

RESOLUTION NO. 2023-

**A RESOLUTION APPROVING A SERVICE AGREEMENT WITH
ANDERSON CONSULTING ENGINEERS, INC., FOR THE MITCHELL
GULCH RETENTION POND IMPROVEMENTS PROJECT**

WHEREAS, the Town of Castle Rock, Colorado (the “Town”) has solicited proposals for engineering services for the Mitchell Gulch Retention Pond Improvements Project (the “Project”); and

WHEREAS, the Project selection team has determined Anderson Consulting Engineers, Inc., (the “Contractor”) is best qualified to perform work for the Project; and

WHEREAS, the Town and the Contractor have agreed to the terms and conditions by which the Contractor will provide work for the Project.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK, COLORADO AS FOLLOWS:

Section 1. Approval. The Service Agreement between the Town and Contractor is hereby approved in substantially the same form attached as ***Exhibit 1***, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney. The Mayor and other proper Town officials are hereby authorized to execute the Agreement by and on behalf of the Town.

Section 2. Encumbrance and Authorization for Payment. In order to meet the Town's financial obligations under the Agreement, the Town Council authorizes the expenditure and payment from account no. 212-4475-444.75-52 in an amount not to exceed \$407,480.00, plus a Town-managed contingency in the amount of \$40,748.00, unless otherwise authorized in writing by the Town.

PASSED, APPROVED AND ADOPTED this 17th day of January, 2023 by the Town Council of the Town of Castle Rock, Colorado, on first and final reading, by a vote of ____ for and ____ against.

ATTEST:

TOWN OF CASTLE ROCK

Lisa Anderson, Town Clerk

Jason Gray, Mayor

Approved as to form:

Approved as to content:

Michael J. Hyman, Town Attorney

Mark Marlowe, Director of Castle Rock Water



Town of Castle Rock

Agenda Memorandum

Agenda Date: 1/17/2023

Item #: File #: TMP 2022-897

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

From: Mark Marlowe, Director of Castle Rock Water
David Van Dellen, Stormwater Manager
Erik Dam, Project Manager

Resolution Approving an Engineering Services Agreement between the Town of Castle Rock and Anderson Consulting Engineers for the Mitchell Gulch Retention Pond Improvements Project *[Mitchell Gulch just north of Mikelson Boulevard]*

Executive Summary

The purpose of this memo is to request Town Council approval of a Resolution approving the Services Agreement with Anderson Consulting Engineers, Inc. for the Mitchell Gulch Retention Pond Improvements Project (see **Attachment A**). The scope of work generally includes engineering design, surveying, geotechnical investigation, alternatives analysis, dam construction and environmental permitting, subsurface utility engineering, conditional letter of map revision (CLOMR) preparation and submittal and easement preparation for this project, located within the Mitchell Gulch Drainageway directly north of Mikelson Boulevard (see **Attachment B**). The cost for these services is **\$407,480** plus a town-managed 10% contingency in the amount of **\$40,748** for a total authorization of **\$448,228**. This is less than the amount budgeted for design, see table below. Services under this agreement are anticipated to be completed by September 2024.

Design	Wetlands Mitigation	Construction	Total
\$450,000	\$200,000	\$2,000,000	\$2,650,000

The timing of bidding and construction has not yet been determined and will be dependent largely on available funding.

Notification and Outreach Efforts

The Town will hold to open houses to present the proposed project improvements and solicit feedback. The Town will utilize the normal Town outreach channels including social media and email to notify the public of the open houses.

History of Past Town Council, Boards & Commissions, or Other Discussions

On December 19, 2006, Town Council passed, approved, and adopted a resolution approving the Mitchell Gulch Drainageway Master Plan.

Discussion

Located directly north of Mikelson Blvd on the Mitchell Gulch tributary to Cherry Creek is an existing stock pond, whose outlet structure is undersized and prone to clogging from debris. Additionally, there is not a defined overflow spillway and the pond suffers from excessive vegetation and sedimentation that has reduced the ponds volume and is not favorable for aquatic species habitat. In 2022, the State Engineer required that a water right be acquired for the pond. Castle Rock Water (CRW) invested \$26,000 in securing an augmentation plan (water right) for the pond and is now required to monitor and report to the State Engineer on the plan and the water rights associated with the plan.

This design project will address these and other issues as follows:

- Evaluate recommendations in the Mitchell Gulch Watershed Master Plan for this reach of the Drainageway.
- *Perform an alternatives analysis consisting of three possible solutions; (1) Lowering the pond embankment such that the dam would not be considered jurisdictional, (2) Maintaining the existing pond embankment height as it currently exists requiring jurisdictional hazard classification, and (3) Removing the existing dam embankment and pond and returning the channel to a natural condition with grade control features to stabilize the channel.*
- *Explore the opportunity for including regional water quality and detention storage in the pond.*
- *Enhance public recreational amenities for the area, including the addition of soft surface trails and fishing platforms to access the pond.*
- *Preserve valuable and sensitive riparian habitat and develop a comprehensive revegetation plan for areas of disturbance.*
- *Remap the floodplain within the project limits to reflect the proposed/constructed improvements and secure approval from FEMA.*
- *Design improvements to provide long-term protection of adjacent public infrastructure.*

The Parks Department will be included in the Town team with respect to some of the design aspects that will be evaluated regarding use of the pond long term for recreation. The Town issued a Request for Proposals (RFP) to accomplish these objectives, and four (4) proposals were received, reviewed and ranked based on a weighted set of criteria included in the RFP document. The proposal fees for services ranged from \$217,351 to \$505,601. The top ranked firm from this selection process was Anderson Consulting Engineers, Inc. Their proposal and fee combination represented the best value for the Town in terms of project approach and understanding, technical expertise and scope of services provided. Can we comment on why their proposal was worth \$200,000 more than the low bid?

Budget Impact

Funds for this design agreement will be charged to the account below and will require a budget transfer from stormwater capital account 212-4475-444.75-52 which has a budget of \$2,700,000 in 2023. Additionally, there is approximately \$10 million available in capital reserves to complete this project and maintain other priorities in the coming year.

Fund	Account Number	Amount	Contingency	Total
Mitchell Gulch	212-4475-444.75- 75	\$407,480	\$40,748	\$448,228

Staff Recommendation

Staff recommends approval of the Services Agreement with Anderson Consulting Engineers, Inc. for the Mitchell Gulch Retention Pond Improvements Project at a cost of **\$407,480** plus a town-managed 10% contingency in the amount of **\$40,748** for a total authorization of **\$448,228**.

Proposed Motion

"I move to approve the Resolution as introduced by title."

Alternative Motions

"I move to approve the resolution as introduced by title, with the following conditions: (list conditions)."

"I move to continue this item to the Town Council meeting on _____ date to allow additional time to (list information needed)."

Attachments

Attachment A: Resolution (Signature Needed)
Exhibit 1: Services Agreement (Signature Needed)
Attachment B: Site Map



**TOWN OF CASTLE ROCK
SERVICES AGREEMENT
(Mitchell Gulch Retention Pond Improvements Project)**

DATE: _____.

PARTIES: **TOWN OF CASTLE ROCK**, a Colorado municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 (the "Town").

ANDERSON CONSULTING ENGINEERS, INC, a Colorado corporation, 375 E. Horsetooth Road, Building 5, Suite 100, Fort Collins, Colorado 80525 ("Contractor").

RECITALS:

- A. Town wishes to engage Contractor to provide the services more fully described in the following Agreement and Exhibits.

TERMS:

Section 1. Scope of Services. Contractor shall provide engineering services as described in the attached *Exhibit 1* ("Services").

Section 2. Payment. Contractor shall invoice Town on a monthly basis for the Services rendered in accordance with the rate and fee schedule set forth in *Exhibit 1*. The Town shall pay such invoices within 30 days receipt of such invoice. In no event shall payment exceed \$407,480.00, unless authorized in writing by Town.

