DEPARTMENT OF MILITARY & VETERANS AFFAIRS

5-Year Capital Outlay Budget Plan
FY 2022-2026
October 31, 2020

I. MIARNG

The Michigan National Guard strives to be fully manned, trained, and equipped to accomplish multi domain operations during any assigned State or Federal mission. Critical to our overall readiness remains the dignified and respectful treatment of all our members and a culture that accepts diversity. Securing consistent funding for maintenance and modernization and establishing facilities in locations that enable strategic objectives greatly affects our ability to gain and retain a quality and diverse workforce.

Our ability to improve Readiness Centers (RC) by means of Sustainment, Restoration & Modernization and our ability to improve and construct Readiness Centers by military construction (MILCON) are integral to mission accomplishment, our ability to defend the nation, and protecting the lives and property of the State of Michigan's citizens.

Programmatic Changes:

Because of anticipated competition for federal and state funds, the Construction and Facilities Management Office (CFMO) has been proactive in contracting master plans for our two training sites, our airfield, our readiness centers and our facility maintenance shops. With these initiatives, CFMO is developing short, mid and long-term goals that are aligned with the DMVA Strategic Plan. This will include upgrading and right-sizing readiness centers and facility maintenance shops statewide, and where practical, purchasing of buildings that meet our requirements and location needs. At Camp Grayling, we will be focusing on achieving the classification of an ARNG "Director's Pick" training location. This title recognizes the installation as a key ARNG readiness building location, increasing the potential for MILCON projects needed to achieve key outcomes within the DMVA Strategic Plan. This will enable it to provide training for regional states' National Guard units, United States Army Reserve units and the Active Component. As this occurs, we will focus on developing Fort Custer's capacity for increased numbers of squad level missions and overflow from Camp Grayling.

a. Implementation Plan

It is the intent of the Adjutant General of Michigan that the Michigan Army National Guard will systematically renovate older facilities with major condition and/or configuration deficiencies with modern and energy efficient facilities. We will strive to enhance existing facilities by bringing them into compliance with current standards and being more energy efficient. Further, within our existing armories we have positioned our formations throughout the State to best support our Recruiting and Retention missions. However, we must divest some exiting facilities and invest in new facilities to meet Michigan's changing demographics. Obsolete and excess facilities shall be disposed of in accordance with federal and state regulatory requirements and law. The MIARGN Campaign plan pursues initiatives to improve diversity and recruiting to accurately match the demographics of their local communities.

1. **<u>Facility Replacement:</u>**

a) New Construction. These projects construct National Guard facilities that support individual and collective training, administrative, automation, and communications and logistical requirements for the MIARNG. These projects will achieve the TAG's goals and objectives by constructing new facilities that will consolidate units. These projects address gross deficiencies in quality and mission functionality while providing a safe environment for equipment security and accountability. These projects optimize the MIARNG's ability to recruit and retain Soldiers, and to train and successfully mobilize units. Funding these projects will eliminate the continued use of inadequate facilities which degrade unit morale and impedes critical training requirements to support the homeland and unit deployments.

i. The Grayling Army Airfield Readiness Center project has been selected for construction on the Future Years Defense Plan (FYDP). See the table below for the schedule of the design and construction:

GRAYLING ARMY AIRFIELD READINESS CENTER			
Activity	**Total Amount**	**Federal**	**Year of Funding**
Planning & Design	1,440,000	1,440,000	FY21
Construction/SIOH/Contingency	16,000,000	16,000,000	FY22
TAILS	1,465,000	1,465,000	FY23
Totals	***18,905,000***	***18,905,000***	

ii. In support of the DMVA Strategic Plan dated 20191015, the potential MILCON projects are as follows:

Priority Number 0001, National Guard Readiness Center, Wayne County, MI. Occupy new addition to existing Readiness Center NLT 1 January 2030. Purchase property NLT 2022 and secure State match funding NLT 2027. The estimated total cost of the project is $36,000,000.00 with the State's contribution equal to 25% of the total cost.

Priority Number 0002, National Guard Readiness Center, Macomb County, MI. Occupy new Readiness Center NLT 1 July 2030. This facility will be built on State land with opportunity for a dual-use campus with MVH (see MVH 5-year plan). Purchase property NLT 2023 and secure State match funding NLT 2027. The estimated total cost of the project is $36,000,000.00 with the State's contribution equal to 25% of the total cost.

Priority Number 0003, National Guard Readiness Center, Genesee County, MI. Occupy new Readiness Center NLT 1 January 2035. This facility will be built on State land with opportunity for a dual-use campus with MVH (see MVH 5-year plan). Purchase property NLT 2024 and secure State match funding NLT 2033. The estimated total cost of the project is $36,000,000.00 with the State's contribution equal to 25% of the total cost.

b) Facilities Sustainment and Modernization. These projects sustain and modernize our existing facilities to implement new or higher standards, to accommodate new functions, or to replace building components that typically last more than 50 years. The federal government/state government cost share is typically 75% / 25% of the total estimated cost. The projects listed below identify those on our 5-year plan to modernize:

Site	Description	Federal	State
Lansing	Flight facility >Supports new aircraft	5,800,000	1,450,000
Waterford	Armory modernization >Provide current standard facility	1,800,000	600,000
Kalamazoo	Armory modernization >Provide current standard facility	3,787,500	1,262,500
Washtenaw	Armory modernization >Provide current standard facility	3,300,000	1,100,000
Battle Creek	Support Facility >*Supports 46th MP Command*	1,800,000	600,000
Kingsford	Armory modernization >Provide current standard facility	1,800,000	600,000
Midland	Armory modernization >Provide current standard facility	3,600,000	1,200,000
Lansing	Armory modernization >Provide current standard facility	4,950,000	1,650,000
Totals		***26,837,500***	***8,462,500***

2. <u>Facility Infrastructure Upgrade/Repair/Maintenance:</u> Many of our readiness centers require upgrading to meet ADA, training, and functionality requirements. Other locations require upgrade of readiness center infrastructure in order to reduce resultant repair/maintenance costs. The federal government provides reimbursement to the state, normally 50/50, for maintenance repairs on state owned facilities. As existing facilities continue to age and deteriorate, repair and maintenance requirements will increase. The following repair/maintenance cycle chart provides details for each**:**

Type of Project	# per year	Federal	State
Boiler replacement	2	135,000	135,000
Roof replacement	6	655,000	655,000
Door repair/replacement	3	75,000	75,000
Ventilation Improvements	2	180,000	180,000
Masonry Repairs	1	45,000	45,000
Parking Lot Improvements	4	2,200,000	2,200,000
Replace Fire Alarms	2	280,000	280,000
Lighting Repair/Replacement	2	110,000	110,000
Install Generator	3	300,000	300,000
Force Protection Improvements	2	80,000	80,000
Totals	***27***	***4,060,000***	***4,060,000***

3. <u>Real Property Acquisitions:</u> National Guard Bureau approval is required for Readiness Center acquisition or new construction since they are authorized by law to be funded 75% federal and 25% state. Real estate may not be considered within the state share; therefore, the State must provide ownership in property in fee.

