



Franklin Regional Transit Authority

Operations Facility Needs Assessment

June 2012

Weston&Sampson

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*planning, permitting,
design, construction,
operation, maintenance*

Weston&Sampson®

25 June 2012

Tina M. Cote
Administrator
Franklin Regional Transit Authority
12 Olive Street
Greenfield, MA 01301

Re: FRTA Operations Facility Needs Assessment

Dear Ms. Cote,

We are very pleased to submit the attached report which presents the analysis completed by our Consultant team, and our conclusions regarding the feasibility of upgrading the existing Operations Facility to meet your current needs, our assessment of the optimum facility required to support FRTA operations, and our assessment of the suitability of a number of sites in Greenfield for locating a potential new FRTA Operations Facility.

Please feel free to contact me if you have any questions regarding the enclosed materials.

We would welcome the opportunity to work with you and your staff to implement the much needed upgrade to your Operations Facility.

Very truly yours,

WESTON & SAMPSON



D. Michael Hicks, AIA
Director of Facilities and Architecture

enclosure

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EXECUTIVE SUMMARY

Weston & Sampson was commissioned by the Franklin Regional Transit Authority to complete a number of tasks:

1. Prepare an independent assessment of the existing conditions of the FRTA Operations facility at 382 Deerfield Street, Greenfield MA,
2. Investigate whether it was feasible / prudent to invest capital funds in modernizing the existing facility, and establish a probable development budget for such an initiative,
3. Prepare a Functional Space Needs Assessment for an Operations Facility that will best serve the Authority's current and anticipated future activities, prepare a prototypical facility layout, and prepare a development budget for this new facility, and
4. Assess the suitability of a number of potential sites for a new Operations Facility.

This report details the work completed by our Consultant team. In summary:

Weston & Sampson has concluded that the existing facility does not serve the needs for FRTA well, and that it will require a substantial amount of repair and modernization work to address a series of significant functional, technical and code-related issues.

We are of the opinion that modernization of the existing facility will cost approximately \$5 M, but the functional limitations of the current site and building are so significant that we do not recommend this option be considered.

Our assessment of the projected space needs for an efficient, safe, code compliant Operations Facility to meet current and projected needs for the foreseeable future are slightly more than 67,000 sf of building. We project the development cost for such a facility to be slightly more than \$16 M, not including the cost of land.

Our investigation of six parcels of available land in Greenfield has proven that a site for a new Operations Facility should have at least 6.25 acres of area free of zoning, environmental or other regulatory restrictions. In order to allow for some future growth and change, a larger parcel would be preferable.

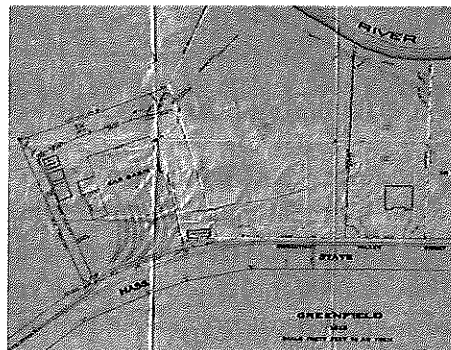
EXISTING OPERATIONS FACILITY

History of Development

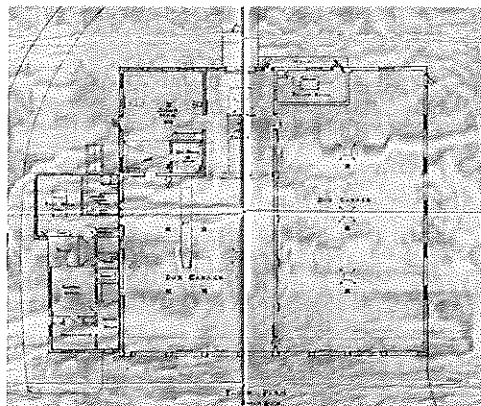
Our understanding of the history of the existing Operations Facility has been derived from a number of sources. FRTA provided us with a folder of documents that included a limited number of drawings and technical specifications from renovation projects at the Operations Facility in 1913, 1945 and 1967.

From the internet we obtained a copy of the MA State Auditor's Report from 2007 which described the consolidation of FRTA and GMTA. We also located a web site called "Rainfan" which included a listing of the local public transit service providers in Western MA (web.me.com/willvdv/chirailfan/aatma5.html).

From these documents we were able to determine that the existing Operations Facility was in existence in 1913 as an 8-bay maintenance facility for the Connecticut Valley Street Railway, which operated street cars between Greenfield and Turner's Falls until 1924. That year CVSR was superseded by GMTA, and street car service was suspended in favor of buses. Therefore, we know that the existing facility was originally designed to service street cars, and the majority of the existing building (8 of the existing 9 vehicle bays, plus the administration wing) is at least 100 years old.



In 1945 there were some relatively minor modifications made to a portion of the Facility, in the area where the current shops are located.



In 1967 the 9th maintenance bay, where the vehicle wash equipment is located, was constructed.

That is the extent of information we were able to gather about the history of the present Operations Facility.

Existing Conditions

Site

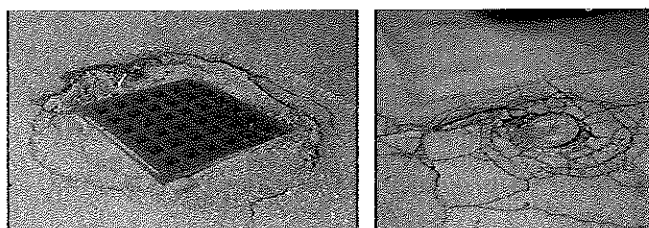
The existing site at 382 Deerfield Street is considerably smaller than required to allow FRTA to operate with any reasonable degree of productivity. The site does not support any separation between circulation of visitor vehicles, employee's private vehicles, and FRTA's operations vehicles – a critical planning criterion for any modern fleet operations facility. The smallness of the existing site also means that all space not taken up by buildings functions as a parking lot during service hours (visitors, employee vehicles, buses between routes) which creates a significant level of conflict.



The site is not secure. There is an easement across the Operations Facility site which provides access to the Waste Water Treatment plant located to the south, along the Green River. This easement prevents FRTA from erecting a fence around the facility or the operations yard, which means the facility, and any vehicle left out of doors, is vulnerable to vandalism. In addition, since the site is open to the street, the general public regularly uses it as a convenient turn-around point, which introduces an unpredictable, additional vehicular circulation component – one that can be particularly dangerous.

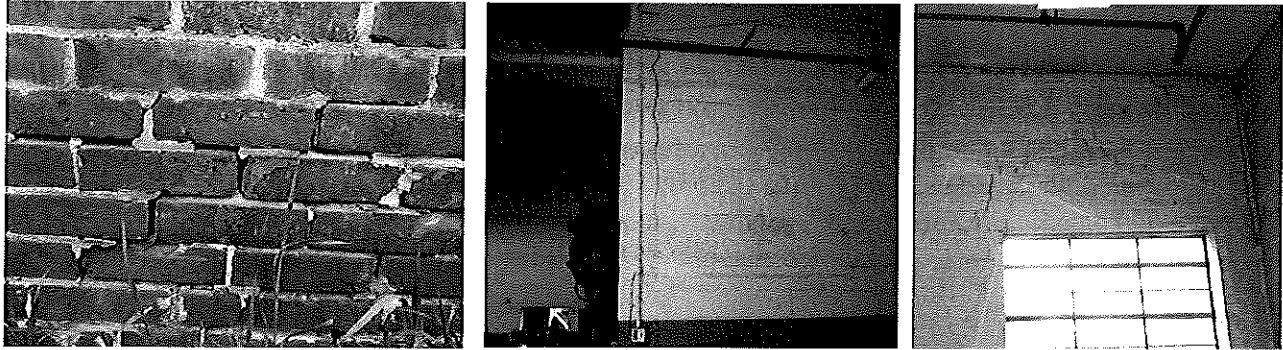
The site is subject to flooding, as was demonstrated during last fall's heavy weather season. At one point the Green River engulfed the access drive behind the Operations Facility, and significantly hindered FRTA operations.

The site is unstable. There is a continuing problem with pavement subsidence around the Operations Facility. The subsurface below pavements in many locations continue to sink, which causes cracking and deterioration of pavement surfaces, and failures around manholes and other subsurface structures. This problem is an on-going maintenance problem.



Building Envelope

Most of the building envelope (roof and walls) is more than 100 years old. In many places the existing exterior brick masonry shows signs of significant deterioration, including diagonal cracking (which points to building settlement), spalling, and failed mortar joints. Interior concrete block masonry also shows signs of diagonal cracking, some of which has been repaired.



The building envelope is not insulated, which places a huge financial burden on the Authority during the heating season due to heat loss through roofs, walls, windows and doors.

The roof membrane over the administration wing is reported to be at least 30 years old - beyond its anticipated useful life – and is a maintenance headache. Replacement is required. The age of the roof over the maintenance bays is unknown.

Building Layout

The building is too small to properly house current staff and maintenance operations. Management spaces function as the primary circulation path for all employees arriving for the day, which creates continual distractions and makes it difficult to have confidential conversations.

Security within the Facility is a problem because there is so little space for storage, and because employees pass through the maintenance bays to gain access to the buses in order to start revenue service. Proper security for parts and tools is not possible, which makes them vulnerable to theft.

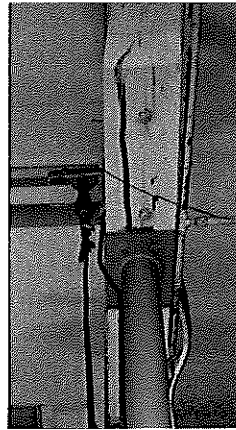
The fact that drivers must pass through active maintenance bays to reach their assigned buses also creates a safety issue.

Toilet, locker and shower facilities in the building are substantially inadequate, and do not meet the current state plumbing code or accessibility code. It is worth noting that a floor plan of the Facility from 1945 shows a T/L/S room of moderate size located in the Administration Wing, accessed from the Maintenance bays. That space was converted at some later time to its current function as a dispatch room.

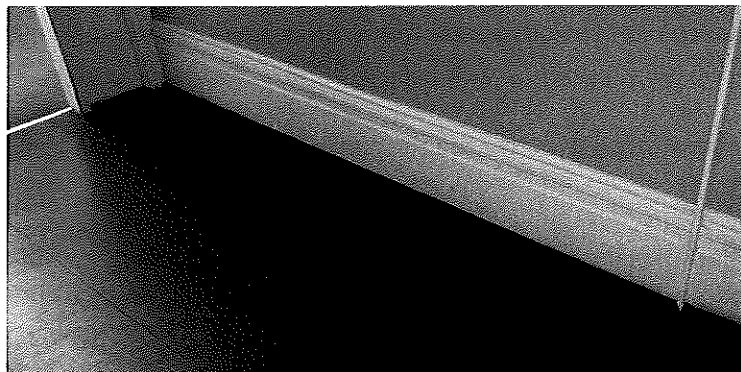
Building Structure

As noted above, there are multiple areas of exterior and interior masonry that show signs of deterioration and/or settlement. While there have been repairs to concrete interior block walls, there is evidence of continue diagonal cracking that will require more attention in the future.

In addition, there is evidence of failures in a number of elements of the original wood roof structural frame. In the western portion of the 1913 building which houses maintenance bays 5-8 and the boiler room, the line of original 12" x 12" wood columns have significant longitudinal splits, which reduce their load carrying capacity. In addition, the 12" x 12" x 6' wood column headers which transfer gravity loads from the roof rafters to the columns also have longitudinal splits that appear in some cases to pass through the entire thickness of the member. In the eastern portion of the 1913 building which houses bays 1-4 the original wood columns have been replaced with steel lally columns, presumably because of the splitting of the original wood columns had become so advanced to require action. Unfortunately, the original wood column headers remain, and nearly all show signs of advanced splitting.



At one location within the administration wing, a section of the existing wood framed floor structure (over a utility basement) is separated from the adjacent wall and has begun to sag. This condition is further evidence of ongoing settlement problem that appears to be a consistent issue throughout the facility.



