

Appendix H

Mitigation Monitoring Program

Dallas Area Rapid Transit

South Oak Cliff Corridor Blue Line Extension

Mitigation Monitoring Program

1.0 Introduction

This document presents the Mitigation Monitoring Program (MMP) for the Dallas Area Rapid Transit (DART) South Oak Cliff (SOC) Light Rail Transit (LRT) Extension, which consists of the construction of a 2.6-mile double-track Blue Line extension from the Ledbetter Station to the campus of the University of North Texas at Dallas (UNT Dallas). This project is referred to as Line Section SOC-3. In addition to modifications to the Ledbetter Station to extend and raise the station platform, two new stations will be constructed at Camp Wisdom and UNT Dallas. The following sections describe the purpose of the document, the organization of the Mitigation Monitoring Program, and describe procedures for addressing possible final design changes that differ from the project definition as contained in the Final Local Environmental Assessment (LEA). This Mitigation Monitoring Program will be updated quarterly and will reflect changes to the project definition should they occur.

1.1 PURPOSE

The Mitigation Monitoring Program provides DART, its contractors, and the city of Dallas with a tool to finalize and monitor the implementation of the mitigation measures in order to minimize impacts of the project to the surrounding community. The purpose of the Mitigation Monitoring Program is twofold:

- To specify recommended mitigation measures reflected in the *South Oak Cliff Corridor Blue Line Extension Final Local EA* and the 5% Plan and Profile drawings in order to facilitate the development and incorporation of appropriate mitigation treatments into the Final Design documents;
- To monitor the implementation of the mitigation measures as the project proceeds through Final Design and Construction.

DART published the Final LEA in May 2013. The Final LEA describes and summarizes the impacts to the social, economic, physical and natural environments associated with the implementation of the project, shown in Figure 1-1.

1.2 ORGANIZATION OF THE MITIGATION MONITORING PROGRAM

Appendix A includes the SOC-3 Mitigation Monitoring Program. The Mitigation Monitoring Program highlights impacts and mitigation measures as identified in the Final Local EA. It will be used during the development of final design plans to ensure that appropriate mitigation measures are included, and to resolve issues identified during the environmental process that are contingent upon further engineering details.

The Mitigation Monitoring Program Quarterly Status Reports will include recent developments made since the previous status report, highlight the status of the implementation of the mitigation measures, and outline any future actions necessary to finalize the mitigation measures.



