

Office of the Auditor General
Follow-Up Report on Prior Audit Recommendations

**Physical Security and Environmental Controls
Over Information Technology Resources**
Department of Technology, Management, and Budget

November 2022

The auditor general shall conduct post audits of financial transactions and accounts of the state and of all branches, departments, offices, boards, commissions, agencies, authorities and institutions of the state established by this constitution or by law, and performance post audits thereof.

The auditor general may make investigations pertinent to the conduct of audits.

Article IV, Section 53 of the Michigan Constitution



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Report Summary

Follow-Up Report

Physical Security and Environmental Controls Over Information Technology Resources Department of Technology, Management, and Budget (DTMB)

Report Number:
071-0500-15F

Released:
November 2022

We conducted this follow-up to determine whether DTMB had taken appropriate corrective measures in response to the two material conditions noted in our December 2015 audit report.

Prior Audit Information	Follow-Up Results		
	Conclusion	Finding	Agency Preliminary Response
Finding 1 - Material condition Improved physical security controls needed to protect the State's telecommunication. Agency agreed.	Partially complied	Material condition still exists. See <u>Finding 1</u> .	Agrees
Finding 4 - Material condition Adequate environmental controls not implemented. Agency agreed.	Partially complied	Material condition still exists. See <u>Finding 4</u> .	Partially agrees

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Doug A. Ringler, CPA, CIA
Auditor General

November 23, 2022

Ms. Michelle Lange, Acting Director
Department of Technology, Management, and Budget
and
Ms. Laura Clark, Chief Information Officer
Department of Technology, Management, and Budget
Elliott-Larsen Building
Lansing, Michigan

Dear Ms. Lange and Ms. Clark:

This is our follow-up report on the two material conditions (Findings 1 and 4) and the two corresponding recommendations reported in the performance audit of the Physical Security and Environmental Controls Over Information Technology Resources, Department of Technology, Management, and Budget. That audit report was issued and distributed in December 2015. Additional copies are available on request or at audgen.michigan.gov.

Your agency provided the preliminary responses to the follow-up recommendations included in this report. The *Michigan Compiled Laws* and administrative procedures require an audited agency to develop a plan to comply with the recommendations and to submit it to the State Budget Office upon completion of an audit. Within 30 days of receipt, the Office of Internal Audit Services, State Budget Office, is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

We appreciate the courtesy and cooperation extended to us during our follow-up. If you have any questions, please call me or Laura J. Hirst, CPA, Deputy Auditor General.

Sincerely,

Doug Ringler
Auditor General

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INTRODUCTION, PURPOSE OF FOLLOW-UP, AND DESCRIPTION

INTRODUCTION

This report contains the results of our follow-up of the two material conditions* (Findings 1 and 4) and the two corresponding recommendations reported in our performance audit* of the Physical Security and Environmental Controls Over Information Technology Resources, Department of Technology, Management, and Budget (DTMB), issued in December 2015.

PURPOSE OF FOLLOW-UP

To determine whether DTMB had taken appropriate corrective measures to address our corresponding recommendations.

DESCRIPTION

DTMB maintains and secures the State's network equipment that transmits data to and from the central computer hosting centers*. Network equipment is stored in switch rooms* and telecommunication rooms* (TRs) located throughout the State. Physical security controls* and environmental controls* help protect IT resources from loss or impairment. Physical security controls include the use of identification badges, exterior lighting, fencing around buildings, security cameras, locked doors, and security guards. Environmental controls include fire alarms, fire suppression systems, smoke detectors, temperature and humidity control, voltage control, and emergency lighting.

With approved delegated authority, a State agency can purchase or enter into an agreement to lease space. All leases are entered into between the State of Michigan and DTMB on behalf of a specific agency who becomes the tenant of that space. DTMB provides State-owned IT infrastructure in both State and leased buildings based on the agency's business needs. The building or office managers are responsible for the physical security of the TRs. The current version of State of Michigan (SOM) Technical Standard 1345.00.02 requires complete compliance for existing SOM-owned facilities by January 1, 2030 or for leased facilities within four years of a new lease or lease renewal date.

* See glossary at end of report for definition.

