TRANSPORTATION ADVISORY COMMITTEE AGENDA

October 4, 2018 MEETING TIME: 10:30 a.m.

The Miller Building 1st Floor Conference Room
2825 3rd Avenue North
Billings, Montana 59101

1. Call to Order: Scott Walker, Transportation Coordinator

2. **PUBLIC COMMENT PERIOD** – As required (minute maximum per person.) *Any member of the public may be heard on any subject that is not on the agenda. The Transportation Advisory Committee will not take any action on these items at this time, but could choose to add an item to the next meeting's agenda for discussion.*

   a. **Comments on items not on the agenda and requests to add items to future agendas.**

   b. **Comments on items on the non-public agenda items.**

3. Motion. Approval of the minutes of: July 19, 2018.

4. New Business

   a. Motion/Recommendation. 2018 Long Range Transportation Plan. Andy Daleiden, Kittelson & Associates, presenting.

   b. Presentation/Discussion. MET Transit Asset Management Plan, Debra Hagel, MET Planner, presenting.

5. Other Business

6. Future Agenda Items

7. Adjournment

Transportation Advisory Committee (TAC) **3.**

Meeting Date: 10/04/2018

Subject

Motion. Approval of the minutes of: July 19, 2018.

Attachments

Minutes_TAC_2018_07_19_DRAFT

Billings Technical Advisory Committee
Draft Meeting Minutes—JULY `9, 2018

1. Call the meeting to order: Scott Walker called the meeting to order at 10:30 a.m. in the Miller Building first floor conference room, 2825 3rd Avenue North, Billings, Montana.

Members Present:
Scott Walker, Transportation Planning Coordinator; Vern Heisler, Deputy Public Works Director; Debi Meling, City Engineer; Public Works-Engineering Division; Erin Claunch, City Traffic Engineer, Tim Miller, Director, YC Public Works Dept.; Debra Hagel, Transit Planner, MET; Mike Black, YC Public Works Department; Kurtis Schnieber, MDT

Others Present: Lora Mattox, Transportation Planner; Elyse Monat, Bike and Pedestrian Planner

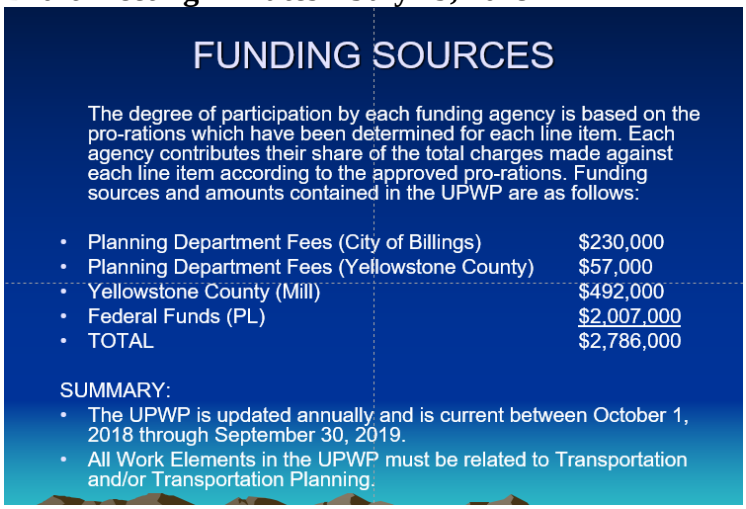
Conference Call: Katy Potts, MDT; Kenn Winegar, MDT

2. Public Comment: Scott Walker opened the public comment portion of the meeting and asked if there was anyone wishing to make a comment at this time. There was no public comment.

3. Minutes of December 14, 2017
Motion
Tim Miller made a motion and it was seconded by Mike Black to approve the minutes of December 14, 2017 as submitted. The motion carried with a unanimous voice vote.

4. Old Business: There was no Old Business.

4. New Business:
4a Presentation. Motion/Recommendation. DRAFT 2019 Unified Planning Work Program, (UPWP), Scott Walker, Transportation Coordinator, presenting.
Scott Walker opened the agenda item and stated this is an annual task related to budget, management of Local and PL funds. He continued with a presentation. The Work program for the PO is required to be revised and adopted annually by PCC and reviewed by the governing bodies.



Scott Walker pointed out the $2,007,00 listed in Federal PL funds. He explained that due to MDT accounting, a "catch up" provision will allow $700,000 in 2019 that we would not normally receive to keep up with the current fiscal year in the contingency. These funds will continue in availability from one year to the next. Historically MDT Helena has allocated monies based on the year previous. This year, payment will be made for 2018 and 2019, which is an approximate increase of $700,000. There are not enough local funds to match but the funds will roll in the contingency line item from one year to the next. He stressed this is an anomaly, and in time the funds will be reduced from project expenditures. He voiced some concern in the case of a potential Federal government rescission of funding. Kenn Winegar, MDT, explained this was done to address pre-awarded funds. There are continuing resolutions for authorization but not allocation.

Funding Cost Comparisions: A comparison of project and staffing costs in the 12 work elements in FY 2016 and FY 2017. Costs have remained constant in all work elements. It is typical to carry a contingency in each year. Scott pointed out “Element 301”, and stated the Transportation Plan is almost completed.

Funding Percentages FY18: Work elements that are exclusively transportation related are 100% federally funded. The less transportation related activity in the work element, the lower the federal contribution.

Table IV: “Staff Months By Work Element Fiscal Year-2018”: The Work Program also allocates staff time to the different work elements. Planning staff is shown across the columns at the staff and the amount of time that individual spends in each element, calculated in man months, is shown in the columns below. This staffing array was approved in the FY16 Work

Program. Elyse Monat was added to the table as the Active Transportation Planner. In response to question by Debi Meling, Scott stated the Traffic Tech position is federally funded and posted in Element 301, Table IV.

2018 Priorities: Complete the Update the 2014 Trans. Plan; Complete Billings MPO Traffic Model; Update MPO's Public Participation Plan; Downtown Traffic Flow Study; County Growth Policy Update

2019 Priorities: Complete the 2018 Transportation Plan; Complete the Billings MPO Traffic Model; Apply for Major FHWA Grant; Inner Belt Loop Corridor Study; Wayfinding Signage Plan; Update the Bike/Pedestrian Tour Map + App; Downtown Traffic Flow Study; County Growth Policy Update

Discussion

Vern Heisler asked about the Inner Belt Loop Corridor Study. Scott Walker noted the language in the document. This project will be completed in two phases with a scope of the intersection of Skyway Drive to Alkali Creek--similar to the Highway 3 Study. He commented that due to the nature of the project it is good from a planning standpoint to be forward thinking to set the stage for future development. The alignment design is completed for this project. There was discussion on the development of a template for a Wayfinding Signage Plan. Scott Walker discussed the benefits of a Bike/Pedestrian Tour Map and Application which would be good in a variety of aspects. The Yellowstone County Growth Policy Update will continue into 2019 and conducted in house by Planning Staff. Scott Walker gave the review schedule below.

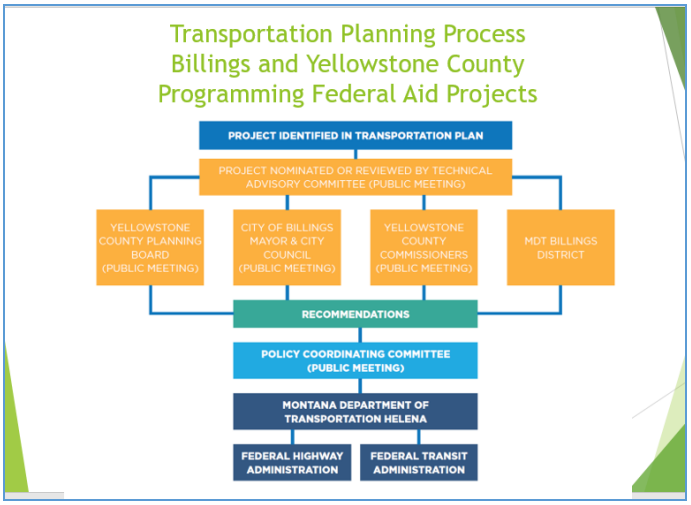
Motion

Tim Miller made a motion and Mike Black seconded the motion to forward a recommendation of approval of the 2019 Unified Planning Work Program as presented by staff. The motion carried with a unanimous voice vote.

Presentation/Discussion. Billings MPO Public Participation Plan, (PPP), Lora Mattox, Transportation Planner, presenting.

Transportation Planner Lora Mattox opened this agenda item with a presentation. She stated MPOs are mandated by the Federal Highway Act, (1973), to provide cooperative, comprehensive, and a continuing transportation planning and decision-making process. Currently this falls under the "Fixing America's Surface Transportation (FAST), Act. A public participation plan, (PPP), is needed for compliance.

The MPO facilitates between FHWA/MDT and local committees and governing bodies. These groups and/or advocates may include but are not limited to: Persons with limited English proficiency; Representatives of the disabled; Representatives of public transportation users; Representatives of pedestrian facility users; Representatives of bicycle facility users; Representatives of low-income communities; Representatives of minority communities; Freight shippers and haulers; Private providers of transportation; and Representatives of affected public agencies.



Strategies and Tools include media; digital and print materials; online and social media, an in-person meetings. The plan encourages creativity in outreach such as "Tag on Meetings" held

during other events, Exhibits at events; Steering Committees, Focus Groups and Stakeholders; and tours.