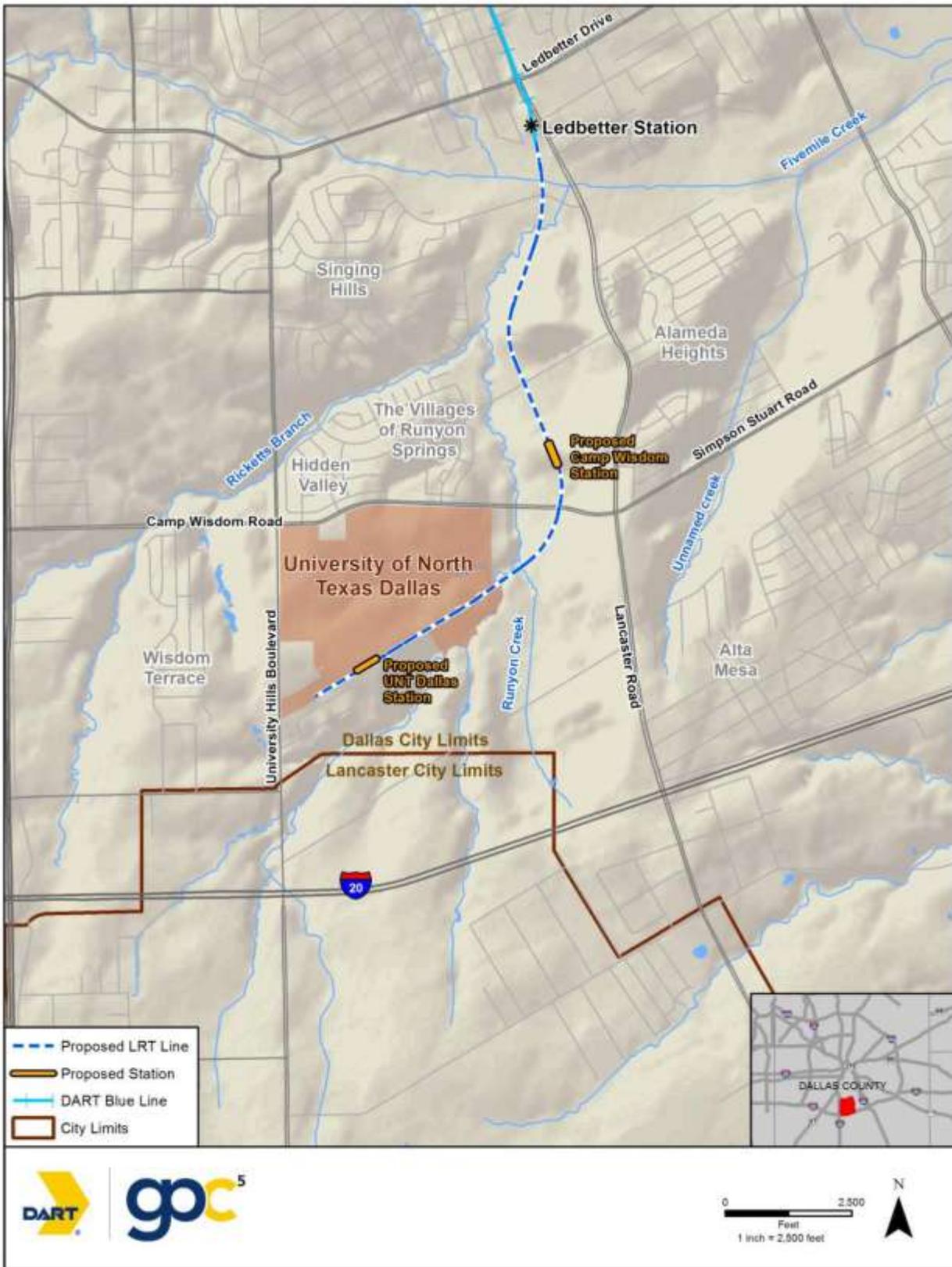


Figure 1-1 South Oak Cliff Corridor Blue Line Extension



Each adopted mitigation measure is assigned a tracking number that begins with SOC3. The following items are summarized for each mitigation measure:

- **Mitigation Measure** - outlines the mitigation commitment, any outstanding issues or community concerns, and necessary background information.
- **Issue** - identifies the general issue/impact area being addressed by the mitigation measure.
- **Final LEA Reference** - indicates which section of the Final LEA specifies the mitigation measure.
- **Status** - describes the current reporting period status of the mitigation measure.
- **Responsible Party** – identifies the primary entity or department responsible for the measure.

Quarterly mitigation monitoring status reports of the Mitigation Monitoring Program will be distributed internally to key Growth & Regional Development staff involved in design and construction, as well as key contractor staff. These quarterly reports will provide the status of the implementation of mitigation measures for the current reporting period and will indicate what actions, if any, must be undertaken in order to complete or finalize the mitigation measure. It should be recognized also that the Mitigation Monitoring Program is an ongoing process. Mitigation measures could be modified as further design details and operating plans are developed.

1.3 PROCEDURES TO ADDRESS PROJECT DESIGN CHANGES

Design and construction of the SOC-3 project will use a Modified Design-Build contract. The information contained in the Final LEA and 5% design plans will guide project design efforts. However, variations in project design may occur due to new or updated information, or other circumstances that preclude strict adherence to the preliminary design commitments.

If changes to project definition occur, the MMP will be updated to reflect any new mitigation measures required as a result of changes. DART has developed a process to ensure that the proper environmental documentation is prepared with proposed project changes as part of ongoing coordination efforts. Figure 1-2 illustrates this process. While this is required for federally-funded projects, DART will apply this process to the SOC-3 project so any changes can be documented and assessed in a similar fashion.

Throughout final design and the MMP process, changes in project design that vary from the Final LEA will be evaluated by DART staff. If the change is insignificant, DART will prepare a letter to the project file. If substantial changes to the project design occur during the final design process, DART will prepare an *Environmental Study* to document the design modification and any changes in impacts or mitigation. All efforts will be undertaken in compliance with DART's *Environmental Impact Assessment and Mitigation Guidelines for Transit Projects* (2012).

