



# Accessibility Awareness for Facilities Managers

## Massachusetts Facilities Management Association (MAFMA)

April 11, 2024



DIVISION OF  
CAPITAL ASSET  
MANAGEMENT &  
MAINTENANCE

# Accessibility Awareness for Facilities Managers

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## Agenda

- Introductions (10 min)
  - Statewide Accessibility Initiative
  - MA Architectural Access Board
- Accessible vs. Inclusive (5 min)
- Guidance on Accessible EV Charging (5 min)
- Inclusive toilet rooms (5 min)
- Common Accessibility Issues (30 min)
- Question and Answer
- Additional Resources

# DCAMM Statewide Accessibility Initiative

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The Statewide Accessibility Initiative (SAI) was developed in 2010 to assist the Commonwealth's agencies in making decisions that would improve their compliance with Title II of the American Disabilities Act (ADA), using a combination of policy development, program access planning, building operations and maintenance procedures, and priorities for capital spending.



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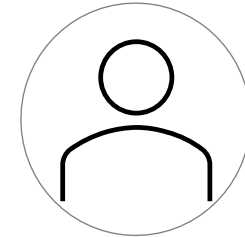
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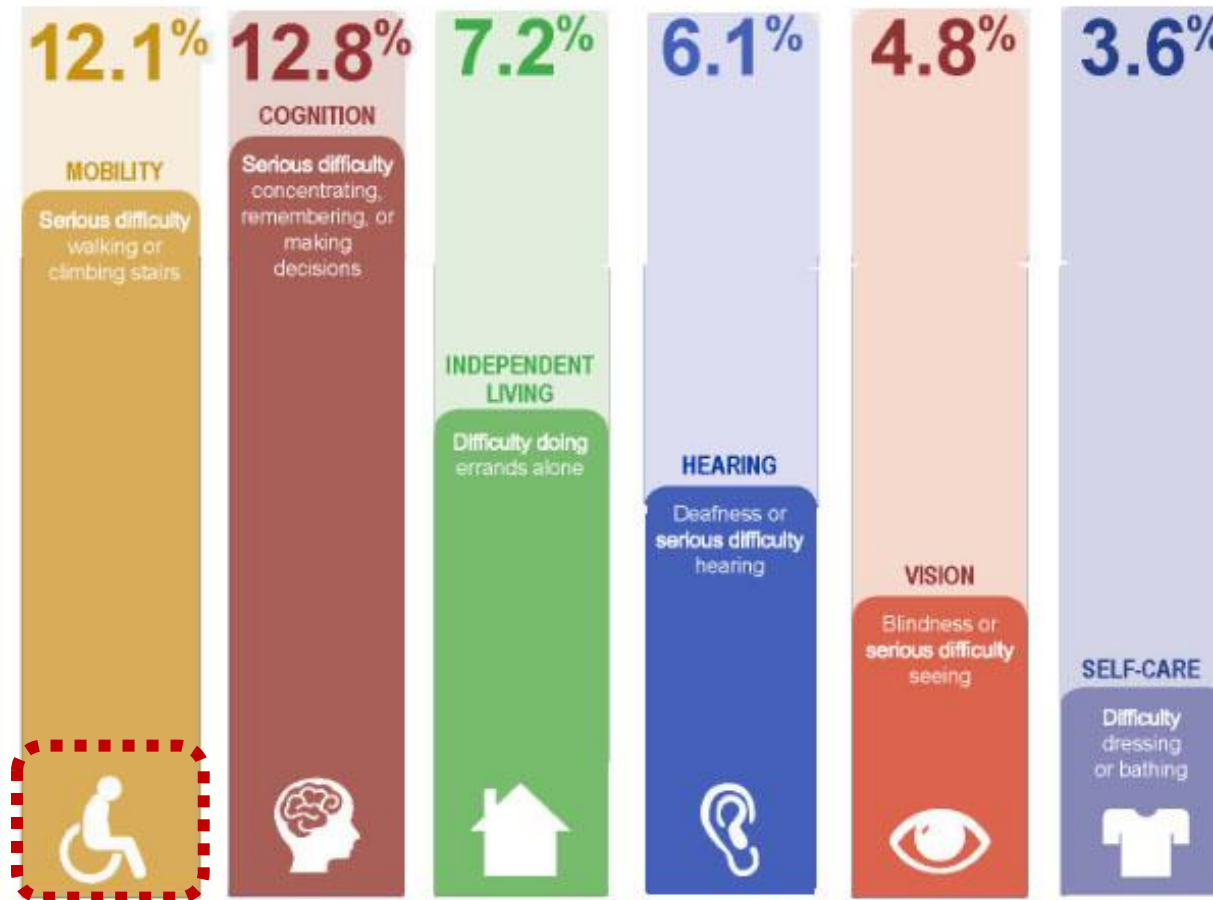
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# Accessible vs. Inclusive

