

### ADA OVERVIEW

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## WHAT WE'LL COVER TODAY

Overview of ADA

Think of the User

Quick overview of Standard Details, and

APS

**ADA Compliant Grates** 

Work Zone stuff

EV Charging Stations.



## AMERICANS WITH DISABILITIES ACT OF 1990

Prior to the ADA - Sec. 504 Rehabilitation Act (1973) Accessibility on *federally funded* facilities

In 1990, President George H.W. Bush signed the Americans with Disabilities Act (ADA)

The intent of ADA is to allow people with disabilities to participate **fully in society.** 

Accessibility in all facilities, workplaces, commercial buildings. (When built or altered.)

ADA compliance is not only about accessibility...
It is about Safety!



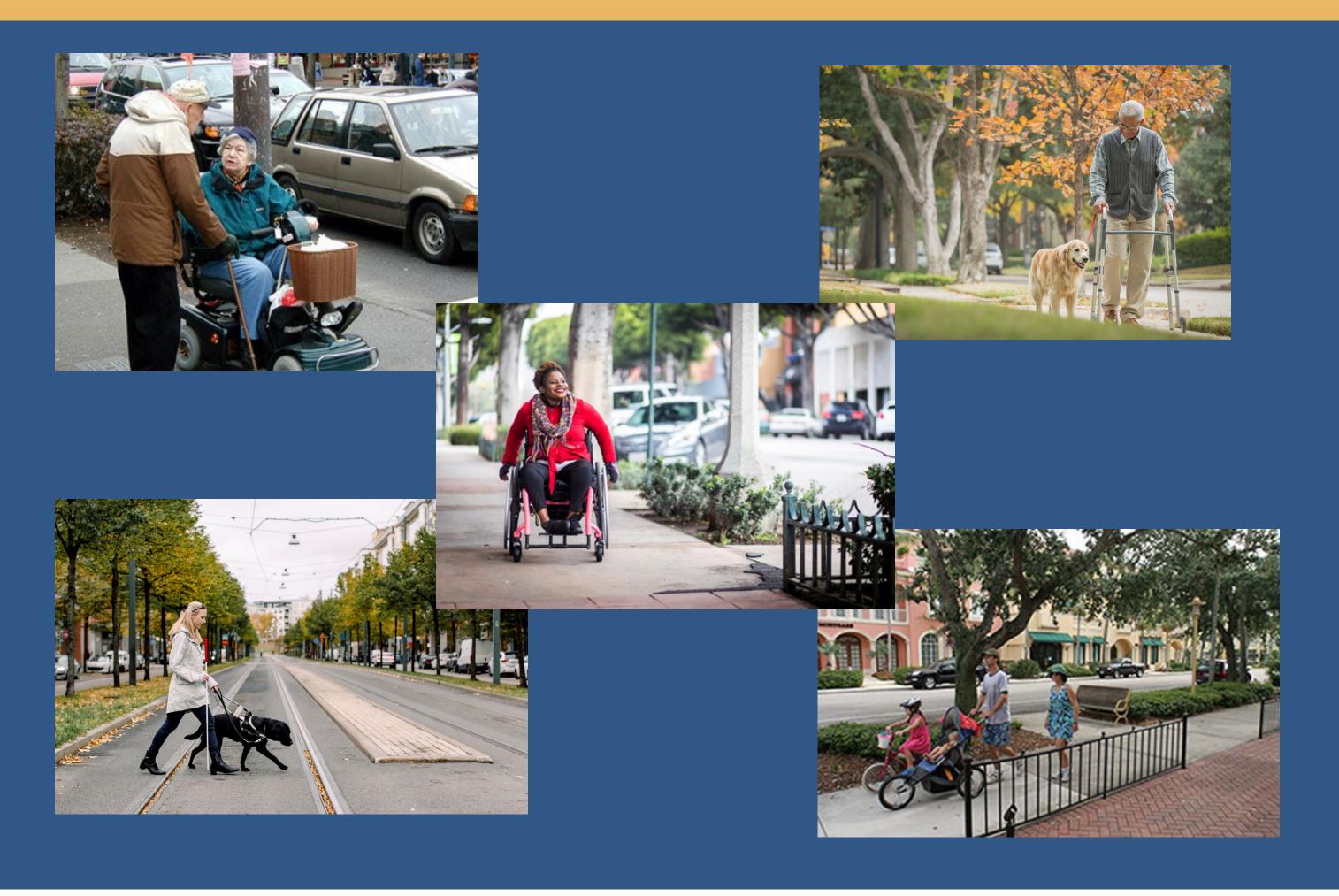
## PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG)

- ❖ ADA created the US Access Board, which develops standards for ADA.
- ❖ The Access Board, with help from the USDOT, developed PROWAG and released the draft rule for comment in 2011.
- The PROWAG final rule has been released but...
- The USDOT has gone through rulemaking and adopted PROWAG
- US DOJ must adopt its own rules and guidance before it is adopted as law. They have not done that yet.
- Much of what we build follows PROWAG



## Think of the User







## MOBILITY DEVICES COME IN MANY SHAPES AND SIZES.



Source: Bayshore Medical Supply





# Many people with disabilities do not use any devices.

#### TRUE OR FALSE

People with visual impairments always...

- 1. Use red canes and/or service dogs.
- 2. Cannot see anything.
- 3. Self-identify as someone with a visual impairment.







