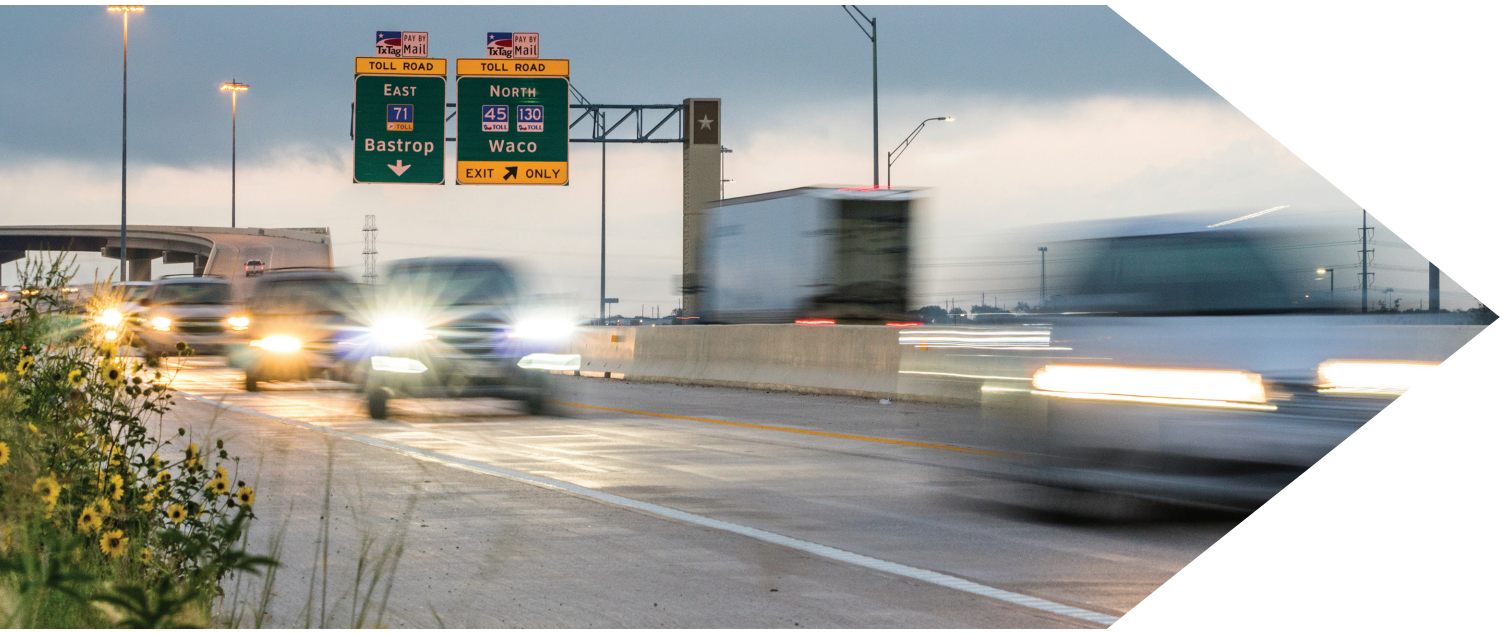

CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

2018
ANNUAL REPORT
OF CONDITIONS

Prepared by:

ATKINS

General Engineering Consultant

183A TOLL · 290 TOLL · 71 TOLL

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY SYSTEM

ATKINS

February 20, 2018

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

Re: 2018 Annual Report of Conditions – 183A Turnpike, Manor Expressway, and SH 71 Express

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 2018 Annual Report of Conditions for the 183A Turnpike, the Manor Expressway, and the SH 71 Express. This report sets forth our findings as to the condition of these facilities, 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 these facilities in October 2017. 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). Due to the impacts of Hurricane Harvey on the Texas Coast, 2017 BRINSAP inspection results have been delayed and will be included as part of the Fiscal Year 2019 report. For reference, a summary of the 2015 findings is included in this report.

The following report summarizes the conditions observed and are fully reported in the 2018 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
Tracie Brown, CTRMA
Justin Word, CTRMA
File

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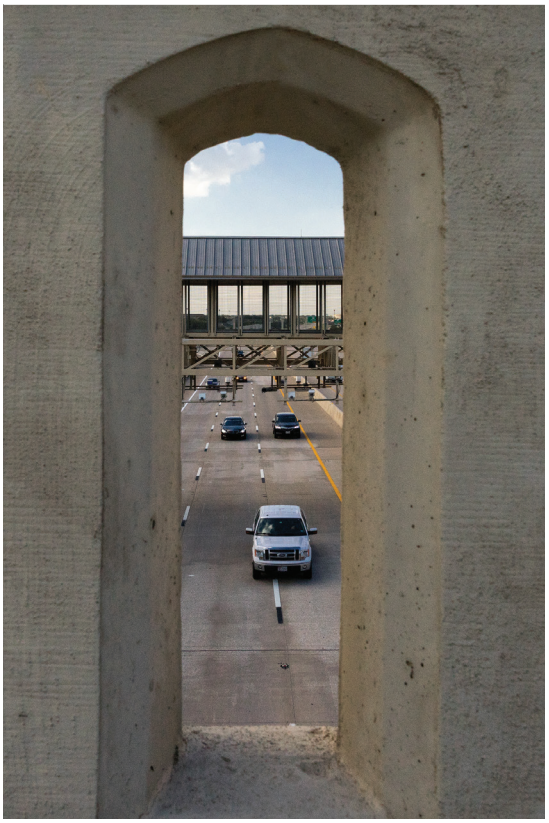


