypass taps, piping and valves, all pipe supports and other required materials to complete the new valve and piping installation, all new piping including spools, couplings, FCA's, disinfection of new piping, testing, and all work required to remove pipe and install new piping. This item is all coordinated with City of Aspen Project Manager and Operations Staff for taking PRV offline for new piping work. All

Item #	Description, Approximate Quantity, and Unit Price	Amount of Bid
	work for a lump sum of. Twenty Five Thousand Six Hundred Thirty Seven Dollars and 37/100	
	<u>\$ 25637.37</u>	<u>\$ 25637.37</u>
	(Words – Lump Sum not to Exceed)	(Total)
	(Figures)	

2. **Pipeline Installation.** Includes furnishing (except where specifically noted otherwise) and handling all required equipment and materials, utility corridor preparation, locating existing pipelines and utilities, all excavation, de-watering, pipe installation, creating a level surface to dig on side slopes, support of all existing utilities, couplings, imported bedding-zone and pipe-zone backfill material, compacted backfill (see SCP's), temporary road base or driving surface until paving is complete, flushing, testing, disinfecting, chlorination, temporary and permanent plugs or caps, adapters, reducers, insulation at crossing of less than 7' of cover, and includes other items not listed elsewhere in this proposal, including fence removal and replacement, clean-up and other items as needed to complete the system as shown on the drawings and as specified, except those items specifically listed hereinafter in the Proposal. This item is to include any and all additional fill and compaction required to maintain cover over water line at culvert crossings, including protection or replacement of culverts if required, and as-builts. Pipeline installation shall also include phasing, construction fencing, and all other work needed to perform the project in the required phasing, provide staging areas, cleanup and all other work need to complete the project in the phases described in the SCP's or ITB. To be paid at the unit price per lineal foot of pipeline in place, measured from end of pipe or center of fittings:

a. 8-inch DIP Pipe, 281± l.f. @:

<u>Two hundred Twenty Three and 26/100</u>	<u>\$ 223.26</u>	<u>\$ 62736.06</u>
(Words – Unit Price)	(Figures)	(Total)

Item #	Description, Approximate Quantity, and Unit Price	Amount of Bid	
b.	6-inch, DIP	12± l.f. @:	
	Two hundred thirty nine and 88/100	\$ 239.88	\$ 2878.56
	(Words – Unit Price)	(Figures)	(Total)
3.	Waterline Fittings. Includes furnishing, handling, and installation of pipeline fittings, as detailed on the drawings, or as required by field changes, includes thrust restraint/block and mega-lugs, the unit price over and above the costs of water pipelines.		
a.	6-inch Tees TB & ML,	2 each @:	
	One thousand three hundred eighty one and 66/100	\$ 1381.66	\$ 2763.32
	(Words – Unit Price)	(Figures)	(Total)
b.	8-inch bends,	2 ea@	
	all angles w/ concrete TB & ML		
	Nine hundred sixty six and 98/100	\$ 966.98	\$ 1933.96
	(Words – Unit Price)	(Figures)	(Total)
c.	8" vertical bends w/ TB & ML,	1 each @:	
	Eight hundred thirty three and 39/100	\$ 833.39	\$ 833.39
	(Words – Unit Price)	(Figures)	(Total)
d.	Tie – Rod Restraint System at CES 1 and 2	4 each @:	
	Two hundred seventy six and 75/100	\$ 276.75	\$ 1107.00
	(Words – Unit Price)	(Figures)	(Total)
e.	Solid Sleeve, Reducers, Caps and Plugs -all sizes all locations	4 each @:	
	Five hundred nine and 38/100	\$ 509.38	\$ 2037.52
	(Words – Unit Price)	(Figures)	(Total)

Item #	Description, Approximate Quantity, and Unit Price	Amount of Bid
4.	<p><u>Water Pipeline Valves.</u> Including furnishing, handling, and installing valves and valve boxes, retainer glands or tie rods as shown on the drawings or as required by field changes, and wrapping in polyethylene sheathing, at the unit price per each:</p> <p>a. 8-inch Butterfly valve and box, 2 each at: Two thousand three hundred seventy six and 07/100 _____ (Words – Unit Price)</p> <p>\$ 2376.07 _____ (Figures)</p> <p>\$ 4752.14 _____ (Total)</p> <p>b. 6-inch Gate valve and box, 4 each at: One thousand seven hundred eighty and 49/100 _____ (Words – Unit Price)</p> <p>\$ 1780.49 _____ (Figures)</p> <p>\$ 7121.96 _____ (Total)</p> <p>c. Hunter Creek PRV Isolation Valve – This work is to install a new 6” gate valve ~ 30’ below the existing Hunter Creek PRV to allow isolation of the PRV to perform new piping installation and keep existing customers below the PRV in service. This work is to include all utility locates to determine the best location for the new valve, (to be approved by the City of Aspen), potholing if required, excavation, backfill, piping, solid sleeves, dewatering, coordination with Water Department, and all other work required to install the new isolation valve for a Lump Sum of:</p> <p>\$ 7639.38 _____ (Total)</p>	
5.	<p><u>Fire Hydrants.</u> Includes furnishing the fire hydrants, installation, concrete thrust blocks, and gravel drain, (tee, gate valve and 6-inch connecting line bid separately), all items needed for a complete installation, 2 each @: Seven thousand four hundred sixty five and 83/100 _____ (Words – Unit Price)</p> <p>\$ 7465.83 _____ (Figures)</p> <p>\$ 14931.66 _____ (Total)</p>	
6.	<p><u>Connections/Disconnections to Existing Water System.</u> Including furnishing, and handling all materials, all excavation all labor, potholing, abandoning of existing lines, and other</p>	

Item #	Description, Approximate Quantity, and Unit Price	Amount of Bid
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work necessary to connect the proposed water lines to the existing water lines as shown on the drawings and as directed, approved, and coordinated with/by the Project Manager and ORC; all bedding, backfilling, disinfection, dewatering, cleanup (but not including valves and pipeline, pipeline fittings and restraint which will be paid for under separate items), handling water, couplings, and all other items necessary to complete connections, @ lump sum for each CES:

a. CES 1 – Lower CES

Five thousand six hundred
sixty nine and 19/100

(Words – Lump Sum Price)

\$ 5669.19

(Total)

b. CES 2 – Upper Connection

Five thousand six hundred
sixty nine and 19/100

(Words – Lump Sum Price)

\$ 5669.19

(Total)

7. **Imported Structural Material 3" MINUS RUN.** Includes furnishing, and placing imported Structural Fill material for replacement of unstable trench backfill material, when required and authorized by the Project Manager, the unit price per cubic yard in place,

100 cubic yards (estimated quantity for comparative bid purposes only) paid on an actual delivered to site and ticket basis per CY:

Eighty and 25/100

(Words – Unit Price/CY)

\$ 80.25

(Figures)

\$ 8025.00

(Total)

Item #	Description, Approximate Quantity, and Unit Price	Amount of Bid
8.	<p><u>Imported Concrete Rock Aggregate ¾" STONE.</u> Includes furnishing and placing imported concrete rock aggregate bedding material for replacement of unstable trench foundation, including the extra excavation required, when authorized by the Project Manager, the unit price per cubic yard in place, this bid item is not to be use as material for pipe zone bedding. 100 cubic yards (estimated quantity for comparative bid purposes only) paid on an actual delivered to site and ticket basis per CY:</p>	
	<p>One hundred six dollars even (Words – Unit Price/CY)</p>	<p>\$ 106.00 (Figures)</p>
		<p>\$ 10600.00 (Total)</p>
9.	<p><u>Asphalt Road Replacement:</u> Including cutting, removing, and disposing of asphalt required for the installation of the water line, connections to existing system, and all other required areas of this project. Including furnishing, handling, and installing all equipment and materials, asphalt preperation and excavation, disposal of excess materials, providing and installing a min of 4" of asphalt replacement, but not limited to matching existing depth, 18" min road base for subgrades, fabric, all other road prep, raising valve boxes and manholes, Asphalt Replacement and all other work shown on these drawings per most recent approved Pitkin County Road and Bridge requirements. 200 tons at per ton paid on an actual delivered to site and ticket basis per TON:</p>	
	<p>Three hundred and one and 66/100 (Words – Unit Price Per ton)</p>	<p>\$ 301.66 (Figures)</p>
		<p>\$ 60332.20</p>
10.	<p><u>Material Testing:</u> Supplying all labor and materials to provide all testing required by these contract documents, include all soils compaction testing including, soil samples for creation of standard proctors, compaction tests. All test to meet ASTM, AWWA, AASHTO, CDOT (Standards for Road and Bridge Construction), most recently approved Pitkin County road standards, all tests required to guard against unsuitable materials or defective workmanship, and other testing per Special Conditions Section 17 "Material Testing and Certificates" for the Lump Sum Price of</p>	<p>\$ (Total)</p>
	<p>Seven Thousand Six hundred Twenty Dollars and 70/100 (Words – Lump Sum Price)</p>	<p>\$7620.70</p>

Item

Description, Approximate Quantity, and Unit Price

Amount
of Bid

\$ _____
(Total)

11. **Erosion Control and Drainage:** Supplying all labor and materials to install and maintain all erosion control and drainage requirements in all areas during the construction of the waterline, vault projects and access roads, including silt fence and waddles and all other erosion and sediment control items in all areas of the contract per the Erosion Control and Drainage Specifications and Plan on Dwg 4 and per the Pitkin County Erosion and Control Standards. Contractor shall review Dwg # 4 and include items required by the Pitkin County Erosion and Sediment Control code and its requirements not included on Dwg # 4, for the Lump Sum Price of

Five Thousand Six Hundred
Forty Five Dollars and 72/100

(Words – Lump Sum Price)

\$5645.72

\$ _____
(Total)

12. **Mobilizations:** All cost to mobilize all equipment, materials, storage, and staff to the job site. for a Lump Sum @:

Twenty eight thousand six hundred
thirty four and 77/100

(Words – Unit Price)

\$ 28634.77

(Figures)

\$28634.77

\$ _____
(Total)

13. **Rock Excavation,** excavation of Bed Rock or large boulders found in pipe trench over and above the normal cost of earth excavation at the specified pay “trench width and depth” as set forth as described in Specification “Earthwork”, includes removal and disposal of excavated rock off the site. This item does not include the cost of typical boulder removal know to be found on the project. Boulder removal shall be part of Pipeline installation only, 100 cubic yards (estimated quantity for comparative bid purposes only) at:

Twelve Thousand Three Hundred
Forty Five Dollars and 00/100

(Words – Unit Price)

\$ 123.45

(Figures)

\$12345.00

\$ _____
(Total)

14. **Pot Holing for Utilities.** Includes all materials. Labor, and equipment to locate or mitigate existing utility crossings the

00400-8

Item #	<u>Description, Approximate Quantity, and Unit Price</u>	Amount of Bid
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existing 6" DIP water lines, CES locations, and the 8" sewer line, or other utilities; Work also includes performing survey grade as-built information on location and elevations of each located utility an additional pothole is included for bidding purposes, all pothole locations to be confirmed by Project Manager prior to excavation: 3 each @:

Ten Thousand Seven Hundred Five Dollars and 59/100

\$ 10705.59

15. (Words – Unit Price)

(Total)

TRAFFIC CONTROL, BARRICADING, AND FLAGGING:

Work shall also include all required labor and equipment to provide flaggers and signage as required and proposed within the attached Traffic Control Plan in order to control all vehicle and pedestrian traffic throughout the Project boundaries. The traffic control plan and selected devices and signs shall be based on the MUTCD. Traffic Control to be provide at a lump Sum Price of:

Six Thousand Eight Hundred Eighty Five Dollars and 00/100

\$6885.00

(Words - Lump Sum Price)

\$

(Total)

TOTAL (Items 1-15) -

Two Hundred Ninety Six Thousand Five Hundred Four Dollars and 65/100

BID IN WORDS

\$ 296504.65

(TOTAL)

Item #	Description, Approximate Quantity, and Unit Price	Amount of Bid
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PARTIES INTERESTED IN BID: The Bidder hereby certifies that the only persons or parties interested in this Proposal are those named herein, and that no other Bidder or prospective Bidder has been given any information concerning this Proposal.

In submitting this Proposal, it is understood that the right is reserved by the Owner to reject any or all Proposals, and to waive informalities and irregularities in Proposals received, and to accept that Proposal which in its judgment best serves the interest of the City.

I acknowledge that in submitting this bid it is understood that the right to reject any and all bids has been reserved by the owner.

FIRM NAME THE ASPEN DIGGER, INC.

BY MAIGIN STONE TITLE PRESIDENT

STATE OF INCORPORATIONS COLORADO

FIRM'S ADDRESS 0075 SOPRIS AVE.

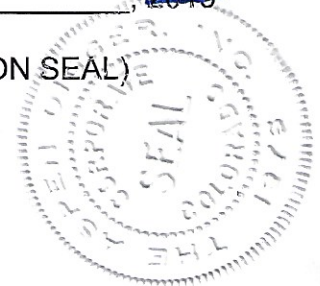
CARBONDALE, CO 81623

PHONE 970.963.2157 FAX 970.704.9633

DATES THIS 1ST DAY OF DECEMBER, ~~2010~~ 2021

ATTEST: [Signature]
Corporation Secretary

(CORPORATION SEAL)



Subcontractor & Material Supplier List

Name: Core and Main, Phone #: 970-210-7014

Address: 3026 N. I-70 Business Loop, Grand Junction CO 81504

Service or Product: Pipe, Parts and Fittings

Name: Grand Junction Pipe, Phone #: 970-963-5700

Address: 740 CO-133 #2, Carbondale CO 81623

Service or Product: Pipe, Parts and Fittings

Name: Western Slope Materials, Phone #: 970-963-2296

Address: 14682 CO-82, Carbondale CO 81623

Service or Product: Aggregate

Name: CC Enterprise Inc., Phone #: 970-242-0669

Address: 830 21 1/2 Rd , Grand Junction CO 81505

Service or Product: Traffic Control

Name: Colorado Site Services, Phone #: 970-963-2482

Address: 398 Merrill Ave. C, Carbondale CO 81623

Service or Product: Temporary Sanitary Services

Name: _____, Phone #: _____

Address: _____

Service or Product: _____



AFFIDAVIT OF COMPLIANCE

PROJECT NUMBER: 2021-219:Red Mountain Water System Improvements

The undersigned contractor has read a copy of the Contract Documents including the construction plans, for this project and understands and hereby affirms that he/she does not now, nor will he/she in the future, violate the provisions of said Contract Documents, so long as he/she is under the Contract to the City of Aspen for the performance of a Contract. The undersigned further acknowledges he/she understands and agrees to all terms and conditions of the Aspen Municipal Code and its being part of the Contract with the City of Aspen.

Attest:

Corporate Seal

THE ASPEN DIGGER, INC.

Contractor

By:

MALIGN STONE, PRESIDENT

STATE OF COLORADO)

SS.

COUNTY GARFIELD)

Before me _____, a notary public and for _____
County, Colorado personally appeared MALIGN STONE known
to me personally to be the person(s) whose signature(s) in my presence this 10TH
day of DECEMBER, A.D. 2021.

My commission expires: 3/25/24

(Seal)

LINDA J. CORCORAN
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19954010371
MY COMMISSION EXPIRES MARCH 25, 2024

Notary Public



LIQUIDATED DAMAGES
for
FAILURE TO COMPLETE THE WORK ON TIME

The undersigned contractor declares his/her full awareness of the content and terms of this contract and affirms that the contractual time is the period mentioned in the contract Specifications plus the time extension(s), if any, granted by the City of Aspen for successful completion of project. The undersigned contractor further acknowledges he/she understands and agrees to liquidated damages to be deducted from moneys due to him/her for any delayed calendar day beyond the total time at the rate of **\$1,000.00 per day**. This amount and the total allowed time by the City shall not be negotiable under any conditions.

Attest:

Corporate Seal

THE ASPEN DIGGER, INC.

Contractor

By:

MAIGIN STONE, PRESIDENT

STATE OF COLORADO)
COUNTY GARFIELD) SS.

Before me Linda Corcoran, a notary public and for GARFIELD

County, Colorado personally appeared MAIGIN STONE known to

me personally to be the person(s) whose signature(s) in my presence this 10TH day of

DECEMBER, A.D. 2021

My commission expires: 3/25/24

(Seal)

LINDA J. CORCORAN
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19954010371
MY COMMISSION EXPIRES MARCH 25, 2024

Notary Public



NOTICE OF INTENT TO AWARD

Date: 12/3/21

RE: 2021-219:Red Mountain Water System Improvements

Dear Franz Stone,

This notice of award is issued to inform you that following a competitive Invitation to Bid, a determination was made that your bid was the lowest responsible and responsive bid. Accordingly, the City of Aspen hereby accepts your bid to perform the work outlined in the bid documents for an amount not to exceed Two Hundred Ninety Six Thousand Five Hundred Four Dollars and Sixty Five Cents (\$296,504.65), subject to approval by the City Council of the City of Aspen. This contract will be presented to the City Council for approval at the first regularly scheduled meeting in January of 2022. Your attendance is not necessary although you are most welcome to attend.

