Fiscal Year 2021 – 2025
Five-Year Capital Outlay Plan
&
Fiscal Year 2021 Capital Outlay Request

October 31, 2019

Department of
Technology, Management & Budget

State Facilities Administration,
Building Operations Division

Table of Contents

Mission

The Department of Technology, Management & Budget's (DTMB) mission is to "provide vital administrative and technology services and information to enable Michigan's reinvention." State Facilities Administration (SFA), Building Operations Division (BOD) supports this mission through its program statement: "to provide safe, comfortable and cost-effective facilities to allow our customers to provide their designated services to the people of the State of Michigan, and to provide maintenance and construction services on buildings to preserve the investment of the State of Michigan, DTMB." SFA works to ensure that the buildings it is responsible for, are in a condition that allows occupants to focus on their core mission in a comfortable, efficient environment.

Programming Changes

BOD is responsible for operating, managing, and maintaining 11.8 million gross square feet of space, 41 DTMB-owned buildings, 906 acres of land, and nearly 14,000 parking spaces in 7 parking ramps and 42 parking lots. DTMB-owned buildings provide space for more than 50% of state employees as well as the general public. BOD's program consists of regular building maintenance, supply chain services, building automation, energy management, parking services, groundskeeping, and maintenance engineering services.

New in FY 2020, BOD will begin managing One Division, an approximately 137,000 square foot office building in Grand Rapids and will become part of DTMB's capital outlay portfolio. Built in 2002, One Division houses the Michigan Department of State, Corrections, Talent and Economic Development, and the Federal Bankruptcy Court. BOD anticipates more than 1,600 additional work orders coming to the maintenance staff and has requested one additional full-time employee (FTE) to accommodate the increased workload.

Project Ranking

BOD has developed a ranking system to prioritize each project based on standardized weighted criteria. Once a project is identified, a team will rank the project based on danger to life or property, environmental or health concern, mandate or initiatives, condition of the asset, remaining service life, ability to generate revenue, code or ADA update, and extenuating circumstances.

Projects are classified into two categories: Discretionary and non-discretionary. Non-

discretionary are projects required to maintain existing assets, while discretionary projects are not required or are new initiatives. Examples of discretionary vs non-discretionary projects include:

- Discretionary
  - Installing an exit to Ottawa Street at Hall of Justice
  - Electric vehicle charging stations
  - Snow melt projects
  - Lobby security projects
- Non-Discretionary:
  - Upgrading fire suppression systems
  - HVAC replacement
  - Replacing windows
  - Refurbishing switchgears

The highest ranked projects are the Secretary of State Office Building and the Hannah Ottawa HVAC System Replacement. BOD does not have the ability to fund the renovations needed for these buildings other than through a capital outlay appropriation. If these are not funded BOD will continue maintaining the buildings to the highest level possible considering the limitations of the structures; however, the conditions of both facilities are risking system failure without renovation.

Funding vs. Backlog

Well maintained, efficient buildings cost 20 – 50% less in energy and avoid costly emergencies. BOD has a proven track record of excellent facility maintenance and works hard to contain energy costs and keeping buildings in good condition.

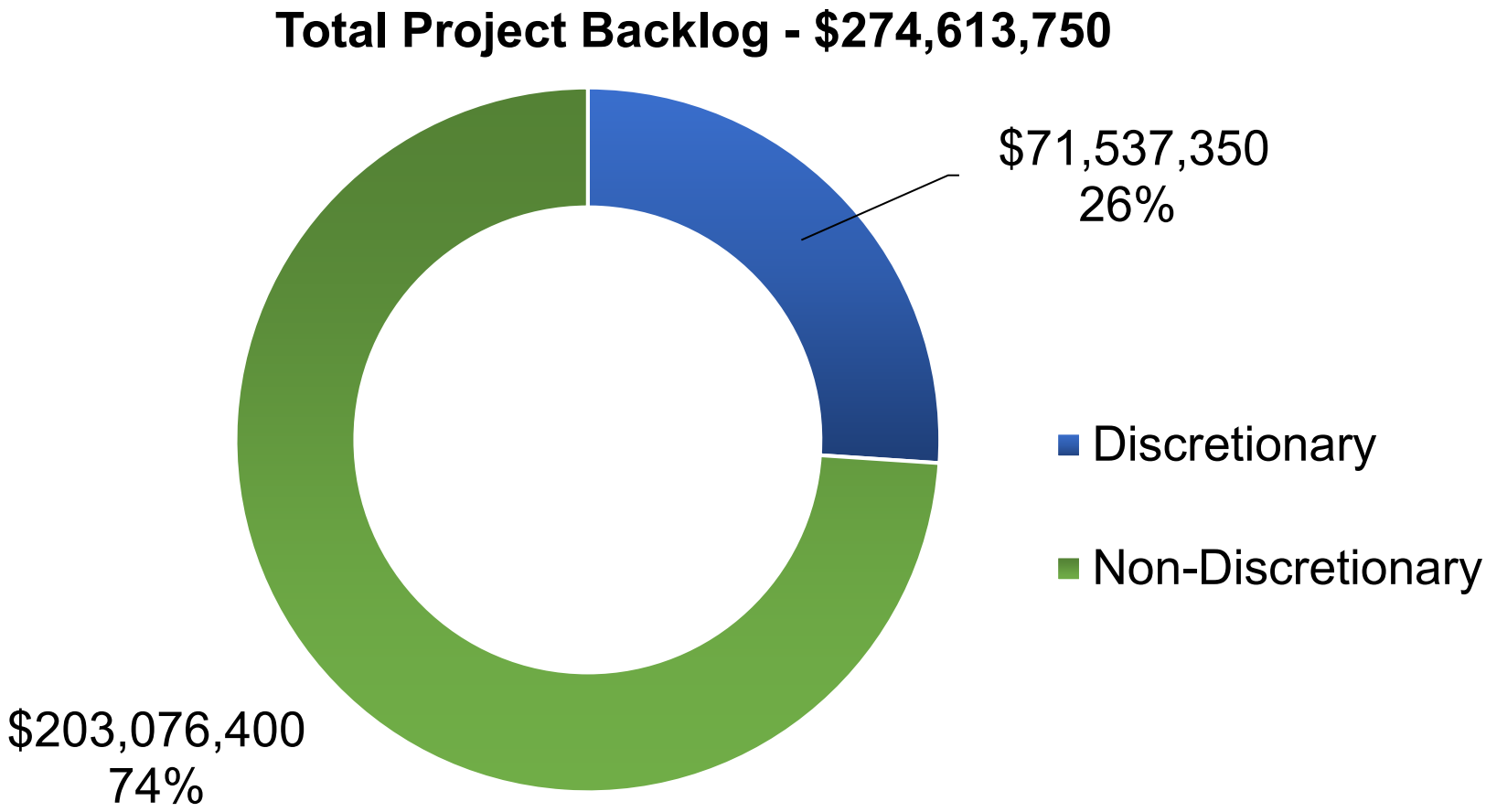
An improved funding plan is necessary because the existing trajectory is not sustainable. DTMB proposes lump sum special maintenance be set at 2% of the Current Replacement Value (CRV) for the portfolio of buildings. DTMB estimates the CRV today is $2 billion which would equate to an annual funding allocation of $40 million. The State of Utah currently uses a similar 2% CRV model and other states are considering it as well. Providing funding at this level is necessary to enable DTMB to properly address maintenance and renovation needs before they become emergency situations that are costlier to handle and possibly pose health and safety risks.