While DART is committed to the mitigation measures outlined in this document, these measures are based on the current level of design. The ongoing mitigation monitoring process may result in the addition of new mitigation measures or the removal of existing mitigation measures, as appropriate, if subsequent design submittals change the project's impact.



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No.	Mitigation Measure	Issue	Final LEA Reference	Status	Responsible Party
SOC3-1	During final design, DART will explore options for the column placement and design at Camp Wisdom and Patrol Way to minimize sight distance safety issues and potential crash hazards	A support column is proposed to be located at the northwest corner of Patrol Way and Camp Wisdom Road. It may create a sight distance safety hazard for cars turning left from southbound Patrol Way to eastbound Camp Wisdom Road.	4.2.2 Local Impacts, p. 4-13	To be examined in final design.	Design Contractor
SOC3-2	Construct permanent replacement parking spaces on the west side of the South Central police station parking lot.	Permanent parking spaces will be impacted by proposed LRT structure at northeast corner of police property. Need to replace 1 for 1.	4.2.2 Local Impacts, p. 4-16	To be designed and coordinated during final design.	Design/ Construction Contractor
SOC3-3	Provide temporary parking during construction on police property. Coordinate with police department to determine location.	Construction along Patrol Way and on police property will reduce available parking.	4.2.2 Local Impacts, p. 4-16	Type and location of temporary parking to be determined during final design.	DART and Construction Contractor
SOC3-4	If parking demand should exceed supply, DART would work with the City of Dallas and affected property owners to implement measures such as sharing parking agreements, or restricting transit patron parking at non-DART parking facilities during business hours or for extended periods of time.	Upon build-out of surrounding areas, parking demand may change.	4.2.2 Local Impacts, p. 4-16	To be monitored by DART after revenue service.	DART
SOC3-5	DART will coordinate with the police department to ensure that truck access paths are functional with the relocated driveway configuration.	5% design plans include relocation of the northernmost driveway at the police station which is used by fueling trucks and other vehicles.	4.3.2 Trucking and Deliveries, p. 4-16	To be coordinated during final design.	DART and Design Contractor
SOC3-6	DART will coordinate with the City of Dallas during final design so as to not preclude the future implementation of a trail within DART right-of-way between the Camp Wisdom and UNT Dallas Stations.	The City of Dallas Runyon Creek Greenbelt Trail (or Ricketts Branch Trail) is planned in the area and would utilize portions of the DART corridor in accordance with DART Policy III.09 <i>Hike and Bike Trail Use on DART Right-of-Way</i> .	4.4.2 Bicycle Movements, p. 4-17	To be coordinated during final design.	DART and Design Contractor
SOC3-7	Accommodate the future extension of Red Bird Lane by including crossing improvements in construction plans.	The City of Dallas has a future extension of Red Bird Lane on the thoroughfare plan (no date for implementation).	5.1.4 Neighborhood Level Land Use and Development Impacts, p. 5-6	Improvements included in 5% PE plans. Will be further developed in final design.	Design Contractor
SOC3-8	New safety fencing would be placed along both sides of the right-of-way where the guideway is at-	DART provides fencing along LRT corridors to control access and	5.1.4 Neighborhood	Fencing and gate locations are not	DART and Design



