STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ADA Technical Infeasibility Form
Justification for Pedestrian Facilities
(TIF Form)

This form is used to document pedestrian facilities within State right-of-way or State projects that cannot comply with current standards. See pages 3-5 for instructions, and pages 6-7 to identify applicable standards and any non-compliant elements for a facility. The non-standard facilities may be identified and justified during preliminary design, final design, or construction. ***A new form must be completed for each facility.***

1. Project and Non-standard Facility Location Information

City/Town: _____ District: _____

Project Number: _____ Project Scope Type: _____

Project Description: _____

Road/Highway: _____ Side of Road or Intersection: _____

Intersecting Road/Highway: _____ Intersection No.: _____

Route Mileage Location: ○ Linear feature (e.g., sidewalk) Milepost *from* _____ *to* _____

○ Point feature (e.g., sidewalk ramp) Milepost _____

GIS Information: ○ Linear feature (e.g., sidewalk) *from* Lat.: _____ Long.: _____

to Lat.: _____ Long.: _____

○ Point feature (e.g., sidewalk ramp) Lat.: _____ Long.: _____

Location Description (if needed, in addition to coordinates):

2. Non-standard Facility

Select the non-standard pedestrian facility the form is intended for:

☐ A. Curb Ramp/Blended Transition
☐ B. Detectable Warnings
☐ C. Sidewalk
☐ D. Surface
☐ E. Crosswalk
☐ F. Pedestrian Signals
☐ G. Railing
☐ H. Accessible Parking
☐ I. Bus Stops
☐ J. Pedestrian At-grade Rail Crossing
☐ K. Other: _____

Describe any non-compliant element(s) within the non-standard facility:

	Element (e.g., Width)	Target Value (e.g., 48")	Achievable Value (e.g., 44")
1.			
2.			
3.			
4.			
5.			
6.			
7.			

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3. Justification for Non-compliant Element(s)

Design Constraints or Reasons for Technical Infeasibility (Check all that apply):

- ☐ A. Underlying Terrain
- ☐ B. Right-of-Way Availability
- ☐ C. Underground Structures
- ☐ D. Adjacent Developed Facilities
- ☐ E. Drainage
- ☐ F. Presence of a Notable Natural Feature
- ☐ G. Presence of a Notable Historic Feature
- ☐ H. Other: _____

Design Alternatives Considered:

Design Alternative	Alternative Selection	Selection Justification
1.	◯ Yes ◯ No	
2.	◯ Yes ◯ No	
3.	◯ Yes ◯ No	

4. Supporting Information

- ◯ No Supporting Information
- ◯ Supporting Information Attached - Number of pages: _____

5. Approval and Acceptance

Form Prepared by: _____ Date: _____

Title: _____ Division/Company: _____

E-mail: _____ Phone: _____

Approved By: _____ **Date:** _____

Title: _____ **Division/Company:** _____

*** This Section is only applicable for locations that occur on State property or State-maintained roadways ***
(To be completed by the CTDOT ADA Engineering Coordination Unit)

◯ **Declined** with Comments: _____

_____

◯ **Accepted.** ☐ Place this facility on the ADA Transition Plan to be made compliant in the future.

Signature: _____ **Date:** _____

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ADA Technical Infeasibility Form Instructions

This document provides the instructions for completing the "ADA Technical Infeasibility Form (TIF)".

1. Project and Facility Location Information

Project Number: CTDOT project number (e.g., 0000-0000 or Town project with its project number).

Project Scope Type: (e.g., preservation, 3R (resurfacing, restoration, and rehabilitation), new construction, etc.).

Project Description: Name of project. (e.g., "Route 9 Pedestrian Improvement Project" or "Encroachment Permit for ……").

Road/Highway: If it's on state highway, provide state highway number.

Side of Road or Intersection: Choose the direction that best reflects the location of the facility in relation to the road or center of the intersection.

Intersecting Road/Highway: This is applicable if the pedestrian facility is located on or near a corner. If there is no intersecting road or highway, enter "N/A".

Intersection No.: If applicable, enter CTDOT Intersection Number (e.g., 000-000).

