



# Federal Transit Administration

## Transit Asset Management Roundtable

# Getting Started

Asset Inventory and Facility Assessment  
TAM Work Underway at a Tier II Property

August 28, 2017



MASSACHUSETTS

CONNECTICUT

# GBT Overview

- Provide Both Fixed Route and Demand Response Services
- Fleet of 57 FR Buses, 28 DR Buses and 165 Employees
- Ridership of 5.5 Million Annually
- Three Facilities (Maintenance, Administration, Public Station)
- Operating Budget of Approximately \$20 Million
- Capital Budget Ranging from \$5 Million to \$30 Million Annually
- Current Assets of \$60,817,448
- Direct Recipient
- Located on the Southwest Coast of Connecticut

RHODE ISLAND

NEW  
YORK

NEW HAVEN

BRIDGEPORT

STAMFORD

LONG ISLAND SOUND

NYC

# Background

- “...insufficient funding combined with *inadequate transit asset management practices* have contributed to an estimated \$85.9 billion transit State of Good Repair (SGR) backlog...”
- **Tier II** - *A recipient that owns, operates, or manages 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.*
- Working With the **Connecticut Department of Transportation** (CTDOT) on the Development of a Statewide Tier II Plan

# Elements of the GBT TAM Plan

## 49 U.S.C. 5326

### Select Key Elements of the Tier II Plan

- 1. Inventory of the Number and Type of Capital Assets (RS,F/E,I)** *(Commensurate with the level of detail of the providers program of capital projects)*
- 2. Asset Condition Assessment** *(To monitor and predict the performance of the asset and inform prioritization)*
- 3. Process for Investment Prioritization** *(To estimate investment needs over time)*
- 4. Prioritization of Investment** *(Rank projects, considering safety and accessibility)*

# GBT Inventory

- Contains Information On All Assets => \$300.00 (Tagged and Inventoried Annually)
  - GBT Will Apply Regulation First to Meet FTA Threshold
  - Finance Staff Verifies All Information – Maintenance and Other Staff Involved in Condition Assessment
  - Fields for Estimated Life and Condition Assessment Available - Historically Not Used
- 
- ❖ **Assets Tended to be Used Until Failure (or Almost Fail)**
  - ❖ **Interrupts Capital Program Budgeting Process**

## Additional Fields for all Records:

- ✓ Asset Classes (RS, F/E, I)
- ✓ Condition Assessment
- ✓ Estimated Replacement Date
- ❖ Safety Critical Determination (Y/N)
- ❖ Mission Critical Determination (Y/N)
- ❖ Accessibility Feature (Y/N)

# Original Asset Inventory

Form No. F-51

**PROPERTY RECORD**  
MACHINERY, TOOLS AND EQUIPMENT  
(Furnishings)

Identification No. 184\

Description Jack Stand - Dover Garage Equipment

Model \_\_\_\_\_

Make \_\_\_\_\_ Year \_\_\_\_\_ Serial No. 93522

Dept. \_\_\_\_\_ Location Dover

Purchased from Connecticut Drive Shaft Date 3/4/80

Maintenance Contract with \_\_\_\_\_ Contract No. \_\_\_\_\_

ORIGINAL COST		SOURCE OF FUNDS	
Purchase Order No. _____	Voucher No. <u>20064</u> \$ <u>118.50\</u>	Current Appropriations	\$ _____
Freight _____	Voucher No. _____	Bonds	_____
_____	Voucher No. _____	Notes (Type)	_____
Total - \$ _____		State Aid } Section 3	_____
Estimated Life _____		Federal Aid }	_____
Condition _____		Gift	_____
		Other	_____
		Total - \$ _____	

WILLIAMSON LAW BOOK CO., ROCHESTER, N. Y. 14609

- Part of Financial Planning Process - Depreciation

- ✓ Asset Description
- ✓ Location
- ✓ Origin
- ✓ Original Cost
- ✓ Date of Purchase
- ✓ Source of Funding

- ❖ Estimated Life
- ❖ Condition
- ❖ Safety Critical
- ❖ Operation Critical

# Asset Management System Transition

- Move from Manual to an Automated System
- Flexibility in the Database
- Transition Was Not for New TAM Effort
- “Legacy” System Contains What is Needed for the Updated Inventory (Asset Class, Useful life, Asset Condition, Estimated Replacement Value, Other Items)

