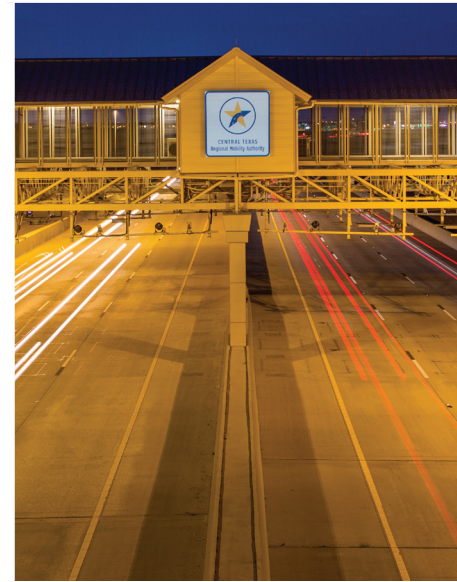




CENTRAL TEXAS
Regional Mobility Authority

2017

ANNUAL REPORT
OF CONDITIONS



Prepared by:
ATKINS
General Engineering Consultant



**CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY SYSTEM**



February 20, 2017

Mike Heiligenstein
Executive Director
Central Texas Regional Mobility Authority
3300 N. IH-35, Suite 300
Austin, Texas 78705

Re: 2017 Annual Report of Conditions – 183A Toll Road and 290 Toll Road/Manor Expressway

Dear Mr. Heiligenstein:

As General Engineering Consultant to the Central Texas Regional Mobility Authority and in accordance with Section 712 of the Master Trust Indenture, Atkins North America, Inc. (Atkins) is pleased to submit the 2017 Annual Report of Conditions for the 183A Toll Road and 290 Toll Road/Manor Expressway. This report sets forth our findings as to the condition of the 183A Toll Road and 290 Toll Road/Manor Expressway, as well as our recommendations of proper operations and maintenance of the facilities during fiscal year 2018.

Atkins conducted a visual inspection of all portions of the 183A Toll Road and 290 Toll Road/Manor Expressway in October and November 2016. Bridges are inspected by the Texas Department of Transportation (TxDOT) every two years per applicable federal requirements in accordance with the National Bridge Inspection Program (NBIP). The findings of the most recent NBIP inspections, conducted in late 2015, were reviewed and are reflected in this report for both facilities. The following report summarizes the conditions observed and are fully reported in the 2017 Annual Detailed Inspection Report transmitted to the Mobility Authority's Director of Engineering.

We appreciate the opportunity to provide the services required of the General Engineering Consultants, and we wish to acknowledge the excellent cooperation of the Mobility Authority staff in the performance of these services.

Sincerely,

Gregory S. Blake, P.E.
Senior Project Director
Atkins North America, Inc.

Enclosure

Copies to: Bill Chapman, CTRMA
Tim Reilly, CTRMA
Justin Word, CTRMA
File

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▶ ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
ASTM	American Society for Testing and Materials
BRINSAP	Bridge Inventory, Inspection and Appraisal Program
CDA	Comprehensive Development Agreement
CIP	Cast in Place
CR	County Road
CTECC	Combined Transportation, Emergency & Communications Center
D/B	Design-Build
DC	Direct Connector
DNE	Do Not Enter
ETC	Electronic Toll Collection
FHWA	Federal Highway Administration
FY	Fiscal Year
GEC	General Engineering Consultant
ILP	In-Lane Processing
IRI	International Roughness Index
MMP	Maintenance Management Plan
MSE	Mechanically Stabilized Earth
MUTCD	Manual on Uniform Traffic Control Devices
NBIP	National Bridge Inspection Program
NBIS	National Bridge Inspection Standards
PBMC	Performance Based Maintenance Contractor
RM	Ranch to Market Road
ROW	Right-of-Way
SH	State Highway
SNs	Skid Numbers
TCS	Toll Collection System
TMC	Traffic Management Center
TxDOT	Texas Department of Transportation
US	United States Highway
WAN	Wide Area Network
WW	Wrong Way
WWDs	Wrong Way Drivers

EXECUTIVE SUMMARY

As per Section 712 of the Master Trust Indenture, the Central Texas Regional Mobility Authority (Mobility Authority) shall require the General Engineering Consultant (GEC) to conduct an inspection of the "System," which is currently comprised of the 183A Toll Road and the 290 Toll Road/Manor Expressway, at least once in the fiscal year following substantial completion of the initial project funded with bond obligations and in each fiscal year thereafter.

Following each inspection and on or before the 90th day prior to the end of each fiscal year, the GEC shall submit to the Mobility Authority a report setting forth:

- ◆ Its findings as to whether the System has been maintained in good repair, working order, and condition;
- ◆ Its advice and recommendations as to the proper maintenance, repair, and operation of the System during the ensuing fiscal year; and
- ◆ An estimate of the amount of money necessary for such purposes, including its recommendations as to the total amounts and classifications of items and amounts that should be provided for in the annual operating budget, the annual maintenance budget, and annual capital budget for the next ensuing fiscal year.

A Detailed Inspection Report of the inspection findings is transmitted separately to the Mobility Authority's Director of Engineering.

Copies of such reports are to be provided to the Trustee by the Mobility Authority. Atkins North America, Inc. (Atkins), as GEC, completed the inspections in October 2016 and is pleased to report that the system has been maintained in good repair, working order and condition. This observation was based on a general visual inspection of the roadways, buildings, overhead sign structures, retaining walls and toll gantries.

Atkins recommends that the Mobility Authority continue to implement the routine maintenance as budgeted and scoped, and to also implement the Renewal and Replacement Projects planned for the ensuing fiscal year. Through coordination with the Mobility Authority staff, and in review of the anticipated Renewal and Replacement Projects anticipated through 2022, the following budgets are recommended:

Operating Expenses - \$12.5 million

Maintenance Expenses - \$3.8 million

Capital Expenses - \$16.2 million

Renewal and Replacement Fund - \$0.5 million in 2020 and \$5.8 million in 2021

The overall condition of the System, and funding levels for the System operating budgets exemplifies the Mobility Authority's commitment to maintain and operate a safe and reliable toll road system for the Central Texas region.

CENTRAL TEXAS ROADWAY SYSTEM MAP



1.0 INTRODUCTION

1.1 Background

In compliance with the requirements of the Master Trust Indenture, Atkins North America, Inc. conducted a visual inspection of 183A Toll Road and the 290 Toll Road/Manor Expressway facility in October 2016. The inspection was conducted to assess the general condition of roadways, buildings, overhead sign structures, retaining walls and toll gantries along the facility and to identify any deficient elements to be restored to good working condition. This report includes conclusions and recommendations concerning the condition, maintenance, repair, and operation; the amount of money necessary for the proper maintenance, repair, and operation of the toll road during the ensuing Fiscal Year (2017), and the amount of funds available in the Renewal and Replacement Fund.