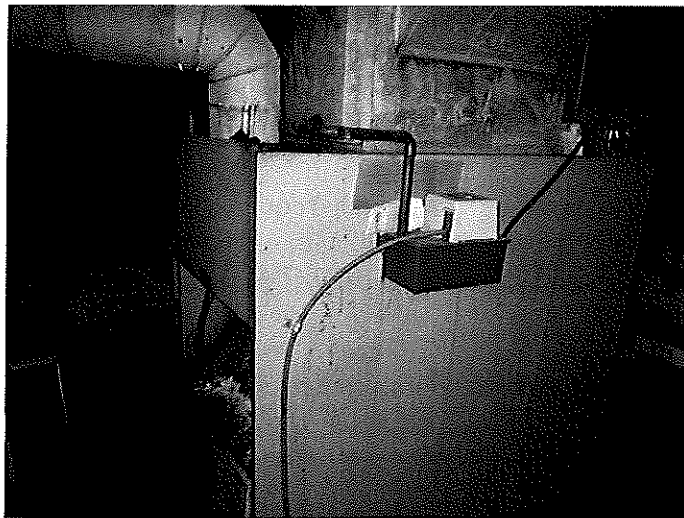
It is important to note that the current State Building Code requires that when an existing building undergoes improvements beyond repair, the structural frame must be analyzed to assure its capacity to carry snow, wind and seismic loads stipulated in the current Code. Clearly, should even a modest program

of upgrades be planned for the existing Operations Facility, the existing structural elements would require a substantial amount of replacement and/or reinforcement.

Building Systems

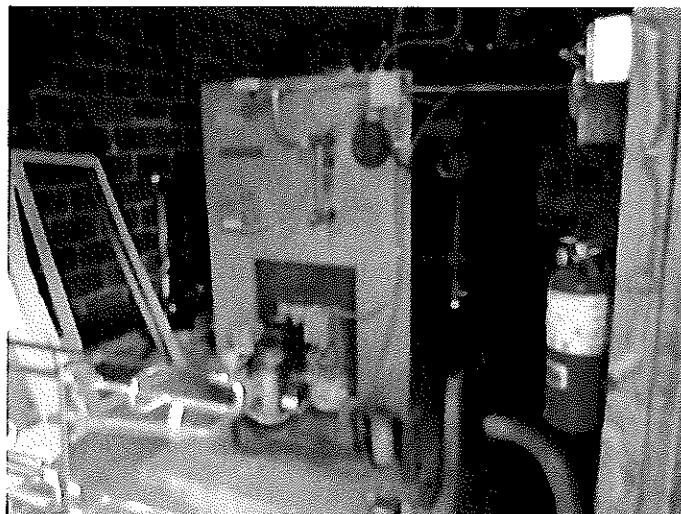
HVAC SYSTEMS

The office area is served by a single zone oil fired furnace with split system air conditioning. The furnace is beyond its useful life and in need of replacement. There are several rooms in the office area that are cold in the winter and hot in the summer due to one single thermostat location.

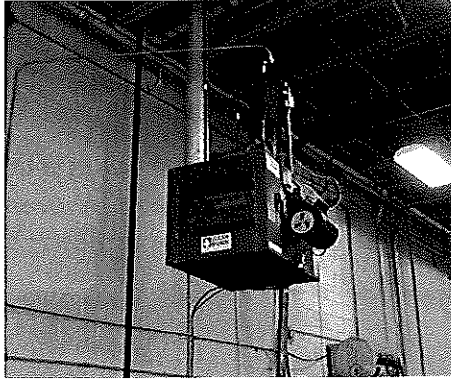


Office Area Furnace / Air Conditioner

The Workshop and Bay areas are heated by a single HB Smith steam boiler that is approximately 20 years old. The boiler is rated for approximately 1,000,000 btu/hr and feeds steam unit heaters in the Workshop and Bays 1-5. There is also a waste oil fired unit heater in Bay 5 that consumes all waste oil recovered at this facility.



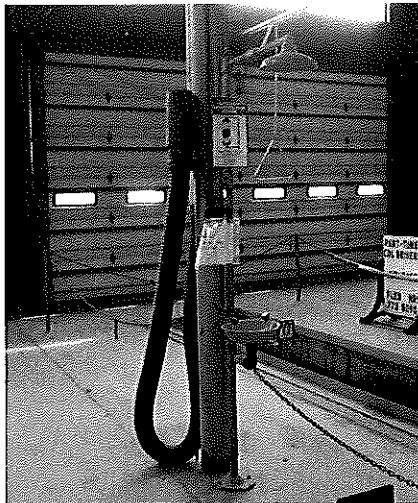
Steam Boiler



Waste Oil Burner / Unit Heater

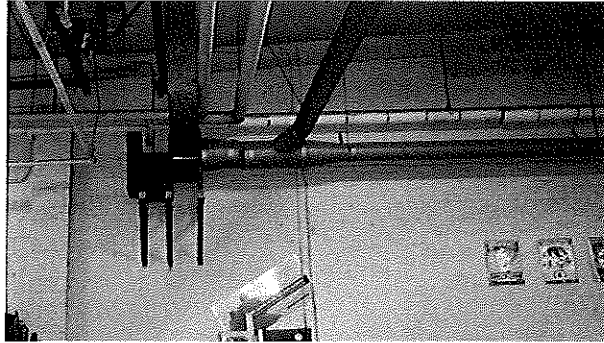
The steam boiler is said to be temperamental, requiring frequent maintenance and tuning. Space temperature control for the Bay areas is lacking, with only one thermostat controlling the boiler. Several of the existing steam unit heaters are not working and some of the Bay areas are quite cold during extreme winter conditions.

The Workshop area is equipped with a general exhaust fan used during welding operations, but there is no means of mechanical makeup air for the exhaust. The office above the workshop has a wall AC unit for summer cooling and air transfer grilles for heating. There is no fresh air supply for this office.



Vehicle Exhaust Connection Hose

Bay areas used for vehicle maintenance are equipped with vehicle exhaust systems. The exhaust fans are old but still operational. The Bay areas also have carbon monoxide monitoring tied into control of rooftop exhaust fans.



Vehicle Exhaust Blower Mounted on Wall in Maintenance Bay

ELECTRICAL SYSTEM

Normal Distribution:

The facility is fed from Western Massachusetts Electric Company (WMECO) pole mounted transformers on WMECO span pole #6443-1, located along the southeast side of the building. These transformers are fed via primary overhead feeders from WMECO pole #6443 on Deerfield Street.



WMECO Pole #6443-1 with Pole Mounted Transformers

The secondary service entrance conductors are run overhead to a weatherhead located on the rear office portion of the building and down to the main service fused disconnect switch in the maintenance shop.



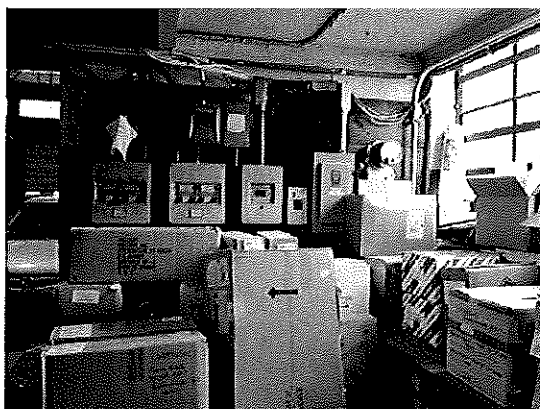
Exterior Electrical Service Entrance Weatherhead

The main service fused disconnect switch is manufactured by General Electric and is rated at 400A, 208Y/120V, 3-Phase 4-Wire. There is a utility CT cabinet adjacent to the main service disconnect switch with the utility meter located in the same room on the adjacent wall. The area in front of the main service

disconnect and distribution was blocked by work tables and benches in violation of Massachusetts Electric Code (MEC) Article 110.26(A)(1).



Main Electric Service & Distribution



Electric Distribution

The electrical distribution is comprised of panelboards of several different manufacturers (i.e. Yankee Electric, General Electric and Square D). The facility also contains small circuit breaker enclosures which appear to be served from the main panelboard. It also appears that a tap was made to the main service feeders to serve panelboards located in the garage addition.

The buildings power distribution is in poor condition and has reached the end of its useful life. Requests for utility metering information have been forwarded to the building owner. This information will help determine the building's power consumption and peak demand use in order to assess the building's available spare electric service capacity.

Emergency Power :

This facility does not contain an emergency generator.

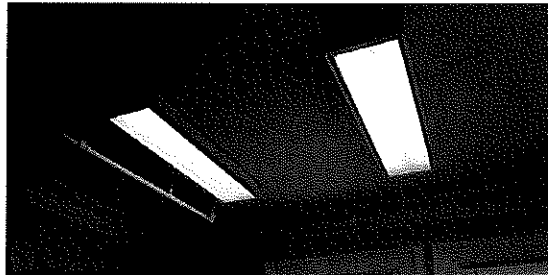
Lighting (Normal):

The office area of this facility consists of surface and recessed mounted fluorescent, acrylic lens fixtures.

The garage area lighting consists primarily of fluorescent, high-bay type fixtures. In general, light levels appear sufficient for the function and activity of the areas served. The office and garage area lighting fixtures appear to have been installed within the last 12 years. It was apparent that several of the newer fixtures have damaged lenses and/or failed lamps. The overall condition of the interior lighting is fair.



Office Area Lighting (w/incandescent exit sign)



Private Office Area Lighting



Garage Area Lighting

Lighting control throughout the facility is comprised of manually operated, local toggle switches. There were no occupancy sensors or other automatic lighting control equipment installed which is in violation of current Massachusetts Building Code Chapter 13 - Energy Efficiency.

There is no building mounted exterior lighting. Exterior lighting consists of HID pole mounted fixtures

provided by the utility company.

Lighting (Emergency):

The interior and exterior portion of this facility does not contain any emergency lighting . The lack of emergency lighting through the egress corridors and at egress exits/exit discharges is in violation of Massachusetts Building Code Chapter 10 – Means of Egress.

The facility primarily contains incandescent type exit signs with integral battery back-up and non-illuminated exit signs. Newer LED-type exit sign signs with integral batteries have been installed in recent years.



Maintenance Shop Exit Signage (LED and non-illuminated type exit signs)

Non-electric exit signs do not illuminate upon loss of power and there is no emergency lighting fixture located nearby to illuminate the signage during this condition. This condition is in violation of Massachusetts Building Chapter 10 – Means of Egress.

Fire Alarm:

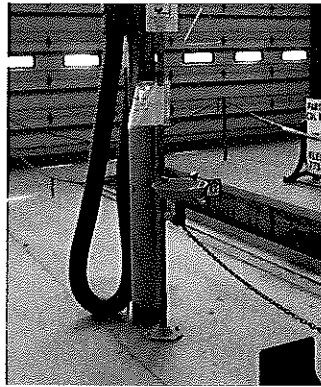
The facility currently does not contain a fire alarm system. The sprinkler system has a water flow switch located at the service entrance point which transmits an alarm to the fire department through the building mounted Master Box which is tied to the City's municipal loop. It does not appear that the sprinkler system is monitored or that annunciation is provided throughout the facility in violation of Massachusetts Building Code Chapter 9 – Automatic Sprinkler Systems. Annunciation appears to be limited to a bell and water motor gong located on the building exterior.



Fire Alarm Master Box #955

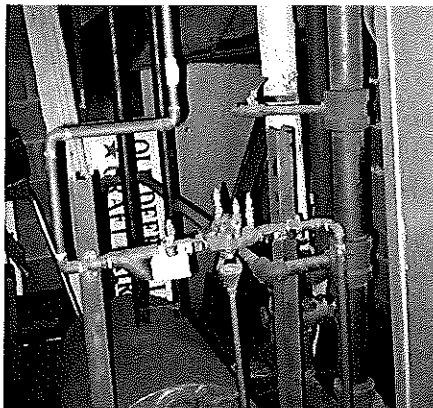
Plumbing Systems:

The entire facility has only one Men's and one Woman's restroom located in the office area. There are no restrooms convenient to the Bay areas. The existing restrooms are not handicap accessible. There are emergency eyewash/shower stations in the Bay areas but they are fed with cold water. Current codes require tempered water supply for these emergency stations.



Emergency Eyewash Shower

Makeup water supply for the steam boiler is equipped with a backflow preventer, as required by code. Wash stations for vehicle cleaning are also protected by backflow preventers. The wash bay has a trench drain system that had standing water in it at the time of our survey. We were unable to determine if this was due to drain plugging or improper pitch of the trench drain. The wash bay drainage system is equipped with a code required oil/water separator system with proper access for cleaning. Floor drains in other Bay areas are capped to prevent accidental discharge of vehicle fluids. The maintenance bays are also equipped with a compressed air distribution systems for pneumatic tools with a relatively new air compressor.



Water Backflow Preventer

Fuel Storage Systems:

There is an existing gas/diesel fueling station located on site. The underground tank is a divided tank with 2,000 gallons of gas and 10,000 gallons of diesel storage. The tank and piping are double wall systems with required leak detection. It appears that the system meet current code requirements.