## [Disability Impacts All of Us, CDC Infographic \(2023\)](#)



1 in 4 U.S. adults have a disability that impacts major life activities

Approximately 95% of disabilities are not visible

Only about 2% of persons with disabilities are wheelchair users

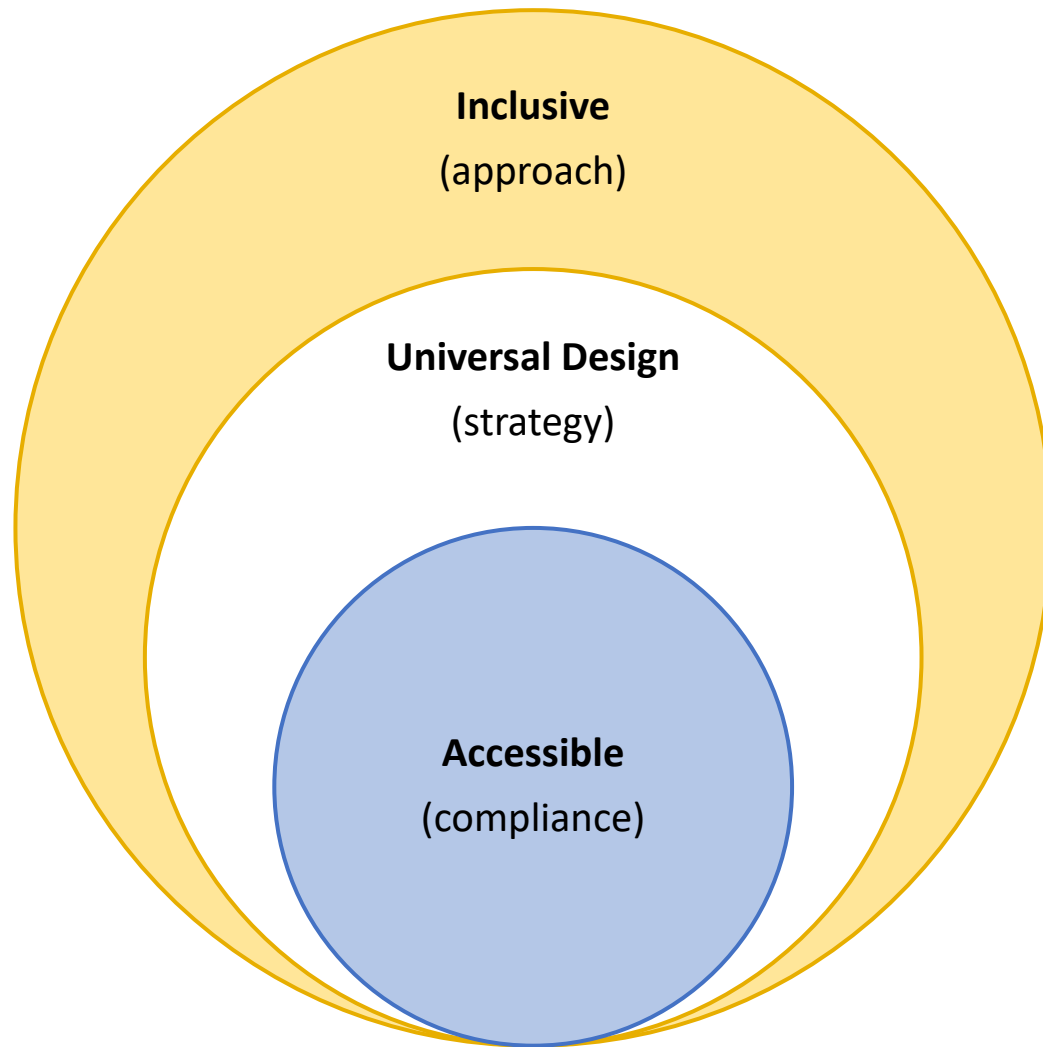
# Question

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How are disability and accessibility being discussed in the context of environmental justice?

# Accessible vs. Inclusive



Content in this presentation relating to inclusive design approach or Universal Design strategy include a yellow header

Content in this presentation relating to MAAB requirements will include a blue header.

# Massachusetts Architectural Access Board

The Architectural Access Board (AAB) develops and enforces regulations designed to make public buildings accessible to, functional for, and safe for use by persons with disabilities.

The [2006 revision of 521CMR](#) is the currently enforced regulation for construction, renovations, alterations, and repairs.