Section 3. Completion. Contractor shall commence the Services on February 1, 2023 and complete the Services by September 30, 2024. Contractor shall devote adequate resources to assure timely completion of the Services. Contractor shall perform the Services under this Agreement using a standard of care, skill and diligence ordinarily used by reputable professionals performing under circumstances similar to those required by this Agreement.

Town shall have the right to terminate this Agreement at any time with 30 days written notice to Contractor. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination. Contractor shall turn over all work product produced up to the date of termination.

Section 4. Annual Appropriation. The continuance of this Agreement is contingent upon the appropriation of funds to fulfill the requirements of the Agreement by the Town. If the Town fails to appropriate sufficient monies to provide for the continuance of the Agreement, the Agreement shall terminate on the final day preceding the date of the beginning of the first fiscal year for which funds are not appropriated. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination.

Section 5. Subcontractors. Contractor may utilize subcontractors to assist with specialized works as necessary to complete the Services. Contractor will submit any proposed subcontractor and the description of their services to the Town for approval.

Section 6. Assignment. This Agreement shall not be assigned by Contractor without the written consent of the Town.

Section 7. Notice. Any notice required or permitted by this Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the first page of this Agreement, or at such other address as has been previously furnished in writing to the other party or parties. Such notice shall be deemed given when deposited in the United States mail.

Section 8. Insurance. Contractor agrees to procure and maintain, at his own cost, the following policy or policies of insurance. Contractor shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

A. Contractor shall procure and maintain, and shall cause each subcontractor of the Contractor to procure and maintain a policy with the minimum insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Town. All coverage shall be continuously maintained from the date of commencement of services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Workers Compensation insurance to cover obligations imposed by the Workers Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employer's Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-each employee.

2. Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall contain a severability of interests provision.

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) each occurrence and ONE MILLION DOLLARS (\$1,000,000)

aggregate with respect to each of Contractor's owned, hired and/or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision.

B. The policies required above, except Workers' Compensation insurance, Employers' Liability insurance and Professional Liability insurance shall be endorsed to include the Town, its officers and employees, as additional insureds. Every policy required above, except Workers' Compensation shall be primary insurance, and any insurance carried by the Town, its officers, or its employees, shall be excess and not contributory insurance to that provided by Contractor. The additional insured endorsement for the Comprehensive General Liability insurance required above shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Contractor shall be solely responsible for any deductible losses under each of the policies required above.

C. Certificates of insurance shall be completed by Contractor's insurance agent and submitted at the time of execution of this Agreement as ***Exhibit 2*** as evidence that policies providing the required coverage, conditions and minimum limits are in full force and effect, and shall be subject to review and approval by the Town. Each certificate shall identify the Project and shall provide that coverage afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The Town reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

D. Failure on the part of Contractor to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which at the Town's discretion may procure or renew any such policy or any extended connection therewith, and all monies so paid by the Town shall be repaid by Contractor to the Town upon demand, or the Town may offset the cost of the premiums against any monies due to Contractor from the Town.

Section 9. Colorado Governmental Immunity Act. The parties understand and agree that the Town is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$424,000 per person, \$1,195,000 for two or more persons, per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, C.R.S., as from time to time amended, or otherwise available to Town, its officers, or its employees.

Section 10. Indemnification. Contractor expressly agrees to indemnify and hold harmless Town or any of its officers or employees from any and all claims, damages, liability, or court awards including attorney's fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone, including, but not limited to, any person, firm, partnership, or corporation, to the extent caused by the negligent acts, errors or omissions of Contractor or any of their employees or agents in performing work pursuant to this Agreement. In the event that any such suit or action is brought against Town, Town will give notice within ten (10) days thereof to Contractor.

Section 11. Delays. Any delays in or failure of performance by any party of his or its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.

Section 12. Additional Documents. The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.

Section 13. Entire Agreement. This Agreement represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect.

Section 14. Time of the Essence. Time is of the essence. If any payment or any other condition, obligation, or duty is not timely made, tendered or performed by either party, then this Agreement, at the option of the party who is not in default, may be terminated by the non-defaulting party, in which case, the non-defaulting party may recover such damages as may be proper.

Section 15. Default and Remedies. In the event either party should default in performance of its obligations under this agreement, and such default shall remain uncured for more than 10 days after notice of default is given to the defaulting party, the non-defaulting party shall be entitled to pursue any and all legal remedies and recover its reasonable attorney's fees and costs in such legal action. In addition, no Party will be entitled to lost profits, economic damages, or actual, direct, incidental, consequential, punitive or exemplary damages in the event of a default.

Section 16. Waiver. A waiver by any party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.

Section 17. Governing Law. This Agreement shall be governed by the laws of the State of Colorado in the Douglas County District Court.

Section 18. Independent Contractor. Contractor has completed the Affidavit of Independent Contractor Status, attached as *Exhibit 3*, and submitted same at the time of execution of this Agreement. In addition to the Affidavit, Contractor and the Town hereby represent that Contractor is an independent contractor for all purposes hereunder. Contractor represents and warrants that they are free from the Town's direction and control in the performance of their work or services and that they have an independent business doing the specific type of work or services which are the subject of this Agreement. More specifically, Contractor represents and warrants that the Town does not control what work or services they will perform or the manner in which such work or services will be performed. As such, Contractor is not covered by any worker's



compensation insurance or any other insurance maintained by Town except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of the Town.

Section 19. No Third Party Beneficiaries. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Town and Contractor, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than Town or Contractor receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

Section 20. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which together shall be deemed to constitute one and the same instrument. Each of the Parties hereto shall be entitled to rely upon a counterpart of the instrument executed by the other Party and sent by electronic mail.

ATTEST:

TOWN OF CASTLE ROCK

Lisa Anderson, Town Clerk

Jason Gray, Mayor

Approved as to form:

Approved as to content:

Michael J. Hyman, Town Attorney

David L. Corliss, Town Manager

CONTRACTOR:

ANDERSON CONSULTING ENGINEERS, INC.