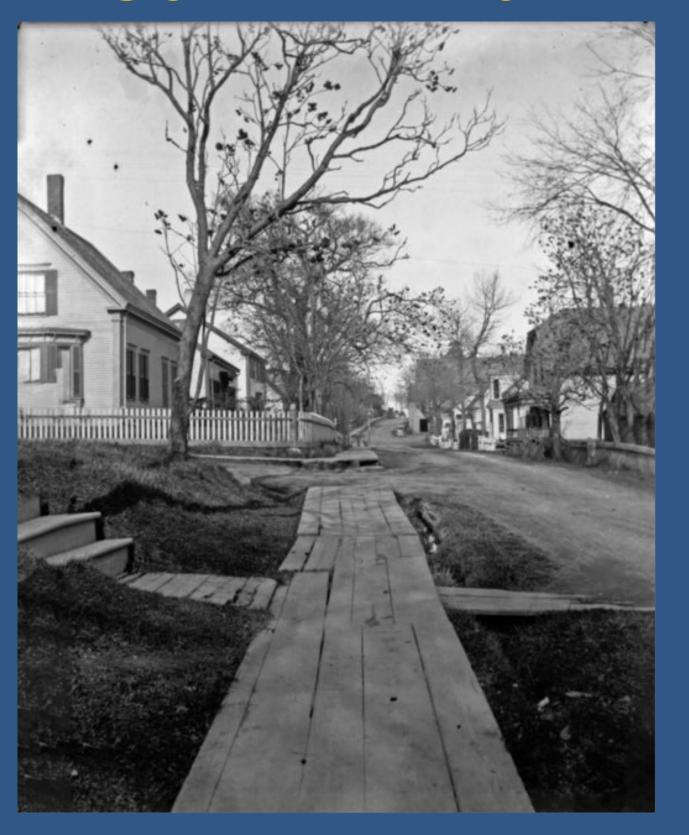


#### PEOPLE WITH VISUAL IMPAIRMENTS

- Sometimes do not use aids at all.
- 85% of people with visual impairments are not totally blind. (American Foundation for the Blind)
- Some do not identify as being visually impaired, but they may fall under the vision standard defined as low vision.



# MAINE DOT STANDARD DETAILS - CURB RAMPS





### MAINEDOT STANDARD DETAILS

MaineDOT has comprehensive Standard Details for Pedestrian Ramps 801(11-27) and Detectable Warning placement 608(02).

We are updating our details, and we have adopted designs that require cross slopes of 1.5%.

The latest and greatest: Curb Ramp Standard Details 2024\_0.pdf

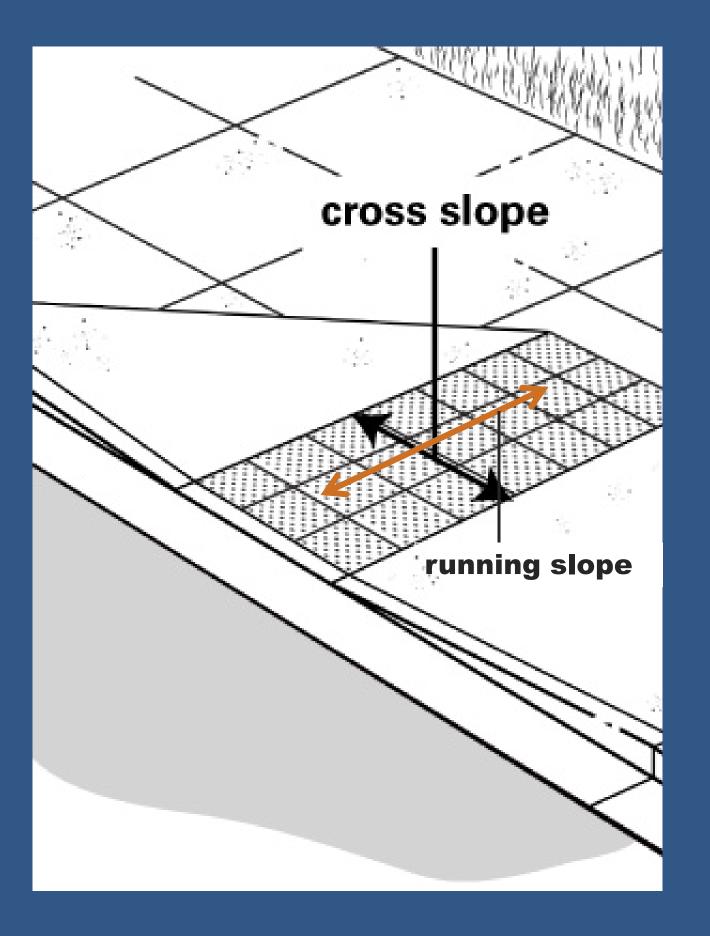


## RUNNING SLOPE & CROSS SLOPE

Running slope should be no more than 8.3% or 1:12. Build lower if possible.

Although PROWAG allows for 2.1% cross slope, MaineDOT will require no more than 1.5%.

Both slopes should be measured at the center of the ramp.





## GOOD THINGS

- Parallel ramps work well on our system of narrow sidewalks and mid block crossings
- •The allow the user to sit at road level, eliminating the need for a clear space in the shoulder.
- •The counter slope can increase up to 8.3%, so road crowns are less of a factor.
- Easier to build and get compliant.



### PARALLEL RAMP CONCERNS

Sometimes parallel ramps will hold water, especially if the counter slope is steep.

It is often difficult to tell but if it looks apparent, adjustments need to be made, and a technical infeasibility can be justifiable.

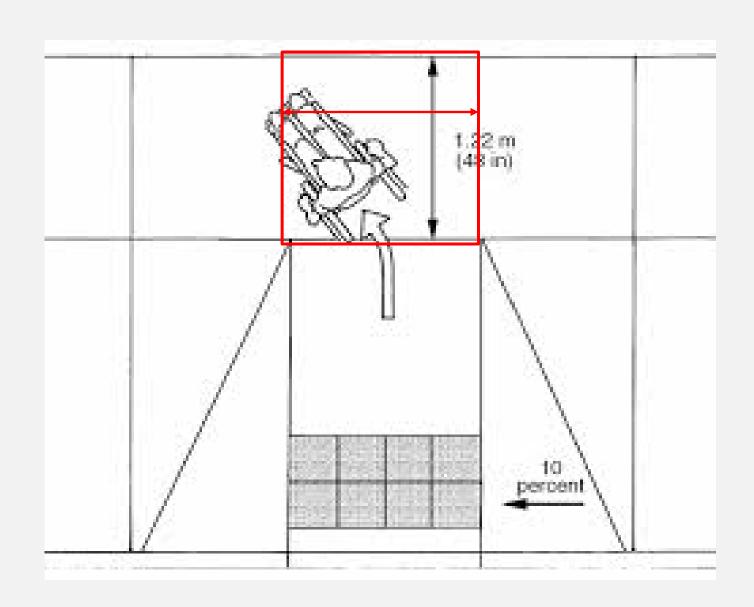


#### LEVEL TURNING SPACE (LANDINGS)

A level landing is vital to ensure that a chair or mobility device can make a turn on and off the ramp or go past the ramp.

