Table D1 Summary of Impacts and Mitigation for the Proposed Action

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
1	Transportation Resources	Temporary disruption of traffic for brief periods during construction	A way-finding and signage system will be implemented to ease travel conditions for motorists during the times when lane closures, detours, and/or delays are required.	City of Aurora	Design Construction
2	Air Quality	Air emissions during construction	▪ Maintain engines and exhaust systems on equipment in good working order. Maintain equipment on a regular basis. Equipment will be subject to inspection by the project manager to ensure maintenance. ▪ Control fugitive dust through implementation of CDOT's Standard Specifications for Road and Bridge Construction, particularly Sections 107.24, 209 and 250, and Air Pollution Control Division's Air Pollutant Emission Notification requirements ▪ No excessive idling of inactive equipment or vehicles.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
3	Geologic Resources and Soil	Structures and roadway could be affected by the low expansive clays, hydro-compression of eolian sands, and could also be affected by and/or cause erosion.	A project-specific geotechnical investigation will be conducted and the results will be used for preliminary and final design. The impact from low expansive clays and hydro-compression of eolian sands will be minimized and/or mitigation through proper design. The potential for erosion will also be minimized and/or minimized through proper design, and the erosion that currently exists in the channel alignments will be mitigated, where appropriate, through bank stabilization and/or revetment.	City of Aurora	Design Construction
4	Floodplains	Increase in the floodplain base flood elevations	Submit a Conditional Letter of Map Revision (CLOMR) to FEMA to notify them of the rise in the floodway. Part of the CLOMR package will include proof of notifications to affected property owners and that buildings that would have been adversely impacted by the rise in the water surface elevations have been mitigated.	City of Aurora	Design

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
5	Floodplains	Floodplain impacts to three structures at Coal Creek Arena	The main electrical building and the abandoned restroom building will be consolidated to a single building that will be constructed near the existing water well with a finished floor elevation one foot above the proposed 100-year floodplain elevation. The announcer's booth stilts will be reinforced to improve the integrity of the structure and protect it from increased flooding hazards caused by floating debris.	City of Aurora	Design Construction
6	Drainage and Water Quality	Increased sediment from the proposed roadway construction process	A Stormwater Management Plan (SWMP) will be required by the Municipal Separate Storm Sewer System (MS4) permit for construction activities and will follow the City of Aurora Rules and Regulations Regarding Stormwater Discharges Associated with Construction Activities, latest edition. For the area impacting CDOT's right-of-way, the SWMP will comply with CDOT's MS4 permit.	City of Aurora CDOT Design Engineering	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
7	Drainage and Water Quality	Increased runoff from the proposed roadway	Permanent water quality Best Management Practices (BMPs) will be provided and maintained to treat roadway runoff prior to release to the drainageways. Additionally, BMPs such as erosion bales, silt fences, or other sediment control devices will be used as sediment barriers and filters adjacent to wetlands, surface waterways, and at inlets where appropriate. Temporary and permanent check dams will be used where appropriate to slow the velocity of water through roadside ditches and in swales. Minimize the amount and time period of disturbance to allow revegetation of disturbed areas.	City of Aurora CDOT Design Engineering	Design Construction
8	Drainage and Water Quality	Additional point discharges causing erosion	All culvert outlets will have permanent riprap erosion protection.	City of Aurora	Design Construction
9	Drainage and Water Quality	Impacts to jurisdictional waters	City of Aurora will use street sweeping and other routine maintenance programs to decrease sedimentation of the adjacent waterways. They will modify their maintenance operations as newer technology becomes available.	City of Aurora	Design Construction
10	Wetlands	Temporary impacts to wetlands	Fence wetlands to be protected during construction.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
11	Wetlands	Temporary impacts to wetlands	After construction, remove temporary fill/materials used for protecting wetlands from permanent impact and remove all construction debris.	City of Aurora	Construction
