Portland ADA Curb Ramp Program

Whys, Whens, Whats, and How Tos

PBOT
PORTLAND BUREAU OF TRANSPORTATION

2024 Refresher

Portland ADA Curb Ramp Program

Agenda

- **Introduction and Background (Eva Huntsinger)**
- **Anatomy of a Curb Ramp (Jason Grassman)**
- **ADA Compliant Ramps - The Big 4 (Chris Wier)**
- **Break**
- **Process for Ensuring a Ramp (Raphael Haou)**
- **Resources**
- **Q & A**

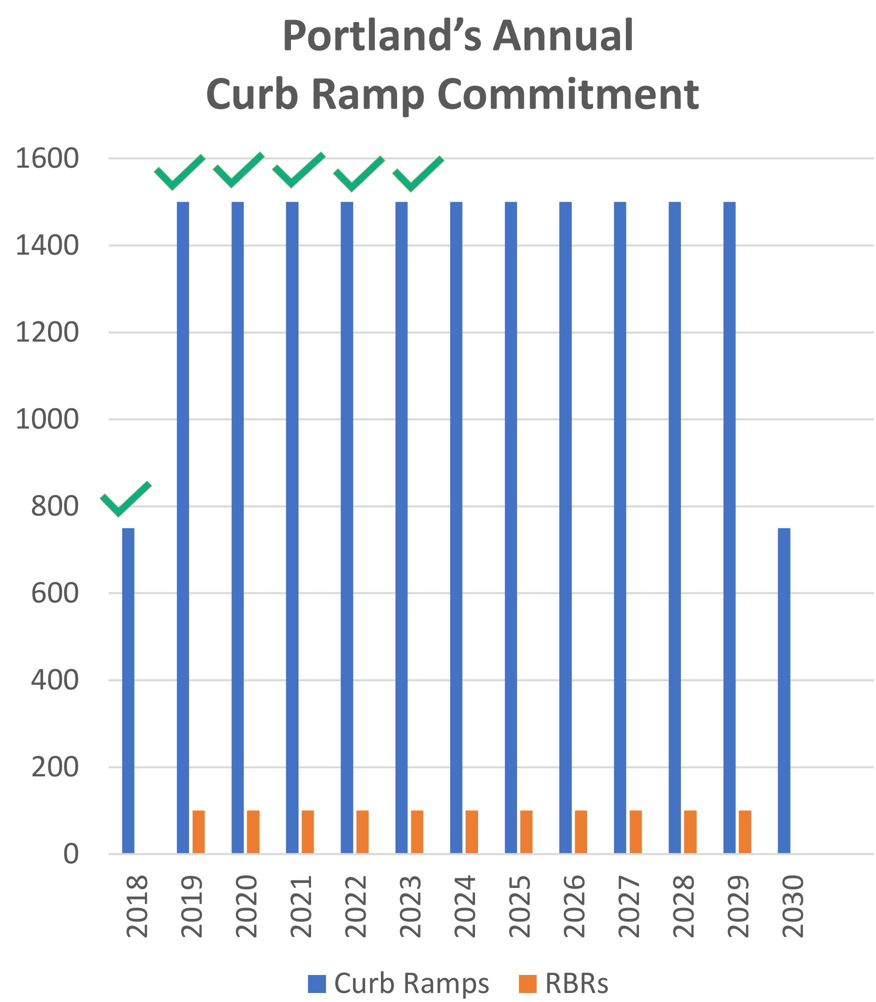
Glossary

ADA	Americans with Disabilities Act (1990)
CREEC	Civil Rights Education and Enforcement Center
ARC	ADA Ramp Crew (Raphael Haou)
ADA Technical Advisors	Chris Wier, P.E., ADA TA Lead (Permit Engineering - Review) Jason Grassman, P.E. (Civil Engineering and Drafting) Mary Wiser, P.E. (Permit Engineering - Support and Inspection) Tim Doherty P.E. (Maintenance Operations, Interim, with support from Raphael). Carlos Hernandez, P.E. (Traffic Engineering) Raphael Haou, P.E., (ADA Ramps Crew) Tom Bennett, P.E. (Signals and Street Lighting) Eva Huntsinger, JD, P.E. (CREEC Program Lead) Adam Hogan (Advisory Role) and Lisa Strader (ADA Coordinator)
RBR	Ramps By Request (Lisa Strader)
Variance/MEF	Curb Ramp Design Report –Maximum Extent Feasible within the Scope of the Work
ADA Standard	• 2010 ADA Standards (28 CFR Part 35.151 + 2004 ADAAG) – 2010 ADA Standards for Accessible Design 2010 Standards for State and Local Government Facilities Title II • FHWA Criteria FHWA Designing Sidewalks and Trails for Access - Part I 29.69 MB FHWA Designing Sidewalks and Trails for Access - Part II 9.3 MB

Curb Ramp Sources

- **Maintenance (Paving, Others)**
- **Permits (Development and Utilities, ODOT)**
- **Capital Improvement Projects**
- **ADA Ramp Crew (RBRs)**

Curb Ramp Commitment



- Annual Reporting
- 1500 Curb Ramps Per Year
- 100 RBRs

Note: After CREEC, we must continue to provide ADA Compliant Ramps when we alter (pave/resurface) or construct a street, because that is federal law.

Prioritization – The Big 4, Hierarchy, Equity

1st: New Construction and Alterations and 100 RBRs per year

2nd:

Pursuant to 28 C.F.R. § 35.150, Accessible curb ramps shall be prioritized at locations that serve the following areas, in the order below:

i. Government offices, facilities, schools, and parks (including the pedestrian rights of way adjacent to facilities owned or operated by the City, and the paths of travel leading from such adjacent pedestrian rights of way to the primary entrances to such facilities);

ii. Transportation corridors;

iii. Hospitals, medical facilities, assisted living facilities, and other similar facilities;

iv. Places of public accommodation, such as commercial and business zones;

