Austin Light Rail Phase 1

Final Environmental Impact Statement

Appendix M: Mitigation Monitoring Plan

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1 Plan Overview

1.1 Introduction

This Mitigation Monitoring Plan (MMP) documents Austin Transit Partnership's (ATP) commitment to mitigation measures that reduce or avoid potential adverse impacts associated with the Austin Light Rail Phase 1 Project (Project), and how these measures will be effectively implemented and monitored. This MMP is consistent with the mitigation and compliance measures identified in the Austin Light Rail Phase 1 Project Final Environmental Impact Statement/Record of Decision (FEIS/ROD) developed in accordance with the National Environmental Policy Act (NEPA).

The goals of the MMP are as follows:

- **Compliance Assurance:** Verify that all mitigation measures are carried out in accordance with the mitigation commitments within the NEPA documentation.
- **Impact Reduction:** Minimize adverse environmental impacts by incorporating mitigation strategies into the final design and construction phases.
- **Effectiveness Evaluation:** Monitor and evaluate the implementation of the mitigation measures as the project proceeds through the final design process, construction, and the first year of operation, and adjust as necessary to improve outcomes of successfully reducing identified environmental impacts.
- **Transparency and Accountability:** Provide clear documentation and reporting to stakeholders, ensuring transparency in the implementation process.
- **Adaptive Management:** Allow for flexibility and adjustments if mitigation measures are found to be ineffective based on monitoring results and changing conditions during design and construction.
- **Stakeholder Engagement:** Involve relevant stakeholders in the monitoring process, where appropriate, to address concerns and provide feedback, as applicable.

This MMP is a dynamic and evolving document. It will be updated regularly to reflect new information, changes in project scope, and feedback from monitoring activities. This ensures that the mitigation strategies remain effective and relevant throughout the project development and construction.

1.2 Definition of Mitigation and Compliance Measures

Mitigation measures are an important mechanism that agencies can use to minimize potential adverse environmental impacts associated with their actions. Mitigation may include:

1. Avoiding an impact by not taking a certain action or parts of an action

2. Minimizing an impact by limiting the degree or magnitude of the action and its implementation
3. Rectifying an impact by repairing, rehabilitating, or restoring the affected environment
4. Reducing or eliminating an impact over time through preservation and maintenance operations during the life of the action
5. Compensating for an impact by replacing or providing substitute resources or environments

Mitigation measures include commitments to specifically reduce the impacts of adverse environmental impacts. Compliance measures, while generally not considered mitigation under NEPA, ensure adherence to existing and relevant laws, regulations, and permit conditions. Together, they form a comprehensive approach to environmental management for the project.

Mitigation Measures

Purpose: Designed to specifically address and reduce adverse environmental impacts identified in the FEIS or identifies additional modeling/studies to be completed during final design to clarify risk.

Examples: Additional modeling to locate noise barriers, creating wetlands to replace those affected by construction, and implementing erosion control compliance measures.

Focus: Directly related to the Project's environmental impacts and aimed at reducing or eliminating the adverse effect of those impacts or furthering risk identification through additional studies.

Compliance Measures

Purpose: Ensure that the project adheres to all relevant laws, regulations, and permit conditions.

Examples: Regular reporting to FTA and/or regulatory agencies, conducting inspections to verify adherence to environmental standards, maintaining records of compliance activities.

Focus: Identifies specific legal and regulatory requirements (local, state, and federal) related to the Project's design and construction.

1.3 Relationship with the FEIS/ROD

The FEIS provides detailed analyses and proposed mitigation measures, while the ROD formalizes the decision and commitment to those measures. Together, they form the foundation for the MMP.

The MMP is directly linked to the FEIS, detailing how each mitigation commitment, including mitigation and compliance measures, identified in the FEIS will be implemented and monitored. The MMP helps maintain alignment between the Project's environmental commitments and its actual implementation. The MMP:

- Ensures all mitigation measures identified in the FEIS are addressed and implemented
- Provides a clear roadmap for how each mitigation measure will be carried out and the parties responsible, ensuring consistency with the FEIS
- Includes detailed documentation and reporting requirements to demonstrate compliance with the FEIS and methods to track the implementation of mitigation measures
- Establishes a feedback loop where monitored results are used to assess the effectiveness of mitigation measures and allow for adjustments and improvements from the measures identified in the FEIS
- Provides a mechanism for demonstrating compliance to regulatory agencies and other stakeholders

The MMP must comply with NEPA regulations and demonstrate a plan to implement all mitigation measures are in accordance with the ROD. Post-ROD actions include monitoring and reporting activities to ensure ongoing compliance.

As design advances, variations in Project design may occur due to new or updated information or other circumstances that preclude strict adherence to the preliminary design commitments. Changes in the Project design and anticipated construction means and methods may be re-evaluated in accordance with provisions included in ATP's Configuration Control Management Plan, and in consultation with FTA, as necessary, to ensure compliance with NEPA. NEPA re-evaluation documents will be completed in coordination with FTA, as needed. Design changes and/or new study area information that result in new or greater environmental impacts compared to those disclosed in the FEIS/ROD will be evaluated in supplemental NEPA-related documents.

1.4 Roles and Responsibilities

The bullets below provide an overview of the roles and responsibilities of individuals involved in the MMP. As ATP's Configuration Management Plan is updated for future project phases, these roles may be refined.

- *FTA* – The FTA and their Project Management Oversight Consultant (PMOC) are responsible for assessing mitigation commitments following completion of the FEIS/ROD as part of the grant oversight process. This primarily occurs during the final design and construction phases.
- *ATP Executive Vice President (EVP), Planning, Community and Federal Programs* – This ATP executive has the ultimate responsibility for the implementation of the MMP. They ensure that all mitigation measures are carried out as planned and that the project remains in compliance with environmental regulations. This position is responsible for the necessary coordination to identify and support the roles and responsibilities on the project team and stakeholders to implement the mitigation

measures effectively. This EVP oversees the preparation and submission of regular reports to the FTA and other regulatory bodies.

- *ATP Environmental Compliance Manager* – The ATP Environmental Compliance Manager (ECM) oversees adherence to relevant environmental regulations and completion of mitigation measures. The ECM and their team will prepare regular reports for FTA, or as needed, for other regulatory bodies. The ECM is responsible for monitoring the implementation of mitigation measures and identifies/addresses any compliance issues that may arise during the Project.
- *City of Austin* - The City retains the authority to review and approve the implementation of any mitigation measures that affect its right-of-way (ROW) or public facilities. The City's approval is required prior to implementation of any mitigations impacting these areas to ensure alignment with local regulations, protection of infrastructure, and public safety. The City will coordinate with ATP and other stakeholders throughout the mitigation development and implementation process.
- *Environmental Compliance Team* – These individuals consist of field inspectors and auditors, including staff from ATP and the City (as applicable) who will conduct regular site inspections to monitor compliance with mitigation measures and environmental regulations.
- *Contractors* – ATP's contractors are responsible for implementing the mitigation measures specified in the project's design and construction documents and ensure their activities comply with all environmental regulations and BMPs. Contractors will be required to submit regular progress reports to ATP as specified by the contract.

Project monitors, whether ATP staff or contract personnel, will be given clear, written guidance regarding the mitigation measures to be monitored and reported on. Furthermore, when compliance is achieved, there will be a clear "sign off" by the appropriate jurisdiction so that this compliance is documented. This "sign off" documentation will be reported in the quarterly project MMP update and attached to the document, if appropriate.

1.5 Monitoring Activities

For purposes of the MMP, monitoring is described as the continuous, ongoing process of project oversight. Monitoring, rather than simply reporting, is well-suited to projects with complex mitigation measures.

