



# KING COUNTY AUDITOR'S OFFICE

December 1, 2020

## Advancing Building Emergency Preparation Essential for Occupant Safety

TO:

Dow Constantine,  
King County Executive

Caroline Whalen,  
Director, Department  
of Executive Services

Anthony Wright,  
Director, Facilities  
Management Division

FROM:

Kymer Waltmunson,  
County Auditor

**Emergency preparation practices for county buildings have improved over time, but concerning gaps remain.** The Facilities Management Division (FMD) has improved emergency preparation practices in recent years, conducting regular fire drills and creating emergency plans for a variety of circumstances. Nevertheless, we found

- no systematic process to address emergency communication and coordination issues
- barriers to evacuation of the public and employees with disabilities
- inadequate planning for emergencies that do not require evacuation
- misinterpretation of the fire code mandating unobstructed exits.

Despite improvements, there is a substantial risk that some building occupants may not be able to safely evacuate or shelter-in-place during an emergency. By addressing these issues, King County can improve building safety in a high-risk environment and help occupants respond to emergencies effectively.

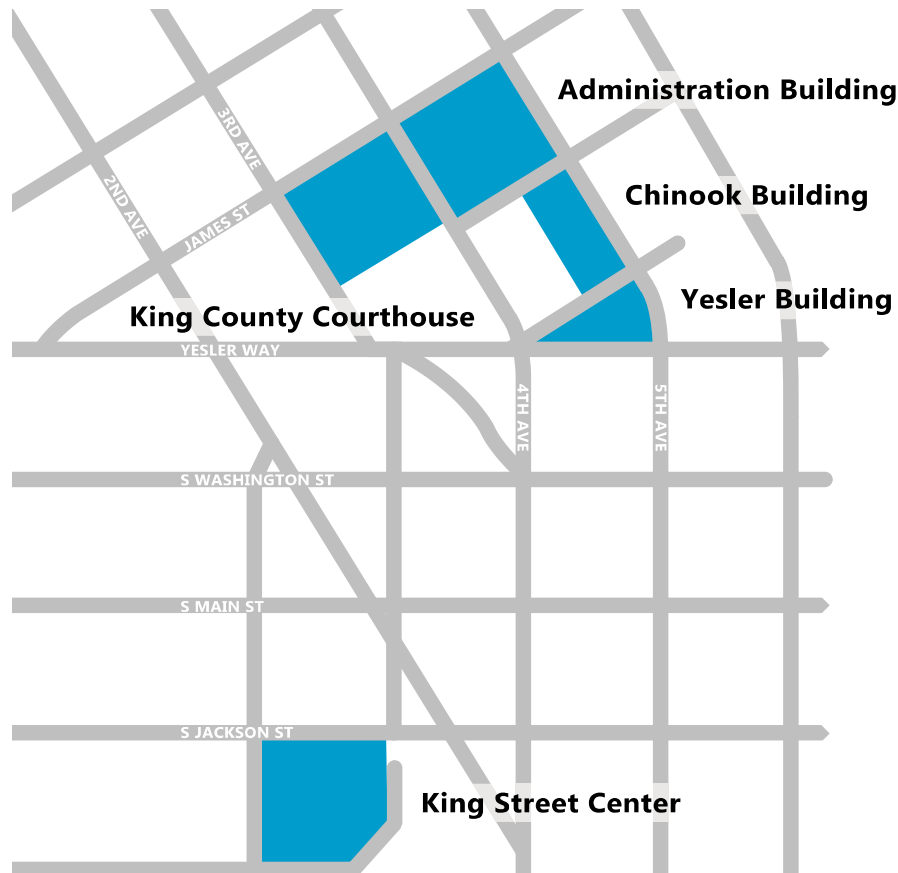
**County adaptations to coronavirus disease 2019 (COVID-19) have changed how county buildings function, creating a need for new building safety practices.** King County has radically increased its use of remote work to prevent the spread of COVID-19. Some agencies plan to give up their workspaces and the County plans to permanently close at least one downtown building. As county leadership discusses more use of telework and systems such as drop-in workstations, FMD will need to adapt its emergency processes accordingly. The current model, which relies on a small number of trained floor wardens to be present during emergencies and drills, is unlikely to be successful in the new work model. The recommendations in this letter reflect this changing environment and support the opportunity to rethink building safety practices in the County.



**King County**

**Risks that could affect downtown county building safety make emergency preparation critical for occupant health and safety.** Prior to the COVID-19 pandemic, about 6,000 county employees worked in downtown Seattle FMD-managed buildings (excluding transit operators). County buildings in downtown Seattle are in areas where emergency managers predict substantial impacts during natural disasters. These include heightened seismic hazards, liquefaction, and tsunami effects. Other possible emergencies include fires, gas leaks, or active shooters. These risks make it important for the County to prepare to respond as effectively as possible in the event of an emergency. We focused on five downtown buildings managed by FMD to address these risks (see Exhibit A).

**EXHIBIT A: We assessed emergency preparation practices for five County-managed buildings in downtown Seattle.**



Source: King County Auditor's Office

## No Systematic Process to Address Emergency Communication and Coordination Issues

**FMD does not systematically identify and address problems with building emergency safety, allowing serious issues to persist.** Fire drill records and floor warden survey responses indicate consistent challenges with coordination, communication, and participation during emergencies and fire drills over multiple years. We identified similar issues through fire drill observations.<sup>1</sup> Floor wardens rarely reported to the fire panel with floor safety information, as required, and some staff did not evacuate.<sup>2</sup> This is troubling given that floor warden reporting is the main way that FMD verifies that staff has evacuated and learns of people who are sheltering-in-place because they cannot evacuate independently. Floor wardens may not consistently report to the fire panel because of a lack of knowledge, with 40 percent of floor wardens stating that they never took the FMD-provided floor warden training or that they last took it more than two years ago.<sup>3</sup> Fifty-two percent of floor wardens also state that they do not train staff in their area on what to do during an emergency. Given county increases in remote work, FMD will face new challenges with floor warden and general staff coordination and communication going forward. This could have negative implications for employee life and safety.

FMD should have a systematic way to identify these kinds of gaps in emergency preparation practices and make sure they are fixed. While FMD keeps track of issues it observes during some fire drills, FMD was unable to provide records for more than half of fire drills from 2017 to 2019. The fire drill records that FMD did supply did not include action items for problems identified in the drill, such as a lack of floor warden reporting, making it unclear whether these problems were addressed. In addition, FMD's after-action reports from other emergencies, such as the 2018 King County Courthouse water main break and 2019 Maleng Regional Justice Center bomb threat, did not consistently identify clear action items based on lessons learned.

### Recommendation 1

**The Facilities Management Division should update its strategy and processes for ensuring the safety of building occupants during emergencies. This strategy should reflect changes in building use such as increased remote work and the likelihood that floor wardens may not be present during emergencies. Full implementation would include developing, documenting, communicating, training, and implementing the updated strategy, including specifying roles and responsibilities for people involved.**

<sup>1</sup> We observed fire drills at the Administration Building (February 20, 2020), the Chinook Building (February 19, 2020), the King County Courthouse (February 21, 2020), King Street Center (February 18, 2020), and the Yesler Building (February 18, 2020). These fire drills each affected three floors of the respective building; however, the Administration Building fire drill was only partially completed due to technical issues.

<sup>2</sup> Floor wardens are staff responsible for evacuating people on the building floor in which they work. Their role is described in Seattle Fire Code, Section 9309.2. The fire panel is the location the fire safety director operates from and floor wardens report to in the case of an emergency.

<sup>3</sup> We surveyed floor wardens across downtown FMD-managed buildings to better understand their experiences with building safety. For more details, see Appendix 1.

## Recommendation 2

**The Facilities Management Division should develop, document, train, and implement a systematic process to ensure that building emergency safety issues identified in emergency drills, tests, and other information sources are communicated to responsible parties and resolved in a timely manner. This process should align with the updated building safety strategy described in Recommendation 1.**

**Components of some building alarm systems were not audible or visible during our observations, raising the risk that occupants may not get essential emergency communications.** Fire drills were not audible or visible in portions of two of the five buildings where we observed fire drills. In one instance employees in an interior office could not hear the alarm. In another, a floor's eastern wing had no visible strobe alarm. If alarms are not audible or visible, building occupants may not realize an emergency is happening or hear directions on how to respond until it is too late. In a real emergency, for example, the two employees in the interior office mentioned above did not evacuate and could have been harmed.

FMD does not have a systematic process to ensure that nonoperative alarms are fixed, nor for submitting work orders for all the faults it identifies during drills. Out of the nine equipment faults FMD identified during drills from 2017 to 2019, five did not have an associated work order. The Seattle Fire Code (SFC) requires high-rise building operators to keep audible alarm systems in operative condition at all times. Functioning visual cues like strobe lights are particularly important for notifying building occupants with hearing impairments of emergencies.

