

**ADDENDUM NO. ONE**  
**REQUEST FOR PROPOSALS**  
**THORNTON WATER PROJECT**  
**SEGMENT F DESIGN**  
**PROJECT NO. 12-777H9**  
**CITY OF THORNTON, CO**

TO: Prospective Proposing Firms and all others concerned

DATE: August 12, 2024

PURPOSE: To provide additional information and clarification to the solicitation documents for the above-referenced Project.

1. The following information shall become part of the original Request for Proposal (RFP) for this Project.
  - A. Attachments 1, 2 and 3 as referenced in Exhibit A – Consultant’s General Scope of Services of the Agreement are attached.
2. All other terms and conditions shall remain unchanged except as provided by this Addendum. Proposing firms must acknowledge receipt of this Addendum in their Proposal.

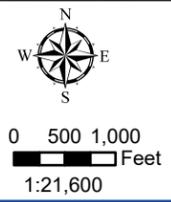
**END OF ADDENDUM NO. ONE**

DocuSigned by: <i>Patrick Hinterberger</i> 6DA8F281E4154C8...	8/12/2024
Patrick Hinterberger	Date
Contracts Supervisor	

# Attachment 1 - Thornton Water Project Segment F Pipeline



**CITY OF THORNTON  
COLORADO**  
12450 WASHINGTON ST  
THORNTON, CO 80241



- Water Pipeline
- Parcel Boundary
- Interstate
- Highway
- Major Road
- Local Road

## Segment F Pipeline Project Extents

Imagery: ESRI World Imagery (Maxar 09/22/2021, 06/26/2020, 10/26/2019)  
Sources: Larimer County, ESRI, CDOT

Attachment 2 - Larimer County 1041 Permit Conditions of Approval (COA)  
 Thornton Water Project  
 Segment F Pipeline Design

Permit COA Number	Condition	Pipeline Design Consultant Compliance Action
2	All construction activities associated with the approval of this 1041 Permit shall comply with all associated regulations and obtain all required county, state, and federal permits.	Comply with all regulations and obtain all required county, state and federal permits
3	Failure to comply with any conditions of this 1041 approval may result in reconsideration of and possible revocation of the approval by the Board of County Commissioners.	Comply with conditions
6	Final engineering documents shall include trench plugs or pipeline collars at appropriate material and spacing to prevent drainage of groundwater along the bedding of the trench that exceeds historic groundwater flows. Of particular concern is the potential for drainage of wetlands or nearby reservoirs. <u>Additional trench plugs may be added during construction where appropriate.</u>	Include design of trench plugs in construction documents
7	The approval is granted for the project as described in the application dated 12/04/2023 with supplementary information provided on 2/23/24. Changes, other than a technical revision as defined by the Areas and Activities of State Interest Section of the Land Use Code, to these materials would constitute an amendment to the project except otherwise described below. Reconsideration by the Board of County Commissioners or Larimer County Development Director shall only amend the portion of the pipeline alignment for that particular land parcel and will not reopen the entire 1041 permit.	Make only technical revisions to the project
7a	a. The pipeline shall be installed within 100 feet on either side of the centerline of the approved pipeline route in the application, which provides an installation envelope of 200 feet. If the Applicant determines a pipeline needs to or should be installed outside of this 200-foot envelope such deviation may occur without further review or approval by Larimer County only if all the following conditions are satisfied:	Keep pipeline within 200 foot envelope
7ai	i. The deviation will not move the location of the pipeline from one property to a different property	Do not change from one property to another
7aii	ii. The property owners where the deviation will occur consent in advance of the deviation; and	Obtain property owner consent
7aiii	iii. The deviation demonstrates compliance with all other review criteria and conditions of approval.	Demonstrate compliance with all other review criteria and conditions of approval
9	Where the proposed pipeline crosses existing conservation easements, the site shall be restored to either agriculture or previously existing land cover.	Designer to include restoration specifications in construction drawings
10	The applicant shall retain a qualified wetland consultant to complete an on-site wetland delineation following the USACOE Wetland Delineation Manual and the High Plains Regional Supplement as soon as possible after they have obtained permission to access the property. Once the applicant has completed the delineation, they shall prepare wetland mitigation design and construction documents that shall provide at least 100% of the wetland area and buffer destroyed or damaged during construction. This wetland shall provide an ecological function that at least equals that of the resource value that is lost.	ERO to perform wetland delineation as soon as access to property has been obtained. Delineation maps to be provided to Designer to identify wetlands within work limits. Designer's wetland mitigation design and construction documents, including specifications to be reviewed by ERO for compliance.
11	If cultural resources are found during Technical Review or construction, the applicant shall notify the County immediately, to the extent allowed by the State Historic Preservation Office, consult with the State Historic Preservation Office, and begin appropriate measures to preserve the cultural resource, including historic or archeological excavation, reasonable project redesign, or relocation activities. Any such mitigation efforts shall be taken in coordination with and with the approval of the State Historic Preservation Office and to the greatest extent practical, the County.	ERO to perform cultural resources survey of the work limits once property access has been obtained. Include narrative in Technical Review documents and/or notify County. Designer shall incorporate preservation/mitigation measures as directed by SHPO/ERO in pipeline design.
17	Thornton and/or respective contractors shall create an air emission control plan for reducing impacts of other emissions beyond dust/particulate matter specifically for the pipeline construction. The Plan for the pipeline corridor shall include discussion on emission control strategies for odor-producing equipment and activities, as well as reducing potential exposure from generators and associated powered equipment when used near residences.	Designer to prepare fugitive dust and emission control plans and specifications for County review as part of Technical Review. Include requirement that Contractor submit written fugitive dust and emission control plan before commencement of construction activities.
18	In addition to the minimum controls required under permits issued by Air Pollution Control Division, the mitigation listed in the submitted Air Quality Impact and Mitigation Report with edits, shall become conditions of approval for construction of both the pump station and pipeline corridor:	Designer to include items listed as part of Condition 18
18	• No off-site transport of visible emissions from disturbed areas, dirt access roads, stockpiles, and haul trucks for both the pump station and pipeline corridor construction activities.	See above
18	• A water truck shall be on-site during operating hours and nonoperating hours including Sundays to regularly apply water to active construction areas, dirt access roads, stockpiles, and other areas of disturbed soil to prevent visible emissions from the pump station and corridor active construction areas.	
18	• No earthwork allowed during days of high wind of 30 miles per hour or greater (this is also in the General Permit).	
18	• Speed limit signs shall be posted in active construction areas restricting speeds to 15 miles per hour.	
18	• Loaded haul trucks shall be covered during transport and storage to prevent visible emissions.	
18	• Sediment deposition shall be removed promptly when it occurs on public roads or rights-of-way as a result of the owner's or operator's operations.	
18	• Minimize drop height: Drivers and operators shall unload truck beds and loader or excavator buckets slowly and minimize drop height of materials to the lowest height possible.	
18	• Stockpiles shall remain at a height that a water haul truck or manual water hose can apply water on all surfaces.	
18	• Cover loads of material hauling trucks: Loads shall be completely covered, or all material enclosed in a manner that prevents the material from blowing, dropping, sifting, leaking, or otherwise escaping from the truck.	
18	• Litter Control: Work sites, temporary staging areas, field trailer areas, finished construction areas and where workers gather for breaks shall be maintained litter-free and supplied with lidded trash enclosures/dumpsters that can withstand water and wind.	
19	Project corridor construction noise levels shall comply with the Larimer County Noise Ordinance as specified in the Ordinance when construction activities are conducted on or adjacent to properties with residential uses. Exceptions shall be evaluated and approved by Larimer County Departments including Health, Community Development, and Engineering.	Designer to include Larimer County Noise Ordinance in specifications for Contractor compliance.