PRIOR AUDIT FINDINGS AND RECOMMENDATIONS; AGENCY PLAN TO COMPLY; AND FOLLOW-UP CONCLUSIONS, RECOMMENDATIONS, AND AGENCY PRELIMINARY RESPONSES

FINDING 1

Audit Finding Classification: Material condition.

Summary of the December 2015 Finding:

DTMB did not fully implement controls to limit physical access to the State's telecommunication equipment to only those individuals requiring access, which may lead to the State's IT resources being stolen or damaged. Specifically, we noted:

- a. Rooms containing telecommunication equipment had physical security vulnerabilities.
- b. DTMB did not ensure that telecommunication equipment was located in designated main telecommunication rooms* (MTRs) and TRs.
- c. DTMB did not ensure that doors to the MTRs and TRs were secured.

Recommendation Reported in December 2015:

We recommended that DTMB fully implement controls to limit physical access to the State's telecommunication equipment to only those individuals requiring access.

AGENCY PLAN TO COMPLY*

On October 31, 2016, DTMB stated that it:

- Has already restricted access to only those individuals who require access and will review card key access reports every six months.
- Will conduct an analysis of possible solutions to ensure MTR and TR doors are secure.
- Will evaluate the feasibility of isolating all telecommunication equipment located in 9,000 or more MTR and TR locations.
- In conjunction with the other State departments, will evaluate how to best improve physical security controls over MTRs and TRs in leased buildings.

FOLLOW-UP CONCLUSION

Partially complied. A material condition still exists.

DTMB worked to limit access to TRs by outfitting access control points in 54 TRs within DTMB-managed facilities. The building or office managers are responsible for the physical security of the TRs.

** See glossary at end of report for definition.*

In late 2015, DTMB worked on a project with an agency to isolate and secure telecommunication equipment within the agency's locations Statewide.

Our review of physical security at 57 TRs located within 36 agency-managed and 2 DTMB-managed buildings throughout Michigan disclosed:

- a. Rooms containing telecommunication equipment had numerous physical security vulnerabilities like those found in the 2015 audit. DTMB's corrective action plan indicated it would work with State departments to improve the physical security controls; however, we did not see evidence of improvement at the sites we reviewed.
- b. For 32 (56%) of the 57 TRs, IT equipment was not stored in the designated room. Network equipment was stored in general office areas and mechanical rooms (see Exhibit 2).

DTMB's corrective action plan indicated it would evaluate the feasibility of isolating all telecommunication equipment. However, DTMB did not provide us documentation that it conducted an evaluation. Further, we noted a significant increase in exceptions from our 2015 audit where 12 (7%) of 163 locations did not store equipment in designated TRs.

- c. For 16 (29%) of the 55 TRs that had doors, the doors were not locked and/or closed. Also, 37 (67%) of the 55 TRs did not have doors that opened outward, and 3 doors had removable hinges.

We consider this finding to be a material condition because of the continued physical security vulnerabilities that remain to telecommunication equipment which could be detrimental to an agency's ability to access the State's network and pose a risk of loss or damage to State property.

**FOLLOW-UP
RECOMMENDATION**

We recommend that DTMB, in conjunction with State agencies, continue to fully implement controls to limit physical access to the State's telecommunication equipment to only those individuals requiring access.

**FOLLOW-UP
AGENCY
PRELIMINARY
RESPONSE**

DTMB agrees.

**AUDITOR'S
COMMENTS TO
AGENCY
PRELIMINARY
RESPONSE***

Given the length of DTMB's preliminary response, the response and our auditor's comments to Finding 1 are presented on page 18.

** See glossary at end of report for definition.*

FINDING 4

Audit Finding Classification: Material condition.

Summary of the December 2015 Finding:

DTMB had not implemented adequate environmental controls over IT equipment, which could result in damaged equipment or fire hazards and hinder the work of IT staff at these locations. Our review disclosed:

- a. Some switch rooms, MTRs, and TRs were not reasonably free from dust, food and beverages, and general storage items.
- b. Potential water hazards in MTRs and TRs.
- c. Inadequate fire detection and suppression systems.
- d. Ungrounded telecommunication equipment in 51 (31%) of the 163 MTRs and TRs.
- e. Carpeted floors in 24 (15%) of the 163 MTRs and TRs.
- f. No emergency lighting in 77 (90%) of the 86 MTRs.
- g. Inadequate surge suppression in MTRs.