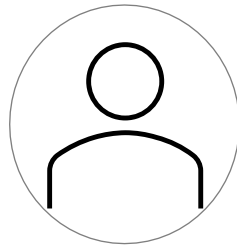


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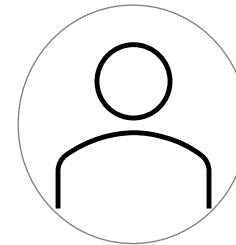


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# Massachusetts Architectural Access Board - Variances

- Can apply when you believe compliance with the Board's regulations is impracticable which is defined as:
  - Technologically unfeasible, or
  - Would result in an excessive and unreasonable cost without ANY substantial benefit to persons with disabilities.
- Complete the form available on our website and provide copies to the Board and the required other parties.
- After a 14-day waiting period, it is reviewed by the Board at their next meeting.
- Notices will be sent to all parties.
- Unless otherwise specified in the variance itself, a variance lasts until the Board's jurisdiction is retriggered on the particular element.

# Massachusetts Architectural Access Board - Complaints

- Any member of the public may submit a complaint alleging non-compliance with 521 CMR.
- Once we conduct an initial review to determine jurisdiction and establish a reasonable likelihood of the violation, the owner of the property is sent a First Notice of Violation, a copy of which is sent to your office.
- If the Owner can prove they are in compliance, the complaint will be dismissed, otherwise they'll need to provide a plan for compliance or apply for a variance.
- Failure to do so will result in a Second Notice being sent, then an Adjudicatory Hearing before the Board, and finally a Fine Hearing.
- AAB has the authority to issue fines of up to \$1,000 per day per violation, file complaints against licenses, issue cease and desists on the use of buildings and facilities among other administrative remedies.

# Question

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Do all existing buildings need to be accessible in MA and what thresholds are in place to assess triggers for compliance?

## Three Levels of Jurisdiction in 3.3

3.3.1(a) – Value of Work performed is less than \$100,000 & less than 30% of the assessed value of the building.

- Work performed must comply.

3.3.1(b) – Value of work performed is equal to or greater than \$100,000, but less than 30% of the assessed value of the building.

- Work performed must comply, &
- At least one accessible entrance needs to be provided and IF PROVIDED TO THE PUBLIC an accessible version of water fountains, public telephones, and toilet rooms.

3.3.2 – Value of work performed is equal to greater than 30% of the assessed value of the building.

- All areas of the building subject to 521 CMR must fully comply.

# Planning Accessibility Improvement Projects



How much of a role does accessibility play in selecting which projects to green light?

Is there a commonly used metric in deciding how to weigh the benefit of accessibility improvements against cost, time, and difficulty of completion?

## Accessibility Requirements for State Facilities ([link](#))

- Is planned work triggering accessibility upgrades under [521CMR, Section 3.3](#)?
- Are you doing an [alteration to primary function area](#) (ADA)?
- Are you meeting [ADA Program Accessibility](#) obligations?
- Follow the [ADA Priorities for existing facilities](#):
  1. Accessible approach and entrance
  2. Access to goods and services
  3. Access to public toilet rooms
  4. Access to other items (drinking fountains)

# Accessible vs. Inclusive

Two image series - This section includes an image on the left which is *accessible* and an image on the right which is *inclusive*. These images help recognize that accessibility is a minimum requirement, while inclusive facilities is the goal.