Attachment 2 - Larimer County 1041 Permit Conditions of Approval (COA)  
 Thornton Water Project  
 Segment F Pipeline Design

Permit COA Number	Condition	Pipeline Design Consultant Compliance Action
20	Hours of construction activity shall be conducted between 7:00 a.m. to 7:00 p.m. Monday through Saturday. Exceptions for time-sensitive tasks shall be evaluated and approved by Larimer County Departments including Health, Community Development, and Engineering.	Designer to include in construction contract documents.
21	A noise mitigation plan shall be submitted with the final design plans for the Project corridor outlining control methods that will be implemented during construction amongst residential properties to remain within the County Ordinance, but also minimize negative impacts on the residents in the area.	Thornton to engage third party consultant to prepare the noise mitigation plan that incorporates required items noted below. Designer to include noise mitigation plans provided by Thornton's consultant in the construction contract documents.
21i	i. The plan shall include adequate recommendations on how low frequency sound/vibrations are managed.	See above
21ii	ii. The Plan shall also include the details of the outreach and communication plan/program. As part of this plan/program, easily visible signage with contact information (phone number, email, and website if created) for addressing questions and concerns, shall be posted in active construction areas.	
21iii	iii. The Plan shall include additional noise mitigation to be implemented when construction activities are approved to go beyond the 7am to 7pm time period and all 24-hour operations near occupied residences. This plan shall include best management practices which may include but not be limited to:	
21iii	• Ensuring equipment is serviced and maintained to manufacturer's specifications.	
21iii	• Using appropriate mufflers	
21iii	• Idle equipment motors down when the equipment is not in immediate use.	
21iii	• Schedule trucks to minimize long queue lines of idling trucks.	
21iii	• Plan site circulation to minimize backup distances for trucks and other equipment.	
21iii	• Use sound attenuated pumps and "quiet" generators where practical.	
21iii	• Install temporary sound barriers when feasible near loud operations.	
21iii	• Use portable sound barriers when feasible near jackhammer and concrete saw work.	
22	Construction equipment and fleet trucks shall utilize white noise backup beepers for construction along the Project corridor.	Designer to include requirement in construction documents
23	Thornton shall require the Project contractor to implement an outreach program that includes:	Designer to include requirements below in construction documents
23i	• 24-hour telephone contact line for questions and concerns.	See above
23ii	• Complaint resolution workflow to contact all complainants and attempt to resolve any problems or issues.	
23iii	• Issue monthly flyers to the residents located within a distance to be determined during Technical Review of the TWP construction area informing them of planned construction activities in advance.	
24	Construction hours will typically be from 7:00 a.m. to 7:00 p.m., Monday through Saturday unless otherwise approved by Larimer County Community Development staff. Construction may extend beyond these hours only as required and on a case-by-case basis approved by the County staff.	Designer to include in construction contract documents
25	As part of the final design plans for the Project Corridor easements, Thornton shall include the locations of private residential utilities (septic systems, wells, gas storage tanks, irrigation systems, etc) as well as utilities and infrastructure along the Corridor. If private utilities fall within the final Project Corridor easements, the property owners shall be consulted and compensated as necessary for repairs and/or replacements in advance of the deviation and construction. Private utilities (as with other utilities/infrastructure) that are not within the final Project Corridor design but adjacent to the final design easements shall be physically located and marked in the field on each property to ensure avoidance by	Designer to include in construction contract documents
26	Commercial infrastructure and easements for businesses shall be identified on the final design plans (and through utility locates in the field prior to construction).	Designer to include in construction contract documents
27	The Thornton and/or representative contractors shall be responsible for arranging for and funding all costs of damage, repair, replacement, and/or relocation of all public and private property utilities and infrastructure as necessary to accommodate the Project corridor.	Designer to include provisions for repair/replacement/relocation in construction documents
28	Creation and implementation of an Emergency Utility Plan or equivalent plan that outlines Thornton or respective contractors' responsibilities, when and how they will provide temporary utilities or alternative accommodations in the event of damage to property private or public utilities (unless addressed in the easement agreements for the permanent and temporary construction easements)	Designer to include Contractor requirement in construction specifications
29	Thornton and/or respective contractors shall be responsible for immediate repair/replacement of damaged utilities (public and private) and all associated costs experienced by properties.	Designer to include provisions for repair/replacement/relocation in construction documents
30	The final design and any alignment adjustments that may occur during construction that would move the TWP closer to an existing structure, or that would move into an existing or future road right-of-way (ROW) corridor (as determined by road functional classification) will be subject to review by Larimer County Departments, including Engineering, Community Development, and Health. In locations where the pipeline is located outside of the existing County ROW, it shall do so in a manner to either:	Designer to include in construction contract documents
30-1	1. Be located outside of the ultimate ROW width corresponding to the functional classification of the roadway, or	Designer to include in construction contract documents

Attachment 2 - Larimer County 1041 Permit Conditions of Approval (COA)  
 Thornton Water Project  
 Segment F Pipeline Design