In accordance with the provisions set forth in the Contract Documents, you must comply with the following conditions precedent within seven (7) consecutive calendar days of the hand delivery or fax transmission of this notice:

1. You must deliver three signed copies of the executed Contract Documents.
2. You must deliver Performance, Payment, and Maintenance bonds on the City forms.
3. You must deliver proof of insurance coverage, with the City of Aspen named as co-insured, as specified in Contract Documents and proof of Workman's Compensation coverage.
4. You must obtain a license to do business within the City of Aspen.
5. You must deliver proof of a Contractor's License

Failure to comply with these conditions within the specified time will entitle the City of Aspen to consider your bid abandoned, to annul this Notice of Award, and to declare your Bid Security forfeited. Within seven (7) days after you comply with these conditions or following the City Council approval, whichever occurs last, the City of Aspen will return to you one fully signed counterpart of the contract, together with a "Notice to Proceed".

Thank you for your bid and congratulations on being the successful bidder for this project.

Sincerely,

By: _____



CONTRACT FOR CONSTRUCTION

THIS AGREEMENT, made and entered into on **January 11th, 2022**, by and between the **CITY OF ASPEN**, Colorado, hereinafter called the "City", and **THE ASPEN DIGGER, INC.**, hereinafter called the "Contractor".

WHEREAS, the City has caused to be prepared, in accordance with the law, specifications and other Contract Documents for the work herein described, and has approved and adopted said documents, and has caused to be published, in the manner and for the time required by law, an advertisement, for the project: **2021-219:Red Mountain Water System Improvements**, and,

WHEREAS, the Contractor, in response to such advertisement, or in response to direct invitation, has submitted to the City, in the manner and at the time specified, a sealed Bid in accordance with the terms of said Invitation for Bids; and,

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined, and canvassed the Bids submitted in response to the published Invitation for Bids therefore, and as a result of such canvass has determined and declared the Contractor to be the lowest responsible and responsive bidder for the said Work and has duly awarded to the Contractor a Contract for Construction therefore, for the sum or sums set forth herein;

NOW, THEREFORE, in consideration of the payments and Contract for Construction herein mentioned:

1. The Contractor shall commence and complete the construction of the Work as fully described in the Contract Documents.
2. The Contractor shall furnish all of the materials, supplies, tools, equipment, labor and other services necessary for the construction and completion of the Work described herein.
3. The Contractor shall commence the work required by the Contract Documents within seven (7) consecutive calendar days after the date of "Notice to Proceed" and will complete the same by the date and time indicated in the Special Conditions unless the time is extended in accordance with appropriate provisions in the Contract Documents.
4. The Contractor agrees to perform all of the Work described in the Contract Documents and comply with the terms therein for a sum not to exceed **TWO HUNDRED NINETY SIX THOUSAND FIVE HUNDRED FOUR AND 65/100 (\$296,504.65) DOLLARS** or as shown on the BID proposal.
5. The term "Contract Documents" means and includes the documents listed in the City of Aspen General Conditions to Contracts for Construction (version GC97-2) and in the

Special Conditions. The Contract Documents are included herein by this reference and made a part hereof as if fully set forth here.

6. The City shall pay to the Contractor in the manner and at such time as set forth in the General Conditions, unless modified by the Special Conditions, such amounts as required by the Documents.
7. This Contract for Construction shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns. Notwithstanding anything to the contrary contained herein or in the Contract Documents, this Contract for Construction shall be subject to the City of Aspen Procurement Code, Title 4 of the Municipal Code, including the approval requirements of Section 4-08-040. This agreement shall not be binding upon the City unless duly executed by the City Manager or the Mayor of the City of Aspen (or a duly authorized official in his/her absence) following a resolution of the Council of the City of Aspen authorizing the Mayor or City Manager (or a duly authorized official in his/her absence) to execute the same.
8. This agreement and all of the covenants hereof shall inure to the benefit of and be binding upon the City and the Contractor respectively and their agents, representatives, employees. Successors, assigns, and legal representatives. Neither the City nor the Contractor shall have the right to assign, transfer or sublet his or her interest or obligations hereunder without the written consent of the other party.
9. This agreement does not and shall not be deemed or construed to confer upon or grant to any third party or parties, except to parties to whom the Contractor or the City may assign this Contract for Construction in accordance with the specific written consent, any rights to claim damages or to bring suit, action or other proceeding against either the City or the Contractor because of any breach hereof or because of any of the terms, covenants, agreements or conditions herein contained.
10. No waiver of default by either party of any terms, covenants or conditions hereof to be performed, kept and observed by the other party shall be construed, or operate as, a waiver of any subsequent default of any of the terms, covenants or conditions herein contained, to be performed, kept and observed by the other party.
11. The parties agree that this Contract for Construction was made in accordance with the laws of the State of Colorado and shall be so construed. Venue is agreed to be kept exclusively in the courts of Pitkin County, Colorado.
12. In the event that legal action is necessary to enforce any of the provisions of this Contract for Construction, the prevailing party shall be entitled to its costs and reasonable attorney's fees.
13. This Contract for Construction was reviewed and accepted through the mutual efforts of the parties hereto, and the parties agree that no construction shall be made or presumption shall arise for or against either party based on any alleged unequal status of the parties in the negotiation, review or drafting of this Contract for Construction.
14. The undersigned representative of the Contractor, as an inducement to the City to execute this Contract for Construction, represents that he/she is an authorized

representative of the Contractor for the purposes of executing this Contract for Construction and that he/she has full and complete authority to enter into this Contract for Construction for the terms and conditions specified herein.

15. This Agreement and any amendments hereto may be executed in several counterparts, each of which shall be deemed an original, and all of which together shall constitute one agreement binding on the Parties, notwithstanding the possible event that all Parties may not have signed the same counterpart. Furthermore, each Party consents to the use of electronic signatures by either Party. The Scope of Work, and any other documents requiring a signature hereunder, may be signed electronically in the manner agreed to by the Parties. The Parties agree not to deny the legal effect or enforceability of the Agreement solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Agreement in the form of an electronic record, or a paper copy of an electronic documents, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

16. Worker Without Authorization – CRS §8-17.5-101 & §24-76.5-101

Purpose. During the 2021 Colorado legislative session, the legislature passed House Bill 21-1075 that amended current CRS §8-17.5-102 (1), (2)(a), (2)(b) introductory portion, and (2)(b)(III) as it relates to the employment of and contracting with a “worker without authorization” which is defined as an individual who is unable to provide evidence that the individual is authorized by the federal government to work in the United States. As amended, the current law prohibits all state agencies and political subdivisions, including the Owner, from knowingly hiring a worker without authorization to perform work under a contract, or to knowingly contract with a Consultant who knowingly hires with a worker without authorization to perform work under the contract. The law also requires that all contracts for services include certain specific language as set forth in the statutes. The following terms and conditions have been designed to comply with the requirements of this new law.

Definitions. The following terms are defined by this reference are incorporated herein and in any contract for services entered into with the Owner.

.1 "E-verify program" means the electronic employment verification program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, that is jointly administered by the United States Department of Homeland Security and the social security Administration, or its successor program.

.2 "Department program" means the employment verification program established pursuant to Section 8-17.5-102(5)(c).

.3 "Public Contract for Services" means this Agreement.

.4 "Services" means the furnishing of labor, time, or effort by a Consultant or a subconsultant not involving the delivery of a specific end product other than reports that are merely incidental to the required performance.

.5 "Worker without authorization" means an individual who is unable to provide evidence that the individual is authorized by the federal government to work in the United States

By signing this document, Consultant certifies and represents that at this time:

1. Consultant shall confirm the employment eligibility of all employees who are newly hired for employment to perform work under the public contract for services; and
2. Consultant has participated or attempted to participate in either the e verify program or the department program in order to verify that new employees are not workers without authorization.

Consultant hereby confirms that:

1. Consultant shall not knowingly employ or contract with a worker without authorization to perform work under the Public Contract for Services.
2. Consultant shall not enter into a contract with a subconsultant that fails to certify to the Consultant that the subconsultant shall not knowingly employ or contract with a worker without authorization to perform work under the Public Contract for Services.
3. Consultant has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under the public contract for services through participation in either the e-verify program or the department program.
4. Consultant shall not use either the e-verify program or the department program procedures to undertake pre-employment screening of job applicants while the Public Contract for Services is being performed.

If Consultant obtains actual knowledge that a subconsultant performing work under the Public Contract for Services knowingly employs or contracts with a worker without authorization, Consultant shall:

1. Notify such subconsultant and the Owner within three days that Consultant has actual knowledge that the subconsultant is employing or subcontracting with a worker without authorization; and
2. Terminate the subcontract with the subconsultant if within three days of receiving the notice required pursuant to this section the subconsultant does not stop employing or contracting with the worker without authorization; except that Consultant shall not terminate the Public Contract for Services with the subconsultant if during such three days the subconsultant provides information to establish that the subconsultant has not knowingly employed or contracted with a worker without authorization.

Consultant shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation that the Colorado Department of Labor and Employment undertakes or is undertaking pursuant to the authority established in Subsection 8-17.5-102 (5), C.R.S.

If Consultant violates any provision of the Public Contract for Services pertaining to the duties imposed by Subsection 8-17.5-102, C.R.S. the Owner may terminate this Agreement. If this Agreement is so terminated, Consultant shall be liable for actual damages to the Owner arising out of Consultant's violation of Subsection 8-17.5-102, C.R.S.

It is agreed that neither this agreement nor any of its terms, provisions, conditions, representations or covenants can be modified, changed, terminated or amended, waived, superseded or extended except by appropriate written instrument fully executed by the parties.

If any of the provisions of this agreement shall be held invalid, illegal or unenforceable it shall not affect or impair the validity, legality or enforceability of any other provision.

17. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation that the Colorado Department of Labor and Employment undertakes or is undertaking pursuant to the authority established in Subsection 8-17.5-102 (5), C.R.S.

18. If Contractor violates any provision of the Public Contract for Services pertaining to the duties imposed by Subsection 8-17.5-102, C.R.S. the City of Aspen may terminate the Public Contract for Services. If the Public Contract for Services is so terminated, Contractor shall be liable for actual and consequential damages to the City of Aspen arising out of Contractor's violation of Subsection 8-17.5-102, C.R.S.

19. This Agreement and any amendments hereto may be executed in several counterparts, each of which shall be deemed an original, and all of which together shall constitute one agreement binding on the Parties, notwithstanding the possible event that all Parties may not have signed the same counterpart. Furthermore, each Party consents to the use of electronic signatures by either Party. The Scope of Work, and any other documents requiring a signature hereunder, may be signed electronically in the manner agreed to by the Parties. The Parties agree not to deny the legal effect or enforceability of the Agreement solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Agreement in the form of an electronic record, or a paper copy of an electronic documents, or a paper copy of a document bearing an electronic signature, on the grounds that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

IN WITNESS WHEREOF, the parties agree hereto have executed this Contract for Construction on the date first above written.



ATTESTED BY:

FRANZ STONE, SECRETARY-TREASURER

CITY OF ASPEN, COLORADO

By: _____

Title: _____

APPROVED AS TO FORM:

By: _____
City Attorney

CONTRACTOR: THE ASPEN DIGGER, INC.

By: MALGIN STONE

Title: PRESIDENT

General Conditions for Construction Contracts and Special Conditions can be found on City of Aspen Website.
<https://www.cityofaspen.com/497/Purchasing>

Note: Certification of Incorporation shall be executed if Contractor is a Corporation. If a partnership, the Contract shall be signed by a Principal and indicate title.

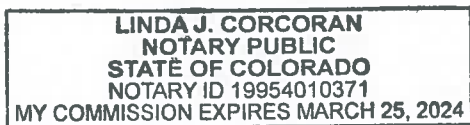
CERTIFICATE OF INCORPORATION

(To be completed if Contractor is a Corporation)

STATE OF COLORADO)
COUNTY OF GARFIELD) SS.

On this 10TH day of DECEMBER, 2021, before me appeared MAIGIN STONE, to me personally known, who, being by me first duly sworn, did say that s/he is PRESIDENT of THE ASPEN DIGGER, INC. and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said deponent acknowledged said instrument to be the free act and deed of said corporation.

WITNESS MY HAND AND NOTARIAL SEAL the day and year in this certificate first above written.



Linda J. Corcoran
Notary Public

1114 WESTLOOK DR GLENDALE, AZ 85140
Address

My commission expires: 3/25/24



City of Aspen Colorado

Business License

Permission is Hereby Given To:

The Aspen Digger, Inc.
0075 Sopris Avenue
Carbondale, CO 81623

License Number

Year Issued

010142

2020

To Maintain and Carry On The Following Described Business : Professional, Scientific and Technical Services

For The Term From 12/14/2020 To 12/31/2021

In Testimony Whereof the Corporate Seal Of the City Of Aspen

Is Hereunto Affixed On This Date

Attest:

TOPPE

Mayor



City Clerk

Pitt Shaw

Director of Finance



Nature of Business	License Number	Expiration Date	Date Issued
Construction / Trades	010142	12/31/2021	12/14/2020

Licensee:

The Aspen Digger, Inc.
0075 Sopris Avenue
Carbondale, CO 81623

This certifies that the licensee shown Hereon is authorized to collect sales/use taxes for the City of Aspen, Colorado, at the address shown hereon, in accordance with the city code.

Pitt Shaw

Director of Finance, City of Aspen

NOT TRANSFERABLE

Valid Until Revoked or Cancelled



Contractor License

License Number: 2007-0254



Issued Date: 07/10/2020

Expiration Date: 07/10/2023

Contractor Type: Excavator

THE ASPEN DIGGER INC
75 Sopris Ave
Carbondale, CO 81623

Chief Building Official, Aspen

Chief Building Official, Pitkin
County



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

12/09/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Moody-Valley Insurance Agency, Inc. 760 Horizon Drive, Suite 302 Grand Junction CO 81506		CONTACT NAME: Moody-Valley Insurance Agency PHONE (A/C, No, Ext): (970) 248-8300 FAX (A/C, No): (970) 242-1894 E-MAIL ADDRESS: certrequestgj@moodyins.com	
INSURED The Aspen Digger, Inc 0075 Sopris Carbondale CO 81623		INSURER(S) AFFORDING COVERAGE INSURER A: Selective Insurance Co of America INSURER B: Pinnacol Assurance INSURER C: Westchester Surplus Lines Ins INSURER D: INSURER E: INSURER F:	
		NAIC #	
		12572	
		41190	
		10172	

COVERAGES **CERTIFICATE NUMBER:** 21/22 Master w/Pollution **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000
	X.C.U						MED EXP (Any one person) \$ 15,000
	UGRE	Y	Y	S2303560	08/15/2021	08/15/2022	PERSONAL & ADV INJURY \$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$ 3,000,000
	<input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG \$ 3,000,000
	OTHER:						\$
A	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO						BODILY INJURY (Per person) \$
	<input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS	Y	Y	S2303560	08/15/2021	08/15/2022	BODILY INJURY (Per accident) \$
	<input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident) \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB						EACH OCCURRENCE \$ 2,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB						AGGREGATE \$ 2,000,000
	<input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE	Y	Y	S2303560	08/15/2021	08/15/2022	\$
	DED RETENTION \$						\$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y/N					E.L. EACH ACCIDENT \$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below	N	A	1622540	07/01/2021	07/01/2022	E.L. DISEASE - EA EMPLOYEE \$ 1,000,000
							E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Contractors Pollution Liability	Y	Y	G70915303003	08/15/2020	08/15/2022	Each Pollution Condition \$1,000,000
							Policy Aggregate \$1,000,000
							Deductible \$5,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: 2021 Red Mountain Water System Improvements Project, Project No. 2021-219

Policies are Primary and Non-Contributory. 30 Day Notice of Cancellation applies, except 10 Day for Non-payment of Premium

CERTIFICATE HOLDER

CANCELLATION

City of Aspen and City of Aspen's Officers and Employees
130 S. Galena Street

Aspen

CO 81611

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Moody-Valley Insurance Agency

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ADDITIONAL REMARKS SCHEDULE

AGENCY Moody-Valley Insurance Agency, Inc.		NAMED INSURED The Aspen Digger, Inc	
POLICY NUMBER			
CARRIER	NAIC CODE	EFFECTIVE DATE:	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** Certificate of Liability Insurance: Notes

Auto Physical Damage Coverage – Selective Insurance Company of America, NAIC 12572, Policy No. S2303560, Effective 8/15/2021 to 8/15/2022, ACV, \$1,000 Deductible Comprehensive, \$1,000 Deductible Collision.

Contractors Equipment Coverage – Selective Insurance Company of America, NAIC 12572, Policy No. S2303560, Effective 8/15/2021 to 8/15/2022; \$3,340,610 Blanket Limit; Valuation ACV, \$1,000 Deductible per Item.

CONTRACTUAL LIABILITY APPLIES PER POLICY TERMS AND CONDITIONS

General Liability:

General Liability Forms Attached Include:

Blanket Additional Insured applies only to the extent provided in form CG 79 88 01 16, form CG 73 00 01 16 and in form CG 73 00 01 16 when required by written contract.

Blanket Waiver of Subrogation applies only to the extent provided in form CG 73 00 01 16 when required by written contract.