12	Wetlands	Temporary impacts to wetlands	Temporary BMPs (such as installing erosion logs, bales, silt fence, etc.) will be used to capture sediments from disturbed areas during construction.	City of Aurora	Construction
13	Wetlands	Temporary impacts to wetlands	Check temporary impact areas following construction to confirm there are not permanent impacts.	City of Aurora	Construction
14	Wetlands	Permanent impacts to wetlands	The bridge over Sand Creek will be designed to minimize permanent and temporary impacts to wetlands to the maximum practicable extent.	City of Aurora	Design Construction
15	Wetlands	Permanent impacts to wetlands	Seed and mulch disturbance areas adjacent to wetlands to reduce erosion and promote revegetation; plant supplemental vegetation as needed.	City of Aurora	Construction
16	Wetlands	Permanent impacts to wetlands	Work occurring in and near wetlands during construction activities will be monitored to ensure protection of wetlands.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
17	Wetlands	Permanent wetland losses	Final impacts will require a Section 404 permit under the Clean Water Act, and mitigation will be required for all wetland impacts. In coordination with CDOT, mitigation will be identified on-site or wetland credits will be purchased to meet Section 404 permit requirements. A Section 404 permit will be acquired after final design, prior to construction.	City of Aurora	Design
18	Vegetation	Removal of Vegetation (clearing and grubbing)	A revegetation plan will be developed in final design in coordination with the City of Aurora, CDOT, CPW, and US Army Corps of Engineers. The revegetation plan will be incorporated into the SWMP and seed mixes (also identified in the SWMP) to be used will be specific to upland areas, riparian areas, and wetland areas. Specific objectives of the revegetation plan will be identified, such as selecting native plants and seed mixes for revegetation that blend the vegetation with existing vegetation, are consistent with vegetation types, growth habits, and soil types, use of native species, mimic surrounding native plant densities and minimizing the spread of noxious and invasive weeds.	City of Aurora CDOT Design Engineering	Design

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
	Vegetation (continued)	Removal of Vegetation (clearing and grubbing)	The revegetation plan will use adaptive restoration methods and match with native plant communities present within the Triple Creek Greenway Corridor. The seed mix used for revegetation will be approved by the City of Aurora Parks, Recreation, and Open Space and CDOT.		
19	Vegetation	Removal of Vegetation (clearing and grubbing)	Minimize the amount and time period of disturbance to allow revegetation of disturbed areas.	City of Aurora	Design Construction
20	Vegetation	Removal of Vegetation (clearing and grubbing)	Avoid disturbance to existing trees, shrubs, and vegetation, to the maximum extent possible. Identify staging areas and avoidance areas in final plans.	City of Aurora	Design Construction
21	Vegetation	Removal of Vegetation (clearing and grubbing)	All disturbed areas will be revegetated with native grass and forb species. Seed, mulch, and mulch tackifier will be applied in phases throughout construction. Native trees and shrubs will be planted where appropriate.	City of Aurora	Construction
22	Vegetation	Temporary work areas (partial clearing and grubbing)	Areas where vegetation is not completely cleared or grubbed will use geo-textile or other protection measures to leave roots/stumps of trees (such as cottonwood) or shrubs (such as sandbar willow) to regenerate after construction is complete.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
23	Vegetation	Removal of Vegetation (clearing and grubbing)	Temporary erosion control blankets will have flexible natural fibers.	City of Aurora	Design Construction
24	Vegetation	Removal of Vegetation (clearing and grubbing)	BMPs such as erosion bales, silt fences, or other sediment control device will be used as sediment barriers and filters adjacent to wetlands, surface waterways, and at inlets where appropriate.	City of Aurora	Construction
25	Vegetation	Removal of Vegetation (clearing and grubbing)	Temporary and permanent check dams will be used where appropriate to slow the velocity of water through roadside ditches and in swales.	City of Aurora	Construction
26	Vegetation	Removal of Vegetation (clearing and grubbing)	Work areas will be limited as much as possible to minimize construction impacts to vegetation.	City of Aurora	Construction
27	Vegetation	Removal of Vegetation (clearing and grubbing)	Clearing and grubbing operations will be limited to the non-nesting season of migratory birds and the non-winter roost season of Bald Eagles. This leaves a period between November 1 to December 31 to remove vegetation in the Triple Creek Greenway Corridor, unless a qualified biologist approves that the area is clear of nesting birds. A qualified biologist can be hired by the City of Aurora or the contractor.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