Summary

In FY 2019, DTMB received:

- $3.8 million for Special Maintenance
- $3.3 million for Miscellaneous Operating Projects (MOP)
- $8.3 for Enterprisewide projects
- **Total of $15.4 million**

The most effective method of facilities maintenance is a balance between a solid proactive maintenance program and capital renewal funding. DTMB is seeking approval of all the projects listed in this plan and is asking for consideration to revise the Capital Outlay allocation to adequately meet the FY 2021 maintenance needs of the aging DTMB building portfolio.



- Non-discretionary are projects required to maintain existing assets, while discretionary projects are not required or are new initiatives.

Current Replacement Value (CRV)

#	Building Name	Rentable SF	Capacity	Occupancy	Year Built	City	Current Replacement Value
1	Richard H. Austin Building	179,180	647	597	1968	Lansing	$53,795,000.00
2	Cadillac Place	1,339,558	2,992	2037	1920	Detroit	$334,889,500.00
3	Lewis Cass Building	197,832	485	385	1922	Lansing	$49,458,000.00
4	Constitution Hall	477,857	1,713	1668	2001	Lansing	$119,464,250.00
5	Energy Center	65,102	28	28	1973	Lansing	$30,007,347.95
6	Escanaba State Office Building	24,250	75	73	1955	Escanaba	$6,062,500.00
7	Flint State Office Building	110,354	479	427	1982	Flint	$27,588,500.00
8	MSP Forensics Laboratory	85,287	84	74	2000	Lansing	$30,162,263.21
9	Grand Rapids State Office Bld.	87,771	282	258	1976	Grand Rapids	$21,942,750.00
10	Grand Tower	274,815	1,315	1189	1990	Lansing	$68,703,750.00
11	General Services Building	152,890	108	107	1975	Lansing	$19,299,233.90
12	Hall of Justice	271,065	275	246	2002	Lansing	$144,536,443.60
13	John A. Hannah Building	179,995	921	864	1982	Lansing	$44,998,750.00
14	Hazardous Materials Training Bld.	4,556	10	7	1991	Lansing	$936,292.09
15	Jackson State Office Building	73,662	256	258	1982	Jackson	$18,415,500.00
16	Joint Operating Center	19,393	35	27	1982	Lansing	$4,848,250.00
17	MI Library & Historical Center	299,795	225	191	1989	Lansing	$74,948,750.00
18	Lottery / Ellis Building	87,948	149	126	1989	Lansing	$21,987,000.00
19	Stevens T. Mason Building	230,869	636	562	1953	Lansing	$57,717,250.00
20	MDOT Construction & Technology	110,857	107	88	1977	Lansing	$32,910,272.55
21	MDOT Warehouse	94,155	59	53	1975	Lansing	$13,638,125.29
22	MSP 1st District Post/HQ	12,442	50	49	1974	Lansing	$2,556,924.10
23	MSP Annex	29,387			1976	Lansing	$6,039,248.39