A program for monitoring the implementation of mitigation measures will contain at a minimum the following components:

- A list of the mitigation measures or revisions and related conditions of approval which have been adopted for the Project
- The time, or Project phase, by which the measure must be implemented
- A schedule for regularly checking on the Project's compliance with the mitigation measures or project revisions and related conditions of approval, including progress toward meeting specified standards, if any
- A means of recording compliance at the time of each check

- A statement assigning responsibility for monitoring implementation of the mitigation measures and related conditions of approval to specific persons or agencies, public or private

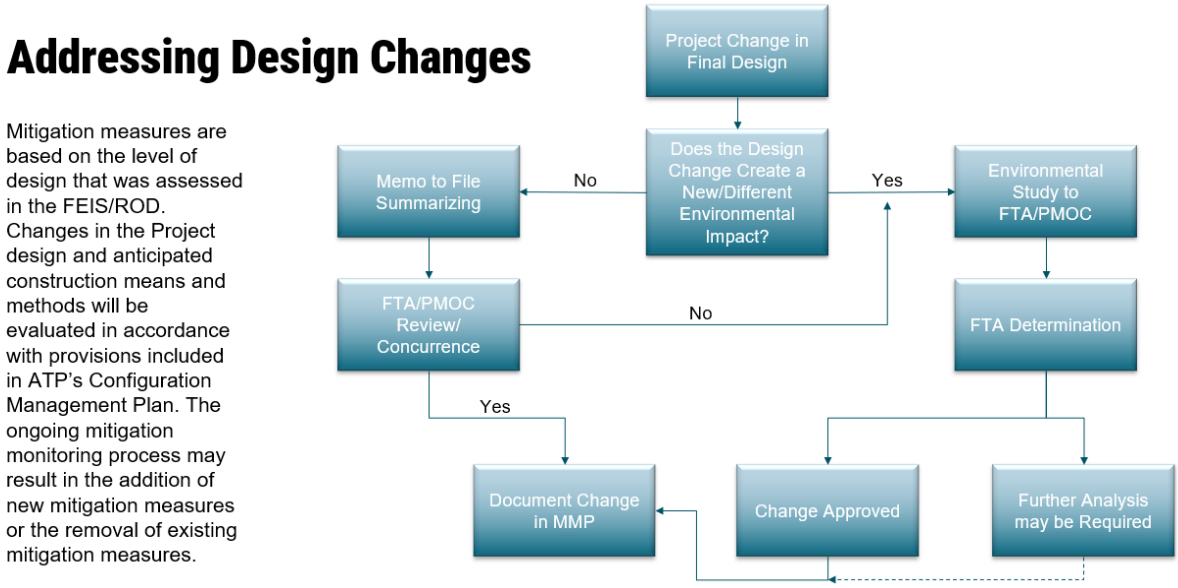
1.6 Tracking and Documentation

Quarterly mitigation monitoring status reports of the MMP will be prepared by the ATP Environmental Compliance Manager for distribution to the FTA, internally to key ATP staff involved in design and construction, as well as key contractor staff. The document will be publicly available on ATP's website. These quarterly reports will provide the status of the monitoring and/or implementation of compliance and mitigation measures for each reporting period and will indicate what actions, if any, must be undertaken to complete or finalize the compliance or mitigation measures. The MMP is a living document and will include periodic updates by ATP. Compliance and mitigation measures may be modified as further design details and operating plans are developed.

In addition to quarterly MMP updates, monitoring and tracking mitigation compliance will be done using worksheets and checklists. Worksheets will be used to express: (1) impact being mitigated; (2) mitigation measure for that impact; (3) implementer; (4) monitoring frequency; (5) monitoring requirements; (6) frequency of monitoring or reporting; (7) standards for completion or compliance; and (8) verification of compliance. Checklists will be developed by ATP (or the Contractor, as applicable) for use during site inspections and audits to verify adherence to BMPs, project specifications, and regulatory requirements.

As design advances, variations in Project design may occur due to new or updated information or other circumstances that preclude strict adherence to the preliminary design commitments. Changes in the Project design and anticipated construction means and methods will be evaluated in accordance with provisions included in ATP's Configuration Management Plan, and in consultation with FTA, as necessary. As shown in **Figure 1-1**, if the change is insignificant, ATP will prepare a letter for the project file and provide a copy to the FTA/PMOC. If substantial changes to the project design occur during the final design process, ATP will submit an Environmental Technical Memorandum to the FTA/PMOC. The memorandum will describe the design modification, any related environmental impacts, and associated changes in mitigation. Based on information contained in the study, the FTA may require that supplemental environmental analyses be conducted, approve the changes as presented in the environmental study, or determine that no additional documentation is required.

Figure 1-1: Addressing Design Changes



2 Identification and Organization of Mitigation and Compliance Measures

Throughout the design process associated with the FEIS, ATP considered methods to avoid or minimize impacts on the human and natural environment. Where adverse impacts could not be avoided through design refinements, mitigation measures were identified to reduce or offset those impacts.

Based on the findings documented in the FEIS/ROD, mitigation and compliance measures are organized by environmental resource area (e.g., neighborhoods and community resources, utilities, water resources, etc.). Each adopted measure is assigned a tracking number that begins with an abbreviation for the resource (e.g., NC for Neighborhoods and Community Resources) and MM for mitigation measure or CM for compliance measure. The table in **Chapter 3** is organized accordingly:

- Unique Identifier – mitigation or compliance measure unique identification number, such as "AQ-MM1" (Air Quality Mitigation Measure #1)
- Mitigation/Compliance Measure – mitigation or compliance measure title (identifies the topic being addressed)
- Summary – explanation of the mitigation or compliance measure, including any outstanding issues or community concerns, and necessary background information
- EIS Reference – identifies the section of the FEIS/ROD where the measure is included
- Responsible Party – identifies the individual, group, or agency responsible for the implementation of the compliance or mitigation measure
- Timing – indicates when the measure will be implemented: during final design, construction, or post-construction

A column relating to the ongoing status of the measure will be added with the first quarterly report.

Table 2-1 shows where each discipline is discussed in the FEIS/ROD. **Chapter 3** summarizes the mitigation and compliance measures for the Project. To avoid duplicity, construction-related measures have been placed at the end of the table.

Table 2-1: Disciplines Discussed in the FEIS/ROD

Discipline	FEIS/ROD Section	FEIS/ROD Appendix
Transportation	3	D
Acquisitions and displacements	4.1	E-1
Land Use and zoning	4.2	E-2
Neighborhoods and community resources	4.3	E-3
Socioeconomics	4.4	E-4
Visual quality and aesthetics	4.5	E-5
Cultural resources including historic and archeological resources	4.6	E-6 and E-7
Hazardous materials	4.7	E-8
Utilities	4.8	E-9
Safety and security	4.9	E-10
Noise and vibration	4.10	I
Air quality and greenhouse gases	4.11	F-1
Energy and electromagnetic fields	4.12	F-2
Soils and geologic resources	4.13	F-3
Water resources	4.14	F-4
Threatened and endangered species	4.15	F-5
Section 4(f) of the U.S. Department of Transportation Act, and Section 6(f) of the Land and Water Conservation Fund Act	—	G, H
Construction	Throughout	—