Recommendation Reported in December 2015:

We recommended that DTMB implement adequate environmental controls over IT equipment.

AGENCY PLAN TO COMPLY

On October 31, 2016, DTMB stated:

- It has already started cleaning the out-of-compliance switch rooms and has established an MTR and TR cleaning schedule.
- It will ensure its policies and procedures expressly prohibit eating and drinking in MTRs and TRs (9,000 or more locations), including posting proper signage, consistent with best practices. It will modify its policies to prohibit use of MTRs and TRs for general storage.
- The Data Center Operations has already procured a secure storage area that will be available for use beginning April 2016.
- It will evaluate MTRs and TRs found to have water hazards; however, most MTRs and TRs are located in leased facilities. DTMB, in conjunction with the other State departments, will evaluate how to best improve environmental controls in leased buildings. MTRs and TRs located in leased facilities will be addressed on an individual basis and equipment will be relocated if reasonable accommodations and budgetary approvals can be achieved.

- The Network and Telecommunications Services Division will continue to work with DTMB Real Estate and Facilities to ensure the State's physical security and environmental control requirements are incorporated into future lease agreements.
- It will evaluate fire detection and suppression systems, alarms, and emergency lighting to meet Building Industry Consulting Services International, Inc. standards.
- It will develop a plan to inspect and correct, if necessary, all MTRs and TRs to ensure equipment has proper grounding and surge suppression. This action takes into account the need for specific requirements and policies for TRs as State locations are being considered and negotiated.

FOLLOW-UP CONCLUSION

Partially complied. A material condition still exists.

DTMB updated its Network and Telecommunications Infrastructure Facility Standard in June 2021 to prohibit food, beverages, and general storage in TRs. However, conditions did not improve because State agencies continued to allow prohibited items, and environmental issues persisted in the TRs (see Exhibits 1 and 2).

We conducted site visits and observed 57 TRs and noted the following issues:

	Follow-Up Exception Rate	Prior Audit Exception Rate
Significant dust	27 (47%)	14%
Food and drink	9 (16%)	12%
General storage items	37 (65%)	75%
Signs of water damage	10 (18%)	15%
Pipes carrying liquid	7 (12%)	10%
Missing fire alarms	24 (42%)	52%
Missing fire extinguisher	22 (39%)	33%
Missing fire suppression	24 (42%)	44%
Missing smoke detector	35 (61%)	44%
Missing emergency lighting	33 (85%)*	90%
Ungrounded telecommunication equipment	18 (32%)	31%
Carpeted floors	17 (30%)	15%
Missing surge protection	12 (31%)*	19%

* Requirement only for MTRs, and we reviewed 39 MTRs.

In addition, DTMB informed us it posted signs to reflect the updated Standard. However, 54 (95%) of the 57 TRs visited did not have proper signage.

In 2021, DTMB initiated a project to address ungrounded issues and the lack of firestops in TRs within 35 facilities. However, we noted the exception rate remained the same from the original audit for ungrounded telecommunication equipment.

In 2017, DTMB assessed the environmental conditions in switch rooms and remediated the identified assessed issues. DTMB has initiated regular cleaning for the switch rooms, and DTMB technicians address environmental issues during service calls. We noted in our site visits an increased presence of significant dust in TRs. DTMB incorporated environmental control requirements in lease agreements as of August 5, 2019.

DTMB performed a limited assessment of buildings to estimate the cost to follow SOM technical standards. This assessment was not completed Statewide.

Our 38 site visits included 15 locations tested during our 2015 audit and 23 new locations. We noted no improvement in environmental controls at the 15 original locations.

We consider this finding to be a material condition because of the continued presence of environmental control weaknesses in TRs.

**FOLLOW-UP
RECOMMENDATION**

We recommend that DTMB, in conjunction with State agencies, continue to implement adequate environmental controls over IT equipment.

