

# Broadacres Farm



## Town of Sudbury ADA Transition Plan

September 2020



Institute for Human Centered Design

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### Background

Year Built: 1922

Broadacres Farm is located at 82 Morse Road and has an unoccupied house, one barn that was used for horse riding lessons and a horse stable with 11 horse stalls that was used to house horses. The facility was assessed based on its last known programs. Currently only the horse riding barn is in use (for Department of Public Works storage only). A small unpaved parking area is provided on the site by the horse riding barn.

The house has three stories including a basement, first floor and second floor and one entrance. An exterior ramp leads from the unpaved parking area to the main entrance. Only a stair connects the three floors. There are inaccessible exits from the kitchen sunroom and basement via a bulkhead. The house also has a sun room attached to the building on the northwest side and an enclosed outdoor office structure that is located outside of the exit door from the kitchen on the northeast side of the house.

The horse riding barn and horse stable are one (1) story. The stable has one (1) entrance. The horse riding barn has three (3) entrances, one (1) of which leads to an enclosed observation room where visitors can watch people riding horses and two (2) barn doors that lead to the horse riding area.

**Note:** The horse riding observation room, the sun room and the outdoor office were locked during the survey and unable to be accessed. Two (2) additional buildings, located on Broadacres Farm across the street from the three (3) previously mentioned facilities, are slated to be torn down and are not included in the survey.

### Key Accessibility Issues

#### Exterior Access Routes

Accessibility issues include running slopes that exceed 1:20 (5%) between the horse stable and horse riding barn, lack of a surface that is firm, stable and slip resistant between the horse riding barn and the horse stable, excessive level changes by the

entrance to the house, lack of an accessible route to the horse riding barn and lack of an accessible route to the outdoor office by the house.

#### Parking

A van accessible parking space is not provided in the parking area.

#### Exterior Ramp

Accessibility issues include lack of an accessible route to the ramp to the house, lack of the required 48 inches clear at the ramp and lack of compliant handrails.

#### Entrances

Accessibility issues include barn doors that require excessive opening force at the horse riding barn; an excessive change in level at the horse riding barn, horse stable and house entrance; and non-compliant door hardware leading to the horse riding observation room and the house. Because barn doors require excessive force, IHCD recommends installing an accessible door to the horse riding barn.

#### Signage

Accessibility issues include lack of compliant signage at entrances and exits.

#### Vertical Circulation

There is no accessible vertical circulation between the basement, first and second floors of the house. Rather than installing a lift, which may trigger full compliance for the building due to 521 CMR 3.3.2, IHCD recommends not locating public programs in the basement or on the second floor.

#### Toilet Rooms

Inaccessible single-user toilet rooms are provided in the horse stable and on the first floor of the house. These rooms lack the minimum required dimensions for accessible toilet rooms, and an accessible single-user toilet room should be provided in each location.

### Additional Accessibility Issues

- The circulation path narrows to less than is allowed in the kitchen storage room in the house.
- There are excessive changes in level at the horse barn entrance and on the first floor of the house.
- The basement of the house has changes in level greater than allowed and has a clearance of less than 80" above the floor in some areas.
- Two doors on the first floor of the house have hardware that is not operable with a closed fist.

### Order of Magnitude Cost Estimates

- Renovate exterior routes: \$8,480
- Provide a van accessible parking space: \$1,850
- Provide a new pressure treated wood ramp to the house: \$7,843
- Provide compliant signs at entrances: \$1,038
- Provide compliant egress signage: \$5,856
- Install an accessible door to the horse riding area: \$2,972
- Provide compliant hardware and a sloped walkway with a 5' by 5' level platform at the entrance door to the horse riding observation area: \$1,684
- Renovate kitchen areas: \$8,054
- Provide an accessible single-user toilet room in the house on the first floor and one in the horse stable: \$49,208
- Miscellaneous corrective actions (door hardware, door threshold, level changes, etc.): \$2,178

