

US Custom House Museum and Carriage House



Town of Barnstable ADA Transition Plan

September 2021



Institute for Human Centered Design

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Background

The US Custom House was built in 1855 used as a custom house and post office until 1913, continuing to have the post office along with other offices until 1958, it was then converted into a museum in 1960. The Museum was listed on the State Register and the National Register of Historic Places in 1975.

The Museum has two (2) floors connected by an interior staircase. There two (2) entrances/egresses, one (1) of which is accessible via a ramp (south side). The first floor of the museum has several display rooms and one (1) single-user toilet room. The second floor of the museum has several display rooms.

A parking lot is located on the west side of the building and is shared with the Carriage House. It is unpaved. There are two (2) accessible parking signs.

Key Accessibility Issues

Exterior Accessible Routes

Accessibility issues with exterior accessible routes include walkways with cross slopes that are greater than the maximum allowed, excessive changes in level and surfaces that are not stable, firm and slip-resistant. In addition, the walkways are not maintained in operable working condition. Other accessibility issues include handrails at the ramp have a non-compliant cross section and do not extend past the top or bottom. In addition, there is no edge protection.

Parking Lot

Accessibility issues include lack of an access aisle and the surface is not stable firm and slip resistant. (see sketch)

Interior Accessible Routes

Accessibility issues include lack of an interior accessible route to the second floor.

Note: For program accessibility purposes the Town is providing video and audio tour of the second floor exhibits for the public to watch located on the first floor.

Single-User Toilet room

Accessibility issues include the toilet seat located further from the side wall than the maximum allowed, rear grab bar is less than the minimum allowed length, and flush control is not located on the open/transfer side of the toilet. In addition, the lavatory lacks knee and toe clearance, and lack of insulated pipes at the lavatory. Other accessibility issues include coat hooks that are installed higher than the maximum height allowed, and lack of compliant door hardware at the toilet room.

Signage

Accessibility issues include lack of a directional signage at inaccessible entrance directing people to the accessible entrance, lack of the International Symbol of Accessibility (ISA) at accessible entrance, and lack of a compliant designation signage raised character and braille at the single-user toilet room.

Additional Accessibility Issues

- Thresholds are higher than the maximum allowed.
- Ladder acts as a protruding object (staircase).
- Lack of an accessible picnic table and accessible route to the picnic table.

Note: The Town has an obligation to achieve program accessibility under the ADA regulations. There are exceptions for alterations to qualified historic buildings and facilities under the ADA Standards. Those exceptions include accessible routes, entrances and toilet facilities. If alterations to a qualified historic building or facility to achieve program accessibility would threaten or destroy the historic significance of the building or facility, fundamentally alter the program, or result in undue financial or administrative burdens, the ADA regulations allow alternative methods to be used to achieve program accessibility. Alternative methods include using audio-visual materials to depict portions of the facility that cannot otherwise be made accessible.

While IHCD's scope of work did not include a full review of the exhibitions, there are accessibility issues at the museum that have been documented in the survey catalog. The content of the

entire exhibition has to be made accessible for people who are blind or have low vision by ways of auxiliary aids or services. A full review of the accessibility of the exhibits is desirable. As a reference for accessible exhibitions, please see the Smithsonian Guidelines for Accessible Exhibition Design which can be downloaded at the following website address:

www.sifacilities.si.edu/sites/default/files/Files/Accessibility/accessible-exhibition-design1.pdf

Order of Magnitude Cost Estimates

- Renovate ramp: \$3,900
- Renovate toilet room: \$6,512
- Provide an accessible picnic table on an accessible route: \$1,400
- Miscellaneous corrective actions (signage, parking, change in level, detectable cane barriers, etc.): \$2,780

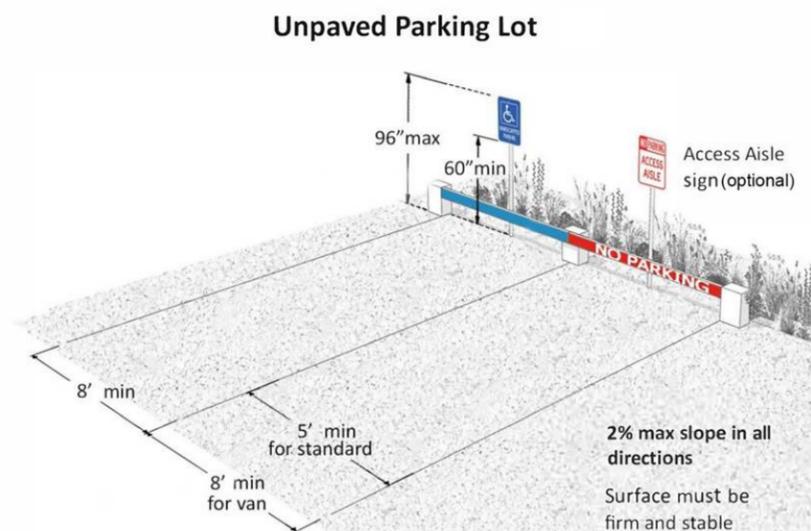
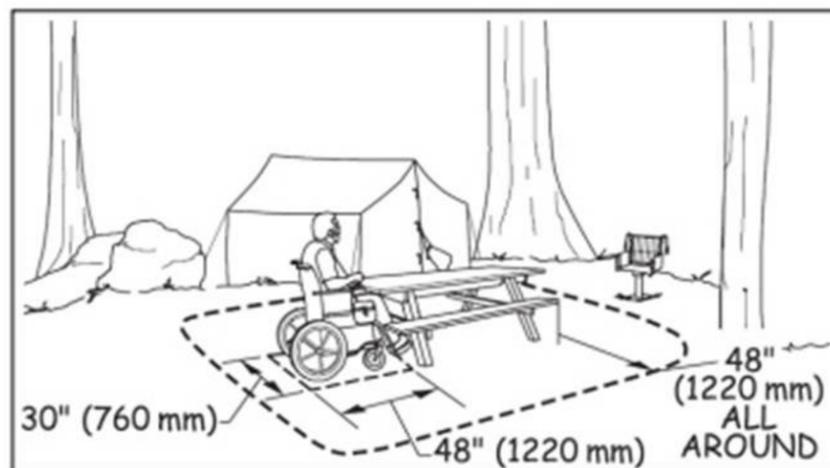
Total: \$14,592