Review Schedule

Transportation Advisory Committee, (TAC)	7/19/18
Planning Board #1	7/24/18
Planning Board #2	8/14/18
City Council Work Session	8/20/18
City Council	8/27/18
Commissioners Discussion	8/20/18
Board of County Commissioners	8/28/18
Policy Coordinating Committee, (PCC)	9/11/18

Motion

Mike Black made a motion and Vern Heisler seconded the motion to forward a recommendation of approval of the Billings MPO Public Participation Plan, (PPP), as presented by staff. The motion carried with a unanimous voice vote.

Other Business:

- Update. The Long Range Transportation Plan is 75% complete. The draft chapters are under review and comments will be forwarded to the consultant next Friday.
- Update. The Modeling Project is moving forward. Kittelson is working on the traffic count information.
- Update. Mike Dodson has been hired for the Traffic Tech position and will start on July 30, 2018. This position will work with the City and County Public Works Departments and Planning Staff.
- Welcome! To Elyse Monat, who has been hired to fill the position of Active Transportation Planner.
- Vern Heisler, Deputy Public Works Director; will retire on August 2, 2018. Members of the Committee expressed their thanks for his years of service in this capacity. Vern Heisler stated it has been an honor to be a part of this committee and he wished the committee, "Good luck in the future. It has been a good ride."
- Debra Hagel: The Transit Asset Management Plan has an October deadline and will be presented at the next TAC meeting to start the review process.
- Downtown Plan: in the process of data collection. This plan is scheduled for a mid-August kickoff, followed by Steering Committee meetings in March, 2019.

Adjournment: 11:00 a.m.

DRAFT TO BE APPROVED BY A MOTION AT THE NEXT SCHEDULED MEETING

Transportation Advisory Committee (TAC) **4. b.**

Meeting Date: 10/04/2018

Subject

Presentation/Discussion. MET Transit Asset Management Plan, Debra Hagel, MET Planner, presenting.

Attachments

MET Transit FY19 TAM Plan-Final with attachments

City of Billings - MET Transit
Transit Asset Management Plan
Kevin Ploehn, Accountable Executive

Last modified by Rusty Logan on 09 Aug 18 at 14:07

Introduction

The Metropolitan (MET) Transit System is a division of the Aviation and Transit Department within the City of Billings located in Billings, MT. The system provides public transportation service within city limits, which includes both fixed-route bus services and ADA paratransit services (referred to as MET Plus). MET Transit has served the majority of the city with fixed-route service for over 40 years; ADA paratransit services were incorporated in 1997. The City of Billings has the largest population in the state of Montana at approximately 110,000 people and covers a geographic area of over 41 square miles. Roughly two thirds of the city are located within the Yellowstone River valley with the remainder of the city located north of a sandstone cliff formation above the valley; Billings is also a significant rail hub for the region which presents a number of challenges regarding planning and development of routes where rail and vehicle traffic interact. Regarding demographics, 30 percent of the population is under the age of 18 years while 15 percent is over the age of 65 years with the remaining 55 percent falling between the ages of 18 and 65. Approximately 12.8 percent of the population falls below the federal poverty level. MET Transit utilizes a fleet of twenty-five (25) buses to provide service on nineteen (19) fixed-routes as well as fifteen (15) body-on-chassis paratransit vans providing service across ten (10) demand-response routes. These vehicles operate from approximately 6:00 AM to 7:00 PM on weekdays and 8:00 AM to 5:30 PM on Saturdays. Further, MET Transit has three (3) separate property locations with three (3) separate facilities, consisting of the main operations facility and two transfer centers placed strategically in the city. The METroplex, located at 1705 Monad Rd is the main operations facility and consists of a large building combining the administrative offices, bus storage and fueling bays, fleet maintenance bays, and general inventory storage; this facility also has a smaller secondary building which houses the MET Transit bus wash bay. All rolling stock, equipment, and parts inventories are housed at the METroplex. The Stewart Park Transfer Center, located on Stewart Park Rd consists of a large bus parking area with passenger shelters for transferring passengers between buses as well as a small outbuilding which serves as a driver break area. The Downtown Transfer Center, located at 220 N. 25th St also consists of a large parking area with passenger shelters and facility containing driver break areas as well as offices for periodic administrative use.

Performance Targets & Measures

Asset Category - Performance Measure	Asset Class	2019 Target	2020 Target	2021 Target	2022 Target	2023 Target
REVENUE VEHICLES						
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)						
	BU - Bus	47%	42%	37%	32%	26%
	CU - Cutaway Bus	17%	17%	17%	17%	17%
	VN - Van	6%	14%	14%	14%	14%
EQUIPMENT						
Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	**Non Revenue/Service Automobile**	66%	66%	66%	66%	66%
	Trucks and other Rubber Tire Vehicles	75%	75%	75%	75%	75%
	Facility Maintenance Vehicles	75%	75%	75%	75%	75%
FACILITIES						
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale						
	Passenger Facilities	33%	33%	33%	33%	33%
	Administration and Maintenance	33%	33%	33%	33%	33%

Target Setting Methodology

Rolling Stock Objective: MET Transit is currently in process of purchasing 6 remanufactured 35ft buses in order to assist in mitigating the issue of a large portion of its full-size bus fleet meeting "End of Usable Life" criteria within the next two years. MET also plans to regularly purchase buses in the upcoming years to replace the remaining outdated vehicles, bringing the portion of the fleet which exceeds usable life below a 30% target. In regards to MET's Cutaway Bus fleet, all vehicles are model year 2016 and will be aged less than the minimum usable life standard for the foreseeable future; MET would expect no more than a single Cutaway Bus to reach end of usable life through unforeseen events in any given year, leading to a target of 17% or less for this vehicle type. Further, MET regularly purchases replacement Body-On-Chassis Vans to maintain an updated paratransit fleet; MET plans to continue this process to ensure the vans are replaced timely after exceeding usable life. With regular replacement, MET's target calls for no more than 2 vehicles of the 15 vans to have exceeded usable life at any given time.

Equipment: MET Transit has found equipment regularly outlasts the minimum useful life standards set by the FTA and replaces equipment "as needed." With this in mind, MET will most likely only replace one service vehicle of the three total in any given year, leading to 66% of the service vehicles exceeding FTA minimum usable life in any given year. This same principle applies to MET Transit's service pickups, fork lift, and tractor. Of these four vehicles, with a single replacement, any given year would see 75% of the total exceeding the FTA standard for usable life.

Facilities: MET Transit regularly maintains its facilities and updates/remodels/refurbishes as needed. As MET Transit has only 3 facility locations, it expects only no single facility out of these 3 would ever fall below a rating of 3 overall as it would move quickly to address any significant repair issues as each facility is critical to service delivery.

TAM Vision

MET Transit aims to utilize the TAM plan to expand and improve upon its existing asset management policies and procedures in order to ensure assets are kept in a state of good repair and are able to be replaced or refurbished as needed. Maintaining assets in a state of good repair will assist MET Transit in improving service delivery to customers while also expanding its ability to more fully utilize assets in efforts to improve overall system efficiency and performance; this will be realized by decreasing the number of road calls, unplanned repairs, and out-of-service occurrences for rolling stock, equipment, and facilities.

TAM and SGR Policy

It is the objective of the MET Transit maintenance program to ensure safe, reliable, and clean vehicles and facilities for the operation of the fixed route and paratransit services. The goal of MET Transit is to have maintenance performed in the most efficient and cost effective manner possible, utilizing preventative maintenance in lieu of unscheduled maintenance, thereby minimizing the number of preventable mechanical failures which would result in a disruption of MET Transit services. MET strives to sustain a state of good repair in its assets through this regular maintenance as well as planned replacement and refurbishment of assets as needed.

TAM Goals and/or Objectives

Goals	
Decrease unplanned maintenance expenses for FY19	Decrease costs through more effective asset management and replacement of aging vehicles and equipment
	Decrease costs through more effective preventative maintenance
Decrease service delays and interruptions for FY19	Decrease road calls through more effective asset management and replacement of aging vehicles and
	Decrease road calls through more effective preventative maintenance
Increase ridership for FY19	Decrease interruptions as stated above thereby increasing system reliability for new and existing passengers
	Modify and improve existing transit routing network through further utilization of increasingly reliable and effective assets maintained in a state of good repair.
Increase fare and bus advertising revenue for FY19	Through increased reliability of revenue vehicles with mobile advertising, increase confidence in ad exposure for advertising customers
	Realize increases in fare revenue through increased ridership and service

About the TAM Plan

The MET Transit TAM plan currently consists of this document with the following attached supporting documents including the MET Transit Maintenance Policies and Procedures with included maintenance schedules and activities, excerpts from the City of Billings Equipment Replacement Plan, and applicable excerpts from the City of Billings Capital Improvement Plan. This document covers the current state of MET Transit assets and is expected to be updated throughout FY19 with more complete information and practices, with concurrent updates to policies and procedures to more fully utilize the TAM as a tool supporting state of good repair. Applicable projects and procurements mentioned in this document have estimated timelines attached.

In regards to values, Revenue Vehicle and Equipment replacement values are taken directly from the City of Billings Equipment Replacement Plan for each individual vehicle type. Regarding facility values, it is assumed the CIty would continue to utilize the land should a total loss of a facility occur; with this in mind, the value indicated for each facility reflects the applicable "insured" value of each facility.

Roles and Responsibilities

Department/Individual	Role (Title and/or Description)
Kevin Ploehn	Director of Aviation and Transit
Rusty Logan	Operations Supervisor - Plan Author, Facilities
Dan Montoya	Operations Supervisor - Fleet Maintenance
Kathy Barr	Paratransit Coordinator
Lynne Arnold	Admin Assistant III - Financial Entry, NTD
Debra Hagel	Transit Planning Coordinator

Capital Asset Inventory

Please see Appendix A (Asset Register) for the asset inventory listing.