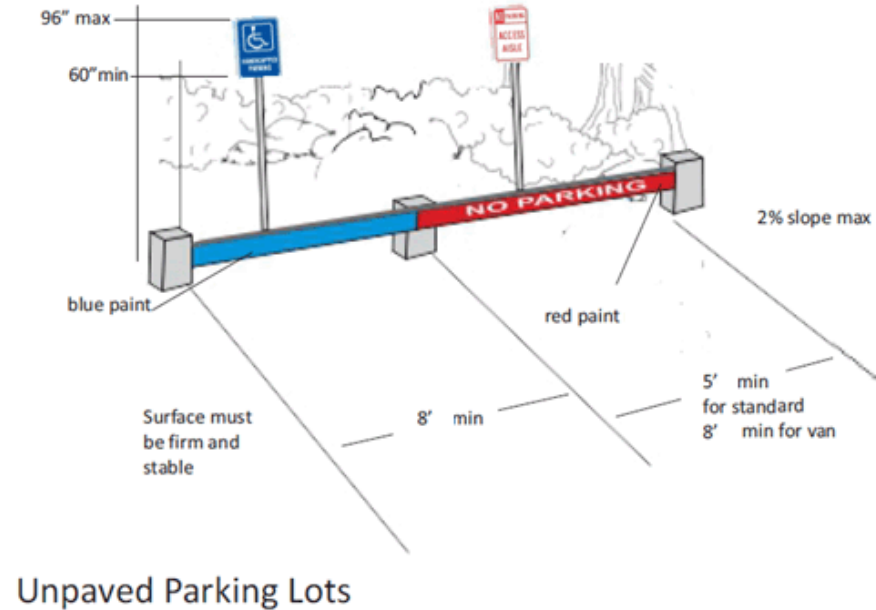
**Total: \$89,163**

### Best Practice and Inclusive Design





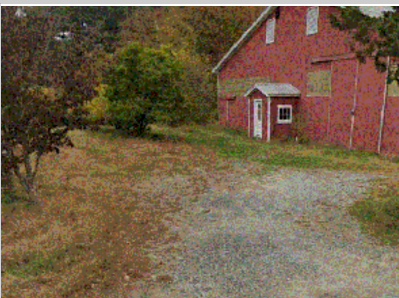
Best practice and inclusive design recommendations include elements that are not required in the standards but may create enhanced experiences for all users.

- Recommend providing a sign with raised characters and braille mounted on the latch side of the door at permanent rooms that do not have a sign.






- See the following image for a recommendation on how to mark an accessible parking space in an unpaved parking lot:





