

# **MUNICIPALITY OF MT. LEBANON**

## **DEPARTMENT OF PUBLIC WORKS**

### **MASTER PLAN**

December 29, 2014

Municipality of Mt. Lebanon  
710 Washington Road  
Pittsburgh, PA 15228

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# **MUNICIPALITY OF MT. LEBANON**

## **PUBLIC WORKS FACILITY**

### **MASTER PLAN** **FEASIBILITY STUDY**

#### **1.0 INTRODUCTION**

##### **MUNICIPALITY OF MT. LEBANON – GENERAL BACKGROUND**

Mt. Lebanon was created as a separate township on February 6, 1912, appointed the first township manager in the Commonwealth of Pennsylvania in 1928, and adopted a Home Rule Charter in 1974. Mt. Lebanon has an area of 6.07 square miles and according to the 2010 Census, had a population of 33,137 persons and a population density of 5,459.14 persons per square mile. In addition, there were 15,040 housing units with an occupancy rate of 94.4% in 2010, based on the United States Census Bureau. Historical population data indicate significant growth 1920 to 1930, moderate growth from 1930 to 1970, small declines in population from 1970 to 2000, with a small increase through the first decade of the century, to 2010. Essentially, since 1990, the population has stayed relatively level.

Located approximately seven miles to the south of downtown, Mt. Lebanon is a suburb of the city of Pittsburgh, with a well developed central business district, high ranking schools, a historic district and numerous churches and community groups. Community amenities include a library, a recreation center, public safety departments and public works. Recreational opportunities include walking and hiking trails in fifteen parks, a public municipal golf course, an Olympic size swimming pool, a regulation size ice rink, playgrounds and year-round tennis and basketball courts (inflatable domes for indoor winter use).

##### **FACILITY BACKGROUND**

The Municipality of Mt. Lebanon Public Works Department facilities and operations center is located at 1250 Lindendale Drive, near the western edge of the municipality. The site also serves as the material storage and staging area for municipal and utility contractors performing work in the municipality. The site consists of a number of adjacent parcels of property (16.36 acres total in size, 5.16 acres useable), bounded by Cedar Boulevard to the east and Robb Hollow Park to the west, with adjacent residential neighborhoods on both sides. Sitting in a valley that gently slopes down from the north end to the south end, the site is very visible for those traveling along Cedar Boulevard and to the residential homes on either side.

To the south of the property are two Project 70 parcels of land that are designated only for parks and recreational use. Currently a large portion of the smaller of the two properties is utilized for public works

material and contractor vehicle storage. There is a higher level of grassy area adjacent to Cedar Boulevard in which a portion is used for the temporary storage of trees that will be used throughout the municipality. The main, and only, entrance to the site is located on the north end, just past the Lindendale Drive and Cedar Avenue intersection. There are currently no security fences and the public has free access to and on the site. Part of the site is utilized as an access point to the adjacent park's walking trail.

There are four buildings on site that house the department of public works operations. Building #1 is a 13,900 square foot, two story brick and concrete block structure housing offices, locker/break rooms, vehicle repair bays, storage, and vehicle/equipment storage. Building #2 is a 5,632 square foot, four bay, pre-engineered open metal shed for material and equipment storage. Building #3 is a 7,320 square foot, five bay, pre-engineered metal structure with block and brick walls garage, for vehicle and equipment storage. Building #4 is a 5,000 square foot salt storage dome building (80 foot diameter, 3,500 ton capacity). Also on site is a fuel station, a salt brine station, material storage bins (gravel, asphalt), yard storage for material and equipment, yard storage for the tree nursery and parking for employees and visitors.

## **PURPOSE OF THE STUDY**

The main purpose of the study is for the Municipality of Mt. Lebanon to develop a master plan and construction costs for future development of the existing public works facility and site, to improve the organization and functionality of the facility to meet current and future services provided to the residents of the municipality.

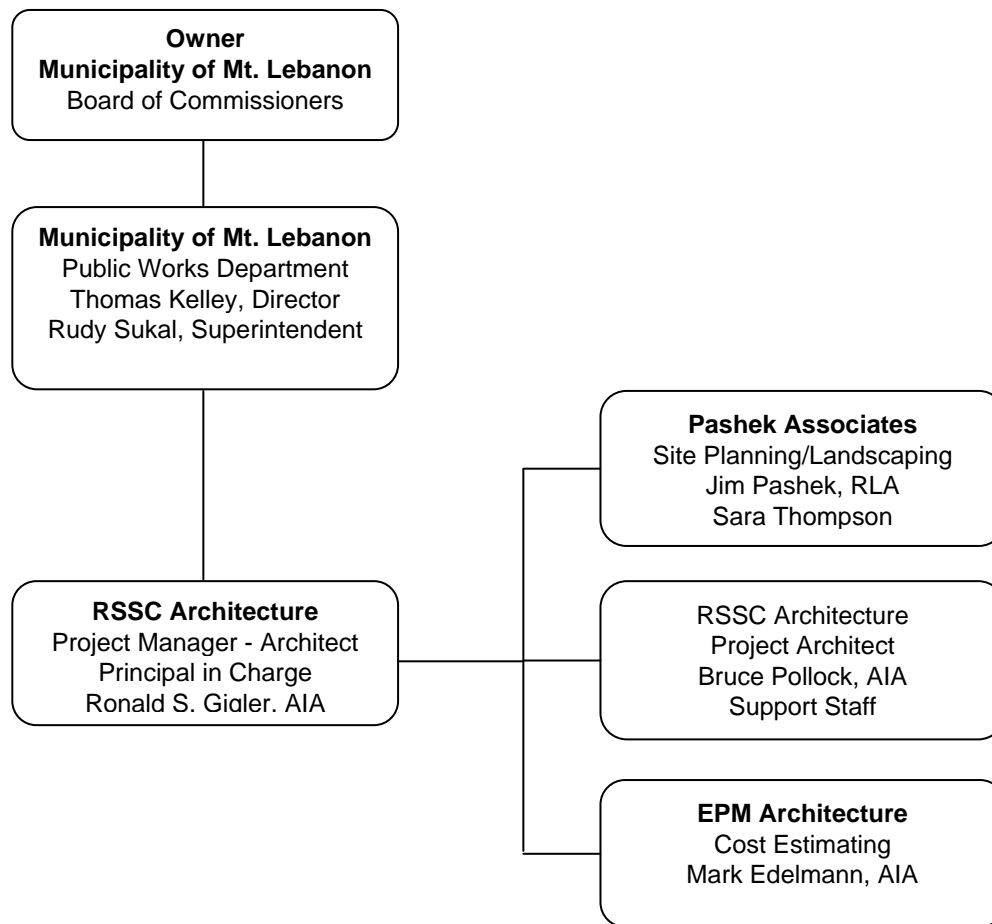
Other aspects of the study included the potential development of other sites in the municipality to support the public works operations:

- Robb Hollow Park,
- McNeilly Road Parcel
- Golf Course Maintenance area.

### **Project Goals:**

- Master Plan to guide development over the next ten (10) years.
- Allow for future expansion.
- Increase operation efficiency through organization and proximity of related tasks.
- Evaluate existing facilities to serve current and future needs.
- Provide efficient circulation of vehicles and workflow.
- Ensure site security.
- Estimate costs to implement necessary improvements.
- Evaluate phasing options of proposed improvements.

## ORGANIZATIONAL CHART



## PROCESS OF STUDY

To complete the master planning process, a series of steps were taken over several months. At each step, specific tasks were performed, which helped provide information for the next step, ultimately providing a guideline for future development of the public works facilities.

- *Kick-off meeting* with Municipality representatives to introduce the team members, review the project goals and general program requirements and establish a project timeline with meeting dates and milestones.
- *Needs Assessment and Existing Facility Analysis* - RSSC held staff interviews with the public works department and administrative staff to identify the needs and requirements for each element of the project and review future needs and operational personnel. Evaluated the existing buildings and sites relative to parking, zoning, building codes, access and circulation and handicapped accessibility standards.

- *Facility Program Development* – A written and graphic program of spaces and attributes, conceptual space usage and functional relationship diagrams. Schematic plans that establish how each area relates to one another and to the public. Reviewed programming of spaces with Public Works representatives.
- *Concept Design, Site Analysis and Master Planning* - Formulate master plan options for the existing public works site. Reviewed options with Public Works staff and Board of Commissioners .
- *Evaluation of Satellite Sites* – Formulated design opportunities and issues for two other 2-5 acre sites within the municipality. Reviewed design concepts with Public Works staff and Board of Commissioners.
- *Opinion of Cost* – Formulation of cost estimates for master planning of new or renovated building structures, site development and improvements for the public works site and conceptual land development costs for the satellite sites. Reviewed costs with Public Works Director and Board of Commissioners.
- *Meetings with Planning Board and Commissioners* – Presentation of progress and completed drawings and probable costs of the master planning concept design.
- *Final Report and Plans* – Completed study and final design, including plans, report, budgets and implementation strategy.

## 2.0 **EXECUTIVE SUMMARY**

The Mission of the Mt. Lebanon Department of Public Works is to maintain and enhance the quality of life for residents through responsive, efficient and effective delivery of services to every neighborhood and by reflecting con-do attitude with our customers and stakeholders.

To provide continued responsive and quality services to the residents of Mt. Lebanon, the Municipality and the Department of Public Works has undertaken a feasibility study of the existing facilities and operations to provide a Master Plan as a guide for future facility modifications and development. The plan takes into consideration the conditions and service life of the existing facilities, the utilization of the existing firing range, the circulation and security on site, the incorporation of material, equipment and vehicle storage on or off site and the future anticipated growth of services provided to the community.

A Master Plan was developed by RSSC Architecture that identified site and building improvements, both in the form of renovations/additions or new structures, that address the current and future needs of the Public Works Department, as determined through the results of surveys, studies and meetings with the Publics Works personnel, along with financial considerations from the Board of Commissioners. As noted earlier in the report, the population growth for Mt. Lebanon for that past couple of decades has been very small, within +/- 1%, and development of new roadways, infrastructure and community amenities will be limited in the next ten years, since the Municipality is already a well-developed and established community. A majority of the expansion of future services for the Public Works will be the maintenance, replacement or repairs of the existing infrastructure (sanitary & storm lines, streets & sidewalks), and the responsibility of the Municipal Forestry Program.

The plan that has been developed allows for renovations and expansions to occur over a period of time, while providing flexibility in re-organizing the operations on the site and meeting the priorities of the Public Works current and future needs. A summary of the phased development of the site and facilities consists of the following:

- **Phase I** – Replace existing salt storage dome with new salt storage building (6,500 ton capacity) and construct new shed building for outdoor material storage. Increased covered salt storage capacity has been a need for several years and is considered the first priority by the Department of Public Works. A new covered yard storage area for topsoil, mulch and sand, would free up space for equipment and vehicle storage, and allow for the future development of a new maintenance garage and vehicle storage building.
- **Phase II** – Construct a new maintenance garage and support spaces (locker rooms, tool and parts storage) and vehicle storage area, along with site development of parking and circulation. Providing a larger and higher garage space to maintain all types of Public Works and Municipal vehicles is considered the second priority by the Department of Public Works. The existing space has limitations and not all vehicles or equipment can be serviced.
- **Phase III** – Construct a new equipment storage building at the Municipal Golf Course maintenance area. The area is already utilized for debris and chipping for landscaping and trees performed by the Public Works, and it would be beneficial to have an enclosed structure at this site for storage of related equipment or seasonal use equipment that would otherwise occupy valuable yard storage space or vehicle storage space at the main public works site.

- **Phase IV** – Renovation of the existing two story block & brick building. With the maintenance garage and support spaces relocated to a new building onsite, the existing two story building would be utilized for vehicle and equipment storage on the lower level and for offices, conference rooms, training & break rooms, traffic control and road signage departments on the upper level.
- **Phase V** – Construct new vehicle/equipment storage building(s) towards southern end of site. This would allow for storing all remaining vehicles and equipment and for any future expansion of the Public Works vehicle fleet and equipment. By sheltering the vehicles and equipment from the weather, maintenance is reduced and the serviceable life is lengthened.

Part of the development of the Public Works site will include upgrades and possible additions to the existing firing range. Incorporation of these modifications should be coordinated with the proposed Public Works projects, as this will affect future development.

#### **Cost Estimate:**

A general overview of the project budgets associated with the Phases listed below:

Phase I:	New salt storage building/covered yard storage.....	\$622,500
Phase II:	New maintenance garage, site work.....	\$2,292,900
Phase III:	New equipment building – golf course site.....	\$276,900
Phase IV:	Renovate existing two story building.....	\$991,200
Phase V:	New vehicle/equipment storage buildings.....	\$ 838,000
	<b>Subtotal:</b> .....	<b>\$5,021,500</b>

Firing Range Renovations and Additions.....	\$819,000
---------------------------------------------	-----------

Detailed Opinion of Probable Costs for the site and building developments are provided in the Implementation Strategy section of the report.

#### **Assumptions for Future Development:**

1. Proposed landscaping berm/mounding shall be built along Cedar Boulevard as part of a separate municipal project (scheduled for 2017).
2. New structures will not be built over existing underground storm culvert or public sanitary lines.
3. Tree Nursery will stay at its current location or move off-site.
4. Existing one story Vehicle Storage building will remain and two story Vehicle Maintenance/Storage building will remain and be renovated.
5. Existing Firing Range will remain on site and be renovated.
6. Project 70 parcel at southern end of site will not be utilized for Public Works operations.



### **3.0 PUBLIC WORKS OPERATIONS DEPARTMENT OVERVIEW**

The Municipality of Mt. Lebanon Department of Public Works provides a variety of services to the residents of the community. These services are carried out by the Public Works employees and some are performed by contracting out to independent contractors. The existing Public Works facility is the central location from which all services, materials, vehicles and equipment originate to perform the required tasks to maintain the municipality's roads, sidewalks, buildings and forestry program. Working along with the Recreation Department, the Public Works also maintains the parks and playgrounds and provides set up and clean up services for many community special events.

The Department is lead by a Director of Public Works, with a Superintendent of Public Works supervising the day to day operations and scheduling of work from the public works facility site. There are Supervisors for the traffic signal and sign departments, for the building maintenance, for the sanitary and storm sewer systems and the forestry program. Except for the Director, all public works personnel are stationed at the public works facility site, which must provide space for their personal vehicles along with the public works vehicles and equipment.

Currently there are 24 full-time employees and 5 part-time employees, with minimal expected growth in the next ten years. Part of this is due to the already well developed municipality infrastructure, part due to the limited locker room and employee support space and part due to some services being contracted out. However, with expanded and re-organized facilities, there would be the opportunity to increase staff and self perform some of the contracted services. The main area of growth for additional employees may be the Municipal Forestry Program, as this program grows to maintain the trees in the municipality.

Services provided by the Department of Public Works include:

- Maintaining the community's infrastructure – sanitary and storm sewer systems, streets and sidewalks
- General maintenance of municipal buildings
- Maintaining the municipality's trees and leading the Forestry Program
- Addressing all sanitary and storm sewer systems issues
- Engineering for infrastructure
- Refuse collection and recycling services
- Snow removal and street sweeping
- Street and sidewalk improvements
- Maintaining municipal parks and playgrounds
- Providing set-up and clean-up services for many community events

Administrative goals of the Department of Public Works include:

- Constantly pursue and implement new and innovative methods of service delivery
- Ensure that public works services are delivered in a timely, efficient and cost-effective manner
- Work with the manager and Commission to set public works priorities and goals for the community
- Using up-to-date equipment and providing its employees with ongoing training in the newest and best methodologies for this region

## 4.0 FACILITY NEEDS ANALYSIS

### EXISTING CONDITIONS

There are four distinct buildings on site that house the department of public works operations.