Route Mileage Location: Enter State Route milepost with accuracy to 2 decimal places.

GIS Information: Enter location coordinates as latitude (Lat.) and longitude (Long.) with accuracy to 6 decimal places. Coordinates can be found by using Google Maps (right click a point and select "What's Here?") or other reputable sources.

> **Linear feature:** This requires a starting location and an ending location to identify the feature (e.g., a section of the sidewalk or bridge).
>
> **Point feature:** This requires only one location point to identify the feature (e.g., curb ramps, crosswalks or landings).

Location Description: This field is optional, and may be used to provide additional information to pinpoint the location of a facility. For instance, if there are two curb ramps in one corner that are in proximity to each other, it may be necessary to distinguish them with a description.

2. Non-standard Facility

Select only the type of non-standard pedestrian facility that is within the scope of the improvement. The following definitions are provided for clarification on some of the facility selections:

Curb Ramp: A ramp that cuts through or is built up to the curb (ADA Standard Section 406).

Blended Transition: A raised pedestrian street crossings, depressed corners, or similar connections between pedestrian access routes at the level of the sidewalk and the level of the pedestrian street crossing that have a grade of 5 percent or less. Blended transitions are suitable for a range of sidewalk conditions. (PROWAG Section R304).

Surface: This is the surface area of sidewalks and other pedestrian circulation paths (e.g., boardwalks), pedestrian street crossings, at-grade rail crossings, pedestrian structures (e.g. pedestrian overpass and underpass), curb ramps, and blended transitions.

Railing: A rail to be grasped by the hand for support or a barrier consisting of a rail and supports. (ADA Standard Section 405.8 & 505)

ADA Technical Infeasibility Form Instructions

2. Non-standard Facility (continued)

Any non-compliant elements shall be listed. Compliance standards can be found on pages 6-7 "Critical Elements for the Design, Layout, and Acceptance of Pedestrian Facilities". Additional non-compliant elements can be attached with the Supporting Information.

Element: Any Critical Element of the facility that will not meet the standard.

Target Value: The standard limit measurement or dimension for the element to be compliant.

Achievable Value: The closest to standard limit measurement or dimension that can be achieved within the project's scope and constraints.

3. Justification for Non-compliant Element(s)

The 2011 PROWAG "recognize[s] that it is not always possible for altered elements, spaces, or facilities to fully comply with new construction requirements because of existing physical constraints. Where existing physical constraints make it impracticable for altered elements, spaces, or facilities to fully comply with the requirements for new construction, compliance is required to the extent practicable within the scope of the project. Existing physical constraints include, but are not limited to, underlying terrain, right-of-way availability, underground structures, adjacent developed facilities, drainage, or the presence of a notable natural or historic feature. The proposed guidelines permit flexibility in alterations to existing facilities where needed." Select all Design Constraints or Reasons for Technical Infeasibility.

A. Underlying Terrain: Existing grade separations may be too steep, or grade separations too great for pedestrian facilities to comply with maximum slopes. For example, a pedestrian path intended to replace a set of stairs on a steep natural grade may not be able to achieve the maximum 8.3% running slope without extensive grading and negative impacts to adjacent properties. If a compliant ramp or sidewalk cannot be furnished within the available space, a facility with the minimum practicable slope should be installed.

B. Right-of-Way Availability: If adequate public right-of-way cannot be acquired, or permission to access private property is not granted by a property owner to construct a facility, it may not be possible to achieve fully compliant dimensions or slopes within the space available.

C. Underground Structures: Existing underground structures may limit the ability to adjust grade to comply with maximum accessible slopes. For example, the elevation of a sidewalk crossing over the top of an existing utility vault will be fixed above the top of the vault. This "fixed" elevation may necessitate a sidewalk slope exceeding the maximum compliant slope.

D. Adjacent Developed Facilities: Existing facilities may introduce constraints that cannot be addressed in a practical manner. For example, a segment of sidewalk installed alongside a developed block of road with a 12% grade could probably not achieve the maximum 8.3% running slope without excessive grading and/or negative impacts to adjacent properties.

