Understanding How the Proposed Changes to 521 CMR May Impact Landscape Architecture

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In collaboration with the Boston Society of Landscape Architects
Disclaimer

This slide presentation has been compiled by Emmanuel Andrade, RA, and Josh Safdie, AIA – co-chairs of the Boston Society of Architects Access Committee. The content of the presentation has not been reviewed by the MA Architectural Access Board (MAAB), and the individual sections highlighted do not include all sections of 521 CMR for which changes have been proposed. Any questions about the specifics of the code should be directed to MAAB staff at (617) 727-0660.
3.3 EXISTING BUILDINGS OR FACILITIES
3.3.1 If the work being performed amounts to less than 30% of the full and fair cash value of the building or facility and:

b. if the work costs $100,000 or more, then the work being performed is required to comply with 521 CMR. In addition, an accessible public entrance and an accessible toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) shall also be provided in compliance.

Exception: Whether performed alone or in combination with each other, the following types of alterations are not subject to 521 CMR 3.3.1, unless the cost of the work exceeds $500,000:

e. Site improvements, including but not limited to, landscaping, fencing and site utilities.
Proposed Changes to 521 CMR

521 CMR 5.00: DEFINITIONS

SITE IMPROVEMENT:
Landscaping, paving for pedestrian and vehicular ways, outdoor lighting, recreational facilities, and the like, added to a site.
7.1 GENERAL
Ground and floor surfaces including, but not limited to, floors, walks, ramps, and curb cuts shall be stable, firm, slip resistant, and maintained with materials that ensure continued slip resistance, and shall comply with Section 7.00: GROUND AND FLOOR SURFACES.

Exceptions:

1. Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm, and slip resistant.
2. Areas of sport activity shall not be required to comply with 521 CMR 7.00: GROUND AND FLOOR SURFACES.
7.3 SURFACE FLATNESS
All ground and floor surfaces shall comply with the following surface flatness requirements:

7.3.1 Ground and floor surfaces shall be constructed to a tolerance of not more than 3/8” for exterior surfaces and 1/4” for interior surfaces out of true plane in any single 10’ long section of ground or floor surface. This is subject to verification by the use of a 10 foot long straightedge.

7.3.2 The tolerance for surface flatness in the short dimension of walkways that are less than 6’ in width shall be no more than 1/4” out of true plane in this dimension.

7.3.3 Where expansion and control joints are needed along accessible routes, they shall be saw cut and not exceed 1/4" in width. If the joint is between sections of bridges, buildings or platforms, the joint may exceed 1/4" provided that it is covered in a manner that is firm and minimizes any variations in vertical displacement over time.
Proposed Changes to 521 CMR

521 CMR 7.00: GROUND AND FLOOR SURFACES

7.4 PAVERS, PAVING STONES AND BRICKS
The use of surface paving products such as pavers, paving stones and bricks shall be permitted on accessible routes. The use of such products shall be subject to 521 CMR 7.00: GROUND AND FLOOR SURFACES. Irregularly shaped materials that cannot be installed in a manner that meets the following requirements shall not be allowed:

- Flatness.
- Width of horizontal joints.
- Lippage. Sand setting bed for brick pavers is encouraged.
- Spacing between cast bricks.
- Slip resistance when ground is wet. Glossy surfaces not allowed.
- Pattern and direction of brick paving.
- Physical edge restraint systems.
- Setting methods, substrates, and drainage systems to maximize life of surface.
- Tolerances.
**Proposed Changes to 521 CMR**

**521 CMR 8.00: ACCESSIBLE ROUTE**

8.1 GENERAL
An accessible route shall connect all accessible spaces and elements inside and outside a facility and shall coincide with the route for the general public. Accessible routes may not include stairs, steps, or escalators, even if the stairs and steps are required to be accessible under 521 CMR.

8.2 LOCATION
Within the boundary of the site, an accessible route(s) shall be provided from accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance they serve. The accessible route(s) shall coincide with the route for the general public.

8.2.1 At least one (1) accessible route shall connect accessible buildings, facilities, elements and spaces that are on the same site.
Proposed Changes to 521 CMR

521 CMR 9.00: WALKWAYS

229.1 GENERAL
Walkways shall include but not be limited to all walks, sidewalks, overpasses, bridges, tunnels, underpasses, plazas, courts and other pedestrian pathways, and shall comply with the following requirements:

Exception:

Limited walkway and sidewalk removal, and replacement work associated with the repair or replacement of essential in ground utilities and services, when the walkway or sidewalk removal and replacement is limited to no more than a 10’ length of the walkway or sidewalk (when measured along the direction of travel). The new work shall be done in such a manner and with such materials so that the replacement surface either matches the pre-existing condition, or so that it in no way lessens the pre-existing surface hardness or flatness.
521 CMR 9.00: WALKWAYS

9.2 WIDTH
Width of walkways shall be a minimum of 48”, excluding curb stones. An unobstructed path of travel shall be provided which is a minimum of 36” clear, excluding curb stones, for a linear length of 60” maximum.