**FOLLOW-UP
AGENCY
PRELIMINARY
RESPONSE**

DTMB partially agrees.

**AUDITOR'S
COMMENTS TO
AGENCY
PRELIMINARY
RESPONSE**

Given the length of DTMB's preliminary response, the response and our auditor's comments to Finding 4 are presented on page 20.

SUPPLEMENTAL INFORMATION

Exhibit 1

PHYSICAL SECURITY AND ENVIRONMENTAL CONTROLS
OVER INFORMATION TECHNOLOGY RESOURCES
Department of Technology, Management, and Budget

Examples of Items Inappropriately Stored in Telecommunication Rooms (TRs)
July 2022

<ul style="list-style-type: none">• 2-Wheel dolly• Batteries• Boots• Box of disinfecting wipes• Box of face masks• Boxes of light bulbs• Briefcase/laptop bags• Buckets• Bullet proof vest• Bulletin board• Cans of paint• Cardboard boxes• Chairs• Christmas tree• Cleaning/janitorial supplies• Clothing• Coffee maker• Coolers• Cube organizer shelf• Filing cabinets/shelving units• First-Aid supplies• Grill• Hard hats• Holiday decorations• Ladders• Lunch bag	<ul style="list-style-type: none">• Maintenance supplies• Metal lockers• Mop bucket• Office equipment• Office supplies• Packages of flyswatters• Paper shredder• Paper towels• Red wagon• Refrigerator• Safes• Shovel• Sound system• Stackable storage bins• Suitcase• Tables• Telephone• Television• Toilet paper• Tools• Trash cans• Umbrella• Utility cart• Vacuum cleaners• Water heater• Water softener
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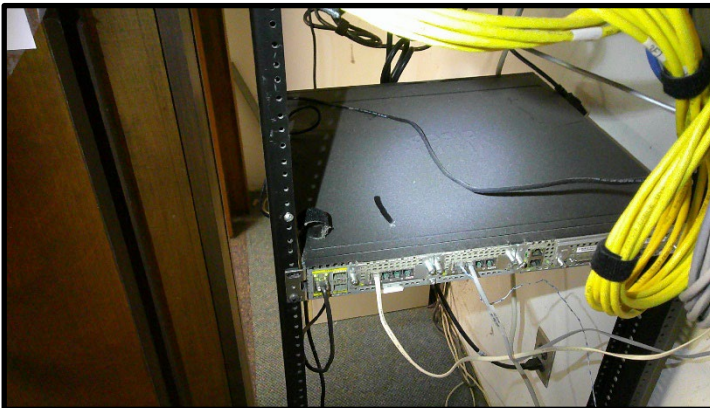
Source: The OAG prepared this exhibit based on observation of TRs.

PHYSICAL SECURITY AND ENVIRONMENTAL CONTROLS
OVER INFORMATION TECHNOLOGY RESOURCES

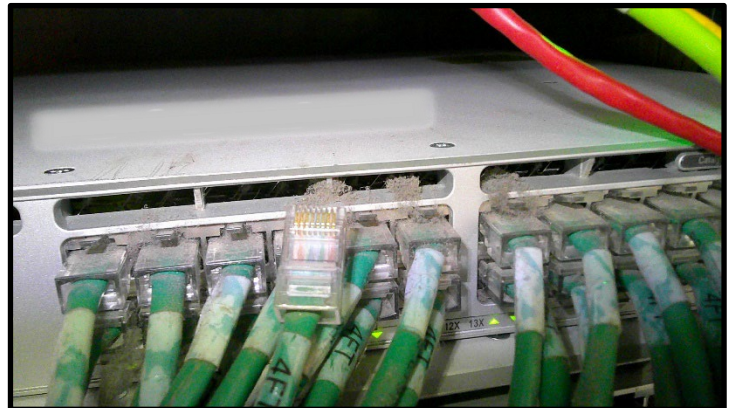
Department of Technology, Management, and Budget

Examples of Security and Environmental Weaknesses in Telecommunication Rooms (TRs)
July 2022

Dust



Evidence of significant dust in a TR.



Example of dust on telecommunication equipment.

