

MITIGATION TRACKING FORM - Book 2, Exhibit 5-A

Project Information

Project Name: US 550 - US 160 Connection South Design-Build
Environmental Project Manager: Emily Byers
Project Number: NHPP 5501-029
Document Type: US 550 FONSI (2005) and US 550 South Connection to US 160 ROD (2015)
Project Phase: Reevaluations

NEPA Doc	Mitigation Category	Impact from NEPA Document	Mitigation Commitment	Responsible Party	Mitigation Commitment Location in RFP	Timing/Phase of Construction Mitigation to be Constructed	Source Document of Mitigation Commitment and Page Number	Location of Mitigation(s) in Plan Sheets/Specs Include All Page Numbers that Apply	Date Mitigation Completed	Name of Person Completing Mitigation	Agency Coordination Required? Yes or No	Name of Each Agency
US 550 FONSI	Air Quality	Increased particulate emissions during construction activities may cause temporary localized visibility impacts.	Locate staging area at least 200 meters from the nearest residence or business.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Air Quality	Construction activities could temporarily diminish air quality	Obtain all required permits and/or notices to regulatory agencies, including a Colorado Department of Public Health and Environment (CDPHE) Air Pollution Emission Notice (APEN), including a Fugitive Dust Control Plan.	Contractor	Book 2, Section 5.5.1							
US 550 South Connection to US 160 ROD (2015)	Air Quality	Construction activities could temporarily diminish air quality	Prohibit unnecessary idling of construction equipment.	Contractor	Book 2, Section 5.5.1							
US 550 South Connection to US 160 ROD (2015)	Air Quality	Construction activities could temporarily diminish air quality. Increased particulate emissions during construction activities may cause temporary localized visibility impacts.	Wet exposed soils and soil piles for dust suppression.	Contractor	Book 2, Section 5.5.1							
US 550 FONSI	Biological Assessment	Potential for erosion during construction.	Before grubbing and grading, erosion controls will be constructed around the perimeter of the project area including filter barriers, diversion, and settling structures.	Contractor	Book 2, Exhibit 5-A							
US 550 EA/FONSI (2018 BA)	Biological Assessment	Introduction of noxious weeds.	Certified weed-free permanent and temporary erosion control measures will be implemented to minimize erosion and sedimentation during and after construction.	Contractor	Book 2, Exhibit 5-A							
US 550 EA/FONSI (2018 BA)	Biological Assessment	Ground disturbance.	Construction will be performed from the roadway where practical to limit disturbance.	Contractor	Book 2, Exhibit 5-A							
US 550 EA/FONSI (2018 BA)	Biological Assessment	Potential for erosion during construction.	Temporary erosion control measures will be maintained in working condition until the project is complete or the measures are no longer needed.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI Reevaluation	Biological Assessment	Permanent and temporary placement of fill in wetlands and waters of the US.	Adhere to the terms and conditions of the Section 404 Nationwide Permit and 401 Water Quality Certification.	Contractor	Book 2, Exhibit 5-A							
US 550 EA/FONSI (2018 BA)	Biological Assessment	Attracting wildlife to construction areas and the highway.	During construction, garbage or trash produced from construction activities will be removed promptly and properly to avoid attracting wildlife.	Contractor	Book 2, Exhibit 5-A							
US 550 EA/FONSI (2018 BA)	Biological Assessment	Introduction of noxious weeds.	Vehicles and equipment entering the project area will be kept clean of noxious weeds and free from oil leaks, and will be subject to inspection. Construction equipment will be washed thoroughly to remove dirt, plant, and other foreign material prior to entering the project area. Particular attention will be shown to the under carriage and surfaces where soil containing exotic seeds could exist. These efforts are critical to prevent the introduction and establishment of non-native plant species into the project area. CDOT's contractor will inspect each piece of equipment before entering the project area. Equipment found operating on the project that has not been inspected or has oil leaks will be shut down and subject to citation.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Birds	Vegetation clearing, earth- moving, and other construction activities have the potential to alter breeding behavior and destroy nests of bird species protected under the Migratory Bird Treaty Act (MBTA), including raptors. Destruction or disturbance of nests that results in loss of eggs or young is a violation of the MBTA.	