OREGON DEPARTMENT OF TRANSPORTATION TECHNICAL SERVICES

Traffic-Roadway Section BULLETIN

SUBJECT	FINAL NUMBER	EFFECTIVE DATE	VALIDATION DATE	SUPERSEDES or RESCINDS
ADA Curb Ramp Design Exception Request Form and ADA Curb Ramp Guidance	RD16-01(B)	12/22/2016		New
	WEB LINK(S) http://www.oregon.gov/ODOT/HWY/TECHSERV/Pages/technicalguidance.aspx			
TOPIC/PROGRAM Highway Design Manual.	APPROVED SIGNATURE Original signed by: Bob Pappe, PE, PLS State Traffic-Roadway Engineer			

PURPOSE

The purpose of this bulletin is to provide design criteria and guidance to be used any time ADA Curb Ramps are installed on or along the State Highways system. In addition, this guidance is to be used for local jurisdiction projects that work on or along the State Highway System or that include Federal funds or non fund-exchange state funds. (See Special Instructions section for local agency guidance). This technical bulletin includes the following guidance documents and exhibits:

1. ADA Curb Ramp Design Check List- A check list to assist designers, providing information on design criteria and determining when a formal design exception is required for curb ramps.
2. ADA Curb Ramp Design Exception Request- Fillable form to be used to justify design exception requests for curb ramps that do not meet design criteria.
3. ADA Curb Ramp Design Exception Request User Guidance & Instructions- Document to assist designers in the populating the ADA Curb Ramp Design Exception Form.
4. Exhibit “A” Curb Ramp Location and Numbering- Exhibit to assist designers in appropriately numbering ADA curb ramps in the design exception request.
5. Exhibit “B” Curb Ramp Types with Design Slopes- Exhibit to assist designers in the identification of the multiple types of curb ramps and the design requirements of the different types curb ramps.

DEFINITIONS

ADA- Americans with Disabilities Act

Blended Transition- A raised pedestrian street crossing, depressed corner, or similar connection between the pedestrian access route at the level of the sidewalk and the level of the pedestrian street crossing that has a grade of 5 percent or less.

Cross Slope- The grade that is perpendicular to the direction of pedestrian travel.

Curb Ramp- A ramp that cuts through or is built up to the curb. Curb ramps can be perpendicular or parallel, or a combination of parallel and perpendicular ramps.

Pedestrian Access Route- A continuous and unobstructed path of travel provided for pedestrians with disabilities within or coinciding with a pedestrian circulation path.

Running Slope. - The grade that is parallel to the direction of pedestrian travel.

BACKGROUND/REFERENCE

Although the current ODOT design exception form lists ADA Standards as one of design elements that requires a design exception for not meeting current guidance, that current form does not have the detail that is needed in the justification of design exceptions for non-compliant curb ramps. The new Curb Ramp Design Exception Request and additional curb ramp guidance documents will allow the Department to document, justify, and identify the location of those curb ramps that have been determined not to be able to comply with current ODOT standards .

ACTION REQUIRED

Designers are to use the ADA Curb Ramp Design Checklist to confirm that each curb ramp design meets applicable requirements and to identify whether specific features are not feasible, requiring justification through a design exception. Designers are to use the ADA Curb Ramp Design Exception Request form for the justification and documentation of curb ramps that do not comply with ODOT design criteria for curb ramps.

The ADA Curb Ramp Design Exception Request, the ADA Curb Ramp Design Exception Request User Guidance & Instructions; the ADA Curb Ramp Design Check List; the Exhibit “A”-Curb Ramp Location and Numbering guidance; and the Exhibit “B”-Curb Ramp Types with Design Slopes are attached with this Technical Bulletin to assist designers in providing either compliant curb ramps or providing appropriate justification when a compliant curb ramp cannot be provided.

The fillable ADA Curb Ramp Design Exception Request and ADA Curb Ramp Design Check List are located on the web at:
http://www.oregon.gov/ODOT/HWY/ENGSERVICES/Pages/forms_home.aspx

The ADA Curb Ramp Design Exception Request User Guidance & Instructions, Exhibit "A" Curb Ramp Location and Numbering, and Exhibit "B" Curb Ramp Types with Design Slopes are located on the web at:
http://www.oregon.gov/ODOT/HWY/ENGSERVICES/Pages/design_exceptions.aspx

SPECIAL INSTRUCTIONS

This technical bulletin guidance applies to all work on or along the State Highway System. In addition, all local agencies (certified and non-certified) receiving project funds through ODOT (except fund-exchange state funds) shall use the ODOT ADA Curb Ramp Design Exception Request form and submit curb ramp design exceptions to ODOT for approval through their ODOT Local Agency Liaison. Certified agencies are to use this form and process until ODOT/FHWA have reviewed and approved the certified agency's written curb ramp design exception and inspection processes. In addition to ODOT approval, curb ramp design exceptions on any Focused Federal Oversight (FFO) project must also obtain Federal Highway Administration approval.