Food



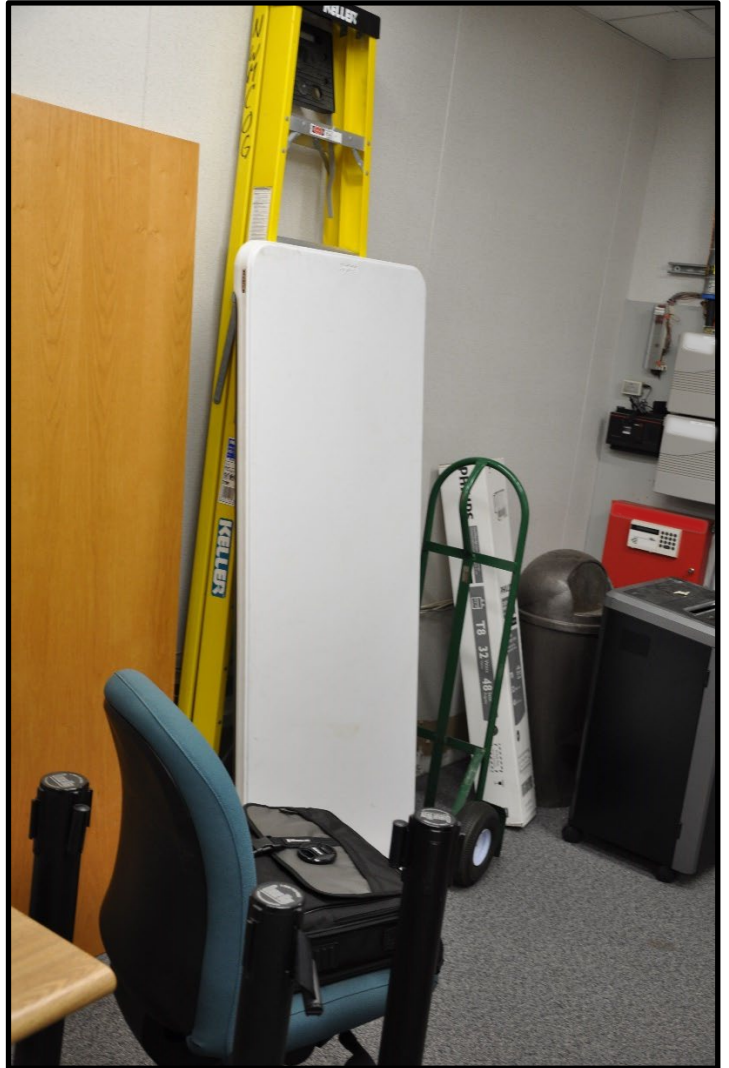
Evidence of food in a TR.

This exhibit continued on next page.

General Storage



General storage items (grill, bag of empty cans, and table) in a TR.



Telecommunication equipment located in a room with general storage (ladder, table, paper shredder, garbage can, and dolly) and carpeted flooring.

This exhibit continued on next page.

Carpeted Flooring



Examples of carpeted flooring in a TR.



Carpeted flooring contributes to the accumulation of dust and increases the risk of static electricity, which could cause a fire or equipment malfunction.

Water Damage



Water-damaged ceiling above telecommunication equipment.

This exhibit continued on next page.

Multipurpose Room



Telecommunication equipment located in a mechanical room rather than a designated TR. The room was used for general storage (vacuum cleaner, mop, and bucket), and a water heater was next to the network equipment.



Telecommunication equipment located in a hallway area rather than a designated TR. There is general storage (holiday decorations, cardboard boxes, and office supplies) near the equipment.

Source: Photographs were taken by OAG staff.

AGENCY PRELIMINARY RESPONSES

PHYSICAL SECURITY AND ENVIRONMENTAL CONTROLS OVER INFORMATION TECHNOLOGY RESOURCES

Department of Technology, Management, and Budget

Finding 1 Agency Preliminary Response and Auditor's Comments to Agency Preliminary Response

This section contains DTMB's preliminary response to Finding 1 and our auditor's comments providing further clarification and context where necessary.

Finding 1: Improved physical security controls needed to protect the State's telecommunication equipment.