ACRONYMNS AND ABBREVIATIONS

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

SYSTEM MAP


29
GEORGETOWN
29
130 TOLL
35
183
183A TOLL
LEANDER
1431
ROUND ROCK
79
HUTTO
1431
CEDAR PARK
45 TOLL
PFLUGERVILLE
183
130 TOLL
Parmer Lane
2222
620
360
35
734
290 TOLL
MANOR
1
360
AUSTIN
WEST LAKE HILLS
130 TOLL
71
35
290
OAK HILL
71 TOLL
DRIPPING SPRINGS
1
71
183
CREEDMOOR
LEGEND
MOBILITY AUTHORITY SYSTEM ROADWAYS
1626
45 TOLL
35
BUDA
KYLE
MUSTANG RIDGE
130 TOLL

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" at least once in the fiscal year following substantial completion of the initial project funded with bond obligations, and in each fiscal year thereafter. The "System" is currently comprised of the 183A Turnpike, the Manor Expressway, and the SH 71 Express.

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 2017 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 bridges, retaining walls and toll gantries.

Atkins recommends that the Mobility Authority continue to implement the routine maintenance as budgeted and scoped, and also implement the Renewal and Replacement Projects planned for the ensuing fiscal year. Through coordination with Mobility Authority staff, and in review of the anticipated Renewal and Replacement Projects anticipated through 2023, the following budgets are recommended:

RECOMMENDED BUDGETS

Operating Expenses	$13,900,000
Maintenance Expenses	$5,100,000
Renewal and Replacement Fund 2021	$6,100,000

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

1. INTRODUCTION

1.1 BACKGROUND

In compliance with the requirements of the Master Trust Indenture, Atkins conducted a visual inspection of the 183A Turnpike, Manor Expressway, and SH 71 Express in October 2017. The inspection was conducted to assess the general condition of roadways, buildings, overhead sign bridges, retaining walls, and toll gantries along the facilities 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 roads during the ensuing Fiscal Year (2019), and the amount of funds available in the Renewal and Replacement Fund.

1.2 INSPECTION PROCESS

The inspection covered all portions of the facilities including: pavement, roadside elements, retaining and noise walls, underdeck lighting, drainage structures, signs and sign bridges, 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). Due to the impacts of Hurricane Harvey on the Texas Coast, 2017 BRINSAP inspection results have been delayed and will be included as part of the Fiscal Year 2019 report. For reference, a summary of the 2015 findings is included in this report.

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, below.

Table 1: Roadway Inspection Elements

CATEGORY	ITEM	DESCRIPTION OF INSPECTION
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

All bridges constructed on the Mobility Authority System, with the exception of the pedestrian bridges, are inspected as part of TxDOT's BRINSAP program to implement the National Bridge Inspection Standards (NBIS). These standards 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 inspected the bridges on 183A Turnpike, Manor Expressway, and SH 71 Express in 2015, 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

CATEGORY	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, right.

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 Sign Bridges 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 Bridge Elements

CATEGORY	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
TCB	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
	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 additional 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.

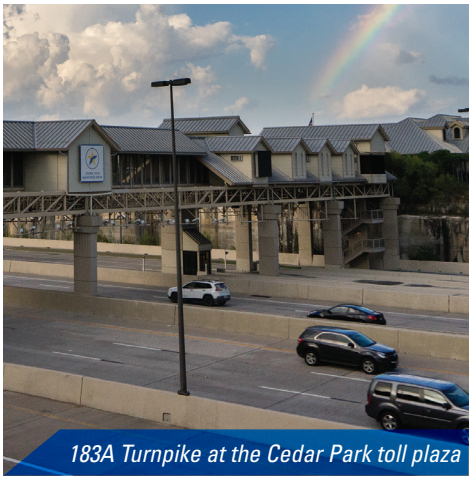
A rating of 2 indicates the defect identified is showing signs of the asset degrading to the point that it is no longer functional and requires expedited maintenance to protect the public or the System.

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 TURNPIKE

The Mobility Authority constructed, operates, and maintains the 183A Turnpike, 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 Turnpike opened to traffic in March 2007, effectively reducing congestion, enhancing mobility, and providing safer travel. Phase II opened to traffic in April 2012 and included a 4.7-mile extension of the shared use path adjacent to the 183A Turnpike from RM 1431 to Hero Way, resulting in a significant shift of traffic from the non-tolled frontage roads to the new tolled mainlanes. In fall 2015, the intersection of 183A Turnpike and US 183 was reconstructed to make the intersection safer, easier to navigate and enable better access to developments along the 183A Turnpike corridor.