➤ Sage® Fixed Asset Solution



# Current Inventory

## Assets

### Tasks

- Add an Asset
- Import Assets
- Calculate Depreciation
- Dispose an Asset
- Transfer an Asset
- Post Depreciation J/E
- Reset Depreciation
- Bulk Dispose Assets
- Bulk Transfer Assets
- Print Asset Detail
- Run Audit Advisor

### Customize

- Create/Edit a Group
- Customize a Field
- Create a SmartList
- Change User Preferences

## Assets



### Reports

### System Administration

### Assistance Center

## Asset List - GREATER BRIDGEPORT TRANSIT

Co Asset No:  Go

Group: <All Complete Assets>  

All	Sys No	Status	Co Asset...	Description	Acquisition Date	Location	Department	Class	G/L Expense Acct No	G/L Asset Acct No	G/L Accum Acct No	Purchase Order...	Insurance C
	2256	Active	2209	Goshen/Chevy Coach Commercial Bus 2012	10/11/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2257	Active	2210	Goshen/Chevy Coach Commercial Bus 2012	10/11/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2258	Active	2211	Goshen/Chevy Coach Commercial Bus 2012	10/11/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2259	Active	2212	Goshen/Chevy Coach Commercial Bus 2012	10/11/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2260	Active	2213	Goshen/Chevy Coach Commercial Bus 2012	10/11/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2261	Active	2214	Goshen/Chevy Coach Commercial Bus 2012	10/12/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2262	Active	2215	Goshen/Chevy Coach Commercial Bus 2012	10/12/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2263	Active	2216	Goshen/Chevy Coach Commercial Bus 2012	10/12/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2264	Active	2217	Goshen/Chevy Coach Commercial Bus 2012	10/12/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2265	Active	2218	Goshen/Chevy Coach Commercial Bus 2012	10/19/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2266	Active	2219	Goshen/Chevy Coach Commercial Bus 2012	10/23/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2267	Active	2220	Goshen/Chevy Coach Commercial Bus 2012	11/02/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2268	Active	2221	Goshen/Ford Coach G-Force Commercial Bus	10/25/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2269	Active	2222	Goshen/Ford Coach G-Force Commercial Bus	11/02/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2270	Active	2223	Goshen/Ford Coach G-Force Commercial Bus	11/02/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2271	Active	2224	Goshen/Ford Coach G-Force Commercial Bus	11/06/2012	Garage			51320-17-00	11101-17-00	11103-17-00	0048597	
	2278	Active	005273	Fire Door: 47.5'x85"	03/28/2013	Garage-Fuel Bay, St			51320-35-00	11101-35-00	11103-35-00	0049818/49998	
	2279	Active	005274	Building Interior Letters: 3'x3/8" (thick); 'gbt,	10/09/2012	Admin Bldg, Rece			51320-37-00	11101-37-00	11103-37-00	0049288	
	2280	Active	5275	Free Standing Exterior LED Illuminated Sign	11/28/2012	Admin Bldg, Front			51320-37-00	11101-37-00	11103-37-00	0049288	
	2281	Active	005240	Fence Mounted Sign: 24"x1/8" (thick)	10/12/2012	1 Cross St., Fnt Gat			51320-37-00	11101-37-00	11103-37-00	0049288	
	2282	Active	005241	Fence Mounted Sign: 24"x1/8" (thick)	10/18/2012	1 Cross St., Fnt Gat			51320-37-00	11101-37-00	11103-37-00	0049288	
	2283	Active	005242	Fence Mounted Sign: 24"x1/8" (thick)	10/18/2012	1 Cross St., Bmdwy			51320-37-00	11101-37-00	11103-37-00	0049288	
	2284	Active	005276	Building LED Halo Lighting Letters	10/09/2012	Admin Bldg, Exteri			51320-37-00	11101-37-00	11103-37-00	0049288	
	2285	Active	005277	Improvement: Driveway Pavement	11/26/2012	1 Cross St., Admin			51320-37-00	11101-37-00	11103-37-00	0049340	
	2286	Active	005278	Improvement: Prep and Paint Interior of Admi	10/03/2012	1 Cross St.			51320-37-00	11101-37-00	11103-37-00	0049057	
	2287	Active	005279	Improvement: Prep and Paint Exterior of Admi	10/03/2012	1 Cross St.			51320-37-00	11101-37-00	11103-37-00	0049057	
	2288	Active	005290	Improvement: Carpet/Wood Paneling of Mail	10/03/2012	1 Cross St.			51320-37-00	11101-37-00	11103-37-00	0049056	
	2289	Active	005005	HP Note Book	03/12/2013	Garage Library			51320-40-00	11101-40-00	11103-40-00	0049874	
	2290	Active	005267	Voice Recorder & Logger w/ Software	10/11/2012	Server Room			51320-40-00	11101-40-00	11103-40-00	0048934	
	2291	Active	005268	Voice Recorder Processor & Storage Hard Drive	08/15/2012	Server Room			51320-40-00	11101-40-00	11103-40-00	0048933	
	2292	Active	005269	Check Printer: HP LaserJet 5200TN	09/12/2012	Accounting Depart			51320-40-00	11101-40-00	11103-40-00	0049197	
	2293	Active	005280	Failover Project: Interface & Router	01/31/2013	St. Vincent's Hspl Ro			51320-40-00	11101-40-00	11103-40-00	0049734	
	2294	Disposed	005281	HP LaserJet ET Pro200 Color MFP	11/13/2012	710 Water St., Boar			51320-40-00	11101-40-00	11103-40-00	0049486	
	2295	Active	005282	Failover Project: Interface & Router	01/31/2013	710 Water St., Serv			51320-40-00	11101-40-00	11103-40-00	0049734	
	2296	Active	005283	Server: Arrival Departure Sign	08/03/2012	710 Water St., Serv			51320-40-00	11101-40-00	11103-40-00	0049086	
	2297	Active	005284	Gov Win Server (2008R2) w/ Software	08/07/2012	Server Room			51320-40-00	11101-40-00	11103-40-00	0049686	
	2298	Active	005287	Security Monitor, Samsung 32" LCD Smart TV	06/25/2013	Acct. Department			51320-40-00	11101-40-00	11103-40-00	0050287	
	2299	Active	005272	Improvement: Recess Lights & Photo Cells	01/04/2013	N & S Entrances Bu			51320-42-00	11101-42-00	11103-42-00	0049648	
	2300	Active	005291	Improvement: Referburishment to Gull Wing B	08/02/2012	John & Broad St., B			51320-42-00	11101-42-00	11103-42-00	0046931	
	2301	Active	005233	Coats 3 Phase Tire Balancer (6450-3D) w/ Sci	08/13/2012	Garage			51320-45-00	11101-45-00	11103-45-00	0048947	
	2302	Active	005234	Platform Ladder: Cottman Steel, 28'x51"	03/14/2013	Garage: Washbay			51320-45-00	11101-45-00	11103-45-00	0049021	
	2303	Active	005236	Portable, Inroom A/C 3.5kw	08/17/2012	Garage Library			51320-45-00	11101-45-00	11103-45-00	0049032	
	2304	Active	005238	HE Air Powered Drump Pump: 33-11/16"	01/31/2013	Garage			51320-45-00	11101-45-00	11103-45-00	0049747	
	2305	Active	005235	Landa Pressure Washer	09/05/2012	Garage			51320-45-00	11101-45-00	11103-45-00	0049224	
	2306	Active	005237	Single Jer Locker, Set of 3	12/10/2012	Garage			51320-45-00	11101-45-00	11103-45-00	0049547	
	2307	Active	005254	Oil Control Valve, Hose, & Reel (109057/1591	12/20/2012	Garage			51320-45-00	11101-45-00	11103-45-00	0049606	