## Recommendation 3

**The Facilities Management Division should develop a systematic process for identifying and addressing issues with alarm equipment functionality, through fire drills or other means, and verify that identified issues are resolved. This process should align with the updated building safety strategy described in Recommendation 1.**

**FMD's public address system announcements did not occur during some fire drills, leaving building staff without key information for responding to emergencies.** In two of the five buildings where we observed fire drills there was no audible public address (PA) system announcement on the affected floors. Twenty-three percent of surveyed floor wardens also reported issues with PA system announcement audibility and directions during drills and emergencies they experienced. The SFC indicates that high-rise buildings should have a functional emergency voice communication system that can broadcast live messages throughout the building.<sup>4</sup> FMD relies on the PA system as one of its main methods of timely emergency communication to building occupants (the other being FMD security officers telling people adjacent to them what is happening and what to do). FMD does not regularly use any other medium to

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<sup>4</sup> The Seattle Fire Department defines a high-rise building as any building that has occupied floors 75 feet or higher above the lowest level of fire department vehicle access. The relevant portion of the fire code only applies to buildings built after the implementation of that version of the fire code. Given that some county buildings were built prior to this, they are not legally required to satisfy this requirement. A Seattle Fire Department representative declined to confirm whether this portion of the fire code applied to the affected buildings. While we cannot confirm whether these buildings are out of compliance with the applicable fire code because of this, inclusion of this requirement in current fire code editions indicates the importance of functional PA systems for ensuring building safety.

communicate specific information to staff or floor wardens during emergencies. Given the criticality of the PA system announcement as a part of FMD's emergency communication system, failure to send PA messages may leave building occupants without essential life and safety information.

During our observations, FMD staff announced the emergency via the PA system in each building, but in some buildings FMD did not transmit the announcement due to apparent staff user error. FMD representatives state that staff who may serve as fire safety director alternates learn how to operate the PA system during onboarding and practice using the system during fire drills.<sup>5</sup> Given the persistence of problems with PA system announcements, it is unclear whether the current training is adequate. Previous alarm records did not note issues with PA system audibility, indicating that this issue was not identified or fixed through a systematic process.

#### Recommendation 4

**The Facilities Management Division (FMD) should ensure that public address (PA) systems are tested on a regular basis to ensure identification and resolution of issues with PA system functionality, including issues related to user error. This process should align with the updated building safety strategy described in Recommendation 1.**

#### Barriers to Evacuation of Employees with Disabilities and the Public

**Wayfinding maps in some buildings lack important navigation information putting people unfamiliar with the building, such as the public, at risk in an emergency.** While King County building wayfinding maps generally include most of the basic features recommended by the National Fire Protection Association (NFPA) and the SFC for evacuation, they often do not show areas of refuge (locations where occupants can wait for help) and exit routes accessible to people with disabilities. Some maps in the Yesler Building and King Street Center buildings are missing even general egress route information (see Exhibit B). The SFC indicates that posted wayfinding maps should include the primary evacuation route, accessible egress routes, and areas of refuge.

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<sup>5</sup> The fire safety director serves as the on-site coordinator to ensure county policies are followed during an emergency, monitoring the emergency alarm system, and assisting the fire department in locating the fire and evacuating the facility. Various FMD security staff members are required to serve as the fire safety director alternate, adopting the responsibilities of the fire safety director, if they are available to fulfill this role.

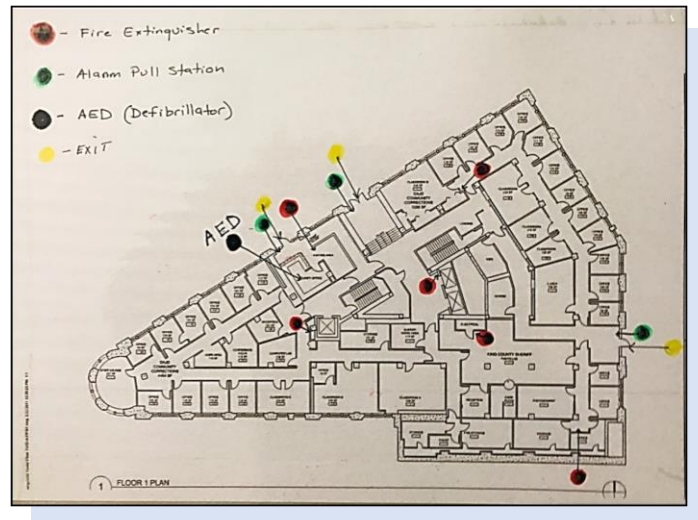
## EXHIBIT B: Wayfinding maps were missing required elements, including those related to safe evacuation.

	Exits?	Primary egress route?	Secondary egress route?	Accessible egress routes or areas of refuge?
King Street Center	✓	✗	✗	✓
Yesler Building	✓	✗	✗	✗

## KING STREET CENTER



## YESLER BUILDING



Source: King Street Center third floor public wayfinding map and Yesler Building first floor public wayfinding map

Wayfinding maps are particularly important for building occupants if they will not receive assistance evacuating the building. Thirty-six percent of surveyed floor wardens working in public offices said that they were not responsible for evacuating the public during emergencies, or that they were only responsible for evacuating the public from the floor warden's immediate work area. Floor warden training does not clearly assign responsibility for evacuating non-employee occupants beyond floor wardens' immediate work area. Given that members of the public in county buildings may need to respond to emergencies without help from county staff, wayfinding maps are necessary tools to help them exit or shelter-in-place safely. If increases in telework lead to reduced reliance on floor wardens, clear wayfinding information will also become more important for staff. FMD reports that it updates wayfinding maps when the County builds or significantly renovates county spaces. FMD corrected inaccurate information on the King Street Center wayfinding maps after floor wardens informed them of the errors.



### Recommendation 5

**The Facilities Management Division (FMD) should ensure that wayfinding maps are accurate, include all elements required by Seattle Fire Code, and are posted in public areas of FMD-managed buildings. This process should align with the updated building safety strategy described in Recommendation 1.**

**Employees with disabilities often lack individualized evacuation plans, increasing the risk that they will not be able to safely evacuate or shelter-in-place during an emergency.** The floor warden training notes that floor wardens should make plans for staff who cannot evacuate independently, maintaining a list of monitors to help these staff members during an emergency. Nearly half of the floor wardens we surveyed were not aware of specific emergency plans for staff in their area that may need them, however. The NFPA recommends the use of individualized evacuation plans for people with disabilities who cannot evacuate independently in order to address their specific needs in the case of an emergency. Without such a plan, these employees are less likely to receive the support they need to safely evacuate or shelter-in-place.

Although it is recommended by NFPA, King County does not require individualized emergency plans for people who cannot evacuate independently, only implementing them if the employee requests one. If staff members who need assistance are not aware of this form of support, they may never receive it.

### Recommendation 6

**The King County Executive should develop, document, communicate, train, and implement a process to ensure that there are individualized emergency plans for staff who are unable to evacuate independently. This process should align with the updated building safety strategy described in Recommendation 1.**

### Inadequate Planning for Emergencies That Do Not Require Evacuation

**FMD emergency preparedness efforts do not fully address emergencies that do not require evacuation, such as chemical spills or active shooter situations.** FMD does not conduct regular drills for non-evacuation emergencies and the FMD plan for active shooter emergencies is incomplete. FMD's lack of planning and training for shelter-in-place scenarios could contribute to confusion and danger to building occupants if these circumstances occur. FMD emergency preparation efforts have focused on fire evacuations. Because the floor warden program focuses on evacuation, floor wardens and building occupants are not trained on active shooter or other shelter-in-place procedures.

### Recommendation 7

**The Facilities Management Division should document, communicate, train, and implement processes to ensure preparation and practice for non-evacuation emergencies. This process should include completing the active shooter emergency plan and should align with the updated building safety strategy described in Recommendation 1.**

## Misinterpretation of the Fire Code Mandating Unobstructed Exits

**At the time of our review, a Yesler Building emergency exit path was out of compliance with the SFC, hindering occupants' ability to exit the building independently.** At the time of our fire drill observations, the second-floor stairwell doors used to evacuate the Yesler Building required a key card from staff to open. Obstructions in the path of exit increase the risk that building occupants without stairwell keys will not be able to evacuate the building during an emergency. The SFC requires that stairwell exits in the path of egress be free of obstructions such as a need for keys.

FMD representatives stated that the second floor of the Yesler Building was a jail setting because it housed the King County Community Center for Alternative Programs, and thus it was appropriate to lock the stairwell doors. While there are exceptions to the fire code for jail occupancy areas, the Seattle Fire Department confirmed that this was not the case for the affected floor. FMD has not removed the locks from the stairwells, stating that it is still discussing compliance with the fire department and emphasizing the presence of an alternate exit on the second floor.

### Recommendation 8

**The Facilities Management Division (FMD) should review all locked doors in the path of egress for compliance with the Seattle Fire Code. Where locks are not allowable, including for the Yesler Building stairwells, FMD should remove any locks or obstructions that prevent people from exiting through the path of egress.**

## Conclusion

This report is being published in a time of change and uncertainty about how King County will use its buildings in the future. While a new emphasis on telework may result in employees occupying county buildings less regularly, King County has a responsibility to maintain the safety of occupants of county buildings in use. By making improvements to emergency preparation practices, FMD can help to ensure the safety of both employees and the public who use county facilities.

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Laina Poon, Kayvon Zadeh, and Brian Crist conducted this review. If you have any questions or would like more information, please contact the King County Auditor's Office at [KCAO@KingCounty.gov](mailto:KCAO@KingCounty.gov).