- Entrances
- Paths of travel
- Toilet rooms
- Specialized spaces
- EV charging

# Accessible vs. Inclusive



# Accessible vs. Inclusive

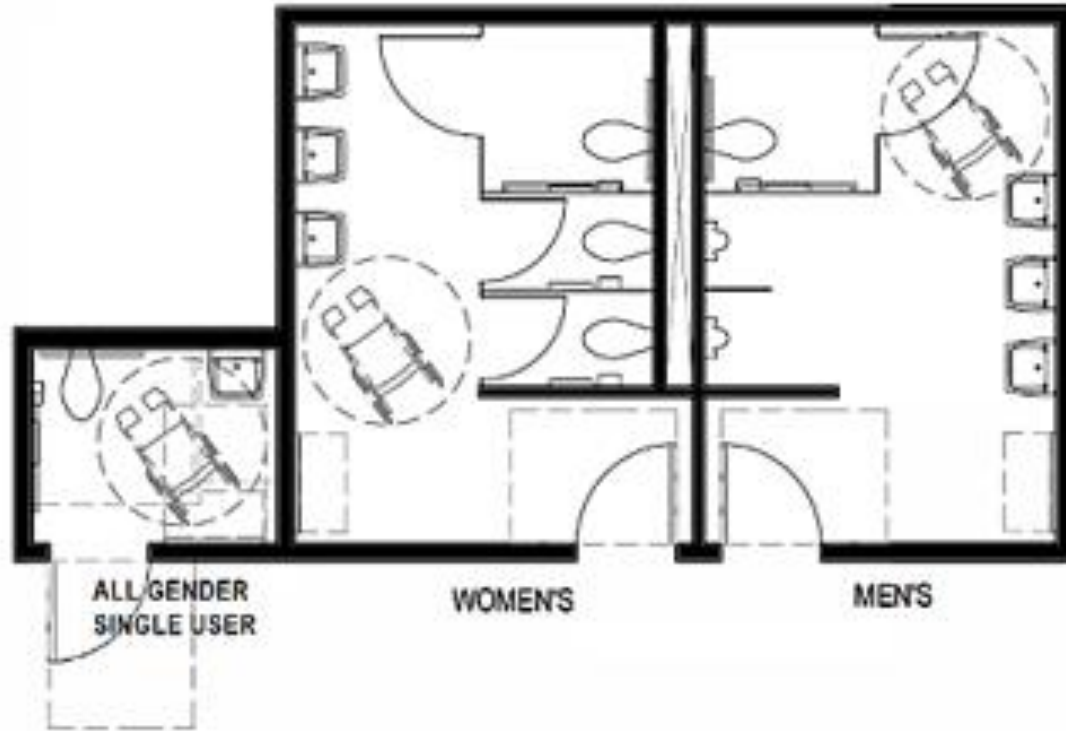


# Accessible vs. Inclusive

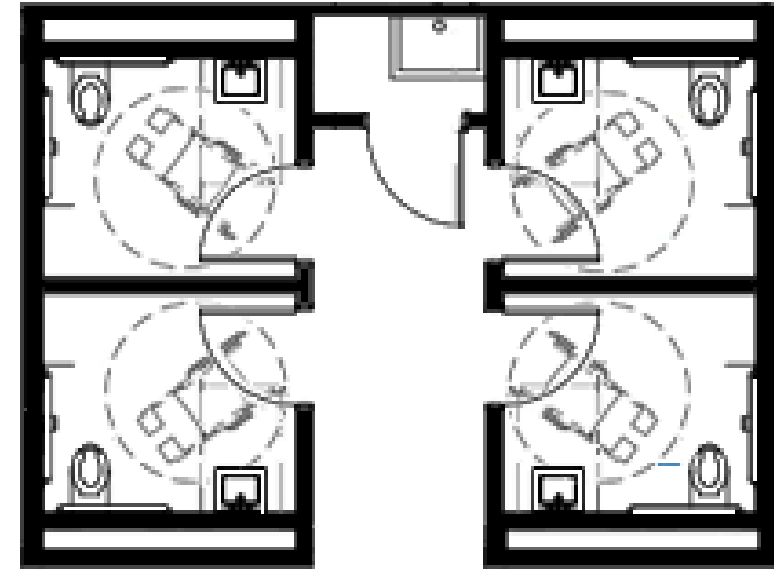


Photo courtesy of Nystrom, Inc.

# Inclusive Toilet Facilities



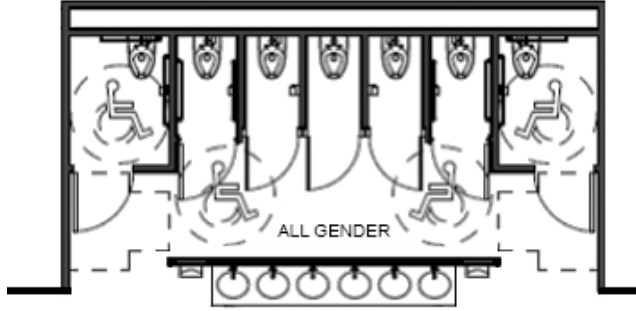
Gendered toilet rooms with accessible options. Meets building code with out the need for a variance



ALL GENDER - SINGLE USER

A variance to 284CMR is required if urinals are not provided in the facility. Discuss gender designation and fixture counts with the AHJ. Consult with a design professional.

# Inclusive Toilet Facilities



A variance to 284CMR would likely be required. Partition height may need to be floor to ceiling.

A variance to 521CMR would likely be required if not all stalls are accessible.

Consult with a design professional and the AHJ.