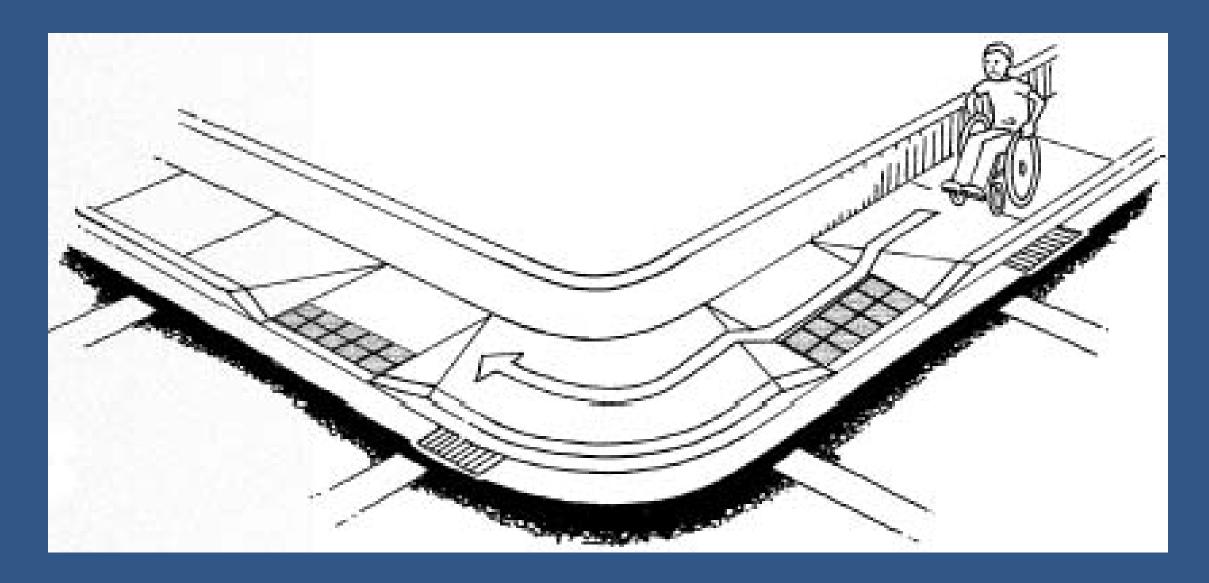
Width of the ramp.

Level landings should be no more than 1.5% in both directions. If it is 2.1% it is compliant.





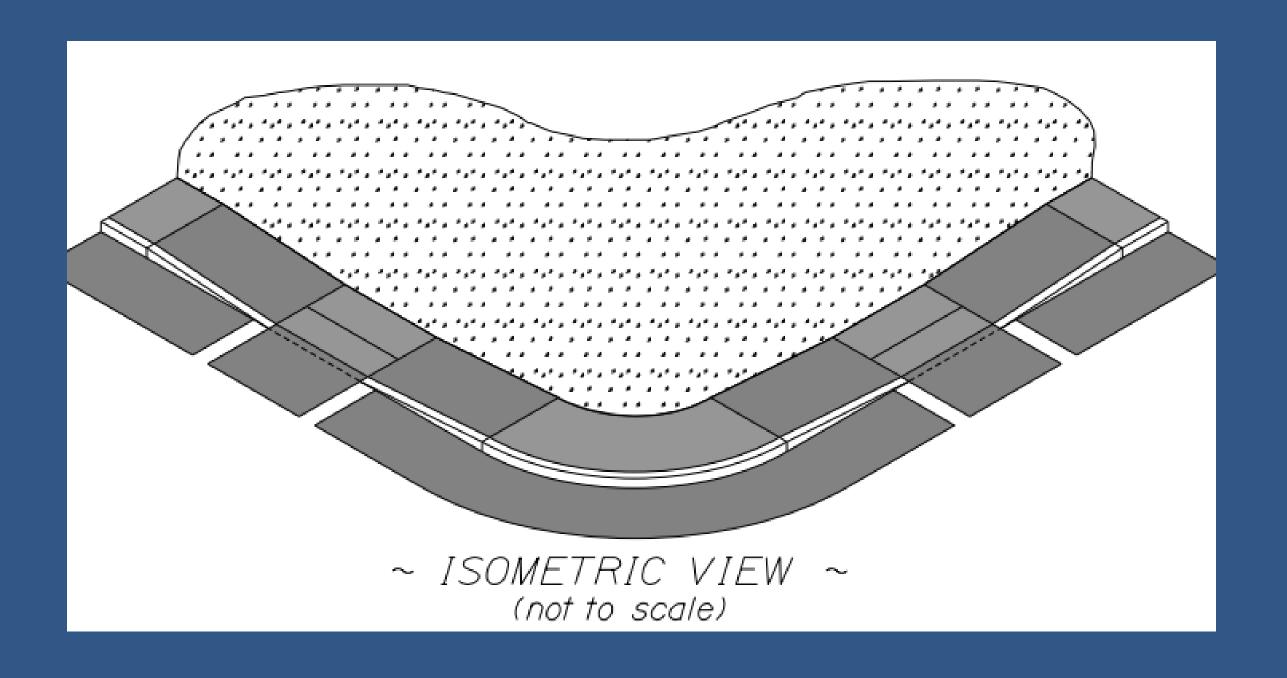
## WHY WE REQUIRE LEVEL TURNING SPACES.