Permit COA Number	Condition	Pipeline Design Consultant Compliance Action
30-2	2. Obtain and convert to a Larimer County road right-of-way easement for any additional pipeline easement widths falling within the ultimate roadway ROW. Final design plans and specifications for alignments within the ROW will need to be prepared for review and approval by the Larimer County Engineering Department. Should it be discovered that the final design, in the County Engineer's opinion, deviates significantly from the conceptual alignment to change the nature of impacts of the pipeline within the permit limits, the County reserves the right to require that the design and alignment be modified to address infrastructure and property impacts as deemed necessary by the County Engineering Department.	Designer to include in construction contract documents
31	A geotechnical subsurface investigation shall be submitted to Larimer County during the Technical Review for those portions of the alignment to be within County ROW, to determine required trench backfill and compaction specifications, subgrade mitigation, and pavement design for areas disturbed by the pipeline installation. Any additional subsurface investigations that may be required by other local and state governments, federal agencies, or impacted utilities, including irrigation and water storage companies, shall be made available to Larimer County for review.	Designer to include in construction contract documents
32	The applicant shall provide Larimer County with a pre-project video capturing existing conditions of the proposed water line installation corridor in and near the existing ROW.	Designer to include Contractor requirement in construction specifications
33	Unless otherwise approved by Larimer County Engineering, all proposed roadway crossings shall be completed by the specific construction method proposed in the Traffic Impact Report. Any proposed open cut road crossing shall be flow-filled to a depth of 2-feet below the surface of the roadway. Design approval of these crossings shall be per the Code of Ordinances and the Land Use Code.	Designer to include in construction contract documents
34	During construction, the applicant shall stabilize and repave all pavement areas disturbed or damaged during pipeline installation in accordance with the Larimer County Rural Area Road Standards for work areas outside the GMA, as directed by the County. If pipeline construction activities involve more than 100 linear feet of disturbance, the applicant shall be responsible for pavement repairs and patching/overlay extending to the full limits (width) of the existing pavement.	Designer to include in construction contract documents
35	The applicant shall submit phasing plans, including planned work days and hours, to be reviewed by Larimer County Engineering Department. Maximum open trench lengths will be defined in consultation with the Larimer County Engineering Department.	Designer to include Contractor requirement in construction specifications
36	Material test reports, as per Larimer County Standard, shall be submitted to and approved by Larimer County for any work to take place within County ROW.	Designer to include Contractor requirement in construction specifications
37	A pre-construction inventory of County roads to be used for construction traffic shall be created and updated as needed by the applicant during construction, documenting preconstruction conditions and the work conducted by the applicant to return the roads to pre-construction conditions when construction is complete.	Designer to include Contractor requirement in construction specifications
38	The applicant shall be responsible for arranging and paying all costs of:	Designer to include in construction contract documents
38	• Utility relocations and irrigation company requirements necessary to accommodate the water pipeline in the road ROW.	Designer to include in construction contract documents
38	• The replacement of existing storm drainage infrastructure, culverts, roadway signage, pavement striping/symbols, landscaping and property fencing necessary to accommodate the water pipeline in the ROW.	Designer to include in construction contract documents
38	• Damage or relocation of private property services as necessary to accommodate the water pipeline corridor if a reasonable alternative is not possible.	Designer to include in construction contract documents
39	The applicant shall allow access to Larimer County staff and consultants for inspections and construction observation throughout the Project and for the term of the construction and any required ongoing monitoring during site reclamation and/or operations.	Designer to include Contractor requirement in construction specifications
41	The applicant shall invite Larimer County staff to attend regularly scheduled coordination meetings during construction, at a frequency to-be-determined, to understand planned construction activities and stay abreast of issues arising from construction impacts to County infrastructure or the public.	Designer to include Contractor requirement in construction specifications
42	The applicant shall provide a public information contact with a phone number and email address that the public can contact to ask questions, express concerns or receive project updates.	Designer to include Contractor requirement in construction specifications
43	The applicant shall coordinate with Larimer County Emergency Services and Poudre R-1 School District on road closures with advance notice to address school bus access.	Designer to coordinate with School District regarding bus routes. Designer to include Contractor requirement in construction specifications
44	The applicant shall submit to Larimer County a Traffic Control and Management Plan for review by the County Engineer prior to construction addressing traffic control devices/personnel (warning signs, flaggers, traffic control supervisors, etc.), any specific delay times, adjacent neighboring property owner notifications, and use and placement of message boards. The Traffic Control and Management Plan will include requirements to provide safe and acceptable access for emergency responders, mail and package delivery, garbage pickup, and school bus stops. The Traffic Control and Management Plan will also identify all proposed access points.	Designer to include Contractor requirement in construction specifications
45	When construction activity is taking place within or impacting Larimer County ROW in any way, the applicant shall obtain and abide by the standards and conditions of applicable County ROW permit(s), per the Code of Ordinances and the Land Use Code. Construction plans shall be provided to detail the work to be completed. Additionally, Traffic Control Plans, developed by a certified traffic control company, must be submitted for all work performed within road ROW or that will directly affect the travelling public.	Designer to incorporate Larimer County requirements for work impacting Larimer County ROW in the construction contract documents, including Contractor requirements.
46	Larimer County regulates access to county roads to maintain safe traffic flow, road drainage facilities, and efficient use of the County's roads. Access Permits will be required for any new access from Larimer County ROW regardless of whether they are to be used for temporary construction purposes or are to be permanent. Staff may also require an Access Permit for existing access points proposed to be utilized for temporary construction or permanent access.	Designer to incorporate Larimer County requirements in the construction contract documents, including Contractor requirements. Designer to prepare access permit applications for up to twelve (12) accesses.

Attachment 2 - Larimer County 1041 Permit Conditions of Approval (COA)  
 Thornton Water Project  
 Segment F Pipeline Design

Permit COA Number	Condition	Pipeline Design Consultant Compliance Action
47	The applicant shall be required to designate planned haul routes. The existing surface condition of all planned haul routes will need to be evaluated prior to construction. If it is determined by the County Engineer that there has been an acceleration in deterioration of the roadway surface during or after construction as a result of construction traffic, equipment, or hauling, the applicant will be required to restore the roadways to their prior condition. This may include the need for regrading and/or resurfacing.	Designer to include Contractor requirement in construction specifications
48	Heavy equipment traffic will be subject to all weight limit restrictions along adjacent roadways and will obtain oversize/overweight permits.	Designer to include Contractor requirement in construction specifications
49	The applicant shall obtain a storm water discharge and construction dewatering permit from the Colorado Department of Public Health and Environment for construction at drainage crossings and for land disturbances of one acre or more, per Article 4.12 of the Land Use Code. These permits will include the preparation of a Storm Water Management Plan and Best Management Practices to prevent storm water runoff and sediment in disturbed areas from reaching nearby waterways or otherwise leaving the site. Multiple state permits may be required for the different project areas.	Designer to prepare Stormwater Management Plan and Best Management Practices for the project, and prepare required permit applications.
50	The applicant shall comply with Larimer County MS4 regulations for all applicable work within the most up to date Larimer County MS4 boundary.	Designer to include in construction contract documents
51	The applicant shall develop a comprehensive document describing best management practices (BMPs) to be employed for utility planning and construction that potentially affects developed, rural, wetland and riparian land areas or may involve stream crossings. Such documentation is to include, but not be limited to, preconstruction and construction BMPs relating to surface water, erosion and sediment control and prevention; groundwater considerations and protection; topsoil conservation and restoration and vegetation/revegetation considerations. Lastly, the document shall address cover post-construction BMPs and monitoring requirements and plans for adaptive management if necessary.	Designer to include in construction contract documents
52	The applicant shall comply with County floodplain regulations. The applicant shall adhere to all requirements noted in the attached Floodplain Memorandum in the Engineering Comments. The applicant shall coordinate directly with the Larimer County Floodplain Administrator as it relates to floodplain regulations.	Designer to prepare Larimer County floodplain permit application(s) and include any permit requirements in the construction contract documents.
53	The applicant shall obtain any additional State, Federal, or Local permits necessary for construction. When applicable, the applicant or its contractors shall obtain other Larimer County issued permits as well. These could include, but are not limited to, Building Permits, Floodplain Development Permits, and/or Utility Permits.	Designer to prepare permit application(s) for those permits obtained during design and include any permit requirements in the construction contract documents. Any permits to be obtained by the construction contractor to be included in the construction contract documents.
54	The applicant shall develop and provide Larimer County with accurate as-built horizontal and vertical survey data (state plane coordinates and elevations in NAVD 88) and GIS shapefiles describing the location of the pipeline and all appurtenant structures.	Designer to include in construction contract documents
55	The applicant shall provide Larimer County with as-built construction drawings certified by a Colorado registered professional engineer, for all portions of the pipeline located in unincorporated Larimer County.	Designer to include in construction contract documents
56	The applicant shall provide information that discusses how the proposed pipeline sections located within County ROW will be accessed for maintenance and operation.	Designer to include in construction contract documents
58	During the Technical Review of the Thornton Water Project, Thornton shall provide documentation that they have consulted with U.S. Fish and Wildlife Service and the Colorado Department of Parks and Wildlife on the final engineering of the TWP and shall follow their recommendations for mitigating impacts to threatened and endangered species and wildlife habitat.	Designer to include mitigations as provided by others in the construction contract documents
59	Thornton shall clear vegetation in construction areas during the winter months, before the nesting season, to minimize impacts on nesting birds. Thornton would review the status of any potential raptor nests, known eagle nests, and eagle roosts prior to construction. If any active raptor or bald eagle nests are located, Thornton shall comply with CPW seasonal restrictions associated with surface activity within recommended buffers around active nest sites and coordinate with CPW to determine and implement any BMPs to minimize or eliminate impacts on active raptor or bald eagle nests.	Designer to include requirements, as provided in this COA and specified by others, in the construction contract documents
60	The recommendations of Submittal Item 11- Wildlife Mitigation Plan Thornton Water Project Within Larimer County, Colorado dated November 9, 2023, shall be followed. A detailed mitigation plan showing how these recommendations are integrated into the engineering and construction related applications and how implementation is to be monitored shall be submitted as part of the Technical Review.	Designer to include requirements, as provided in this COA and specified by others, in the construction contract documents
61	During Technical Review, Thornton representatives or consultants shall consult with the Colorado Department of Parks and Wildlife and the U.S. Fish and Wildlife Service for concurrence related to potential federally listed species that may occur within the work limits or in the site inventory area. If any species of concern are identified during Technical Review or construction, mitigation measures as required by the Colorado Department of Fish and Wildlife and the U.S. Fish and Wildlife Service shall be followed.	Designer to include requirements, as provided in this COA and specified by others, in the construction contract documents
62	During construction, wildlife crossovers (trench plugs) with ramps on each side of the trench shall be installed at well-defined game trails, as identified during Technical Review, other permitting processes, or on-site during construction.	Designer to include requirements, as provided in this COA and specified by others, in the construction contract documents
63	A site-specific Stormwater Management Plan and Erosion and Sediment Control Plan shall be developed and submitted to the County for approval.	Designer to include in construction contract documents
64	A detailed restoration plan and specifications shall be developed in consultation with the applicant's environmental consultants during the Project's design phase. The restoration plan shall involve pre- and post-construction surveys and appropriate seed mixes for restoring the various vegetation classes within the work limits. Thornton's construction contract shall include a warranty period that covers not only the installation of the Project but also restoration. Furthermore, the construction contractor's state stormwater discharge permit shall not be closed until 70 percent vegetation cover is achieved and County Community Development staff have deemed the landscape restoration complete.	Designer to include in construction contract documents

