

ACCESSIBILITY

GENERAL INFORMATION

- 1.1 CU is committed to fostering a barrier free environment for their students, faculty, staff and visitors. The purpose of these requirements is to:
 - Clarify selected accessibility requirements found under the Americans with Disabilities Act (ADA)
 - Provide guidance to Consultants based on practical experience of University leadership regarding accessibility methods, the historical significance of the campus and the expectations of the relevant public.
- 1.2 Columbia University is subject to regulations under federal and local laws and codes that require minimum design requirements for people with disabilities. The following list of laws, regulations, standards, and building codes apply to Columbia University in relation to architectural accessibility.
 - [Title III of the Americans with Disabilities Act](#)
 - [2010 ADA Standards for Accessible Design](#)
 - [New York State Human Rights Law](#)
 - [2008 New York City Building Code](#)
 - [New York City Administrative Code](#)
 - [Fair Housing Act](#)
 - [Section 504 of the Rehabilitation Act](#)
- 1.3 It is the joint responsibility of the Consultant and Project Manager to adhere to Columbia University Policy regarding Accessibility Requirements for new construction, alterations, renovations and barrier removal.

DESIGN REQUIREMENTS

The Consultant is expected to evaluate the accessible route including restroom facilities and identify all readily removable barriers for consideration of inclusion in the project. The following information serves as a complement to the requirements outlined in the Columbia University Policy for Accessibility Requirements for New Construction, Alterations/Renovations, and Barrier Removal.

- 2.1 Pathways/Corridors: Provide access routes throughout the Campus that support the use by all Community members and guests, including those with disabilities.

- a) All exterior pathways should be as level and smooth as possible to best accommodate the movement of mobility devices and to reduce tripping hazards for people with visual disabilities and who use walking assistance devices.
 - 1. Where possible, concrete finished pathways are preferred.
 - 2. When using a stone walk, a concrete base should be used rather than a sand or loose screen base.
 - 3. Additionally, a maximum of half-inch mortar joints is allowed to minimize the “rutting” of wheels on mobility devices.
- b) Provide an accessible route in the same area as general circulation for both interior and exterior pathways. General circulation routes must be accessible to maximum extent feasible. An accessible route should not be separated from the general circulation route. For example, the Northwest Corner Building library has an elevator located adjacent to stairs and therefore the accessible route is in the same area as the general circulation.
 - 1. In the rare circumstance that an accessible route cannot be provided in the same area as the general circulation, then the Project Manager must ensure that the accessible route provides easy and unassisted access to building areas (e.g. no intercom, CUID card required for access.)
- c) Address potential drainage problems that cause puddles of water or form icy areas along accessible paths with particular attention to accessible building entries and curb cuts at crosswalks.
 - 1. Provide a cross pitch for drainage perpendicular to pathways and sidewalks within the range of 1/8” per foot to 1/4” per foot.
 - 2. Use gratings with openings of no more than 1/2” in any direction of travel (“wheels and heels” compatible).
 - 3. Slope accessible paths away from entry doors at a maximum slope of 1:50.
 - 4. Ensure exterior path finish materials meet slip coefficient standards.
- d) New curb cuts and crosswalks should be positioned so that all pathways allow a mobility device user to follow established and predicted traffic patterns set by pedestrians. Install detectable warnings at curb cuts and when the pedestrian route crosses a hazardous vehicular way.
- e) All pathways, corridors, and general circulation routes must not have any protruding objects to ensure sight impaired users do not harm themselves by bumping into an object undetectable by a white cane. Protruding objects are objects that protrude more than 4” into the circulation route and are located between 27”- 80” above the floor/surface.

- 2.2 Ramps: Provide convenient access throughout the campus with a minimal need for ramps, especially for building access.

- a) Gradual slopes equal to or less than 1:20 are preferred to steeper ramps with railings. Exterior ramps between 1:12 and 1:20 slope require railings. Such railings should be designed to prohibit the securing of bicycles.
- b) Ramps should not be made of wood. They should be constructed of permanent and durable materials, be easy to clean and clear off snow during the winter.
- c) Covering an outdoor ramp should be considered, if architecturally appropriate, in order to protect both the ramp and its users from severe weather.