Designing Sidewalks and Trails for Access, FHWA 2002

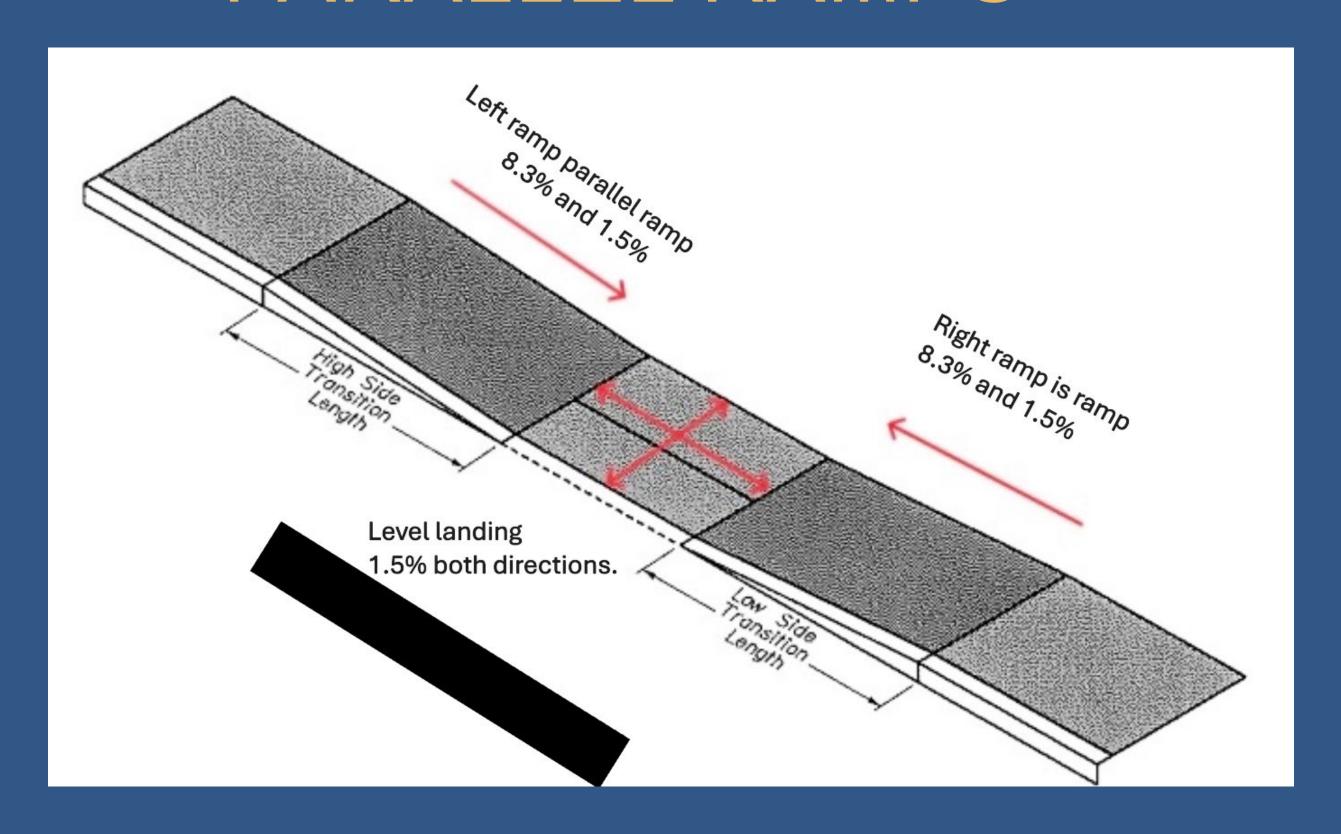


## WHAT WE BUILD INSTEAD...



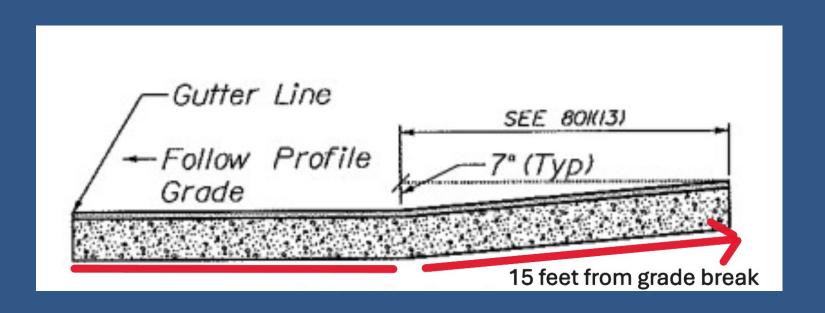


## PARALLEL RAMPS





## 15 FOOT RULE



PROWAG acknowledges that reaching compliance on steep grades may not be practical.

PRPWAG Requires that we go 15 feet from the grade bread to meet compliance to the maximum extent.

If we cannot reach compliance beyond 15 feet we do not need to go further.

There may be instances where we cannot go 15 feet and that is okay as well. We only need to document that/.

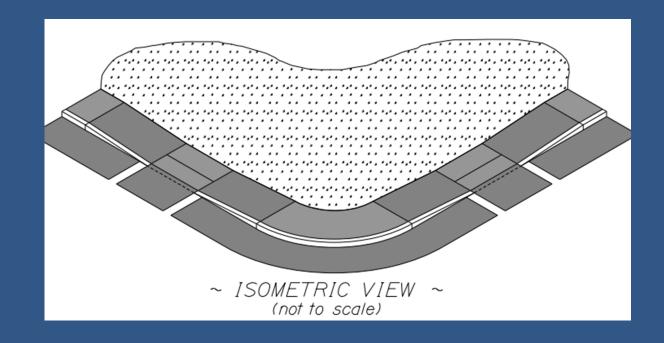


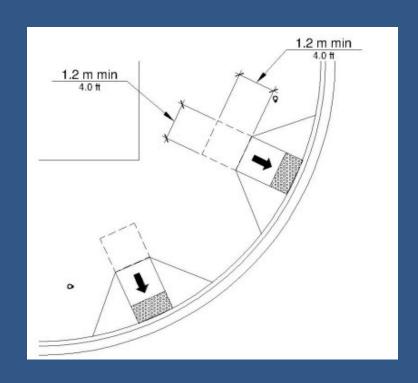
### PERPENDICULAR RAMPS

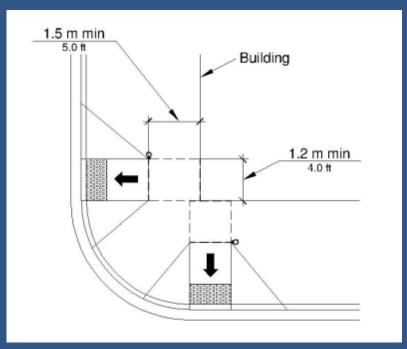
PROWAG Prefers perpendicular ramps.