By: _____

Its: _____



EXHIBIT 1

SERVICES AND FEE SCHEDULE

PROPOSED FEE SCHEDULE
for the
MITCHELL GULCH RETENTION POND PROJECT

PROJECT: Mitchell Gulch Retention Pond CLIENT: Town of Castle Rock - Castle Rock Water				Anderson Consulting Engineers, Inc. Direct Labor				ODC's	Totals		
ACE PROJECT NO.: XCOTOCR2022 PREPARED BY: JMA AMH DATE: 12/7/2022				Principal Engineer \$165/hr	Senior Engineer II \$135/hr	Senior Engineer \$130/hr	Project Engineer \$105/hr	GIS/CADD Technician \$100/hr	Senior Project Assistant \$85/hr	Other Direct Costs	
Task/Description				Hours	Hours	Hours	Hours	Hours	Hours	Cost	Phase
PHASE I - SURVEYING, SITE INVESTIGATION & ALTERNATIVES ANALYSIS											\$117,475
Task 1.1 Survey				1		4	6	2		\$100	13
Task 1.2 Geotechnical Investigation						8	6	2			16
Task 1.3 Dam Breach Analysis					8	16	80			\$100	104
Task 1.4 Alternative Analysis				8	12	54	120	24	4	\$100	222
Task 1.5 Coordination & Meetings					8	16	16			\$100	40
Outside Services											
Survey - AVI (Task 1.1)										190	\$16,400
Geotechnical Investigation - CTL Thompson (Task 1.2)										370	\$45,075
Alternative Analysis - BHA (Task 1.3)										46	\$5,515
Alternative Analysis - CTL Thompson (Task 1.3)										56	\$5,000
PHASE II - PRELIMINARY DESIGN											\$80,080
Task 2.1 Preliminary (30%) Design Drawings ¹				1	24	60	180	2	8		275
Task 2.2 Preliminary Hydraulic Calculations					8	24	60		4		96
Task 2.3 Environmental Permitting Coordination					8		4				12
Task 2.4 SUE Survey					2		2				4
Task 2.5 Coordination & Meetings					16	12	8			\$100	36
Outside Services											
Preliminary (30%) Design Drawings - BHA (Task 2.1)										76	\$9,505
Preliminary (30%) Design Drawings - CTL Thompson (Task 2.1)										8	\$4,500
Preliminary (30%) Design Drawings - K-Squared (Task 2.1)										16	\$2,000
SUE-AVI (Task 2.4)										65	\$14,110
Environmental Permitting Coordination - Centennial Archaeology (Task 2.3)										4	\$500
Environmental Permitting Coordination - WCI (Task 2.3)										8	\$1,000
PHASE III - FINAL DESIGN & FLOODPLAIN MODIFICATION APPROVAL											\$209,925
Task 3.1 90% Construction Drawings ¹				1	40	80	200		4		325
Task 3.2 Dam Design Report and Submittal ^{1,2}					24	80	80	4	4		192
Task 3.3 Temporary Erosion and Sediment Control (TESC) Plan					4	16	40	4	4		68
Task 3.4 CLOMR Completion and Submittal ^{1,3}					8	20	120		4	\$6,500	152
Task 3.5 Environmental Permitting (Section 404 - Assumes Individual Permit)					16	32	120		4		172
Task 3.6 Utility Relocations					4		8				12
Task 3.7 Technical Specifications ¹					4	40	24				68
Task 3.8 Final Cost Estimate and Bid Schedule					4	4	16				24
Task 3.9 Draft and Final Easements							4				4
Task 3.10 100% Bid Set ¹				1	12	40	120			\$300	173
Task 3.11 Coordination & Meetings					24	16	12			\$100	52
Outside Services											
90% Construction Drawings - BHA (Task 3.1)										60	\$8,430
90% Construction Drawings - CTL Thompson (Task 3.1)										120	\$12,000
90% Construction Drawings - K-Squared (Task 3.1)										24	\$3,000
Dam Design Report -CTL Thompson (Task 3.2)										40	\$4,500
Environmental Permitting - Wildland Consultants (Task 3.5)										96	\$12,000
Environmental Permitting - Centennial Archaeology (Task 3.5)										60	\$4,960
Utility Relocates - AVI (Task 3.6)										8	\$1,400
Technical Specifications - CTL Thompson (Task 3.7)										8	\$1,000
Draft and Final Easements - AVI (Task 3.9)										8	\$1,400
100% Bid Set - BHA (Task 3.10)										14	\$1,845
100% Bid Set - CTL Thompson (Task 3.10)										80	\$7,500
100% Bid Set - K-Squared (Task 3.10)										8	\$1,000
Coordination & Meeting - CTL Thompson (Task 3.11)										10	\$1,500
TOTAL PROJECT HOURS				12	226	522	1226	38	36		3435
TOTAL PROJECT BUDGET				\$1,980	\$30,510	\$67,860	\$128,730	\$3,800	\$3,060	\$7,400	\$407,480

¹Task Budgets can be significantly reduced if Alternatives 1 or 2 are selected.

²Task does not include Dam Construction Permit Application, as it is dependent on construction costs, it is estimate that this fee will be around \$8,000

³ODC's for this Task include On-Line FEMA Submittal Fee

**TECHNICAL PROPOSAL FOR
 ENGINEERING DESIGN SERVICES
 MITCHELL GULCH RETENTION POND
 IMPROVEMENTS PROJECT**



SUBMITTED BY:

**ANDERSON CONSULTING ENGINEERS, INC.
 375 E. HORSETOOTH ROAD, BLDG. 5
 FORT COLLINS, CO 80525
 (970) 226-0120**

TEAM QUALIFICATIONS/RELATED EXPERIENCE

Anderson Consulting Engineers, Inc. (ACE) is an employee-owned water resources engineering and environmental consulting firm providing a full range of water resources services. For more than 30 years ACE's principals have specialized in hydrologic and hydraulic engineering projects that emphasize master planning and design projects that incorporate flood mitigation/mapping, urban stormwater/stormwater quality management, and infrastructure improvements. ACE emphasizes a practical approach to the evaluation and design of water resources projects, resulting in a company culture that has won the confidence of our wide variety of clients in both the public and private sectors.

ACE currently has a staff of 16 people consisting of 13 engineers, of which 10 are Registered Professional Engineers in Colorado. Five of our engineers are also Certified Floodplain Managers. **All our Senior Staff have been with the company for at least 18 years and consist of some of the same staff that were involved with previous projects supporting the Town of Castle Rock.** Our continuity of Senior Staff ensures management and oversight consistency throughout the duration of the project. ACE's Senior Staff are typically registered in several states, and all have advanced degrees and/or education in their fields. They are supported by dedicated, experienced engineers and a full complement of technical support personnel including GIS analysts/CAD designers, and a Part 107 Certified Drone Pilot.

From its single corporate office in Fort Collins, Colorado ACE provides engineering services specializing in: (a) the preparation of **master drainage plans**; (b) the **design of capital improvement projects**; (c) complex **hydrologic and channel hydraulic modeling** (both 1D/2D and steady/unsteady state); (d) alternative engineering/economic evaluations; (e) **analysis, design and construction of flood control facilities, dams**, major irrigation system components, and **drainage improvement projects**; (f) analysis, design and construction of **channel stability and stream restoration projects**; (g) completion of **floodplain mapping and management** studies; (h) **water quality planning, design and implementation**, including **MS4 compliance** guidance and support; (i) providing **resident engineering** services and related **construction support**; and (j) providing aerial drone services including ortho production, site analysis and documentation.

Engineering/Technical Staff Member	Total Years Experience	Years of Experience with ACE
Greg Koch, P.E., CFM	37	32
Aaron Hansen, P.E., CFM	26	26
Michelle Martin, P.E.	20	20
Brian Smith, P.E., CFM	19	19
Scott Parker, P.E.	20	19
Jamie Darrow, P.E., CFM	18	18
Jason Albert, P.E., CFM	18	18
Matt Clark, P.E.	13	13
Michael Turner, P.E.	11	11
Clark Kephart, P.E.	9	9
Alison Osborn, EIT	3	3
Craig Hocking, EIT	4	2
Kevin To, EIT	1	1
Brian Thompson, GIS Analyst	25	15
Ben Ackert, GIS Analyst	16	13
ACE Project Manager		
ACE Assistant Project Manager		

ACE STAFF OFFERS:

- Unparalleled hydraulic modeling and hydrologic analysis expertise in both riverine and urban settings
- Extensive experience with hydraulic design including designing flood mitigation, dams, storm drainage, and water quality improvements
- Outstanding experience providing flood mitigation and stream restoration services in a variety of situations, including post-flood and post-wildfire areas
- 30 years of experience producing FEMA-compliant submittals, including 15 years of corporate DFIRM production experience
- A commitment to excellence in the successful completion of a wide variety of municipal storm water and flood mitigation projects.

ACE has emphasized servicing governmental clients at all levels, including municipalities, counties, states, and federal agencies. However, our main client emphasis has been on municipalities, counties, and stormwater/irrigation districts.

ACE has a track record of success in retaining staff at all levels, which is illustrated in the ACE Staff Table above. This permanence of company personnel provides continuity and stability in project management, while promoting continuous quality service and accountability over multi-year contracts. ***The Town of Castle Rock can be assured that the same personnel who initiate work under this contract will be here to complete the work.***

ACE's abilities are strengthened by our long working relationships with subconsultants that have supported us on countless past projects. The following paragraphs provide a summary of the ACE project team members whose services will be

SECTION 1 – PROJECT TEAM QUALIFICATIONS AND RELATED EXPERIENCE (CONT.)

utilized during the project. Additionally, Table 1 at the end of this section summarizes the project team, their specialties, key personnel, and anticipated project responsibilities.



BHA Design Incorporated (BHA) is a landscape architecture and planning firm established in January of 1993. BHA provides landscape architecture, planning, urban design, and graphic design services to both public and private clients. BHA and ACE have an excellent and extensive list of successful projects together, a small sample of the projects ACE and BHA have completed include: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Poudre Downtown Whitewater Park, Fort Collins, CO; (c) Evert Pierson Kids' Fishing Pond, Boulder, CO; and (d) Eben Fine Park Rehabilitation, Boulder, CO.