#	Building Name	Rentable SF	Capacity	Occupancy	Year Built	City	Current Replacement Value
24	MSP Headquarters	246,436	923	705	1974	Lansing	$61,609,000.00
25	State Joint Laboratory	105,361	225	217	1993	Lansing	$31,456,073.07
26	Operations Center	352,194	1,710	1610	1974	Lansing	$88,048,500.00
27	Ottawa Building	175,332	640	595	1982	Lansing	$43,833,000.00
28	MSP Training Academy	128,252	47	42	1974	Lansing	$28,585,618.96
29	Records Building	202,171	33	22	1959	Lansing	$50,542,750.00
30	George W. Romney Building	231,172	761	681	1926	Lansing	$57,793,000.00
31	Jerome T. Hart Building	113,642	355	250	1982	Saginaw	$28,410,500.00
32	State Emergency Operations Center	30,535	12	12	2016	Lansing	$7,633,750.00
33	Site Maintenance Equipment Ctr	8,902	10	5	2002	Dimondale	$1,576,343.96
34	State of Michigan Warehouse	117,153	117	102	1950	Lansing	$29,288,250.00
35	Secretary of State Building	124,430	280	225	1969	Dimondale	$31,107,500.00
36	South Grand	140,840	500	423	2009	Lansing	$35,210,000.00
37	Traverse City Station Office Bld	51,990	162	154	1938	Traverse City	$12,997,500.00
38	Murray D. Van Wagoner Building	232,210	1,035	921	1968	Lansing	$58,052,500.00
39	Vehicle & Travel Services Building	87,023	36	32	1988	Dimondale	$21,755,750.00
40	G. Mennen Williams Building	130,994	411	378	1969	Lansing	$32,748,500.00
41	Allegan Ramp	949,040	1,934	1992	1967	Lansing	$113,884,800.00
42	HOJ Ramp	189,866	297	300	2002	Lansing	$22,783,920.00
43	Ottawa Ramp	366,370	682	695	1982	Lansing	$43,964,400.00
44	Roosevelt Ramp	138,107	438	468	2003	Lansing	$19,334,980.00
45	Romney Ramp	10,271	14	14	1926	Lansing	$1,232,520.00
46	Flint Ramp	372,068	549	562	1984	Flint	$52,089,520.00
47	Grand Rapids Ramp	60,347	143	140	1982	Grand Rapids	$7,241,640.00
Total		**8,973,726**	**18,188**	**15,688**			**$2,066,086,217.07**

**Occupancy updated as of 2015*

FORM F

Fiscal Year 2021 Capital Outlay Plan: Major Project Request – Rank 1

Department:	Technology, Management & Budget
Project Title:	Building Renovation and Addition
Facility Name:	Secretary of State Building
Project Location:	Dimondale, Michigan
Type of Project:	Renovation ☑ Addition ☑ New Construction ☐
Approximate Square Footage:	198,000
Total Estimated Cost:	$68,700,000
Estimated Start/Completion Dates:	January 2021 through December 2023

Is the Five-Year Plan posted on the department's public internet site?

Yes ☑ No ☐

Is the requested project included in the Five-Year Capital Outlay Plan?

Yes ☑ No ☐

1. Describe the project purpose.

The Secretary of State (SOS) Building, located at the Secondary Governmental Complex in Dimondale, houses the Department of State (DOS) and the Department of Technology, Management & Budget (DTMB) in the Lake Superior Hosting Center (LSHC). There are approximately 430 tenants in the SOS Building. The LSHC administrative portion of the SOS building was completely renovated in 2012. The remaining building is 50 years old,

25 years past its design life and the building structure and operating equipment is failing, and areas of the Data Center are nearing the end of its life. DTMB and DOS leadership are requesting facility improvements for the entire building other than the newly renovated LSHC administrative portion, to enable the agency to maintain services at the existing location.

DOS provides face-to-face services to over 15,000 customers annually at this location. Services provided at the building include:

- Various licensing services to walk-in customers
- International Registration Plan (IRP) for commercial interstate trucking and walk-in customers
- Commercial Driver's License (CDL) Help Desk that assists customers, law enforcement and other state agencies with administration issues
- Special parking accommodations for commercial motor vehicles
- Law Enforcement Information Network (LEIN) to support law enforcement of street-related records
- Renewal by Mail, which performs nearly 10,000 transactions daily through the remittance processor
- Call center handling up to 12,000 calls daily, Monday through Saturday providing support to staff in all 83 counties of Michigan
- Passenger driver education and motorcycle education course testing

The DTMB Lake Superior Hosting Center provides critical services to the entire state that directly affect Michigan citizens. These services include:

- Michigan State Police LEIN
- Michigan Public Safety Communication System
- Department of Health and Human Services, Child Welfare
- Unemployment Insurance Agency
- MDOS and MSP license plate look up
- Over 18 applications that are life/safety, and 130 that will severely impact SOM's ability to support citizens, such as food assistance, unemployment services, and services to Veterans.

Based on the needs of DOS, we propose renovating existing SOS Building areas that can be salvaged and then demolishing and replacing areas that would require more money to renovate than to replace. A replacement structure would be erected first to avoid the cost and inconvenience of temporary relocations. The new project will utilize a smaller

land footprint but still increase square footage more than 40,000 by adding additional stories to provide growth and consolidation. Furthermore, upgrading and replacing the many outdated and failing building systems will result in lower utility and operational costs.

In addition, the current LSHC would be downsized and moved to an approximately 10,000-12,000 square foot building to the south of the new SOS wing, and the existing data center would be converted to office space where Data Center Operations would move staff who are currently housed in a leased facility, into this office space.