**Building #1:** 13,900 square foot, two story brick and concrete block structure with precast concrete plank floors and roof structure. The building sits into a hillside, allowing access to both levels from grade. The upper level contains offices, locker/break room, toilets & shower, storage rooms, the traffic sign room and the traffic signal room. The lower level contains the vehicle repair bays, storage, and vehicle/equipment storage. This building is very sound structurally and was designated a building to remain in use as part of the master plan.

**Building #2:** 5,632 square foot, four bay, pre-engineered open metal shed for material, vehicle and equipment storage. The additional road salt required during the winter will be housed in this shed building, along with sand, mulch and other material that would require protection from the weather before being used. Many of the smaller tractors and tree grinding equipment is stored in this building in the summer. There is also a 5-ton crane on rails in one bay. This building is in poor condition and is deteriorating due to the salt and other material storage use.

**Building #3:** 7,320 square foot, five bay, pre-engineered metal structure with block and brick walls used as a garage for vehicle and equipment storage along with the carpentry shop. The largest vehicles are general housed in this garage. There are several mezzanines with material storage and some rack shelving for storing the inflatable structures for the tennis and basketball courts. This building recently had the roof repaired and skylights installed and was designates as a building to remain in use as part of the master plan.

**Building #4:** 5,000 square foot salt storage dome building (80 foot diameter, 3,500 ton capacity). The base of the building is reinforced poured concrete walls, with a wood frame dome sitting on top. These structures are meant to be loaded with a conveyor system to an opening near the top of the dome, but this opening is in the wrong location and is not utilized. The main door opening is not large enough to empty a truck full of salt, so a front end loader must push and load the salt in the dome. This creates additional work, is not efficient and can create hazardous situations.

Also on site are a fuel station and a salt brine station.

### SPACE PROGRAMMING:

RSSC Architecture met with the Director, the Superintendent and the Supervisors of the various public works crews to discuss the programming and needs of the public works facility and operations. A survey was performed to identify and more clearly define the current issues and future needs. RSSC Architecture and Pashek Associates performed an existing conditions site survey to determine what site elements would affect the master planning of the building structures, while RSSC performed an existing conditions survey of the buildings. Upon completion of these surveys and discussions with the Public Works personnel, we created the initial list of program spaces for the facility. .

# Program Spaces

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Space	Existing Area	Program Area	Option #3	Net Change	Net %
Vehicle/Equip Bays	12,420	18,000	23,280	10,860	87.4%
Pallet Storage Shelving	184	312	400	226	122.8%
Subtotal (SF):	<b>12,604</b>	<b>18,312</b>	<b>23,680</b>	<b>6,106</b>	<b>48.4%</b>
Maintenance Bays (3)	2,470	2,140	3,600	1130	45.7%
Wash Bay	0	720	720	1500	new
Plow Repair	0	480	480	480	new
Plow Repair	0	480	0	0	0.0%
Vehicle Maintenance Storage	1,100	1,140	1,000	-100	-9.0%
Work Bench Area	140	240	150	10	7.1%
Mechanics Storage	540	600	600	60	11.1%
Subtotal (SF):	<b>4,250</b>	<b>5,800</b>	<b>6,550</b>	<b>3,080</b>	<b>72.5%</b>
Carpentry Shop	720	860	720	0	0.0%
Carpentry Storage	874	600	874	0	0.0%
Sign Shop	480	480	540	160	33.3%
Traffic Signal Shop	352	500	800	448	127.2%
Tool Storage	0	400	192	192	new
General Supplies	320	400	400	80	25.0%
Stock/Paints	0	325	240	240	new
Plumbing Supply Storage	76	160	280	104	136.8%
Work Bench Area	0	140	0	0	0.0%
Mezzanine Storage	1,334	1,000	1200	-134	-10.0%
Tailgate Storage	0	130	100	100	new
Subtotal (SF):	<b>4,156</b>	<b>4,995</b>	<b>5,346</b>	<b>1,190</b>	<b>28.6%</b>
Firing Range	1,824	2,400	2,475	650	35.6%
Mechanical Room	10	300	507	498	4900.0%
Controls	0	150	80	80	new
Storage	0	150	60	60	new
Mens Toilet (single user)	0	180	184	184	new
Womens Toilet	0	180	184	184	new
Cleaning	0	200	80	80	new
Subtotal (SF):	<b>1,834</b>	<b>3,560</b>	<b>3,570</b>	<b>1,736</b>	<b>94.6%</b>

## Program Spaces

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Space	Existing Area	Program Area	Option #3	Net Change	Net %
Break Room	570	600	620	50	8.8%
Training Room	0	600	620	620	new
Mens Locker/Toilet	296	700	560	264	89.1%
Womens Locker/Toilet	0	200	200	200	new
Office/Overnight	0	150	120	120	new
Conference Room	192	220	240	48	25.0%
Main Office (Superintendent)	108	220	240	132	122.0%
Mechanics Office	0	120	150	150	new
Traffic Office	0	120	360	360	new
Carpenters Office	0	120	0	0	0.0%
Reception area	50	100	144	94	1.9%
Toilet	15	60	198	183	1220.0%
Mechanical Room	130	150	150	20	15.4%
Electric Room	0	150	150	150	new
Subtotal (SF):	1,361	3,510	3,752	2,391	175.0%
Grand Total (net SF):	24,205	36,177	42,898	18,693	77.2%

## Outdoor Program Spaces

11/11/2014

Space	Existing Area	Program Area	Option #3	Net Change	Net %
Yard Storage (PWB)	40,000	25,000	12,000	-28,000	-70.0%
Yard Storage (Contractors)	30,000	12,000	6,000	-24,000	-80.0%
Leaf Vacs (*)	1,400	1,580	0	-1,400	-100.0%
Leaf Boxes	700	770	770	70	10.0%
Snow Plow Storage (*)	1,880	1,880	0	-1,880	-100.0%
Salt Boxes (*)	600	600	0	-600	-100.0%
Tennis Court Vestibules	250	250	250	0	0.0%
Community Event Items (*)	450	450	0	-450	-100.0%
Miscellaneous Storage (*)	1,000	1,125	0	-1,000	-100.0%
Material Bin Storage (uncovered)	1,200	1,500	1,500	300	25.0%
Material Bin Storage (covered)	1,830	1,600	1,500	-330	-18.0%
Public Safety Trailers	800	680	800	0	0.0%
Calcium Chloride Plant	600	1000	1,000	400	66.7%
Dumpsters (3)	945	945	945	0	0.0%
Trailers (3) (School District)	1,550	1,550	0	-1,550	-100.0%
<b>Grand Total (SF):</b>	<b>83,205</b>	<b>13,930</b>	<b>24,765</b>	<b>-58,440</b>	<b>-70.0%</b>
Salt Storage	<b>5,000</b>	<b>8,000</b>	<b>8,000</b>	<b>3,000</b>	<b>60.0%</b>
	(3,500 tons)	(6,500 tons)			
(* denotes existing outdoor storage space being converted to indoor equipment storage space)					
(Site area for parking and circulation around the site will be similar to existing conditions)					
(Site area for tree nursery will remain the same as existing)					

|

#### General Site Survey Findings:

1. Only one access point to site. Location of driveway can cause hazardous condition when entering or exiting.
2. Lack of organized designated parking areas.
3. Lack of well marked public entrance into main building.
4. Main vehicle circulation around site can cause safety issues with pedestrian circulation, equipment and material movement, and with parked vehicles. Contractors have to travel through the entire public works facilities to the other end of the site.
5. Salt storage dome is in poor condition, inefficient and does not have sufficient capacity.
6. Lack of covered material and equipment storage space.
7. Material and equipment not efficiently organized.
8. Project 70 parcel at south end of site will remove a significant portion of yard storage.
9. Lack of site and building security.

#### General Building Survey Findings:

1. Maintenance Garage lacks sufficient height to perform maintenance of certain vehicles (truck beds in upright position, back hoes, front end loader). Lack of space to perform maintenance on snow plows and other equipment.
2. Lack of vehicle and equipment indoor wash bay.
3. Lack of private locker room space and insufficient toilet and shower areas.
4. Lack of private offices for crew supervisors.
5. Lack of conference and training room space.
6. Insufficient break/lunch room space.
7. Lack of sufficient vehicle & equipment garage space (+/- 70 vehicles or pieces of equipment).
8. Lack of sufficient community equipment indoor storage space.
9. Lack of loading dock area.
10. Insufficient HVAC, plumbing and inefficient lighting.

The findings were reviewed and prioritized. It was determined that all aspects of the public works facilities could use upgrading and additional space, however, the main concerns of the superintendent included replacing the existing salt storage dome with a new larger “barn like” salt storage building to provide the needed storage capacity of 6,500 tons per year, to provide additional covered material storage area, to provide a larger and higher vehicle maintenance garage and to provide additional vehicle and equipment garage space. By increasing the capacity of the salt storage building and providing additional covered outdoor material storage area, this helps alleviate the seasonal use of the existing shed building, will allow temporary vehicle and equipment storage, until a new maintenance garage and vehicle storage building can be built in its place.

Currently a majority of the equipment and some vehicles are exposed to the elements year round. This shortens the useful life of the equipment and requires additional maintenance. By providing additional garage space, all vehicles and a majority of equipment can be stored indoors, protected from the elements, requiring less maintenance and providing a longer service life.

Finally, providing upgraded locker and toilet rooms, break room and conference spaces, along with new offices, a training room and community indoor storage, the public works facility can provide sufficient and efficient facilities for their employees, as they do for the residents of the community.

**Facility Needs to be incorporated:**

- New salt storage building (6,500 ton capacity)
- New larger & higher vehicle maintenance garage (lifts and pit in floor for very large vehicles)
- New covered material yard storage area (sand, mulch, asphalt patch)
- New vehicle and equipment garage storage space
- New locker rooms and support spaces for maintenance vehicle garage
- New break room, training room, conference room and offices
- Indoor wash bay area

**Other Aspects for consideration:**

- Tool storage, area for ladders, shovels, rakes, etc.
- Work Bench Area
- Lumber storage area
- Community event storage area
- Storage for flammable liquids and herbicides
- Mezzanine area for storage of seasonal decorations and municipal supplies
- File Storage
- Utility Rooms
- Trash dumpster
- 30 – 35 employee parking spaces

**Operating Staff Projections**

Based on the already well developed infrastructure, roads and parks in the municipality, and the anticipated minimal increase in these items, along with the ability to contract services with independent subcontractors, the Department of Public Works does not anticipate much growth in the future ten years.

The main area of growth may occur in the Forestry program, park/recreation maintenance, and vehicle/equipment maintenance, which may provide for five (5) additional full-time employees.



## **5.0 SITE ANALYSIS**

### **SITE DESCRIPTION AND LOCATION**

The site is located at 1250 Lindendale Drive, near the western edge of the municipality. The site also serves as the material storage and staging area for municipal and utility contractors performing work in the municipality. The site consists of a number of adjacent parcels of property (16.36 acres total in size, 5.16 acres useable), bounded by Cedar Boulevard to the east and Robb Hollow Park to the west, with adjacent residential neighborhoods to both. This area is very visible for those traveling along Cedar Boulevard and to the residential neighborhoods on both sides.

To the south of the main facilities are two Project 70 parcels of land that are designated only for parks and recreational use. One of the parcels is currently being used for material and equipment yard storage for both the public works and contracted services subcontractors. The eastern side of the site rises up at various points to a gently sloping grassy area adjacent to Cedar Boulevard. A portion of this area is used for the temporary storage of trees that will be used throughout the municipality. There are currently no security fences and the public has free access to and on the site. Part of the site is utilized as an access point to the adjacent park's walking trail.

There is multiple pump fuel station and a salt brine dispensing station located on the site. The fuel station is close to the main parking areas and is utilized by all the municipal vehicles. Nearby to the fuel station, is a parking area for the public safety police trailer and the fire department training trailer. The salt brine station is located across from the vehicle garage by the material storage bins.

There are multiple levels to the site, with the lowest level being the main level for circulation, buildings and yard storage. The higher level on the east side is for the tree nursery and the upper level on the west side provides access to the upper level of the existing two story maintenance building. There are several smaller levels (4'-0" or less in grade change), that are utilized for yard storage of equipment and miscellaneous supplies. Moving through the site, the buildings are lined up on the right (west) side, while the material and equipment storage is lined up along the left (east) side of the site. There are concrete barriers and concrete pads that form several material storage bins (uncovered, approximately 20' x 24" each). Parking is scattered in various locations, but stays mostly in the northern end of the site. There are two parallel wooden walls across from the two story maintenance building that originally served as covered salt storage, but currently is used for a variety of uses, including parking, leaf vacuums storage and impounded cars.

### **Environmental Issues:**

There are no known environmental issues, however the site has been slowly filled in with uncompacted fill, along with extending the underground storm culvert piping several times. The site is located in a flood plain.

## **TRAFFIC ACCESS AND SITE CIRCULATION**

The main, and only, entrance to the site is located on the north end of the site, just past the Lindendale Drive and Cedar Avenue intersection. This is a frequently used intersection for access to adjacent neighborhoods and provides only a short distance for vehicles making a left hand turn onto the site. At times the entrance to the site may be blocked by vehicles stacking to make a left hand turn onto Cedar Boulevard.

Upon entering the site, there is one main drive aisle, with large trees on both sides, and with a small parking area for access to a park trailhead and a gas pipe service area on the other side. At the end of the drive aisle, there are three options to continue into the site. One is to stay straight and continue along the main drive aisle through the site to the yard storage areas at the end of the site. This is the most frequently used option by public works personnel, contractors, material deliveries and visitors. From this main thoroughfare, parking, garages, material storage sheds, the salt dome and all yard storage can be accessed. Option two is access to the left for the fuel station and a short road up to the tree nursery. Option three is to the right, up a road to the upper level access for the two story maintenance building.

Some of the site concerns of the public work's personnel:

- Only one access point to site - Contractors have to travel through the entire public works facilities to gain access to their material and equipment at the other end of the site and then back through again when exiting the site.
- Large amounts of vehicle and pedestrian traffic in front of the vehicle maintenance bays garage doors. Moving vehicles in and out of the garage bays along the main drive aisle can create hazardous situations, especially if backing out of the garage with a large vehicle.
- Limited organized, dedicated parking areas. Vehicles are double parked end to end, and most parking occurs wherever space is available or in some cases on the grass.
- Well marked public entrance into main building – most visitors go into vehicle maintenance garage, instead to upper level offices.
- Lack of site security and minimal site lighting.
- Salt storage – outdated dome structure, small capacity, hard to load salt into dome and into trucks (additional maneuvering and time to move salt), required additional salt stored in shed garage building.
- Tree nursery on separate level with limited access from public works main yard storage.

## **ADJACENT LAND USE AND HISTORICAL RESOURCES**

The area the public works site is located and the adjacent parcels of land are zoned and used as single family residents, along with some areas designated as open passive community park space (Robb Hollow Park). As noted earlier, the parcels at the southern end of the site are designated as Project 70 parcels which limits the activities and use of the parcel due to the type of funding to purchase the land. Only park or sustainable type recreational uses are allowed on these parcels, which currently have public works material and equipment yard storage. There are no known designated historical sites or resources located at the public works site.