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	grade or in a cut scenario. Gates would be required at crossing locations.	channelize pedestrian to safe crossings such as gated street crossings.	Level Land Use and Development Impacts, p. 5-6 5.15 Safety and Security, p. 5-70	included in 5% PE plans. Will be further developed in final design.	Contractor
SOC3-9	All acquisition of property must adhere to the DART Board of Directors' Real Estate Policy and Procedures.	Several acquisitions or easements are proposed with the project.	5.2.3 Acquisition and Displacement Impact Mitigation, p. 5-20	5% PE right-of-way plans show proposed ROW needs. Property acquisitions will be completed before or during final design.	DART Rail Estate
SOC3-10	Provide an 800-ft long sound barrier along the southbound (west) edge of the aerial structure (between Civil Stations 20+00 and 28+00) with solid barrier panels extending from the bottom of the track slab to a height of four feet above the top of rail elevation.	Impact to single-family home is within the moderate range and requires mitigation based on FTA guidance and DART policy.	5.5.3 Noise Impact Mitigation, p. 5-33	To be included in final design plans.	Design Contractor
SOC3-11	Preserve existing trees to the greatest extent possible for the single-family residence south of Wagon Wheels Road.	Aerial structure will pass through this property and several large trees exist and should be preserved.	5.7.3 Visual and Aesthetic Mitigation, p. 5-41	Recommend mark trees during final design to ensure preservation.	Design Contractor
SOC3-12	Provide visual screening between Camp Wisdom station platform and police station to minimize views and security concerns.	Police are concerned that operations could be compromised if there are views directly from platform to police parking lot.	5.7.3 Visual and Aesthetic Mitigation, p. 5-41	Type and placement of screening will be developed during final design in cooperation with the police.	DART and Design Contractor
SOC3-13	In the event that archeological resources are discovered during construction activities, work would be halted immediately and transit authority representatives would be notified at once.	DART <i>Environmental Impact Assessment and Mitigation Guidelines for Transit Projects (2012)</i> states work should not proceed until the find has been assessed by a qualified archeologist and the transit authority has been given notice to proceed by THC.	5.9.4 Archeological Impact Mitigation, p. 5-46	Potential resource finds to be monitored during construction activities.	Construction Contractor
SOC3-14	DART will replace trees of exceptional size and quality within the proposed easement area. During final design, DART will engage an arborist and tree survey staff to identify quality trees in order to preserve them or provide compensation for replacement trees at a location to be determined by the City of Dallas.	The City of Dallas approved a mass transit easement through the southern tip of Runyon Creek park of 12,184 square feet. This is an element of the mitigation related to the easement.	5.10.3 Park and Recreational Impact Mitigation, p. 5-48	Tree survey will be done in early final design to determine preservation and/or replacement requirements.	DART and Design Contractor



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SOC3-15	DART will maintain a shallow, aerial design through the easement area to allow for wildlife passage under the LRT structure at the creek crossing and minimize vegetation impacts.	The City of Dallas approved a mass transit easement through the southern tip of Runyon Creek park of 12,184 square feet. This is an element of the mitigation related to the easement.	5.10.3 Park and Recreational Impact Mitigation, p. 5-48	To be reviewed during final design.	Design Contractor
SOC3-16	DART will provide an appropriate license agreement for the future Ricketts Branch Trail so that it can utilize the DART right-of-way from the area where the trail will connect and then as it continues toward the future UNT Dallas Station. Use of the DART right-of-way will be in accordance with DART Policy III.09: <i>Hike and Bike Trail Use on DART Right-of-Way</i> .	The City of Dallas approved a mass transit easement through the southern tip of Runyon Creek park of 12,184 square feet. This is an element of the mitigation related to the easement.	5.10.3 Park and Recreational Impact Mitigation, p. 5-48	To be coordinated when trail plans are developed.	DART Real Estate
SOC3-17	Construction impacts beyond the right-of-way (station areas, access roads, station locations) would require compliance with the City of Dallas Landscape and Tree Preservation Ordinance. Detailed tree surveys would be conducted in final design in any areas outside of the linear LRT right-of-way to determine mitigation required.	Only the linear LRT right-of-way is exempt for the City ordinance. City regulations state the "Protected Trees" are certain species (Section 51A-10.101) with eight inches or greater diameter at breast height (dbh).	5.11.1 Long Term Vegetation Impact, p. 5-49	To be conducted during final design.	Design Contractor
SOC3-18	DART or its contractors would minimize disturbance within the ROW as much as practicable. Equipment and heavy machinery would not be driven over vegetation when it is extremely wet and would not be stored on vegetation for long periods of time. Clearing of vegetation and future maintenance (mowing, clearing) would take place between August 1 and March 15 to avoid the migratory bird nesting season.	Minimize impacts to vegetation and wildlife habitat.	5.11.1 Long Term Vegetation Impact, p. 5-55 and 5.11.1 Wildlife Impact, p. 5-55	Monitor during construction and after operations.	DART and Construction Contractors
SOC3-19	Re-vegetation efforts would ensure disturbed stream banks are adequately stabilized. Disturbed areas would be re-vegetated using native species.	Follow City of Dallas Landscape and Tree Preservation Regulations as appropriate (Section 51A-10.134).	5.11.1 Long Term Vegetation Impact, p. 5-55	To be completed during construction.	Construction Contractor
SOC3-20	No migratory birds, their nests, eggs, or young would be harmed by construction. Clearing of vegetation and future maintenance (moving, clearing) would take place between August 1 and March 15 to avoid the migratory bird nesting season. If nests are discovered, they would not be disturbed	Minimize or avoid impacts to protected species.	5.11.3 Impact on Protected Species, p. 5-56	To be monitored during construction.	DART and Construction Contractor