2. Describe the scope of the project.

The scope of this project includes:

- Demolition of the 1-story south wing (29,500 sf.) to be replaced with a 2-story addition (39,600 sf.)
- Demolition of the 1-story north wing (27,000 sf.) to be replaced with a 3-story addition (50,400 sf.)
- Renovation of the central tower from office space to be converted to mechanical space in order to move unprotected outdoor rooftop equipment inside
- Addition of an approximate 10,000-12,000 square foot IT production data center
- Renovation of current 25,000 square foot data center into office space

In addition to the construction, the interior of the central tower will be renovated, and the exterior will get a new envelope. This project will address structural, mechanical, environmental, safety, and building code concerns by updating the following inefficient and failing systems:

- Interior and exterior building structure
- Windows
- HVAC
- Fire suppression
- Electrical distribution
- Roofing and soffits
- Doors and entrances
- Carpeting
- Ceilings
- Lighting
- Restrooms
- Data center

3. **Program Focus of Occupants**

The program focus of occupants for DOS serve the citizens of Michigan with programs designed to administer driver and vehicle systems, enhance traffic safety, protect consumers, ensure integrity of records maintained and oversee the statewide elections process.

The program focus of the LSHC is to provide a secure, optimum and efficient operating environment for high density compute technology that supports applications for every agency in the State of Michigan such as MDOS, MSP, Treasury, as well as some federal programs. The LSHC provides a service that impacts every program that supports Michigan citizens.

4. **How does the project support Michigan's talent enhancement, job creation and economic growth initiatives on a local, regional and/or statewide basis?**

This project creates and enhances jobs in the Lansing area by using professional design services, construction, transportation, manufacturing and service-sector jobs. It also supports the Governor's Jobs, Talent and Economy initiative by creating work in the skilled trades careers. In a 36-month reconstruction period, more than 68 construction trades staff will work 424,320 labor hours on this project. The project supports economic growth by meeting Leadership in Energy and Environmental Design (LEED) standards which use materials that are sourced and manufactured within a 500-mile radius – therefore reinvesting in Michigan's economy and job market. Along with the construction jobs required to support the construction, additional personnel will be required to assist in the relocation of the computer IT equipment from the existing location into the new location. There will be a minimum of 12 people full time for a period of 18 months just to relocate the equipment.

5. **How does the project support or enhance the core mission of the department? What is the primary justification supporting the need for this project?**

This project supports DTMB - State Facilities Administration (SFA) mission of: "maintain and manage state space thereby freeing the agencies to focus on their core mission, provide economies of scale, implement common processes, and leverage procurement" by ensuring the building is efficient, comfortable, safe, and reliable for tenant agencies so they can focus on their specific role in government. It also supports the core mission of

DTMB by providing necessary space for long-term operations at the lowest possible cost and least disruption.

This project supports DOS's mission of: "serving the citizens of Michigan with programs designed to administer driver and vehicle systems, enhance traffic safety, protect consumers, ensure integrity of records maintained and oversee the statewide elections process" by ensuring they have a working environment that is efficient for their staff, accommodating to the public, and meets the needs of their agency. Their mission will be enhanced by providing adequate space for staff to function efficiently.

This project also supports the LSHC's mission to provide a professional 24 hour, 7 days a week, 365 days a year hosting center environment that serves all of state government, as well as to proactively take steps to ensure critical and essential government functions continue in the event of an emergency, by ensuring they have a working environment that is efficient for supporting the critical SOM services that utilize the application housed there.

The primary justification supporting the need for this project is the inefficient, outdated and failing building systems that are beyond design life. This building is 50 years old and was built for $2.3 million using low-cost materials with intentions of it being a temporary facility. The building has doubled its intended life and every system in the building needs attention despite continuous maintenance performed by DTMB. The following issues support the justification and need for this project:

- Exterior pre-cast walls are crumbling and poorly insulated. In fact, an additional interior wall has been built within the LSHC to protect equipment inside from the weather outside
- Single-paned windows leak air and water, and do not meet energy codes
- Panel soffits under the eaves surrounding the building are rusted through and the brackets are deteriorating, allowing water intrusion and birds to get into the building
- Exterior brick is leaking and needs tuckpointing
- The roof needs to be insulated and brought into code compliance
- HVAC system is outdated, inefficient, and non-upgradeable. Because of this, in conjunction with the structural and insulation issues of the building, the HVAC runs 24 hours a day, 7 days a week, 365 days a year to attempt to maintain required temperatures in the building
- Air system either blows hot air or cold air through the vents – there is no way to moderate between the two temperature extremes

- Because of the leaks and broken pipes, the chilled water piping outside on the roof must be drained annually so it doesn't freeze
- The building is still equipped with inefficient fluorescent lighting
- Lighting controls are not up to code and inefficient
- Paper coated wiring creates a fire hazard
- Only one entrance to the building is barrier free. The remaining do not meet ADA requirements. The need for fully accessible entrances is increased for the SOS Building to handle the needs of the 15,000 annual public visitors
- Foundation is deteriorating because of improper drainage. During heavy rain, water pools near foundation and water completely covers electrical boxes
- Carpet is worn and needs replacement
- Aside from the LSHC, 75% of the building does not have sprinkler fire protection
- There are areas with no fall protection on the roof
- Bathrooms are outdated, not barrier-free, and not up to code
- Doors are damaged and lacking code-required safety hardware/panic bars
- Asbestos is in many areas including floor tiles, columns, and was used as fireproofing on steel throughout the building.
- Because of the faulty HVAC system and its inability to properly dehumidify the building, condensation drips on people, desks, documents, and increases the chance for mold in the ductwork. This is a threat to the indoor air quality
- Medium voltage cables and switchgears that serve the SOS Building are old and in need of replacement. The cables can no longer be tested without risking possible failure. The switchgear is in failure status, unrepairable, and a safety concern.
- The building power is 120/208 which serves general power needs but is not compatible with increased demand output for uninterrupted power source systems and maximum lighting efficiency. This electrical configuration is non-standard making maintenance and repair parts costlier
- Poor indoor air quality caused by deteriorating insulation inside ductwork causing complaints of health issues and necessitates Indoor Air Quality Reports being completed
- The LSHC's red room is nearing the end of its life cycle which supports critical functions of the state