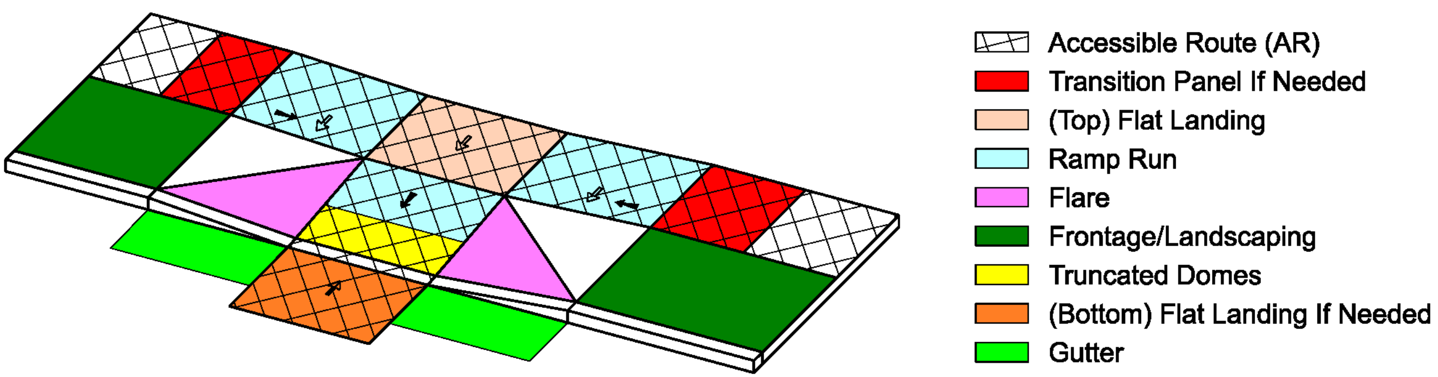
v. Facilities containing employers; and

vi. Residential neighborhoods.

❖ **Contact Lisa Strader – PBOT ADA Coordinator**

Help Us Get to 1500

Anatomy of a Curb Ramp
By Jason Grassman, P.E.



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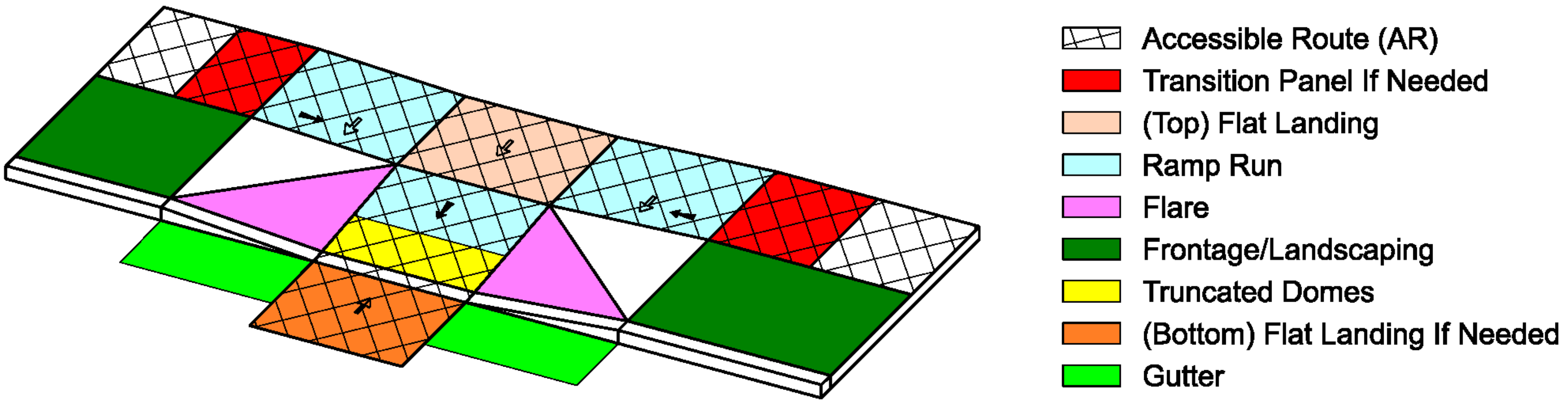
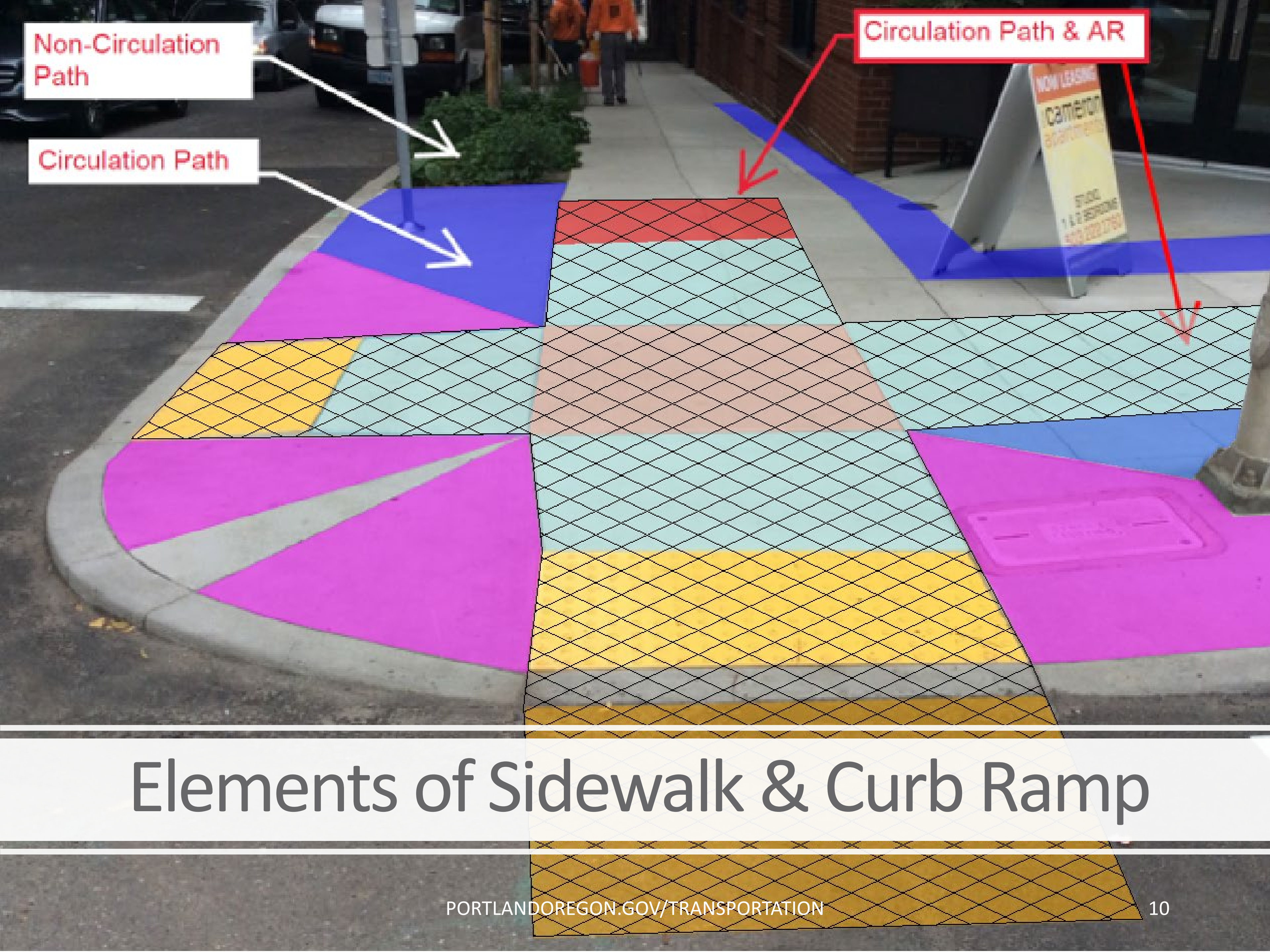
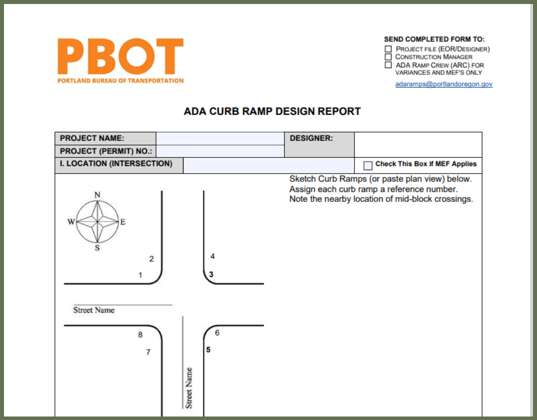