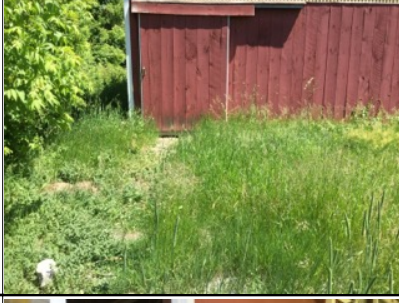


**Town of Sudbury  
Broadacres Farm**

| ID                                      | Location   | Floor | Room | Element                          | Type     | Photo  | Issues  | Current Measure   | Recommendations  | Quantity | Price | Cost Estimation |
|---|--|-------|------|----------------------------------|----------|--|---|-------------------|--|----------|-------|-----------------|
| <b>Approach and Entrance</b>            |  |       |      |                                  |          |  |   |                   |  |          |       |                 |
| <b>Exterior Access Route</b>            |  |       |      |                                  |          |  |   |                   |  |          |       |                 |
| 1                                       | Path Between Horse Riding Practice Building and Horse Barn | Ext.  |      | Exterior Access Route            | Walkway  |    | Running slope > 1:20 (5%)<br>Surface is not stable, firm, and slip-resistant<br>Accessible route not provided | 7.3%<br>-<br>250' | Ensure an accessible route is provided with a slope no greater than 1:20 (5.00%).<br>(Cost estimate for a 250' long 4' wide stone dust walkway.) | 1        | 8000  | \$8000          |
| 2                                       | House Entrance   | Ext.  |      | Exterior Access Route            | Walkway  |    | Level changes > 1/4"  | 2"                | Alter change in level to be 1/4" high max. (Cost estimate for a 4' by 4' asphalt area.)  | 1        | 160   | \$160           |
| 3                                       | Horse Riding Practice Building                             | Ext.  |      | Exterior Access Route            | Walkway  |   | Accessible route not provided   | -                 | Ensure an accessible route is provided to the new main entrance door. (Cost estimate for a 10' long 4' wide stone dust walkway.)                 | 1        | 320   | \$320           |
| 4                                       | Kitchen Egress to Outdoor Office                           | Ext.  |      | Exterior Access Route            | Exterior |  | Accessible route not provided   | -                 | Due to lack of space an accessible route may not be technically feasible to the outdoor office.  | 1        | -     | \$0             |
| <b>Off-Street Parking Lot or Garage</b> |  |       |      |                                  |          |  |   |                   |  |          |       |                 |
| 5                                       | Parking Area   | Ext.  |      | Off-Street Parking Lot or Garage | Visitor  |  | Total # of parking<br>Total # of designated van accessible spaces   | 3<br>0            | Provide one van accessible parking space.  | 1        | 1850  | \$1850          |






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|----------------------|--|-------|------|---------------|--------------------|--|---|--------------------|--|----------|-------|-----------------|
| <b>Exterior Ramp</b> |  |       |      |               |                    |  |   |                    |  |          |       |                 |
| 6                    | House - Main Entrance                            | Ext.  |      | Exterior Ramp | N/A                |    | No lower handrail 18"-20" high provided<br>Ramp < 48" wide<br>Handrails do not extend 12" past top & bottom<br>Handrails have non-compliant cross section<br>Ramp is not located on an accessible route | -<br>35"<br>-<br>- | Rebuild ramp so that there is 48" inches clear. Provide a lower handrail between 18" to 20" high on each side. Provide handrails that extend horizontally above the landing for 12" min. beyond the top and bottom of ramp runs. Provide handrails with 1-1/4" to 1-1/2" circular cross sections. (Cost estimate for a new 30' pressure treated wood ramp.).                                     | 1        | 7843  | \$7843          |
| <b>Entrance</b>      |  |       |      |               |                    |  |   |                    |  |          |       |                 |
| 7                    | Horse Riding Practice Building Inaccessible Door | Ext.  |      | Entrance      | Secondary Entrance |    | Entrance not on an accessible route<br>Directional sign to accessible entrance not provided   | 5"<br>-            | Provide a directional sign indicating the location of the nearest accessible entrance.   | 1        | 346   | \$346           |
| 8                    | Horse Riding Practice Building Observation Area  | Ext.  |      | Entrance      | Secondary Entrance |   | Entrance not on an accessible route<br>Threshold > 1/2" high<br>Hardware not operable with a closed fist<br>International Symbol of Accessibility not provided  | -<br>5"<br>-       | After the entrance is made accessible, provide a sign with the International Symbol of Accessibility (ISA). Provide hardware that can be operable with one hand and not require tight grasping, pinching, or twisting of the wrist. Provide a sloped walkway with a 5' by 5' level platform at the door. (Cost estimate includes a 15' long concrete route to the door, door hardware and sign.) | 1        | 2030  | \$2030          |
| 9                    | Horse Riding Practice Building Main Entrance     | Ext.  |      | Entrance      | Main Entrance      |  | International Symbol of Accessibility not provided  | -<br>-             | Provide a sign with the International Symbol of Accessibility (ISA) at the new accessible entrance door.   | 1        | 346   | \$346           |
| 10                   | House - Main Entrance                            | Ext.  |      | Entrance      | Main Entrance      |  | Threshold > 1/2" high<br>Hardware not operable with a closed fist   | 1"<br>-            | Alter threshold to be 1/2" high max. Provide hardware that can be operable with one hand and not require tight grasping, pinching, or twisting of the wrist.   | 1        | 634   | \$634           |