DTMB provided us with the following response:

AGENCY PRELIMINARY RESPONSE

DTMB agrees with the need for State Agencies, including DTMB, to limit physical access to the State's telecommunication equipment to only those individuals requiring access. The cost of re-design and mitigating construction items noted in the audit finding is exponentially more than the cost of the discovered risk, and it remains the Agencies' and the lessors' responsibility to mitigate physical building issues that are brought to them. Based on the below, DTMB does not consider it an efficient use of taxpayer resources to require State Agencies to update existing buildings to meet the State of Michigan's 1345.00.02 Network and Telecommunications Infrastructure Facility Standard as it relates to telecommunication rooms.

As noted in the audit report, in 2017 DTMB conducted a sample assessment of 14 State buildings to estimate the cost to implement the requirements contained in the State of Michigan's 1345.00.02 Network and Telecommunications Infrastructure Facility Standard. The assessment indicated costs would exceed \$19 million statewide (based on 2017 cost figures) to implement the requirements contained in the Standard, and did not include all costs, some of which could be significant, such as relocating telecommunication rooms; and labor, permit, or project management fees. Based on a review of records, since 2014, 29 telecommunication devices in State buildings have been replaced due to damage or loss out of 3,209 (.9%) devices existing statewide in telecommunication rooms. Nine of these devices were replaced due to lightning strikes at the local site.

AUDITOR'S COMMENTS TO AGENCY PRELIMINARY RESPONSE

This information was provided subsequent to our fieldwork; as such, we did not validate it. However, it also does not refute our conclusion. Our review noted numerous physical security vulnerabilities, failure to store equipment properly, and doors that were not locked or not closed. Therefore, DTMB has only partially complied with implementing controls related to its standard. Fortunately, DTMB has not experienced significant Statewide damage or loss.

As part of the audit, the OAG compared the local sites to the State of Michigan's 1345.00.02 Network and Telecommunications Infrastructure Facility Standard and

The OAG conducted its audit testing by comparing criteria **applicable** to the audited entity with the activities that occurred. While it is important for State agencies to occupy buildings that meet State and local building codes, those codes are not a substitute for the

recommendations contained in BICSI (Building Industry Consulting Services International). For a site to be authorized for occupancy, an occupancy permit must be issued by the local ordinance verifying the site meets all local and State building codes. The OAG did not compare the local site's structure to local or State building codes.

SOM technical standard designed to ensure the security of network and telecommunications equipment Statewide. Further, DTMB did not evaluate if the noncompliance represented an acceptable risk or document any instances in which local building codes prevented compliance with the SOM technical standard.

The State of Michigan's 1345.00.02 Network and Telecommunications Standard was written to be applied in accordance with local and State building code. The Standard notes certain provisions only apply if allowed by local and State building code. In addition, the State's Standard contains recommendations made by BICSI. BICSI is a member only association supporting the advancement of the information and communications technology (ICT) profession which publishes reference manuals with recommendations for ICT.

DTMB will review and revise the State of Michigan's 1345.00.02 Network and Telecommunications Infrastructure Facility Standard to remove confusion.

The OAG believes the SOM technical standard is clear. However, If DTMB feels modifications are necessary, we concur it should revise the standard, keeping security best practices in mind.

DTMB will formalize a process where network personnel will use a checklist to review local telecommunication rooms for areas of concern when the State's network personnel visit a site as part of normal operational duties. DTMB will communicate deficiencies to DTMB for DTMB managed sites or to the Agency for Agency leased or Agency owned/managed sites. The Agency will then need to create a mitigation plan or accept risk. DTMB will inform the Agency that the Agency or Lessor needs to assure the site will comply with State of Michigan Standards.

State Agencies are responsible for limiting physical access to their buildings and rooms within their building which contain telecommunication equipment. DTMB will share the audit findings with the respective Agencies identified in the OAG's testing to ensure the State Agencies are aware of their Agency specific audit findings.

PHYSICAL SECURITY AND ENVIRONMENTAL CONTROLS
OVER INFORMATION TECHNOLOGY RESOURCES
Department of Technology, Management, and Budget

Finding 4 Agency Preliminary Response and Auditor's Comments to
Agency Preliminary Response

This section contains DTMB's preliminary response to Finding 4 and our auditor's comments providing further clarification and context where necessary.