***Note:** Costs for renovating exterior access routes is not included. Costs for making elements that might be part of the historic significance of the building is not included. Cost to provide compliant exterior routes is not included.

Best Practice and Inclusive Design

Best practice and inclusive design recommendations include elements that are not required in the standards but may create enhanced experiences for all users.

- Recommend switching to a matte flooring finish. The floor is highly polished that it creates a glare problem. Many people with low vision and some with perceptual differences related to brain-based issues cannot comfortably navigate that floor surface.
- Recommend adding contrasting strips at the edge of each step at exterior stairs.
- Recommends providing 48" wide stable, firm and slip-resistant surface all around the picnic table.



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ID	Location	Floor	Room	Element	Type	Photo	Issues	Current Measure	Recommendations	Quantity	Price	Cost Estimation
Approach and Entrance												
Exterior Access Route												
1	Path to Open Field at East Side	1		Exterior Access Route	Exterior		Cross slope > 1:50 (2.00%)	2.9%	Reduce cross slope to be no steeper than 1:50 (2.00%).	1	-	\$0
2	Main Street (West Side)	1		Exterior Access Route	Sidewalk		Cross slope > 1:50 (2.00%)	4%	Reduce cross slope to be no steeper than 1:50 (2.00%).	1	-	\$0
3	Main Street (East Side)	Ext.		Exterior Access Route	Sidewalk		Cross slope > 1:50 (2.00%)	5.7%	Reduce cross slope to be no steeper than 1:50 (2.00%).	1	-	\$0
4	Main Street (East Side)	Ext.		Exterior Access Route	Sidewalk		Cross slope > 1:50 (2.00%)	5,2%	Reduce cross slope to be no steeper than 1:50 (2.00%).	1	-	\$0
5	Main Street (West Side)	Ext.		Exterior Access Route	Sidewalk		Running slope > 1:20 (5%)	9.6%	Reduce running slope to be no steeper than 1:20 (5%).	1	-	\$0

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ID	Location	Floor	Room	Element	Type	Photo	Issues	Current Measure	Recommendations	Quantity	Price	Cost Estimation
6	Carriage House West Side Door	Ext.		Exterior Access Route	Exterior		Level changes > 1/4"	1"	Alter change in level to be 1/4" high max.	1	160	\$160
7	Carriage House East Side Door	Ext.		Exterior Access Route	Walkway		Level changes > 1/4"	1.5"	Alter change in level to be 1/4" high max.	1	160	\$160
8	Rear Entrance (South Side)	Ext.		Exterior Access Route	Walkway		Level changes > 1/4" Does not prevent accumulation of water	2" -	Alter change in level to be 1/4" high max. Repair surface.	1	160	\$160
9	Main Street (West Side)	Ext.		Exterior Access Route	Sidewalk		Route not maintained in operable working condition	-	Ensure the accessible route is maintained in operable working condition.	1	-	\$0
10	Entrance to Parking	Ext.		Exterior Access Route	Exterior		Route not maintained in operable working condition	-	Ensure the accessible route is maintained in operable working condition.	1	-	\$0

