Fiscal Year 2020 – 2024
Five-Year Capital Outlay Plan
&
FY2020 Capital Outlay Request

October 31, 2018

MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET

State Facilities Administration, Building Operations Division

DEPARTMENT OF
TECHNOLOGY, MANAGEMENT & BUDGET
CAPITAL OUTLAY PLAN
Fiscal Year 2020

MISSION

DTMB's 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.

SFA is responsible for operating, managing and maintaining 9.8 million gross square feet of space in 41 state-owned or managed buildings, 906 acres of land and nearly 14,000 parking spaces in 7 parking ramps and 42 parking lots.

PROGRAMMING CHANGEs

Condition Assessments

BOD has developed the Combined Condition Score (CCS) for major asset types and for all buildings in the portfolio so buildings can be assessed on a 0 – 100 scale. CCS and references to CCS may be used throughout this submittal.

Energy Conservation Measures

The Building Operations Division continues to work on reducing energy costs. The annual energy expense is $24 million. Since 2012 the cost of energy has increased 21.6%. However, through initiatives like LED lighting, smart metering, solar voltaic, thermal storage, daylight harvesting, white roofing and building the co-generation plant at the Secondary Complex, BOD's actual energy cost only increased 9%.

BOD works hard to contain energy costs and keeping buildings in good condition can be a major contributor. Well maintained, efficient buildings cost 20 – 50% less for energy.

FACILITY ASSESSMENTS

Building Operations Division staff conduct annual assessments of all DTMB buildings and facilities using standardized assessment processes to provide an overview of the condition of each facility's components and systems.

Projects have been ranked against standardized weighted criteria to prioritize them. A list of unfunded projects, ranked in order of priority from highest to lowest is included in the tab

"Appendix-Project Backlog". Detailed facility assessments and CCS reports for each building are in the appendix.

The two highest projects are the Secretary of State Office Building and the State Laboratory. Both are outdated and have equipment well beyond expected lifespan. SFA 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 SFA 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.

SUMMARY

DTMB received $2 million in fiscal 2018. Also in FY18, DTMB received $9.8 million in enterprisewide special maintenance for a total of $11.8 million.

BOD has identified $404 million in non-discretionary project needs. Because of an inequity of funding versus growing need, the backlog is increasing an average of $1
7 million per year.

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 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 are more costly to handle and possibly pose health and safety risks.

The most effective method of facilities maintenance is a balance between a solid proactive maintenance program and capital renewal funding. The SFA, BOD has a proven track record of excellent facility maintenance. 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 FY2020 maintenance needs of the aging DTMB building portfolio.

Funding vs. Backlog

The DTMB Facilities Funding versus Backlog chart below illustrates the annual maintenance funding for the past seven years. The red line shows identified, non-discretionary backlog in today's dollars. Non-discretionary is required to maintain existing assets while discretionary projects are not required or are new initiatives. Examples of actual projects on the discretionary list include installing an exit to Ottawa Street at Hall of Justice, electric vehicle charging stations, snow melt projects and lobby security projects. The current discretionary list is about $40 million.

Following these charts is a listing of the buildings making up the portfolio with rentable area, occupant capacity and actual occupancy, year built and the replacement value as of this writing based upon DTMB Engagement & Risk Section and the Marshall & Swift annual appraisals.

FORM F

FISCAL YEAR 2020 CAPITAL OUTLAY PLAN
MAJOR PROJECT REQUEST – RANK 1

Department:	Department of Technology, Management & Budget
Project Title:	Building Renovation and Addition
Facility Name:	Secretary of State Office Building
Project Location:	Dimondale, Michigan
Type of Project:	Renovation ☑ Addition ☑ New Construction ☐
Approximate Square Footage:	188,000
Total Estimated Cost:	$49,900,000
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) employees, as well as the DTMB staff in the Lake Superior Hosting Center (LSHC). There are approximately 430 tenants in the SOS Building. The LSHC 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 are failing. DOS leadership

is requesting facility improvements for the remainder of the building 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

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. The 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 30,000 by adding additional stories to provide for growth and consolidation. Furthermore, upgrading and replacing the many outdated and failing building systems will result in lower utility and operational costs.

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

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

3. 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, approximately 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.

4. 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.

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

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.

Pictures below provide a few examples of the condition of the building.

↑ *Windows separating from the building*

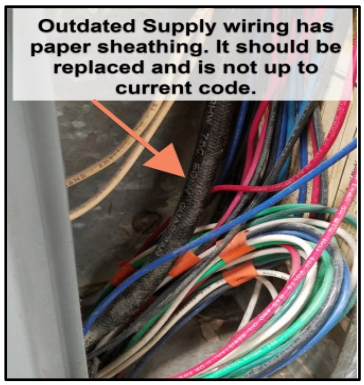
↑ *Deteriorating wall panels*

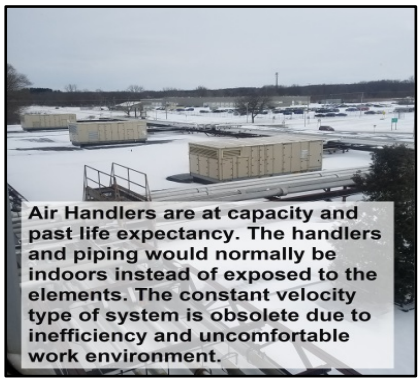
↑ *Deteriorating aggregate stucco columns*

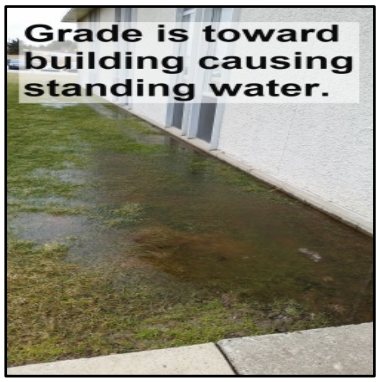
↑ *Single pane windows leaking air and water*

↑ *Exterior brick leaks causing water intrusion*

↑ *Single pane layered stucco walls. Poorly insulated.*







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

This project preserves the hosting center and will be able to use the existing central tower and property around the building. This project supports the significant investment of the existing infrastructure (i.e. generators, electrical, renovations) by providing a long-term solution by changing the 'temporary' facility into a permanent one. 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.