## UTILITIES AND DRAINAGE

All the main utilities are available at the site, with larger stormwater and sanitary sewer lines running through the middle of the site (flowing from north to south). The stormwater line is an approximately nine (9) foot diameter metal culvert pipe, serving as an underground storm water control piping system for the site, for the drainage swale/stream at the northern part of the site, and for the residential neighborhoods surrounding the site. The top of the culvert pipe is only about two to four feet below grade. The water from this culvert pipe ultimately discharges at the southern end of the site, into a stream along Painters Run Road. The sanitary sewer line is a twenty four (24) inch diameter vitrified clay pipe, approximately twelve (12) feet below grade at the inverts of the manholes. There are several sanitary manholes on the site, which some act as the connection point for sanitary lines serving the surrounding neighborhoods.

Building #1: Existing two story vehicle maintenance garage, vehicle storage and offices/support spaces.

- Overhead electric (3-phase) and telephone service, gas service, water and sanitary service.
- Emergency generator located inside lower level material storage garage bay.

Building #2: Existing four bay, open metal shed building for material & equipment storage.

- Electric service only.

Building #3: Existing five bay, vehicle and equipment storage garage, along with the carpentry shop.

- Electric (3-phase) and gas service only.

Building #4: Existing salt storage dome.

- No utilities.

The existing onsite fuel station and a salt brine station have electrical service for lighting and pumps and there is one fire hydrant on the site. There are two utility poles on site with three transformers on each, which serve building #1 and building #3. Also, there are three site light poles with one or two light fixtures on each, that illuminate the drive aisle and storage areas in front of buildings #1, 2 and 3.

## SITE ANALYSIS

There were several factors identified to be addressed in the master plan of the site. The main items included the access to the contractor's areas, the vehicle circulation on the site, the parking areas, the visitor's entrance and site security. Some of these items would be affected based on the removal, replacement or expansion of the buildings on site or if a facility was to remain.

Several features that have impacted the proposed master plan and development of the public works facility and site, included:

- Existing sanitary line and stormwater culvert running through the middle of the site.
- Existing Project 70 parcels that have restrictions for parks & recreational uses.
- Existing steep grades.
- Physical conditions of the existing buildings.
- Decisions to keep certain buildings in service due to recent renovations.
- Limited access point to site.
- Surrounded by residential neighborhoods that look directly into site.

We explored and reviewed two initial site layout concepts with the Public Works Department and presented these to the Board of Commissioners. Based upon the review comments received from both, we created a third concept, which eventually became the master plan.

**Concept #1:**

In the first conceptual site layout, we concentrated on reorganizing the site circulation by creating a new drive aisle and separating the flow of traffic of the Contractors from the access in front of the main public works buildings and from the new main parking areas. We also proposed to include a second access point onto the site, off of Cedar Boulevard, near the southern end of the site. This would allow the option of creating a separate Contractor's entrance and avoid having them traveling through the public works facilities altogether. In addition, this would also allow the salt trucks to leave the site in both directions, alleviating bottlenecks at the main entry. With a new drive aisle, this would allow the public work vehicles to maneuver in and out their buildings without interference from the contractor's vehicles and material deliveries. To achieve the additional drive aisle on site, allow for yard storage and a larger (deeper) vehicle maintenance and storage garages, grading into the existing hillside on the eastern side of the site would be required.

We have proposed dividing the site into three secure areas. One would be public access at the main parking area for visitors and those using the firing range. The second would be the main public works facilities, which would have a gate and fencing at the new drive aisle. While the third would be the yard storage area, to help protect material and equipment and prevent unauthorized debris and material being discarded in the trash dumpsters or in the yard. New site lighting would be provided throughout the site also.

At the yard storage areas on the mid to southern end of the site, we were proposing to create and organize the storage area into a group of smaller areas, separated by rain gardens with vegetation and landscaping. This would help control and filter surface storm water, while providing screening from the adjacent road way and residential homes nearby.

With concept #1, all the existing buildings and the salt dome were removed, except for the two story block & brick building, which was determined to be a strong asset and would be difficult and costly to demolish.

In the original space occupied by the salt dome, vehicle storage garage and open shed building, a new fully enclosed, larger vehicle and equipment building would be constructed, which would include the new vehicle maintenance bays, wash bay and carpentry shop. A new larger salt storage building would be constructed in part of the existing yard storage area and the opening into the building would face north, away from the new drive aisle.

**Concept #2:**

For the second conceptual site layout, we kept the same idea of the site circulation by creating a new drive aisle and separating the flow of traffic of the Contractors and deliveries from the parking areas and the garage doors of the public works vehicle and equipment buildings. We also included the second access point onto the site and the idea of a group of smaller areas yard storage, separated by rain gardens with vegetation and landscaping. Security measures would be similar.

With concept #2, all the existing buildings and the salt dome were removed, except for the two story block & brick building. The new larger salt dome would be built in the same location as the current one. Infilling between the new salt storage building and the existing two story building, a new fully enclosed,

larger vehicle and equipment building would be constructed and attached to the two story building. Covered yard material and equipment storage would be provided in a portion of the existing yard storage area, just south of the new salt storage building.

### **Review Comments of Concepts #1 & #2:**

The initial site plan layouts and buildings were presented and reviewed by the Public Works management and the Board of Commissioners. Some of the comments and decisions made during these reviews included:

1. The Project 70 parcel at the southern end of the public works site will be reclaimed as a parks & recreation use site. Public works yard storage area shall be reduced and will end at the northern tip of the Project 70 parcel.
2. The existing 5-bay vehicle storage garage (building #3) will remain and be incorporated into the new master plan. New roof and skylight renovations budgeted and installed the summer of 2014.
3. Existing 2-story block and brick building to remain and eventually be renovated.
4. Firing range and fuel station will remain on-site and be incorporated into the master plan.
5. The idea of adding a second access point to the site from Cedar Boulevard was well received and will be incorporated into the master plan as an option.
6. Creating new separate parking areas from the main drive aisle will be incorporated into the master plan.
7. Priority of new salt storage building and vehicle maintenance garage for public works superintendent.
8. Costs of re-grading hillside compared to benefit of extra useable space and separate drive aisle.
9. New buildings or shed structures shall not be built above the existing large stormwater culvert or sanitary sewer lines. This will alleviate costly excavation and patching of structures in the future.
10. Security fencing and controlled access gates to be incorporated as an option in the master plan.
11. New energy efficient site lighting to be incorporated as an option in the master plan.
12. Incorporate new way-finding signage on the site for visitors, contractors and deliveries.
13. Master plan to incorporate multiple phases over a period of years.

### **Concept #3 – Site Master Plan:**

In the third conceptual site layout, we incorporated the review comments, with the main items of keeping the existing 5-bay vehicle storage garage building, incorporating the firing range, not building over the main storm water and sanitary sewer lines, creating a separate parking area and limiting any grading into the existing hillside. By doing this, we have re-organized the circulation and parking at the northern end of the site to be more efficient and clear to those entering the site, along with new signage for visitor parking, deliveries and contractors.

Visitor parking will be to the right, up the hill to the upper level of the two story building. The public works superintendent and staff supervisor parking will also be on the upper level by their offices. Straight ahead will now be the main parking area for the public works employees. This area is separated from the main drive aisle going back through the site to the other buildings and yard storage. Between the two parking areas, there will be approximately 40 parking spaces. On the right hand side, an existing narrow drive aisle, currently used to exit from the fuel station, will be widened and paved, to provide a new drive aisle back to the fuel station and to the remainder of the site. This will allow delivery trucks and contractors to

avoid traveling straight through the employee parking area and reduces the speeds of the vehicles.

A second access point onto the site, located off of Cedar Boulevard, at the northern end of the Project 70 parcel and where the public works yard storage would end is being proposed with an option to incorporate a small parking lot for access to the walking trail in Robb Hollow Park and possible future parks & recreation activities on the Project 70 parcels. Without grading into the hillside, circulation through the site would be one main drive aisle, with buildings or yard storage on either side. This makes for efficient use of available land and minimizes costs for grading. With the location of the new parking area, this eliminates the “straight shot” to the back of the site, providing safety for both vehicles and employees. With the reduction of the existing yard storage due to the Project 70 parcel, the remaining yard storage area will stay as is, with minor improvements in grading, paving and stormwater control.

With one main drive aisle, site security options for the site would include a security fence and access gate at the addition to the two story building and at the southern end of the yard storage. This would allow public safety personnel access to the firing range and municipal vehicle access to the fuel pumps. Public works personnel would have easy access to the lower level community storage in the two story building. By securing the main facilities area and yard storage, this will help prevent unauthorized access to the majority of the site, alleviating vandalism, theft and dumping of debris in the large trash dumpsters.

As part of Concept #3, the existing salt storage dome would be replaced with a larger rectangular shaped salt storage building. The existing vehicle storage garage would remain next to the new salt storage building. A one story, pre-engineered vehicle maintenance garage and vehicle/equipment storage building, would be constructed as an addition and infill building between the vehicle storage garage and the existing two story building.

Two additional pre-engineered vehicle & equipment storage buildings are proposed to be built in part of the existing yard storage area and covered outdoor material storage is proposed to be built across from the new salt storage building. In addition, we are proposing to construction a small equipment storage building or shed at the municipal golf course site, to house equipment related to seasonal work.



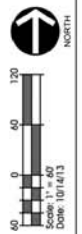


NOTES:

1. Base Map Information compiled from a recent aerial photograph and PAFGA LIDAR information.
2. Locations of all the features and facilities are approximate. PAFGA LIDAR information is not a substitute for a site visit and accuracy of utility location or other facilities.

# **Mt. Lebanon Public Works Master Plan** Municipality of Mt. Lebanon Allegheny County, Pennsylvania

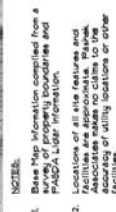
CONCEPT 1













CONCEPT 2

60 0 60 120

Scale: 1" = 60'

DOB: 10/14/13

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Municipality of Mt. Lebanon  
Allegheny County, Pennsylvania



## 6.0 REGULATORY REQUIREMENTS

### **ZONING:**

Zoning District: R2 – Single Family Residential District, OSP – Open Space Passive District

- Municipal Services Building, Permitted Use

### Lot, Area & Dimensional and Parking Requirements:

Section 617.1 Any Municipal Facility owned and operated by the Municipality shall not be required to comply with the area and bulk regulations and off-street parking and loading standards and requirements of the zoning district in which the facility is located.

Based on the above section in the zoning code, the development would not be required to comply with the main aspects of the zoning regulations, however, it is recommended to present the proposed development of the public works site to the Planning Commission and the Commissioners for review and approval.

### **GENERAL DEVELOPMENT REQUIREMENTS:**

Since there is basically a stream running through the property and the site is located in a flood plain, there will site plan development reviews required at the municipal, county and state levels. Depending on the extent of the disturbed area, this will determine the extent of information and reviews required.

There are multiple options for building design development, depending on the type of construction, the distance from property lines and if a fully automatic sprinkler system is installed throughout the facility or only in a portion of the facility. Based on some of these decisions, this will help determine the allowable size or floor area of a building and whether fire separations will be required. Currently, there are inherent fire rated walls at the two story building and the vehicle storage building with the block wall construction.

### **BUILDING CODES:**

The State of Pennsylvania currently has adopted the Uniform Construction Code, which governs building construction. The code standards which regulate the design of buildings are the International Codes and ANSI/ICC A117.1-2009 Accessibility Standards. For the purposes of the feasibility study, we are utilizing the International Building Code (IBC) 2009 along with the accessibility standards.

### **IBC 2009**

#### **Chapter 3: Use and Occupancy Classification**

The facility is classified with two occupancy uses, **B – Business** and **S-1 Storage** (contains area for motor vehicle repair). These uses may be utilized as ‘non-separated’ uses or as ‘separated’ uses. If ‘separated’ uses, then a rated fire wall or partition shall be provided between the two uses.

## **Chapter 5: General Building Heights and Areas**

Table 503 – Allowable building Heights and Areas, provides the limitations to the floor area per story, the number of stories and the height of building from grade plane, depending on the Use & Occupancy of the building and the Type of Construction used. The allowable floor area, building height and number of stories may be increased by providing a minimum clear distance (or “frontage”) around the perimeter of the building (code notes 20 feet, but 30 feet maximizes the increase), or if a sprinkler system is installed throughout the facility.

### **TYPE IIB CONSTRUCTION (Noncombustible)**

#### **Fire-Resistance Rating Requirements for Building Elements:**

Primary Structural Frame	0 Hours
Bearing Walls	
Exterior	0 hours**
Interior	0 Hours
Nonbearing Interior Walls	0 Hours
Floor Construction	0 Hours
Roof Construction	0 Hours

\*\*1-Hour Rating Required if Exterior Wall is less than 10'-0" from the Property Line or Fire Wall

#### **Allowable Building Height & Area (S-1 Storage, most restrictive if uses ‘non-separated’):**

##### Without Sprinklers:

- 2-Stories
- 17,500 SF per floor
- 55'-0" Building Height

##### With Sprinklers:

- 3-Stories
- 52,500 SF/Floor (65,625 SF with min. 20 foot clear area at building perimeter)
- 75'-0" Building Height

#### **Allowable Building Height & Area (Business, if separated from Storage use):**

##### Without Sprinklers:

- 3-Stories
- 23,000 SF per floor
- 55'-0" Building Height

##### With Sprinklers:

- 4-Stories
- 69,000 SF/Floor (86,250 SF with min. 20 foot clear area at building perimeter)
- 75'-0" Building Height

## Chapter 6: Types of Construction

There are five basic types of construction:

- Type I – Non-combustible and 2-hour fire-resistant construction.
- Type II – Non-combustible
- Type III – Combustible, except for exterior bearing walls/structure, which requires 2-hour fire rated
- Type IV – Heavy Timber
- Type V – Combustible (typically wood framing)

Each type also is divided into two categories, “A” – fire rated protection on the structure or “B” – non-fire rated structure. As noted earlier, depending what Type of Construction is utilized, will depend on how large and tall a facility may be designed, before additional items may have to be considered (i.e. sprinklers or fire walls).

## Chapter 7: Fire and Smoke Protection Features

### **Fire Rated Walls:**

Fire Walls- Divides a Facility into Separate Buildings

- 2-Hour Fire Resistance Rating Required (Type IIB or VB)

Fire Barriers- Divides a Facility into Separate Fire Areas

- 2-Hour Fire Resistance Rating Required

Fire Partitions- Corridors

- 1-Hour Fire Resistance Rating Required (Without Sprinklers)
- No Fire Resistance Rating Required (With Sprinklers)

Exit Enclosures- Stairs

- 1-Hour Fire Resistance Rating Required (When Connecting Less Than Four Stories)

## Chapter 9: Fire Protection Systems (new buildings)

Group B – Business does not require an automatic sprinkler system unless the building exceeds the allowable floor area. S-1 Storage occupancies require an **automatic sprinkler system** throughout the building when **one** of following conditions exists:

1. The fire area exceeds **12,000 SF**;
2. The fire area is located more than three stories above grade plane,
3. The combined S-1 fire areas, including mezzanines exceeds **24,000 SF**, or
4. The fire area used for storage of commercial trucks or buses exceeds **5,000 SF**.

A **fire area** is defined as the aggregate floor area enclosed and bounded by fire walls, fire barriers, exterior walls or horizontal assemblies of a building. Group B- Business use occupancies require a **manual fire alarm system** when the occupant load is 500 or greater. S-1 Storage Occupancies do not require manual fire alarm systems. The code **does not** require smoke or heat detectors.

