

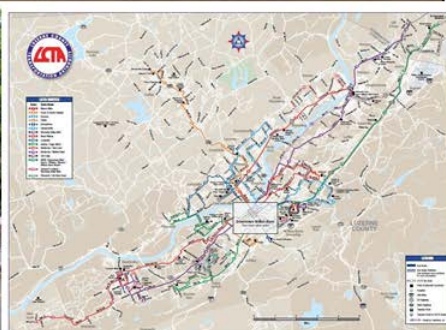
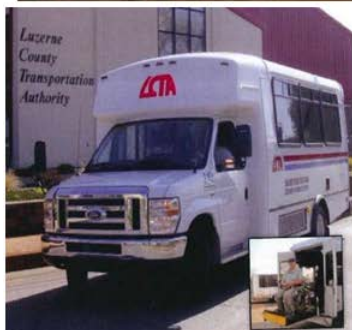
SHARED RIDE
2009 WYOMING AVE.
FORTY FORT, PA 18704
(570) 288-8420
FAX (570) 288-7455



FIXED ROUTE
315 NORTHAMPTON ST.
KINGSTON, PA 18704
(570) 288-9356

FAX (570) 288-7327
www.lctabus.com

TRANSIT ASSET MANAGEMENT PLAN



October 2017

Mission Statement

The Luzerne County Transportation Authority (LCTA), through the operation of fixed route and shared ride divisions, seeks to provide high quality affordable public transportation services that are safe, reliable, useful, accessible and efficient. To this end, members of the Board of Directors and all employees shall conduct themselves in a professional manner; work to ensure the safety and security of passengers; seek new opportunities to improve and/or expand services; and coordinate public transit services with other agencies, organizations, and transit providers.

About LCTA

The Luzerne County Transportation Authority (“LCTA”) or (“the Authority”) is an independent local governmental unit classified as a Pennsylvania Municipal Authority, which is responsible for providing both fixed route bus and paratransit public transportation service in Luzerne County, Pennsylvania.

The Luzerne County Transportation Authority currently provides the Wilkes-Barre urbanized area with scheduled mass transportation bus service. LCTA’s bus fleet operates on routes serving 31 municipalities within the urbanized area, so that approximately 88% of the population resides within one-quarter of a mile of a bus route. Route frequency of the various routes averages out to about every forty-five minutes, with some routes operating every half-hour. Our current service hours are between approximately 5:00 am and 7:00 pm, Monday thru Friday and between approximately 9:00 am and 6:00 pm on Saturdays. The Luzerne County Transportation Authority also assists persons with disabilities in fulfilling their transportation needs and to meet requirements of the Americans with Disabilities Act of 1990. This special Transportation Efforts Program (S.T.E.P.) is available in the General Service Area of the Luzerne County Transportation Authority.

Disclaimer & Copyright Notice

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The Luzerne County Transportation Authority assumes no liability or responsibility, expressed or implied, for the use, completeness, usefulness, or accuracy of the information, apparatus, product, or process disclosed or contained in this document. This document does not constitute a warranty, standard, specification, or regulation. Reference herein to any specific commercial product, process, or service by its trade name, trademark, manufacturer or otherwise, does not constitute or imply an endorsement, recommendation, or favoring by the Luzerne County Transportation Authority. If trademarks or manufacturer’s names appear in these documents, it is only because they are considered essential to the objective of the document. Any opinions, findings, and conclusions or recommendations, and translations thereof, expressed in this publication is that of the author(s), and do not necessarily reflect the views of the Federal Transit Administration or the Luzerne County Transportation Authority.

© 2017-2021 LUZERNE COUNTY TRANSPORTATION AUTHORITY ALL RIGHTS RESERVED

Acknowledgements

Luzerne County Transportation Authority Administrative Staff

Norm Gavlick, Executive Director & Accountable Executive

Joe Roselle, Director of Administrative Services

Frank Knorek, Compliance Analyst & TAM Program Coordinator

Lee Horton, Director of Fixed Route Operations

Justin Davis, Fixed Route Road Supervisor & Operations and Safety/Training Manager

Vince Coviello, Director of Maintenance

Richard Wasilius, Maintenance Manager

John Alu, Director of Finance

Kathleen Bednarek, Grants & Finance Coordinator

Lou Uritz, Procurement Manager

Colleen O'Brien, Paratransit Operations & Safety Training Manager

John Usavage, Assistant Paratransit Operations & Safety Training Manager

Janine Hennigan, Human Resources Manager

Lorri Vandermark, Public Relations Manager

Luzerne County Transportation Authority Board of Directors

Dr. Valerie Kepner, Chair

Art Bobbouine, Vice Chair

Lynette Villano, Secretary

Gary Polakoski, Asst. Secretary

Charles Sciandra, Treasurer

Sean Robbins Esq., Asst. Treasurer

Patrick Conway, Member

John Koch, Ph.D., Member

Sid Halsor, Ph.D., Member

Joseph Blazosek Esq., Solicitor

Revision History

Agency Name:

Accountable Executive:

Initial LCTA Board Adoption Date:

Original Effective Date:

Last Modified By (Name):		Last Modified (Date):
Frank Knorek, LCTA Compliance Analyst		10/25/2017



SID HANSON, Ph.D.
VALERIE KEPNER, Ph.D.
PATRICK CONWAY

GARY POLAKOSKI
T. LYNETTE VILLANO
CHARLES SCHMIDT
NORM GAYLICK, Executive Director

JOHN KOCH, Ph.D.
SEAN ROBBINS, Esq.
ARTHUR BOBBOLINE

Motion to Approve Board Action

Motion to approve, accept or ratify items listed on consent agenda as submitted:

- **FFY 2017-2018 FTA Transit Asset Management Plan.**

I certify that the foregoing resolution was duly adopted by the Luzerne County Transportation Authority Board of Directors at a properly noticed open meeting held on this 24th day of October 2017 at which a quorum was present.

By: Valerie K. Kepner
Board Chairman

By: [Signature]
Executive Director

Table of Contents

Section	Page
EXECUTIVE SUMMARY	1.
SECTION 1: INTRODUCTION & APPLICABILITY	2.
SECTION 2: ASSET INVENTORY PORTFOLIO	8.
SECTION 3: ASSET CONDITION ASSESSMENT	12.
SECTION 4: DECISION SUPPORT TOOLS & MANAGEMENT APPROACH	14.
SECTION 5: PRIORITIZED LIST of INVESTMENTS	15.
SECTION 6: ANNUAL PERFORMANCE TARGETS & MEASURES	15.
SECTION 7: RECORDKEEPING & NTD REPORTING	16.
SECTION 8: UPDATES & CONTINUOUS IMPROVEMENT	16.
SECTION 9: CONCLUSION	17.

Tables

Table #:	Title	Page #:
1.1	LCTA Annual TAM Goals: FY 2017-2018	T1
1.2	LCTA Asset Useful Life Benchmarks: FY 2017-2018	T2
2.1	LCTA TAMP Asset Inventory Summary: FY 2017-2018	T2
2.2	LCTA Fixed Route Bus Rolling Stock Fleet inventory: FY 2017-2018	T3
2.3	LCTA Shared Ride ProgramParatransit Rolling Stock Fleet Inventory: FY 2017-2018	T4
2.4	LCTA Equipment (Non-Revenue Service Vehicles) Inventory: FY 2017-2018	T6
2.5	LCTA non-Vehicle Equipment Inventory (> \$50K): FY 2017-2018	T7
2.6	LCTA Facility Inventory: FY 2017-2018	T7
3.1	FTA TERM Rating Scale	T7
3.2	LCTA Fixed Route Bus Rolling Stock Fleet Condition Ratings: FY 2017-2018	T7
3.3	LCTA Shared Ride ProgramParatransit Rolling Stock Fleet Condition Ratings: FY 2017-2018	T9
3.4	LCTA Equipment (Non-Revenue Service Vehicles) Condition Ratings: FY 2017-2018	T12
3.5	LCTA non-Vehicle Equipment Condition Ratings (> \$50K): FY 2017-2018	T12
3.6	LCTA Facility Condition Rating Assessment: FY 2017-2018	T13
4.1	LCTA TAMP Decsision Support & Capital Asset Investment Planning Process	T13
4.2	LCTA TAMP Decsision Support Tools	T14
4.3.1	Asset Management Approach: Acquisition & Renewal Strategy	T15
4.3.2	Asset Management Approach: Maintenance Strategy	T16
4.3.3	Asset Management Approach: Overhaul Strategy	T17
4.3.4	Asset Management Approach: Disposal Strategy	T18
4.3.5	Asset Management Approach: Risk Management Strategy	T19
5.1	LCTA TAMP Investment Prioritization Project List (FFY 2018-2021)	T20
6.1	FTA TAM Asset Category Performance Measures	T20
6.2	LCTA Annual SGR Asset Performance Targets: Fixed Route Rolling Stock (FFY 2017-2018)	T21
6.3	LCTA Annual SGR Asset Performance Targets: Paratransit Rolling Stock (FFY 2017-2018)	T22
6.4	LCTA Annual SGR Asset Perfomance Targets: Non-Revenue Service Vehicles (FFY 2017-2018)	T23
6.5	LCTA Annual SGR Asset Perfomance TargetsL: Facilities (FFY 2017-2018)	T24
8.1	FTA TAMP Key Dates (FY: July to June)	T24

Executive Summary

A Transit Asset Management Plan (TAMP) is a business model that uses the condition of assets to guide the optimal prioritization of funding at transit agencies in order to keep transit systems in a State of Good Repair (SGR). By implementing a TAMP, the benefits include:

- Improved transparency and accountability for safety, maintenance, asset use, and funding investments;
- Optimized capital investment and maintenance decisions;
- Data-driven maintenance decisions; and
- System safety & Performance outcomes.

The consequences of an asset not being in a SGR include:

- Safety risks (Accidents per 100,000 revenue miles);
- Decreased system reliability (On-time performance);
- Higher maintenance costs; and/or
- Lower system performance (Missed runs due to breakdown).

Transit Asset Management Plan (TAMP) Policy:

The Luzerne County Transportation Authority has developed this TAMP to aide in: (1) Assessment of the current condition of capital assets; (2) determine what condition and performance of its assets should be (if they are not currently in a State of Good Repair); (3) identify the unacceptable risks, including safety risks, in continuing to use an asset that is not in a State of Good Repair; and (4) deciding how to best balance and prioritize reasonably anticipated funds (revenues from all sources) towards improving asset condition and achieving a sufficient level of performance within those means.

Agency Overview:

The Luzerne County Transportation Authority (*“the Authority”*) provides both fixed route bus and shared ride paratransit public transportation services to approximately 1.2 million passengers annually in the greater Wilkes-Barre/Scranton/Hazleton MSA. As a Pennsylvania-designated local government entity (municipal authority), the Authority has an extensive core inventory of vehicles and capital assets, including the following:

- 38 Fixed route buses;
- 49 Paratransit vehicles; and
- A centrally-located administration/operations/vehicle storage/refueling & maintenance facility.

The Authority and transit system have been in operation for more than three decades. The fixed route bus system has been operated by the Authority since 1972. The system went through a period of rapid demand in the 1970’s and 1980’s. In 2012, the Authority acquired the operations and maintenance responsibilities for the Shared Ride Program (paratransit service) from Luzerne County government.

Local operating conditions of the transit system consist of weekday service from 5AM to 7PM, and Saturday service from 9AM to 6PM. The operating climate conditions in the service area consist of cold and snowy winter weather for six months out of the year. Winter weather conditions account for the large-scale use of road salt and liquid “brine”, which historically has caused the bodywork and undercarriage/ frame structure of some revenue and service vehicles to severely rust and to no longer be usable in a state of good repair. Additionally, warm weather conditions characterizes on average four to five months out of the year. Warmer weather conditions place a strain on the A/C and climate controls of revenue service vehicles during the varying four seasons experienced in the service area.

The Authority’s efforts to implement an asset management approach began in 2014 when a new management team was installed. This change in the Authority’s financial management, updated fleet & facility maintenance plans and funding approach, has led the agency to assess the condition of its existing assets and determine its needs over time for keeping the now expanding system in a state of good repair.

SECTION 1: INTRODUCTION & APPLICABILITY

The Luzerne County Transportation Authority (“the *Authority*”) is committed to operating a public transportation system that offers reliable, accessible and convenient service with safe vehicles and facilities. Transit Asset Management (TAM) is an administrative management process that combines the components of investment (available funding), rehabilitation and replacement actions, and performance measures with the outcome of operating assets in the parameters of a *State of Good Repair* (SGR).

The Authority is currently operating as a FTA-defined *Tier II* transit operator in compliance with (49 CFR § 625.45 (b)(1). Tier II transit providers are those transit agencies that do not operate rail fixed-guideway public transportation systems and have either 100 or fewer vehicles in fixed-route revenue service during peak regular service, or have 100 or fewer vehicles in general demand response service during peak regular service hours.