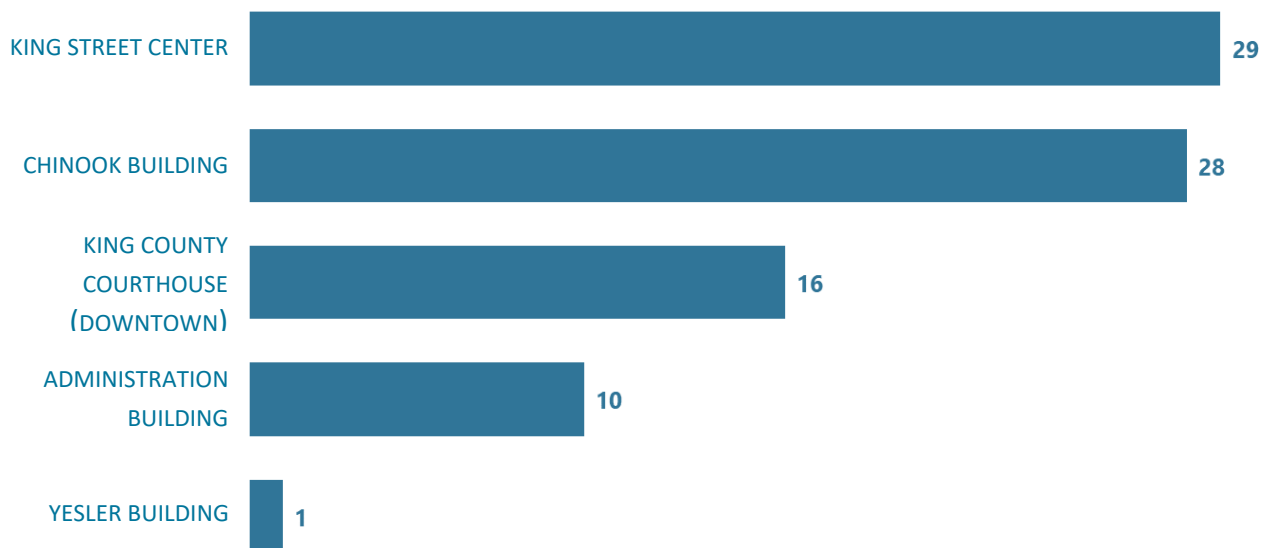
## Appendix 1: Floor Warden Survey

In the process of conducting this audit we surveyed floor wardens across Facilities Management Division (FMD)-managed buildings in downtown Seattle to better understand their experiences with building safety. Given their role in ensuring the safety of employees during an emergency, floor wardens are well situated to speak to emergency safety experiences and concerns.

### SURVEY METHODOLOGY AND ANALYSIS

We sent the survey directly to floor wardens in the Administration Building, the Chinook Building, King County Courthouse, King Street Center, and the Yesler Building, based on the FMD's floor warden email list. There was a 44 percent response rate; we received 118 total responses out of a total of 270 employees on the list. Eighty-four of the respondents reported that they were current floor wardens and their responses are reported below.

FIGURE 1: **Total current floor warden responses received by building.**



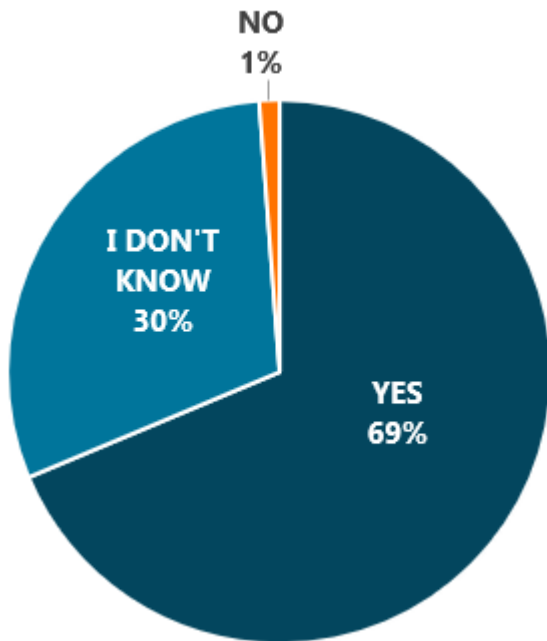
Source: King County Auditor's Office

### SURVEY RESULTS<sup>6</sup>

Below are the results of the closed-ended survey results from current floor wardens at the time of the survey. Survey responses presented as percentages are based on respondents who reported that they were current floor wardens.

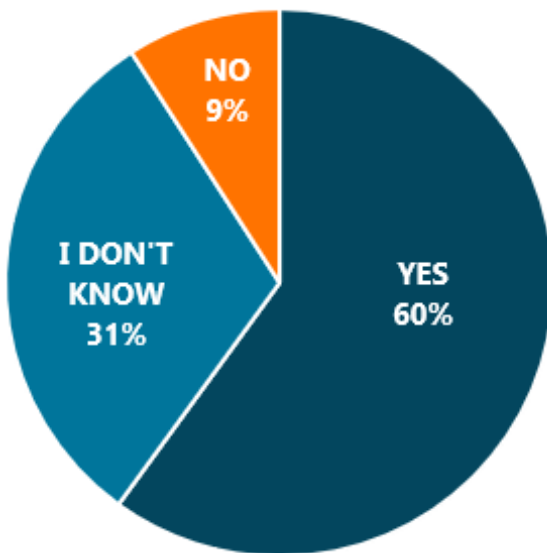
<sup>6</sup> In some instances, percentages do not add up to 100% due to rounding.

FIGURE 2: Is there a building emergency plan for the primary building you work in?



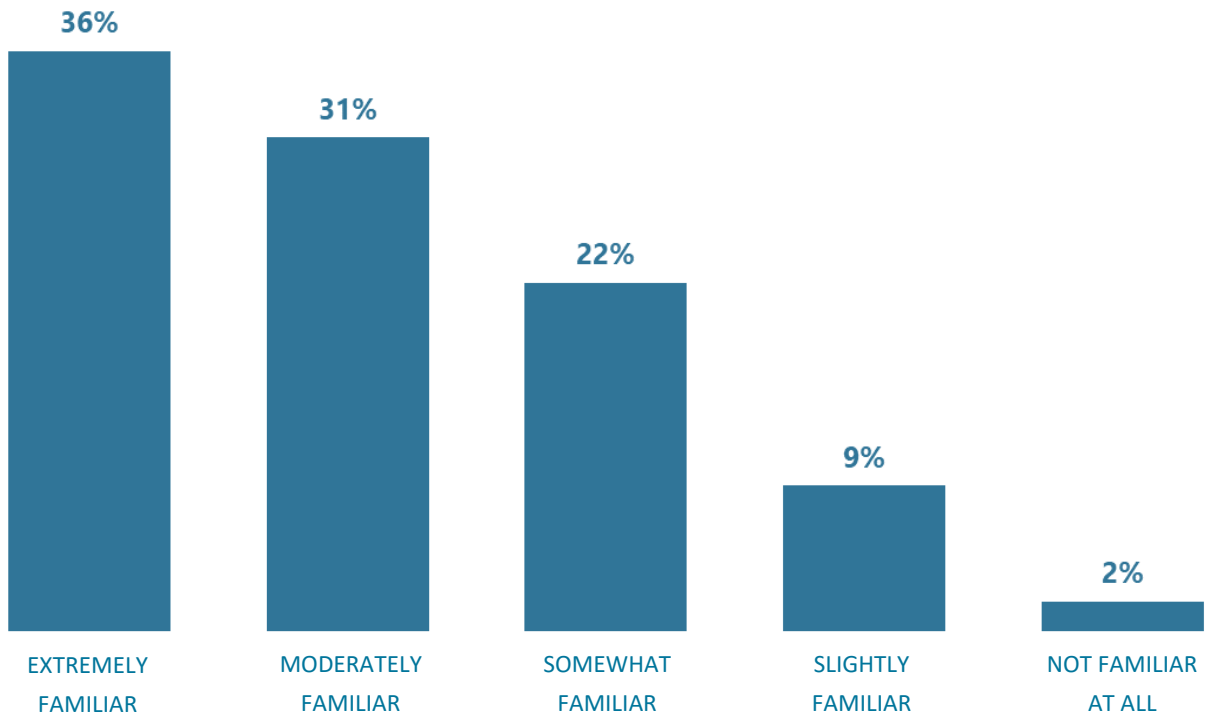
Source: King County Auditor's Office

FIGURE 3: Do you have access to your building's emergency plan?



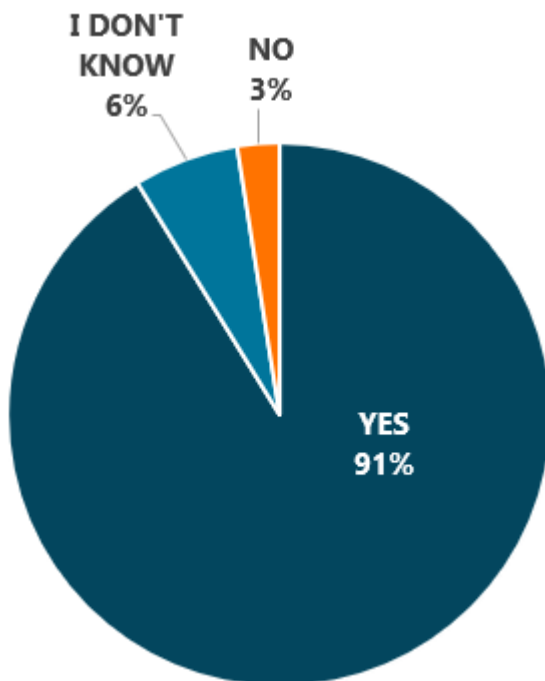
Source: King County Auditor's Office

FIGURE 4: How familiar are you with your building's emergency/evacuation plan?