CTL|Thompson, Inc. (CTL) is a consulting engineering firm offering dam design support, geotechnical, materials, and structural engineering services, construction observation, soil and materials testing, and forensic engineering. ACE and CTL have collaborated on numerous projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Latham Diversion Dam Spillway & Gate Rehabilitation, Evans, CO; and (c) South Loveland Outfall Phase 3, Loveland, CO.



Wildland Consultants, Inc. (WCI) was established in Larimer County in 1994 to provide high quality environmental, natural resource assessment, and ecological consulting services to private industry, cities, counties, and government agencies. WCI and ACE have teamed on numerous projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) West Vine Stormwater Outfall, Fort Collins, CO; (c) Rigden Reservoir, Fort Collins, CO; and (d) Prospect Road Bridge Replacement, Fort Collins, CO.



K² Aquatics specializes in science advisory, review and technical oversight for fishery, aquatic, instream flow, and interpretation of ecological modeling studies and mitigation development. Our major focus centers on fisheries management of both warm and cold-water habitats for sport fish recreation and native species recovery. K² and ACE have collaborated on several projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Halligan Seaman Water Supply Project, Larimer County, CO; and (c) NISP Geomorphic Assessment-Cache La Poudre River, Larimer County, CO.



Centennial Archaeology was founded in 1984 and is headquartered in Fort Collins, Colorado. For three decades Centennial has conducted contract-based archaeological and historical research throughout the Southern Rocky Mountains, western Great Plains, eastern Great Basin, and Southwest. Centennial Archaeology and ACE have collaborated on several projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Rigden Reservoir, Fort Collins, CO; (c) West Vine Pedestrian Trail Design, Fort Collins, CO; and (d) Prospect Road Bridge Replacement, Fort Collins CO.



AVI, p.c. (AVI) is a planning, civil engineering, and surveying firm with a focus on public works projects along the front range. Founded in 1979, AVI is headquartered in Cheyenne, WY, with an additional office located in Fort Collins, CO. The AVI team has years of experience providing engineering planning and survey with state, county and city government, private developers, and contractors. AVI and ACE have collaborated on several projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Lions Open Space Stabilization, Larimer County, CO; and (c) Wildsong Road-Buckhorn Creek, Larimer County, CO.

KEY PERSONNEL

The ACE Project Manager and primary point of contact for the Mitchell Gulch Retention Pond Improvements Project will be **Mr. Jason Albert, P.E., CFM**. Mr. Albert will be responsible for project management, coordination with the Town's PM, quality control, permitting, and oversight of the project. He will be assisted by **Ms. Michelle Martin, P.E.** Ms. Martin will be the second point of contact in Mr. Albert's absence and will be responsible for the hydraulic analysis/design, alternatives analysis and the final design. Together, they bring their more than 38 years of combined experience in the field of water resources engineering and extensive experience in designing and managing dam design, flood mitigation, river restoration, sediment transport and stream stabilization projects in a variety of regulatory floodplain settings.

A summary of key personnel is identified in Table1 below with brief resumes of these staff being provided in Appendix A.

Table 1. Project Team

ACE Team Member	Specialties	Key Personnel (Brief Resumes in Appendix A)	Project Responsibilities
	Hydraulics/Hydrology/ Design/ Natural Channel Design/Fluvial Geomorphology	Jason Albert P.E. Michelle Martin, P.E.	Design, Hydraulic Analysis, Permitting, Coordination, Design Plans
	Landscape Architecture	Roger Sherman Douglas Elgar	Design of Park Enhancements and Integration
	Geotechnical/Materials/ Environmental/Structural Engineering	Mathew Montieth, P.E. Nicholas Reuter, P.E.	Structural Engineering Geotechnical Engineer and Investigation
	Riparian Ecology/Habitat Restoration/Natural Channel Design	Ken Kehmeier	Fish Habitat Design
	Environmental Assessment and Permitting	Eric Berg	Environmental Permitting
	Archaeological and Historical Research	Kristin Gensmer	State Historic Preservation Office Permitting
	Survey/Legal Descriptions Subsurface Utility Engineering	Adam Deschler, PLS Tom Kent, PE	Site Survey, Topography, Legal Descriptions Subsurface Utility Engineering

SECTION 2 – RESPONSE TO SCOPE OF WORK

PROJECT UNDERSTANDING

Located along the eastern side of the Town of Castle Rock, Mitchell Gulch generally flows south to north, through the Founders Subdivision, before reaching its confluence with Cherry Creek northwest of the Highway 83 Highway 86 intersection. With respect to the Town of Castlerock's Mitchell Gulch Retention Pond Project, the subject reach extends approximately 600 feet from Mikelson Boulevard to just downstream of the existing Mitchell Pond embankment. This project limit may be adjusted according to project requirements.

Based on recent site visits, our findings were consistent with that of the URS's evaluation memo stating that the Mitchell Gulch Pond embankment is quite old and heavily vegetated, the inlet pipe is most likely buried or plugged, the impounded water is stagnant with algae, and the embankment is seeping. Additionally, the bedrock (Castle Rock Conglomerate) is very hard and contains fissures that water can infiltrate, exacerbating the seepage. Furthermore, the spillway, located adjacent to the Mitchell Gulch Trail, appears undersized and lacks sufficient erosion protection measures. Given the disrepair of the current embankment, any work completed as part of this Mitchell Gulch Project will likely require the removal of the embankment. Subsequent to URS's assessment in 2008, the project area has experienced sediment deposition that has reduced the surface area and depth of the pond. Consequently, regardless of the selected alternative, sediment transport mitigation measures should be considered.

The master plan calls for a water quality outlet structure installed at the upstream toe of the existing embankment which would result in 9 ac-ft of potential Water Quality Capture Volume (WQCV) and resulting in a "sunny day dry pond". Although this alternative would provide ample water quality, it would eliminate the public/wildlife amenity that is the pond itself. It was also noticed that the master plan does not address incoming sediment, which will likely be a critical component to this project.

To successfully accomplish this project, ACE has put together a team of experts in hydraulic and hydrologic evaluation, hydraulic design, dam design, geotechnical design, fish habitat design, sediment transport, geomorphology, channel rehabilitation and ecological restoration. With our team, we believe we can meet the Town's goals of providing an aesthetically pleasing restoration/rehabilitation project, enhance the gulch's riparian habitat, and create a public amenity.

The remainder of Section 2 serves to address the scope of work identified in the RFP, while providing insight to the ACE Team's approach for identifying a technically sound and economical solution, in context of the Town's goals and the project setting. It should be noted that the design of this project will be completed in accordance with the Town of Castle Rock's Storm Drainage Design and Technical Criteria Manual (SDDTCM).

PHASE I: SURVEYING, SITE INVESTIGATION, DAM BREACH EVALUATION & ALTERNATIVE ANALYSIS

Prior to the initiation of data collection and formulation of alternatives, a project kick-off meeting will be scheduled to introduce the key members of the project team, identify project stakeholders, reconfirm the goals and objectives of the project, define project schedule and critical milestones, and finalize project budget. It is anticipated that the kick-off meeting will also involve a field reconnaissance visit to the site to identify the following: (a) specific site conditions and physical constraints; (b) the presence of existing wetlands and critical habitat areas; (c) channel restoration locations; (d) sources of incoming sediment to the pond; and (e) the limits of data collection for survey, environmental mapping, and the subsurface utility investigation.

Field Survey – A ground survey of the subject area, adequate to generate 1-foot topography, will be collected by our subconsultant AVI. The ground survey will focus on the embankment, channel and critical areas for the project design. In order to develop a comprehensive basemap for construction drawings, the ground survey will be supplemented, as needed, with the most up-to-date topographic data of the project area (assumed to be LiDAR provided by the Town). The accuracy and comprehensiveness of the survey work will be critical for the project as it will define the existing dimensions of the dam which will be utilized to perform the existing hydraulic hazard classification and dam breach analysis, identify erosion issues, provide a basis for all analytical and design work, and establish baseline conditions for the floodplain modeling and mapping. In addition to collection of ground survey, this effort will collect available property pins, identify current property ownership and easements, survey existing structures and trees, and set project control pins which can be utilized for construction. The topographic mapping, which will be referenced to NAVD88 and Colorado State Plane, will also inform the need to establish additional easements to support construction of the project, as well as provide access for future maintenance activities. It is noted that timing of the field survey will be dependent on weather conditions and may be delayed until a preferred project alternative has been selected to optimize the value/cost of the survey.