Primary and Non-Contributory status only to the extent provided in form CG 73 00 01 16 when required by written contract.

Designated Project General Aggregate applies only to the extent provided in form CG 25 03 05 09 when required by written contract.

Designated Location(s) General Aggregate applies only to the extent provided in form CG 25 04 05 09 when required by written contract.

Auto Liability:

Auto Liability Forms Attached Include:

Blanket Additional Insured status applies only to the extent provided in form CA 78 09 01 16 when required by written contract.

Blanket Waiver of Subrogation applies only to the extent provided in form CA 78 09 01 16 when required by written contract.

Primary and Non-Contributory status only to the extent provided in form CA 78 09 01 16 when required by written contract.

Contractors Pollution Liability:

Contractors Pollution Liability Forms Attached Include:

Blanket Additional Insured status applies only to the extent provided in form ENV-3250 (12/18) and form ENV-3251 (12/18) when required by written contract.

Blanket Waiver of Subrogation applies only to the extent provided in form ENV-3143 (03-05) when required by written contract.

Primary and Non-Contributory status only to the extent provided in form ENV-3225 (10-08) and form ENV-3253 (12-18) when required by written contract.

Excess Liability:

Excess Liability policy is on a follow form basis for the following underlying insurance coverages: General Liability, Automobile Liability, and Employers Liability. Additional insured status will follow when required by written contract including Primary and Non-Contributory status when required by written contract.

Worker's Compensation:

359-B From Attached Includes Blanket Waiver of Subrogation. Status applies when required by written contract.

IMPORTANT:

The policy forms referenced will be sent via email only. To obtain copies, please send your request with the email address to certrequestgj@moodyins.com

NCCI #: WC000313B
Policy #: 1622540

Aspen Digger Inc
0075 Sopris Ave.
Carbondale, CO 81623

Moody-Valley Insurance Agency, Inc.
760 Horizon Drive
#302
Grand Junction, CO 81506-1509
(970) 243-3421

ENDORSEMENT: Blanket Waiver of Subrogation

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

SCHEDULE

To any person or organization when agreed to under a written contract or agreement, as defined above and with the insured, which is in effect and executed prior to any loss.

Effective Date: June 11, 2021 Expires on: July 1, 2022
Pinnacol Assurance has issued this endorsement June 11, 2021

Contracting, Installation, Service and Repair General Liability Extended ElitePac® Endorsement

COMMERCIAL GENERAL LIABILITY
CG 79 88 01 16

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

1. BLANKET ADDITIONAL INSURED

a. Ongoing Operations

SECTION II — WHO IS AN INSURED is amended to include as an additional insured any person or organization you have agreed in a written contract, written agreement, or written permit to add as an additional insured on your policy, but only with respect to liability arising out of your ongoing operations performed under that contract, agreement, or permit when that contract, agreement, or permit requires the additional insured be added with respect to liability arising out of your ongoing operations. If the written contract, written agreement, or written permit does not require that the additional insured be added with respect to liability arising out of your ongoing operations, then **SECTION II — WHO IS AN INSURED** is amended to include as an additional insured any person or organization you have agreed in a written contract, written agreement, or written permit to add as an additional insured on your policy, but only with respect to “bodily injury”, “property damage” or “personal and advertising injury” caused in whole or in part by your ongoing operations performed under that contract, agreement, or permit.

b. Completed Operations

SECTION II — WHO IS AN INSURED is amended to include as an additional insured any person or organization you have agreed in a written contract, written agreement, or written permit to add as an additional insured on your policy, but only with respect to their liability arising out of “your work” performed under that contract, agreement, or permit and included in the “products-completed operations hazard” when that contract, agreement, or permit requires the additional insured be added with respect to liability arising out of “your work” performed under that contract, agreement, or permit and included in the “products-completed

operations hazard”. If the written contract, written agreement, or written permit does not require that the additional insured be added with respect to liability arising out of “your work” performed under that contract, agreement, or permit and included in the “products-completed operations hazard”, then **SECTION II — WHO IS AN INSURED** is amended to include as an additional insured any person or organization you have agreed in a written contract, written agreement, or written permit to add as an additional insured on your policy, but only with respect to liability for “bodily injury”, “property damage” or “personal and advertising injury” caused, in whole or in part, by “your work” performed under that contract, agreement, or permit and included in the “products-completed operations hazard”.

- c. The coverages provided in Paragraphs a. and b. do not apply unless the written contract or written agreement has been executed (executed means signed by the named insured) or written permit issued prior to the “bodily injury”, “property damage” or “personal and advertising injury”.

d. Exclusions

- (1) With respect to the insurance afforded to additional insureds under a. **Ongoing Operations** the following is added to 2. **Exclusions** under **SECTION I — COVERAGE A — BODILY INJURY AND PROPERTY DAMAGE LIABILITY**:

This insurance does not apply to “bodily injury”, “property damage”, or “personal and advertising injury” occurring after:

- (a) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or

(b) That portion of “your work” out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

- (2) With respect to the insurance afforded to these additional insureds under **a. Ongoing Operations** and **b. Completed Operations**, the following is added to **2. Exclusions** under **SECTION I — COVERAGE A — BODILY INJURY AND PROPERTY DAMAGE LIABILITY**:

This insurance does not apply to:

“Bodily injury”, “property damage”, or “personal and advertising injury” arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

- (a) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- (b) Supervisory, inspection, architectural or engineering activities.

e. Conditions

With respect to the insurance afforded to these additional insureds under **a. Ongoing Operations** and **b. Completed Operations** the following is added to Paragraph **4. Other Insurance**, **a. Primary Insurance** under **SECTION IV — COMMERCIAL GENERAL LIABILITY CONDITIONS**:

This insurance is primary and will not contribute with any other insurance available to an additional insured under this coverage part provided that:

- (1) The additional insured is a Named Insured under such other insurance.
- (2) You have agreed in a written contract, written agreement or written permit to include that additional insured on your General Liability policy on a primary and/or non-contributory basis.

2. PROPERTY DAMAGE CARE, CUSTODY OR CONTROL

The following is added to **Exclusion j.** under **SECTION I - COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY**:

Paragraphs **(4)** and **(5)** do not apply for the limited purpose of providing the coverage and sub-limits of liability as set forth below.

We will pay those sums that the insured becomes legally obligated to pay as damages arising out of “property damage” to:

- (1) Personal property in the care, custody or control of the insured; and
- (2) That particular part of real property on which you or any contractors or subcontractors working directly or indirectly on your behalf are performing operations, if the “property damage” arises out of those operations.

The most we will pay under **(1)** and **(2)** above in any one “occurrence” or for all damages during any one policy period is a sub-limit of \$100,000.

These limits are included in and not in addition to the Limits of Insurance shown in the Declarations of the Commercial General Liability Policy.

Our right and duty to defend the insured against any “suit” for damages under **(1)** and **(2)** above ends when we have used up the applicable sub-limit of liability in the payment of judgments or settlements under it.

3. OTHER INSURANCE AMENDMENT — SUPPLEMENTAL COVERAGE FOR INSURED’S INVOLVEMENT IN A CONSOLIDATED (WRAP-UP) INSURANCE PROGRAM OR SIMILAR PROJECT

The following is added to **SECTION IV — COMMERCIAL GENERAL LIABILITY CONDITIONS**, Paragraph **4. Other Insurance b. Excess Insurance (1)(a)**:

- (v) That is covered by a consolidated (wrap-up) or similar insurance program provided by the prime contractor/project manager or owner of the construction project in which you are involved for your ongoing operations or operations included within the “products-completed operations hazard”, unless such consolidated (wrap-up) or similar program is specifically excluded from coverage on this policy.

4. FELLOW EMPLOYEE EXTENSION

Under **SECTION II — WHO IS AN INSURED** Paragraphs **2.a.** and **2.a. (1)** are replaced by the following:

- a. Your “volunteer workers” only while performing duties related to the conduct of your business, or your “employees”, other than either your “executive officers” (if you are an organization other than a partnership, joint venture, or limited liability company) or your managers (if you are a limited liability company), but only for acts within the scope of their employment by you or while performing duties related to the conduct of your business. The Employers Liability exclusion (**SECTION I — COVERAGES; COVERAGE A, exclusion e.**) does not apply to this provision. However, none of these “employees” or “volunteer workers” are insureds for:

- (1) “Bodily injury” or “personal and advertising injury”:

- (a) Arising out of his or her providing or failing to provide professional health care services.

5. CONTRACTUAL LIABILITY (RAILROADS)

Definition 9. Insured Contract is amended as follows:

Paragraph **c.** is deleted in its entirety and replaced with the following:

Any easement or license agreement;

Paragraph **f.(1)** is deleted in its entirety.

6. CONTRACTUAL LIABILITY AMENDMENT — (PERSONAL AND ADVERTISING INJURY)

If it is required in a written contract, written agreement or written permit with the insured that any contractual liability exclusion for Personal Injury be removed from the policy, then Exclusion **e. Contractual Liability** under **COVERAGE B PERSONAL AND ADVERTISING INJURY, 2. Exclusions** is deleted in its entirety and replaced with the following:

e. Contractual Liability

“Personal and advertising Injury” for which the insured has assumed liability in a contract or agreement arising out of an “advertisement”. This exclusion does not apply to liability for damages that the insured would have in the absence of the contract or agreement.

7. WAIVER OF GOVERNMENTAL IMMUNITY

We will waive, both in the adjustment of claims and in the defense of “suits” against the insured, any governmental immunity of the insured, unless the insured requests in writing that we not do so.

Waiver of immunity as a defense will not subject us to liability for any portion of a claim or judgment in excess of the applicable limit of insurance.

8. DAMAGE TO PREMISES RENTED TO YOU

The Limit of Insurance for Damage To Premises Rented To You is increased to \$1,000,000.

ElitePac® General Liability Extension Endorsement

COMMERCIAL GENERAL LIABILITY
CG 73 00 01 16

SUMMARY OF COVERAGES (including index)

This is a summary of the various additional coverages and coverage modifications provided by this endorsement. No coverage is provided by this summary. Refer to the actual endorsement (Pages 3-through-8) for changes affecting your insurance protection.

DESCRIPTION	PAGE FOUND
Additional Insureds - Primary and Non-Contributory Provision	Page 7
Blanket Additional Insureds - As Required By Contract	Page 6
Broad Form Vendors Coverage	Page 6
Damage To Premises Rented To You (Including Fire, Lightning or Explosion)	Page 3
Electronic Data Liability (\$100,000)	Page 4
Employee Definition Amended	Page 8
Employees As Insureds Modified	Page 5
Employer's Liability Exclusion Amended (Not applicable in New York)	Page 3
Incidental Malpractice Exclusion modified	Page 7
Knowledge of Occurrence, Claim, Suit or Loss	Page 7
Liberalization Clause	Page 7
Mental Anguish Amendment (Not applicable to New York)	Page 8
Newly Formed or Acquired Organizations	Page 5
Non-Accumulation Of Limits (Not applicable in New York or Wisconsin)	Page 7
Non-Owned Aircraft	Page 3
Non-Owned Watercraft (under 60 feet)	Page 3
Not-for-profit Members - as additional insureds	Page 5
Personal And Advertising Injury - Discrimination Amendment (Not applicable in New York)	Page 8
Products Amendment (Medical Payments)	Page 4
Supplementary Payments Amended - Bail Bonds (\$5,000) and Loss of Earnings (\$1,000)	Page 4
Unintentional Failure to Disclose Hazards	Page 7
Waiver of Transfer of Rights of Recovery (subrogation)	Page 7
When Two or More Coverage Parts of this Policy Apply to a Loss	Page 3

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ElitePac®
General Liability Extension Endorsement

COMMERCIAL GENERAL LIABILITY
CG 73 00 01 16

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies the insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

The **SECTIONS** of the Commercial General Liability Coverage Form identified in this endorsement will be amended as shown below. However, **if (a) two or more Coverage Parts of this policy, or (b) two or more forms or endorsements within the same Coverage Part apply to a loss**, only the broadest coverage of this policy will apply, unless specifically stated otherwise within the particular amendment covering that loss.

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

COVERAGES - Amendments

SECTION I - COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY

EXCLUSIONS

Employer's Liability Amendment

(This provision is not applicable in the State of New York).

The following is added to Exclusion **e. Employer's Liability** under **COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2. Exclusions**:

This exclusion also does not apply to any "temporary worker".

Non-Owned Aircraft, Auto or Watercraft

A. Paragraph **(2)** of Exclusion **g. Aircraft, Auto Or Watercraft** under **COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2. Exclusions** is deleted in its entirety and replaced with the following:

(2) A watercraft you do not own that is:

- (a)** Less than 26 feet long and not being used to carry persons or property for a charge; or
- (b)** At least 26 feet, but less than 60 feet long, and not being used to carry persons or property for a charge. Any person is an insured who uses or is responsible for the use of such watercraft with your expressed or implied consent. However, if the insured has any other valid and collectible insurance for "bodily injury" or "property damage" that would be covered under this provision, or on any other basis, this coverage is then excess, and subject to Condition **4. Other Insurance, b. Excess Insurance** under **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS**.

B. The following is added to Exclusion **g. Aircraft, Auto Or Watercraft** under **COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2. Exclusions**:

This exclusion does not apply to:

- (6)** Any aircraft, not owned or operated by any insured, which is hired, chartered or loaned with a paid crew. However, if the insured has any other valid and collectible insurance for "bodily injury" or "property damage" that would be covered under this provision, or on any other basis, this coverage is then excess, and subject to Condition **4. Other Insurance, b. Excess Insurance** under **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS**.

Damage To Premises Rented to You

A. The last paragraph of Paragraph **2. Exclusions** under **COVERAGE A BODILY INJURY AND PROPERTY DAMAGE** is deleted in its entirety and replaced with the following:

Exclusions **c. through n.** do not apply to damage by fire, lightning or explosion to premises rented to you or temporarily occupied by you with the permission of the owner. A separate limit of insurance applies to this coverage as described in **SECTION III - LIMITS OF INSURANCE**.

B. Paragraph **6.** under **SECTION III - LIMITS OF INSURANCE** is deleted in its entirety and replaced with the following:

6. Subject to Paragraph **5.** above, the most we will pay under **COVERAGE A** for damages because of "property damage" to any one premises, while rented to you, or in the case of damage caused by fire, lightning or explosion, while rented to you or temporarily occupied by you with permission of the owner, for all such damage caused by fire, lightning or explosion proximately caused by the same event, whether such damage results from fire, lightning or explosion or any combination of the three, is the amount shown in the Declarations for the Damage To Premises Rented To You Limit.

C. Paragraph **a.** of Definition **9.** "Insured contract" under **SECTION V - DEFINITIONS** is deleted in its entirety and replaced with the following:

a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire, lightning or explosion to premises while rented to you or temporarily occupied by you with the permission of the owner is not an "insured contract";

Electronic Data Liability

A. Exclusion **p. Access or Disclosure Of Confidential Or Personal Information And Date-related Liability** under **COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY, 2. Exclusions** is deleted in its entirety and replaced by the following:

p. **Access or Disclosure Of Confidential Or Personal Information And Date-related Liability**

Damages arising out of:

- (1) Any access to or disclosure of any person's or organization's confidential or personal information, including patents, trade secrets, processing methods, customer lists, financial information, credit card information or any other type of nonpublic information; or
- (2) The loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate "electronic data" that does not result from physical injury to tangible property.

This exclusion applies even if damages are claimed for notification costs, credit monitoring expenses, forensic expenses, public relations expenses or any other loss, cost or expense incurred by you or others arising out of that which is described in Paragraph **(1)** or **(2)** above.

B. The following paragraph is added to **SECTION III - LIMITS OF INSURANCE**:

Subject to **5.** above, the most we will pay under **COVERAGE A** for "property damage" because of all loss of "electronic data" arising out of any one "occurrence" is a sub-limit of \$100,000.

SECTION I - COVERAGE C MEDICAL PAYMENTS EXCLUSIONS

Any Insured Amendment

Exclusion **a. Any Insured** under **COVERAGE C MEDICAL PAYMENTS, 2. Exclusions** is deleted in its entirety and replaced with the following:

a. **Any Insured**

To any insured.

This exclusion does not apply to:

- (1) "Not-for-profit members";
- (2) "Golfing facility" members who are not paid a fee, salary, or other compensation; or
- (3) "Volunteer workers".

This exclusion exception does not apply if **COVERAGE C MEDICAL PAYMENTS** is excluded by another endorsement to this Coverage Part.

Product Amendment

Exclusion **f. Products-Completed Operations Hazard** under **COVERAGE C MEDICAL PAYMENTS, 2. Exclusions** is deleted in its entirety and replaced with the following:

f. **Products-Completed Operations Hazard**

Included within the "products-completed operations hazard".

This exclusion does not apply to "your products" sold for use or consumption on your premises, while such products are still on your premises.

This exclusion exception, does not apply if **COVERAGE C MEDICAL PAYMENTS** is excluded by another endorsement to this Coverage Part.