183A Turnpike at the Cedar Park toll plaza

The Manor Expressway

1.3.2. MANOR EXPRESSWAY

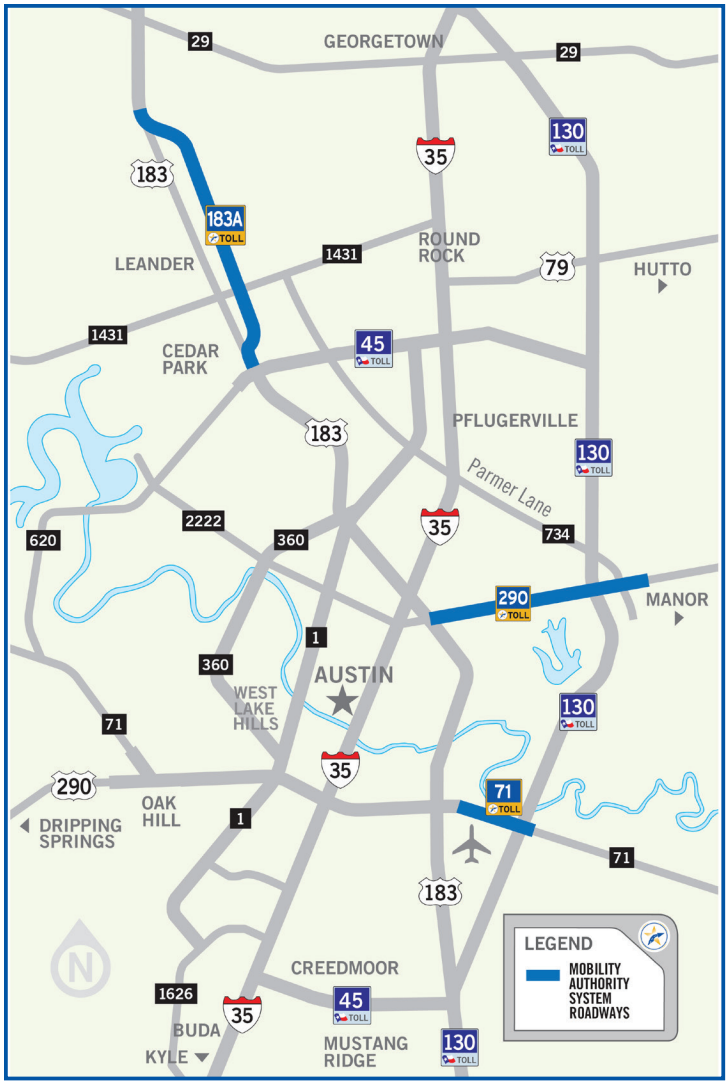
The Mobility Authority constructed, operates, and maintains the Manor Expressway, a 6.2-mile limited access toll road along US 290 East, spanning from US 183 to just east of Parmer Lane. The all electronic toll collection corridor is a significant link to important roadwaysin the region including US 183, I-35, and SH 130, and provides a critical evacuation route from the Gulf Coast. The first phase of Manor Expressway, which consists 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. SH 71 EXPRESS

The Mobility Authority operates and maintains the SH 71 Express, which stretches approximately four miles eastward along SH 71 from Presidential Boulevard to east of SH 130 in Travis County. The project, constructed by TxDOT, added a toll lane in each direction along SH 71 and opened to traffic in February 2017. Transactions are 43% above projections during the first year, showing just how strong the need was for reliable travel options along this corridor.

The all electronic toll facility enhances traffic flow, mobility, and vehicle and pedestrian safety along SH 71, a key east-west corridor connecting drivers to the Austin-Bergstrom International Airport, the city of Bastrop, and points beyond. The project was

The SH 71 Express



Mobility Authority System Map

designed to eliminate weaving and merging caused by airport-bound traffic exiting SH 71 while sharing the road with through-traffic. It also offers drivers an alternative to the long travel times caused by multiple traffic signals within the project limits. The new lanes offer a free-flowing and reliable bypass route for through-traffic, especially during peak hour congestion.

The same number of non-tolled travel lanes that existed prior to the project have been preserved and enhanced. Additionally, approximately five miles of shared use path line both sides of the corridor for bicycle and pedestrian recreation and travel.

1.3.4. FACILITIES/BUILDINGS

Mobility Authority facilities provide support for the safe and reliable operation of the System. These facilities include the Traffic & Incident Management (TIM) Center adjacent to the 183A Turnpike in Cedar Park, the 183A Turnpike maintenance storage yard at the Brushy Creek Road interchange, the Manor Expressway 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/TIM 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 roadways on randomly selected sections. This ensures the Contractor is maintaining the facilities within the tolerances established by the performance measures.

2. 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 TURNPIKE

2.2.1. 183A TURNPIKE ROADWAY

The 183A Turnpike

ASPHALT PAVEMENT

Although minor issues were noted, the inspection conducted in October 2017 did not identify any major deficiencies in the asphalt pavement that would affect the safety and operations of 183A Turnpike. It should be noted that the northbound and southbound frontage roads from RM 1431 to approximately 1,000 feet north of San Gabriel Parkway, excluding sections at 183A Turnpike and Scottsdale Drive, were repaved in the fall of 2014. The sections at Scottsdale Drive were repaved in 2012 with the construction of 183A Turnpike 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.

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 and cross drainage structures. Some driveway culverts and pond inlets were partially clogged.

MISCELLANEOUS

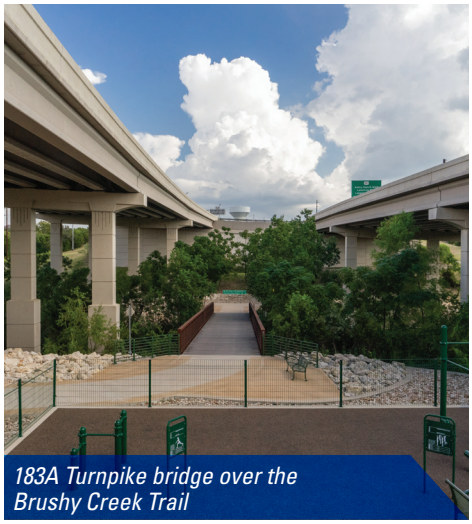
Striping activities were performed in August 2017, improving pavement striping and symbols along the mainlanes. Reflective pavement markers were replaced in November 2016, addressing those that were previously noted as missing or non-reflective markers.

In addition, a nighttime visual inspection was performed during the fall 2017 inspections. Most signs were clearly visible and legible to the inspector. Signs along 183A Turnpike are beginning to show signs of fading with most still in good condition at this time. It is recommended that reflectivity testing be performed every three to five years to ensure compliance with requirements.

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 Turnpike 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 Turnpike 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 erosion, vegetative growth in sand filtration basins, trash buildup, and isolated incidents of ponds 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.