28	Vegetation	Removal of Vegetation in Riparian Areas	A Formal SB 40 Wildlife Certification will be required during final design, prior to project construction. The SB 40 certification will identify the total number of SB 40 trees and aerial square footage of SB 40 shrubs that will be removed as part of project construction. A proper mitigation ratio of trees and shrubs will be identified and planted on-site. These planting locations will either be identified in the SWMP or final design plan set.	City of Aurora CDOT Environmental	Design Construction
29	Noxious Weeds	Spread of noxious weeds	A CDOT Standard Specification Section 217 (Herbicide Treatment) will be incorporated into project design and implemented during construction. Cleaning and disposal of weed infested soil shall be included in the cost of Item 626 Mobilization. Noxious weed populations will be mapped and shown in the final design plan set or SWMP.	City of Aurora	Design Construction
30	Noxious Weeds	Spread of noxious weeds	During final design, detailed weed mapping of the study area will be updated. Mapping will be included in the final design plan set and construction documents along with appropriate control methods for noxious weeds.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
31	Noxious Weeds	Spread of noxious weeds	Following noxious weeds mapping and inventory, the potential for spread of identified noxious weeds due to disturbance by construction activities will be analyzed including potential for noxious weeds to spread into wetlands or other sensitive areas. The information will be added to the Specification 217 and final design plan set and construction documents.	City of Aurora	Design Construction
32	Noxious Weeds	Spread of noxious weeds	Use of herbicides will include selection of appropriate herbicides and timing of herbicide spraying.	City of Aurora	Design Construction
33	Noxious Weeds	Spread of noxious weeds	Certified weed-free hay and/or mulch will be used in all revegetated areas.	City of Aurora	Construction
34	Noxious Weeds	Spread of noxious weeds	All construction vehicles will be cleaned of dirt/soil before off-loading at the project to prevent the introduction of noxious weeds. Project staging areas will be treated for noxious weeds prior to construction.	City of Aurora	Construction
35	Noxious Weeds	Spread of noxious weeds	Project design and construction engineer will coordinate with the Arapahoe County weed supervisor, CDOT, local governing bodies, and landowners to assure proper noxious weed management activities.	City of Aurora	Design Construction
36	Noxious Weeds	Spread of noxious weeds	No fertilizers will be used on the project site.	City of Aurora	Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
37	Wildlife	Disruption and loss of existing habitats and movement corridors	A revegetation plan will be developed in final design plan set and/or construction documents in coordination with the City of Aurora, CDOT, CPW, Arapahoe County, and the USACE for vegetation restoration in areas disturbed by construction activities.	City of Aurora CDOT Environmental	Design Construction
38	Wildlife	Disruption and loss of existing habitats and movement corridors	The new span bridge over Sand Creek is sized to facilitate movement of large animals and will maintain a natural bottom substrate to promote wildlife usage. The area under the span bridge will accommodate a regional trail, the floodplain, and wildlife movement. Mature habitat adjacent to this new span bridge shall be retained, as much as practicable during construction. The design of the bridge will be done in close coordination with a qualified wildlife biologist to facilitate elements specific to wildlife. The potential for incorporating standard wildlife fencing associated with the bridge will also be evaluated. Enhancement of vegetation adjacent to this span bridge and wildlife crossing will be evaluated during final design and will be done in close coordination with a qualified wildlife biologist. Wildlife crossing design will incorporate applicable recommendations and guidelines as identified in the *FHWA Wildlife Crossing Structure Handbook – Design and Evaluation in North America*.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
	Wildlife (continued)		The new span bridge will include sufficient spacing for wildlife movement on either side of Sand Creek and maintain a natural substrate for wildlife usage (deer and smaller). Lighting under the new span bridge will not be provided in order to promote usage by wildlife. Enhancement of vegetation adjacent to the span bridge will be evaluated during final design.		