2.3 Stairs: When provided, stairs should be as negotiable as possible for those with limited mobility.

- a) spiral stairs are not permitted.
- b) Interior Convenience stairs are discouraged. For floor plates requiring travel distances in excess of 75' to a stair or elevator, they will be considered, if they are accompanied by a lift or LULA. Requests for the addition of a convenience stair and lift/LULA shall be made to the VP, Capital Project Management.
- c) All stairs, even those with fewer than three risers, both inside and outside buildings, should have hand railings on both sides that meet ANSI A117.1 specifications for handrails.
- d) Stairs should be avoided on primary routes wherever possible. When stairs are necessary, stairs must be made accessible and comply with ANSI A117.1 specifications for stairs.
- e) For interior stairs, contrasting striping must be provided on the top and bottom tread nosing of each stair rise. For exterior stairs, contrasting striping must be provided on all tread nosing.
- f) Sufficient lighting must be provided at stairs.

2.4 Elevators: Elevators should be consistently equipped/maintained for ease of operation by all users and located in the same areas as general circulation paths.

- a) Code requires that an audible signal announce the position of the elevator car. An automatic voice announcement is preferred when this does not interfere with the primary functions of the building.
- b) Areas of refuge must be designated and identified at each floor not directly accessible to an exterior exit, and have a way to communicate for assistance, e.g. a telephone. These areas are to be used in case of emergencies such as fire and must be kept clear.
- c) If existing elevator sizes in a renovated building are such that they cannot accommodate an interior wheel chair turning radius, then a modified cab must be considered, having two doors at opposite ends and/or duplicate interior controls.

2.5 Lifts: Wheelchair and platform lifts can be difficult to operate, they breakdown frequently, some cannot accommodate heavier, electric wheelchairs and scooters, and can be difficult to use for people who use crutches and/or walkers. Therefore, they should be installed only after all other alternatives have been explored and ruled out in alteration/renovation projects.

Wheelchair lift installation must be approved by Capital Projects Management Director of Design and Compliance and Disability Services Compliance Manager for Access and Accommodations.

- a) Wheelchair lifts are not allowed to be installed in new construction.
- b) Exterior lifts should never be used.
- c) All lifts must have signs that explain how to operate the lift, identify a contact person for assistance to use the lift when necessary, and display an emergency number in case the contact person is unavailable.
- d) When a lift is installed, no swipe or key access should be required to operate the lift. This helps ensure equal access and avoids the need to request assistance.

2.6 Doors: Design and install doors that meet code requirements and do not hinder ease of movement into and through a building.

- a) Main entrances and building vestibule doorways must have automatic door openers
- b) All new buildings must have 36" wide doors as a minimum. Doors being renovated in existing buildings should also be 36" wide to provide required clearances for mobility devices. In the case where a 34" door is installed, a 32" clear door opening must be provided.
- c) Eliminate thresholds/sill plates under doorways where possible in renovations. When unavoidable, minimize transition height to the minimum possible (no higher than ¾" and beveled 1:2)

2.7 Building Entrances: Entrances to buildings must be accessible to all users of the facility.

- a) For new construction, all building entrances must be accessible.
 - 1. Entrances must be accessible regardless of whether they are open to members of the public.
 - 2. If a service entrance is the only entrance to a building or tenant space, then it must be accessible.
 - 3. Routes to the entrance must be accessible and located on a direct route from the exterior general circulation
- b) Renovated or altered existing facilities must provide accessibility through the main entrance.
- c) A side or rear entrance can not be the only accessible entrance unless it can be demonstrated that accessibility through the main entry can not be accomplished and is approved by Capital Projects Management Director of Design and Compliance and Disability Services Compliance Manager for Access and Accommodations. In the case of a side or rear entry:
 - 1. The entry should terminate in the same interior lobby or entry hall as the main entry.

2. The accessible path from the main entrance to accessible building entrance must be clearly marked. Signage must be posted at the main building entrance describing the accessible route to the accessible building entrance.
 3. Access that requires the assistance of others, such as ringing a doorbell, or requiring CUID swipe access, is unacceptable.
- d) Automatic doors must be installed at building main entrances.
 - e) Snow and ice can make an otherwise accessible entrance dangerous to all, and inaccessible to a wheelchair user. If architecturally appropriate, covered entrances should be considered as another way of keeping entrances free of ice and snow.
 - f) Floor mats should be placed inside at building entrances to reduce slippery floors. Surface mounted mats may present barriers or bumps to wheelchair users. When possible, mats should be recessed into the floor so that the adjacent surfaces are level with each other.
 - g) Landings with an entry door at the top of both stairs and a ramp should be wider than the minimum wheel chair turning radius. New ramps reaching these upper landings are often designed perpendicular to the axis of the entry stairs and doors. In such situations, turning to open the door exposes the wheelchair user's back to the flight of stairs, especially when the user has to also back away from the door swing. Locating the doors in protected areas, installing railings or providing a more generous landing depth should be considered to address the danger of a wheelchair rolling backwards down the stairs.