Asset Inventory Summary

Asset Category	Total Number	Avg Age	Avg Mileage	Avg Value
RevenueVehicles	**40**	**6.5**	**148,488**	**$253,818.18**
BU - Bus	19	11.8	305,918	$500,000.00
CU - Cutaway Bus	6	2.0	51,556	$300,000.00
VN - Van	15	3.7	59,689	$82,000.00
Equipment	**8**	**15.9**	**45,697**	**$45,305.63**
Non Revenue/Service Automobile	3	16.3	60,540	$36,178.67
Trucks and other Rubber Tire Vehicles	2	14.0	23,434	$60,815.00
Facility Maintenance Vehicles	3	16.7	N/A	$44,093.00
Facilities	**3**	**23.7**	**N/A**	**$2,796,141.33**
Passenger Facilities	2	18.0	N/A	$1,103,170.00
Administration and Maintenance	1	35.0	N/A	$6,182,084.00

Condition Assessment

Please see Appendix B (Asset Condition Data) for individual asset condition listing.

Asset Condition Summary

Asset Category	Total Number	Avg Age	Avg Mileage	Avg TERM Condition	Avg Value	% At or Past ULB
RevenueVehicles	**40**	**6.5**	**148,488**	**N/A**	**$253,818.18**	**5%**
BU - Bus	19	11.8	305,918	N/A	$500,000.00	5%
CU - Cutaway Bus	6	2.0	51,556	N/A	$300,000.00	0%
VN - Van	15	3.7	59,689	N/A	$82,000.00	7%
Equipment	**8**	**15.9**	**45,697**	**N/A**	**$45,305.63**	**88%**
Non Revenue/Service Automobile	3	16.3	60,540	N/A	$36,178.67	100%
Trucks and other Rubber Tire Vehicles	2	14.0	23,434	N/A	$60,815.00	100%
Facility Maintenance Vehicles	3	16.7	N/A	N/A	$44,093.00	67%
Facilities	**3**	**23.7**	**N/A**	**3.0**	**$2,796,141.33**	**N/A**
Passenger Facilities	2	18.0	N/A	3.0	$1,103,170.00	N/A
Administration and Maintenance	1	35.0	N/A	3.0	$6,182,084.00	N/A

Decision Support

Investment Prioritization

In conjunction with the Equipment Replacement Plan (ERP) and Capital Improvement Plan (CIP), MET Transit also utilizes its own historical maintenance, repair, and performance records for determining which assets should be replaced in what order. For instance, rolling stock replacement is generally replaced in accordance with minimum useful life standards, but the overall performance of the vehicle is also considered when replacement occurs. Priorities are set using age, mileage, hours, and other applicable metrics as a baseline but are not the only determining factors; overall condition and performance of the assets is also considered. In regards to facilities, MET Transit ensures the facilities continue to meet the needs of the agency and updates, remodels, repairs, or refurbishes as needed to meet changing demands.

Decision Support Tools

The following tools are used in making investment decisions:

Process/Tool	Brief Description
City Wide Equipment Replacement Plan (ERP)	Written plan and committee which evaluate vehicle and equipment assets for replacement based upon applicable age, mileage, hours, and overall operating/physical condition.
City Wide Capital Improvement Plan (CIP)	Written plan and committee which evaluates facilities and other related assets for replacement based upon applicable age and overall operating/physical condition.

Risk Management

Risk	Mitigation Strategy
Loss of significant amounts of federal funds	Increase local sources of funding in areas such as fares, advertising, and investigation of requesting further tax mills; decrease expenditures through improved utilization of available resources
Loss of service due to planned and unplanned rolling stock maintenance	MET Transit currently maintains a spare ratio slightly above 20 percent in accordance with FTA regulations regarding agencies operating less than 50 vehicles in revenue service.

Maintenance Strategy

Asset Category	Asset Class	Maintenance Activity	Frequency	Avg Duration (Hrs)	Cost
RevenueVehicles	BU - Bus	Preventative Maintenance A	Every 5,000 - 6,500 miles	8	$260
RevenueVehicles	BU - Bus	Preventative Maintenance B	Every 13,000 - 14,000 miles	4	$133
RevenueVehicles	BU - Bus	Preventative Maintenance C	Every 35,500 - 36,500 miles	2	$76
RevenueVehicles	CU - Cutaway Bus	Preventative Maintenance A	Every 5,000- 6,500 miles	8	$387
RevenueVehicles	CU - Cutaway Bus	Preventative Maintenance B	Every 13,000 - 14,000 miles	4	$81
RevenueVehicles	CU - Cutaway Bus	Preventative Maintenance C	Every 35,500 - 36,500 miles	2	$41
RevenueVehicles	VN - Van	Preventative Maintenance A	Every 3000 - 5000 miles	4	$109
RevenueVehicles	VN - Van	Preventative Maintenance B	Every 11,500 - 12,500 miles	2	$41
RevenueVehicles	VN - Van	Preventative Maintenance C	Every 29,500 - 30,500 miles	2	$41
Equipment	Non Revenue/Service Automobile	Preventative Maintenance A	Every 3000 - 5000 miles	4	$105
Equipment	Non Revenue/Service Automobile	Preventative Maintenance B	Every 11,500 - 12,500 miles	2	$39
Equipment	Non Revenue/Service Automobile	Preventative Maintenance C	Every 29,500 - 30,500 miles	2	$39
Equipment	Facility Maintenance Vehicles	Preventative Maintenance A	Hours Vary Per Vehicle; Completed at Least Annually	4	$106
Equipment	Facility Maintenance Vehicles	Preventative Maintenance B	Hours Vary Per Vehicle	0.5	$12

Unplanned Maintenance Approach

When allocating its yearly budget, MET Transit reviews the previous three year's expenditures for parts, labors, repairs, and other maintenance and adjusts accordingly based upon previous trends; in this process, the age, mileage, and hours on each piece of rolling stock or equipment is also taken into consideration. If repairs exceed the anticipated budgeted amount, operating reserve is utilized to address the excess expense.

Disposal Strategy

Asset Category	Asset Class	Disposal Strategy
RevenueVehicles	BU - Bus	Rolling stock at the end of usable life (when finances allow for procurement of replacement vehicles) are re-tired using multiple options: (1) sale to other entities via open advertisements; (2) sale via local auction; (3) direct sale to other city departments; (4) salvage sale. Retired vehicles moved from the indoor storage bays to the vacant lot for storage until disposal occurs.
RevenueVehicles	CU - Cutaway Bus	Rolling stock at the end of usable life (when finances allow for procurement of replacement vehicles) are re-tired using multiple options: (1) sale to other entities via open advertisements; (2) sale via local auction; (3) direct sale to other city departments; (4) salvage sale. Retired vehicles moved from the indoor storage bays to the vacant lot for storage until disposal occurs.
RevenueVehicles	VN - Van	Rolling stock at the end of usable life (when finances allow for procurement of replacement vehicles) are re-tired using multiple options: (1) sale to other entities via open advertisements; (2) sale via local auction; (3) direct sale to other city departments; (4) salvage sale. Retired vehicles moved from the indoor storage bays to the vacant lot for storage until disposal occurs.
Equipment	Non Revenue/Service Automobile	Equipment stock at the end of usable life (when finances allow for procurement of replacement vehicles) are re-tired using multiple options: (1) sale to other entities via open advertisements; (2) sale via local auction; (3) direct sale to other city departments; (4) salvage sale. Retired vehicles moved from the indoor storage bays to the vacant lot for storage until disposal occurs.
Equipment	Trucks and other Rubber Tire Vehicles	Equipment stock at the end of usable life (when finances allow for procurement of replacement vehicles) are re-tired using multiple options: (1) sale to other entities via open advertisements; (2) sale via local auction; (3) direct sale to other city departments; (4) salvage sale. Retired vehicles moved from the indoor storage bays to the vacant lot for storage until disposal occurs.
Equipment	Facility Maintenance Vehicles	Equipment stock at the end of usable life (when finances allow for procurement of replacement vehicles) are re-tired using multiple options: (1) sale to other entities via open advertisements; (2) sale via local auction; (3) direct sale to other city departments; (4) salvage sale. Retired vehicles moved from the indoor storage bays to the vacant lot for storage until disposal occurs.
Facilities	Administration and Maintenance	MET Transit has historically not disposed of any facilities or locations; facility overhauls and remodels, as well as new facility construction, have occurred at various points in the agency's history.
Facilities	Passenger Facilities	MET Transit has historically not disposed of any facilities or locations; facility overhauls and remodels, as well as new facility construction, have occurred at various points in the agency's history.