1.2 Inspection Process

The inspection covered all portions of the facility including: pavement, roadside elements, retaining and noise walls, underdeck lighting, drainage structures, signs and sign structures, pavement markings and associated buildings and equipment. Bridge inspections were conducted in late 2015 by the Texas Department of Transportation (TxDOT) as part of their Bridge Inventory, Inspection and Appraisal Program (BRINSAP). A summary of their findings is included in this report.

Table 1: Roadway Inspection Elements

Category	Item	Description
Pavement	Pavement & Shoulders	General condition of pavement and shoulders
	Curb/Gutter	Identification of deficiencies such as settlement, cracking, and displacement
	Joints	Identification of deficiencies including joint cracking, faulting, and surface deterioration, etc.
Roadside	Culverts	Identification of inadequate drainage at culverts, flumes, and weep holes and condition of safety treatments
	Ditches	Presence of erosion, silting, presence of debris, lack of vegetation, etc.
	Grates/Inlets/Piping	Identification of inadequate drainage at pipes, grates and inlets
	Ponds	Identification of inadequate drainage, evidence of erosion and malfunctioning components
Misc.	Signs	Conditions associated with mainlane and ramp signing to include damage and day and night visibility
	Pavement Graphics	Condition of pavement graphics to include day and night visibility and section loss
	Pavement Markings	Presence of wear and tear of striping and markings to include day and night visibility and section loss
	Raised Pavement Markers	Condition of raised pavement markers to include missing markers and proper day and night visibility
	Delineators	Condition of delineation to include missing delineators and proper day and night visibility
	Metal Beam Guard Fence (MBGF)	Condition of MBGF and its components, terminal anchors, single guardrail terminals (SGT), etc.
	Attenuators	Condition of various crash attenuation systems
	Barriers	Condition of concrete barriers and bridge rail
	Coatings	Conditions such as peeling, absent or damaged coatings on concrete traffic barrier, concrete traffic rail, or other coated surfaces
	Fence	Condition of chain-link, barbed wire, and ornamental fencing at the right-of-way (ROW), or within maintenance limits
	Lighting	Conditions associated with lighting structures and their components, bridge underdeck lights and night time inspections for proper operation

For the purpose of this report, the existing roadway conditions were rated and grouped into three major categories: (1) Pavement; (2) Roadside; and (3) Miscellaneous. Each category consisted of specific features that were inspected, as shown in Table 1, page 4.

All bridges constructed on the Mobility Authority System, with the exception of the pedestrian bridges, are inspected as part of the Texas Department of Transportation’s (TxDOT) Bridge Inventory, Inspection and Appraisal Program (BRINSAP). BRINSAP is TxDOT’s program to implement the National Bridge Inspection Standards (NBIS) which are issued by the Federal Highway Administration (FHWA) and discussed in detail in the Code of Federal Regulations, 23 CFR 650C. These standards require all bridges on the Texas Transportation Commission-designated State Highway System to be inventoried, inspected and appraised every two years in accordance with the Manual of Maintenance Inspection of Bridges published by the American Association of State Highway and Transportation Officials (AASHTO).

TxDOT inspects the bridges on 183A and 290 Toll/Manor Expressway as part of their On-System bridge inventory. The resulting reports were provided to the Mobility Authority and serve as the basis for the comments and recommendations in the bridge portion of this report.

The existing bridge conditions are rated and grouped by the following categories: (1) Deck; (2) Substructure; (3) Superstructure; (4) Channel; (5) Culverts; (6) Approaches; (7) Miscellaneous; and (8) Traffic Safety. Each category consists of specific features that were inspected, as shown in Table 2, below.

Table 2: Bridge Inspection Elements

Category	Description of Inspection
Deck	Condition of the deck surface, its associated joints, rail, sidewalks/medians, striping, and drainage on top of the bridge structure
Superstructure	Condition of concrete beams, beam connections and bearings
Substructure	Condition of columns, bents, abutments, foundations, and riprap
Channel	Condition of the stream or creek being crossed by the bridge
Culverts	Condition of the headwalls, wingwalls, slab footing, safety devices and other associated items
Approaches	Condition of the approach slabs, rail leading up to the bridge, guard fence, and retaining walls at the bridge abutments
Miscellaneous	Condition of the warning devices such as vertical under clearances, signs, illumination and utility lines
Traffic Safety	Condition of approach rails and impact attenuators

To ensure the health of the system, both new and existing retaining and noise walls, as well as the various components of retaining and noise walls were rated and grouped in categories described in Table 3, below.

Table 3: Wall Inspection Components

Item	Description of Inspection
Wall	Condition of wall face, coping, foundations, joints, panel finishes and Cast in Place (CIP) sections
Earth	Conditions of the top slope, toe slope, backfill, CIP and Mechanically Stabilized Earth (MSE) wall

For the purpose of this report, the existing building conditions were rated and grouped by the following categories: (1) Architectural; (2) Structural; (3) Mechanical; and (4) Electrical. Each category consisted of specific features that were inspected, as shown in Table 4, below.

Table 4: Building Inspection Elements

Category	Item	Description of Inspection
Architectural	Building Exterior	Condition of walls, glazing, decks, stairs, handrails, sealants, soffits, doors, paint and signage
	Building Interior	Conditions of the lobby, finishes, stairs, doors, restrooms, security system and ceiling tile
	Roof	Condition of the surface condition, seams, expansion joints and access
	Drainage	Condition of the roof drains, secondary drainage, gutters, downspouts and edge flashing
	Site	Condition of the ramps, rails, lighting, retaining walls, screen walls, landscaping, irrigation and parking
Structural	Structural	Condition of the foundation, ground floor slab, grade beams, walls, elevated floor slabs, roof, columns and joints
Mechanical	Mechanical	Condition of cooling and heating systems, air handlers, exhaust fans, ductwork, piping and insulation
	Plumbing	Condition of the piping, water flow and pressure, hot water source, water pumps, natural gas plumbing, sanitary sewer plumbing, fixtures and water softening system
	Fire Protection Systems	Condition of fire protection systems and backflow preventers
Electrical	Electrical	Condition of the primary transformer, step-down transformer, electrical room, wiring, conduits, emergency power and communication systems

The Overhead Signs Structures located on each roadway were inspected as part of this report. The inspection covered the structural items of the structures, as shown in Table 5, below.