Complete nest surveys to evaluate the presence of active nests within the study area. Inactive nests, once confirmed by the wildlife biologist, will be removed at any time to discourage nesting. Use techniques such as netting under bridges and at culverts, to prevent new nest establishment. Visit the site every three to four days to prevent new nests from being completed, unless construction activity is continuous on a daily basis during active nesting season.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Bald Eagle	The project is expected to have limited adverse effects on bald eagles wintering or nesting within 0.5-mile of the study area due to construction activities causing increased stress during wintering and nesting periods.	Raptor nest surveys will be conducted within 0.5 mile of construction activities prior to starting construction of specific highway segments. If an active or inactive bald eagle nest is identified, a 0.5-mile seasonal construction buffer (November 15 to July 31) will be required around the nest, and restrictions on construction activities in the area will be implemented. No human encroachment will occur within a 0.5-mile radius of the nest during the nesting season (November 15 to July 31).	Contractor	Book 2, Section 5.9 Book 2, Exhibit 5-A Book 2, Section 5.5.7							
US 550 South Connection to US 160 ROD (2015)	Birds Threatened and Endangered Species	Vegetation clearing, earth- moving, and other construction activities have the potential to alter breeding behavior and destroy nests of bird species protected under the Migratory Bird Treaty Act (MBTA), including raptors. Destruction or disturbance of nests that results in loss of eggs or young is a violation of the MBTA. Bald eagle and raptor habitats could be disrupted due to construction activities.	Contact CDOT if an active nest or roost is located in or near the study area to determine the need for seasonal buffers to prevent disturbance to nesting birds during construction.									
US 550 FONSI	Burrowing Owl	Should burrowing owls be present in the construction area, there is a potential for loss of nests and mortality of eggs and young.	Conduct burrowing owl surveys within Gunnison's Prairie Dogs colonies between May 1 and July 31 where impacts to GPD colonies are planned. Follow CPW policies regarding burrowing owl surveys (CPW, 2007, Recommended Survey Protocol and Actions to Protect Nesting Burrowing Owls When Conducting Prairie Dog Control) and time the survey such that the final burrowing owl survey is completed within one week of disturbance to Gunnison's Prairie Dogs colonies.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Construction	Highway users would be impacted by temporary road closures or detours.	Contact emergency service providers and provide an access plan during construction to minimize delays and response times for emergency services.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Construction	Highway users would be impacted by temporary road closures or detours.	Limit major traffic disruption to the off-peak hours as much as possible to alleviate congestion, reduce capacity impacts, and lessen economic impacts.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Construction	Highway users would be impacted by temporary road closures or detours.	Place flaggers placed immediately adjacent to work areas to optimize traffic flow during periods of construction activities and to reduce delays.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Construction	Highway users would be impacted by temporary road closures or detours.	Provide public notices through newspapers and local signs to warn motorists of future detours and road closures.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Construction	Access to business and residential areas would be impacted during construction.	Provide temporary signage to business entrances during construction to draw attention to highway access points.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Construction	Highway users would be impacted by temporary road closures or detours.	Use the shortest, most direct detours with adequate signing to limit additional travel to the extent possible.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Farmland	Two agricultural properties irrigated with a center-pivot irrigation system would be impacted by all the action alternatives, including the Preferred Alternative.	Relocate center pivot irrigation systems prior to construction. Review and resolve other irrigation conflict on a case by case basis.	Contractor	Book 2, Exhibit 5-A							