This TAMP provides and outlay of how LCTA will assess, monitor, and report the physical condition of assets utilized in the operation of the public transportation system. The Authority’s approach to accomplish a SGR includes the strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on both engineering and economic analysis based upon quality of information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets at a minimum practicable cost. This document shall cover a “horizon period” of time (10/1/2018 to 9/30/2021) beginning with the completion of the initial TAM plan in 2017, continuing with full implementation in 2018, and ending four years later on FFY 2021. This TAMP shall be amended during the four-year horizon period when there is a significant change to staff, assets, and/or operations occurring at the Authority.

The Accountable Executive:

Per FTA TAM requirements, each transit operator receiving FTA funding shall designate an “Accountable Executive” to implement the TAM Plan. The Authority’s Accountable Executive shall be the Executive Director. The Authority’s Accountable Executive must balance transit asset management, safety, day-to-day operations, and expansion needs in approving and carrying out the TAM Plan and a public transportation agency safety plan.

The Accountable Executive shall be responsible to ensure the development and implementation of the TAM Plan, in accordance with §625.25 (*Transit Asset Management Plan requirements*). Additionally, the Accountable Executive shall be responsible to ensure the reporting requirements, in accordance with both § 625.53 (*Recordkeeping for Transit Asset Management*) and § 625.55 (*Annual Reporting for Transit Asset Management*) are completed. Furthermore, the Accountable Executive shall approve the annual asset performance targets, TAMP document, and SGR Policy. These required approvals shall be self-certified by the Accountable Executive via the annual FTA Certifications and Assurances forms in TrAMS.

TAMP Elements:

As a Tier II public transportation provider, the Authority has developed and implemented a TAMP containing the following elements:

- (1) Asset Inventory Portfolio: An inventory of the number and type of capital assets to include: Rolling Stock, Facilities, and Equipment.
- (2) Asset Condition Assessment: A condition assessment of those inventoried assets for which the Authority has direct ownership and capital responsibility.
- (3) Decision Support Tools & Management Approach: A description of the analytical processes and decision-support tools that the Authority uses to estimate capital investment needs over time, and develop its investment prioritization.
- (4) Investment Prioritization: The Authority's project-based prioritization of investments, developed in accordance with §625.33.

Definitions:

Accountable Executive: Means a single, identifiable person who has ultimate responsibility for carrying out the safety management system of a public transportation agency; responsibility for carrying out transit asset management practices; and control or direction over the human and capital resources needed to develop and maintain both the agency's public transportation agency safety plan, in accordance with 49 U.S.C. 5329(d), and the agency's transit asset management plan in accordance with 49 U.S.C. 5326.

Asset Category: Means a grouping of asset classes, including a grouping of equipment, a grouping of rolling stock, a grouping of infrastructure, and a grouping of facilities.

Asset Class: Means a subgroup of capital assets within an asset category. For example, buses, trolleys, and cutaway vans are all asset classes within the rolling stock asset category.

Asset Inventory: Means a register of capital assets, and information about those assets.

Capital Asset: Means a unit of rolling stock, a facility, a unit of equipment, or an element of infrastructure used for providing public transportation.

Decision Support Tool: Means an analytic process or methodology: (1) To help prioritize projects to improve and maintain the state of good repair of capital assets within a public transportation system, based on available condition data and objective criteria; or (2) To assess financial needs for asset investments over time.

Direct Recipient: Means an entity that receives Federal financial assistance directly from the Federal Transit Administration.

Equipment: Means an article of nonexpendable, tangible property having a useful life of at least one year.

Exclusive-Use Maintenance Facility: Means a maintenance facility that is not commercial and either owned by a transit provider or used for servicing their vehicles.

Facility: Means a building or structure that is used in providing public transportation.

Full Level of Performance: Means the objective standard established by FTA for determining whether a capital asset is in a state of good repair.

Horizon Period: Means the fixed period of time within which a transit provider will evaluate the performance of its TAM plan. FTA standard horizon period is four years.

Implementation Strategy: Means a transit provider's approach to carrying out TAM practices, including establishing a schedule, accountabilities, tasks, dependencies, and roles and responsibilities.

Infrastructure: Means the underlying framework or structures that support a public transportation system.

Investment Prioritization: Means a transit provider's ranking of capital projects or programs to achieve or maintain a state of good repair. An investment prioritization is based on financial resources from all sources that a transit provider reasonably anticipates will be available over the TAM plan horizon period.

Key Asset Management Activities: Means a list of activities that a transit provider determines are critical to achieving its TAM goals.

Life-Cycle Cost: Means the cost of managing an asset over its whole life.

Participant: Means a tier II provider that participates in a group TAM plan.

Performance Measure: Means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets (*e.g.*, a measure for on-time performance is the percent of trains that arrive on time, and a corresponding quantifiable indicator of performance or condition is an arithmetic difference between scheduled and actual arrival time for each train).

Performance Target: Means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Transit Administration (FTA).

Public Transportation System: Means the entirety of a transit provider's operations, including the services provided through contractors.

Public Transportation Agency Safety Plan: Means a transit provider's documented comprehensive agency safety plan that is required by 49 U.S.C. 5329.

Recipient: Means an entity that receives Federal financial assistance under 49 U.S.C. Chapter 53, either directly from FTA or as a subrecipient.

Rolling Stock: Means a revenue vehicle used in providing public transportation, including vehicles used for carrying passengers on fare-free services.

Service Vehicle: Means a unit of equipment that is used primarily either to support maintenance and repair work for a public transportation system or for delivery of materials, equipment, or tools.

State of Good Repair (SGR): Means the condition in which a capital asset is able to operate at a full level of performance.

Subrecipient: Means an entity that receives Federal transit grant funds indirectly through a State or a direct recipient.

TERM Scale: Means the five (5) category rating system used in the Federal Transit Administration's Transit Economic Requirements Model (TERM) to describe the condition of an asset: 5.0—Excellent, 4.0—Good; 3.0—Adequate, 2.0—Marginal, and 1.0—Poor.

Tier I Provider: Means a recipient that owns, operates, or manages either (1) one hundred and one (101) or more vehicles in revenue service during peak regular service across all fixed route modes or in any one non-fixed route mode, or (2) rail transit.

Tier II Provider: Means a recipient that owns, operates, or manages (1) one hundred (100) or fewer vehicles in revenue service during peak regular service across all non-rail fixed route modes or in any one non-fixed route mode, (2) a subrecipient under the 5311 Rural Area Formula Program, (3) or any American Indian tribe.

Transit Asset Management (TAM): Means the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation.

Transit Asset Management (TAM) Plan: Means a plan that includes an inventory of capital assets, a condition assessment of inventoried assets, a decision support tool, and a prioritization of investments.

Transit Asset Management (TAM) Policy: Means a transit provider's documented commitment to achieving and maintaining a state of good repair for all of its capital assets. The TAM policy defines the transit provider's TAM objectives and defines and assigns roles and responsibilities for meeting those objectives.

Transit Asset Management (TAM) Strategy: Means the approach a transit provider takes to carry out its policy for TAM, including its objectives and performance targets.

Transit Asset Management (TAM) System: Means a strategic and systematic process of operating, maintaining, and improving public transportation capital assets effectively, throughout the life cycles of those assets.

Transit Provider (provider): Means a recipient or subrecipient of Federal financial assistance under 49 U.S.C. Chapter 53 that owns, operates, or manages capital assets used in providing public transportation.

Useful life: Means either the expected life cycle of a capital asset or the acceptable period of use in service determined by FTA.

Useful life benchmark (ULB): Means the expected life cycle or the acceptable period of use in service for a capital asset, as determined by a transit provider, or the default benchmark provided by FTA.

State of Good Repair (SGR) Standards Policy:

The Authority's SGR policy is as follows:

A capital asset is in a state of good repair (SGR) when each of the following objective standards is met:

- (1) If the asset is in a condition sufficient for the asset to operate at a full level of performance. An individual capital asset may operate at a full level of performance regardless of whether or not other capital assets within a public transportation system are in a SGR;
- (2) The asset is able to perform its manufactured design function;
- (3) The use of the asset in its current condition does not pose an identified unacceptable safety risk and/or deny accessibility; and
- (4) The asset's life-cycle investment needs have been met or recovered, including all scheduled maintenance, rehabilitation and replacements (ULB).

The TAMP allows the Authority to predict the impact of its policies and investment justification decisions on the condition of its assets throughout the asset's life cycle, and enhances the ability to maintain a SGR by proactively investing in an asset before the asset's condition deteriorates to an unacceptable level.

The Authority shall establish annual TAM goals, which are separate from annual SGR performance goals, based upon tangible criteria related to asset performance. For FY 17-18, the authority shall use this time period to gather data in order to establish baseline measures. TAM goals include monitoring the following criteria (see Table 1.1):

- Safety risks (Measure of accidents per 100,000 revenue miles by mode, no more than 1);
- System reliability (On-time performance by mode, 95% goal);
- Maintenance Resources (Number of vehicles out of service for 30 or more days, by mode) ; and
- System performance (Missed runs due to major breakdown as a percentage of total runs by mode, no more than 10 in a 30 day period).

It is the belief of the Authority that TAMP implementation and monitoring provides a framework for maintaining a SGR by considering the condition of its assets in relation to the local operating environment. The authority has developed its SGR policies to account for the prevention, preservation, maintenance, inspection, rehabilitation, disposal, and replacement of capital assets. The goal of these policies is to allow the Authority to determine and predict the cost to improve asset condition(s) at various stages of the asset life cycle, while balancing prioritization of capital, operating and expansion needs. The two foundational criteria of SGR performance measures are *Useful Life Benchmark* (ULB) and *Condition*.

Useful Life Benchmark:

The Useful Life Benchmark (ULB) is defined as the expected lifecycle of a capital asset for a particular transit provider's operating environment, or the acceptable period of use in service for a particular transit provider's operating environment. ULB criteria are user defined, whereas ULB takes into account, a provider's unique operating environment (service frequency, weather, geography). When developing Useful Life Benchmarks (ULB),

the Authority recognized and took into account the local operating environment of its assets within the service area, historical maintenance records, manufacturer guidelines, and the default asset ULB derived from the FTA. In most cases, if an asset exceeds its ULB, then it is a strong indicator that it may not be in a state of good repair.

For the purposes of this TAMP, the Authority utilized a customized ULB for paratransit rolling stock that is based on PennDOT ULB standards. It should be noted that the FTA ULB measure for paratransit rolling stock is nearly double, at 10 years vs. 5 years and 150,000 miles for the PennDOT ULB measure. All other assets (facilities, equipment, and fixed route rolling stock) were assessed by using the FTA default ULB metrics (see Table 1.2).

While all other assets cited in this document are financed with federal funding, paratransit rolling stock replacement purchases are funded primarily by state (PennDOT) funding sources. The state DOT is utilizing FTA funds for the replacement of paratransit rolling stock assets throughout the Commonwealth. In addition to the Authority observing the paratransit van ULB measure of 5 years and 150,000 miles due to PennDOT funding and program requirements, the following standards are utilized by PennDOT to arrive at the suggested vehicle replacement lifecycles and ULB measures, specifically those standards found in FTA Circular 5010.1E:

Recipients of federal assistance need to specify the expected minimum useful life in invitations for bids when acquiring new vehicles. Minimum useful life is determined by years of service or accumulation of miles whichever comes first, by asset type as follows:

(a) Buses:

- 1 Large, heavy-duty transit buses including over the road buses (approximately 35'–40', and articulated buses): at least 12 years of service or an accumulation of at least 500,000 miles.
- 2 Small size, heavy-duty transit buses (approximately 30'): at least 10 years or an accumulation of at least 350,000 miles.
- 3 Medium-size, medium-duty transit buses (approximately 25'–35'): at least seven years or an accumulation of at least 200,000 miles.
- 4 Medium-size, light-duty transit buses (approximately 25'–35'): at least five years or an accumulation of at least 150,000 miles.

(b) Light Duty Vehicles:

- 1 Other light-duty vehicles used as equipment and in transport of passengers (revenue service) such as regular and specialized vans, sedans, and light-duty buses including all bus models exempt from testing in the current 49 CFR part 665: at least four years or an accumulation of at least 100,000 miles.

Condition Assessment:

The physical condition of an asset is rated as an SGR performance measure because it is a direct reflection of its ability to perform its intended function. As part of the TAMP SGR Standards, the Authority requires each vehicular asset and facility meeting FTA TAMP criteria to have a physical condition assessment conducted on an annual basis, where applicable. The condition assessments uses a rating scale to rate the current physical appearance, maintenance requirements, safety and accessibility of an asset, “as it currently sits”. See Section 3 for more information on condition assessments.

SGR Performance Measures & Targets:

SGR performance measures combine the measures of ULB and physical condition to create a performance measures from which asset performance targets can be derived on an annual basis. These performance measures are directly related to asset lifecycle (ULB & condition) and maintenance needs. By the time an asset meets or exceeds its assigned ULB, it should have reached its prescribed mileage, maintenance, and condition requirements. Further information related to annual SGR targets can be found in Section 6. FTA-defined SGR performance measures include:

- **Rolling Stock: (Age)** The SGR performance measure for rolling stock is the percentage of revenue vehicles (fixed route & paratransit) within a particular asset class that have either met or exceeded their ULB.
- **Equipment (non-revenue service vehicles): (Age)** The SGR performance measure only applies to non-revenue service vehicles. The SGR performance measure for non-revenue, support-service and maintenance vehicles equipment is the percentage of those vehicles that have either met or exceeded their ULB.
- **Facilities: (Condition)** The SGR performance measure for facilities is the percentage of facilities within an asset class, rated below condition 3 on the FTA TERM Scale.