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	until after the young have fledged.				
SOC3-21	If final design process reveals that the project would be located in the escarpment zone, the appropriate City of Dallas permit would be acquired prior to construction.	Dallas Escarpment Ordinance Section 51A-5.2.00 protects plant and animal life and reduced soil erosion.	5.12.1 Geology Impact, p. 5-57	To be determined during final design.	Design Contractor
SOC3-22	Use BMP's such as silt fencing and protective vegetation to reduce impacts to soils. Vehicles not needed specifically for construction at creek crossings should utilize nearby roadways and bridges to avoid soil disturbances.	Increased run-off and erosion may result from the project.	5.12.1 Geology Impact, p. 5-58	To be monitored during construction.	Construction Contractor
SOC3-23	Re-evaluate potential impacts to Waters of the U.S. and wetlands once more detailed design plans are developed to confirm USACE permit requirements.	USACE reviewed 5% design preliminary jurisdictional determinations but need more detailed design information. It is anticipated that impacts will be minimal and may be authorized under a nationwide permit and not require a Pre-Construction Notification (PCN).	5.13 Water Resource Impacts, p. 5-63	Re-evaluation to be completed during final design to determine permit requirements.	DART and Design Contractor
SOC3-24	Develop Storm Water Pollution Prevention Plan (SW3P) to prevent water quality and other environmental problems.	Protect surface and groundwater quality	5.13 Water Resource Impacts, p. 5-64	To be completed during final design.	Design and Construction Contractor
SOC3-25	Coordinate with the Dallas Floodplain Administrator to determine permitting requirements or other mitigation.	Minimize impacts to floodplain.	5.13 Water Resource Impacts, p. 5-64	To be completed during final design.	Design Contractor
SOC3-26	Conduct a Phase I Environmental Site Assessment (ESA) for each project parcel, and conduct Phase II ESA if necessary.	Need to determine appropriate remediation. Initial review indicates a low risk of potential hazardous materials contamination	5.14.3 Hazardous and Regulated Material Impact Mitigation, p. 5-66	To be completed during final design.	DART Real Estate
SOC3-27	Solid waste and other nuisance materials that may be found directly within the proposed alignment's right-of-way construction zones will require removal and proper disposal.	Special handling of these materials may be necessary.	5.14.3 Hazardous and Regulated Material Impact Mitigation, p. 5-67	To be monitored during construction.	Construction Contractor
SOC3-28	If any unanticipated sources of hazardous or regulated materials are encountered during construction activities, the construction manager or designee would immediately notify DART's Environmental Compliance Division.	To comply with federal, state and local requirements.	5.14.3 Hazardous and Regulated Material Impact Mitigation, p. 5-67	To be monitored during construction.	Construction Contractor



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SOC3-29	Before start-up, DART would host security sessions with police departments, fire departments, schools, emergency response teams, employers, and other interested parties located within the corridor to cover details of LRT operations, potential security issues, and agency responsibilities. DART will coordinate closely with the South Central Station staff during construction to minimize any impacts on response times.	To minimize impacts on police protection and community safety, particularly response times during construction.	5.15 Safety and Security Impacts, p. 5-69	To be coordinated during final design and construction.	DART
SOC3-30	Construct fencing along the right-of-way in accordance with DART's Standard Drawings for Type A Chain Link Fencing.	To control pedestrian and vehicle access. Preliminary locations are noted in the Final LEA.	5.15 Safety and Security Impacts, p. 5-70	Exact location of safety fencing, as well as gate locations, will be refined during final design.	Design and Construction Contractor
SOC3-31	Coordinate with other scheduled construction projects or entities that may influence the design of the SOC-3 project.	To ensure no conflicts and maintain cooperation.	5.16.1 Construction Scenario, p. 5-75	To be coordinated during design and construction.	Design and Construction Contractor
SOC3-32	Notification of roadway, driveway, and parking disruptions should be provided to the City of Dallas and Dallas Police Department South Central Station prior to construction activities that will affect facilities.	To minimize impacts on police operations during construction activities.	5.16.2 Construction Impact Assessment, p. 5-76	To be coordinated during construction.	Construction Contractor
SOC3-33	Construction contractors should identify the appropriate regulations and incorporate mitigation measures in the construction specifications as directed by DART guidelines. All traffic mitigation measures must be approved by local traffic engineering authorities. DART Community Affairs would coordinate with the contractors during construction to ensure public notification of changes and closures.	To maintain reasonable and safe traffic operations at affected roadways and crossings.	5.16.2 Construction Impact Assessment, p. 5-77	To be coordinated during construction.	Construction Contractor and DART Community Affairs
SOC3-34	Control exhaust emissions emanating from non-road equipment and other construction-related vehicles in accordance with EPA guidelines by using a variety of measures. Comply with any DART Sustainability Plan requirements as appropriate. Implement dust control measures.	Minimize emissions and dust during construction through BMPs.	5.16.2 Construction Impact Assessment, p. 5-78	To be implemented during construction	Construction Contractor
SOC3-35	Construction activities will be carried out in compliance with all applicable local noise regulations and DART Specifications. Specific	Minimize noise disturbance during construction.	5.16.2 Construction Impact	To be addressed during final design and construction	Design and Construction Contractor