183A Turnpike bridge over the Brushy Creek Trail

2.2.2. 183A TURNPIKE BRIDGES

All of the 183A Turnpike 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 Turnpike is provided in the 183A Turnpike 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 Turnpike. These bridges were found to be in good condition.

Based on a review of the most recent inspection reports and visual observations, all 183A Turnpike 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 TURNPIKE RETAINING WALLS

The retaining walls on the project consist primarily of MSE walls. There are also concrete noise walls adjacent to neighborhoods in the Phase I segment of 183A Turnpike, 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 2017 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 and minor concrete riprap settlement.

2.2.4. 183A TURNPIKE BUILDINGS

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

Retaining walls on the 183A Turnpike

- **BUILDING EXTERIOR**
  No unsatisfactory deficiencies were observed on the exterior finishes or surfaces. Maintenance is needed to address exterior door lockset wear.

- **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 in need of 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 TURNPIKE 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 TIM Center, 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.

Overhead sign bridge on 183A Turnpike north of Avery Ranch Boulevard

2.2.6. 183A TURNPIKE OVERHEAD SIGN BRIDGES

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.

2.2.7. 183A TURNPIKE 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 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 2017 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. 183A Turnpike 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.

2.3 MANOR EXPRESSWAY

As part of the Comprehensive Development Agreement (CDA), a warranty provision is in place for various items, as summarized in Table 6, below.

Table 6: Manor Expressway 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. MANOR EXPRESSWAY ROADWAY

- **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 continues to address this by 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 along the corridor.

- **ROADSIDE**

  The roadside visual inspection did not identify any unsatisfactory deficiencies that would 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 causing pavement edge drop offs and small areas where vegetation is sparse.

- **MISCELLANEOUS**

  Striping activities were performed in August 2017, improving pavement striping and symbols along the mainlanes. Reflective pavement markers were replaced in November 2016, addressing those that were previously noted as missing or non-reflective markers.

In addition, a nighttime visual inspection was performed during the fall 2017 inspections. All signs were clearly visible and legible to the inspector. The signs along Manor Expressway are still in good condition and do not need to be replaced at this time. It is recommended that reflectivity testing be performed every three to five years to ensure compliance with requirements.

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

2.3.2. MANOR EXPRESSWAY BRIDGES

Manor Expressway mainlane bridges over Walnut Creek

All bridges constructed on the Manor Expressway, 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 Manor Expressway is provided in the Manor Expressway Detailed Inspection Report.

As part of an ongoing plan to address ride quality caused by uneven transitions from the roadway section to the bridge section, repairs were made in August 2017. These repairs were 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. Additional locations were identified during the fall 2017 inspection and are being monitored.

The pedestrian bridge was inspected by the GEC in October 2017 with no significant deterioration noted.

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

Retaining Wall on the westbound mainlanes of Manor Expressway at Springdale Road

2.3.3. MANOR EXPRESSWAY RETAINING WALLS

Based on visual observations, retaining walls on Manor Expressway are in adequate or better condition with minor cosmetic deficiencies.

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

The fall 2017 visual inspection did not identify any deficiencies that would 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 as unrelated panel spalling and cracking in other locations. These drains have been

located and cleaned. 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. The structural integrity of the walls is not believed to be compromised; however the walls will continue to be monitored.

2.3.4. MANOR EXPRESSWAY BUILDINGS

The inspection of building facilities serving the 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.

ILP building located at the Parmer Mainlane tolling location

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 Manor Expressway are in adequate or better condition. The following is a general summary of condition assessment for each category.

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

- **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.

- **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**
  No deficiencies requiring maintenance were observed on the mechanical systems at either ILP building.

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. MANOR EXPRESSWAY MAINTENANCE STORAGE YARDS

The Maintenance Storage Yard on Manor Road near Manor Expressway 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. As part of the PBMC's crack seal operations, cracking noted in the fall 2016 inspection was addressed. The fall 2017 inspection observed additional cracking in the outer portions of the maintenance yard pavement.

2.3.6. MANOR EXPRESSWAY OVERHEAD SIGN BRIDGES

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 or operation of the toll gantries and sign structures. 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.

Overhead sign bridge on the westbound mainlanes of Manor Expressway at Walnut Creek

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. 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 2017 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. Manor Expressway 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 indicate 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.

Westbound mainlane entrance ramp toll gantry on Manor Expressway

2.4 SH 71 EXPRESS

As part of the Design-Build Agreement (DBA), a warranty provision is in place for various items, as summarized in Table 7, below.

Table 7: SH 71 Express Warranty Performance and Measurement Table Baseline

ELEMENT CATEGORY	REF	ELEMENT	WARRANTY TERM	TxDOT INSPECTION AND MEASUREMENT METHOD	PERFORMANCE REQUIREMENT
ROADWAY	**Unless stated otherwise, measurements shall be conducted using procedures, techniques, and measuring equipment consistent with TxDOT's *Pavement Management Information System Rater's Manual.***				
	1.2	Pavement	5 years, except for mill and overlay section shaving a 2-year performance Warranty Term per Note 1	**b) Ruts – Mainlanes:** shoulders & rampsDepth as measured using an automated device in compliance with TxDOT Standards. 10ft straight edge used to measure rut depth for localized areas. **c) Ride Quality:** Measurement of International Roughness Index (IRI) according to TxDOT standardTex-1001-S, Operating Inertial Profilers and Evaluating Pavement Profiles 3-ft straight edge used to measure discontinuities **d) Failures:** Instances of failures exceeding the failure criteria set forth in the TxDOT PMIS Rater's Manual, including potholes, base failures, punchouts and jointed concrete pavement failures **f) Skid resistance:** ASTM E274/E274M-11 Standard TestMethod for Skid Resistance Testing of Paved Surfaces at 50 MPH using a full scale smooth tire meeting the requirements of ASTM E524-08 .	No wheel path length with ruts greater than ¼" in depth No length with depth of rut at any location greater than 0.5" • Mainlanes, ramps – no results greater than 95" per mile • Frontage roads – no results greater than 120" per mile No individual discontinuities greater than 0.75" No occurrence of failure

