ADA FOR THE PUBLIC RIGHT-OF-WAY INCORPORATING PROWAG

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THE CITY OF FAIRHOPE
&
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TODAYS PRESENTER

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CAVEAT

This presentation is provided for informational purposes only and is not to be construed as legal advice. You should seek independent counsel to resolve any individualized legal issues that you are responsible to address. While I am not an attorney and do not offer legal advice, the specialized technical assistance I offer may help minimize your risk for design and construction liability associated with the ADA.

WHY COMPLIANT CURB RAMP AND SIDEWALK DESIGN CAN MAKE A DIFFERENCE

LEARNING GOALS AND OBJECTIVES FOR TODAY

- Learn about PROWAG and PROWAG development
- Learn a brief background of ADA development.
- Learn about ADA obligations of State and Local Governments under Title II of ADA
- Learn the basic differences between the current ADA requirements and PROWAG
- Learn about Pedestrian Accessible Route (PAR) requirements
- Learn about PROWAG sidewalk and slope requirements
- Learn about PROWAG curb ramp requirements
- Learn about PROWAG detectable warning requirements
- Learn about ADA Parking requirements and on-street parking under PROWAG
- Review local examples of curb ramp non-compliance.

TODAYS AGENDA – PART I

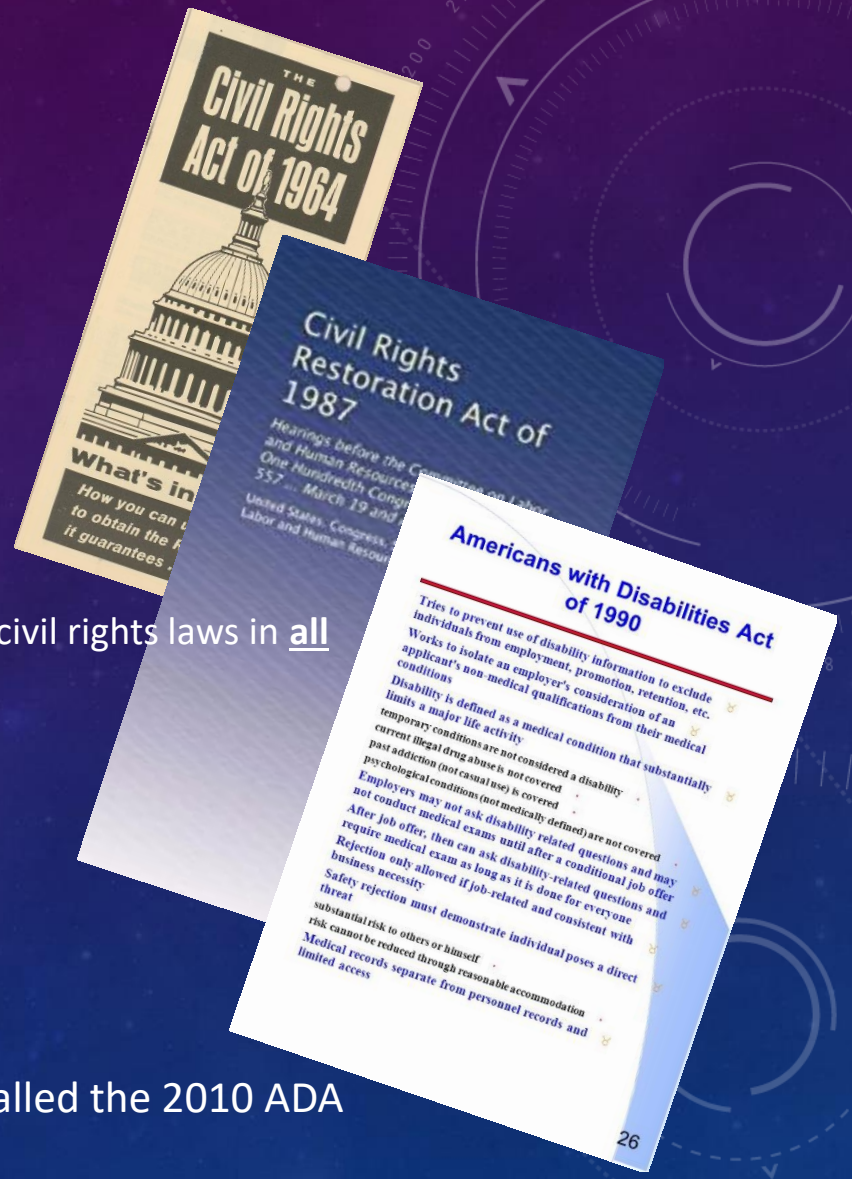
- Brief history of the ADA
- Responsibilities of local agencies under the ADA
- Obligations of providing access under title II
- Understanding ‘Public Rights-of-Way Accessibility Guidelines’ (PROWAG)
- Pedestrian Accessible Routes (PAR)
  - Sidewalk surfaces, width, running slope, cross slope, driveways, circulation paths, ramps, curb ramps, grade breaks and detectable warnings

TODAYS AGENDA – PART II

- Parking
  - ADA Parking
  - PROWAG – On-street Parking
- Review current examples of local curb ramp, sidewalk and parking construction
- Questions

CIVIL RIGHTS AND ACCESS FOR ALL

- 1964 Civil Rights Act (Title IV – Landmark Civil Rights)
- 1968 Architectural Barriers Act (federal buildings, UFAS)
- 1973 Rehabilitation Act, Section 504
  - ❑ Applies to programs and activities receiving Federal funds
- 1987 Civil Rights Reauthorization Act
  - ❑ US legislative act that specified that recipients of federal funds must comply with civil rights laws in **all areas**, not just in the particular program or activity that received federal funding.
- 1990 Americans with Disabilities Act (ADA)
  - ❑ Prohibits discrimination in the provision of facilities, services, and programs
  - ❑ Title II applies to State and Local Governments
- 2010 ADA Revised Regulations and Standards
  - ❑ Published in the Federal Register on September 15, 2010
  - ❑ These regulations adopted revised, enforceable accessibility standards called the 2010 ADA Standards for Accessible Design
  - ❑ On March 15, 2012, compliance with the 2010 Standards was required for new construction and alterations under Titles II and III.



CIVIL RIGHTS AND ACCESS FOR ALL

- **1990 Americans with Disabilities Act**
  - July 26, 1990 - signed
  - January 26, 1992 – effective date
  - July 1, 1994 – Revised ADA Standards
  - July 26, 2004 – new ADA guidelines (ADA/ABA)
  - Nov 23, 2005 – new PROW guidelines (PROWAG)
  - **Nov 26, 2006 – FHWA adopts ADA Standards for Transportation Facilities (ADASTF)**
  - **July 23, 2011 – Access Board issues NPRM for PROWAG**
  - March 15, 2012 – Compliance with 2010 Standards required for new construction and alterations; Supplemental requirements required for recreational facilities.

AMERICANS WITH DISABILITIES ACT, A CIVIL RIGHTS LAW

The ADA is divided into five titles (or sections) that relate to different areas of public life.

- Title I – Employment
- Title II – Public Services: State and Local Governments
- Title III – Places of Public Accommodations and Services Operated by Private Entities (Retail stores, restaurants, medical offices, etc.)
- Title IV – Telecommunications
- Title V – Miscellaneous Provisions

ESTABLISHING STANDARDS

- U.S. Access Board - an independent Federal agency
- Tasked with developing minimum design criteria
  - ✓ Telecommunication and information technology
  - ✓ Medical diagnostics and communication
  - ✓ Transportation vehicles
  - ✓ Built environment – buildings, sites and recreation

- Adoption and enforcement responsibilities belong to other agencies
  - ✓ Department of Justice – 2010 ADA Standards
  - ✓ Department of Transportation ADA Standards
  - ✓ and Defense, Education, General Services

- The Access Board enforces the Architectural Barriers Act in facilities built with Federal funds
  - ✓ 2004 ABA Standards

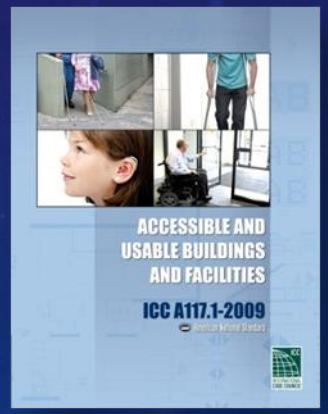
ROLE OF THE LOCAL CODE OFFICIAL

- Enforce the locally adopted building code and any local ordnances or state laws
- Does not enforce ADA or FHA.

REQUIREMENTS

- Scoping :
- “What, Where and How Many”
- 2012 / 2015 / 2018 IBC and IEBC

- Technical :
- “How”
- ICC/ANSI A117.1-2009



OBLIGATIONS FOR ADA ACCESS UNDER TITLE II

State and Local Governments under Title II

- Program Access requires all programs, services and activities to be made accessible
- ADA Standards for new construction vs alterations vs existing facilities
- Local jurisdictions must ensure that the facilities they build or alter are accessible to people with disabilities. The current United States Access Board's ADA and ABA accessibility guidelines specify the minimum level of accessibility in new construction and alteration projects and serve as the basis for enforceable standards maintained by other agencies.

OBLIGATIONS FOR PROVIDING ACCESS

- **New construction** is required to be accessible
- **Alterations** to existing facilities must be accessible to the maximum extent feasible within the scope of the project

- **Existing facilities** that have not been altered can not deny access to persons with disabilities

NEW CONSTRUCTION

- Accessibility is easiest to achieve in new construction

ALTERATIONS

- In alterations, it may not be possible to meet all of the accessibility requirements.
- Follow new construction provisions to the extent practicable..... within the scope of the project.

- Document decisions!

EXISTING FACILITIES (STATE AND LOCAL GOVERNMENTS)

- Cannot deny access
- Title II – Self-evaluation and Transition Plan
- Every program or inaccessible facility identified in the self-evaluation needing structural modifications for accessibility must be in the transition plan
    1. A list of the physical barriers
    2. Methodology to remove these barriers
    3. Schedule to achieve compliance with Title II
    4. Name of the official responsible for implementation.

OBLIGATIONS FOR PROVIDING ACCESS

PROGRAM ACCESS

ADA TITLE II – RECAP

- Public services must be accessible
- Public sidewalks are public services
- Public sidewalks are pedestrian access routes
- Curb ramps are part of pedestrian access route
- Features along sidewalks and curb ramps must be accessible

WHAT CAN STATE AND LOCAL AGENCIES DO ENSURE ADA COMPLIANCE

- Enforcement at local level
- Look to Current Standards
- Education

OR……..

- Reduced citizen safety
- Reduced quality of life
- Economic loss
- Federal Civil Rights complaint – DOJ/DOT
- Project Civic Access Settlement Agreement

OR CONSIDER……

- Incorporating “PROWAG” into the design, development and construction of facilities in the public right-of-way.