Finding 4: Adequate environmental controls not implemented.

DTMB provided us with the following response:

AGENCY PRELIMINARY RESPONSE

**AUDITOR'S COMMENTS TO
AGENCY PRELIMINARY RESPONSE**

DTMB partially agrees. DTMB agrees with the need for State Agencies, including DTMB, to implement environmental controls over the State's telecommunication equipment. The cost of re-design and mitigating construction items noted in the audit finding is exponentially more than the cost of the discovered risk, and it remains the Agencies' and the lessors' responsibility to mitigate physical building issues that are brought to them. Based on the below, DTMB does not consider it an efficient use of taxpayer resources to require State Agencies to update existing buildings to meet the State of Michigan's 1345.00.02 Network and Telecommunications Infrastructure Facility Standard as it relates to telecommunication rooms.

As noted in the audit report, in 2017 DTMB conducted a sample assessment of 14 State buildings to estimate the cost to implement the requirements contained in the State of Michigan's 1345.00.02 Network and Telecommunications Infrastructure Facility Standard. The assessment indicated costs would exceed \$19 million statewide (based on 2017 cost figures) to implement the requirements contained in the Standard, and did not include all costs, some of which could be significant, such as relocating telecommunication rooms; and labor, permit, or project management fees. Based on a review of records, since 2014, 29 telecommunication devices in State buildings have been replaced due to damage or loss out of 3,209 (.9%) devices existing statewide in telecommunication rooms. Nine of these devices were replaced due to lightning strikes at the local site.

As part of the audit, the OAG compared the local sites to the State of Michigan's 1345.00.02 Network and Telecommunications Infrastructure Facility Standard and recommendations contained in BICSI (Building Industry Consulting Services International). For a site to be authorized for occupancy, an occupancy permit must be issued by the local ordinance verifying the site meets all local and State building codes. The OAG did not compare the local sites to local or State building code.

The State of Michigan's 1345.00.02 Network and Telecommunications Standard was written to be applied in accordance with local and State building code. The Standard notes certain provisions only apply if allowed by local and State building code. In addition, the State's Standard contains

The auditor's comment for Finding 1 is also applicable for this finding.

The auditor's comment for Finding 1 is also applicable for this finding.

recommendations made by BICSI. BICSI is a member only association supporting the advancement of the information and communications technology (ICT) profession which publishes reference manuals with recommendations for ICT.

DTMB will review and revise the State of Michigan's 1345.00.02 Network and Telecommunications Infrastructure Facility Standard to remove confusion.

The auditor's comment for Finding 1 is also applicable for this finding.

DTMB does not agree with the exceptions related to fire extinguishers, fire suppression, and smoke detectors. In terms of fire alarms, smoke detectors, sprinklers and the use of fire extinguishers, all buildings have such fire suppression as required by the fire inspector and local building code. DTMB does not agree with the OAG's interpretation that the State of Michigan's 1340.00.120.01 Physical and Environmental Protection Standard is applicable to telecommunication rooms; the State's Standard is intended to apply to Data Centers. DTMB will review and revise the Standard to remove confusion.

As indicated in the follow-up conclusion, DTMB asserts all buildings have proper fire suppression. However, 17 of 38 facilities, representing 24 TRs, did not have any fire suppression and 10 of these facilities did not have a fire extinguisher in or nearby the TR. The scope of State of Michigan's 1340.00.120.01 Physical and Environmental Protection Standard applies to the management of IT resources, including network equipment, regardless of where the equipment is housed. The standard specifically states when it is applicable to a data center. However, in relation to fire extinguishers, fire suppression, and smoke detectors, the standard is not limited to only data centers.

DTMB will formalize a process where network personnel will use a checklist to review local telecommunication rooms for areas of concern when the State's network personnel visit a site as part of normal operational duties. DTMB will communicate deficiencies to DTMB, for DTMB managed sites or to the Agency for Agency leased or Agency owned/managed sites. The Agency will then need to create a mitigation plan or accept risk. DTMB will inform the Agency that the Agency or Lessor needs to assure the site will comply with State of Michigan Standards.