SECTION 2: ASSET INVENTORY PORTFOLIO

The following capital asset items that the Authority owns, operates and has a direct capital responsibility, included in the TAMP asset inventory, are comprised of: Rolling Stock, Equipment, and Facilities (see Table 2.1). At the time of this writing, the Authority is not a grantee that operates passenger rail service. Therefore, the Authority does not have any associated rail infrastructure in its asset portfolio.

The Authority utilizes internal spreadsheet reports, Dossier fleet & facility management software, and the PennDOT Capital Planning Tool (CPT) software program (http://pa-cpt.camsys-apps.com/users/sign_in) to maintain inventory, schedule maintenance, and track the condition of assets. Assets are inventoried and tracked by entering the data into the PennDOT Bureau of Public Transportation (BPT) Capital Planning Tool (CPT). The CPT is an online capital management software program developed by PennDOT for its grantees. Additionally, an internal spreadsheet of this data is kept as a backup in the event the CPT is not available. The Authority maintenance department utilizes the Dossier software system to track and schedule fleet and facility maintenance.

Rolling Stock

Rolling stock is an Authority-owned and operated revenue service vehicle used in the provision of providing public transportation, and includes vehicles used to primarily transport passengers. The Authority does not utilize or operate any third-party rolling stock assets. In addition to the TAMP, data for rolling stock assets is maintained and updated in both the Dossier system and the PennDOT CPT on a quarterly basis by the LCTA Director of Maintenance and Grants Coordinator. The following required data fields are maintained for each rolling stock asset (public transit vehicle):

External Vehicle ID	Asset Tag #
Asset Description	Classification
Vehicle Type	Last Maintenance Performed
Vehicle Title Ownership	Expected Useful Life
Mileage	Expected Useful Miles
VIN Number	Useful Life Benchmark (UBL)
Manufacturer	Anticipated Replacement or Rehab Year
Year Built/In Service Date/Age	License Plate
Reported Condition Assessment	Gross Vehicle Weight
Purchase Cost	Vehicle Features
Purchase Date	Capacity: Seating/Standing/Wheelchair
Purchase Status (New/Used)	Length of Vehicle
Purchase Source (Dealer/Vendor)	Current Status of Vehicle
Fuel Type	Storage location
Make/Model	Disposition Date, Cost & Buyer
Grant Source Used for Purchase (State/Federal/ %)	Grant Number
SGR Status	

The Authority's operates two public transportation service divisions, Fixed Route Bus and Shared Ride Paratransit. The fixed route bus service fleet inventory consists of one replica trolley, and both 30' and 35' Gillig diesel and diesel-electric hybrid buses (see Table 2.2).

The Shared Ride paratransit fleet inventory consists of Dodge caravan minivans, Ford E-350 cutaway vans, and Ford E-450 "Challenger" cutaway vans (see Table 2.3).

Equipment:

Equipment evaluated per FTA requirements in this TAMP, is all non-revenue service vehicles regardless of value, and any authority-owned equipment with a cost of over \$50,000 in acquisition value. Equipment includes non-revenue service vehicles that are primarily used to support maintenance and repair work for a public transportation system, supervisory work, or for the delivery of materials, equipment, or tools. The Authority does not utilize or operate any third-party non-revenue service vehicle equipment assets. All non-revenue service vehicle equipment assets are owned and operated by the Authority.

Equipment: Non-Revenue Service Vehicles

The Authority operates six non-revenue service vehicles in its daily operations (see Table 2.4). Two vehicles are Chevrolet Trailblazer SUV's that are primarily used for supervisor and administrative purposes. The Authority also

operates two GMC Savana 8 passenger vans that are primarily used for administrative use, driver exchanges, and travel to transportation conferences. The Authority operates one Ford E-350 dump truck that is used for facility winter maintenance, removing stuck vehicles, and construction projects. Lastly, the Authority operates a Ford F-250 service truck that is used for responding to maintenance-related road calls and accidents involving revenue vehicles.

In addition to the TAMP, data for non-revenue service vehicle equipment assets is maintained and updated in the Dossier system, the PennDOT CPT, and internal spreadsheet on a quarterly basis by the LCTA Director of Maintenance and Grants Coordinator. The following required data fields are maintained for each non-revenue service vehicle equipment asset:

External Vehicle ID	Asset Tag #
Asset Description	Classification
Vehicle Type	Last Maintenance Performed
Vehicle Title Ownership	Expected Useful Life
Mileage	Expected Useful Miles
VIN Number	Useful Life Benchmark (UBL)
Manufacturer	Anticipated Replacement or Rehab Year
Year Built/In Service Date/Age	License Plate
Reported Condition Assessment	Gross Vehicle Weight
Purchase Cost	Vehicle Features
Purchase Date	Capacity: Seating
Purchase Status (New/Used)	Length of Vehicle
Purchase Source (Dealer/Vendor)	Current Status of Vehicle
Fuel Type	Storage location
Make/Model	Disposition Date, Cost & Buyer
Grant Source Used for Purchase (State/Federal %)	Grant Number
Book Value	SGR Status

Equipment: At or Over \$50,000 in Acquisition Value

Equipment is any authority-owned asset item (single line item or group) with a cost at or over \$50,000 in acquisition value. Equipment includes items that are utilized in the operations of providing public transportation service. The Authority does not utilize or operate any third-party equipment assets. All equipment assets are owned and operated by the Authority.

In the provision of operating a public transportation system, the Authority utilizes five key equipment elements that have an acquisition value of \$50,000 or more (see Table 2.5). These five equipment elements are all part of the Facility asset class, specifically, the Authority (HQ) Administration & Maintenance Facility, and Fuel Island Facility.

In addition to the TAMP, data for non-vehicle equipment assets is maintained and updated in the Dossier System, PennDOT CPT, and internal spreadsheet on an annual basis by the LCTA Director of Maintenance and Grants Coordinator. The following required data fields are maintained for each non-vehicle equipment asset with an acquisition value of \$50,000 or more:

Type	Book Value
Asset Tag	Location
Description	Acquisition Date
Status	Purchase Source
Age	Cost

Condition	Item Serial Number
Rehabilitation Year	Model
Replacement Year	Grant Source Used for Purchase (State/Federal %)
Vendor	Grant Number
Quantity	Disposition Date, Cost & Buyer
Units	SGR Status

Facilities

Facilities are any structure used in providing public transportation where the Authority owns and has a direct capital responsibility. Facilities utilized, but not necessarily owned or operated, by the Authority Include: operations, maintenance and administrative buildings, and passenger stations.

The Authority currently utilizes four separate locations for operations, administration, maintenance, storage, refueling, and passenger boarding activities. However, the Authority owns, operates, and has a direct capital responsibility for one “compound” location which contains three facility assets-those being the Administrative & Maintenance HQ, Fuel Island, and Tire and Battery Warehouse.

The Authority does utilize three third-party-owned facility locations for operations, vehicle storage, and passenger boarding activities/parking. However, the Authority does not have a direct capital responsibility at these three locations (see Table 2.6).

In addition to the TAMP, data for facility assets is maintained and updated in the Dossier system, PennDOT CPT, and an internal spreadsheet on an annual basis by the LCTA Director of Maintenance and Grants Coordinator. The following required data fields are maintained for each facility asset:

Asset Ownership	Build Cost
Asset Description/Name	Purchase Date
Physical Location/Address	In-Service Date
Asset Tag #	Purchase Status (New/Used)
External ID	Expected Useful Life
Classification	Land Owner
Asset Type	Building Owner
Status	Facility Size
Age/Year Built	Section of Larger Facility
Reported Condition	Percent Operational
Last Maintenance	Number of Structures
Book Value	Number of Floors
Rehabilitation Year	Number of Elevators or Escalator
Replacement Year	Number of Parking Spaces (Public,Private, ADA)
Vendor/Builder	Line Number
FTA Facility Classification	LEED Certification Status
Interior (Sq. Ft.)	Features & Amenities (ADA)
Lot Size	Disposition Date, Cost & Buyer
Grant Source Used for Purchase (State/Federal %)	Grant Number
SGR Status	

SECTION 3: ASSET CONDITION ASSESSMENT

The Authority assesses the condition of its assets on an annual basis by utilizing the FTA TERM (Transit Economic Requirements Model) condition rating assessment scale (see Table 3.1). This rating scale assigned a numerical value or rank based on the physical condition(s) presented by each individual asset throughout its life cycle. The rating scale is based on numbers 1 to 5, with five being new and one being poor. Assets with a rating of 2.5 or higher are considered to be in a SGR. All completed asset inspection forms are documented in the data set of the LCTA TAMP Data companion document.

The inspection process and documentation forms utilized to assess facility and vehicle assets are detailed in the following TAMP companion documents:

- LCTA Facility and Equipment Maintenance Plan
 - SGR Facility/Building/Equipment Inspection Procedures & Inspection Assessment Standards
- LCTA Fleet Management & Maintenance Manual
 - SGR Revenue & Non-Revenue Vehicle Inspection Procedures & Inspection Assessment Standards

Rolling Stock

The TAMP Rolling Stock condition assessment consists of assigning a condition rating to all rolling stock assets for which the Authority owns and has a direct capital responsibility. A condition assessment ranking is not conducted in the TAMP for rolling stock assets for which the Authority does not own the rolling stock asset, the rolling stock asset is owned by a 3rd party, and/or where the Authority does not have a direct capital responsibility for the rolling stock asset. However, for the purposes of NTD reporting (Inventory & Condition Submittal), all Authority owned and 3rd party owned rolling stock assets (regardless of direct capital responsibility) are assigned an asset condition rating. At the time of this writing, the Authority owns and operates all fixed route and Shared Ride paratransit rolling stock (revenue vehicles).

The fixed route bus rolling stock condition assessment can be found on Table 3.2. The Shared Ride Paratransit rolling stock condition assessment can be found on Table 3.3.

Equipment: Non-Revenue Service Vehicles

The TAMP Equipment condition assessment consists of assigning a TERM physical condition rating to both all equipment that is either a non-revenue service vehicle or a non-vehicle equipment asset with an acquisition value of \$50,000 or more (individual line item or group). Furthermore, the equipment condition assessment contains only assets for which the Authority owns and has a direct capital responsibility.

A condition assessment ranking is not conducted in the TAMP for equipment assets for which the Authority does not own, is owned by a 3rd party, the equipment has an acquisition cost below \$50,000 (individual line item or group), or where the Authority does not have a direct capital responsibility.

However, for the purposes of NTD reporting (Inventory & Condition Submittal), all Authority owned equipment (with direct capital responsibility) that is a non-revenue service vehicle is only reported. At the time of this writing, the Authority owns and operates all equipment that is either a non-revenue service vehicle or a non-vehicle equipment asset with an acquisition cost at or above \$50,000.

The non-revenue service vehicle equipment condition assessment can be found on Table 3.4. The non-vehicle equipment condition assessment can be found on Table 3.5.

Equipment: Over \$50,000 in Acquisition Value (Non-Vehicle)

The non-vehicle equipment condition assessment can be found on Table 3.5.

Facilities

The TAM Plan Facilities condition assessment consists of assigning a physical condition rating, based on the FTA TERM Scale, to all facility assets for which the Authority owns and has a direct capital responsibility. A condition assessment ranking is not conducted in the TAM Plan for facility assets for which the Authority does not own the asset, the facility asset is owned by a 3rd party, and/or where the Authority does not have a direct capital responsibility for the facility asset.

However, for the purposes of NTD reporting (Inventory & Condition Submittal), all Authority owned and 3rd party owned facility assets (regardless of direct capital responsibility) are included in the Facility Asset Inventory (see Table 2.6). Only Authority owned facility assets with a direct capital responsibility are assigned a facility asset condition rating. At the time of this writing, the Authority only owns, operates, and has a direct capital responsibility for its administration, operations, and maintenance headquarters; fuel island; and battery/tire warehouse in Kingston, PA. These three separate Administrative & Maintenance facilities are located within a single “compound”. However, each of these facility assets were inspected and assessed individually.

As detailed in the Authority Facility & Equipment Maintenance Plan, each condition assessment inspection will take place in July/August of each calendar year. The inspection of major facility components and subcomponents will be conducted by the Director of Maintenance and an Authority staff member, with results and data reported to the Authority Compliance Analyst and Grants Coordinator. Facility equipment assets that have an acquisition value of \$50,000 or greater will also be included in the facility condition assessment inspection.

As detailed in the LCTA Facility and Equipment Maintenance Plan (SGR Facility/Building/Equipment Inspection Procedures & Inspection Assessment Standards), the process developed to assess the condition of the facilities where LCTA has direct capital responsibility and ownership is as follows:

1. Define the facility components and sub-components;
2. Establish the condition assessment language based on the FTA TERM Scale;
3. Conduct the assessment on an annual basis, to be conducted in August of each year;
4. Calculate the overall condition by using the *Median Value Method*; and
5. Document and report the assessed condition.