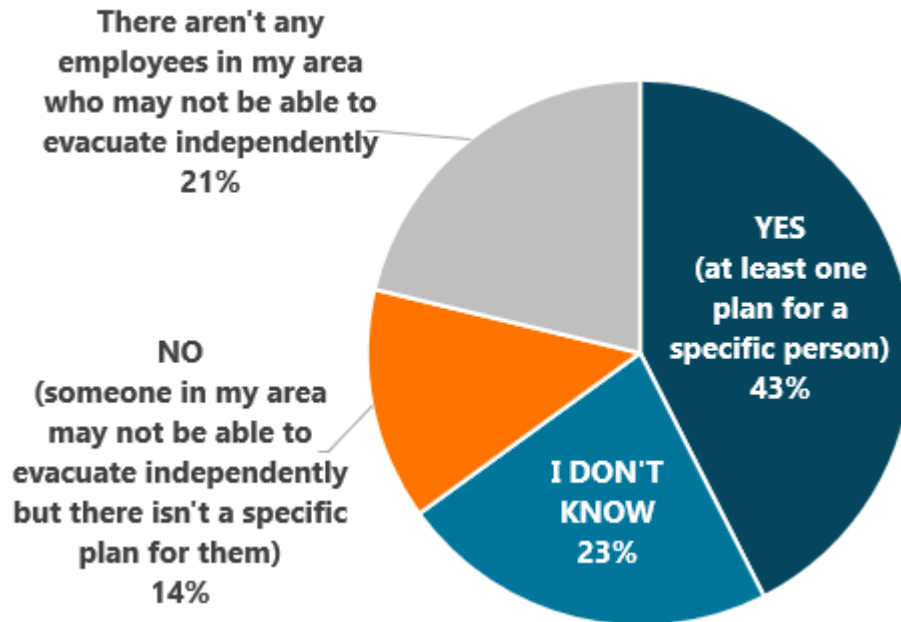
Source: King County Auditor's Office

FIGURE 5: Is there a plan in place for what to do with people in your area who are not able to evacuate independently?



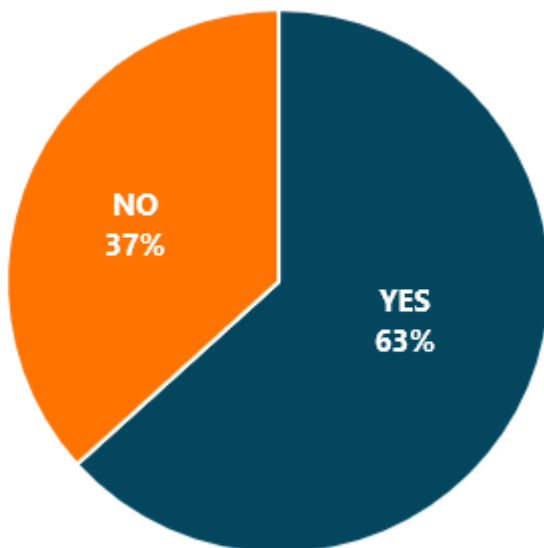
Source: King County Auditor's Office

FIGURE 6: Are there individual emergency plans for specific employees in your area who may not be able to evacuate independently?



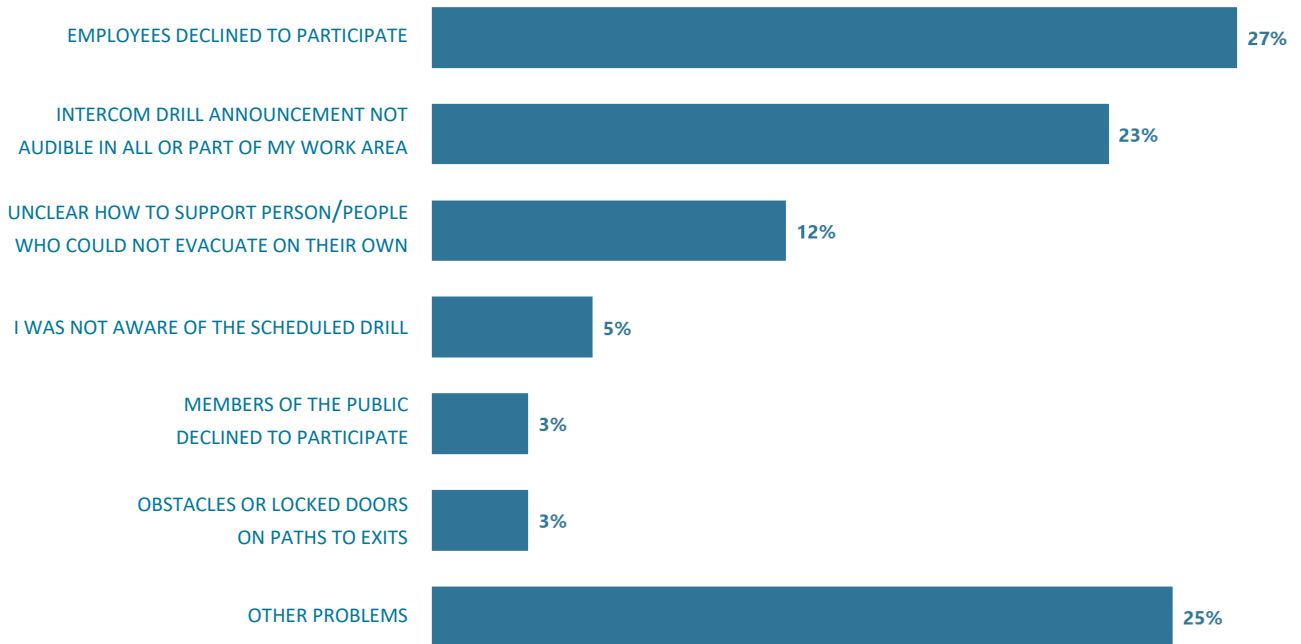
Source: King County Auditor's Office

FIGURE 7: Have you experienced problems during evacuation emergencies or drills?



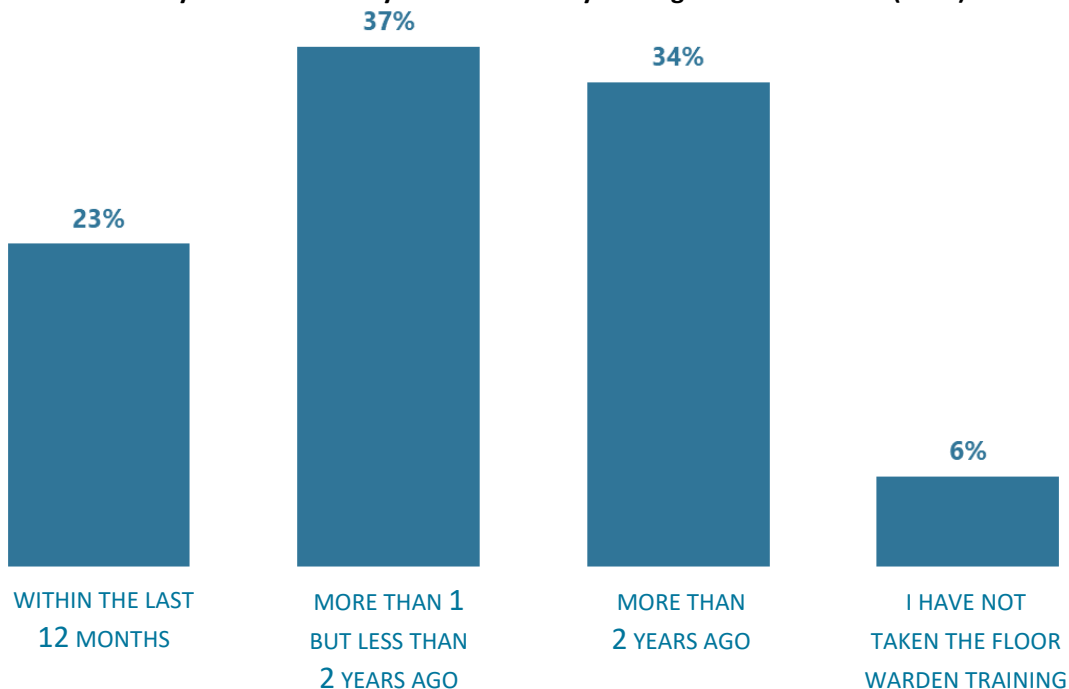
Source: King County Auditor's Office

FIGURE 8: **Select the problems that occurred during emergencies or drills in your building:**<sup>7</sup>