Table 5: Overhead Sign Structures Elements

Item	Description of Inspection
Structural	Condition of the foundation.
	Condition of the concrete columns.
	Condition of the truss connection to the column, including the bolts.
	Condition of the arm chords on the truss

The toll system infrastructure required to accommodate the Toll Collection System (TCS) consists of various components at each remote tolling location including, but not limited to those indicated in Table 6, below:

Table 6: TCS Inspection Elements

Category	Description of Inspection
Toll Collection System (TCS)	Special reinforced pavement section;
	Retaining walls and copings;
	Drainage features;
	Civil site work, including grading, access driveways and fencing;
	Toll gantries, including foundations and gantry structures;
	In-Lane Processing (ILP) Equipment Enclosures, environmental protection and climate controls for housing the electronic equipment;
	Conduit and ground boxes providing connections between the ILPs and the Electronic Toll Collection (ETC) Lane equipment installations;
	Power and Wide Area Network (WAN) communication services up to the location of the ILP enclosures;
	Emergency generators and associated fuel tanks; and
	Signing, pavement markings, traffic barriers and other roadway appurtenances required at each remote tolling location.

The assessment is based on general visual observations made in the field without conducting any detailed in-place testing. It should also be noted that the observations reflect the condition of the feature(s) on the day the inspection was performed. As such, the opinions, statements, and recommendations in this report are based solely on conditions observed during the inspection. As part of this inspection, a list of roadside deficiencies is being provided to the Mobility Authority to forward to either the Performance Based Maintenance Contractor (PBMC) or the construction contractor to be addressed.

No representation or warranty is made that all defects have been discovered or that defects will not appear in the future. An inspection rating scale of 1 to 5 is used to determine the severity of the asset defect, shown in Table 7, below.

Table 7: Condition Assessment Rating Scale

Grade	Rating	Description
5	Excellent	Feature is in like-new condition. No deficiencies noted.
4	Good	Feature appearance and functionality/operability are good. No maintenance is required.
3	Degraded	Feature appearance and functionality/operability are below average. Maintenance is required, but does not require emergency repair to protect the System.
2	Unsatisfactory	Feature appearance and functionality/operability are substandard. Maintenance is required, as soon as practical ⁽¹⁾ , but does not require emergency repair to protect the System.
1	Failing	Feature appearance and functionality/operability are unacceptable. Feature has failed and may require emergency repair to protect the public or System. ⁽²⁾

Notes:

- (1) Timeframe for which, under normal circumstances, repair work would be prioritized and scheduled.
 - (2) The need for emergency repair will be determined based on response times set forth in maintenance protocols set forth by the Mobility Authority as appropriate for a specific deficiency.
- ◆ A rating of 5 indicates the asset is adequately performing or is in “like-new” condition and does not require maintenance action.
 - ◆ A rating of 4 indicates some level of degradation of the asset but has not affected performance and does not require maintenance.
 - ◆ A rating of 3 indicates some level of degradation of the asset performance and requires maintenance action but does not warrant expedited maintenance.
 - ◆ A rating of 2 indicates the defect identified is showing signs of the asset degrading to the point that it is no longer functional and requires expedited maintenance to protect the public or the System.
 - ◆ A rating of 1 indicates that the asset is out of service and is in need of replacement or reconstruction.

1.3 Description of System

1.3.1 183A Toll Road

The Mobility Authority constructed, operates, and maintains the 183A Toll Road, a tolled facility stretching 10.4 miles from RM 620 to CR 276 in Williamson County. The all electronic toll collection corridor is a critical link in the highway network serving an area experiencing tremendous development and economic growth. The first phase of 183A opened to traffic on March 3, 2007, effectively reducing congestion, enhancing mobility, and providing safer travel. The second phase opened to traffic on April 6, 2012.

Phase II also included a 4.7-mile extension of the shared use path adjacent to the 183A Toll Road from RM 1431 to Hero Way. This extension was opened to the public on January 18, 2013. In fall 2015, the intersection of 183A Toll and US 183 was reconstructed to make the intersection safer, easier to navigate and enable better access to developments along the 183A corridor.



**1.3.2 290 Toll Road/
Manor Expressway**

The Mobility Authority constructed, operates and maintains the 290 Toll Road/Manor Expressway, a 6.2-mile limited access toll road spanning from US 183 to just east of Parmer Lane. The all electronic toll collection corridor is a significant link to important roadways in the region including US 183, I-35 and SH 130 and provides a critical evacuation route from the Gulf Coast. The first phase of 290 Toll/Manor Expressway, which consists



290 Toll/Manor Expressway near Springdale Road

of four tolled direct connectors at the US 183 interchange, opened in December 2012. The second phase of the project opened to traffic in May 2014, effectively reducing congestion on US 290 East and bringing reliable travel times for tolled and non-tolled travel.

1.3.3 Facilities/Buildings

Mobility Authority facilities provide support for the safe and reliable operation of the System. These facilities include the Traffic Management Center (TMC) adjacent to the 183A Toll Road in Cedar Park, the 183A maintenance storage yard at the Brushy Creek Road interchange, the 290 Toll Road maintenance storage yard on Old Manor Road, and various roadway ILP structures.

1.4 Maintenance Program Overview

The Mobility Authority utilizes a System-wide PBMC to maintain its infrastructure. Also included in the PBMC are Performance-Based Maintenance services for existing and future shared use paths, trailheads, and Mobility Authority building facilities, including the 183A Field Operations Building/Traffic Management Center, existing and future maintenance yard buildings, existing and future ILP buildings, and emergency generators located at or near toll gantries. The general maintenance obligations of the PBMC are as follows:

1. Maintain the Project and Related Transportation Facilities in a proactive and timely manner appropriate for a facility of the character of the Project.
2. Minimize delay and inconvenience to users and, to the extent the Contractor is able to control, users of Related Transportation Facilities.
3. Identify and manage incidents and correct all defects and damages from Incidents to include cleanup of spilled cargo, removal and disposal of damaged and unsalvageable materials, obtaining required permits, etc.
4. Monitor and observe weather and weather forecasts to proactively deploy resources to minimize delays and safety hazards due to heavy rains, snow, ice, or other severe weather events.
5. Remove debris, including litter, graffiti, animals, and abandoned vehicles or equipment from the Project Right-of-Way (ROW).
6. Minimize the risk of damage, disturbance, or destruction of third-party property during the performance of maintenance activities.

7. Coordinate with and enable the Mobility Authority and others with statutory duties or functions in relation to the Project or Related Transportation Facilities to perform such duties and functions.
8. Perform systematic Project inspections and maintenance in accordance with the provisions of Contractor’s Maintenance Management Plan (MMP) to include Contractor’s Safety and Health Plan and in accordance with the Contract Documents.

The term of this Contract begins with an initial five-year term, terminating June 30, 2020, with two additional one-year renewal options to extend the initial term to a maximum of seven years.

The intent of the PBMC is for the Contractor to manage and plan maintenance activities to meet the performance requirements as set forth in the contract documents.