## **Chapter 10: Means of Egress**

### **Occupant Load:**

Occupant loads for the spaces in the building are calculated based on a maximum floor area per occupant. The occupant load will be utilized for calculating the size and number of a variety of code requirements, including egress widths at corridors and doors, the number of exits, number of plumbing fixtures, fire areas separations and fire protection installation.

Based on Table 1004.1.1, these are some of the allowable square footages:

- Business Areas (offices) 100 SF per occupant
- Parking Garages 200 SF per occupant
- Mechanical/Storage 300 SF per occupant

### **Corridors:**

In B – Business and S-1 Storage Occupancies that serve more than 30 people, corridors are required to have a **1-hour fire-resistance rating**. (The fire-resistance rating may be decreased to zero, if automatic sprinklers are installed throughout the facility).

### **Accessible Means of Egress:**

New construction or additions require the proper maneuvering clearances and spaces to allow for accessible means of egress. Exit signs with raised lettering and accessibility symbols shall be provided at exit stairwells and exit doors.

## **Chapter 11: Accessibility**

In general, an accessible route is required from the handicapped parking spaces to the main entry of the facility and then to the areas of primary use, including support spaces (i.e. toilet rooms) along the accessible route. Door and corridor widths and spaces at plumbing fixtures shall be provided with the proper maneuvering clearances.

## **Chapter 29: Plumbing Systems**

The occupant load of the proposed facility is 40 occupants (17 in B-Business Use and 23 in S-1 Storage/Parking garage). The plumbing code requires separate restroom facilities for men and women, and depending on the total number of water closets required, a separate “family restroom” would be required. Also, each restroom shall have at least one of each type of fixture (sink, toilet and urinal) handicapped accessible.

### **Plumbing fixture calculations:**

#### **Business Use:**

- |                     |                                                    |
|---------------------|----------------------------------------------------|
| Water Closets:      | 1 per 25 for the first 50, and 1 per 50 thereafter |
| Lavatories:         | 1 per 40 for the first 80, and 1 per 80 thereafter |
| Drinking Fountains: | 1 per 100 occupants                                |



Mop Basins: 1

Storage Use:

Water Closets: 1 per 100

Lavatories: 1 per 100

Drinking Fountains: 1 per 1000 occupants

Mop Basins: 1

(Note - for the men's restroom, a urinal may be substituted for a water closet, but only up to 67% of the required water closets)

## **7.0 FACILITY DESIGN CONCEPT**

### **DESIGN ISSUES AND OPPORTUNITIES:**

The existing public works buildings and structures have reached the point in their age that repairs and maintenance is required. In 2014, the roofing material of the existing open material & equipment storage shed was re-done to alleviate roof leaks, while a new roof and new skylights were installed on the existing vehicle storage garage. As these buildings continue to age, additional maintenance and repairs will be required. Since the firing range is part of one of the existing facilities, this area also has reached its serviceable life, and is in dire need of upgrades, including new ventilation and mechanical systems, new lighting, new bullet trap and target systems, new support rooms and a longer firing range to meet current qualification standards.

Essentially the public works department operations, vehicles and equipment have outgrown the current facilities. Equipment is shuffled around from indoors to outdoors and from one area of the site to another, depending on the season and use. Vehicles are stored inside a majority of the year, but barely fit in the available space. Garage space is valuable in the winter time, to keep vehicles 'warm' and allow for quick use without cleaning off snow. Meanwhile, leaf vacuums & boxes, and other equipment sit outside in the snow and rain, deteriorating. There is a lack of organized and dedicated spaces, either indoor or outdoor, that allows for efficient transitions for equipment and material use from season to season. With the reduction of yard storage due to the Project 70 parcel being reclaimed for park use, the remaining yard storage space will be at a premium.

The Public Works facilities and yard storage space are considered an eyesore to the surrounding residential neighbors and those driving along Cedar Avenue. There are municipal plans to install additional landscaping, trees and mounding along Cedar Avenue to provide a visual screen, mainly for those traveling along the roadway, since most residential homes are much higher in elevation and look down into the site. Keeping many of the existing taller trees helps alleviate this somewhat, but "cleaning up" and organizing the site and buildings, along with additional landscaping within the public works site, will help with the aesthetics of the area.

As noted earlier in the report, there are several issues with the current facilities, including:

1. Maintenance Garage lacks sufficient height to perform maintenance of certain vehicles (truck beds in upright position, back hoes, front end loader). Lack of space to perform maintenance on snow plows and other equipment.
2. Lack of vehicle and equipment indoor wash bay.
3. Lack of private locker room space and insufficient toilet and shower areas.
4. Lack of private offices for crew supervisors.
5. Lack of conference and training room space.
6. Insufficient break/lunch room space.
7. Lack of sufficient vehicle & equipment garage space (+/- 70 vehicles or pieces of equipment).
8. Lack of sufficient community equipment indoor storage space.
9. Lack of loading dock area.
10. Insufficient HVAC, plumbing and inefficient lighting.

The existing salt storage dome is a major issue at the facility. The dome lacks sufficient storage space, is inefficient and is starting to reach the end of its serviceable life. A large portion of the open storage shed is utilized for salt storage, which takes up space for equipment and vehicles. The salt also has started to corrode a portion of the steel structure of the shed building. By providing a new larger capacity salt storage building, more space would be available in the open shed building for covered material storage, equipment and vehicles.

The existing open storage shed building has already had the roof repaired and the structure is in poor condition and unsightly. Because of the depth of the building (around 60 feet), it's inefficient for storage of outdoor material, which has to be moved back in the building with equipment, and not quite deep enough for two vehicles with attached equipment to stack inside. There is the opportunity to create new covered material and equipment storage sheds across from the proposed new salt storage building and the existing vehicle garage building. By moving the location of covered material storage, this would allow the existing shed to be used for vehicle & equipment storage until the municipality was ready to replace the shed with a new vehicle maintenance and storage building, for more efficient use of space, upgraded facilities and better aesthetics.

The existing 5-bay vehicle storage building is to remain per the request of the municipality. The building is in good condition and a new roof and skylights have been added, providing great natural light and addressing a major maintenance item. The carpentry shop and storage is already set-up in the building, along with several other material storage mezzanines and racks. The building has sufficient power and heating, but no cooling. There are no trench drains at the truck bays or toilet rooms, but trench drains could be easily added and with a connection to a new vehicle maintenance garage, employees would have easy access to locker rooms and toilet facilities.

The existing two story building is very structural sound, constructed of masonry walls and precast concrete plank floors and roof. The windows have insulated glass and the garage doors are insulated. However the building is showing its age and is in need of many upgrades to its building systems, room finishes and space utilization. The lower floor is utilized as the vehicle maintenance garage, vehicle parts storage, utility service area and the firing range, while the upper floor is half used as a vehicle garage and storage, and half used as traffic sign workshop, traffic signal workshop, offices, locker area, break room and a toilet room. There is a lack of sufficient space to provide the proper areas for the required spaces, because a majority of the building is used for vehicle storage or maintenance. There is the opportunity to re-develop this existing building into the new public works administrative and community storage areas by moving out the vehicle garages and creating new offices, new break and training rooms, new toilet facilities, expanding the traffic sign and signal shops and creating new indoor community storage areas, along with an unloading/loading area for pallet deliveries.

#### **Concept #1:**

The initial facility design proposed removing the salt dome, the vehicle garage and the open shed. The existing two story block & brick building, which was determined to be a strong asset, was to remain and eventually renovated. In the area where the other buildings were removed, a new fully enclosed, larger vehicle and equipment building would be constructed, which would include the new vehicle maintenance bays, wash bay and carpentry shop. This building would connect to the existing two story building to allow interior circulation through the facility, which would improve efficiency of operations. The two story building would eventually be renovated into offices, break and training rooms, storage areas and expanded traffic sign and signal shops.

A new larger salt storage building would be constructed in part of the existing yard storage area and the opening into the building would face north, away from the new drive aisle running through the site. Covered yard storage would be across from the new vehicle maintenance building, providing a buffer between the new main drive aisle and the circulation space in front of the maintenance building. This option keeps the firing range in the existing two story building and allows for extending the range with a new addition.

### **Concept #2:**

For the next concept, a new larger salt storage building would be built in the same location as the current one. Infilling between the new salt storage building and the existing two story building, a new fully enclosed, larger vehicle and equipment building would be constructed and attached to the two story building. We introduced the idea of two options for the location of the upgraded firing range. One idea was to keep the firing range where it was and allow for future expansion and support facilities. The second idea was to relocate the firing range into the new pre-engineered building, behind the vehicle maintenance bays, since they do not require a full eighty feet of depth. A common entrance would be built that would allow public works staff and those using the firing range to enter the building, but a secure access point would be installed to limit the access of those using the firing range.

Covered yard material and equipment storage would be provided in a portion of the existing yard storage area, just south of the new salt storage building.

### **Firing Range Discussion**

During this point of the study, RSSC Architecture was asked to review the design criteria and options of the firing range with the police chief and Mt. Lebanon High School. The school district had an alternate cost for renovating the existing firing range at the high school as part of the expansion and renovations of the school, but was in discussions with the municipality for the option of combining the two ranges at the public works site. RSSC contacted the police chief and reviewed his program requirements and then held a conference call with the police chief and a representative from the school district to review options and concerns, including:

- Police qualification standards would require a longer firing range, while the high school would fit in the existing space.
- High school team would require team locker rooms (home/visitor), nearby toilet facilities, scoring area or room, storage room. The police would like to have better storage area and gun cleaning room, and toilet facilities.
- Both desire new target system, bullet catch, and ventilation/mechanical systems.
- Separate entrance from public works entrance and available parking area for buses and cars.
- Security, access and liability issues with students coming onto the public works site, especially during certain busy times of the year with leaf collection, tree installation, contractors work and snow removal.
- Costs and funding.

As of this master plan, combining both ranges was less probable and the municipality was moving ahead with adding a new ventilation system to the existing fire range.

### **Concept #3 – Master Plan:**

After presentations and reviews of concepts #1 & #2, the municipality requested that the existing vehicle garage building to remain and the Project 70 parcel would be reclaimed for park & recreation use and both be incorporated into the overall master plan. With this new design criteria, along with trying to reduce the amount of grading into the hillside, the concept for the master plan started to take shape.

As part of Concept #3, we kept the idea of separating the parking from the main drive aisle, but once past the proposed addition to the firing range, the main drive would be in a similar location as now, with buildings on one side and yard storage on the other. The existing salt storage dome would be replaced with a larger rectangular shaped salt storage building and the existing vehicle storage garage with the carpentry shop would remain next to the new salt storage building.

A one story, pre-engineered vehicle maintenance garage and vehicle/equipment storage building, along with new locker rooms and support spaces, would be constructed as an addition and infill building between the vehicle storage garage and the existing two story building. This would create a continuous connection and allow circulation between the buildings without going outside. This helps create a safer environment for the employees with shelter from the weather and vehicle circulation on-site.

Two additional pre-engineered vehicle & equipment storage buildings are proposed to be built in part of the existing yard storage area and covered outdoor material storage is proposed to be built across from the new salt storage building, to replace the old covered material open shed structure. In addition, we are proposing to construction a small equipment storage building or shed at the municipal golf course site, to house equipment related to seasonal work.

One of the critical decisions as part of the master plan implementation, will be the ultimate size and location of the firing range within the facility. We have provided two options, 1) keeping the firing range in its current location and allowing for expansion to the east, for a longer range, mechanical space, a separate entry and support spaces, and 2) moving the firing range to the back lower level of the existing two story building and expanding to the north with a separate entry and support spaces. The second option, may require significant structural work, if the range will be column free, or will take up additional space allocated for community storage. The advantage of moving the firing range is the new maintenance vehicle garage may be constructed in the area originally designated for the firing range expansion and would provide at least one drive-thru garage bay, which was desired by the public works maintenance crew.

## **8.0 EVALUATION OF SATELLITE SITES**

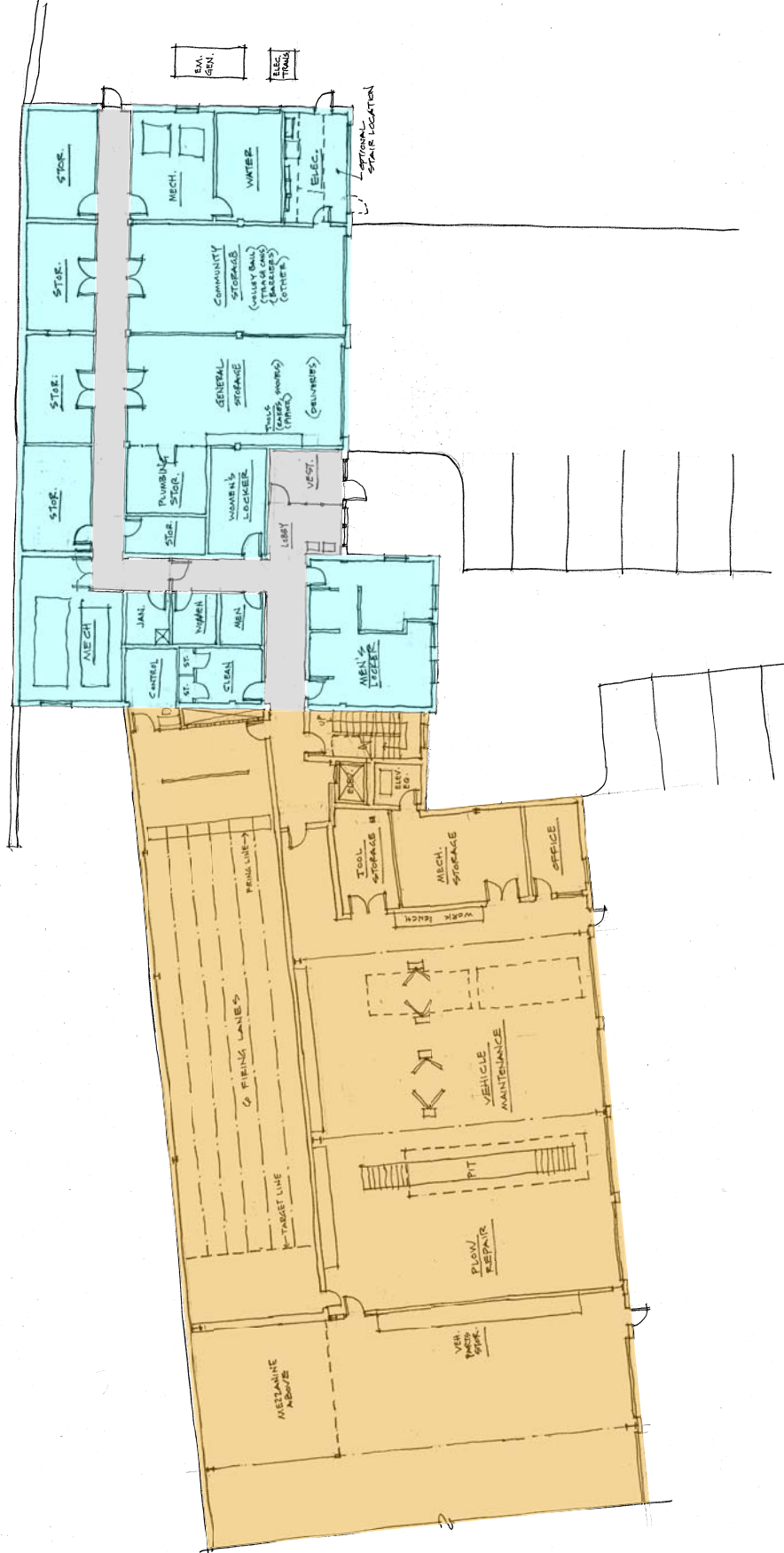
### **DESIGN ISSUES AND OPPORTUNITIES FOR OTHER SITES:**

We reviewed and evaluated other potential sites for public works operations or facilities, including Robb Hollow Park, McNeilly Park and the municipal golf course. Because of the use restrictions due to types of funding utilized to purchase the properties (except the golf course), and sloping topography of the sites, Robb Hollow Park and McNeilly Park were determined not to be feasible for public works operations. However, the golf course maintenance area already is utilized by the public works for tree debris and chipping operation. There is the opportunity to construct a small building at this site (two already exist for the golf course), for equipment storage (leaf vacs, chipping equipment, trailers, snow plows, salt boxes).