Source: King County Auditor's Office

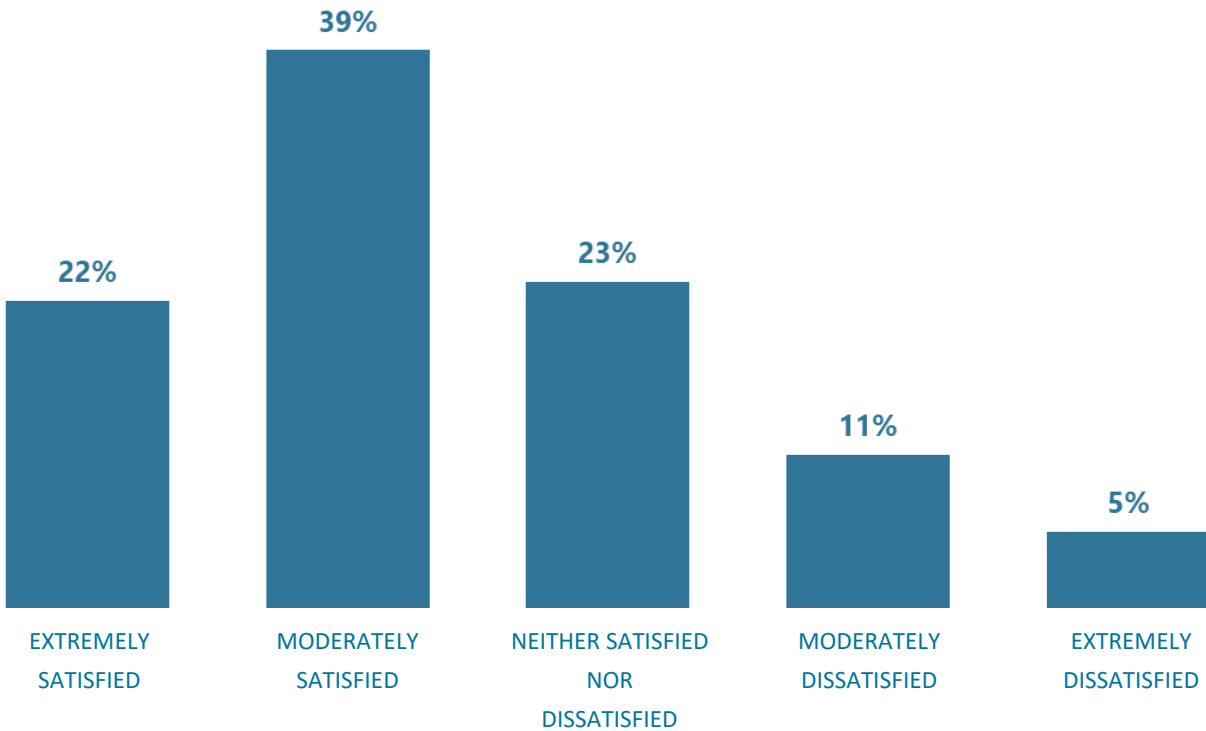
FIGURE 9: **When did you most recently take the Facility Management Division's (FMD) floor warden training?**



Source: King County Auditor's Office

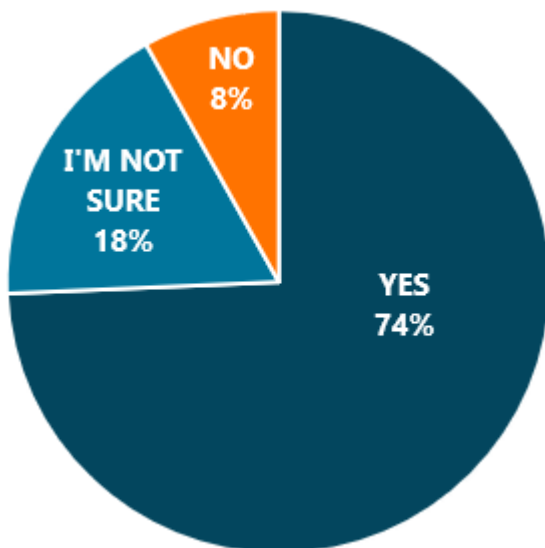
<sup>7</sup> Question only presented if the survey respondent indicated there were problems in the previous question.

FIGURE 10: How satisfied are you that the floor warden training provided sufficient information to carry out your floor warden responsibilities?



Source: King County Auditor's Office

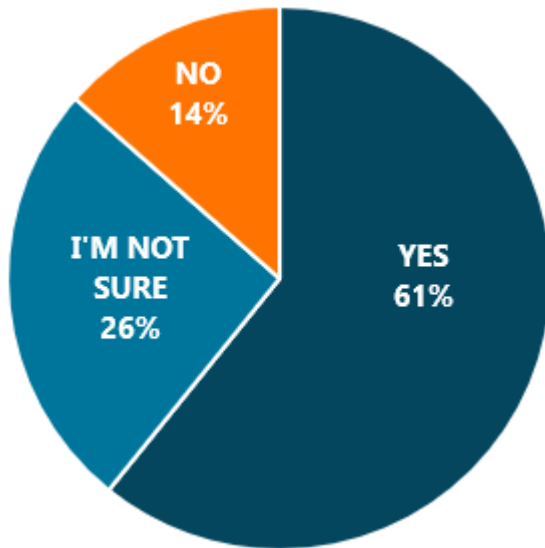
FIGURE 11: Did the training include information on how to assist people in your area who may not be able to evacuate independently?



Source: King County Auditor's Office

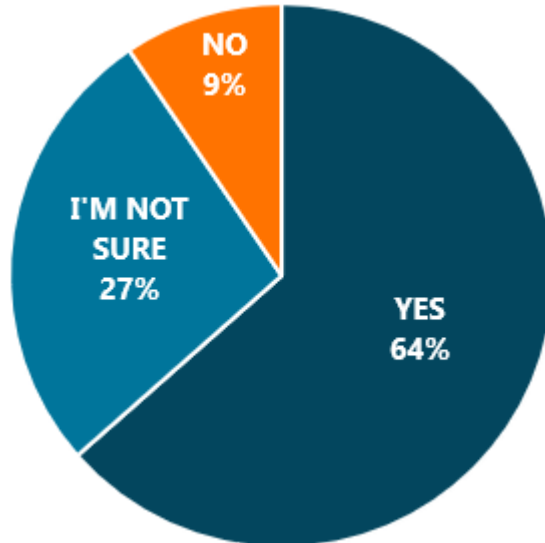


FIGURE 12: Did the training include instructions to report to FMD staff at the fire panel that your work area was clear of occupants?



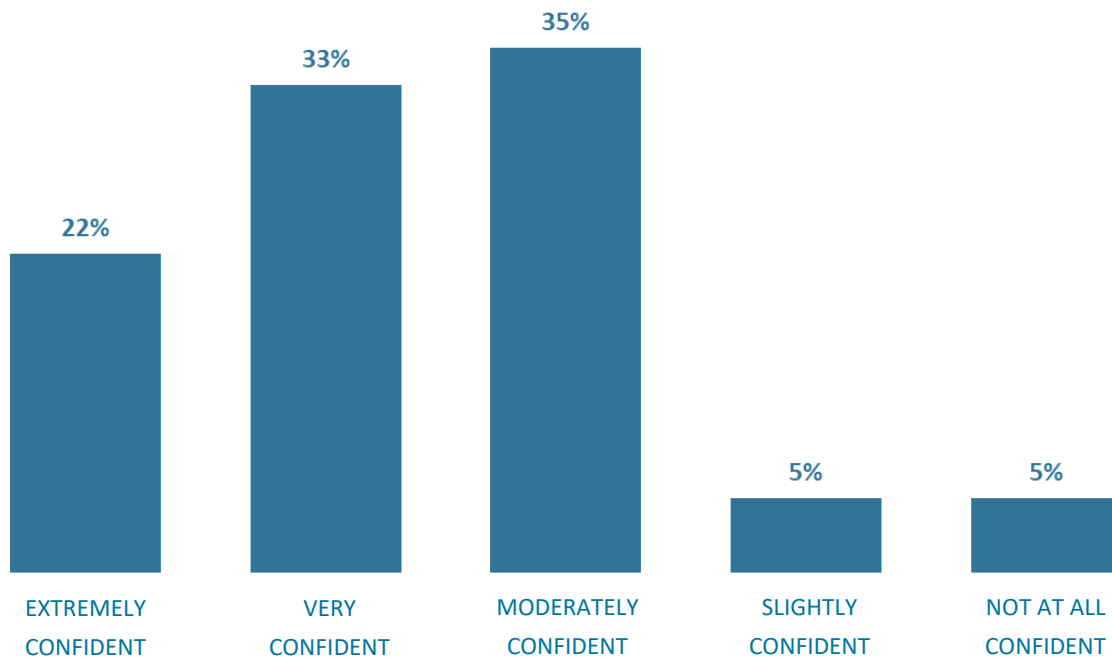
Source: King County Auditor's Office

FIGURE 13: Did the training include instructions to report to FMD staff at the fire panel if there was someone sheltering-in-place on your floor?