Elements of Sidewalk & Curb Ramp



Elements of Sidewalk & Curb Ramp

Designing Ramps

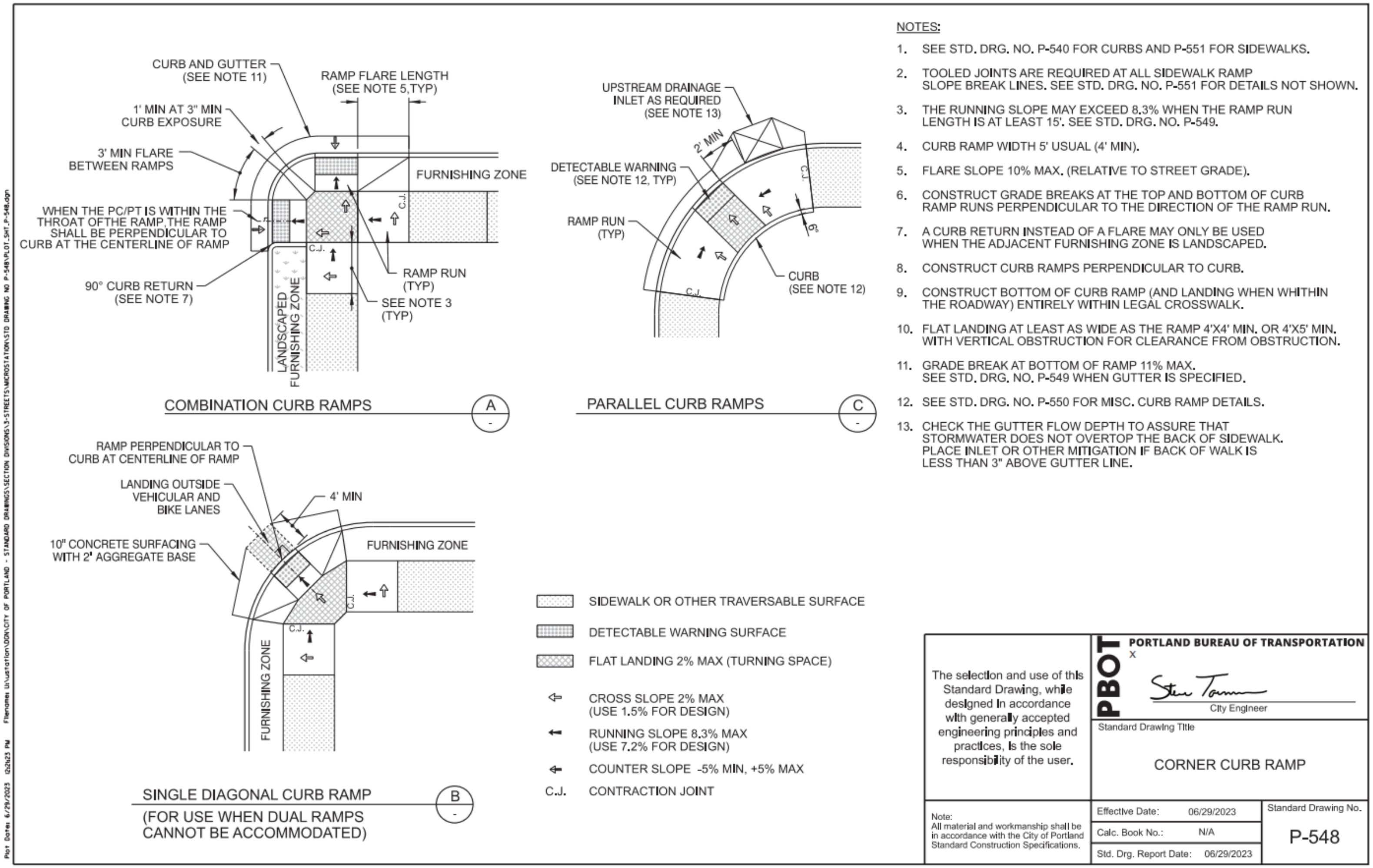


[ADA Technical Resources - Design, Construction, Reporting | Portland.gov]