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|-----------------------|--|-------|------|----------------|---------------|--|---|-----------------|---|----------|-------|-----------------|
| 11                    | Horse Riding Practice Building Main Entrance     | Ext.  |      | Entrance       | Main Entrance |    | Door requires > 15 lbs. of force to open  | -               | Provide an accessible door into the facility. (Cost estimate for installing a solid core wood door.)  | 1        | 2972  | \$2972          |
| <b>Emergency Exit</b> |  |       |      |                |               |  |   |                 |   |          |       |                 |
| 12                    | Kitchen Egress                                   | 1     |      | Emergency Exit | N/A           |    | Tactile sign not provided at exit<br>Directional sign to accessible emergency exit not provided | -<br>-          | Provide tactile exit signs with raised characters and braille at exit doors. Mount signs between 48"- 60" above the finished floor located on the latch side of the door.<br>Provide a directional sign indicating the location of the nearest accessible emergency exit.   | 1        | 464   | \$464           |
| 13                    | Horse Riding Practice Building Inaccessible Door | Ext.  |      | Emergency Exit | N/A           |   | Tactile sign not provided at exit<br>Directional sign to accessible emergency exit not provided | -<br>-          | At the interior of the exit door: provide tactile exit signs with raised characters and braille at exit doors. Mount signs between 48"- 60" above the finished floor located on the latch side of the door.<br>Provide a directional sign indicating the location of the nearest accessible emergency exit.                 | 1        | 464   | \$464           |
| 14                    | Horse Barn Exit                                  | 1     |      | Emergency Exit | N/A           |  | Tactile sign not provided at exit<br>Illuminated Int. Symbol of Acc. not provided (MAAB)        | -<br>-          | Provide tactile exit signs with raised characters and braille at exit doors. Mount signs between 48"- 60" above the finished floor located on the latch side of the door.<br>Provide an illuminated sign with the International Symbol of Accessibility.  | 1        | 1116  | \$1116          |
| 15                    | Horse Riding Practice Building Observation Area  | Ext.  |      | Emergency Exit | N/A           |  | Tactile sign not provided at exit<br>Illuminated Int. Symbol of Acc. not provided (MAAB)        | -<br>-<br>-     | Provide a tactile exit signs with raised characters and braille at the interior. Mount signs between 48"- 60" above the finished floor located on the latch side of the door.<br>After the door is made accessible, provide an illuminated sign with the International Symbol of Accessibility on the interior of the door. | 1        | 1116  | \$1116          |




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|-------------------------------------|--|-------|------|-----------------------|------|--|--|------------------|---|----------|-------|-----------------|
| 16                                  | House - Main Entrance                        | Ext.  |      | Emergency Exit        | N/A  |    | Tactile sign not provided at exit<br>Illuminated Int. Symbol of Acc. not provided (MAAB)   | -<br>-           | Provide a tactile exit sign with raised characters and braille at the interior of the exit door. Mount sign between 48"- 60" above the finished floor located on the latch side of the door.<br>After the exit is made accessible, provide an illuminated sign with the International Symbol of Accessibility.  | 1        | 1116  | \$1116          |
| 17                                  | Horse Riding Practice Building Main Entrance | Ext.  |      | Emergency Exit        | N/A  |    | Tactile sign not provided at exit<br>Illuminated Int. Symbol of Acc. not provided (MAAB)<br>Directional sign to accessible emergency exit not provided | -<br>-<br>-<br>- | At the interior of the exit door: provide tactile exit signs with raised characters and braille at the existing main exit door and the new accessible main exit door. Provide a directional sign indicating the location of the nearest accessible emergency exit at the inaccessible exit. Provide an illuminated sign with the International Symbol of Accessibility at the accessible exit door. | 1        | 1580  | \$1580          |
| <b>Access to Goods and Services</b> |  |       |      |                       |      |  |  |                  |   |          |       |                 |
| <b>Interior Access Route</b>        |  |       |      |                       |      |  |  |                  |   |          |       |                 |
| 18                                  | Kitchen Storage and Bathroom                 | 1     |      | Interior Access Route | N/A  |   | Route < 36" wide   | 31"              | Ensure that a clear width of 36" min. is maintained at the accessible route. Remove shelves. Route is allowed to narrow to 32 inches for a depth of 24 inches.  | 1        | Labor | \$0             |
| 19                                  | Horse Barn Entrance                          | 1     |      | Interior Access Route | N/A  |  | Level changes > 1/4"   | 2"               | Alter change in level to be 1/4" high max.  | 1        | 144   | \$144           |
| 20                                  | House - Main Entrance                        | 1     |      | Interior Access Route | N/A  |  | Level changes > 1/4"   | 3"               | Alter change in level to be 1/4" high max.  | 1        | 432   | \$432           |