3 Project Compliance and Mitigation Measures

Table 3-1: Mitigation and Compliance Measures for the Project

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
Acquisitions and Displacements					
AD-MM1	Develop Acquisition and Relocation Plans	ATP will develop the Real Estate Acquisition Management Plan (RAMP) and Relocation Plan outlining the acquisition and relocation processes for affected property (residential and commercial) owners and tenants.	4.1.2.2 Appendix E1	ATP	Project Development/ Final Design
AD-CM1	Support Anti-Displacement Program	ATP will support the City of Austin Displacement Prevention team and Community Advisory Committee (CAC).	4.1.3	City Displacement Prevention Team	Final Design and Construction
AD-CM2	Comply with Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA)	All persons (residential and commercial) displaced, as a result of an acquisition of real property, will be provided with assistance to relocate pursuant to the requirements of 49 CFR Part 24. ATP will also provide financial and advisory services in compliance with the URA for short-term construction-related relocations.	4.1.2.2 Appendix E1	ATP	Final Design and Construction
Land Use and Zoning					
LZ-CM1	City Site Development Process	ATP will coordinate with the City to develop a permitting manual that addresses compliance with city permitting/code requirements.	4.2.2.2	ATP, City	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
Neighborhoods and Community Resources					
NCR-MM1	Contractors' Compliance Plan(s)	Prior to the start of construction, ATP contractors will develop traffic control and environmental compliance plans based on site-specific means and methods addressing noise, vibration, dust, air quality emissions, lighting, visual quality, traffic disruption, property access, and temporary parking loss. The traffic control plans will be consistent with ATP's Maintenance of Traffic (MOT) plans developed in coordination with the Construction Partnership Program, and the environmental compliance plans will address regulatory requirements and reflect ATP's mitigation commitments. ATP will monitor contractor compliance with the plans in accordance with ATP's Construction Management Plan (**CON-MM1**). ATP will make the traffic control plans available to emergency responders. The construction phasing and sequencing is developed during the final design of transportation projects and Traffic Control Plans are developed by contractors. Construction phasing and sequencing plans for the Project and I-35, for example, will be reviewed to determine whether scheduled construction contracts will overlap and affect the same community. Contractor work restrictions and traffic/ped/bike detour routes will be identified to minimize the combined effects of the work done by different contractors. Measures to minimize construction	4.3.2.2	ATP and Contractors	Final Design and Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		impacts to the greatest extent practicable will be identified.			
NCR-MM2	Waller Creek Boathouse	As a part of the impacts to Waller Beach, one community resource would be displaced. ATP will compensate the City in accordance with City and Federal requirements per **PARK-MM1**, **PARK-CM2**, and **AD-CM2**.	4.3.2.2	ATP	Final Design
Socioeconomics					
SE-MM1	Develop Business Assistance Program	ATP will develop a Business Assistance Program to reduce the burden on businesses prior to and during construction.	4.4.3	ATP	2025 initiate program development; implementation throughout construction
SE-CM1	Workforce Development	ATP will work with regional partnerships across government, non-profit, and private industry to support workforce development programs for residents to be trained and ready for job opportunities and career pathways resulting from the Project, as well as other major infrastructure projects in the region.	4.4.3	ATP and CapMetro	Currently ongoing
Visual Quality and Aesthetics					
VA-MM1	Aesthetic and Visual Guidelines	ATP will develop Architecture and Urban Design Guidelines to provide that station, bridge design, and other features are compatible with the surrounding environment.	4.5.3	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
VA-MM2	Community Engagement for Design Features	ATP will develop a Public Involvement Plan to involve the community in the development of the project including design features of stations and new bridges. ATP will work collaboratively with the community, including people with disabilities, to develop architectural treatments, visual screening, landscape, and other features designed to enhance visual quality and aesthetics within the urban realm.	4.5.3	ATP and Contractors	Final Design
VA-MM3	Visual Screening during Construction	ATP and its contractors will implement visual screening treatments at construction sites in residential areas, where feasible, near facilities such as the OMF and park and rides.	4.5.3	ATP and Contractors	Final Design and Construction
VA-MM4	Construction Lighting Plan	ATP and its contractors will use lighting (for construction and operation) in accordance with the Texas Health and Safety Code Title 5 §425.002 regarding light pollution, City lighting code ordinances, and ATP's Architectural and Urban Design Guidelines, and the High-Performance Infrastructure Guidelines.	4.5.3	ATP and Contractors	Construction and Operation
VA-MM5	Riverside Dr Elevated Structure	ATP will explore strategies to address visual impacts of the elevated structure along Riverside Drive near Travis Heights. Community outreach will be conducted in accordance with **VA-MM2**.	4.5.2.2	ATP	Final Design
Cultural Resources					
CR-MM1	Archeological Survey and Monitoring	ATP will continue archaeological surveying in previously recommended areas as right-of-entry is obtained. ATP intends to perform construction monitoring (**CON-MM2**) for areas potentially	4.6.5	ATP	Final Design and Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		containing historic features and areas of high probability for containing archaeological deposits that are currently inaccessible for survey due to existing structures or pavement. The areas of proposed grade changes on either side of the Lady Bird Lake crossing, which are currently covered in concrete, would be monitored during construction in addition to the following locations: • 422 Guadalupe Street • 510 Guadalupe Street • 810 Guadalupe Street • 1305 Guadalupe Street • 411 West MLK Boulevard • 2825 Guadalupe Street • 3402 Guadalupe Street • 517 West 39th Street • Trinity Street at the proposed Cesar Chavez Station A final report detailing the results of the archaeological survey and monitoring will be submitted to FTA and THC for review after all surveys and monitoring are completed.			
CR-MM2	City Historic Preservation Office	ATP and the City of Austin will explore the potential for structural impacts of the rail construction project and rail operations on the historic Bertram Building, 1601 Guadalupe Street. The 1860s building is among the oldest commercial buildings in Austin and features a basement. This building is identified in Table 5 – Criteria of Effect in Appendix E-6.	4.6.2.2 Appendix E-6	City and ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
CR-CM1	Section 106 of the National Historic Preservation Act of 1966	ATP will continue to comply with the Section 106 consultation process to identify any historic properties potentially affected by the Project; to accurately assess the Project's effects; and to identify reasonable ways to avoid, minimize, and mitigate any adverse effect on historic properties. Continue to consult with the Texas Historical Commission (THC) and other parties with interest in the effects of the Project on historic properties. FTA and ATP have developed a Programmatic Agreement (PA) in consultation with the SHPO/THC and Project Consulting Parties to streamline and clarify the Section 106 review process for any future activities related to the Project. The PA establishes agreed-upon procedures for identifying and evaluating historic properties, assessing any changes to the Project during final design, and resolving adverse effects. The PA will help to expedite Project approvals while protecting historic properties.	4.6.3	ATP	Final Design and Construction
CR-CM2	City Historic Preservation Office (HPO) Coordination	ATP will work closely with the City's Historic Preservation Office to facilitate local historic review processes for buildings over 45 years of age that are 1) locally historically designated or eligible for local designation, and 2) identified for demolition, alternation, or potentially impacted by easements for Project elements. As part of the local historic preservation review process, the HPO recommends measures to mitigate the loss of or impact on historic buildings that meet one or	4.6.2.2 Appendix E-6	City and ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		more of the five criteria for local landmark designation. Mitigation measures include a City of Austin Documentation Package, which is a standard requirement for building demolitions that may meet one or more local designation criteria. Additional measures may include interpretive signage or interpretive elements that convey the history of demolished buildings. Interpretive elements may be incorporated into the design process. Construction-related mitigation: **CON-MM3**.			
Hazardous Materials					
HM-MM1	Complete Environmental Site Assessments	Prior to property acquisition and construction, ATP will conduct Phase 1 ESAs for all permanent property acquisitions (Phase I ESA-ASTM 1527-21). Special attention will be given to the three high-risk and 24 moderate-risk sites identified in Table 2 and Table 3 of Appendix E-8. The Phase I ESA will include review of available TCEQ files (existing sampling data and/or investigation reports). If the results of a Phase I ESA reveal recognized environmental conditions (release of hazardous substances or petroleum products to the environment), ATP will perform a Phase II ESA (ASTM 1903) that could include soil and groundwater sampling to quantify contamination. Where conditions warrant a Phase II ESA, ATP will include the following in the ESAs:	4.7.1 4.7.2.2 Appendix E-8	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		• A work plan that includes the numbers and locations of proposed soil borings/monitoring wells, drilling and sampling methods, analytical methods, sampling rationale and site geohydrology sited in a manner to determine impacts to construction • A site-specific health and safety plan • Documentation to include field procedures and evaluation of the levels and extent of contaminants found and conclusions and recommendations regarding the condition of the site and the necessary remediation or waste management activities necessary to complete construction If the Phase II ESAs indicate the presence of contaminated soil and/or groundwater at concentrations exceeding TCEQ screening values in locations where ground-disturbing activities will occur, ATP will conduct appropriate remediation prior to construction. Remediation activities may include removal of contaminated soil, in situ treatment or soil capping. Contaminated soil will be disposed of properly **(HM-MM2)**. If contamination is intrinsic to construction activities and remediation prior to construction is impractical, ATP will complete mitigation measures during construction.			
HM-MM2	Hazardous Waste Management	ATP contractors will prepare a Hazardous Materials Management Plan to ensure the proper handling, use, storage, and disposal of hazardous	4.7.2.2	ATP and Contractors	Final Design, Construction,