In addition to gas/diesel storage, there is a separate 5,000 gallon underground fuel oil tank for the steam boiler system. This tank is single wall construction with single wall piping to the boiler room.



Vehicle Fueling Station

Fire Protection:

The building is equipped with an automatic fire protection sprinkler system. It appears that all areas of the facility have sprinkler coverage. The sprinkler risers are not equipped with code required backflow preventers.



Fire Protection Riser in Office Area

Conclusions

HVAC Systems:

For continued use of this facility, the Consultant recommends replacement of all existing HVAC systems. We would recommend starting with the steam boiler replacement, converting the heating system from steam to hot water. This would enable individual temperature control zones for the office areas as well as each individual Bay and Workshop area. The new system would have multiple temperature control zones with individual circulator pumps and/or zone valves. It would be preferable to have two boilers with some redundancy in case of failure.

For the office area, we would recommend a new energy efficient variable air volume (VAV) system with individual room temperature controls. Unit heaters and/or unit ventilators would be provided for the Bay areas, as well as improved vehicle exhaust and ventilation systems.

Electrical System

Overall the facility's electrical systems described have reached the end of their useful lives. Any substantial future renovations made to this facility will require a complete electrical upgrade which should include, but not be limited to, the following: new normal interior and exterior lighting fixtures, new automatic lighting control systems, new life safety systems (i.e. emergency lighting and fire alarm) and a completely new power distribution system.

An increase to the utilities' electrical service will be determined upon the available power consumption data and extent of future building renovations.

Plumbing Systems:

The facility is in need of additional restrooms, locker and shower facilities. New restrooms and showers would need to be handicap accessible.

Emergency eyewash/shower systems will need to be fed with tempered water, per current code requirements. This would entail the installation of new water heaters and a circulation system for all existing and/or new emergency stations.

Standing water issues in the trench drain for the wash Bay would need to be addressed. If it is determined that the existing trench is improperly pitched, then new trench drains would most likely be required.

Fuel Storage Systems:

The existing 5,000 gallon fuel oil storage tank for the heating system would need to be replaced with a new double wall tank and piping system. The new system would require leak detection for the tank and piping.

Fire Protection:

The existing sprinkler system would need to be retrofitted with new code approved backflow prevention devices. We would also need to check existing coverage and sprinkler density to ensure current code requirements.

OPERATIONAL SPACE NEEDS ASSESSMENT

The objective of this portion of the study was to develop space needs recommendations and design guidelines to assist the FRTA in the development of a cost-effective, technically-operational, and state-of-the-art Transit Vehicle Maintenance Facility with the flexibility to accommodate future growth and changing technology.

Approach

The approach to accomplish these space needs or programmatic objectives included the following steps that were performed:

- Oriented project team to project development history and overall FRTA requirements.
- Interviewed selected employees to understand critical assumptions, rationale, etc.
- Collected existing data such as:
 - Current inventory of buses and support equipment,
 - Skill resources and staffing levels, and
 - Control/security.
- Interviewed management and key users regarding operational attributes they would prefer to see in new areas.
- Documented operation/design objectives for workflow parameters. Considered such things as:
 - Work layout,
 - Work flow (indoors),
 - Work flow (outdoors),
 - Minimization of delay times,
 - Control points,
 - Security, and
 - Administrative and support functions.
- Modeled all areas to consider design capacity, resource requirements, and throughput for the year 2035.
- Described layout in narrative form.
- Reviewed narrative with all involved departments.

The study proceeds with our space needs and programming and planning recommendations and concludes with a conceptual floor plan site plan, and building plan configurations. The plans, building footprints, and construction cost estimates were prepared by W&S.

Standards and Justification for Future Space Needs Requirements

To provide the future space requirements, projections were made based on historical data, estimates by Transit employees, and industry standards. The following chart presents guidelines W&S has used successfully on similar sized Transit operations.

Basic Requirements

Toilet/locker room	25 square feet per person
Lunch room	15 square feet per person
Manager's office	200-250 square feet
Administrative office	100 to 200 square feet
Large bus parking	750 square feet
Small bus parking	250 square feet
Bus circulation	25 percent of storage space

Employee Space Requirements

The number of employees used to develop proposed facility space needs is 36 (8 administration/supervisory, 16 full-time drivers - 2 of whom also function as dispatchers, 7 part-time drivers and 5 mechanics/utility workers). Given these figures, the lunch room and men's and women's toilet/locker areas were calculated at 15 & 25 square feet per employee respectively. Provisions should be made for ADA (Americans with Disabilities Act) providing acceptable washrooms and common areas including lockers and shower privacy stalls.

Growth in Number of Buses and Equipment

With future growth and increasing fuel prices, the FRTA will be required to provide additional transit services in the future. This growth will require additional buses and Paratransit buses necessary to meet the increased service demand. To speculate today, and over design the bus storage facility would be a mistake however the facility is planned to expand in the future. We did however program in some short term grow (one extra bus storage bay, one future Road Supervisor, one future Clerk / Office person). The vehicle storage portion of the facility can be expanded in the future to house new rolling stock.

Warm Bus Storage Requirements

It is our experience that all buses should be parked in warm storage. This is done to optimize quick starting and improve engine, transmission, and hydraulics performance in freezing weather conditions. It improves response time through operators not having to wait for units to warm up, scrape ice off windows, and it further reduces the possibility of injury to operators by preventing falls from icy running boards. It provides a warm and dry environment that encourages operators to perform pre-trip inspection and minor preventive maintenance procedures in each respective bay, which is key to promoting rider safety and longer bus life expectancy

Bus Maintenance Facility

A well-designed, modern bus maintenance facility is critical for keeping buses serviceable and safe. In the program plan we have taken into account the changing technology in the industry. The facility is also planned for overhead lifting because many of the many fuel systems that are currently, and will continue to be, be roof mounted. Other special equipment required are adequate bus lifts and special ventilation to carry off smoke created by engine exhaust and periodic welding.

Bus Wash Bay

The condition and appearance of bus promotes a good public image, but more importantly, regular washing of a transit vehicle lengthens the service life of bus. For this reason, we have programmed a hybrid, automatic bus wash system featuring an on demand underbody wash system.

Building Configuration

The shape of the new Transit Maintenance Facility and Fleet Maintenance Facility provides direct supervision of department employees in a centralized management configuration. The Transit Maintenance Facility also provides offices for shift start-up and shift end supervision. The buildings will provide good security from the public, and between the shop and office personnel. More importantly, all areas allow for future expansion to all major areas of the facilities and separate noisy shop operations from the administrative offices.

Mezzanine

The bus maintenance area will provide 1,625 square feet of mezzanine space located above the bus maintenance parts room, tool storage and corridor. This area provides above-ground storage for slow moving parts, heavy components such as engines and transmissions and space for building mechanical systems. Use of a mezzanine reduces the first floor footprint and reduces construction cost for that portion of the facility from \$300.00 per square foot to \$90.00 per square foot

State and Local Compliance

The new facility will need to comply with the:

- MA State Building and Plumbing Codes
- MA Environmental Regulations
- Environmental Protection Agency (EPA)
- MA Architectural Access Board Regulations
- Americans with Disabilities Act (ADA)
- Local Zoning Ordinances
- Occupational Health and Security Act (OSHA)

Security

The new facility and yard will require security and monitoring through the installation of perimeter fencing and the use of video cameras with 48-hour tape-over capability. We would suggest installing cameras on the four outer corners of the building and interior shots of the public/employee entry points, bus maintenance area, quick service line and bus storage.

Ventilation

Sophisticated ventilation systems are required in the Transit Maintenance Facility parking structure and quick service lane and bus wash and bus maintenance areas. Poor ventilation resulting from the lack of carbon monoxide/dioxide sensors and undersized fans poses many health, safety, efficiency, and comfort problems. The ventilation system must work on its own. The use of insulated overhead doors and windows to vent exhaust is inefficient and unreliable.

RECOMMENDED PROGRAMMING AND PLANNING MASTER PLAN REQUIREMENTS

The purpose of this document was the development of future space needs and design criteria for a new FRTA Operations Facility. Also included is a prototypical facility layout which demonstrates the interrelationships between the numerous functional elements as well as a preferred vehicular circulation pattern that will generate operational efficiencies.

The vehicle storage and maintenance portions of the proposed new facility are anticipated to be constructed either from conventional structural steel frames including joists, truss girders, beams and columns which are skinned with factory insulated steel skinned metal panels, or from a pre-engineered steel frame and site assembled insulated metal panel system. The administrative portion of the facility may be constructed of masonry bearing walls, or masonry veneer over steel frame, with Low E insulated glass in order to present a less industrial image to the public, should the budget allow. Where abuse resistance is required, Interior walls will be concrete block, with other partitions being drywall over metal studs. Areas are to be designed for:

- Long-term consideration for the ease of facility maintenance.
- Maximum flexibility for future changes.
- Provide effective work environment, with considerations for safety, comfort, and a positive influence to employees.
- Centralization of common functions.
 - Electrical
 - HVAC
 - Plumbing
- Minimum insulation values, by Code, as noted below, with higher levels recommended:
 - Roof assembly R 20
 - Walls R 20.5

The facilities will have the following considerations addressed:

- Interior finish must resist high abuse.
- Vehicular traffic flow should be counter-clockwise whenever possible.
- Where ever the final placement of the facility is established, a traffic control study should be conducted at any intersections near the facility. Based on the results, traffic signals, acceleration, and deceleration lanes may be required.

HVAC systems should be considered for dependable, energy-efficient, mechanically-related equipment.

- Heating should provide:
 - Office and personnel areas, 72 deg. F.
 - Shop areas, 68 deg. F.
 - Warm bus storage areas, 50 deg. F.
 - All other areas in Transit Maintenance Facility must operate at 72 deg. F.

The specific lighting requirements will be addressed throughout the course of the study for the individual work areas with consideration given to:

- Energy-efficient lighting outside the facility.
- Higher foot candle levels in the employee parking area.
- Fluorescent lighting in offices, work spaces, automotive parts, and central stores, in the Transit Maintenance Facility.
- True color balanced (such as, metal halide) lighting in the bus repair shop. This light selection is extremely important, because metal halide lighting provides true color recognition for mechanics working on complex wiring harnesses (wires are color coded for identification purposes).

Provide 110 V AC waterproof receptacles spaced approximately every 20' around the exterior of the Transit Maintenance Facility.

Areas often overlooked are the identifications signs or pictures that provide additional safety and direction throughout the facilities. Consideration should be given to identification of, but not limited to:

Reception	Bay Numbers
Building Identification	Bus Wash
Commercial Bus Traffic	Compressed Air
Janitorial Storage	Hazardous Materials
Lunch Room	Electrical Room
Emergency Shower	Eye Wash
Entrance and Exit	Flammable Material
Handicapped	Hot Water
Consumable Fill Ports	Locker Rooms
Lunchroom	Lubrication Distribution
No Smoking Areas	Office Identification
Receiving	Restricted Areas
Tire Storage	Trash
Eye Protection Areas	Welding Outlet

Pipes, conduit, and exposed major lines must be color-coded and labeled to indicate:

Antifreeze – Blue	Engine Oil (EO) – Green
Water – Light Blue	Gear Oil (GO) – Purple
Transmission Oil (TO) – Black	Hydraulic Oil (HO) – Brown
Chassis Grease (CG) – White	Sprinkler System – Red
Compressed Air (CA) – Exposed Galvanized Pipe	Natural Gas (GAS) – Light Orange

Traffic Surfaces

Requirements should be provided for the following:

- Striping of all road surfaces.
- All asphalt to consist of 6" base stone, 4" asphalt/stone intermediate mix, and 2" asphalt topcoat.
- 8" concrete ingress and egress aprons to bus repair and bus storage areas.

Safety Equipment

Requirements should be provided for the following in applicable areas:

- Fire extinguisher and markings per codes.
- First aid kits located in all areas.
- Firefighting equipment per code and at the fuel island.
- Shower with "D" rings.
- Eye wash stations.

Communication

Requirements should be provided for the following:

- Internal communication network to the following areas: yard speakers (general paging), parking structure, bus maintenance, wash bay, and Fuel/Service lane.
- Direct 911 line from the Fuel Service Lane to the Town's 911 Dispatch Center.

- Internal and external communication networking to offices and departmental support shops.

Interior Paint Finish

Requirements should be provided for the following:

- Painted surfaces to be of a high quality, durable easily cleanable material, or of an epoxy material if so indicated in the individual areas.