Site	Description	State
Wayne County	Property purchase >*Supports new Readiness Center*	3,000,000
Macomb County	Property purchase >*Supports new Readiness Center*	5,000,000
Kent County	Property purchase >*Supports new Readiness Center*	5,000,000
Genessee County	Property purchase/exchange >*Supports new Readiness Center*	4,000,000
Total		***17,000,000***

4. <u>Impact of addressing infrastructure repairs and upgrades over time:</u> With an adequate long-range Capital Outlay Plan, the MIARNG can program the replacement of aging and deteriorating readiness centers, thus deferring or rescheduling infrastructure repair, maintenance, and upgrade projects. However, some of the repairs accomplished each year are of an emergency nature, where deferment would cause further damage or create a safety risk.

a) Addressing infrastructure repairs or upgrades includes maintaining and/or improving the facilities, which are utilized not only by National Guard members during training

assemblies, but for emergency use for domestic operations. Properly maintained facilities reflect positively on the image of the Michigan Army National Guard and the Michigan Department of Military and Veterans Affairs. Unsafe environments are reduced, thereby creating a better environment for our soldiers, families, and community. By completing the program repairs, it positively affects the ability of assigned units to conduct required training and increase their readiness.

b) Addressing infrastructure repairs and upgrades over time fall in line with the DMVA's personnel model and federal funding amounts, as we do not have the personnel or federal matching resources to address all infrastructure deficiencies immediately. Additionally, if the Department were to request funding and schedule all repair/upgrade requirements immediately, there would be an adverse effect on the ability of units to conduct training if many of our readiness center were undergoing extensive repairs/upgrades.

5. Rate of Return on Expenditures: The Capital Outlay Budget Plan will provide the following operational savings:

a) Unit Readiness - By completing the program repairs, it positively affects the ability of assigned units to conduct required training and increase their readiness. The new construction and property purchases will better align with our demographics to fully resource personnel.

b) Utility Savings - The MIARNG has realized a savings in utility costs because of its ongoing efforts to replace non-energy efficient roofs, windows, doors, and heating systems. The scheduled replacement of these items in selected readiness centers over the next five years will further enhance the savings. It is estimated that the rate of return due to the upgrade of utility components is 18% per year, thus recovering investment costs in just 4 years. As energy audits occur, more detailed information will be available.

c) Readiness Center Replacement - The capital investment of replacing older readiness centers is recouped during the first 20 years of the life of the readiness centers. In many instances, the DMVA has spent many times more than the state's share of new readiness center construction in repairs/maintenance costs.

d) Energy Resiliency and Independence. Will allow for continuing state and federal operations in the event of utility company-provided electrical, water, gas and sewer are disrupted in the result of natural or manmade events.

b. Facility Assessment

1. Overview: MIARNG operates and maintains 39 readiness centers, 9 maintenance facilities, 4 aviation facilities, and training installations at Camp Grayling and Fort Custer.

2. Facility Age: MIARNG readiness centers range in age from 67 to less than 7 years old. The functional lifespan of a readiness center is 50 years. The chart below provides a breakdown of the range of age of active readiness centers.

Over 50 years old	12
26-50 years old	16
10-25 years old	7
Less than 10 years old	4

3. Property size: MIARNG readiness centers are situated on parcels that range in size from 2 acres to more than 58 acres. The National Guard Bureau standard for acreage for readiness centers is no less than 15 acres with 20 acres being desirable. The chart below provides a breakdown on the range of size of our active state-owned readiness center acreage:

2-14 acres	26
15-20 acres	2
More than 20 acres	11

4. Utilization Rates: National Guard Bureau Pamphlet 415-12, Army National Guard Facilities Allowances, prescribes size and utilization of space in readiness center. In all but the most recently constructed readiness centers, the number and size of classrooms, offices, locker rooms, food preparation and storage areas are significantly below the standard, resulting in grossly inadequate facilities.

5. Functionality: Due to changing political climate and war on terror, the military unit force structure has also increased. Since many of the MIARNG's readiness centers have reached their lifespan, they need to be extensively upgraded to meet current codes, technological infrastructure, accessibility standards and logistical mission requirements to match the increases in operations tempo. Most of the readiness centers are not large enough to provide the classroom, storage, locker room, office, administrative space and fire protection required to meet these standards. Changes in training technologies have placed additional emphasis on simulators and other computer-aided training requiring increased electrical and data infrastructure. The building shell at these readiness centers continues to be of serious concern. The roofs, boiler systems, windows, doors, and other internal infrastructure continue to age and degrade requiring more and more repairs to keep them in service. Additionally, over 38% of the readiness centers were built prior to 1972; the first year women were permitted to enlist into the Army National Guard, and were not designed to accommodate both genders. In 2015, the Secretary of the Army issued Army Directive 2015-43 which requires Commanders to designate a private space, other than a restroom, with locking capabilities for a Soldier to breastfeed or express milk. This space must include a place to sit, a flat surface (other than a floor) to place the pump on, an electrical outlet, and access to a safe water source within reasonable distance from the lactation space. ***Only one readiness centers meets this directive, so included within our readiness center modification plan is to provide lactation space. See Para Ia1b.***

6. Estimated Replacement Value of Existing Facilities: The current plant replacement value for our readiness centers is $521,639,259. However, the replacement value of the

existing infrastructure must take into consideration the changes in military force structure and unit composition mentioned in Para Ib5 above. Therefore, replacement readiness centers will be larger and have additional required features and capabilities. The estimated replacement cost of all active state and federally-owned readiness centers is provided in the following chart (chart does not include the JFRC Headquarters Readiness Center).

Type of Readiness Center	Number	Cost Per Readiness Center	Total Cost
Single Unit Readiness Centers	22	14,000,000	308,000,000
Multiple Unit Readiness Centers	16	20,000,000	320,000,000
Total	***38***		***628,000,000***

7. <u>Assessment of Utilities Systems:</u> In most instances, utilities (electric, gas, water/sewer, and telephone) for each complex are provided by private or public utility companies. These companies are responsible for upgrade and maintenance of systems to the point of delivery. Upgrade and maintenance of the internal utility infrastructure (heating, ventilating, and air conditioning systems, water pipes, electrical lines, etc.) are the responsibilities of the MIARNG. Because of the age of many of the readiness centers, there are continuous repair and maintenance requirements for internal utility systems to include work to meet code requirements. Unless the older readiness centers are replaced, extensive repairs are anticipated to electrical, heating and plumbing systems. Repair and maintenance cost estimates for the next five years can be found in Para Ia2.