II. DESIGN CRITERIA FOR NEW RAMPS: CHECK BOX IF DESIGN ELEMENT MEETS CRITERIA BELOW FOR EACH CORRESPONDING RAMP.

RAMP NUMBER:								
1	2	3	4	5	6	7	8	
☐	☐	☐	☐	☐	☐	☐	☐	A. SINGLE RAMP PROVIDES ACCESS TO RECEIVING RAMP WITH A DIRECTIONAL TURN ANGLE LESS THAN 45 DEGREES.
☐	☐	☐	☐	☐	☐	☐	☐	B. RAMP IS PERPENDICULAR TO CURB LINE.
☐	☐	☐	☐	☐	☐	☐	☐	C. BOTTOM OF RAMP AS IT INTERSECTS WITH THE STREET IS COMPLETELY WITHIN THE LEGAL CROSSING.
☐	☐	☐	☐	☐	☐	☐	☐	D. MAX (DESIGN) RAMP RUNNING GRADE IS 7.2%.
☐	☐	☐	☐	☐	☐	☐	☐	E. MIN DIMENSIONS OF LEVEL LANDING AT TOP OF RAMP IS 4' X 4' (PROVIDE AN ADDITIONAL FOOT FOR CLEARANCE ADJACENT TO VERTICAL OBSTRUCTIONS SUCH AS CURBS, WALLS, FENCES, POLES, ETC.)
☐	☐	☐	☐	☐	☐	☐	☐	F. MIN RAMP THROAT WIDTH IS 4' (EXCLUDING FLARES OR WINGS).
☐	☐	☐	☐	☐	☐	☐	☐	G. MAX RAMP FLARE (WING) IS 6' LONG FOR A 6" CURB EXPOSURE (OR EQUIVALENT RATIO; CURB RETURN MEETS THIS REQUIREMENT IF ADJACENT TO SOFTSCAPE OR COMPLETE LENGTH OF RAMP IS PHYSICALLY BLOCKED).
☐	☐	☐	☐	☐	☐	☐	☐	H. MAX (DESIGN)STREET GUTTER GRADE AT BOTTOM OF RAMP IS 1.5%
☐	☐	☐	☐	☐	☐	☐	☐	I. MAX (DESIGN)STREET CROSS SLOPE AT BOTTOM OF RAMP IS 4% (THIS APPLIES TO GUTTERS AND ROAD SURFACES WITHIN 2' OF A CURB RAMP, MEASURED PERPENDICULAR TO THE CURB).
☐	☐	☐	☐	☐	☐	☐	☐	J. MAX (DESIGN)STREET TO RAMP GRADE BREAK DIFFERENCE IS 10%.
☐	☐	☐	☐	☐	☐	☐	☐	K. MAX (DESIGN) SIDEWALK TRANSITION PANEL RUNNING GRADE IS 8.33% OR MIN LENGTH IS 15'.
FOR DIAGONAL RAMPS ONLY (TURNING MOVEMENT TO RECEIVING RAMP IS 45 DEGREES OR HIGHER) (ADA TA SIGN-OFF REQUIRED AS PREFERENCE IS FOR TWO DIRECTIONAL RAMPS AT EACH CORNER)								
☐	☐	☐	☐	☐	☐	☐	☐	CHECK BOX IF NOT APPLICABLE
☐	☐	☐	☐	☐	☐	☐	☐	L. RAMP LANDING (MATCH RAMP THROAT, MINIMUM SQUARE 4' X 4') CENTERED AT BOTTOM OF RAMP IN THE STREET IS OUTSIDE OF THE VEHICULAR TRAVELED WAY (INCLUDING BIKE LANES) AND 1.5% IN ALL DIRECTIONS.
FOR RAMPS WITH PUSH BUTTON ONLY (COORDINATE PUSH BUTTON PLACEMENT WITH SSL ENGINEERING)								
☐	☐	☐	☐	☐	☐	☐	☐	CHECK BOX IF NOT APPLICABLE
☐	☐	☐	☐	☐	☐	☐	☐	M. THE PUSH BUTTON POLE IS LOCATED ADJACENT TO A LEVEL ALL-WEATHER RAMP LANDING.
☐	☐	☐	☐	☐	☐	☐	☐	N. THE PUSH BUTTON POLE IS WITHIN 5' LONGITUDINALLY (ALONG CURB ALIGNMENT) OF THE OUTSIDE LIMITS OF THE MARKED (OR LEGAL UNMARKED) CROSSING.
☐	☐	☐	☐	☐	☐	☐	☐	O. THE PUSH BUTTON POLE IS BETWEEN 1.5' AND 10' FROM FACE OF CURB, SHOULDER, OR EDGE OF PAVEMENT (IDEALLY BETWEEN 1.5' AND 6').
☐	☐	☐	☐	☐	☐	☐	☐	P. DISTANCE FROM ADJACENT PUSHBUTTONS ON SEPARATE POLES IS AT LEAST 10'.
☐	☐	☐	☐	☐	☐	☐	☐	Q. THE CENTER OF THE PUSH BUTTON IS BETWEEN 3.5' AND 4' ABOVE THE ADJACENT LEVEL ALL-WEATHER RAMP LANDING.
☐	☐	☐	☐	☐	☐	☐	☐	R. THE FACE OF THE PUSH BUTTON IS WITHIN 10" TO THE EDGE OF THE LEVEL ALL-WEATHER RAMP LANDING BUT NOT PROTRUDING MORE THAN 4" HORIZONTALLY INTO THE CIRCULATION PATH.
☐	☐	☐	☐	☐	☐	☐	☐	S. THE PUSH BUTTON IS AN AUDIBLE PEDESTRIAN SIGNAL (APS) AND PARALLEL TO THE DIRECTION OF THE CROSSING.

PBOT ADA Curb Ramp Design Form Page 2 of 3 April 3, 2024



Portland Corner Curb Ramp Standard Drawing

ADA Compliant Ramps - The Big 4

By Chris Wier, P.E.

When are ADA compliant curb ramps required?