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Project Phase: Reevaluations

NEPA Doc	Mitigation Category	Impact from NEPA Document	Mitigation Commitment	Responsible Party	Mitigation Commitment Location in RFP	Timing/Phase of Construction Mitigation to be Constructed	Source Document of Mitigation Commitment and Page Number	Location of Mitigation(s) in Plan Sheets/Specs Include All Page Numbers that Apply	Date Mitigation Completed	Name of Person Completing Mitigation	Agency Coordination Required? Yes or No	Name of Each Agency
US 550 FONSI	Farmland	The Preferred Alternative would impact approximately 29.3 total acres of Prime Farmland.	To limit impacts to Prime Farmland acquire only the portions of parcels actually needed for the right-of-way instead of the entire parcel.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Fish and Wildlife	Temporary wildlife and fish habitat impact.	BMPs for sediment control and sediment reduction techniques will be incorporated into the alternatives.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Fish and Wildlife	Migratory birds and habitat impacts.	Comply with the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act at all times, including conducting pre-construction surveys for nesting birds set forth by U.S. Fish and Wildlife Service (USFWS), CPW, and Revision of Section 240, Protection of Migratory Birds (attached). Schedule work to avoid taking (pursue, hunt, take, capture or kill; attempt to take, capture, kill or possess) migratory birds protected by the MBTA. Report any incidental taking of a migratory bird to CDOT.	Contractor	Book 2, Section 5.5.7 Book 2, Exhibit 5-A							
US 550 FONSI	Birds	Vegetation clearing, earth- moving, and other construction activities have the potential to alter breeding behavior and destroy nests of bird species protected under the Migratory Bird Treaty Act (MBTA), including raptors. Destruction or disturbance of nests that results in loss of eggs or young is a violation of the MBTA.										
US 550 South Connection to US 160 ROD (2015)	Fish and Wildlife	Effect to wildlife movement across Farmington Hill	Eight-foot-high wildlife exclusionary fencing in conjunction with large-mammal underpasses will be used to reduce vehicle-wildlife collisions and provide road crossing opportunities.	Contractor	Book 2, Section 5.5.7							
US 550 South Connection to US 160 ROD (2015)	Fish and Wildlife	Wildlife movement across Florida Mesa	In addition to the two bridges, construct one large mammal crossing and seven small mammal crossings to accommodate to wildlife movement.	Contractor	Book 2, Section 5.5.7							
US 550 South Connection to US 160 ROD (2015)	Fish and Wildlife	Wildlife connectivity.	The remaining US 550 right-of way not incorporated into an alternative would be removed and revegetated.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Fish and Wildlife	Effect to wildlife movement across Farmington Hill	To ensure that locations of wildlife crossings will be suitable, CDOT will continually collect data on roadkilled wildlife to identify trends in locations of vehicle wildlife collisions.	CDOT	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Fish and Wildlife	Wildlife connectivity.	Use exclusionary fencing along the alignment.	Contractor	Book 2, Section 5.5.7							
US 550 South Connection to US 160 ROD (2015)	Hazardous	Possible effect to hazardous materials.	Any required hazardous materials management plans will include safety measures developed for protection of workers and the public while doing this work and during construction if hazardous materials/waste are encountered.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Hazardous	Possible effect to hazardous materials.	Comply with the Colorado Petroleum Storage Tank Regulations requirements for equipment staging and bulk fuel storage. Include security, secondary containment, pressure relief, and a spill prevention control and countermeasure plans.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Hazardous	Possible effect to hazardous materials.	Follow CDOT standard specifications when disposing of roadway and residential structures potentially coated with lead based paint.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Hazardous	Possible effect to hazardous materials.	Test fill materials derived from areas that could be impacted by hazardous materials sites or are suspect of being contaminated to ensure that contaminated materials are not redeposited within the project right-of-way.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Hazardous	Possible effect to hazardous materials.	Use BMPs to offset accidental release of hazardous materials into the environment during normal construction activities.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Hazardous Materials	Potential disturbance of regulated sites, including underground storage tanks, leach fields, and contaminated soil.	A Materials Management Plan will be prepared and implemented in order to specify management practices for worker protection and possible excavation and disposal of contaminated materials in areas where contaminated soil and/or groundwater may be encountered during construction activities.	Contractor	Book 2, Section 5.5.11							
US 550 FONSI	Hazardous Materials	Potential disturbance of regulated sites, including underground storage tanks, leach fields, and contaminated soil.	Educate all workers of the potential to encounter soil and/or groundwater during construction activities. All applicable personnel performing construction type activities at the site will comply with OSHA worker protection standards.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Hazardous Materials	Potential disturbance of regulated sites, including underground storage tanks, leach fields, and contaminated soil.	If USTs, and/or petroleum contamination is found, adhere to all CDOT specifications regarding removal and/or site cleanup.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Hazardous Materials	Potential disturbance of a regulated site, including underground storage tanks, leach fields, and contaminated soil.	Once right-of-way process acquisition is complete, CDOT will complete subsurface testing to verify if the REC located at 12995 South Highway 550 site poses a contamination risk. If necessary, CDOT will complete the Phase II and any required mitigation measures at this location prior to the start of construction.	CDOT	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Historic and Archaeological	Six archaeological resources and three historic resources eligible for the National Register of Historic Places (NRHP) will be affected.	CDOT Cultural Resources Specialist will review interim and final design plan set submittals to confirm that no additional impacts to cultural resources will occur.	CDOT	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Historic and Archaeological	Six archaeological resources and three historic resources eligible for the National Register of Historic Places (NRHP) will be affected.	CDOT shall initiate consultation with SHPO and the consulting parties when design plans are completed at the 30%, 70%, and 90% level to evaluate opportunities to minimize harm to resources.	CDOT	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Historic and Archaeological	Six archaeological resources and three historic resources eligible for the National Register of Historic Places (NRHP) will be affected.	CDOT will complete historic recordation for Webb Ranch (5LP8461) and Craig Limousin Ranch (5LP9307) accordance with Level II Documentation, as outlined in Colorado Office of Archaeology and Historic Preservation (OAHP) Form #1595. All documentation activities will be performed or directly supervised by architects, historians, photographers and/or other professionals meeting the qualification standards in their field as stipulated in the Secretary of Interior's Professional Qualifications Standards. originals of all documents resulting from the documentation to the SHPO, the La Plata County Historical Society, the property owners, and a local library or archive designated by the SHPO.	CDOT	Book 2, Exhibit 5-A							