WHAT IS "PROWAG"

- PROWAG is the acronym for **"Public Rights Of Way Accessibility Guidelines"**
- The U.S. Access Board was given the responsibility of generating the accessibility guidelines (PROWAG) to cover access to sidewalks and streets, including crosswalks, curb ramps, street furnishings, parking, and other components of public rights-of-way.
- The Access Board's aim in developing these guidelines was to ensure that access for persons with disabilities is provided wherever a pedestrian way is newly built or altered, and that the same degree of convenience, connection, and safety afforded the public generally is available to pedestrians with disabilities.
- Before PROWAG the Access Board's guidelines focused mainly on facilities on sites. While they address certain features common to public sidewalks, such as curb ramps, further guidance is necessary to address conditions unique to public rights-of-way. Various constraints posed by space limitations at sidewalks, roadway design practices, slope, and terrain raised valid questions on how and to what extent access can be achieved. Access for blind pedestrians at street crossings and wheelchair access to on-street parking are typical of the issues for which additional guidance was needed.

WHAT IS "PROWAG" (CONT.)

- State and local government facilities must follow the requirements of the 2010 Standards for Accessible Design for new construction and alterations. Beginning in 1992, specific guidelines were proposed to address elements within the public-right-of-way. These are known as the Public Rights-of-Way Accessibility Guidelines (PROWAG). As of February 2, 2012, the PROWAG are still "proposed."
- Although not yet officially adopted as standards by the Department of Justice, these proposed guidelines are the currently recommended best practices and are recommended when planning, designing and constructing within the right-of-way.
- The proposed PROWAG covers pedestrian features in new or altered public right-of-ways, including sidewalks and other pedestrian ways, street crossings, medians and traffic islands, overpasses, underpasses and bridges. On-street parking, transit stops, toilet facilities, signs, and street furniture are also addressed. The guidelines apply to permanent as well as temporary facilities, such as temporary routes around work zones and portable toilets. Provisions in the guidelines address:
- Pedestrian Access Routes (including sidewalks, street crossings, curb ramps/ blended transitions), Detectable Warning Surfaces, Pedestrian Signals, Roundabouts, On-Street Parking and Passenger Loading Zones, Transit Stops and Shelters, Street Furniture and Other Elements

RULEMAKING UPDATE

- Final Rule Draft has been approved by the Board
- Review by the Office of Management and Budget (Current)
- Publication in the Federal Register
- Adoption by the Department of Justice and Department of Transportation

QUESTIONS?

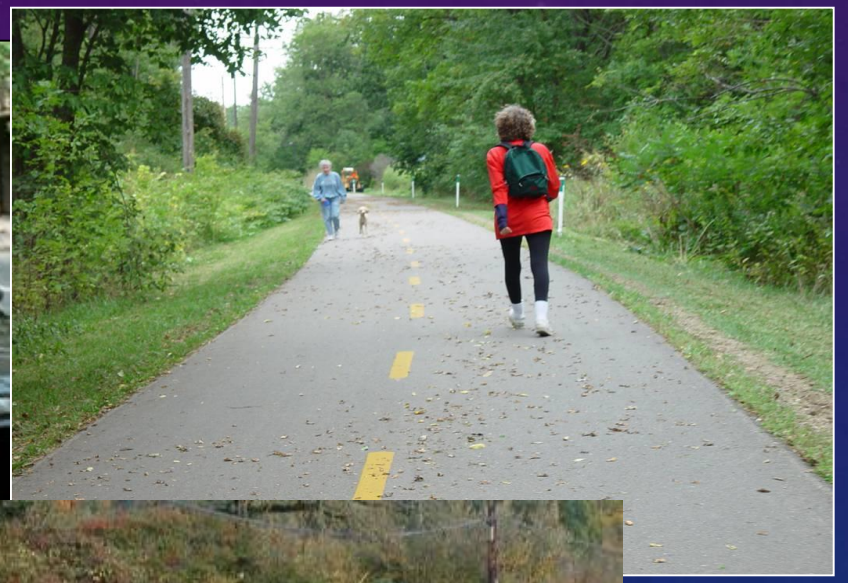
PEDESTRIAN ACCESS ROUTE DESIGN BASICS

PEDESTRIAN ACCESSIBLE ROUTE (PAR)

A pedestrian access route is a continuous and unobstructed path of travel provided for pedestrians with disabilities within or coinciding with a pedestrian circulation path in the public right-of-way.

TYPES OF PEDESTRIAN FACILITIES
PEDESTRIAN ACCESS ROUTES

Sidewalks



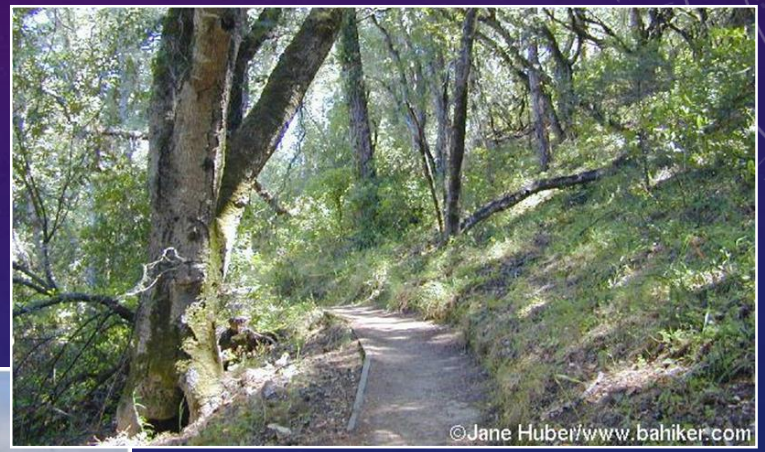
Shared-use Paths

Shoulders

DESIGN GUIDANCE

Pedestrian Access Route
Pedestrians Only

Shared Use Path
Pedestrian and Bikes



Trail
Pedestrian Recreation
(Outdoor Developed Areas)

SIDEWALKS - WHO NEEDS THEM?

- **<u>If</u>** sidewalks are provided, then they are required to be accessible to and usable by a person with a disability.

PAR DESIGN BASICS

- **Surface** - firm, stable and slip resistant
- **Clear width** – 48” min. w passing spaces
- **Grade** – 5% max. or road grade
- **Cross slope** - 2% max.
- **Level change max.** – ¼” vertical or ½” beveled
- **No protruding objects** within circulation path
- **Clear space** - 30” x 48” min. at entrances, signal pushbuttons, and other pedestrian features (drinking fountains, parking meters, ATMs…)

SURFACES

SURFACES

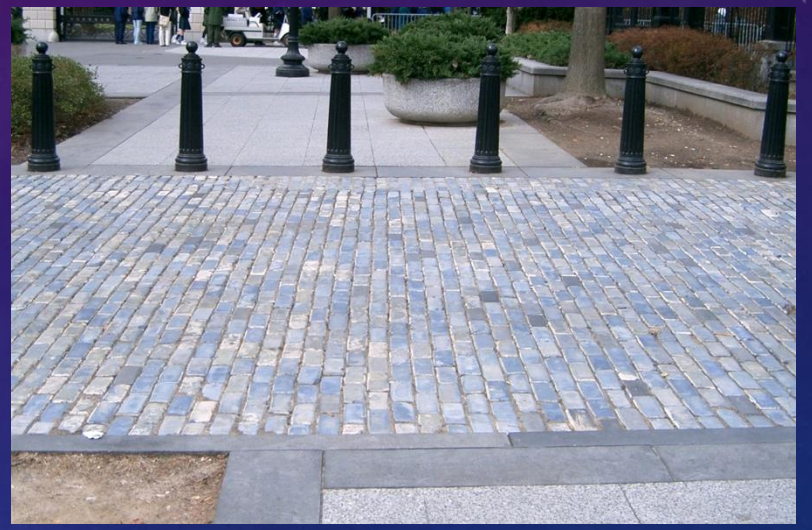
Surface requirements:

- Firm, stable, and slip-resistant
- No large openings or gaps
- Minimal vertical discontinuities

SURFACES

Properly installed, and well maintained bricks and pavers can work.

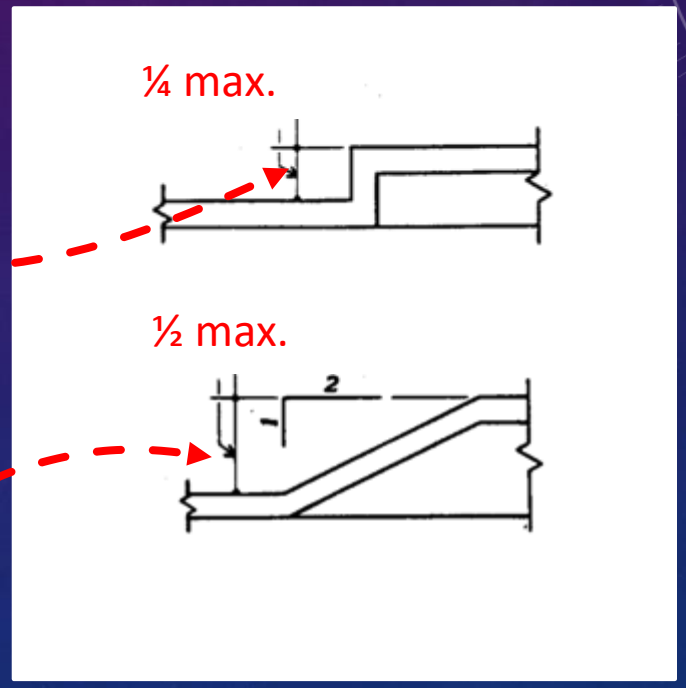
SURFACES



Beveled edged pavers are an issue for roll ability

SURFACES OF PAR
R302 & ADASTF 302 & 303

- Firm, stable, slip-resistant
  - Dry or wet!
- Changes in level
  - ≤ ¼ - Vertical allowed
  - > ¼ ≤ ½ - 1:2 max. slope
  - > ½ - 1:12 max. slope

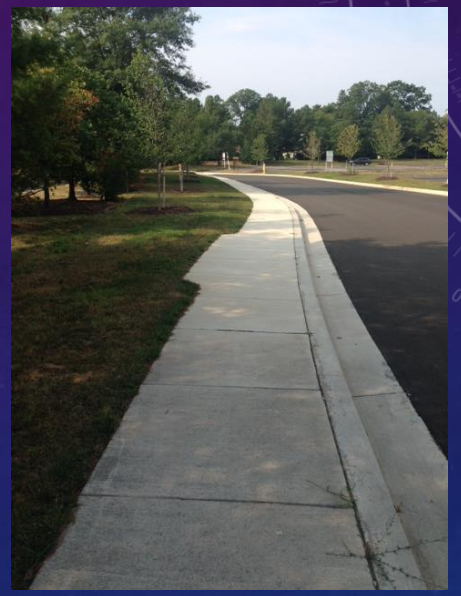


* Grade breaks must be flush

GRATES AND OPENINGS

- No more than ½ inch opening in the direction of travel.