# Drill Down By Record

File Edit View Asset Depreciation Reports Customize Links Window Help

Assets

Asset Detail - GREATER BRIDGEPORT TRANSIT Version 2013.1

**Asset 2212: Goshen/Chevy Coach Commercial Bus 2012**  
Status: Active

Co Asset No:  Go Group: <All Complete Assets>

Main Transactions Notes Images History

System Number: 2259

**General Information** > Items in bold are required fields

Co Asset No	2212	Description	Goshen/Chevy Coach Commercial Bus 2012	
G/L Asset Acct No	11101-17-00	Class		
Location	Garage	G/L Accum Acct No	11103-17-00	
G/L Expense Acct No	51320-17-00	Purchase Order No	0048597	
Mfg Serial No	1gb3g2b7c1200064	Vendor/Mfg	North Central Bus	
Custodian	Maintenance	Warranty Date	MM/DD/YYYY	
Department		Insurance Category		
User Numeric 1	0	Replacement Value		
RV Override?	No	Grant	ct90x458	
MODEL #		Grant % to Fed	80	
Vendor No. 2		Grant % to State	20	
Mfg Serial No. 2		Condition of Asset		
PO No. 2		Supplier No. 3	Disposed	
PO No. 3		Acquisition Date	Excellent	
			Fair	Item was disposed of
			Good	Excellent Condition
			Out of service	Fair Condition
			Poor	Good condition
				Taken out of service
				Poor Condition