CONTACT INFORMATION

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Branch/Section:	Traffic-Roadway Section
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ATTACHMENTS:

1. ADA Curb Ramp Design Check List
2. ADA Curb Ramp Design Exception Request
3. ADA Curb Ramp Design Exception Request User Guidance & Instructions
4. Exhibit "A" Curb Ramp Location and Numbering
5. Exhibit "B" Curb Ramp Types with Design Slopes

Attachment #1
ADA Curb Ramp Design Check List

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN CHECK LIST
(IF BOX IS NOT CHECKED, DESIGN EXCEPTION REQUEST REQUIRED)
Use new check list form for each intersection.
See Exhibit "A" for Curb Ramp Location and Numbering Guidance, and Exhibit "B" for Curb Ramp Style Examples.

Section Name:										Route No.:
Highway Name:										Highway No.:
Intersection MP:		Intersecting Street Name:								
Curb Ramp Number										Check List Items
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	A separate curb ramp is provided for each pedestrian access route crossing (typically two curb ramps per corner) within the scope of the project unless such crossing is officially and properly closed. • If crossing is officially closed, confirm documentation or pursue closure process. [Note: Excluding an officially closed crossing, ODOT requires a design exception if a curb ramp cannot connect each pedestrian street crossing (typically two curb ramps per corner)]. . • Crosswalk closure signs are installed at all officially closed crosswalks.
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Bottom of curb ramp meets applicable criteria below: • If landing area is located in the roadway and not part of the curb ramp, 4' x 4' clear space in roadway is outside the parallel vehicular path of travel and within the crosswalk; OR • 4' x 4' clear space is part of curb ramp (parallel style of ramp).
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Ramp running slope meets applicable criteria below: • 7.5 % maximum ramp running slope on all ramp runs; AND • Maximum length for any ramp-run does not exceed 15'. [Note: ODOT requires a design exception if 7.5% ramp run cannot be achieved in 15' run length.] OR • Maximum of 5% running slope on blended transitions.
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Cross slope meets the applicable criteria below: • 1.5% maximum cross slope on all ramp-runs. • At an Island across an intersection approach without yield or stop control, maximum cross slope is 5.0%. • At an Island at a midblock location, maximum cross slope does not exceed adjacent road profile grade.
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Gutter flow slope meets the applicable criteria below: • Maximum gutter flow slope is 2.0% at bottom of curb ramps with yield or stop control. • At intersection approaches without yield or stop control, the maximum gutter flow is 5%. • At midblock crossings, the gutter flow shall be permitted to equal the street or highway grade.

Reset Entire Form Keep Project Heading, Reset Fields

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN CHECK LIST
(IF BOX IS NOT CHECKED, DESIGN EXCEPTION REQUEST REQUIRED)
Use new check list form for each intersection.
See Exhibit "A" for Curb Ramp Location and Numbering Guidance, and Exhibit "B" for Curb Ramp Style Examples.

Curb Ramp Number										Check List Items
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Maximum counter slope meets applicable criteria below: • If gutter pan, maximum counter slope is 4.0%. • If no gutter pan, maximum counter slope is 4.0%.
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Minimum clear width (within the Standard Drawing pay limit) meets the applicable criteria below: • Minimum clear width through the pedestrian access route (flares and curbs are excluded from pedestrian access route) shall be equal to or greater than 48". • Minimum clear width through a cut-through island shall be equal to or greater than 60".
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Ramp flares or return curbs meet the applicable criteria below: • Flares are provided with maximum slope of 10% relative to gutter flow slope; OR • Side of ramp discourages pedestrian cross-travel with landscaping or an obstruction (If no flares, curb return is used).
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	No drainage grates within the pedestrian access route.
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Ramp turning space meets the applicable criteria below: 1.5% in both directions of travel; AND • 4' x 4' if no obstruction at back of walk; OR • 4' x 5' if obstruction at back-of-walk (5' in crosswalk direction). [Note: Obstructions are objects that prevent a wheel chair footrest from overhanging the edge of the turning spacing, thus requiring a larger area to turn.]
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Pedestrian push buttons, if present, meets the criteria below: • Pushbutton located within 10" reach from clear space. • Pushbutton is located vertically 36"-48" above the clear space.
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Curb ramp is within the width of the pedestrian street crossing (crosswalk) served.
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Transitions on and off the curb ramp are flush and free of abrupt level changes (no lip or other vertical surface discontinuity).
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Detectable warning surface consisting of truncated domes, extending 2' along the full width of curb ramp. • Detectable warning surface not required at Cut-Through Island if less than 6' in length in the direction of pedestrian travel or distance between detectable warnings would be less than 2'.
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Between curb ramps, curb ramp exposure height is at least 3" (12" minimum length of curb).
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Curb ramp is not blocked by legally parked cars.

Reset Entire Form Keep Project Heading, Reset Fields

Attachment #2
ADA Curb Ramp Design Exception Request

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN EXCEPTION REQUEST

Reset Form

For Roadway Section Office use only	
Control No:	

Section Name:							
Highway Name:				**Route No.:**			
County Name:		**Region:**		**Key No.:**		**EA No.:**	
Highway No.:					**Suffix Code:**		
RDWY ID:	I ◯ D ◯	**Mileage Type:**	0 ◯ Z ◯	**Mileage Overlap Code:**	0 ◯ 1 ◯ 2 ◯		
Intersection MP:		**Cross Street Name:**					
Corner Position(s) and Ramp Position Numbers(s)							
Bid Date:		**Funding:**					

Curb Ramp Location (Provide sketch or insert graphic file of intersection and label corner position and ramp numbers)-See Exhibit "A").