In a continued effort to effect energy efficiency, we utilize numerous energy reduction measures when designing new or remodeled facilities. These measures also help in meeting the energy reduction goals that are set forth by the federal government requirements. They include such actions as installing lighting fixtures with occupancy sensors, LED lights in facilities, motion sensors in parking lots, double pane windows, high efficiency boilers, increasing the roof and wall insulation R factors, installing demand control ventilation systems, micro grid, and low-flow flush valves on bathroom fixtures. We continue to install advanced meters in our facilities, as federal funding is received, to more accurately measure utility consumption. During FY20, we hired a Sustainability Manager and awarded another phase of our energy audit contract.

Energy resiliency and independence is also a focus for our facilities. Within the next 5 years, we will focus on identifying the highest risks to critical operations and identify cost-effective measures to reduce risks based on the Army "Net Zero Strategy". We will determine focus areas and goals related to endangered species restoration, migratory birds, invasive species, contaminants cleanup, and wetland restoration on our training installation. We will reduced energy intensity (energy consumed per gross square foot) by 25% and reduce reliance on

consumption of petroleum fuels for ground fleet by 30% and we will document compliance on Integrated Natural Resources Management Plan for at least five years.

8. Assessment of Infrastructure: The primary supporting infrastructure surrounding each readiness center is parking surfaces. These include paved and unpaved, Government Owned Vehicle (GOV) and Privately Owned Vehicle (POV) areas. At 31 of our readiness centers, the GOV and POV parking areas do not meet National Guard Bureau criteria. In inclement weather, movement of heavy vehicles on these surfaces cause substantial damage and requires subsequent repair of the parking areas as several are in general degradation status and all 31 are rated poorly. As units are modernized and become more mobile, additional parking requirements for organizational equipment is generated. The required fenced, secure parking areas with security lighting is inadequate. At older locations with minimal acreage, there is insufficient space for GOV and POV parking.

9. Adequacy of Utilities and Infrastructure: As outlined in Paras Ib7 and Ib8 above, several readiness centers require repair and preventive maintenance, including replacement of infrastructure (utilities, roofs, boilers, windows, doors, flooring), in order to prevent failure of the structural component.

10. Assessment of Existing Land: In some instances, adequate acreage exists to replace readiness centers at the same locations. However, for many of the readiness centers exceeding their useful lifespan, there is no available space for replacement or future development. Most of these readiness centers are in the built-up areas of the communities.

II. Michigan Veteran Homes (MVH)

The Michigan Veteran Homes provide quality long-term care for veterans and their eligible family members through a federal-state partnership with the United States Department of Veterans Affairs (USDVA). High-quality care for this phase of life is central to the "member for life" concept. Currently, the MVH operates homes in Grand Rapids and Marquette, with a third home opening in Chesterfield Township in 2021.

The State of Michigan's veteran homes have a distinguished tradition of meeting the ever-changing needs of Michigan veterans. Service programs are developed to be efficient, effective, enhance the quality of life, and be accountable to the public purpose that underlies the Homes. The Homes are a symbol of America's promise to her veterans, that in return for their sacrifices and call to duty they would be cared for in time of need.

Market data indicates that, across the country, state veteran homes serve a substantially different population than other long-term care facilities. Veterans and family members seeking care at one of MVH's facilities are looking for a long-term care setting that strives not only to meet any distinct medical needs they may have, but also to accommodate the expectations they may have for living in a unique veteran-centric community.

To do this, MVH embraces the principles and goals articulated under the long-term care "culture change" philosophy to transition away from an institutional care approach toward a veteran-centric "person-centered" care model. Specifically, culture change refers to the progression from institutional or traditional models of care to more individualized, member-directed practices that embrace choice and autonomy for our members and providers. Culture change is an approach anchored in values and beliefs that return the locus of control to our members and those who work closest with them. Its ultimate vision is to create a culture of aging that is inclusive, life-affirming, satisfying, humane, and meaningful.

Core culture change elements that facilitate meeting the unique needs of our members include:

- Member-direction in care, daily activities and policy development
- Home-like atmosphere
- Close relationships between members, family members, staff, and community at large
- Staff empowerment
- Collaborative decision making
- Quality improvement processes and culture

Our ultimate goal is to provide an environment where our members can continue to live and, most importantly, make their own choices and have control over their daily lives. This kind of care not only enhances quality for our members and staff, but also creates opportunities for MVH to improve in quality of care, efficiency, revenue and stable staffing.

As we proceed in the future and Michigan seeks to transition to a modern "person-centered" care delivery model with facilities that provide a home-like environment for residents, the MVH are working with stakeholders to develop a holistic system-wide plan to modernize the veterans homes' facilities and operational model. Management has begun implementing this plan, which will continue over the next five years.

Programmatic Changes: In 2017, the Governor signed legislation creating a Michigan Veterans Facility Authority, an entity that will assume oversight responsibilities of the newly constructed facilities, and eventually the existing Homes. The Michigan Veterans' Facility Authority was created to provide a new direction and focus as we transition from the current operating model to a new, more modern approach. Eight of the nine members serving on the MVFA must have professional knowledge, skill, or experience in long-term care, health care licensure or finance, or medicine; the ninth is the Director of the DMVA or his/her designee from within the Department. One year after the second facility operated by the MVFA is open and housing veterans, the Director of the Department shall then serve as a non-voting member of the board. A new member who is a veteran and who has professional knowledge, skill, or experience in long-term care, health care licensure or finance, or medicine shall be appointed by the Governor with the advice and consent of the Senate.

New Home Construction

VA demographic data indicates that Michigan's total veteran population in 2016 was approximately 623,600 veterans, with 323,500 veterans (51.9%) over the age of 65. Of these

veterans, an estimated 250,000 are likely to need long-term care in the next 7 years. Although the VA anticipates that the total veteran population in all states will decrease as Vietnam-Era veterans begin to pass away, the VA's most recent population estimates show Michigan will continue to have over 170,000 veterans over the age of 65 in 2040. While the vast majority of those veterans will receive care from family members or other care providers, MVH is expanding the number of homes where we directly serve veterans in order to meet the current and anticipated needs of our veterans.

Notably, nearly one third of Michigan's veteran population currently lives in the tri-county metropolitan area of Wayne, Oakland and Macomb counties, surrounding the city of Detroit. Although more than 100,000 veterans aged 65+ live in these three counties, veterans residing in this region currently have to travel approximately three hours (160+ miles) to reach the closest state veterans home in Michigan, located in Grand Rapids.

In order to meet the long-term care needs of veterans across Michigan, MVH will engage in a multi-facility bed replacement effort for the State of Michigan's existing state veterans facilities. The ultimate goal of this multi-phase plan is the gradual replacement of Michigan's existing certified beds (758 in Grand Rapids, 206 in Marquette) in a manner that accomplishes SG3's strategic objectives.

a. Phase I: In Progress
The first phase in this plan is the construction of two new facilities one in Grand Rapids and a second in southeast Michigan to replace the outdated institutional facility in Grand Rapids. Subsequent phases will replace the existing beds with additional facilities located near veteran population centers throughout the State, including Marquette.