GENERAL REQUIREMENTS FOR NEW CONSTRUCTION OF THE TRANSIT MAINTENANCE FACILITY

Public Vestibule Square Feet 56
Identification Key: 101

Requirements should be provided for the following:

- 9' high ceiling is adequate.
- Nonskid floor surface
- Boot scraper.
- CCTV monitored

Reception Lobby Square Feet: 151
Identification Key: 102

Requirements should be provided for the following:

- Secured area.
- 9' high ceilings are adequate.
- Air conditioned and heated space.
- Vinyl or tile floor covering.
- 110 Volt Service.
- Customer services counter with security glass between Lobby and adjacent Office.
- 1 CAT 5 jack for future kiosk computer links.
- Door to main office access controlled adjacent Office.

Dispatch Square Feet: 108
Identification Key: 103

Requirements should be provided for the following;

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Air conditioned and heated space.
- Connection for the two-way radio communication system.
- Vinyl or tile floor covering.
- Counter tops on three sides of office with sufficient file storage space below.
- Window to outdoors to oversee temporary bus parking
- Security windows to areas #102 and #104.
- Provide bus bar of electrical outlets.
- 2 CAT 5 jacks.
- Connections for all printer, phone, and computer links.

Employee Vestibule

Square Feet: 52

Identification Key: 104

Requirements should be provided for the following:

- Secured entry via swipe card.
- 9' high ceilings are adequate.
- Air conditioned and heated space.
- Vinyl or tile floor covering.
- 110 Volt Service.
- 1 CAT 5 jack for future kiosk computer links.
- CCTV monitored.

Road Supervisor Office (Future)

Square Feet: 184

Identification Key: 106

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Air conditioned space.
- Connection for the two-way radio communication system.
- Vinyl or tile floor covering.
- Windows.
- Provide bus bar of electrical outlets.
- 2 CAT 5 jacks.
- Connections for all printer, phone, and computer links.

Lost and Found Storage

Square Feet: 81

Identification Key: 111

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Securable
- Standard shelving.

Office Clerk (Future) Square Feet: 108
Identification Key: 113

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Air conditioned space.
- Vinyl or tile floor covering.
- 2 CAT 5 jacks.
- Connections for all printer, phone, and computer links.

Coat Closet Square Feet: 24
Identification Key: N/A

Requirements should be provided for the following:

- Shelf and closet rod
- 9' high ceilings are adequate.

Unisex Bathroom Square Feet: 60
Identification Key: 118

Requirements should be provided for the following:

- Secured area.
- 9' high ceilings are adequate.
- ADA compliant.
- Air conditioned and heated space.
- Ventilation fan.
- Standard hand washing sinks.
- Fluorescent lighting.
- Ceramic tile floor.
- Epoxy paint on all other surfaces.
- One commode.
- Mirror.
- Towel dispensers.
- Hand Dryer.
- Provide 110V service.
- Soap dispenser.

General Manager Office Square Feet: 233
Identification Key: 117

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Air conditioned and heated space.
- Connection for the two-way radio communication system.
- Vinyl or tile floor covering.
- Provide bus bar of electrical outlets.
- Dry mark board.
- Connections for all printer, phone, and computer links.
- 4' x 8' bulletin board.
- 2 CAT 5 jacks.
- Shades or curtains on windows.
- Cable TV connection.
- Provide bus bar of electrical outlets.

Operations Manager Office Square Feet: 186
Identification Key: 105

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Air conditioned space.
- Connection for the two-way radio communication system.
- Vinyl or tile floor covering.
- Windows.
- Provide bus bar of electrical outlets.
- 2 CAT 5 jacks.
- Connections for all printer, phone, and computer links.

Copy/Mail/Supplies Square Feet: 192
Identification Key: 114

Requirements should be provided for the following:

- Secured and enclosed work area.
- 9' high ceilings are adequate.
- Air conditioned and heated space.

- Vinyl or tile floor covering.
- Provide bus bar of electrical outlets.
- 2 CAT 5 jacks.
- Connections for all printer, phone, and computer links.
- Continuous counters, under counter, open storage and wall mounted open storage.

Server/Telephone Room Square Feet: 75
Identification Key: 116

Requirements should be provided for the following:

- Secured and enclosed area.
- 9' high ceilings are adequate.
- Air conditioned and heated space.
- Vinyl or tile floor covering.
- Static free environment.
- Provide bus bar of electrical outlets.
- Rack for servers.
- Wall mounted board for telephone panels.

Storage Closet Square Feet: 24
Identification Key: N/A

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Standard shelving.

Conference Room Square Feet 234
Identification Key: 112

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Connection for the two-way radio communication system.
- Air conditioned and heated space.
- Flat floor with durable tile floor covering.
- 4' x 8' bulletin board.
- 4' x 8' secured posting board.
- 2 CAT 5 jacks.
- Dry marker board 3' x 6'.

- Cable TV connection.
- In floor electrical outlets 110 V.
- Ceiling mounted Power Point projector
- Drop down electric projection screen.

Central File Square Feet: 322
 Identification Key: 107

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Air conditioned and heated space.
- Vinyl or tile floor covering.
- Provide bus bar of electrical outlets.
- 2 CAT 5 jacks.
- Connections for all printer, phone, and computer links.

Cash Counting Room Square Feet: 126
 Identification Key: 108

Requirements should be provided for the following:

- Secured and dedicated space
- 9' high ceilings are adequate.
- Air conditioned and heated room.
- Heavy duty vinyl covered counter tops capable of supporting 250 lbs.
- CCTV monitored.
- Provide bus bar of electrical outlets.
- Vinyl or tile floor.
- Ventilation fan.

Bus Cleaning Supplies / Equipment Square Feet: 216
 Identification Key: 109

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Securable area.
- Ventilation fan.
- 6' wide double door accessing room.

- Fluorescent lighting is adequate.
 - Cat5 connections in room
 - 110 volt electrical service
 - Connection to air supply.
 - Heated area.
 - Pitch floor slightly to center floor drain.
 - Flat concrete floor with light broom finish.
 - In the event of a fuel spill floor drain should be connected to room # 141 fuel containment sump, if a sump is required by code.
 - Steel work station as pictured below
 - Industrial shelving for the storage of cleaning supplies. A standard vented flammable storage cabinet would work well for this application as pictured below.
-
- American Vacuum model PB 15S or equal system as pictured below.
-
- Wall hung Veeder Root fuel monitoring system (or equal) in this room.
-
- Piping for fuel dispensing and tank farm shall terminate in this room.
 - Install a fuel hose connection through the wall to room 129.
 -

Training & Break Area

Square Feet: 815

Identification Key: 110

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Air conditioned space.
- Fluorescent lighting.
- Connection for the two-way radio communication system.
- Flat floor with durable tile floor covering.
- Cable TV connection.
- Vending service area providing floor drainage, electrical, and water service. 25 amp service.
- Countertop with sink, providing hot and cold water, with garbage disposal.
- Full-size refrigerator and ice cube machine.

- Electrical service at counter for appliances.
- Provide 220V service for oven/range.
- Seating for 36 employees in a class room setting utilizing stackable chairs.
- Design room so it can be partitioned off in the event they want to have two training session going on at the same time.
- CCTV monitored.

T & B Storage Room Square Feet: 82

Identification Key: 127

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Fluorescent lighting.
- Air conditioned space.
- Vinyl or tile floor covering.
- Shelving.

Driver's Locker Area

Square Feet: 116

Identification Key: 125

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Air conditioned space.
- Fluorescent lighting.
- 30 half sized uniform lockers
- Vinyl or tile floor covering.
- Epoxy paint on all other surfaces.

Janitorial Closet

Square Feet: 86

Identification Key: 124

Requirements should be provided for the following:

- Ceramic tile floor.
- Epoxy paint on all other surfaces.
- Fluorescent lighting.
- Janitors slop sink.
- Towel dispensers.

- Provide one hose bib.
- Floor drain.
- Adequate shelving for supplies.
- Provide 110V service.
- Heated and well ventilated.

Men's Toilets/Lockers/Shower Square Feet: 346
Identification Key: 121 & 122

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Air conditioned space.
- Standard and ADA compliant sinks.
- Standard and ADA compliant urinals
- Standard and ADA compliant commodes.
- Towel dispenser.
- One hose bib
- Fluorescent lighting.
- 6 Full changing lockers with slanted tops.
- Provide area for uniform storage.
- Changing benches.
- One individual shower stalls with privacy area.
- Ceramic tile floor.
- Floor drains.
- Epoxy paint on all other surfaces.
- Provide 110V service.

Women's Toilets/Lockers/Shower Square Feet: 256
Identification Key: 120

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Air conditioned space.
- Standard and ADA compliant sinks.
- Standard and ADA compliant urinals
- Standard and ADA compliant commodes.
- Towel dispenser.
- One hose bib
- Fluorescent lighting.
- 4 Full changing lockers with slanted tops.

- Provide area for uniform storage.
- Changing benches.
- One individual shower stalls with privacy area.
- Ceramic tile floor.
- Floor drains.
- Epoxy paint on all other surfaces.
- Provide 110V service.

Electrical/Mechanical Room Square Feet: 225
Identification Key: 119

Requirements should be provided for the following:

- Flat concrete floor and sealed.
- 9' high ceiling.
- Fluorescent lighting.
- Provide standard 110V AC through the area.

Shop Supervisor Office Square Feet: 177
Identification Key: 126

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Air conditioned space.
- Fluorescent lighting.
- Connection for the two-way radio communication system.
- Vinyl or tile floor covering.
- Window to shop and warm bus storage.
- Provide bus bar of electrical outlets.
- Connections for all printer, phone, and computer links.
- Hydronic heat as an option.

Shop Library Square Feet: 135
Identification Key: 123

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.

- Air conditioned space.
- Fluorescent lighting.
- Connection for the two-way radio communication system.
- Vinyl or tile floor covering.
- Window on shop hallway.
- Shelving and laydown table.
- Provide bus bar of electrical outlets.
- Connections for all printer, phone, and computer links.
- Hydronic heat as an option.

Parts Room Square Feet: 600
Identification Key: 133

Requirements should be provided for the following:

- Secured area.
- 9' high ceiling is adequate.
- Flat floor with light broom finish and sealed.
- Man door accessing the shop.
- Double door accessing the Maintenance Bays – one leaf fixable in closed position.
- Fluorescent lighting is acceptable.
- Heavy-duty shelving.
- Light fixtures to run perpendicular to shelving.
- Heated area.
- Hydronic heat as an option.

Shop Tool Storage Square Feet: 380
Identification Key: 134

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Smooth floor and sealed.
- Shelving.
- Hydronic heat as an option.

Fare Box/Upholstery Shop Square Feet: 380
Identification Key: 134

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Smooth floor and sealed.
- Shelving.
- Work benches.
- Provide bus bar with electric outlets
- Hydronic heat as an option.

Stairwell to Mezzanine Square Feet: 72
Identification Key: N/A

Requirements should be provided for the following:

- Stairwell with hand rails.
- Nonskid steps.
- Roof access from the mezzanine.

Utility/Maintenance Bay Square Feet: Total 1,680
Identification Key: 135-1

Requirements should be provided for the following:

- The intent of this area is for the repair of large equipment and welding and fabrication.
- Floor should be pitching just enough to promote drainage toward the floor drain at exterior overhead door.
- Floor to smooth and sealed.
- Floor drain located 2' in from the edge of the overhead door.
- Bollards protecting the wall structure both inside and outside the building.
- Metal halide lighting.
- Walls sealed and painted with white epoxy paint.
- 220 Volt service evenly spaced along walls.
- 110 Volt service evenly spaced along walls.
- Air service evenly spaced along walls and between doors.
- Air service need to be designed for 1" impact wrenches.
- Ventilation system activated by unsafe carbon monoxide and carbon dioxide levels. Manual override is required on the system.
- Industrial sized bus exhausts extraction system located on walls. System must be designed to remove bus exhaust from large trucks and equipment with exhaust stacks up to 6" diameters.
- Insulated overhead doors are to be 16' x 16' wall climbing doors.
- Push button door operator.
- Overhead door are to be of the highest manufactures quality.
- Windows in overhead door are desired.

- Area must be serviceable by overhead bridge crane which reaches the storage mezzanine.
- Man door to the exterior.
- Hydronic heat as an option.