E. Drainage: Standing or frozen water can make a facility inaccessible, unsafe and prone to faster deterioration. If the maximum compliant slope of a pedestrian facility is not adequate to drain it in certain conditions, or will impede the drainage of a larger area, a slope exceeding the maximum will be necessary.

F. Presence of a Notable Natural Feature: It may not be possible to build a fully compliant facility without negatively affecting the existence or integrity of a natural feature. For example, if replacing a non-compliant 3-feet wide sidewalk with a compliant 4-feet wide sidewalk would require the removal of a row of valued, mature street trees, then segments of 3-feet wide walk near the trees may be acceptable.

ADA Technical Infeasibility Form Instructions

3. Justification for Non-compliant Element(s) (Continued)

G. Presence of a Notable Historic Feature: It may not be possible to build a fully compliant facility without negatively affecting the existence or integrity of a historic feature. For example, if replacing a non-compliant 3-feet wide sidewalk with a compliant 4-feet wide sidewalk would require the removal of a historic stone retaining wall, then the segment of 3-feet wide walk along the wall may be acceptable.

H. Other: Any design constraint or technical infeasibility that does not fit the criteria of A through G above can be included here. A description of the justification factor must be included in the text box.

Design Alternatives Considered: Identify up to 3 design alternatives that were considered, including the one that was ultimately selected, and briefly explain why each alternative was or was not selected.

4. Supporting Information

Supporting information such as drawings/sketches and photos are recommended to be included with each justification form. This information will be helpful for future design considerations or as records for defending decision-making in court. Supporting documents shall be labeled with description and submitted together with the TIF Form in PDF format. Provide the total page number for the attachments.

5. Approval and Acceptance

Nonstandard facilities identified during:	*Shall be approved by:*	***Require acceptance:***
Project in Design	CTDOT Transportation **Principal Engineer**	For all locations that occur on a State property or State-maintained roadways, the form must be forwarded to the **CTDOT ADA Engineering Coordination Unit** for review and acceptance. The declined form shall be revised and resubmitted with attachments responding to previous comments. The form shall be attached to an e-mail and sent to *dot.adatransitionplan@ct.gov*
Project in Construction	Shall be forwarded to the CTDOT Design Engineer for review, then be approved by the CTDOT **Assistant District Engineer** with concurrence from the CTDOT Transportation Principal Engineer	
Locally Administered Federal-Aid and State Funded Projects	Local **Public Works Director** or the Highest-ranking Official	
Utility Company Encroachment Permit Applications	CTDOT Special Service **Section Manager**	
Other Encroachment Permit Applications	Local **Public Works Director** or the Highest-ranking Official	

Copies of approved/accepted justifications for state projects are to be retained in the project folder for record as long as the non-standard facility exists.

For more information, please contact CTDOT ADA Engineering Coordination Unit at dot.adatransitionplan@ct.gov.

STATE OF CONNECTICUT
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Critical Elements for the Design, Layout, and Acceptance of Pedestrian Facilities

This document is intended to serve as a tool for the evaluation of existing pedestrian facilities, for the layout and inspection of new pedestrian facilitie's and for the assistance in completing the Technical Infeasibility Form (TIF). The pedestrian facilities must meet the applicable values on this sheet, or be justified as Non-standard facilities.