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US 550 South Connection to US 160 ROD (2015)	Historic and Archaeological	Six archaeological resources and three historic resources eligible for the National Register of Historic Places (NRHP) will be affected.	During the execution of the MOA through termination, FHWA shall provide a summary report detailing work undertaken pursuant to the MOA to all parties to this agreement.	CDOT	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Historic and Archaeological	Six archaeological resources and three historic resources eligible for the National Register of Historic Places (NRHP) will be affected.	If resources protected by the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001) are encountered during excavation, work must halt immediately until the appropriate course of action is determined by CDOT in concert with the SHPO, consulting parties and tribal governments. All work will proceed according to the provisions of the Unmarked Human Graves section of the Colorado Historical, Prehistorical, and Archaeological Resources Act of 1973, as amended (CRS 24-80-1301ff).	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Historic and Archaeological	-	Obtain a conservation easement or other form of deed restriction for a portion of the right-of-way being acquired from the Webb Ranch to preclude future development and help retain the historic nature of the ranch.	CDOT	Book 2, Exhibit 5-A							
US 550 FONSI	Historic and Archaeological Preservation	Inadvertent discovery of archeological material.	If surface or subsurface archaeological materials—including but not limited to flaked stone or bone implements, pottery, architectural features, and/or human remains—are exposed in the presence (or absence) of an Archaeological Monitor, all work in the vicinity of the find shall stop and the Engineer shall be notified. The Archaeological Monitor and CDOT Senior Archeologist will work with the Contractor to avoid unnecessary work interruptions.	CDOT and Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Historic and Archaeological Preservation	Inadvertent discovery of archeological material.	The project corridor is known to contain significant Ancestral Puebloan archaeological materials, including human remains. Consequently, a qualified Archaeological Monitor provided and funded by CDOT (an in-house or contracted specialist) shall monitor the initial phase(s) of ground disturbance during construction within the US 550/US 160 Connection project area.	CDOT	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015) US 550 FONSI	Land Use	Construction of the new roadway will alter land use and future land use plans in the area.	Comply with state and federal requirements, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (referred to as the Uniform Act) for the acquisition of any property.	CDOT	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Noise	Construction noise, including blasting adjacent to noise sensitive receptors	Use well- maintained equipment, particularly with respect to mufflers.	Contractor	Book 2, Section 5.5.2							
US 550 South Connection to US 160 ROD (2015) US 550 FONSI	Noise	Construction noise, including blasting adjacent to noise sensitive receptors. Construction noise would cause a temporary disturbance to local residents. Construction would generate noise from diesel-powered earth- moving equipment such as dump trucks and bulldozers, back-up alarms on certain equipment, compressors, and pile drivers.	All applicable La Plata County noise ordinances and regulations will be followed, unless the Contractor secures a variance.	Contractor	Book 2, Section 5.5.2 Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Noise	Construction noise, including blasting adjacent to noise sensitive receptors	Develop a communication protocol to inform local residents, businesses, and the traveling public about construction, including blasting. Consider the use of Variable Message Signs and Web sites and media outlets.	Contractor	Book 2, Section 5.5.2							
US 550 FONSI	Noxious Weeds	Mobilizing construction vehicles, excavating and moving borrow materials and topsoil, land clearing, and reclamation may bring noxious weeds or introduce new noxious weeds into the project area.	Conduct monthly noxious weed surveys during the growing season, March through October, to identify and treat noxious weeds.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Noxious Weeds	Introduction of noxious weeds.	Examine topsoil sources used in reclamation for noxious weeds prior to bringing on site.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Noxious Weeds	New weed infestations may occur after the project is completed. Noxious weeds that establish in construction areas and along the road ROW may spread into adjacent lands, resulting in degradation of habitat quality in riparian areas and other natural habitats.	Post-construction monitoring will be performed per existing CDOT ROW maintenance standards.	CDOT	Book 2, Exhibit 5-A							
US 550 FONSI	Noxious Weeds	Mobilizing construction vehicles, excavating and moving borrow materials and topsoil, land clearing, and reclamation may bring noxious weeds or introduce new noxious weeds into the project area.	Reclaim all disturbed areas.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Noxious Weeds	Introduction of noxious weeds.	Use certified weed-free mulch for reclamation.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Noxious Weeds	Mobilizing construction vehicles, excavating and moving borrow materials and topsoil, land clearing, and reclamation may bring noxious weeds or introduce new noxious weeds into the project area.	Wash vehicles before being brought onto the project site to ensure that they are free of soil and debris capable of transporting noxious weed seeds or roots from other areas.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015) US 550 FONSI	Paleontology	Discovery of subsurface bones or other potential fossils. Paleontological resources may be impacted by excavation activities although none were found during field visits.	If paleontological resources are uncovered during project construction immediately notify CDOT paleontological staff by calling the Cultural Resource Program Manager at 303-757-9631 and follow procedures in Section 107.23 of the Standard Specifications.	Contractor	Book 2, Section 5.5.4 Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Paleontology	Discovery of subsurface bones or other potential fossils.	The CDOT paleontologist will review the final released for construction documents for review at least 14 Days prior to associated construction activities determine the extent of impact beyond areas previously surveyed determine if additional survey is required.	Contractor and CDOT	Book 2, Section 5.5.4							
US 550 South Connection to US 160 ROD (2015)	Socioeconomics and Environmental Justice	Construction of the new roadway could require the acquisition of operational farmland	Where farmlands are permanently lost to production, CDOT will compensate landowners for the lost value of crops and production.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Soils and Geology	Construction activities would cause increased wind and runoff-related soil erosion due to the loss of vegetation cover in construction areas.	Obtain and adhere to the terms and conditions of the CDPHE CDPS permit and CDOT's Stormwater Construction program.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Soils and Geology	Construction activities would cause soil compaction that impairs soil function.	Topsoil will be stripped and stored separately during construction activities. Topsoil will be placed on areas to be reclaimed just prior to mulching and reseeded to minimize compaction from construction equipment.	Contractor	Book 2, Exhibit 5-A							