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|-------------------------------------|--------------------------------------|-------|------|---------------------------|-------|--|---|-----------------|---|----------|-------|-----------------|
| 21                                  | Stair                                | 1     |      | Interior Access Route     | N/A   |    | Accessible route not provided   | -               | Consider locating all public programs on the first floor of the building.   | 1        | -     | \$0             |
| 22                                  | Basement                             | B     |      | Interior Access Route     | N/A   |    | Vertical clearance < 80" above finished floor                                       | 62.5"           | The basement is unfinished with tripping hazards, no lighting, and has vertical clearance less than 80" above the floor in some areas. IHCD recommends not providing public programs in this area.  | 1        | -     | \$0             |
| <b>Doors, Doorways, &amp; Gates</b> |                                      |       |      |                           |       |  |   |                 |   |          |       |                 |
| 23                                  | Dining Room                          | 1     |      | Doors, Doorways, & Gates  | Other |   | 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           |
| 24                                  | Access to Porch From the Living Room | 1     |      | Doors, Doorways, & Gates  | Other |  | 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           |
| <b>Kitchens and Kitchenettes</b>    |                                      |       |      |                           |       |  |   |                 |   |          |       |                 |
| 25                                  | Kitchen                              | 1     |      | Kitchens and Kitchenettes | N/A   |  | Knee/toe clearance not provided at sink<br>Sink > 34" high<br>Countertop > 34" high | -<br>-<br>-     | Provide a sink with knee and toe clearance positioned for a forward approach.<br>Lower sink to be no higher than 34" positioned for a forward approach.<br>Lower countertop to provide a work surface no higher than 34" positioned for a forward approach. | 1        | 3974  | \$3974          |
| <b>Toilet &amp; Bathing Rooms</b>   |                                      |       |      |                           |       |  |   |                 |   |          |       |                 |

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|--------------------------|-------------------------------|-------|------|----------------|-------------|--|---|-----------------|--|----------|-------|-----------------|
| <b>Overall Access</b>    |                               |       |      |                |             |  |   |                 |  |          |       |                 |
| 26                       | Horse Barn Toilet Room        | 1     |      | Overall Access | Toilet Room |    | Turning space not provided<br>Accessible plumbing fixtures or stalls not provided     | 40"<br>-        | Add an accessible single-user toilet room.   | 1        | 24604 | \$24604         |
| 27                       | Kitchen Bathroom in the House | 1     |      | Overall Access | Toilet Room |    | Turning space not provided<br>Accessible plumbing fixtures or stalls not provided     | 31"<br>-        | Provide an accessible single-user toilet room.   | 1        | 24604 | \$24604         |
| <b>Additional Access</b> |                               |       |      |                |             |  |   |                 |  |          |       |                 |
| <b>Sink</b>              |                               |       |      |                |             |  |   |                 |  |          |       |                 |
| 28                       | Kitchen Storage Area          | 1     |      | Sink           | Other       |  | Toe and knee clearances not provided<br>Rim or counter > 34"<br>Non-compliant faucets | 24"<br>37"<br>- | Ensure there is a 27" knee clearance positioned for a forward approach.<br>Relocate sink with the front of the rim or counter no higher than 34".<br>Install faucets that do not require tight grasping, pinching, or twisting of the wrist. | 1        | 4080  | \$4080          |