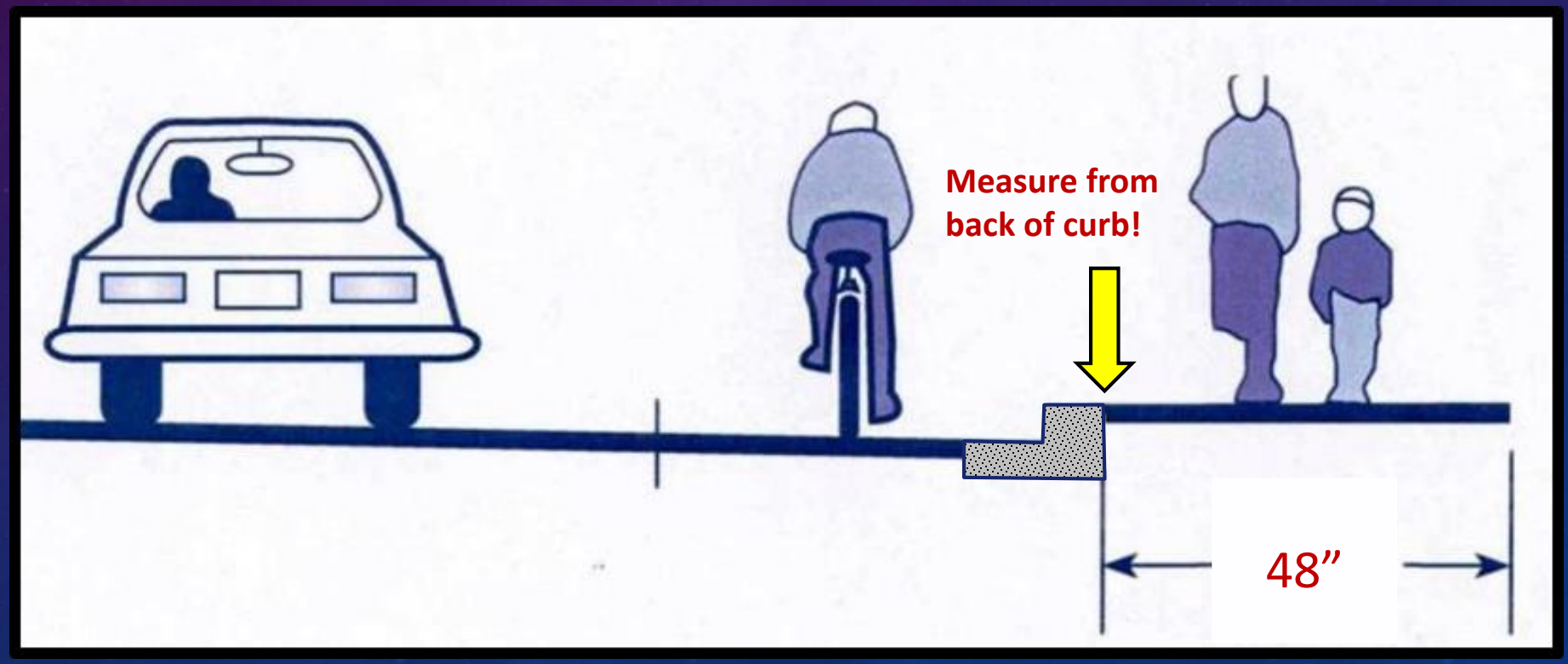
CLEAR WIDTH



- 48” min pedestrian access route (PAR), 60” passing space max of 200’ if less 60” wide

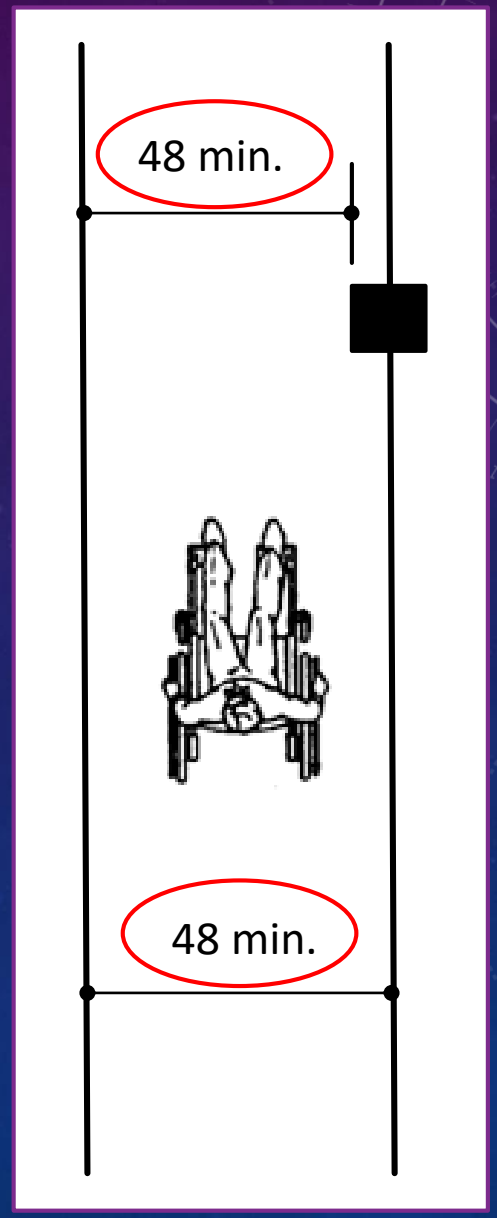
PEDESTRIAN ACCESS ROUTE (PAR) R301.3.1

- Continuous Width
  The minimum continuous and unobstructed clear width of a pedestrian access route shall be 4 ft, exclusive of the width of the curb



ACCESSIBLE ROUTE (AR) VS. PEDESTRIAN ACCESSIBLE ROUTE (PAR)

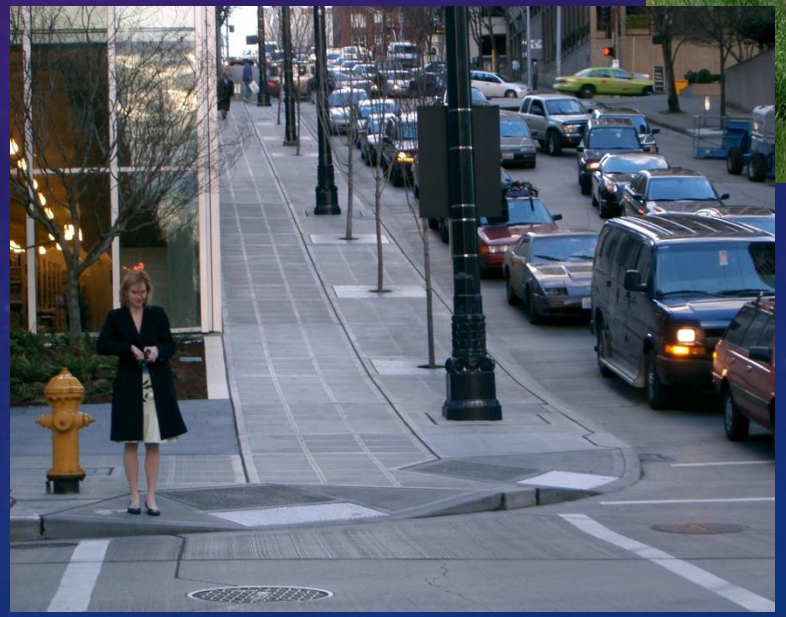
- Width:
  - AR = 36” wide and requires continuous unobstructed path (ADA)
  - PAR = 48” (PROWAG)
  - AR = 32” reduction in route allowed at a ‘point’ (24” max.) (ADA)
  - PAR = No reduction allowed
  - 60” x 60” passing space @ 200’ (ADA & PROWAG)
- Running Slope:
  - ≤1:20 (≤5%) is compliant and not a ramp (ADA and PROWAG)
  - >1:20 (>5%) is a ramp (ADA and PROWAG)
  - 1:12 (8.33%) max. allowed for ramp (ADA and PROWAG)
- Cross-slope
  - 1:50 (2%) max. allowed (ADA and PROWAG)



- Which one meets the requirements ?

RUNNING SLOPE (GRADE)

The running slope of the PAR may match - but not exceed - that of the adjacent roadway.



RUNNING SLOPE

R302.5.1 Within Street or Highway Right-of-Way - The grade shall not exceed the general grade of the adjacent street or highway.

R302.5.2 Not Within Street or Highway Right-of-Way - The grade of pedestrian access routes shall be 5 percent maximum.

R302.5.3 Street Crossings - The grade of pedestrian access routes shall be 5 percent maximum.

RUNNING SLOPE

- R302.5.4 Physical Constraints - Where compliance is not practicable due to existing terrain or infrastructure, right-of-way availability, a notable natural feature, or similar existing physical constraints, compliance is required to the extent practicable.

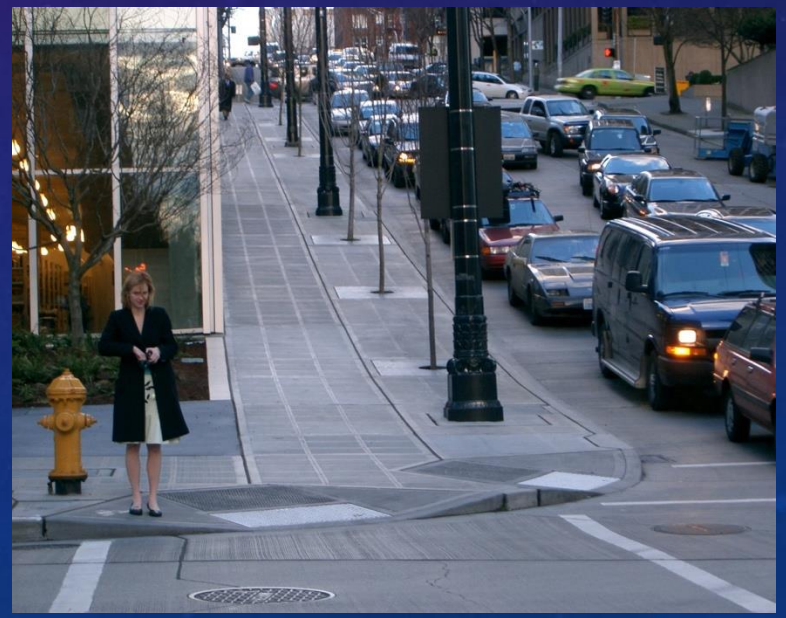
- R302.5.5 Regulatory Constraints - Where compliance is precluded by federal, state, or local laws where the purpose is to preserve threatened or endangered species; the environment; or archaeological, cultural, historical, or significant natural features, compliance is required to the extent practicable.

FOR SIDEWALKS WITHIN THE PUBLIC RIGHT OF WAY…

- Sidewalk grade – ADA vs. PROWAG
  - ADA Accessible Route: ramps, landings, railings, etc.
  - PROWAG: Pedestrian Access Route: match grade of road

2010 ADA applied

Proposed PROWAG



CROSS SLOPE

- 0% best for wheelchair users
- Some slope needed for drainage
- Max cross slope 2%
  - Exceptions for street crossings

CROSS SLOPE

- Construction tolerances?
- Rounding?