Turning space is above the ramp:  $1.5\% \times 1.5\%$  and 4 feet.

The tip down/flared side (curbing) should not exceed 10%







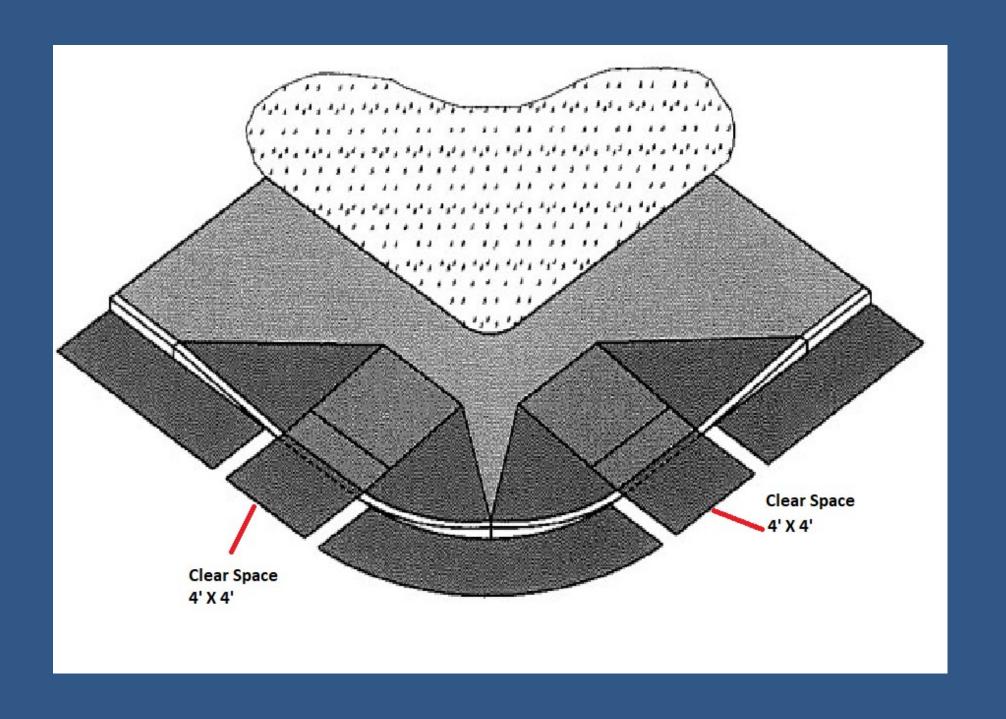


#### CLEAR SPACE

Only if there is a landing and a ramp to the street.

Need to have space where chair or walker can sit.

Don't need on parallel ramps.



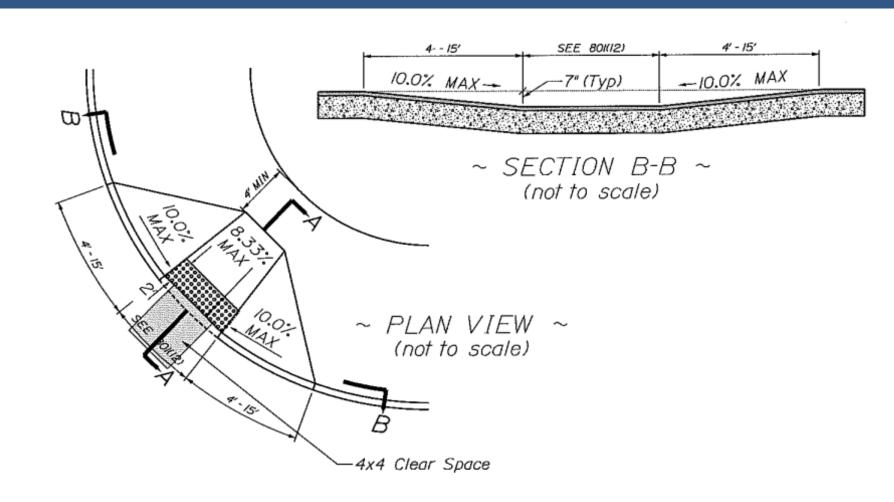


### DIAGONAL RAMPS

Our standard details note that this is a last resort.

When retrofitting, it may be the only option,

In design, we should be looking at the two ramp option.

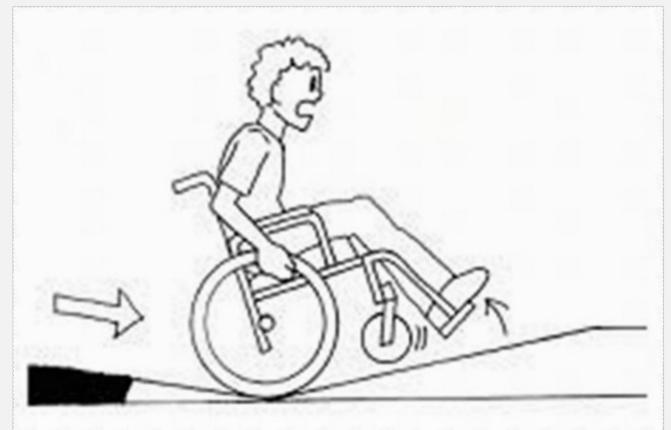


#### Notes:

- This less desirable design should not be used unless required by design constraints. It does not provide directional cues. Use Option I or Option 2 when possible.
- No vehicular access shall be permitted through the curb radius.







#### COUNTER SLOPE

If there is a ramp to the street, counter slope should still be 5%, but there are many instances where it can exceed 5%.

If you have a parallel ramp and the slope at the bottom is flat or 2%, the counter slope can be 8.3%.



## DETECTABLE WARNINGS (DW)





## WHY DO WE HAVE DW'S?



#### MORE ON DETECTABLE WARNINGS

Where are DW's needed?