Geotechnical Investigation –. The subsurface/geotechnical engineering evaluation will be conducted by our subconsultant CTL|Thompson (CTL) and will include a total of nine (9) borings. Along the existing embankment five borings with rock cores will be utilized to evaluate the existing dam and dam foundation. These borings will be extended to bedrock, and cores of the bedrock will be taken to a depth equal to the height of the embankment. Upon successful borehole completion, the bedrock within each hole will be tested for hydraulic conductivity via single-stage or straddle packers. The packer testing will provide indication of, if any, groundwater flow rates within the bedrock joints. Temporary nested piezometers will be installed in each of the five boreholes to determine the depth interval where seepage is flowing. A third piezometer will be set within the embankment for the purposes of hydraulic conductivity testing. Four additional borings will be drilled around the existing pond, soils and bedrock will be sampled using standard penetration test samplers. Slotted pipe will be inserted into each of the boreholes for groundwater monitoring.

Dam Breach Analysis - Due to the current condition of the dam, and to ensure that if the dam were to fail it would not result in significant damage to downstream infrastructure and most importantly cause a risk to human lives, a dam breach analysis should be conducted early in the project. Given the height of embankment, volume of water impounded by the embankment and lack of structures and infrastructure downstream of the embankment it is anticipated that current embankment will be categorized as a low hazard dam. If the current embankment is determined to be a high or significant hazard dam, we would recommend breaching the dam as soon as possible based on a breach plan that would be prepared and submitted to the State Engineers Office (SEO) for approval.

Alternative Analysis – To ensure that the ultimate solution best addresses the needs of the Town of Castle Rock, ACE will work closely with Town Staff to identify conceptual-level alternatives. Each alternative will be evaluated with the ultimate goal of providing conceptual level plan and profile drawings, relevant details, conceptual costs and alternative based pros/cons. This information, along with supporting documentation (survey, geotechnical, dam breach, etc.), will be provided to the Town of Castle Rock Staff as part of an Alternatives Memorandum to aid in selection of an

alternative to take to preliminary design. Additionally, this alternative analysis will be required in both the CLOMR and 404 permit submittals. Brief discussions of the three alternatives are provided below, and in Figure 1.

Alternative 1 Remove dam: This alternative would require the removal of the existing embankment and construction of a stable channel through the existing pond. There is currently about 8 feet of drop of 350 feet of length therefore, a stable channel with a slope of 0.5% would require three 2-foot-high drop structures. It is anticipated that these will be either boulder or riffle drop structures. This alternative would not provide additional water quality and most likely require a technical criteria variance through the Town.

Alternative 2 Reduce Embankment Height: This alternative would require the removal of the existing embankment, construction of a new embankment less than 10 feet in height, and the installation of a water quality outlet. This alternative could be designed either as a sunny day dry pond (i.e., the Masterplan) or with a permanent pool. If a permanent pool is desired, the depth of the pond may be inadequate to maintain a viable trout habitat. Consequently, the pond would need to be stocked with more tolerant fish, include vegetation control and incorporate aeration.

Alternative 3 Rebuild Embankment as Jurisdictional Dam: This alternative would require the removal of the existing embankment and construction of an embankment satisfying Dam Safety rules and regulations (likely requiring a larger footprint to meet Town/State embankment criteria). Given that the existing spillway is inadequately sized and is located such that it may pose a risk to pedestrians, it is recommended that the requisite spillway be relocated to the opposite (eastern) side of the reconstructed embankment. To provide a viable fish habitat, and depending on the depth to bedrock, it would also be ideal to excavate the pond to a depth of 10-12 feet.

PHASE II: ALTERNATIVE ANALYSIS AND PRELIMINARY DESIGN

Based on the selected alternative, or a combination of alternative components, ACE will conduct preliminary design efforts and develop a 30% progress submittal, which will include all deliverables identified in the RFP for Phase II. In support of the Preliminary Design Phase, both SUE and Environmental Permitting Coordination will be completed. The following is provided to elaborate on specific tasks associated with Phase II. It should be noted that of the three alternatives, designing a jurisdictional dam will be the most extensive. Consequently, the scopes for Phase 2 and Phase 3, as well as the Fee Schedule (submitted separately), will be prepared assuming Alternative 3 is selected. However, if Alternative 3 is not selected, the fee schedule will be altered to reflect the significant reduction in effort (specific tasks whose effort would be greatly reduced if Alternative 3 is not chosen are identified accordingly in the Fee Schedule).

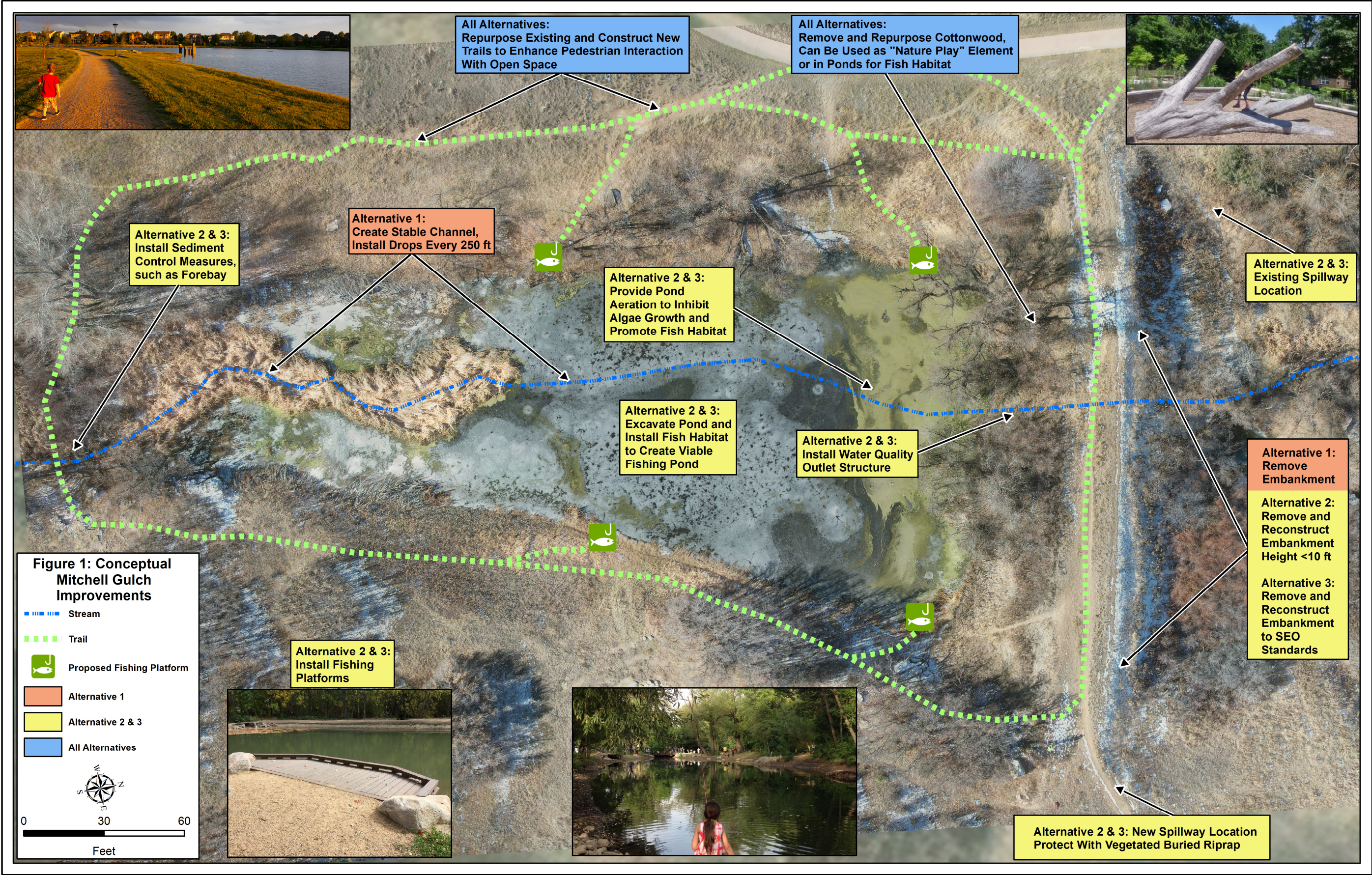
Water Rights. It is our understanding that a water rights investigation, and any requisite water rights permitting, for this project will be completed by the Town.