SECTION I - SUPPLEMENTARY PAYMENTS - COVERAGES A AND B

Expenses For Bail Bonds And Loss Of Earnings

A. Subparagraph **1.b.** under **SUPPLEMENTARY PAYMENTS - COVERAGES A AND B** is deleted in its entirety and replaced with the following:

b. Up to \$5,000 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

B. Subparagraph 1.d. under **SUPPLEMENTARY PAYMENTS - COVERAGES A AND B** is deleted in its entirety and replaced with the following:

- d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to \$1,000 a day because of time off from work.

SECTION II - WHO IS AN INSURED - Amendments

Not-for-Profit Organization Members

The following paragraph is added to **SECTION II - WHO IS AN INSURED**:

If you are an organization other than a partnership, joint venture, or a limited liability company, and you are a not-for-profit organization, the following are included as additional insureds:

1. Your officials;
2. Your trustees;
3. Your members;
4. Your board members;
5. Your commission members;
6. Your agency members;
7. Your insurance managers;
8. Your elective or appointed officers; and
9. Your "not-for-profit members".

However only with respect to their liability for your activities or activities they perform on your behalf.

Employees As Insureds Modified

- A. Subparagraph 2.a.(1)(a) under **SECTION II - WHO IS AN INSURED** does not apply to "bodily injury" to a "temporary worker" caused by a co-"employee" who is not a "temporary worker".
- B. Subparagraph 2.a.(2) under **SECTION II - WHO IS AN INSURED** does not apply to "property damage" to the property of a "temporary worker" or "volunteer worker" caused by a co-"employee" who is not a "temporary worker" or "volunteer worker".
- C. Subparagraph 2.a.(1)(d) under **SECTION II - WHO IS AN INSURED** does not apply to "bodily injury" caused by cardio-pulmonary resuscitation or first aid services administered by a co-"employee".

With respect to this provision only, Subparagraph (1) of Exclusion 2. e. **Employer's Liability** under **SECTION I - COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY** does not apply.

Newly Formed Or Acquired Organizations

A. Subparagraph 3.a. under **SECTION II - WHO IS AN INSURED** is deleted in its entirety and replaced with the following:

- a. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier. However, **COVERAGE A** does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization.

B. The following paragraph is added to **SECTION II - WHO IS AN INSURED**, Paragraph 3:

If you are engaged in the business of construction of dwellings three stories or less in height, or other buildings three stories or less in height and less than 25,000 square feet in area, you will also be an insured with respect to "your work" only, for the period of time described above, for your liability arising out of the conduct of any partnership or joint venture of which you are or were a member, even if that partnership or joint venture is not shown as a Named Insured. However, this provision only applies if you maintain or maintained an interest of at least fifty percent in that partnership or joint venture for the period of that partnership or joint venture.

This provision does not apply to any partnership or joint venture that has been dissolved or otherwise ceased to function for more than thirty-six months.

With respect to the insurance provided by this provision, **Newly Formed or Acquired Organizations**, the following is added to **SECTION IV - COMMERCIAL GENERAL LIABILITY**, Paragraph 4. **Other Insurance**, Subparagraph b. **Excess Insurance**:

The insurance provided by this provision, **Newly Formed or Acquired Organizations**, is excess over any other insurance available to the insured, whether primary, excess, contingent or on any other basis.

(All other provisions of this section remain unchanged).

Blanket Additional Insureds - As Required By Contract

A. Subject to the **Primary and Non-Contributory** provision set forth in this endorsement, **SECTION II - WHO IS AN INSURED** is amended to include as an additional insured any person or organization whom you have agreed in a written contract, written agreement or written permit that such person or organization be added as an additional insured on your policy. Such person or organization is an additional insured only with respect to liability for "bodily injury" or "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your ongoing operations, "your product", or premises owned or used by you;

With respect to the insurance afforded to these additional insureds, the following additional exclusion applies:

This insurance does not apply to:

"Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services by or for you, including:

- a. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and
- b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or failure to render, any professional architectural, engineering or surveying services.

2. Your maintenance, operation or use of equipment, other than aircraft, "auto" or watercraft, rented or leased to you by such person or organization. A person or organization's status as an additional insured under this endorsement ends when their contract, or agreement with you for such rented or leased equipment ends. With respect to the insurance afforded to these additional insureds, this insurance does not apply to any "occurrence" which takes place after the rental agreement or equipment lease expires.

The provisions of this coverage extension do not apply unless the written contract or written agreement has been executed (executed means signed by the named insured) or written permit issued prior to the "bodily injury" or "property damage" or "personal and advertising injury".

Broad Form Vendors Coverage

Subject to the **Primary and Non-Contributory** provision set forth in this endorsement, **SECTION II - WHO IS AN INSURED** is amended to include as an additional insured any person or organization (referred to below as vendor) whom you have agreed in a written contract or written agreement to add as an additional insured on your policy. Such person or organization is an additional insured only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business, however the insurance afforded the vendor does not apply to:

- a. "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement; however this exclusion does not apply to liability for damages that the vendor would have in the absence of the contract or agreement;
- b. Any express warranty unauthorized by you;
- c. Any physical or chemical change in the product made intentionally by the vendor;
- d. Repackaging, unless unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;
- e. Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business in connection with the sale of the product; or
- f. Products which, after distribution or sale by you, have been labeled or re-labeled or used as a container, part of ingredient of any other thing or substance by or for the vendor; however this insurance does not apply to any insured person or organization, from who you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.

The provisions of this coverage extension do not apply unless the written contract or written agreement has been executed (executed means signed by the named insured) prior to the "bodily injury" or "property damage".

Incidental Malpractice

Subparagraph **2.a.(1)(d)** under **SECTION II - WHO IS AN INSURED** is deleted in its entirety and replaced with the following:

- (d)** Arising out of his or her providing or failing to provide professional health care services. This does not apply to nurses, emergency medical technicians or paramedics if you are not in the business or occupation of providing any such professional services.

This provision does not apply if you are a Social Service or Senior Living risk.

SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS - Amendments

Knowledge Of Occurrence, Claim, Suit Or Loss

The following is added to Paragraph **2. Duties in the Event of Occurrence, Offense, Claim or Suit** under **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS**:

The requirements under this paragraph do not apply until after the "occurrence" or offense is known to:

1. You, if you are an individual;
2. A partner, if you are a partnership;
3. An "executive officer" or insurance manager, if you are a corporation;
4. Your members, managers or insurance manager, if you are a limited liability company; or
5. Your elected or appointed officials, officers, members, trustees, board members, commission members, agency members, or your administrator or your insurance manager if you are an organization other than a partnership, joint venture, or limited liability company.

Primary and Non-Contributory Provision

The following is added to Paragraph **4. Other Insurance, b. Excess Insurance** under **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS**:

This insurance shall be excess with respect to any person or organization included as an additional insured under this policy, any other insurance that person or organization has shall be primary with respect to this insurance, unless:

- (1)** The additional insured is a Named Insured under such other insurance;
- (2)** You have agreed in a written contract, written agreement or written permit to include that additional insured on your General Liability policy on a primary and/or non-contributory basis; and
- (3)** The written contract or written agreement has been executed (executed means signed by the named insured) or written permit issued prior to the "bodily injury" or "property damage" or "personal and advertising injury".

Unintentional Failure To Disclose Hazards

The following is added to Paragraph **6. Representations** under **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS**:

However, if you should unintentionally fail to disclose any existing hazards in your representations to us at the inception date of the policy, or during the policy period in connection with any additional hazards, we shall not deny coverage under this Coverage Part based upon such failure to disclose hazards.

Waiver Of Transfer Of Rights Of Recovery

The following is added to Paragraph **8. Transfer of Rights Of Recovery Against Others To Us** under **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS**:

We will waive any right of recovery we may have against a person or organization because of payments we make for "bodily injury" or "property damage" arising out of your ongoing operations or "your work" done under a written contract or written agreement and included in the "products-completed operations hazard", if:

1. You have agreed to waive any right of recovery against that person or organization in a written contract or written agreement;
2. Such person or organization is an additional insured on your policy; or
3. You have assumed the liability of that person or organization in that same contract, and it is an "insured contract".

The section above only applies to that person or organization identified above, and only if the "bodily injury" or "property damage" occurs subsequent to the execution of the written contract or written agreement.

Liberalization

The following condition is added to **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS**:

If we revise this Coverage Part to provide more coverage without additional premium charge, subject to our filed company rules, your policy will automatically provide the additional coverage as of the day the revision is effective in your state.

Non-Accumulation Of Limits

(This provision is not Applicable in the state of New York or Wisconsin).

The following condition is added to **SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS**:

If you have other insurance provided by us or one of our affiliates that will respond to a claim or "suit" also covered under this coverage, the maximum limit of insurance under all collectible insurance shall not exceed the highest applicable limit under any one of the other coverage part(s), form(s) or policy(ies).

SECTION V - DEFINITIONS

Discrimination

(This provision does not apply in New York).

- A. The following is added to Definition 14. "Personal and advertising injury":

"Personal and advertising injury" also means "discrimination" that results in injury to the feelings or reputation of a natural person, however only if such "discrimination" or humiliation is:

1. Not done by or at the direction of:
 - a. The insured; or
 - b. Anyone considered an insured under **SECTION II - WHO IS AN INSURED**;
2. Not done intentionally to cause harm to another person.
3. Not directly or indirectly related to the employment, prospective employment or termination of employment of any person or persons by any insured.
4. Not arising out of any "advertisement" by the insured.

- B. The following definition is added to **SECTION V - DEFINITIONS**:

"Discrimination" means:

- a. Any act or conduct that would be considered discrimination under any applicable federal, state, or local statute, ordinance or law;
- b. Any act or conduct that results in disparate treatment of, or has disparate impact on, a person, because of that person's race, religion, gender, sexual orientation, age, disability or physical impairment; or
- c. Any act or conduct characterized or interpreted as discrimination by a person based on that person's race, religion, gender, sexual orientation, age, disability or physical impairment.

It does not include acts or conduct characterized or interpreted as sexual intimidation or sexual harassment, or intimidation or harassment based on a person's gender.

Electronic Data

The following definition is added to **SECTION V - DEFINITIONS**:

"Electronic data" means information, facts or programs stored as or on, created or used on, or transmitted to or from computer software, including systems and applications software, hard or floppy disks, CD-ROMS, tapes, drives, cell, data processing devices or any other media which are used with electronically controlled equipment.

For the purpose of the Electronic Data Liability coverage provided by this endorsement, Definition 17. "Property damage" is deleted in its entirety and replaced by the following:

17. "Property damage" means:

- a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it; or
- b. Loss of, loss of use of, damage to, corruption of, inability to access, or inability to properly manipulate "electronic data", resulting from physical injury to tangible property. All such loss of "electronic data" shall be deemed to occur at the time of the "occurrence" that caused it.

For the purpose of the Electronic Data Liability coverage provided by this endorsement, "electronic data" is not tangible property.

Employee Amendment

Definition 5. "Employee" under **SECTION V - DEFINITIONS** is deleted in its entirety and replaced by the following:

5. "Employee" includes a "leased worker", or a "temporary worker". If you are a School, "Employee" also includes a student teacher.

Golfing Facility

The following definition is added to **SECTION V - DEFINITIONS**:

"Golfing facility" means a golf course, golf club, driving range, or miniature golf course.

Mental Anguish Amendment

(This provision does not apply in New York).

Definition 3. "Bodily injury" under **SECTION V - DEFINITIONS** is deleted in its entirety and replaced with the following:

3. "Bodily injury" means bodily injury, sickness or disease sustained by a person, including death resulting from any of these at any time. This includes mental anguish resulting from any bodily injury, sickness or disease sustained by a person. (In New York, mental anguish has been determined to be "bodily injury").

Not-for-profit Member

The following definition is added to **SECTION V - DEFINITIONS**:

"Not-for-profit member" means a person who is a member of a not-for-profit organization, including clubs and churches, who receives no financial or other compensation.

DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT

POLICY NUMBER: S 2303560

COMMERCIAL GENERAL LIABILITY
CG 25 03 05 09

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Designated Construction Project(s):

ALL CONSTRUCTION PROJECTS OF YOURS AND LOCATIONS AT WHICH
YOU ARE PERFORMING SERVICE WORK FOR WHICH COVERAGE IS
PROVIDED UNDER THIS POLICY.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I — Coverage A, and for all medical expenses caused by accidents under Section I — Coverage C, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
 2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage C regardless of the number of:
 - a. Insureds;
 - b. Claims made or "suits" brought; or
 - c. Persons or organizations making claims or bringing "suits".
 3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule above.
- 4.** The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.
- B.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I — Coverage A, and for all medical expenses caused by accidents under Section I — Coverage C, which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule above:
1. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
 2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.
- C.** When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.

- D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.
- E. The provisions of **SECTION III — Limits Of Insurance** not otherwise modified by this endorsement shall continue to apply as stipulated.

DESIGNATED LOCATION(S) GENERAL AGGREGATE LIMIT

POLICY NUMBER: S 2303560

COMMERCIAL GENERAL LIABILITY
CG 25 04 05 09

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Designated Location(s):

SUBJECT TO THE TERMS AND CONDITIONS OF THIS POLICY, EACH
DESIGNATED LOCATION LISTED ON THE SCHEDULE OF LOCATIONS
SHOWN ON THE DECLARATION PAGE FOR THIS POLICY.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

- A.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I — Coverage A, and for all medical expenses caused by accidents under Section I — Coverage C, which can be attributed only to operations at a single designated "location" shown in the Schedule above:
1. A separate Designated Location General Aggregate Limit applies to each designated "location", and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
 2. The Designated Location General Aggregate Limit is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage C regardless of the number of:
 - a. Insureds;
 - b. Claims made or "suits" brought; or
 - c. Persons or organizations making claims or bringing "suits".
 3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Designated Location General Aggregate Limit for that designated "location". Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Location General Aggregate Limit for any other designated "location" shown in the Schedule above.
- 4.** The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Location General Aggregate Limit.
- B.** For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I — Coverage A, and for all medical expenses caused by accidents under Section I — Coverage C, which cannot be attributed only to operations at a single designated "location" shown in the Schedule above:
1. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
 2. Such payments shall not reduce any Designated Location General Aggregate Limit.
- C.** When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Location General Aggregate Limit.

- D. For the purposes of this endorsement, the **Definitions** Section is amended by the addition of the following definition:

“Location” means premises involving the same or connecting lots, or premises whose connection is interrupted only by a street, roadway, waterway or right-of-way of a railroad.

- E. The provisions of **SECTION III — Limits Of Insurance** not otherwise modified by this endorsement shall continue to apply as stipulated.

ElitePac®

Commercial Automobile Extension

COMMERCIAL AUTO
CA 78 09 01 16

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Business Auto Coverage Form apply unless modified by the endorsement.

AMENDMENTS TO SECTION II - LIABILITY COVERAGE

If this policy provides Auto Liability coverage for Owned Autos, the following extensions are applicable accordingly:

NEWLY ACQUIRED OR FORMED ORGANIZATIONS

The following is added to **SECTION II, A.1. - Who Is An Insured**:

Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company over which you maintain ownership or majority interest, will qualify as a Named Insured if there is no similar insurance available to that organization. However:

1. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier;
2. Coverage does not apply to "bodily injury" or "property damage" resulting from an "accident" that occurred before you acquired or formed the organization.

No person or organization is an "insured" with respect to the conduct of any current or past partnership, joint venture or limited liability company that is not shown as a Named Insured in the Declarations.

LIMITED LIABILITY COMPANIES

The following is added to **SECTION II, A.1. - Who Is An Insured**:

If you are a limited liability company, your members and managers are "insureds" while using a covered "auto" you don't own, hire or borrow during the course of their duties for you.

EMPLOYEES AS INSURED

If this policy provides Auto Liability coverage for Non-Owned Autos, the following is added to **SECTION II, A.1. - Who Is An Insured**:

Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow in your business or your personal affairs.

An "employee" of yours is an "insured" while operating an "auto" hired or rented under a contract or agreement in that "employee's" name with your permission, while performing duties related to the conduct of your business.

BLANKET ADDITIONAL INSURED

The following is added to **SECTION II, A.1. - Who Is An Insured**:

Any person or organization with whom you agreed in a written contract, written agreement or written permit to add as an additional "insured" on your policy is an additional "insured". Such person or organization is an additional "insured" only with respect to your ownership, maintenance or use of a covered "auto". This coverage shall be primary and non-contributory with respect to the additional "insured". This provision only applies if:

1. It is required in the written contract, written agreement or written permit identified in this section;
2. It is permitted by law; and
3. The written contract or written agreement has been executed or written permit issued prior to the "bodily injury" or "property damage".

EXPENSES FOR BAIL BONDS AND LOSS OF EARNINGS

Paragraphs (2) and (4) of **SECTION II, A.2.a. - Supplementary Payments** are deleted in their entirety and replaced with the following:

- (2) Up to the Limit of Insurance shown on the ElitePac Schedule for the cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" covered under this policy. We do not have to furnish these bonds.
- (4) All reasonable expenses incurred by the "insured" at our request. This includes actual loss of earnings because of time off from work, which we will pay up to the Limit of Insurance shown on the ElitePac Schedule.

EMPLOYEE INDEMNIFICATION AND EMPLOYER'S LIABILITY AMENDMENT

The following is added to **SECTION II, B.4. - Exclusions:**

This exclusion does not apply to a "volunteer worker" who is not entitled to workers compensation, disability or unemployment compensation benefits.