This building has been on DTMB's Capital Outlay for the past 13 years and remains DTMB's number one priority. Because the future use of this facility is in question, investment has been limited to basic maintenance.

FORM F

↑ *Single pane windows leaking water and air*

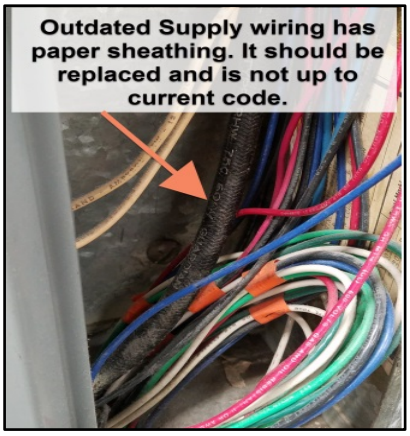
↑ *exterior brick leaks causing water intrusion*

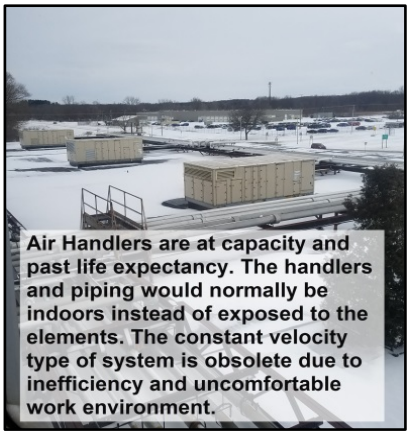
↑ *Single pane layered stucco walls poorly insulated*

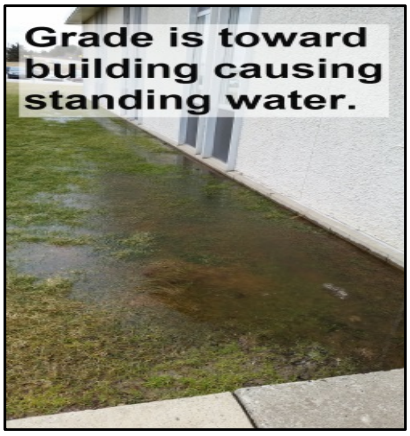
↑ *Windows separating from the building*

↑ *Deteriorating wall panels*

↑ *Deteriorating aggregate stucco columns*







6. **Is the requested project focused on a single, stand-alone facility? If no, please explain.**

   Yes.

7. **How does the project support investment in or adaptive re-purposing of existing facilities and infrastructure?**

   This project preserves and extends the life of the hosting center and will be able to use the existing central tower and property around the building. This project supports the investment of the existing infrastructure by providing a long-term solution by changing the 'temporary' facility into a permanent one and reusing capital investments that are already in place such as the blue room data center that was build three years ago, utility infrastructure from the Energy Center, new switchgear, and the generators. This project is an excellent adaptive solution for a site with major immediate needs. This location preserves on-site space for parking on the site for customers and employees.

8. **Does the project address or mitigate any current life/safety deficiencies relative to existing facilities? If yes, please explain.**

   Yes, this project will address the following life/safety deficiencies:
   - Installation of complete safety required fall protection on the roof
   - Provide for proper air quality and dehumidification
   - Installation of ADA complaint restrooms and entrances
   - Bring building in line with all building and health & safety codes
   - Install proper fire suppression sprinkler systems throughout the entire building
   - Removal of all asbestos floor tiles throughout the building

- Upgrade of data center life safety services

↑ *Outdated bathrooms that are not ADA compliant*

↑ *No fall protection in areas of the roof*

9. How does the project help to improve the utilization of existing space and infrastructure, or support the need for additional space and infrastructure?

The renovation and new construction will improve DOS and DTMB operations and services in the following ways:

- Based on the final approved plan, DOS intends to consolidate staff from other locations with the goal to reduce rent and overhead
- By bringing the building up to code and using new HVAC and mechanical systems we will create an environment that is ADA compliant, accessible, and more comfortable for visitors and employees
- This project will be able to use the existing utilities from the energy center both for the SOS Building as well as chilled water to cool, and steam to humidify the data center
- The new structures will provide for better services, flow, and partitioning. By having separate areas for different services, customers should receive more immediate attention and have a better understanding of where they need to go. Also, through better partitioning of services and office areas, DOS employees will have a greater focus on their individual duties and be more efficient
- The new structure will include training centers, enabling DOS to provide training services without the extras cost of renting training facilities
- With the additional conference rooms that will be included in the facility, DOS will be able to host more meetings on the premises. Instead of employees spending extra time traveling to alternate meeting locations, they will be able to use this time

more productively. With this project, DOS intends to move programs that are currently working separate, to the SOS building so they can work together. Currently, documents are scanned or faxed to and from Austin and the SOS building.