In addition, Authority facility inspector(s) will gather and review the following elements before conducting a condition assessment inspection:

- Agency inspection & maintenance procedures/schedules found in the Fleet and Facility Maintenance Plans;
- Inspection schedule/alignment with reporting schedule;
- Data needs;
- Warranty status & age of components;
- Third-party inspection records; and
- Previous inspection records (CPT & internal tracking spreadsheet).

The components and sub-components that will be inspected for a condition assessment in an Administrative/Maintenance and/or Passenger/Parking Facility can be found on pages 43-65 of the LCTA Facility and Equipment Maintenance Plan (SGR Facility/Building/Equipment Inspection Procedures & Inspection Assessment Standards). The 2017 facility condition assessment rating data can be found on Table 3.6. The 2017 facility inspection data showed that all three Authority facilities had an overall condition rating of 4.00.

SECTION 4: DECISION SUPPORT TOOLS & MANAGEMENT APPROACH

Sections 4 and 5 of this document are interrelated and detail the process and tools used to manage the lifecycle planning of capital public transportation assets. Authority staff within the maintenance, finance/grants, compliance, operations & safety, and executive departments utilizes a variety of management practices, policies, and technology to manage, maintain, and plan throughout the life cycle of an asset.

Decision Support Tools:

The following analytical process is in place to support investment decision-making, including project selection and prioritization (see Table 4.1). The decision support tools that the Authority utilizes for asset lifecycle management and investment planning, include both electronic software and written policy manuals. Each written policy manual and software program complements each other as they contribute to asset management throughout the lifecycle, from planning and procurement to disposal. An explanation of the decision support tools can be found in Table 4.2.

Management Approach to Asset Management:

The primary management approach utilized to maintain an SGR is risk mitigation. This management philosophy applies risk mitigation strategies (policies and procedures) throughout the assets life cycle, both from a maintenance perspective (breakdowns) and a safety & accessibility perspective (accidents/ADA requirements).

Throughout each asset's life cycle, the Authority shall monitor all assets for unsafe and inaccessible conditions. However, identifying an opportunity to improve the safety of an asset does not necessarily indicate an unsafe condition. When the Authority encounters and identifies as unacceptable safety risk associated with an asset, the asset shall be ranked with higher investment prioritization, to the extent practicable. The Authority's risk management philosophy is the proactive approach of identifying future projects and ranking preventative projects with better return on investment higher in the investment prioritization risk. Policies and procedures to mitigate risk are included in the documents presented in Tables 4.3.1 to 4.3.5.

Performing an analysis of the asset life cycle at the individual asset level is just one management approach the Authority uses to maintain a SGR. This analysis follows the asset from the time it is purchased, placed in operation, maintained, and ultimately disposed of. The analysis is a snap shot of each asset's current status. The asset lifecycle stages consist of the following strategies:

- Table 4.3.1: Acquisition Strategy (Design/Procurement)
- Table 4.3.2: Maintenance Strategy (Operate/Maintain/Monitor)
- Table 4.3.3: Overhaul & Rehabilitation Strategy (Rebuild)
- Table 4.3.4: Replacement Strategy (Disposal)
- Table 4.3.5: Risk Management Strategy (Mitigation)

SECTION 5: PRIORITIZED LIST of INVESTMENTS

Investment Prioritization Process:

The Authority shall perform an investment prioritization analysis on a quarterly basis, in order to:

- (1) Determine what capital investments are needed, how much (and when), in order to maintain SGR; and
- (2) Rate and rank SGR programs and projects in order of implementation priority.

The investment prioritization analysis aids the Authority in making more informed investment decisions to improve SGR of our capital assets, and define when an asset needs overhaul or replacement. The investment prioritization list, is a list containing the work plan(s) and schedule(s) of the proposed projects and programs that the Authority estimates would achieve its SGR goals, and a ranking of projects and programs based on implementation priority over the TAMP horizon period of four (4) years.

The Authority will rank selected projects and programs to improve or manage the SGR of capital assets for which the Authority has a direct capital responsibility. The ranking criteria of projects and programs shall be consistent throughout the TAMP. Priority consideration will be given to local projects and programs that: (1) both improve SGR and correct an identified unacceptable safety risk; and (2) take into consideration ADA requirements (49 CFR Part 37) concerning maintenance of accessible features and the alteration of transit facilities. Furthermore, when developing an investment prioritization list, the Authority shall take into consideration its estimation of funding levels from all sources that it reasonably expects will be available in each fiscal year during the TAMP horizon period.

The ranking of investment prioritization programs and projects will be expressed as: *High Priority, Medium Priority, or Low Priority*. Each investment prioritization program or project ranked shall contain a year and/or date in which the Authority intends to carry out the program or project. This output process is a list of ranked projects and programs at the asset class level that identify assets from the asset inventory. The Authority's list of prioritized investments can be found on Table 5.1.

SECTION 6: ANNUAL PERFORMANCE TARGETS & MEASURES

This section lists the process, data sources, and methodology used in the development of the FTA requirement of the Authority to set annual SGR performance targets. As introduced in Section 1, a State of Good Repair (SGR) is a threshold that identifies the desired performance condition. Specifically, an asset is in an SGR when: The condition of a capital asset is able to operate at a full level of performance. This means the asset:

1. Is able to perform its designed function;
2. Does not pose a known and/or unacceptable safety risk (Condition); and
3. Its lifecycle investments have been met or recovered (ULB).

The FTA has enlisted the use of the following asset performance measure criteria for use in the development of the Authority's SGR performance targets (see Table 6.1).

The Authority shall establish one or more performance target(s) for each applicable asset class performance measure on an annual basis for the next fiscal year. The timeline for establishing SGR performance targets & measures are as follows:

Within three months before the effective date of October 1, 2018, the Authority shall set performance targets for the next fiscal year for each asset class included in this TAM Plan. These performance targets shall be established on or by no later than the date of the September meeting of the Authority Board of Directors.

SGR performance targets are based on realistic expectations derived from both the most recent available data (ULB/condition), FTA performance measure criteria, and the financial resources from all sources the Authority reasonably expects will be available during the TAM Plan horizon period for capital planning purposes. SGR performance targets for the current fiscal year shall be monitored on a quarterly basis. The Accountable Executive is required to approve each annual performance target submission to FTA/NTD.

The Authority's annual SGR performance targets for FFY 2017- FFY2018 can be found on Tables 6.2 through 6.5.

SECTION 7: RECORDKEEPING & NTD REPORTING

The Authority shall maintain all supporting TAM Plan records and documents. The Authority shall make TAMP records available to Federal (FTA), State (PennDOT) and MPO's entities that provide(s) funding to the Authority, and to aid in the planning process. The Authority shall report, on an annual basis, to the FTA's National Transit Database (NTD):

- Inventory of assets;
- SGR performance targets for the next fiscal year;
- Condition inspection assessments and performance measures of capital assets; and
- An annual narrative shall also be included and reported to NTD that provides a description of any change in the condition of the Authority's transit system or operations from the previous year, and describe the progress made during the reporting year to meet the performance targets set in the previous reporting year.

Per NTD requirements, because the Authority's fiscal year ends on 6/30/2017, annual TAM data reporting to NTD shall be completed by the Authority Finance & Grants department by the last business day of October of each calendar year. If a NTD filing extension is required for any reason, an extension letter must be filed with NTD by October 31st

SECTION 8: UPDATES & CONTINUOUS IMPROVEMENT

The TAM Plan can be considered a "living document" that shall be reviewed on at least a quarterly basis, updated, and incorporated into the Authority's capital and budget planning, and reporting processes. Beginning in 2017, TAMP data shall serve as a "baseline" measure of asset performance management. As more data is collected, additional monitoring categories and goals will be included to support condition and reliability-based decision-making.

This document shall cover a "horizon period" of time (10/1/2018 to 9/30/2021) beginning with the completion of the initial TAM plan in 2017, continuing with full implementation in FFY 2018, and ending four years later on FFY 2021. Table 8.1 details the key data and action items for FTA TAMP compliance. This TAMP shall be amended during the four-year horizon period when there is a significant change to staff, assets, maintenance plans, and/or operations occurring at the Authority.

SECTION 9: CONCLUSION

The Board of Directors, management team, staff, and employees of the Luzerne County Transportation Authority firmly believe that by implementing this *Transit Asset Management Program* (TAMP), that it will allow the transportation system to meet its mission and offer safe, efficient, reliable, and accessible public transportation options to the general public of the Luzerne County metropolitan area. In addition, the Authority believes that by implementing this TAMP, the following *State of Good Repair* (SGR) indicators will be either maintained or improved upon:

- Limit safety risks;
- Justify investments;
- Increase system reliability & accessibility;
- Lower maintenance costs; and/or
- Increase system performance.

Table of Tables

Table #:	Title	Page #:
1.1	LCTA Annual TAM Goals: FY 2017-2018	T1
1.2	LCTA Asset Useful Life Benchmarks: FY 2017-2018	T2
2.1	LCTA TAMP Asset Inventory Summary: FY 2017-2018	T2
2.2	LCTA Fixed Route Bus Rolling Stock Fleet Inventory: FY 2017-2018	T3
2.3	LCTA Shared Ride Program Paratransit Rolling Stock Fleet Inventory: FY 2017-2018	T4
2.4	LCTA Equipment (Non-Revenue Service Vehicles) Inventory: FY 2017-2018	T6
2.5	LCTA non-Vehicle Equipment Inventory (> \$50K): FY 2017-2018	T7
2.6	LCTA Facility Inventory: FY 2017-2018	T7
3.1	FTA TERM Rating Scale	T7
3.2	LCTA Fixed Route Bus Rolling Stock Fleet Condition Ratings: FY 2017-2018	T7
3.3	LCTA Shared Ride Program Paratransit Rolling Stock Fleet Condition Ratings: FY 2017-2018	T9
3.4	LCTA Equipment (Non-Revenue Service Vehicles) Condition Ratings: FY 2017-2018	T12
3.5	LCTA non-Vehicle Equipment Condition Ratings (> \$50K): FY 2017-2018	T12
3.6	LCTA Facility Condition Rating Assessment: FY 2017-2018	T13
4.1	LCTA TAMP Decision Support & Capital Asset Investment Planning Process	T13
4.2	LCTA TAMP Decision Support Tools	T14
4.3.1	Asset Management Approach: Acquisition & Renewal Strategy	T15
4.3.2	Asset Management Approach: Maintenance Strategy	T16
4.3.3	Asset Management Approach: Overhaul Strategy	T17
4.3.4	Asset Management Approach: Disposal Strategy	T18
4.3.5	Asset Management Approach: Risk Management Strategy	T19
5.1	LCTA TAMP Investment Prioritization Project List (FFY 2018-2021)	T20
6.1	FTA TAM Asset Category Performance Measures	T20
6.2	LCTA Annual SGR Asset Performance Targets: Fixed Route Rolling Stock (FFY 2017-2018)	T21
6.3	LCTA Annual SGR Asset Performance Targets: Paratransit Rolling Stock (FFY 2017-2018)	T22
6.4	LCTA Annual SGR Asset Performance Targets: Non-Revenue Service Vehicles (FFY 2017-2018)	T23
6.5	LCTA Annual SGR Asset Performance Targets: Facilities (FFY 2017-2018)	T24
8.1	FTA TAMP Key Dates (FY: July to June)	T24

TABLES

Table: 1.1

LCTA Annual TAM Goals: FFY 2017-2018			
Criteria	Measure	FFY 2017-2018	
		Goal	Actual
Safety Risks	Number of accidents per 100,000 revenue miles by mode. (FR)	1	TBD
Safety Risks	Number of accidents per 100,000 revenue miles by mode. (SR)	1	TBD
Safety Risks	Number of facility-related accidents to employees or customers.	0	TBD
System Reliability	On time performance, by mode. (FR)	95%	TBD
System Reliability	On time performance, by mode. (SR)	95%	TBD
Maintenance Resources	Number of vehicles out of service for 30 or more days, by mode. (FR)	1	TBD
Maintenance Resources	Number of vehicles out of service for 30 or more days, by mode. (SR)	1	TBD
System Performance	Missed runs due to major breakdown, as a percentage of total runs, by mode (FR)	< 120	TBD
System Performance	Missed runs due to major breakdown, as a percentage of total runs, by mode (SR)	< 120	TBD

Table: 1.2

LCTA Asset Useful Life Benchmarks: FFY 2017-2018		
Asset Classification (NTD/CPT)	Asset Item	ULB* (Years)
Rolling Stock: Revenue Vehicle, Paratransit	Paratransit Van Bus < 30 FT (Cutaway) / (SR) Paratransit Van Ford E350/450	5
Rolling Stock: Revenue Vehicle, Paratransit	Paratransit Van (Passenger) / (SR) Dodge Caravan	4
Rolling Stock: Revenue Vehicle, Fixed Route	Bus Trolley STD / (FR) Replica Trolley	13 (TB)
Rolling Stock: Revenue Vehicle, Fixed Route	Bus STD 30 FT / (FR) Motor bus, Gillig Low Floor	14 (BU)
Rolling Stock: Revenue Vehicle, Fixed Route	Bus STD 35 FT / (FR) Motor Bus, Gillig Phantom	14 (BU)
Rolling Stock: Revenue Vehicle, Fixed Route	Bus STD 35 FT / (FR) Motor Bus, Gillig Low Floor	14 (BU)
Facility: Administrative and Maintenance	(HQ) Fuel Island	40
Facility: Administrative and Maintenance	(HQ) Tire/Battery Storage Warehouse	40
Facility: Administrative and Maintenance	(HQ) Operations, Administration & Maintenance Facility	40
Equipment: Non-Revenue Service Vehicle	Passenger Van / (FR) GMC Savana	8 (AO)
Equipment: Non-Revenue Service Vehicle	SUV (Supervisor Car) / (FR/SR) Chevrolet Trailblazer	8 (SV)
Equipment: Non-Revenue Service Vehicle	Other Support Vehicle / (FR/SR) FORD F-350 Dump	8 (AO)
Equipment: Non-Revenue Service Vehicle	Pickup Truck (Road Call/Mobile Maint.) / (FR/SR) FORD F-250	8 (AO)
Equipment: Non-Revenue Service Vehicle	Forklift / (FR) TCM FO25N5T	14 (ORTV)
Note: FR = Fixed Route Bus, SR = Shared Ride Paratransit Program		
Source*: FTA ULB Cheat Sheet, 2017 Asset Inventory Reporting Module, Page 53.		