The following progress has been made with respect to the construction of two new facilities, one in Grand Rapids and one in Southeast Michigan.

- **December 2016:** State of Michigan approved funding to construct two new veteran homes: one in Grand Rapids on the current site of the existing Grand Rapids Home for Veterans, and one in southeast Michigan, in or near the Detroit area, to accommodate the significant need and population of veterans in this region.

- **April 2017:** State of Michigan submitted application to UDSVA construction grant program requesting FY18 funding for construction of two new homes.

- **April 2018:** Michigan was selected for USDVA new build grants for Grand Rapids and Southeast Michigan.

- **August 2018:** The USDVA conditionally approved the State of Michigan for FY18 State Home Construction Grant funding for the proposed projects in Grand Rapids and Southeast Michigan, pending submission of final grant documentation no later than March 19, 2019.

- **April 2019:** The USDVA finalized the State of Michigan for FY18 State Home Construction Grant funding for the proposed projects in Grand Rapids and Southeast Michigan.

- **Spring 2019:** Construction of new veteran homes began at both Grand Rapids and Southeast Michigan sites. Estimated construction completion is Spring 2021, with full occupancy occurring by end of FY21.

b. Phase II: Proposed
The second phase in this plan is the construction of two new facilities one in SE Michigan or Flint/Saginaw region and a replacement for the DJJHV facility in Marquette. These projects were moved up in priority from previous capital outlay plans. While we have successfully pursued partial CMS certification of the existing DJJHV facility (Marquette) construction of a replacement facility in Marquette has been moved up on MVH's prioritized list for new construction because of challenges associated with the current facility's age, MVH plans to seek match funding to pursue new construction for a Marquette-region Home, with a goal of construction of a DJJHV replacement facility in the next five years.

c. Operational Adjustments: Resident-Centered Care. At both facilities, operational changes that facilitate the provision of resident-centered care are underway. Because the legislature supports the recommendation to replace the existing facility in Grand Rapids (in large part due to the significant investments needed for capital maintenance and with making the physical plant changes necessary to permit CMS certification), changes at Grand Rapids do not currently include any capital investments, other than those necessary to ensure the continued safety of residents and ability to provide quality care to those residents. At DJJHV, requests do include capital investments needed for both CMS certification and improved quality of care. Both facilities are engaged in modernizing the operational approach, including implementation of updated policies and procedures and increased training for staff.

DJ Jacobetti Home for Veterans

a. Implementation Plan

1. Major Projects in Priority Order/Estimated Costs

*= Project unnecessary if construction of replacement facility approved, would not be pursued.
**= Project unnecessary if construction of replacement facility approved, would not be pursued except in the event of a major failure while members still live in current facility. If replacement pursued NLT FY22 or FY23, we anticipate system will last through construction of replacement w/ stop gap repairs

FY 2022

Item	Description	Cost
Expand Rear Parking*	Add additional rear parking for volunteers and staff.	200,000

Total		***200,000***

FY 2023

Item	Description	Cost
Renovation of Physical Therapy Area*	As the Home pursues and achieves CMS certification, the rehabilitation operations and structure will change drastically from current operations. Additionally, the current space is outdated and requires upgrade. Necessary to ensure compliance with CMS requirements (person-centered care); ensure quality care for residents consistent with LTC industry standards	225,000
Water Heater Replacement with Recirculating lines**	Tie both water mains together with-in building to create redundancy in the event of water loss and replace end of line water heater.	105,000
Total		***330,000***

FY 2023

Item	Description	Cost
Replace Chiller**	Replace end of life-cycle chiller.	500,000
Air Handler Replacement**	Replace end of life-cycle air handling unit.	100,000
Parking Lot Restoration*	Replace infrastructure of main parking lots and install new asphalt.	800,000
On-Unit Dining*	CMS requires person-centered care, and the creation of a home-like environment to the extent possible. The Home is modifying its food service structure to bring on-unit dining to members of the Home. The next stage of this process (following 2 North on-unit dining project) is the creation of on-unit dining on the 1 South unit. Necessary to ensure compliance with CMS requirements (person-centered care); ensure	150,000

	quality care for residents consistent with LTC industry standards.	
Courtyard Construction*	Construction of member centered green space to enhance the lives of the veterans while provide sensory stimulation.	620,000
Total		***2,170,000***

FY 2024

Item	Description	Cost
Elevator Replacements**	Existing elevators have been in place likely since 1981 or prior, and parts are almost obsolete. Entire system requires replacement/upgrade. Note: partial replacement of lobby elevators scheduled for FY21, using special maintenance and State Home Construction Grant Program funding. The estimated cost reflect repairs of remaining elevators close to end of life cycle.	1,000,000
Replacement of Interior Piping System* *But see description*	All interior piping at life cycle and beginning to fail, which includes leaking pipes and necessity to "chase leaks" on near constant basis. Fully addressing issue requires complete replacement of facility's heat piping, drain piping, water supply. This would require total interior demotion of building and replacement. Pursuit of this approach is strongly discouraged, as cost to state would near that of new construction w/ federal match from SHCGP. Recommendation: Construction of new facility using SHCGP funding, make necessary minor section repairs to hold off total system failure (approx. $20 – 30k each time for replacement of 10-20 ft pipe)	**Unknown** *But requires total interior demolition, at a cost which would likely exceed complete demotion and new construction*
Total		***1,000,000***

b. Impact of Addressing Structural Repairs vs New Construction

Based on the Home's needs and priorities, we have scheduled our requests in priority order. The age of the building and the extent of the capital outlay necessary to address major system and mechanical issues likely exceeds that of new construction. Approval of plans for new construction replacement of building NLT FY23 is strongly encouraged.

Assuming approval of new construction, only capital outlay expenditures required for critical life safety projects and major system failures are recommended.

Absent approval of new construction, addressing critical infrastructure issues as soon as possible is recommended, as all systems identified are currently at end of life cycle. The impacts of not addressing the issues are significant, resulting in either required emergency repair efforts being required, the failure of the Home to meet Life Safety Code standards, or the failure to meet CMS requirements.

c. Operational Savings: Existing vs New Construction

Maintaining modern and up-to-date physical plant and living environment allows us to maximize our nursing census, which in turn, maximizes federal and restricted revenues, reducing the State portion of the cost of operating the home (likely not possible in existing facility, absent CMS waiver for remaining non-certified beds which is currently unlikely). Additionally, the achievement of CMS certification will place the Home under a financial model (from the potential applicant or resident's perspective) more closely aligned with every other private and not-for-profit nursing Home in existence in the region (Medicare funding, Medicaid funding, etc.). As such, the Home needs to create an inviting and home-like atmosphere, which includes a high-quality physical environment, to attract and retain potential qualified applicants to ensure the continuity of revenue for sustained operations.

d. Facility Assessment

1. Overview: The Home is operated as a long-term care facility and the buildings along with the parking lots encompass 90% of the available land. The original building was constructed in 1954 and has undergone additions in 1965, 1967, and 1988. The latest construction in 1988 was a 50-bed addition and this wing has an independent heating system and a shared chilled water-cooling system (updated 2012). The Home is constructed of masonry and brick veneer walls with interior plaster finishes. With the exception of the 1988 50-bed addition, ceramic tiles are installed up to 48 inches above finished floors in public areas. The roof has an average of 6 inches of insulation except over the Chapel.