For Evaluation of Existing Ramps to Remain on Preservation or Preventative Maintenance Projects *Subject to 1991 ADAAG*	Reference *1991 ADAAG unless otherwise noted*	1991 ADA Limits	
A Curb Ramp			
Clear width	4.3.3	36" min.	
Flare slope for ramps in walkable area	4.7.5	10% max.	
Cross slope at crossing with yield or stop control	4.3.7 & PROWAG R304.5.3	2% max.	
Cross slope at crossing without yield or stop control (including any signal but flashing red)	4.3.7 & PROWAG R304.5.3	2% max.	
Curbed ramp edge or flare slopes exceeding 10%	4.7.5	Located in non-walkable area	
Grade (running slope)	4.8.2	8.33% max.	
Grade (running slope), if space is limited	4.1.6	10% for 6" rise	
Clear space for diagonal ramps	4.7.10	48" x 48" min.	
Grating spaces (in walking surface)	4.5.4	0.5" max.	
Vertical changes	4.5.2	0.5" max., with 1:2 max. bevel between 0.25" and 0.5" high	
New and Replacement Facilities *Subject to 2011 PROWAG , and National Manual of Uniform Traffic Control Devices*	**Reference** *(2011 PROWAG unless otherwise noted)*	**Reference Requirements**	**Design and Layout Limits**
A Curb Ramp / Blended Transition			
Clear width	R304.5.1	48" min.	
Slope of flared sides, within pedestrian circulation path	R304.2.3	10.0% max.	10% max. Where walkable surface is adjacemnt to ramp
Slope of flared side, outside pedestrian circulation path	R304.2.3	No max. slope, may be curbed	No max. slope, may be curbed
Grade (running slope) for curb ramp	R304.3.2	8.3% max.	7.1%
Grade (running slope) for blended transition	R304.1 & R304.4.1	5.0% max.	5.0% max.
Cross slope (at crossing with yield or stop control)	R304.5.3	2.0% max.	2.0% max.
Cross slope (at crossing without yield or stop control, including any signal but flashing red)	R304.5.3	Highway grade is max.	Highway grade is max.
Length of a curb ramp, if the ramp must exceed maximum allowable grade (running slope) due to steep terrain, (i.e., "chasing grade")	R304.2.2 & R304.3.2	15' Max.	15' Max.
Turning space, with no constraints	R304.2.1 & R304.3.1	48" x 48" min.	48" x 48" min.
Turning space, with constraint at back of sidewalk	R304.2.1	48" x 60" min.	48" x 60" min.
Turning space, with constraints on two sides	R304.3.1	48" x 60" min.	48" x 60" min.
Slope of turning space, in any direction	R304.2.2 & R304.3.2	2.0% max.	1.5%
Counter slope at bottom of ramp	R304.5.4	5.0% max.	5.0% max.
Clear space (beyond bottom grade break, outside of parallel vehicle path; can include drop curb)	R304.5.5	48" x 48" min.	48" x 48" min.
Grade breaks (no rounding)	R304.5.2	Perpendicular to direction of ped. travel	Perpendicular to direction of ped. travel
B Detectable Warnings *(for ped. rail crossings, refer to M.)*			
Covered by Specs: Dome dimensions and spacing	R305.1.1 & R305.1.2	On DOT Approved List	On DOT Approved List
Contrast of warning device	R305.1.3	Light on dark or dark on light	Federal Standard 595A Color #22144 or approval equal
Alignment	R304.5.2	Perpendicular to grade break between ramp run and street	Perpendicular to grade break or back of curb
Width	R305.2	Full width of ramp (2" border allowed)	Width of Ramp (no more than 2" boaders if required)
Length (depth)	R305.1.4	24" min. in direction of pedestrian travel	2' min.
Placement	R305.2.1	At grade break if < 60" from curb, otherwise at back of curb	At grade break if less than 60" from curb otherwise along radius of curb
Where not required	R208.2	Refuge islands where ped. route is < 72" long	Refuge islands where ped. route is < 72" long

Critical Elements for the Design, Layout, and Acceptance of Pedestrian Facilities