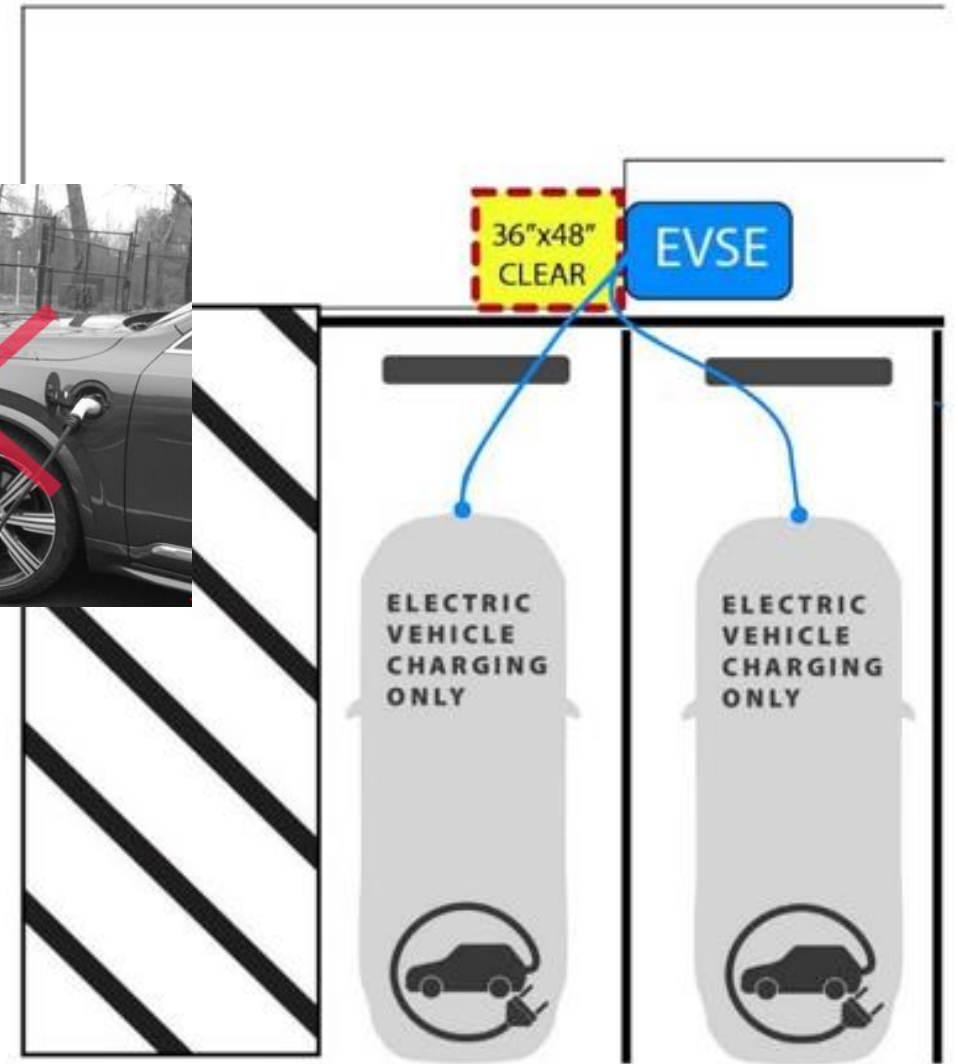
Image credit: Cunningham Group Architecture, Inc. Inclusive Restroom Design Guide: A Comparative Analysis of Inclusive and Gender Specific Restrooms in K-12 Schools, 2020.

# Accessible EV Charging Guidance

The Statewide Accessibility Initiative, in collaboration with the DOER Leading by Example program, has published [guidance](#) on how to make EV charging accessible.

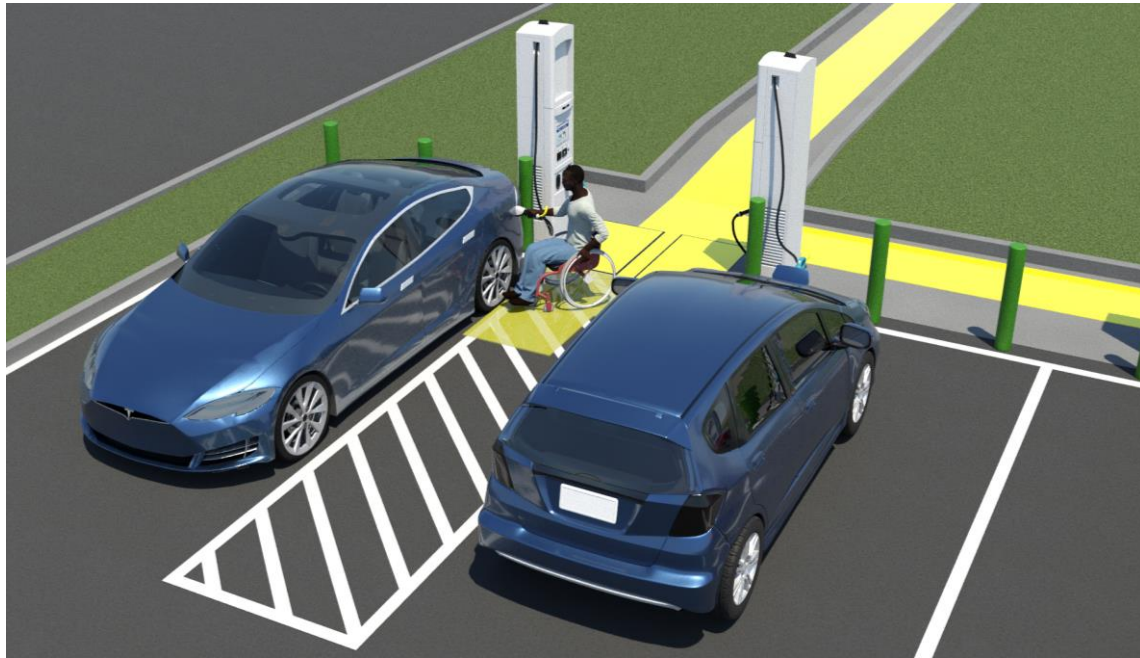
1. wide parking space with access aisle
2. adjacent to an accessible route
3. charging equipment adjacent to accessible route
4. level surface at the charging equipment
5. controls within an accessible reach
6. a layout where cords do not conflict with the route