Click here to Delete Image

For Illustration Only
Use Link on Page 3 to Access Fillable Form

Click here to insert image

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN EXCEPTION REQUEST

Design Criteria for New Curb Ramps:	List curb ramp number(s) where criterion is not met.
A. A separate curb ramp is provided for each pedestrian access route crossing(typically two per curb ramp corner) within the scope of the project unless such crossing is officially and properly closed. (If crossing is officially closed, provide documentation)	
B1. 7.5 % maximum ramp running slope on all ramp runs; AND B2. Maximum length for any ramp-run does not exceed 15'. [Note: ODOT requires a design exception if 7.5% ramp run cannot be achieved in 15' run length.]	
C1. 1.5% maximum cross slope on all ramp-runs. C2. At an Island across an intersection approach without yield or stop control, maximum cross slope is 5.0%. C3. At an Island at a midblock location, maximum cross slope does not exceed adjacent road profile grade.	
D1. Maximum gutter flow slope is 2.0% at bottom of curb ramps with yield or stop control. D2. At intersection approaches without yield or stop control, the maximum gutter flow is 5%. D3. At midblock crossings, the gutter flow shall be permitted to equal the street or highway grade.	
E1. If gutter pan, maximum counter slope (cross slope of gutter) of 4.0%. E2. If no gutter pan, maximum slope of crosswalk (counter slope) of 4.0%.	
F1. Minimum clear width through the pedestrian access route (flares and curbs are excluded from the pedestrian access route) shall be equal to or greater than 48". F2. Minimum clear width through a cut-through island shall be equal to or greater than 60".	
G1. Flares are provided with maximum slope of 10% relative to gutter flow slope, OR G2. Side of ramp discourages pedestrian cross-travel with landscaping or an obstruction.	
H. Drainage grates are outside pedestrian access route.	
J1. Ramp turning space (1.5% cross slope in both directions) 4' x 5' if obstruction at back-of-walk (5' in crosswalk direction); OR J2. 4' x 4' if no obstruction at back of walk.	
K. If signalized, pushbutton located within 10" reach from clear space. The pushbutton is to be located vertically 36"-48" above the clear space.	

Description of Exception: (Describe each requested design exception for each curb ramp)
Description of Project
Reasons for Not Attaining Standard: (Explain each requested design exception for each non-standard curb ramp)
Effect on Other Standards: (Describe for each requested design exception for each curb ramp)
Mitigation for Exception Included in Design (How does the design strategy accomplish accessibility to the maximum extent practicable): (Describe for each requested design exception for each curb ramps)

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN EXCEPTION REQUEST

Supporting Documentation (Include the appropriate Plan Section, Cross Section, Alignments Sheets & Plan Details):

Oregon Department of Transportation

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN EXCEPTION REQUEST

Signatures

Prepared By: _____ **Date:** _____
(Engineer of Record)

Print Name:			**Phone:**		
Company Name:					
Company Address:					
City:		**ST:**		**Zip:**	
Email Address:					

Concurred By: _____ **Date:** _____
(Signature)
(ODOT Program Mngr: Area Mngr, District Mngr, BDU, Private Public Partnerships, Local Government)
(Print Name)

Concurred By: _____ **Date:** _____
(Signature)
(ODOT Region Tech Center Mngr or Region Roadway Mngr)
(Print Name)

Approved By: _____ **Date:** _____
(Signature)
(State Roadway Engineer)
(Print Name)

PREPARED BY:	APPROVED BY:
ENGINEER OF RECORD PROFESSIONAL ENGINEER STAMP Click here to Delete Image	STATE ROADWAY ENGINEER PROFESSIONAL ENGINEER STAMP
Click here to enter image	

Attachment #3
ADA Curb Ramp Design Exception Request User Guidance & Instructions

Oregon Department of Transportation

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN EXCEPTION REQUEST
USER GUIDANCE & INSTRUCTIONS

For Roadway Section Office use only	
Control No:	

Section Name:							
Highway Name:					**Route No.:**		
County Name:		**Region:**		**Key No.:** 1		**EA No.:** 2	
Highway No.: 3					**Suffix Code:**	4	
RDWY ID: 5	I ☐ D ☐	**Mileage Type:** 6	0 ☐ Z ☐	**Mileage Overlap Code:** 7		0 ☐ 1 ☐ 2 ☐	
Intersection MP:	8		**Cross Street Name:**				
Corner Position(s) and Ramp Position Numbers(s)	9						
Bid Date:				**Funding:**			

Curb Ramp Location (Provide sketch or insert graphic file of intersection and label corner position and ramp numbers)-See Exhibit "A"). 10