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US 550 FONSI	Terrestrial Wildlife	Mortality to small- and medium-sized terrestrial wildlife from vehicle collisions is expected along with long-term habitat fragmentation and population losses from highway widening.	CDOT will continue to coordinate with CPW as the wildlife crossing design is refined.	CDOT	Book 2, Exhibit 5-A							
US 550 FONSI	Terrestrial Wildlife	Mortality to small- and medium-sized terrestrial wildlife from vehicle collisions is expected along with long-term habitat fragmentation and population losses from highway widening.	Install small culverts every 500 to 1,000 feet to increase habitat connectivity and access across US 550 for small- and medium-sized mammals, such as rodents, lagomorphs, coyotes, weasels, and foxes. Construct these crossings of small concrete box or pipe culverts (ranging from 3.0 to 5.0 feet in diameter, achieving an average of 4.0 feet throughout the corridor) and place in areas with vegetative cover, including uplands with herbaceous cover and drainages. Partially bury the culverts to accommodate a natural substrate floor.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Terrestrial Wildlife	Mortality to small- and medium-sized terrestrial wildlife from vehicle collisions is expected along with long-term habitat fragmentation and population losses from highway widening.	Place approximately one foot of vegetative debris such as old stumps, logs, and brush inside (along one edge of the bottom) of the four large crossing structures as cover for small mammals and amphibians	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Terrestrial Wildlife	Mortality to small- and medium-sized terrestrial wildlife from vehicle collisions is expected along with long-term habitat fragmentation and population losses from highway widening.	Provide three years of post-construction monitoring for the large wildlife mammal crossings structures. Include AVC data along US 550 and track surveys and camera traps on in the structures.	CDOT	Book 2, Exhibit 5-A							
US 550 FONSI	Terrestrial Wildlife	Wildlife vehicle collisions.	Two wildlife crossings will be installed, if funding allows, at MP 14.2 and MP 15.3. These structures will include wildlife fencing.	Contractor	Book 2, Exhibit 5-A							
US 160 Final EIS BA Addendum (2013)	Threatened and Endangered Species	Construction disturbance (noise and human presence)	Both permanent and construction lighting will be located to prevent or minimize light throw into suitable NMMJM habitat.	Contractor	Book 2, Exhibit 5-A							
US 160 Final EIS BA Addendum (2013)	Threatened and Endangered Species	Construction disturbance (noise and human presence)	Construction within suitable NMMJM riparian habitat will be avoided. A construction buffer of 330 feet will be employed around suitable riparian habitat. The buffer would not include areas of poor habitat quality such as asphalt, gravel areas, or other areas with less than 50% vegetative cover from grasses, forbs, or shrubs.	Contractor	Book 2, Exhibit 5-A							
US 160 Final EIS BA Addendum (2013)	Threatened and Endangered Species	Construction disturbance (noise and human presence)	Night work will be avoided within 330 feet of suitable NMMJM habitat.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI US 550 South Connection to US 160 ROD (2015)	Bald Eagle Threatened and Endangered Species	Impacts to nesting birds. Bald eagle and raptor habitats could be disrupted due to construction activities.	Nocturnal roost surveys will be conducted on specific highway segments prior to starting construction activities between November 15 and March 15. Construction activity will be restricted within a 0.25-mile buffer of active nocturnal roost sites between November 15 and March 15.	Contractor	Book 2, Section 5.9 Book 2, Section 5.5.7							