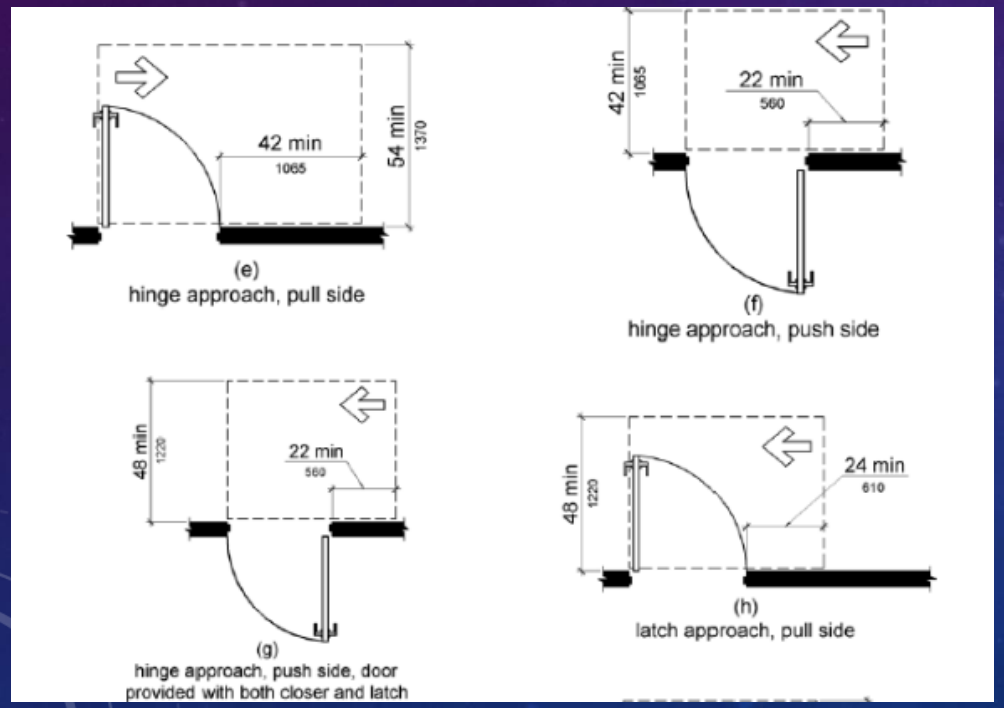
  2, 2.0, 2.0000?
- Method of measure?

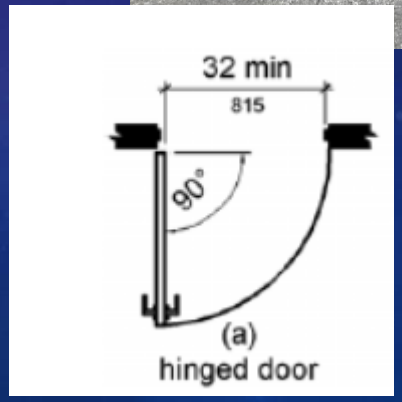
  smart level, elevations?