Oregon Department of Transportation

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN EXCEPTION REQUEST
USER GUIDANCE & INSTRUCTIONS

Design Criteria for New Ramps:	List curb ramp number(s) where criterion is not met. 11
A. A separate curb ramp is provided for each pedestrian access route crossing(typically two per curb ramp corner) within the scope of the project unless such crossing is officially and properly closed.(If crossing is officially close, provide documentation) 12	
B1. 7.5 % maximum ramp running slope on all ramp runs; AND B2. Maximum length for any ramp-run does not exceed 15'. [Note: ODOT requires a design exception if 7.5% ramp run cannot be achieved in 15' run length.] 13	
C1. 1.5% maximum cross slope on all ramp-runs. C2. At an Island across an intersection approach without yield or stop control, maximum cross slope is 5.0%. C3. At an Island at a midblock location, maximum cross slope does not exceed adjacent road profile grade. 14	
D1. Maximum gutter flow slope is 2.0% at bottom of curb ramps with yield or stop control. D2. At intersection approaches without yield or stop control, the maximum gutter flow is 5%. D3. At midblock crossings, the gutter flow shall be permitted to equal the street or highway grade. 15	
E1. If gutter pan, maximum counter slope (cross slope of gutter) of 4.0%. E2. If no gutter pan, maximum slope of crosswalk (counter slope) of 4.0%. 16	
F1. Minimum clear width through the pedestrian access route (flares and curbs are excluded from the pedestrian access route) shall be equal to or greater than 48". F2. Minimum clear width through a cut-through island shall be equal to or greater than 60". 17	
G1. Flares are provided with maximum slope of 10% relative to gutter flow slope, OR G2. Side of ramp discourages pedestrian cross-travel with landscaping or an obstruction. 18	
H. Drainage grates are outside pedestrian access route. 19	
J1. Ramp turning space (1.5% cross slope in both directions): 4' x 5' if obstruction at back-of-walk (5' in crosswalk direction); OR J2. 4' x 4' if no obstruction at back of walk. 20	
K. If signalized, pushbutton located within 10" reach from clear space. The pushbutton is to be located vertically 36"-48" above the clear space. 21	

Description of Exception: (Describe each requested design exception for each curb ramp) 22

Description of Project: 23

Reasons for Not Attaining Standard: (Explain each requested design exception for each non-standard curb ramp) 24

Effect on Other Standards: (Describe for each requested design exception for each curb ramp) 25

Mitigation for Exception Included in Design (How does the design strategy accomplish accessibility to the maximum extent practicable): (Describe for each requested design exception for each curb ramp) 26

Supporting Documentation (Include the appropriate Plan Section, Cross Section, Alignments Sheets & Plan Details): 27

Oregon Department of Transportation

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN EXCEPTION REQUEST
USER GUIDANCE & INSTRUCTIONS

Signatures

Prepared By: _____ **Date:** _____
(Engineer of Record)

Print Name:		**Phone:**			
Company Name:					
Company Address:					
City:		**ST:**		**Zip:**	
Email Address:					

Concurred By: _____ **Date:** _____
(ODOT Program Manager: Area Manager, District Manager, BDU, Private Public Partnerships, Local Government)

_____
(Print Name)

Concurred By: _____ **Date:** _____
(ODOT Region Tech Center Manager or Region Roadway Manager)

_____
(Print Name)

Approved By: _____ **Date:** _____
(State Roadway Engineer)

_____
(Print Name)

PREPARED BY:

ENGINEER OF RECORD PROFESSIONAL ENGINEER STAMP

APPROVED BY:

STATE ROADWAY ENGINEER PROFESSIONAL

Oregon Department of Transportation

OREGON DEPARTMENT OF TRANSPORTATION
ADA CURB RAMP DESIGN EXCEPTION REQUEST
USER GUIDANCE & INSTRUCTIONS

Guidance

1. **Key Number:** The ODOT unique 5-digit number given to each project.

2. **EA Number and Sub-Job**: The ODOT internal account number for the project including the sub-job number.

3. **State Highway Number**: The ODOT, 3-digit number given to each state highway for identification purposes. Generally, this is not the same as the route number. If the project is off the State Highway System, use the street name of the mainline.

4. **Suffix Code:** In ODOT's GIS, the suffix code is a two digit highway suffix that differentiates mainline roads from connections and frontage roads with the same highway number. The mainline suffix is the numerical value 00. Connections and frontage roads each have a unique combination of two letters (AA to ZZ).

5. **Roadway ID**: In ODOT's GIS, the roadway identifier code determines the alignment when there is a separated highway alignment such as a freeway. Code I (Increasing) is for the primary alignment that increases with the mile point. Code D (Decreasing) is for the alignment with the decreasing milepoints.

6. **Mileage Type**: In ODOT's GIS, the mileage type code is for when there are unique milepoints along a highway. The O Code indicated regular mileage. The Z code indicates an overlap in the milepoints. During realignment that lengthens the highway, an overlap in the mile points will result. The Z code indicates the repeated milepoints.

7. **Mileage Overlap Code**: In ODOT's GIS, the mileage overlap code is used when the "Z" code is used to indicate each unique occurrence of duplicate mile points. A code of 1 is use for the first occurrence, a code of 2 for the second occurrence, etc.

8. **Intersection MP:** If a state highway, list the appropriate milepoint of the intersection. If the project is off the State Highway System use the local agency milepoint if available, cross street name, or general location (i.e. midblock crossing between 25th and 26th). A new design exception request form is required for each individual intersection, entrance, midblock crossing, etc.. Multiple curb ramp design exceptions for each milepoint location can be included in the Design Exception Request form if identified appropriately (See Number 9 below).