1.5 Condition Assessment

The PBMC is administered by the Mobility Authority. All elements are audited, at minimum, on a monthly basis for contract compliance. In addition, the System and its performance is monitored on a daily basis. These audits are performed by way of a condition assessment consistent with parameters set forth in the PBMC. The condition assessments are conducted on 10% of the roadway on randomly selected sections. This ensures the Contractor is maintaining the facilities within the tolerances established by the performance measures.

2.0 ANNUAL REPORT OF CONDITIONS

2.1 Overview

The results of this year’s annual inspection indicate the System is in satisfactory condition or better and is being maintained in an overall excellent condition. No deficiencies indicating unsatisfactory performance were identified. In general, most of the corrective measures are being addressed through the Mobility Authority System-wide PBMC.

2.2 183A Toll Road

2.2.1. 183A Toll Road Roadway

Asphalt Pavement

Although minor issues were noted, the inspection conducted in October 2016 did not identify any major deficiencies in the asphalt pavement that affect the safety and operations of 183A. It should be noted that the northbound and southbound frontage roads from RM 1431 to approximately 1000



183A Toll north of the Cedar Park toll plaza

feet north of San Gabriel Parkway, excluding sections at 183A and Scottsdale Drive, were repaved in the fall of 2014. The sections at Scottsdale Drive were repaved in 2012 with the construction of 183A Phase II, and are in good condition.

Concrete Pavement

Concrete pavement along the mainlanes and frontage roads was found to be in good condition, with some minor deficiencies present. The most prevalent deficiency was transverse cracking, which occurred at various locations along the mainlanes. While transverse cracking is common with concrete pavement, it is a relatively minor issue and does not affect safety and operations at this time. This issue does not require immediate attention, however it should continue to be monitored during future condition inspections.

Maintenance activities were performed since the last annual inspection improving the northbound mainlane approach to the bridge over Lakeline Blvd. Repairs were made in August 2016 to improve the ride quality at this location. This repair was made using foam injection to lift and stabilize this location, realigning the approach slab with the adjacent pavement, ultimately improving ride quality for the driver. In addition, this smooth transition ensures less wear and tear on the bridge and adjacent pavement. Similar repairs were made at Brushy Creek Road and South Brushy Creek overpasses, also in August 2016.

Roadside

The roadside visual inspection did not identify any unsatisfactory deficiencies that affect the safety and operations of the facility. In general, most roadside features are in adequate or better condition. Only a few elements were identified as minor problems, with the most common deficiency being minor erosion and siltation of drainage elements.

Drainage elements overall were found to be in good condition with only minor deficiencies. There was sediment buildup in some of the inlets. Minor to moderate erosion was present in several ditches and berms and at bridge drain outlets. Some driveway culverts and pond inlets were partially clogged.

Miscellaneous

Pavement striping and symbols are showing signs of deterioration through lack of reflectivity and section loss. Reflective pavement markers are in need of maintenance to replace missing or non-reflective markers. Restriping of the facility is scheduled for summer 2017 through the PBMC. Replacement of the reflective pavement markers was conducted in November 2016 subsequent to this inspection.

In addition, a nighttime visual inspection was performed during the fall 2016 inspections. All signs were clearly visible and legible to the inspector. The signs along 183A are still in good condition and do not need to be replaced at this time. It is recommended that reflectivity testing be performed every 3-5 years to ensure compliance with requirements.

Delineators at entrance and exit ramps were missing at various locations throughout the corridor and should be replaced.

The illumination elements were inspected for damage and to ensure proper functioning of the lights at night. No major deficiencies were recorded, with minor maintenance consisting of bulb replacements needed.

183A has eight traffic signals on the frontage road that are the Mobility Authority's responsibility. There are two located at each of the following four intersections: Crystal Falls Parkway, Hero Way, Scottsdale Drive, and San Gabriel Parkway. The signals were found to be in good condition with only minor deficiencies.

183A has numerous detention and water quality ponds along the length of the facility. These ponds serve to provide water quality treatment of the runoff from the roadway and detain the storm water where necessary. The most common issues noted were minor to severe erosion of some pond berms where water entered the pond, vegetative growth in sand filtration basins, trash buildup, and one outfall pipe not draining properly. Ongoing maintenance of the ponds is performed through the PBMC to address vegetation, siltation trash and debris. Plans for erosion and malfunctioning devices are in development and planned for repair as soon as practical.

2.2.2 183A Toll Road Bridges

All of the 183A bridges were inspected and evaluated in late 2015, as part of TxDOT's BRINSAP Program, which occurs every two years per federal requirements. The resulting reports were provided to the Mobility Authority and serve as the basis for the comments and recommendations for the Bridge portion of this report.

A summary of the TxDOT bridge inspection reports for 183A is provided in the 183A Toll Road Detailed Inspection Report.

The pedestrian bridges were not inspected by TxDOT and were thus included in the GEC's annual inspection. There are four pedestrian bridges along the shared use path adjacent to 183A. These bridges were found to be in good condition.

Based on a review of the most recent inspection reports and visual observations, all 183A bridges, including those for the shared use path, remain in good condition. There are no significant deficiencies noted in the 2015 NBIP Reports. The most common deficiencies noted were hairline longitudinal and transverse cracks, worn joint sealant at bridge joints, and sediment build-up in bridge deck drains.

2.2.3 183A Toll Road Walls

The retaining walls on the project consist of mainly MSE walls. There are also concrete noise walls adjacent to neighborhoods in the Phase I segment of 183A, a concrete block subdivision wall at the Block House Creek neighborhood, and soil nail and drilled shaft wall systems at the Scottsdale Drive underpass.

The fall 2016 visual inspection did not identify any deficiencies that affect the safety and operations of the facility. The majority of the defects noted included the presence of vegetation growth causing minor drainage obstruction, minor cracking of panels, minor scratches and chips at the bottom of the walls, believed to be from mowing operations.

2.2.4 183A Toll Road Buildings

A summary of the Mobility Authority's ILP buildings and the associated general conditions are described in the 183A Inspection Report. Overall, the ILP building facilities on 183A are in adequate or better condition. The following is a general summary of condition assessment for each category.

Building Exterior

No unsatisfactory deficiencies were observed on the exterior finishes or surfaces.

Roofing

The surface, seams, expansion joints and roof at both ILP building locations are in good condition.

Building Interior

No unsatisfactory deficiencies were observed on the interior finishes or surfaces other than minor scuffs on the flooring. This work is cosmetic in nature and can be addressed through routine maintenance.

Site Improvements

No unsatisfactory deficiencies were observed. Minor issues noted include parking lot appearance needing maintenance, requiring routine maintenance to address the deficiency.

Structure

No deficiencies were observed in the structural components of ILP buildings.

Electrical Systems

The electrical systems appear to be in adequate or better condition.

Mechanical Systems

The mechanical systems at both ILP buildings are in good working order with no deficiencies requiring maintenance.