ANNUAL REPORT OF CONDITIONS continued

ELEMENT CATEGORY	REF	ELEMENT	WARRANTY TERM	TxDOT INSPECTION AND MEASUREMENT METHOD	PERFORMANCE REQUIREMENT
ROADWAY					
	1.3	Crossovers and other paved areas	2 years	**a) Potholes** **b) Base failures**	No potholes of low severity or higher No base failures of low severity or higher
	1.4	Joints in concrete	5 years	Visual inspection of joints Measurement of joint width and level difference of two sides of joints	No length with unsealed joints greater than ¼" No joint width more than 1" or faulting more than ¼"
	1.5	Curbs	2 years	Visual inspection	Less than 1" deflection out of alignment over 10'
DRAINAGE					
	2.2	Drainage treatment devices	2 years	Visual inspection	Devices functioning correctly with means of operation displayed
	2.3	Travel Way	2 years	Visual inspection of water on surface	The travel way is free from water to the extent that such water would represent a hazard by virtue of its position and depth.
	2.4	Discharge systems	2 years	Visual inspection and records	Surface water discharge systems perform their proper function and discharge to groundwater and waterways complies with the relevant permits and other legal requirements.
STRUCTURES					
	3.1	Structures having an opening measured along the centre of the roadway of more than 20 feet between undercopings of abutments or springlines of arches or extreme ends of openings or multiple boxes	5 years	Inspection and assessment in accordance with the requirements of federal National Bridge Inspection Standards (NBIS) of the Code of Federal Regulations, 23 Highways – Part 650, the TxDOT Bridge inspection Manual, and the Federal Administration's Bridge Inspector's Reference Manual	No occurrences of condition rating below seven for any deck, superstructure, substructure or components as required in the TxDOT Bridge Inspection Manual.
	3.3	Non-bridge class culverts	5 years	Visual inspection	Non-bridge-class culverts are free of: • defects in sealant to movement joints • scour damage
	3.4	Gantries and high masts	5 years	Visual inspection	Sign signal gantries, high masts are structurally sound and free of defects in surface protection systems
	3.5	Load ratings	5 years	Load rating calculations in accordance with the Manual for Bridge Evaluation and the TxDOT Bridge Inspection Manual. Load restriction requirements as per the TxDOT Bridge Inspection Manual	All structures maintain the design load capacity.

ELEMENT CATEGORY	REF	ELEMENT	WARRANTY TERM	TxDOT INSPECTION AND MEASUREMENT METHOD	PERFORMANCE REQUIREMENT
PAVEMENT MARKINGS, OBJECT MARKERS, BARRIER MARKERS AND DELINEATORS					
	4.1	Pavement markings	2 years	a) Markings General - Physical measurement Profile Markings - Visual inspection	No Length with no more than 5% loss of area of material at any point Length performing its intended function and compliant with relevant regulations
	4.2	Raised reflective markers	2 years	Visual inspection	Markings are functioning as intended
GUARDRAILS, SAFETY BARRIERS AND IMPACT ATTENUATORS					
	5.1	Guard rails and safety barriers	2 years	Visual inspection	All guardrails, safety barriers, concrete barriers, etc. are free of construction defects and remain at correct height.
	5.2	Impact attenuators	2 years	Visual inspection	All impact attenuators remain as installed.
TRAFFIC SIGNS					
	6.1	General – All Signs	2 years	**a) Retroreflectivity:** Coefficient of retro reflectivity **b) Face damage:** Visual inspection **c) Placement:** Visual inspection	No signs with reflectivity below the requirements of TxDOT's TMUTCD and free from structural and electrical defects No signs with face damage greater than 5% of area, unless caused by a third party Sign mounting posts are structurally sound and rust free
TRAFFIC SIGNALS					
	7.2	Soundness	2 years	**a) Structural soundness** Visual inspection **b) Electrical soundness**	Traffic Signals, Pedestrian Elements and Vehicle Detectors are structurally and electrically sound Inspection records showing compliance
LIGHTING					
	8.1	Roadway Lighting – General	2 years		Columns are upright, correctly founded, visually acceptable and structurally sound
	8.3	Electrical Supply	2 years	Testing to meet NEC regulations, visual inspection	Electricity supply, feeder pillars, cabinets, switches and fittings are electrically, mechanically and structurally sound and functioning
	8.5	High Mast Lighting	2 years		All winch and safety equipment is correctly functioning. (for structural requirements refer to Element Category 3)
FENCES, WALLS AND SOUND ABATEMENT					
	9.2	Construction	5 years	Structural assessment if visual inspection warrants	Integrity and structural condition of the fence is maintained

ELEMENT CATEGORY	REF	ELEMENT	WARRANTY TERM	TxDOT INSPECTION AND MEASUREMENT METHOD	PERFORMANCE REQUIREMENT
EARTHWORKS, EMBANKMENTS AND CUTTINGS					
	12.1	Slope Failure	5 years	Visual inspection by geotechnical specialist and further tests as recommended by the specialist	All structural failures of the embankment and cut slopes of the Facility are repaired
ITS EQUIPMENT					
	13.5	Vehicle Detection Equipment	2 years	Defect measurement dependent on equipment Traffic Detector Loops: Loop circuit's inductance to be > 50 and <1,000 micro henries. Insulation resistance to be > 50 meg ohms.	All equipment free of defects and operational problems such as; • Inoperable loops. • Malfunctioning camera controllers.
PLANT MATERIALS					
	14.1	Trees, Shrubs, and Other Plant Materials	1 year	Visual inspection of trees, shrubs, and other	All trees, shrubs, and other plant materials shall be in healthy condition. • Remove dead plants within ten (10) Business Days of discovery. • Replace such plants during the next planting season.