6. 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

↑ *Outdated bathrooms that are not ADA compliant*

↑ *No fall protection in areas of the roof*

7. 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 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 crate and 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
- 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

8. 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 almost $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

9. 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 $100,000 annually in utility costs. It is anticipated that no additional staff will be necessary.

10. 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 ability to efficiently carry out their core mission. Building and equipment failure could result in unsafe and unhealthy working conditions, costly emergency repairs, and 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, they could relocate to costlier leased space while leaving the current building vacant.

11. 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 and assets. This project renews existing assets and extends design life by more than 20 years while also adding valuable space at an existing site.

Alternative: Patchwork

An alternative to this project for 2020 is to replace the exterior panelized system with a new wall system for an estimated $4.5 million and replace main power feed for an estimated $1 million. This would address water infiltration and disastrous building façade degradation but would not improve infrastructure equipment or building interior needs except to mitigate the known concern of power loss. 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 $49 million eliminates long-standing issues that will otherwise certainly become worse.

FORM F

FISCAL YEAR 2020 CAPITAL OUTLAY PLAN
MAJOR PROJECT REQUEST – RANK 2

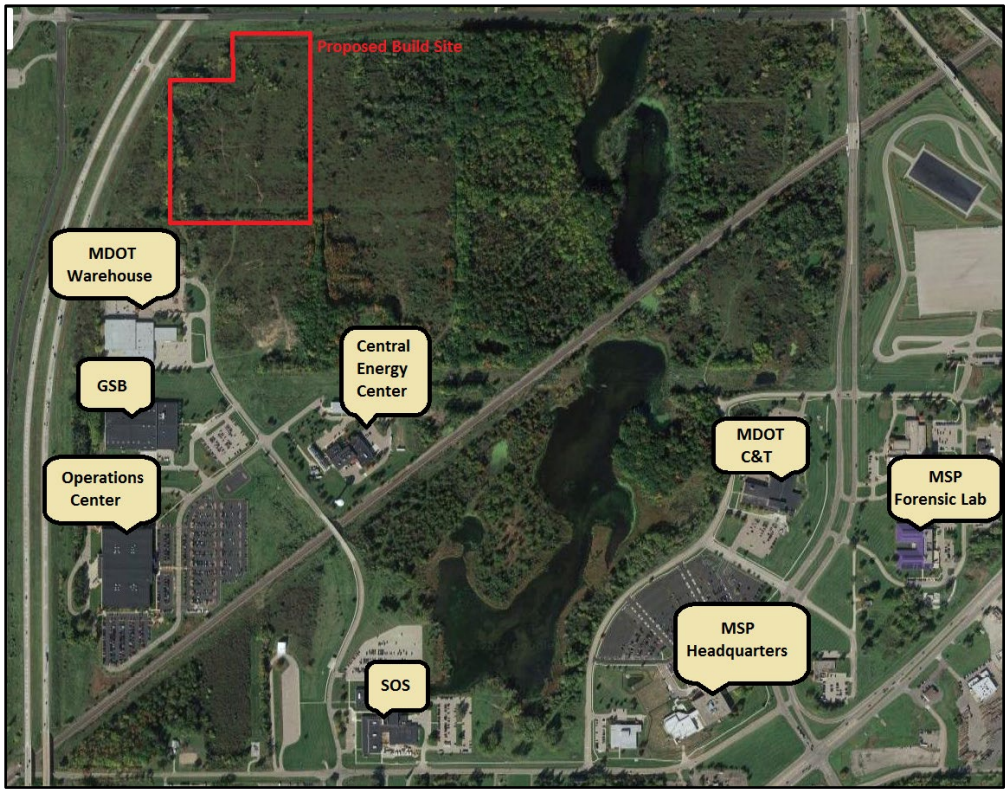
Department:	Department of Technology, Management & Budget
Project Title:	Building Replacement
Facility Name:	State Laboratory Building
Project Location:	Lansing, Michigan
Type of Project:	Renovation ☐ Addition ☐ New Construction ☑
Approximate Square Footage:	195,000 Square Feet
Total Estimated Cost:	$113,100,000
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.

This laboratory is the only one of its kind in Michigan. Built in 1993 with most mechanical elements having a design life of 20 to 30 years, the facility is in need of replacement. Laboratory operations are constrained in the existing space and unmet need for additional lab services is growing. These two factors are foundational to this major project request for replacement of this facility. The third element of demonstrated need is the fact that ongoing operations cannot be interrupted for any significant period without dire consequences which would be an extreme risk of renovation. The new building will provide space to deliver critical services essential to public health and also be a vehicle for economic growth.

2. Describe the scope of the project.

Construct a new 195,000 square foot laboratory on a 22-acre site located on 7575 Crowner Drive at the Secondary Governmental Complex. Construct surface parking for 300. Dispose of existing State Laboratory property. Extend the existing utility tunnel to complete the 360 loop to connect the new lab at the Secondary Complex.



3. 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, Michigan area beginning with professional design services, construction, transportation, manufacturing and service-sector jobs. "Roughly 90 percent of LEED projects source materials that are harvested and manufactured from within a 500 mile radius." (USGBC.org). Dozens of construction trades-related personnel will be employed just to execute this project which will exceed 500,000 labor hours invested.

Within the new lab, Michigan is in need of additional good talent. For instance New York has 200 PhD's working in their health department, Michigan has five. Erecting a new state of the art laboratory will provide opportunities for more and new scientific health testing and monitoring, accommodate laboratory job growth, help staff the laboratory with the highest quality of candidates, and will drive the regional economy as well.

The new space will include a training center. Today, Michigan does not have one so staff go to New York every year for training. An in-house training center will trim Michigan travel expenses and also make Michigan a training destination and contribute to economic growth.