Fire Protection

All fire protection equipment appeared to be in good working order. Fire suppression systems will be inspected by a licensed professional as there are no panels available to check the status of the system.

2.2.5 183A Toll Road Maintenance Storage Yard

The Maintenance Storage Yard at the Brushy Creek Road interchange provides a secured area for storage of various materials, including signs, lighting poles and fixtures, and other miscellaneous materials. The facility also stores a fully operational anti-icing storage tank and space for solid de-icing agents. This facility, together with the TMC, meets the immediate needs for storage of equipment and materials. The facility remains in generally good condition with adequate space for the orderly storage of materials.

**2.2.6 183A Toll Road
Overhead Sign Structures**

Overhead sign bridges, which include toll gantries, sign structures, and monotube sign structures were visually inspected for deficiencies associated with their foundations, anchor bolts, base plates, column supports and arm chord connections and members.

The inspection did not reveal any unsatisfactory deficiencies in the condition and operation of the toll gantries and sign structures.



Overhead sign structure on 183A Toll

2.2.7 183A Toll Road Toll Collection System

The basic components for the Toll Collection System (TCS) are the TCS Infrastructure, the TCS Operations and Maintenance, the Customer Service Center and the Violation Processing Center. The TCS is fully interoperable with all Texas toll roads so that ETC customers from other cities, such as Houston and Dallas, can use the Mobility Authority’s System, and vice versa. Violation processing and collections, as well as the operation and maintenance of the toll collection systems, are provided through separate contracts.

The fall 2016 annual inspection performed by the GEC only included inspection of the toll infrastructure; it did not include inspection of the tolling equipment itself as this equipment is inspected by a separate party.

The visual inspection of the TCS infrastructure indicates that the primary components remain in very good condition. Efforts should be made to continue to keep all components clean, well maintained, and secure for the TCS.

2.2.7.1 Toll Collection System Infrastructure

As discussed in Section 2.2.4 (Buildings), the visual inspection of the building and civil site aspects of the toll system infrastructure indicates that the primary components are in adequate or better condition. In addition, as discussed in Section 2.2.6 (Overhead Sign Bridges), the toll gantries are in adequate or better condition. Other elements associated with the toll infrastructure listed above were found to be in adequate or better condition. Efforts should be made to continue to keep all components clean, well maintained, and secure for the TCS.



Toll collection infrastructure on 183A Toll

2.3 290 Toll Road/Manor Expressway

As part of the Comprehensive Development Agreement (CDA), a warranty provision is in place for various items, as summarized in Table 8, below.

Table 8: Manor Expressway Summary of Project Warranties

Summary of Project Warranties	
General Subject	Warranty Period after FA
Flexible Pavement: Pavement Failure in Surface/Base	5 years
Flexible Pavement: Cracking, Raveling, Flushing, Rutting, and Popouts	3 Years
Rigid Pavement: Cracking, Joint Deficiencies, Punch-Outs, and Surface Defects	5 years
Buildings, Structures, Toll Structures, Gantries and related facilities	5 years
Structural Concrete	5 years
Steel Paint System	5 years
Settlement: New Roadway Grade	5 years
Settlement: Noise and Retaining Walls	5 years
Signing (Permanent)	2 Years
Traffic Signals	2 years
Turf Establishment	1 year
Lighting	2 years
D/B CDA Developer Directed Utilities Relocations	2 years

2.3.1. 290 Toll/Manor Expressway Roadways

Pavement

The concrete pavement sections along the corridor appear to be in good condition with no apparent unsatisfactory deficiencies. The most prevalent deficiency was transverse cracking, which occurred at various locations along the mainlanes. While transverse cracking is common with concrete pavement, it is a relatively minor issue and does not affect safety and operations at this time. This issue does not require immediate attention, however it should continue to be monitored during future condition inspections.

Evidence of pavement ride quality degradation was observed in several locations along the corridor. The Mobility Authority is actively monitoring this condition and is prepared to make further routine maintenance repairs to stabilize the pavement, preventing further movement.

No deficiencies were identified in the joints or curb and gutter along the corridor.

Roadside

The roadside visual inspection did not identify any unsatisfactory deficiencies that affect the safety and operations of the facility. In general, most roadside features are newly constructed or are in adequate or better condition. Only a few elements were identified as minor problems, with the most common deficiency being minor erosion and small areas where vegetation is sparse.

Miscellaneous

Pavement striping and symbols are showing signs of deterioration through lack of reflectivity and section loss. Reflective pavement markers are in need of maintenance to replace missing or non-reflective markers. Restriping of the facility is scheduled for summer 2017 through the PBMC. Replacement of the reflective pavement markers was conducted in November 2016 subsequent to this inspection.

In addition, a nighttime visual inspection was performed during the fall 2016 inspections. All signs were clearly visible and legible to the inspector. The signs along 290 Toll are still in good condition and do not need to be replaced at this time. It is recommended that reflectivity testing be performed every 3-5 years to ensure compliance with requirements.

Delineators at entrance and exit ramps were missing at various locations throughout the corridor and should be replaced.

The illumination elements were inspected for damage and proper functioning of the lights at night. The only item noted was lack of the number of functioning lights on a single high mast light pole due to bulb outage.

2.3.2 290 Toll/Manor Expressway Bridges

All bridges constructed on the 290 Toll Road, with the exception of the pedestrian bridge, were inspected and evaluated in late 2015, as part of TxDOT’s BRINSAP Program.

A summary of the bridge inspection reports for 290 Toll/Manor Expressway is provided in the 290 Toll/Manor Expressway Detailed Inspection Report.

It should be noted that during the fall 2015 inspection, uneven transitions from the roadway section to the bridge section of multiple bridges were observed. The Design-Build Contractor was notified of these deficiencies pursuant to the warranty terms of the design-build contract. Repairs were made in June 2016 to improve the ride quality at the approach and departure of the mainlane bridge over the MOKAN railroad. This repair was made using foam injection to lift and stabilize this location, realigning the approach and departure slabs with the adjacent pavement, ultimately improving the ride quality for the driver. In addition, this smooth transition ensures less wear and tear on the bridge and adjacent pavement. Other locations were repaired in August 2016 as part of an ongoing plan to correct these locations. Additional locations were identified during the fall 2016 inspection and are part of scheduled repairs utilizing this same method.

The pedestrian bridge was inspected by the GEC in October 2016 with no significant deterioration noted.

Based on a review of the most recent inspection reports and visual observations, 290 Toll/Manor Expressway bridges are in adequate or better condition.



290 Toll/Manor Expressway mainline bridges over SH 130 mainlanes and frontage roads

2.3.3 290 Toll/Manor Expressway Walls

Based on visual observations, both new and existing retaining walls on 290 Toll/Manor Expressway are in adequate or better condition with minor cosmetic deficiencies.