2.8 Toilet Facilities/Restrooms: Provide toilet facilities that are user-friendly to the entire community.

- a) Accessible toilet facilities should be located in convenient areas of buildings and nearby other public restrooms. When the accessible restroom is not located adjacent to other restrooms, signage describing directions to the nearest accessible restrooms must be clearly posted.
- b) In alterations only, if an accessible restroom cannot be provided on a floor, then an accessible restroom should be provided no more than one-story above or below the floor.
- c) Toilet stall door latches should be easy to grasp with one hand and should not require tight grasping, pinching, or twisting of the wrist to operate. Doors in wheelchair accessible stalls should have pull handles on both sides of the door near the hinge.
- d) Where possible, single accessible toilet rooms should have doors that swing outward. For in-swinging doors, the swing of the door should be such that in the event of someone falling and requiring assistance access can be gained without obstruction.
- e) There should be a shelf or several hooks in the restroom/stall where packages, garments, purses, backpacks, etc., can be placed. At least one hook should be placed at 46", reachable from a sitting position.
- f) In large public buildings or buildings with large assembly spaces, install at least one accessible unisex restroom which will allow an attendant of the opposite sex to assist a person with a disability needing assistance.

- 2.9 Classrooms, Assembly Areas, Auditorium: Seating and use of classrooms, assembly areas, and auditoriums must be designed to accommodate all users.
- a) Classrooms and other assembly areas must be designed to provide integrated seating for people with disabilities that permit seating with friends or guests.
 - 1. In classrooms with tiered seating for 300+ occupants, wheelchair seating must be dispersed vertically.
 - 2. Wheelchair seating must not obstruct the general circulation route(s).
 - b) In a classroom and auditorium where fixed seating is required, the perimeter of the room should have aisle clearances equal in width to that of the wheelchair turning diameter, at least 5ft. wide.
 - c) In classrooms with tables, at least one table (no less than 5% of the total number of tables provided) should have an ADA specified knee clearances in order to accommodate a wheelchair user.
 - 1. Project Managers must determine if it is possible to make all classroom tables accessible instead of only 5%.
 - d) Wheelchair seating locations must be identified with a sign stating "Reserved for people with disabilities."
 - e) Height adjustable podiums/lecterns should be provided to accommodate faculty who are unable to stand.
 - f) Projector screen controls or other A/V controls must be with reach range from a seated position (15"-48" above the floor).
 - g) Instructor tables, lecterns, and/or desks should be accessible and accommodate various heights. They should be accessible to persons who must be seated when they lecture by providing a 60 in. minimum turning circle behind any fixed counter, lectern, or furniture.
 - h) A floor level speaking area is preferable to a raised podium or stage in tiered assembly rooms. Ramps, not wheelchair lifts, should be used to provide access to different levels of an auditorium, including the stage level.
 - i) Ramps, not wheelchair lifts, should be used to provide access to different levels of an auditorium. Wheelchair lifts accessing a podium or stage may not be used in new construction.
 - j) Wheelchair users should be able to enter and exit along the same primary routes as non-wheelchair users.
 - k) Assistive listening systems must be installed in classrooms and assembly areas where audible communication (i.e. microphone) is provided.
- 2.10 Dining Areas: Seating and use of Dining Halls must be designed to accommodate all users.
- a) Provide a wheelchair accessible route to all service areas. Provide at least 36" clearances to maneuver between occupied tables and chairs.
 - b) Tables and chairs should not be permanently fixed to the floor.
 - c) At least 50% of dining area tables must have ADA specified knee clearance to accommodate wheelchair users.

- d) At least one of each type of self-service item must be within reach range from a seated position (15"-48" above the floor).

CONSTRUCTION REQUIREMENTS

These requirements are intended to ensure continued accessibility in construction areas.

- 3.1 When an accessible route is temporarily closed by construction, alterations, maintenance operations, or other conditions, an alternate accessible route must be provided. Signage indicating the accessible route must be provided.
- 3.2 When an accessible toilet facility/restroom is closed by construction, alterations, maintenance, operations, or other conditions, signage indicating the nearest accessible restroom must be provided.

PRODUCTS

The following products have been reviewed for ADA compliance and should be considered for use in new construction and renovation projects:

- 4.1 Toilet Facilities/Restrooms:
 - a) Faucet: Zurn 4" Centerset Z81104
 - b) Mirror: Harney Hardware 19074
 - c) Sink: American Standard Lucerne Wall hung
 - d) Sink piping: Truebro Lav Shield
 - e) Toilet: Zurn HET Z5667-BWL elongated floor mounted
 - f) Urinal: Zurn Z5798

END OF SECTION