Attachment 2 - Larimer County 1041 Permit Conditions of Approval (COA)  
 Thornton Water Project  
 Segment F Pipeline Deisgn

Permit COA Number	Condition	Pipeline Design Consultant Compliance Action
65	The areas of construction shall be accessed using existing roads to the maximum extent possible. Any temporary access roads shall be removed upon completion of the Project, and the area restored to <u>preconstruction conditions.</u>	Designer to include Contractor requirement in construction specifications
66	BMPs will be implemented during construction, which will help minimize impacts in the Project work limits. These BMPs shall be determined during Technical Review and could include installing temporary fencing to deter access to sensitive areas, placing staging areas in previously disturbed upland areas, and installing <u>sediment- and erosion-control devices to minimize surface runoff in disturbed areas.</u>	Designer to include in construction contract documents
67	Temporary impacts will be fully restored to pre-project conditions after completion of the proposed activities.	Designer to include Contractor requirement in construction specifications
68	Topsoil shall be salvaged and used in disturbed areas, which will be revegetated where practicable. The applicant shall retain a local soil scientist, agronomist, and/or agricultural engineer to work with impacted property owners of agricultural land to determine existing soil conditions, best management practices, and mitigation measures to implement, including the implementation of soil amendments, to protect and re-establish the soil health of the soil column (topsoil and subsoil) that will be impacted by construction activities. Those practices shall be included in the design and completed for review by staff during Technical Review.	Designer, either directly or through a subconsultant, shall retain a local soil scientist, agronomist, or agricultural engineer to develop mitigations as provided in this COA. Designer to incorporate mitigations in the construction contract documents
69	All temporarily disturbed areas shall be planted with County-approved native seed mixes, or as reasonably specified by the property owner, and mulched, to increase diversity and decrease nonnative and noxious <u>weed cover.</u>	Designer to include Contractor requirement in construction specifications
70	To limit the introduction or spread of noxious weeds in the site inventory area, a preconstruction and post-construction weed management approach will be implemented. Weed management strategies for each of the project stages shall be followed as described in the Noxious Weed Management Plan in the Item 10 <u>Wetland Mitigation Plan (ERO 2023)</u>	Designer to coordinate weed management requirements provided by ERO, and include Contractor requirements in the construction contract documents
71	During construction, open-cut trenches shall be as narrow as safely practicable when crossing waters of the U.S. and non-jurisdictional waters and wetlands. Final design shall include criteria to ensure that impacts on <u>aquatic resources will be minimized.</u>	Designer to include in construction contract documents
72	Additional site assessments will be completed during the Technical Review phase to determine the boundaries of potential or suitable habitat for federally listed threatened, endangered, or candidate wildlife species. Thornton will coordinate with USFWS and CPW prior to construction to confirm that the Project will <u>have no effect on federally listed species.</u>	Designer to include requirements, as provided in this COA and specified by others, in the construction contract documents
73	If construction occurs between February and August, a preconstruction nesting bird survey shall be conducted by a qualified wildlife biologist prior to any clearing or tree removal. Where feasible, Thornton plans to clear vegetation in construction areas prior to the nesting season to minimize impacts on nesting birds. Thornton shall review the CPW raptor nest data (CPW 2022b) and perform nest surveys for raptors prior to the nesting season to identify potential active raptor nests prior to construction. Thornton shall coordinate with CPW regarding any potential conflicts between scheduled construction and potential raptor nests and <u>develop resource acceptable to CPW to minimize impacts on nesting raptors.</u>	Designer to include requirements, as provided in this COA and specified by others, in the construction contract documents
74	The City of Thornton should consider using an archeological monitor especially where the project is within 200 feet of a waterway or when in proximity to the 22 features of historic and cultural significance.	Designer to include requirements, as provided in this COA and specified by others, in the construction contract documents
75	The City of Thornton Shall provide a listing and location of features of historic and cultural significance, as allowed to be shared by the State Historic Preservation Office, at the time of Technical Review as well as any <u>appropriate mitigation measures that may be appropriate.</u>	Designer to include requirements, as provided in this COA and specified by others, in the construction contract documents
76	The applicant shall obtain any necessary approvals from the Dam Safety Branch of the Colorado Division of Water Resources related to Windsor Reservoir #8 and any other structures regulated by the Division, <u>including high hazard dams, prior to the approval of the Technical Review.</u>	Designer to include in construction contract documents
77	The applicant shall exercise due diligence to locate all known underground utilities and other underground facilities that may be impacted by the construction of the TWP and pothole them where appropriate and shall <u>incorporate the results into their submittal for Technical Review.</u>	Designer to include in construction contract documents
78	The applicant shall minimize disturbance and mitigate all impacts to trees along the pipeline route. In the Technical Review submittal, the applicant shall accurately identify the locations, species, size and condition of all trees along the pipeline alignment, each labeled showing the applicant's intent to either remove, transplant or protect the tree. The applicant shall retain an ISA certified arborist to conduct a full tree inventory and evaluate the health of and make recommendations for the retention of significant trees where the drip line is within either the temporary or permanent easement of the pipeline. For trees proposed to be removed, the applicant shall demonstrate why it is technically infeasible to avoid impacts to the tree and its critical root zone. Where it is not feasible to protect and retain tree(s) or to transplant them to another on-site location, Thornton shall replace impacted trees, either on-site or off-site, in accordance with Sec. 18-537 of the City of Thornton's Development Code (Existing Plant Material). If avoiding impacts to trees results in greater impacts to County ROW, efforts should be made to minimize disruptions to road users and traffic patterns and shall comply with all other conditions of approval related to County ROW.	Designer to include in construction contract documents