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		materials in accordance with local, state, and federal regulations during construction and operation. ATP will require its construction contractor and any other entities handling hazardous materials during construction and operation activities to adhere to the Hazardous Materials Management Plan. This plan will also address the potential for discovery of unidentified hazardous materials, USTs, or hazardous or solid waste **(HM-MM3)**. Hazardous waste regulations are enforced by TCEQ, and asbestos regulations are enforced by the Texas Department of State Health Services. Depending on the amount of hazardous waste generated, ATP will prepare a RCRA Contingency Plan, if applicable.			and Operation
HM-MM3	Previously Unidentified Hazardous Materials	Prior to construction, ATP will prepare a Hazardous Materials Contingency Plan to address the potential for the discovery of unidentified hazardous materials, USTs or hazardous or solid waste. The contingency plan will also address remediation of accidental damage that might occur during pipelines relocation and require that such remediation be conducted prior to continuation of construction activities in the affected area. ATP will require its construction contractor and any other entities handling hazardous materials during construction and operation activities to adhere to the	4.7.2.2	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		Hazardous Materials Contingency Plan. Hazardous materials and solid/hazardous waste regulations are enforced by TCEQ.			
HM-MM4	Construction and Demolition Waste Management	ATP contractors will prepare a Waste Management Plan to address handling, transporting, and disposing of construction and demolition waste **(CON-MM2)** generated during construction and operation activities. ATP will require its construction contractor and any other entities handling non-hazardous waste during construction activities to adhere to the Waste Management Plan and to handle and dispose of construction and demolition waste generated during construction according to applicable federal, state and local regulations.	4.7.2.2	ATP and Contractors	Final Design and Construction
Utilities					
U-MM1	Master Utilities Agreement	ATP will develop a Master Utilities Agreement(s) in coordination with franchise utility companies. This effort will assemble and track utility conflicts and agreements with public and private utility owners and third parties. ATP will coordinate with public and private utility owners and third parties as design progresses to identify additional impacts and minimize service disruptions.	Appendix E-9 (Attachment A)	ATP, City	Final Design and Construction
U-MM2	Identification of Utilities	During final design, ATP or its contractors will perform below ground utility exploration to verify exact locations and depths of known subsurface utilities. This data may inform or modify ATP's	4.8.2.2	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		approach to the protection and/or relocation of these utilities.			
U-MM3	Disruption of Service during Utilities Relocation	During final design and construction, ATP or its contractors will resolve conflicts with each major utility provider (water, wastewater, oil and gas, electric transmission, etc.). Where utilities must be relocated, ATP will comply with other regulatory requirements applicable to utility relocations and the UROP **(U-CM1)**. Because of utility relocations, construction of the Project would result in scheduled and/or accidental interruptions of utility services **(CON-CM1)**. ATP will coordinate with the utility provider during final design and phasing of construction activities to minimize interruptions during the relocation process. Relocation of electric transmission lines will be in accordance with the Texas Public Utility Commission Substantive Rule 25.101, as applicable to electric utilities.	4.8.2.2 and Appendix E-9 (Attachment A)	ATP	Final Design
U-MM4	Design to Reduce Energy and Water Demand at Facilities	ATP or its contractors will develop High-Performance Infrastructure Guidelines to implement efficiency practices, report on their effectiveness, and align with City goals. ATP will integrate efficient operating practices at the new OMF and other facilities to reduce energy and water demand and to recycle water.	4.8.2.2	ATP	Final Design
U-MM5	Stray Current	ATP or its contractors will develop and implement standard control measures in consultation with utility owners to avoid the potential of stray currents that can damage or corrode utility	4.8.3	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		systems. If additional effects are identified during final design of the Project, ATP will work with the potentially affected utility owners or utility provider to determine whether mitigation is warranted.			
U-CM1	Utility Rules of Practice Compliance	ATP will comply with UROP to maintain access to utilities for maintenance and repair.	4.8.2.2	ATP, City	Final Design and Construction
Safety and Security					
SS-MM1	Emergency Response Analysis	Prior to construction, ATP will coordinate with the City of Austin to evaluate traffic control plans and develop alternative routing for emergency responders, as needed, to mitigate emergency access impacts. During construction, ATP will coordinate with emergency responders as needed to address alternative routing needs.	4.9.3	ATP	Final Design and Construction
SS-MM2	Emergency Response Plan	ATP will also work with emergency response agencies to establish an Emergency Response Plan and communication protocols to support coordinated response during construction and operations.	4.9.3	ATP, Contractors, and Emergency Responders	Prior to Operations
SS-MM3	Agency Safety Plan	In compliance with 49 CFR 673, ATP will develop and implement a Public Transportation Agency Safety Plan that incorporates Safety Management Systems principles and methods for the Project. These plans may be incorporated into relevant operating agreements developed prior to service operations. An annual assessment of the Agency Safety Plan will be reported to FTA. TxDOT will serve as the State Oversight Agency and will	4.9.2.2	ATP	Prior to Operations

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		oversee ATP's implementation of the Agency Safety Plan.			
SS-MM4	Construction Safety	ATP will prepare a Safety and Security Management Plan in compliance with FTA's Project and Construction Management Guidelines and perform pre-construction assessments of the LOC to identify potential hazards. Appropriate safety measures will be specified in contract documents and ATP will conduct regular safety audits of contractor compliance.	4.9.2.2	ATP	Final Design and Construction
SS-MM5	Inspection, Testing, and Maintenance Program	ATP will develop an Inspection, Testing, and Maintenance Program that specifies minimum standards and schedules for inspection, testing, and maintenance of vehicles, track, and other critical infrastructure to maintain state of good repair, reduce waste, reduce costs, and alleviate safety risks of failure.	4.9.2.2	ATP	Prior to Operations
SS-CM1	Austin Fire Department Regulations and Requirements	ATP will coordinate AFD design requirements for safety, access, and operations into final design.	4.9.3	ATP	Final Design
SS-CM2	Transit Facilities Safety	ATP will incorporate Crime Prevention through Environmental Design (CPTED) principles for public areas associated with stations, park-and-rides, and ancillary support facilities (TPSS, OMF, MOW, etc.)	4.9.2.2	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
Noise and Vibration					
NV-MM1	Operational Noise Mitigation	Where potential noise impacts have been identified, ATP will assess and incorporate feasible and reasonable site-specific mitigation measures (noise barriers, building sound insulation, and special trackwork) into the final design. This includes the four locations where crossover noise contributes to impacts and one location where the structure is adversely affected by operational noise: • 3rd Street between Guadalupe and Trinity streets • Guadalupe Street between Mary and Oltorf streets • East Riverside between Grove Boulevard and Lawrence Street • East Riverside between Lawrence Street and Coriander Drive In accordance with FTA guidance (FTA 2018), severe noise impacts will be mitigated unless there is no reasonable and feasible means to do so. Moderate noise impacts will be evaluated based on factors such as sensitivity of land uses, increase over existing levels, and cost-effectiveness. ATP will continue monitoring noise levels during the operations testing phase of the Project. Should additional operational noise impacts be identified, ATP will hold a community noise	4.10.3.1	ATP	Final Design and Operations

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		workshop (specific to affected property owners) to identify appropriate mitigation.			
NV-MM2	Operational Vibration Mitigation	Where adverse vibration impacts have been identified, including at the Motel 6 and the Arise Riverside Apartments along the lead track for the OMF, ATP will evaluate and incorporate reasonable and feasible site-specific mitigation treatments into final design. Potential measures include ballast mats, tire-derived aggregate, resilient fasteners, floating slabs, and low-impact special trackwork. Evaluation of site-specific mitigation measures will occur during the final design phase, considering track geometry, vibration frequencies, and surrounding sensitive receptors. ATP will continue monitoring vibration levels during the operations testing phase of the Project. Should additional operational vibration impacts be identified, ATP will hold a community vibration workshop to identify appropriate mitigation.	4.10.3.2	ATP	Final Design and Operations
NV-MM3	Construction Noise and Vibration Control Plan	ATP will comply with the Project Connect Noise Ordinance, which includes the preparation of Noise Control Plans by contractors addressing: • Contractor's specific equipment types and maximum noise limits for each piece of equipment with certification testing • Prohibitions on pile driving and certain other types of equipment and processes during the nighttime hours	4.10.3.3	ATP and Contractors	Final Design, Construction, and Operations

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		• Identification of specific noise sensitive sites near construction sites • Methods for projecting construction noise levels • Noise monitoring plan requirements • Implementation of noise and vibration control measures, where appropriate • Public information and complaint response procedures including points of contact and procedures for prompt response Noise and vibration minimization techniques may include, but are not limited to, locating stationary equipment away from noise-sensitive sites, constructing temporary barriers, adjusting haul routes, or modifying construction methods and schedules. The KUT radio station and the Jesse H. Jones Communication Center (CMB) at the University of Texas are noise and vibration sensitive receivers and should be given special consideration by the contractor during construction to avoid impacts. ATP will prepare the Programmatic Project Communications Plan, as specified in the Project Connect noise ordinance.			