**Book Information**

Acquisition Date:  Acquired by: ☒ Purchase ☐ Exchange or Conversion

	Internal	Closed-Tax	Closed-State	Closed-AMT	Closed-ACE	Closed-Book 6	Closed-Book 7
Property Type	A						
Placed-in-Service Date	10/11/2012						
Acquisition Value	\$70,674.36						
Depreciation Method	SL						
Estimated Life	04 yrs 00 mos						
ADS Life	N/A						
Business Use %	100						
179 Deduction	\$0.00						
168 Allowance %	0						
Salvage Value	\$0.00						
Investment Tax Credit	\$0.00						
Beginning Date	MM/YYYY						
Beginning YTD	\$0.00						
Beginning Accum	\$0.00						
<b>Depreciation Calculations</b>							
Current Through Date	06/2016						
168 Allowance Amount	\$0.00						
Current YTD	\$17,668.59						
Current Accum	\$66,257.21						
Net Book Value	\$4,417.15						
Period Close Date	06/2016						

Assets Reports System Administration Assistance Center

Asset List Print Detail Save Asset IRS Table Help

# Condition Assessment

## *CT Statewide Standardization*

> Items in bold are required fields

<b>Description</b>	Goshen/Chevy Coach Commercial Bus 2012	
<b>Class</b>		
<b>G/L Accum Acct No</b>	11103-17-00	
<b>Purchase Order No</b>	0048597	
<b>Vendor/Mfg</b>	North Central Bus	
<b>Warranty Date</b>	MM/DD/YYYY	
<b>Insurance Category</b>		
<b>Replacement Value</b>		
<b>Grant</b>	ct90x458	
<b>Grant % to Fed</b>	80	
<b>Grant % to State</b>	20	
<b>Condition of Asset</b>	▼	
<b>Supplier No. 3</b>	Disposed	Item was disposed of
<b>Acquisition Date</b>	Excellent	Excellent Condition
	Fair	Fair Condition
	Good	Good condition
	Out of service	Taken out of service
	Poor	Poor Condition

# Capital Planning and Programming

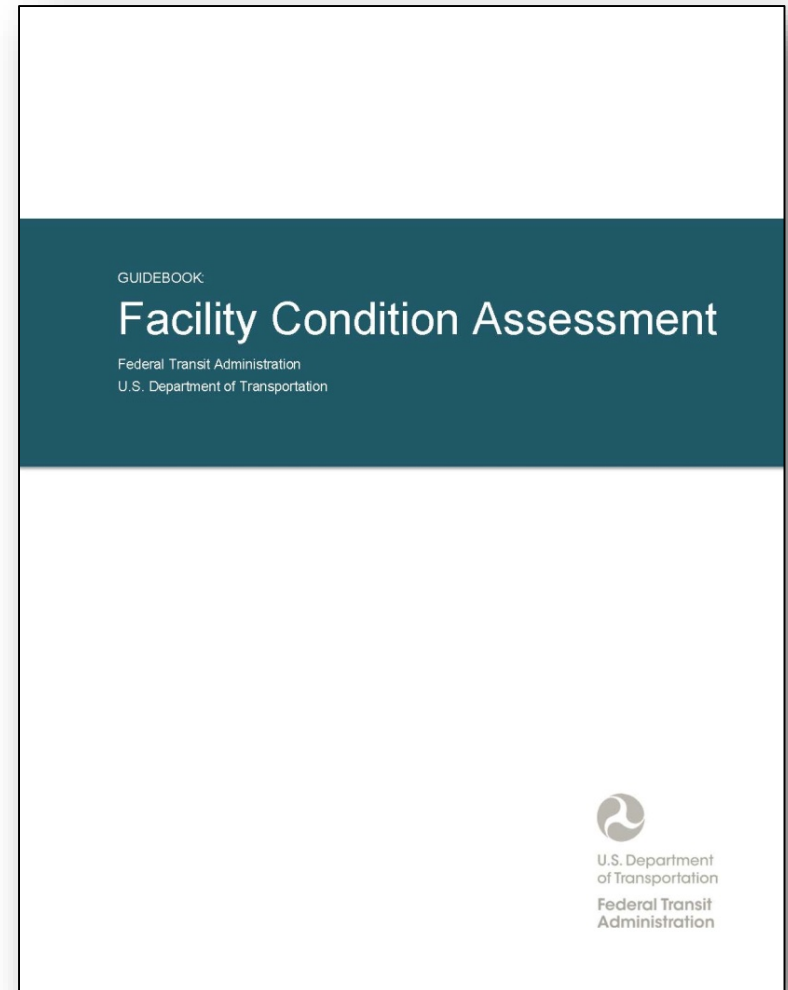
## Asset Inventory - Decision Support Tool