Attachment 3 - Larimer County 1041 Permit Mitigations  
Thornton Water Project  
Segment F Pipeline Design

Mitigation	Pipeline Design Consultant Compliance Action
The water pipeline will be buried at a minimum depth of 4 feet below grade.	Designer to include in construction contract documents.
The fiber optic cable will be buried at a minimum depth of 3 feet below grade.	Designer to include in construction contract documents.
During construction of the Project, the Project will comply with the intent of Larimer County's then-existing Noise Level Ordinance (currently Ordinance No. 97-03).	Designer to include in construction contract documents.
Thornton contacted Poudre Valley Rural Electrical Association (PVREA) to determine if current infrastructure in the area supports the proposed load, and they confirmed sufficient power is available in the area to supply the source water pump station. Power will be supplied from existing PVREA infrastructure along Colorado Highway 1, approximately 3,000 feet north of CR 56. New underground conductors will be installed in an existing PVREA easement to the west for approximately 1,700 feet across the LCC to replace an existing PVREA overhead line. These new conductors will then extend northwest, generally parallel to the Project water pipeline and LCC, replacing an existing PVREA line to its current termination at an existing residence. From the existing residence, the new conductors will extend west, joining with the Project water pipeline alignment, then	Designer to coordinate design and construction constraints with parallel power line installation
Construction work hours will typically be from 7 a.m. to 7 p.m. Monday through Saturday. Construction may extend beyond these hours on an as-required and case-by-case basis.	Designer to include in construction contract documents.
Contractors will obtain permits from CDPHE before construction activities in accordance with state air quality regulations.	Designer to include in construction contract documents.
Contractors will develop and operate under a fugitive dust control plan and will submit the fugitive dust control plan to Larimer County Health Department for approval as required.	Designer to include in construction contract documents.
Irrigation Ditches - Thornton will obtain appropriate agreements for each crossing before construction.	Designer to prepare required design documents, drawings, and figures in support of agreement negotiations
Irrigation Ditches - Crossings will be constructed using either open-cut or trenchless construction methods as directed by the irrigation ditch company or owner and during off season, if required.	Designer to prepare required design documents, drawings, and figures in support of agreement negotiations
Thornton will coordinate construction activities with ditch companies so that impacts are minimized.	Designer to include in construction contract documents.
Thornton has communicated with Colorado Parks and Wildlife (CPW) and the United States Fish and Wildlife Service (USFWS) to initiate coordination activities. Thornton will follow these agency recommendations with regards to impact mitigation.	Designer to include mitigations, including those provided by others, in the construction contract documents
Thornton has conducted coordination meetings with CPW and will continue coordination with CPW as the Project is developed and implemented.	Designer to include mitigations, including those provided by others, in the construction contract documents
Thornton will and/or require its contractors to obtain the required stormwater quality permit and will comply with all requirements therein.	Designer to include in construction contract documents.
The design of the water pipeline will include standards of practice for locating pipelines near structures and the final construction drawings will be sealed by a Colorado Licensed Professional Engineer.	Designer to include in construction contract documents.
Project contractors will implement site specific safety measures and construction methods for construction near structures.	Designer to include in construction contract documents.
Roads and fences will be restored to preconstruction conditions.	Designer to include in construction contract documents.
Subsurface utility engineering will be completed during the design and will include surface geophysical methods and test holes to determine the locations of existing utilities.	Designer to perform as required
Utility crossings will be coordinated with utility providers including vertical clearance requirements, crossing agreements, and inspection during construction.	Designer to prepare required design documents, drawings, and figures in support of agreement negotiations
Land and vegetation will be restored to preconstruction conditions.	Designer to include in construction contract documents.
In areas disturbed for water pipeline construction grades will be restored to preconstruction conditions.	Designer to include in construction contract documents.
Construction areas will not be open to or accessible by the public.	Designer to include in construction contract documents.
Applicable federal, state, and local health and safety standards will be followed.	Designer to include in construction contract documents.
Manhole and vault openings will be locked.	Designer to include in construction contract documents.
Thornton and the Project contractors will provide and maintain sanitary accommodations for the use of their employees during construction of the Project in a manner that complies with the requirements and regulations of health departments and other governmental bodies.	Designer to include in construction contract documents.
Construction waste will be stockpiled in construction staging areas and removed from the construction site during the construction process.	Designer to include in construction contract documents.
Garbage dumpsters will be emptied approximately every 1 to 2 weeks.	Designer to include in construction contract documents.
Construction, operation, and maintenance activities will follow best management practices for the management of wastes to avoid and minimize impacts from potential spills or other releases to the environment.	Designer to include in construction contract documents.

Attachment 3 - Larimer County 1041 Permit Mitigations  
Thornton Water Project  
Segment F Pipeline Design