FELLOW EMPLOYEE COVERAGE

The **Fellow Employee** Exclusion, **SECTION II, B.5. -** is deleted in its entirety.

CARE, CUSTODY OR CONTROL AMENDMENT

The following is added to **SECTION II, B.6. - Exclusions:**

This exclusion does not apply to property owned by anyone other than an "insured", subject to the following:

1. The most we will pay under this exception for any one "accident" is the Limit of Insurance stated in the ElitePac Schedule; and
2. A per "accident" deductible as stated in the ElitePac Schedule applies to this exception.

AMENDMENTS TO SECTION III - PHYSICAL DAMAGE COVERAGE

If this policy provides Comprehensive, Specified Causes of Loss or Collision coverage, the following extensions are applicable for those "autos" for which Comprehensive, Specified Causes of Loss or Collision coverage is purchased:

TOWING AND LABOR

SECTION III, A.2. - Towing is deleted in its entirety and replaced with the following:

We will pay all reasonable towing and labor costs up to the maximum Limit of Insurance shown on the ElitePac Schedule per tow each time a covered "Private Passenger Auto", "Social Service Van or Bus" or "Light Truck" is disabled and up to the maximum Limit of Insurance per tow each time a covered "Medium Truck", "Heavy Truck" or "Extra Heavy Truck" is disabled.

For labor charges to be eligible for reimbursement the labor must be performed at the place of disablement.

This coverage extension does not apply to Emergency Services Organizations and Governmental Entities.

GLASS BREAKAGE DEDUCTIBLE

The following is added to **SECTION III, A.3. - Glass Breakage - Hitting A Bird Or Animal - Falling Objects or Missiles:**

If damaged glass is repaired rather than replaced, no deductible will apply for such repair. This extension does not apply to Emergency Services Organizations and Governmental Entities.

ADDITIONAL TRANSPORTATION EXPENSES

SECTION III, A.4.a. - Transportation Expenses is deleted in its entirety and replaced with the following:

We will pay up to the maximum Limit of Insurance shown on the ElitePac Schedule for temporary transportation expenses that you incur because of any "loss" to a covered "auto", but only if the covered "auto" carries the coverages and meets the requirements described in **1.** or **2.** below:

1. We will pay temporary transportation expenses for total theft of a covered "auto". We will only pay for such expenses incurred during the period beginning 24 hours after the theft and ending, regardless of the policy's expiration, when the covered "auto" is returned to use or we pay for its "loss".
2. For "loss" other than total theft of a covered "auto" under Comprehensive or Specified Causes of Loss Coverage, or for any "loss" under Collision Coverage to a covered "auto", we will only pay for those temporary transportation expenses incurred during the policy period beginning 24 hours after the "loss" and ending, regardless of the policy's expiration, with the lesser of the number of days reasonably required to repair or replace the covered "auto" or 30 days.

Paragraph **2.** of this extension does not apply while there are spare or reserve "autos" available to you for your operations.

This coverage extension does not apply to Emergency Services Organizations and Governmental Entities.

HIRED AUTO PHYSICAL DAMAGE COVERAGE

The following is added to **SECTION III, A.4. - Coverage Extensions:**

Physical Damage coverage is hereby extended to apply to Physical Damage "loss" to "autos" leased, hired, rented or borrowed without a driver. We will provide coverage equal to the broadest coverage available to any covered "auto" shown in the Declarations. But, the most we will pay for "loss" to each "auto" under this coverage extension is the lesser of:

1. The Limit of Insurance stated in the ElitePac Schedule; or
2. The actual cash value of the damaged or stolen property as of the time of the "loss"; or
3. The actual cost of repairing or replacing the damaged or stolen property with other property of like kind and quality. A part is of like kind and quality when it is of equal or better condition than the pre-accident part. We will use the original equipment from the manufacturer when:

- (a) The operational safety of the vehicle might otherwise be impaired;
- (b) Reasonable and diligent efforts to locate the appropriate rebuilt, aftermarket or used part have been unsuccessful; or
- (c) A new original equipment part of like kind and quality is available and will result in the lowest overall repair cost.

For each leased, hired, rented or borrowed "auto" our obligation to pay "losses" will be reduced by a deductible equal to the highest deductible applicable to any owned "auto" for that coverage. No deductible will be applied to "losses" caused by fire or lightning.

SECTION IV, B.5. Other Insurance Condition, Paragraph 5.b. is deleted in its entirety and replaced by the following:

For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

- 1. Any covered "auto" you lease, hire, rent, or borrow; and
- 2. Any covered "auto" hired or rented by your "employee" under a contract or agreement in that "employee's" name, with your permission, while performing duties related to the conduct of your business.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

This coverage extension does not apply to Emergency Services Organizations and Governmental Entities.

HIRED AUTO LOSS OF USE COVERAGE

The following is added to **SECTION III, A.4. - Coverage Extensions**:

We will pay expenses for which you are legally responsible to pay up to the Limit of Insurance shown on the ElitePac Schedule per "accident" for loss of use of a leased, hired, rented or borrowed "auto" if it results from an "accident".

This coverage extension does not apply to Emergency Services Organizations, Governmental Entities, and Schools.

AUTO LOAN/LEASE GAP COVERAGE (Not Applicable in New York)

The following is added to **SECTION III, A.4. - Coverage Extensions**:

In the event of a total "loss" to a covered "auto" we will pay any unpaid amount due on the lease or loan for a covered "auto", less:

- 1. The amount paid under the Physical Damage Coverage Section of the policy; and

2. Any:

- a. Overdue lease/loan payments at the time of "loss";
- b. Financial penalties imposed under a lease for excessive use, abnormal wear and tear, high mileage or similar charges;
- c. Security deposits not refunded by the lessor or financial institution;
- d. Costs for extended warranties, credit life, health, accident, or disability insurance purchased with the loan or lease; and
- e. Carry-over balances from previous leases or loans.

You are responsible for the deductible applicable to the "loss" for the covered "auto".

This extension only applies if the lessor or financial institution is an additional "insured" under this Coverage Form.

PERSONAL EFFECTS

The following is added to **SECTION III, A.4. - Coverage Extensions**:

If this policy provides Comprehensive Coverage for a covered "auto" you own and that covered "auto" is stolen, we will pay up to the Limit of Insurance shown on the ElitePac Schedule, without application of a deductible, for lost personal effects that were in the covered "auto" at the time of theft. Personal effects do not include jewelry, tools, money, or securities. This coverage is excess over any other collectible insurance.

AIRBAG COVERAGE

The following is added to **SECTION III, B.3.a. - Exclusions**:

Mechanical breakdown does not include the accidental discharge of an airbag.

This coverage extension does not apply to Emergency Services Organizations and Governmental Entities.

EXPANDED AUDIO, VISUAL, AND DATA ELECTRONIC EQUIPMENT COVERAGE

SECTION III, B.4. - Exclusions

This exclusion does not apply to the following:

- 1. Global positioning systems;
- 2. "Telematic devices"; or
- 3. Electronic equipment that reproduces, receives or transmits visual or data signals and accessories used with such equipment, provided such equipment is:
 - a. Permanently installed in or upon the covered "auto" at the time of the "loss";
 - b. Removable from a housing unit that is permanently installed in the covered "auto" at the time of the "loss";

- c. Designed to be solely operated by use of power from the "auto's" electrical system; or
- d. Designed to be used solely in or upon the covered "auto".

For each covered "loss" to such equipment, a deductible of \$50 shall apply, unless the deductible otherwise applicable to such equipment is less than \$50, at which point the lower deductible, if any, will apply.

COMPREHENSIVE DEDUCTIBLE - LOCATION TRACKING DEVICE

The following is added to **SECTION III, D. - Deductible:**

Any Comprehensive Coverage Deductible shown in the Declarations will be reduced by 50% for any "loss" caused by theft if the covered "auto" is equipped with a location tracking device and that device was the sole method used to recover the "auto".

PHYSICAL DAMAGE LIMIT OF INSURANCE

SECTION III, C. - Limit Of Insurance is deleted in its entirety and replaced with the following:

The most we will pay for a "loss" in any one "accident" is the lesser of:

1. The actual cash value of the damaged or stolen property as of the time of the "loss"; or
2. The cost of repairing or replacing the damaged or stolen property with other property of like kind and quality.

This coverage extension does not apply to Emergency Services Organizations and Governmental Entities.

AMENDMENTS TO SECTION IV - BUSINESS AUTO CONDITIONS

DUTIES IN THE EVENT OF ACCIDENT, CLAIM, SUIT OR LOSS

The following is added to **SECTION IV, A.2.a. - Duties In The Event Of Accident, Claim, Suit Or Loss:**

The notice requirements for reporting "accident" claim, "suit" or "loss" information to us, including provisions related to the subsequent investigation of such "accident", claim, "suit" or "loss" do not apply until the "accident", claim, "suit" or "loss" is known to:

1. You, if you are an individual;
2. A partner, if you are a partnership;
3. An executive officer or insurance manager, if you are a corporation;
4. Your members, managers or insurance manager, if you are a limited liability company;

5. Your elected or appointed officials, trustees, board members or your insurance manager, if you are an organization other than a partnership, joint venture or limited liability company.

But, this section does not amend the provisions relating to notification of police or protection or examination of the property that was subject to the "loss".

WAIVER OF SUBROGATION

SECTION IV, A.5. - Transfer Of Rights Of Recovery Against Others To Us is deleted in its entirety and replaced with the following:

We waive any right of recovery we may have against any person or organization because of payments we make for "bodily injury" or "property damage" resulting from the ownership, maintenance or use of a covered "auto" but only when you have assumed liability for such "bodily injury" or "property damage" in an "insured contract". In all other circumstances, if a person or organization to or for whom we make payment under this Coverage Form has rights to recover damages from another, those rights are transferred to us.

MULTIPLE DEDUCTIBLES

The following is added to **SECTION IV, A. - Loss Conditions:**

If a "loss" from one event involves two or more covered "autos" and coverage under Comprehensive or Specified Causes of Loss applies, only the highest applicable deductible will be applied.

CONCEALMENT, MISREPRESENTATION OR FRAUD

The following is added to **SECTION IV, B.2. - Concealment, Misrepresentation Or Fraud:**

If you should unintentionally fail to disclose any existing hazards in your representations to us prior to the inception date of the policy or during the policy period in connection with any newly discovered hazards, we will not deny coverage under this Coverage Form based upon such failure.

POLICY PERIOD, COVERAGE TERRITORY

SECTION IV, B.7. - Policy Period, Coverage Territory is deleted in its entirety and replaced with the following:

Under this Coverage Form, we cover "accidents" and "losses" occurring:

- a. During the policy period shown in the Declarations; and
- b. Within the "Coverage Territory".

We also cover "loss" to or "accidents" involving a covered "auto" while being transported between any of these places.

TWO OR MORE COVERAGE FORMS OR POLICIES ISSUED BY US - DEDUCTIBLES

The following is added to **SECTION IV, B.8. - Two Or More Coverage Forms Or Policies Issued By Us:**

If a "loss" covered under this Coverage Form also involves a "loss" to other property resulting from the same "accident" that is covered under this policy or another policy issued by us or any member company of ours, only the highest applicable deductible will be applied.

AMENDMENTS TO SECTION V - DEFINITIONS

BODILY INJURY INCLUDING MENTAL ANGUISH (Not Applicable in New York)

The definition of bodily injury is deleted in its entirety and replaced by the following:

"Bodily injury" means bodily injury, sickness, or disease sustained by a person, including death resulting from any of these. "Bodily injury" includes mental anguish resulting from bodily injury, sickness or disease sustained by a person.

ADDITIONS TO SECTION V - DEFINITIONS

COVERAGE TERRITORY

"Coverage Territory" means:

1. The United States of America (including its territories and possessions), Canada and Puerto Rico; and
2. Anywhere in the world, except for any country or jurisdiction that is subject to trade or other economic sanction or embargo by the United States of America, if a covered "auto" is leased, hired, rented, or borrowed without a driver for a period of 30 days or less, and the insured's responsibility to pay "damages" is determined in a "suit" on the merits in and under the substantive law of the United States of America (including its territories and possessions), Puerto Rico, or Canada, or in a settlement we agree to.

If we are prevented by law, or otherwise, from defending the "insured" in a "suit" brought in a location described in Paragraph 2. above, the insured will conduct a defense of that "suit". We will reimburse the "insured" for the reasonable and necessary expenses incurred for the defense of any such "suit" seeking damages to which this insurance applies, and that we would have paid had we been able to exercise our right and duty to defend.

EXTRA HEAVY TRUCK

"Extra Heavy Truck" means a truck with a gross vehicle weight rating of 45,001 pounds or more.

HEAVY TRUCK

"Heavy Truck" means a truck with a gross vehicle weight rating of 20,001 pounds to 45,000 pounds.

LIGHT TRUCK

"Light Truck" means a truck with a gross vehicle weight rating of 10,000 pounds or less.

MEDIUM TRUCK

"Medium Truck" means a truck with a gross vehicle weight rating of 10,001 pounds to 20,000 pounds.

PRIVATE PASSENGER AUTO

"Private Passenger Auto" means a four-wheel "auto" of the private passenger or station wagon type. A pickup, panel truck or van not used for business is included within the definition of a "private passenger auto".

SOCIAL SERVICE VAN OR BUS

"Social Service Van or Bus" means a van or bus used by a government entity, civic, charitable or social service organization to provide transportation to clients incidental to the social services sponsored by the organization, including special trips and outings.

TELEMATIC DEVICE

"Telematic Device" includes devices designed for the collection and dissemination of data for the purpose of monitoring vehicle and/or driver performance. This includes Global Positioning System technology, wireless safety communications and automatic driving assistance systems, all integrated with computers and mobile communications technology in automotive navigation systems.

VOLUNTEER WORKER

"Volunteer worker" means a person who performs business duties for you, for no financial or other compensation.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

Named Insured Aspen Digger, Inc.			Endorsement Number
Policy Symbol CPW	Policy Number G70915303 003	Policy Period 8/15/2020 To 8/15/2021	Effective Date of Endorsement 8/15/2020
Issued By (Name of Insurance Company) Westchester Surplus Lines Insurance Company			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART CONTRACTORS POLLUTION LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization:

Any person or organization that is an owner of real property or personal property on which you are performing operations, or a contractor on whose behalf you are performing operations, and only at the specific written request of such person or organization to you, wherein such request is made prior to commencement of operations.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

The **TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US Condition** is amended by the addition of the following:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or **your work** done under a contract with that person or organization and included in the **products-completed operations hazard**. This waiver applies only to the person or organization shown in the Schedule above.

All other terms and conditions remain the same.

ADDITIONAL INSURED ENDORSEMENT – ONGOING WORK OR OPERATIONS

Named Insured Aspen Digger, Inc.			Endorsement Number
Policy Symbol CPW	Policy Number G70915303 003	Policy Period 8/15/2020 To 8/15/2021	Effective Date of Endorsement 8/15/2020
Issued By (Name of Insurance Company) Westchester Surplus Lines Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

THIS ENDORSEMENT MODIFIES INSURANCE PROVIDED UNDER THE FOLLOWING:

CONTRACTORS POLLUTION LIABILITY COVERAGE PART

SCHEDULE:

<p><u>Name of Person(s) or Organization(s):</u></p> <p>As required by written contract or agreement signed by both parties prior to a loss to which this insurance applies.</p>

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

A. SECTION II - WHO IS AN INSURED is amended to include as an additional insured the persons or organizations shown in the Schedule, but only with respect to liability for injury or damage, to which this insurance applies, caused, in whole or in part, by:

1. Your acts or omissions; or
 2. The acts or omissions of those acting on your behalf;
- in the performance of your ongoing operations for the additional insureds.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following exclusion is added:

Exclusions

This insurance does not apply to injury or damage occurring after:

- a. All work or operations, including materials, parts or equipment furnished in connection with such work or operations, on the project (other than service, maintenance or repairs) to be performed by you or on your behalf at the site of the covered operations has been completed; or

- b.** That portion of **your work** out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for the additional insured as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to **SECTION III – LIMITS OF INSURANCE:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

- 1.** Required by the contract or agreement; or
- 2.** Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

All other terms and conditions of this policy remain unchanged.

ADDITIONAL INSURED ENDORSEMENT – PRODUCTS-COMPLETED OPERATIONS HAZARD

Named Insured Aspen Digger, Inc.			Endorsement Number
Policy Symbol CPW	Policy Number G70915303 003	Policy Period 8/15/2020 To 8/15/2021	Effective Date of Endorsement 8/15/2020
Issued By (Name of Insurance Company) Westchester Surplus Lines Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

THIS ENDORSEMENT MODIFIES INSURANCE PROVIDED UNDER THE FOLLOWING:

CONTRACTORS POLLUTION LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization:

As required by written contract or agreement signed by both parties prior to a loss to which this insurance applies.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

- A. SECTION II – WHO IS AN INSURED** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for injury or damage, to which this insurance applies, caused by or resulting from **your work** performed for that additional insured and included in the **products-completed operations hazard**, and only to the extent that such injury or damage is caused, in whole or in part, by your negligence or the negligence of those acting on your behalf.