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ID	Location	Floor	Room	Element	Type	Photo	Issues	Current Measure	Recommendations	Quantity	Price	Cost Estimation
Off-Street Parking Lot or Garage												
11	Parking Lot	Ext.		Off-Street Parking Lot or Garage	Visitor		Access aisle not provided Surface not stable, firm, and slip-resistant	- -	Provide a marked access aisle that is at least 96" wide. Repair surface.	1	300	\$300
Exterior Ramp												
12	Rear Entrance (South Side)	Ext.		Exterior Ramp	N/A		Handrails have non-compliant cross section Edge protection < 4" high	- -	Provide handrails with 1-1/4" to 1-1/2" circular cross sections. Provide edge protection that prevents the passage of a 4" diameter sphere, where any portion of the sphere is within 4" of the finished floor or ground surface.	1	3900	\$3900
Entrance												
13	Main Entrance (north side)	1		Entrance	Main Entrance		Directional sign to accessible entrance not provided	-	Provide a directional sign indicating the location of the nearest accessible entrance.	1	346	\$346
14	Rear Entrance (South Side)	1		Entrance	Secondary Entrance		International Symbol of Accessibility not provided	-	Provide a sign with the International Symbol of Accessibility (ISA).	1	346	\$346
Access to Goods and Services												

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ID	Location	Floor	Room	Element	Type	Photo	Issues	Current Measure	Recommendations	Quantity	Price	Cost Estimation
Means of Egress												
15	Rear Egress (South Side)	1		Means of Egress	N/A		Tactile exit sign not provided	- -	Ensure tactile exit signs with raised characters and braille are provided at exit doors. Mount signs between 48"- 60" above the finished floor located on the latch side of the door. If an illuminated exit sign is provided, ensure it has the illuminated International Symbol of Accessibility (ISA).	1	232	\$232
16	Main Entrance (North Side)	1		Means of Egress	N/A		Directional sign to accessible emergency exit not provided	-	Provide a directional sign indicating the location of the nearest accessible emergency exit.	1	232	\$232
Interior Access Route												
17	Exhibit Area	1		Interior Access Route	N/A		Obstructed by protruding objects	-	Provide a cane-detectable barrier at the exhibit.	1	306	\$306
18	From Exhibit Area to Stairs	2		Interior Access Route	N/A		Obstructed by protruding objects	-	Provide a cane-detectable barrier.	1	306	\$306
Doors, Doorways, & Gates												
19	Exhibit Area	2		Doors, Doorways, & Gates	Circulation		Threshold > 1/2" high	1.5"	Alter the threshold to be 1/2" high max.	1	-	\$0

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ID	Location	Floor	Room	Element	Type	Photo	Issues	Current Measure	Recommendations	Quantity	Price	Cost Estimation
20	Exhibit Area	2		Doors, Doorways, & Gates	Circulation		Threshold > 1/2" high	1.5"	Alter the threshold to be 1/2" high max.	1	-	\$0
21	Exhibit Area	2		Doors, Doorways, & Gates	Circulation		Threshold > 1/2" high	1.5"	Alter the threshold to be 1/2" high max.	1	-	\$0
22	Single-User Toilet Room	1		Doors, Doorways, & Gates	Toilet Room		Hardware not operable with a closed fist	-	Provide hardware that can be operable with one hand and not require tight grasping, pinching, or twisting of the wrist.	1	484	\$484
Signage												
23	Toilet Room	1		Signage	Designation		Raised characters not provided on sign Braille not provided on sign Sign not located on the latch side of the door	- - -	Provide text with raised characters duplicated in braille on sign. Locate sign at permanent rooms alongside the door on the latch side.	1	232	\$232
Picnic Tables												
24	Near Rear Entrance (West Side)	Ext.		Picnic Tables	N/A		At least 5% accessible spaces not provided Picnic table not on an accessible route	- -	Ensure that one (1) picnic table is accessible. Ensure that the picnic table is connected to an accessible route.	1	1400	\$1400
Toilet & Bathing Rooms												

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ID	Location	Floor	Room	Element	Type	Photo	Issues	Current Measure	Recommendations	Quantity	Price	Cost Estimation
Lavatory												
25	Single-User Toilet Room	1		Lavatory	N/A		Toe or knee clearances not provided Plumbing underneath is exposed	25.75" -	Provide at least one lavatory with knee and toe clearance positioned for a forward approach. Insulate or otherwise configure pipes to prevent contact for at least one lavatory.	1	1778	\$1778
Single-User Toilet												
26	Single-User Toilet Room	1		Single-User Toilet	N/A		Flush control not on open side Centerline < or > 18" (MAAB) Rear grab bar < 42" long (MAAB)	- 19.5" 18"	Relocate the flush control to the open side. Relocate toilet so that the centerline is 18" from the side wall. Provide a rear wall grab bar that is 42" long min. and extends from the toilet 12" min. on one side and 24" min. on the other side (open side).	1	4100	\$4100
27	Single-User Toilet Room	1		Single-User Toilet	N/A		Hook located > 48" high	67"	Locate hook no higher than 48" above the finished floor.	1	150	\$150
Best Practice												
28	Main Entrance (North Side)	1		Main Entrance					Recommend adding contrasting strips at the edge of each step at exterior stairs.	1	-	\$0

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ID	Location	Floor	Room	Element	Type	Photo	Issues	Current Measure	Recommendations	Quantity	Price	Cost Estimation
29	Exhibit Area	1			N/A				Recommend switching to a matte flooring finish. The floor is so highly polished that it creates a glare problem. Many people with low vision and some with perceptual differences related to brain-based issues cannot comfortably navigate that floor surface.	1	-	\$0