- Capital Programming Currently Not Based on Formal Inventory *or* Formal Condition Assessment
- Consists Generally of Annual “Ask” of Department Leaders
- Some Departments are More Detailed than Others
- Can Miss Important Items in Asset Classes
- Process is Not Good at Predicting System Failures or Informing the Process

When complete, the new process will generate reports of assets reaching useful life with **condition assessments** and other **(safety/mission/accessibility critical)** characteristics as a decision support tool for capital programming.

# A & M Facility Assessment

1. Administrative Offices
  2. Maintenance Facility and Garage
  3. Maintenance “Shed”
- Campus Completed in 1987
  - Recent SGR Improvements:
    - Garage Roof Replacement
    - Five UST Replacements
    - Steam Bay Rehabilitation
    - Wash Bay Rehabilitation
    - Perimeter Fencing



# Minimum and Supplemental Facility Components

## Systems/Components to be Evaluated Include:

- A. Visible substructure;
- B. Exterior envelope (including roofs, doors and windows);
- C. Interiors;
- D. Conveyance (elevators and escalators);
- E. Plumbing;
- F. HVAC;
- G. Fire Protection;
- H. Electrical,
- I. Equipment;
- J. Site (physical site characteristics);
  
- K. \*Fare Collection at Passenger Facility

## Supplemental

- **Bus Lifts;**
- **UST Systems;**
- **Security Systems;**
- **Energy Efficiency**

# Performance Measure

- *625.43 (d) Facilities. The performance measure for facilities is the percentage of facilities within an asset class, related below condition 3 on the (Transit Economic Requirements Model) TERM Scale.*

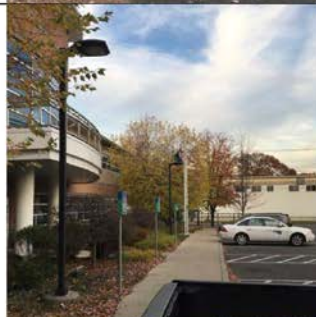
**Table 5 - General Condition Assessment Rating Scale**

Rating	Condition	Description
5	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4	Good	Good condition, but no longer new, may have some slightly defective or deteriorated component(s), but is overall functional
3	Adequate	Moderately deteriorated or defective components; but has not exceeded useful life
2	Marginal	Defective or deteriorated component(s) in need of replacement; exceeded useful life
1	Poor	Critically damaged component(s) or in need of immediate repair; well past useful life

# PHOTOS



Lens Seal is ha  
not sealed.



Base is cracked and should be replaced. Located to  
the right of the front entrance.



## Transit Facility Assessment



Field Investigator rbelous@wendelcompanies.com

### FIELD ASSESSMENT

Site	ASM
Room	Exterior
Category	Electrical
Component Name	Site lighting

Physical Condition	Good
Comment	Staff vehicle parking area is illuminated by using 16ft pole mounted MH luminaries. Show signs of deterioration of weather seal around the lens. Some luminaries indicate and dust in the optical compartment. One luminaire base is cracked.

- 1 - EXCELLENT: well maintained and in like new condition; no further action is required with respect to physical condition.  
 2 - GOOD: fully functional, in sound condition, well maintained but exhibits signs of use/wear; minor action required.  
 3 - MODERATE: functional, in working condition but exhibits clear signs of use/wear; action required to maintain functionality over near future.  
 4 - POOR: marginally functional, in working condition but exhibits critical evidence of use/wear; high maintenance, immediate attention required.  
 5 - UNSATISFACTORY: no longer functional or about to fail; immediate replacement or extensive rehabilitation required.