- Existing parking lots on the building site will be updated to accommodate the anticipated increase of visitors and employees
- This building requires 38% more maintenance than a typical building of similar size. The renovation and new construction will eliminate up to 75% of the maintenance needs for the first five years of operation. Therefore, despite the addition of square feet less man hours will be needed to operate the building
- DOS previously had a training center where they could train walk-in customers on motorcycle and passenger driver education. This spot is now used for a conference center and staff can no longer train walk-in customers
- By shrinking and moving the current data center, DCO intends to consolidate staff from other locations into one owned location to reduce rent and overhead

10. How does the department intend to integrate sustainable design principles to enhance the efficiency and operations of the facility?

This project will be completed using LEED standards that will create opportunities to reduce energy consumption and cost. LEED certified buildings typically use 25% less energy and reduce operating costs by 19%. This project has a goal of being LEED-certified which could save the State of Michigan more than $100,000 annually on utilities. This project will enhance efficiency by using:

- Lighting controls to turn of lights when space is unoccupied
- Water-conservation fixtures to reduce water consumption
- Energy efficient HVAC systems will run for shorter periods of time and less often
- Insulating walls, roofs, and windows
- Upgrading fluorescent lighting, which consumes 168% more energy than the LED light bulbs that will be installed

The Data Center would also be built using LEED standards and would implement the following:

- Modern electrical and cooling efficiency especially for higher density, higher heat producing equipment
- Hot/cold aisle containment that creates more efficiency in cooling
- Using chilled water for primary cooling uses less electricity, reducing electrical costs

    - The Data Center requires cooling year-round, the energy center can provide 'free cooling' in the winter months. The energy center converts the warm water from the data center by running it through the cooling towers and letting the cold outside air chill the water. It does not require any mechanical means to create the chilled water.
- The new building would not use underfloor plenum for wiring distribution. No obstructed airflow by cabling that would make the air handlers work harder
- The new building would be built to withstand natural disasters like heavy rains, high wind and tornados
    - A new roof. The current roof is black and creates excessive heat in the hosting center and has cracks, causing leaks and allows moisture to penetrate the data center
- Upgrade end of life electrical equipment with modern energy efficient gear.

11. Will the project increase operating costs to the department? If yes, please provide an estimated cost and indicate whether the department has identified available funds to support the additional cost.

This project will not increase operational costs to the department and should provide a decrease in operating cost when taking into consideration of saving approximately $640,000 annually in utility costs and lease avoidance. It is anticipated that no additional staff will be necessary.

12. If this project is not authorized, what are the impacts to the department and its clients/customers?

If this project is not authorized, continued deterioration of the building structure and equipment will jeopardize DOS's and DTMB's ability to efficiently carry out their core mission. Building and equipment failure could result in unsafe and unhealthy working conditions, costly emergency repairs, and could literally put lives at risk in addition to the cost to locate and provide alternate working space during repairs. Furthermore, if this building is unable to provide adequately provide the need for DOS and DTMB, they could relocate to costlier leased space while leaving the current building vacant.

For the data center, the risk of not doing this project is a much bigger issue that just having to relocate people. This is the production data center which, if failed, would fail over to the Disaster Recovery site if the building were to fail. The hosting center would then be

without redundancy, putting the State of Michigan at risk of complete failure if the Disaster Recovery site were to experience a disastrous event or failure.

- An outage of the Michigan State Police LEIN could make criminal justice information unavailable to criminal justice agencies put State Troopers at risk
- An outage in the Michigan Public Safety Communication System could mean radio outage for state, local, and county law enforcement officers
- An outage of the Department of Health and Human Services, Child Welfare could mean agents wouldn't have access to information that could locate a child in critical need
- An outage in the Unemployment Insurance Agency could mean citizens on unemployment may not receive payment
- MDOS outage could mean police offices wouldn't be able to look up a license plate before approaching a car, and may not know it's a stolen car
- Over 18 applications that are life/safety, and 130 that will severely impact SOM's ability to support citizens, such as food assistance, unemployment services, and services to Veterans

13. What alternatives to this project were considered? Why is the requested project preferable to those alternatives?

Deferring this project will likely result in unacceptable risk to occupants, assets and Michigan citizens. This project renews existing assets and extends design life by more than 20 years while also adding valuable space at an existing site.

Alternative 1: SOS Building Renovation - $50 million

An alternative to this project for 2021 is to only do the SOS portion of the building for approximately $50 million. This would include the demolition of the 1-story south wing (29,500 sf.) to be replaced with a 1-story addition (39,600 sf.), demolition of the 1-story north wing (27,000 sf.) to be replaced with a 3-story addition (50,400 sf.), and renovation of the central tower from office space to be converted to mechanical space in order to move unprotected outdoor rooftop equipment inside, but not any of the hosting center projects. The requested project is preferable because it does not address all of the critical needs for DTMB, putting the Data Center at risk by delaying capital investment, and does not take advantage of cost efficiencies to doing both the DOS and LSHC such as site work, demolition, procuring materials, etc.

Alternative 2: Patchwork – $18.5-22.5 million

An alternative to this project for 2021 is to replace the exterior panelized system with a new wall system for an estimated $4.5 million and upgrade the current data center for $14-$18 million for a total of $18.5 – $22.5 million. This would address water infiltration, disastrous building façade degradation, and the red room, but would not improve infrastructure equipment or building interior needs. This does not address a majority of the concerns at the site so is not a viable alternative.