The retaining walls on the project consist of mainly MSE walls.

The fall 2016 visual inspection did not identify any deficiencies that affect the safety and operations of the facility. The majority of the defects noted were vegetation growth causing minor drain obstruction and evidence of minor panel misalignment, as well



Retaining Wall S1-05 at the southwest corner of the Springdale Road intersection

as unrelated panel spalling and cracking in other locations. However, last year's report indicated a significant number of vertical cracks on the wall panels of soil nail walls 19 and 20, at the Scottsdale Drive bridges, which had white, brown, or black stains at the crack. These drains have been located and cleaned. The structural integrity of the walls is not believed to be compromised; however the walls will continue to be monitored.

2.3.4 290 Toll/Manor Expressway Buildings

The inspection of building facilities serving the 290 Toll Road/Manor Expressway revealed areas where the existing conditions of these facilities require maintenance actions. The inspections covered three ILP buildings, which house various electronic toll collection equipment, located at the westbound and eastbound tolling locations at the east ends of the direct connect flyovers, and at the Parmer mainlane tolling location. An emergency generator site that serves both the westbound and eastbound tolling locations is located on the north side of the westbound frontage road, just west of Cross Park Drive. The Parmer emergency generator is located adjacent to the Parmer ILP building.

A summary of the Mobility Authority's ILP buildings and the associated general conditions are described in the Detailed Inspection Report. Overall, the ILP building facilities on 290 Toll/Manor Expressway are in adequate or better condition. The following is a general summary of condition assessment for each category.

Building Exterior

No unsatisfactory deficiencies were observed on the exterior finishes or surfaces.

Roofing

The surface, seams, expansion joints and roof at both ILP building locations are in good condition.

Building Interior

No unsatisfactory deficiencies were observed on the interior finishes or surfaces.

The GEC was unable to gain access to the building interior at the mainlane Parmer ILP due to issues with the door hardware, therefore, this building was not inspected.



ILP building located at the Parmer Mainlane tolling location



Emergency generator that a the eastbound entrance ramp toll location east of Johnny Morris Road

Site Improvements

No unsatisfactory deficiencies were observed on the sidewalks, parking lots, landscape areas or other appurtenances.

Structure

No deficiencies were observed in the structural components of ILP buildings.

Electrical Systems

The electrical systems appear to be in adequate or better condition.

Mechanical Systems

The mechanical systems at both ILP buildings are in good working order with no deficiencies requiring maintenance.

Fire Protection

All fire protection equipment appeared to be in good working order. Fire suppression systems will be inspected by a licensed professional as there are no panels available to check the status of the system.

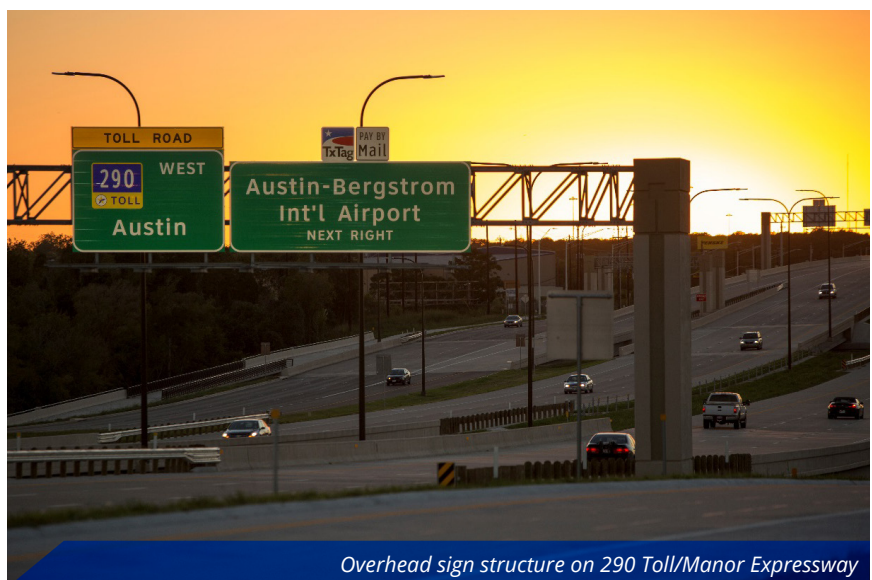
2.3.5 290 Toll/Manor Expressway Maintenance Storage Yards

The Maintenance Storage Yard on Manor Road near 290 Toll provides a secured area for storage of various materials, including signs, lighting poles and fixtures, and other miscellaneous materials. The facility also stores a fully operational anti-icing storage tank and space for solid de-icing agents. The facility remains in generally good condition with adequate space for the orderly storage of materials. Cracking was observed in the outer portions of the maintenance yard pavement. The Mobility Authority will make repairs as part of the PBMC's crack seal operations planned for winter 2017.

2.3.6 290 Toll/Manor Expressway Overhead Sign Structures

Overhead sign bridges, which include toll gantries, sign structures, and monotube sign structures were visually inspected for deficiencies associated with their foundations, anchor bolts, base plates, column supports and arm chord connections and members.

The inspection did not reveal any unsatisfactory deficiencies in the condition and operation of the toll gantries and sign structures.



Overhead sign structure on 290 Toll/Manor Expressway

Deficiencies requiring maintenance include members of a column support beginning to reveal rust stains from the presence of an iron ore aggregate which can occur naturally in the concrete coarse aggregate known as marcasite. These rust stains are limited to a cosmetic concern and are easily repaired. The Mobility Authority is monitoring this condition and will pursue cosmetic repairs through the PBMC.

Minor cracking was also observed. While cracking is common with concrete, it is a relatively minor issue and does not affect safety and operations at this time. This issue does not require immediate attention, however it should continue to be monitored during future condition inspections.

2.3.7 290 Toll/ Manor Expressway Toll Collection System

The basic components for the TCS are the TCS Infrastructure, the TCS Operations and Maintenance, the Customer Service Center, and the Violation Processing Center. The TCS is fully interoperable with all Texas toll roads so that ETC customers from other cities, such as Houston and Dallas, can use the Mobility Authority's System and vice versa. Violation processing and collections, as well as the operation and maintenance of the toll collection systems, are provided through private contracts.

The fall 2016 annual inspection performed by the GEC only included inspection of the toll Infrastructure. It did not include inspection of the tolling equipment itself. This equipment is inspected by a separate party.

The visual inspection of the toll system infrastructure indicates that the primary components remain in very good condition. Efforts should be made to continue to keep all components clean, well maintained, and secure for the TCS.