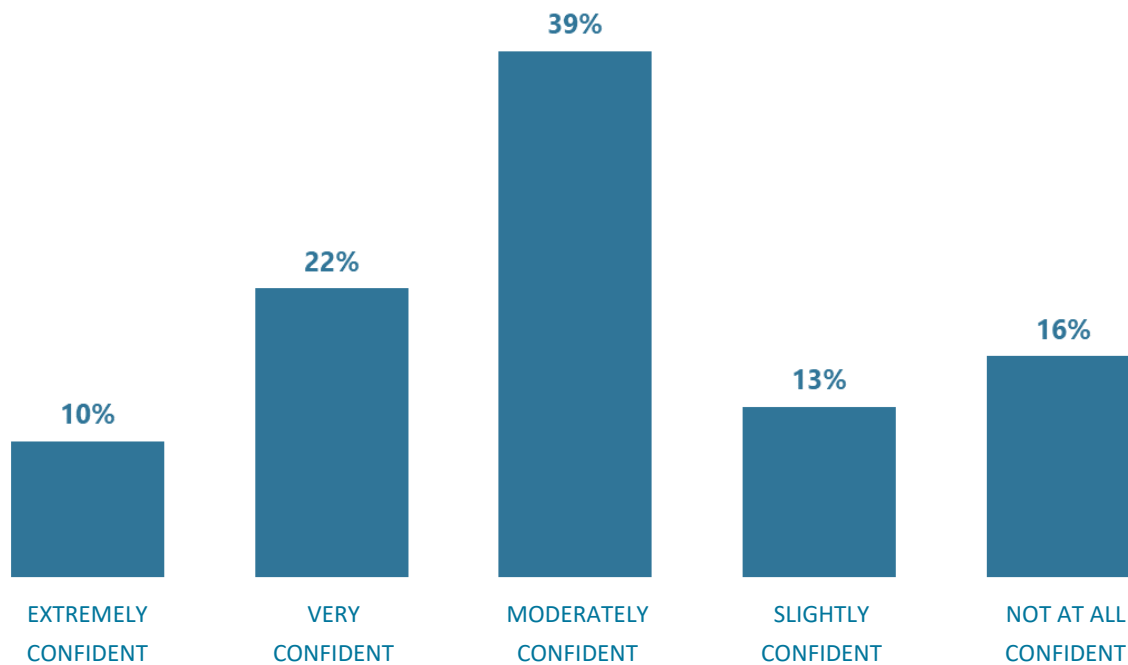
Source: King County Auditor's Office

FIGURE 14: Based on training you have received, how confident are you that you could support employees in your work area during an emergency that may not require an immediate evacuation (like an earthquake or gas leak outside)?



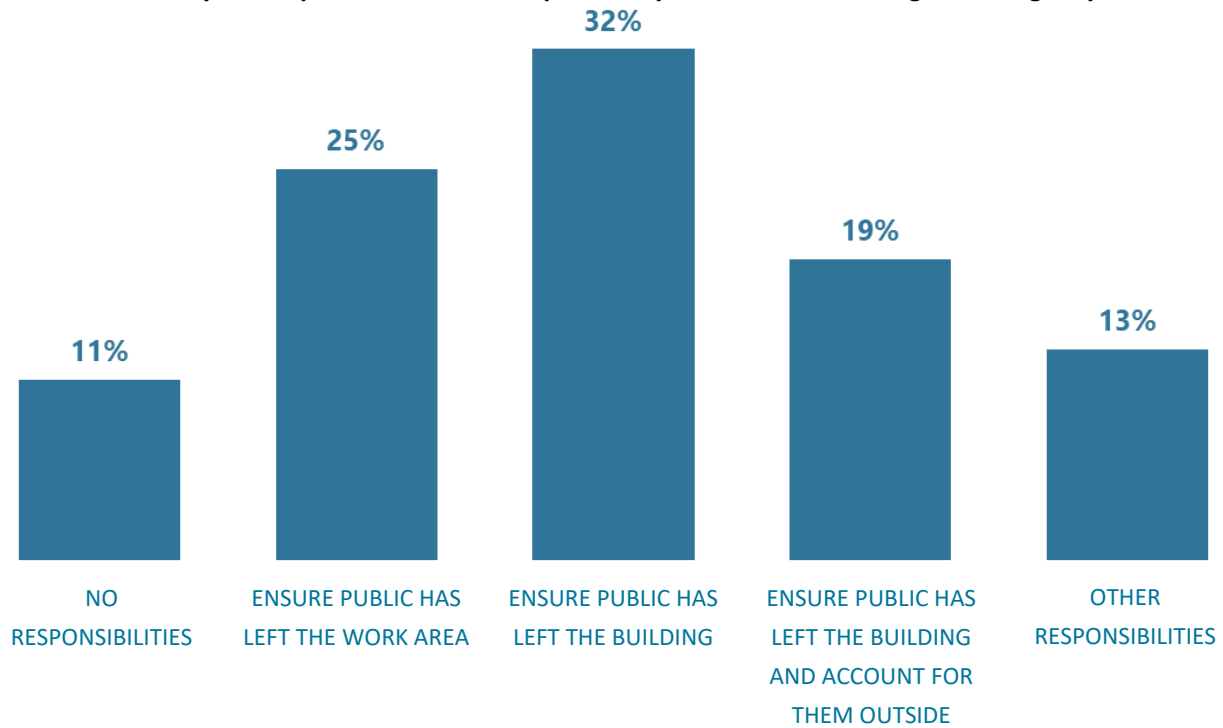
Source: King County Auditor's Office

FIGURE 15: Based on training you have received, how confident are you that you could support employees sheltering-in-place during an active shooter situation?



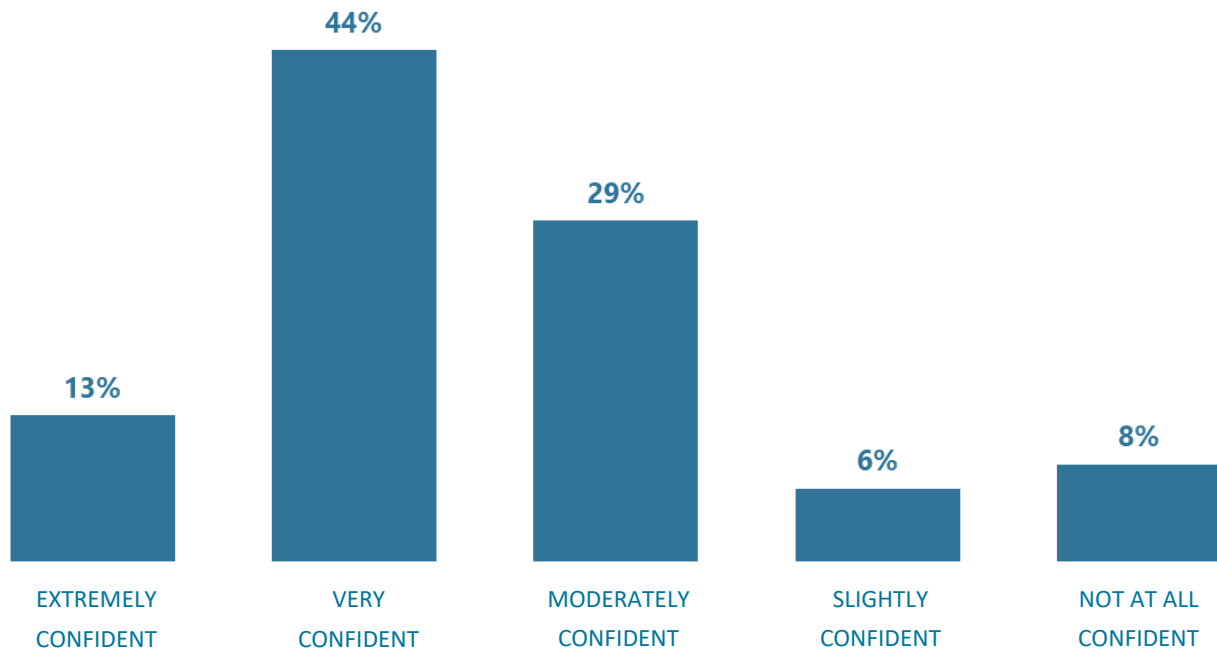
Source: King County Auditor's Office

FIGURE 16: What are your responsibilities for the public in your work area during an emergency evacuation?



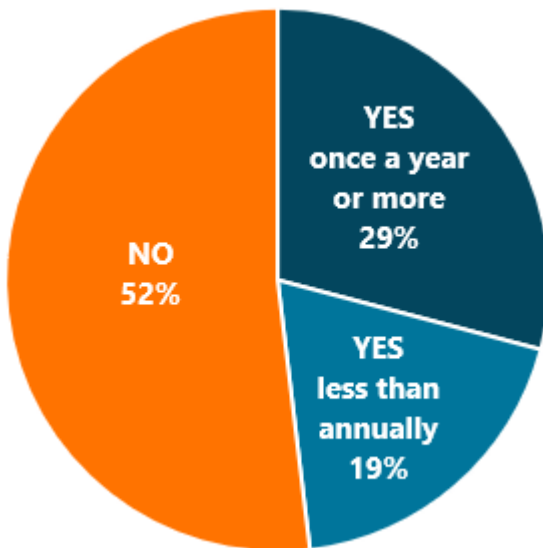
Source: King County Auditor's Office

FIGURE 17: How confident are you that you would be able to help members of the public to evacuate or shelter-in-place during a real emergency?