Acquisition and Renewal Strategy

Asset Category	Asset Class	Acquisition and Renewal Strategy
RevenueVehicles	BU - Bus	5339(A) statutory funds are allocated to projects each year with funds marked for use in bus replacement as needed dependent on the age and mileage of the vehicles; capital reserves are set aside in order to ensure adequate funds to meet local match.
RevenueVehicles	BU - Bus	Current level of 5339(A) funds and capital reserves will allow for the purchase of six (6) remanufactured 35ft Diesel Buses in order to help mitigate the rapidly approaching "End of Usable Life" deadlines on 16 of MET Transit's vehicles
RevenueVehicles	CU - Cutaway Bus	MET Transit has found this type of bus ineffective at meeting the needs of the agency and will seek to replace these buses at the end of their usable life with more appropriate vehicles, potentially consisting of 35ft Transit Buses
RevenueVehicles	VN - Van	MET Transit is eligible to receive 5310 funds on a regular basis in accordance with program requirements and utilizes these funds, along with local capital reserves, to regularly purchase and replace paratransit vans which have reached the end of their usable life.
Equipment	Non Revenue/Service Automobile	MET Transit has found service vehicles to be usable beyond the minimum standards set forth by the Federal Transit Administration and replaces equipment as needed.
Equipment	Trucks and other Rubber Tire Vehicles	MET Transit has found maintenance vehicles to be usable beyond the minimum standards set forth by the Federal Transit Administration and replaces equipment as needed.
Equipment	Facility Maintenance Vehicles	MET Transit has found other wheeled equipment to be usable beyond the minimum standards set forth by the Federal Transit Administration and replaces equipment as needed.
Facilities	Administration and Maintenance	In regards to Admin and Maintenance facilities, MET Transit ensures the facilities continue to meet the needs of the agency and updates, remodels, repairs, or refurbishes as needed to meet changing demands. Facilities are inspected regularly for defects or needed repairs with the yearly budget process accounting for upcoming major repairs requiring capital expenditures.
Facilities	Passenger Facilities	In regards to Passenger facilities, MET Transit ensures the facilities continue to meet the needs of the agency and updates, remodels, repairs, or refurbishes as needed to meet changing demands. Facilities are inspected regularly for defects or needed repairs with the yearly budget process accounting for upcoming major repairs requiring capital expenditures.

Investment Prioritization

The list of prioritized investment projects is provided in Appendix C.

Capital Investment Activity Schedules

Document Name	File
MET Transit FY19 to FY23 CIP	PDF
FY2018 Equipment Replacement	PDF
MET Transit Maintenance Plan Rev_07-26-2016	PDF
FY19 Facility Ratings May2018	PDF

Appendices

Appendix A	Asset Register
Appendix B1	Revenue Vehicle (Rolling Stock) Condition Data
Appendix B2	Equipment Condition Data
Appendix B3	Facilities Condition Data
Appendix C	Proposed Investment Project List

Appendix A: Asset Register

Asset Category	Asset Class	Asset Name	Make	Model	Count	ID/Serial No.	Acquisition Year	Vehicle Mileage	Replacement Cost/Val
Equipment	Facility Maintenance Vehicles	1990 Forklift	Toyota	02-5FD30	1	1862	1990	N/A	$55,272.00
Equipment	Facility Maintenance Vehicles	2004 Floor Cleaner	Nilfisk Advance	Captor 4800	1	1870	2004	N/A	$47,256.00
Equipment	Facility Maintenance Vehicles	2010 Tractor	Massey Ferguson	GC2600	1	1859	2010	N/A	$29,751.00
Equipment	Non Revenue/Service Automobile	2000 Minivan	Ford	Windstar	1	1866	2000	75,782	$49,960.00
Equipment	Non Revenue/Service Automobile	2000 Passenger Car	Chevrolet	Malibu	1	1867	2000	57,205	$37,952.00
Equipment	Non Revenue/Service Automobile	2005 Passenger Car	Ford	Taurus	1	1865	2005	48,632	$20,624.00
Equipment	Trucks and other Rubber Tire Vehicles	1999 Ford Pickup	Ford	F350	1	1861	1999	15,067	$63,825.00
Equipment	Trucks and other Rubber Tire Vehicles	2009 Ford Pickup	Ford	F350	1	1869	2009	31,801	$57,805.00
Facilities	Administration and Maintenance	METroplex	N/A	N/A	1	MTROPLX	1983	N/A	$6,182,084.00
Facilities	Passenger Facilities	Downtown Transfer Center	N/A	N/A	1	DWNTWN	2008	N/A	$2,153,215.00
Facilities	Passenger Facilities	Stewart Park Transfer Center	N/A	N/A	1	STWRTPK	1992	N/A	$53,125.00
RevenueVehicles	BU - Bus	2004 35ft Transit Bus	Gillig	Phantom	6	1801-1806	2004	328,427	$500,000.00
RevenueVehicles	BU - Bus	2005 35ft Transit Bus	Gillig	Phantom	10	1807-1816	2005	392,806	$500,000.00
RevenueVehicles	BU - Bus	2007 35ft Transit Bus	Gillig	Phantom	1	1871	2007	270,882	$500,000.00
RevenueVehicles	BU - Bus	2009 35ft Low Floor Transit Bus	Gillig	Low Floor	2	1818-1819	2009	231,558	$500,000.00
RevenueVehicles	CU - Cutaway Bus	2016 30ft Body on Chasis Bus	Champion	LF Transit	6	1820-1825	2016	51,556	$300,000.00
RevenueVehicles	VN - Van	2010 26ft Paratransit Body on Chassis Van	Startrans	Ford Supreme	1	1883	2010	88,045	$82,000.00
RevenueVehicles	VN - Van	2012 26ft Paratransit Body on Chassis Van	Startrans	Ford Supreme	3	1885-1887	2012	120,396	$82,000.00
RevenueVehicles	VN - Van	2014 26ft Paratransit Body on Chassis Van	Elkhart	Coach	1	1888	2014	69,453	$82,000.00
RevenueVehicles	VN - Van	2015 26ft Paratransit Body on Chassis Van	Eldorado	Aerotech	3	1889-1891	2015	60,766	$82,000.00
RevenueVehicles	VN - Van	2017 26ft Paratransit Body on Chassis Van	Elkhart	Coach	2	1892-1893	2017	19,476	$82,000.00
RevenueVehicles	VN - Van	2018 26ft Paratransit Body on Chassis Van	Elkhart	Coach	5	1872-1876	2018		$82,000.00

Appendix B: Asset Condition Data

B1: Revenue Vehicle Assets

Asset Category	Asset Class	Asset Name	Count	ID/Serial No.	Age (Yrs)	Vehicle Mileage	Replacement Cost/Value	Useful Life Benchmark (Yrs)	Past Useful Life Benchmark
RevenueVehicles	BU - Bus	2004 35ft Transit Bus	6	1801-1806	14	328,427	$500,000.00	14	Yes
RevenueVehicles	BU - Bus	2005 35ft Transit Bus	10	1807-1816	13	392,806	$500,000.00	14	No
RevenueVehicles	BU - Bus	2007 35ft Transit Bus	1	1871	11	270,882	$500,000.00	14	No
RevenueVehicles	BU - Bus	2009 35ft Low Floor Transit Bus	2	1818-1819	9	231,558	$500,000.00	14	No
RevenueVehicles	CU - Cutaway Bus	2016 30ft Body on Chassis	6	1820-1825	2	51,556	$300,000.00	10	No
RevenueVehicles	VN - Van	2010 26ft Paratransit Body on Chassis Van	1	1883	8	88,045	$82,000.00	8	Yes
RevenueVehicles	VN - Van	2012 26ft Paratransit Body on Chassis Van	3	1885-1887	6	120,396	$82,000.00	8	No
RevenueVehicles	VN - Van	2014 26ft Paratransit Body on Chassis Van	1	1888	4	69,453	$82,000.00	8	No
RevenueVehicles	VN - Van	2015 26ft Paratransit Body on Chassis Van	3	1889-1891	3	60,766	$82,000.00	8	No
RevenueVehicles	VN - Van	2017 26ft Paratransit Body on Chassis Van	2	1892-1893	1	19,476	$82,000.00	8	No
RevenueVehicles	VN - Van	2018 26ft Paratransit Body on Chassis Van	5	1872-1876			$82,000.00	8	No

Appendix B: Asset Condition Data

B2: Equipment Assets

Asset Category	Asset Class	Asset Name	Count	ID/Serial No.	Age (Yrs)	Vehicle Mileage	Replacement Cost/Value	Useful Life Benchmark (Yrs)	Past Useful Life Benchmark
Equipment	Facility Maintenance Vehicles	1990 Forklift	1	1862	28	N/A	$55,272.00	14	Yes
Equipment	Facility Maintenance Vehicles	2004 Floor Cleaner	1	1870	14	N/A	$47,256.00	14	Yes
Equipment	Facility Maintenance Vehicles	2010 Tractor	1	1859	8	N/A	$29,751.00	14	No
Equipment	Non Revenue/Service Automobile	2000 Minivan	1	1866	18	75,782	$49,960.00	8	Yes
Equipment	Non Revenue/Service Automobile	2000 Passenger Car	1	1867	18	57,205	$37,952.00	8	Yes
Equipment	Non Revenue/Service Automobile	2005 Passenger Car	1	1865	13	48,632	$20,624.00	8	Yes
Equipment	Trucks and other Rubber Tire Vehicles	1999 Ford Pickup	1	1861	19	15,067	$63,825.00	8	Yes
Equipment	Trucks and other Rubber Tire Vehicles	2009 Ford Pickup	1	1869	9	31,801	$57,805.00	8	Yes

Appendix B: Asset Condition Data

B3: Facilities Assets

Asset Category	Asset Class	Asset Name	Count	ID/Serial No.	Age (Yrs)	TERM Scale Condition	Replacement Cost/Value
Facilities	Administration and Maintenance	METroplex	1	MTROPLX	35	3	$6,182,084.00
Facilities	Passenger Facilities	Downtown Transfer Center	1	DWNTWN	10	3	$2,153,215.00
Facilities	Passenger Facilities	Stewart Park Transfer Center	1	STWRTPK	26	3	$53,125.00

Appendix C: Proposed Investment Project List

Project Year	Project Name	Asset/Asset Class	Cost	Priority
2018	Remanufactured Diesel Bus Acquisition (6)	RevenueVehicles	$1,725,000.00	High
2018	METroplex Roof Repair Phase 1	Facilities	$133,000.00	High
2019	METroplex Interior Lighting LED Upgrade	Facilities	$30,000.00	Medium
2019	METroplex Security Upgrade (Cameras)	Facilities	$25,000.00	Medium
2019	26ft Body on Chassis Van Acquisition (1)	RevenueVehicles	$68,000.00	High
2019	METroplex Roof Repair Phase 2	Facilities	$190,000.00	High