9.4 LEVEL CHANGES
Walkways shall have continuous common surfaces, not interrupted by steps or changes in level greater than 1/2”.

9.4.1
Changes in level between 1/4” and 1/2” shall be beveled with a slope no greater than 1:2 (50%).

9.4.2
Changes in level greater than 1/2” shall require a curb cut, walkway, ramp, elevator, or platform lift that complies with 521 CMR.
12.2.1
The maximum slope of a ramp, and any 24” segment thereof, shall be 1:12. (There is no tolerance allowed on the maximum slope, Refer to 521 CMR 2.4.4d). Ramps of a shallower slope (i.e. 1:14 or shallower are preferable.

Exception: In existing sites, buildings, and facilities, ramps shall be permitted to have running slopes steeper than 1:12 complying with Table 12.2.1 where such slopes are necessary due to space limitations. When this exception is utilized, no handrails are required.

<table>
<thead>
<tr>
<th>Slope</th>
<th>Maximum rise</th>
</tr>
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<tbody>
<tr>
<td>Steeper than 1:10 but not steeper than 1:8</td>
<td>3”</td>
</tr>
<tr>
<td>Steeper than 1:12 but not steeper than 1:10</td>
<td>6”</td>
</tr>
</tbody>
</table>
Proposed Changes to 521 CMR

521 CMR 12.00: RAMPS

12.6 HANDRAILS
e. Handrail gripping surfaces shall have a cross-section complying with the following:

   i. Circular Cross Section: Handrails shall have a circular cross-section dimension with an outside diameter of 1-1/4” minimum and 2” maximum.

   ii. Non-Circular Cross Section: Handrails shall have a perimeter dimension of 4 inches minimum and 6-1/4” maximum, and a cross section dimension of 2-1/4” maximum.
Proposed Changes to 521 CMR

521 CMR 12.00: RAMPS

12.8 EDGE PROTECTION
Edge protection complying with 521 CMR shall be provided on each side of ramp runs and at each side of ramp landings.

Exceptions:

1. Edge protection shall not be required on ramps at curb cuts that are not required to have handrails and have slopes complying with 521 CMR 13.3, Slope, and 521 CMR 13.7, Flared Sides.

2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway.

3. Edge protection shall not be required on the sides of ramp landings having a vertical drop-off of 1/2” maximum within 10” horizontally of the landing edge.
12.9 OUTDOOR CONDITIONS
Outdoor ramps and their approaches shall be designed so that water will not accumulate on walking surfaces. If gratings are used to disperse water, they shall comply with 521 CMR 9.7, Gratings.

12.10 CIRCULAR RAMPS
Circular ramps are not permitted, except with the approval of this Board.
Proposed Changes to 521 CMR

521 CMR 15.00: PARKING AND PASSENGER LOADING ZONES

15.2.2
For every 6, or fraction of 6, parking spaces required by 521 CMR 15.2, Number, at least 1 shall be van accessible, See 521 CMR 15.4g.

15.2.3
Spaces required by the table in 521 CMR 15.2.1 need not be provided in a particular lot. They may be provided in a different location if equivalent or greater accessibility, in terms of distance from an accessible entrance, cost and convenience, is ensured.

15.3.1
Accessible parking spaces serving a particular building, facility or temporary event shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance.
16.1 GENERAL
All stairs are required to comply with the following:

16.2 TREADS AND RISERS
On any given flight of stairs, all steps shall have uniform riser heights and uniform tread depths.

16.2.1
The risers may be set at a 90 degree angle to the tread, or they may be sloped. If sloped, the slope under the tread shall be at an angle of 30 degrees maximum from vertical.
Proposed Changes to 521 CMR

PARTJ : RECREATION FACILITIES

521 CMR 50.00: GOLF FACILITIES
521 CMR 51.00: MINIATURE GOLF FACILITIES
521 CMR 54.00 SWIMMING POOLS, WADING POOLS, AND SPAS
521 CMR 59.00: PLAY AREAS
521 CMR 60.00 RECREATIONAL BOATING FACILITIES
521 CMR 61.00: FISHING PIERS AND PLATFORMS