US 550 South Connection to US 160 ROD Reeval (2019)	Threatened and Endangered Species	Construction disturbance (noise and human presence)	Potential Southwestern willow flycatcher habitat in and adjacent to the project area will be avoided and will be clearly marked on project maps and flagged in the field by CDOT prior to construction. CDOT will fully inform contractors and subcontractors of the locations of these areas prior to construction activity	CDOT and Contractor	Book 2, Exhibit 5-A							
BA, US 160 Final EIS (2006)	Threatened and Endangered Species	Construction disturbance (noise and human presence)	Pre-construction surveys will be required to determine presence or absence of Southwestern willow flycatchers if suitable willow habitat (30 feet in width and length, and 6 feet in height) would be directly affected by construction activities, or when construction activities would occur within 0.25 mile of suitable willow habitat. Surveys will be required annually to determine the presence or absence of Southwestern willow flycatchers prior to construction of each particular segment of roadway. Surveys will be conducted during the Southwestern willow flycatcher breeding season (May 1 to August 15) as outlined in A Natural History Summary and Survey Protocol for the Southwestern willow flycatcher (Sogge et al. 2010).	Contractor	Book 2, Exhibit 5-A							
BA, US 160 Final EIS (2005)	Threatened and Endangered Species	Construction disturbance (noise and human presence)	Seasonal construction buffers (May 1 to August 15) will be required within 0.25 mile of active nest areas and within 0.25 mile of occupied habitat (Powell 2003). During and after construction, CDOT will delineate sensitive habitats to avoid direct impacts from maintenance activities.	CDOT and Contractor	Book 2, Exhibit 5-A							
US 160 Final EIS BA Addendum (2013)	Threatened and Endangered Species	Construction disturbance (noise and human presence)	Staging, parking, and stockpiling areas will be located outside NMMJM habitat areas (330 feet from the 100-year floodplain or as determined by project biologist).	Contractor	Book 2, Exhibit 5-A							
US 160 Final EIS BA Addendum (2013)	Threatened and Endangered Species	Construction disturbance (noise and human presence)	Suitable NMMJM riparian habitat in and adjacent to the project area will be clearly marked on project maps and flagged in the field prior to construction. The contractor and all subcontractors will be fully informed of the locations of these areas prior to construction activity.	CDOT and Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015) US 550 EA/FONSI (2018 BA)	Vegetation	Construction activities would impact vegetation and stabilization of soils and permanently alter the vegetation profile. Vegetation loss.	All temporarily disturbed areas will be returned to pre-construction grades, as feasible, and reseeded with appropriate native upland and/or wetland seed mix.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Vegetation	Potential long-term loss of other native vegetation communities	Revegetate areas of ground disturbance with a native seed mix.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Vegetation	Habitats may be degraded by construction activities.	Use silt fencing and other BMPs to prevent degradation of habitats adjacent to the construction area by preventing transport of eroded sediment.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Vegetation	Construction activities could contribute to the spread of noxious weeds.	Conduct monthly noxious weed surveys during the growing season, March through October, to identify and treat noxious weeds.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Vegetation	Sensitive habitats could be disturbed.	Fence the construction ROW where it passes through sensitive areas to prevent temporary disturbance outside the construction limits.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI Reevaluation	Visual	New retaining wall that is visible to residents.	Follow the project specific aesthetic guidelines.	Contractor	Book 2, Exhibit 5-A							