The Big 4

1. The public agency must provide accessible pedestrian walkways (ADA compliant curb ramps) **when constructing new sidewalks (or infills).**

2. **Roadway resurfacing** and/or reconstruction triggers ADA Complaint curb ramps on both sides of the street **when the work spans from one intersection to another.**

3. **When roadway resurfacing crosses a pedestrian crossing**, ADA compliant curb ramps are required, even if the roadway surfacing does not span curb to curb,.

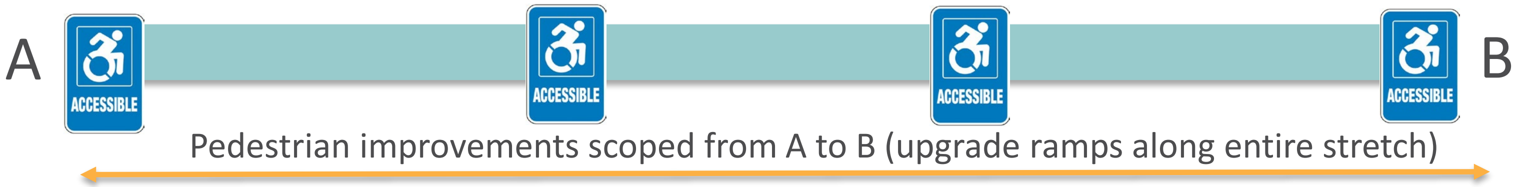
4. **There is an exception for utility trenches, as follows. When a utility trench is just a portion of the pavement**, even including a portion of the crosswalk, **repaving to cover the trench does not require ADA Compliant curb ramps**, but a lower level of accessibility is not allowed.

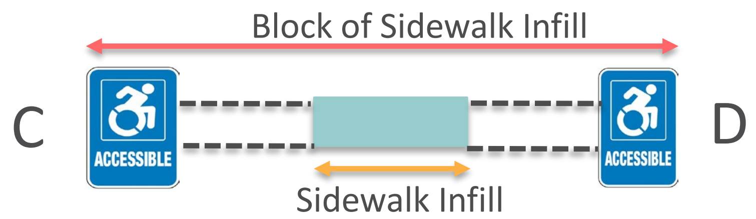
   Also note, per **City Engineer Directive TL001 Utility Trench Paving Triggers ADA Compliant Ramps,** Paving associated with utility trench work as depicted in Standard Drawings P-505 and P-518 triggers construction of an ADA compliant curb ramp on the side of the street where the utility trench related paving occurs, when the work is 2’ or less from the curb face at a sidewalk, or 2’ or less from the, lip of gutter where one exists.

ADA Compliant to the Maximum Extent Feasible within the Scope of the Project

Number 1.

1. The public agency must provide accessible pedestrian walkways (ADA compliant curb ramps) **when constructing new sidewalks (or infills)** 29 U.S.C. § 794(a). (9-12-06); https://www.fhwa.dot.gov/civilrights/programs/ada/ada_sect504qa.cfm .





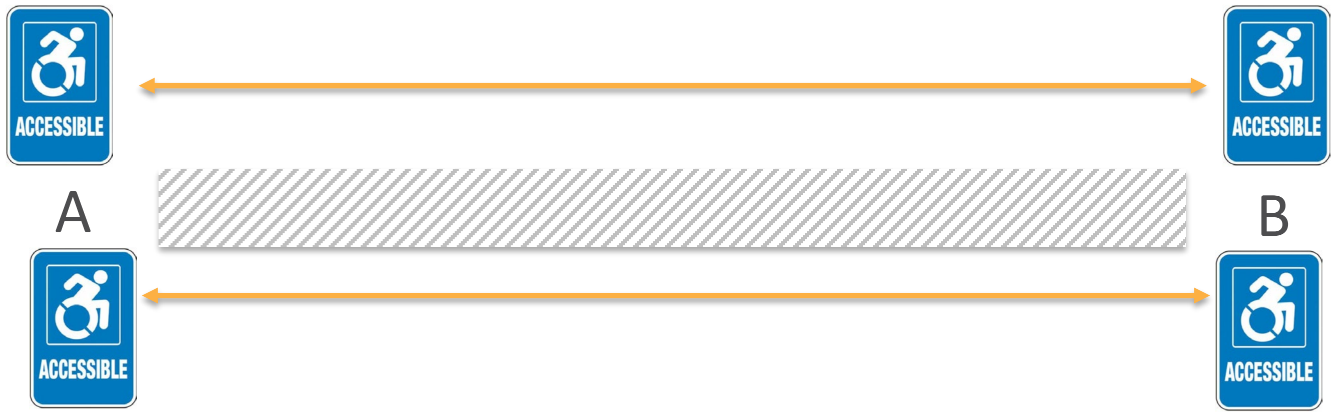
Small Stretch of Sidewalk Infill – Provide ADA Compliant Ramps to Access the New Sidewalk Infill Section

- ✓ **Provide curb ramps along the sidewalk route/corridor.**
- ✓ **Provide receiving curb ramps on both sides of median island/refuge area.**
- ✓ **For Small Sidewalk Infill Project (C to D), bring curb ramps on either end of each sidewalk infill segment into ADA Compliance.**

ADA Compliant to the Maximum Extent Feasible within the Scope of the Project

Number 2.

2. **Roadway resurfacing** and/or reconstruction triggers ADA Complaint curb ramps on both sides of the street **when the work spans from one intersection to another.** https://www.ada.gov/doj-fhwa-ta-supplement-2015.html, Q2. Q and As Supplement to the 2013 DOJ/DOT Joint Technical Assistance on the Title II of the Americans with Disabilities Act Requirements To Provide Curb Ramps when Streets, Roads, or Highways are Altered through Resurfacing | FHWA