Bus Repair Bay (3) Square Feet: 1,265

Identification Key: 135-2, 135-3, 135-4

Requirements should be provided for the following:

- The intent of this area is for the repair of smaller equipment.
- Floor should be pitching just enough to promote drainage toward the floor drain at exterior overhead door.
- Floor to be troweled smooth and sealed.
- Floor drain located 2' in from the edge of the overhead door.
- Bollards protecting the wall structure both inside and outside the building.
- Metal halide lighting.
- Walls sealed and painted with white epoxy paint.
- 220 Volt service evenly spaced along walls.
- 110 Volt service evenly spaced along walls.
- Air service evenly spaced along walls and between doors.
- Air service need to be designed for 1" impact wrenches.
- Ventilation system activated by unsafe carbon monoxide and carbon dioxide levels. Manual override on the system.
- Industrial sized bus exhausts extraction system located on walls. System must be designed to remove bus exhaust from large trucks and equipment with exhaust stacks up to 4" diameters.
- Insulated overhead doors are to be 16' x 16' wall climbing doors.
- Push button door operator.
- Overhead door are to be of the highest manufactures quality.
- Windows in overhead door are desired.
- Man door to the exterior.
- Reinstall FRTA-owned light bus lift.
- New light bus lift.
- Lubrication distribution station located between light bays providing the following products and services; engine oil, chassis grease, transmission oil, hydraulic oil water, air and 110 volt service.
- Hydronic heat as an option.

Eye Wash Station and Sink Square Feet: N/A
Identification Key: 135

Requirements should be provided for the following:

- Per applicable code for eye wash and shower with D ring.
- Wall hung Bradley wash fountain or equal.
- Hydronic heat as an option.

Service Vehicle Parking / Storage Square Feet: 1,312
Identification Key: 144

Requirements should be provided for the following:

- Parking for non-bus vehicles
- Storage shelving
- Hydronic heat as an option.

Oil Distribution / Waste Oil System Square Feet: 374
Identification Key: 138

Requirements should be provided for the following:

- Secured and dedicated space.
- 9' high ceilings are adequate.
- Air conditioned space.
- Connection for the two-way radio communication system.
- Smooth and sealed concrete floor.
- Double door to exterior.
- Fire door to shop floor.
- 110 v outlets along walls.
- Designed for the storage of flammables.
- 250 gallons of engine, transmission, hydraulic oil. These products will be dispensed to the shop floor in high pressure seamless tubing. Tanks to be filled from outdoors via exterior wall mounted valves.
- Chassis grease and 80/90/140 gear oil will also be dispensed to shop floor.
- Air supply.
- Heated area.
- Containment in the event of spills.
- Door floor sills are not allowed so oil barrels can be rolled out to the shop floor.
- Hydronic heat as an option.

Tire Storage Square Feet: 884

Identification Key: 136

Requirements should be provided for the following:

- Secured area.
- 9' high ceilings are adequate.
- Fluorescent lighting.
- Flat floor with light broom finish and sealed.
- Double door accessing the Maintenance Bays.
- Fluorescent lighting is acceptable.
- Heated area.
- Fire suppression system per local code for new and used tires.
- 8' x 8' electric overhead door to exterior.
- Bollards protecting the door openings.
- Tire racking.
- Hydronic heat as an option.

Equipment Storage Square Feet: 340

Identification Key: 136

Requirements should be provided for the following:

- Heavy duty shelving..
- Hydronic heat as an option.

Storage Mezzanine Square Feet: 1,622

Identification Key: above 133, 134, 141

Requirements should be provided for the following:

- Cast concrete slab over corrugated deck.
- Secured area. For access by mechanics only.
- Heated.
- Fluorescent lighting is adequate over this area.
- Paint and seal walls.
- Natural lighting is required.
- Flat floor with smooth finish sealed and painted grey.
- 110 volt services on all walls.
- 220 Volt service.
- Rotary screw compressor with one additional reservoir.
- Compressor capacity engineered at time of design.

- If hydronic heat is selected, boilers will be located on mezzanine.
- Hot water heater.
- Mezzanine must have code approved removable sectional railings with toe boards to allow placement of parts on the mezzanine by forklift from Maintenance Bay floor.
- Each section must be designed so one person can remove a section.

Drive Isle

Square Feet: N/A

Identification Key: 139

Requirements should be provided for the following:

- 20 to 22' wide.
- Center self cleaning drain running the length of the building.
- Install a 20' deep collection manhole midpoint of floor drain for solids to collect.
- Floor to be a light broom finish.
- Drained connected to oil water separator.

Large Bus Storage

Square Feet: N/A

Identification Key: 139

Requirements should be provided for the following:

- Natural light, either through clerestories or translucent wall panels
- Sky lights are not acceptable.
- Energy efficient lighting.
- Zone control for lighting.
- Low level lighting on walls so operators have can perform pretrip inspections
- Provide wheel chocks to prevent bus from encroaching on walkways when parking.
- Floor painted parking bay lines
- Floors to have a light broom finish and sealed.
- Floor should be pitching just enough to promote drainage toward the floor drain in the drive isle.
- Bollards protecting the wall structure both inside and outside of the buildings overhead doors.
- Walls sealed and painted with white epoxy paint.
- Ventilation system activated by unsafe carbon monoxide and carbon dioxide levels. Manual override on the system.
- Ventilation system can be mounted on mezzanine over the parts room.
- Insulated overhead doors are to be 16' x 16', to be of the highest quality. Manual chain operated openers in the event of power failure.
- In-ground loop detectors to open doors and an electronic eye to hold door in the up position until bus passes. Then time out and close the door.
- Windows in overhead door are desired.
- Man door to the exterior per code.

Van Storage Square Feet: N/A
Identification Key: 145

Requirements should be provided for the following:

- Same as Large Bus Storage

Detailing Supplies Storage Square Feet: 253
Identification Key: 140

Requirements should be provided for the following:

- Per applicable code for eye wash and shower with D ring.
- Wall hung Bradley wash fountain or equal.
- Hydronic heat as an option.

Posting Corridor and Drinking Fountain Square Feet: 264
Identification Key: 132

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Light illuminating posting board.
- Two lockable message posting board.

Bus Wash Bay Square Feet: 1,320
Identification Key: 130

Requirements should be provided for the following:

- Touchless, Gantry-style, fresh-water Drive through automated bus wash system capable of cleaning the front, roof and back of bus with high pressure water. Roof top shaker curtain is not acceptable.
- High pressure underbody wash with a manual on/off selection switch located inside room #109
- Presoak system.
- All wash tower components must be coated with a durable galvanized coating
- Floor mounted wheel guide rails shall be anchored 8" deep in concrete. Guide rails must not make contact with tire rims or handicap ramp attachment hardware.
- Spot free reverse osmosis rinse
- Stainless steel door hinge pins
- Walls painted white epoxy paint
- Radiant heating however spark ignition systems are not acceptable

- Drain floor to center floor drain.
- Install a trench per bus wash manufactures specification.
- Floor to be a light broom finish.
- Low level wall mounted lighting.
- Energy efficient overhead lighting.
- All electrical services must be water tight fixtures.
- One 1 ½" hose connection at midpoint of bay. Provide 30 feet of hose on a manually operated hose take up reel
- Electrical operated overhead door at entry point to room # 139
- Overhead door opener push button shall be located in room # 130.
- Overhead Door to be 14' x 15' wall climbing design or roll up as long as it will not interfere with the wash equipment towers.
- Overhead door are to be of the highest quality, utilizing the highest torsion spring duty cycle and stainless steel hardware.

Wash Bay Equip., Chem. Storage Square Feet: 187

Identification Key: 131

Requirements should be provided for the following:

- 9' high ceilings are adequate.
- Fluorescent lighting.

Fueling and Pre-Cleaning Bay Square Feet: 1,450

Identification Key: 129

Requirements should be provided for the following:

- Drive through configuration.
- Fluid containment design per local fire code.
- Install a 20' deep collection manhole for solids to collect.
- Floor to be a light broom finish.
- Walls painted with white epoxy paint.
- Low level wall mounted lighting.
- Energy efficient overhead lighting.
- All electrical services must be water tight fixtures.
- Heated area.
- Spark ignition heating systems are not acceptable.
- Hydronic heat as an option.
- E.J. Ward fuel dispenser on east interior wall.
- Install a 20 foot long fuel hose compatible with transit bus fuel port filler neck.
- Electrical operated overhead door at entry point to room # 130

- Overhead door opener push button shall be located in room # 129.
- Overhead Door to be 14' x 15' wall climbing design or roll up
- Overhead door are to be of the highest quality, utilizing the highest torsion spring duty cycle and stainless steel hardware.

GENERAL REQUIREMENTS FOR SITE PREPARATION AND SITE ANCILLARY AREAS

Traffic Surfaces Square Feet: N/A
Identification Key: N/A

Requirements should be provided for the following:

- All asphalt paving to consist of 6" base stone, 4" stone/asphalt mix, 2" topcoat asphalt.
- Striping of all road surfaces.
- 8' thick concrete ingress and egress aprons to bus repair and warm storage areas. These aprons should extend 20' from the overhead doors.

Yard Lighting and Electrical Square Feet: N/A
Identification Key: N/A

Requirements should be provided for the following:

- Adequate light to illuminate the entire storage yard.
- Weather proof electrical outlets at selected locations along exterior wall.

Security and Fencing Square Feet: N/A
Identification Key: N/A

Requirements should be provided for the following:

- Entire bus operations area of site enclosed by security fence.
- Electrically operated sliding security gate at bus entrance.
- CCTV monitoring cameras strategically mounted on building to cover entire site.
- CCTV monitoring system tied to dedicated server with digital recording capability, which feeds live video monitor in Dispatch Office.

PROTOTYPICAL OPERATIONS FACILITY LAYOUT

Utilizing the above detailed physical needs assessment, the consultant prepared a Conceptual Floor Plan for a new FRTA Operations Facility. ("Identification Keys" listed for each functional space refer to the room numbers shown on the plan.)

The planning strategies used in development of this layout are as follows:

Administration / Employee Facilities

This cluster of spaces is intended to serve as the management core of the facility, as well as center for all employee-support activities. This portion of the Facility also acts as the "public face" of the facility.

One building entrance is designed to receive any visitors (#101), while the other will be the primary way for FRTA employees to access the facility (#104). These entrances are located on either side of the Dispatch Office (#103), where the person on duty will be able to arrange for the appropriate staff person to accompany a visitor, and will be also able to note the arrival of employees. The General Manager and his support staff are located adjacent to the public entrance, while the Operations Manager and his support are located adjacent to the employee entrance. A conference room, copy/file room and the server room are centrally located.

The rear portion of the cluster is taken up by employee facilities: toilet / locket / shower room, mail boxes, and a shared break / training room that has a kitchenette unit and the capacity to be organized differently depending on the function. A corridor leads from the break room directly to the vehicle storage garage, bypassing the vehicle maintenance area in order to avoid security and safety issues that plague the existing facility.

Vehicle Maintenance

The size and nature of the current fleet, which is not expected to change appreciably in the foreseeable future, is best served by four maintenance bays – three standard size, and one oversize. The larger vehicle bay has drive-through access into the vehicle storage building, along with a 3-ton overhead bridge crane. All bays will be served with appropriate services, such as compressed air, fluids (oils, antifreeze) and power.

Along one side of the repair bays are rooms for bulk fluids storage (oils, antifreeze), tire storage, battery charging, and larger repair equipment. Along the rear of the bays are rooms for parts, smaller tool storage, and a clean shop for repair of fare boxes and upholstery. Along the third side are located the Supervisor's office and a mechanics' library.

Also included in the vehicle maintenance cluster is inside parking for two FRTA support vehicles, general storage, and the electrical / telephone / data service entrance.

Vehicle Equipment / Storage

The vehicle storage building is where all of the revenue service vehicles will be parked when not in use. In the winter this space will be heated to approximately 50 degrees F in order to maintain full-time operational capacity, to reduce vehicle wear and tear due to inclement weather, and eliminate the time loss and potential employee hazard related to ice and snow removal.

Every vehicle will have an assigned space, which is large enough to allow operators to complete a daily inspection of their assigned vehicle prior to beginning service. Should minor problems be discovered (e.g. flat tire, change a light bulb), those issues can be addressed without needing to move the vehicle, since compressed air stations will be located within the vehicle storage building.

Vehicle Wash / Fueling / Pre-Cleaning

A service line is included in the Facility to allow buses returning from their runs to be prepared for the next day's service.

Buses will first enter a Fueling and Pre-Cleaning Room (#129), where contents of the fare box will be transferred to the Cash Room, the vehicle interior will be vacuumed, and the fuel tank topped off. Vehicles will then be moved to the wash bay (#130), where an automatic vehicle wash assembly will clean and rinse the outside surfaces. Vehicles will then move into the Vehicle Storage Building for parking in their assigned spaces. At that point interior detail cleaning of the buses will be completed.