However:

- 1.** The insurance afforded to such additional insured only applies to the extent permitted by law; and
 - 2.** If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.
- B. With respect to the insurance afforded to these additional insureds, the following is added to SECTION III - LIMITS OF INSURANCE:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

- 1.** Required by the contract or agreement; or
 - 2.** Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

All other terms and conditions of this policy remain unchanged.

PRIMARY AND NONCONTRIBUTORY – OTHER INSURANCE CONDITION

Named Insured Aspen Digger, Inc.			Endorsement Number
Policy Symbol CPW	Policy Number G70915303 003	Policy Period 8/15/2020 To 8/15/2021	Effective Date of Endorsement 8/15/2020
Issued By (Name of Insurance Company) Westchester Surplus Lines Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

THIS ENDORSEMENT MODIFIES INSURANCE PROVIDED UNDER THE FOLLOWING:

CONTRACTOR'S POLLUTION LIABILITY COVERAGE PART

The following is added to the **Other Insurance** Condition and supersedes any provision to the contrary:

Primary and Noncontributory Insurance

This policy is primary to, and will not seek contribution from, any other insurance available to an additional insured under this policy, provided that:

- a.** The additional insured is a named insured under such other insurance; and
- b.** The **named insured** has agreed in a written contract or agreement that this insurance would:
 - (1)** act as primary insurance; and
 - (2)** would not seek contribution from any other insurance available to the additional insured.

All other terms and conditions of this policy remain unchanged.

General Endorsement

General Policy Information

Named Insured: **Aspen Digger, Inc.**

Policy Symbol: **CPW**

Policy Number: **G70915303 003**

Endorsement Number: **002**

Effective date of Endorsement: **08/15/2020**

Policy Period: **08/15/2020 to 08/15/2021**

Issued by: **Westchester Surplus Lines Insurance Company**
(Name of Insurance Company)

This Endorsement changes the policy – Please read it carefully

This endorsement modifies insurance provided under the following:

Contractors Pollution Liability **COVERAGE FORM**

Endorsement Information

In consideration of an additional premium of \$1,304, it is agreed that form ENV-1502 (03/06) Environmental Policy Declarations Item 3, Policy Period is amended to read:

Inception Date: 08/15/2020

Expiration Date: 08/15/2022

All other terms and conditions remain the same

This policy is issued by an insurance company that is not regulated by the Colorado Division of Insurance.

The insurance company may not provide claims service and may not be subject to service of process in Colorado. If the insurance company becomes insolvent, insureds or claimants will not be eligible for protection under Colorado insurance law.

Licensee: UCPM, Inc.

Surplus Lines Tax: \$39.12

Authorized Agent

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: That we, the undersigned, as, _____

_____ having a legal business
(Principal's Name)

address _____ at

a _____ as Principal, hereinafter called "Principal", and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

a corporation organized under the laws of the State of _____, and qualified to transact business in the State of Colorado, hereinafter called "Surety", are held and firmly bound unto the City of Aspen, a Colorado home rule municipality, as Obligee, hereinafter called "City", in the amount of:

_____ (\$_____),
in lawful money of the United States for payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly unto these present.

WHEREAS, Principal has by written agreement dated _____, 20____, entered into a contract with City for _____ in accordance with the Contract Documents which Contract Documents is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, if Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the City, with or without notice to the Surety and during the guaranty period, and if Principal shall satisfy all claims and demands incurred under such Contract, and shall fully indemnify and save harmless City from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the City all outlay and expense which the City may incur in making good any default, then this obligation shall be void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the City.

Whenever Principal shall be, and declared by City to be in default under the Contract, the City having performed City's obligation hereunder, the Surety may promptly remedy the default or shall promptly:

- (1) Complete the Contract in accordance with its terms and conditions, or
- (2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the City elects, upon determination by the City and Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and City, and make available as work progresses (even though there should be a default or succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract price" as used in this paragraph, shall mean the total amount payable by City to Principal under the Contract and any amendments thereto, less the amount properly paid by City to Principal.
- (3) Any contract or succession of contracts entered into hereunder for the completion of the Contract, shall also be subject to this bond as part of the original Contract obligations.

This bond is intended to be in satisfaction of, and in addition to, the bond required pursuant to Section 38-26-106, C.R.S., as amended.

This bond, as a penalty and indemnification bond, shall also entitle City to recover as part of the completion of the Contract or the payment of any labor or material costs hereunder, actual and consequential damages, liquidated and unliquidated damages, costs, reasonable attorneys fees and expert witness fees, including, without limitations, the fees of engineering or architectural consultants.

Surety, for value received, hereby stipulates and agrees that to indemnify and save harmless the City to the extent of any and all payments in connection with the carrying out of the contract which the City may be required to make under the law by any reason of such failure or default of the Principal.

Further, Surety and Principal shall protect, defend, indemnify and save harmless the City's officers, agents, servants, and employees from and against all claims and actions and all expenses incidental to the defense of such claims or actions, based upon or arising out of injuries or death of persons or damage to property caused by, or sustained in connection with, this Contract by conditions created thereby, and on request of the City will assume the defense of any claim or action brought against the City.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the City named herein or the employees, agents, administrators or successors of City.

SIGNED AND SEALED this _____ day of _____, 20____.

PRINCIPAL: _____ (seal)

By: _____ Attest: _____

Title: _____

SURETY: _____ (seal)

By: _____ Attest: _____

Title: _____

NOTE: Accompany this bond with certified copy of General Power of Attorney from the Surety to include the date of the bond. (Date of Bond must not be prior to date of Contract.) If Principal is Partnership, all partners should execute Bond.

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: That we, the undersigned, as,

_____ having a legal business
(Principal's Name)

address at _____,
(Principal's Address)

a _____, as Principal, hereinafter called "Principal", and
(Corporation, Partnership, or Individual)

(Surety's Name)

(Surety's Address)

a corporation organized under the laws of the State of _____, and qualified to transact business in the State of Colorado, hereinafter called "Surety", are held and firmly bound unto the City of Aspen, a Colorado home rule municipality, as Obligee, hereinafter called "City", in the amount of :

_____ (\$_____), in lawful money of the United States for payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly unto these present.

WHEREAS, Principal has by written agreement dated _____, 20____, entered into a contract with the City for a project entitled: _____ (project no. _____) in accordance with the Contract Documents which Contract Documents is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants hereinafter defined, for all labor and material used or reasonably required for the use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A Claimant is defined as having a direct contract with the Principal or with subcontractor of the Principal for labor, material, or both, used or reasonably required for the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract.

2. The above-name Principal and Surety hereby jointly and severally agree with the City that every claimant as herein defined who has not been paid in full before the expiration of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed or materials were furnished by such claimant, may sue on this bond for use of such sums as may be justly due claimant, and have execution thereon. The City shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall commence hereunder by any claimant:

(a) Unless claimant, other than one having a direct contract with the Principal shall have given written notice to any of the following: The Principal, the City, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the material for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work of labor was done or performed. Such notice shall be served by mailing the same registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, City or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of Colorado.

(b) After the expiration of one (1) year following the date on which Principal ceased work on said Contract, it being understood, however, that if any limitation embodied in this Bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

(c) Other than in a state of competent jurisdiction in and for the County of Pitkin, State of Colorado.

4. The amount of this Bond shall be reduced to the extent of any payment or payments made hereunder, inclusive of the payment by surety of liens or claims which may be filed of record against the improvement(s), whether or not claim for the amount of such lien be presented under and against this Bond.

5. This Bond is intended to be in satisfaction of, and in addition to, the bond required pursuant to Section 38-26-105, C.R.S., as amended.

6. No final settlement between the City and Principal shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

SIGNED AND SEALED this _____ day of _____, 20____.

PRINCIPAL: _____ (seal)

By: _____ Attest: _____

Title: _____

SURETY: _____ (seal)

By: _____ Attest: _____

Title: _____

NOTE: Accompany this bond with certified copy of General Power of Attorney from the Surety Company to include the date of the bond. (Date of Bond must not be prior to date of Contract). If Principal is a Partnership, all partners should execute Bond.

MAINTENANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS, That we, the undersigned, as _____

_____, of _____, as
Principal, hereinafter referred to as "Principal", and

_____,
a corporation organized under the laws of the State of _____, and qualified to
transact business in the State of Colorado, as "Surety" are held and firmly bound unto the City of Aspen,
Colorado, as obligee, hereinafter referred to as "City," in the penal sum of:

Dollars (\$ _____), lawful money of the United States of America, for the Payment of
which sum, well and truly to be made to the City, we bind ourselves, and our heirs, executors, administrators,
successors, and assignees, jointly and severally, by these presents:

WHEREAS, said Principal has entered into a written Contract with the obligee dated _____,
for furnishing all equipment, labor, tools and materials for:
_____ in accordance with detailed plans and
specifications on file in the office of the City Clerk of said City, a copy of which Contract is attached hereto
and made a part hereof.

NOW THEREFORE, The conditions of the foregoing obligations are such that if the said Principal shall well
and truly perform all the covenants and conditions of this Contract on the part of said Principal to be
performed, and repair or replace all defects for a period of two year(s) as provided herein, and protect and
save harmless the City of Aspen, Colorado, from all loss and damages to life or property suffered or
sustained by any person, firm or corporation, caused by said Principal or his agents or his employees, in the
performance of said work, or by, or in consequence of any negligence, carelessness, or misconduct in
guarding and protecting same, or from any improper or defective equipment or materials used in the work, or
other damages, costs and expenses and set forth in such Contracts, then this obligation shall be void
otherwise to remain in full force and effect in law.

This Bond guarantees that the material and equipment furnished and used, and workmanship employed in
the performance of the work described in this Contract will be of such character and quality as to insure it to
be free from all defects and in continuous good order and in a condition satisfactory to the Governing Body of
the City of Aspen for a period of two year(s) from the date of the issuance of the Certificate of Completion.

This Bond guarantees that the said Principal will keep and maintain the subject work without additional
charge or cost to the City of a period specified, and make such repairs or replacement of any defective
construction as the City may deem necessary.

The said Principal shall not be required to maintain any part of the improvement under this guarantee which, after its completion and acceptance shall have been removed or altered by the City or its agent.

SIGNED AND SEALED this _____ day of _____, 20____.

PRINCIPAL: _____ (seal)

By: _____ Attest: _____

Title: _____

SURETY: _____ (seal)

By: _____ Attest: _____

Title: _____

(Accompany this bond with certified copy of General Power of Attorney from the Surety Company to include the date of the bond.)

NOTICE TO PROCEED



Date: _____

RE: Project Number and Title

Dear Mr.

Enclosed please find an executed copy of the Contract Documents for the above referenced project. You are hereby informed to attend a mandatory Pre-construction Conference and you are authorized to commence construction thereafter as set forth in the Contract Documents. The Commencement Date of the contract performance time is the date fixed for the Pre-construction Conference. The date for the Pre-construction Conference will be set by _____ or his designated representative.

If you have any questions concerning this project please do not hesitate to call the _____ Department.

Again, thank you for your bid and your continued interest in this project.

Sincerely,

CITY OF ASPEN

By: _____
Title



Daily Construction Log

130 South Galena Street, Aspen, Colorado 81611

PROJECT # _____ BID # _____
PROJECT TITLE: _____
PROJECT LOCATION: _____
DATE: _____ PAGE _____ OF _____
WEATHER: _____ TRAFFIC CONDITIONS: _____
WORKING DAYS USED _____ WORKING DAYS LEFT _____
CONTRACTOR : _____
SUPERINTENDENT: _____ INSPECTOR: _____

BID ITEM DESCRIPTION	CONTRACT QUANTITY	TODAY'S QUANTITY	TOTAL TO DATE

SUMMARY OF TODAY'S WORK AND COMMENTS: _____

CONTRACTOR: _____

CITY INSPECTOR: _____

DATE: _____

To Owner: _____ Project: _____

Application No. : _____

Distribution to :

Period From: _____

☐ Owner
☐ Architect
☐ Contractor
☐
☐

Period To: _____

From Contractor: _____ Via Architect: _____

Project Nos: _____

Contract For: _____

Contract Date: _____

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Continuation Sheet is attached.

1. Original Contract Sum
2. Net Change By Change Order
3. Contract Sum To Date (Line 1 + 2)
4. Total Completed and Stored To Date
- (Column G on G703)
5. Retainage :
 - a. of Completed Work
 - b. of Stored Material
 - Total Retainage
 - (Total in Column I on G703)
6. Total Earned Less Retainage
- (Line 4 less Line 5 Total)
7. Less Previous Certificates For Payments
- (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 in previous months by Owner:		
Total Approved this Month		
TOTALS		
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:

By: _____ Date: _____

State of: _____
 Subscribed and sworn to before me this _____
 Notary Public: _____
 My Commission expires: _____

County of: _____
 day of _____

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Architect certifies to the Owner that to the best of the Architect'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.

AMOUNT CERTIFIED

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

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.

**CITY OF ASPEN
CHANGE ORDER FORM**

Change Order No. _____

Date of Issuance: _____

COA Acct No.: _____

Project Name: _____

Contractor: _____

The Contract is modified as follows upon execution of this Change Order:

Description: _____

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:		ACCEPTED:		ACCEPTED:	
Sign: _____	Sign: _____	Sign: _____	Sign: _____	Sign: _____	Sign: _____
By: _____	By: _____	By: _____	By: _____	By: _____	By: _____
Title: _____	Title: _____	Title: _____	Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____	Date: _____	Date: _____	Date: _____

APPROVAL					
Sign: _____	Sign: _____	Sign: _____	Sign: _____	Sign: _____	Sign: _____
By: _____	By: _____	By: _____	By: _____	By: _____	By: _____
Title: _____	Title: _____	Title: _____	Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____	Date: _____	Date: _____	Date: _____



CLAIM RELEASE

Sub-Contractor

For valuable consideration, the sufficiency of which is hereby acknowledged, the undersigned Sub-Contractor hereby releases the City of Aspen and waives all rights to file a claim for labor, services, machinery, tools, equipment, or materials furnished prior to _____, while engaged as a Sub-Contractor to _____, the Contractor, for the work on the _____ Project, in the City of Aspen, Pitkin County, Colorado. Furthermore, the undersigned waives any and all rights the undersigned may have to file a lien, notice of claim, lis pendens or legal action against the City of Aspen, pursuant to Section 38-26-107, C.R.S., or to make any claim whatsoever against the City of Aspen, or its bond, for labor services, supplies, machinery, tools, equipment or materials furnished in connection with the above described work..

In the event an employee or agent or other person hired by the undersigned Sub-Contractor to perform the work under the contract brings a claim against the City of Aspen for payment of labor or materials, or both, the undersigned Sub-Contractor agrees to indemnify the City of Aspen and to satisfy fully any such claim brought against the City of Aspen, its employees and officers.

Attest:

Corporate Seal _____

Sub-Contractor

By: _____

STATE OF COLORADO)
) SS.
COUNTY)

Before me _____, a notary public and for _____ County, Colorado personally appeared _____ known to me personally to be the person(s) whose signature(s) in my presence this _____ day of _____, A.D. 20__.

My commission expires:

(Seal)

Notary Public

CLAIM RELEASE

Contractor

For valuable consideration, the sufficiency of which is hereby acknowledged, the undersigned Contractor hereby releases the City of Aspen and waives all rights to file a claim for labor, services, machinery, tools, equipment, or materials furnished prior to _____, while engaged as a Contractor for the work on the _____ Project, in the City of Aspen, Pitkin County, Colorado. Furthermore, the undersigned waives any and all rights the undersigned may have to file a lien, notice of claim, lis pendens or legal action against the City of Aspen, pursuant to Section 38-26-107, C.R.S., or to make any claim whatsoever against the City of Aspen, or its bond, for labor services, supplies, machinery, tools, equipment or materials furnished in connection with the above described work..

In the event an employee or agent or other person hired by the undersigned Contractor to perform the work under the contract brings a claim against the City of Aspen for payment of labor or materials, or both, the undersigned Contractor agrees to indemnify the City of Aspen and to satisfy fully any such claim brought against the City of Aspen, its employees and officers.

Attest:

Corporate Seal _____

Contractor

By: _____

STATE OF COLORADO)
) SS.
COUNTY)

Before me _____, a notary public and for
_____ County, Colorado personally appeared _____ known
to me personally to be the person(s) whose signature(s) in my presence this _____ day
of _____, A.D. 199____.

My commission expires:

(Seal)

Notary Public



PROJECT CLOSURE FORM

ADVERTISEMENT AND FINAL ACCEPTANCE

Date: _____

Contact Person
Company
Address
City, State Zip

Re: Project Title City Project #: , Bid #:

You are hereby notified that the following advertisement for Final Payment appeared in a local newspaper dated .

"After thirty (30) consecutive calendar days from the date of second publication for project closure and release of retainage, the City of Aspen will pay to Contractor's Name, Contractor, the full retainage on the project. All persons having claims for labor, rentals, services, or materials furnished under this Contract, who shall not have been paid therefore, shall present the same to the City of Aspen in writing and verified prior to date specified above, or the City of Aspen shall be free of all obligations and liabilities for attempting to withhold payment to the Contractor."