CITY OF BILLINGS FY 2019 - FY 2023 CAPITAL IMPROVEMENT PLAN
APPROVED BY COUNCIL ON MARCH 26, 2018

MET Transit

PROJECT NUMBER	TITLE	SHORT DESCRIPTION	PROJ. STATUS	7/01/18 - 6/30/19 FY '19	7/01/19 - 6/30/20 FY '20	7/1/20 - 6/30/21 FY '21	7/1/21 - 6/30/22 FY '22	7/1/22 - 6/30/23 FY '23	FY19-23 FUND TOTALS
				AMOUNT FOR EACH FUNDING SOURCE	AMOUNT FOR EACH FUNDING SOURCE	AMOUNT FOR EACH FUNDING SOURCE	AMOUNT FOR EACH FUNDING SOURCE	AMOUNT FOR EACH FUNDING SOURCE	
	Roof Replacement over Para Transit Van Annex - Phase 3	Replaces 25 year old roof over the parking bays used for the para transit vans. Phase III, Sections C & J.							
	Transit FTA Grant		*Approved*	$0	$0	$0	$160,000	$0	**$160,000**
	Total For Project		**Total**	**$0**	**$0**	**$0**	**$160,000**	**$0**	**$160,000**
	Roof Replacement-Bus Bays - Phase 2	Replaces 35 year old roof over the MET's original Bus Bay Area. Phase II, Sections B, D, & I.							
	Transit FTA Grant		*Approved*	$190,000	$0	$0	$0	$0	**$190,000**
	Total For Project		**Total**	**$190,000**	**$0**	**$0**	**$0**	**$0**	**$190,000**
	Bus Wash Improvements	The current facility is inadequate for the needs of MET. This project would look to add on and enhance the Bus wash facility.							
	Transit FTA Grant		*Approved*	$0	$0	$300,000	$0	$0	**$300,000**
	Total For Project		**Total**	**$0**	**$0**	**$300,000**	**$0**	**$0**	**$300,000**
	Exterior Security Enhancements	Due to recent vandalism and theft at the Metroplex, staff wants to incorporate security measures to mitigate these issues.							
	Transit FTA Grant		*Approved*	$25,000	$0	$0	$0	$0	**$25,000**
	Total For Project			**$25,000**	**$0**	**$0**	**$0**	**$0**	**$25,000**

Transit Funding Total Approved Projects		FY '19	FY '20	FY '21	FY '22	FY '23	FY19-23 FUND
Transit FTA Grant	**Approved**	**$215,000**	**$0**	**$300,000**	**$160,000**	**$0**	**$675,000**
Transit Local Funds	**Approved**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
		$215,000	**$0**	**$300,000**	**$160,000**	**$0**	**$675,000**

EQUIPMENT REPLACEMENT PLAN

Fiscal Year 2018

Equipment Replacement Plan

- The City of Billings Equipment Replacement Plan identifies replacement and funding guidelines for vehicles and equipment with a useful life in excess of three years and a cost of $5000 or more. Stationary equipment which is part of a facility Such as compressors, generators, air conditioners, etc. are exempt.

- On an annual basis the Equipment Replacement Committee will review vehicles and equipment scheduled for replacement, make required changes and submit recommendations for current or future replacements to the City Administrator.

- Equipment replacement guidelines are not intended to be an automatic replacement indicator. Guidelines are an indicator for consideration to recommend equipment for replacement. Because a piece of equipment is scheduled for replacement in a certain year, does not necessarily mean that it will automatically be replaced. Likewise, because a piece of equipment falls within the age and meter/miles guidelines does not necessarily mean that it will be recommended for replacement. Extended use options will be considered. Departments are required review and adjust replacement schedules annually, prior to committee review. Departmental review for replacement consideration include: Meter/Miles, Age, Usage, Condition, Cost, Obsolescence, Safety and Change of operations.

- The replacement plan will cover a 20-year time period and will be reviewed and updated annually. This would require many pieces of equipment to be replaced several times over the 20 years.

- Each piece of equipment will be assigned a replacement year, salvage value, and replacement cost.

- Salvage value is determined by past market analysis as a percentage of purchase price varied by equipment class. Average salvage values range from 15 to 20% of purchase price. Some exceptions will apply to obsolete, low demand, and high demand equipment.

- Estimated Replacement costs are determined by manufacturer average annual percentage increases ranging from 3 to 5%. Some exceptions will apply.

- Departments should ensure that replacement cost estimates are accurate. The amount entered in the Equipment Replacement Plan (ERP) must match the annual budget request amount. Budget amounts will be determined by taking total estimated replacement cost less estimated salvage value. Instances where the equipment is not traded in but sold through auction or other methods will be handled on a case by case basis. The affected department/division will work with

finance to determine the budget impact if any. Budget amendments if required will need Department Head and City Administrator approval prior to placing on the council agenda.
Any savings from purchase replacements will not be used to purchase other equipment.

- Any piece of equipment which has been approved for replacement must be disposed of unless otherwise approved by the committee for retention. It will be the respective department's responsibility to ensure that all replacement equipment is appropriately disposed of.

- Replacement funding is maintained by annual contributions for each piece of equipment based on the estimated life, salvage value and replacement cost. Internal Service and Enterprise funded equipment are excluded from the annual contribution funding process but are included in the replacement, cost projection and budgeting process of the program.

- The final plan document will total equipment by department, fund and replacement year including a grand total for all city funds.

- Departments requesting additional equipment or upgraded equipment replacements are required to obtain the additional funding through an **approved** Supplemental Budget Request submitted through the ERP committee.
    - *Example of "upgraded equipment":* If a department presently has a compact car and wishes to replace it with a full size pickup, the replacement funding calculations are based on the replacement cost of the compact car. The additional cost for the pickup will require a Supplemental Budget Request Form to be submitted.

- Change requests after the final plan is submitted will likely be deferred to the next budget year. Any changes to the final plan, such as equipment purchases, transfers, retentions or other revisions must be reviewed by the committee, recommend by majority vote and then requested in writing and submitted to the City Administrator for approval.

EQUIPMENT REPLACEMENT GUIDELINES

Class Code	Equipment Class	Years	Meter
1001	Autos - General Use	10-12	80-100k
1002	Police Patrol Cars	5-7	80-100k
1003	Pickups and Light trucks	7-12	80-100k
1004	SUVs	7-12	80-100k
1005	Trucks over 1 ton	10-15	60-100k
1006	Dump trucks	10-15	60-100k mi/ 7-12k hrs
1007	Trucks Refuse	7-10	7-12k hrs
1008	Trucks Sewer Jet	7-12	7-12k hrs
1009	Trucks Ariel Bucket	7-10	7-10k hrs
1010	Trucks Sander/Dump	10-12	60-100k
1011	Trucks Fire Aerial ladder	15-20	N/A
1012	Trucks Fire/Pumper	15-20	N/A
1013	Trucks Fire/Rescue	15-20	N/A
1014	Bus MET	12	300-500k
1015	Bus Paratransit	5	80-100k
1016	Bus Misc	10-20	100-500k
1017	Dozers	3-6	8-10k hrs
1018	Tractors	10-20	5-15k hrs
1019	Loaders	10-20	7-10k hrs
1020	Backhoes	7-15	7-10k hrs
1021	Compactor Landfill	3-5	8-10k hrs
1022	Graders	10-20	7-12k hrs
1023	Rollers	10-20	5-8k hrs
1024	Pavers	15-20	5-7k hrs
1025	Misc Const Equipment	10-20	4-15k hrs
1026	Small Equipment	3-15	N/A
1027	Non Powered Equipment	7-20	N/A
1028	Forklifts	15-20	5-10k hrs
1029	Cushman & Enforcement Scooters	10-15	25-35k
1030	Snow Blowers	10-20	N/A
1031	Snow Plows	10-20	N/A
1032	Street Sweepers	7-10	7-12k hrs
1033	Pumps/generators	7-20	N/A
1034	Air Compressors	10-20	N/A
1035	Mowers/Riding	5-10	3-10k hrs
1036	Attachments/accessories	5-20	N/A
1037	Electronic equipment	3-20	N/A
1038	Computer equipment	3-20	N/A
1039	Furniture/office equipment	3-20	N/A
1040	Shop equipment/machines	3-20	N/A

MET TRANSIT

MAINTENANCE POLICIES AND PROCEDURES

Billings METropolitan Transit

Updated 06/17/2016

PROGRAM GOAL & OBJECTIVES

It is the objective of the vehicle maintenance program to assure safe, reliable, and clean vehicles for operation in the MET Transit fixed route and paratransit service. The goal of the MET is to have maintenance performed in the most efficient and cost effective manner possible, utilizing preventative maintenance in lieu of unscheduled maintenance, thereby minimizing the number of preventable mechanical failures which would result in a disruption of MET fixed routed and paratransit service.

PROGRAM DESCRIPTION

SCHEDULED MAINTENANCE

The preventive maintenance program is performed in cycles as follows:

A INSPECTIONS are performed between 5,000 and 6,500 miles on buses (all based on type of power plant OEM and synthetic oil manufacturer guidelines) and 3,000 and 5,000 miles on the paratransit vans which includes oil changes, steering linkage and lines inspections, brake inspections, chassis lubrication, air cleaner inspections, all fluids are checked, filter replacements, hoses and belts are check for wear, bus air tanks drained, visual inspections of major components including electrical systems and cameras are made. Wheelchair ramps and lifts are also inspected, adjusted and lubed. Seating areas including the restraint areas for wheelchairs are inspected.

