521 CMR: ARCHITECTURAL ACCESS BOARD

521 CMR 18.00: TRANSPORTATION TERMINALS

18.1 GENERAL
Transportation terminals shall comply with 521 CMR, except as specified or modified in 521 CMR 18.00. Transportation terminals shall include but not be limited to airports, bus and train stations, marine terminals, subway stops, commuter rail, light rail, and rapid rail transit stations.

18.2 ACCESSIBLE ROUTE
At all newly constructed, reconstructed, altered or remodeled stations, an accessible route shall connect all terminal buildings or station houses, platforms, parking areas and street entrances.

18.3 ENTRANCES
At least 50% of the entrances to a transportation terminal shall be accessible.

18.4 PLATFORM ACCESS
To facilitate access to subway cars, airplanes, buses, trains, and other means of public transportation, platforms shall comply with the following:

18.4.1 Platform to Vehicle Gaps: At newly constructed, reconstructed, altered, or remodeled stations, the distance between platform and vehicle at boarding platforms shall not exceed three inches (3" = 76mm) in the horizontal plane and ½ an inch (½" = 13mm) in the vertical plane. Where construction constraints result in platform to vehicle gaps that exceed these requirements, a bridge plate designed to eliminate such gaps shall be made available at every door of the vehicle where passengers are boarding or disembarking. Where construction constraints in light rail stations result in platform to vehicle gaps that exceed the requirements a device used to bridge the gap must be a minimum of 36 inches wide or the width of the opening, whichever is greater and the slope shall not exceed 1:12. Exception: a slope between 1:10 (10%) and 1:12 (8.3%) is allowed for a single rise of a maximum of three inches (3" = 76mm).

18.4.2 Platform Warnings: Platform edges at newly constructed, reconstructed, altered, or remodeled stations shall have a yellow (Federal Yellow 33538) band of detectable warning at least 24 inches (24" = 610mm) in width except where there is no defined platform edge, the warnings shall be placed far enough from the tracks to allow for the dynamic envelope of vehicles using tracks at those terminals. See Fig 18a.
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a. *Detectable warnings* shall consist of raised truncated domes with a base diameter of nominal 0.9 inches (0.9" = 23mm), a height of nominal 0.2 inches (0.2" = 5mm) and a center-to-center spacing between domes which are farthest apart in a configuration, of nominal 2.35 inches (2.35" = 60mm) and shall contrast visually with adjoining surfaces, by a minimum of 40%.

b. The material used to provide contrast shall be an integral part of the walking surface.

c. *Detectable warnings* used on interior surfaces shall differ from adjoining walking surfaces in resiliency or sound-on-cane contact.

18.5 COMMUTER, LIGHT RAIL AND RAPID RAIL TRANSIT TERMINALS

To facilitate access to *commuter, light rail, and rapid rail* transit vehicles, the following shall be provided:

18.5.1 Platforms at new stations: At newly *constructed* stations serving *commuter rail* coaches, access shall be provided to all passengers and to all coaches of the train by means of a full length raised platform. For purposes of 521 CMR 18, a newly *constructed* station is defined as any station stop where passenger services has not heretofore been provided or where no regularly scheduled passenger service has been provided for five or more years. See Fig. 18b.

![Diagram of a platform with overhead shelter and an access ramp.](image)

a. Such platforms shall be at least 60 inches (60"=1524mm) in *clear width*

b. Such platforms shall provide overhead shelter from rain and snow along a total of at least 150 feet (150' = 46m) of their length and at all access *ramps*. 
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18.5.2 Platforms at reconstructed stations: Any reconstructed, altered or remodeled stations serving commuter rail coaches shall afford access to at least two coaches of a train by means of a raised platform. Said platform shall comply with the following:

a. Such platforms shall be at least 60 inches (60" = 1524mm) in clear width.
b. Such platforms shall be at least 45 feet (45' = 14m) in length and shall, along their full length and at all access ramps, provide overhead shelter from rain and snow.

18.5.3 Light Rail Transit Terminals: To facilitate access to light rail transit vehicles, the following shall be provided:

18.5.3.1 Platforms at newly constructed stations serving light rail transit vehicles shall provide access to all passengers and to all coaches of the train by means of a full length raised platform. Such platforms shall be at least 60 inches (60" = 1524mm) to clear width at the stopping zone for accessible doors. A minimum of 36 inches (36" = 914mm) in clear width must be provided to each stopping zone for accessible doors.

18.5.3.2 Platforms at reconstructed, remodeled or altered stations serving light rail transit vehicles shall afford access to at least one car by means of a raised platform. Said platform shall comply with the following:

a. Such platforms shall be at least 60 inches (60" = 1524mm) in clear width at the stopping zone for accessible doors. A minimum 36 inch (36" = 914mm) clear width must be provided to each stopping zone for accessible doors.
b. Such platforms shall be at least eight feet (8' = 2438mm) in length.

18.6 FARE TRANSACTION

At least one fare transaction area of each type, at each accessible entrance shall be accessible and shall have a minimum 36 inch (36" = 914mm) wide path of travel. Where transaction counters are provided, they shall comply with the requirements set forth in 521 CMR 7.2.1a., b., c., and d. Where provided, coin or card slots shall comply with 521 CMR 6.5 Forward Reach or 521 CMR 6.6 Side Reach.

18.7 ENTRY/EXIT GATE

At least one entry and one exit gate shall be accessible and shall have a clear opening of not less than 32 inches (32" = 813mm) wide. If one gate serves as both entry/exit, it shall have a clear opening of not less than 32 inches (32" = 813mm) wide.