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
Air Quality					
AQ-MM1	Air Quality BMPs	ATP will incorporate requirements into construction contract documents for best management practices to manage air quality throughout construction through the implementation of measures such as: • Dust Suppression: Treat disturbed areas with dust suppression techniques (e.g., watering, soil binders, chemical stabilizers). Apply water or other methods during clearing, excavation, grading, and demolition to control fugitive dust. • Materials Transport: Cover or wet materials transported offsite to limit dust emissions; limit construction vehicle speeds and remove tracked-out soil from roads when it extends more than 50 feet or at end of each workday. • Construction Equipment: Limit idling of inactive equipment and maintain equipment per manufacturer specs. Encourage use of electric-powered and low-VOC equipment, where feasible. • Ground-Disturbing Activities: Phase ground-disturbing activities to minimize the extent of exposed surfaces at any one time. • Traffic Management: Implement proper traffic control to minimize congestion and localized emissions. Encourage routing to less congested streets and avoid peak-hour disruptions.	4.11.2.2	Contractor	Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
AQ-CM1	Compliance with Texas Low Emission Diesel Fuel Program	All contractors must comply with the Texas Low Emission Diesel Fuel Program.	4.11.2.2	Contractor	Construction
Energy and Electromagnetic Disruption					
EED-MM1	Sensitive Facilities and Sensitive Equipment	If warranted, ATP will perform modeling at each of the sensitive facilities identified in the EMF/Electromagnetic Interference (EMI) Study Area to identify existing levels of EMI and the potential level of EMI that will result from the Project. Develop and implement standard design control measures in consultation with utility owners to mitigate the potential of stray currents.	4.12.3	ATP	Final Design
EED-CM1	Compliance with Federal Communications Commission Regulations	ATP will comply with Federal Communications Commission regulations and NEPA guidelines for Project equipment regarding electromagnetic fields (EMF).	Appendix F2	ATP	Operations
Soils and Geologic Resources					
SG-MM1	Void Mitigation Plan	During final design, ATP will prepare a void mitigation plan in coordination with TCEQ and the City. The plan will include void discovery protocols, protection and mitigation measures for features within or near regulated zones, and provisions for daily trench inspections if warranted. If a previously unknown void or karst feature is discovered during construction, work within 50 feet will stop, and temporary protective BMPs will be installed. Work may resume only	4.13.2.2	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		after regulatory agencies approve a mitigation or closure plan appropriate to the feature's characteristics.			
SG-MM2	Erodibility, Shrink-Swell Potential, and Settlement	Incorporate stabilization techniques and BMPs, such as matting and revegetation, into the design of the Project to improve unstable and settlement-prone soils to minimize and mitigate the hazards of soil conditions throughout the Project alignment as a result of erodibility, shrink-swell potential, settlement, and slope failures.	4.13.2.2	ATP	Final Design
SG-MM3	Pre-construction Site Inspections	Conduct site geotechnical inspections and slope monitoring of the Project alignment to identify concerns and determine whether unstable locations need improvement so that mitigation measures, such as additional site stabilization, can be incorporated in the final design.	4.13.2.2	ATP and Contractors	Pre-Construction
SG-MM4	Riverside Drive Slope Stabilization	ATP will assess ground conditions along the right-of-way of the slope on the south side of Riverside Drive during Final Design to ascertain unsafe ground conditions and stabilization methods, if needed. These will be specified in construction contract documents, as appropriate.	4.13.2.2	ATP	Final Design
SG-CM1	Protection of Geologic Features	ATP and contractors will identify and protect geologic features as required by the City's Land Development Code (LDC) and Environmental Criteria Manual (ECM).	4.13.2.2	ATP and Contractors	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
Water Resources					
WR-MM1	Intensive Critical Environmental Feature (CEF) Survey	ATP will conduct an intensive critical environmental features (CEF) survey to identify CEFs within 150 feet of the Build Alternative, as required by the City's Land Development Code and Environmental Criteria Manual. Following the intensive survey, ATP will coordinate buffer distances with the City's Watershed Protection Department, and if applicable, submit variance requests.	4.14.2.2 Appendix F-4 (Section 6.2.1.6)	ATP	Final Design
WR-MM2	Total Suspended Solids / Stormwater Runoff Control	The ATP contractor will implement stabilization measures to reduce total suspended solids, soil erosion, and sedimentation to protect adjacent waterbodies. Acceptable measures for stabilization include the following: • Retention/irrigation systems • Extended detention basin • Vegetative filter strips • Grassy swales • Sedimentation chambers • Constructed wetlands • Wet basins • Vegetation-lined drainage ditches • Rain gardens • Biofiltration ponds • Sand filter systems • Mulch filter socks Construction-related mitigation includes **CON-MM7**, **CON-MM8** and **CON-CM3**.	4.14.2.2 Appendix F-4 (Section 6.2.2.4)	Contractor	Post-construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
WR-MM3	Section 404 Permit	ATP will continue to coordinate with the U.S. Army Corps of Engineers as the designs of bridges are advanced to obtain the Section 404 permit (anticipated under a series of Nationwide Permits).	4.14.2.2 Appendix F-4 (Section 6.2.1.1)	ATP	Final Design
WR-MM4	Section 402 Permit	ATP will obtain and comply with the NPDES Construction General Permit Program and continue to coordinate with the U.S. Environmental Protection Agency and the Texas Commission on Environmental Quality through design and construction.	4.14.2.2 Appendix F-4 (Section 6.2.1.1)	ATP	Final Design and Construction
WR-CM1	Section 401 Water Quality Certification	Concurrent with the Section 404 process described in FEIS/ROD Appendix F-4, Section 6.1.1, ATP and its contractors will complete a Tier II Certification Questionnaire and Alternatives Analysis Checklist for review by TCEQ to obtain Section 401 Water Quality Certification. TCEQ may request additional information from ATP. Construction-related mitigation includes **CON-MM4**.	4.14.2.2 Appendix F-4 (Section 6.2.1.1)	ATP and Contractors	Final Design
WR-CM2	City Watershed Protection Compliance	ATP will incorporate compliance measures with City LDCs pertaining to watershed protection and stormwater control measures into contract documents. ATP will incorporate requirements into contract documents to comply with Austin Light Rail	4.14.2.2 Appendix F-4 (Section 6.2.1.5)	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		Design Criteria Manual, which addresses compliance with applicable local ordinances. Construction-related mitigation includes **CON-MM4**, **CON-MM5** and **CON-MM6**.			
WR-CM3	Floodplain Development Permit	During final design, ATP will obtain floodplain development permits from the local floodplain administrator and the City's Watershed Protection Department, and comply with local floodplain regulations, as required by the floodplain development permits. Construction-related mitigation includes **CON-MM8**.	4.14.2.2 Appendix F-4 (Section 6.3.1.1)	ATP	Final Design
WR-CM4	Channel Stability	ATP will design hydraulic structures, outfalls, intakes, bridges, rail crossings of roads regulated by the Federal Highway Administration and TxDOT, and rail crossings over waterbodies in compliance with the latest Federal Highway Administration Hydrologic Engineering Center 20 and Hydrologic Engineering Center 18 procedures to maintain stable stream channels and protect existing and planned infrastructure, including the TxDOT Hydraulic Design Manual (2019).	4.14.2.2 Appendix F-4 (Section 6.3.1.4)	ATP	Final Design
WR-CM5	Local Floodplain Compliance	ATP will comply with local floodplain requirements implemented by the City's Watershed Protection Department and incorporate appropriate measures as necessary during final design. The	4.14.2.2 Appendix F-4 (Section 6.3.1.5)	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		City's Land Development Code defines prohibited activities and/or encroachment of floodplains.			
WR-CM6	Environmental Resource Inventory (ERI)	ATP will produce an ERI to be field-verified by WPD staff. Proposed mitigation for impacts to identified Critical Environmental Features (CEFs) will be approved under the authority of COA WPD review staff.	4.14.2.2 Appendix F-4 (Section 2.3.2)	ATP, City	Final Design
Natural Resources and Threatened and Endangered Species					
NR-MM1	City Tree Surveys and Coordination	ATP will conduct an updated tree survey to identify all trees with a dbh of 8 inches or greater as required by City ordinances and criteria (LDC, Chapter 25-8, Subchapter B, Article 1 and Environmental Criteria Manual, Section 3.3.0).	4.15.1, Appendix F-5 (Section 6.1.1)	ATP, City	Final Design
NR-MM2	Tree Mitigation Measures	ATP will coordinate with the City Arborist as design progresses to identify avoidance, minimization, and mitigation measures for each tree removal, informing the Site Development Permit, as required. ATP and its contractors will use guidance in the ALR Comprehensive Tree Manual to avoid or preserve Protected and Heritage trees (as defined In the Land Development Code Chapter 25-8, Subchapter B, Article 1), wherever practical (**CON-CM2**).	Appendix F-5 (Sections 2.3.2, 4.1.3, 5.2.2, and 6.2) Appendix G (Sections 5.1 and 7)	ATP and Contractors	Final Design and Construction
NR-MM3	Species of Concern Habitat Protection	ATP contractors will implement construction BMPs **(CON-MM9, CON-MM10, CON-MM11, and CON-MM12)** to protect special features and	4.15.2.2	ATP and Contractors	Final Design and Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		natural communities including those that are not listed as threatened or endangered species. ATP will follow TPWD's recommendations for the protection of the tricolored bat, monarch butterfly, and Texas map turtle.			
NR-MM4	Protection of Mexican Free-Tailed Bats	ATP will consult with an Austin bat advocacy group to minimize impacts the roosting Mexican Free-Tailed bats at the Ann W. Richards Congress Avenue Bridge during construction **(CON-MM10)**. For permanent lighting that could influence the bat roosting area, ATP will consider lighting mitigation as recommended by the International Dark-Sky Association (2024). Recommendation could include: • fixtures that are fully shielded and emit no light above the horizontal plane • no sag or drop lenses, side light panels, or up light panels on the fixtures • consider feasibility of using red light (which have no effect in bat activity). If red light cannot be used, use only warm-toned (3000K and lower) white, amber, or filtered LED light sources. • use of dim and directional lighting (downward facing or away from existing/potentially new bat colonies) on pedestrian paths beneath the new bridge	Appendix F-5 (Sections 2.3.2, 4.1.3, 5.2.2, and 6.2)	ATP and Contractors	Final Design and Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
NR-MM5	Compliance with State Regulations	ATP will coordinate the design with the TPWD Wetlands Conservation Team to identify the need for a Marl, Sand, Gravel, Shell or Mudshell Permit and TPWD Kills and Spills Team (KAST) for potential impacts on aquatic organisms.	4.15.2.2	ATP and Contractors	Final Design and Construction
NR-CM1	Karst BMPs	If karst features are encountered during bedrock excavation activities, ATP contractors will immediately cease work within a 50-foot buffer around the feature. ATP will have a permitted scientist investigate the feature for the presence of karst invertebrate habitat. While the feature is being evaluated, the surface expression will be covered to minimize the influence of diurnal variations in surface temperature and implement appropriate BMPs to prevent surface runoff from entering the feature. If the feature meets the criteria for potential karst habitat, the ATP will initiate presence/absence surveys in accordance with USFWS procedures (2015) to determine if the feature is occupied or presumed occupied by a federally listed species.	Appendix F-5 (Section 6.3.1)	ATP and Contractors	Construction
Section 4(f) and Section 6(f) - Parkland					
PARK-MM1	Replacement of Permanently and Temporarily Impacted Parkland	ATP will follow Chapter 26 of the Texas Parks and Wildlife Code and City of Austin transfer of use procedures for financial compensation and other considerations to the City for the loss and change of use of parkland.	Appendix G (Section 5.1)	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
PARK-MM2	Access to Lady Bird Lake Recreational Amenities During Construction	To maintain functionality of the park and trail during construction, ATP will coordinate with PARD and TPWD on design refinements to minimize the Project's footprint at Waller Beach, and ATP will coordinate with PARD and The Trail Conservancy to maintain functionality and avoid disconnection of the trail network along the Ann and Roy Butler Hike and Bike Trail at both the north and south shores of Lady Bird Lake as per **CON-MM1**. ATP will also include in the construction management plans a description of measures for temporary park closures, temporary trail closures, and/or temporary relocation of portions of trails.	Appendix G (Sections 5.1.2 and 7)	ATP, City	Final Design and Construction
PARK-MM3	Trail Improvement	For better connectivity, ATP will improve a portion of the Ann and Roy Butler Hike and Bike Trail located just west of the new Lady Bird Lake Bridge that is not currently in compliance with the Americans with Disabilities Act. ATP will re-establish the Ann and Roy Butler Hike and Bike Trail beneath the bridge and connect to the new bicycle and pedestrian facilities on the bridge in accordance with ADA standards.	Appendix H (Section 9)	ATP	Final Design
PARK-MM4	Parkland Access	ATP will coordinate with PARD and the Trail Conservancy to maintain access and functionality of all impacted parkland and avoid park closures when possible during construction in line with CON-MM1.	Appendix G (Sections 5.1.2 and 7)	ATP, City	Final Design and Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
PARK-CM1	Stakeholder and Public Outreach	ATP will provide support for the City's Chapter 26 public hearing process.	Appendix G (Section 7)	ATP, City	Final Design and Construction
PARK-CM2	Uniform Relocation	The Waller Creek Boathouse tenants will be provided relocation benefits in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.	Appendix H (Section 8)	ATP	Final Design
PARK-CM3	6(f) Replacement Property	ATP will work with the City to comply with 6(f) conversion requirements including appraisal of Waller Beach and appraisal of replacement property(ies).	Appendix H (Section 7)	ATP, City	Final Design
Transportation					
TRA-MM1	Traffic Management and Control Plan	ATP and its contractors will develop traffic management and control plans for construction sequencing activities to minimize traffic disruptions and minimize localized air quality effects. Traffic management activities may include providing traffic control, providing less congested routes for construction vehicles accessing the site, and restricting construction activities during hours of higher traffic volumes on existing roadways where feasible. The plans will include plans for phasing lane closures throughout the project. ATP will coordinate construction-related activities through the multi-agency Construction Partnership Program and coordinate with CapMetro Service Impacts Team to alert transit customers to alternate routes/scheduling.	Appendix J	ATP and Contractor	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		The contractor will maintain reasonable access to and from residences and businesses throughout the construction period, coordinating in advance with affected occupants regarding any temporary access modifications.			
TRA-MM2	Traffic – All Intersections	In coordination with the TPW, ATP will develop an opening day traffic model to optimize signal timing (to be refined during final design). Within the Center-Running Bike/Pedestrian and Shade Tree Facilities on East Riverside Design Option, separate the pedestrian phase into two phases with median refuge when crossing East Riverside Drive to improve traffic operations.	3.2.2.3, Table 3-12	ATP	Final Design
TRA-MM3	Traffic – Various Intersections	ATP will optimize intersection queue storage length to reflect the left-turn and right-turn queue needs, where feasible.	3.2.2.3, Table 3-12	ATP	Final Design
TRA-MM4	Traffic – Lavaca Street between W 2nd Street and W MLK Boulevard	Due to Guadalupe being converted to an LRT corridor with limited vehicular use, ATP will convert Lavaca Street between W 2nd Street and W Martin Luther King Jr. (MLK) Boulevard from one-way northbound to two-way traffic with strategically located left-turn lanes.	3.2.2.3, Table 3-12	ATP	Final Design
TRA-MM5	Traffic – Guadalupe Street from MLK Blvd. to 29th Street	ATP will incorporate the following traffic mitigation between MLK and 29th due to the reconfiguration of Guadalupe: • Re-striping Nueces between 28th and 29th Street and continuation of the bike lanes	3.2.2.3, Table 3-12	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing

		• Roadway reconfiguration, including relocation of bus stops to accommodate revised bus routes, for:
		  ○ 27th Street from Guadalupe to Nueces
		  ○ Hemphill Park from 27th to 30th Street
		  ○ 30th Street adjacent to Guadalupe
		• San Antonio Street upgrades:
		  ○ Traffic signal upgrades at San Antonio and 21st, 22nd, 23rd, 24th, 25th, and 26th streets
		  ○ Restriping from 24th Street to MLK Blvd
		  ○ Restriping and curb modifications at 24th Street
		  ○ Restriping of San Antonio from 26th Street to MLK Blvd, and addition of channelizing island at San Antonio and MLK
		• Nueces Street upgrades:
		  ○ Traffic signal upgrades at 24th Street
		  ○ Roadway upgrades and restriping from 24th to 25th streets
		• Dean Keeton extension to San Antonio			

TRA-MM6	Traffic – Guadalupe Street and 15th Street Intersection	Due to the reconfiguration of Guadalupe, ATP will incorporate westbound left-turn movement at the Guadalupe Street and W 15th Street intersection to provide increased queue storage length for eastbound left turns at the Lavaca Street and W 15th Street intersection.	3.2.2.3, Table 3-12	ATP	Final Design
TRA-MM7	Traffic – W 2nd Street between Guadalupe and Lavaca Streets	Due to the reconfiguration of Guadalupe, ATP will convert W 2nd Street between Guadalupe and Lavaca streets from two-way to one-way westbound traffic. This configuration will increase	3.2.2.3, Table 3-12	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		capacity for traffic movement on southbound Lavaca Street and shift traffic to southbound Guadalupe Street for access to the S 1st Street bridge over Lady Bird Lake.			
TRA-MM8	Bicycle – S 1st Street between W Riverside Drive and W Cesar Chavez Street	ATP will advance the design in a manner that provides a comparable level of bicycle connectivity across the S 1st St bridge as currently exists.	3.2.2.3, Table 3-12	ATP	Final Design
TRA-MM9	Traffic – Guadalupe Street between W 3rd Street and W MLK Boulevard	Due to the reconfiguration of Guadalupe Street between MLK Blvd and 3rd Street, left turns for traffic along Guadalupe Street between W 3rd Street and W MLK Boulevard will be prohibited to optimize traffic operations.	3.2.2.3, Table 3-12	ATP	Final Design
TRA-MM10	Bicycle - Nueces Street between W Cesar Chavez Street and W MLK Boulevard	ATP will coordinate with the City to mitigate removal of downtown bicycle lanes along Guadalupe and Lavaca by adding bicycle lanes to an alternative north-south street between the limits of W Cesar Chavez Street and W MLK Boulevard.	3.2.2.3, Table 3-12	ATP	Final Design
TRA-MM11	Traffic - 3rd Street between Guadalupe Street and Trinity Street	Due to the reconfiguration of 3rd Street, left turns between Guadalupe and Trinity streets will be prohibited to optimize traffic operations.	3.2.2.3, Table 3-12	ATP	Final Design
TRA-MM12	Bicycle - 4th Street between Nueces Street and Trinity Street	To mitigate the removal of protected bicycle lanes along 3rd Street, ATP will add protected bicycle lanes along 4th Street between Nueces Street and Trinity Street. ATP will reconstruct 4th Street between Nueces Street and Trinity Street	3.2.2.3, Table 3-12	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		(including the bicycle lanes) before closure of the 3rd Street protected bicycle lanes to mitigate effects on connectivity and safety.			
TRA-MM13	Traffic -Pleasant Valley Intersection	ATP will reconfigure the Riverside Blvd and Pleasant Valley intersection to remove steep grades (south to north) and reduce crossing length across Riverside Drive. Appropriate traffic control devices will be implemented to accommodate vehicular and pedestrian safety.	3.2.2.3, Table 3-12	ATP	Final Design
TRA-MM14	On-Street Parking	ATP will continue to coordinate with the Austin Transportation and Public Works Department to reduce the removal of on-street parking.	3.2.2.3	ATP	Final Design
TRA-MM15	Bus Stop Displacements and Relocations	In cooperation with CapMetro and the City, ATP will coordinate with CapMetro to identify temporary stops during construction as part of **CON-MM14**. During the final design phase, ATP will coordinate the permanent bus stop locations with CapMetro and the City.	3.2.2.3, Table 3-13	ATP	Final Design
TRA-MM16	Park and Rides	ATP will design park-and-ride facilities with direct access to arterial roadways and include appropriate signage and traffic controls to direct users away from residential streets and minimize cut-through traffic impacts. ATP will monitor traffic conditions and park-and-ride usage after the facilities open to ascertain capacity constraints. ATP will coordinate with other nearby property owners to lease unused parking spaces. Additional measures could be considered in coordination with the City, should operational issues arise.	3.2.2.1	ATP, CapMetro	Final Design and Post Opening