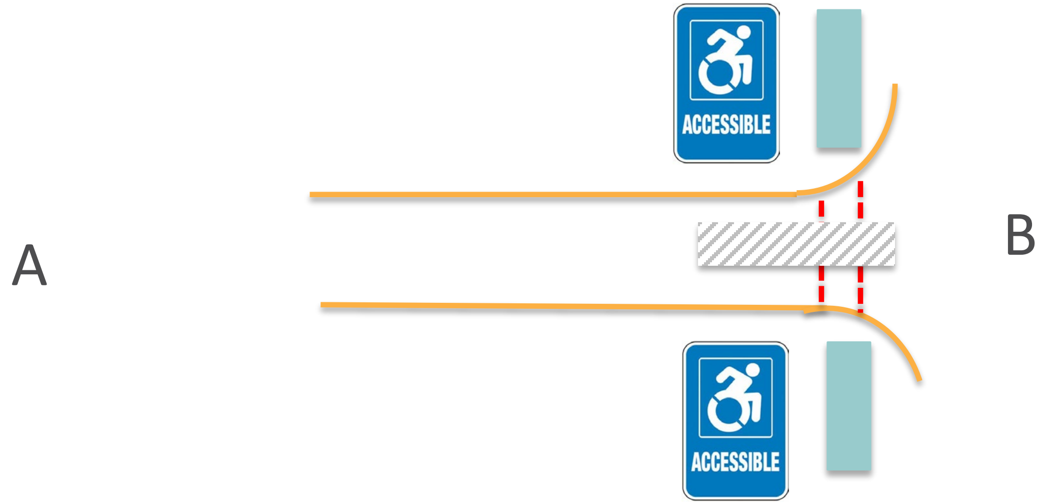


Provide curb ramps along the paving route from A to B.

ADA Compliant to the Maximum Extent Feasible within the Scope of the Project

Number 3.

3. **When roadway resurfacing crosses a pedestrian crossing**, ADA compliant curb ramps are required, even if the roadway surfacing does not span curb to curb, https://www.ada.gov/doj-fhwa-ta-supplement-2015.html, Q3. Q and As Supplement to the 2013 DOJ/DOT Joint Technical Assistance on the Title II of the Americans with Disabilities Act Requirements To Provide Curb Ramps when Streets, Roads, or Highways are Altered through Resurfacing | FHWA

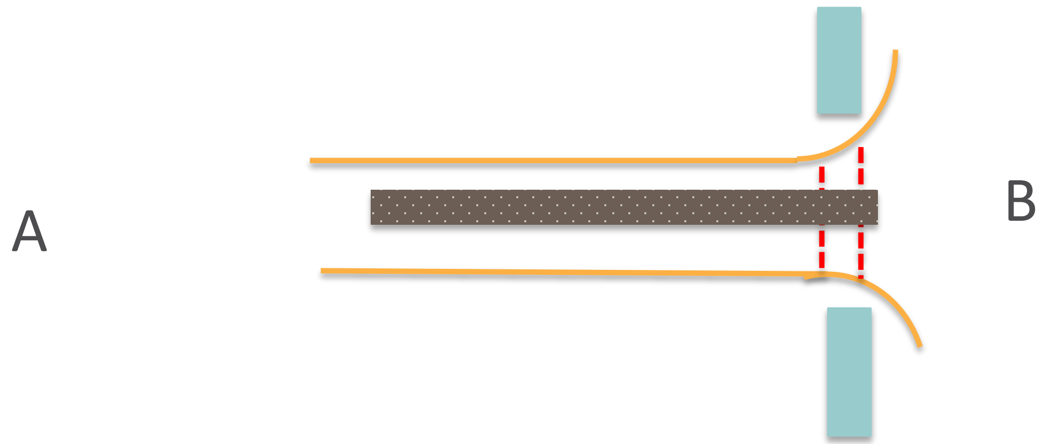


Provide ADA compliant curb ramps on both sides of the crosswalk.

ADA Compliant to the Maximum Extent Feasible within the Scope of the Project

Number 4.

4. **When a utility trench is just a portion of the pavement**, even including a portion of the crosswalk, **repaving to cover the trench does not** require ADA Compliant curb ramps, but a lower level of accessibility is not allowed. If the curb at the sidewalk crossing is affected, and there is no curb ramp, a curb ramp must be constructed rather than simply fixing the curb. https://www.ada.gov/doj-fhwa-ta-supplement-2015.html Q11. Q and As Supplement to the 2013 DOJ/DOT Joint Technical Assistance on the Title II of the Americans with Disabilities Act Requirements To Provide Curb Ramps when Streets, Roads, or Highways are Altered through Resurfacing | FHWA



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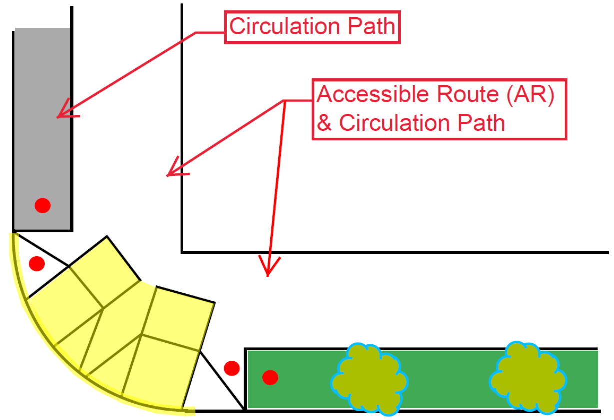
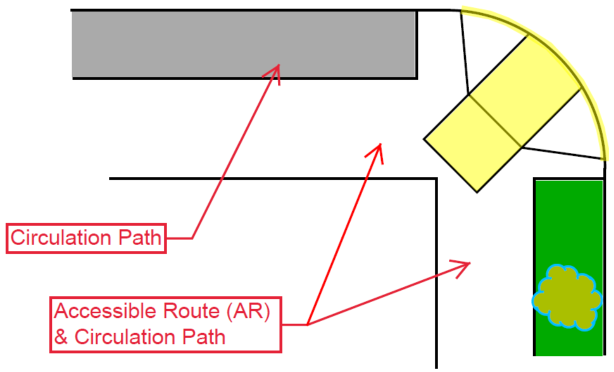
ADA Compliant to the Maximum Extent Feasible within the Scope of the Project

When are curb ramps required?

Utility Work



- Yes, if any portions of the curb radius or curb ramp are disturbed.
- No, if disturbance is within Circulation Path and outside of curb ramp.



Take a Break

PBOT ADA Ramp Crew Ensures Ramps

Raphael Haou, P.E.