2. Utilization: The Home typically maintains a skilled nursing occupancy rate of approximately 95%. This was not true during FY20, due to the COVID-19 pandemic and admissions restrictions during active outbreaks.

3. Mandated Facility Standards for Program Implementation:

a) U.S. Department of Veterans Affairs under Nursing Home Care Standards for State Veterans Homes for all aspects of clinical care, food standards, and life/safety standards.

b) Michigan Department of Licensing and Regulation, Bureau of Fire Services for all applicable NFPA standards, Life Safety Code, and OSHA and MIOSHA General Industry Standards.

c) Life Safety Codes are enforced by the State Fire Marshall.

d) The Home is partially Centers for Medicare & Medicaid Services (CMS) certified and has made changes to be in compliance with the requirements of CMS and the conditions of participation.

4. **Functionality of Existing Structures and Space Allocation**:
Approximately 560 sq. ft. per member.

5. **Estimated Replacement Value of Existing Facilities**: Based on State of Michigan OFM Property Accounting Ledger Report for Fiscal Year ending 9/30/2018: Historic Cost is $12,718,769.20 and the Book Value is $4,802,422.22. Replacement cost of building in order to qualify for SHCGP match funding (and to be in line with current skilled nursing/LTC standards) anticipated to be $27M in state funding ($80M total project budget, $50M in federal SHCGP support, $27M in grant match funding).

6. **Assessment of Utilities System**:
All resident areas of the Home are air-conditioned. Some staff and utility areas are not air conditioned. The electrical system was updated in 2006 with the installation of a new emergency generator, transfer switch and replacement of many power panels and feeders. In addition, corridor lighting was upgraded to meet NFPA Life Safety Code. An automated fire suppression sprinkler system was installed in 2006, providing coverage to the entire building. Previously, only hazardous areas and a portion of the nursing units were sprinkled. A large portion of the plumbing system in the oldest part of the building has been replaced; however, additional upgrades will be required. Due to deterioration of the system, some repairs are needed on an on-going basis as the waste and vent piping disintegrates. The heating system was upgraded in 1998 and is in fair condition. All emergency re-tubing was completed in 2017.

7. **Assessment of Infrastructure**:
Much of the roofing has been updated and is in good condition, with the most recent upgrade occurring in 2015 on our Part F wing. The amount of parking available is barely adequate at this time due to an increasing number of volunteers, visitors and families at the Home each day. We no longer are able to use parking in an adjacent abandoned parking lot (non-State owned), as the building is being renovated for low cost housing.

8. **Adequacy of Utilities and Infrastructure System:**
The plumbing system is adequate but requires ongoing repairs. The roofs are currently adequate. The parking is in good condition, although expansion is needed.

9. Assessment of Existing Land:

Existing land is adequate for current operations, but additional structure, land, or solutions will need to be developed to ensure sufficient parking is available for members, employees, and visitors.

Grand Rapids Home for Veterans

a. Implementation Plan

Itemized List of Major Projects/Estimated Cost:

In December 2016, the Legislature approved a capital outlay bill that authorized and provided state match funding for the construction of a new facility in Grand Rapids and a new facility in Southeast Michigan. Assuming plans for new construction move forward, there are a number of capital investments, specifically infrastructure investments for items that require life cycle replacement, that it would not make sense to pursue proactively. For that reason, GRHV management is currently limiting capital outlay requests to:

*= Project unnecessary if construction of replacement facility approved, would not be pursued.
**= Project unnecessary if construction of replacement facility approved, would not be pursued except in the event of a major failure while members still live in current facility. If replacement pursued NLT FY22 or FY23, we anticipate system will last through construction of replacement w/ stop gap repairs

a) investments that are necessary to keep old buildings operational for residential use. These investments would need to be undertaken should there be a major system failure while buildings are still in use for that purpose (Category 1)

b) investments that are necessary to keep old buildings operational in certain capacities (residential, healthcare), but would not be undertaken unless a decision was made to keep buildings in operation (Category 2)

Note: None of these investments would be made in the event the buildings were no longer going to be used.

It is essential to note that there are a number of capital investments that will be necessary for continued operations of the existing facilities if members are living in the older buildings/the buildings are still in use. This includes a large number of items that have reached or will reach the end of their remaining life cycle and will need immediate replacement to avoid an emergency replacement project. It also includes projects that would be necessary to get the existing facilities in line with current industry practices and standards.

A workgroup was established by the Director of the Michigan Veterans Affairs Agency to study and make recommendations of possible future uses of the campus. The

workgroup had representation from both boards, staff, Veterans, and local interested individuals. This workgroup will be making recommendations to the Board of Managers and the Michigan Veterans Facility Authority Board which will likely include consideration of providing Adult Day Care, Behavioral Health Services and other areas. If the responsible governing boards, the Health System and the Executive Leadership of the State proceed with any recommendations it is likely there will be Capital Outlay requirements to make modifications to the existing buildings to accommodate these services. USDVA Matching Grants will be pursued wherever possible to reduce the total required State of Michigan investments.

Capital Outlay Investments - New Construction Plan Moves Forward

FY 2022 Supplemental Capital Outlay Requests

Item	Description	Cost
Demolition of NCO Club	Proposed demolition of the NCO Club, located by the newly constructed facility. Federal funding cannot be used for demolition, but new construction on that property would be eligible for federal SHCGP funding 1-year post demolition. This is the recommended location for construction of laundry and pharmacy facilities should the old building be taken offline.	500,000
Essential Elevator Repairs (Category 1)	There are 7 elevators needing repairs. ****Two of these elevators are currently being replaced during FY20 and FY21 due to major system failures. GRHV is using Special Maintenance funding to complete projects*** These repairs must be made to avoid an emergency situation during the years of construction while these buildings will continue to be home to our Veterans. It is likely also these buildings will remain in use for many years for Veteran programming and elevator service will be required. A workgroup was established by the Director of the Michigan Veterans Affairs Agency to determine future uses of the campus and will be making recommendations to the Boards including Adult Day Care and Behavioral Health Services.	
	Mann Freight Elevator	203,000
	McLeish Traction Elevators	495,000**
	McLeish Kitchen Hydro Elevators	71,500
	Total	***1,269,500***