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
TRA-MM17	Traffic - Riverside	ATP will elevate LRT at Riverside to mitigate traffic conflicts and ROW impacts as the train approaches/departs Waterfront Station.	3.2.2.1 and 4.9.2.2	ATP	Final Design
TRA-MM18	Traffic - 40th Street	ATP will evaluate if there are options to the raised median to improve access at 40th Street.	3.2.2.1	ATP	Final Design
TRA-MM19	Loading Dock/ Delivery Access	ATP will work with all stakeholders along the alignment to understand loading/unloading schedules, and access needs (including trucks) across the guideway during the final design phase of the project. Construction phasing will be determined during final design and will include provisions for access during construction for deliveries and trash pickup.	3.2.2.1	ATP	Final Design
TRA-MM20	Bus Operations	ATP will coordinate with CapMetro and the City to support future downtown bus operations during light rail revenue service, including accommodating space requirements for regular and abnormal operations, in accordance with TransitPlan 2035 and subsequent adopted service plans, to enable connectivity among modes.	3.2.2.3	ATP	Final Design
Construction Mitigation Measures					
CON-MM1	Construction Management Plan(s)	ATP will develop, implement, and maintain construction management plans, including a Maintenance of Traffic Plan developed in coordination with the Construction Partnership Program, to minimize the effects of construction. The plan will include:	Various	ATP	Final Design

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		• construction activities by construction phase, including timing and duration, for each affected segment • description of measures for temporary lane, sidewalk, and trail closures and detour routes • contractor work restrictions and requirements to mitigate construction effects on adjacent communities • ATP's responsibilities to monitor compliance with the construction specifications and environmental rules and regulations. ATP will make the construction management plan(s) available to the public, emergency responders, and schools.			
CON-MM2	Unanticipated Discoveries of Cultural Resources during Construction	ATP will develop policies and procedures pursuant to 36 C.F.R. 800.13(a)(1-2) to implement identification, assessment and/or resolution of any adverse effects for unanticipated effects to or unanticipated discoveries of historic properties during construction. A Secretary of the Interior qualified cultural resources professional will aid ATP in the development of these policies and procedures. An Unanticipated Discovery Plan will be drafted and implemented to outline the procedures should new or additional cultural resources, including human remains, be found after construction has begun on the Project; or the undertaking affects a previously unidentified	4.6.5	ATP and Contractors	Pre-Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		historic property, which may be eligible for the NRHP; or the undertaking affects a known historic property in an unanticipated manner.			
CON-MM3	Development of Demolition Plan	Prior to construction, ATP contractors will develop demolition plans. Demolition would require strict controls to ensure that adjacent buildings and infrastructure are not damaged or otherwise affected by construction activities. These controls include the installation of fencing and barricades, environmental monitoring, and restrictions on the types of equipment and demolition procedures used during construction. The contractors will test for and properly manage lead-based paint, asbestos-containing building materials, or polychlorinated biphenyls (PCB)-containing equipment prior to demolition, and transport the materials to a proper disposal facility in accordance with the Toxic Substances Control Act. Each contactor will be responsible for completing and maintaining waste manifests. Related mitigation measures include the transportation, storage, and disposal of hazardous waste **(HM-MM2)** and solid waste **(HM-MM4)**.	4.7.2.2	Contractors	Final Design and Construction
CON-MM4	Surface Waters Construction BMPs	In accordance with Section 404(b)(1) guidelines and pursuant to the Final Mitigation Rule (40 Code of Federal Regulations 230.91), ATP contractors will implement BMPs to avoid and	4.14.2.2 Appendix F-4 (Section 6.1.1)	Contractor	Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		minimize adverse effects on waters of the U.S. (WOTUS) during construction, as follows: • Temporary fills will consist of materials that would not be eroded by expected high flows • Temporary fills will be removed in their entirety and the affected areas returned to pre-construction elevations as soon as practicable after construction • No activity will be permitted to use unsuitable material (trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged will be free from toxic pollutants (i.e., clean fill) • Areas affected by temporary fills will be revegetated as soon as practicable after construction following Environmental Criteria Manual Section 1.4 (Erosion and Sedimentation Control Criteria) • For wetland areas disturbed by construction, a minimum of 12 inches of topsoil material from the wetland will be stockpiled and used as backfill material to restore pre-construction contours, if recommended by City's Watershed Protection Department • To preserve stream characteristics to the extent possible, open-bottom culverts will be used in place of closed culverts, where practicable; a waiver from the City's Watershed Protection Department may be required • Construction detention basins will be developed in-line or off-channel, as necessary			