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	residential property line noise limits will be developed during final design and included in the construction specification. Noise monitoring will be conducted during construction to verify compliance.		Assessment, p. 5-78		
SOC3-36	Numeric limits and monitoring requirements will be developed during final design and included in construction specifications. Construction activities would be closely coordinated with sensitive receptors such as the South Central Station and Magnolia Trace apartments.	Minimize vibration impacts during construction.	5.16.2 Construction Impact Assessment, p. 5-79	To be addressed during final design and construction	Design and Construction Contractor, DART Community Affairs
SOC3-37	Protect existing site conditions, including vegetation (such as trees, shrubs, and grass) on or adjacent to the work site which are not to be removed and which do not unreasonably interfere with the work. Conduct a field survey to mark trees and shrubs to be avoided in construction areas. Disturbed areas should be re-vegetated with native plant species.	Avoid habitat destruction.	5.16.2 Construction Impact Assessment, p. 5-79	Identify areas to protect during final design.	Design and Construction Contractor
SOC3-38	Provide erosion controls and minimization of the introduction of sediments, wastewater and chemical to surface and subsurface waters in a Storm Water Pollution Prevention Plan (SW3P) and in conformance with the TPDES General Permit. Project specifications must be reviewed by the Storm Water Quality Department at the City of Dallas prior to initiation of construction.	Provide adequate mitigation measures to minimize impacts to water quality and reduce sediment runoff.	5.16.2 Construction Impact Assessment, p. 5-80	To be developed during final design.	Design and Construction Contractor
SOC3-39	Contractor will use BMPs for construction activities to prevent stormwater runoff of construction materials and equipment in accordance with DART specifications and the SW3P. The contractor will also mulch and re-seed disturbed areas to prevent air and water erosion on the site after termination of construction operations. DART will coordinate with property owners for temporary use of property outside of station sites or DART owned property.	Manage construction sites and access to minimize impacts to environment.	5.16.2 Construction Impact Assessment, p. 5-81	To be coordinated during final design and construction.	Construction Contractor; DART Real Estate
SOC3-40	The contractor will verify existing utilities prior to construction. Contractors will be directed to consider a range of mitigation approaches to minimize or avoid impacts to utilities including coordination with utility agencies on alterations, two week notification to businesses and residences, limited down time. Should unknown utilities be discovered during construction, work would be	Minimize and mitigate disruption of utilities during construction	5.16.2 Construction Impact Assessment, p. 5-83	Verification of utilities should be done prior to construction. Coordination ongoing during construction period.	Design and Construction Contractors; DART Real Estate



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No.	Mitigation Measure	Issue	Final LEA Reference	Status	Responsible Party
SOC3-41	discontinued until appropriate actions are taken. Dispose of debris, spoil and waste in accordance with DART specifications. Clean fill material can be used or disposed of on-site. No waste material would be burned onsite. Project site and disposal areas will be left clean upon completion of the project.	Proper disposal of fill, debris, spoil and waste.	5.16.2 Construction Impact Assessment, p. 5-83	To be managed during construction.	Construction contractor