Mitigation	Pipeline Design Consultant Compliance Action
Construction, operation, and maintenance activities involving Thornton or the Project contractors bringing any hazardous materials onto the site will comply with applicable federal, state, and local laws and regulations regarding the handling, storage, disposal, transportation, and use of hazardous substances.	Designer to include in construction contract documents.
In its contract with the Project contractors, Thornton will require that the Project contractors comply with applicable laws.	Designer to include in construction contract documents.
If trenching activities uncover previously unknown areas of contamination that are apparent, work will be stopped until the party responsible for such contamination has properly managed and/or disposed of such contamination.	Designer to include in construction contract documents.
Construction staging areas will be located and arranged in a manner to preserve trees and vegetation to the extent feasible.	Designer to include in construction contract documents.
Excavated material or other construction materials will not be stockpiled or deposited near or on streambanks or other watercourse perimeters where they could be washed away by high water or storm runoff or could encroach upon stream banks.	Designer to include in construction contract documents.
Best management practices will be implemented for stormwater management. A summary of best management practices (BMPs) to protect water resources from potential contamination is provided in Item 14 Drainage & Erosion Control Report & Plan.	Designer to include in construction contract documents.
If possible, fueling requirements will be met by the contractor prior to arrival at the construction site.	Designer to include in construction contract documents.
Fueling vehicles will be equipped with spill kits and fire extinguishers, and personnel will be properly trained in spill prevention, control, and countermeasures.	Designer to include in construction contract documents.
Keep fire away while loading/unloading. Persons in the vicinity are forbidden to smoke, light matches, or carry any flame or lighted cigar, pipe, or cigarette. 49CFR 177.834(c, d)	Designer to include in construction contract documents.
Fuel will not be loaded/unloaded from any motor vehicle while the engine is running. The exception is when the engine of the vehicle is to be used in the operation of the pump. 49CFR 177.837(a)	Designer to include in construction contract documents.
The fuel tank records will be reviewed to determine the theoretical fuel tank level. 7CCR 1101-14 S2-3-1 and S2-4-2(a)(2)	Designer to include in construction contract documents.
The fuel tank level gauge will be inspected to determine the actual fuel tank level before unloading takes place. (Note: Any fuel tank level discrepancies will be resolved prior to hooking up to the fuel tank.) 7CCR 1101-14 S2-3-1 & S2-4-2(a)(2)	Designer to include in construction contract documents.
The supply truck driver will observe the transfer during the entire operation. 49CFR 177.834(i)(2)	Designer to include in construction contract documents.
Once the truck is in position, its emergency brake will be applied and reasonable precautions will be taken to prevent motion of the truck during unloading (example: utilize wheel chocks when parked on an incline). 49CFR 177.834(e)	Designer to include in construction contract documents.
Signs must be posted that remind drivers not to pull away before detaching hoses. 40CFR 112.7(h)(3)	Designer to include in construction contract documents.
Containers and cargo tanks will be grounded prior to and during transfer. 49CFR 177.837(b) & (c)	Designer to include in construction contract documents.
The transfer line must be properly disengaged, and the valves and piping of both the fuel tank and truck must be checked for leaks before allowing the truck to leave the site. (40CFR 112.7 h(4) for trucks)	Designer to include in construction contract documents.
Access will be maintained for local area residents.	Designer to include in construction contract documents.
Emergency vehicle access needs will be maintained,	Designer to include in construction contract documents.
Construction activities coordinated with local fire departments, police departments, ambulance services, and other emergency responders as necessary.	Designer to include in construction contract documents.
Project contractors will implement traffic management plans based upon local traffic control requirements and general safe operating practices. Proper signage, flaggers, lighting, speed limits, work hours, postings, notifications, and other precautionary safety measures will be taken to protect the residents of Larimer County and Project contractors' employees.	Designer to include in construction contract documents.
Traffic control plans will be implemented prior to construction, subject to approval and acquisition of permits from Larimer County Engineering.	Designer to include in construction contract documents.
Pipeline markers will be installed in the pipeline permanent easement to indicate that a water pipeline is buried nearby. The markers will identify the water pipeline, Thornton as the pipeline operator, the operator's 24-hour emergency contact number, and the area's utility notification number.	Designer to include in construction contract documents.
Marking tape indicating that a water pipeline is buried in the location will also be installed above the water pipeline for the entire length of the water pipeline.	Designer to include in construction contract documents.
The water pipeline will be designed and constructed to be watertight. Pipe materials will be required to undergo shop testing before installation as well as hydrostatic field testing after installation.	Designer to include in construction contract documents.
The water pipeline and other appurtenances will be coated and lined to prevent corrosion. As an additional safety measure, project components will be installed with cathodic protection, which will control the corrosion of a metal surface.	Designer to include in construction contract documents.
An emergency response plan will be developed for the construction and the operation phases of the Project. The plan will be written to include identification of emergency response departments near the Project area, including how and when to communicate with the Poudre Fire Authority and the Larimer County Sheriff, as applicable.	Designer to prepare Emergency Response Plan and include in construction contract documents.
During construction of the water pipeline short-term disruptions could occur to domestic water service if relocation of utilities is required. Area residents will be notified in advance of any service disruptions.	Designer to include in construction contract documents.

Attachment 3 - Larimer County 1041 Permit Mitigations  
 Thornton Water Project  
 Segment F Pipeline Design

Mitigation	Pipeline Design Consultant Compliance Action
Thornton will endorse hiring local workers.	Designer to include in construction contract documents.
Thornton will obtain individual Larimer County, Colorado Department of Transportation (CDOT), and other municipal access permits for any necessary temporary and permanent access locations as applicable.	Designer to prepare required design documents, drawings, and figures in support of access permits
Stabilized construction entrances/exits will be installed, as necessary, at the intersections of the Project temporary access roads with paved roads.	Designer to include in construction contract documents.
Permanent access locations will be designed per local government standards applicable at the location of access.	Designer to include in construction contract documents.
Temporary access will be unpaved and used primarily for transport of materials and construction workers. Temporary and permanent access locations will be closed to the public. Temporary access locations could include warning signs, flaggers, and controlled access, as necessary. Additionally, gates or other approved barriers on temporary access roads may be utilized when construction workers are not present to control unauthorized access.	Designer to include in construction contract documents.
Temporary access locations will be restored to pre-construction conditions upon the completion of construction.	Designer to include in construction contract documents.
Surface drainage BMPs will include application of erosion control techniques and the revegetation of disturbed areas.	Designer to include in construction contract documents.
Construction stormwater management plans (SWMPs) will include detailed descriptions of BMPs that will be used to protect surface hydrology and water quality. Item 14 Drainage & Erosion Control Report & Plan includes information on stormwater management.	Designer to prepare SWMPs for Contractor use and include in construction contract documents
During construction, fire extinguishers will be located at designated areas along the Project including but not limited to staging area and areas of heavy machinery such as trenchless operations.	Designer to include in construction contract documents.
The Project contractor is responsible for developing and carrying out an emergency response plan under Thornton's direction and supervision that includes fire protection and fire emergency response.	Designer to prepare Emergency Response Plan and include in construction contract documents.
During construction, wildlife crossovers (trench plugs) with ramps on each side of the trench could be installed at well-defined game trails as appropriate.	Designer to include requirements, as provided in this mitigation and specified by others, in the construction contract documents
Thornton will implement measures to avoid or minimize impacts raptors and migratory birds during construction of Project	Designer to include requirements, as provided in this mitigation and specified by others, in the construction contract documents
Coordinate with CPW before and during construction on the effective means to minimize effects on raptors and other migratory birds.	Designer to include requirements, as provided in this mitigation and specified by others, in the construction contract documents
Mitigation measures such as restricting construction during nesting seasons may be implemented as appropriate and in accordance with CPW recommendations. Thornton will review the CPW raptor nest data and perform nest surveys for raptors before the nesting season to identify potential active raptor nests before construction.	Designer to include requirements, as provided in this mitigation and specified by others, in the construction contract documents
Wetland areas disturbed for construction will be restored following construction to pre-construction grades and vegetation. A wetland seed mix will be specified in the contract documents.	Designer to include requirements, as provided in this mitigation and specified by others, in the construction contract documents
Thornton will submit a Pre-construction Notification to the U.S. Army Corps of Engineers (USACE) regarding the construction work that will be performed within the jurisdictional waters, including wetlands, and will obtain verification from the USACE that work is authorized under Nationwide Permit (NWP) 58.	Designer to prepare required design documents, drawings, and figures in support of Pre-construction Notification
Thornton's contractors will be required to meet NWP 58 requirements, including restoration of wetlands.	Designer to include requirements, as provided in this mitigation and specified by others, in the construction contract documents
Land disturbed by construction of the water pipeline within the floodplain will be restored following construction to pre-construction grades and vegetation and the Project will not alter the floodplain. Therefore, the Project will have no impact on the hydraulics and hydrology of the floodplain and be at no risk of flooding because it is a buried pipeline.	Designer to include in construction contract documents.
The Project will have no effect on federally listed threatened, endangered, or candidate wildlife or plant species.	Designer to include requirements, as provided in this mitigation and specified by others, in the construction contract documents
As applicable, pavement and vegetation will be removed from the site and will be properly disposed of.	Designer to include in construction contract documents.
If topsoil exists, it will be removed and stockpiled separately away from other excavated material.	Designer to include in construction contract documents.
A construction manager will be contracted to oversee Project contractor's work, including compliance with the SWMP and permit requirements.	Designer to include in construction contract documents.
Noxious weeds within the Project construction limits will be controlled	Designer to include in construction contract documents.
Major equipment (e.g., truck equipment and backhoes) will be cleaned by high pressure air or water spray before being delivered to the project area to avoid introducing undesirable plants and noxious weeds.	Designer to include in construction contract documents.
For areas where removal is not practicable or only a small area of noxious weeds is present, pre-treat all noxious weed populations in the topsoil.	Designer to include in construction contract documents.
Fertilizer or other soil amendments will not be used unless recommended by a revegetation specialist based on site-specific conditions. The use of fertilizers will be restricted because they can promote noxious weeds and can be detrimental to native species in the revegetation mix.	Designer to include in construction contract documents.