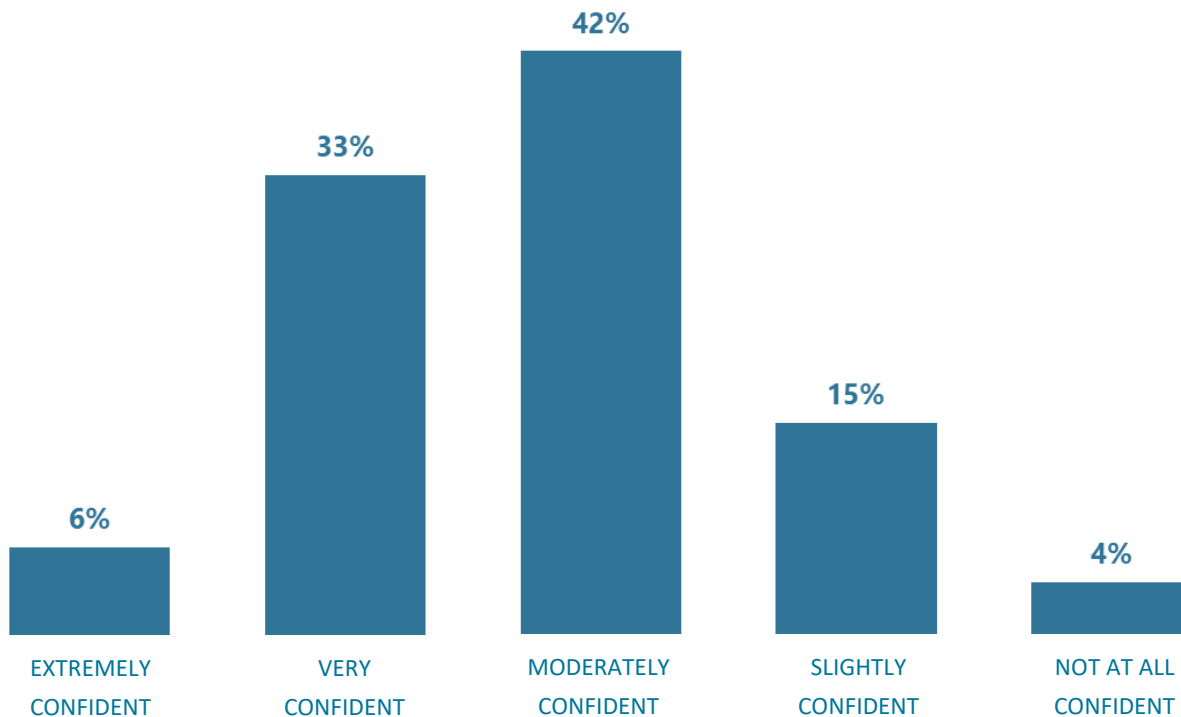
Source: King County Auditor's Office

FIGURE 18: Do you or other floor wardens in your section train people on your floor on what to do in drills or emergencies?



Source: King County Auditor's Office

FIGURE 19: How confident are you that building occupants would be safe in a real emergency response/evacuation under current processes?



Source: King County Auditor's Office

## Executive Response

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### King County

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November 30, 2020

Kymber Waltnunson  
King County Auditor  
Room 1033  
C O U R T H O U S E

**KING COUNTY  
AUDITOR'S OFFICE**

**11/30/2020**

**RECEIVED**

Dear Ms. Waltnunson:

Thank you for the opportunity to review and comment on the proposed final report on **Facilities Management Division (FMD) Building Safety Report**. The Facilities Management Division appreciates the focus on building safety within the report. We look forward to implementing the recommendations to improve building safety, procedures, and increase transparency of the actions FMD will undertake with building tenants for safe and secure working environments for all King County employees and guests.

**Recommendations Regarding Policies and Procedures:** Most of the audit recommendations are related to programmatic implementation and training. To address these issues, the Building Safety Program within FMD will be transitioned out of the Security Section and placed under the purview of the FMD Emergency Manager. A comprehensive review of training and accountability tracking will be undertaken over the course of the next year to update and enhance the recommendations provided in this report. This will be a concerted effort between the FMD Emergency Manager, Security and Building Operations.



Kymber Waltmunson  
November 30, 2020  
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**Responses to Individual Recommendations.** The chart below provides a summary of responses to individual recommendations.

<b>Responses to Individual Recommendations for King County Facility Parking Program</b>	
<b>Recommendation 1:</b> The Facilities Management Division should update its strategy and processes for ensuring the safety of building occupants during emergencies. This strategy should reflect changes in building use such as increased remote work and the likelihood that floor wardens may not be present during emergencies. Full implementation would include developing, documenting, communicating, training, and implementing the updated strategy, including specifying roles and responsibilities for people involved.	Concur
<b>Recommendation 2:</b> The Facilities Management Division should develop, document, train, and implement a systematic process to ensure that building emergency safety issues identified in emergency drills, tests, and other information sources are communicated to responsible parties and resolved in a timely manner. This process should align with the updated building safety strategy described in Recommendation 1.	Concur
<b>Recommendation 3:</b> The Facilities Management Division should develop a systematic process for identifying and addressing issues with alarm equipment functionality, through fire drills or other means, and verify that identified issues are resolved. This process should align with the updated building safety strategy described in Recommendation 1.	Concur
<b>Recommendation 4:</b> The Facilities Management Division (FMD) should ensure that public address (PA) systems are tested on a regular basis to ensure identification and resolution of issues with PA system functionality, including issues related to user error. This process should align with the updated building safety strategy described in Recommendation 1.	Concur
<b>Recommendation 5:</b> The Facilities Management Division (FMD) should ensure that wayfinding maps are accurate, include all elements required by Seattle Fire Code, and are posted in public areas of FMD-managed buildings. This process should align with the updated building safety strategy described in Recommendation 1.	Concur
<b>Recommendation 6:</b> The King County Executive should develop, document, communicate, train, and implement a process to ensure that there are individualized emergency plans for staff who are unable to evacuate independently. This process should align with the updated building safety strategy described in Recommendation 1.	Concur
<b>Recommendation 7:</b> The Facilities Management Division should document, communicate, train, and implement processes to ensure preparation and practice for non-evacuation emergencies. This process should include completing the active shooter emergency plan and	Concur



Kymber Waltmunson  
November 30, 2020  
Page 3

should align with the updated building safety strategy described in Recommendation 1.	
<b>Recommendation 8:</b> The Facilities Management Division (FMD) should review all locked doors in the path of egress for compliance with the Seattle Fire Code. Where locks are not allowable, including for the Yesler Building stairwells, FMD should remove any locks or obstructions that prevent people from exiting through the path of egress.	Concur

As noted in the responses to individual recommendations, FMD will work in partnership with the impacted tenants in our facilities to create policies and procedures to implement these recommendations within the next year.

Thank you for the opportunity to review and respond to your report. I appreciate the data collection, collaboration, and cooperation between the King County Auditor's Office and FMD management and staff during the building safety audit. I look forward to the improvements that will be implemented as a result of this effort.

If you have any questions regarding this response, please contact Aaron L. Bert, FMD Deputy Director, at 206-263-8005.

Sincerely,



for

Dow Constantine  
King County Executive

Enclosure

cc: Rachel Smith, Chief of Staff, KCEO  
Dwight Dively, Director, Office of Performance, Strategy and Budget  
Shannon Braddock, Deputy Chief of Staff, Executive Office  
Caroline Whalen, County Administrative Officer, Department of Executive Services (DES)  
Anthony Wright, Director, Facilities Management Division (FMD), DES  
Aaron L. Bert, Deputy Director, Facilities Management Division (FMD), DES

**Recommendation 1**

The Facilities Management Division should update its strategy and processes for ensuring the safety of building occupants during emergencies. This strategy should reflect changes in building use such as increased remote work and the likelihood that floor wardens may not be present during emergencies. Full implementation would include developing, documenting, communicating, training, and implementing the updated strategy, including specifying roles and responsibilities for people involved.

**Agency Response**

Concurrence	<b>Concur</b>
Implementation date	6/30/2021
Responsible agency	Facilities Management Division (FMD)
Comment	FMD concurs with the recommendation and will evaluate programmatic training and implementation in conjunction with a large portion of County staff moving to a distributive work environment.

**Recommendation 2**

The Facilities Management Division should develop, document, train, and implement a systematic process to ensure that building emergency safety issues identified in emergency drills, tests, and other information sources are communicated to responsible parties and resolved in a timely manner. This process should align with the updated building safety strategy described in Recommendation 1.

**Agency Response**

Concurrence	<b>Concur</b>
Implementation date	6/30/2021
Responsible agency	<b>Facilities Management Division (FMD)</b>
Comment	FMD concurs with the recommendation. FMD has implemented an upgraded workorder system and the increase functionality will allow for rapid identification and flagging of priority issues for repair and or preventative maintenance.

**Recommendation 3**

The Facilities Management Division should develop a systematic process for identifying and addressing issues with alarm equipment functionality, through fire drills or other means, and verify that identified issues are resolved. This process should align with the updated building safety strategy described in Recommendation 1.