- \*At street intersections with signalization:
  - Stop sign
  - Signal
  - Yield (New in PROWAG)
  - At mid-block crossings
  - At some RR crossings

DW's are not needed at driveways or parking lots unless they warrant signalization.



### ACCESSIBLE PEDESTRIAN SIGNALS (APS) AND RRFBS

The APS must be in a location that is reachable by a mobility device. That means in an area that is:

- Unobstructed, and
- Adjacent to a level all-weather surface, and
- At a mounting height of 36 inches and no more than 48 inches (shoot for 42"), and
- Tactile arrow that points in the direction of the crossing (parallel to the crosswalk to be used)
- The reach range for APS is 10".





## RETROFITTING AND APS BUTTONS

In design the buttons need to be reachable. (10 inches) which isn't much.

Often APS upgrades are beyond the scope of the project. Updating curb ramps on paving projects does not require APS updates, BUT...

We should try to get as close to the APS as possible. Sometimes we can adjust the ground around the button, remove grass and dirt and pave up to the button.

Maximum extent feasible.



## BEAWARE OF WHERE YOU PUT THE HARDWARE

PROWAG does not allow for protrusions of more than 4 inches into the ped circulation path

Protrusions of more than 4 inches should be above 80 inches (6.7 ft.)

Move control box away from the button not in the pedestrian access route.

Again, think of the user.



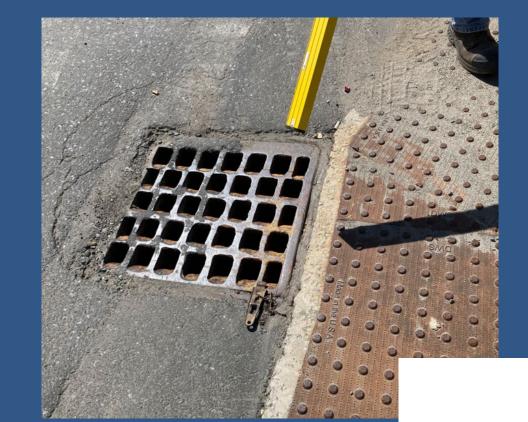
#### GRATES

Grates in Pedestrian access route need to be ADA compliant.

No more than ½ inch openings.

The best option is to work around the grate, but we do have a special provision:

USF 4132 & 6001, which meets ASTM A48 Class 35B



#### NOTES:

- Dimensions are approximate & in inches
- Gray Iron, Class 35B
- Conforms to ASTM A48 / A48M-03 specifications



## TECHNICAL INFEASIBILITY

#### Defined by number of conditions:

- 1. Structural (bridge beams, buildings, basements, foundations, etc.)
- 2. Utilities (project scope would not otherwise require utility relocation)
- 3. Historic Feature (historic buildings, entrances, monuments, etc. need to be considered.)
- 4. Steep Existing Grades (profile grade exceeds ramp running slope or cross slope max.) 15 foot rule.
- 5. Drainage
- 6. Other?



#### FINAL INSPECTION

When ADA facilities are complete, a final inspection will be made and the curb ramp information will be gathered and placed in our ADA curb ramp inventory.

When this is complete, please have resident contact the MaineDOT Project Manager to set up a walk through. This is often done on the project walk through.

If ramps or sidewalks do not meet compliance, unless there is a technical reason why they are not compliant, they will need to be corrected before the final close out.



#### PEDESTRIAN WORK ZONE SAFETY



### QUESTION

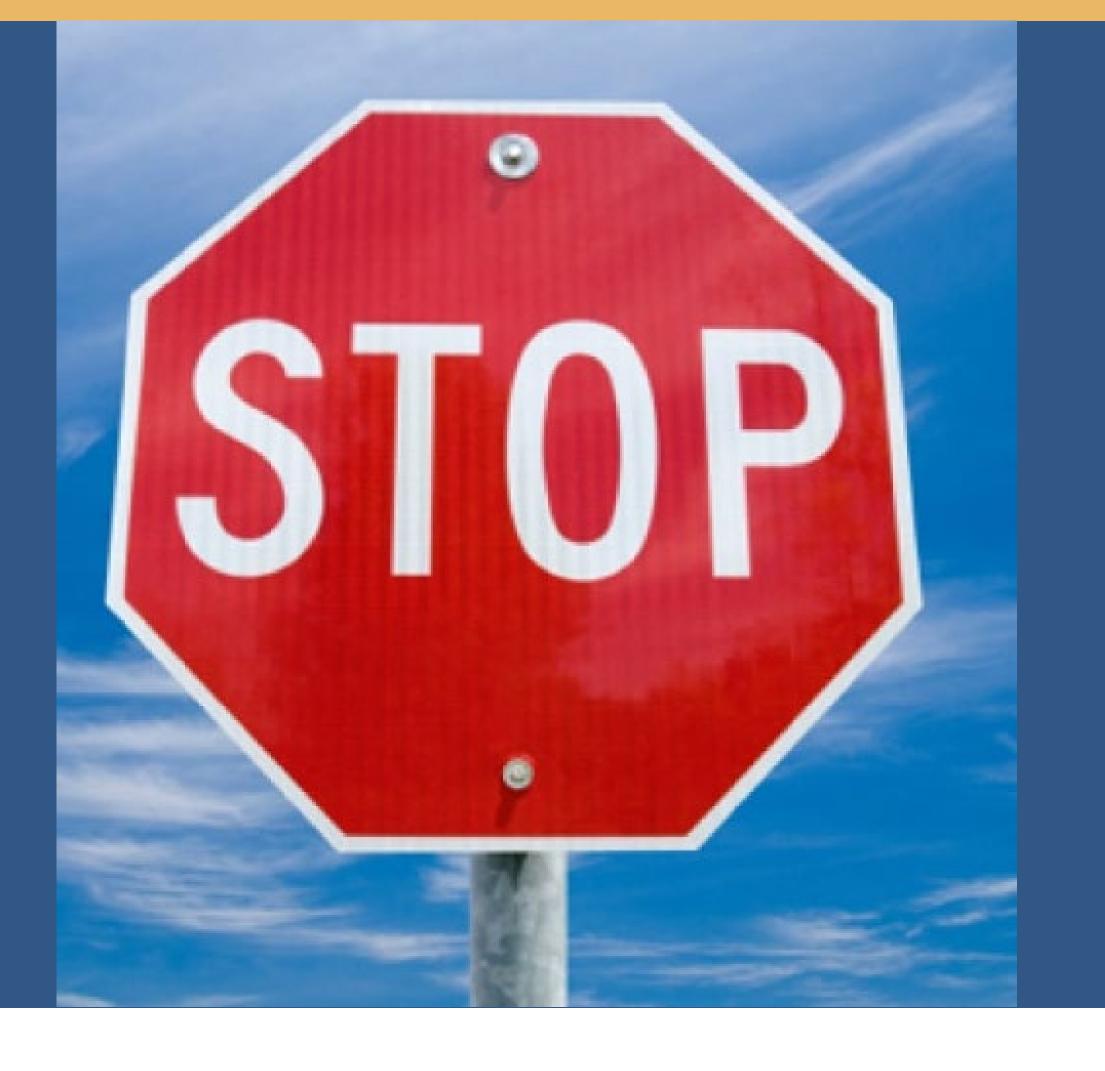
What do you do when a work zone is unsafe for vehicles?