Item	Description	Cost
Hobart Dish Machine (Category 1)	***The Hobart Dish Machine is beyond its remaining lifecycle.*** If it ceases working it will require the use of disposables for all service: trays, mugs, cups, bowls, plates, flatware, etc. This is an extraordinary expense that is not budgeted for. Given the high likelihood that replacement of this item will be necessary prior to the opening of a new facility, it is recommended that it be replaced proactively, rather than waiting until an emergency request is necessary. If possible, a smaller machine will be purchased to reduce cost while meeting the needs of the current population. **If a decision is made to use the buildings for a non-residential purpose, this investment may not be necessary.*	
	Hobart Dish Machine	120,000
	Total	***120,000***

FY 2023 – Capital Outlay Request

Item	Description	Total	Potential VA Grant Funding	State Share
Mann Building HVAC Control System Upgrade (Category 2)	Replace current and failing system. The system controls temperatures in resident rooms and other clinical areas of building. It is a computer-based system and currently many functions make it difficult to control and has to be done manually.	1,700,000	1,020,000	680,000
Totals		***1,700,000***	***1,020,000***	***680,000***

Possible Capital Outlay Emergency Investment Requests

Item	Description	Cost
Large Kitchen Appliance Replacement (Category 1)	***A number of the large kitchen appliances at GRHV are currently operating well outside expected life cycle*** with multiple efforts undertaken to extend life cycle to the	

	extent possible. It is extremely likely that these appliances will fail within the next 12 – 18 months, requiring an emergency replacement request. **If a decision is made to use the buildings for a non-residential purpose, this investment may not be necessary.*	
	Combi Oven x 2 ($21 - $31k each)	62,000
	Hobart 6-Door Walk Through Refrigerator ($5.5 - $8.5k)	8,500
	Tilt Griddle ($2.5 – $3k)	3,000
	Lowerator Tray Dispenser ($2 - $2.2k)	2,200
	Blodgett Convection Ovens x 2 ($24 - $30k each)	60,000
	Total	***135,700***

Capital Outlay Investments – Continued Use of Mann and/or McLeisch

Item	Description	Cost
Mann Freight Elevator (Category 1)	Poor Condition; 0 years remaining in lifecycle	203,000
McLeish Traction Elevators (Category 1)	Poor Condition; 0 years remaining in lifecycle	495,000
McLeish Kitchen Hydro Elevators (Category 1)	Poor Condition; 0 years remaining in lifecycle	71,500
Mann Traction Elevators (Category 1)	Fair Condition; 0-5 years remaining in lifecycle	130,000
Mann Brick Exterior Tuck-Point Repair (Category 1)	Fair Condition; 0-5 years remaining in lifecycle	100,000
Digital Temperature Control System (Category 2)	Life safety project 1.1M grant deferred	2,200,000
Vinyl Rail Protections (Category 2)	Life safety project	176,000
Wi-Fi Routers & Repeaters (Administrative & Business Services) (Category 2)	Improved business processes, efficiencies	40,000
Fiber Optic Cable/Cat6A (IT upgrades) (Category 2)	Improved business processes, efficiencies; alignment with industry standards, improved quality of care & services	100,000
Main Dining Remodel (Category 2)	Alignment with industry standards, improved quality of care & services	220,000
Kitchen Operation – Large Appliances (Category 2)	Poor – Fair Condition; 0 – 5 years remaining life cycle	405,000
Total		***4,140,500***

b. Impact of Addressing Structural Repairs Immediately vs. Over the Next Five Years

The movement forward with constructing new facilities and moving to an authority model of governance affords many advantages, as discussed in detail in the Veterans Long-Term Care Workgroup's recommendations. This includes modernizing and improving the care provided to our veterans, the eventual elimination of a structural deficit, creating a model of financial sustainability, and reducing the assessed need to spend millions of dollars in capital needs for required facility renovations if the new homes are not constructed.

The new facilities will provide a homelike setting affording more dignity and quality of life to the Michigan veterans who live here and rely on the State of Michigan for their medical care and quality of life. The Federal Omnibus Budget Reconciliation Act (OBRA) of 1987 amended the Medicaid program requirements for nursing homes and OBRA (425CFR483.70[d]) specifies that member rooms must be designed and equipped for adequate care, comfort and privacy of the resident. Shared bathrooms are not allowed for new CMS certification as of November 2016.

The current program structure does not allow for adequate privacy for veterans and their families and it does not provide a homelike environment.

Lastly, the investment(s) in new facilities and a new form of governance proposes an opportunity to the Legislature, Executive Office, and citizens of the State of Michigan to make a positive impact on the future of how the State cares for the men and women who have worn our nation's cloth.

The prioritization of GRHV capital needs, assuming the ongoing construction of two new homes, will be driven by individual projects and its immediate need for health & welfare, and operations & cost, versus the ability to create intermittent solutions that prevent significant investments. In summary, the requested stabilization costs for capital outlay for GRHV will be utilized to maintain operations and remain compliant, limiting investment to absolute need, while two additional facilities are being constructed.

As the Boards make decisions as to the continued use of the existing buildings on the campus, capital outlay requirements over the next 5 years for required modifications will be developed.

c. Operational Savings

The plan currently underway at the GRHV campus required significant "up-front" investments with saving to be realized over time. Continued use of the current buildings will require a facility assessment to determine the most financially advantageous path forward upon completion of new facility on GRHV campus.

d. Facility Assessment

1. **Overview:** The Grand Rapids Home for Veterans has been providing long term nursing care for eligible veterans and their dependents at its current location since

1886. We currently provide nursing care at various levels in two resident nursing care buildings:

a) Mann Building (built in 1988) - 121,383 sq. ft.

b) McLeish Building (built in 1975) – 164,972 sq. ft.

They are all block/concrete/steel/column construction with brick exterior and joined end-to-end on the first floor by breezeway. The facility is institutional in design which makes providing a home like setting difficult to achieve.

Other buildings and structures on grounds:

c) NCO Club/Clothing Room building, built in 1906, is wood frame construction with stucco exterior (4,900 sq. ft.). Building has been designated a historic building and cannot be demolished. The building has been incorporated into the new construction plans. **We propose demolition of this structure in Fall 2021.**

d) Maintenance building, built in 1979, is block construction with brick exterior (10,800 sq. ft.)

e) Power Plant, built in 1956, is block construction with brick exterior (13,941 sq. ft.)

f) Old Ice House building, built in 1885, is poured concrete construction (1,700 sq. ft.)

g) Grounds building, built in 1974, is metal frame with metal sheeting exterior (2,000 sq. ft.)

h) Greenhouse, built in 1967, is aluminum frame with glass construction (2,000 sq. ft.)

i) Cemetery storage building, built in 1885, is block construction (110 sq. ft.)

j) Cooling tower structure, built in 2015, is steel and aluminum construction (110 sq. ft.)

k) Cannon shelter, built in 1982, is wood frame construction (1,000 sq. ft.)

l) Storage building, built in 1998, is metal frame construction with metal sheeting (2,400 sq. ft.)

m) Nature trail gazebo, built in 2000, is wood frame construction (675 sq. ft.)

n) Grotto Park Healing Garden gazebo built in 2008 is wood frame construction (576 sq. ft.)

o) Grotto Park Healing Garden pavilion, built in 2008, is wood frame construction (952 sq. ft.)

p) Potting Shed, built in 2013, is wood frame construction (432 sq. ft.)