Note 1: Where indicated, mill and overlay sections specified in Technical Provisions Section 1.2.1 shall meet performance requirements for a period of 2 years from Final Acceptance (rather than for the 5-year Warranty Term generally applicable to the element category).

2.4.1. SH 71 EXPRESS ROADWAY

SH 71 Express shared use path

PAVEMENT

The newly constructed concrete pavement sections along the corridor are in excellent condition with no deficiencies, with the exception of the ride quality at one location across lanes in both directions where the pavement transitions from concrete to existing flexible pavement. These values exceed the warranty threshold for reference section 1.2 Pavement, Ride Quality. This issue does not require immediate attention; however, it should continue to be monitored during the warranty period.

ROADSIDE

At the time of the inspection, SH 71 Express had not reached final acceptance. Roadside elements were subject to completion of punch list items; therefore, roadside features were not inspected for this corridor.

MISCELLANEOUS

Pavement striping, symbols and reflective pavement markers are in excellent condition with no noted maintenance needs.

2.4.2. SH 71 EXPRESS BRIDGES

Newly constructed bridges on SH 71 Express will be inspected in 2019 as part of TxDOT's BRINSAP Program. Results of these inspections will be included in the 2020 inspection report.

SH 71 Express Bridge

2.4.3. SH 71 EXPRESS RETAINING WALLS

Based on visual observations, newly constructed retaining walls on SH 71 Express are in excellent condition with no noted maintenance needs.

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

2.4.4. SH 71 EXPRESS OVERHEAD SIGN BRIDGES

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. All inspected elements appear to be in excellent condition.

2.4.5. SH 71 EXPRESS 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 2017 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.

Toll gantry on SH 71 Express

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.

2.4.5.1 SH 71 Express Toll Collection System Infrastructure

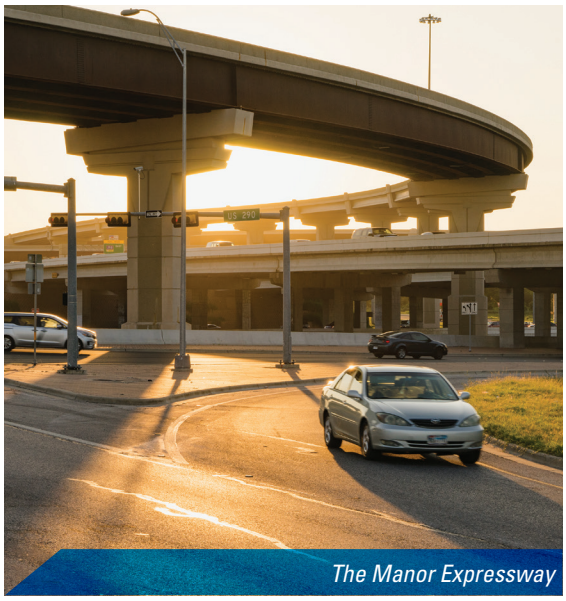
As discussed in Section 2.3.4 (Buildings), the visual inspection of the building and civil site aspects of the toll system infrastructure indicates that the primary components are in adequate or better condition. In addition, as discussed in Section 2.3.6 (Overhead Sign Bridges), the toll gantries are 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.

3. ONGOING INITIATIVES

3.1 ASSET MANAGEMENT

The Mobility Authority Board of Directors approved a budget for implementation of a formal Transportation Asset Management Plan (TAMP).

Establishing a TAMP promotes organization, communication and planning, and provides a strategy for the agency to protect its investment in infrastructure by proactively–rather than reactively–managing its program. This ultimately gives the agency the ability to realize the value of physical assets by optimizing their life cycle costs, mitigating their risks, and managing and monitoring performance at the individual asset, asset system and asset portfolio levels. The net result is an improved return on investment throughout the life cycle of the asset–from initial capital investment into maintenance and operations and even through final disposition of the asset.



The Manor Expressway

Money saved in maintenance and operations costs can mean more funds available for capital improvements for agencies that continue to build out their network.

Establishing a means for monitoring, evaluating and planning for the preservation of its system puts the agency in the best place for mitigating risks. An established TAMP not only better positions the agency to respond to inquiries, litigation, new mandates, and reporting requirements, it can help effectively manage change as the agency transitions from establishing and building out its transportation network to ensuring the cost-effective preservation of that network.

3.2 FIVE-YEAR PLAN

The Mobility Authority is developing a refined five-year budgeting outlook to include a formal decision-making process for continued evaluation of the Five-Year Plan for use in planning for the operating and maintenance expenses, renewal and replacement improvement of existing capital assets and construction of new projects.

The Plan includes current year estimated expenditures approved through the annual budget process, and estimates for the five subsequent years. As part of the decision-making process, subsequent years are re-evaluated and updated as part of the annual budget process. As a multi-year planning tool, the Mobility Authority's Five-Year Plan is comprised of projects continued from previous years and projects being initiated within the next five years.

Once implemented, the Plan will be adopted annually by the Mobility Authority Board of Directors.

3.3 ANNUAL SAFETY AND TRAFFIC REPORTS

Each year, the Mobility Authority develops traffic and safety reports for corridors currently in operation.