Preliminary Design. The preliminary design task will begin with the refinement of the selected alternative (for the purpose of this discussion it was assumed that Alternative 3 was selected). This effort will be to inform the selection of the various components associated with the final configuration including, but not limited to, the following:

- (a) size, location and type of primary (low level) outlet pipe and pipe intake system;
- (b) type, location and alignment of overflow spillway, possibly considering:
 - (i) a shorter, more structural spillway;
 - (ii) locating the spillway along the east side of the embankment;
 - (ii) an elongated overflow spillway/rundown swale that is more natural in appearance;
 - (iii) material types which could range from vegetated turf reinforcement matting to concrete, or somewhere in between such as rock riprap, articulated concrete block revetment, or soil cement; and
 - (iv) one or more confluence locations along the downstream channel;
- (c) stream channel stabilization needs and options.

A preliminary design plan set will be prepared including, but not limited to, the following: (a) grading plan reflective of the selected components; (b) the overflow spillway/rundown channel; (c) primary outfall pipe and associated structure; (d) requisite stabilization measures; (e) requisite plan and profile design sheets; and (f) requisite standard details. It is anticipated that this plan set will be taken to a 30% design level and will be submitted to the Town's Project Manager. At this point in the design, the State Engineers Office will also be contacted to inform and discuss with them the project. Contacting the SEO early in the design process will streamline the permitting process and identify any potential issues with the preliminary design.

Preliminary Hydraulic Calculations – A hydraulic model will be prepared to reflect existing (pre-project) and proposed (post-project) conditions, which will be compared to the effective model in order to determine if the project is creating a rise in base flood elevations (100-year water surface elevations). Using the proposed conditions hydraulic model, every effort will be made to design/refine the project to fall under a No-Rise Certification and avoid the need for both a Conditional Letter of Map Revision (CLOMR) submittal and eventual Letter of Map Revision (LOMR) submittal.



However, due to the anticipated, and potentially significant, changes associated with the Mitchell Gulch Retention Pond Project, it is conservatively assumed for this scope and associated budget that a CLOMR will be required and that a subsequent LOMR will be conducted under a separate scope/budget following construction.

SUE Engineer – To inform the preliminary design, and to meet Colorado Law SB18-167, a Subsurface Utility Engineering (SUE) investigation will be conducted by our subconsultant AVI based on ASCE 38-02 guidelines. AVI will conduct a SUE survey to collect and record any utilities within the project area to acquire a Quality Level B designation for existing subsurface utilities. Based on our current understanding of the project, we do not anticipate that there will be utilities within the project area that will require a Quality Level A (test hole and vertical location survey) designation. Therefore, a Quality level A utility investigation has not been assumed as part of AVI's current scope of work, but can be provided as part of additional services, if determined necessary as part of the preliminary design. Upon completion of the SUE investigation, AVI will develop and provide a set of stamped SUE drawings and a report. ACE will utilize the SUE drawings to incorporate and depict the utility information on the project construction drawings.

Environmental Permitting Coordination – An initial consultation with the U.S. Army Corps of Engineers (USACE) and U.S. Fish and Wildlife Service (USFWS) will be made to determine 404 and other ecological permitting requirements. The initial step will be to request a Jurisdictional Determination for the study area in an attempt to classify it as non-jurisdictional under the premise that there is not defined channel downstream that connects it to Waters of the US. Although not anticipated, a non-jurisdictional determination would eliminate the need for a USACE 404 permit. If the study area is found to be jurisdictional, every effort will be made to conduct this project under a USACE Nationwide Permit. However, given our previous experience on similar projects, namely the Paintbrush Park Project, it is anticipated that an USACE Individual 404 Permit (IP) will be required if the site is found to be jurisdictional.

Operating under the assumption that an IP will be required, Wildland Consultants, Inc. (WCI) will complete a formal wetland, ordinary high-water mark delineation for the project area. The results of this effort will be mapped and documented in a wetland delineation report that will be submitted to the Town and UASCE. WCI will also complete a riparian vegetation survey, in accordance with the methodologies outlined in the Colorado Stream Quantification Tool (CSQT) manual. ACE will collect all other requisite CSQT data, with Centennial Archaeology being tasked to complete a Class III archaeological investigation to determine if the project will potentially impact culturally significant areas or historic structures. It is noted that there is a prehistoric site in the larger section, that this project will not affect, however due to its proximity to this project a Class I investigation will most likely not meet permitting requirements.

PHASE III: FINAL DESIGN & FLOODPLAIN MODIFICATION APPROVAL

Comments generated from the 30% progress submittal will be addressed and incorporated into a 90% progress submittal (submittal will include all deliverables identified in the RFP for Phase III). Following the 90% submittal, a public outreach open house will be conducted where the design will be presented for public comment. Comments generated by the Town and the public from the 90% submittal will then be addressed and incorporated into the 100% Bid Set in accordance with Town Criteria. In addition to the construction drawings (draft list of drawings identified in Section 3 of this proposal), the 90% progress submittal will include a number of additional products, which will be finalized along with the 100% Bid Set. These products are listed and discussed below.

- **Drainage Calculations (Dam Design Report)** – All hydraulic analyses and supporting documentation, used as part of the design effort, will be summarized and provided in a Dam Design Report. This report will be submitted to the SEO to support the dam construction permit and will include, but not limited to, discussions and calculations of the following: hydraulic hazard classification, hydrologic hazard evaluation, spillway design, outlet design, geotechnical design, structural design, stabilization measures, water quality enhancements, an instrumentation and monitoring plan, mechanical design and a water control plan, as outlined in the SEO Project Review Guide. It should be noted that the dam construction permit application fee is not included in the cost estimate as it is dependent on estimated construction costs (permit fees will be \$6 for every \$1,000 in dam construction costs), based on similar projects this fee will be around \$8,000.
- **Temporary Erosion and Sediment Control (TESC) Plan** – ACE will prepare a TESC Plan and Report, stamped by a P.E., in accordance with the Town's TESC Manual (specifically Sections 2, 3 and 4) in order to obtain a Standard TESC Permit. This plan will include initial, interim and final TESC drawings as well as a water control plan and meet the requirements of a SWMP for use by the contractor to obtain a Construction Discharge Permit from the Colorado Department of Health & Environment.
- **Floodplain Modification Study/Conditional Letter of Map Revision (CLOMR)** – Based on our preliminary site evaluation, and information in the RFP, a CLOMR will most likely be required for this project, however ACE will investigate and discuss with the Town the feasibility of a no-rise permit. If a CLOMR is required, Endangered Species Act (ESA) compliance will be obtained from the U.S. Fish and Wildlife Service (USFWS). Having submitted

SECTION 2 – RESPONSE TO SCOPE OF WORK (CONT.)

dozens of approved CLOMR applications in the past, we are intimately familiar with the process, limiting both review time and the number of comments that typically need to be addressed. So that we do not duplicate work, the report submitted to FEMA will double as the floodplain modification memo.