9. **Corner Position(s) and Ramp Position Number(s)**: In addition to the intersection milepoint, list the appropriate corner and ramp position number (i.e. 1-1, 2-1, 2A-1, 2A-2, 4-2, etc.) as demonstrated in Exhibit "A" attached. Every curb ramp design exception must have a corner position and ramp position number assigned for documentation purposes. Multiple corner positions and ramp

position numbers (one milepost location) should be shown on a single Design Exception Request form.

10. **Curb Ramp Location:** Sketch or insert graphic file for entire intersection. Indicate which ramps are addressed or not addressed in the project scope. Corner number is based on increasing milepoints (generally southbound or eastbound) beginning with the first encountered corner on the right and proceeding counter-clockwise as demonstrated in Exhibit "A" attached. An 'A' is added to the number for an island.

11. Identify the corner position and ramp number that do not meet design criteria "A" through "K". Design Criteria may have multiple ramps included in criteria column [i.e. Criteria B1 (ramp running slope), corner ramps 2-2, 3-1, 3A-1, etc.]

12. **A:** Types of curb ramps include: perpendicular; parallel; combination of perpendicular and parallel; or a unique design (See Exhibit "B" for types of ramps). Guidance is as follows: A separate curb ramp shall connect the pedestrian access route at each pedestrian crossing within the scope of the project[within the scope of the project is to address locations where an intersecting street corner has two curb ramps but only one ramp is being addressed in a project. (i.e. paving project that impacts only the curb ramps that intersection the highway being paved and not the curb ramps along the intersecting roadway not being paved)] (e.g. two curb ramps constructed at each intersection corner) or the crossing is officially and properly closed. Potential locations for justification could be a diagonal ramp where constraints would require significant impacts in order to install two curb ramps at the intersection. Other locations that would meet the criteria could be a "T" intersection where the curb location across the street is located in a driveway. The crosswalk would be closed and appropriately marked. In either case (new construction or alteration); a design exception is required for not constructing appropriate curb ramps under the guidance of A.

13. **B:** The maximum running slope for all ramps runs shall be designed for 7.5% but shall not require the ramp length to exceed 15'. A design exception is required if the 7.5% (design) maximum ramp run slope is exceeded (B1) and/or if the length of the ramp run exceeds 15' (B2).

14. **C1.** The cross slope on all curb ramps shall be designed at a maximum of 1.5%. At islands, use the following guidance for cross slope. **C2:** At islands across an intersection approach without yield or stop control, the maximum cross slope is 5%. **C3:** The cross slope of the pedestrian access route for islands at mid-block crossings shall be permitted to equal the street or highway grade. A design exception is required if C1, C2, and/or C3 is not met.

15. **D1.** The maximum gutter flow slope at the bottom of ramps at stop or yield controlled cross streets is 2%. **D2.** At an intersection approach without yield or stop control, the maximum cross slope is 5%. **D3.** At a mid-block crossing the gutter flow slope shall be permitted to equal the street or highway grade.

16. The gutter/curb flow line may or may not include a gutter pan. Although guidance allows a 5% maximum counter slope, ODOT guidance is as follows. **E1:** If there is a gutter pan, the maximum counter slope (cross slope of gutter) is 4.0%. **E2:** If there is no gutter pan, the maximum counter slope of the crosswalk is also 4.0%. A design exception is required if E1 and/or E2 are not met. See Oregon Standard Drawings RD 700 and RD755 for additional information on gutter pans.

17. **F:** There must be a minimum 48" clear width through the pedestrian accessible route area. Ramp flares are excluded from the clear passage width. Obstructions are not part of the clear width. Curbs are not part of the clear width. The 48" minimum clear width can overlap other turning spaces and clear spaces. The minimum clear width through a cut-through island shall be greater or equal to 60". A design exception is required if F1 and/or F2 is not met.

18. **G:** For perpendicular ramps, ramp flares are part of the pedestrian circulation path but are not part of the pedestrian access route. Guidance for ramp flares is as follows. G1: Ramp flares are installed at a maximum slope of 10% relative to the gutter flow line. G2: If ramp fares are not used, a curb return can be used at the side of the curb ramp if the return curb is protected by cross travel by landscaping, street furniture, chains, fencing, or railings. There may be locations where a design exception is needed such as ramp flares overlap each other (e.g. maintaining a 12" minimum curb length and 3" minimum curb height between flares) or there is not adequate space to install landscaping (concrete curb is all that is able to be installed due to constraints. A design exception is required if G1 and/or G2 is not met.

19. **H:** Drainage grates are to be located outside of the pedestrian access route. If located in the access route, a design exception in required. The grate openings shall be 1/2 inch or less in the direction of travel. Elongated openings in gratings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

20. **J:** If the ramp turning spacing is obstructed or constrained at the back of the sidewalk, a minimum 4' x 5' turning space shall be provide in the direction of the ramp run (5' in crosswalk direction). If there is no obstruction, a 4' x 4' turning spacing shall be provided at the top of the ramp (back of the sidewalk). A design exception is required if J1 and/or J2 is not met. The Clear Space and Turning Space are independent of each other; they may coincide, overlap, or not touch depending on the ramp type and geometrics.