Table: 2.1

LCTA TAMP Asset Inventory Summary: FFY 17-18*				
Asset Category	Total #	Avg. Age.	Avg. TERM Condition	Total Value
Rolling Stock: FR	38	10	3.54	\$19,000,000
Rolling Stock: SR	49	4	4.00	\$2,605,000
Facility	3	13	4.00	\$6,435,000
Equipment (Service Vehicles)	7	11	3.70	\$235,000
Equipment (> \$50K)	13	13	4.00	\$595,000
*Authority owned with direct capital responsibility				

Table: 2.2

LCTA Fixed Route Bus Rolling Stock Fleet Inventory: 2017															
Item #	Classification Type	Bus #	Make	Model	Year	Age	Mileage	ULB**	ULB Met	Length	Fuel	Status	Owner/Capital Responsibility	Primary Funding Mechanism	Replacement Cost
B-18	Bus STD 35 FT	401	Gilling	Phantom	2004	13	411,069	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-19	Bus STD 35 FT	402	Gilling	Phantom	2004	13	372,405	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-20	Bus STD 35 FT	403	Gilling	Phantom	2004	13	372,443	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-21	Bus STD 35 FT	404	Gilling	Phantom	2004	13	353,790	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-22	Bus STD 35 FT	405	Gilling	Phantom	2004	13	408,047	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-23	Bus STD 35 FT	406	Gilling	Phantom	2004	13	375,380	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-24	Bus STD 35 FT	407	Gilling	Phantom	2004	13	355,277	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-25	Bus STD 35 FT	408	Gilling	Phantom	2004	13	394,438	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-26	Bus STD 35 FT	409	Gilling	Phantom	2004	13	381,893	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-27	Bus STD 35 FT	410	Gilling	Phantom	2004	13	387,674	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-28	Bus STD 35 FT	601	Gilling	Phantom	2005	12	352,499	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-29	Bus STD 35 FT	602	Gilling	Phantom	2005	12	353,868	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-30	Bus STD 35 FT	603	Gilling	Phantom	2005	12	333,504	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-31	Bus STD 35 FT	604	Gilling	Phantom	2005	12	338,562	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-32	Bus STD 35 FT	605	Gilling	Phantom	2005	12	337,170	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-33	Bus STD 35 FT	606	Gilling	Phantom	2006	11	364,049	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-34	Bus STD 35 FT	607	Gilling	Phantom	2006	11	340,972	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-35	Bus STD 35 FT	608	Gilling	Phantom	2006	11	350,929	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-36	Bus STD 35 FT	609	Gilling	Phantom	2006	11	347,317	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-37	Bus STD 35 FT	610	Gilling	Phantom	2006	11	348,716	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-38	Bus Trolley STD	38	Optima Bus	Replica Trolley	2002	15	79,560	13	YES	29'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-39	Bus STD 35 FT	901	Gilling	Low Floor	2009	8	243,163	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-40	Bus STD 35 FT	902	Gilling	Low Floor	2009	8	220,704	14	NO	35'	Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-41	Bus STD 35 FT	903	Gilling	Low Floor Hybrid	2009	8	234,999	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-42	Bus STD 35 FT	904	Gilling	Low Floor Hybrid	2009	8	261,375	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-43	Bus STD 35 FT	905	Gilling	Low Floor Hybrid	2009	8	228,511	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-44	Bus STD 35 FT	103	Gilling	Low Floor Hybrid	2009	8	220,160	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-45	Bus 30 FT	101	Gilling	Low Floor Hybrid	2009	8	172,137	14	NO	30'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-46	Bus 30 FT	102	Gilling	Low Floor Hybrid	2009	8	182,455	14	NO	30'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-47	Bus STD 35 FT	104	Gilling	Low Floor Hybrid	2010	7	242,332	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-48	Bus STD 35 FT	105	Gilling	Low Floor Hybrid	2010	7	196,996	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-49	Bus STD 35 FT	201	Gilling	Low Floor Hybrid	2012	5	135,497	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-50	Bus STD 35 FT	202	Gilling	Low Floor Hybrid	2012	5	163,791	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-51	Bus STD 35 FT	203	Gilling	Low Floor Hybrid	2012	5	155,017	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-52	Bus STD 35 FT	204	Gilling	Low Floor Hybrid	2012	5	123,197	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-53	Bus STD 35 FT	205	Gilling	Low Floor Hybrid	2012	5	145,550	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-54	Bus STD 35 FT	206	Gilling	Low Floor Hybrid	2012	5	149,237	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000
B-55	Bus STD 35 FT	207	Gilling	Low Floor Hybrid	2012	5	158,997	14	NO	35'	Hybrid-Diesel	In-Service	LCTA 100%	Federal/FTA	\$500,000

Table: 2.3

LCTA Shared Ride Paratransit Rolling Stock Fleet Inventory: 2017												
Van #	Classification Type	Make/Model	Year	Age	Mileage	ULB** (Years)	ULB Met	Status	Owner/Capital Responsibility	Primary Funding Mechanism	Replacement Cost	
\$107	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	143,476	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$108	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2011	6	127,116	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$109	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	151,400	5	YES	In Service	LCTA 100%	PennDOT	\$55,000	
\$111	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	139,128	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$195	Paratransit Van (Passenger)	DTD CARAVAN	2010	7	81,063	4	NO	In Service	LCTA 100%	PennDOT	\$25,000	
\$196	Paratransit Van (Passenger)	DTD CARAVAN	2010	7	83,593	4	NO	In Service	LCTA 100%	PennDOT	\$25,000	
\$197	Paratransit Van (Passenger)	DTD CARAVAN	2010	7	82,121	4	NO	In Service	LCTA 100%	PennDOT	\$25,000	
\$198	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2010	7	138,202	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$199	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2010	7	158,165	5	YES	In Service	LCTA 100%	PennDOT	\$55,000	
\$200	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	121,297	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$201	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	132,825	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$202	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	139,139	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$203	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	152,222	5	YES	In Service	LCTA 100%	PennDOT	\$55,000	
\$204	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	140,464	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$205	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	127,085	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$206	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	139,978	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$207	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	168,140	5	YES	In Service	LCTA 100%	PennDOT	\$55,000	
\$208	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	126,110	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
\$209	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	148,218	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	

Table: 2.3 (cont'd)

LCTA Shared Ride Paratransit Rolling Stock Fleet Inventory: 2017											
Van #	Classification Type	Make/Model	Year	Age	Mileage	ULB** (Years)	ULB Met	Status	Owner/Capital Responsibility	Primary Funding Mechanism	Replacement Cost
\$210	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	97,341	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$211	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	137,090	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$212	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	151,054	5	YES	In Service	LCTA 100%	PennDOT	\$55,000
\$213	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	144,779	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$214	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	144,680	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$300	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	127,806	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$301	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	123,494	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$302	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	120,850	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$303	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	115,324	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$304	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	117,879	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$305	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	133,740	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$500	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	69,606	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$501	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2015	2	77,629	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$502	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2015	2	66,687	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$503	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	74,552	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$504	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2015	2	74,252	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$505	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	58,133	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$506	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	61,169	5	NO	In Service	LCTA 100%	PennDOT	\$55,000
\$507	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	51,045	5	NO	In Service	LCTA 100%	PennDOT	\$55,000

Table: 2.3 (cont'd)

LCTA Shared Ride Paratransit Rolling Stock Fleet Inventory: 2017												
Van #	Classification Type	Make/Model	Year	Age	Mileage	ULB** (Years)	ULB Met	Status	Owner/Capital Responsibility	Primary Funding Mechanism	Replacement Cost	
S600	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	45,901	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S601	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	46,804	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S602	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	45,270	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S603	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	46,260	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S700	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	16,995	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S701	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	16,996	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S702	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	20,681	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S703	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	16,953	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S704	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	15,724	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S705	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	17,497	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	
S800	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2013	4	116,019	5	NO	In Service	LCTA 100%	PennDOT	\$55,000	

Table: 2.4

LCTA Equipment (Non-Revenue Service Vehicle) Inventory: 2017												
Item #	Classification Type	Make/Model	Year	Age	Mileage	ULB (FTA)	ULB Met	Qty.	Status	Owner/Capital Responsibility	Primary Funding Mechanism	Total Replacement Cost
Car 1	Equipment (Non-Revenue Vehicle): Sport Utility Vehicle (AO)	CMD Chevy Trail Blazer	2005	12	50,246	8	YES	1	In-Service	LCTA 100%	Federal/FTA	\$31,000
Car2	Equipment (Non-Revenue Vehicle): Sport Utility Vehicle (AO)	CMD Chevy Trail Blazer	2005	12	40,979	8	YES	1	In-Service	LCTA 100%	Federal/FTA	\$31,000
Van 1	Equipment (Non-Revenue Vehicle): Passenger/Utility Van (AO)	GMC Savana	2006	11	57,035	8	YES	1	In-Service	LCTA 100%	Federal/FTA	\$35,000
Van 2	Equipment (Non-Revenue Vehicle): Passenger/Utility Van (AO)	GMC Savana	2006	11	45,982	8	YES	1	In-Service	LCTA 100%	Federal/FTA	\$35,000
Truck 1	Equipment (Non-Revenue Vehicle): Other Support Vehicle (Dump/Snow Removal) (Truck)	FRD F-350 Dump	2009	8	5,048	14	NO	1	In-Service	LCTA 100%	Federal/FTA	\$50,000
Truck 2	Equipment (Non-Revenue Vehicle): Pickup Truck (Road Call/Mobile Maint.) (Truck)	FRD F-250	2009	8	29,090	14	NO	1	In-Service	LCTA 100%	Federal/FTA	\$45,000
Lift 1	Equipment (Non-Revenue vehicle): Forklift (ORTV)	TCM FO25NST	1999	18	Hours	14	YES	1	In-Service	LCTA 100%	Federal/FTA	\$8,000

Table: 2.5

LCTA Non-Vehicle Equipment Inventory & Condition Ratings (> \$50K)**: 2017								
Item #	Classification	Item	In-Service Year	Age	Qty.	Status	Owner/Capital Responsibility	Total Replacement Cost
B-003	Equipment: Admin./Maintenance Facility	Paint Booth	2014	3	1	In-Service	LCTA 100%	\$110,000
B-004	Equipment: Admin./Maintenance Facility	Bus Wash Rack System	2004	13	1	In-Service	LCTA 100%	\$115,191
B-005	Equipment: Admin./Maintenance Facility	Cyclone Vehicle Cleaning System	2004	13	1	In-Service	LCTA 100%	\$72,625
B-007	Equipment: Admin./Maintenance Facility	8 Station Lube System	2004	13	8	In-Service	LCTA 100%	\$96,764
F-001	Equipment: Fuel Island Facility	Underground Fuel Storage Tanks	2004	13	2	In-Service	LCTA 100%	\$200,000
**Chart is for aggregate data collection purposes only. Each item is included in its respective asset class condition assessment inspection.								