39	Wildlife	Disruption and loss of existing habitats and movement corridors	A revegetation plan will be incorporated into the SWMP during final design in coordination with the City of Aurora Parks, Recreation and Open Space, CDOT, CPW, and the USFWS for use along the Proposed Action alignment in areas disturbed during construction. Specific objectives of the revegetation plan will be identified, such as blending the vegetation with existing vegetation, use of native species, and minimizing the spread of noxious and invasive weeds.	City of Aurora	Design Construction
40	Wildlife	Erosion control measures could entangle animals	Temporary erosion control blankets will have flexible natural fibers.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
41	Wildlife	Disruption to nesting birds habitat	If construction is to commence between January 1 and October 31, to avoid impacts to nesting raptors and migratory birds in accordance with the Migratory Bird Treaty Act. The City will incorporate a CDOT Special Specification 240 (Protection of Migratory Birds) as part of the final plan set. The Specification 240 will be modified, as needed, to provide protections for any migratory birds that may be present outside of the typical nesting season. A qualified biologist will conduct a nest survey prior to construction. If active nests are found, coordination with CPW and the USFWS is required to determine an appropriate course of action, which may include, but is not limited to, a delay in construction to avoid the breeding season. In addition, due to the presence of two known active Great-horned Owl (*Bubo virginianus*) nests in the study area, a qualified biologist will conduct a nest survey prior to construction if construction occurs after January 1.	City of Aurora, CDOT Environmental	Prior to Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
42	Special Status Species – Federal Threatened/ Endangered Species	Potential loss of Ute ladies'-tresses orchid habitat	A qualified biologist will conduct surveys every year until construction commences for Ute ladies'-tresses orchid habitat during the blooming season of the orchid (late July through August) to identify if the orchid is present. If the orchid is present then consultation with the USFWS will be initiated, with the possibility of a Biological Assessment being prepared which would include conservation and mitigation measures for the effects identified. If no survey is conducted, then presence must be assumed. Coordinate with the USFWS during final design for effects determination. Incorporate erosion control BMPs to avoid sediment in wetlands and along Sand Creek, where potential habitat exists. The City will implement the BMPs identified in the Central Shortgrass Prairie Programmatic Biological Opinion in areas of presumed presence for state species of special concern. The City will consult with the USFWS to confirm the proposed effects on the Ute ladies'-tresses orchid and obtain any necessary clearances prior to construction activities taking place. Mitigation may be required if any plants are found and cannot be avoided by the Proposed Action.	City of Aurora, CDOT Environmental USFWS	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
	Special Status Species – Federal Threatened/ Endangered Species (continued)		Mitigation measures will be identified in coordination with the USFWS prior to construction activities occurring. Minimize disturbance and vegetation removal in potential habitat areas.		
43	Special Status Species – Species with other Federal Protection	Potential impacts to Bald Eagles and/or their habitat	Monitoring for eagle winter-roosts and active eagle nests will continue up to and during construction. Close coordination will occur with USFWS and CPW. A meeting will be scheduled with these agencies no less than 6 months prior to construction activities to determine eagle activity and identify any existing nests. Surveys will be conducted in the Triple Creek Greenway Corridor from November 15 through August 15 each year to identify winter-roosting locations and active nest locations. Should active winter-roosts or active eagle nests be identified, the appropriate mitigation, such as sequencing of construction activities and construction timing and duration restrictions, will be determined through coordination with USFWS and CPW. Ongoing coordination will occur with USFWS and CPW to discuss monitoring results during the November 15 through August 15 dates for the duration of the project.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
44	Special Status Species – Colorado State Threatened/ Endangered Species	Potential loss of Western Burrowing Owl habitat associated with black-tailed prairie dog colonies.	A qualified biologist will conduct a survey prior to construction for nesting Western Burrowing Owls in prairie dog colonies if construction occurs between March 15 and October 31. If nesting burrowing owls are found, then coordination with CPW and USFWS must take place to identify mitigation. Mitigation will include providing a 150-foot buffer around any active burrowing owl burrows.	City of Aurora	Prior to Construction
45	Special Status Species – Colorado State Species of Special Concern – Swift Fox	Potential loss of habitat for the Swift Fox (*Vulpes velox*)	A qualified biologist will conduct a survey prior to construction to identify the presence of swift fox or their dens. If dens are identified, coordination with CPW will occur to identify more site-specific mitigation.	City of Aurora	Prior to Construction