These spaces are capable of being used by someone with a disability but are not required to be restricted to a person with a disability plate or placard.



# Accessible EV Charging Guidance

The US Access Board guidance on accessible EV charging is very comprehensive and is complimentary to the guidance and 521CMR.



Possibilities for accessible EV charging are numerous.

Source: US Access Board, [Design Recommendations for Accessible Electric Vehicle Charging Stations](#) (July 2023)



Guidelines are provided for public and fleet parking.

Source: US Access Board, [Design Recommendations for Accessible Electric Vehicle Charging Stations](#) (July 2023)

# Common Accessibility Issues for Facilities Managers

Site arrival points

Paths of travel

Maintenance of routes

Entryways

- Door clearances
- Door pressure
- Closing speed
- Signage

Emergency Egress

Toilet Rooms

Signs for Permanent Spaces

Assembly areas



# Common Accessibility Issues for Facilities Managers

## Accessible Parking and Site Issues

### Design

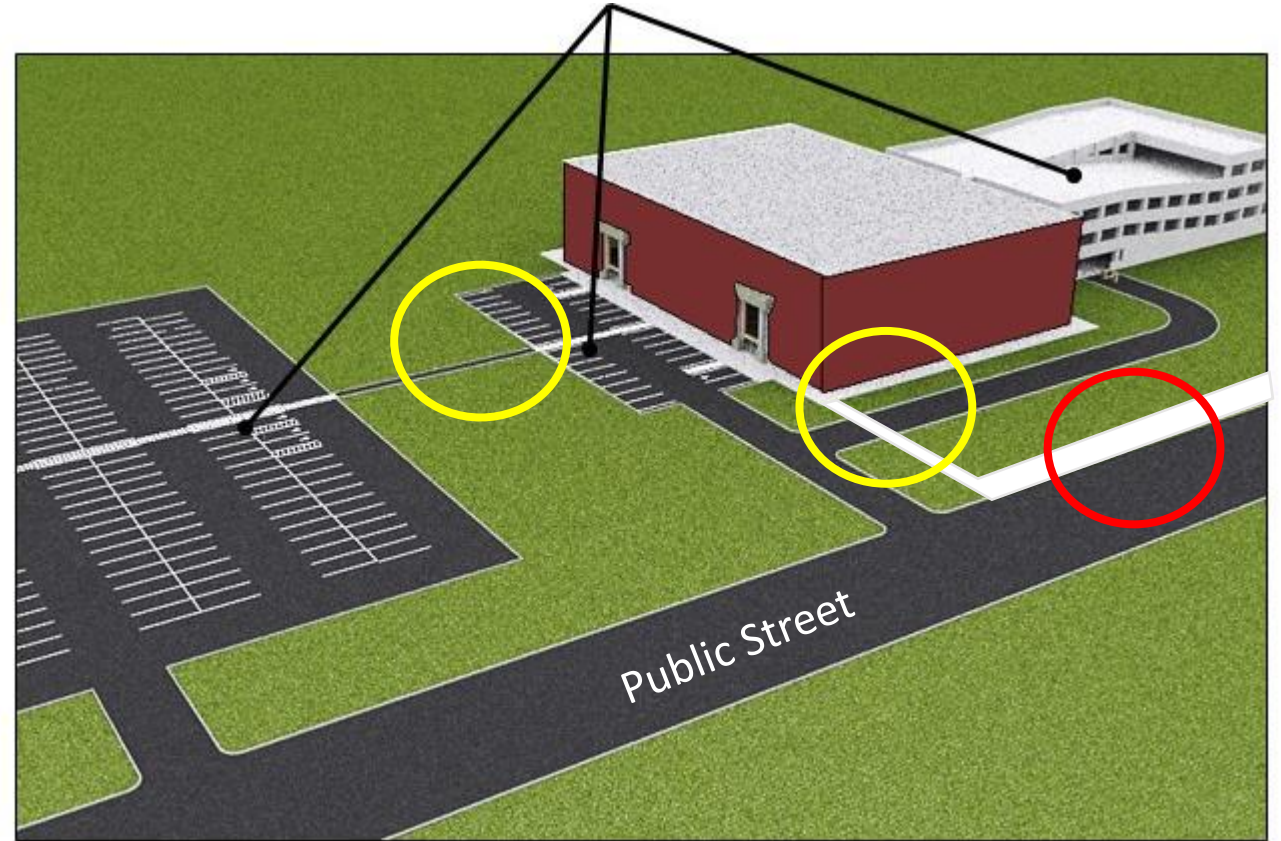
- 8' Wide Space
- 5' or 8' diagonally striped access aisle
- Sign at head of space.