How ARC Ensures Ramps for ADA Compliance

ADA CURB RAMP INSPECTION MANUAL

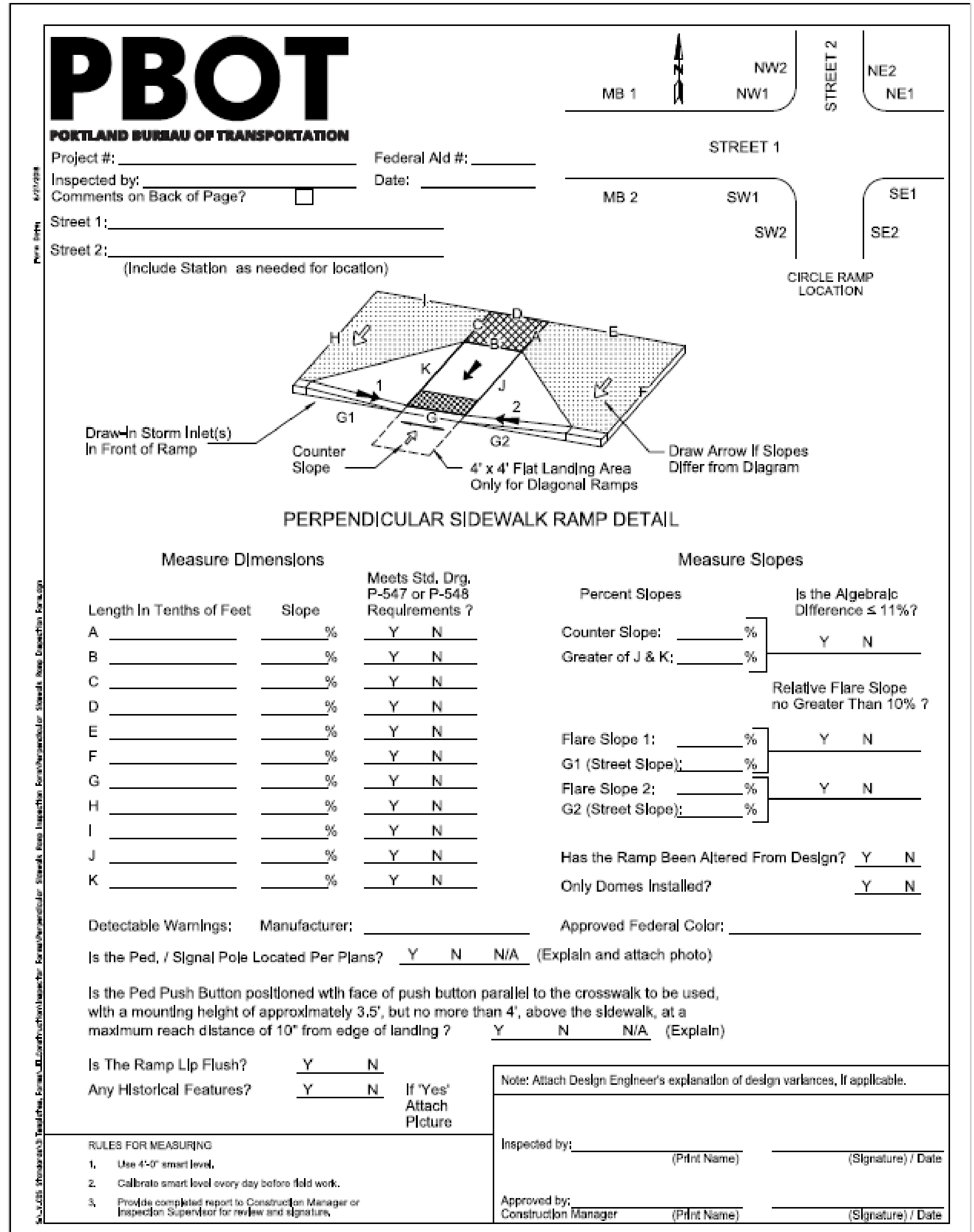
PBOT

PORTLAND BUREAU OF TRANSPORTATION

Effective Date 9/17/2021

PORTLANDOREGON.GOV/TRANSPORTATION

ADA Ramp Inspection Form



PBOT
PORTLAND BUREAU OF TRANSPORTATION

Project #: ____________ Federal Aid #: ________
Inspected by: ____________ Date: ________
Comments on Back of Page? ☐
Street 1: ____________
Street 2: ____________
(Include Station as needed for location)

PERPENDICULAR SIDEWALK RAMP DETAIL

Measure Dimensions

Length In Tenths of Feet		Slope	Meets Std. Drg. P-547 or P-548 Requirements ?
A	______	____%	Y N
B	______	____%	Y N
C	______	____%	Y N
D	______	____%	Y N
E	______	____%	Y N
F	______	____%	Y N
G	______	____%	Y N
H	______	____%	Y N
I	______	____%	Y N
J	______	____%	Y N
K	______	____%	Y N

Measure Slopes

Percent Slopes		Is the Algebraic Difference ≤ 11%?
Counter Slope:	____%	Y N
Greater of J & K:	____%	

		Relative Flare Slope no Greater Than 10% ?
Flare Slope 1:	____%	Y N
G1 (Street Slope):	____%	
Flare Slope 2:	____%	Y N
G2 (Street Slope):	____%	

Has the Ramp Been Altered From Design? Y N
Only Domes Installed? Y N

Detectable Warnings: Manufacturer: ________ Approved Federal Color: ________

Is the Ped. / Signal Pole Located Per Plans? Y N N/A (Explain and attach photo)

Is the Ped Push Button positioned with face of push button parallel to the crosswalk to be used, with a mounting height of approximately 3.5', but no more than 4', above the sidewalk, at a maximum reach distance of 10" from edge of landing ? Y N N/A (Explain)

Is The Ramp Lip Flush? Y N
Any Historical Features? Y N If 'Yes' Attach Picture

Note: Attach Design Engineer's explanation of design variances, if applicable.

Inspected by: ________ (Print Name) ________ (Signature) / Date

Approved by: Construction Manager ________ (Print Name) ________ (Signature) / Date

RULES FOR MEASURING

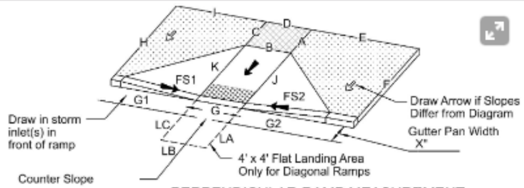
1. Use 4'-0" smart level.
2. Calibrate smart level every day before field work.
3. Provide completed report to Construction Manager or Inspection Supervisor for review and signature.