At every A inspection on a bus, an engine oil sample is drawn and submitted to CITGO labs for analysis. A sample of the transmission fluid is drawn from a bus on the B inspections and it is sent to CITGO Labs, for analysis. CITGO Labs furnishes copy of the reports online to the MET for analysis of the results.

B INSPECTIONS are performed between 13,000 and 14,000 miles on buses and on paratransit vans at 11,500 and 12,500 miles which includes transmission fluid and filter changes. In addition to the above, on buses, we also check coolant, drain oil box collector, check retarder accumulator, lifts, knells, and the suspension system. On vans we replace fuel filter, check electrical system, and wheelchair lift mounting system.

C INSPECTIONS are performed every 35,500 to 36,500 miles on the buses and for para transit vans at 29,500 to 30,500 miles. On buses we check engine operation, change differential grease, change air dryer, inspect lifts, inspect knells,

and inspect high-pressure lines. On the paratransit vans we check engine operation, check differential grease, and pack wheel bearings if necessary.

All PM maintenance intervals have been established based on work-experience by MET Transit or by manufactures recommendations to optimize the life of the vehicle and its components. All intervals fall within manufacturer recommended levels and/or lubrication standards within the transportation industry.

It is the policy of the maintenance department to inspect and repair all items and or components during PM maintenance, thereby minimizing unscheduled maintenance. Components are rebuilt to OEM specifications to ensure equal or better life. Most major components are tracked by the OEM serial number or are assigned a MET Transit inventory number. This allows the components to be tracked for original miles run and miles to next rebuild. This cycle is tracked for major components life.

A City wide computer system provides an accurate mileage tracking for each vehicle on a weekly basis which in turn triggers the vehicle preventative maintenance program. MET imputes the mileage daily into the program to provide the weekly report.

UNSCHEDULED MAINTENANCE

Unscheduled maintenance is any work necessary due to premature failure, and items that are impractical or impossible to include on a preventative maintenance schedule. These items may include electrical components, turn signals flashers, wiper motors, relays, valves, door motors, glass, and light bulbs. Although many of these items are checked during the PM inspections and are repaired/replaced when it is determined the useful life is nearing completion, many items have minimal indicators or none at all.

A daily review of coach inspection sheets submitted by vehicle operators, and all occurrences of mechanical failures, are analyzed. The analysis serves as the basis for unscheduled vehicle maintenance beyond that which is required for the actual repair of failed vehicles. The daily monitoring of individual vehicle mechanical performance can be effectively accomplished manually. The monitoring identifies deviations from expected component failure rates so adjustments can be made to inspection intervals. In most cases, timely inspections will detect the failure before they occur on the road.

PROGRAM PERFORMANCE

MET Transit operates 26 buses and 15 paratransit vans in revenue service utilizing a service facility with four repair bays. All fueling, cleaning, running repairs, minor

electrical repairs, inspections, and maintenance works is performed at the MET with the exceptions of body work and some technical component work. The MET Transit maintains an automated bus wash facility, which is adjacent to the main terminal complex. Each night vans and buses are fueled, fluids checked and cleaned (windows, floors, and seating).

The MET's fleet consists of NOVA 35' standard floor buses, GILLIG 35' standard floor buses, and Gillig 35' Low floor buses with Detroit or Cummins Diesel Engines, Carrier HVAC systems, and Allison and V-Drive Transmission power plants. In addition to the buses the MET operates a variety of paratransit vans. All of the MET's buses and vans have electronic engines that utilize computers to analyze performance. Power steering has replaced manually steering on all MET vehicles. All of the buses and all paratransit vans have wheelchair lifts or ramps to comply with the needs of the disabled that make use of mobility aids such as wheelchairs and walkers. MET Transit mechanics perform the majority of the maintenance on the vehicles with the exception of work that is farmed out and some of the transmission overhaul work is also farmed out.

RECORDS

All vehicle job orders (includes PM's) and related paperwork to the MET Fleet is keep in files adjacent to the MET Supervisor's office in lateral file cabinets. Also in this area are warranty records which are in separate files to allow MET Personnel to track and ensure that warranties have been satisfied. Past year records are boxed up and stored in a record retention area in a storage area.

Records for the maintenance of the facility and grounds are maintained in both the Transit Service Worker's office and the MET Supervisor's office. These records include PM's, inspections, and repairs.

QUALITY CONTROL

Quality control is accomplished through OEM suggestion, report data, and MET Supervisor's impute. No time frames are established for work performance while a vehicle component is worked on. It is the MET's policy that all jobs are completed in a reasonable amount of time based on problems found, and the amount of work required to complete the task what will enable the vehicle to be placed into revenue service in a safe, and reliable condition without the necessity of further repairs prior to the next scheduled maintenance. It is also MET Transit policy that the vehicle be inspected each and every time it is bought into the shop for any reason as time permits. All items in need of attention/repair are evaluated and either repaired or

noted and scheduled for repair at a future date.

MET Transit utilizes journeymen mechanics with extensive training both from OEM's, Transit/Vendor classes, and years of on-hands experience. MET mechanics perform all most all bus transmission overhauls. All paratransit van engine and transmission overhauls are farmed out to factory authorized outlets. MET mechanics do all AC work, electrical work, brake jobs, suspension/knell work, wheelchair and or ramp repairs, and by doing both scheduled and unscheduled work. MET mechanics take pride to see that their work is of high quality to keep a dependable MET fleet of buses and paratransit vans on the streets of Billings bringing MET passengers a reliable efficient service.

MAINTENANCE MANPOWER DISTRIBUTION

MET Transit operates one AM shift of two mechanics and one mechanic on the afternoon shift that are supervised by a MET Operations Supervisor that in turn reports to the MET Transit Manager. In addition to the three mechanics, the MET employs one service tech to do minor service works such as oil changes, services filters, and basic PM work. Tire work is handled by the mechanics with some assistance from outside tire shops. Most body work and glass repairs are farmed out.

MAINTENANCE PROTECTION AND REVIEWS

On a daily basis the MET Operations Supervisor, the three MET mechanics and the MET service worker meet to discuss equipment problems, workloads, and the scheduling of major component needs such as overhauls. The MET Operations Supervisor meets with the MET Transit Manager on a weekly basis on maintenance issues. A formal operations report is filed with the MET Transit Manager on a monthly basis summarizing the past months major maintenance activities and future maintenance needs. Budget needs are addressed on an annual basis or as unanticipated needs dictate. Labor needs are analyzed on a yearly basis also.

NON-REVENUE VEHICLES

Maintenance on the five non-revenue vehicles is performed by the three mechanics and service worker. Maintenance is performed on a mileage basis. Vehicles that do not operate on the streets, such as forklifts, floor machine, and lawn equipment that accrue low monthly mileage, receive maintenance on a time frame depending on use. All other vehicles receive schedule maintenance based on mileage. It is the

goals of the Maintenance Department to maintain vehicles in a dependable and safe operating condition.

NON-ROLLING STOCK

Non-rolling stock includes building, parking lots, grounds, poles/signs, shelters, and equipment

Maintenance is performed as follows:

1. **Buildings and parking lots are repaired as needed. The MET also adheres to the following preventative maintenance schedule.**
   -Fire Extinguishers inspected monthly by MET personnel
   Inspection performed by ARFF Fireman on a yearly basis
   Stevens Fire Protection does Hydro Test every 10 years
   -Building Emergency Exit Lights checked monthly
   -Waste Oil heater is serviced every 500 hours
   - Bus Wash – PM interval every six months
   - Exhaust Fans – PM interval every six months
   - Shop Compressor – PM interval every six months
   - Pneumatic Compressor (mechanical room) – PM interval every six months.
   - Heating & Cooling unit in day room serviced every six months
   - Air Circulator (boiler room & mechanical room) – annual service
   - Roof top heater and air conditioner (paratransit area) PM interval every six months
   - Overhead heaters (garage bays) – PM interval every six months
   - Sumps (garage bays, shop, bus wash) – PM interval every six months
   - Boilers – Daily check of all items on posted log sheet (gauges, circulator pumps, belt, etc.). Boiler water analysis performed every twelve months and closed system treatment added if needed.
   - Underground Fuel Tanks – Perform weekly leak tests. Test line tightness every year and perform cathodic protection check every three years. Test tank tightness every year.