## Buildings & Structures Square Footage

11/11/2014

Space	Existing Area	Program Area	Option #3	Net Change	Net %
Exist. Maintenance Bldg.	13,912	(gross SF)	13,912	0	0.0%
Exist. Storage Shed Bldg.	5,696		0	-5,696	-100.0%
Exist. Vehicle Garage Bldg	7,320		7,320	0	0.0%
Firing Range Addition	0		2,900	2,900	new
New Maint./Veh. Garage Addition	0		8,640	8,640	new
New Locker Rooms/Stor. Addition	0		3,000	3,000	new
New Veh./Equip. Storage Bldg. #1	0		5,000	5,000	new
New Veh./Equip. Storage Bldg. #2	0		5,000	5,000	new
New Material Storage Shed Bldg.	0		1,500	1,500	new
New Equip. Storage Bldg. (Golf Crs.)	0		2,400	2,400	new
<b>Grand Total (gross SF):</b>	<b>26,928</b>		<b>49,672</b>	<b>22,744</b>	<b>84.5%</b>
Salt Storage	<b>5,000</b>	<b>8,000</b>	<b>8,000</b>	<b>3,000</b>	<b>60.0%</b>
	(3,500 tons)	(6,500 tons)			

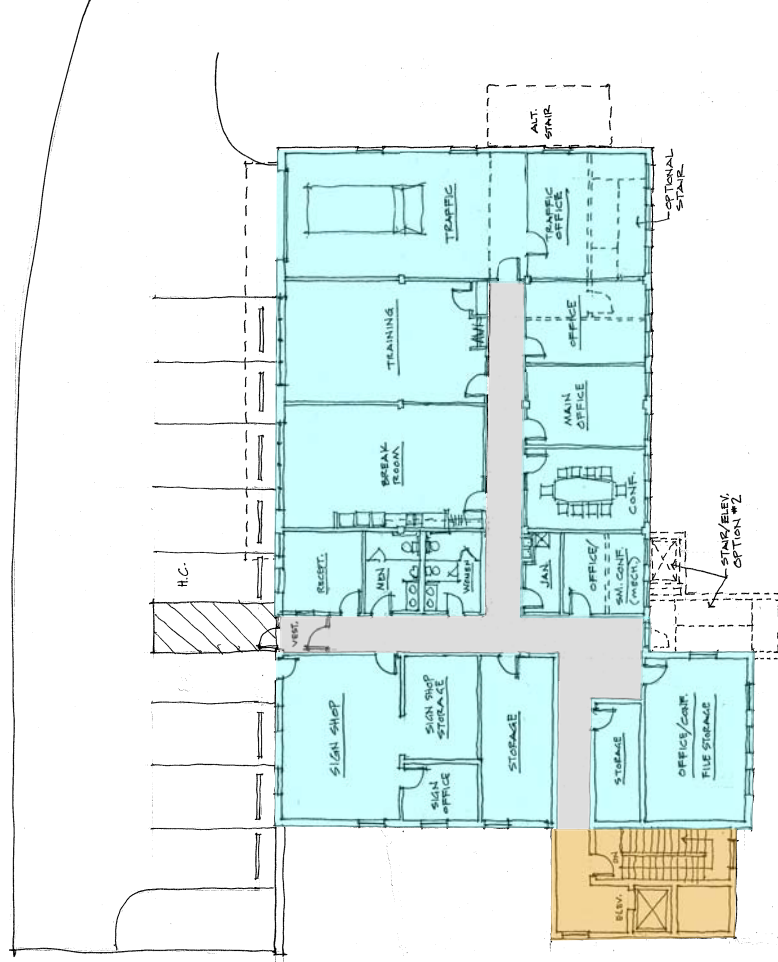


**FIRST FLOOR PLAN - OPTION #1**  
 1/8" = 1'-0"





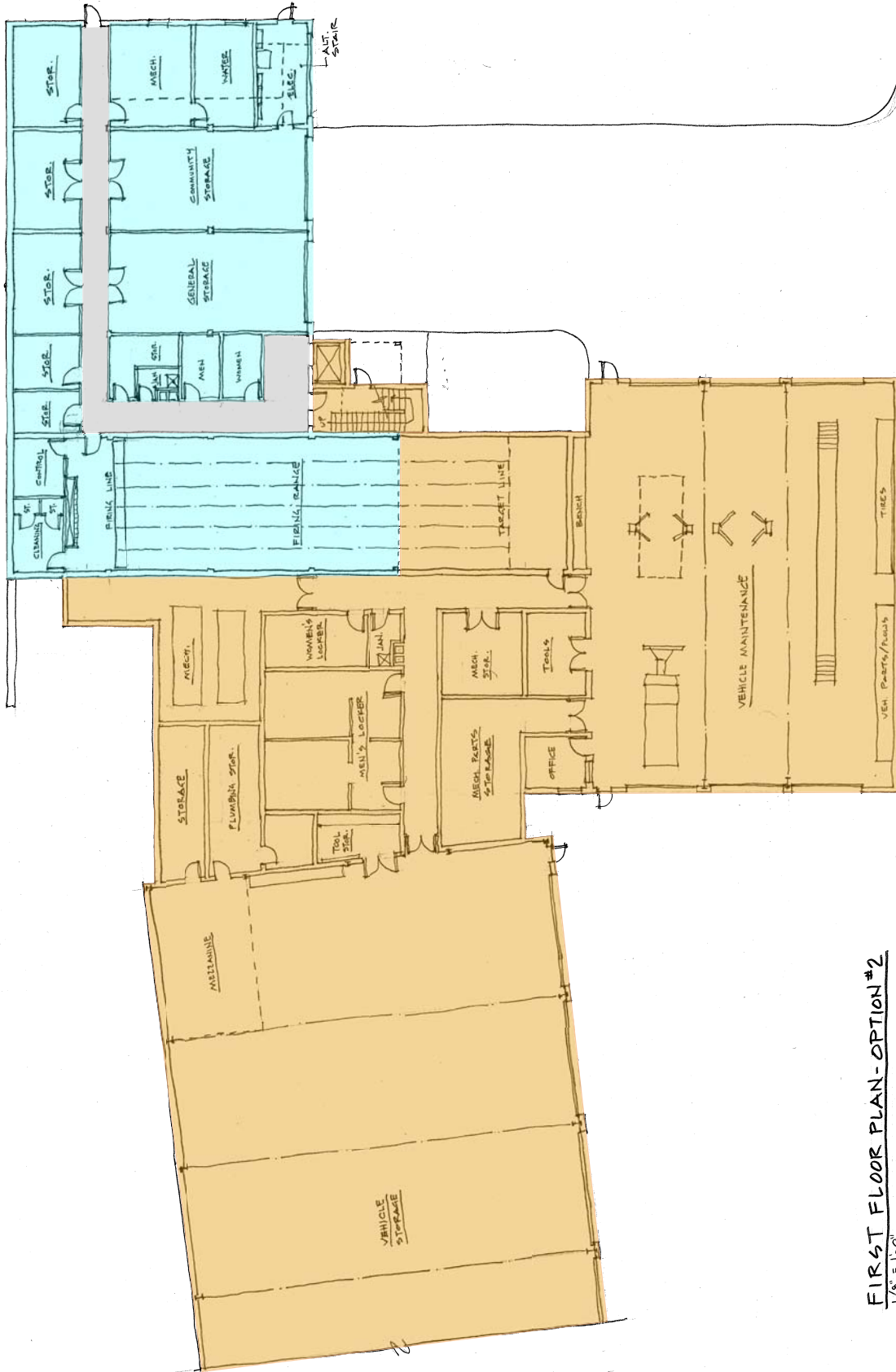




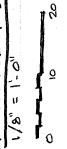
SECOND FLOOR PLAN - OPTION #1

1/8" = 1'-0"  
0 10 20

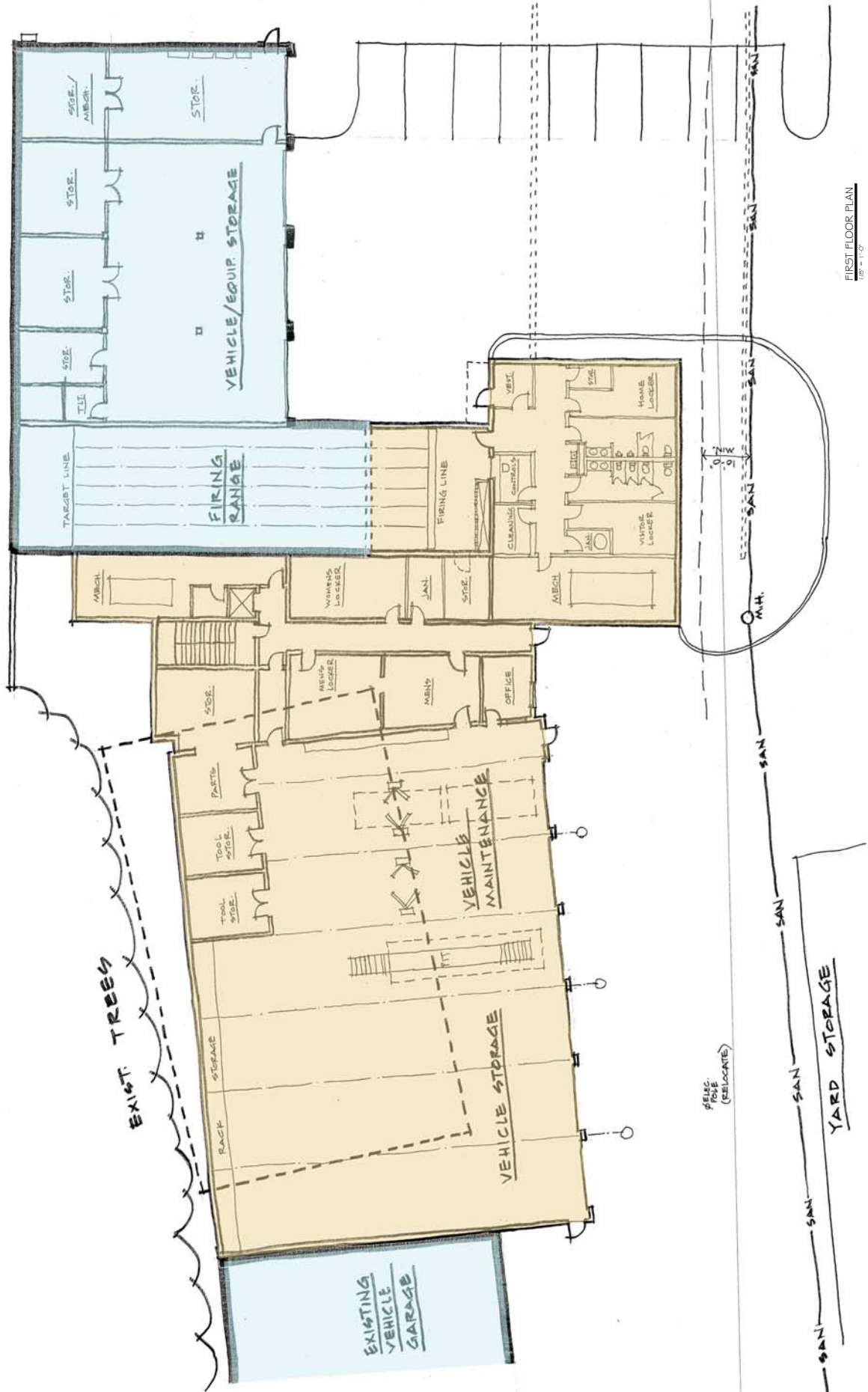




FIRST FLOOR PLAN-OPTION #2



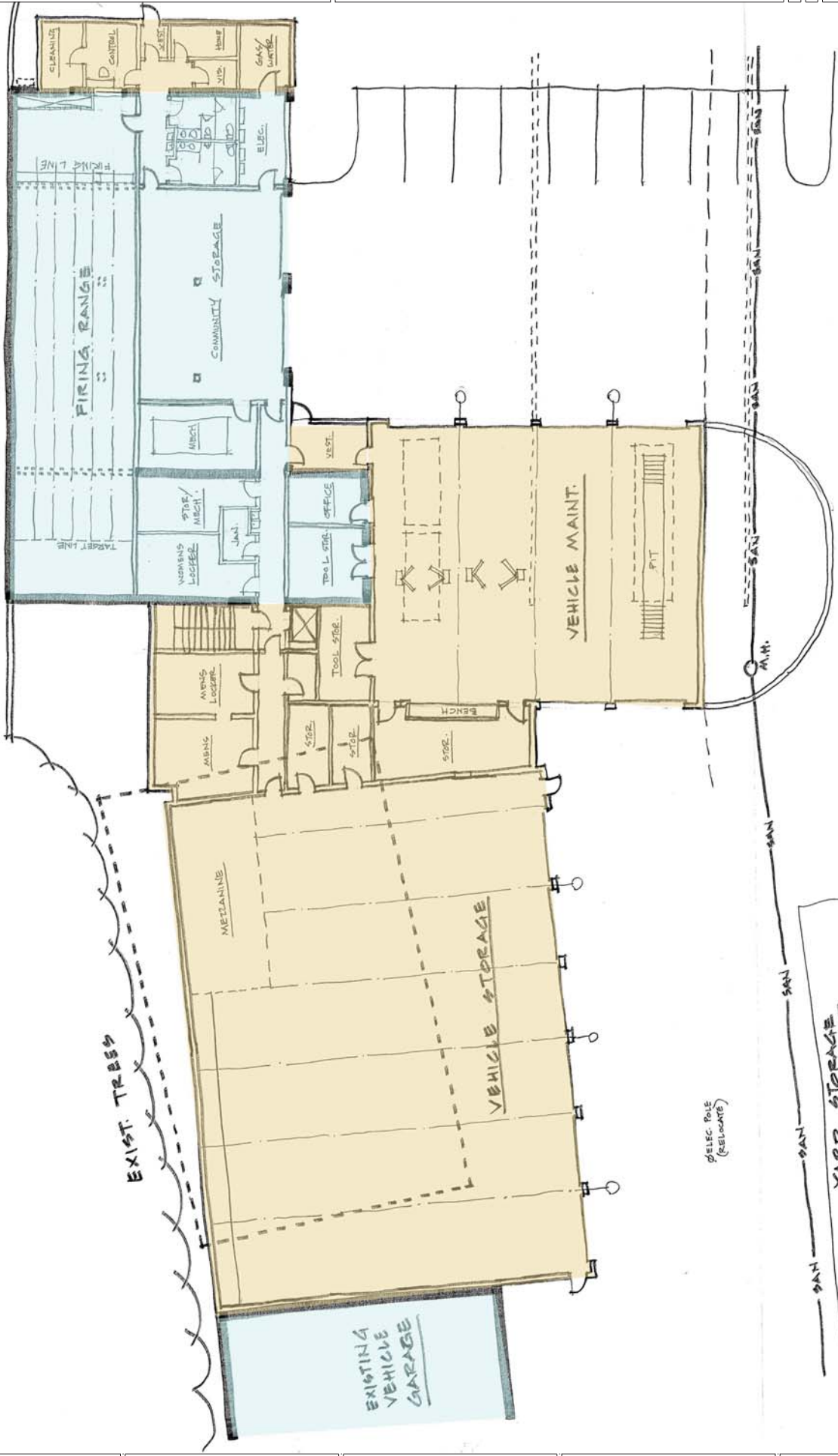






NOT FOR CONSTRUCTION

FIRST FLOOR PLAN  
1/8" = 1'-0"



REVISIONS

SCHEMATIC DESIGN

JUNE 10, 2014

MT. LEBANON

FEASIBILITY STUDY FOR:

MT. LEBANON PUBLIC WORKS

ALLEGHENY COUNTY PENNSYLVANIA



RSSc ARCHITECTURE  
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## **9.0 IMPLEMENTATION STRATEGY**

### **RECOMMENDATIONS:**

The master plan and feasibility study process identified numerous areas of concern and opportunities to improve the public works facilities. We agree with and recommend implementing the overall master plan in phases. By doing so, this allows the majority of operations to continue to serve the community residents, with minimal disruption and allows the municipality to budget for the facilities improvements over a period of time. The Public Works Department identified and prioritized the main items, which have guided the proposed phasing of the master plan.