46	Special Status Species – Colorado State Species of Special Concern – Black-tailed prairie dog	Loss of Black-tailed prairie dogs (*Cynomys ludovicianus*)	Surveys for black-tailed prairie dogs will occur during final design and prior to construction. The City of Aurora's policy on removal/relocation of prairie dogs will be followed. Preference will be given to passive relocation and non-lethal removal.	City of Aurora	Prior to Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
47	Special Status Species – Colorado State Species of Special Concern	Potential loss of habitat for: American Peregrine Falcon (*Falco peregrinus anatum*) – State Special Concern Ferruginous Hawk (*Buteo regalis*) – State Special Concern Long-billed Curlew (*Numenius americanus*) – State Special Concern Mountain Plover (*Charadrius montanus*) – State Special Concern	Coordination will occur with the USFWS whenever an active migratory bird nest is found to identify appropriate species-specific protection. Minimize disturbance and vegetation removal in potential habitat areas. A revegetation plan will be incorporated into the SWMP during final design in coordination with the City of Aurora Parks, Recreation, and Open Space, CPW, CDOT, and the USFWS for use along the Proposed Action alignment in areas disturbed during construction. Specific objectives of the revegetation plan will be identified, such as blending the vegetation with existing vegetation, use of native species, and minimizing the spread of noxious and invasive weeds.	City of Aurora	Design Prior to Construction Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
48	Special Status Species – Colorado State Species of Special Concern	Potential loss of habitat for the northern leopard frog and the common garter snake.	A survey will be conducted between May 1 and September 1 prior to construction to determine if northern leopard frogs or common garter snakes are present in the Proposed Action footprint. If frogs or snakes are found, coordination with CPW will occur to safely remove any tadpoles**,** adult frogs, or snakes, and relocate them to a protected location. Pesticide application near permanent bodies of water will be restricted during the period of frog metamorphosis (June to August). Proper erosion control and construction BMPs will be used and identified in the SWMP to minimize erosion and sedimentation in frog and snake habitat.	City of Aurora	Prior to Construction Construction Maintenance
49	Archaeological Resources	The potential to impact previously unknown resources.	Should unidentified archaeological resources be discovered during any phase of construction, work will stop until the CDOT senior staff archaeologist is contacted and the resources have been evaluated in terms of the National Register eligibility criteria.	City of Aurora	Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
50	Paleontological Resources	The potential to impact previously unknown resources.	If disturbance yields any subsurface bones or other potential fossils anywhere within the Project area during construction, then work in the area should cease and the CDOT Staff Paleontologist, currently Nicole Peavey 303-747-9632, should be notified immediately to assess their significance and make further recommendations. When the project design plans are finalized, the CDOT Staff Paleontologist will examine them and determine the amount (lateral extent and depth) of impact to the Denver Formation, and the amount of construction monitoring, if any.	City of Aurora CDOT Environmental	Construction
51	Land Use	Conversion of small amounts of parks, recreation, and open space, residential and agricultural/pasture properties and transportation use.	For mitigation commitments, see parks, recreation, open space and Section 4(f) and 6(f), and right-of way.	City of Aurora	Design Right-of-Way Acquisition
52	Social Resources and Environmental Justice	Delays and detours during construction.	Coordinate with the local communities to provide advance notification of construction delays. Use construction practices that will minimize the disruption of traffic flow.	City of Aurora	Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
53	Social Resources and Environmental Justice	Impaired access to residences, delays and detours during construction.	Maintain access to residential dwellings at all times throughout construction. Maintain or provide alternate access to ensure connectivity between the transportation network and individual parcels.	City of Aurora	Construction
54	Social Resources and Environmental Justice	Delays and detours during construction.	Implement a way-finding and signage system to ease travel conditions for motorists.	City of Aurora	Construction
55	Right-of-Way	Property needed for right-of-way acquisition	Property acquisition for right-of-way will conform to requirements set forth in the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970 (Public Law 91-646 as amended).	City of Aurora	Design Right-of-Way
56	Right-of-Way	Permanent and temporary easements	Easements will be obtained through agreement between CDOT, the City of Aurora, and other affected property owners. Stipulations included in the easements will be followed.	City of Aurora	Design Right-of-Way

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
57	Utilities	Grading changes, physical conflicts with utilities	Where relocations are required due to conflicts with the Proposed Action, designs to relocate the utility will be developed with the utility company or public utility department. Utility adjustments that are required will be reviewed by each affected company or public utility department. Proper detours and advance notice will be coordinated with service providers to allow delivery of uninterrupted utility service during construction.	City of Aurora	Prior to construction