Mezzanine

Above the Vehicle Maintenance parts and small equipment rooms is located a mezzanine, where larger parts can be stored, and building air handling equipment will be located. A removable railing system will allow larger parts to be picked up by the overhead crane for transfer to the shop floor.

Building Systems

Each portion of the Operations Facility has unique environmental and utility requirements, by Code. The administration and employee facilities will be heated, cooled and ventilated in accordance with typical office building standards. Vehicle maintenance and storage spaces will be serviced by enhanced ventilation equipment to address vehicle exhaust, and monitored for potential accumulation of exhaust byproducts, the presence of which will trigger the ventilation system. The vehicle fueling and wash rooms will also have enhanced ventilation system that will be tied to monitors that will track high humidity and noxious air.

ANTICIPATED DEVELOPMENT BUDGET

Utilizing our data base of local construction costs for fleet operations facilities, we developed preliminary development budgets for a potential repair and upgrade of the existing facility at 382 Deerfield Street in Greenfield, and development of a new Operations Facility at a different site, sized in accordance with the facility program developed as part of this study.

For the building enclosure we've utilized dollar per square foot values, based on the type of space (e.g. administration, shops, vehicle maintenance bays, vehicle wash, vehicle storage, or building repair). Separate budget line items were included for industrial equipment, mezzanines and site work. Costs were also included for "soft" expenses, such as design fees, furnishings, abatement of hazardous materials, and a design/construction contingency.

The budget established for rehabilitation of the existing Operations facility is \$4,953,120.

The budget established for a new Operations Facility is \$16,003,554.

A copy of the two budgeting worksheets is included in the attached exhibits.

POTENTIAL SITE FOR LOCATION OF NEW OPERATIONS FACILITY

At the request of FRTA staff, the Consultant investigated a number of pieces of property in Greenfield for their potential as a development site for a new Operations Facility. A site visit was made to each location, a review made of each site's zoning and environmental restrictions, and a general assessment made of the suitability for this intended reuse.

The parcels that were investigated are as follows:

1. Address: 100 Adams Road. Greenfield, MA
 Past Use: former USPS distribution facility
 Existing Building: 7,728 sf light industrial – not high enough for CVM
 Observed issues: wetland in middle of site
 Parcel Size: 3.75 ac.
2. Address: 261 Mohawk Trail, Greenfield MA
 Past Use: former horse farm
 Existing Building: none
 Observed issues: wetlands
 Parcel Size: 3.485 ac.
3. Address: 298 Federal Street, Greenfield MA
 Past Use: former Lunt Silversmith
 Existing Building: retail and factory bldg. (multiple)
 Observed issues: residential neighborhood adjacent
 Parcel Size: 4.7 ac
4. Address: 29H Silvio O. Conte Drive, Greenfield MA
 Past Use: unknown
 Existing Building: none
 Observed issues: slope up from street, endangered species habitat, may be ledge
 Parcel Size: 11.18 ac
5. Address: 367 Federal Street, Greenfield, MA
 Past Use: former auto dealership
 Existing Building: 23,544 sf one story building
 Observed issues: would need to build high bay space for CVM
 Parcel Size: 3.07.ac.
6. Address: Wisdom Way parcels 9E,14 & 16, Greenfield, MA
 Past Use: unknown
 Existing Building: none
 Observed issues: needs additional sliver of land along roadway
 Parcel Size: 6.17 ac.

It quickly became obvious that only the Silvio Conte parcel and the Wisdom Way parcels warranted consideration. All of the other sites were considerably smaller that required, or are located in inappropriate neighborhoods.

The Silvio Conte Drive site initially appeared to be a strong candidate site, as its dimensions are suitable to development of the Operations facility. However, a search of the Massachusetts Geographical Information System (GIS) for natural heritage restrictions uncovered a large zone that designated habitat for an endangered species which covered the bulk of the site, rendering the parcel undevelopable.

The Wisdom Way parcels appear to be suitable for location of the FRTA Operations Facility. The majority of adjacent uses (e.g. municipal capped landfill and transfer station) are sympathetic to FRTA use, and the additional sliver of land along the roadway has been reported by FRTSA to be owned by the Town. A planning exercise generated a modified prototypical Facility layout, which is attached. If this site is to be investigated further, it would be advisable to look into the possibility of acquiring the small triangular parcel to the north, in order to provide some additional room for access roads on the site.

PROJECT FUNDING OPPORTUNITIES

Overview

It is expected that funds for a new maintenance facility would be obtained substantially from federal funding sources with supplemental funding provided by local sources, most likely through the Massachusetts Department of Transportation. The narrative below outlines considerations and opportunities related to obtaining project funding. Most important among these considerations is that the project must be included in the regional and state Transportation Improvement Programs before it can be eligible for any federal funding, and hence any state funding match. Therefore, if the project is to go forward, the FRTA should take immediate actions to have the project added to these lists. Also, if local matching funds for the project will be needed (which is very likely), the FRTA should begin working immediately to have the project specifically listed on the state's next transportation bond bill.

Federal Transit Administration Discretionary Program Funds

Among the dozen or so FTA Discretionary grant programs, a relatively small number of programs would be most suitable for funding the design, land acquisition, and construction of a new FRTA maintenance facility. Those programs include:

- FTA Section 5309 Bus and Bus Facilities grant programs
- Transportation Investment Generating Economic Recovery (TIGER) grants
- Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER) grants

In general, the grant programs listed under the Bus and Bus Facilities program are most appropriate, since these grants are designed to provide capital investments in bus vehicles and supportive infrastructure projects, such as bus maintenance facilities. The TIGER program is also listed as a possibility, as these funds can be used if the project can be demonstrated to be one of substantial regional impact that is ready to be constructed, but is lacking a viable source of funds. The TIGGER program is also included as a possibility, since TIGGER funds can also be used on bus facility projects in instances where the project can demonstrate actual greenhouse gas reductions and reduced energy consumption.

The following summary descriptions have been modified slightly from the summaries that appear in the respective Federal Register announcements for these programs, in order to focus more on how the funds may be used by the FRTA. Each program should be considered by the FRTA as a potential source of funding for the proposed maintenance facility. Historically, FTA accepts applications annually from those recipients seeking to participate in them, so timing of the applications will be an important consideration.

FTA 5309 Bus and Bus Facilities

The State of Good Repair (SGR) Initiative – The SGR Initiative makes funds available to public transit providers to finance capital projects to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities. The initiative extends to programs of bus and bus-related projects for assistance to sub-recipients that are public agencies, private companies engaged in public transportation, or private non-profit organizations. Additionally, the SGR Initiative makes funds available for Transit Asset Management systems. As a public agency FRTA is eligible for this program, and, since the FRTA's ability to maintain its fleet is currently constrained by the deteriorated conditions and undersized

accommodations of their current facility, they would be a prime candidate for this program. FY 2012 SGR grant applications were due March 22, 2012, so planning should begin for making an application to the FY2013 program.

The Livability Initiative Program – The Bus Livability Initiative makes funds available to public transportation providers to finance capital projects to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities. It also is intended for programs of bus and bus-related projects for assistance to sub-recipients that are public agencies, private companies engaged in public transportation, or private non-profit organizations. Again, this program appears ideally suited to address FRTA's maintenance facility needs. FY 2012 Bus Livability grant applications were due March 29, 2012, so planning should begin for making an application to the FY2013 program.

TIGER Discretionary Grants

The TIGER Discretionary Grant program has been used for capital investments in surface transportation infrastructure. They are to be awarded on a highly competitive basis for projects that will have a significant impact on the Nation, a metropolitan area, or a region. In evaluating applications for TIGER funding, the federal government applies the following principles in determining whether a project is eligible as a capital investment in surface transportation: (1) surface transportation facilities generally include roads, highways and bridges, marine ports, freight and passenger railroads, transit systems, and projects that connect transportation facilities to other modes of transportation; and (2) surface transportation facilities also include any highway or bridge project eligible under title 23, U.S.C., or public transportation project eligible under chapter 53 of title 49, U.S.C. Due to the highly competitive nature of this program, and uncertainty regarding the availability of future rounds of funding (the application deadline for FY 2012 TIGER funds was closed on March 19, 2012) the FRTA's opportunity to use this funding category is likely very limited.

TIGGER Discretionary Grants

Managed by FTA's Office of Research, Demonstration and Innovation in coordination with the Office of Program Management and FTA Regional Offices, the TIGGER Program works directly with public transportation agencies to implement new strategies for reducing greenhouse gas emissions and/or reduce energy use within transit operations. To date, most TIGGER grant awards have been used to purchase hybrid or "clean fuel" buses, or to construct "clean fuel" refueling facilities, which might make them applicable to a new FRTA maintenance facility. However, like the TIGER program, the TIGGER program is highly competitive, and there currently is no guarantee of a future round of grants. (The latest awards were announced in December 2012).

State Matching Funds

Although most FTA discretionary funding programs require only a 20% match from state or local funds, recipients typically can improve their competitive position by overmatching the federal share with state and local participation rates exceeding 20%. In Massachusetts, the primary source of matching funds is through the periodic transportation bond issue. To ensure that state matching funds are potentially available to local projects, it will be important for the FRTA to seek legislative support to program local matching funds into appropriate pieces of legislation.

Metropolitan Planning Organization Program

At the earliest possible opportunity, federal aid projects should also be included in the Long Range Regional Transportation Plan, and the regional and state Transportation Improvement Programs, the TIP and STIP respectively. Programming potential future projects in these documents also improves the recipient's chances of competing for discretionary funds, as this is frequently a pre-requisite of the application for such funds. In cases where engineering cost estimates are not yet available, planning-level estimates will usually suffice for project programming in these documents.

EXHIBITS

- Existing Facility Plans
- Prototypical Facility Building Plan
- Prototypical Facility Site Plan
- Analysis of Potential Sites
- Modified Prototypical Facility Site Plan on Wisdom Way parcel
- Record of Meeting

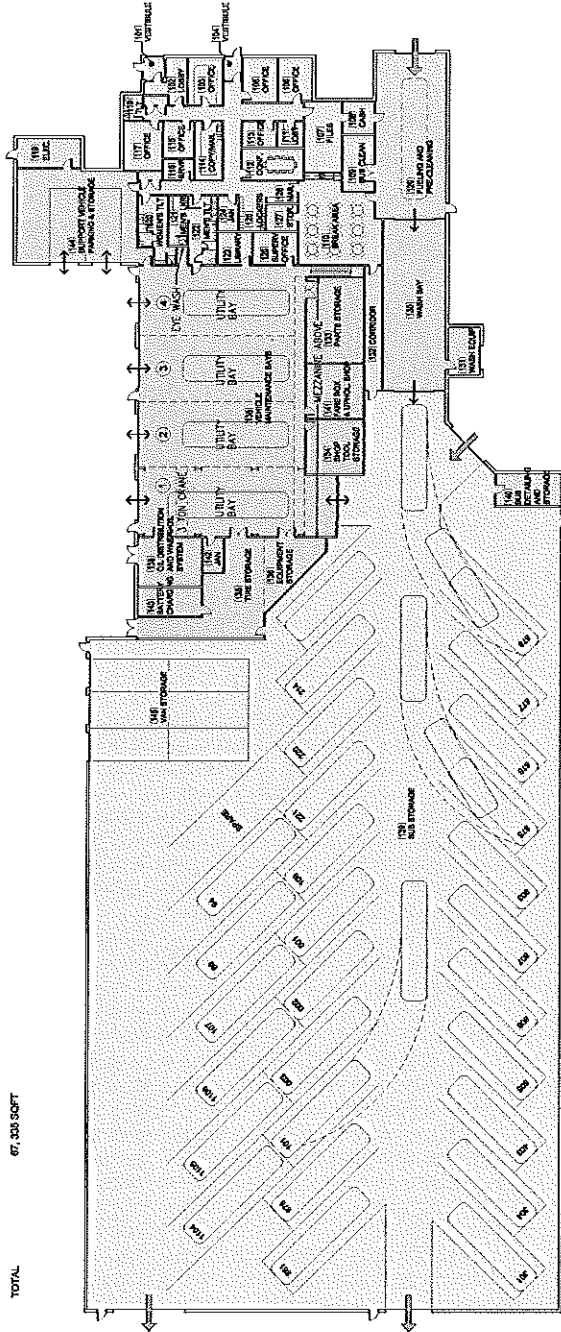
FRTA Operations Facility Study

PROTOTYPICAL FACILITY BUILDING PLAN



SPACE	SQUARE FEET
ADMINISTRATION/ EMPLOYEE FACILITIES	6,210 SQFT
VEHICLE MAINTENANCE	11,200 SQFT
VEHICLE/ EQUIPMENT STORAGE	45,000 SQFT
VEHICLE WASH, FUELING AND PRE-CLEANING	3,300 SQFT
MECHANICAL FOR STORAGE AND HVAC EQUIPMENT	1,625 SQFT
TOTAL	67,335 SQFT