Attachment 3 - Larimer County 1041 Permit Mitigations  
 Thornton Water Project  
 Segment F Pipeline Design

Mitigation	Pipeline Design Consultant Compliance Action
After construction is complete, all disturbed areas will be properly revegetated as quickly as possible. Prompt revegetation with appropriate species is essential for preventing the spread of noxious weeds.	Designer to include in construction contract documents.
Certified weed-free seed and mulch will be used for revegetation. Weed-free straw bales will be used for sediment barriers.	Designer to include in construction contract documents.
If stands of noxious weeds become established, weed control would be implemented following an integrated approach specific to the weed species present.	Designer to include in construction contract documents.
Because new control methods are continually being developed, particularly for herbicide applications, any control methods used will follow the CDOA and Larimer County recommendations at the time of implementation.	Designer to include in construction contract documents.
Security fencing will be installed in accordance with Larimer County standards.	Designer to include in construction contract documents.
Before the start of construction, Thornton will acquire necessary access permits and ROW permits from Larimer County.	Designer to obtain all permits required for design activities, and prepare required design documents, drawings, and figures in support of permits to be obtained by Thornton/Contractor
ROW - Areas impacted during construction will be restored to pre-construction conditions upon completion of the Project. Thornton will mitigate any construction impacts to county roads, bridges, and related facilities and construction access will re-grade and re-vegetate to minimize environmental impacts.	Designer to include in construction contract documents.
Conservation considerations will be addressed during the Project design, and will be applied during construction, and subsequently through the operational life of the facility. Thornton has engaged a credentialed Envision® professional to support the Thornton Water Project team in using the Envision® framework to identify practices to employ during design and construction to encourage sustainability.	Designer to include requirements, as provided in this mitigation and specified by others, in the construction contract documents
The construction contractor will be required to control fugitive dust from the construction site primarily using water spray when conditions are dry and in accordance with permit requirements.	Designer to include in construction contract documents.
The construction contractor will be required to use and maintain vehicle tracking pads to mitigate tracking mud on public streets in accordance with permit requirements.	Designer to include in construction contract documents.
Thornton will have oversight representatives on site to monitor that mitigation measures are in place to control construction-related visual impacts.	Designer to include in construction contract documents.
Construction and silt fencing will be utilized to minimize disturbance to surrounding areas.	Designer to include in construction contract documents.
Existing trees and vegetation will be preserved to the extent practicable.	Designer to include in construction contract documents.
Long term staging and storage of materials in areas approved by Thornton	Designer to include in construction contract documents.
Installation of trench plugs constructed of impervious materials such as bentonite, other clays, or controlled low-strength material within the water pipeline trench. Trench plugs serve as dams that mitigate groundwater flow paths that could develop through typical water pipeline bedding material. Trench plugs could be installed periodically along and perpendicular to the water pipeline to deflect flow into native ground to maintain the natural hydrology.	Designer to include in construction contract documents.
Installation of an impervious water pipeline trench backfill material such as bentonite, other clays, or controlled low-strength material to mitigate groundwater levels and groundwater flow paths.	Designer to include in construction contract documents.
Compacting backfill material and soil disturbed during trenching. Compact with a backhoe, vibration machine, rollers, or other equipment. Compaction requirements and testing would be specified in accordance with standards of practice.	Designer to include in construction contract documents.
Installation of porous backfill material to allow natural groundwater flow paths to flow around the water pipeline.	Designer to include in construction contract documents.
The mitigation measures implemented will be specified in the construction documents and will be developed as part of the design process, including evaluation of geotechnical investigations.	Designer to include in construction contract documents.
The Project will avoid known cultural resources where possible.	Designer to include in construction contract documents.
Trenchless construction methods or open-cut construction methods with reconstruction to preconstruction contours or design would be used to minimize permanent physical impacts.	Designer to include in construction contract documents.
Despite the low paleontological potential across most of the Project area, if any subsurface bones or other potential fossils are found during construction, Thornton will halt ground disturbing activities in a 20-foot radius until a State of Colorado permitted paleontologist can evaluate the discovery and make further recommendations.	Designer to include in construction contract documents.
Wetland topsoil contains seeds, roots, rhizomes, tubers, and other fleshy propagules that can aid in revegetation. The top 8 to 10 inches of soil should be scraped with a front-end loader and stockpiled for later use in restoring site conditions.	Designer to include in construction contract documents.
For wetland areas to be successful in maintaining habitat and ecological functions, it is necessary to monitor and maintain the areas during early establishment. Thornton has prepared the following monitoring plan to implement, maintain, and protect the proposed wetland mitigation areas as part of the Project. Thornton is proposing a 2 year monitoring plan similar to the plan included in the North Weld County and East Larimer County Water Districts Water Transmission Pipeline Project (NEWT Pipeline Project), Phase 3 Larimer County 1041 Permit Application approved by the Larimer County Board of County Commissioners (BOCC) on April 24, 2023.	Designer to include in construction contract documents.

Attachment 3 - Larimer County 1041 Permit Mitigations  
 Thornton Water Project  
 Segment F Pipeline Design