The first recommended improvement is to replace the existing salt storage dome and construct new covered material storage. This will resolve several issues related to storing salt onsite, costs of purchasing salt and allowing future improvements to occur by freeing up space currently used by both.

The second recommendation is to plan for and within the near future, construct a new vehicle maintenance garage and site parking improvements. This should be coordinated with the future renovations/expansion of the firing range, since the location of the firing range will determine the location of the new vehicle garage.

These first two recommendations are basically at the top of the list for the Public Works Department. Once these two improvements have occurred, the remaining phases of the proposed master plan improvements are less critical and may occur over a longer time frame, but would greatly improve protecting vehicles and equipment and providing for a more stable organization of the public works site and operations. Refer to "Phasing Plan" section below for a more detailed description of each phase and improvements.

### **INFRASTRUCTURE GUIDELINES:**

Since infrastructure and utilities already exist on site and serve the surrounding area, we recommend maintaining the use of the current infrastructure and utilities. We do not recommend constructing permanent buildings over the large storm water culvert pipe or the main sanitary sewer line running almost down the middle of the site. Some of the onsite utilities may require modifications with final designs, but should be sufficient to serve any new structures.

Site grading and storm water control strategies should be reviewed and implemented with the new proposed paving and increased building sizes.

### **PROJECT BUDGET:**

The overall project budget, including all proposed public works facility improvements, off site development, firing range renovations, soft costs, design fees and contingencies, is estimated at **\$5,840,500.**



A general overview of the project budgets associated with the Phases listed below:

Phase I:	New salt storage building/covered yard storage.....	\$622,500
Phase II:	New maintenance garage, site work.....	\$2,292,900
Phase III:	New equipment building – golf course site.....	\$276,900
Phase IV:	Renovate existing two story building.....	\$991,200
Phase V:	New vehicle/equipment storage buildings.....	\$ 838,000
	<b>Subtotal:</b> .....	<b>\$5,021,500</b>

Firing Range Renovations and Additions.....\$819,000

Detailed Opinion of Probable Construction Costs for the site improvements, the buildings and for each phase are included in this section.

### PHASING PLANS:

The plan that has been developed allows for renovations and expansions to occur over a period of time, while providing flexibility in re-organizing the operations on the site and meeting the priorities of the Public Works current and future needs. A summary of the phased development of the site and facilities consists of the following:

- **Phase I** – Replace existing salt storage dome with new salt storage building (6,500 ton capacity) and construct new shed building for outdoor material storage. Increased covered salt storage capacity has been a need for several years and is considered the first priority by the Department of Public Works. The existing dome does not have enough capacity, is reaching the end of its serviceable life and is not efficient for operations. The required additional salt is delivered during the winter, when prices are higher and also stored in a portion of the existing shed type building, displacing vehicles and equipment. A new covered yard storage area for topsoil, mulch and sand, which are also stored in the existing shed building, would free up space for equipment and vehicle storage, and allow for the future development of a new maintenance garage and vehicle storage building.
- **Phase II** – Construct a new maintenance garage and support spaces (locker rooms, tool and parts storage) and vehicle storage area, along with site development of parking and circulation. Providing a larger and higher garage space to maintain all types of Public Works and Municipal vehicles is considered the second priority by the Department of Public Works. The existing space has limitations and not all vehicles or equipment can be serviced. By providing a new building that replaces the old metal shed building, vehicle and equipment maintenance operations can be increased and made more efficient, along with allowing future existing building renovations.
- **Phase III** – Construct a new equipment storage building at the Municipal Golf Course maintenance building area. The area is already utilized for debris and chipping for landscaping and tree maintenance performed by the Public Works, and it would be beneficial to have an enclosed structure at this site for storage of related equipment or seasonal use equipment that would otherwise occupy valuable yard storage space or vehicle storage space at the main public works site.

- **Phase IV** – Renovation of the existing two story block & brick building. With the maintenance garage and support spaces relocated to a new building onsite, the existing two story building would be utilized for vehicle and equipment storage on the lower level and for offices, conference rooms, training & break rooms, traffic control and road signage departments on the upper level.
- **Phase V** – Construct new vehicle/equipment storage building(s) towards southern end of site. This would allow for storing all remaining vehicles and equipment and for any future expansion of the Public Works vehicle fleet and equipment. By sheltering the vehicles and equipment from the weather, maintenance is reduced and the serviceable life is lengthened.

Part of the development of the Public Works site will include upgrades and possible additions to the existing firing range. Incorporation of these modifications should be coordinated with the proposed Public Works projects, as this will affect future development.

With the implementation of the proposed public works facility site and building improvements over a period of time in multiple phases, the Municipality of Mt Lebanon can provide the necessary and quality facilities for the Public Works Department operations and employees that match the quality of services provided to the residents of the community.

End of Report

**Mount Lebanon Public Works - Concept 3A**

10/27/14

*Opinion of Probable Construction Costs - Site Work**Prepared by Pashek Associates*

<i>Item Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Cost</i>	<i>Total Item Cost</i>
<b><i>Public Works Facilities - Site Construction</i></b>				
<i>Pavement removal</i>	7,000	SY	\$10	\$ 70,000
<i>Clearing and Grubbing</i>	1	AC	\$4,000	\$ 4,000
<i>Relocate Above Ground Utilities</i>	1	LS	\$20,000	\$ 20,000
<i>Earthwork</i>	18,000	CY	\$10	\$ 180,000
<i>Line Striping</i>	1	LS	\$2,000	\$ 2,000
<i>Asphalt Paving (heavy duty)</i>	7,000	SY	\$55	\$ 385,000
<i>Concrete Walks</i>	390	SY	\$100	\$ 39,000
<i>Concrete Curb</i>	500	LF	\$30	\$ 15,000
<i>Gravel Paving</i>	5,400	EA	\$25	\$ 135,000
<i>Irrigation (nursery)</i>	1	LS	\$10,000	\$ 10,000
<i>Guiderail</i>	640	LF	\$75	\$ 48,000
<i>Gate</i>	2	EA	\$2,500	\$ 5,000
<i>Chain Link Fence</i>	1,240	LF	\$35	\$ 43,400
<i>Regulatory / Directional Signs</i>	8	EA	\$250	\$ 2,000
<i>Shade Tree</i>	5	EA	\$500	\$ 2,500
<i>Berm / Buffer Planting</i>	1	LS	\$40,000	\$ 40,000
<i>Swale Planting (Salt Tolerant Grass) 1,260lf</i>	12,600	SF	\$0.25	\$ 3,150
<i>Seeding - mowable mix</i>	4,000	SF	\$0.25	\$ 1,000
<i>Security Lighting (night sky caps)</i>	4	LS	\$6,000	\$ 24,000
<b>SUBTOTAL</b>				\$1,029,050
<i>Stormwater management (5%)</i>				\$51,453
<i>Erosion and Sedimentation controls (3%)</i>				\$30,872
<b>SUBTOTAL FOR CONSTRUCTION</b>				\$1,111,374
<i>Permitting/Surveying 5%</i>				\$55,569
<i>Contingency 10%</i>				\$111,137
<i>Design Fees (8%)</i>				\$88,910
<b>TOTAL Public Works Facilities - Site</b>				<b>\$1,366,990</b>

Mount Lebanon Public Works - Concept 3A				11/10/14
Opinion of Probable Construction Costs - Building Construction				Prepared by RSSC
Item Description	Quantity	Unit	Unit Cost	Total Item Cost
<b>Public Works Facilities - Building Construction</b>				
Exist. Maint. Bldg. Renovations - First Floor	5,032	SF	\$50	\$ 251,600
Exist. Maint. Bldg. Renovations - Second Floor	6,956	SF	\$75	\$ 521,700
New Vehicle Maint. & Storage Garage Addition	8,640	SF	\$80	\$ 691,200
New Locker Rooms/Support Spaces Addition	3,000	SF	\$120	\$ 360,000
New Vehicle/Equipment Storage Bldg. #1	5,000	SF	\$60	\$ 300,000
New Vehicle/Equipment Storage Bldg. #2	5,000	SF	\$60	\$ 300,000
Covered Yard Storage Bins	1,500	SF	\$35	\$ 52,500
New Salt Storage Building	8,000	SF	\$42	\$ 336,000
Demolition of Old Salt Storage Dome	1	LS	\$20,000	\$ 20,000
New Equipment Storage Building (Golf Course site)	2,400	SF	\$65	\$ 156,000
				\$ -
Firing Range Renovations	1	LS	\$300,000	\$ 300,000
New Firing Range Addition	2,900	SF	\$120	\$ 348,000
				\$ -
				\$ -
				\$ -
				\$ -
<b>SUBTOTAL</b>				\$3,637,000
<b>SUBTOTAL FOR CONSTRUCTION</b>				\$3,637,000
Soft Costs 5%				\$181,850
Contingency 10%				\$363,700
Design Fees (8%)				\$290,960
<b>TOTAL Public Works Facilities - Buildings</b>				<b>\$4,473,510</b>

<b>Overall Project Budget</b>				
Site Construction Probable Costs	1	LS	\$1,366,990	\$ 1,366,990
Building Construction Probable Costs	1	LS	\$4,473,510	\$ 4,473,510
				\$ -
				\$ -
				\$ -
<b>TOTAL</b>				<b>\$5,840,500</b>

Mount Lebanon Public Works - Phase I				12/8/14
Opinion of Probable Construction Costs - Building Construction				Prepared by RSSC
Item Description	Quantity	Unit	Unit Cost	Total Item Cost
<b>Public Works Facilities</b>				
New Salt Storage Building	8,000	SF	\$42	\$ 336,000
Demolition of Old Salt Storage Dome	1	LS	\$20,000	\$ 20,000
Covered Yard Storage Bins	1,500	SF	\$35	\$ 52,500
				\$ -
				\$ -
				\$ -
				\$ -
<b>SUBTOTAL</b>				\$408,500
<b>SUBTOTAL FOR PHASE I CONSTRUCTION</b>				\$408,500
Soft Costs 5%				\$20,425
Contingency 10%				\$40,850
Design Fees (8%)				\$32,680
<b>TOTAL</b>				<b>\$502,455</b>

<b>Phase I Project Budget</b>				
Site Construction Probable Costs	1	LS	\$120,000	\$ 120,000
Building Construction Probable Costs	1	LS	\$502,455	\$ 502,455
				\$ -
				\$ -
				\$ -
<b>TOTAL</b>				<b>\$622,455</b>

Mount Lebanon Public Works - Phase II				12/8/14
Opinion of Probable Construction Costs - Building Construction				Prepared by RSSC
Item Description	Quantity	Unit	Unit Cost	Total Item Cost
<b>Public Works Facilities</b>				
New Vehicle Maint. & Storage Garage Addition	8,640	SF	\$80	\$ 691,200
New Locker Rooms/Support Spaces Addition	3,000	SF	\$120	\$ 360,000
				\$ -
				\$ -
				\$ -
				\$ -
<b>SUBTOTAL</b>				\$1,051,200
<b>SUBTOTAL FOR CONSTRUCTION</b>				\$1,051,200
Soft Costs 5%				\$52,560
Contingency 10%				\$105,120
Design Fees (8%)				\$84,096
<b>TOTAL</b>				<b>\$1,292,976</b>

<b>Phase II Project Budget</b>				
Site Construction Probable Costs	1	LS	\$1,000,000	\$ 1,000,000
Building Construction Probable Costs	1	LS	\$1,292,976	\$ 1,292,976
				\$ -
				\$ -
				\$ -
<b>TOTAL</b>				<b>\$2,292,976</b>

Mount Lebanon Public Works - Phase III				12/8/14
Opinion of Probable Construction Costs - Building Construction				Prepared by RSSC
Item Description	Quantity	Unit	Unit Cost	Total Item Cost
<b>Public Works Facilities</b>				
New Equipment Storage Building (Golf Course site)	2,400	SF	\$65	\$ 156,000
				\$ -
				\$ -
				\$ -
				\$ -
<b>SUBTOTAL</b>				\$156,000
<b>SUBTOTAL FOR PHASE I CONSTRUCTION</b>				\$156,000
Soft Costs 5%				\$7,800
Contingency 10%				\$15,600
Design Fees (8%)				\$12,480
<b>TOTAL</b>				<b>\$191,880</b>

<b>Phase III Project Budget</b>				
Site Construction Probable Costs	1	LS	\$85,000	\$ 85,000
Building Construction Probable Costs	1	LS	\$191,880	\$ 191,880
				\$ -
				\$ -
				\$ -
<b>TOTAL</b>				<b>\$276,880</b>

Mount Lebanon Public Works - Phase IV				12/8/14
Opinion of Probable Construction Costs - Building Construction				Prepared by RSSC
Item Description	Quantity	Unit	Unit Cost	Total Item Cost
<b>Public Works Facilities</b>				
Exist. Maint. Bldg. Renovations - First Floor	5,032	SF	\$50	\$ 251,600
Exist. Maint. Bldg. Renovations - Second Floor	6,956	SF	\$75	\$ 521,700
				\$ -
				\$ -
				\$ -
				\$ -
				\$ -
<b>SUBTOTAL</b>				\$773,300
<b>SUBTOTAL FOR CONSTRUCTION</b>				\$773,300
Soft Costs 5%				\$38,665
Contingency 10%				\$77,330
Design Fees (8%)				\$61,864
<b>TOTAL</b>				<b>\$951,159</b>

<b>Phase IV Project Budget</b>				
Site Construction Probable Costs	1	LS	\$40,000	\$ 40,000
Building Construction Probable Costs	1	LS	\$951,159	\$ 951,159
				\$ -
				\$ -
				\$ -
<b>TOTAL</b>				<b>\$991,159</b>



Mount Lebanon Public Works - Phase V				12/8/14
Opinion of Probable Construction Costs - Building Construction				Prepared by RSSC
Item Description	Quantity	Unit	Unit Cost	Total Item Cost
<b>Public Works Facilities</b>				
New Vehicle/Equipment Storage Bldg. #1	5,000	SF	\$60	\$ 300,000
New Vehicle/Equipment Storage Bldg. #2	5,000	SF	\$60	\$ 300,000
				\$ -
				\$ -
				\$ -
				\$ -
<b>SUBTOTAL</b>				\$600,000
<b>SUBTOTAL FOR CONSTRUCTION</b>				\$600,000
Soft Costs 5%				\$30,000
Contingency 10%				\$60,000
Design Fees (8%)				\$48,000
<b>TOTAL</b>				<b>\$738,000</b>

<b>Phase V Project Budget</b>				
Site Construction Probable Costs	1	LS	\$100,000	\$ 100,000
Building Construction Probable Costs	1	LS	\$738,000	\$ 738,000
				\$ -
				\$ -
				\$ -
<b>TOTAL</b>				<b>\$838,000</b>

Mount Lebanon Public Works - Firing Range				12/8/14
Opinion of Probable Construction Costs - Building Construction				Prepared by RSSC
Item Description	Quantity	Unit	Unit Cost	Total Item Cost
<b>Public Works Facilities - Building Construction</b>				
				\$ -
Firing Range Renovations	1	LS	\$300,000	\$ 300,000
New Firing Range Addition	2,900	SF	\$120	\$ 348,000
				\$ -
				\$ -
				\$ -
				\$ -
<b>SUBTOTAL</b>				\$648,000
<b>SUBTOTAL FOR CONSTRUCTION</b>				\$648,000
Soft Costs 5%				\$32,400
Contingency 10%				\$64,800
Design Fees (8%)				\$51,840
<b>TOTAL</b>				<b>\$797,040</b>

<b>Overall Project Budget</b>				
Site Construction Probable Costs	1	LS	\$21,990	\$ 21,990
Building Construction Probable Costs	1	LS	\$797,040	\$ 797,040
				\$ -
				\$ -
				\$ -
<b>TOTAL</b>				<b>\$819,030</b>



**NOTES:**

1. Base Map information compiled from a survey of property boundaries and PASDA Lidar information.
2. Locations of all site features and facilities are approximate. Pashek Associates makes no claims to the accuracy of utility locations or other facilities.