FRANKLIN REGIONAL TRANSIT AUTHORITY CONCEPTUAL FLOOR PLAN
DATE: 17 MAY 2013



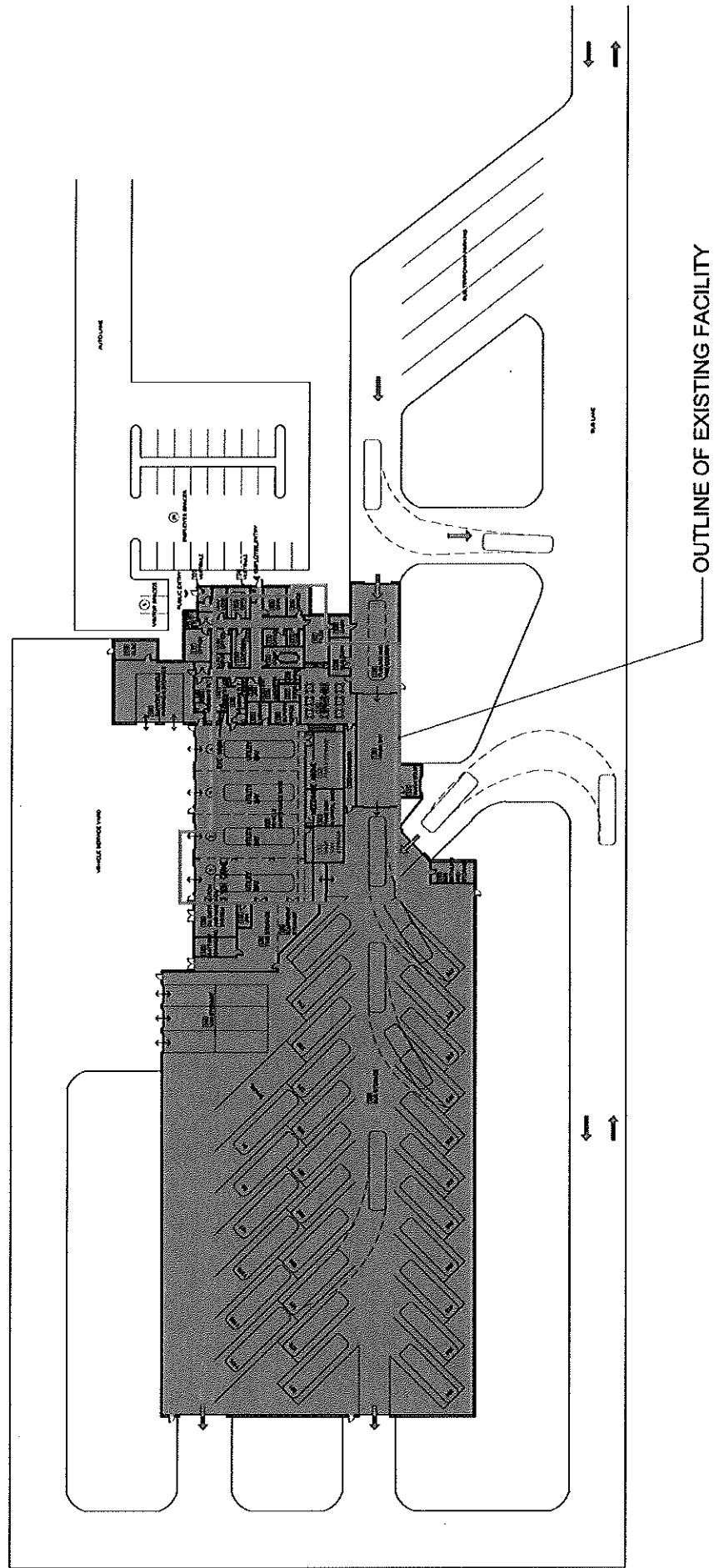
1 FRANKLIN REGIONAL TRANSIT AUTHORITY CONCEPTUAL FLOOR PLAN
SCALE: 1"=20'
DATE: 17 MAY 2013



ROOM	SQUARE FEET
101 VESTIBULE	100 SQFT
102 LAMP	200 SQFT
103 VESTIBULE	200 SQFT
104 VESTIBULE	200 SQFT
105 VESTIBULE	200 SQFT
106 VESTIBULE	200 SQFT
107 VESTIBULE	200 SQFT
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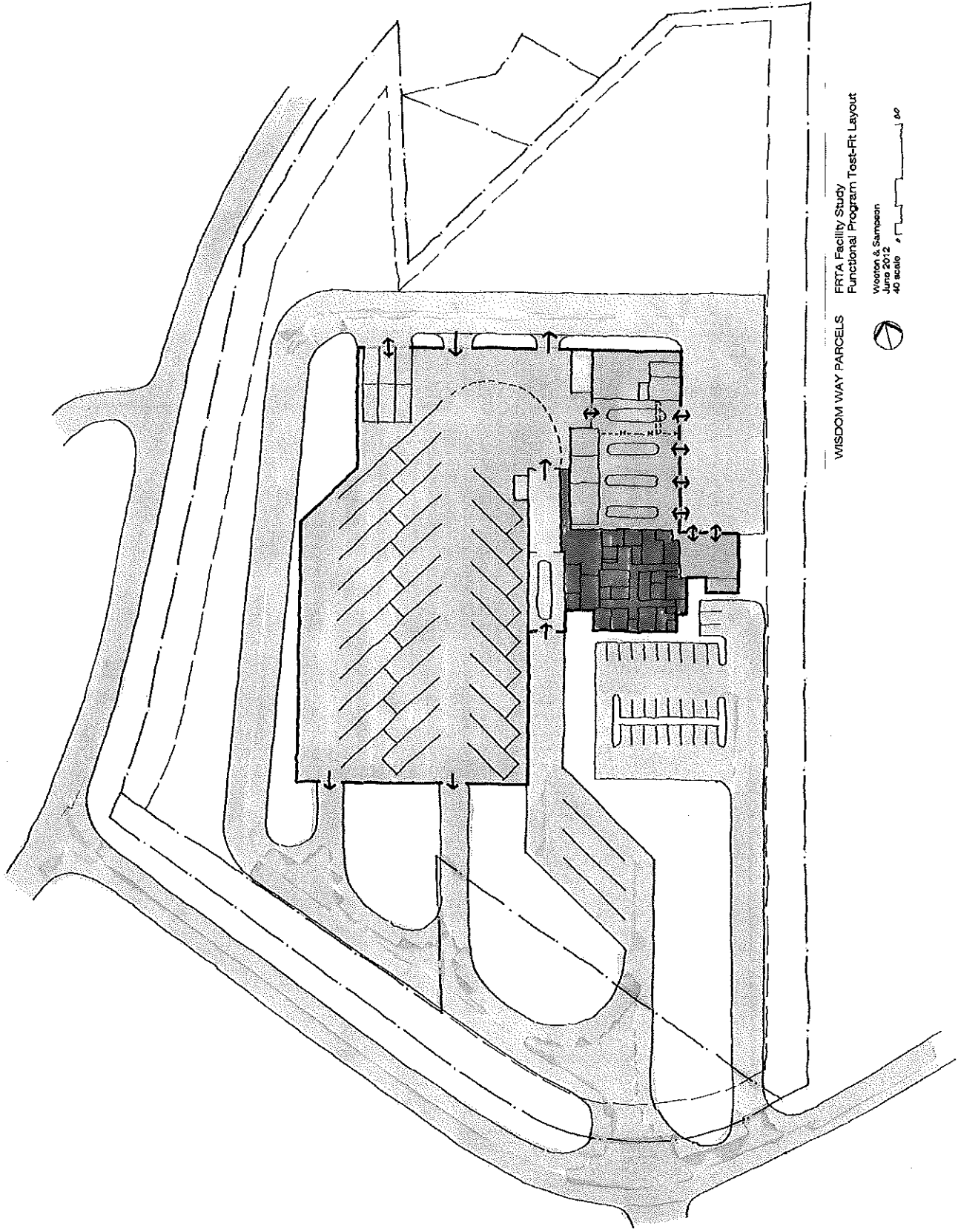
FRTA Operations Facility Study

PROTOTYPICAL FACILITY SITE PLAN



FRTA Operations Facility Study

MODIFIED PROTOTYPICAL FACILITY SITE PLAN @ Wisdom Way parcel



FRTA Facility Study
Functional Program Test-Rt Layout
Wooden & Sampson
June 2012
40 scale



FRTA Operations Facility Study

POTENTIAL SITES ANALYSIS

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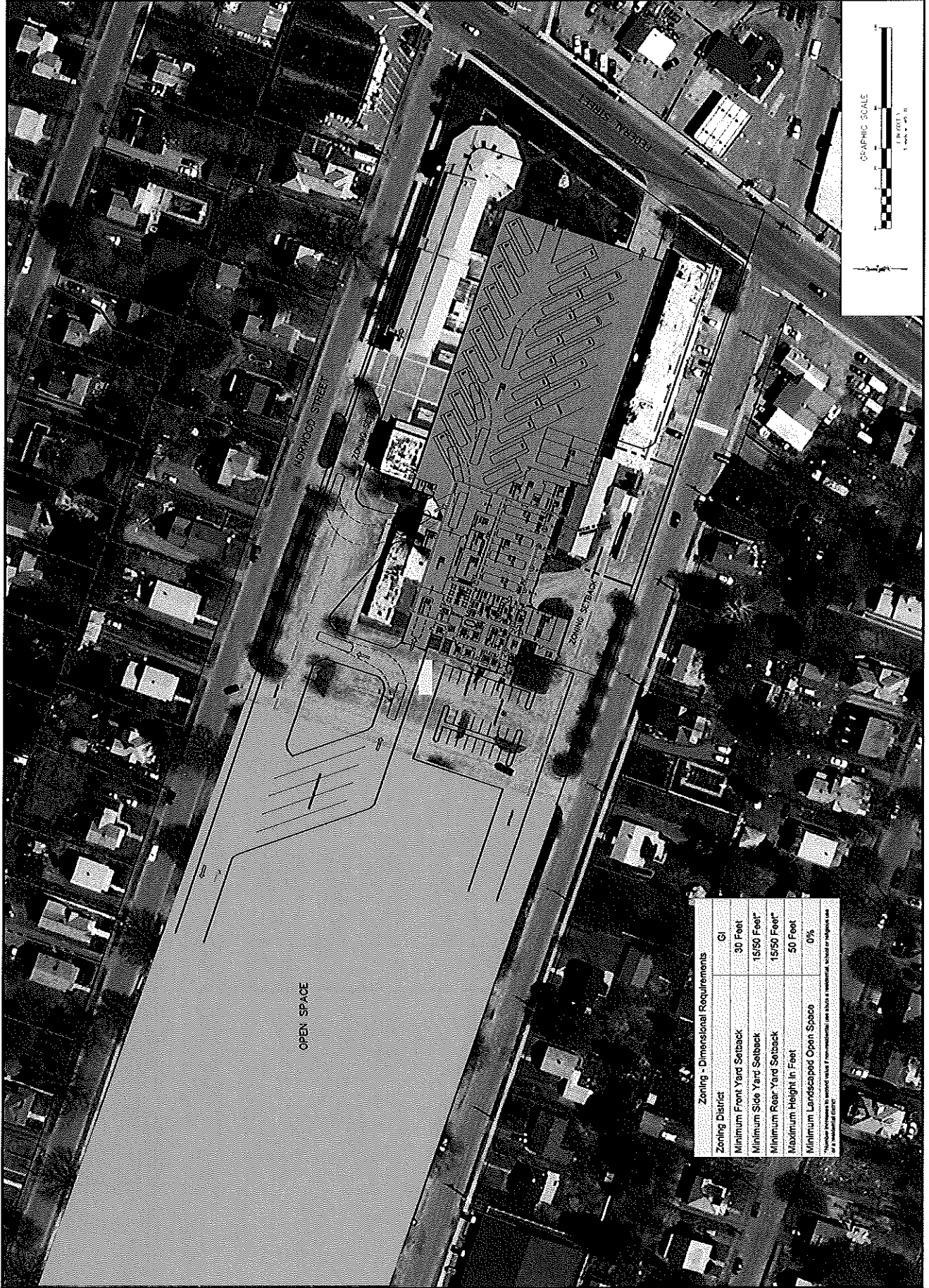
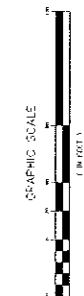
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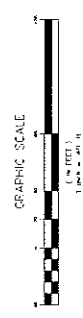
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SITE ASSESSMENT
298 FEDERAL STREET - PARCEL 95 1 UTA/UTB

TOWN OF GREENFIELD, MASSACHUSETTS
FRANKLIN REGIONAL TRANSIT AUTHORITY
OPERATIONS AND MAINTENANCE FACILITY

[illegible]



Zoning - Dimensional Requirements	
Zoning District	LC
Minimum Front Yard Setback	0 Feet
Minimum Side Yard Setback	0/15 Feet*
Minimum Rear Yard Setback	0/25 Feet*
Maximum Height in Feet	35 Feet
Minimum Landscaped Open Space	0%

*Number indicates to select value from minimums and select a maximum, subject to subject use or applicable code.