Table: 2.6

LCTA Facility Inventory: 2017												
Facility Description	Asset Classification	Location	Year Built	Lot Size (acres)	Building Size	Status	Primary Mode Served	Owner/Capital/Budget Responsibility	ULB (FTA)	ULB Met	Primary Funding Mechanism	Replacement Cost
LCTA Administration, Operations, and Maintenance HQ*	Administrative/Maintenance Facility (DO)	Kingston, PA	2004	3.56	54,312 ft2	In-Service	Bus & Paratransit	LCTA (100%)	40	NO	Federal/FTA	\$6,434,710
LCTA HQ Fuel Station*	Maintenance (DO)	Kingston, PA	2004	3.56	2,660 ft2	In-Service	Bus & Paratransit	LCTA (100%)	40	NO	Federal/FTA	\$6,434,710
LCTA HQ Tire/Battery Storage Warehouse*	Maintenance (DO)	Kingston, PA	2004	3.56	1,500 ft2	In-Service	Bus & Paratransit	LCTA (100%)	40	NO	Federal/FTA	\$6,434,710
Shared Ride Program Administration and Operations Bldg.	Administrative/Revenue Vehicle Parking Facility (3rd Party)	Forty-Fort, PA	1959, Renovated 1998	0.39	5,544 ft2	In-Service	Paratransit	Luzerne County Government (100%)	N/A	N/A	County	N/A
Shared Ride Program Drums Vehicle Storage Garage	Revenue Vehicle Parking Facility (3rd Party)	Drums, PA	1982	1.24	3,480 ft2	In-Service	Paratransit	Luzerne County Government (100%)	N/A	N/A	County	N/A
Scranton (COLTS) Downtown Intermodal Center	Bus Passenger Facility (3rd Party)	Scranton, PA	2016	1.5	24,163 ft2	In-Service	Bus	COLTS (100%)	N/A	N/A	Federal/FTA	N/A
Downtown Intermodal Passenger Terminal & Parking Garage	Bus Passenger Facility (3rd Party)	Wilkes-Barre, PA	2010	2.05	8,120 ft2	In-Service	Bus	City of Wilkes-Barre (100%)	N/A	N/A	City	N/A
*Facility is part of one "compound" location.												

Table: 3.1

FTA TERM Rating Scale		
Rank	Category	Description
5.00	New/Excellent	New asset; no visible defects.
4.00	Good	Some slightly defective/deteriorated component(s).
3.00	Adequate	Some moderately defective/deteriorated component(s).
2.00	Marginal	Increasing # of defective/deteriorated component(s) & maintenance needs.
1.00	Poor	In need of immediate repair or replacement; Item is a safety hazard, and may have critically damaged component(s).

Table: 3.2

LCTA Fixed Route Bus Rolling Stock Fleet Condition Rankings: 2017												
Item #	Classification Type	Bus #	Make	Model	Year	Age	Mileage	ULB	ULB Met	Length	Fuel	Condition Rating
B-18	Bus STD 35 FT	401	Gillig	Phantom	2004	13	411,069	14	NO	35'	Diesel	3.43
B-19	Bus STD 35 FT	402	Gillig	Phantom	2004	13	372,405	14	NO	35'	Diesel	3.43
B-20	Bus STD 35 FT	403	Gillig	Phantom	2004	13	372,443	14	NO	35'	Diesel	3.40
B-21	Bus STD 35 FT	404	Gillig	Phantom	2004	13	353,790	14	NO	35'	Diesel	3.43
B-22	Bus STD 35 FT	405	Gillig	Phantom	2004	13	408,047	14	NO	35'	Diesel	3.40
B-23	Bus STD 35 FT	406	Gillig	Phantom	2004	13	375,380	14	NO	35'	Diesel	3.43
B-24	Bus STD 35 FT	407	Gillig	Phantom	2004	13	355,277	14	NO	35'	Diesel	3.43
B-25	Bus STD 35 FT	408	Gillig	Phantom	2004	13	394,438	14	NO	35'	Diesel	3.30
B-26	Bus STD 35 FT	409	Gillig	Phantom	2004	13	381,893	14	NO	35'	Diesel	3.14
B-27	Bus STD 35 FT	410	Gillig	Phantom	2004	13	387,674	14	NO	35'	Diesel	3.36
B-28	Bus STD 35 FT	601	Gillig	Phantom	2005	12	352,499	14	NO	35'	Diesel	3.60
B-29	Bus STD 35 FT	602	Gillig	Phantom	2005	12	353,868	14	NO	35'	Diesel	3.60
B-30	Bus STD 35 FT	603	Gillig	Phantom	2005	12	333,504	14	NO	35'	Diesel	3.43
B-31	Bus STD 35 FT	604	Gillig	Phantom	2005	12	338,562	14	NO	35'	Diesel	3.60
B-32	Bus STD 35 FT	605	Gillig	Phantom	2005	12	337,170	14	NO	35'	Diesel	3.60
B-33	Bus STD 35 FT	606	Gillig	Phantom	2006	11	364,049	14	NO	35'	Diesel	3.60
B-34	Bus STD 35 FT	607	Gillig	Phantom	2006	11	340,972	14	NO	35'	Diesel	3.60
B-35	Bus STD 35 FT	608	Gillig	Phantom	2006	11	350,929	14	NO	35'	Diesel	3.60
B-36	Bus STD 35 FT	609	Gillig	Phantom	2006	11	347,317	14	NO	35'	Diesel	3.60
B-37	Bus STD 35 FT	610	Gillig	Phantom	2006	11	348,716	14	NO	35'	Diesel	3.60
B-38	Bus Trolley STD	38	Optima Bus	Replica Trolley	2002	15	79,560	13	YES	29'	Diesel	3.21
B-39	Bus STD 35 FT	901	Gillig	Low Floor	2009	8	243,163	14	NO	35'	Diesel	3.64
B-40	Bus STD 35 FT	902	Gillig	Low Floor	2009	8	220,704	14	NO	35'	Diesel	3.64
B-41	Bus STD 35 FT	903	Gillig	Low Floor Hybrid	2009	8	234,999	14	NO	35'	Hybrid-Diesel	3.64
B-42	Bus STD 35 FT	904	Gillig	Low Floor Hybrid	2009	8	261,375	14	NO	35'	Hybrid-Diesel	3.64
B-43	Bus STD 35 FT	905	Gillig	Low Floor Hybrid	2009	8	228,511	14	NO	35'	Hybrid-Diesel	3.64
B-44	Bus STD 35 FT	103	Gillig	Low Floor Hybrid	2009	8	220,160	14	NO	35'	Hybrid-Diesel	3.64
B-45	Bus 30 FT	101	Gillig	Low Floor Hybrid	2009	8	172,137	14	NO	30'	Hybrid-Diesel	3.64
B-46	Bus 30 FT	102	Gillig	Low Floor Hybrid	2009	8	182,455	14	NO	30'	Hybrid-Diesel	3.64
B-47	Bus STD 35 FT	104	Gillig	Low Floor Hybrid	2010	7	242,332	14	NO	35'	Hybrid-Diesel	3.64
B-48	Bus STD 35 FT	105	Gillig	Low Floor Hybrid	2010	7	196,996	14	NO	35'	Hybrid-Diesel	3.64
B-49	Bus STD 35 FT	201	Gillig	Low Floor Hybrid	2012	5	135,497	14	NO	35'	Hybrid-Diesel	3.64
B-50	Bus STD 35 FT	202	Gillig	Low Floor Hybrid	2012	5	163,791	14	NO	35'	Hybrid-Diesel	3.64
B-51	Bus STD 35 FT	203	Gillig	Low Floor Hybrid	2012	5	155,017	14	NO	35'	Hybrid-Diesel	3.64
B-52	Bus STD 35 FT	204	Gillig	Low Floor Hybrid	2012	5	123,197	14	NO	35'	Hybrid-Diesel	3.64
B-53	Bus STD 35 FT	205	Gillig	Low Floor Hybrid	2012	5	145,550	14	NO	35'	Hybrid-Diesel	3.64
B-54	Bus STD 35 FT	206	Gillig	Low Floor Hybrid	2012	5	149,237	14	NO	35'	Hybrid-Diesel	3.64
B-55	Bus STD 35 FT	207	Gillig	Low Floor Hybrid	2012	5	158,997	14	NO	35'	Hybrid-Diesel	3.64

Table: 3.3

LCTA Shared Ride Paratransit Rolling Stock Fleet Condition Rankings: 2017								
Van #	Classification Type	Make/Model	Year	Age	Mileage	ULB (Years)	ULB Met	Condition Rating
S107	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	143,476	5	NO	3.85
S108	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2011	6	127,116	5	NO	3.85
S109	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	151,400	5	YES	3.85
S111	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	139,128	5	NO	3.85
S195	Paratransit Van (Passenger)	DTD CARAVAN	2010	7	81,063	4	NO	4.00
S196	Paratransit Van (Passenger)	DTD CARAVAN	2010	7	83,593	4	NO	4.00
S197	Paratransit Van (Passenger)	DTD CARAVAN	2010	7	82,121	4	NO	4.00
S198	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2010	7	138,202	5	NO	3.85
S199	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2010	7	158,165	5	YES	3.85
S200	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	121,297	5	NO	3.85
S201	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	132,825	5	NO	3.85
S202	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	139,139	5	NO	3.92
S203	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	152,222	5	YES	3.92
S204	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	140,464	5	NO	3.92

Table: 3.3 (cont'd)

LCTA Shared Ride Paratransit Rolling Stock Fleet Condition Rankings: 2017								
Van #	Classification Type	Make/Model	Year	Age	Mileage	ULB (Years)	ULB Met	Condition Rating
S205	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	127,085	5	NO	3.77
S206	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	139,978	5	NO	3.85
S207	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2012	5	168,140	5	YES	3.85
S208	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	126,110	5	NO	3.92
S209	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	148,218	5	NO	3.85
S210	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	97,341	5	NO	3.85
S211	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	137,090	5	NO	3.85
S212	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	151,054	5	YES	3.85
S213	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	144,779	5	NO	3.85
S214	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2012	5	144,680	5	NO	3.85
S300	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	127,806	5	NO	3.85
S301	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	123,494	5	NO	3.92
S302	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	120,850	5	NO	3.92
S303	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	115,324	5	NO	3.92
S304	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	117,879	5	NO	3.77
S305	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-450	2013	4	133,740	5	NO	3.85
S500	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	69,606	5	NO	3.92
S501	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2015	2	77,629	5	NO	3.92

Table: 3.3 (cont'd)

LCTA Shared Ride Paratransit Rolling Stock Fleet Condition Rankings: 2017								
Van #	Classification Type	Make/Model	Year	Age	Mileage	ULB (Years)	ULB Met	Condition Rating
S502	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2015	2	66,687	5	NO	3.92
S503	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	74,552	5	NO	3.92
S504	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2015	2	74,252	5	NO	3.92
S505	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	58,133	5	NO	3.92
S506	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	61,169	5	NO	3.92
S507	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	51,045	5	NO	3.92
S600	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	45,901	5	NO	3.92
S601	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	46,804	5	NO	3.92
S602	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	45,270	5	NO	3.92
S603	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2016	1	46,260	5	NO	3.92
S700	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	16,995	5	NO	4.80
S701	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	16,996	5	NO	4.80
S702	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	20,681	5	NO	4.80
S703	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	16,953	5	NO	4.80
S704	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	15,724	5	NO	4.80
S705	Paratransit Van Bus < 30 FT (Cutaway)	FRD Challenger/E-450	2017	0.5	17,497	5	NO	4.80
S800	Paratransit Van Bus < 30 FT (Cutaway)	FRD E-350	2013	4	116,019	5	NO	3.85

Table: 3.4

LCTA Equipment (Non-Revenue Service Vehicle) Condition Ratings: 2017										
Item #	Classification Type	Make/Model	Year	Age	Mileage	ULB (FTA)	ULB Met	Qty.	Status	Condition Rating
Car 1	Equipment (Non-Revenue Vehicle): Sport Utility Vehicle (AO)	CMD Chevy Trail Blazer	2005	12	50,246	8	YES	1	In-Service	3.40
Car2	Equipment (Non-Revenue Vehicle): Sport Utility Vehicle (AO)	CMD Chevy Trail Blazer	2005	12	40,979	8	YES	1	In-Service	3.50
Van 1	Equipment (Non-Revenue Vehicle): Passenger/Utility Van (AO)	GMC Savana	2006	11	57,035	8	YES	1	In-Service	3.80
Van 2	Equipment (Non-Revenue Vehicle): Passenger/Utility Van (AO)	GMC Savana	2006	11	45,982	8	YES	1	In-Service	3.80
Truck 1	Equipment (Non-Revenue Vehicle): Other Support Vehicle (Dump/Snow Removal) (Truck)	FRD F-350 Dump	2009	8	5,048	14	NO	1	In-Service	3.70
Truck 2	Equipment (Non-Revenue Vehicle): Pickup Truck (Road Call/Mobile Maint.) (Truck)	FRD F-250	2009	8	29,090	14	NO	1	In-Service	3.60
Lift 1	Equipment (Non-Revenue vehicle): Forklift (ORTV)	TCM FO25NST	1999	18	1,976 Hrs.	14	YES	1	In-Service	3.80

Table: 3.5

LCTA Non-Vehicle Equipment Condition Ratings (> \$50K): 2017								
Item #	Classification	Item	In-Service Year	Age	Qty.	Status	Total Replacement Cost	Condition Rating
B-003	Equipment: Admin./Maintenance Facility	Paint Booth	2014	3	1	In-Service	\$110,000	4.00
B-004	Equipment: Admin./Maintenance Facility	Bus Wash Rack System	2004	13	1	In-Service	\$115,191	4.00
B-005	Equipment: Admin./Maintenance Facility	Cyclone Vehicle Cleaning System	2004	13	1	In-Service	\$72,625	4.00
B-007	Equipment: Admin./Maintenance Facility	8 Station Lube System	2004	13	8	In-Service	\$96,764	4.00
F-001	Equipment: Fuel Island Facility	Underground Fuel Storage Tanks	2004	13	2	In-Service	\$200,000	4.00