The previous total gross square footage of all buildings and structures was 388,070 sq. ft. In Spring 2019, over 60,120 square feet (as noted above) was demolished for the construction of the new Home, and the updated total gross square footage of all building and structures is now 327,950 sq. ft.

The entire campus occupies a tract of land of approximately 89 acres.

A registered veteran's cemetery occupies approximately 11½ acres on the north end of the grounds. There is approximately 7 wooded acres on the south end of the campus that is the site of a nature trail for member recreation. To the east (rear) of the buildings, we provide parking for 334 employees and members. To the west (front) of the facility, we provide parking for 111 visitors and volunteers. The grounds are cared for by the Grounds Department and accessible to all members.

2. **Power Plant:** The Power Plant provides heat, domestic hot water, air conditioning and emergency power for all facilities on the grounds, with exceptions as follows:

a) No air conditioning to the maintenance building (except the offices, conference room and break area, served by stand-alone unit).

b) No air conditioning is provided to the greenhouse.

c) No air conditioning provided to the grounds building.

d) No air conditioning, heat or water provided to the storage building.

e) No air conditioning or water provided to the large tractor garage

f) No air conditioning provided to the poppy room/storage building- air conditioning provided to poppy room with stand-alone unit.

g) No air conditioning provided to the public toilet building.

h) No air conditioning provided to the NCO Club/Clothing Room building (air conditioning provided to NCO Club side by a stand-alone unit).

i) No air conditioning, heat or hot water provided to the cemetery storage building.

3. **Utilization:** At the end of September 2017, the nursing facility(ies) were occupied at approximately 78% of operational capacity, while the domiciliary was occupied at approximately 27% of authorized capacity. The buildings are aging and member rooms, physical therapy areas, member recreational areas, hallways, and shower rooms are in need of remodeling throughout all buildings. The kitchen and dining areas are in need of remodeling. There is a general shortage of space for equipment storage, housekeeping and general storage that are all supportive to nursing care. Nurse stations in the 40-year old McLeish Building are not constructed to be HIPAA compliant and are in need of remodeling to adjust for more recent regulations affecting health care institutions. Some equipment used for nursing care and food preparation are aged and in need of replacement.

4. **Mandated Facility Standards for Program Implementation:**

   a) U.S. Department of Veterans Affairs under Nursing Home Care Standards for State Veterans Homes for all aspects of clinical care food standards and life/safety standards.

   b) Michigan Department of Licensing and Regulation, Bureau of Fire Services for all applicable NFPA standards and OSHA/MIOSHA General Industry Standards.

   c) Life Safety Codes are enforced by the State Fire Marshall.

5. **Functionality of Existing Structures and Space Allocation:**

   a) Skilled nursing care – 164,683 sq. ft.

   b) Domiciliary care – 13,988 sq. ft.

   c) Nursing administration & clinics – 2,009 sq. ft.

   d) Social services – 1,893 sq. ft.

   e) Activity/recreational therapy – 9,143 sq. ft.

   f) Physical therapy – 2,235 sq. ft.

   g) Occupational therapy – 990 sq. ft.

   h) Nutritional services – 11,493 sq. ft.

   i) Pharmacy – 1,241 sq. ft.

   j) Medical supplies – 1,838 sq. ft.

k) Housekeeping/linen services – 6,525 sq. ft.

l) Plant operations – 44,625 sq. ft.

m) General administrative – 7,268 sq. ft.

n) Employee lounge/locker/toilet areas – 4,691 sq. ft.

o) **McLeish Building:** The McLeish Building was constructed in 1975. The building contains three resident floors and a first floor that houses clinical areas, administrative offices and a cafeteria. The current floor lay out includes 42 resident rooms per floor; two associated nurses' stations with medication rooms; two associated centralized bathing areas with all necessary plumbing fixtures and patient bathing equipment; several associated offices and connecting hallways; two central dining rooms with small pantry areas. Some member rooms and hallways have undergone renovation.
   i. Old wood and countertops are prevalent in the building, constructed in the mid-1970s.
   ii. The exterior brick is in good condition and a tuck and point was completed in 2001.
   iii. The building contains several roof systems. The roof over the resident building was replaced in 1991 and is still in working condition but would need to be replaced in the next 2 to 4 years. The kitchen roof was replaced in 2003 and is in good condition. Another part of the roof covering the resident courtyard section, and major social gathering areas was replaced in 2008 and is in good condition.
   iv. The HVAC is in good condition; however, it is a pneumatic system. This is thirty-year old technology. Overall temperatures are appropriately monitored but controlling individual separate member rooms cannot be accomplished with this technology.
   v. The windows were replaced in 2014 and rooms and dining areas now meet the VA requirement for glazing and light entry.
   vi. The elevators are original to the structure, and modernization has only been done to the motors and controls. The vendor has strongly recommended needed upgrades. The interior of the elevator cars consist of original equipment.
   vii. The electrical system meets code, although as resident rooms are being renovated, more outlets are being added.
   viii. New emergency generator was installed the summer of 2015 and can supply enough backup power to maintain 100% services in the building.

p) **Mann Building:** The Mann building was constructed in 1988. It houses resident on three floors, with 36 resident rooms on each floor. The building is in overall good condition with all exterior components including rooms.

i. The roof, windows and exterior brick are currently in satisfactory shape. The roof was replaced in 2008 and is in good condition.
ii. The utility systems are in good condition. The core infrastructure of the HVAC system is good and operates properly. However, the Direct Digital Control (DDC) system controls for individual rooms is in need of replacement as it is first version technology from 1988.
iii. Interior rooms are a maintenance issue with the aging of the building and the rooms do not conform to current day communal nursing home living standards.
iv. New Emergency Generator was installed the summer of 2015 and can supply enough backup power to maintain 100% services in the building.

6. Estimated Replacement Value of Existing Facilities: Based on State of Michigan OFM Property Accounting Ledger Report for Fiscal Year ending 9/30/2018: Historic Cost is $41,829,596 and the Book Value is $8,617,083.20.

The costs of construction for a new modern facility on the current site of GRHV, and a new facility in SE Michigan, have been allocated funding from the state Capital Outlay process, and are under construction, scheduled for substantial completion in March 2021.