21. **K:** At signalized locations, the pushbutton for the pedestrian crossing shall be located within an unobstructed 10" reach of the clear space (1.5% cross slope). Use the Wheelchair design vehicle to verify as per the ODOT Signal Design Manual. The pushbutton is to be located vertically between 36" and 48" above the clear space.

22. **Description of Exception:** For each location identified in the table above, describe the difference between the requirement and the level of accessibility achieved by the design (e.g. what slope is attained?)

23. **Description of Project:** The scope of work indicates which ADA requirements are triggered by the project. Describe the project's scope of work with special detail to the following features:

- whether pavement surfacing is included;
  - what surface treatment is used;
  - what is the length of pavement surfacing work;
- whether sidewalk is constructed and where;
- whether traffic signals will replace pushbuttons, walk signals or controllers;

24. **Reasons for Not Attaining Standard:** ADA requirements allow deviation from a requirement only when meeting that requirement is technically infeasible or infeasible within the scope of work. Explain in detail why the geometric requirement cannot be achieved. Describe the site specific constraints for each curb ramp where an exception is sought. Physical constraints may include underlying terrain, underground structures, adjacent developed facilities, right-of-way availability, drainage, or the presence of a notable natural or historic feature. Explain why the constraint precludes achieving the ADA requirement. If achieving a compliant solution is possible, but outside the scope of work, describe why it would not be possible to add this to the scope of work.

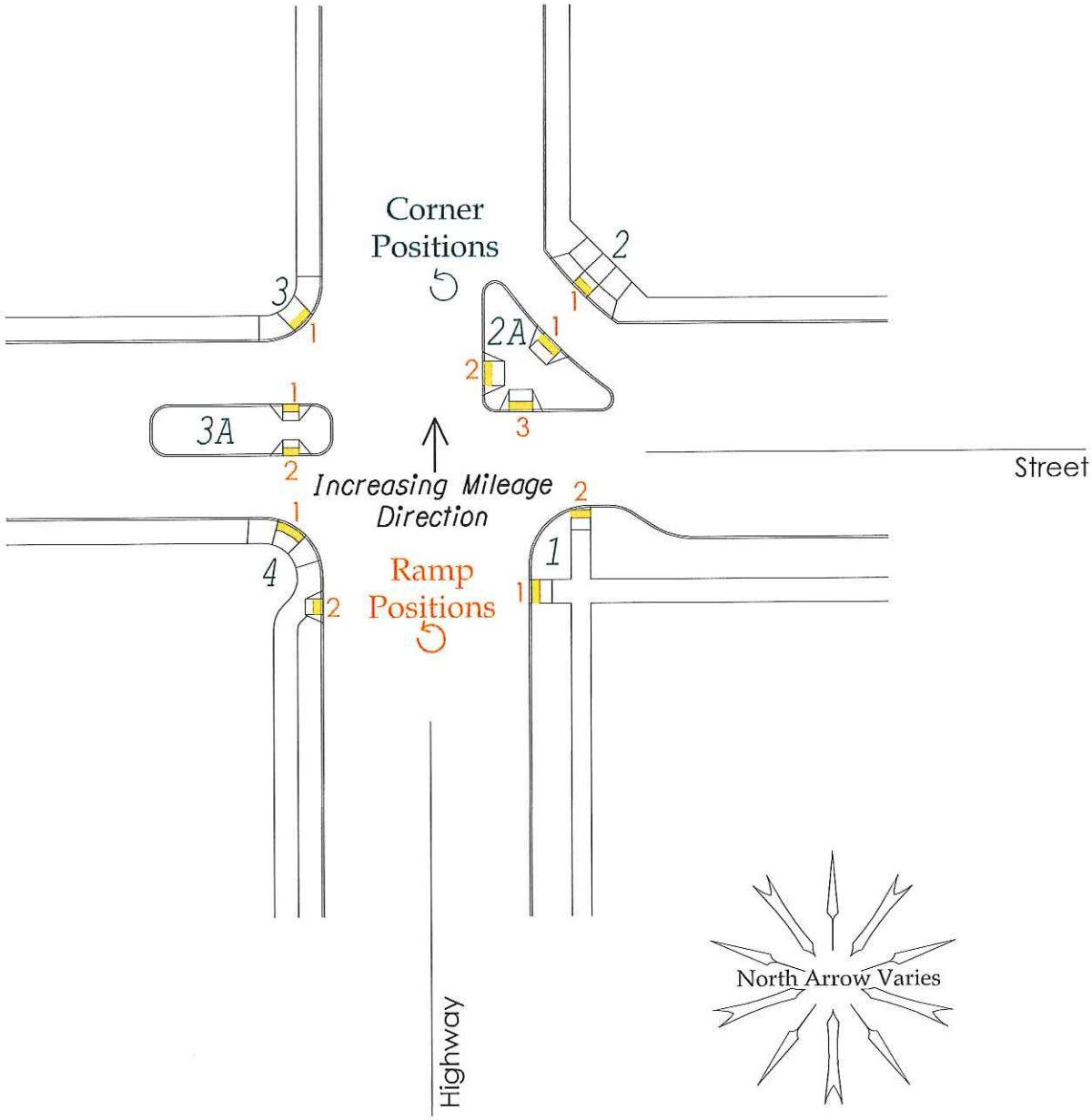
25. **Effect on Other Standards:** Does compliance with a requirement conflict with federal, state, or local laws? (regulatory conflicts may include preserving threatened or endanged species, the environment, archeological or cultural or natural feautres, historic preservation). Are there trade-offs with other engineering standards, best practices or other conflicting interests which are impacted due to achieving an ADA requirement? Describe any feature that would be affected because of compliance with the ADA requirement.