MITIGATION TRACKING FORM - Book 2, Exhibit 5-A

Project Information

Project Name: US 550 - US 160 Connection South Design-Build
Environmental Project Manager: Emily Byers
Project Number: NHPP 5501-029
Document Type: US 550 FONSI (2005) and US 550 South Connection to US 160 ROD (2015)
Project Phase: Reevaluations

NEPA Doc	Mitigation Category	Impact from NEPA Document	Mitigation Commitment	Responsible Party	Mitigation Commitment Location in RFP	Timing/Phase of Construction Mitigation to be Constructed	Source Document of Mitigation Commitment and Page Number	Location of Mitigation(s) in Plan Sheets/Specs Include All Page Numbers that Apply	Date Mitigation Completed	Name of Person Completing Mitigation	Agency Coordination Required? Yes or No	Name of Each Agency
US 550 South Connection to US 160 ROD (2015)	Visual Resources	Visual quality impacts.	Adhere to the project specific guidelines developed for the project regarding walls and bridges.	Contractor	Book 2, Section 5.5.24							
US 550 South Connection to US 160 ROD (2015)	Visual Resources	Visual quality impacts.	Implement revegetation as soon as possible during construction to stabilize soils and reduce visual contrasts.	Contractor	Book 2, Section 5.5.23							
US 550 South Connection to US 160 ROD (2015)	Visual Resources	Visual quality impacts.	Minimize construction of cut-and-fill slopes and blend the cut line into the existing terrain.	Contractor	Book 2, Section 5.5.22							
US 550 South Connection to US 160 ROD (2015)	Visual Resources	Visual quality impacts. The removal of roadside vegetation increases the visual impact of the roadway by increasing the contrast between construction areas and the surrounding landscape.	Minimize removal of adjacent roadside vegetation to the extent practicable. In impacted areas that lose vegetation that provides visual screening, revegetate with taller plant species that serve the same function, so long as they do not inhibit sight distance or are in the clear zone.	Contractor	Book 2, Section 5.5.25							
US 550 FONSI	Vegetation	Vegetation communities in the construction area would be impacted due to construction activities.			Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Visual Resources	Visual quality impacts.	Revegetate "Farmington Hill" with native species once the existing roadway has been removed.	Contractor	Book 2, Section 5.5.26							
US 550 FONSI	Vegetation	Farmington Hill road would be impacted due to new road realignment.			Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Water Quality	Impacts from erosion during construction.	On lands owned by the Southern Ute Indian Tribe, obtain and adhere to the terms and conditions of the National Pollution Discharge Elimination System Permit (NPDES), issued by the Environmental Protection Agency (EPA).	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI Reevaluation	Biological Assessment	Increased impervious surface and concentrated runoff as a result of the widened roadway (on tribal lands).										
US 550 FONSI	Water Resources	Increased impervious surface and concentrated runoff as a result of the widened roadway (on non-tribal lands).	Obtain and adhere to the terms and conditions of the CDPHE CDPS permit and CDOT's Stormwater Construction program.	Contractor	Book 2, Section 5.5.27							
US 550 South Connection to US 160 ROD (2015)	Water Quality	Indirect impacts to water resources as a result of water quality degradation due to contaminant runoff. Indirect impacts to water resources include additional pollutant loading (copper and zinc) and potential sediment discharges associated with stormwater, erosion, hydrologic modifications, and noxious weeds.										
US 550 FONSI	Wetlands	Permanent and temporary placement of fill in wetlands and waters of the US.	Provide compensatory mitigation for all permanently impacted wetlands and restore temporarily impacted wetlands on-site.	Contractor	Book 2, Exhibit 5-A							
US 550 FONSI	Wetlands	Permanent and temporary placement of fill in wetlands and waters of the US.	Wetland and riparian areas shall be protected from construction equipment and unpermitted fills by installing temporary orange construction fencing as directed by the Engineer. Construction fencing shall be removed upon project completion.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Temporary construction impacts.	Clearing and grubbing will include the conditions of the Migratory Bird Treaty Act (MBTA), Environmental Site Assessment (ESA), Municipal Separate Storm Sewer System (MS4) permit, and Section 404 permit.	CDOT	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Construction activities could temporarily impact wetlands.	Construct concrete washout structures in designated areas at least 50 feet from wetlands and other waters of the U.S. Do not store temporary fill material stored within wetlands or other waters.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Construction activities could temporarily impact wetlands.	Cover any wetland areas used for construction access with a layer of geotextile, straw, and soil prior to use. Remove the materials upon completion of use.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Discharge of effluent could impact wetlands	Do not discharge of effluent into wetlands or other waters without appropriate discharge permits.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Construction activities could temporarily impact wetlands.	Do not store stage equipment or store construction materials within 50 feet of wetlands or other waters.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Construction activities could temporarily impact wetlands.	Do not use upland seed mixes within wetlands.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Construction activities could temporarily impact wetlands.	Fence wetland and stream boundaries during construction.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Wetland hydrology will be maintained to the extent possible	Maintain wetland hydrology sources and connections to wetlands if possible. If construction will cut off the hydrological connection to a wetland, mitigate the impacts to the affected wetlands. Obtain a Section 404 permit and coordination with USACE as necessary if these are new impacts.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Construction activities could temporarily impact wetlands.	Temporary fill material will not be stored within wetlands or other waters.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Construction activities could temporarily impact wetlands.	Use BMPs, such as berms, brush barriers, checkdams, erosion control blankets, filter strips, sandbag barriers, sediment basins, silt fences, surface roughening and/or diversion channels, during all phases of construction to reduce impacts from sedimentation and erosion.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S	Construction activities could temporarily impact wetlands.	Where practicable, perform work during low flows or dry periods, to the extent practicable. If present, divert flowing water around active construction areas.	Contractor	Book 2, Exhibit 5-A							