**Agency Response**

Concurrence	<b>Concur</b>
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Implementation date	6/30/2021
Responsible agency	<b>Facilities Management Division (FMD)</b>
Comment	FMD concurs with this recommendation. As part of the revised emergency operations planning and drill program, assessment of critical systems will be part of the training and evaluation. Operational issues will be flagged and assigned as priorities for repairs, if needed.

**Recommendation 4**

The Facilities Management Division (FMD) should ensure that public address (PA) systems are tested on a regular basis to ensure identification and resolution of issues with PA system functionality, including issues related to user error. This process should align with the updated building safety strategy described in Recommendation 1.

**Agency Response**

Concurrence	<b>Concur</b>
Implementation date	6/30/2021
Responsible agency	<b>Facilities Management Division (FMD)</b>
Comment	FMD concurs with this recommendation and identification of operational issues will be captured, noted and repaired as part of monthly preventative maintenance scheduling.

**Recommendation 5**

The Facilities Management Division (FMD) should ensure that wayfinding maps are accurate, include all elements required by Seattle Fire Code, and are posted in public areas of FMD-managed buildings. This process should align with the updated building safety strategy described in Recommendation 1.

**Agency Response**

Concurrence	<b>Concur</b>
Implementation date	9/30/2021
Responsible agency	<b>Facilities Management Division (FMD)</b>
Comment	FMD concurs with this recommendation. Implementation will be part of the revised building safety strategy. Additionally, due to potential adjustment of building floor plans as part of the County's space consolidation effort, new and revised floor evacuation plans will be one of the final actions undertaken to close out this recommendation.

**Recommendation 6**

The King County Executive should develop, document, communicate, train, and implement a process to ensure that there are individualized emergency plans for staff who are unable to evacuate independently. This process should align with the updated building safety strategy described in Recommendation 1.

**Agency Response**

Concurrence	<b>Concur</b>
Implementation date	9/30/2021
Responsible agency	<b>Facilities Management Division (FMD)</b>
Comment	FMD concurs with this recommendation. FMD will work with associated partners and Departments to develop a comprehensive tracking system and training program to ensure individuals who are in need of individualized emergency plans are identified and trained on how to implement such a plan in a time of need. This will entail working with Risk Management, Safety & Claims and various HR contacts to develop the program.

**Recommendation 7**

The Facilities Management Division should document, communicate, train, and implement processes to ensure preparation and practice for non-evacuation emergencies. This process should include completing the active shooter emergency plan and should align with the updated building safety strategy described in Recommendation 1.

**Agency Response**

Concurrence	<b>Concur</b>
Implementation date	6/30/2021
Responsible agency	<b>Facilities Management Division (FMD)</b>
Comment	FMD concurs with this recommendation. As part of the response to Recommendation 1 - additional training and support will be dedicated to completing further emergency procedures trainings.

**Recommendation 8**

The Facilities Management Division (FMD) should review all locked doors in the path of egress for compliance with the Seattle Fire Code. Where locks are not allowable, including for the Yesler Building stairwells, FMD should remove any locks or obstructions that prevent people from exiting through the path of egress.

**Agency Response**

Concurrence	<b>Concur</b>
Implementation date	3/31/2021
Responsible agency	<b>Facilities Management Division (FMD)</b>
Comment	FMD concurs with this recommendation. A system wide review will be accomplished by Building Operations Staff to address potential egress issues.

# Statement of Compliance, Scope, Objective & Methodology

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## Statement of Compliance with Government Auditing Standards

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Scope of Work on Internal Controls

We assessed internal controls relevant to the audit objectives. This included interviews with knowledgeable staff within the Facilities Management Division (FMD) and staff who occupy buildings that FMD manages. We also reviewed FMD policies relating to emergency practices and observed fire drills conducted by FMD to understand ongoing emergency preparation practices. In performing our audit work, we identified concerns relating to the consistency and effectiveness of emergency preparation practices meant to protect the life and safety of building occupants.

## Scope

This performance audit evaluated emergency preparation practices in Facilities Management Division-managed buildings, namely the Administration Building, the Chinook Building, King County Courthouse, King Street Center, and the Yesler Building. Data used to understand historical practices ranged from January 1, 2017 to December 31, 2019.

## Objectives

The initial objectives of this audit were the following:

1. To what extent does the County further the safety of building occupants by effectively communicating in preparation for and during evacuation drills and emergencies?
2. To what extent are the safety needs of building visitors and people with disabilities addressed in preparation for and during evacuation drills and emergencies?

## Methodology

To understand the extent to which the County furthers the safety of building occupants, we reviewed records, surveyed county floor wardens, and directly observed emergency preparation practices. We reviewed fire alarm testing records, Seattle Fire Department (SFD) high-rise inspection summaries, SFD notices of violation, and FMD fire drill documentation to understand whether life and safety equipment

are fully functional, whether required tests are conducted, and whether issues identified through such tests are remediated.

To understand best (and required) practices for emergency preparation and communication in buildings, we reviewed relevant portions of the Seattle Fire Code (SFC), the Washington Administrative Code, and guidance produced by the National Fire Protection Association. We also interviewed county employees with disabilities and county Americans with Disabilities Act (ADA) compliance managers to better understand best practices for ensuring the safety of employees with disabilities during building-wide emergencies. We then assessed the extent to which FMD standard operating procedures, policies, and emergency plans satisfy these requirements. We also reviewed evacuation wayfinding maps posted in county buildings and assessed the extent to which they include elements referenced in the SFC.

To assess the extent to which emergency preparation practices are effective and align with best practices, we directly observed five fire drills in FMD-managed buildings, namely:

- Administration Building, February 20, 2020
- Chinook Building, February 19, 2020
- King County Courthouse, February 21, 2020
- King Street Center, February 18, 2020
- Yesler Building, February 18, 2020

We also interviewed building occupants and conducted a survey of county employees that FMD identified as floor wardens to better understand employee experiences with prior emergency drills and preparation practices. We received 118 total survey responses out of a total of 270 employees included in the FMD's floor warden email lists.

In instances where we identified potential noncompliance with the SFC, we consulted directly with SFD about our interpretation. When SFD confirmed noncompliance with the SFC, we communicated these issues directly to FMD management.

### Portions of Methodology Discontinued

Due to disruptions caused by coronavirus disease 2019 (COVID-19), audit resources were reprioritized, safety of the audit methodologies for the auditors and others was assessed, and some original audit methodologies were eliminated. We initially developed methodologies for evaluating King County building ADA compliance, jail evacuation practices, and duress alarm functionality. We did not complete these evaluations. In the absence of the COVID-19 pandemic, these evaluations would have moved through the full audit process and may or may not have resulted in audit findings. Although we did not complete this work, we may do so in the future.



## List of Recommendations

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### Recommendation 1

The Facilities Management Division should update its **strategy and processes for ensuring the safety of building occupants during emergencies**. This strategy should reflect changes in building use such as increased remote work and the likelihood that floor wardens may not be present during emergencies. Full implementation would include developing, documenting, communicating, training, and implementing the updated strategy, including specifying roles and responsibilities for people involved.

### Recommendation 2

The Facilities Management Division should develop, document, train, and implement a systematic process to ensure that building emergency safety **issues identified in emergency drills, tests, and other information sources** are communicated to responsible parties and resolved in a timely manner. This process should align with the updated building safety strategy described in Recommendation 1.

### Recommendation 3

The Facilities Management Division should develop a systematic process for identifying and addressing **issues with alarm equipment functionality**, through fire drills or other means, and verify that identified issues are resolved. This process should align with the updated building safety strategy described in Recommendation 1.

### Recommendation 4

The Facilities Management Division (FMD) should **ensure that public address (PA) systems are tested** on a regular basis to ensure identification and resolution of issues with PA system functionality, **including issues related to user error**. This process should align with the updated building safety strategy described in Recommendation 1.

### Recommendation 5

The Facilities Management Division (FMD) should **ensure that wayfinding maps are accurate, include all elements required by Seattle Fire Code, and are posted in public areas** of FMD-managed buildings. This process should align with the updated building safety strategy described in Recommendation 1.

### Recommendation 6

The King County Executive should develop, document, communicate, train, and implement a process to **ensure that there are individualized emergency plans for staff who are unable to evacuate independently**. This process should align with the updated building safety strategy described in Recommendation 1.

### Recommendation 7

The Facilities Management Division should document, communicate, train, and implement processes to ensure **preparation and practice for non-evacuation emergencies**. This process should include completing the active shooter emergency plan and should align with the updated building safety strategy described in Recommendation 1.

### Recommendation 8

The Facilities Management Division (FMD) should review all locked doors in the path of egress for compliance with the Seattle Fire Code. **Where locks are not allowable, including for the Yesler Building stairwells, FMD should remove any locks or obstructions** that prevent people from exiting through the path of egress.

# Advancing Performance & Accountability

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**MISSION** Promote improved performance, accountability, and transparency in King County government through objective and independent audits and studies.

**VALUES** INDEPENDENCE - CREDIBILITY - IMPACT

**ABOUT US** The King County Auditor's Office was created by charter in 1969 as an independent agency within the legislative branch of county government. The office conducts oversight of county government through independent audits, capital projects oversight, and other studies. The results of this work are presented to the Metropolitan King County Council and are communicated to the King County Executive and the public. The King County Auditor's Office performs its work in accordance with government auditing standards.



This audit product conforms to the GAGAS for independence, objectivity, and quality.