Subject to the terms of the Contract Documents the Final Payment will be attached and forwarded in the amount of (\$_____). Acceptance of which the Contractor thereby warrants that all persons doing work upon or furnishing materials for work under this Agreement have been paid in full. Failure to sign, approve and return one copy of this form, or to protest, within ten (10) consecutive calendar days constitutes proof of receipt and acceptance by the Contractor of the final amount due under the Agreement.

Please acknowledge by your signature below that the final amount of the Contract was paid and that the terms and conditions set forth above and in the Contract Documents relating to final payment are understood and accepted.

Contractor



MEMORANDUM

TO: MAYOR and COUNCIL MEMBERS

FROM: JAMES R. TRUE

MEETING DATE: January 25, 2022

RE: Ordinance #1 (Series of 2022)/Liquor and Marijuana Code Amendments

REQUEST OF COUNCIL:

The Local Licensing Authority (LLA), pursuant to Resolution #1 (Series of 2021), has recommended that Council adopt certain amendments to Title 5 of the Aspen Municipal Code regarding Alcoholic Beverage and Marijuana.

DISCUSSION:

Based on discussions and positions expressed by various members of the LLA over the years, staff prepared a resolution to submit to City Council recommending that it consider certain code amendments to Title 5, of the Aspen Municipal Code. Resolution #1 (Series of 2021) is attached. The specific Code changes are outlined below, addressing the sections of the Ordinance.

Section 1: Amendment regarding qualification for the LLA:

Although the LLA is currently fully constituted, with five regular members and one alternate, there have been times in which it has been difficult to find applicants. It is has been expressed that part of the difficulty has been disqualification of individuals who work in the industry but are not part of ownership of any licensed entity. This proposed amendment allows for the appointment of an individual in the industry, if the individual does not have an ownership interest in the business.

The recommended amendment to Section 5.04.040(a)(3) of the City of Aspen Liquor code is the addition of the following at the end such paragraph:

“Financial interest” as used in this paragraph (a)(3) shall not include employees of any licensed restaurant, bar, or marijuana facility, if the employee has no ownership interest in the business. Notwithstanding this definition, such appointed member of

the Authority shall be disqualified from consideration of any action regarding his or her employer.

Sections 2 and 3: Amendments regarding term, inordinate closures, loss of possession and renewals:

LLA members expressed concerns regarding a number of these issues. For instance, questions arose regarding a circumstance in which a Licensee lost possession of premises but the License itself remained valid. The LLA also considered circumstances in which there have been lengthy closures of businesses, with the license remaining valid. In addition, questions were raised regarding the LLA's authority to consider and deny a renewal of alcohol licenses. The proposed language addresses loss of possession and inordinate closures and gives the LLA the ability to deny the renewal of an alcohol license "for good cause," which is consistent with the language within the marijuana code. The LLA considered these issues, which are addressed in different sections of the code for alcohol and marijuana and recommended the amendments set forth below. Chapter 5.04 addresses alcohol, which Chapter 5.16 addresses marijuana.

The proposed amendments are as follows:

Sec. 5.04.080. - Term and renewal of licenses, is amended to read as follows :

- (a) The term of the City license issued under this Chapter is twelve (12) months from the date of issuance.
- (b) Applicants for State and City license renewal shall apply to the City Clerk on or before the forty-fifth day prior to the date of expiration of the license.
- (c) Upon receipt of a completed application for a license renewal, the City Clerk shall refer the application to the following City departments: Environmental Health Department, City Utility Department, City Police Department and the Aspen Fire Protection District. If the referral comments received by the City Clerk do not adversely reflect upon the applicant's license, the City Clerk shall approve the renewal application forthwith. The City Clerk shall notify the authority of all such applications for renewals on the first of each month.
- (d) If for any reason the City Clerk decides not to approve a renewal application, he or she shall place the matter on the agenda of the next regularly scheduled meeting of the Aspen Local Licensing Authority at which time the authority shall grant the renewal, order further staff investigation or order a hearing in accordance with state law. The Local Licensing Authority may refuse to renew a license for good cause.
- (e) Notwithstanding the provisions of subparagraph (a), above, a licensee must maintain possession of leased premises at all times that a license is active. If the Licensee loses possession of leased premises prior to the end of the license term, whether through termination, abandonment or any other reason, the license shall be deemed immediately suspended and all operations of the Licensee pursuant to the license shall immediately cease. The Licensee may request that the suspension be lifted pursuant to an application for change of location, pursuant to Section 5.04.120, or transfer of ownership, pursuant to Section 5.04.130, below. The application to lift the suspension for a change of location or transfer of ownership may be submitted at any time during the remainder of the License term. The Licensee may also apply to

lift the suspension upon a showing that the Licensee has regained possession of the premises.

(f) The license of any Licensee who has ceased operations for a period of in excess of six (6) months shall be suspended. Such suspension may be lifted by the LLA for good cause shown to the LLA pursuant to an application for relief. Good cause shall include any closure pursuant to a general public health order. However, a closure of a business for violation of a duly issued public health order shall not be deemed good cause. In the event that a Licensee is aware of an upcoming closure for longer than six months for construction, remodeling, maintenance or other purpose, the Licensee may provide the LLA with notice of such closure with a statement of anticipated reopening date. If closure is based on activity that requires the receipt of a Certificate of Occupancy (CO) prior to reopening, then no suspension will occur if the business is open within thirty (30) days of issuance of the CO. For any other reason of closure, no suspension will occur pursuant to this Section if the business is reopened within thirty (30) days of the anticipated reopening date, unless such time is extended by the LLA. If any business is closed for a period of three months immediately prior to the renewal date of such license, such license renewal shall be reviewed by the LLA, pursuant to subparagraph (d), above.

Sec. 5.16.090. - Term and renewal of licenses. is amended to read as follows:

a) Each license issued pursuant to this Chapter shall be valid for one (1) year from the date of issuance, and may be renewed as provided in the applicable code, the applicable administrative regulations, and this Chapter, provided, however, that a license shall not be renewed if the Local Licensing Authority determines that the licensed premises have been inactive, without good cause, for at least six (6) consecutive months.

(b) Upon receipt of a completed application for a license renewal, the City Clerk shall refer the application to the following City departments: Environmental Health Department, City Utility Department, City Police Department and the Aspen Fire Protection District. If the referral comments received by the City Clerk do not adversely reflect upon the applicant's license, the City Clerk shall approve the renewal application forthwith. The City Clerk shall notify the authority of all applications for renewals on the first of each month.

(c) The Local Licensing Authority may refuse to renew a license for good cause.

(d) No license shall be renewed by the Local Licensing Authority until the licensee provides verification that the license has been renewed by the State Licensing Authority.

(e) Notwithstanding anything contained in this Chapter to the contrary, a licensee has no vested right to the renewal of a license, and no property right in the renewal of a license.

(f) Notwithstanding the provisions of subparagraph (a), above, a licensee must maintain possession of leased premises at all times that a license is active. If the Licensee loses possession of leased premises prior to the end of the license term, whether through termination, abandonment or any other reason, the license shall be deemed immediately suspended and all operations of the Licensee pursuant to the

license shall immediately cease. The Licensee may request that the suspension be lifted pursuant to an application for change of location, pursuant to Section 5.16.100, or transfer of ownership, pursuant to Section 5.16.120, below. The application to lift the suspension for a change of location or transfer of ownership may be submitted at any time during the remainder of the License term. The Licensee may also apply to lift the suspension upon a showing that the Licensee has regained possession of the premises.

(g) The license of any Licensee who has ceased operations for a period of in excess of six (6) months shall be suspended. Such suspension may be lifted by the LLA for good cause shown to the LLA pursuant to an application for relief. Good cause shall include any closure pursuant to a general public health order. However, a closure of a business for violation of a duly issued public health order shall not be deemed good cause. In the event that a Licensee is aware of an upcoming closure for longer than six months for construction, remodeling, maintenance or other purpose, the Licensee may provide the LLA with notice of such closure with a statement of anticipated reopening date. If closure is based on activity that requires the receipt of a Certificate of Occupancy (CO) prior to reopening, then the no suspension will occur if the business is open within thirty (30) days of issuance of the CO. For any other reason for closure, no suspension will occur pursuant to this Section if the business is reopened within thirty (30) days of the anticipated reopening date, unless such time is extended by the LLA. If any business is closed for a period of three months immediately prior to the renewal date of such license, such license renewal shall be reviewed by the LLA.

Sections 4 and 5. Procedural amendments

Although these amendments are not addressed in Resolution #1, staff felt that two non-substantive changes should be adopted pursuant to Ordinance #1. The first is simply an update of the heading for Chapter 5.04 which currently reads “Chapter 5.04 - Beer and Wine Licensing.” This is proposed to be amended to read “Chapter 5.04 - Alcoholic Beverages.”

The other amendment concerns the reorganization of state code adopted in 2018. The Colorado Liquor Code was part Title 12 of the Colorado Revised Statute for many years, including during the time that the City created a separate licensing authority. Section 5.04.010 expresses the legislative intent of our code to adopt and follow state codes and Sections 5.04.020 and 5.04.030, incorporate C.R.S. Title 12, as amended, into our local code. Since Title 12 was amended and incorporated into C.R.S. Title 44, for clarity staff recommends that all references in our code to Title 12 be deemed references to Title 44.

FINANCIAL/BUDGET IMPACTS: None

ENVIRONMENTAL IMPACTS: None

RECOMMENDATION:

The LLA and staff recommend adoption of Ordinance #1 (Series of 2022) on first reading, setting the second reading for February 8, 2022.

ORDINANCE NO. 1
(Series of 2022)

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ASPEN,
COLORADO, AMENDING TITLE 5 OF THE ASPEN MUNICIPAL CODE,
MARIJUANA AND ALCOHOLIC BEVERAGES.**

WHEREAS, Title 5, of the Aspen Municipal Code sets forth the City's regulations of Marijuana and Alcoholic Beverages as authorized pursuant to the State of Colorado Codes, formerly Title 12, C.R.S., currently Title 44, C.R.S.; and

WHEREAS, the Local Licensing Authority reviews the local and state laws in order to accomplish the directions and authority provide to it pursuant to those laws; and

WHEREAS, pursuant to Resolution #1, Series of 2021, the Local Licensing Authority determined that it would be in the best interest of the City of Aspen, if certain laws under which it works would be amended to address issues that the Local Licensing Authority has faced in recent years; therefore, it is recommending that the Council adopt the language set forth in Sections 1 through 3, below; and,

WHEREAS, given the proposed amendments to Title 5 pursuant to Resolution #1, staff recommends two changes to the code to provide additional clarity given updates to the Colorado Revised Statutes in 2018, as set forth in Sections 4 and 5, below.

WHEREAS, the City Council finds that this Ordinance furthers and is necessary for the promotion of public health, safety, and welfare.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ASPEN, COLORADO, THAT:

Section 1.

Section 5.04.040(a)(3) of the City of Aspen Liquor code is hereby amended by adding the following at the end such paragraph:

“Financial interest” as used in this paragraph (a)(3) shall not include employees of any licensed restaurant, bar, or marijuana facility, if the employee has no ownership interest in the business. Notwithstanding this definition, such appointed member of the Authority shall be disqualified from consideration of any action regarding his or her employer.

Section 2.

Sec. 5.04.080. - Term and renewal of licenses, is amended to read as follows:

- (a) The term of the City license issued under this Chapter is twelve (12) months from the date of issuance.
- (b) Applicants for State and City license renewal shall apply to the City Clerk on or before the forty-fifth day prior to the date of expiration of the license.
- (c) Upon receipt of a completed application for a license renewal, the City Clerk shall refer the application to the following City departments: Environmental Health Department, City Utility Department, City Police Department and the Aspen Fire Protection District. If the referral comments received by the City Clerk do not adversely reflect upon the applicant's license, the City Clerk shall approve the renewal application forthwith. The City Clerk shall notify the authority of all such applications for renewals on the first of each month.
- (d) If for any reason the City Clerk decides not to approve a renewal application, he or she shall place the matter on the agenda of the next regularly scheduled meeting of the Aspen Local Licensing Authority at which time the authority shall grant the renewal, order further staff investigation or order a hearing in accordance with state law. The Local Licensing Authority may refuse to renew a license for good cause.
- (e) Notwithstanding the provisions of subparagraph (a), above, a licensee must maintain possession of leased premises at all times that a license is active. If the Licensee loses possession of leased premises prior to the end of the license term, whether through termination, abandonment or any other reason, the license shall be deemed immediately suspended and all operations of the Licensee pursuant to the license shall immediately cease. The Licensee may request that the suspension be lifted pursuant to an application for change of location, pursuant to Section 5.04.120, or transfer of ownership, pursuant to Section 5.04.130, below. The application to lift the suspension for a change of location or transfer of ownership may be submitted at any time during the remainder of the License term. The Licensee may also apply to lift the suspension upon a showing that the Licensee has regained possession of the premises.
- (f) The license of any Licensee who has ceased operations for a period of in excess of six (6) months shall be suspended. Such suspension may be lifted by the LLA for good cause shown to the LLA pursuant to an application for relief. Good cause shall include any closure pursuant to a general public health order. However, a closure of a business for violation of a duly issued public health order shall not be deemed good cause. In the event that a Licensee is aware of an upcoming closure for longer than six months for construction, remodeling, maintenance or other purpose, the Licensee may provide the LLA with notice of such closure with a statement of anticipated reopening date. If closure is based on activity that requires the receipt of a Certificate of Occupancy (CO) prior to reopening, then no suspension will occur if the business is open within thirty (30) days of issuance of the CO. For any other reason of closure, no suspension will occur pursuant to this Section if the business is reopened within thirty (30) days of the anticipated

reopening date, unless such time is extended by the LLA. If any business is closed for a period of three months immediately prior to the renewal date of such license, such license renewal shall be reviewed by the LLA, pursuant to subparagraph (d), above.

Section 3.

Sec. 5.16.090. - Term and renewal of licenses. is amended to read as follows:

- a) Each license issued pursuant to this Chapter shall be valid for one (1) year from the date of issuance and may be renewed as provided in the applicable code, the applicable administrative regulations, and this Chapter, provided, however, that a license shall not be renewed if the Local Licensing Authority determines that the licensed premises have been inactive, without good cause, for at least six (6) consecutive months.
- (b) Upon receipt of a completed application for a license renewal, the City Clerk shall refer the application to the following City departments: Environmental Health Department, City Utility Department, City Police Department and the Aspen Fire Protection District. If the referral comments received by the City Clerk do not adversely reflect upon the applicant's license, the City Clerk shall approve the renewal application forthwith. The City Clerk shall notify the authority of all applications for renewals on the first of each month.
- (c) The Local Licensing Authority may refuse to renew a license for good cause.
- (d) No license shall be renewed by the Local Licensing Authority until the licensee provides verification that the license has been renewed by the State Licensing Authority.
- (e) Notwithstanding anything contained in this Chapter to the contrary, a licensee has no vested right to the renewal of a license, and no property right in the renewal of a license.
- (f) Notwithstanding the provisions of subparagraph (a), above, a licensee must maintain possession of leased premises at all times that a license is active. If the Licensee loses possession of leased premises prior to the end of the license term, whether through termination, abandonment or any other reason, the license shall be deemed immediately suspended and all operations of the Licensee pursuant to the license shall immediately cease. The Licensee may request that the suspension be lifted pursuant to an application for change of location, pursuant to Section 5.16.100, or transfer of ownership, pursuant to Section 5.16.120, below. The application to lift the suspension for a change of location or transfer of ownership may be submitted at any time during the remainder of the License term. The Licensee may also apply to lift the suspension upon a showing that the Licensee has regained possession of the premises.
- (g) The license of any Licensee who has ceased operations for a period of in excess of six (6) months shall be suspended. Such suspension may be lifted

by the LLA for good cause shown to the LLA pursuant to an application for relief. Good cause shall include any closure pursuant to a general public health order. However, a closure of a business for violation of a duly issued public health order shall not be deemed good cause. In the event that a Licensee is aware of an upcoming closure for longer than six months for construction, remodeling, maintenance or other purpose, the Licensee may provide the LLA with notice of such closure with a statement of anticipated reopening date. If closure is based on activity that requires the receipt of a Certificate of Occupancy (CO) prior to reopening, then the no suspension will occur if the business is open within thirty (30) days of issuance of the CO. For any other reason for closure, no suspension will occur pursuant to this Section if the business is reopened within thirty (30) days of the anticipated reopening date, unless such time is extended by the LLA. If any business is closed for a period of three months immediately prior to the renewal date of such license, such license renewal shall be reviewed by the LLA.

Section 4:

The heading of Chapter 5.04 which currently reads “Chapter 5.04 - Beer and Wine Licensing” is hereby amended to read “Chapter 5.04 - Alcoholic Beverages.”

Section 5:

Any and all references to “C.R.S. Title 12” throughout Title 5 of the Aspen Municipal Code are hereby deemed to refer to C.R.S. Title 44 and specific references within Title 5 of the Aspen Municipal Code to state code sections within C.R.S. Title 12 shall be deemed to refer to a corresponding code sections in C.R.S. Title 44.

Section 6: Severability.

If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held invalid or unconstitutional in a court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and shall not affect the validity of the remaining portions thereof.

Section 7. Existing Litigation.