MITIGATION TRACKING FORM - Book 2, Exhibit 5-A

Project Information

Project Name: US 550 - US 160 Connection South Design-Build
Environmental Project Manager: Emily Byers
Project Number: NHPP 5501-029
Document Type: US 550 FONSI (2005) and US 550 South Connection to US 160 ROD (2015)
Project Phase: Reevaluations

NEPA Doc	Mitigation Category	Impact from NEPA Document	Mitigation Commitment	Responsible Party	Mitigation Commitment Location in RFP	Timing/Phase of Construction Mitigation to be Constructed	Source Document of Mitigation Commitment and Page Number	Location of Mitigation(s) in Plan Sheets/Specs Include All Page Numbers that Apply	Date Mitigation Completed	Name of Person Completing Mitigation	Agency Coordination Required? Yes or No	Name of Each Agency
US 550 South Connection to US 160 ROD (2015) US 550 FONSI Reevaluation	Wetlands and Waters of the U.S. Biological Assessment	Impacts to jurisdictional wetlands. Permanent and temporary placement of fill in wetlands and waters of the US.	Obtain a USACE Section 404 Nationwide Permit and Section 401 Water Quality Certification from U.S. Environmental Protection Agency.	CDOT	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD Reeval (2019)	Wetlands and Waters of the U.S.	Impacts to non-jurisdictional impacts	Provide a minimum of 1:1 replacement.	CDOT and Contractor.	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD Reeval (2019)	Wetlands and Waters of the U.S.	Impacts to jurisdictional wetlands.	Purchase mitigation bank credits for jurisdictional impacts.	CDOT and Contractor.	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S.	Erosion adjacent to a wetland	Seed and/or plant and mulch all areas of exposed soil throughout construction (following the completion of each section). Place mulch or tackifier when seeding and/or planting cannot occur due to seasonal constraints.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S.	Chemical use in the project area could damage wetlands.	Prohibit the use of chemicals, such as soil stabilizers, dust inhibitors, and fertilizers within 50 feet of wetlands and other waters.	Contractor	Book 2, Exhibit 5-A							
US 550 South Connection to US 160 ROD (2015)	Wetlands and Waters of the U.S.	Equipment refueling in the project area could damage wetlands.	Refuel equipment in designated contained areas, at least 50 feet away from wetlands and other waters.	Contractor	Book 2, Exhibit 5-A							