Test samples that are presently going to Wisconsin for processing will be processed in Michigan because of the added production capacity; decreasing processing time and expenses as well as becoming a resource for other states.

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

   The core mission of DTMB State Facilities Administration is to provide work space that accommodates the specific needs and missions of the resident agencies.

   The primary justification for this project is to guarantee a work space to MDHHS and MDEQ for the continuation and expansion of vital services to the residents of Michigan. Under the current lab conditions there is a risk of system failure and no room for enhanced services.

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

   This initiative supports the utilization of existing property at 7575 Crowner Drive while also incorporating efficiency improvements in specimen testing operations and mechanical systems. Once emptied, the current laboratory could easily be renovated making it an attractive piece of real estate for neighboring laboratories to expand.

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

The State Laboratory provides many critical services impacting the health and safety of Michigan citizens and visitors. However, as the facility infrastructure approaches its expiration there is a growing risk of catastrophic failure, leading to loss of critical sample material, lab errors, and the inability to perform testing.

A new facility mitigates the risk of equipment, infrastructure and system failure. The new design will include redundant utilities delivering backup services for continual, uninterrupted operations. Redundancies include:

- Domestic water feed
- Primary electrical
- Cooling
- Heating
- Natural gas
- Some of the services at risk are:
- Newborn screening tests are up 783% since 1990 with 5,830,000 tests performed annually at this lab. These tests can and do save lives. There is concern that errors may occur because the function has outgrown the space
- Support to the federal Centers for Disease Control and Prevention (CDC). In fact, the State Lab developed the strain of flu virus vaccine in use today nationally
- First point of awareness regarding emerging diseases and trending. The lab is 1 of 10 nationally relied upon for chemical response information
- Fish-safe-to-eat tests for the Michigan Department of Natural Resources
- 24/7/365 urban air sampling
- Sexually Transmitted Infections (STI) testing
- Response to new disease threats as they emerge, such as Zika virus testing, SARS, Middle East Respiratory Coronavirus, and more
- New and rapidly growing testing for perfluoroalkyl and polyfluoroalkyl substances (PFAS) in drinking water, lakes, soils, wildlife, and foam used for firefighting that can accumulate in lakes and rivers

PFAS has become an environmental issue of increased concern in recent years. This substance may lead to many health concerns such as: low birth weight, infertility, hormone balance, cancer, and impact the immune system.

The State of Michigan takes this issue seriously and has established a clean up standard for PFAS. Michigan is the first state in the nation to create a multi-agency action team to investigate contamination and take action to protect residents. This project provides necessary space for testing this nationally emerging contaminant.

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

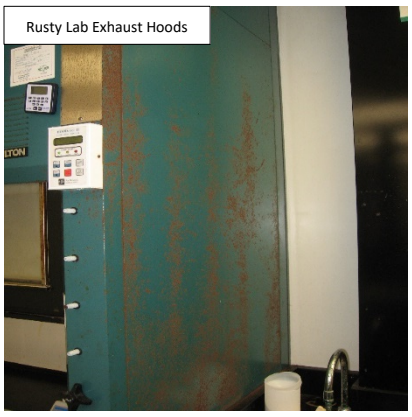
A significant percentage of the existing lab space is outdated and inefficient because it has exceeded design life. Due to the lab's age and crowded conditions driven by the increased need for services, this facility now requires urgent attention. The project will improve existing conditions with the following:

- State of the art cooling towers
- Smart environmental control system
- Increased parking
- High efficiency distribution pumps
- Advanced fire systems
- ADA compliant restrooms
- Tapping into state-provided utilities from the Energy Center
- Efficient exhaust system and hoods
- Energy Star rated equipment
- New office space to DTMB standards
- Energy efficient LED lighting and windows
- Walk-in cold rooms/freezer controls and condensers

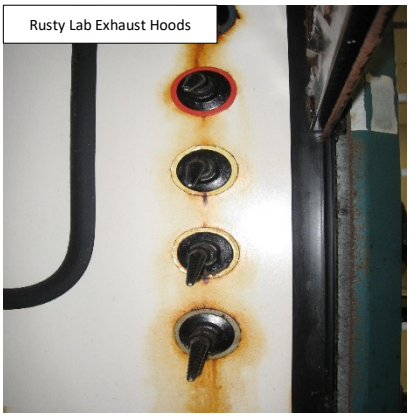
The following pictures illustrate deteriorating conditions:

2017 photographs of lab equipment

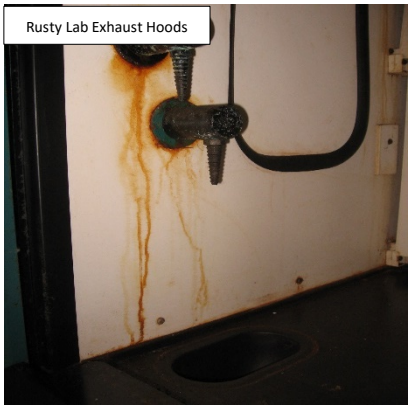
Rusty Lab Exhaust Hoods



Rusty Lab Exhaust Hoods

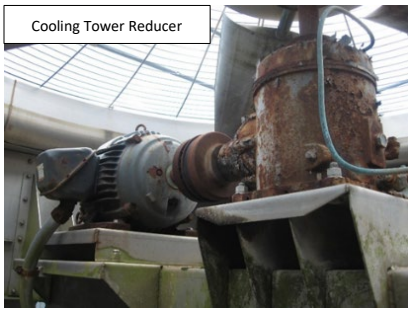


Rusty Lab Exhaust Hoods

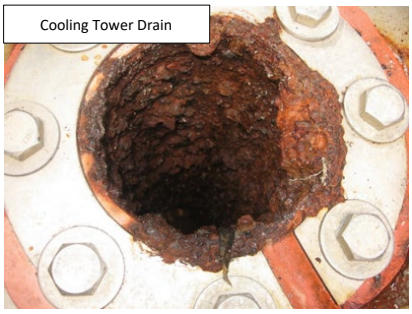


2017 cooling tower and piping photographs

Cooling Tower Reducer



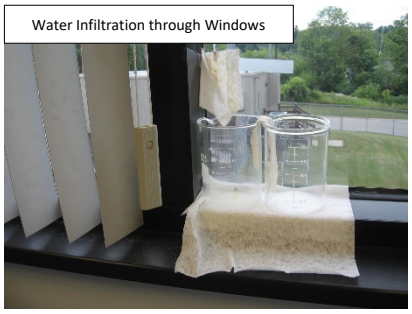
Cooling Tower Drain



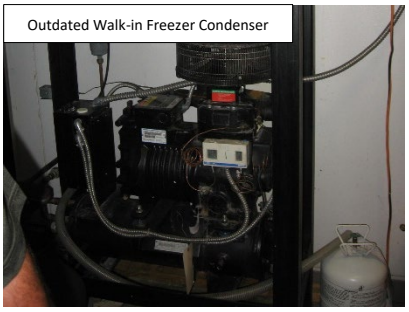
Cooling Tower Support and Piping

Water Infiltration through Windows

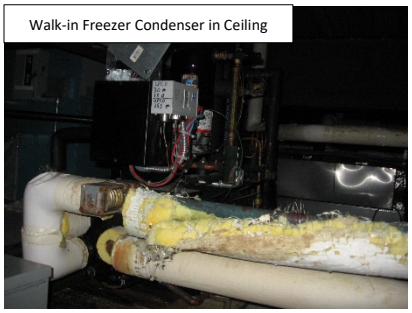
Water Infiltration through Windows



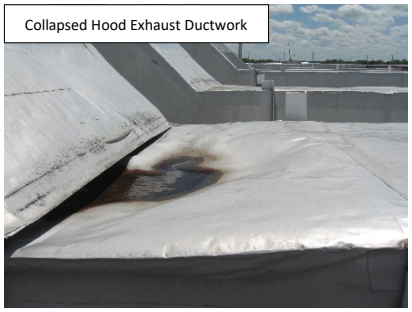
Outdated Walk-in Freezer Condenser



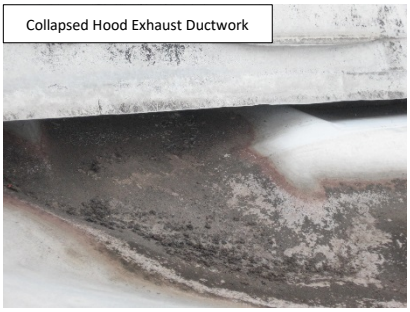
Walk-in Freezer Condenser in Ceiling



Collapsed Hood Exhaust Ductwork

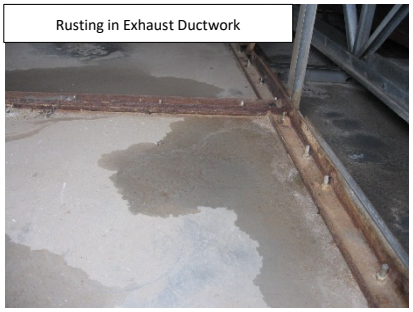


Collapsed Hood Exhaust Ductwork



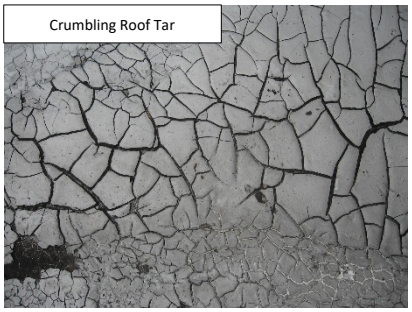
Rusting Exhaust Support

Rusting in Exhaust Ductwork

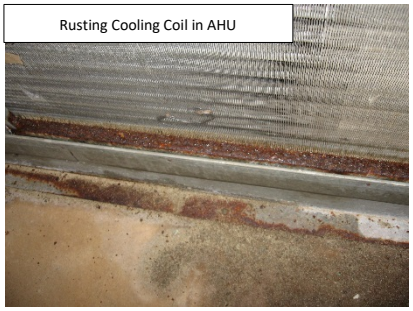


Collapsing Hood Exhaust Ductwork

Crumbling Roof Tar



Rusting Cooling Coil in AHU



Standing Water in Air Handling Unit

Rusting Chilled Water Unit

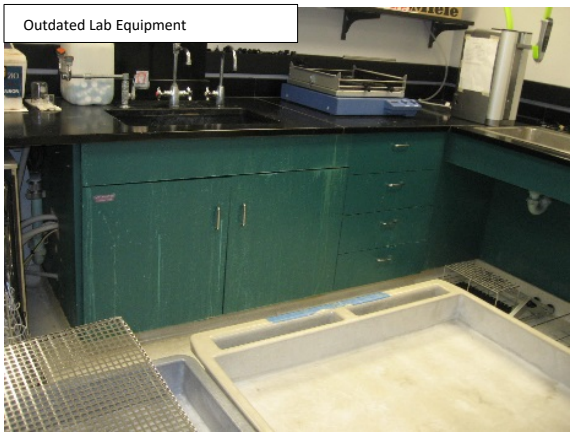
Rusting Chilled Water Unit

Leaking Condensate Return Pumps

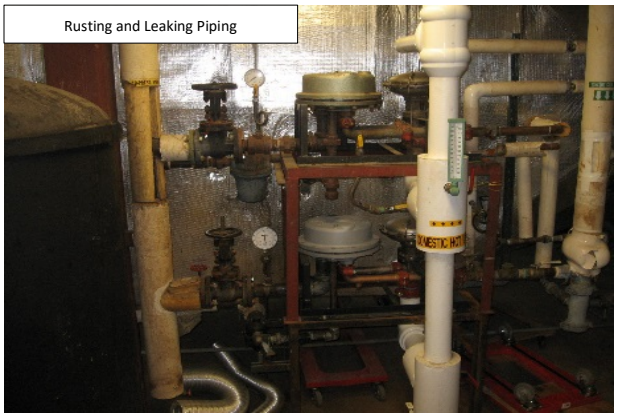
Rusting Chilled Water Circulation Pump

Rusting Hot Water Supply Pump

Outdated Lab Equipment



Rusting and Leaking Piping



Outdated Lab Equiment

Rusting and Leaking Piping

Rusting Slop Sink

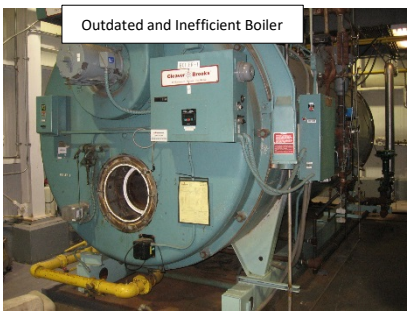
Standing Water in Air Handling Unit

Rusting and Leaking Piping

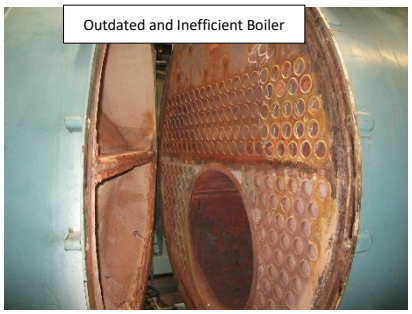
Rusting and Leaking Piping and Pumps

Rusting and Leaking Piping and Pumps

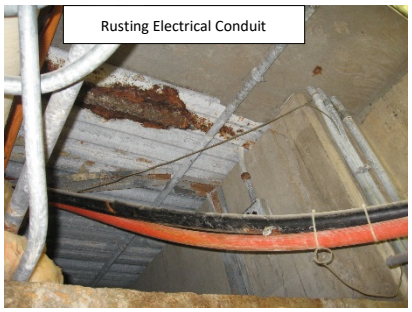
Outdated and Inefficient Boiler



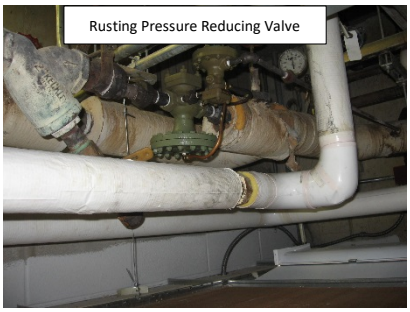
Outdated and Inefficient Boiler



Rusting Electrical Conduit



Rusting Pressure Reducing Valve



Rusting Condensate Return Station

Rusting Restroom Piping

Walk-in Freezer Outdated Controls

This project will allow flexibility and growth in lab services for years to come.

The land that the proposed project will occupy is already owned with favorable site conditions.

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

- The project will seek to achieve a Leadership in Energy and Environmental Design (LEED) Certification of Silver, typically 25% more energy efficient and 19% less costly to operate, estimated to save $308,862 annually based on the new building size
- Smaller, highly efficient modular boilers will deliver energy reductions in non-heating months
- ASHRAE Standards call for dramatic energy efficiency improvement in chillers and boilers
- The state lab will be furnished with Energy-Star rated equipment
- The new lab will connect to the Energy Center utilities distribution system. The current psf savings for utilities at the Secondary Complex is 35 percent less than public utilities with an estimated savings of $569,000 annually
- New design capabilities now exist where modular stations and flexible floor plans can be used with a standard infrastructure thereby enabling easy reconfiguration as needs evolve and change
- Additional space is required for:
  - Reagents
  - New born screening blood spots
  - Operational supplies
  - Cold rooms
  - State-wide laboratorian and university training
  - Biosafety Level 3 operations
  - Other test specimens

9. 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.

No, the new building will be 74% larger yet the energy estimate indicates up to a 20% decrease in utility cost, estimated at $204,000, because of LEED design and Energy Center supplied utilities.