This ordinance shall not have any effect on existing litigation and shall not operate as an abatement of any action or proceeding now pending under or by virtue of the ordinances amended as herein provided, and the same shall be construed and concluded under such prior ordinances.

Section 8. Effective Date.

This ordinance shall be effective thirty days after final adoption.

A public hearing on the ordinance shall be held on the 8th day of February 2022, in the City Council Chambers, 427 Rio Grande Place, Aspen, Colorado and/or via Webex.

INTRODUCED, READ AND ORDERED PUBLISHED as provided by law by City Council of the City of Aspen on the 25th day of January 2022.

Torre, Mayor

ATTEST:

Nicole Henning, City Clerk

FINALLY adopted, passed and approved this ____ day of February 2022.

Torre, Mayor

ATTEST:

Nicole Henning, City Clerk

Approved as to form:

James R True, City Attorney

CITY OF ASPEN, COLORADO
LOCAL LICENSING AUTHORITY
RESOLUTION # 01
(Series of 2021)

A RESOLUTION OF THE LOCAL LICENSING AUTHORITY OF THE CITY OF ASPEN,
COLORADO, RECOMENDING TO THE ASPEN CITY COUNCIL CERTAIN
AMENDMENTS TO THE ASPEN MUNICIPAL CODE.

WHEREAS, the Local Licensing Authority is an authority duly established pursuant to the Aspen Municipal Charter, Title 5 of the Aspen Municipal Code and C.R.S., Title 44; and

WHEREAS, the Local Licensing Authority reviews the local and state laws in order to accomplish the directions and authority provide to it pursuant to those laws; and

WHEREAS, the Local Licensing Authority has determined that it would be in the best interest of the City of Aspen, if certain laws under which it works would be amended to address issues that the Local Licensing Authority has faced in recent years.

NOW, THEREFORE, BE IT RESOLVED BY THE LOCAL LICENSING
AUTHORITY OF THE CITY OF ASPEN, COLORADO,

That the following code amendments be adopted by City Council:

Section 1.

Section 5.04.040(a)(3) of the City of Aspen Liquor code is hereby amended by adding the following at the end such paragraph:

“Financial interest” as used in this paragraph (a)(3) shall not include employees of any licensed restaurant, bar, or marijuana facility, if the employee has no ownership interest in the business. Notwithstanding this definition, such appointed member of the Authority shall be disqualified from consideration of any action regarding his or her employer.

Section 2.

Sec. 5.04.080. - Term and renewal of licenses, is amended to read as follows, with changes outlined in red:

- (a) The term of the City license issued under this Chapter is twelve (12) months from the date of issuance.
- (b) Applicants for State and City license renewal shall apply to the City Clerk on or before the forty-fifth day prior to the date of expiration of the license.
- (c) Upon receipt of a completed application for a license renewal, the City Clerk shall refer the application to the following City departments: Environmental Health

Department, City Utility Department, City Police Department and the Aspen Fire Protection District. If the referral comments received by the City Clerk do not adversely reflect upon the applicant's license, the City Clerk shall approve the renewal application forthwith. The City Clerk shall notify the authority of all such applications for renewals on the first of each month.

(d) If for any reason the City Clerk decides not to approve a renewal application, he or she shall place the matter on the agenda of the next regularly scheduled meeting of the Aspen Local Licensing Authority at which time the authority shall grant the renewal, order further staff investigation or order a hearing in accordance with state law. The Local Licensing Authority may refuse to renew a license for good cause.

(e) Notwithstanding the provisions of subparagraph (a), above, a licensee must maintain possession of leased premises at all times that a license is active. If the Licensee loses possession of leased premises prior to the end of the license term, whether through termination, abandonment or any other reason, the license shall be deemed immediately suspended and all operations of the Licensee pursuant to the license shall immediately cease. The Licensee may request that the suspension be lifted pursuant to an application for change of location, pursuant to Section 5.04.120, or transfer of ownership, pursuant to Section 5.04.130, below. The application to lift the suspension for a change of location or transfer of ownership may be submitted at any time during the remainder of the License term. The Licensee may also apply to lift the suspension upon a showing that the Licensee has regained possession of the premises.

(f) The license of any Licensee who has ceased operations for a period of in excess of six (6) months shall be suspended. Such suspension may be lifted by the LLA for good cause shown to the LLA pursuant to an application for relief. Good cause shall include any closure pursuant to a general public health order. However, a closure of a business for violation of a duly issued public health order shall not be deemed good cause. In the event that a Licensee is aware of an upcoming closure for longer than six months for construction, remodeling, maintenance or other purpose, the Licensee may provide the LLA with notice of such closure with a statement of anticipated reopening date. If closure is based on activity that requires the receipt of a Certificate of Occupancy (CO) prior to reopening, then no suspension will occur if the business is open within thirty (30) days of issuance of the CO. For any other reason of closure, no suspension will occur pursuant to this Section if the business is reopened within thirty (30) days of the anticipated reopening date, unless such time is extended by the LLA. If any business is closed for a period of three months immediately prior to the renewal date of such license, such license renewal shall be reviewed by the LLA, pursuant to subparagraph (d), above.

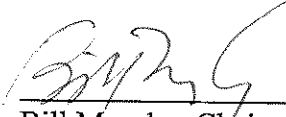
Section 3.

Sec. 5.16.090. - Term and renewal of licenses. is amended to read as follows, with changes outlined in red:

- a) Each license issued pursuant to this Chapter shall be valid for one (1) year from the date of issuance, and may be renewed as provided in the applicable code, the applicable administrative regulations, and this Chapter, provided, however, that a license shall not be renewed if the Local Licensing Authority determines that the licensed premises have been inactive, without good cause, for at least six (6) consecutive months.
- (b) Upon receipt of a completed application for a license renewal, the City Clerk shall refer the application to the following City departments: Environmental Health Department, City Utility Department, City Police Department and the Aspen Fire Protection District. If the referral comments received by the City Clerk do not adversely reflect upon the applicant's license, the City Clerk shall approve the renewal application forthwith. The City Clerk shall notify the authority of all applications for renewals on the first of each month.
- (c) The Local Licensing Authority may refuse to renew a license for good cause.
- (d) No license shall be renewed by the Local Licensing Authority until the licensee provides verification that the license has been renewed by the State Licensing Authority.
- (e) Notwithstanding anything contained in this Chapter to the contrary, a licensee has no vested right to the renewal of a license, and no property right in the renewal of a license.
- (f) Notwithstanding the provisions of subparagraph (a), above, a licensee must maintain possession of leased premises at all times that a license is active. If the Licensee loses possession of leased premises prior to the end of the license term, whether through termination, abandonment or any other reason, the license shall be deemed immediately suspended and all operations of the Licensee pursuant to the license shall immediately cease. The Licensee may request that the suspension be lifted pursuant to an application for change of location, pursuant to Section 5.16.100, or transfer of ownership, pursuant to Section 5.16.120, below. The application to lift the suspension for a change of location or transfer of ownership may be submitted at any time during the remainder of the License term. The Licensee may also apply to lift the suspension upon a showing that the Licensee has regained possession of the premises.
- (g) The license of any Licensee who has ceased operations for a period of in excess of six (6) months shall be suspended. Such suspension may be lifted by the LLA for good cause shown to the LLA pursuant to an application for relief. Good cause shall include any closure pursuant to a general public health order. However, a closure of a business for violation of a duly issued public health order shall not be deemed good cause. In the event that a Licensee is aware of an upcoming closure for longer than six months for construction, remodeling, maintenance or other purpose, the Licensee may provide the LLA with notice of such closure with a statement of anticipated reopening date. If closure is based on activity that requires the receipt of a Certificate of Occupancy (CO) prior to reopening, then the no suspension will occur if the business is open within thirty (30) days of issuance of the CO. For any other reason for closure, no suspension will occur pursuant to this Section if the business is reopened within thirty (30)

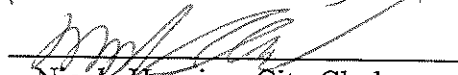
days of the anticipated reopening date, unless such time is extended by the LLA.
If any business is closed for a period of three months immediately prior to the
renewal date of such license, such license renewal shall be reviewed by the LLA.

INTRODUCED, READ AND ADOPTED by the Local Licensing Authority of the City
of Aspen on the 7th day of December 2021.



Bill Murphy, Chairman

I, Nicole Henning, duly appointed and acting City Clerk do certify that the foregoing is a
true and accurate copy of that resolution adopted by the Local Licensing Authority of the City of
Aspen, Colorado, at a meeting held on December 7, 2021.

Nicole Henning by


Nicole Henning, City Clerk



MEMORANDUM

TO: Mayor Torre and Aspen City Council
FROM: Ben Anderson, Principal Long-Range Planner
THROUGH: Phillip Supino, Community Development Director
MEMO DATE: January 20, 2022
MEETING DATE: January 25, 2022
RE: Resolution No. 014, Series of 2022
Aspen Mini-Storage, Annexation Petition

REQUEST OF COUNCIL: City Council is asked to approve Resolution No. 014, Series of 2022.

SUMMARY AND BACKGROUND: The Aspen Mini-Storage property, owned by the City of Aspen and intended for inclusion in the land assemblage that will define the site of the Lumberyard affordable housing project, is located in Pitkin County. When purchased by the City, this property was planned for eventual annexation into the City of Aspen. This resolution begins the annexation process and would do three things:

- Show Council findings that Petition for Annexation and proposed Annexation Plat are in substantial compliance with Colorado Revised Statutes; 31-12-107(1).
- Set a date, time, and place for a public hearing to determine compliance with the annexation procedures required by Colorado Revised Statutes; 31-12-104 and 31-12-105.
- Authorizes the initiation of zoning procedures for the property once it is annexed into the City.

The annexation process requires four meetings with City Council (including this meeting). Approval of Resolution #014 will set a public hearing on March 8th to formalize the Petition for Annexation and the Plat. The hearing on the 8th has special notice requirements that include notification of Pitkin County BOCC, the Pitkin County Attorney, Aspen Unified School District, and any special districts that the property is subject to. Eventually, the annexation and zoning of the property will be reviewed by the Planning and Zoning Commission and Council will consider the annexation and zoning of the property via ordinance.

DISCUSSION: In general, this Resolution is a cursory first step that formally initiates the annexation process as described by Colorado State Statute. This Resolution does not

approve the annexation or the eventual zoning, nor will it change the existing uses on the property in any way. Future hearings will provide opportunity for public and stakeholder comment.

FINANCIAL IMPACTS: N/A

ENVIRONMENTAL IMPACTS: N/A

ALTERNATIVES:

RECOMMENDATIONS: Staff recommends that Council approve Resolution No. 014, Series of 2022, initiating the annexation process for the Aspen Mini-Storage Property.

CITY MANAGER COMMENTS:

**RESOLUTION NO. 014
(SERIES OF 2022)**

A RESOLUTION OF THE CITY COUNCIL OF ASPEN COLORADO, RELATIVE TO THE PETITION FOR ANNEXATION OF TERRITORY TO THE CITY OF ASPEN, COMMONLY KNOWN AS THE ASPEN MINI STORAGE, LEGALLY DESCRIBED AS LOT 3, COMMUNICATION CENTER SUBDIVISION, ACCORDING TO THE PLAT THEREOF RECORDED OCTOBER 3, 1988, IN PLAT BOOK 21 AT PAGE 34; FINDING SUBSTANTIAL COMPLIANCE WITH SECTION 31-12-107(1), C.R.S.; ESTABLISHING A DATE, TIME, AND PLACE FOR A PUBLIC HEARING TO DETERMINE COMPLIANCE WITH SECTIONS 31.12.104 AND 31-12-105, C.R.S.; AUTHORIZING PUBLICATION OF SAID NOTICE OF SAID HEARING; AND AUTHORIZING THE INSTITUTION OF ZONING PROCEDURES FOR LAND IN THE AREA PROPOSED TO BE ANNEXED.

WHEREAS, on November 23, 2021, the City Manager on behalf of the City of Aspen, the owner of the property proposed to be annexed, did file with the City Clerk of the City of Aspen a Petition for the Annexation of territory to the City of Aspen (*Exhibit A*), whereby real property described in *Exhibit B* appended to the Petition for Annexation, is being petitioned for annexation to the City of Aspen; and,

WHEREAS, the City Clerk of the City of Aspen has referred the aforesaid petition as a communication to the City Council for appropriate action to determine if the petition is substantially in compliance with Section 31-12-107, C.R.S.; and,

WHEREAS, the petition, including accompanying copies of an annexation map, has been reviewed by the City Attorney's Office and the City Engineer and found by them to contain the information prescribed and set forth in paragraphs (c) and (d) of subsection (1) of Section 31-12-107, C.R.S.; and,

WHEREAS, one hundred percent (100%) of the owners of affected property have consented to annexation of their property to the City of Aspen; and,

WHEREAS, Section 31-12-107(1)(g), C.R.S., mandates that the City of Aspen initiate annexation proceedings in accordance with Sections 31-12-108 to 31-12-110, C.R.S., whenever a petition is filed pursuant to subsection (1) of Section 31-12-107, C.R.S.

NOW, THEREFORE BE IT RESOLVED BY THE PLANNING AND ZONING COMMISSION OF THE CITY OF ASPEN, COLORADO THAT:

Section 1:

That the Petition for Annexation of territory to the City of Aspen is hereby found and determined to be in substantial compliance with the provisions of subsection (1) of Section 31-12-107, C.R.S.

Section 2:

That the City Council hereby determines that it shall hold a public hearing to determine if the proposed annexation complies with Section 31-12-104 and 31-12-105, C.R.S., and to establish whether or not said area is eligible for annexation pursuant to the Municipal Annexation Act of 1965, as amended; said hearing to be held at a regular meeting of City Council of the City of Aspen at 5:00

o'clock p.m. on the 8th day of March, 2022, in Council Chambers at City Hall, 427 Rio Grande Place, Aspen, Colorado 8161, or held virtually in response the public health concerns related to COVID-19, as published in the notice and the meeting agenda. (A date which is not less than 30 days nor more than 60 days after the effective date of this resolution).

Section 3:

That the City Clerk shall give public notice as follows: A copy of this resolution shall constitute notice that, on the given date and given time and place set by the City Council, the City Council shall hold a hearing upon said resolution of the City of Aspen for the purpose of determining and finding whether the area proposed to be annexed meets the applicable requirements of Sections 31-12-104 and 31-12-105, C.R.S. and is considered eligible for annexation. Said notice will be published once a week for four consecutive weeks in a newspaper of general circulation in the area proposed to be annexed. The first publication of such notice shall be at least 30 days prior to the date of the hearing. The proof of publication shall be returned when the publication is completed, and an affidavit confirming the publication shall become part of the land use case file and shall be proof thereof of the publication. A copy of the resolution and petition as filed shall be sent by registered mail by the clerk to the Pitkin County Board of County Commissioners and to the County Attorney of Pitkin County, to the Aspen School District and any other special districts that the property is subject to, at least twenty days prior to the date fixed for such hearing.

Section 4:

That pursuant to Section 31-12-115, C.R.S., the City Manager is hereby directed to initiate appropriate zoning procedures with regard to the territory proposed to be annexed.

INTRODUCED, READ AND ADOPTED by the City Council of City of Aspen on the 25th of January, 2022.

Approved as to form:

Approved as to content:

James R. True, City Attorney

Mayor Torre

Attest:

Nicole Henning, City Clerk

EXHIBIT A – Petition to Annex

PETITION FOR ANNEXATION OF TERRITORY TO THE CITY OF ASPEN

THE UNDERSIGNED (hereinafter referred to as the “Petitioners”) hereby petitions the Council of the City of Aspen, Colorado for the annexation of an area, to be referred to as the Aspen Mini Storage Annexation to the City of Aspen. Said area, consisting of approximately 129,678 square feet (2.977 acres), is more particularly described on Attachment “A,” attached hereto.

The Petitioners allege:

1. That it is desirable and necessary that such area be annexed to the City of Aspen.
2. That the requirements of Sections 31-12-104 and 31-12-108, C.R.S., exist or have been met.
3. That not less than one-sixth (1/6) of the perimeter of the area proposed to be annexed is contiguous with the boundaries of the City of Aspen.
4. That a community of interest exists between the area proposed to be annexed and the City of Aspen.
5. That the area to be annexed is urban or will be urbanized in the near future.
6. That the area proposed to be annexed is integrated with or capable of being integrated with the City of Aspen.
7. That the Petitioners herein comprise 100% of the landowners in the area to be annexed, as described in Attachment A.

WHEREFORE, said Petitioners request that the Council of the City of Aspen approve the annexation of the area described on Attachment “A,” legal description of the land.

The Petitioners reserve the right to withdraw this petition and their signatures there from at any time prior to the commencement of the roll call of the City Council for the vote upon the second reading of the annexation ordinance.

IN WITNESS WHEREOF, I/we have executed this Petition for Annexation this 23 day of November, 20 21.



Petitioner's/Owner's Signature

Sara Ott, City Manager

Petitioner's/Owner's Printed Name

427 Rio Grande Place

Address

Aspen, CO 81611

City, State, Zip

Legal Description: LOT 3, COMMUNICATIONS CENTER SUBDIVISION, according to the Plat thereof recorded October 3, 1988 in Plat Book 21 at Page 34.