DTMB will share the audit findings with the respective Agencies identified in the OAG's testing.

FOLLOW-UP METHODOLOGY, PERIOD, AND AGENCY RESPONSES

METHODOLOGY

We reviewed DTMB's corrective action plan, operating standards, and updated guidance to local agencies. Specifically, for:

- Finding 1, we:
 - Met with DTMB staff to obtain an understanding of the changes implemented to improve physical security controls in State and leased buildings.
 - Judgmentally sampled 38 of the approximately 875 locations throughout the State to tour and evaluate physical security controls over the TRs. Fifteen of the buildings sampled were also tested in our 2015 performance audit.
- Finding 4, we:
 - Reviewed DTMB's revised policies to determine whether the policies addressed environmental controls, such as eating and drinking, general storage, and hazardous elements, in TRs.
 - Met with DTMB staff to obtain an understanding of the changes implemented to improve environmental controls in State and leased buildings.
 - Judgmentally sampled 38 of the 875 locations throughout the State to tour and evaluate environmental controls over the TRs. Fifteen of the buildings sampled were also tested in our 2015 performance audit.

PERIOD

Our follow-up generally covered October 1, 2020 through July 31, 2022.

AGENCY RESPONSES

Our follow-up report contains 2 recommendations. DTMB's preliminary response indicates it agrees with 1 recommendation and partially agrees with 1 recommendation.

The agency preliminary response following each follow-up recommendation in our report was taken from the agency's written comments and oral discussion at the end of our fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and the State of Michigan Financial Management Guide (Part VII, Chapter 4, Section 100) require an audited agency to develop a plan to comply with the recommendations and to submit it to the State Budget Office upon completion of an audit. Within 30 days of receipt, the Office of Internal Audit Services, State

Budget Office, is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

GLOSSARY OF ABBREVIATIONS AND TERMS

agency plan to comply	The response required by Section 18.1462 of the <i>Michigan Compiled Laws</i> and the State of Michigan Financial Management Guide (Part VII, Chapter 4, Section 100). The audited agency is required to develop a plan to comply with Office of the Auditor General audit recommendations and to submit the plan to the State Budget Office upon completion of an audit. Within 30 days of receipt, the Office of Internal Audit Services, State Budget Office, is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.
auditor's comments to agency preliminary response	Comments the OAG includes in an audit report to comply with <i>Government Auditing Standards</i> . Auditors are required to evaluate the validity of the audited entity's response when it is inconsistent or in conflict with the findings, conclusions, or recommendations. If the auditors disagree with the response, they should explain in the report their reasons for disagreement.
BICSI	Building Industry Consulting Services International.
DTMB	Department of Technology, Management, and Budget.
environmental control	A control that prevents or mitigates damage to facilities and interruptions in service through early detection of problems such as fire, smoke, and water leaks.
hosting center	A building or a portion of a building whose primary function is to house a computer room and its support systems.
ICT	information and communications technology.
IT	information technology.
main telecommunication room (MTR)	A TR that provides the pathway for data coming into and out of a building. MTRs connect all the TRs in a building to the switch rooms.
material condition	A matter that, in the auditor's judgment, is more severe than a reportable condition and could impair the ability of management to operate a program in an effective and efficient manner and/or could adversely affect the judgment of an interested person concerning the effectiveness and efficiency of the program. Our assessment of materiality is in relation to the respective audit objective.

performance audit	An audit that provides findings or conclusions based on an evaluation of sufficient, appropriate evidence against criteria. Performance audits provide objective analysis to assist management and those charged with governance and oversight in using the information to improve program performance and operations, reduce costs, facilitate decision-making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability.
physical security control	A control that restricts physical access to computer resources and protects them from intentional or unintentional loss or impairment.
SOM	State of Michigan.
switch room	A room that connects MTRs from multiple buildings and routes network traffic to the hosting centers to access the appropriate servers to store or retrieve data.
telecommunication room (TR)	An enclosed architectural space for equipment that provides data and telephone connections. One TR typically exists on each floor which then connects to the MTR within the building.



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