Given the final goal of the new work space for laboratory functions, the state could return work presently outsourced to in-house for increased revenue.
Co-locating other agencies into this facility could eliminate leases.

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

The potential for systemic or catastrophic failure is increasing at an alarming rate which could result in unplanned shut down with inadequate sustainable contingencies. MDEQ and MDHHS would be unable to continue to provide many critical services that impact the health and safety of Michigan citizens. Refer to Question 6 for a list of services at risk.

Additionally, not funding this project impacts the ability to:

- Acquire $1M training facility grant
- Acquire up to $2M in bio-informatics funding
- Contribute to a national/international research partnership
- Impact the ability to handle the influx of Whole Genome Sequencing testing
- Test bioterrorism in one unique area, apart from food emergency response, due to the extremely dangerous nature of these tests

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

Alternative #1 Renovate existing space
This option was not chosen because there is no suitable swing space available in the area and more space is needed for ongoing operations.

Alternative #2 Renovate existing space and construct an 80,000 square foot, 3-story laboratory addition at a cost of $98.8 million.

This is a viable option as we would have swing space for the old lab area once the addition is complete and building systems could be updated. In addition, this provides many of the same benefits of the new lab although the end result is a much smaller facility. This remains DTMB's second option for the following reasons:

- There is still a danger to ongoing lab services with unplanned outages and disruptions inherent in any renovation project
- The current building shape and size prohibits the modern and efficient design recommendations
- Utility cost at the Secondary Complex offer substantial savings
- Space for other agencies was not included in this particular plan
- The requested project is preferable because:
- Does the best job of protecting state and national services critical to the health and safety of citizens
- Swing space is not required
- Market value of existing property
- Eliminates 2 – 3 years of renovation disruption to operations
- Minimizes the threat of aged equipment failure
- Least amount of risk to continuity of operations
- Most energy efficient option for long term sustainability
- Allows expansion of tenants
- Expands volume of services and helps position Michigan to also deal with PFAS
- This state of the art facility will attract more talent to the region and create jobs
- Will house the newly created training center
- Enables agencies to capitalize on more grant funding and partnership opportunities

FORM G

FISCAL 2020 CAPITAL OUTLAY SPECIAL MAINTENANCE REQUEST

Department: *Department of Technology, Management and Budget*
Total of All Requests: *$26,600,000*

Priority 1

Project Title: Replace fire suppression system
Facility Name: Energy Center
Facility Location (City/County): Dimondale/Eaton
Estimated Cost: $400,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes
Project Description:
Less than 30% of this facility has adequate fire suppression yet all energy for the entire Secondary Governmental Complex is produced here or flows through the site. There are unprotected boilers, chillers and turbines operating in space without fire suppression. There is no suppression in the lower level shop space and risk of loss or disaster is elevated due to the type of operations here. This project adds suppression to areas that don't have it and analysis of existing detection systems is also included.