2.3.7.1 Toll Collection System Infrastructure

As discussed in Section 2.3.4 (Buildings), the visual inspection of the building and civil site aspects of the toll system infrastructure indicates that the primary components are in adequate or better condition. In addition, as discussed in Section 2.3.6 (Overhead Sign Bridges), the toll gantries are in adequate or better condition. Other elements associated with the toll infrastructure listed above were found to be in adequate or better condition. Efforts should be made to continue to keep all components clean, well maintained, and secure for the TCS.



Toll collection infrastructure on 290 Toll/Manor Expressway

3.0 ONGOING INITIATIVES

3.1 Roadways

Pavement Management:

Overall, the minor deficiencies identified during the annual inspection should be monitored to ensure that more serious conditions do not develop. As traffic volumes increase, continued attention and maintenance on 290 Toll/Manor Expressway is essential to ensure proper operation. The following preventative maintenance programs would effectively complement the Agency's pavement management plan and aid in proactively monitoring the condition of the pavement.

Preventative Maintenance Programs:

- ◆ **Ride Quality Testing** – International Roughness Index (IRI) testing and straight edge testing is recommended to be performed on an annual basis to determine ride quality. Ride quality is important for several reasons. Studies have found that the traveling public considers pavement conditions, which includes ride quality, to be the third most important improvement needed for highways, ranking behind only traffic flow and safety.
- ◆ **Skid Testing** – Since 290 Toll/Manor Expressway is in like-new conditions, skid testing is not warranted at this time. As the facility ages, skid testing is recommended to be performed on a bi-annual cycle. In the meantime, the facility should continue to be monitored for any wet-weather safety issues. The most common method of evaluation reported by state departments of transportation was the locked-wheel skid test following American Society for Testing and Materials (ASTM) E274. Using ASTM E274 specifications, states described skid numbers (SNs) of 30 and above as acceptable for low-volume roads and SNs of 35-38 as acceptable for heavily-traveled roads.

3.1.1 Wrong-Way Driver Program

Texas leads the nation in wrong way crashes-crashes that occur when a driver heads the wrong direction on a roadway and into oncoming traffic. Wrong-way drivers (WWDs) have been an issue facing transportation providers worldwide as long as divided roadways have existed. According to FHWA, numerous studies of this problem were conducted in the late 1960s and early 1970s. The FHWA study (FHWA/TX-04/4128-2; January 2004) indicated that “despite over forty years of highway design, marking and signing improvements at freeway interchanges, the problem still persists.” The Mobility Authority reviewed possible changes in design, signage, maintenance, countermeasure deployment, technology, and/or practices and policies to enhance safety and prevent instances of wrong way driving. The agency is moving forward with the following countermeasures:

◆ **Lowered Sign Initiative -**

In late 2016, in an effort to prevent drivers from entering a highway going the wrong way, the Mobility Authority began lowering Wrong Way (WW) and Do Not Enter (DNE) signs at the at the exit ramps of 183A Toll and 290 Toll/Manor Expressway, System-wide. The signs are being lowered from the current seven foot-height to the MUTCD-approved three foot height. The initiative was based on research done by the Texas A&M Transportation Institute which found that many



An example of a newly-installed three-foot sign on 290 Toll /Manor Expressway as part of the Lowered Sign initiative

wrong-way crashes involve intoxicated drivers. Findings indicated that intoxicated drivers tend to get tunnel vision and focus only on the road in front of them, not highway signs. In total, 150 lowered signs will be installed to increase safety. In addition, raised pavement markings will be refreshed to display a red reflection when lit by headlights as an additional method to alert drivers they are traveling in the wrong direction. In order to increase sign visibility, red retroreflective tape will be affixed vertically to the sign face side of all WW/DNE signposts.

- ◆ **WWD Device Testing** – The Mobility Authority will test the WWD detection capability of currently installed Wavetronix devices on single-lane exit ramps on 290 Toll/Manor Expressway, as studies show most wrong way driving occurs on highways on single-lane exit ramps. If successful, the agency will consider expanded deployment.
- ◆ **WWD Detection with Idris Inductive Loops** – The Mobility Authority’s current tolling system uses in-pavement loops to count axles at tolling points to dictate the toll rate for each user based on vehicle classification. This data is pushed to the tolling hub/server where transactions are stored. The agency confirmed the equipment’s WWD detection capability. Evidence of wrong way movement exists in and can be extracted from lane controllers. The next steps are to develop a process to push the detection data to TMC/Combined Transportation, Emergency & Communications Center (CTECC) Operator for immediate response.

4.0 ANNUAL BUDGETS

Annual budgets are currently being prepared by the Mobility Authority for the proper maintenance, repair, and operation of the System for FY 2018. These budgets, which are based on estimated cost projections, together with the factors that may influence costs during this period, will be reviewed by the GECs as they are made available from the Mobility Authority. These budgets should take into account the recommended maintenance and repairs noted in the current 183A and 290 Toll/Manor Expressway Annual Report of Conditions and Detailed Inspection Reports; and they should be based on current operating practices and agency organization, anticipated changes in methods of operations, and changes in Mobility Authority staff and organization projected through FY 2018. The budgets shown below do not include non-system costs.

4.1 Annual Operating Budget

The operations costs consist of administration costs, including: accounting, financial and legal expenses, toll collection and toll system maintenance, customer service, violation processing, banking services, policing, and other costs associated with the operations of 183A and 290 Toll/Manor Expressway. The estimated costs for the proper operation of these facilities for the coming fiscal year is based on a review of existing and future conditions, together with the factors that may influence costs during this period. The GECs estimate the FY 2018 System Operating Expenses to be \$12,500,000. The factors that determine this estimate include the utilization of consultants/vendors and the assignment of Mobility Authority personnel. The actual Annual Operating Budget will be finalized by the Mobility Authority on or before June 30, 2017.

It is the opinion of the GECs that the costs projected for the operation of 183A Toll and 290 Toll/Manor Expressway are reasonable estimations of anticipated costs for the FY 2018 Annual Operating Budget.

4.2 Annual Maintenance Budget

The maintenance costs include administration costs, roadway contract maintenance activities, and other costs associated with the maintenance of 183A and 290 Toll/Manor Expressway. The estimated costs for the proper maintenance and repair of these facilities for the coming year is based on a review of existing and future conditions, together with the factors that may influence costs during this period. The GECs estimate the FY 2018 Maintenance Expenses to be \$3,800,000. The increase in the maintenance budget over the previous year's budget is reflective of the new maintenance contract that began January 1, 2016. This estimated budget does not include the amount that TxDOT will reimburse the Mobility Authority for maintenance of TxDOT's portion of the 290 Toll/Manor Expressway Project. The actual Annual Maintenance Budget will be finalized by the Mobility Authority on or before June 30, 2017.

It is the opinion of the GECs that the costs projected for the maintenance of the 183A Toll and 290 Toll/Manor Expressway are reasonable estimations of anticipated costs for the FY 2018 Annual Maintenance Budget.