Process Condition	Good
Comment	1 - EXCELLENT: fully functional in intended role; meets current code/regulations without further modification. 2 - GOOD: functional but requires regular maintenance. 3 - MODERATE 4 - POOR: currently in service but function may be/will be reduced without immediate attention. 5 - UNSATISFACTORY

### PROPOSED IMPROVEMENTS

Proposed Improvement	Replace weather seals for 9 fixtures or replace with LED, ground fixtures, replace with LED.
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## Transit Facility Assessment



DATE 2016-11-15

Field Investigator jboje@wendelcompanies.com

### FIELD ASSESSMENT

Site	ASM
Room	145 Vehicle wash
Category	Structural
Component Name	Bus wash area

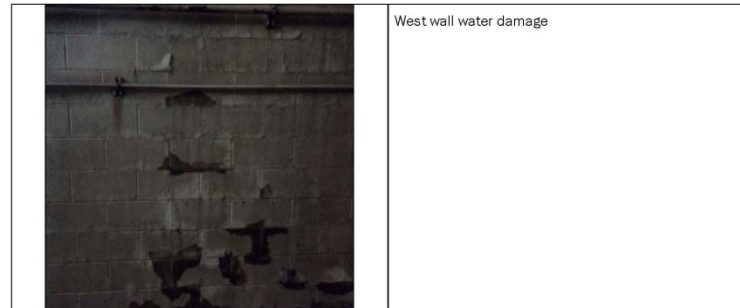
Physical Condition	Poor
Comment	1 - EXCELLENT: well maintained and in like new condition; no further action is required with respect to physical condition. 2 - GOOD: fully functional, in sound condition, well maintained but exhibits signs of use/wear; minor action required. 3 - MODERATE: functional, in working condition but exhibits clear signs of use/wear; action required to maintain functionality over near future. 4 - POOR: marginally functional, in working condition but exhibits critical evidence of use/wear; high maintenance, immediate attention required. 5 - UNSATISFACTORY: no longer functional or about to fail; immediate replacement or extensive rehabilitation required.

Process Condition	Poor
Comment	1 - EXCELLENT: fully functional in intended role; meets current code/regulations without further modification. 2 - GOOD: functional but requires regular maintenance. 3 - MODERATE 4 - POOR: currently in service but function may be/will be reduced without immediate attention. 5 - UNSATISFACTORY

### PROPOSED IMPROVEMENTS

Proposed Improvement	Masonry cracks should be routed out and filled with sealant. In addition, water damaged masonry should be repaired and sealed.
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### PHOTOS



West wall water damage

**Public Transit District  
Capital Plan**

Summary

Priority	Item	Cost
1	Electrical Code Issues	\$ 41,397.13
1A	Replace Roof	\$ 2,697,227.16
2	HVAC	\$ 1,653,928.20
3	Gas Storage Dispensing Facility	\$ 478,328.13
4	Outlets for Block Heaters	\$ 28,699.69
5	Lifts in the Maintenance Shop	\$ 721,840.63
6	Canopy at East Garage	\$ 1,230,126.35
7	Improvements at the Hub	\$ 586,882.52
8	Roof Between Shop & Garage	\$ 1,423,803.67
9	Bird Netting	\$ 87,100.94
10	Replace Diesel Tanks	\$ 493,112.81
11	Electrical - other	\$ 698,446.03
12	All Other	\$ 1,286,418.56

Total \$ 11,385,914.69

# Expected Outcomes

- Use New (more detailed) Asset Inventory and Facility Assessment as Decision Support Tools;
- Use Initial Facility Assessment as a Benchmark and Foundation for Assessment Cycle (4 Years)
- Inform and Improve the Accuracy and Effectiveness of Capital Programming;
- Inform the Investment Prioritization Process;
- Prevent Systems from Failing Before Replacement; and
- Ensure SGR – **“The state at which an asset can be operated [safely] at a full level of performance”.**

# Larger TAM Goals

- Reduced Safety Risks
- Increased System Reliability
- Reduced Maintenance Costs
- Overall Improvement in Safety and Performance



## Contacts at GBT:

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- Software – Sage® Fixed Asset Solution