To determine how the roadways are operating, an evaluation of traffic and operational efficiency is conducted. The Traffic Report looks at various traffic metrics and toll transactions to discern the operational efficiency of the corridors.

The Safety Report serves as an evaluation of the safety performance along Mobility Authority corridors. An investigation of crashes on each corridor is conducted multiple times per year. Reported crashes on or adjacent to Mobility Authority corridors are evaluated by the Safety Committee for potential countermeasure strategies where appropriate.

Key findings from these reports aid the Mobility Authority in planning and implementing operational improvements as part of the Safety Management Process. Each quarter, members of the Safety Committee review all fatality and injury crashes on Mobility Authority corridors. Once all crashes have been reviewed, a decision to implement a countermeasure may be made. If a countermeasure decision is supported, it will be programmed and funded. In some cases, further investigation is needed in order to facilitate an informed decision.

3.4 TECHNOLOGY INITIATIVES

The Mobility Authority is leveraging industry best practices in technology to enhance safety and operations on its roadway System.

3.4.1. WRONG WAY DRIVING DETECTION

In an effort to reduce the incidence of wrong way driving, the Mobility Authority has engaged the firm NEC Corporation to analyze crash footage video feeds and present opportunities for using their video analytics for wrong way driving detection and automated incident detection along the roadways. Informed by research from the Texas A&M Transportation Institute which indicates drivers under the influence are often involved in wrong way crashes, the Mobility Authority lowered all "wrong way" and "do not enter" signs on its system last year in an effort to make them more noticeable to drivers under the influence.

3.4.2. WAZE DATA INTEGRATION

The Mobility Authority has signed an agreement for the exchange of data through the participation in the Waze Connected Citizens Program. The program offers transportation agencies the opportunity to receive free, real-time, crowdsourced traffic and incident data through a data stream. The Mobility Authority has engaged systems integrator Kapsch to port the stream into their advanced traffic management system (EcoTrafiX) currently in use in the Authority's TIM Center. This interface will give TIM Center operators access to current travel conditions affecting the Mobility Authority System. It will also allow operators to add Mobility Authority incidents, construction, and closures to the Waze data stream for use by Waze website and mobile application users to help improve mobility throughout the region; all in real-time.

3.4.3. SMART CITY AUSTIN

The Mobility Authority remains an active partner in the provision of smart technology solutions being considered and delivered to the Austin region. This partnership, seeded by the USDOT Smart City Challenge, includes the City of Austin, TxDOT, and a large team of universities, researchers and consultants all working together to deliver smart, multimodal transportation solutions to the Austin region. The Mobility Authority is involved in the project to ensure that when viable deployment and/or partnership opportunities present themselves, the agency can deliver.

4. ANNUAL BUDGETS

The SH 71 Express

Annual budgets are currently being prepared by the Mobility Authority for the proper maintenance, repair, and operation of the System for Fiscal Year 2019. 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 Turnpike, Manor Expressway, and SH 71 Express 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 2019. 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 Turnpike, Manor Expressway, and SH 71 Express. 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 2019 System Operating Expenses to be $13.9 million. 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, 2018.

It is the opinion of the GECs that the costs projected for the operation of 183A Turnpike, Manor Expressway, and SH 71 Express are reasonable estimations of anticipated costs for the FY 2019 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 Turnpike, Manor Expressway, and SH 71 Express. 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 2019 Maintenance Expenses to be $5.1 million. This budget includes replacement of signs on 183A Turnpike. This estimated budget does not include the amount that TxDOT will reimburse the Mobility Authority for maintenance of TxDOT's portion of Manor Expressway and SH 71 Express. The actual Annual Maintenance Budget will be finalized by the Mobility Authority on or before June 30, 2018.

It is the opinion of the GECs that the costs projected for the maintenance of the 183A Turnpike, Manor Expressway, and SH 71 Express are reasonable estimations of anticipated costs for the FY 2019 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 is in the design phase of the Manor Expressway Phase III Direct Connectors (DC) project, which will provide a safe and efficient link between two heavily traveled toll facilities: the Mobility Authority's Manor Expressway and TxDOT's SH 130 Toll. The Mobility Authority has completed design of the southbound SH 130 to westbound Manor Expressway DC, the eastbound Manor Expressway to southbound SH 130 DC, and the northbound SH 130 to westbound Manor Expressway DC. Construction is anticipated to begin in FY 2019, lasting approximately 32 months, and costing $130 million. The Mobility Authority is estimating $56.5 million of the project cost will be spent in FY 2019, funded by the Project Fund.

In addition, the Mobility Authority has begun development of 183A Phase III. This 5.3-mile roadway would extend 183A Turnpike northward from Hero Way to SH 29 and would include up to three tolled lanes in each direction. The Mobility Authority's proposed highway would be located within the existing TxDOT and Mobility Authority right-of-way and within the median of the existing US 183 corridor. Schematic design, traffic modeling, and environmental investigations are currently underway. These costs are expected to be $10 million for FY 2019.