4.3 Annual Capital Budget

The Annual Capital Budget details the Mobility Authority's planned capital expenditures during the ensuing Fiscal Year and the portion of capital expenditures expected to be funded from the Renewal and Replacement Fund. As defined by the Master Trust Indenture, the Annual Capital Budget for each Fiscal Year includes: the expected beginning balance in the Renewal and Replacement Fund; the amounts to be transferred by the Trustee to the Renewal and Replacement Fund from the Revenue Fund; the amount of proceeds of Obligations expected to become available during the Fiscal Year; and the desired year-end balance in the Renewal and Replacement Fund. At a minimum, the Annual Capital Budget should be in the amount recommended by the GECs.

The Mobility Authority has begun design of the southbound SH 130 to westbound 290 Toll/Manor Expressway direct connector (DC), the eastbound 290 Toll/Manor Expressway to southbound SH 130 DC, and the northbound SH 130 to westbound 290 Toll/Manor Expressway. The design for this project is expected to be complete within FY 2018 for an estimated fee of \$9,800,000. If funding becomes available, the Mobility Authority will authorize construction of the direct connectors at this interchange.

The Mobility Authority has begun development of 183A Phase III. This 5.3 mile roadway would extend 183A north from Hero Way to SH 29 and have up to three tolled lanes in each direction. The Mobility Authority's proposed highway would be located within the existing TxDOT right-of-way and within the median of the existing US 183 corridor. Schematic design, traffic modeling, and environmental investigations are currently underway. The capital expenditures for this project are expected to be \$6,400,000 for FY 2018.

Currently, the Capital Budget expenditures in FY 2018 are estimated to be \$16.2 million for the system improvements. The actual Annual Capital Budget will be finalized by the Mobility Authority on or before June 30, 2017.

5.0 RENEWAL AND REPLACEMENT FUND

The Renewal and Replacement Fund was established under the terms of the Master Trust Indenture for the purpose of paying the cost of:

- i. unusual or extraordinary maintenance or repairs not occurring annually, and renewals and replacements, including major items of equipment;
- ii. repairs or replacements resulting from an emergency caused by some extraordinary occurrence, so characterized by a certificate signed by an authorized representative, approved by the Consulting Engineer and filed with the Trustee stating that the moneys in the Reserve Fund and insurance proceeds, if any, available therefore are insufficient to meet such emergency; and,
- iii. paying all or any part of the cost of any capital improvements to the System.

To finance future repairs, replacement, and rehabilitation work required on 183A and 290 Toll/Manor Expressway, the cumulative amount in the Renewal and Replacement Fund should be sufficient to finance the next anticipated Renewal and Replacement Activities. Renewal and Replacement for 183A Toll is projected to be approximately \$500,000, tentatively scheduled to occur in 2020 for sign replacement.

An overlay of 183A Toll frontage road pavement is estimated to cost \$5,800,000 and is tentatively scheduled for 2021. No Renewal and Replacement is expected to occur within the next 5 years on the 290 Toll/Manor Expressway.

The Mobility Authority executed a new System-wide PBMC in January 2016, which covers certain activities that would have been covered by the Renewal and Replacement Fund in previous years, such as striping and pavement marking replacement. The striping scheduled for the summer of 2017 will be performed by the PBMC.

6.0 RECOMMENDATIONS

6.1 Overview

Based on the findings of the annual visual inspections as well as the inventory and condition assessment, the current maintenance program that has been implemented should be continued to effectively secure and maintain the overall condition of each asset. The continued efforts by the Mobility Authority to maintain the roadways, bridges, roadside appurtenances, toll plazas, and buildings have kept the overall condition of the Mobility Authority assets in adequate or better condition.

The Mobility Authority is mandated by State Law, as well as by the terms of the Trust Indenture, to maintain a safe highway facility in sound condition and good working order. An effective maintenance policy contributes significantly to ensuring a safe highway for System users, as well as preserving the investment.

6.2 183A Recommendations

No unsatisfactory pavement or roadside deficiencies were identified during the October 2016 visual inspection period that would negatively affect current safety and operations of the facility. Based on the October 2016 visual inspection, the asphalt and concrete pavement sections of 183A are in good condition with no apparent unsatisfactory deficiencies. No maintenance repairs on the pavement are necessary or recommended at this time but should continue to be monitored.



Pavement markings and graphics are showing significant signs of wear and warrant replacement. Raised pavement markings are in need of maintenance as well. This work is part of the PBMC scope and will be scheduled accordingly.

Based on visual observations, both new and existing retaining walls on the 183A corridor are in adequate or better condition. Deficiencies observed were minor and mostly cosmetic in nature.

Bridges were inspected and evaluated in late 2015, as part of TxDOT's BRINSAP Program. The Mobility Authority should continue to address deficiencies as part of a bridge maintenance program.

The 2016 annual inspection revealed that the eight ILP buildings on 183A are in adequate or better condition with only minor deficiencies identified.

The inspection did not reveal any unsatisfactory deficiencies in the condition and operation of the toll gantries and overhead sign structures.

Of the items inspected, the results did not reveal any unsatisfactory deficiencies in the condition and operation of the TCS infrastructure.

6.3 290 Toll/Manor Expressway Recommendations

No unsatisfactory pavement or roadside deficiencies were identified during the October 2016 visual inspection period that would negatively affect current safety and operations of the facility. Based on the October 2016 visual inspection, the concrete pavement sections of 290 Toll/Manor Expressway are in good condition with no apparent unsatisfactory deficiencies. Evidence of pavement ride quality degradation was observed in several locations along the corridor. The Mobility Authority is actively monitoring this condition.



Pavement markings and graphics are showing significant signs of wear and warrant replacement. Raised pavement markings are in need of maintenance, as well. This work is part of the PBMC scope and will be scheduled accordingly.

Based on visual observations, both new and existing retaining walls on the 290 Toll/Manor Expressway corridor are in adequate or better condition. Deficiencies observed were minor and mostly cosmetic in nature. The wall panels of soil nail walls 19 and 20, at the Scottsdale Drive bridges will continue to be monitored for water evidence of seepage.

Bridges were inspected and evaluated in late 2015, as part of TxDOT's BRINSAP Program. The Mobility Authority should continue to address deficiencies as part of a bridge maintenance program.

The 2016 annual inspection revealed that the three ILP buildings on 290 Toll/Manor Expressway are in adequate or better condition with only minor deficiencies identified.

The inspection did not reveal any unsatisfactory deficiencies in the condition and operation of the toll gantries and sign structures. The rust stains cause by the presence of marcasite in the concrete large aggregate are limited to a cosmetic concern.

Of the items inspected, the results did not reveal any unsatisfactory deficiencies in the condition and operation of the TCS infrastructure.



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