#### QUESTION

What do you do when a work zone is unsafe for pedestrians?





#### THINK ABOUT THE USER

Pedestrians won't want to backtrack to other intersections or add distance to their trips

More importantly ...

People who have physical impairments may not be able to do so.



### PRE CONSTRUCTION

Is there a Special Provision for Pedestrians? This may be happening more on Village projects.

What pedestrian facilities will be impacted?

Does the Contractor have a point person responsible for pedestrian safety?

If necessary, meet with the town and bring the contractor's pedestrian designee with you so that they will understand concerns.

Does the Contractor have what they need to make the area safe and usable?



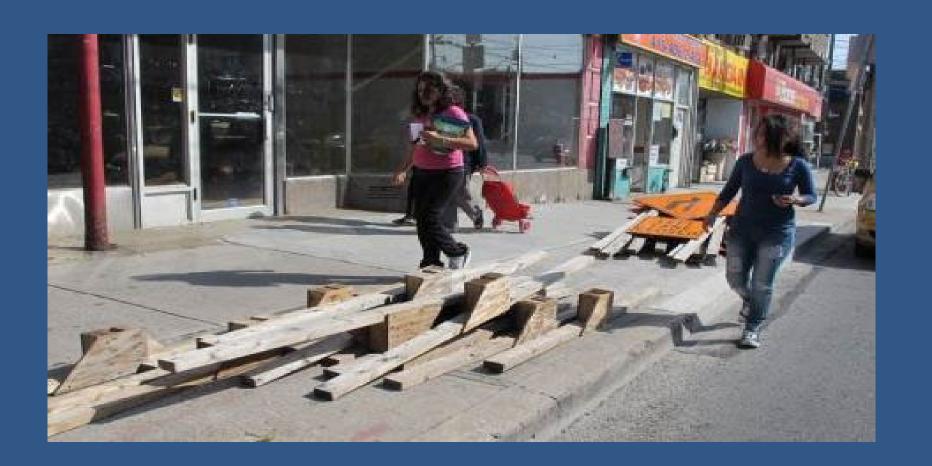
# CONSIDERATIONS FOR PEDESTRIANS IN WORK ZONES

- \*Physical separation from workspace and vehicular traffic.
- \*Adequate and safe detour(s) whenever sidewalks are closed or blocked.
- \*Maintain pedestrian access to businesses, residences, transit stops, etc.
- \*Provide temporary nighttime lighting for pedestrian walkways throughout the work zone.



#### SAFETY

MATERIAL STORAGE: When laying out the work zone, consider designating locations where materials and supplies can be stored safely away from pedestrians

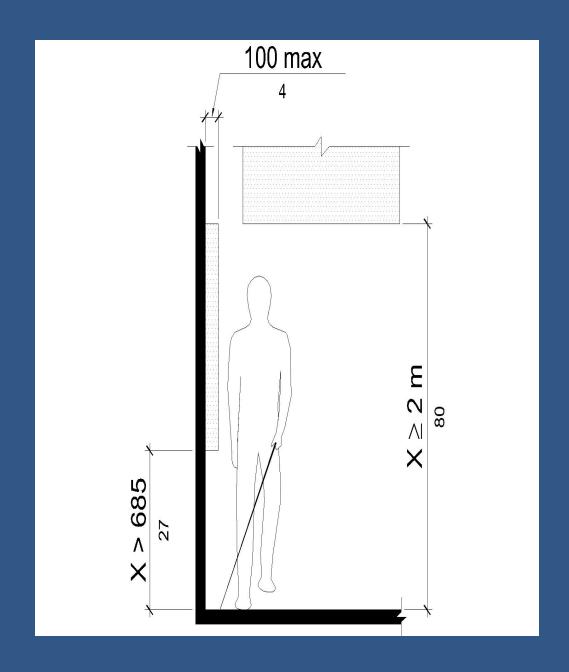


### ENSURE ADA COMPLIANCE

- \*Sign closure ahead of construction.
- \*Can have a minimum sidewalk width of 48", erect curb ramps, and provide passing space (minimum 5 foot by 5 foot space every 200 feet).
- \*Maintain a consistent width and smooth surface to avoid creating tripping danger and to minimize barriers to wheelchair use. Firm Stable and Slip Resistant.
- \*Make all barriers and channelizing devices detectable for pedestrians with visual disabilities.
- \*Ensure that there is a continuous detectable route. Safe handrails without nails or splinters and toe rails.



#### VERTICAL AND HORIZONTAL OBSTRUCTIONS



Signs and equipment cannot encroach the pedestrian route more than 80 inches vertically

And

Less than 4 inches Horizontally

Draft PROWAG protrusion limits. (Larger text: millimeters. Smaller text: inches.)







# WHAT NOT TO DO...

Construction Tape is NEVER acceptable to protect a work area;

Cones are not acceptable barriers for work zones.

Barrels are not good unless they are side by side and provide a continuous barrier with toe rail at the bottom and should be used if no other option is available.