58	Parks, Recreation, Open Space and Section 4(f) and 6(f) Resources	Impacts to Open Space	The specific measures to compensate for impacted open space will be determined with each funding partner prior to construction but will include: ▪ Where possible provide replacement land of equivalent value, ▪ Payback of funding received relative to the current value of the property being converted, and monetary penalty payments, among other measures.	City of Aurora	Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
59	Parks, Recreation, Open Space and Section 4(f) and 6(f) Resources	Impacts to Coal Creek Arena from increase to floodplain/floodway	The main electrical building and the abandoned restroom building will be consolidated to a single building that will be constructed near the existing water well with a finished floor elevation above the proposed 100-year floodplain elevation. The announcer's booth stilts will be reinforced to improve the integrity of the structure and protect it from increased flooding hazards caused by floating debris.	City of Aurora	Prior to construction
60	Parks, Recreation, Open Space and 6(f) Resources	Impacts to Section 6(f) parcels	To offset the permanent impacts to the Section 6(f) Project #748 Springhill Park Addition by conversion to a non-recreation use, a replacement in-kind with land of at least current fair market value and of reasonable equivalent usefulness and location will occur.	City of Aurora	Prior to construction
61	Parks, Recreation, Open Space and 6(f) Resources	Triple Creek Trail impacts to existing alignment and Coal Creek Arena	Trail realignment and new trail spur will be constructed. The existing Triple Creek Trail will be open until proposed trail realignment is completed. Access to the trail will be maintained during construction.	City of Aurora	Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
62	Section 4(f) Resources	Impacts to Section 4(f) resources Environmental Day Camp Triple Creek Trail Coal Creek Arena	CDOT and FHWA will seek public review and comment regarding the impacts and mitigation for the Section 4(f) properties, through the EA review and comment process. ▪ Environmental Day Camp – Areas temporarily impacted during construction will be revegetated and restored to pre-construction conditions. ▪ Triple Creek Trail – Trail realignment and new trail spur will be constructed. The existing Triple Creek Trail will be open until proposed trail realignment is completed. ▪ Coal Creek Arena – The main electrical building and the abandoned restroom building will be consolidated to a single building that will be constructed near the existing water well with a finished floor elevation above the proposed 100-year floodplain elevation. The announcer's booth stilts will be reinforced to improve the integrity of the structure and protect it from increased flooding hazards caused by floating debris.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
63	Noise	Temporary noise during construction	Noise abatement barriers to mitigate traffic noise impacts were evaluated. None of the barriers were found to meet the requirements to be both feasible and reasonable. Therefore, no noise abatement barriers are recommended for the Proposed Action. The Proposed Action abuts several residences and parks. To minimize construction noise levels, typical best practices will be incorporated into construction contracts where it is appropriate to do so. These may include: ▪ Notify neighbors in advance when construction noise may occur. ▪ Keep noisy activities as far from sensitive receptors as possible. ▪ Exhaust systems on equipment be in good working order. Equipment maintained on a regular basis and will be subject to inspection by the construction project manager to ensure maintenance.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
	Noise (continued)		▪ Properly designed engine enclosures and intake silencers will be used where appropriate. ▪ New equipment subject to new product noise emission standards. ▪ Stationary equipment located as far from sensitive receptors as possible. ▪ Perform construction activities in noise sensitive areas during hours that are least disturbing to nearby residents.		
64	Visual Resources/ Aesthetics	Visual contrast of grading	▪ Avoid slopes greater than 3:1 to minimize erosion and difficulties with revegetation on steep slopes. ▪ Select native plant species that produce dense, fibrous roots to help prevent soil erosion.	City of Aurora	Design Construction
65	Visual Resources/ Aesthetics	Visual contrast of Sand Creek bridge structure	▪ Select colors, materials, forms, and finishes of bridge and wing walls that blend in and complement landscape features. ▪ Avoid reflective surfaces. ▪ Coordination of project design with CDOT landscape architect.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
66	Visual Resources/ Aesthetics	Visual contrast of native vegetation removal in Triple Creek Greenway Corridor	▪ Select plants and seed mixes that are consistent with native vegetation types, growth habits and soil types. ▪ Plan vegetation clearing edges that create a naturalized line and transition with the landscape setting. ▪ Temporary riparian and wetland impacts will be revegetated with appropriate native plants which will mimic adjacent habitats. ▪ Mimic surrounding plant density, spacing and species composition. ▪ Blend existing natural materials from the site into the project area by saving and reusing stumps, tree logs or native rocks.	City of Aurora	Design Construction