- **Design cross slope <2%**

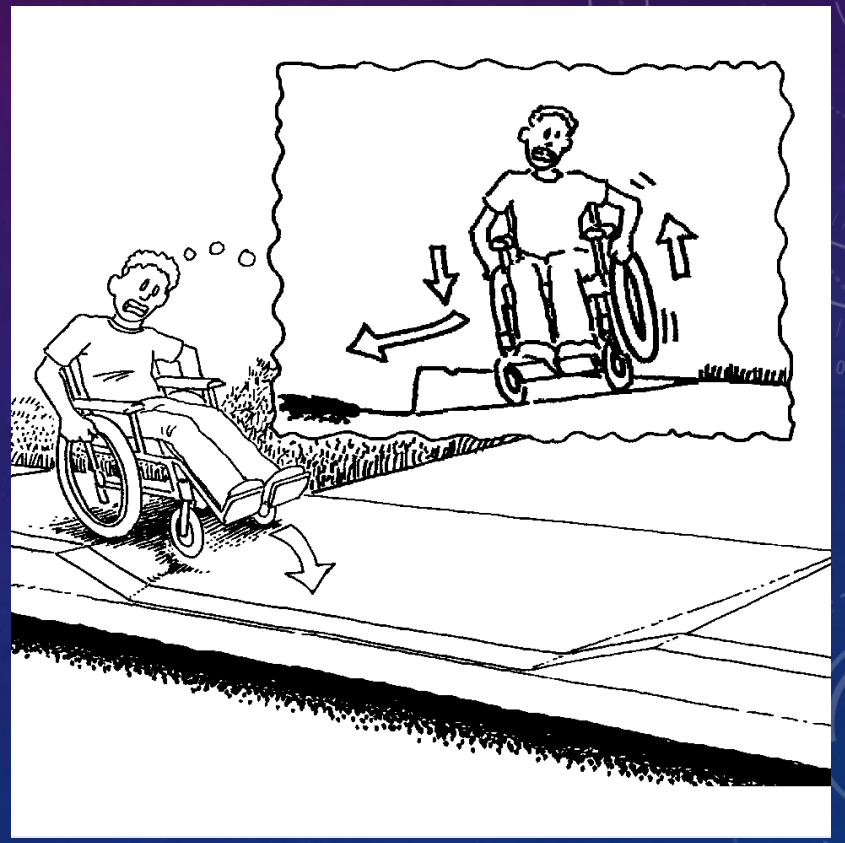
DOORWAYS

2010 ADA Standards, Section 404





COMPOUND SLOPES AT DRIVEWAYS

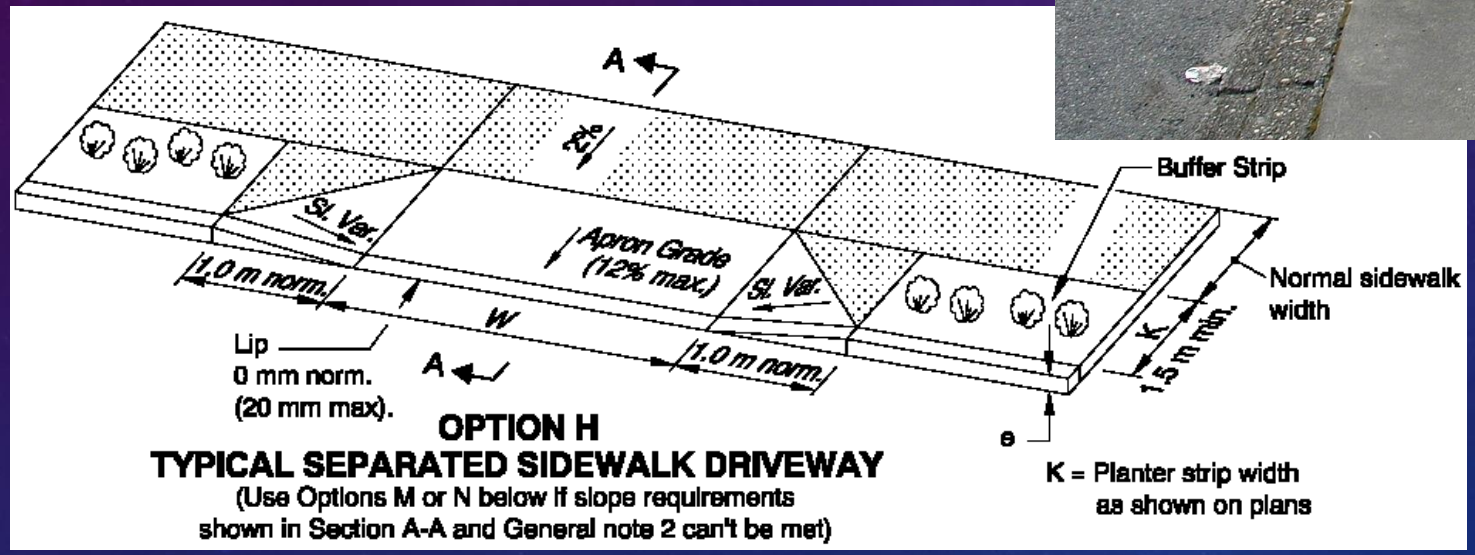


Compound slopes – running and cross slopes combined

CROSS SLOPE AT DRIVEWAYS

Pedestrian design is not an after thought

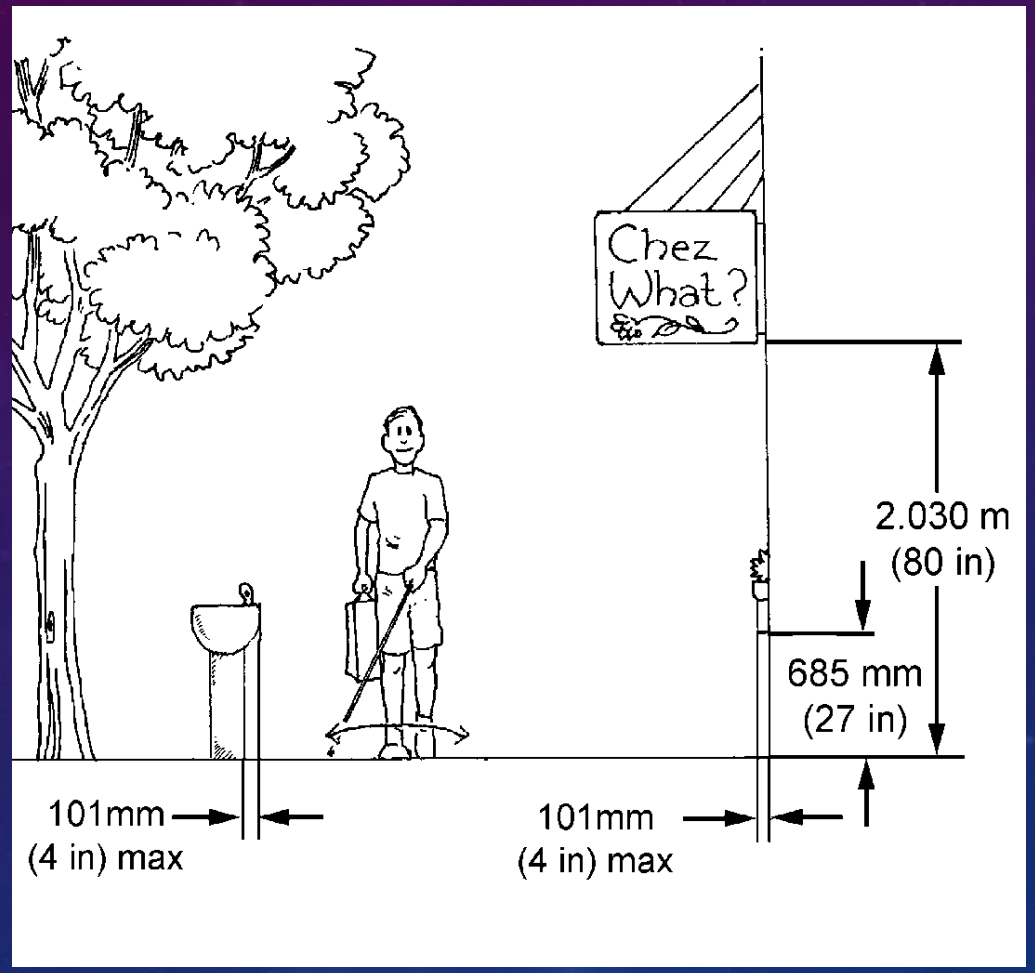
DRIVEWAYS



- Designing a usable cross slope

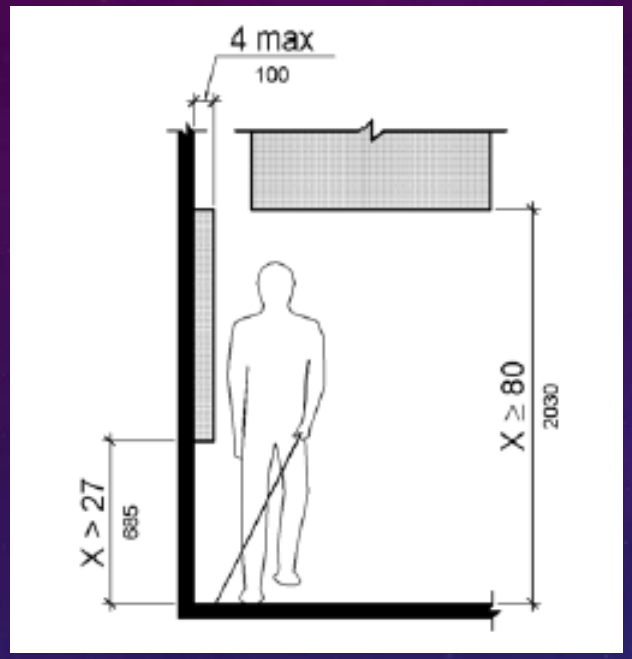
CIRCULATION PATH

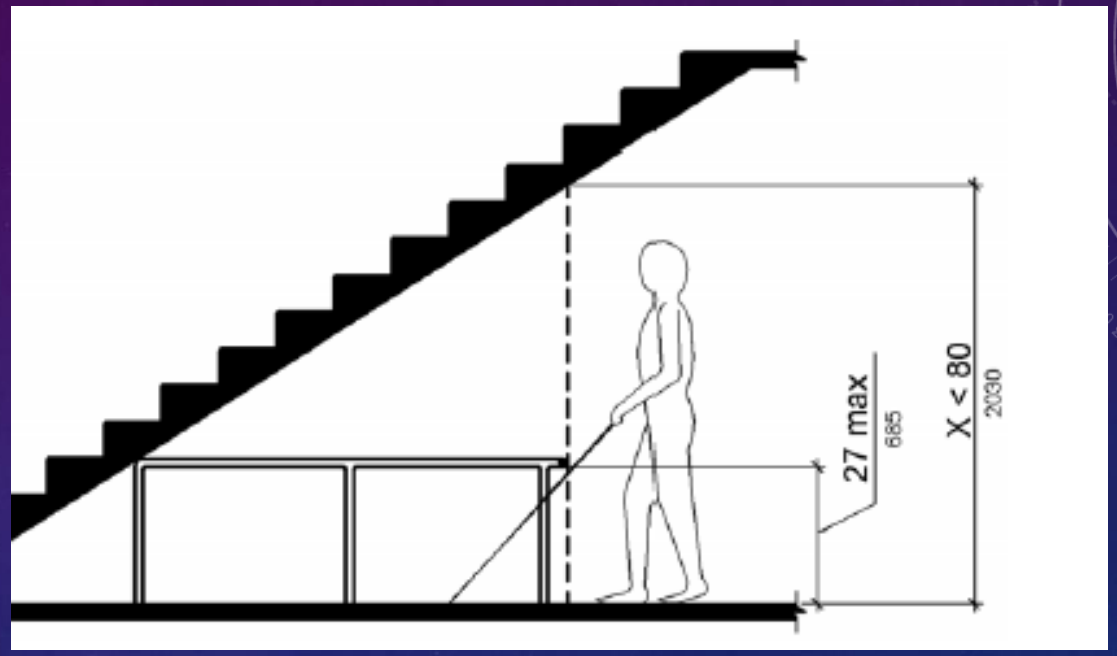
CIRCULATION PATH



Protruding Objects

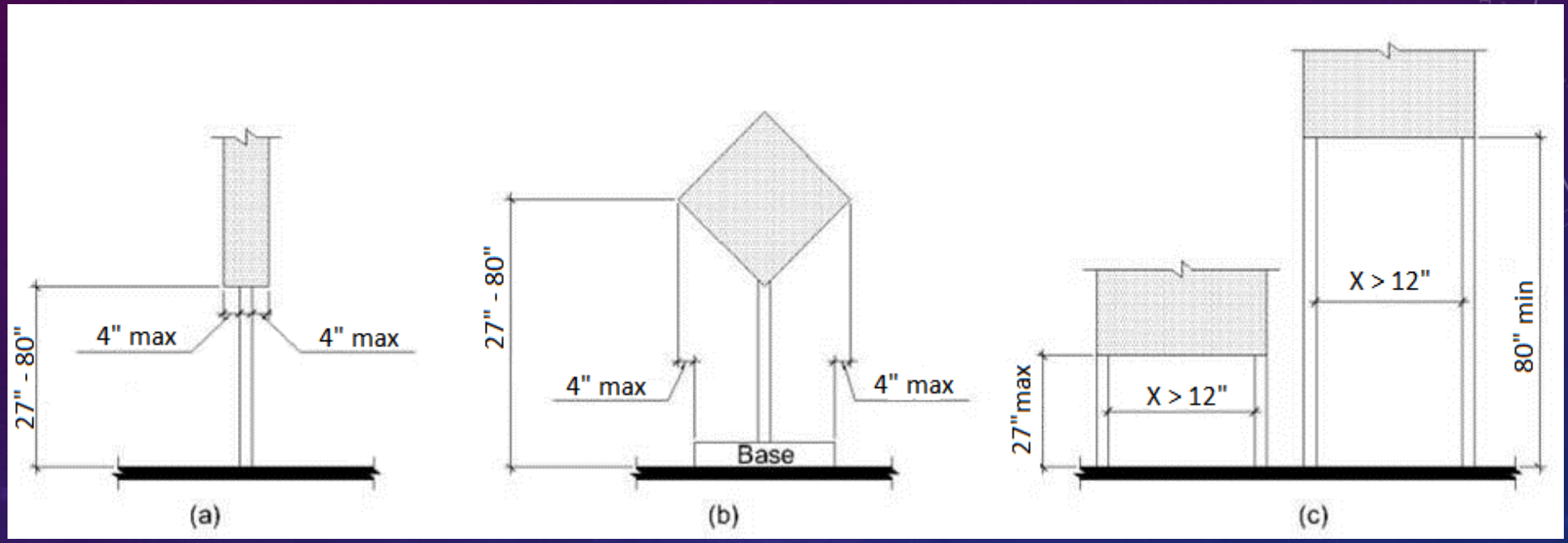
PROTRUDING OBJECTS





Objects between 27” and 80” may not protrude more than 4”.
Entire circulation path!

PROTRUDING OBJECTS



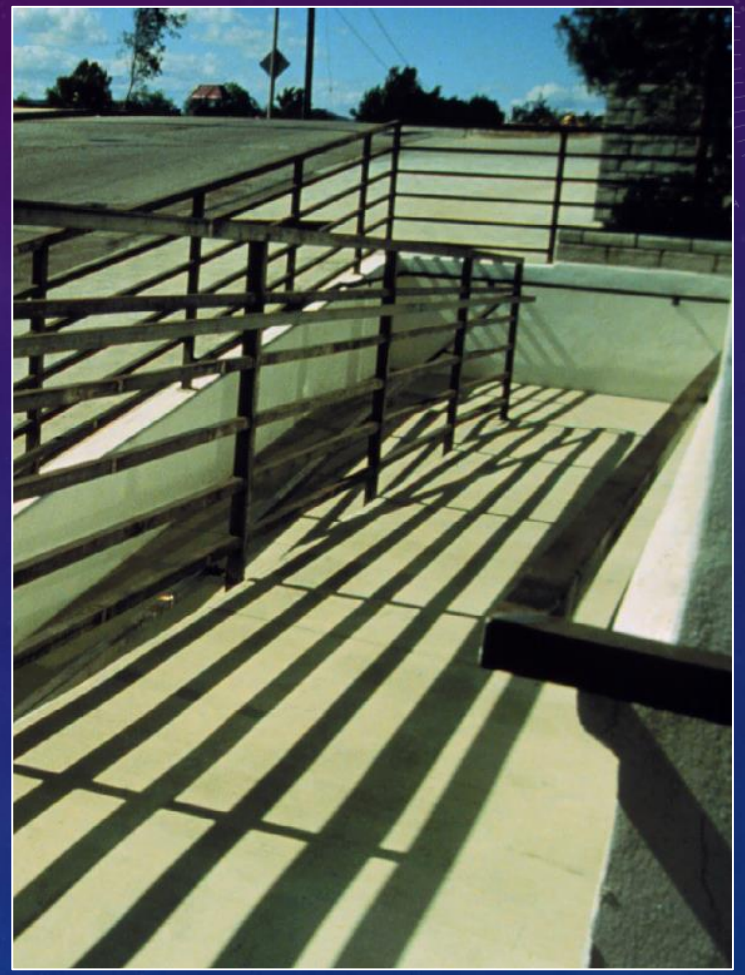
- Objects between 27” and 80” may not protrude more than 4”
- Post mounted objects must not protrude more than 4” beyond the base
- Space greater than 12” between posts must be detectable