Priority 2

Project Title: Waterproof/tuckpoint/clean building envelope, and repair fountain
Facility Name: Michigan Library and Historical Center
Facility Location (City/County): Lansing/Ingham
Estimated Cost: $3,500,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes
Project Description:
Panelized limestone construction requires caulking, cleaning and waterproofing treatment periodically to minimize water infiltration and the disastrous effects of freeze-thaw cycles. This building was originally built in 1989 and a building envelope study was performed in 2012. Findings show waterproofing on this building is no longer providing adequate protection and caulk at the window system and stone-to-stone joints have deteriorated and failed in some areas. This project provides for caulking and the application of waterproofing protection to the entire building envelope. Fountain repairs are included in this project.

Priority 3

Project Title: Replace fire suppression system
Facility Name: Flint Parking Ramp
Facility Location (City/County): Flint/Genessee
Estimated Cost: $600,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes
Project Description:
Replace discontinued, obsolete system with Honeywell XLS system that is independent of the Flint State Office building. The existing system includes parts modified and made to fit in an attempt to provide coverage. Concern is increasing that component or system failure will occur. According to the U.S. Fire Administration (USFA), there were an estimated 650 parking garage fires in the U.S. in a single year. The new system will provide centralized and detailed reporting for increased monitoring and response efficiency so that responders know where the issue or problem is rather than just somewhere in the ramp. This project cost will be split with the University of Michigan – Flint as the ramp is a shared asset.

Priority 4

Project Title: Replace Original Failing Piping, Mechanical, Electrical & Switchgear (Phase I, most critical)
Facility Name: Cadillac Place
Facility Location (City/County): Detroit/Wayne
Estimated Cost: $2,600,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes
Project Description:
This building was originally built in 1920. Major renovations were completed in 2000. Some building systems not included in the most recent renovation are still original and are now breaking down. We have observed an increase in the number of emergency failures and repairs due to component failure. Damage has actually impacted occupants of the building including water-soaked legal documents and books that were shipped out for freeze-drying in an attempt 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 5

Project Title: Replace Failed Fire Suppression System in the East and West Parking Ramps
Facility Name: Hall of Justice
Facility Location (City/County): Lansing/Ingham
Estimated Cost: $1,200,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes
Project Description:
OIP/Safety Service's recommendations are to replace the entire existing system as soon as possible. The existing piping, installed 12 years ago, is schedule 10 galvanized pipe which is a thin-walled pipe resulting in a shorter life span. The west side exhibits extensive leaking and has been removed from service. The east side is now leaking as well. According to the National Fire Protection Association, there are 30 vehicle fires per hour in the U.S. and one person dies each day as a result. About 250 vehicles enter these ramps daily. With nearly 2 parking garage fires in the U.S. per day, this project is a high priority.

Priority 6

Project Title: Upgrade and Modernize Elevators Including Controls and Equipment
Facility Name: Michigan Library and Historical Museum
Facility Location (City/County): Lansing/Ingham
Estimated Cost: $4,500,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes
Project Description:
The highly visible, heavily utilized elevators in this building are nearly 5 years beyond their 25-year design life. Multiple issues have occurred with elevators #2 and #3 in particular and concern is growing that service failure and entrapment will occur. Hydraulic systems need to be replaced and elevator modernization building-wide needs to be a priority. This project includes 5 passenger cars, 3 freight cars and 1 handicap accessible unit in the Forum.

Priority 7

Project Title: Waterproof and tuckpoint building exterior
Facility Name: Operations Center
Facility Location (City/County): Dimondale/Eaton
Estimated Cost: $600,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? No
Project Description:
Caulking and waterproofing treatments are required periodically to minimize water infiltration and the 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, or damage to interrelated building elements like floors or windows. Moisture-related deterioration is more costly to repair the longer it is allowed to progress. The project provides for caulking and application of waterproofing protection to the entire building envelope.

Priority 8

Project Title: Upgrade controls and equipment on east freight elevator
Facility Name: Cadillac Place
Facility Location (City/County): Detroit/Wayne
Estimated Cost: $1,400,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? No
Project Description:
Freight elevators have original controls from the 1920's and some original electrical. They do not meet standards and renovation is necessary. This project delivers more reliable and energy efficient equipment. Major moves within the building can only be efficiently and effectively accomplished when freight elevators are available. Many major moves are planned for the near future so reliable operation is critical.

Priority 9

Project Title: Partial roof replacement
Facility Name: Energy Center
Facility Location (City/County): Dimondale/Eaton
Estimated Cost: $500,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? No
Project Description:
This project will replace the roof over the office and procurement areas of the facility. The current roof is from 1993 and is a continual maintenance issue. The roof over the procurement area leaks all the time, causing damage to new materials and equipment.

Priority 10

Project Title: Stairwell Renovation and Abatement
Facility Name: VanWagoner Building
Facility Location (City/County): Lansing/Ingham
Estimated Cost: $400,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes
Project Description:
These stairwells need renovation. Floor tile needs abatement and replacement before it becomes friable and hazardous. Tread bullnose is deteriorating such that trip hazards can quickly develop. This project also provides for refinishing authentic wooden handrails.

Priority 11

Project Title: Repair fire sprinkler piping
Facility Name: Operations Center
Facility Location (City/County): Dimondale/Eaton
Estimated Cost: $200,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? Yes
Project Description:
Corrosion at the fire suppression pipe fittings is resulting in water leaks throughout the building. As corrosion advances, leaks can be more severe and urgent, impacting occupants and property.