### Dispersion

- Parking counts are based on the sum of all lots and should be distributed across all lots UNLESS clustering them in particular lots will result in a GREATER level of access.
- If spaces are distributed proportionally, they can be subject to the same restrictions (time, fee, etc.) as the rest of the spaces in a lot.

### Location

- Closest to building entry
- If more than 200' a drop off is required within 100'



Running slope exception: Remember that sidewalk is a defined term in 521 CMR. It applies only to walks that fall within the right-of-way of a street

# Common Accessibility Issues for Facilities Managers

## Paths of travel

- An oft overlooked requirement is passing spaces if your route is less than 60" wide you need one every 200'.
- Cross-slope requirements for accessible route are completely uniform across all types and have no by-right exceptions. Changes in cross-slope have an outsized impact on the work required to traverse a path in a wheelchair.
- Running slope exception: Remember that sidewalk is a defined term in 521 CMR. It applies only to walks that fall within the right-of-way of a street



Parking slopes greater than 2%



Excessively steep or sloping walkways



No tolerance for user error



Non-compliant ramp

# Common Accessibility Issues for Facilities Managers

## Entryways

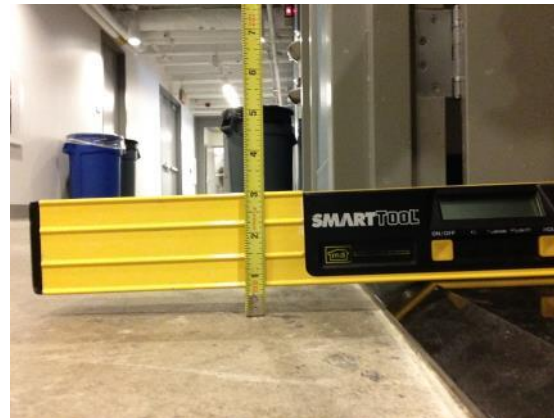
- The space on either side of a door must be level (not more than 1:50 in any direction).
- Clearance requirements are based on direction of approach and where a door has multiple directions of approach it may need to meet multiple clearances.
- Door opening force is an ongoing maintenance issue and needs to be checked on a regular basis as hydraulics in closers will degrade over time as they are used.
- An automatic opener will exempt you from the clearance/opening force requirements, consider using them if you have doors with repeated opening force issues.



Heavy doors



Door width is too narrow



Excessively high threshold

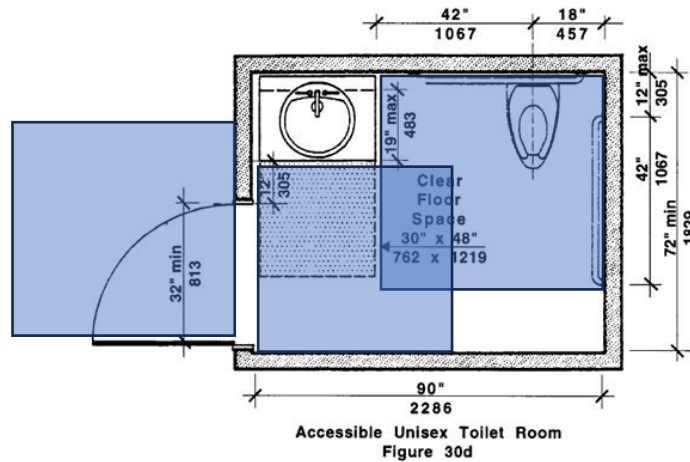


Lack of maneuvering clearance at door

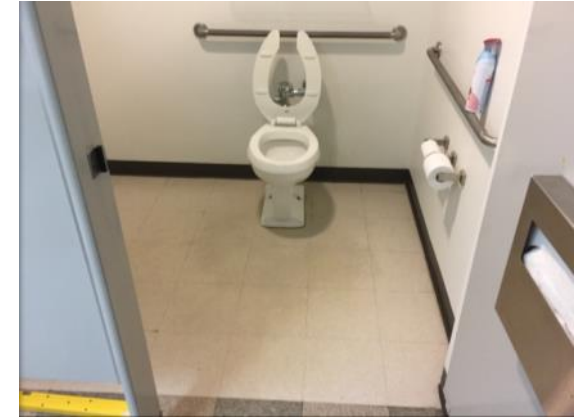
# Common Accessibility Issues for Facilities Managers