- No protruding objects within entire width of the pedestrian circulation route

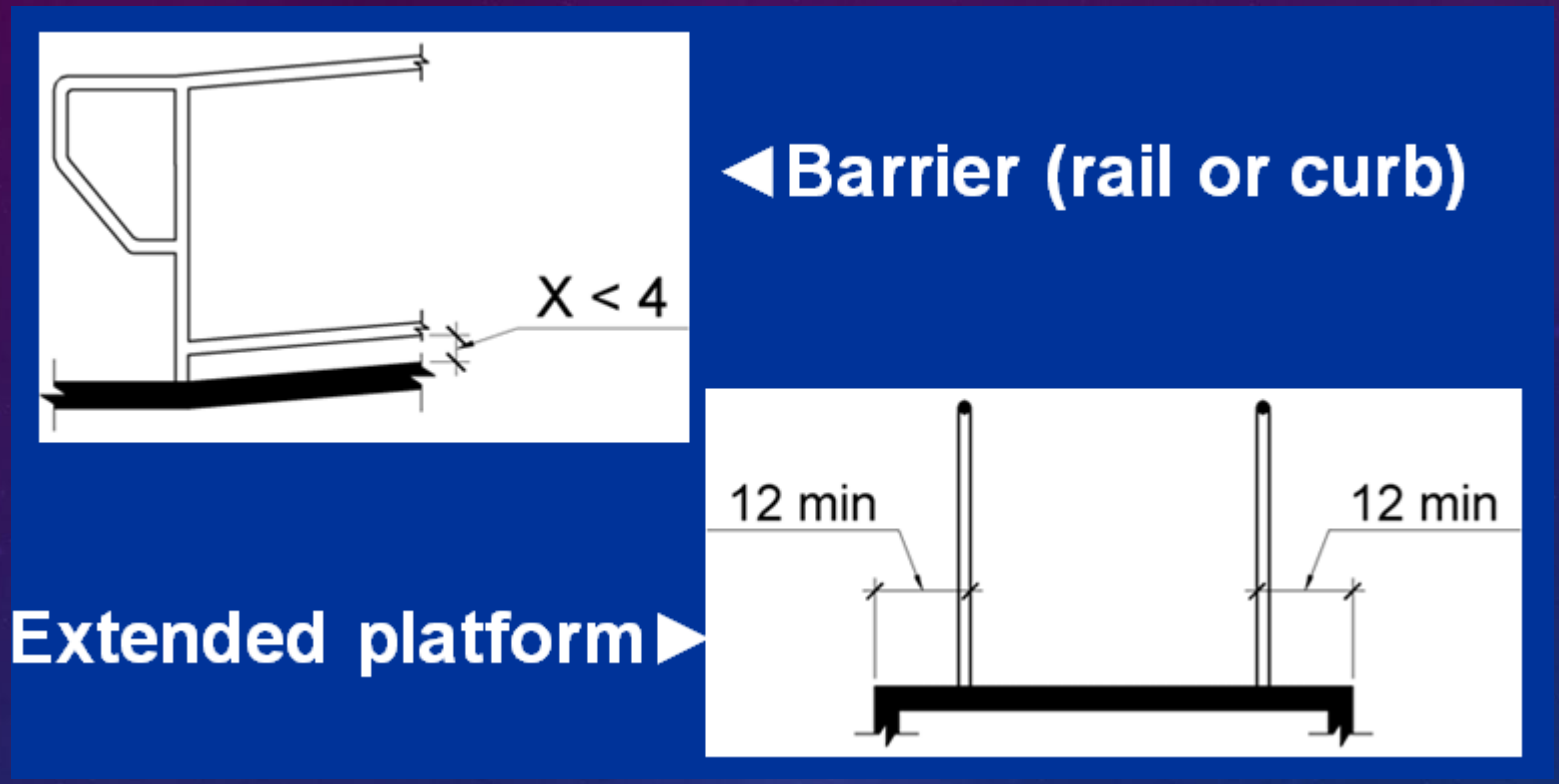
- Ouch!

RAMPS

- Slope: 1:12 max (8%)
- Cross slope: 2% max
- Clear width: 36” min
- Rise: 30” max
- Level landings
- Handrails (both sides)
- Edge protection



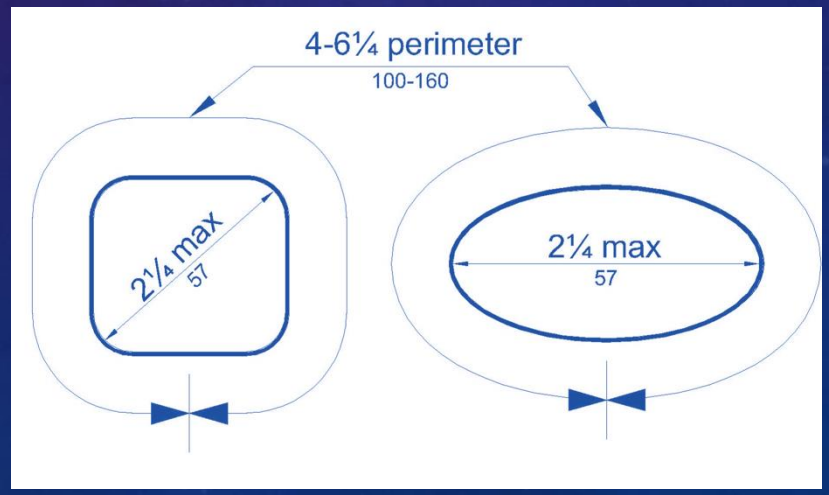
RAMPS



> 6” elevation change requires edge protection

RAMPS

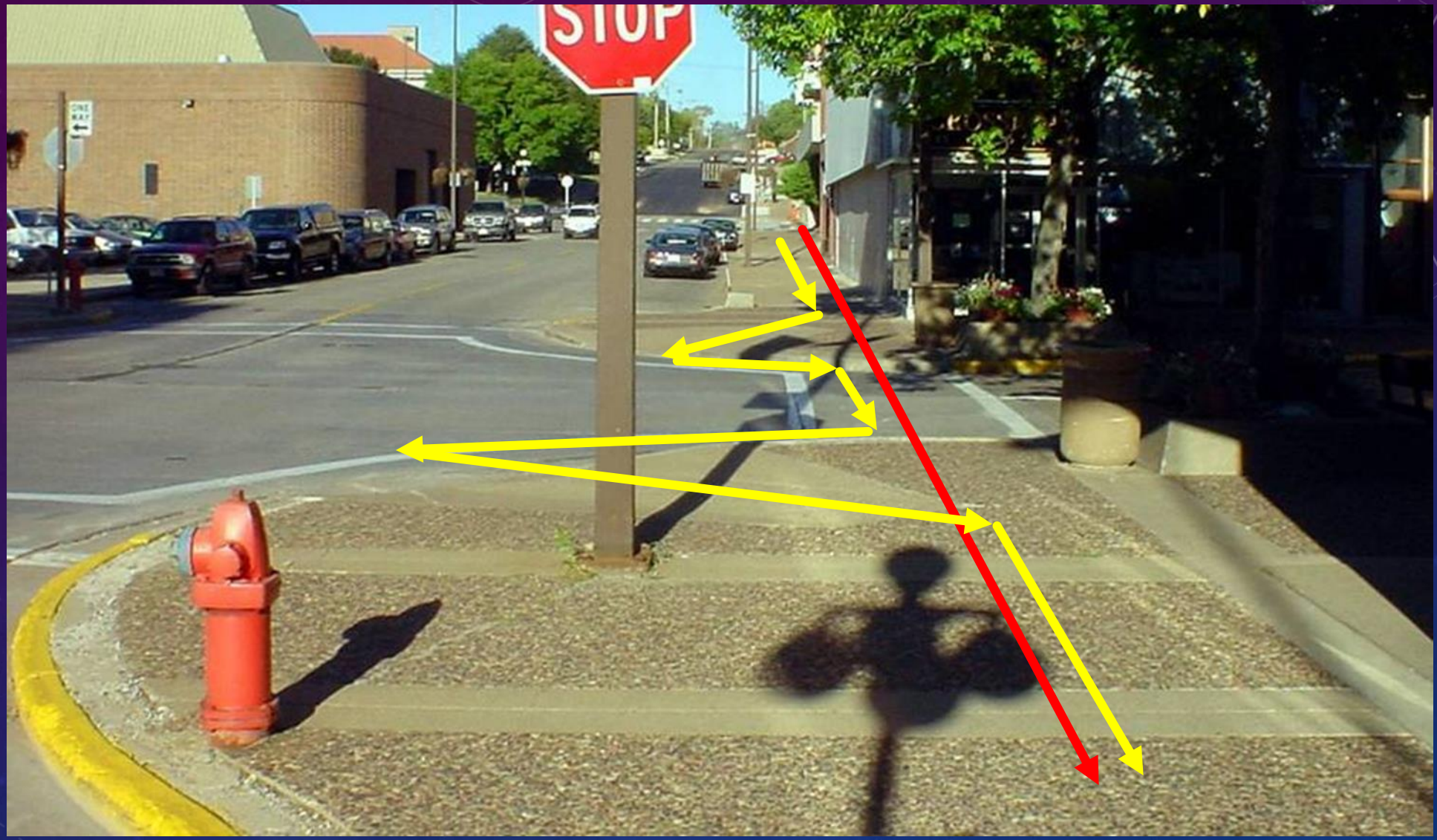
- Ramps, stairs, and walkways
- Knuckle clearance: 1 ½” min
- Diameter: 1 ¼” – 2”
- Applies to outer diameter
- Circular & noncircular cross sections



CURB RAMPS

CURB RAMP FOR EACH STREET CROSSING

- **<u>Two</u>** ramps per corner (R207)



Two curb ramps per corner are required when feasible

CURB RAMPS – WHAT'S REQUIRED?

- ADA regulations state that when a sidewalk approaches an intersection a curb ramp is required.
- Detectable Warnings are required on PAR, but not AR (building sites).
- Need to understand that:
  - The 'cookie cutter' curb ramp will not fit all.
  - Some engineering required at most corners.

CURB RAMP BASICS

- 1:12, or 8% max. running slope (with length limit as exception to slope limit);
- 1:50, or 2% max. cross slope (with exceptions for stop condition);
- Width – PAR is 4’ min, Shared use path is full width
- Turning space at top of a perpendicular curb ramp and at the bottom of a parallel curb ramp;
- Clear space at the bottom outside of travel lane;
- Perpendicular grade breaks
- Flush transitions (no lips);
- Detectable warnings

WHY DO WE NEED DWs ??

- All ramps and raised crossings must have detectable warnings to provide notice underfoot of the change from a pedestrian to a vehicular route

DETECTABLE WARNINGS

- 2010 ADA Standards do not require them on curb ramps on sites
- DOT ADA Standards req. DW on curb ramps (406.8)
- 2010 ADA Standards require them at rail platforms where the edge is not protected.

DETECTABLE WARNINGS

- Purpose of the detectable warnings is to inform the user that they are at the edge of the roadway.
- The truncated domes do not “Point You” in a certain direction.