This requested project is preferred because it manages the escalating risk concern while returning the facility to a condition well suited for the mission at the lowest possible cost and least operational disruption. An investment of $69 million eliminates long-standing issues that will otherwise certainly become worse.

Fiscal Year 2020 Capital Outlay Plan: Major Project Request – Rank 1

FORM G

Fiscal Year 2021 Capital Outlay Plan: Special Maintenance Request

Department: Technology, Management & Budget
Total of All Requests: $37,750,000

Priority 1

Project Title: Replace HVAC System
Facility Name: Hannah Building
Facility Location (City/County): Lansing/Ingham County
Estimated Cost: $6,000,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes

Project Description:
The purpose of this project is to replace the heating, ventilation, and air conditioning (HVAC) systems in the Hannah Office Building. Built in 1982, the building's HVAC system is 37 years old, exceeding its designed life by almost eight years. The current HVAC unit is in poor condition leaking, require constant maintenance, and at risk of total system failure causing the building to be shut down. The scope of this project would include: Air handling units, exhaust fans, hot water converters heat exchangers, heating pumps, humidifiers, temperature control systems, main switchgear, motor control centers, penthouse fire suppression re-configuration, and building fire panel controls. During this project, air handling units from another area in the building will temporarily feed the areas that are being worked on.

Priority 2

Project Title: Replace HVAC System
Facility Name: Ottawa Building
Facility Location (City/County): Lansing/Ingham County
Estimated Cost: $6,000,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes

Project Description:
The purpose of this project is to replace the heating, ventilation, and air conditioning (HVAC) systems in the Ottawa Office Building. Built in 1982, the building's HVAC system is 37 years old, exceeding its designed life by almost eight years. The current HVAC unit is in poor condition leaking, require constant maintenance, and at risk of total system

failure causing the building to be shut down. The scope of this project would include: Air handling units, exhaust fans, hot water converters heat exchangers, heating pumps, humidifiers, temperature control systems, main switchgear, motor control centers, penthouse fire suppression re-configuration, and building fire panel controls. During this project, air handling units from another area in the building will temporarily feed the areas that are being worked on.

Priority 3

Project Title:	Replace original failing piping, mechanical, electrical & switchgear (phase I most critical)
Facility Name:	Cadillac Place
Facility Location (City/County):	Detroit/Wayne County
Estimated Cost:	$1,300,000
Funding Source:	LSSM-GF or BOC

Does the project address a life /safety deficiency? Yes

Project Description:
This building was originally built in 1920 and underwent a major renovation in 2000. Some building systems were not included in the most recent renovation, are still original and are now breaking down. DTMB-SFA staff have observed an increase in the number of emergency failures and repairs due to component failure. The electrical distribution system is outdated and becoming increasingly hard to find spare components. The piping systems continue to fail, and emergency repairs have become common practice for maintenance staff. Damage has impacted occupants of the building including water-soaked legal documents and books that were shipped out for freeze-drying to minimize permanent damage. This project will begin the work of upgrading and replacing various systems in phases with most critical issues first. A study to identify and prioritize projects was funded in 2018.

Priority 4

Project Title:	Upgrade controls and equipment on 3 annex elevators
Facility Name:	Cadillac Place
Facility Location (City/County):	Detroit/Wayne County
Estimated Cost:	$1,400,000
Funding Source:	LSSM-GF or BOC

Does the project address a life /safety deficiency? Yes

Project Description:
Elevators are 25+ years old, have exceeded life expectancy and do not meet current ADA standards. Parts are no longer made, and repair parts are not available. There are three (3) elevators that service 4 floors in the Annex. One elevator has been red tagged by the City of Detroit, another does not operate, and the only operational elevator is at risk of failure and entrapment. One elevator was modified to be able to fit a wheelchair through the opening but is still not ADA compliant and is currently out of service. These elevators are used a lot by the public to get to the Michigan Gaming Control Board.

Priority 5

Project Title:	Replace HVAC system controls and add separate cooling at warehouse
Facility Name:	Lottery Building
Facility Location (City/County):	Lansing/Ingham County
Estimated Cost:	$4,000,000
Funding Source:	LSSM-GF or BOC

Does the project address a life /safety deficiency? No

Project Description:
The four package roof top units at the Lottery Building are nearing their end of service life expectancy of 18-20 years. The original duct board is still in place and continues to have blowouts. This is the only DTMB state office building using a duct board configuration to deliver conditioned air and they are prone to failure. These duct blowouts result in a lack of cooling and heating in areas throughout the building and is inefficient. It is recommended that the entire HVAC system be redesigned and replaced to maximize efficiency. The four units require an outside contractor to come in twice a year to ensure the units switch over to the proper heating or cooling mode. The current HVAC controls are controlled and monitored by a Trane Summit (comm 3/4) system that is no longer supported by Trane. There have been VAV boxes added during remodeling that are standalone due to the outdated/obsolete controls system. The current warehouse area air conditions use city water for the condenser and then dumped down the drain which wastes water. If this loop was closed, we would see water savings and less energy used on cooling the water.