- **Environmental Permitting** – As previously mentioned it is anticipated that this project will require an Individual 404 Permit. To meet State requirements, the dam footprint will be increased and will most likely reduce the functional length of Mitchell Gulch. Consequently, to obtain an IP a CSQT showing the project results in a functional stream length lift will be required. The IP application will include an alternatives analysis, CSQT analysis, wetland delineation, habitat assessment, Class III archeological investigation, photo log, and all necessary figures and documentation quantifying how the project will affect the Waters of the U.S. Due to the nature of the project the Town will likely need to purchase wetland mitigation credits. Consequently, a mitigation plan has not been included in this scope of work; however, the project will be designed to minimize wetland disturbance and thus minimizing the mitigation costs for the Town.
- **Utility Relocations** – Based on the outcome of the SUE efforts, the ACE Team will coordinate with applicable agencies in order to complete utility relocation applications, as necessary.
- **Technical Specifications** – Technical specifications from CDOT, the Town and Mile High Flood District will be tailored specifically to the Mitchell Gulch Retention Pond Project. Project related items not included in these standard specifications will be addressed in the Special Provisions section of the Bid Documents.
- **Traffic Control Plan** – A traffic control plan will be prepared and included in the design sheet set. It is anticipated that this project will not affect vehicle traffic; however, being adjacent to the Mitchell Gulch Trail, pedestrian traffic will need to be safely routed during construction. This may involve temporary trails and/or detours; however, the intent will be to maintain public trail access to the extent possible during construction.
- **Engineer's Opinion of Probable Cost Estimate and Bid Schedule** – Bid items and quantities will be determined from the construction drawings. This information will be used to develop a Bid Schedule and to prepare the Measurement and Payment Section. Estimated costs will be applied to the Bid Schedule to provide the Engineer's opinion of probable construction cost.
- **Easement Legal Descriptions and Exhibits** – AVI will be tasked with the preparation of all legal descriptions and exhibits associated with both temporary and permanent construction related easements.

SECTION 3 – ACTION PLAN AND SCHEDULE

WORK BREAKDOWN STRUCTURE

Person-hour effort by phase and discipline is provided in the table below. A detailed breakdown of hours by task within each project phase is included in the cost proposal provided under separate cover. Additionally, a project schedule is provided below, the proposed schedule provides more than adequate time to meet all milestones and complete this project within the Town's schedule.

WORK BREAKDOWN HOUR ESTIMATES

ACE Team Member	Services	Hours			
		Phase 1	Phase 2	Phase 3	Total
Anderson Consulting Engineers	Hydraulics/Design/Civil Engineering/Geomorphology	395	423	1,242	2,060
BHA	Trail Design and Landscaping	46	76	74	196
CTL Thompson	Geotechnical and Structural	426	8	258	692
AVI	Field Survey/SUE/ Easements	190	65	16	271
WCI	Env. Survey & Permitting	0	8	96	104
Centennial	Archaeological Survey	0	4	60	64
K ²	Fish Habitat Design	0	16	32	48

SECTION 4 – SUMMARY OF SIMILAR PROJECTS (CONT.)

The project is being permitted through the United States Corps of Engineers via an **Individual 404 Permit**, FEMA and Mile High Flood District via a **CLOMR**, and the State Engineers Office Dam Safety Board via a **Dam Construction Permit**. Following construction a LOMR LOMR will be completed.

Dam Breach Inundation Mapping, Larimer and Weld County, CO : The Dam Safety Branch of the Colorado Division of Water Resources provides financial assistance to dam owners for projects to develop dam breach flood inundation mapping necessary for Emergency Action Planning (EAP). To reduce costs the Dam Safety Branch office combined projects for ten dams located within the Cache la Poudre Canyon. ACE provided dam breach flood inundation mapping for the following dam owners and corresponding reservoirs:

City of Fort Collins Dams: Joe Wright, and Halligan Reservoirs

Water Supply and Storage Company Dams: Long Draw

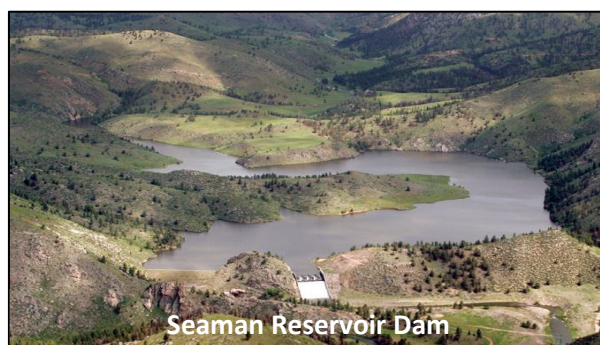
Reservoir, and Chambers Lake Reservoir

City of Greeley Dams: Barnes Meadow Reservoir, Comanche Reservoir, Seaman Reservoir, Hourglass Reservoir, Peterson Lake Reservoir, and Twin Lakes Reservoir

Dam breach parameters including geometry and time to failure were developed using empirical equations recommended by the Colorado SEO Dam Safety Branch. Breach modeling was conducted using the USACE's HEC-RAS 1D Model to produce an outflow hydrograph. **Flood routing and inundation mapping was conducted along 135 miles of river using the USACE's HEC-RAS 2D Model.** The following 2D hydraulic models were developed: (a) Poudre Canyon 2D Model – covers approximately 30 miles of the Poudre River upstream of the North Fork confluence, 16 miles of the South Fork, 6 miles of Beaver Creek, 2 miles of La Poudre Pass Creek, and 7 miles of Joe Wright Creek, (b) North Fork 2D Model – includes the lower 23 miles of the North Fork Poudre River between Halligan Reservoir and the Main Stem, and; (c) Poudre 2D Model – includes approximately 25 miles of the Poudre River downstream of the North Fork Confluence. Final deliverables of the project, produced individually for each dam, included an Inundation Mapping Report, inundation mapping, digital inundation boundaries and critical facilities shape files, and HEC-RAS modeling files.

Terry Lake Neighborhood Regional Detention Pond Dam Design, Longmont, CO: The Terry Lake Neighborhood (TLN) is located at the northern edge of the City of Longmont, CO and has a contributing drainage area of just over 10.5 square miles. This drainage basin has the potential to generate 3,900 cfs during a 100-year (1-percent annual chance of occurrence) storm event, which greatly exceeds the existing conveyance capacity of downstream drainage facilities (roughly 87 cfs). Consequently, the City of Longmont identified the need to detain storm runoff to a level that downstream drainage facilities could accommodate. One of the prescribed detention facilities is the TLN Regional Detention Pond, which will occupy over 40 acres of land, providing approximately 420 acre-feet of detention storage. ACE completed final design of the TLN Regional Detention Pond which consisted of the following key elements: (a) Hydrologic modeling of the tributary drainage basin using CUHP/EPA SWMM to define design discharges and to **evaluate various alternatives**; (b) Formulation and **hydraulic design** of the regional detention facility; (c) Final design of the approximate 420 acre-foot TLN Regional Detention Pond, which meets the storm flow attenuation requirements of the City's receiving drainage infrastructure while **limiting the impact to existing jurisdictional wetlands**; (d) **Final design of a 15-foot high, exempt jurisdictional dam embankment** under Rule 17.1.1 of the Dam Safety Rules and Regulations; (e) **Final design of an outlet structure, which incorporates both primary outlet and emergency spillway functions**; (f) Final design of a 62-wide collector roadway to be constructed on top of the pond embankment; (g) **A Nationwide 43 Permit (wetland delineation, threatened and endangered species survey, permit application, and a wetland mitigation plan)**; and (h) **Preparation of final construction plans, technical specifications, and contract documents.**

Client: Ms. Kallie Bauer, P.E.,
(970)352-8712 Ext 1218
Colorado DNR – Dam Safety
Completed: 2019
Budgeted Cost: \$ 118,268
Cost at Completion: \$118,268
Personnel: Michelle Martin, Jason Albert



Client: Mr. Chris Huffer, (303) 651-8351
Completed: 2016
Budgeted Cost: \$216,600
Cost at Completion: \$206,400
Personnel: Aaron Hansen, Brian Smith

SECTION 5 – REQUEST FOR PROPOSAL CONFIDENTIALITY

This technical response to the request for proposal is free to distribute and contains no portions we deem to be confidential. Consequently, the Letter of Indemnification for Withholding Confidential Information is not applicable and has not been included. We also acknowledge the receipt and incorporation of Addendum #1 into this response.