2. **Landscaping and grounds maintenance is performed on a weekly schedule as needed. (Sprinkler system serviced annually)**

3. **Signs are repaired as needed.**

4. **Bus shelters are cleaned and inspected every two months and are repaired as needed.**

5. Floor Scrubber/Sweeper -

- To be done by 50 hours

Change Oil 10/30 W and Oil Filter
Fuel Lines/Tank/Cap Inspect for Leaks
Hoses/Clamps/Belts Inspect for Condition
Power Steering Inspect Hoses/Lines and Refill Reservoir as Needed
Exhaust System Inspect Connections and for Leaks
Starter Inspect Connections
Battery Inspect Connections/Clean Contacts/Lube Cable Contacts
Park Brake Condition
Brake Peddle Condition
Instruments/Gauges Inspection Condition/Operation
Tires/Wheels Inspect Condition
Body Inspect for Condition
Lights Replace as needed
Lube all Zerts
Steering Components Condition

- To be done by 100 hours

Replace Hydraulic Charge oil Filter
Check Operation and Condition of Debris Dump Box
Check Operation of Safety Features including Operators Seat
Check Condition of Brushes and Replace As Needed
Check Scrubber equipment/fittings/hoses

- To be done by 200 hours

Replace Hydraulic Oil with 10/30 W Oil and the In Tank Filter
Flush Radiator
Inspect Water Pump for Operation/Leaks/Fittings
Replace Primary Air Cleaner Element
Test Drive for Powerplant Performance, Steering, and Braking

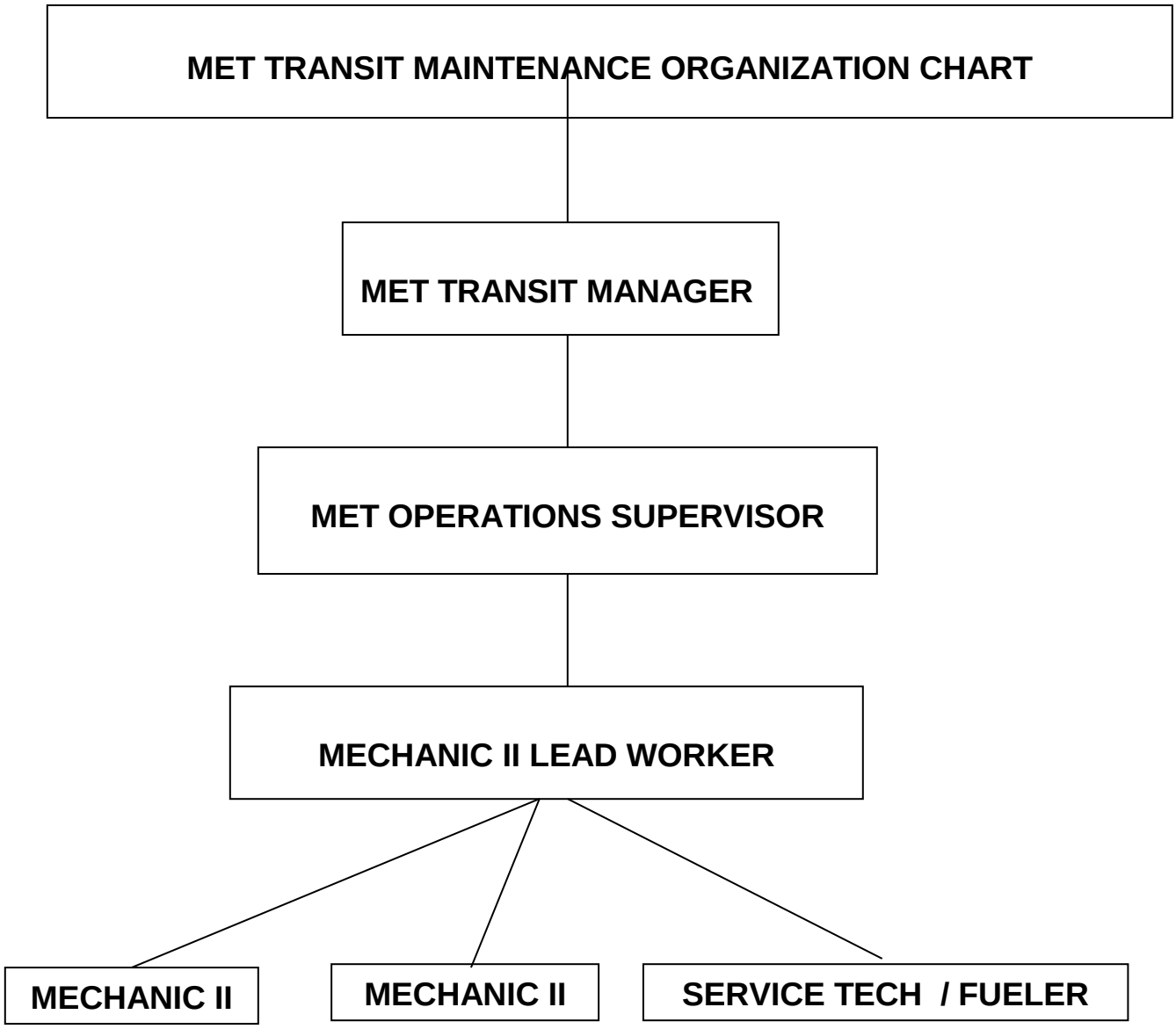
MAINTENANCE BUDGET

The Maintenance Budget consists of salaries, maintenance services, lubricants, fuels, parts, tires, and maintenance operating supplies, tools, training, safety equipment/supplies and building upkeep.

WARRANTY PROGRAM

When the MET Transit receives a new vehicle a separate file is set up to record and store any and all warranty work performed on the vehicle during the warranty period.

It is the MET's goal to maximize the use of the warranty on each vehicle as stated by the OEM. If a local warranty outlet in Billings is available an appointment is made with the outlet to have the work done and a copy of work order is obtained and filed in the Warranty Folder for the vehicle. If the MET shop performs warranty work the MET contacts the OEM for reimbursement for parts and labor. This situation is rare as most components on the MET vehicles have warranty outlets in Billings to do the work. The MET actively pursues the use of vehicles warranties to see that they are utilized to the fullest extent possible.



REVISED 06/17/2016

FACILITY NAME:	METroplex			OVERALL RATING:		4
Primary Level	***Rating***	**Secondary Level**	***Rating2***	**Components**	***Rating3***	
Substructure	3.25	Foundation	3.25	Walls		4
				Columns		4
				Slabs		3
				Paint/Sealant		2
Shell	3.540816	Superstructure	4	Columns/Pillars		4
				Walls		4
				Roof rafters		4
		Siding/Façade	3.6666667	Surface		4
				Paint		4
				Signage		3
		Bay Doors	3.3333333	Glass		4
				Paint/Finish		3
				Seals		3
				Motors		4
				Handles		4
				Trim		2
		Gutter system	4	Gutters		4
				Downspouts		4
		Windows	3.7142857	Seals		4
				Glass		4
				Open/close		4
				Paint/Finish		3
				Trim		3
				Hinges		4
				Signage		4
		Personnel Doors	3.5	Seals		3
				Handles		4
				Paint/Finish		3
				Hinges		4
				Locks		4
				Glass		4
				Trim		3
				Signage		3
		Roof	2.5714286	Surface		3
				Skylights		2
				Flashings		2
				Chimney Surrounds		3
				Sealants		2

				Hardware		3
				Paint/Finish		3
				Age		35
				Warranty?	N	
				Pooled water?	N	
				Proper drainage?	N	
				Channels/Gutters?	Drain Issues	
Interiors	3.541667	Walls	3.6666667	Drywall		3
				Partitions		4
				Paint/Finish		3
				Insulation		4
				Baseboards		4
				Trim		4
		Ceiling	3.25	Paint/Finish		3
				Tile condition		3
				Metal Frame		4
				Insulation		3
		Doors	3.8333333	Handles		4
				Paint/Finish		4
				Hinges		4
				Locks		4
				Glass		4
				Trim		3
		Signage	3.5	Clearly visible		4
				Paint/Finish		3
		Floors	3	Carpet		4
				Vinyl		3
				Concrete		3
				Paint/Finish		2
		Stairs\Ladders	4	Access issues	None	
				Railing		4
				Steps		4
				Paint/Finish		4
				Hardware		4
Plumbing	3.40625	Domestic Water	3.625	Sink Fixtures		3
				Toilet Fixtures		4
				Shower Fixtures		3
				Piping		4
				Insulation		3
				Water Heater (3)		4

				Water Heater Chimney		4
				Electrical and Controls		4
				Water Heat Energy Source	2 Gas, 1 Elec	
				Leaks?	2 Backflow Valves	
		Waste Water	3.75	Sink Drains		4
				Toilets		4
				Showers		3
				Piping		4
				Leaks?	None	
		Grey Water	3.25	Drains		4
				Grates		3
				Sumps		4
				Pumps		2
				Leaks?	None	
		Rainwater	3	Roof drains		2
				Grates		3
				Piping		4
				Insulation		3
				Leaks?	Multiple	
HVAC	3.8625	Boiler	3.8333333	Heating system		4
				Water System		3
				Controls		4
				Wiring		4
				Chimney		4
				Performance?		4
				Age	10?	
				Past repairs	None	
				Maintained regularly	Yes	
				Warranty	None	
				Fuel Used	Natural Gas	
		Rooftop AC/Heat (2)	3.8	Cooling system		4
				Heating System		4
				Controls		4
				Wiring		3
				Performance?		4
				Age	10, 20	
				Past repairs	Yes	
				Maintained regularly	Yes	
				Warranty	None	
				Refrigerant Used	?	
		Heat Pump	4	Heating system		4

		Cooling system		4
		Controls		4
		Wiring		4
		Chimney		4
		Performance?		4
		Age		15
		Past repairs	Yes	
		Maintained regularly	Yes	
		Warranty	None	
		Refrigerant Used	?	
	Waste Oil Heater	3.875	Heating system	4
			Pumps	4
			Drain	4
			Air System	4
			Controls	4
			Wiring	4
			Chimney	3
			Performance?	4
			Age	15
			Past repairs	Yes
			Maintained regularly	Yes
			Warranty	None
			Fuel Used	Waste Oil
	Gas Heater	4	Heating system	4
			Controls	4
			Wiring	4
			Chimney	4
			Performance?	4
			Age	15
			Past repairs	None
			Maintained regularly	Yes
			Warranty	None
			Fuel Used	Natural Gas
	Bay Heaters	3.6666667	Heating system	4
			Instruments	3
			Controls	4
			Wiring	4
			Chimney	4
			Performance?	3
			Age	10
			Past repairs	Yes
			Maintained regularly	Yes
			Warranty	None
			Fuel Used	Natural Gas