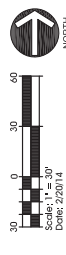


NOTES:

1. Base Map Information compiled from a PASCAL Lidar Information.
2. Locations of all site features and facilities are approximate. Please verify the location and accuracy of utility location or other facilities.

**Mt. Lebanon Public Works Master Plan - Golf Course Site**  
Municipality of Mt. Lebanon  
Allegheny County, Pennsylvania

**DRAFT MASTER PLAN**





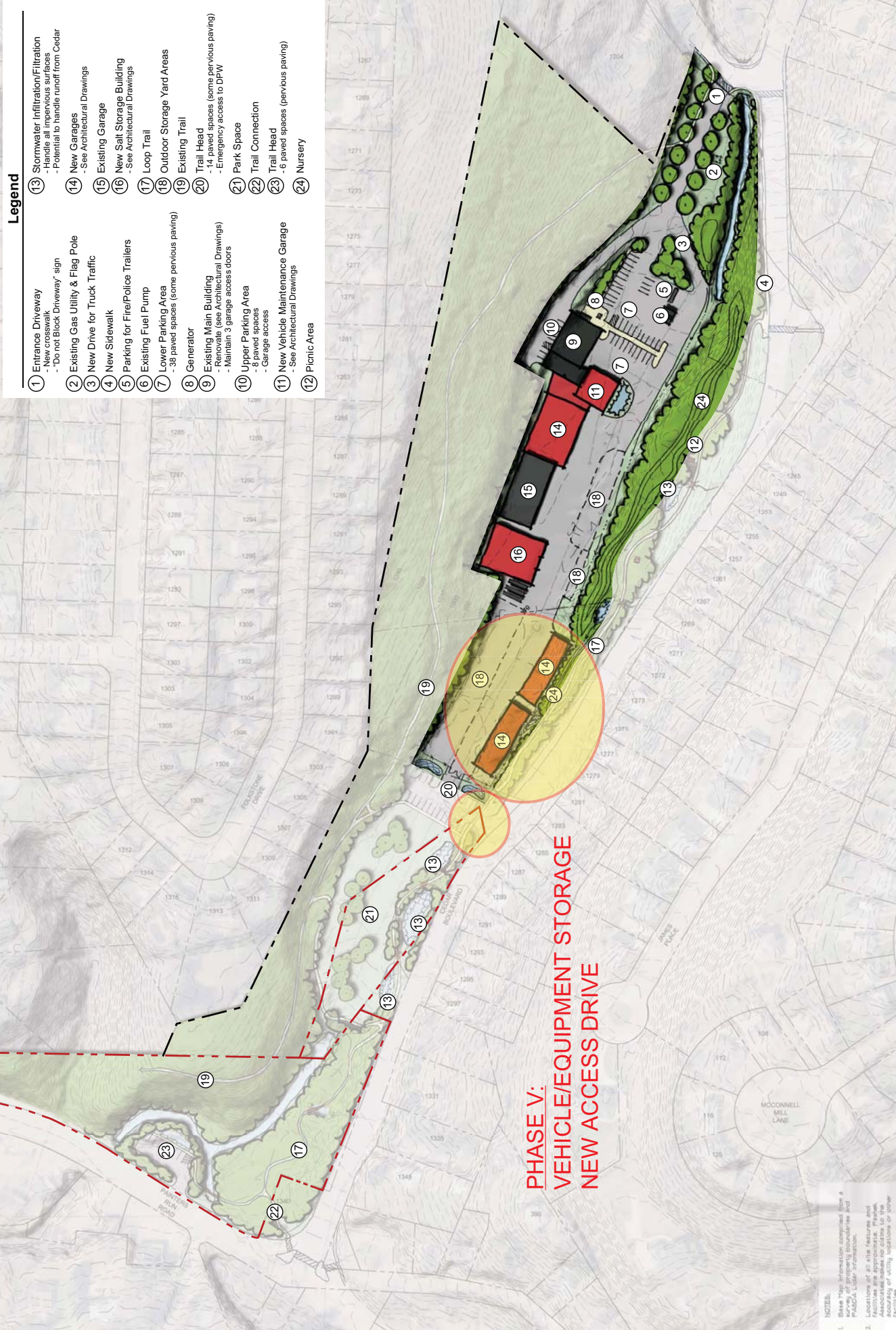




NOTES:  
1. Base Map information compiled from a PASHEK Associates, Inc. (PA) and PASHEK Associates, Inc. (PA) data.  
2. Location of all site features and facilities are approximate. Plans, drawings, and specifications are subject to change without notice.









## **APPENDIX A**

# MUNICIPALITY OF MT. LEBANON

## PUBLIC WORKS FACILITY MASTER PLAN STUDY



PROJECT: 2637.01

8/13/2013

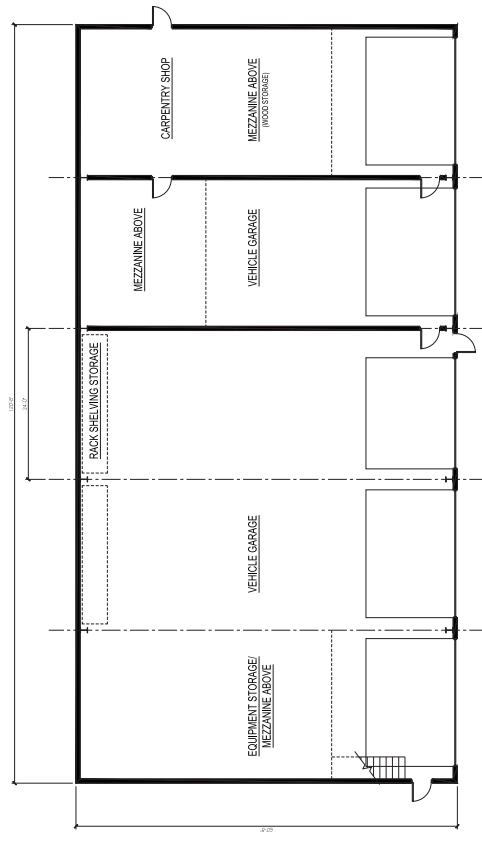
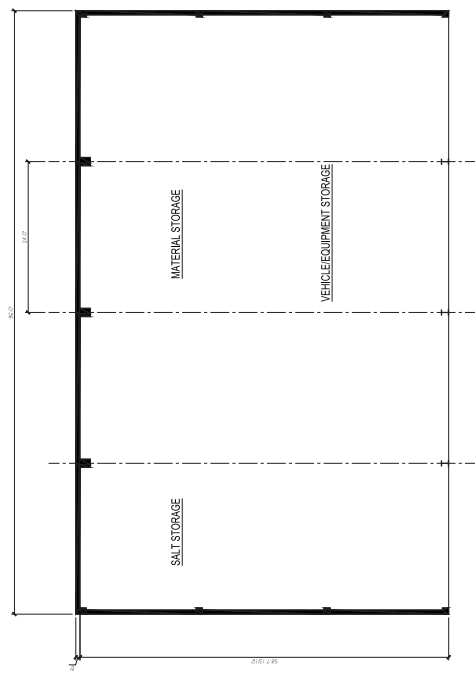
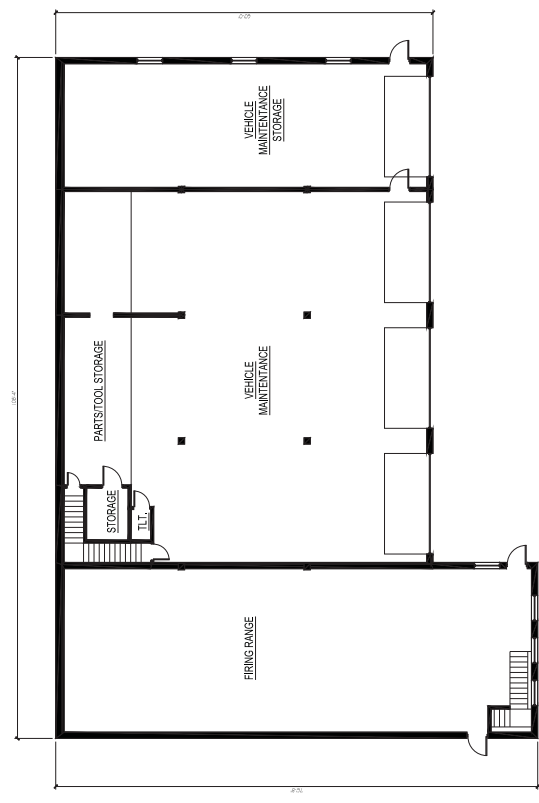
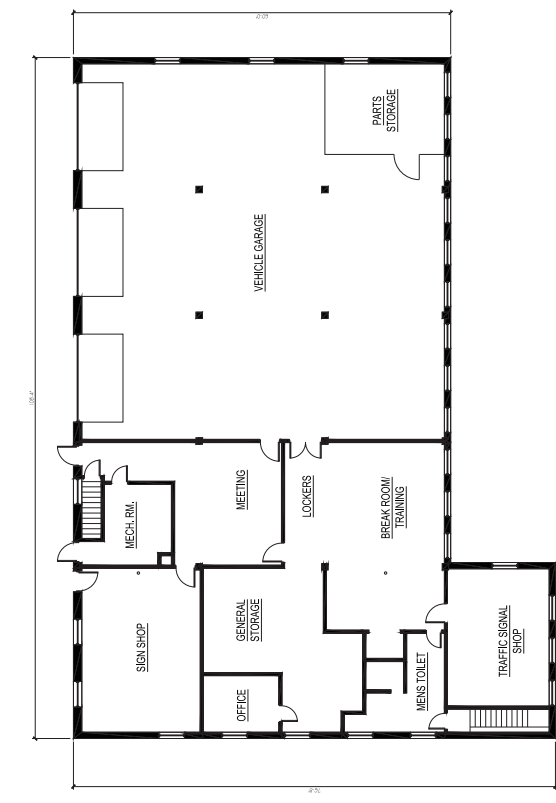
### MUNICIPAL AND UTILITY CONTRACTORS EQUIPMENT & STORAGE LIST

Program	Contractor/Entity	Equipment	Storage
Road Construction	Niando	Trucks	Pipe, Inlets, Aggregate
Sanitary Sewer Point Repairs	Niando	Excavators	Pipe, Manholes
Stormwater Repairs	Niando	Excavators	Pipe, Inlets, Aggregate
Pipe Lining	Reynolds	Four (4) large trucks	Hoses, Liners
Cleaning and Inspection (What items?)	AAA	Four (4) to Six (6) large trucks	Hoses, Safety Signs
Manhole Repairs	Lake County	Three (3) large trucks	Miscellaneous
Sidewalk Repairs	Pasquale	Varies	Soils and Aggregate
Utility Contractors	Various	Trucks, Excavators, Backhoes	Pipes, Aggregate, Soils
Storage	School District	Three (3) 40' trailers	
Public Safety	Fire Dept.	Trailer (training exercises) 8'w x 26'Lx9'h w/5' hitch	
Public Safety	Police	Trailer 7'w x 15'Lx9'h w/5' hitch	Impounded cars
Leaf Pickup	Public Works	Seven (7) Leaf Vacuums	Six (6) Leaf Boxes 7'w x 11'L x 6'h
Traffic Signals	Public Works		Traffic Signal Poles
Sanitation	Public Works		Three (3) Large Dumpsters (road/park debris for transfer) 7'w x 24'L x 6'h