DETECTABLE WARNINGS

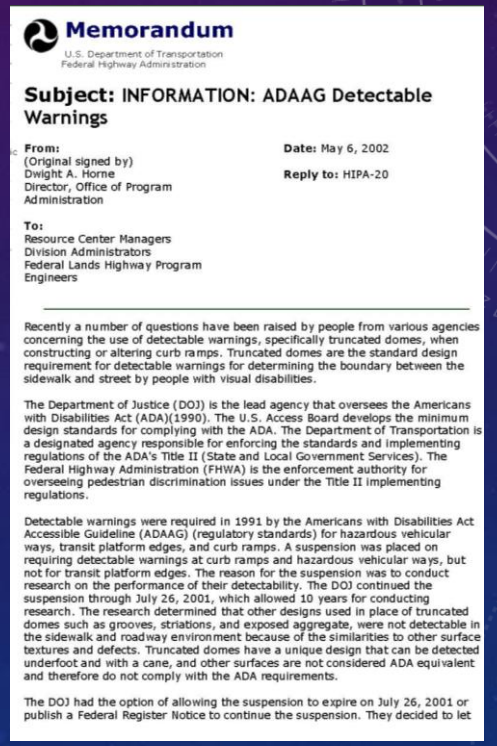
- PROWAG Requirements (R208.1)
  - **Curb ramps and blended transitions at pedestrian street crossings;**
  - **Pedestrian refuge islands;**
  - **Pedestrian at-grade rail crossings not located within a street or highway;**

DETECTABLE WARNINGS

- PROWAG Requirements (R208.1)
  - **Boarding platforms at transit stops for buses and rail vehicles where the edges of the boarding platform are not protected by screens or guards; and**
  - **Boarding and alighting areas at sidewalk or street level transit stops for rail vehicles where the side of the boarding and alighting areas facing the rail vehicles is not protected by screens or guards.**

DETECTABLE WARNINGS (FHWA MEMO)

- Required at all street crossings, railroad and boarding platforms - driveways??
- Provide warning to the visually impaired that they are about to enter a hazardous area.
- Raised domes with in-line or radial arrangement
- 24” min. in the direction of travel and full width of curb opening
- Contrasting in color



Memorandum

U.S. Department of Transportation
Federal Highway Administration

Subject: INFORMATION: ADAAG Detectable Warnings

From:
(Original signed by)
Dwight A. Horne
Director, Office of Program Administration

Date: May 6, 2002

Reply to: HIPA-20

To:
Resource Center Managers
Division Administrators
Federal Lands Highway Program Engineers

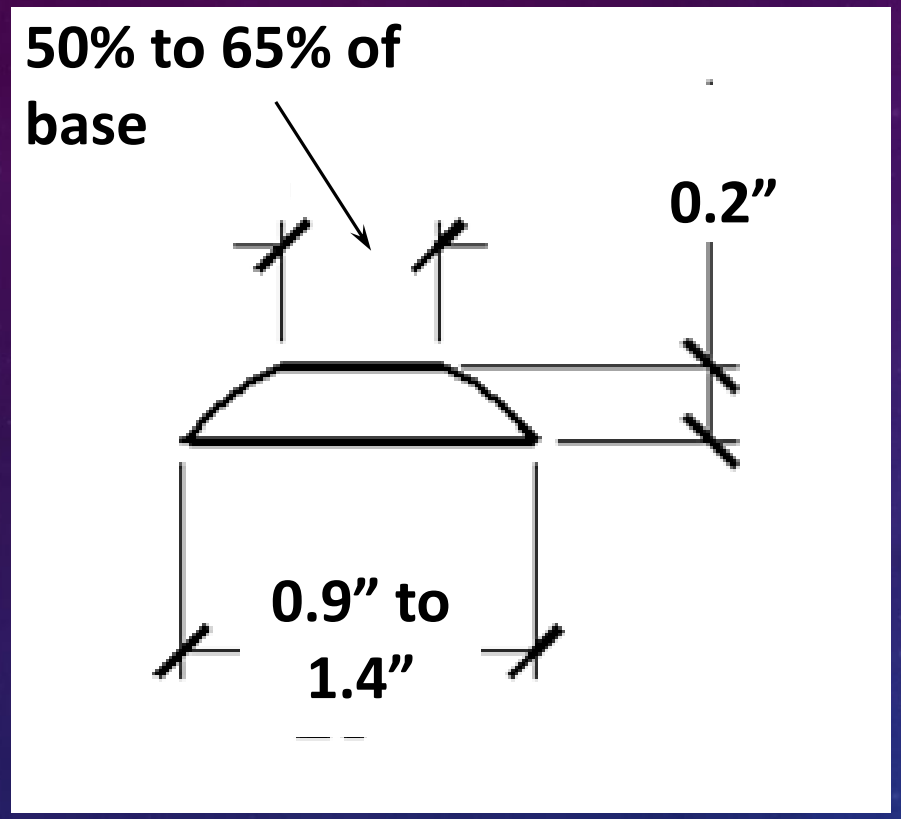
Recently a number of questions have been raised by people from various agencies concerning the use of detectable warnings, specifically truncated domes, when constructing or altering curb ramps. Truncated domes are the standard design requirement for detectable warnings for determining the boundary between the sidewalk and street by people with visual disabilities.

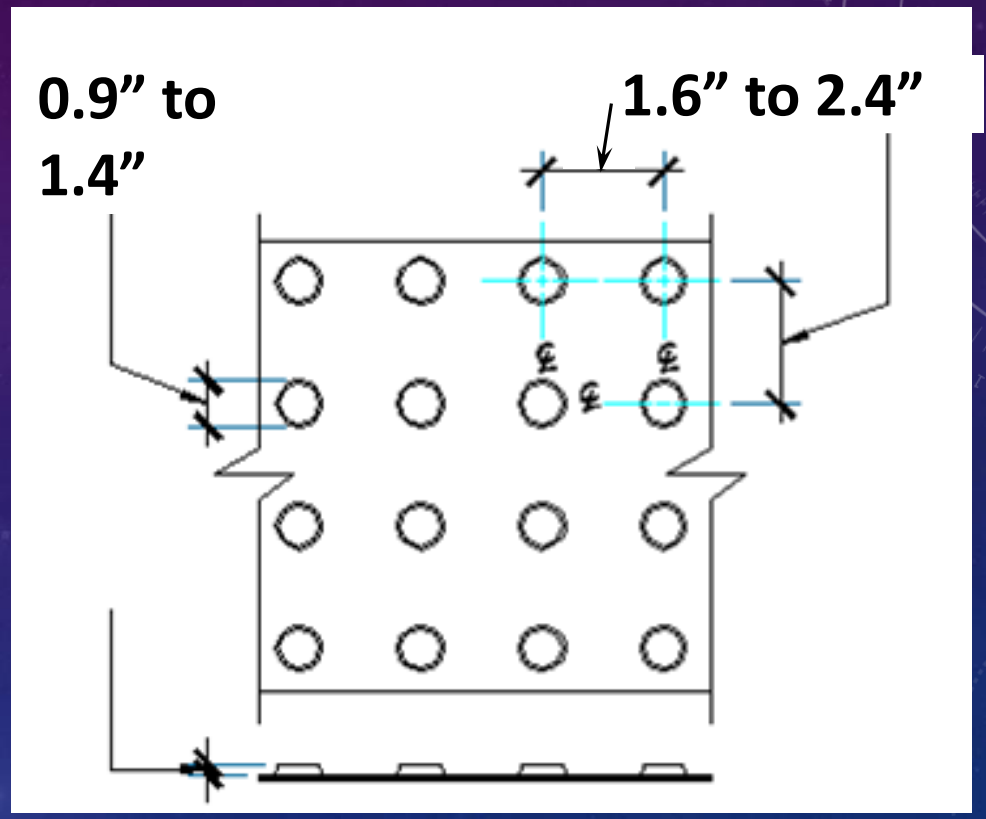
The Department of Justice (DOJ) is the lead agency that oversees the Americans with Disabilities Act (ADA)(1990). The U.S. Access Board develops the minimum design standards for complying with the ADA. The Department of Transportation is a designated agency responsible for enforcing the standards and implementing regulations of the ADA's Title II (State and Local Government Services). The Federal Highway Administration (FHWA) is the enforcement authority for overseeing pedestrian discrimination issues under the Title II implementing regulations.

Detectable warnings were required in 1991 by the Americans with Disabilities Act Accessible Guideline (ADAAG) (regulatory standards) for hazardous vehicular ways, transit platform edges, and curb ramps. A suspension was placed on requiring detectable warnings at curb ramps and hazardous vehicular ways, but not for transit platform edges. The reason for the suspension was to conduct research on the performance of their detectability. The DOJ continued the suspension through July 26, 2001, which allowed 10 years for conducting research. The research determined that other designs used in place of truncated domes such as grooves, striations, and exposed aggregate, were not detectable in the sidewalk and roadway environment because of the similarities to other surface textures and defects. Truncated domes have a unique design that can be detected underfoot and with a cane, and other surfaces are not considered ADA equivalent and therefore do not comply with the ADA requirements.

The DOJ had the option of allowing the suspension to expire on July 26, 2001 or publish a Federal Register Notice to continue the suspension. They decided to let

DETECTABLE WARNINGS





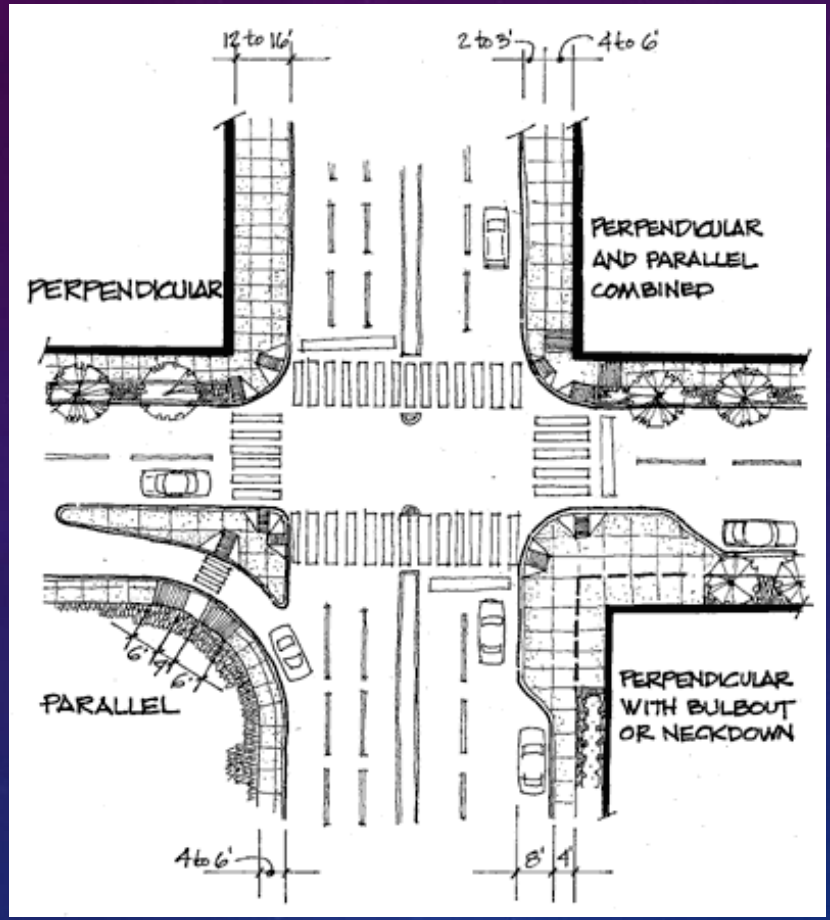
Due to their distinctive design, truncated domes are detectable by cane and underfoot