7. Assessment of Utilities System:

a) A new domestic hot water plate and frame instantaneous hot water system with back up was installed in 2012. This is in new and excellent condition.

b) There are two chillers serving the Home's cooling system. One 425-ton chiller was installed in 2014 and is in good condition. This chiller replaced a chiller that became inoperable in August 2013. Prior to this chiller failing, both chillers were running 100% at peak months. The second chiller was installed in the summer of 2015. The old cooling tower was dismantled, and two smaller, more efficient cooling towers were installed in the spring/summer 2015 to assist with the cooling of the facility.

c) There are three boilers that serve the entire facility providing redundancy in service and range in age from 25 years to 8 years. The boilers are high pressure steam boilers. They are serviced annually to manufacturer and equipment code standards. The condition of the boilers is good.

d) Much of the utility infrastructure from the power plant to the resident buildings is housed in an underground tunnel system where it is protected from the elements. Steam piping and hot water piping is all heavily insulated for efficiency. Some of the piping over the years has been repaired due to faulty welds or fittings

breaking. Piping is 25 to 40 years old. Some of this infrastructure will be eliminated when the demolition occurs for the new build.

e) The electrical system has had periodic upgrades, is up to current state and federal code. Conduits that take the wiring from the power plant to the buildings are all in underground areas. Much of this is 25 to 40 years old. It is buried and its current true condition is unknown. Four generators serve the Home with stand-by emergency power. Original was installed in 1973 and is a 12- cylinder Caterpillar diesel with 565kw. It currently only supplies code-required emergency power in resident building including exit signage, site lighting, emergency lighting and boiler power. The Home underwent a project that added three generators to the system in 2015. The generators are located adjacent to the structures. 2 of those service the Mann and McLeish buildings. The third powers the power plant cooling system for cooling in all buildings They are powered by diesel fuel supplied in self-contained tanks attached to the generator.

f) **McLeish Building:** The HVAC is a rectangular duct system, low velocity with original fan coil units located in all patient rooms. This is an inefficient system relative to more modern standards. The air handling units are a duct system and are not designed for today's standards of atmospheric comfort. Most of the heating and cooling controls in the building are pneumatic. Heating is hot water radiant, one pipe mono-flow tee system. The water system is galvanized mains and risers with copper supply to all fixtures. The galvanized nature of the water system creates a maintenance issue because they rust out and pieces are replaced as they fail with modern piping. The sewage system throughout the building is cast iron, is aged and susceptible to cracking, rusting and breaking. The electrical system is all copper conductors run in conduit throughout the building. The fire alarm system, including the ceiling smoke detectors, pull stations, door closers and all annunciating equipment is Seimans. Duct detectors are all wired to the alarm system. In 2009, the building became fully suppressed with a new fire sprinkling system.

g) **Mann Building:** The HVAC is divided into two parts. Each side is served by separate supply air, return air and make-up air fans. The duct work system is round, high velocity. The heating system in the building is a hot water radiant, two-pipe system. The water system is galvanized mains and risers with copper supply to all fixtures. The sewage system throughout the building is cast iron. The electrical system is all copper conductors run in conduit throughout the building. The entire building is sprinkled with a charged wet type system. The fire alarm system, including the ceiling smoke detectors, duct smoke detectors, pull stations, door closers and all annunciating equipment is Seimans. It is tied to a central alarm system in the McLeish Building.

8. <u>Assessment of Infrastructure:</u>

a) Roads and parking lots are all asphalt and in good condition. A project to complete restoration and improvement of the onsite parking lots and roads around the facility was completed in early fall 2017.

b) Approximately 14,000 sq. ft. of concrete sidewalk is 20+ years old and in need of replacing. Only spot repairs have been made to take care of sagging and frost heaving sections during this time.

c) The GRHV has two bridges on its property. One connects the cemetery on the north end of the grounds to the rest of the agency grounds. In July 2012 a bridge inspection by Michigan Department of Transportation Bridge Inspection team was conducted. Based on their report, the bridge was in immediate need of replacement. Vehicular traffic was immediately restricted on this bridge. A new bridge was installed in summer/fall of 2016. The second bridge is constructed of wood, concrete and covered with sod. It is located over Lamberton Creek at the lower pond floor gate. The most recent inspection of this structure occurred in July 2000 and revealed what appears to be some deterioration of the wood structure underneath. We have since restricted traffic over this bridge to exclude motor vehicles except grounds care equipment.

d) A new front entrance and canopy was completed in fall 2013. The canopy is a steel and tensile structure and is 5,700 square feet in size. There is 3,500 square feet of heated sidewalk underneath the structure. It is in excellent condition.

e) New windows have been installed in the McLeish building as part of the overall remodeling of the structure. The project replaced 422 windows of varying sizes and configurations. The window installation was completed in October 2014.

9. <u>Adequacy of Existing Utilities and Infrastructure System:</u>

a) The Direct Digital Control system that controls the heating and cooling in the Mann Building is original to the 1988 structure. Due to its age 80% of the valves have to be manually adjusted to achieve the desired temperatures. Desired temperatures are reached, but to attain this is manual and time consuming. This is a software-based system that contains parts that are no longer available on the market. The pneumatic control heating and cooling system in the McLeish Building is workable, but of old-fashioned design and very manual. The McLeish Building is a one pipe mono-flow tee system as opposed to a two-pipe system, which would have been more efficient in heating the space. The McLeish building was constructed in 1973- 1975 during the energy crisis when there was a perceived benefit to saving money by putting in a one-pipe system.

b) The Home is serviced by substations of the local utility company. If the Home loses its primary electrical source from the utility, within five seconds the utility transfers the Home to the secondary source and the Home is under full power.

The overall condition of the underground electric, given its age, is unknown. The boiler system in is good working order. The generator system is up to date with 3 new gensets large enough to carry full 100% of the building loads and also supply cooling from the chiller systems.

10. Energy Audit: A general basic energy assessment was most recently completed in March 2012.

11. Assessment of Existing Land:

a) The current site is approximately 89 acres and appears adequate to support the additional construction of a new facility, while potentially tying in with the current supporting road structures if required, to allow access to existing maintenance buildings, etc. The State Veterans Cemetery occupies 11½ acres of this site and contains around 5,300+ graves. The current projection is that it has approximately six to eight years of space left for burials. It is probable that a columbarium structure will have to be erected in the near future for cremains to extend the active use of the cemetery. The roads in the cemetery are in need of replacement and are in fair to poor condition. The landscaping in the cemetery is old and needs consistent maintenance attention and possibly irrigation.

b) A workgroup established by the MVAA Director researched and looked at possible expansion for the cemetery. Columbarium style buildings was the focus and the group will submit this information to the Homes Board of Managers and Michigan Veterans Facility Authority Board for their review.