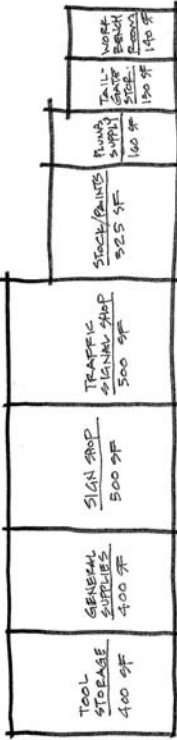
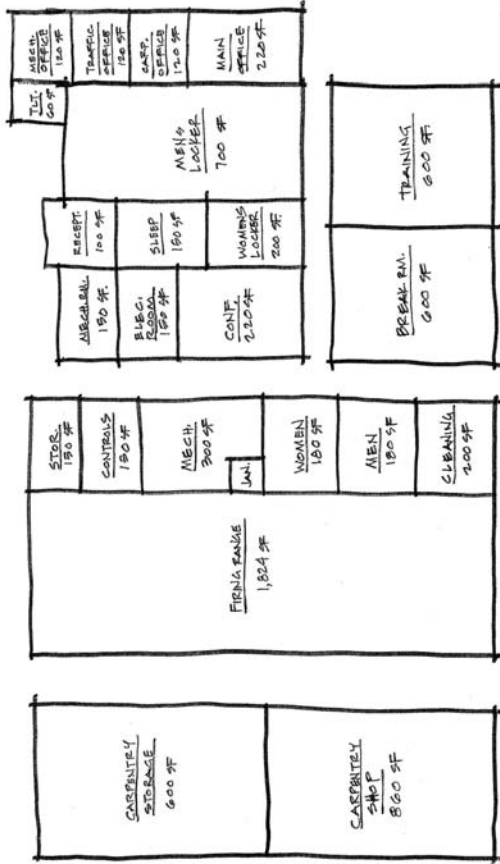
<b>Veh.#</b>	<b>Year</b>	<b>Make</b>	<b>Model Type</b>	<b>Category</b>	<b>G.V.W.</b>	<b>Size</b>
211	2001	International	4900 Dump Tk.	Heavy Dump	33,000	
212	2011	International	4900 Dump Tk.	Heavy Dump	33,000	
214	2012	International	7400 Dump Truck	Heavy Dump	35,000	
215	2003	International	7900 Dump Tk.	Heavy Dump	33,000	
216	2001	International	4900 Dump Tk.	Heavy Dump	33,000	
217	2008	International	7900 Dump Tk.	Heavy Dump	33,000	
218	2000	Ford	F-750 Chipper Tk.	Specialty Truck	33,000	
219	2013	International	7400 TREE TRUCK	Specialty Truck	33,000	
221	2010	Ford	F-550 4WD Dump Tk.	Light Dump	17,500	
222	2012	Dodge	Dump Truck	Light Dump	18,950	
223	2007	Ford	F-550 4WD Dump Tk.	Light Dump	17,950	
224	2003	Ford	F-550 4WD Dump Tk.	Light Dump	17,500	
225	2006	Ford	F-550 4WD Dump Tk.	Light Dump	17,950	
227	2008	Ford	F-550 4WD Dump Tk.	Light Dump	17,950	
228	2000	Ford	F-550 4WD Dump Tk.	Light Dump	17,500	
231	2011	Ford	E-150 Van Paint Crew	Specialty Truck	6,100	
233	2001	Ford	F-550 Utility / Lift Tk.	Specialty Truck	17,500	
252	2013	Ford	E 250 full size van	Van		
253	2009	Ford	Ford F-150	Pick up Truck	6400	
255	2001	Sterling	Elgin Sweeper	Specialty Equipment	33,000	
256	1997	Freightliner	FL-80 Sewer Tk.	Specialty Equipment	54,000	
257	1998	Ford	Camera Van	Specialty Truck	14,050	
258	2011	Ford	Trades Van	Van	9,000	
311	1999	Ford	F-550 4WD Dump Tk.	Light Dump	17,500	
312	1999	Ford	F-550 4WD Dump GC	Light Dump	17,500	
401	2002	GMC	Silverado 1500	Pick up Truck	6,400	
226	2008	Ford	F-550 4WD Dump	Light Dump	17,950	
FE1	2005	Ford/New Holland	2WD Tractor	Field Equipment		
386	2004	Caterpillar	Loader Front End	Heavy Equipment	35,700	
B-#1	2002	Caterpillar	4WD - Backhoe	Heavy Equipment	16,260	
B-#2	2005	Caterpillar IT420D	4WD - Backhoe	Heavy Equipment	16,260	
TRL-#1	1989	Belshe	Trailer	Trailer	10,000	
TRL-#2	2000	International	Trailer	Trailer	9,950	
TRL-#3	1995	Utility	Trailer	Trailer	1,650	

C1	1995	Sullair	Air Compressor	Specialty Equipment	3,000	
SE1	2002	Smoracy	Grinder	Specialty Equipment	48,550	
LK#1	2011	Tarco	Leaf King Trailer	Specialty Equipment	5,080	
LK#2	2011	Tarco	Leaf King Trailer	Specialty Equipment	5,080	
LK-#7	2003	Tarco	Leaf King Trailer	Specialty Equipment	5,080	
LK-#8	2003	Tarco	Leaf King Trailer	Specialty Equipment	5,080	
LK-#9	2003	Tarco	Leaf King Trailer	Specialty Equipment	5,080	
LK-#10	2004	Tarco	Leaf King Trailer	Specialty Equipment	5,080	
LK-#11	2004	Tarco	Leaf King Trailer	Specialty Equipment	5,080	
LK-#12	2007	ODB	Leaf King Trailer	Specialty Equipment	5,300	
SE2	1972	Vemeer	Stump Grinder	Specialty Equipment		
SE3	2001	Brush Chipper	Brush Bandit	Specialty Equipment		
202	2003	Ford Expedition	4WD Sport Utility	4WD Sports Utility		
201	2006	Ford Explorer	4WD Sport Utility	4WD Sports Utility		
S-95	2009	Ford Explorer	4WD Sport Utility	4WD Sports Utility		
SE4	1988	Vemeer	Root Cutter	Specialty Equipment		
SE5	1988	Essick	Roller	Specialty Equipment		
FE2	1990	Cushman	Truckster	Field Equipment		
FE3	2000	Toro	Sand Pro Tractor	Field Equipment		
FE11	2011	Finn	Hydroseeder	Field Equipment	7,770	
FE4	2001	Ford/New Holland	Tractor	Field Equipment		
FE5	2005	Ford/New Holland	Tractor	Field Equipment		
FE6	2006	Toro	Infield Pro Tractor	Field Equipment		
FE7	2008	Toro	Infield Pro Tractor	Field Equipment		
FE8	2009	Cushman	Truckster	Field Equipment		
FE9	1978	Davey	Tractor	Field Equipment		
FE10	1982	Ford	Tractor	Field Equipment		



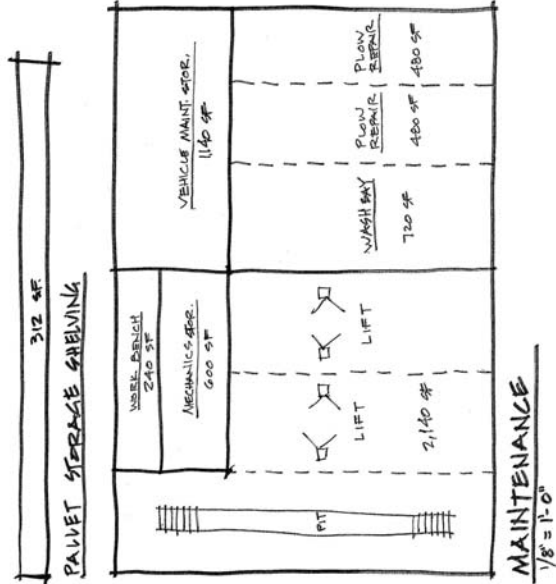






220'-0"

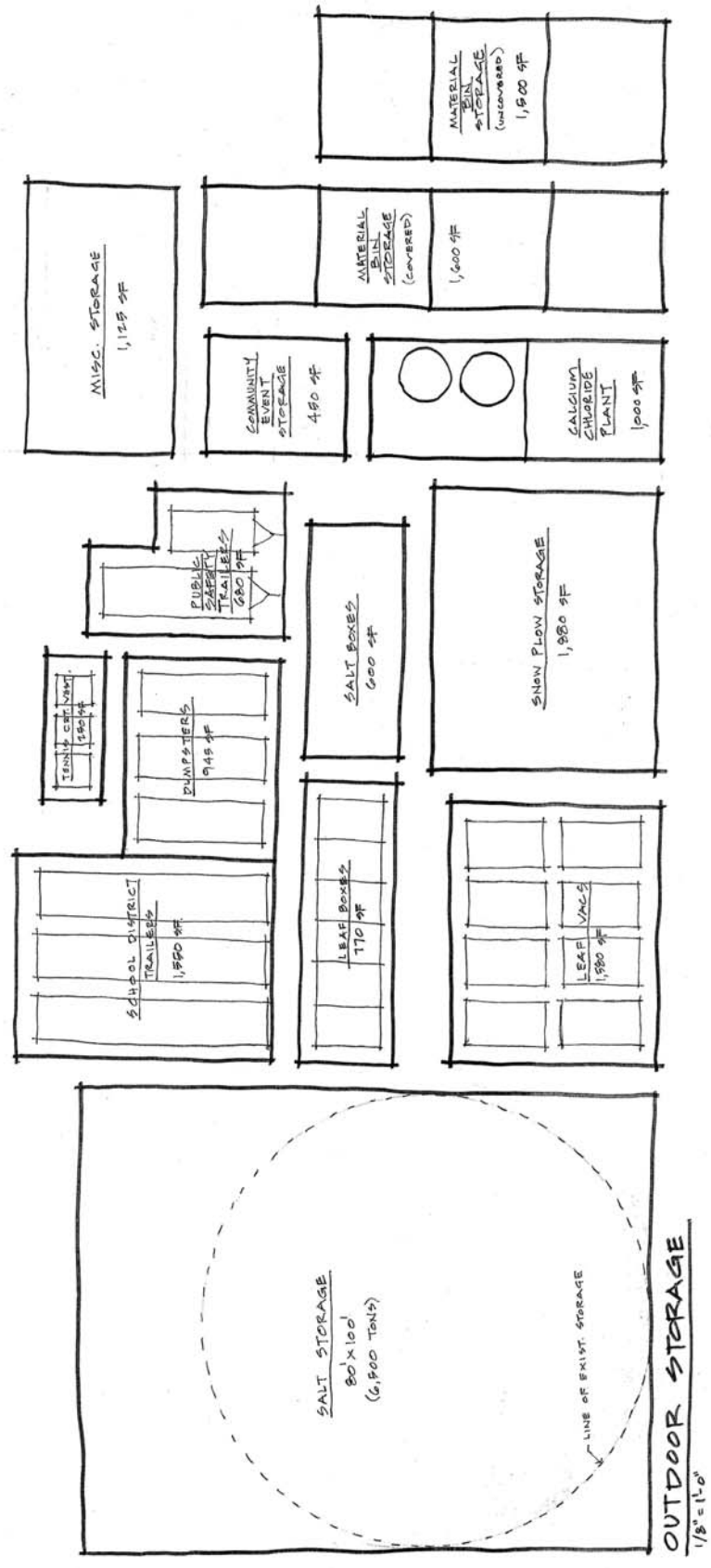
16,900 SF



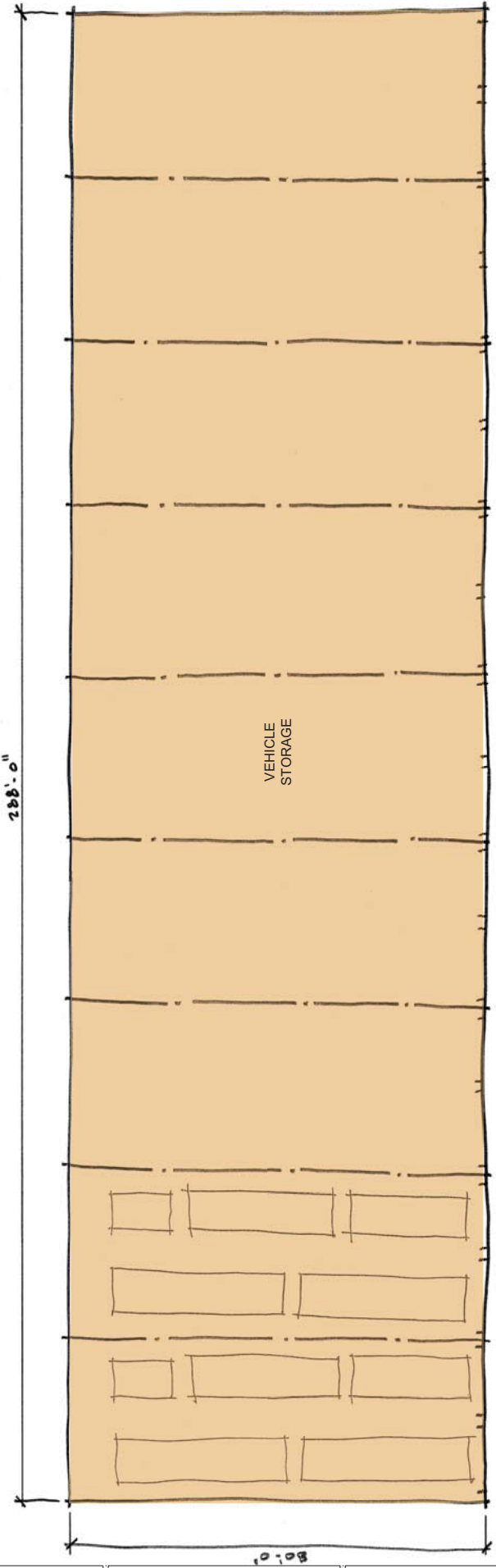
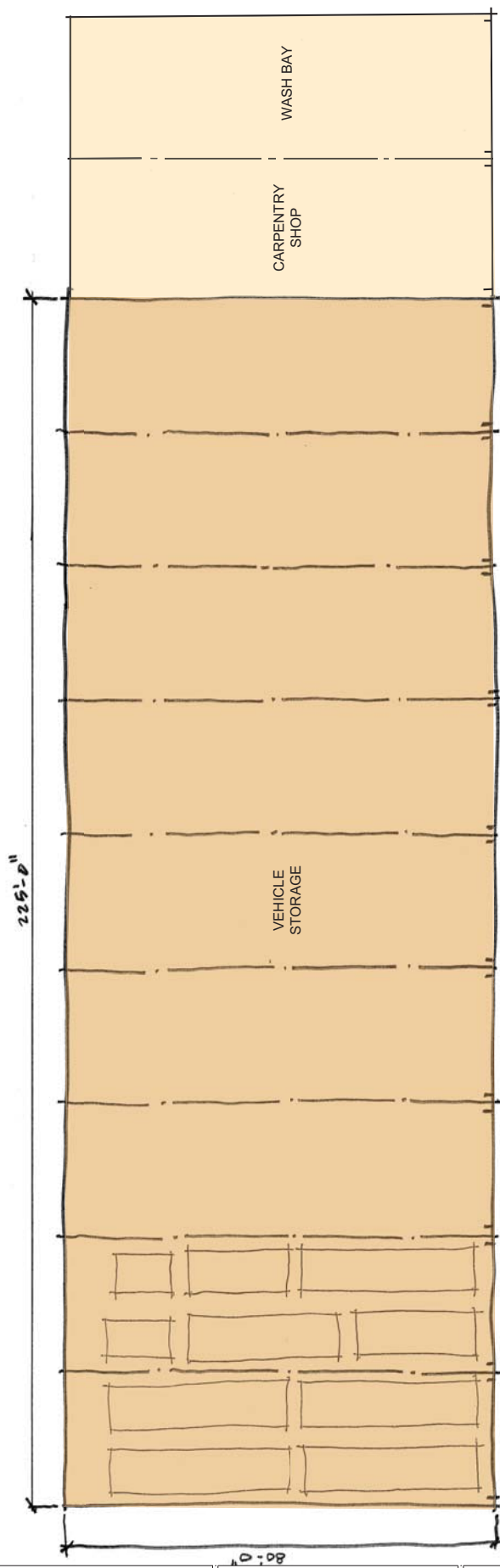
PAVET STORAGE GARAGING

312 SF













## **APPENDIX B**













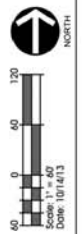


NOTES:

1. Base Map Information compiled from a recent aerial photograph and PARDOL data.
2. Locations of all the features and facilities are approximate. Please refer to the site plan for the location of any facility.

# **Mt. Lebanon Public Works Master Plan** Municipality of Mt. Lebanon Allegheny County, Pennsylvania

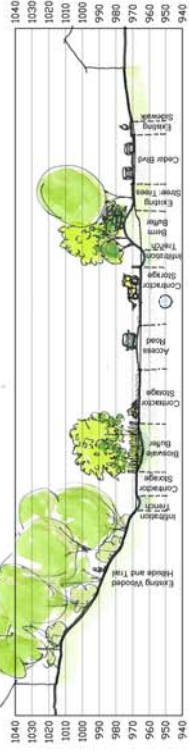
CONCEPT 2







Profile A PROFILE



Profile B PROFILE



Profile C PROFILE