APPENDIX A RESUMES OF KEY PERSONNEL





EXHIBIT 2

CONTRACTOR'S CERTIFICATION OF INSURANCE



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
12/09/2022

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 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 USI INSURANCE SERVICES LLC/PHS 34341438 The Hartford Business Service Center 3600 Wiseman Blvd San Antonio, TX 78251	CONTACT NAME: PHONE (866) 467-8730 FAX (A/C, No, Ext): E-MAIL ADDRESS:																					
INSURED ANDERSON CONSULTING ENGINEERS, INC. 375 E HORSETOOTH RD BLDG 5 FORT COLLINS CO 80525-3155	<table border="1"> <thead> <tr> <th colspan="2">INSURER(S) AFFORDING COVERAGE</th><th>NAIC#</th></tr> </thead> <tbody> <tr> <td>INSURER A :</td><td>Hartford Casualty Insurance Company</td><td>29424</td></tr> <tr> <td>INSURER B :</td><td></td><td></td></tr> <tr> <td>INSURER C :</td><td></td><td></td></tr> <tr> <td>INSURER D :</td><td></td><td></td></tr> <tr> <td>INSURER E :</td><td></td><td></td></tr> <tr> <td>INSURER F :</td><td></td><td></td></tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE		NAIC#	INSURER A :	Hartford Casualty Insurance Company	29424	INSURER B :			INSURER C :			INSURER D :			INSURER E :			INSURER F :		
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COVERAGES

CERTIFICATE NUMBER:

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 INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/Y YY)	LIMITS
A	COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR ☒ General Liability	X		34 SBW KC5665	12/28/2022	12/28/2023	EACH OCCURRENCE \$1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence) \$300,000
							MED EXP (Any one person) \$10,000
							PERSONAL & ADV INJURY \$1,000,000
							GENERAL AGGREGATE \$2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PROJECT ☐ LOC OTHER:						PRODUCTS - COMP/OP AGG \$2,000,000
A	AUTOMOBILE LIABILITY ☐ ANY AUTO ☐ ALL OWNED AUTOS ☒ HIRED AUTOS ☐ SCHEDULED AUTOS ☒ NON-OWNED AUTOS			34 SBW KC5665	12/28/2022	12/28/2023	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000
							BODILY INJURY (Per person)
							BODILY INJURY (Per accident)
							PROPERTY DAMAGE (Per accident)
A	☒ UMBRELLA LIAB ☒ EXCESS LIAB			34 SBW KC5665	12/28/2022	12/28/2023	EACH OCCURRENCE \$8,000,000
							AGGREGATE \$8,000,000
	☐ DED ☒ RETENTION \$ 10,000						
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N/A		34 SBW KC5665	12/28/2022	12/28/2023	☐ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE -EA EMPLOYEE E.L. DISEASE - POLICY LIMIT
A	EMPLOYMENT PRACTICES LIABILITY			34 SBW KC5665	12/28/2022	12/28/2023	Each Claim Limit \$5,000 Aggregate Limit \$5,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Those usual to the Insured's Operations. Certificate holder is an additional insured per the Business Liability Coverage Form SS0008 attached to this policy.

CERTIFICATE HOLDER

Town of Castle Rock
 its Officers and Employees
 100 N WILCOX ST
 CASTLE ROCK CO 80104

CANCELLATION

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

Susan L. Castaneda

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
12/09/2022

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 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 USI INSURANCE SERVICES LLC/PHS 34343366 The Hartford Business Service Center 3600 Wiseman Blvd San Antonio, TX 78251	CONTACT NAME:	
	PHONE (866) 467-8730 (A/C, No, Ext):	FAX (A/C, No):
INSURED ANDERSON CONSULTING ENGINEERS, INC. 375 E HORSETOOTH RD BLDG 5 FORT COLLINS CO 80525-3155	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A : Hartford Insurance Company of the Midwest	NAIC# 37478
	INSURER B :	
	INSURER C :	
	INSURER D :	
	INSURER E :	
INSURER F :		

COVERAGES**CERTIFICATE NUMBER:****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 INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/Y YY)	LIMITS
	COMMERCIAL GENERAL LIABILITY CLAIMS-MADE ☐ OCCUR ☐						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG
	GEN'L AGGREGATE LIMIT APPLIES PER: POLICY ☐ PRO-JECT ☐ LOC ☐ OTHER:						
	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS HIRED AUTOS SCHEDULED AUTOS NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
	UMBRELLA LIAB EXCESS LIAB OCCUR CLAIMS-MADE ☐ DED ☐ RETENTION \$						EACH OCCURRENCE AGGREGATE
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N ☐	N/A	34 WEG KD0066	01/01/2023	01/01/2024	X PER STATUTE ☐ OTH-ER ☐ E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE -EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Those usual to the Insured's Operations.

CERTIFICATE HOLDER

Town of Castle Rock
its Officers and Employees
100 N WILCOX ST
CASTLE ROCK CO 80104

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AUTHORIZED REPRESENTATIVE

Susan L. Castaneda

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EXHIBIT 3

TOWN OF CASTLE ROCK AFFIDAVIT OF INDEPENDENT CONTRACTOR STATUS

I, _____, an authorized representative of **Anderson Consulting Engineers, Inc.**, holding legal authority to sign this Affidavit declare under oath that I am 18 years or older and have the capacity to sign this Affidavit.

In accordance with Section 8-70-115, C.R.S., I certify the following:

- With respect to the Agreement, I represent and warrant that it is my express intention to be employed as an independent contractor of the Town of Castle Rock (the “Town”) for purposes of performing the work or services which are the subject of the Agreement. I understand and confirm that the Town reasonably relied on this intention in entering into the Agreement.
- The Town does not require I work exclusively for the Town, except that I may choose to work exclusively for the Town for a finite period of time specified in the document.
- The Town does not establish a quality standard for the work or services performed pursuant to the Agreement, except that the Town may provide plans and specifications regarding the work but cannot oversee the actual work or provide instruction as to how the work is performed.
- The Town does not pay a salary or hourly rate but rather a fixed or contract rate, as noted in the terms and conditions of the Agreement, and any Exhibits made part of the Agreement.
- The Town cannot terminate the work or services performed during the contract period unless otherwise agreed to in the terms and conditions of the Agreement.
- I am not provided with anything, if at all, more than minimal training from the Town.
- The Town does not provide me with tools or benefits for the performance of the work or services which are the subject of the Agreement, except materials and equipment may be supplied.
- The Town does not dictate the time of performance, except that a completion schedule and a range of mutually agreeable work hours may be established in the Agreement.



- The Town does not pay me personally but rather makes checks payable to the trade or business name of the entirety for which I am employed and who is a party to the Agreement; and the Town does not combine their business operations in any way with the entity's business, but instead maintains such operations as separate and distinct.
- I understand that if a professional license to practice a particular occupation under the laws of the State of Colorado requires the exercise of a supervisory function with regard to the work of services performed under this Agreement, such supervisory role shall not affect the independent contractor relationship with the Town.
- **I UNDERSTAND THAT I AM NOT ENTITLED TO UNEMPLOYMENT INSURANCE BENEFITS UNLESS UNEMPLOYMENT COMPENSATION COVERAGE IS PROVIDED BY ME OR THE ENTITY FOR WHICH I AM EMPLOYED.**
- **I UNDERSTAND THAT I AM OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID PURSUANT TO THE AGREEMENT.**

CONTRACTOR:

ANDERSON CONSULTING ENGINEERS, INC.

By: _____

Name

STATE OF COLORADO)

) ss.

COUNTY OF _____)

The foregoing instrument as acknowledged before me this ___ day of _____,
20__ by _____ as _____ of the above mentioned Contractor.

Witness my official hand and seal.

My commission expires:

Notary Public