Priority 6

Project Title:	Replace phoenix control valves
Facility Name:	Joint Lab
Facility Location (City/County):	Lansing/Ingham County

Estimated Cost: $3,500,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes

Project Description:
Install new controls, supply and exhaust valves, and rebalance the system per new air requirements for the 66 fume hoods. Laboratory specialists work directly under these hoods daily performing critical tests and experiments. It should be noted that this laboratory is accountable for all tuberculosis testing in the United States. The hoods are designed to exchange the air and remove harmful materials out of the building. The hoods Phoenix controls are obsolete and becoming increasingly harder to find replacement parts. Should any of these hoods fail, a life safety issue is highly probable. The project can be phased thus minimizing interruptions in daily laboratory operations. It addresses two major issues including life safety potentials and downtime due to obsolete parts. Once the project is completed, significant energy savings are anticipated due to less building air exchanges.

Priority 7

Project Title: Upgrade and modernize elevators including controls and equipment
Facility Name: Michigan Library & Historical Center
Facility Location (City/County): Lansing/Ingham County
Estimated Cost: $4,600,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes

Project Description:
The MLHC elevators have exceeded their 25-year design life expectancy by 6 years and replacement parts are becoming increasingly expensive and harder to acquire. The project will modernize the elevators building wide and bring them to necessary ADA standards. Multiple issues have occurred with elevators #2 and #3. The hydraulic systems need to be replaced in the hydraulic driven elevators. The elevators are in high use daily since the MLHC is available for the public to use. The project will include all 5 passenger cars, 3 freight elevators and update the forum elevator and bring it to ADA standards. The people mover is used to transport large groups of people, in March of 2019 the motor failed which resulted in a small electrical fire and the building had to be evacuated.

FORM G

Priority 8

Project Title:	Abate flooring and pressurize stairwell
Facility Name:	VanWagoner Building
Facility Location (City/County):	Lansing/Ingham County
Estimated Cost:	$950,000
Funding Source:	LSSM-GF or BOC

Does the project address a life /safety deficiency? Yes

Project Description:
The building stairway tiles are vinyl asbestos and need to be abated and retiled with vinyl composite tiles. This will eliminate a safety issue should the tiles begin to crumble in which case they would become friable. Friable asbestos materials are dangerous because they can easily release toxic dust into the air. Building stairways need to be pressurized for emergency evacuation purposes and new handrails and treading would be included in this project.

Priority 9

Project Title:	Pressurize stairways, abate asbestos, redesign lobbies
Facility Name:	Austin Building
Facility Location (City/County):	Lansing/Ingham
Estimated Cost:	$1,300,000
Funding Source:	LSSM-GF or BOC

Does the project address a life /safety deficiency? Yes

Project Description:
Three building stairways need to be pressurized for emergency evacuation purposes. New stairwell pressurization fans and dampers will be installed to accommodate the lack of pressurization in these areas. The tile in these stairways are vinyl asbestos tiles and need to be abates and retiles with vinyl composite. Replace elevator lobby supply air fans 5, 6, & 7 that service the upper and lower levels of the building entry from the ramp. The project will also consist of redesigning the lobby heating and replacement of the current systems.

Priority 10

Project Title:	Upgrade restrooms and piping
Facility Name:	VanWagoner Building
Facility Location (City/County):	Lansing/Ingham County

Estimated Cost: $4,100,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? No

Project Description:
The restrooms are original to the building and outdated. Renovating the bathrooms will bringing them up to ADA standards and will include new efficient water closets, flush valves, and touchless faucets. Thus, saving daily water use in the facility. The restroom counter tops have reached life expectancy and need to be replaced due to water damage over the years. They are delaminating causing extra cleaning and maintenance issues. Wall coverings are showing wear and tear, which includes unsightly stains that cannot be removed using normal cleaning practices. The piping and drains are original as well and numerous leaks and drain backups occur regularly. Investigation into the condition of the piping should occur with this project.

Priority 11

Project Title: Waterproof/tuckpoint building envelope
Facility Name: Michigan Library & Historical Center
Facility Location (City/County): Lansing/Ingham
Estimated Cost: $3,600,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? No

Project Description:
The building was originally built in 1989 and a building envelope study was performed in 2012 with a $1,500,000 probable cost to correct the studies discoveries. Findings show waterproofing on this building is no longer providing adequate protection. The caulk at the window system and stone-to-stone joints have deteriorated and failed in some areas. This project provides an exterior façade repair and the application of waterproofing protection to the entire building envelope. Caulking and waterproofing treatments are required periodically to minimize water infiltration and disastrous effects of freeze-thaw cycles. Water penetration reduces the effectiveness of insulation and affects humidity which impedes the ability to maintain a comfortable environment within the building. A constant presence of moisture can lead to mold growth, corrosion, concrete deterioration, and damage to interrelated building elements like doors and windows. Moisture related deterioration is more costly to repairs the longer it is allowed to progress.

FORM G

Priority 12

Project Title:	Sustainability and energy efficiency measures
Facility Name:	DTMB Buildings
Facility Location (City/County):	Statewide
Estimated Cost:	$1,000,000
Funding Source:	LSSM-GF or BOC

Does the project address a life /safety deficiency? No

Project Description:

Energy audits have been performed in all DTMB facilities by the internal Facilities Sustainability Impact & Innovations Team (FSIIT). Many Energy Conservation Measures have been identified by the FSIIT and funding is required to take action. Some of the most common findings include lighting upgrades with improved controls, the installation of better window systems and heating, cooling and ventilation system improvements. It is now common for improvements such as these to yield a 25% operational savings. In addition to increased efficiency, these projects increase the service life of building systems and infrastructures. Funding is sought to fully implement identified energy conservation opportunities.