Fire Protection	3.857143	Sprinkler System	4	Sprinkler Heads		4
				Pipes		4
				Control System		4
				Water Supply		4
		Fire Alarm	3.7142857	Control System		4
				Audible Alarms		4
				Wiring/Eletrical		4
				Extinguishers		4
				Signage		3
				Visible Alarms		4
				Emergency Lighting		3
Electrical	3.995238	Distribution	3.8	Main feeds		4
				Main panels		4
				Sub-panels		3
				Breakers		4
				Feed Switches		4
		Interior Lighting	4	Fixtures		4
				Switches		4
				wiring/conduit		4
		Exterior Lighting	4.6666667	Fixtures		5
				Wiring/Conduit		4
				Housings		5
		Outlets	4	Fixtures		4
				wiring/conduit		4
		Security System	3.5	Sensors		3
				Control Panel		4
				Needs?	Camera System	
		Communications	4	Telephone		4
				Network		4
				Interfaces		4
				Needs?	N/A	
		Generators	4	wiring/conduit		4
				Mechanical Status		4
				Repairs?	Minor	
				Start time		0:02
				Age?		35
Major Equipment	3.864286	In-ground Hoist	3	Hydrauilc system		3

				Electrical System		4
				Chains/movement		2
				Age		35
				Functional Level		3
		Parts Washer	3.75	Water line		4
				Electrical system		4
				Gas system		4
				Body and Frame		3
				Age		35
				Functional Level		4
		Compressed Air System	4.2	Piping		4
				Fittings		3
				Compressor		5
				Auto Drains		5
				Reels		4
		Fueling System	4	Pumps		4
				Piping		4
				Tanks		4
				Electrical		4
		Lubrication System	3.8	Pumps		4
				Air System		4
				Reels		4
				Fittings		4
				Nozzels		3
		Bus Wash	3.8	Piping		4
				Pumps		4
				Tanks		3
				Wash system		4
				Electrical		4
				Leaks?	Yes, tanks	
		Exhaust Systems	4.5	Bay Units		4
				Pit Unit		5
Site	3.75	Parking	3.75	Surface/structure		3
				Paint		4
				Signage		4
				Drains		4
		Sidewalks	3.75	Wheelchair ramps/access		3
				Surface		4
				Paints		4

			Signage		4
	Other Development	3.5	Fencing		3
			Signage		4
	Landscaping	4	Surface		4
			Sprinkler System		4
			Drainage Problems	None	

FACILITY NAME:	Downtown Transfer			OVERALL RATING:		4
Primary Level	***Rating***	**Secondary Level**	***Rating2***	**Components**	***Rating3***	
Substructure	4	Foundation	4	Walls		4
				Columns		4
				Slabs		4
				Paint/Sealant		4
Shell	4.245	Superstructure	4	Columns\Pillars		4
				Walls		4
				Roof rafters		4
		Siding/Façade	4	Surface		4
				Paint		4
				Signage		4
		Windows	4.6	Seals		4
				Glass		5
				Paint/Finish		5
				Trim		5
				Signage		4
		Personnel Doors	4.625	Seals		4
				Handles		5
				Paint/Finish		4
				Hinges		4
				Locks		5
				Glass		5
				Trim		5
				Signage		5
		Roof	4	Surface		4
				Eaves		4
				Flashings		4
				Chimney Surrounds		4
				Sealants		4
				Hardware		4
				Paint/Finish		4
				Age		10
				Warranty?	None	
				Pooled water?	None	
				Proper drainage?	Yes	
				Channels/Gutters?	Ok	
Interiors	4.238095	Walls	4	Drywall		4
				Paint/Finish		4
				Insulation		4
				Baseboards		4

				Trim		4
		Ceiling	5	Paint/Finish		5
				Insulation		5
		Doors	4.4285714	Seals		4
				Handles		5
				Paint/Finish		4
				Hinges		4
				Locks		5
				Glass		5
				Trim		4
		Signage	4	Clearly visible		4
				Paint/Finish		4
		Floors	4	Carpet		4
				Vinyl		4
				Concrete		4
				Paint/Finish		4
		Ladder	4	Rungs/Structure		4
				Hatch		4
				Paint/Finish		4
				Hardware		4
Plumbing	4.05	Domestic Water	4.2	Sink Fixtures		4
				Toilet Fixtures		4
				Piping		4
				Insulation		4
				Water Heater		5
				Water Heat Energy Source	Electric	
				Electrical and Controls		4
				Leaks?	None	
		Waste Water	4	Sink Drains		4
				Toilets		4
				Piping		4
				Leaks?	None	
		Grey Water	4	Drains		4
				Grates		4
				Leaks?	None	
		Rainwater	4	Roof drains		4
				Grates		4
				Piping		4

				Leaks?	None	
HVAC	4	Heat Pump	4	Heating system		4
				Cooling system		4
				Instruments		4
				Controls		4
				Wiring		4
				Performance?		4
				Age		10
				Past repairs	Yes	
				Maintained regularly	Yes	
				Warranty	None	
				Refrigerant Used	?	
Fire Protection	4	Fire Alarm	4	Audible Alarms		4
				Wiring/Eletrical		4
				Extinguishers		4
				Signage		4
				Visible Alarms		4
				Emergency Lighting		4
Electrical	3.791667	Distribution	4	Main feeds		4
				Main panels		4
				Sub-panels		4
				Breakers		4
				Feed Switches		4
		Lighting	4	Fixtures		4
				Switches		4
				wiring/conduit		4
		Outlets	4	Fixtures		4
				wiring/conduit		4
		Security System	3	Sensors		3
				Control Panel		3
				Needs?	Camera Fixes, additional sensors	
		Communications	4	Telephone		4
				Network		4
				Interfaces		4
				Needs?	Wifi	
		Solar Panels	3.75	Face/cell status		4

				wiring		4
				conduit		4
				Monitoring System		3
Site	4.3125	Parking	4	Surface/structure		5
				Paint		3
				Signage		4
				Drains		4
		Sidewalks	4.5	Wheelchair ramps/access		4
				Surface		5
				Paints		4
				Signage		5
		Other Development	4.75	Canopies		5
				Shelters		5
				Benches		5
				Signage		4
		Landscaping	4	Surface		4
				Drains		4
				Sprinkler System		4
				Drainage Problems	None	

FACILITY NAME:	Stewart Park			OVERALL RATING:		4
Primary Level	***Rating***	**Secondary Level**	***Rating2***	**Components**	***Rating3***	
Substructure	3.625	Foundation	3.25	Walls		4
				Columns/Pads		4
				Slabs		3
				Paint/Sealant		2
		Basement	4	Insulation		4
				Floor Underpinnings		4
				Crawl Space		4
Shell	4.027778	Superstructure	4	Walls		4
				Roof rafters		4
		Siding/Façade	4	Surface		4
				Paint		4
		Gutter system	4	Gutters		4
				Drains		4
				Downspouts		4
		Windows	3.8333333	Seals		4
				Glass		4
				Open/close		4
				Paint/Finish		3
				Trim		4
				Hinges		4
		Personnel Doors	4.3333333	Seals		4
				Handles		5
				Paint/Finish		4
				Hinges		4
				Locks		5
				Trim		4
		Roof	4	Surface		4
				Eaves		4
				Flashings		4
				Chimney Surrounds		4
				Sealants		4
				Hardware		4
				Paint/Finish		4
				Age	25?	
				Warranty?	None	
				Pooled water?	No	
				Proper drainage?	Yes	
				Channels/Gutters?	Ok	

Interiors	3.95	Walls	4	Drywall		4
				Paint/Finish		4
				Insulation		4
				Baseboards		4
				Trim		4
		Ceiling	4	Paint/Finish		4
				Insulation		4
		Doors	3.8	Handles		4
				Paint/Finish		3
				Hinges		4
				Locks		4
				Trim		4
		Floors	4	Vinyl		4
				Paint/Finish		4
Plumbing	3.916667	Domestic Water	4	Sink Fixtures		4
				Toilet Fixtures		4
				Piping		4
				Insulation		4
				Water Heater		4
				Water Heat Energy Source	Electric	
				Electrical and Controls		4
				Leaks?	None	
		Waste Water	4	Sink Drains		4
				Toilets		4
				Piping		4
				Leaks?	None	
		Grey Water	3.75	Drains		4
				Grates		3
				Sumps		4
				Pumps		4
				Leaks?	None	
HVAC	4	Electric AC	4	Cooling system		4
				Controls		4
				Wiring		4
				Performance?		4
				Age		10
				Past repairs	None	
				Maintained regularly	yes	
				Warranty	None	

				Refrigerant Used	??	
		Baseboard Heat	4	Heating system		4
				Controls		4
				Wiring		4
				Performance?		4
				Age		25
				Past repairs	None	
				Maintained regularly	Yes	
				Warranty	None	
				Refrigerant Used	??	
Fire Protection	3.25	Fire Alarm	3.25	Audible Alarms		1
				Extinguishers		4
				Signage		4
				Emergency Lighting		4
Electrical	4.083333	Distribution	4	Main feeds		4
				Main panels		4
				Sub-panels		4
				Breakers		4
				Feed Switches		4
		Lighting	4.3333333	Fixtures		5
				Switches		4
				wiring/conduit		4
		Outlets	4	Fixtures		4
				wiring/conduit		4
		Security System		Needs?	Cameras	
		Communications	4	Radio		4
				Needs?	Phone/Netw	
Site	3.6	Parking	3.75	Surface/structure		4
				Paint		3
				Signage		4
				Drains		4
		Sidewalks	3.25	Wheelchair ramps/access		4
				Surface		3
				Paints		3
				Signage		3
		Other Development	3.4	Kiosk		4
				Shelters		2

			Fencing	4
			Benches	4
			Signage	3
	Landscaping	4	Surface	4
			Sprinkler System	4
			Drains	4
			Drainage Problems?	No