Table: 3.6

LCTA Facility Condition Rating Assessment: 2017											
Facility Description	Asset Classification	Location	Year Built	Lot Size (acres)	Building Size	Primary Mode Serviced	Owner/Capital/Budget Responsibility	ULB (FTA)	ULB Met	Primary Funding Mechanism	Condition Rating
LCTA Administration, Operations, and Maintenance HQ*	Administrative/Maintenance Facility (DO)	Kingston, PA	2004	3.56	54,312 ft2	Bus & Paratransit	LCTA (100%)	40	NO	Federal/FTA	4.00
LCTA HQ Fuel Station*	Maintenance (DO)	Kingston, PA	2004	3.56	2,660 ft2	Bus & Paratransit	LCTA (100%)	40	NO	Federal/FTA	4.00
LCTA HQ Tire/Battery Storage Warehouse*	Maintenance (DO)	Kingston, PA	2004	3.56	1,500 ft2	Bus & Paratransit	LCTA (100%)	40	NO	Federal/FTA	4.00
Shared Ride Program Administration and Operations Bldg.	Administrative/Revenue Vehicle Parking Facility (3rd Party)	Forty-Fort, PA	1959, Renovated 1998	0.39	5,544 ft2	Paratransit	Luzerne County Government (100%)	N/A	N/A	County	N/A
Shared Ride Program Drums Vehicle Storage Garage	Revenue Vehicle Parking Facility (3rd Party)	Drums, PA	1982	1.24	3,480 ft2	Paratransit	Luzerne County Government (100%)	N/A	N/A	County	N/A
Scranton (COLTS) Downtown Intermodal Center	Bus Passenger Facility (3rd Party)	Scranton, PA	2016	1.5	24,163 ft2	Bus	COLTS (100%)	N/A	N/A	Federal/FTA	N/A
Downtown Intermodal Passenger Terminal & Parking Garage	Bus Passenger Facility (3rd Party)	Wilkes-Barre, PA	2010	2.05	8,120 ft2	Bus	City of Wilkes-Barre (100%)	N/A	N/A	City	N/A
*Facility is part of one "compound" location.											

Table: 4.1

LCTA TAMP Decision Support & Capital Asset Investment Planning Process	
Step	Process Description
1	Quarterly department management meetings to review asset performance & establish goals. (Maintenance, Operations, Finance/Grants, Procurement, Executive)
2	Development of or update to departmental policies, procedures, and SOPs.
3	Creation or update of: Operations Plan, Facility & Equipment Maintenance Plan, Procurement Manual, Fleet Maintenance Plan, TAMP, and Finance Capital Plan.
4	Data collection, analysis, and review.
5	Update, Record & Report Data: PennDOT CPT, NTD, Dossier, TAMP.
6	Department management meetings: Assess asset and transit system capital investment needs, based on: Safety deficiencies, ADA Accessibility, agency capacity, consumer demand, maintenance needs, data, and available funding. Compare to goals.
7	Development of Asset Investment Priority List of Projects & Programs. Placement on TIP/LCTA Capital Plan.
8	Contract Advertising-RFP (Bid) & Award Process (Board Approval).
9	Project/Program Implementation & Monitoring.

Table: 4.2

LCTA TAMP Decision Support Tools	
Document/Software Tool	Description
LCTA Facility and Equipment Maintenance Plan	The LCTA Facility & Equipment Maintenance Plan details all policies and procedures related to Authority-owned facilities and equipment. It includes: Facility maintenance standards; facility inspection process, PM schedules, work categories, work order process, inventory of facility components, vendor contacts, and inspection checklists.
LCTA Fleet Management & Maintenance Manual	The LCTA Fleet Management & Maintenance Manual details all policies and procedures related to Authority-owned vehicles. It includes: maintenance department responsibilities, vehicle maintenance practices and service standards, shop safety policies and procedures, inspection procedures, inspection checklists and data collection forms, work order process, vehicle/parts/tool inventory, and PM schedules.
LCTA Procurement Manual	The Authority Procurement Manual lists all FTA and Commonwealth of Pennsylvania purchasing policies, contract/bidding requirements and regulations, asset purchasing procedures, and asset disposal procedures. This document should be consulted when planning to purchase or dispose of an asset.
LCTA TAM Plan	The Authority Transit Asset Management Plan (TAMP) is a document containing a business model that uses the condition of assets (facility, rolling stock and equipment) used in the provision of providing public transportation to guide the optimal prioritization of funding at transit agencies in order to keep transit systems in a State of Good Repair (SGR). In addition, the TAMP contains information related to data collection and reporting requirements for the following elements: Asset Inventory Portfolio; Asset Condition Assessment; Decision Support Tools & Management Approach; Investment Prioritization List of Projects and Program; and NTD Reporting.
Dossier Systems Fleet Management & Maintenance Software	The Dossier software allows the Authority Maintenance Department to track, schedule, and record all vehicle related maintenance activities in a single platform. This software program also allows for custom reporting, inventory parts usage and vendor management activities, track pending work, create repair orders, create quotes for parts and equipment for use in procurement activities, track personnel activities, inventory vehicles, track fuel usage, and track asset/component warranty data.
PennDOT Capital Planning Tool (CPT) Software	The PennDOT CPT is a software program that allows the Authority to be in compliance with State DOT asset management and capital planning requirements by entering and analyzing transit asset data. The CPT software allows for a uniform way to inventory assets and asset performance, justify funding, schedule capital needs, and prioritize investment needs and alternatives (disposal/overhaul).
LCTA Capital Plan/List of Prioritization Projects/Programs	The LCTA Capital plan lists projects in rank order on the priority list of projects needed in order to maintain the SGR of an asset.
Metropolitan Planning Organization Transportation Improvement Program (MPO TIP)	The Metropolitan Planning Organization Transportation Improvement Program is a list of upcoming transportation projects covering a period of at least four years. The TIP is developed in cooperation with PennDOT and regional transportation providers. The TIP includes capital and non-capital surface transportation projects, bicycle and pedestrian facilities and other transportation enhancements. The TIP includes all regionally significant projects receiving FHWA or FTA funds, or for which FHWA or FTA approval is required.

Table: 4.3.1

Asset Management Approach: Acquisition & Renewal Strategy		
Acquisition & Renewal Strategy: Determine when to initiate acquisition activities for assets. Describe the Authority's long-term replacement strategy, and how long-term renewal and improvement activities are assessed based on the asset's lifecycle. As applicable, describe any planned changes or improvements to these processes, describing the strategies below.		
Asset Category	Asset Class	Acquisition & Renewal Strategy
Rolling Stock	BU - Bus	Per Penn DOT, transition to a 100% fixed route bus fleet powered by CNG. Current fleet will be transitioned over a period of five years.
Rolling Stock	CU - Paratransit Van / VN - Caravan	Per PennDOT mandate, paratransit vans ULB is 5 years and 150,000 miles. PennDOT approves acquisition and renewal of paratransit vehicles. ULB replacement can be forecasted up to three years in advance.
Rolling Stock	TB - Trolley Bus	Per PennDOT, transition to a 100% fixed route bus fleet powered by CNG. Current fleet will be transitioned over a period of five years.
Equipment	SV - SUV	Per PennDOT mandate, the replacement of non-revenue service vehicles once their ULB is met. . PennDOT approves acquisition and renewal of service vehicles. ULB replacement can be forecasted up to three years in advance.
Equipment	AO - Truck/Van	Per PennDOT mandate, the replacement of non-revenue service vehicles once their ULB is met. . PennDOT approves acquisition and renewal of service vehicles. ULB replacement can be forecasted up to three years in advance.
Facility	Admin & Maintenance	In the event a facility needs to be updated or expanded, the project is scheduled in the Authority capital plan, and placed out to bid using the proper procurement method.

Table: 4.3.2

Asset Management Approach: Maintenance Strategy			
Maintenance Strategy: List regularly planned maintenance activities.. As applicable, describe any planned changes or improvements to these processes, describing the strategies below.			
Asset Category	Asset Class	Maintenance Activity	Frequency
Rolling Stock*	BU - Bus / TB - Trolley bus	Clean, Wash & Vacuum	3X/ Week
		Pre-Trip Inspection	Daily
		Level " A"PM Service	6,000 Miles
		PA State Inspection	Bi-Annual
		SGR Vehicle Inspection	Annual
		Transmission Inspection	75,000 Miles
		Hybrid Transmission Inspection	100,000 Miles
		Rear End Inspection	25,000 Miles
		Air Dryer Inspection	Annual
		Engine Breather Inspection	30,000 Miles
		A/C Inspection	Annual
		A/C Inspection	Quarterly
		Camera System Inspection	Daily
		Farebox Inspection	Bi-Annual
		Tire Inspection	Daily
		ADA Systems Inspection	Daily
Rolling Stock*	CU - Paratransit Van/ VN - Caravan	Pre-Trip inspection	Daily
		Post-Trip inspection	Daily
		Clean, Wash & Vacuum	As needed
		PM Service	5,000 Miles
		PA State Inspection	Annual
		SGR Vehicle Inspection	Annual
Equipment*	SV - SUV	Clean, Wash & Vacuum	As needed
		PM Service	5,000 Miles
		PA State inspection	Annual
		SGR Vehicle Inspection	Annual
Equipment*	AO - Truck/Van	Clean, Wash & Vacuum	As needed
		PM Service	5,000 Miles
		PA State inspection	Annual
		SGR Vehicle Inspection	Annual
Facility**	Admin & Maintenance	Facility & Equipment Inspection: Mission Critical	Daily
		Facility & Equipment Inspection: Mission Critical	Monthly
		Facility & Equipment Inspection: Mission Critical	Quarterly
		Facility & Equipment Inspection: Mission Critical	Bi-Annual
		SGR Facility & Equipment Inspection	Annual
*Reference LCTA Fleet Management & Maintenance Manual.			
**Reference LCTA Facility & Equipment Maintenance Plan.			

Table: 4.3.3

Asset Management Approach: Overhaul Strategy		
Overhaul Strategy: Determine how and when assets get overhauled or replaced. Describe what activities take place during an overhaul. As applicable, describe any planned changes or improvements to these processes, describing the		
Asset Category	Asset Class	Acquisition & Renewal Strategy
Rolling Stock	BU - Bus / TB - Trolley Bus	It is the policy of the Authority to repair damaged or non-functional assets and components on an "as needed basis", only. The Authority does not overhaul or rehabilitate its assets, unless additional specific funding is obtained from state or federal sources, and a replacement asset item is made available during the time period the asset is unavailable. Assets are replaced once the following three conditions are met: (1) The asset's ULB is met; (2) an asset is considered a total loss by covering insurance; and (3) when replacement is approved by both the state DOT and FTA.
Rolling Stock	CU - Paratransit Van / VN - Caravan	
Equipment	SV - SUV	
Equipment	AO - Truck/Van	
Facility	Admin & Maintenance	

Table: 4.3.4

Asset Management Approach: Disposal Strategy		
Disposal Strategy: Describe the Authority's strategy for disposing of assets that are being renewed or replaced. Describe the approval process and detail, including procedures for physically removing the asset from the property. As applicable, describe any planned changes or improvements to these processes, describing the strategies below.		
Asset Category	Asset Class	Disposal Strategy
Rolling Stock	BU - Bus / TB - Trolley Bus	Paratransit vans and cutaway vans, once ULB is met or exceeded, are disposed of using the following method: 1) Approval received from both FTA and PennDOT to initiate disposal procedures; 2) Vehicles are inspected, and a vehicle condition form is completed by the maintenance department; 3) Vehicles are placed out to bid and advertisements are placed on the Authority website and in both local newspapers; 4) Vehicle is sold to the highest bidder, sale is approved by the Authority Board; 5) The Authority Maintenance Director creates the asset disposal form for documentation purposes; 6) The asset is written off the books by the Authority finance department and removed from TAMP tracking; and 6) The highest bidder receives title, and removes the vehicle from the property.
Rolling Stock	CU - Paratransit Van / VN - Caravan	Paratransit vans and cutaway vans, once ULB is met or exceeded, are disposed of using the following method: 1) Approval received from both FTA and PennDOT to initiate disposal procedures; 2) Vehicles are inspected, and a vehicle condition form is completed by the maintenance department; 3) Vehicles are placed out to bid and advertisements are placed on the Authority website and in both local newspapers; 4) Vehicle is sold to the highest bidder, sale is approved by the Authority Board; 5) The Authority Maintenance Director creates the asset disposal form for documentation purposes; 6) The asset is written off the books by the Authority finance department and removed from TAMP tracking; and 6) The highest bidder receives title, and removes the vehicle from the property.
Equipment	SV - SUV	Non-revenue service vehicles, once ULB is met or exceeded, are disposed of using the following method: 1) Approval received from both FTA and PennDOT to initiate disposal procedures; 2) Vehicles are inspected, and a vehicle condition form is completed by the maintenance department; 3) Vehicles are placed out to bid and advertisements are placed on the Authority website and in both local newspapers; 4) Vehicle is sold to the highest bidder, sale is approved by the Authority Board; 5) The Authority Maintenance Director creates the asset disposal form for documentation purposes; 6) The asset is written off the books by the Authority finance department and removed from TAMP tracking; and 6) The highest bidder receives title, and removes the vehicle from the property.
Equipment	AO - Truck/Van	
Facility	Admin & Maintenance	Facilities and real-estate, once ULB is met or exceeded or conditions exist to permit a move, facility assets are disposed of using the following method: 1) Approval received from the Authority Board, and both the FTA and PennDOT to initiate disposal procedures; 2) The facility is inspected and appraised by the 3rd party; 3) Utilizing a real-estate company, the facility is placed up for sale and bid; 4) The facility is sold to the highest bidder, sale is approved by the Authority Board, and both FTA and PennDOT; 5) The Authority removes all property and vacates the location; 6) The asset is written off the books by the Authority finance department and removed from TAMP tracking; and 7) The highest bidder receives title, and takes ownership of the property.