Priority 12

Project Title: Waterproof ramp and repair building entrance
Facility Name: Hall of Justice
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:
Concrete footing foundation and deck failing in west ramp causing deterioration of the Ramp system above. Pavers are set in a sand bed and water is not properly draining causing the pavers to heave and cause trip hazards. Most of the pavers are in good shape. Drainage needs to be addressed, pavers reset in concrete and waterproofed. Permanent chain fence has been erected to keep pedestrians out of the paver area.

Priority 13

Project Title: Upgrade restrooms and piping
Facility Name: VanWagoner Building
Facility Location (City/County): Lansing/Ingham
Estimated Cost: $3,500,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? No
Project Description:
First floor west restrooms were renovated in 2012 to provide required accessibility. The 15 others with a Combined Condition Score of 23.4, are the oldest and worst in the portfolio. They are more than 20 years beyond the typical service life. They do not meet accessibility requirements, are not water or energy efficient and appear dingy and dirty even when clean. Piping will also be replaced as necessary to restore these assets to fully renewed condition.

Priority 14

Project Title: Repair or replace drainage system
Facility Name: MSP 1st District Headquarters
Facility Location (City/County): Dimondale/Eaton
Estimated Cost: $300,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? No
Project Description:
This building is experiencing water infiltration from below the floor. Dehumidification is being utilized to keep it dry and free of mold. This project provides for drainage to direct ground water out from under and away from the building.

Priority 15

Project Title: Upgrade restrooms and piping
Facility Name: Romney Building
Facility Location (City/County): Lansing/Ingham
Estimated Cost: $2,300,000
Funding Source: LSSM-GF or BOC
Does the project address a life /safety deficiency? No
Project Description:
Counter tops in the bathrooms 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 peeling and unsightly stains that can not be removed using normal cleaning practices. Restrooms do not meet current ADA codes. Piping will be investigated during this project with replacement incorporated as required.

Priority 16

Project Title: Energy Efficiency Enhancements
Facility Name: All DTMB Campuses
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 Building Energy Assessment Team (BEAT). Many Energy Conservation Measures have been identified by the BEAT 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.

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
2020 - 2024 CAPITAL OUTLAY PLAN SUMMARY

LOCATION/PROJECT DESCRIPTION	PRELIMINARY PROJECT ESTIMATE				
	2020	2021	2022	2023	2024
DTMB OWNED FACILITIES REQUESTS					
ALLEGAN PARKING RAMP					
Replace overhead doors and gates		$500,000			
Replace mesh vehicle ER entry/exits				$100,000	
AUSTIN BUILDING					
Upgrade lighting, HVAC controls and integration				$950,000	
Pressurize east, west and center stairway, abate and replace asbestos tiles and retread; redesign and install lobby entrance heating and replace supply air fans.					$1,300,000
CADILLAC PLACE					
Replace original failing piping, mechanical, electrical & switchgear (Work will be phased over multiple years)	$2,600,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000
Upgrade and modernize east freight elevator including controls and equipment	$1,400,000				
Design and construct a conference center on the 1st floor			$2,600,000		
Repair stone façade (study completed)		$1,500,000			
Upgrade controls and equipment on the 3 annex elevators		$1,350,000			
DTMB OWNED BUILDINGS					
Multiple Buildings - Energy efficiency improvements including continuious commissioning, lighting and other efficiences based on energy audits conducted by DTMB Building Energy Assessment Team	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
ENERGY CENTER					
Replace fire suppression system	$400,000				
Replace roof over office and procurement areas	$500,000				
Replace chilled water pump and drive				$300,000	

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
2020 - 2024 CAPITAL OUTLAY PLAN SUMMARY

LOCATION/PROJECT DESCRIPTION	PRELIMINARY PROJECT ESTIMATE				
	2020	2021	2022	2023	2024
ESCANABA STATE OFFICE BUILDING					
Replace parking lot and upgrade lighting		$500,000			
Upgrade elevator controls and equipment to meet current ADA standards			$300,000		
Replace switchgear			$650,000		
FLINT STATE OFFICE BUILDING					
Parking Ramp - Replace fire system controls and equipment (requested by Office of Infrastructure Protection; cost will be shared with UM-Flint)	$600,000				
GENERAL SERVICES BUILDING					
Repair loading dock		$300,000			
Replace windows with energy efficient system					$150,000
GRAND RAPIDS STATE OFFICE BUILDING					
Replace/repair drain and ice melt system on the Ottawa entrance side					$350,000
HALL OF JUSTICE					
Replace failed fire suppression system in the east and west parking ramps	$1,200,000				
Waterproof ramp and repair building entrance	$3,600,000				
Repair/replace retaining wall railings		$600,000			
HANNAH BUILDING					
Upgrade HVAC System (study completed)			$4,500,000		
Replace original window system				$1,900,000	

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
2020 - 2024 CAPITAL OUTLAY PLAN SUMMARY

LOCATION/PROJECT DESCRIPTION	PRELIMINARY PROJECT ESTIMATE				
	2020	2021	2022	2023	2024
JACKSON STATE OFFICE BUILDING					
Upgrade the building interior and exterior to ensure a water/air tight seal, replace the roof, upgrade life safety systems and improve tenant environment including lighting, heating, ventilation, air conditioning, ceilings, hazardous abatement, fire system, including upgrades to the reporting systems in Central Control, furniture, carpeting, painting, and blinds. Project is being done in phases. Floors 2-4 have been funded. This final phase will renovate the 1st floor.		$1,000,000			
Repair water intrusion issues identified in 2017 study		$700,000			
Replace window system		$800,000			
Upgrade fire alarm system		$350,000			
Replace and relocate fire pump		$150,000			
JOINT LAB - NORTH COMPLEX					
Construct new lab	$113,100,000				
Replaced damaged fume hoods		$2,700,000			
LEWIS CASS BUILDING					
Install fall protection in the restroom chase and penthouse guardrail				$350,000	
Replace Cass D parking lot					$2,300,000
LOTTERY BUILDING					
Renovate restrooms to current ADA standards; scope and upgrade piping as needed		$1,300,000			
Replace generator and automatic transfer switch that failed on 1/5/12			$400,000		
Upgrade HVAC system and controls				$3,300,000	
MDOT ANNEX (previously MDOT Photo Lab)					
Enlarge restroom to accommodate additional tenants				$450,000	
MDOT CONSTRUCTION AND TECHNOLOGY BUILDING					
Replace air handling units 1-6 and upgrade the controls				$6,000,000	