New and Replacement Facilities *Subject to 2011 PROWAG , and National Manual of Uniform Traffic Control Devices*	Reference *(2011 PROWAG unless otherwise noted)*	Reference Requirements	Design and Layout Limits
C Sidewalk			
Clear width of Ped. Access Route (excluding curb)	R302.3	48" min.	48" min.
Grade (running slope) where hwy. grade is 5% or less	R302.5	5% max.	5% max.
Grade (running slope) where hwy. grade is > 5%	R302.5	Hwy. edge of pvmt. grade is max.	Hwy. edge of pvmt. grade is max.
Cross slope	R302.6	2.0% max.	1.5%
Passing space interval (if Ped. Access Route is less than 60" wide)	R302.4	200' max.	200' max.
Passing space dimensions	R302.4	60" x 60" min	60" x 60" min
D Surfaces			
Material	R302.7	HMA or PCC	Firm, stable, and slip resistant
Horizontal openings (such as gratings and joints)	R302.7.3	0.5" max.	0.5" max
Vertical discontinuities	R302.7.2	0.25" max.	0.25" max.
E Crosswalk (Pedestrian Street Crossing)			
Width	R302.3	72" min.	96"
Cross slope at intersection with yield or stop control	R302.6.1	2.0% max.	2.0% max.
Cross slope at intersection without yield or stop control (including any signal but flashing red)	R302.6.1	5.0% max.	5.0% max.
Cross slope, midblock	R302.6.2	Highway grade is max.	Highway grade is max.
Grade (running slope), e.g., highway cross slope	R302.5.1	5.0% max.	4% - 13% max.
Markings	MUTCD 3B.18	L, S, or LS Type	8' x 16" Crosswalk Bars
Clear width, within median or pedestrian refuge island	R302.3.1	60" min.	60" min.
F Drainage			
Adequate drainage	HDM CH 8	No low spots that will pond water within Ped. Access Route	No low spots that will pond water within Ped. Access Route
G Pedestrian Signals			
Push button height	R406.2 & R406.3	15" min. - 48" max.	42" max.
Push button distance from pedestrian access route	R406.3	10" max.	10" max.
Dimensions of clear space adjacent to push button	R302.7 &R404.3	30" x 48" min.	30" x 48" min.
Grade (running slope) of clear space adjacent to push button	R404.2	Match grade of adjacent Ped. Access Route	Match grade of adjacent Ped. Access Route
Cross slope of clear space adjacent to push button	R404.2	2.0% max.	2.0% max.
Clearance timing	R306.2	3.5 ft/s max. walking speed	3.5 ft/s max. walking speed
H Accessible Parking			
Width of street-level access aisle for parallel parking, if width of adjacent sidewalk or available ROW is > 14'	R309.2.1	60" min. for length of space	60" min. for length of space
Parallel parking space located at end of block face, if width of adjacent sidewalk or available ROW is < 14'	R309.2.2	Yes	
Width of street-level access aisle for perpendicular or angled parking	R309.2.3	96" min., for length of space	
Sign displaying International Symbol of Accessibility	R211.3 & R411	Yes	Yes
Number of accessible on-street parking spaces required	R214	1 for every 25 up to 100, 1 for each additional 50 over 100, 4% of total spaces over 201	1 for every 25 up to 100, 1 for each additional 50 over 100, 4% of total spaces over 201
I Bus Stops (Transit Stops)			
Dimensions of boarding area	R308.1.1.1	60" min. parallel to hwy., 96" min. perpendicular to curb	60" min. parallel to hwy., 96" min. perpendicular to curb
Slope of boarding area, parallel to highway	R308.1.1.2	Match highway grade	Match highway grade
Slope of boarding area, perpendicular to highway	R308.1.1.2	2.0% max.	1.5% to 2% max.
J Pedestrian At-grade Rail Crossings			
Track gaps, crossing freight tracks	R302.7.4	3" max.	3" max.
Track gaps, crossing passenger tracks	R302.7.4	2.5" max.	2.5" max.
Detectable warnings, at a ped. crossing not located within a highway	R305.2.5	6' min. - 15' max. from rail, both sides	6' min. - 15' max. from rail, both sides for no gate present, otherwise 2' away from gate
Grade (running slope), where adjacent hwy. grade is ≤ 5%	R302.5	5.0% max	5% max
Grade (running slope), where adjacent hwy. grade is > 5%	R302.5	Hwy. edge of pvmt. grade is max.	Hwy. edge of pvmt. grade is max.
Cross slope	R302.6	2.00%	1.5% to 2% max.

3 References

A US Access Board's Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Rights of Way, 2011, a.k.a. Public Right of Way Accessibility Guidelines (PROWAG).
B ADA Accessibility Guidelines (ADAAG) for Buildings and Facilities in 28 CFR, 1991
C United States Access Board
D National Manual of Uniform Traffic Control Devices (MUTCD)

4 Contact for questions

A dot.adatransitionplan@ct.gov