67	Visual Resources/ Aesthetics	Visual Contrast of intersection fill slopes	▪ Introduce native plants that provide and contribute to an aesthetic vista, in a manner that does not interfere with implementation of the project or result in inappropriate costs. ▪ Create a naturalized transition with the adjacent landscape setting.	City of Aurora	Design Construction
68	Visual Resources/ Aesthetics	Visual contrast of native vegetation removal in upland prairie	Create a continuous planting pattern across medians and roadway edges that will blend in with adjacent shortgrass prairie vegetation.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
69	Visual Resources/ Aesthetics	Visual contrast to residential viewers	Provide appropriate vegetation screening for residents adjacent to roadway and Picadilly intersection	City of Aurora	Design Construction
70	Visual Resources/ Aesthetics	Landform and vegetation contrast of water quality ponds and drainage features	Reduce the visual contrast of the geometric shape by rounding corners and blending pond edges and drainage channel with existing grades through slope rounding techniques to establish a naturalized shape.	City of Aurora	Design Construction
71	Visual Resources/ Aesthetics	Visual contrast of new building at Coal Creek Arena	Building will be visually consistent with surrounding setting	City of Aurora	Design Construction
72	Energy	Energy consumption due to construction	Recycled materials, such as asphalt, will be used to the maximum extent possible. The contractor will keep equipment well maintained, minimize equipment idling, and encourage carpooling to and from the work site. Staging areas will be located as close to the construction as possible.	City of Aurora	Construction
73	Hazardous Materials	Potential to encounter hazardous materials	An individual, property-specific Phase I Environmental Site Assessment is recommended prior to acquisition of property from Map I.D. # 1 and 1A.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
74	Hazardous Materials	Potential to encounter hazardous materials	CDOT Standard Specifications 250 (Environmental, Health and Safety Management) for assessment, handling, transport, and disposal of hazardous materials will be implemented if hazardous materials are encountered during construction.	City of Aurora	Design Construction
75	Hazardous Materials	Potential to encounter hazardous materials – groundwater	Structural excavation, such as caisson construction, may require the dewatering of contaminated groundwater. If dewatering is necessary, groundwater brought to the surface will be managed according to Section 107.25 of the *CDOT Standard Specifications for Road and Bridge Construction*. Dewatering in the vicinity of Buckley AFB will require specific management and disposal due to groundwater contamination (Map I.D. # 1, 1A, 2, 3, 4, 5 6, 7, and 8).	City of Aurora	Design Construction
76	Hazardous Materials	Potential to encounter hazardous materials – lead containing paint (LCP), asbestos containing material (ACM)	Due to the potential presence of ACM and LCP, an ACM and LCP survey will be conducted on any structures to be demolished as part of this project, and the regulated materials should be managed in accordance with Section 250.07 and 250.04, of the *CDOT Standard Specifications for Road and Bridge Construction*.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
77	Hazardous Materials	Potential to encounter hazardous materials – monitoring wells	Several wells, as shown on the plans, shall be protected by fence (plastic). Although not expected, if the wells are impacted during construction, the well must be abandoned and plugged according to Section 202.02 of the *CDOT Standard Specifications for Road and Bridge*. If wells are impacted, further coordination with Buckley AFB is required.	City of Aurora	Design Construction
78	Hazardous Materials	Potential to encounter hazardous materials – contaminated soil	Contaminated soil may be encountered during project construction due to illicit dumping in the area and the presence of contaminated groundwater west of Sand Creek (Map I.D. # 1, 1A, 2, 3, 4, 5 6, 7, and 8). A material handling plan and health and safety plan, is recommended as required by Section 250.03 of the *CDOT Standard Specifications for Road and Bridge Construction*.	City of Aurora	Design Construction
79	Hazardous Materials	Potential to encounter hazardous materials – asbestos contaminated soil	Specifications for Road and Bridge Construction will be prepared. Asbestos-contaminated soil is not anticipated during excavation, but if it is encountered, FHU recommends that the CDOT Asbestos-Contaminated Soil Management Standard Operating Procedure (CDOT, 2011) be followed for this project.	City of Aurora	Design Construction

Table D1 Summary of Impacts and Mitigation for the Proposed Action (continued)

#	Mitigation Category	Impact	Mitigation Commitment from Source Document	Responsible Branch	Timing/Phase that Mitigation will be Implemented
80	Project Completion	All construction impacts	Before final conclusion of the Project and 45 days prior to Project completion, the Contractor/City of Aurora shall submit to CDOT a final memorandum stating that all of the environmental mitigation commitments listed in **Table 4** Summary of Impacts and Mitigation for the Proposed Action of the Environmental Assessment (EA), 6th Avenue Extension, (included in the Reference Documents) have been documented and fulfilled, along with a summary detailing any of the environmental BMPs that were used on the Project. The memo should be addressed to the CDOT Region 1 environmental project manager (currently Carol Coates) at 303-757-9926. This summary of completion will be reviewed by CDOT and forwarded to FHWA for Acceptance before Project close-out can occur.	City of Aurora	Construction