Manor Expressway and Springdale Shared Use Path

5. 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:

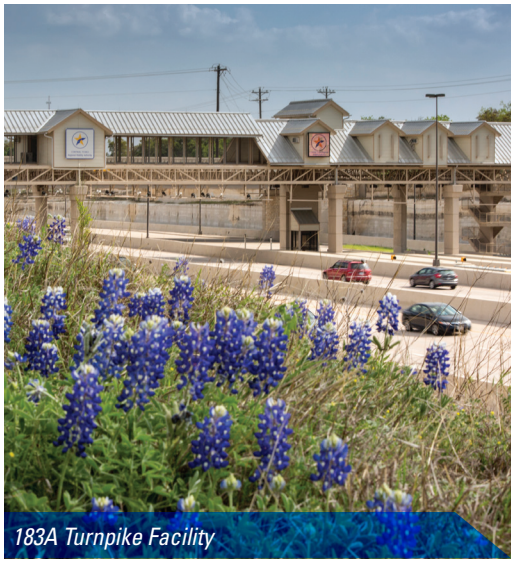
i. unusual or extraordinary maintenance or repairs not occurring annually, and renewals and replacements, including major items of equipment;

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 Turnpike, Manor Expressway, and SH 71 Express, the cumulative amount in the Renewal and Replacement Fund should be sufficient to finance the next anticipated Renewal and Replacement Activities. An overlay of 183A Turnpike frontage road pavement is estimated to cost $6.1 million and is tentatively scheduled for 2021. No Renewal and Replacement is expected to occur within the next five years on Manor Expressway.

6. RECOMMENDATIONS



183A Turnpike Facility

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 Master 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 TURNPIKE RECOMMENDATIONS

No unsatisfactory pavement or roadside deficiencies were identified during the October 2017 visual inspection period that would negatively affect safety and operations of the facility. Based on the October 2017 visual

inspection, the asphalt and concrete pavement sections of 183A Turnpike 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, graphics, and raised pavement markings show isolated areas in need of maintenance. This work is part of the PBMC scope and will be scheduled accordingly.

Signs along 183A Turnpike are beginning to show signs of fading. Replacement of signs associated with Phase I construction is recommended in 2019.

Based on visual observations, retaining walls on the 183A Turnpike 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.

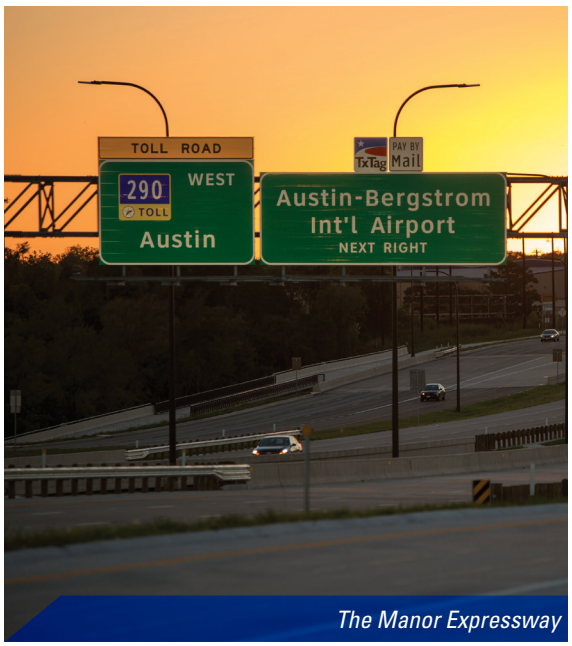
The 2017 annual inspection revealed that the eight ILP buildings on 183A Turnpike are in adequate or better condition with only minor deficiencies identified.

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 MANOR EXPRESSWAY RECOMMENDATIONS

No unsatisfactory pavement or roadside deficiencies were identified during the October 2017 visual inspection period that would negatively affect safety and operations of the facility. Based on the October 2017 visual inspection, the concrete pavement sections of 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.



The Manor Expressway

Pavement markings, graphics and raised pavement markings show isolated areas in need of maintenance. This work is part of the PBMC scope and will be scheduled accordingly.

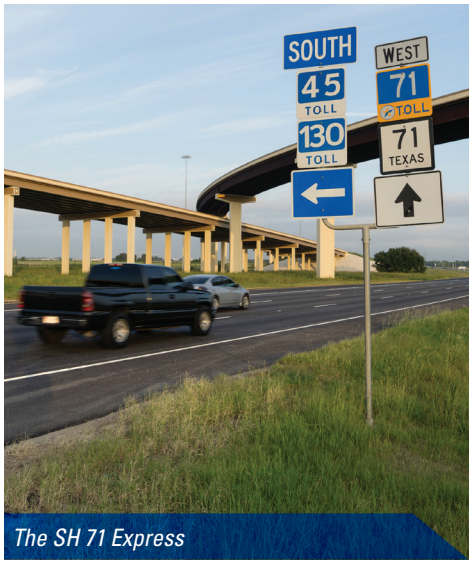
Based on visual observations, retaining walls on the Manor Expressway corridor are in adequate or better condition. Deficiencies observed were minor and mostly cosmetic in nature. The wall panels of soil nail walls 19 and 20, at the Scottsdale Drive bridges will continue to be monitored for water evidence 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 2017 annual inspection revealed that the three ILP buildings on 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 caused 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.



The SH 71 Express

6.4 SH 71 EXPRESS RECOMMENDATIONS

No unsatisfactory pavement deficiencies were identified during the October 2017 visual inspection period that would negatively affect safety and operations of the facility. Based on the October 2017 visual inspection, the concrete pavement sections of SH 71 Express are in excellent condition with no apparent unsatisfactory deficiencies. Evidence of pavement ride quality degradation is present where the pavement transitions from concrete to existing flexible pavement. The Mobility Authority is actively monitoring this condition per the warranty specifications.

All newly constructed assets observed as part of the October 2017 visual inspection are in excellent condition and will be maintained as part of the Mobility Authority's established PBMC and monitored in accordance with applicable warranty specifications.

Results of TxDOT's 2017 BRINSAP Program will be reviewed. The Mobility Authority should address deficiencies as part of a bridge maintenance program.

The 2017 annual inspection revealed that ILP buildings on SH 71 Express are in like-new condition.

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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