MUNICIPAL



FRTA Operations Facility Study

ANTICIPATED FACILITY DEVELOPMENT BUDGET



FRTA
Budget Total Project Cost

Weston&Sampson

Date 17-May-12

		AVERAGE FINISHES / EQUIPMENT		
Rehabilitation of Existing Ops Facility Area		Size (SF)	2012 Cost/USF	Cost
Repair, code compliance, upgrade of existing		15,646	\$ 185	\$ 2,894,610
New Construction Subtotal:		15,646		\$ 2,894,610
Building Cost per SF:		185		
		Place a "x" here if included		
Industrial Equipment				
- Wash Equipment		\$ 50,000	x	\$ 50,000
- Heavy Duty Vehicle Lift		\$ 100,000		
- Light Duty Vehicle Lift		\$ 25,000		
- Bridge Crane		\$ 60,000		
- Overhead Lubrication System		\$ 120,000	x	\$ 120,000
- Storage Shelving / Benches / Racks		\$ 25,000	x	\$ 25,000
- Exhaust Removal System		\$ 30,000		
Industrial Equipment Subtotal:				\$ 195,000
Fuel System				
- 2 - 10,000 Gallon Tanks		\$ 80,000	x	\$ 80,000
- Concrete Ballast Pad		\$ 20,000	x	\$ 20,000
- Concrete Surface Pad		\$ 20,000	x	\$ 20,000
- Pea Stone Backfill		\$ 14,000	x	\$ 14,000
- Dispensing System & Associated Pipe		\$ 38,000	x	\$ 38,000
- Canopy		\$ 35,000		
- Fuel Management System		\$ 25,000	x	\$ 25,000
- Installation		\$ 180,000	x	\$ 180,000
Fuel System Subtotal:				\$ 375,000
Building & Equipment Total:				\$ 3,464,610
Mezzanines		-	\$ 50	\$ -
Open Canopy Storage		-	\$ 75	\$ -
Site Development (acres) - repairs to structures/utilities, etc.		1.4	\$ 200,000	\$ 270,000
				Subtotal Bldg, Equip, & Site: \$ 3,734,610
				Design Contingency (5%): \$ 186,726
				Total Construction: \$ 3,921,336
				(2012 dollars)
				Total Construction Cost/USF: 251
Owner's Soft Costs				
A&E Fees (design, bld, const.)		\$ 392,124	(Assume 10% of Const. Value)	
		\$ 59,819	Schematic Design (15%)	
		\$ 78,425	Design Development (20%)	
		\$ 158,849	Construction Documents (40%)	
		\$ 19,606	Bidding (5%)	
		\$ 78,425	Construction Administration (20%)	
A&E Special Services		\$ 78,425	(Assume 2% of Const. Value)	
Owner's Project Manager Fees		\$ 117,837	(Avg 2.5-3.5% of Const. Value)	
Furnishings (FFE)		\$ 50,000	allowance	
Communic. / Low Voltage System		\$ 25,000	allowance	
Temporary Facilities		\$ -	allowance	
Printing Cost - Advertisement		\$ 15,000	allowance	
Legal Costs		\$ -	allowance	
Commissioning		\$ -	allowance	
Abatement		\$ 20,000	allowance	
Chapter 17 Test & Inspections		\$ 20,000	allowance	
Owner Bonding Costs		\$ -	allowance	
Construction Contingency (8%)		\$ 313,699	allowance	
TOTAL PROJECT COST (Average Bid Price)		\$ 4,953,120		



FRTA
Budget Total Project Cost

Weston&Sampson

Date 17-May-12

		AVERAGE FINISHES/EQUIPMENT		
New Construction	Area	Size (SF)	2012 Cost/SF	Cost
Administration / Employee Facilities		6,210	\$ 237	\$ 1,471,149
Shops		-	\$ 196	\$ -
Vehicle Maintenance (not including equipment)		11,200	\$ 247	\$ 2,768,640
Wash		3,300	\$ 258	\$ 849,750
Vehicle/Equipment Storage		45,000	\$ 103	\$ 4,635,000
New Construction Subtotal:		65,710		\$ 9,724,539
Building Cost per SF:		148		
		Place a 'x' here if included		
Industrial Equipment				
- Wash Equipment		\$ 50,000	x	\$ 50,000
- Heavy Duty Vehicle Lift (2)		\$ 200,000	x	\$ 200,000
- Light Duty Vehicle Lift		\$ 25,000	x	\$ 25,000
- Bridge Crane		\$ 60,000	x	\$ 60,000
- Overhead Lubrication System		\$ 120,000	x	\$ 120,000
- Storage Shelving / Benches / Racks		\$ 25,000	x	\$ 25,000
- Exhaust Removal System		\$ 30,000	x	\$ 30,000
Industrial Equipment Subtotal:				\$ 510,000
Fuel System				
- 2 - 10,000 Gallon Tanks		\$ 80,000	x	\$ 80,000
- Concrete Ballast Pad		\$ 20,000	x	\$ 20,000
- Concrete Surface Pad		\$ 20,000	x	\$ 20,000
- Pea Stone Backfill		\$ 14,000	x	\$ 14,000
- Dispensing System & Associated Pipe		\$ 38,000	x	\$ 38,000
- Canopy		\$ 35,000		
- Fuel Management System		\$ 25,000	x	\$ 25,000
- Installation		\$ 180,000	x	\$ 180,000
Fuel System Subtotal:				\$ 375,000
Building & Equipment Total:				\$ 10,609,539
Mezzanines		1,826	\$ 50	\$ 81,250
Open Canopy Storage		-	\$ 75	\$ -
Site Development (acres) - assumes level site with no contamination, existing structures/utilities, etc.		8.0	\$ 200,000	\$ 1,600,000
Subtotal Bldg, Equip, & Site:				\$ 12,290,789
Design Contingency (5%):				\$ 614,539
Total Construction:				\$ 12,905,328
(2012 dollars)				
Total Construction Cost/SF:			196	
Owner's Soft Costs				
A&E Fees (design, bld, const.)		\$ 1,290,533	(Assume 10% of Const. Value)	
		\$ 193,580	Schematic Design (15%)	
		\$ 258,107	Design Development (20%)	
		\$ 516,213	Construction Documents (40%)	
		\$ 64,527	Bidding (5%)	
		\$ 258,107	Construction Administration (20%)	
A&E Special Services		\$ 258,107	(Assume 2% of Const. Value)	
Owner's Project Manager Fees		\$ 387,160	(Avg 2.5-3.5% of Const. Value)	
Furnishings (FFE)		\$ 50,000	allowance	
Communic. / Low Voltage System		\$ 25,000	allowance	
Temporary Facilities		\$ -	allowance	
Printing Cost - Advertisement		\$ 16,000	allowance	
Legal Costs		\$ -	allowance	
Commissioning		\$ -	allowance	
Abatement		\$ 20,000	allowance	
Chapter 17 Test & Inspections		\$ 20,000	allowance	
Owner Bonding Costs		\$ -	allowance	
Construction Contingency (8%)		\$ 1,032,426	allowance	
TOTAL PROJECT COST		\$ 16,003,554	(Average Bid Price)	



FRTA Operations Facility Study

RECORD OF MEETING



MEETING RECORD
(expanded version)

Project: FRTA Operations Facility Study
Date: 10 April 2012
Place: 382 Deerfield Street, Greenfield MA
Participants: Michael Perreault, FRTA Assistant Administrator
Scott Willis, FRTA General Manager
James Haine (pt), FRTA Administrator
Perry Schwarzer, FRTA Operations Manager
Keith Kaczinski, Maintenance Manager
Roger Thompson, W&S
Michael Hicks, W&S
Tim Curran, RDK
Daniela Herlihy, RDK

Purpose of the meeting was to begin the information gathering process and to view the existing Operations Facility. After initial discussions, participants toured the Facility, and then reconvened to explore daily operations procedures and anticipated space needs.

1. FRTA administrators are moving into the new Greenfield Transportation Center shortly.
2. The transit operations of FRTA and GMTA (Greenfield Montague Transit Area) were merged by the State in 2006. FRTA now owns the rolling stock and equipment and provides all of the transit services. GMTA still exists as a Board, and owns the Deerfield Street Operations Facility.
3. FRTA serves a total of 40 communities, either through the six fixed bus routes (weekdays only), or through on-call paratransit services. The majority of services are provided in the Greenfield and Montague area.
4. The goal of this study is to give FRTA the tools to be ready to act on development of a substantially improved operations facility as soon as a funding source is identified. They want to be as close to "shovel ready as possible."
5. The preference would be to spend capital dollars when that will save operating budget.
6. Key operational needs include:
 - Establish location on the site for a snow dump
 - Need more lifts (4-post plus inground 2-post) such as ECO 60 bus lifts
 - Likes pits for quick service and inspection
 - Needs flexibility in all bays to be able to service large or small vehicles
 - Stacked parking of vehicles causes significant time waste

7. Preferred end of the day vehicle flow:

- Fuel inside, then probe fare box, top off fluids then wash bay
- Need cash room close to fare box probing spot
- Maintenance staff will take change of vehicle for all of this activity

8. Dispatcher assigns vehicle to driver each day

9. Admin. Spaces:

- Conference rooms
 - Smaller (capacity 8) for managers use
 - Larger (capacity 30) for training / lunch room
- Offices
 - Scott
 - Jim
 - Perry
 - Kevin
 - Future Road Supervisor
 - Future Clerk/office person
 - Dispatch Office 2 people

10. Lockable cabinet or room near Dispatcher's office for lost & found

11. Drivers lunch / break room with secure mail box system adjacent

12. Current roster of drivers: 16 full time (2 are also dispatchers); 7 part time

13. Current roster of trade staff: 2 mechanic, 1 utility worker. Plan for one more mechanic and one more Utility person , for a total of 5

14. Adequate toilet / locker / shower rooms

- Separate admin staff & drivers from maintenance staff
- Half size lockers for drivers, full height double sized lockers for mechanics
- Shower / locker room for mechanics

15. Vehicle body work is outsourced, as is engine rebuilds

16. Need a clean room, separate from repair bays, for repairing fare boxes

17. Work shop or clean room for upholstery

18. Will need staging parking area for buses that are in between routes or waiting to be run through the fuel/wash bay.

19. Long term potential fleet growth is 50% which will require increases in number of mechanics and drivers.

- Agency goal is for 30 min headway for primary routes and 60 minutes for secondary routes
- Current operations are 45 min headway – 180 min headway

20. Potential growth means any plan developed will need to have the flexibility for expansion

21. There is little current interest in alternative fuels, but that may change with pressure from funding sources (e.g. FTA).

22. Shop Issues.

- Current rotary screw compressor is only 5 years old
- Current 4 post Rotary lift is approximately 8 years old

23. Fuel Island

- Fuel key pad is not functional
- Fuel tanks have significant problems either settling, dented or both
- They lack fuel management Information technology
- Future fuel management system needs to interface with fleet management system
- Current fleet management system was developed locally and there is a compelling case to purchase a true fleet management system such as RTA or CFA

24. Other Areas Required

- Lubrication Distribution Room
- Battery Charging room
- Tire Storage and Mounting Equipment Room
- Receiving area
- Mechanical Room
- Janitorial Rooms (office and shop)
- Server Room
- Fire Suppression Room
- Shop tool storage Room
- 3 repair bays
- 1 Utility repair bay
- Parts Room
- Special Tool Lock Up Room

25. Other Notes

- Keith indicated that the roof over the office area has never been replaced in his tenure of 27 years and leaking
- Grounds around the facility are settling
- They consume approximately 1,100 gallons of heating oil monthly

- Wash/repair/parking bay area is extremely cold due to so many windows and non insulated OH garage door

END OF MEETING

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