## EFFECTIVE CHANNELING





Source: Vermont DOT



# BE CAREFUL HOW YOU LEAVE THINGS. THINK ABOUT THE USER!



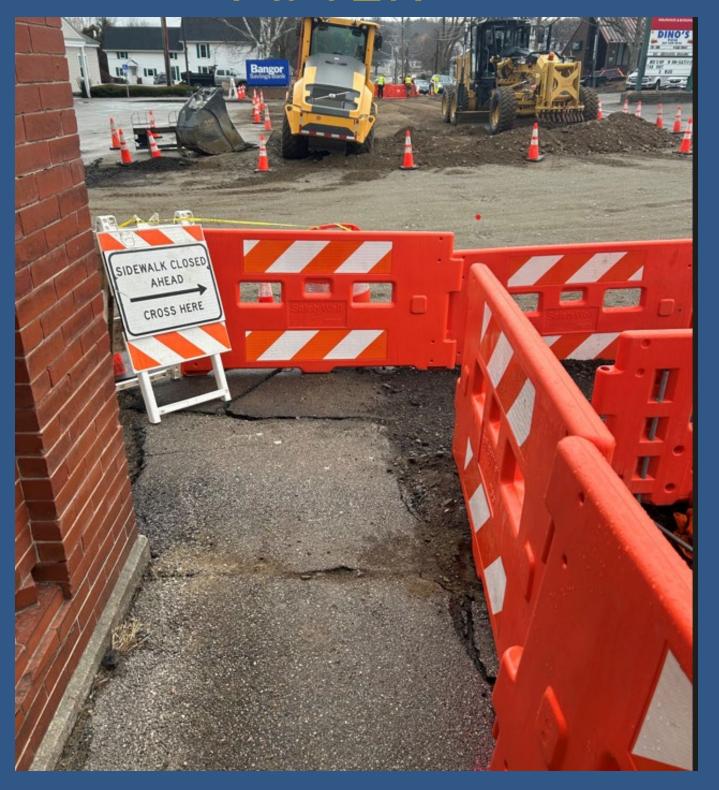


#### **BEFORE**





#### AFTER





## BEFORE





### AFTER





#### EV CHARGING STATIONS

Accessible Electric Vehicle (EV) charging

#### **Documents / Resources**

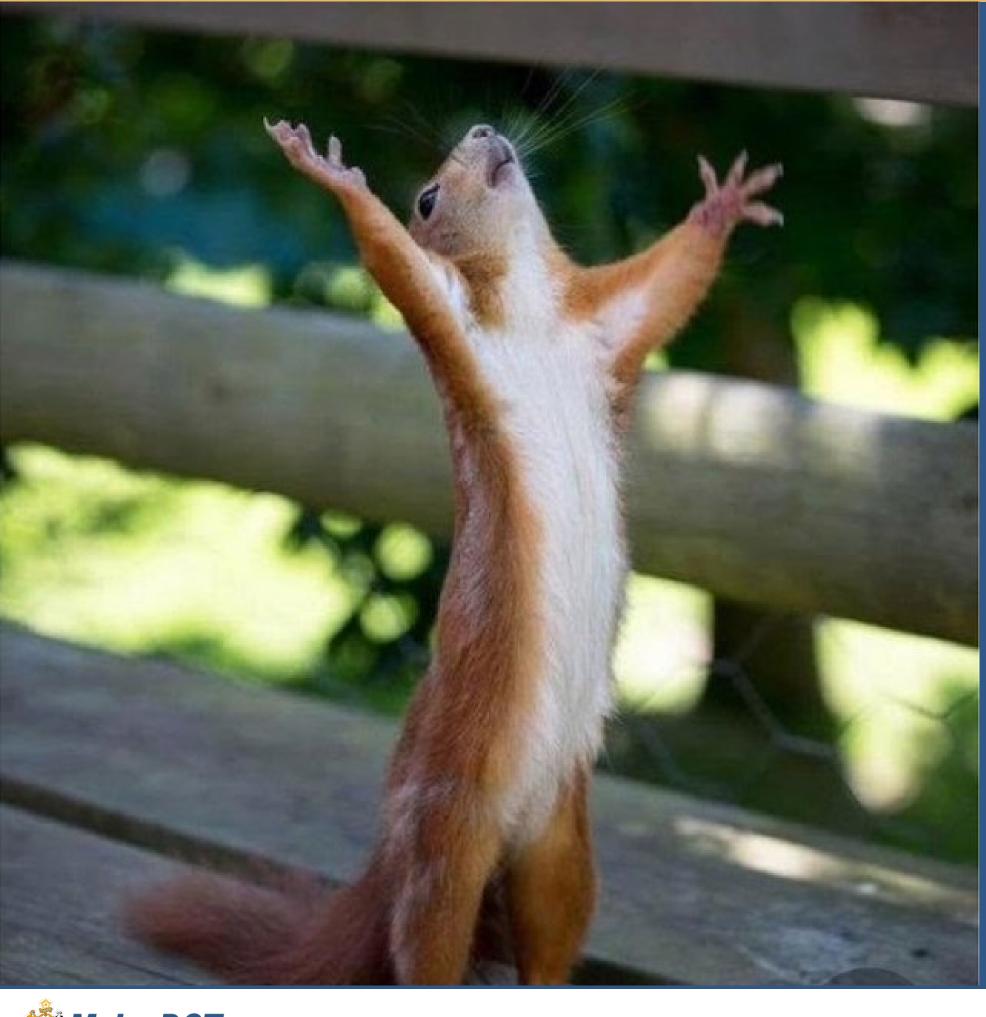
In 2024, the State of Maine created guide for locating and installing accessible EV Charging stations and units based on the 2023 <u>Design Recommendations for Accessible Electric Vehicle</u>

<u>Charging Stations</u>

Maine EV Charging Guide and Check Lists:

- Maine EV Charging Guide.docx Maine EV Charging Guide.pdf
- EV Location Check List.pdf EV Location Check List.docx
- EV Installation Check List.docx EV Installation Check List.pdf





I KNOW THIS STUFF IS HARD...

DO YOUR BEST
TRUST YOUR GUT
ASK QUESTIONS
CONTACT ME...





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## CONTACT ME