18.8 HAZARDOUS VEHICULAR AREAS

Detectable warnings shall be provided where a walk crosses or adjoins a vehicular way and the pedestrian and vehicular areas are not separated by curbs, railings, or other elements. The boundary between the areas shall be defined by a continuous detectable warning which is 24 inches (24" = 610mm) wide, complying with 521 CMR 18.4.2(a), (b), and (c).
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18.9 SEATING
Within the terminal there shall be seating at intervals not to exceed 200 feet (200' = 61m).

18.10 AT GRADE CROSSINGS
Where public sidewalks cross rail systems at grade, the surface of the continuous passage shall be level and flush with the rail top at the outer edge and between the rails. The horizontal gap on the inner edge of each rail shall be the minimum necessary to allow passage of wheel flanges and shall not exceed 2½ inches (2½" = 64mm). Where tracks cross a sidewalk, 24 inch (24" = 610mm) wide detectable warnings complying with 521 CMR 18.4.2a shall be placed on both sides of the tracks across the entire width of the sidewalk, at a sufficient distance from the tracks to allow clearance for the widest vehicle using those tracks. Where multiple tracks are part of the same level crossing, detectable warnings should be placed alongside the outermost track, and not within the sets of tracks.

18.11 ANNOUNCEMENTS IN SEATING AND PLATFORM AREAS
Visual systems for providing announcement to deaf and hard of hearing customers shall be provided wherever there are auditory systems for providing announcements.

18.12 TIER I MARINE FACILITIES
Tier I marine facilities are docks and/or piers that service scheduled waterborne passenger vessels with a vessel length of 40 feet (40' = 12m) or greater. These facilities shall provide persons with disabilities unassisted access measured under nominal marine conditions throughout spring tide range or 9½ feet (9.5' = 2996mm) whichever is less. Tier I marine facilities shall comply with the following:

18.12.1 Unassisted Access between the land or fixed facility and a floating vessel, with or without an intervening floating structure, shall be provided.

18.13 MARINE RAMPS
shall comply with the following:

18.13.1 Handrails: Marine ramps shall be equipped with handrails which comply with 521 CMR 24.5 Handrails.

Exception: At the top and bottom of the marine ramp, the upper and lower rails shall be connected with a circular return extending a minimum of 12 inches (12" = 305mm) beyond the edge of the ramp. It is not intended that handrail extensions be horizontal during all tidal or weather conditions.

18.13.2 Width: The clear width of the marine ramp shall be a minimum of 36 inches (36" = 914mm) measured between the handrails.
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18.13.3 Platforms: Marine ramps shall terminate in level platforms that are a minimum of 48 inches (48" = 1219mm) by 48 inches (48" = 1219mm), clear and unobstructed by handrails, door swings, entrances, or other projections. Such platforms shall occur at the top and bottom of each ramp and at intervals not exceeding the maximum ramp length as described in Table 1:

<table>
<thead>
<tr>
<th>RAMPS</th>
<th>MAXIMUM RAMP LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(excluding transition plates)</td>
</tr>
<tr>
<td>1:12 but less than 1:14</td>
<td>Not to exceed 30 feet (9m)</td>
</tr>
<tr>
<td>1:14 but less than 1:16</td>
<td>Not to exceed 35 feet (11m)</td>
</tr>
<tr>
<td>1:16 but less than 1:18</td>
<td>Not to exceed 40 feet (12m)</td>
</tr>
<tr>
<td>1:18 but less than 1:20</td>
<td>Not to exceed 45 feet (14m)</td>
</tr>
<tr>
<td>1:20 and over</td>
<td>Unlimited length</td>
</tr>
</tbody>
</table>

18.13.4 Transition Plates shall be a maximum of eight feet (8' = 2438mm) in length and shall have slopes less than or equal to 1:12. Transition plates longer than 18 inches (18" = 457mm) shall be equipped with handrails complying with 521 CMR 18.11.1. These handrails must be parallel to the handrails on the marine ramp(s), but may not necessarily be continuous with them. Transition plates shall be at least as wide as the ramp. The change in level between the end of the transition plate and the adjoining level surface shall be no greater than ½ an inch (½" = 13mm).

BRIDGE PLATES

Vessels using bridge plates at boarding and disembarking areas, access shall comply with the following:

18.14.1 A maximum slope of 1:8 to 1:10 is allowed for a maximum rise of three inches (3" = 76mm). A maximum slope that is less steep than 1:10 and no steeper than 1:12 is allowed for a maximum rise of six inches (6" = 152mm).

18.14.2 Bridge Plates shall have a minimum clear width of at least 36 inches (36" = 914mm).

18.14.3 Bridge Plates longer than six feet (6' = 1829mm) are marine ramps and shall comply with 521 CMR 18.13, Marine Ramps.

FLOATING AND FIXED DOCKS

The edge of all floating and fixed docks shall provide at least one of the following:

a. Handrails that comply with 521 CMR 24.5, Handrails;
b. Curbs that are at least four inches (4" = 102mm) high and are preceded by detectable warnings that comply with 521 CMR; or
c. Detectable warnings that comply with 521 CMR.
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18.16 ACCESSIBLE ROUTE
There shall be an accessible route to and throughout the marine facility that connects the vessels boarding area with all other areas and services available to the public within the marine facility. The accessible route shall comply with 521 CMR 20.00: ACCESSIBLE ROUTE.

18.17 ANCILLARY FACILITIES
Where provided within the marine facility, ancillary facilities such as fare transaction areas, public toilets, public telephones, vendor(s) stands, etc., shall comply with 521 CMR.

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18.18 MARINE FACILITIES THAT SERVICE WATERBORNE PASSENGER VESSELS WITH A VESSEL LENGTH OF LESS THAN 40 FEET (40' = 12m) - Reserved

18.19 OTHER TIER(S) MARINE FACILITIES - Reserved