CREEC Report Map

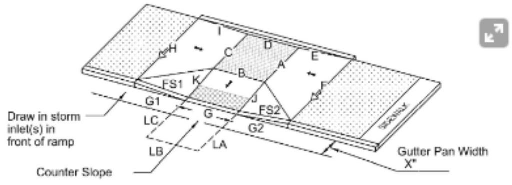
PBOT ADA Curb Ramp Frequently Asked Questions with A

Understanding the Inspection Data

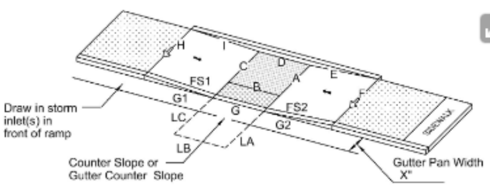
The Slope and Length measurements provided with each curb ramp inspection record correspond to locations on the curb ramp. These locations are detailed in the following measurement diagrams, which differ for each ramp style. The ramp style is recorded in each curb ramp inspection record. *Click to expand the measurement diagrams.*



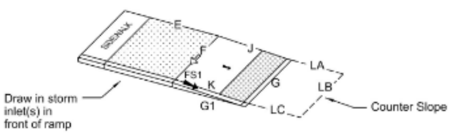
PERPENDICULAR RAMP MEASUREMENT



COMBINATION RAMP MEASUREMENTS



PARALLEL RAMP MEASUREMENTS



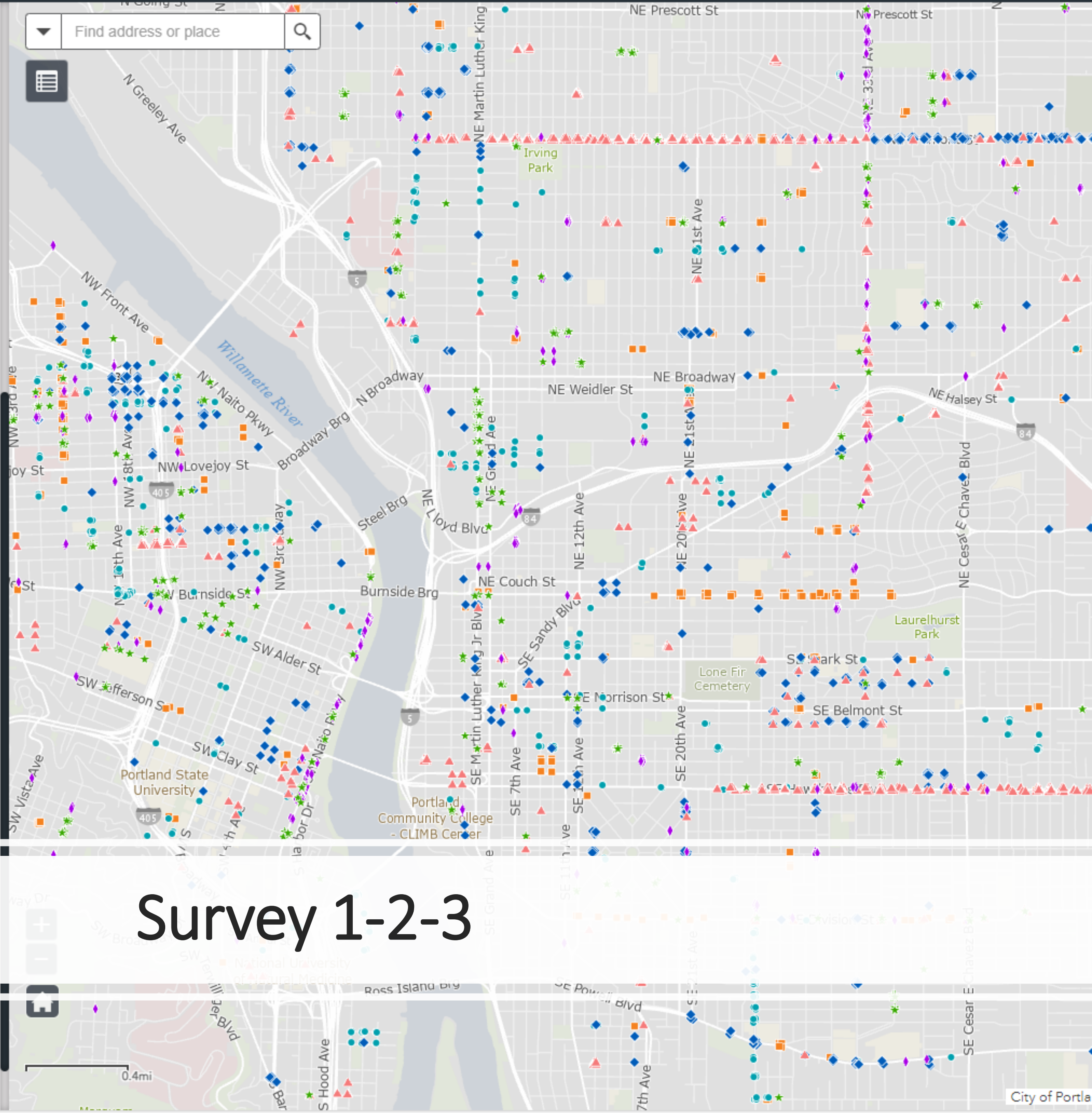
SIDEWALK END RAMP MEASUREMENTS

Downloading Inspection Data

Click to expand instructions

Step 3: Select the **Export all to CSV** by clicking

Step 4: Click **OK** in the confirmation dialog



Survey 1-2-3

Resources

[PBOT ADA Technical Resources - Design, Construction, Reporting]

- ADA Technical Advisors
- Standard Drawings
- Curb Ramp Design Form
- Directives
- ADA Design Guide in Development (Fall 2024)
- ADA Inspection Manual
- Inspection Video (Underway)

When in doubt or if you don't immediately find what you need, contact your ADA Technical Advisor. That is what they are here for!