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
2020 - 2024 CAPITAL OUTLAY PLAN SUMMARY

LOCATION/PROJECT DESCRIPTION	PRELIMINARY PROJECT ESTIMATE				
	2020	2021	2022	2023	2024
MDOT WAREHOUSE					
Replace AHU #9 and DX unit		$450,000			
Waterproof exterior			$1,100,000		
Replace roof					$1,200,000
MICHIGAN LIBRARY AND HISTORICAL CENTER					
Waterproof/tuckpoint/clean building envelope	$3,500,000				
Upgrade elevator controls and equipment to meet current ADA standards. Replace elevator monitoring system.	$4,500,000				
Replace storefronts			$250,000		
OPERATIONS BUILDING					
Waterproof and tuckpoint building exterior	$600,000				
Repair fire sprinkler piping	$200,000				
Replace original domestic hot water system			$100,000		
OTTAWA BUILDING					
Upgrade HVAC system			$4,500,000		
Replace original window system				1,900,000	
OTTAWA PARKING RAMP					
Replace overhead doors and gates		$500,000			
Renovate/update UL conference rooms 1-5 and hallway		$750,000			
Replace CO detection system			$500,000		
Replace ceiling in cafeteria and dining area					$200,000
Replace/refurbish switchgear and motor circuit control panels					$3,600,000
PINE STREET PARKING LOT					
Mill and resurface pervious pavement				$200,000	

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
2020 - 2024 CAPITAL OUTLAY PLAN SUMMARY

LOCATION/PROJECT DESCRIPTION	PRELIMINARY PROJECT ESTIMATE				
	2020	2021	2022	2023	2024
RECORDS BUILDING AND GARAGE					
Replace single pane glass and aluminum frame windows to reduce energy consumption			$200,000		
Replace parking lot and drainage system				$1,400,000	
ROMNEY BUILDING					
Upgrade restrooms and piping	$2,300,000				
Repair east wall and adjoining stairway in the parking garage				$150,000	
Upgrade controls and integrate to MiBIS				$2,400,000	
SAGINAW					
Upgrade fire alarm system		$350,000			
Replace obsolete switchgear that failed in 2012			$400,000		
Replace parking lots and concrete near building steps				$450,000	
SECONDARY COMPLEX					
Repair steam tunnel pipe stanchions and replace piping (remaining repairs will be done over multiple years)		$2,700,000	$2,500,000	$2,500,000	
SECRETARY OF STATE BUILDING					
LINE ITEM REQUEST: Upgrade building envelope including walls, windows, roof-top equipment and removal of roof-top piping, roof replacement, life safety systems and improve tenant environment including lighting, heating, ventilation, air conditioning, ceilings, hazardous abatement, fire system, restrooms, floor tile removal , carpeting and painting.	$49,900,000				
STATE POLICE ANNEX (Formerly MDOT Photo Lab)					
Enlarge restroom to accommodate tenants					$450,000
STATE POLICE 1st DISTRICT HEADQUARTERS					
Repair or replace drainage system	$300,000				
Replace chiller, tube bundle, circulation pumps, insulate pipes and update controls			$450,000		
Upgrade restrooms					$1,500,000
Upgrade elevator controls and equipment to meet current ADA standards and replace monitoring system					$2,600,000
Pressurize and correct humdity issues in the stairwells					$300,000

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
2020 - 2024 CAPITAL OUTLAY PLAN SUMMARY

LOCATION/PROJECT DESCRIPTION	PRELIMINARY PROJECT ESTIMATE				
	2020	2021	2022	2023	2024
STATE POLICE FORENSICS LAB					
Resurface parking lot			$3,000,000		
STATE POLICE HEADQUARTERS					
Renovate restrooms to current ADA standards; scope and replace piping as needed. (Design completed.)					$1,500,000
Upgrade elevator controls and equipment to meet current ADA standards					$2,600,000
STATE POLICE TRAINING ACADEMY					
Replace AHU's 1-3 and 7-13		$7,100,000			
Upgrade elevator controls and equipment to meet current ADA standards. Replace monitor system.			$1,200,000		
Renovate dorm and locker restrooms/showers			$2,600,000		
Pressurize high rise stairwell and replace unit heaters					$1,100,000
VAN WAGONER BUILDING					
Upgrade stairwells (abate, retile and refinish wood handrails)	$400,000				
Renovate 16 restrooms and upgrade piping (if overall renovations are not funded)	$3,500,000				
Upgrade life safety systems and improve tenant environment including lighting, heating (including lobby entrance), ventilation, air conditioning, ceilings, hazardous abatement, fire system, carpeting, and painting. Project will be done in phases as funding allows.			$50,980,765		
VEHICLE AND TRAVEL SERVICES					
Replace domestic hot water system			$150,000		
WAREHOUSE COMPLEX					
Building 100 - Replace roof and insulation				$700,000	
Site improvements					$3,500,000
TOTAL LUMP SUM REQUEST 2020-2024	**$26,600,000**	**$27,100,000**	**$28,900,000**	**$26,550,000**	**$26,150,000**
TOTAL LINE ITEMS 2020-2024 (SOS & Joint Lab)	**$163,000,000**	**$0**	**$50,980,765**	**$0**	**$0**
TOTAL REQUEST	**$189,600,000**	**$27,100,000**	**$79,880,765**	**$26,550,000**	**$26,150,000**