Table: 4.3.5

Asset Management Approach: Risk Management Strategy	
Risk Management: ID any risks faced to your assets or organization as a whole, and describe the mitigation strategies for each one.	
Risk	Mitigation Strategy
Loss of significant amounts of federal funding.	Decrease dependence on federal funding for capital improvements. Utilize reserve fund. Cut back on maintenance and service activities that are in balance with budget. Request additional PennDOT and local funding to make up the difference. Extend asset ULB, if possible.
Loss of significant amounts of state/local funding.	Decrease dependence on local/state funding for capital improvements. Utilize reserve fund. Cut back on maintenance and service activities that are in balance with budget. Request additional FTA funding to make up the difference. Extend asset ULB, is possible.
Fuel supply chain disruption.	Fuel offsite in partnership with another transit agency, state DOT, municipality, and/or private sector organization.
Parts supply chain disruption.	Partner with regional transit agencies and OEMs to retain parts supply chain.
Catastrophic loss of asset(s) due to natural or man-made disasters and hazards.	Enact SEPP and Catastrophic Loss Plans. Use backup facilities, and reserve vehicles from partner transit agencies.

Table: 5.1

LCTA TAMP Investment Prioritization Project List (FFY 2018-FFY 2021)									
Rank	Priority	Asset Category	Asset Class/Type	Project/Program Description	Investment Justification	Anticipated Project Year	Primary Funding Source	Qty.	Total Estimated Cost
1	High	Rolling Stock	Bus STD 35 FT	Fixed Route Bus Replacement (CNG)	ULB Met/Exceeded, Wear & Tear, Frame Corrosion	FFY 2018	Federal/FTA	5ea	\$2.5 M
2	High	Rolling Stock	Paratransit Van Bus < 30 FT (Cutaway)	Paratransit Van Replacement	ULB Met/Exceeded, Wear & Tear	FFY 2018	PennDOT	10ea	\$550,000
3	High	Rolling Stock	Bus STD 35 FT	Fixed Route Bus Replacement (CNG)	ULB Met/Exceeded, Wear & Tear, Frame Corrosion	FFY 2019	Federal/FTA	1ea	\$500,000
4	High	Rolling Stock	Paratransit Van Bus < 30 FT (Cutaway)	Paratransit Van Replacement	ULB Met/Exceeded, Wear & Tear	FFY 2019	PennDOT	5ea	\$300,000
5	High	Rolling Stock	Bus STD 35 FT	Fixed Route Bus Replacement (CNG)	ULB Met/Exceeded, Wear & Tear, Frame Corrosion	FFY 2020	Federal/FTA	1ea	\$500,000
6	High	Rolling Stock	Paratransit Van Bus < 30 FT (Cutaway)	Paratransit Van Replacement	ULB Met/Exceeded, Wear & Tear	FFY 2020	PennDOT	5ea	\$300,000
7	High	Rolling Stock	Bus STD 35 FT	Fixed Route Bus Replacement (CNG)	ULB Met/Exceeded, Wear & Tear, Frame Corrosion	FFY 2021	Federal/FTA	1ea	\$500,000
8	High	Rolling Stock	Paratransit Van Bus < 30 FT (Cutaway)	Paratransit Van Replacement	ULB Met/Exceeded, Wear & Tear	FFY 2021	PennDOT	5ea	\$300,000
9	Medium	Facility	Administrative & Maintenance	Fuel Island Upgrade (Usage Monitoring Equip.)	Wear & Tear, Better Technology	FFY 2019	Federal/FTA	1ea	\$80,000
10	Medium	Equipment	SUV (AO)	Supervisor SUV Replacement	ULB Met/Exceeded, Wear & Tear	FFY 2021	Federal/FTA	2ea	\$100,000
11	Low	Facility	Administrative & Maintenance	Parking Lot Paving & Concrete Refurbishment	Wear & Tear	FFY 2020	Federal/FTA	1ea	\$100,000
								Total: \$5,730,000	

Table: 6.1

FTA TAM Asset Category Performance Measures		
Asset Class	Performance Measure	Definition
Rolling Stock (All revenue vehicles)	Age	The % of revenue vehicles (fixed route & paratransit) within a particular asset class that have either met or exceeded their ULB.
Equipment (Maintenance equipment or non-revenue vehicles)	Age	The % of vehicles that have either met or exceeded their ULB.
Facilities (All building or structures)	Condition	The % of facilities with a condition rating below 3.0 on the FTA's TERM Scale.

Table: 6.2

LCTA ANNUAL SGR ASSET PERFORMANCE TARGETS: Fixed Route Rolling Stock (FFY 2017-2018)							
Asset Category	Asset Class	Fleet Size	Vehicle Age (Years)	Default FTA ULB (Years)	FFY 17 Performance Metric (% Exceeding ULB)	SGR Target FFY 18	FTA (Default) Performance Metric
Rolling Stock: FR Bus	Bus STD 35 FT: Gillig Phantom Diesel (2004)	10	13	14	0%	100%	The % of Revenue Service Vehicles (by type) that meet/exceed the ULB.
	Bus STD 35 FT: Gillig Phantom Diesel (2005)	5	12	14	0%	0%	
	Bus STD 35 FT: Gillig Phantom Diesel (2006)	5	11	14	0%	0%	
	Bus STD 35 FT: Gillig Phantom Diesel (2009)	2	8	14	0%	0%	
	Bus STD 35 FT: Gillig Low Floor Hybrid (2009)	4	8	14	0%	0%	
	Bus STD 35 FT: Gillig Low Floor Hybrid (2010)	2	7	14	0%	0%	
	Bus STD 35 FT: Gillig Low Floor Hybrid (2012)	7	5	14	0%	0%	
	Bus 30 FT: Gillig Low Floor Hybrid (2009)	2	8	14	0%	0%	
	Bus Trolley STD: Optima Bus (2002)	1	15	13	100%	100%	

Table: 6.3

LCTA ANNUAL SGR ASSET PERFORMANCE TARGETS: Paratransit Rolling Stock (FFY 2017-2018)							
Asset Category	Asset Class	Fleet Size	Vehicle Age (Years)	Default ULB (Years)	FFY 17 Performance Metric (% Exceeding ULB)	SGR Target FFY 18	FTA (Default) Performance Metric
Rolling Stock: SR paratransit*	Paratransit Van Bus < 30 FT (Cutaway): 2010 Ford E450	2	7	5*	100%	100%	The % of Revenue Service Vehicles (by type) that meet/exceed the ULB.
	Paratransit Van Bus < 30 FT (Cutaway): 2011 Ford E450	1	6	5*	100%	100%	
	Paratransit Van Bus < 30 FT (Cutaway): 2012 Ford E350	7	5	5*	100%	100%	
	Paratransit Van Bus < 30 FT (Cutaway): 2012 Ford E450	11	5	5*	100%	100%	
	Paratransit Van Bus < 30 FT (Cutaway): 2013 Ford E350	1	4	5*	0%	100%	
	Paratransit Van Bus < 30 FT (Cutaway): 2013 Ford E450	6	4	5*	0%	0%	
	Paratransit Van Bus < 30 FT (Cutaway): 2015 Ford E450	3	2	5*	0%	0%	
	Paratransit Van Bus < 30 FT (Cutaway): 2016 Ford E450	9	1	5*	0%	0%	
	Paratransit Van Bus < 30 FT (Cutaway): 2017 Ford E450	6	0.8	5*	0%	0%	
	Paratransit Van (Passenger): Dodge Caravan (2010)	3	7	4*	100%	100%	
* ULB derived from LCTA internal standards.							

Table: 6.4

LCTA ANNUAL SGR ASSET PERFORMANCE TARGETS: Non-Revenue Service Vehicles "Equipment" (FFY 2017-2018)							
Asset Category	Asset Class	Fleet Size	Vehicle Age (Years)	Default FTA ULB (Years)	FFY 17 Performance Metric (% Exceeding ULB)	SGR Target FFY 18	FTA (Default) Performance Metric
Equipment: Non-Revenue Service Vehicle	Automobile: SUV (2005 Chevy)	2	12	8	100%	100%	The % of Non-Revenue Service Vehicles (by type) that meet/exceed ULB.
	Automobile: Passenger/Utility Van (2006 GMC)	2	11	8	100%	100%	
	Other Rubber Tire Vehicle: Forklift (TCM FO25NST, 1999)	1	18	14	100%	100%	
	Other Rubber Tire Vehicle: Dump & Plow Truck (2009 F350)	1	8	14	0%	0%	
	Other Rubber Tire Vehicle: Support Truck (2009 F250)	1	8	14	0%	0%	

Table: 6.5

LCTA ANNUAL SGR ASSET PERFORMANCE TARGETS: Facilities (FFY 2017-2018)					
Asset Category	Asset Class	2017 TERM Condition Rating	FFY 17 Performance Metric (% Below 3.0 Term Rating)	SGR Target FFY 18	FTA (Default) Performance Metric
Facility: (1) LCTA Operations/Administrative Offices & Maintenance Garage	Administration & Maintenance	4.0	0%	No more than 0% of LCTA-owned facilities rated less than 3.0 on the FTA TERM scale.	The % of facilities (by group) that are rated less than 3.0 on the FTA TERM Scale.
Facility: (1) LCTA Fuel Island	Administration & Maintenance	4.0	0%	No more than 0% of LCTA-owned facilities rated less than 3.0 on the FTA TERM scale.	The % of facilities (by group) that are rated less than 3.0 on the FTA TERM Scale.
Facility: (1) LCTA Tire/Battery Warehouse	Administration & Maintenance	4.0	0%	No more than 0% of LCTA-owned facilities rated less than 3.0 on the FTA TERM scale.	The % of facilities (by group) that are rated less than 3.0 on the FTA TERM Scale.

Table: 8.1

TAMP Key Dates	
LCTA/State: (FY) July-June	Federal: (FFY) October-September
Action Item	Date
-Share initial targets with planning partners.	July 2017
-Report FY 17 Asset Inventory Module (AIM) data to NTD.	October 2017
-Submit targets for FY 18 to NTD (optional).	
-Complete compliant TAMP (1st required).	October 2018
-Share TAMP with planning partners.	
-Report FY 18 Asset Inventory Module (AIM) data to NTD (1st required).	October 2018
-Submit targets for FY 19 to NTD (1st required).	
-Report FY19 Aim data to NTD.	October 2019
-Submit targets for FY20 to NTD.	
-Submit narrative report to NTD (1st required).	
-Report FY20 Aim data to NTD.	October 2020
-Submit targets for FY21 to NTD.	
-Submit narrative report to NTD.	
-Complete updated TAMP.	October 2022
-Share TAMP with planning partners.	



From: Smith, Mshadoni (FTA) [mailto:mshadoni.smith@dot.gov]
Sent: Tuesday, October 17, 2017 7:23 AM
To: Frank Knorek; Resnick, AnneMarie (FTA)
Subject: LCTA TAM Plan Review

Mr. Knorek,

Thank you for sharing your draft TAM plan with us for review. Both AnneMarie and I have reviewed it for content and completeness and think it is a good document. It appears to meet all the TAM requirements of 49 CFR Part 625. We have also reviewed its content to provide you with some observations as you progress to the final stages. Please note these are just suggestions not requirements.

- I greatly appreciated your agency taking on more than the minimum requirements for a Tier II plan it seems like you have and intend to institutionalize the TAM approach and that is very encouraging. This above the minimum approach will add some effort but I believe it will also add value.
- We both thought your investment prioritization section was very clear to understand and well laid out and supported by data, I also thought your risk mitigation approach was progressive and proactive.

I would like to post this document to our [peer library](#) so that it might assist other agencies in developing a TAM plan as good as yours! Please let me know if you object.

Kind regards,

Mshadoni & AnneMarie

Mshadoni Smith
Transit Asset Management Program Manager
Office of Budget and Policy
Federal Transit Administration
1200 New Jersey Ave., SE
Washington, DC 20590
United States

202-366-4050
mshadoni.smith@dot.gov
www.fta.dot.gov

Anne Marie Resnick
Financial Analyst
Federal Transit Administration
Region III, Philadelphia Metropolitan Office
1760 Market Street, Suite 500
Philadelphia, PA 19103-4124
United States

215-656-7249
annemarie.resnick@dot.gov
www.fta.dot.gov