## Toilet Rooms

- Protection under sinks
- Toilets not on center
- Grab bar issues
- Objects in clearances
- Dispensers and/or dryer within reach of the accessible sink



Lack of protection underneath sink



Toilet not located correctly from wall



Rear grab bar obstructed by flush valve



Side grab bar obstructed by dispenser

# Common Accessibility Issues for Facilities Managers

## Paths of travel

- protruding objects as hazards
- overhead hazards
- noncompliant changes in level
- slopes that exceed 5% and don't meet ramp requirements
- signage



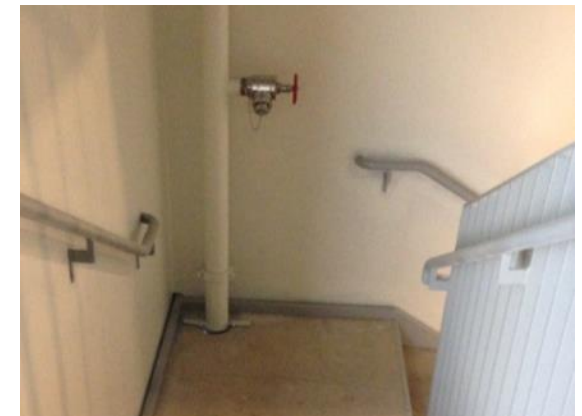
Protruding drinking fountain in pathway



Lack of protection underneath stairs



Noncompliant handrails



Lack of protection under standpipe valve

# Common Accessibility Issues for Facilities Managers

## Signs

See 521CMR, [Section 41: Signage](#) and, the *Guide to the ADA Accessibility Standards*, [Chapter 7: Signs](#)

- Where requirements differ, use the regulation that provides better accessibility.
- The 2010 ADA Standards has more detailed technical requirements for sign placement.
- 521CMR and the 2010 ADA Standards align on the use of Braille, raised letters, symbols, and text size and other characteristics.
- Both the MAAB and the ADA require the use of the original International Symbol of Accessibility (ISA) where the symbol is required on signs.



ISA (1968)

# Common Accessibility Issues for Facilities Managers

## Paths of travel

- deteriorated surfaces
- snow and ice removal
- maintain vegetation (tree roots)
- pooling water
- access during construction



Plazas and walkways in disrepair



Overhanging vegetation along paths



Alternative path during construction



Clearances during inclement weather

# Maintenance of Accessible Features

## Schedules and checklists

- Are all accessible features routinely maintained and serviced?
- Are there written procedures for managing access during equipment failures?
- Assistive Listening system checks where these systems are required.

## Janitorial

- Are flooring, lighting, and toilet rooms maintained with safety in mind?
- Are corridors kept free of storage and clutter?
- Weather conditions: snow removal, wet floors, icing, drainage



# Question and Answer

## DCAMM SAI



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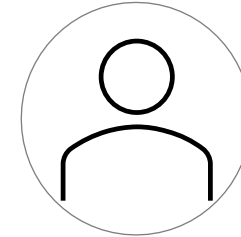
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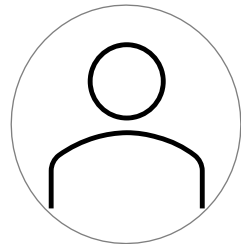


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Accessibility Intern

(January to May 2024)

## MAAB

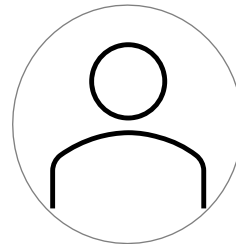


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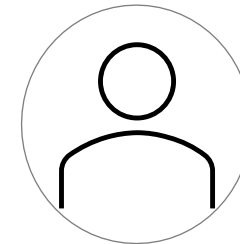


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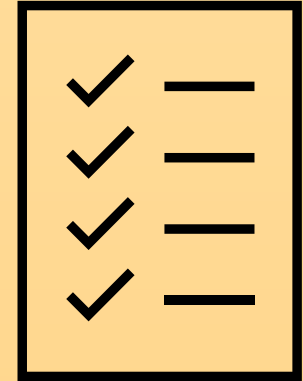
# Additional Resources

## DCAMM

- Statewide Accessibility Initiative ([link](#))
- Accessibility Requirements for State Facilities ([link](#))
- DM Deferred Maintenance ([link](#))
- DCAMM's MAAB Scoping Form ([link](#))
- 2010 ADA Standards for Accessible Design ([Standards](#)) ([Guide](#))

## Massachusetts Architectural Access Board ([link](#))

- 2006 revision of 521CMR ([link](#))
- Variance Process ([link](#))



### TRAINING EVALUATION

Please visit the link below to evaluate this training:

<https://forms.office.com/g/D0gizTjiGk>