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
CON-MM5	Construction BMPs for Maintaining Low Flow of Surface Water	In compliance with the Clean Water Act and under USACE general permit conditions, ATP contractors will design and construct crossings of WOTUS to maintain low flows and avoid stream relocations during construction and operation of the Project. This includes maintaining flows sufficient to support the necessary life cycle movements of those species of aquatic life indigenous to the water body, including those species that normally migrate through the area. Design and construction considerations include, but are not limited to: • All permanent and temporary crossings of waterbodies will be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species • If bottomless culverts cannot be used, the crossing should be designed and constructed to minimize adverse effects on aquatic life movements • To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity unless alterations are designed to benefit the aquatic environment (e.g., stream restoration) • The activity must not restrict or impede the passage of normal or high flows and must be constructed to withstand expected high flows	4.14.2.2 Appendix F-4 (Section 6.1.1)	Contractor	Final Design and Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
CON-MM6	Maintain Pre-construction Conditions for Surface Waters	In compliance with the Clean Water Act and under USACE general permit conditions, the ATP construction contractor will restore pre-construction contours and remove temporary fills from all temporarily affected WOTUS (e.g., temporary equipment crossings or temporary disturbances in construction areas around and beneath the Project) to pre-construction conditions.	4.14.2.2 Appendix F-4 (Section 6.1.1)	ATP, Contractor	Post-Construction
CON-MM7	Texas Pollutant Discharge Elimination System (TPDES) General Construction Permit and Multi-Sector General Permit	The ATP contractor will prepare a Stormwater Pollution Prevention Plan (SWPPP) for the Project or for each construction segment and submit a Notice of Intent to TCEQ (with the appropriate fees) to obtain coverage under the General Construction Permit. Before starting construction, the contractor will post a copy of the Site Notice at the construction site, and the notice will remain posted until construction is complete. Activities conducted during construction will adhere to General Construction permit requirements. The contractor will obtain authorization under the Multi-Sector General Permit (TXR050000) to discharge stormwater during operation of the Project. The contractor will monitor contaminant levels in stormwater discharges annually as set forth in the permit. These results will be maintained on-site with the SWPPP. A related mitigation measure Includes **CON-MM8**.	4.14.2.2 Appendix F-4 (Section 6.2.1.2)	Contractor	Final Design and Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
CON-MM8	Stormwater Management/ Stormwater Pollution Prevention Plan	Prior to construction, the ATP contractor will prepare a SWPPP and submit a Notice of Intent to TCEQ to address authorized discharges that would reach WOTUS, including discharges to Municipal Separate Storm Sewer Systems (MS4) that drain to WOTUS, to identify and address potential sources of pollution that are reasonably expected to affect the quality of discharges from the construction site. The contractor will be responsible for implementing the SWPPP throughout the construction period and will restrict construction activities to permanent and temporary workspaces and easements. The contractor will incorporate green infrastructure, such as bioswales, rain gardens, permeable pavement, and green spaces, to the maximum extent practicable to promote infiltration and groundwater recharge, reduce stormwater runoff and standing water, reduce peak stormwater flows, reduce the risk of flooding, and increase soil porosity. To address Section 401 Water Quality Certification requirements, the contractor will identify and implement sediment control measures prior to the start of and during construction to isolate the construction areas from waterbodies and wetlands. The contractor will store dredged and fill material in a manner that prevents sedimentation runoff to waterbodies.	4.14.2.2 Appendix F-4 (Section 6.2.1.3)	Contractor	Final Design and Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		Control measures may include, but would not be limited to, the following: • Silt fence • Triangular filter dike • Rock berm • Erosion control compost • Compost filter socks • Mulch filter socks The contractor will stabilize disturbed areas during construction to prevent sediment from entering adjacent waterbodies and wetlands. Stabilization measures may include, but would not be limited to, the following: • Temporary vegetation • Blankets/matting • Mulch • Sod • Interceptor swale • Diversion dike • Erosion control compost • Mulch filter socks			
CON-CM7	MS4 Compliance	As part of compliance with TPDES and any Municipal Separate Storm Sewer System (MS4) requirements, prior to construction, the contractor will provide the City and/or its MS4 operators with a copy of the SWPPP and/or Notice of Intent. During the construction phase, the City and/or its MS4 operators may inspect the construction site as frequently as every 14 calendar days. The contractor will conduct regular inspections,	4.14.2.2 Appendix F-4 (Section 6.2.1.4)	Contractor	Final Design and Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		maintenance, and recordkeeping to determine whether appropriate control measures have been installed and implemented in accordance with the SWPPP and General Construction Permit.			
CON-MM8	Construction Floodplain BMPs	The ATP contractor will implement erosion and sedimentation controls in accordance with TPDES Permit TXR150000 for work within floodplains. Prior to beginning work, the contractor will submit a Notice of Intent to obtain coverage and, on completion of work, a Notice of Termination. The contractor will conduct periodic site inspections and maintenance when BMPs are in place to identify and address areas requiring maintenance and maintain records of all inspections as part of the SWPPP. Local regulatory entities have the authority to conduct additional inspections as they deem necessary. At the conclusion of construction, the contractor will restore the site, including replanting vegetation, in accordance with TCEQ Clean Water Act Section 401 water quality certification standards (see FEIS/ROD Appendix F-4, Section 6.2.1.1). For all stream crossings temporarily affected during construction, the contractor will implement BMPs in accordance with local regulating authorities, any local site development permits, and any USACE Section 404 permits **(CON-MM4 and CON-MM5)**.	4.14.2.2 Appendix F-4 (Section 6.3.1.2)	Contractor	Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
CON-MM9	Site Restoration and Revegetation	The ATP contractor will restore temporary construction areas to at least the quality of preexisting conditions. Additionally, the contractor will use native seed mixes approved by the U.S. Department of Agriculture and the City's Environmental Criteria Manual appropriate for the Austin ecoregion. The contractor will coordinate site restoration and revegetation requirements, including the control of invasive species, in accordance with other statutory obligations (i.e., Section 404 permit, TPDES, U.S. Fish and Wildlife Service [USFWS], and Texas Parks and Wildlife Department [TPWD]), the City's Environmental Criteria Manual, landowner agreements, and local site conditions.	4.14.2.2 Appendix F-4 (Section 6.2.2.3)	Contractor	Construction
CON-MM10	Mexican Free-Tailed Bat BMPs	ATP will consult with Austin bat advocacy group to minimize impacts to the roosting Mexican Free-Tailed bats at the Ann W. Richards Congress Avenue Bridge during construction. It is anticipated that the contractor will implement the following BMPs: • avoid construction activities near the Ann W. Richards Congress Avenue Bridge that would result in increased ambient noise levels between February and November • avoid harm or death to bats and handle bats only as a last resort (contractor will inform ATP of bat activity within a construction site and ATP will initiate communication with USFWS and TPWD)	Appendix F-5 (Sections 6.2.1 and 6.3.6)	ATP	Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		• shield lighting from the Congress Avenue Bridge bat roosting area during construction • use lighting only as bright as necessary during nighttime construction to effectively conduct work (as minimally required by Occupational Safety and Health Administration standards) and use such lighting only in the immediate area where active construction is underway **(VA-MM4)** ATP will use a qualified biologist to perform a habitat assessment and occupancy survey of the feature(s) with roost potential as early as possible or within 1 year before construction.			
CON-MM11	Aquatic Species BMPs	The ATP contractor will implement the following BMPs for aquatic species during construction of the Project: • Minimize the use of equipment in streams and riparian areas during construction and, when possible, access equipment from banks, bridge decks, or barges • Keep riparian buffer zones undisturbed, where practicable • Maintain the existing hydrologic regime and any connections between wetlands and other aquatic features • When temporary stream crossings are unavoidable, remove stream crossings once they are no longer needed and stabilize banks and soils around the crossing	Appendix F-5 (Section 6.1.2 and 6.3.3)	Contractors	Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		• Avoid placing riprap across stream channels and instead use alternative stabilization such as biotechnical stream bank stabilization methods including live native vegetation or a combination of vegetative and structural materials • Use barrier fencing to direct animal movements away from construction activities • Apply hydro-mulching and/or hydroseeding per the City's Standard Specifications Manual (additional information provided in FEIS/ROD Appendix F-5, Section 6.1.2) in areas for soil stabilization and/or revegetation of disturbed areas around wetlands and in riparian areas			
CON-MM12	Migratory Bird BMPs	In addition to complying with the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act, the ATP contractor will employ the following BMPs to avoid, minimize, and mitigate the effects of the Project on migratory bird species: • Avoid vegetation clearing activities during the general bird nesting season, March through August, to minimize adverse effects on nesting birds • Up to 5 days prior to construction, ATP will perform daytime surveys for nests, including under bridges and in culverts, to determine if they are active before removal • Do not disturb, destroy, or remove active nests, including nests of ground nesting birds, during the nesting season	Appendix F-5 (Section 6.3.4)	ATP	Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		• Do not collect, capture, relocate, or transport birds, eggs, young, or active nests without a permit • Protect sensitive habitat areas with temporary barriers or fencing to limit human foot traffic and off-road vehicle use to alert and discourage contractors from causing any unintentional effects • Avoid vegetation clearing in a primary buffer area of 984 feet (300 meters) from a rookery or heronry periphery • Comply with construction noise and lighting BMPs			
CON-MM13	Construction Partnership Program	To mitigate potential construction effects, participate in a Construction Partnership Program with regional transportation agencies that will coordinate construction schedules, road closures, and detours for vehicles, bicyclists, and pedestrians in the Study Area. The program will implement public information platforms (such as a mobile app, website, and customer information call-in number) that will keep the traveling public apprised of roadway conditions and allow them to plan ahead to meet their mobility needs. In coordination with the partners, ATP may incorporate Transportation Demand Management tools during construction to assist in congestion management.	3.2.2.3	ATP and contractors	Construction
CON-MM14	Temporary Displacement of	In cooperation with CapMetro and the City, ATP will locate and install temporary bus stops as close as possible to original bus stop locations.	3.2.2.3, Table 3-13	ATP, CapMetro	Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
	Bus Stops During Construction	ATP will also coordinate development of a traffic control plan with CapMetro and the City during the final design phase to minimize transit service disruptions during construction. ATP will also coordinate the relocation of CapMetro Bikeshare stations during construction to be as close as possible to the temporary stations, where feasible.			
CON-MM15	Training Program for Contractors	ATP will develop a comprehensive training matrix to identify specific training programs for contractors. This training may include, but not be limited to: • 40Hr HAZWOPER for abatement contractors • 8Hr Refresher for HAZWOPER for abatement contractors • OSHA 10 & 30-hour Construction Safety when applicable • Hazard Material Handling • SWPPP Inspection • Roadway Worker Protection – when applicable • Wildlife Management Compliance • Historic Resource Protection • Other Training as may be deemed necessary	4.7.2.2 Appendix E-8	ATP and Contractors	Pre-Construction and Construction
CON-CM1	Utility Services during Construction	ATP contractors will comply with City criteria manuals and public utilities requiring contractors to maintain utility services (through temporary service connections) and provide notification to affected parties of temporary service outage during switch over. The construction contractor	4.8.2.2	Contractor	Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		will install, operate, protect, and maintain the respective temporary services during the construction period until the permanent utility can be placed back into service.			
CON-CM2	Compliance with City Tree Protection and Replacement Requirements	The contractor will comply with ATP's Comprehensive Tree Manual and mitigate the loss of trees through coordination with the City Arborist and compliance with the City's Tree Ordinance and tree replacement requirements.	4.15.2.2 4.15.3	Contactor	Construction
CON-CM3	Maintenance and Inspection of Temporary Erosion and Sediment Controls	City permitting requirements set forth in the City's Land Development Code and Environmental Criteria Manual will be met by the contractor. Per the requirements: • silt and sediment will be removed from devices no later than when the design capacity of the device reached 50 percent of the original design capacity • deteriorated materials will be repaired or replaced when discovered The contractor will regularly inspect the Project area in compliance with General Construction Permit TXR150000. The contractor will inspect the Project area, as defined in the SWPPP, to evaluate the condition of erosion and sediment controls. Inspections will be conducted either every 14 calendar days or within 24 hours of a rain event consisting of greater than or equal to 0.5 inch. An alternative schedule would be to conduct regular inspections every 7 calendar	4.14.2.2 Appendix F-5 (Section 6.2.2.1)	Contractor	Construction

Unique Identifier	Mitigation/ Compliance Measure	Summary	EIS Reference	Responsible Party	Timing
		days regardless of whether there has been a rainfall event since the previous inspection.			

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