Mitigation	Pipeline Design Consultant Compliance Action
Thornton would maintain the wetland mitigation areas until the mitigation success criteria have been met.	Designer to include in construction contract documents.
A detailed restoration plan and specifications will be developed, in consultation with ERO during the Project's design phase. The restoration plan will involve pre- and post-construction surveys and developing the appropriate seed mixes for restoring the various vegetation classes along the work limits. It should be noted that Thornton's construction contract includes a warranty period that covers not only the installation of the Project but also restoration. Furthermore, the construction contractor's state stormwater discharge permit will not be able to be closed until 70 percent restoration is achieved.	Designer to include in construction contract documents.
The areas of construction will be accessed using existing roads to the maximum extent possible. Any temporary access roads will be removed upon completion of the Project, and the area restored to preconstruction conditions.	Designer to include in construction contract documents.
BMPs will be implemented during construction, which will help minimize impacts in the Project work limits. These BMPs could include installing temporary fencing to deter access to sensitive areas, placing staging areas in previously disturbed upland areas, and installing sediment- and erosion-control devices to minimize surface runoff in disturbed areas.	Designer to include in construction contract documents.
During construction, open-cut trenches will be as narrow as safely practicable when crossing waters of the U.S. and nonjurisdictional waters and wetlands. Design efforts include criteria that impacts on aquatic resources will be minimized.	Designer to include in construction contract documents.
The Project will have no effect on any federally listed threatened, endangered, or candidate plant or wildlife species. Additional site assessments will be completed during the design phase to determine the boundaries of potential or suitable habitat for federally listed threatened, endangered, or candidate wildlife species to confirm that construction will not occur in those areas. A habitat assessment will be submitted to the Service prior to construction to confirm that the Project will have no effect on federally listed species.	Designer to include requirements, as provided in this mitigation and specified by others, in the construction contract documents
Remove expansive soils or bedrock and replace with imported materials as specified by the Engineer of Record responsible for the design	Designer to include in construction contract documents.
Treating the expansive soil or bedrock with cement, lime, fly ash, or other stabilization material before replacement in the trench	Designer to include in construction contract documents.
Structural reinforcement	Designer to include in construction contract documents.
Moisture control on structures	Designer to include in construction contract documents.
Water and drainage management	Designer to include in construction contract documents.
Partially remove collapsible soils and replace with imported materials, such as controlled low-strength material (CLSM), as specified by the Engineer of Record responsible for the design	Designer to include in construction contract documents.
Moisture conditioning and compaction of collapsible soils in the trench	Designer to include in construction contract documents.
Foundation installation to a competent soil or bedrock layer	Designer to include in construction contract documents.
A subsurface geotechnical investigation of geologic conditions utilizing soil borings will be completed during design to further determine the subsurface soil conditions and associated geological hazards along the Project. Mitigation measures will be further refined during design to meet site-specific geological hazards.	Designer to perform as required by this mitigation and include in construction contract documents.
Utilization of major roads and bridges for haul routes whenever feasible.	Designer to include in construction contract documents.
Minimization of hauling/deliveries during peak driving hours.	Designer to include in construction contract documents.
Coordination with Larimer County and other entities to avoid planned concurrent road construction.	Designer to include in construction contract documents.
Coordination with local schools on bus routes and pickup or drop-off times.	Designer to include in construction contract documents.
Stabilized construction access in accordance with erosion control and streets ordinances and construction standards.	Designer to include in construction contract documents.
Thornton will construct road crossings in Larimer County using trenchless methods for paved roads and open-cut construction for unpaved roads.	Designer to include in construction contract documents.
The Project contractor will use temporary single lane closures to open cut unpaved roadways which allows one lane of the road to be open while the Project contractor constructs the water pipeline within the other lane. Traffic control for the single lane closure will conform to applicable standards.	Designer to include in construction contract documents.
During final design, Thornton will present anticipated haul/delivery routes and coordinate access from public roads to the active construction zone with Larimer County and other applicable authorities or governing agencies.	Designer to prepare drawings/figures showing anticipated haul routes for submittal to Larimer County
The Project will be hydrostatically tested prior to operation start up. Before discharge of hydrostatic test water from the water pipeline, Thornton and/or the Project contractor will obtain a General Permit for Discharges from Hydrostatic Testing of Pipelines, Tanks, and Similar Vessels from CDPHE. Sampling and effluent limits will be in accordance with permit requirements.	Designer to include in construction contract documents.
As required by NWP 58 there will be no change in pre-construction contours of jurisdictional waters.	Designer to include in construction contract documents.

Attachment 3 - Larimer County 1041 Permit Mitigations  
 Thornton Water Project  
 Segment F Pipeline Design

Mitigation	Pipeline Design Consultant Compliance Action
In general, following Project construction, the restored Project area will drain in the same manner and at generally the same rate as it did prior to construction.	Designer to include in construction contract documents.
Geotechnical investigations will be completed during the design phase of the Project and pavement design for pavement replacement will be prepared by or under the supervision of and signed and stamped by a Professional Engineer registered in the State of Colorado. Larimer County permits and other approvals such as approval of traffic control plans and pavement design will be obtained as required.	Designer to perform as required by this mitigation and include in construction contract documents.
The contractor will provide material testing from an independent geotechnical testing firm in accordance with Larimer County standards and testing results will be provided to Larimer County in accordance with permit requirements.	Designer to include in construction contract documents.
The water pipeline will be designed for materials resistant to flood damage, such as welded steel pipe or ductile iron pipe. Buried manholes and vaults located within areas designated as 100-year floodplains will include watertight joints and waterproofing coatings. Materials for appurtenances will include concrete, steel, cast iron, and ductile iron. Valves in manholes will include equipment capable of withstanding water submersion. Design and specifications will be completed by a registered Colorado Professional Engineer.	Designer to include in construction contract documents.
A detailed restoration plan and specifications will be developed. Design will be developed so that there is no increase in base flood elevations and will comply with Larimer County floodplain regulations, including LUC Article 12.	Designer to include in construction contract documents.
In addition to implementing these best management practices, Thornton will require the Project contractor to implement a robust outreach program that will include: <ul style="list-style-type: none"> <li>• 24-hour telephone contact line for questions and concerns.</li> <li>• Complaint resolution workflow to contact all complainants and attempt to resolve any problems or issues.</li> <li>• Issue monthly flyers to the residents located in close proximity to the project area informing them of planned construction activities in advance.</li> </ul>	Designer to include in construction contract documents.

**Certificate Of Completion**

Envelope Id: 349BB8959D1F435FBE60D067EB73F3C2	Status: Completed
Subject: Complete with DocuSign: 12-777H9 Addend no1 8-12-24.pdf	
Source Envelope:	
Document Pages: 13	Signatures: 1
Certificate Pages: 1	Initials: 0
AutoNav: Disabled	Envelope Originator:
Envelope Stamping: Disabled	Patrick Hinterberger
Time Zone: (UTC-07:00) Mountain Time (US & Canada)	9500 Civic Center Drive
	Thornton, CO 80229
	Patrick.Hinterberger@ThorntonCO.gov
	IP Address: 199.117.212.4

**Record Tracking**

Status: Original	Holder: Patrick Hinterberger	Location: DocuSign
8/12/2024 2:40:36 PM	Patrick.Hinterberger@ThorntonCO.gov	

**Signer Events**

Patrick Hinterberger  
 Patrick.Hinterberger@ThorntonCO.gov  
 Sr. Contract Administrator  
 SHI OBO City of Thornton  
 Security Level: Email, Account Authentication (None)

**Signature**

DocuSigned by:  
  
 6DA8F281E4154C8...  
 Signature Adoption: Pre-selected Style  
 Using IP Address: 199.117.212.4

**Timestamp**

Sent: 8/12/2024 2:40:52 PM  
 Viewed: 8/12/2024 2:40:58 PM  
 Signed: 8/12/2024 2:41:13 PM  
 Freeform Signing

**Electronic Record and Signature Disclosure:**  
 Not Offered via DocuSign

In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	8/12/2024 2:40:52 PM
Certified Delivered	Security Checked	8/12/2024 2:40:58 PM
Signing Complete	Security Checked	8/12/2024 2:41:13 PM
Completed	Security Checked	8/12/2024 2:41:13 PM
Payment Events	Status	Timestamps