26. **Mitigation for Exception Included in Design (How does the design strategy accomplish accessibility to the maximum extent practicable):** While the reason for an exception can be justifiable, the curb ramp design is still required to be accessible and usable by people with disabilities to the maximum extent feasible or practicable. Since at least one requirement is infeasible, explain the decision process to work around that loss in accessibility. What alternatives were explored? How does the current design achieve the maximum level of accessibility? What site specific mitigations are employed to ensure that people with disabilities can access and use the curb ramp?

27. **Supporting Documentation (Include the appropriate Plan Section, Cross Section, Alignments Sheets & Plan Details):** Include a detail sheet showing elevations and slopes for each curb ramp where an exception is sought. See template in ODOT Standard Detail DET1720 & DET1721. Indicate the signal pole, pedestrian pole & pushbutton location if applicable. Include curbline alignment profile if design exception pertains to the gutter flow slope.

Attachment #4
Exhibit "A" Curb Ramp Location and Numbering

Exhibit "A" Curb Ramp Location and Numbering

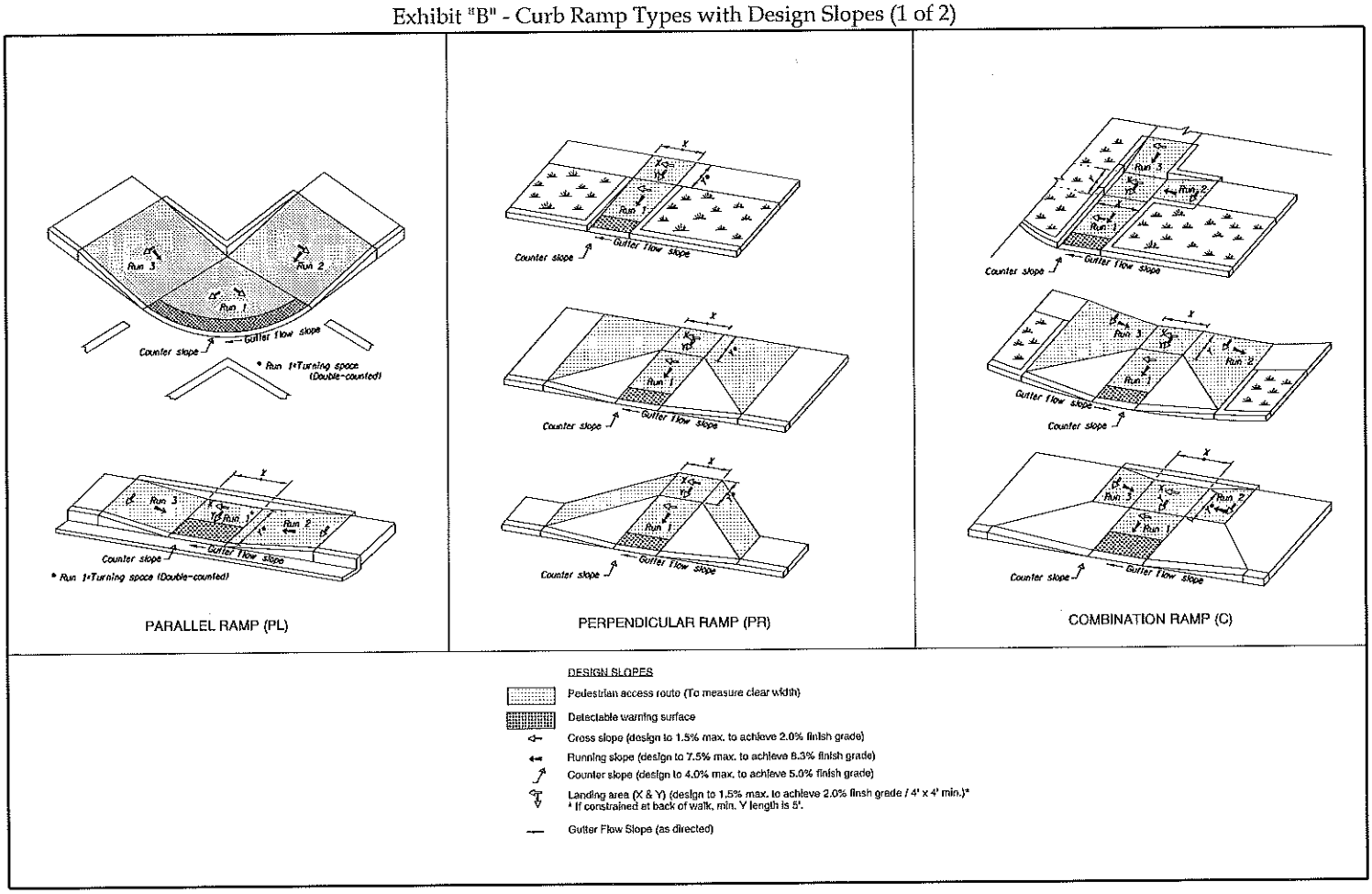


Directions:

- Sketch or insert drawing of intersection, labeling curb ramp locations.
- Number each corner counter-clockwise, beginning in the direction of increasing mileage. Add 'A' for islands (e.g. 1, 1A, 2, 2A…)
- Number each ramp at each corner counter-clockwise (1, 2, 3…)

Attachment #5
Exhibit "B" Curb Ramp Types with Design Slopes

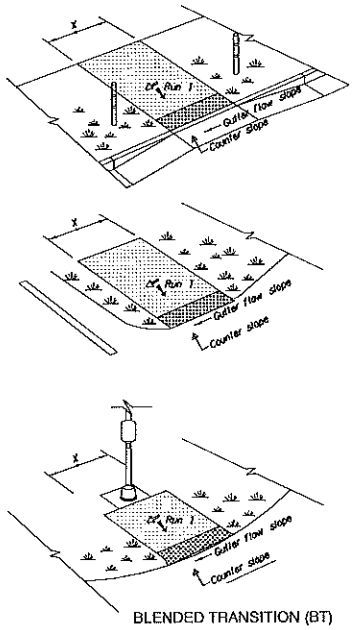
Exhibit "B" - Curb Ramp Types with Design Slopes (1 of 2)



DESIGN SLOPES

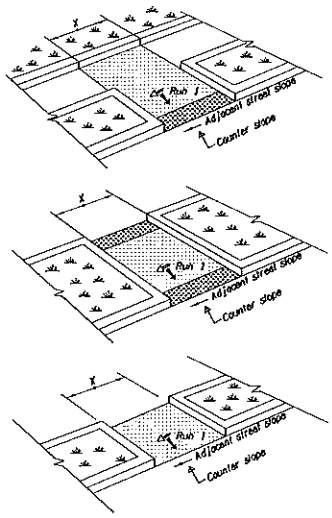
- Pedestrian access route (To measure clear width)
- Detectable warning surface
- Cross slope (design to 1.5% max. to achieve 2.0% finish grade)
- Running slope (design to 7.5% max. to achieve 8.3% finish grade)
- Counter slope (design to 4.0% max. to achieve 5.0% finish grade)
- Landing area (X & Y) (design to 1.5% max. to achieve 2.0% finsh grade / 4' x 4' min.)*
  * If constrained at back of walk, min. Y length is 5'.
- Gutter Flow Slope (as directed)

Exhibit "B" - Curb Ramp/Blended Transition Types with Design Slopes (2 of 2)



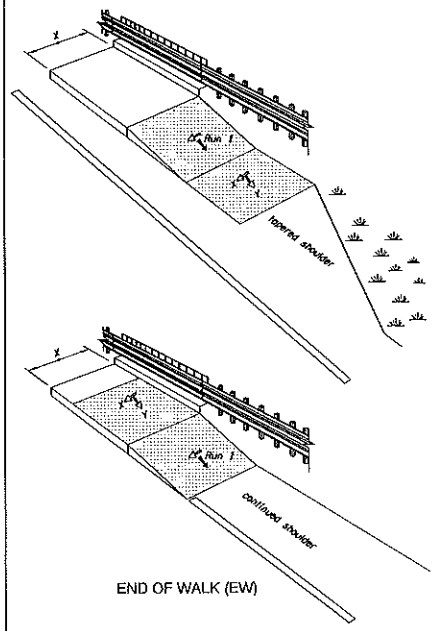
BLENDED TRANSITION (BT)

- Pedestrian access route (To measure clear width)
- Detectable warning surface
- Cross slope (design to 1.5% max. to achieve 2.0% finish grade)
- Running slope (5.0% max. finish grade) (If running slope exceeds 5.0%, this is a curb ramp, not a blended transition.)
- Counter slope (design to 4.0% max to achieve 5.0% finish grade)
- Gutter flow slope (2.0% max. if located at stop or yield control approach; 5.0% max. if located at uncontrolled or signalized intersection; if located midblock, allowed to equal adjacent street slope.)



CUT THROUGH (CT)

- Pedestrian access route (To measure clear width)
- Detectable warning surface
- Cross slope (If located at stop or yield control approach, cross slope shall be 2.0% max; if located at uncontrolled or signalized intersection, cross slope max is 5.0%; If located midblock, cross slope allowed to equal adjacent street slope.)
- Running slope (5.0% max. finish grade) (If running slope exceeds 5.0%, this is a curb ramp, not a cut-through island.)
- Counter slope (design to 4.0% max to achieve 5.0% finish grade)
- Adjacent street slope (As directed)



END OF WALK (EW)

- Pedestrian access route (To measure clear width)
- Cross slope (design to 1.5% max. to achieve 2.0% finish grade)
- Running slope (design to 7.5% max to achieve 8.3% finish grade)
- Landing area (X & Y) (design to 1.5% max to achieve 2.0% finish grade / 4' x 4' min.)