DETECTABLE WARNINGS

DETECTABLE WARNINGS

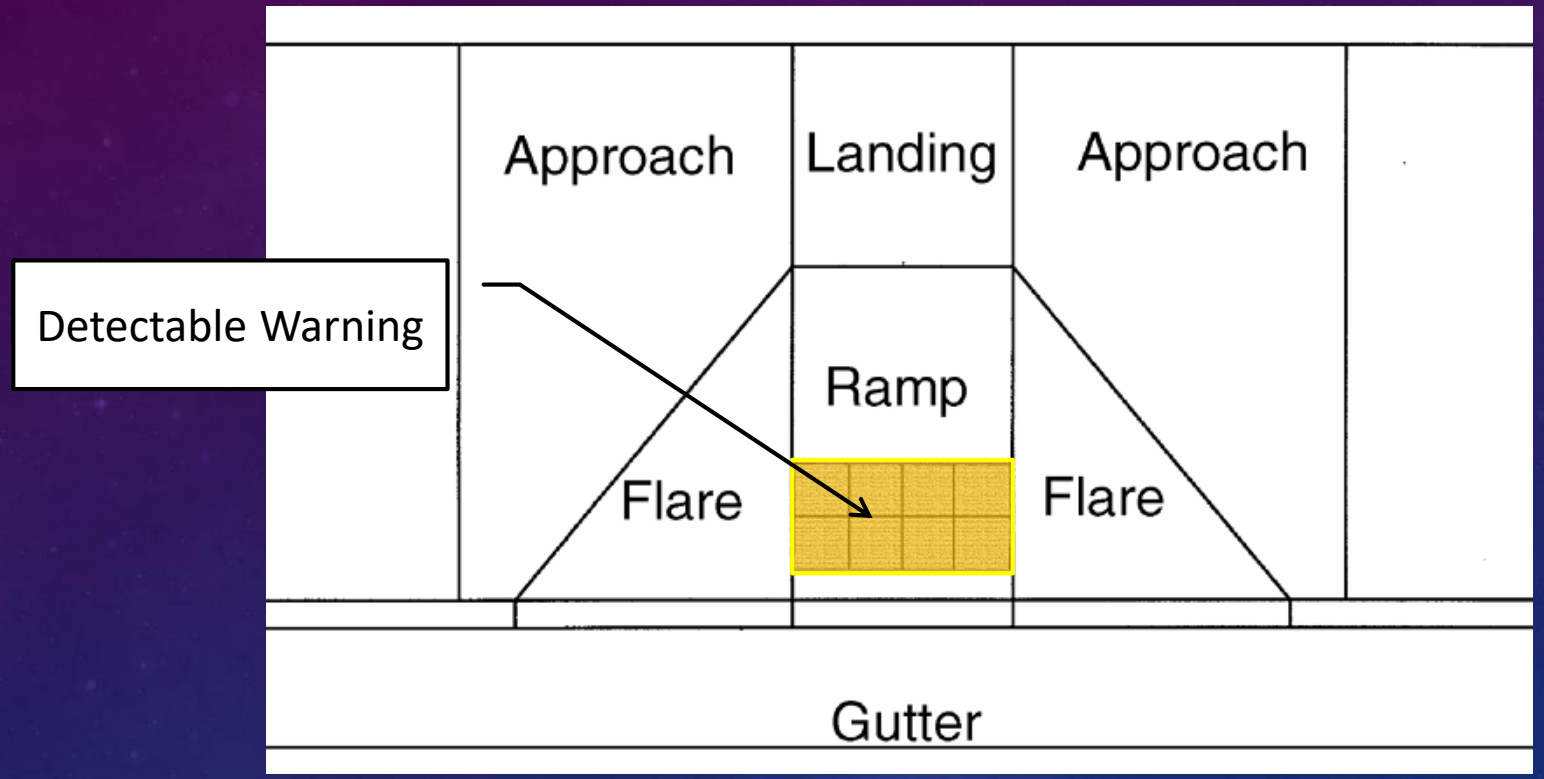
DW must have a visual contrast with the surrounding surfaces

REALITY OF CURB RAMPS



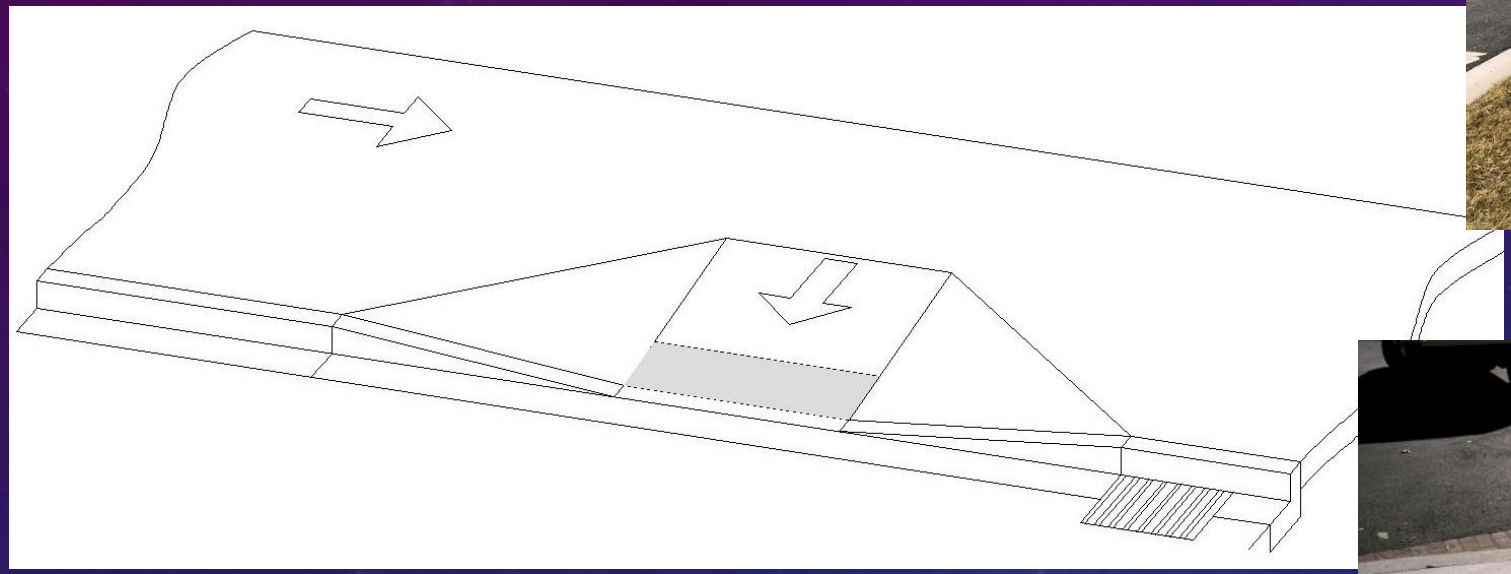
Curb ramps require design work

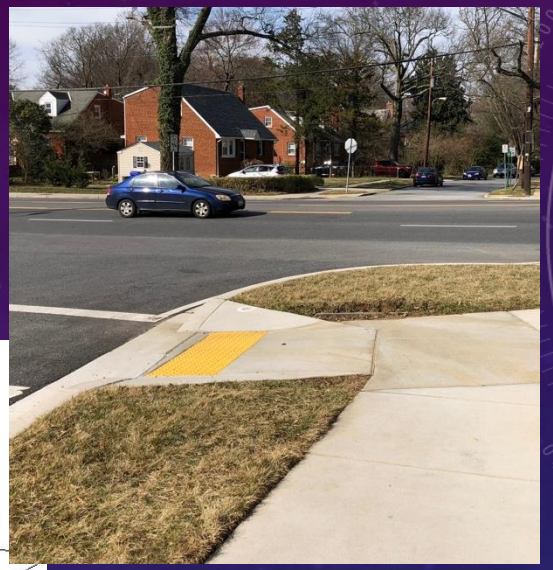
ANATOMY OF CURB RAMPS (R207 & R304)



The ‘cookie cutter’ curb ramp

TYPES - PERPENDICULAR

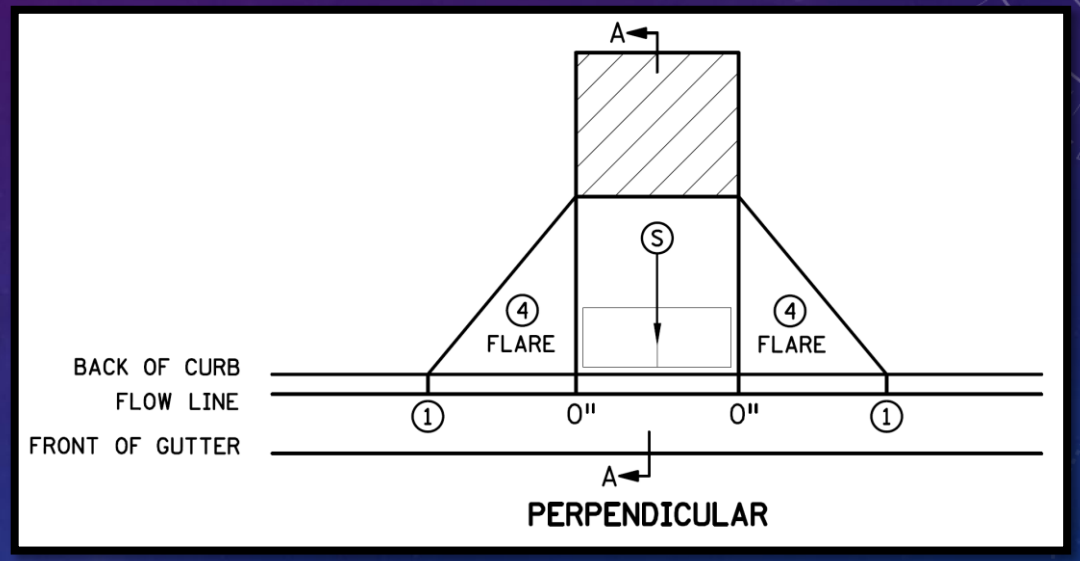




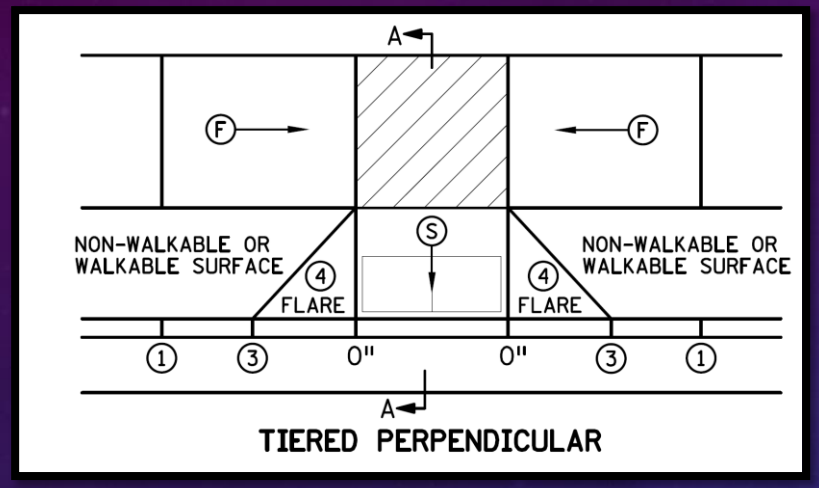
Perpendicular to the curb

TYPES - PERPENDICULAR

- Ramp is perpendicular to the curb line

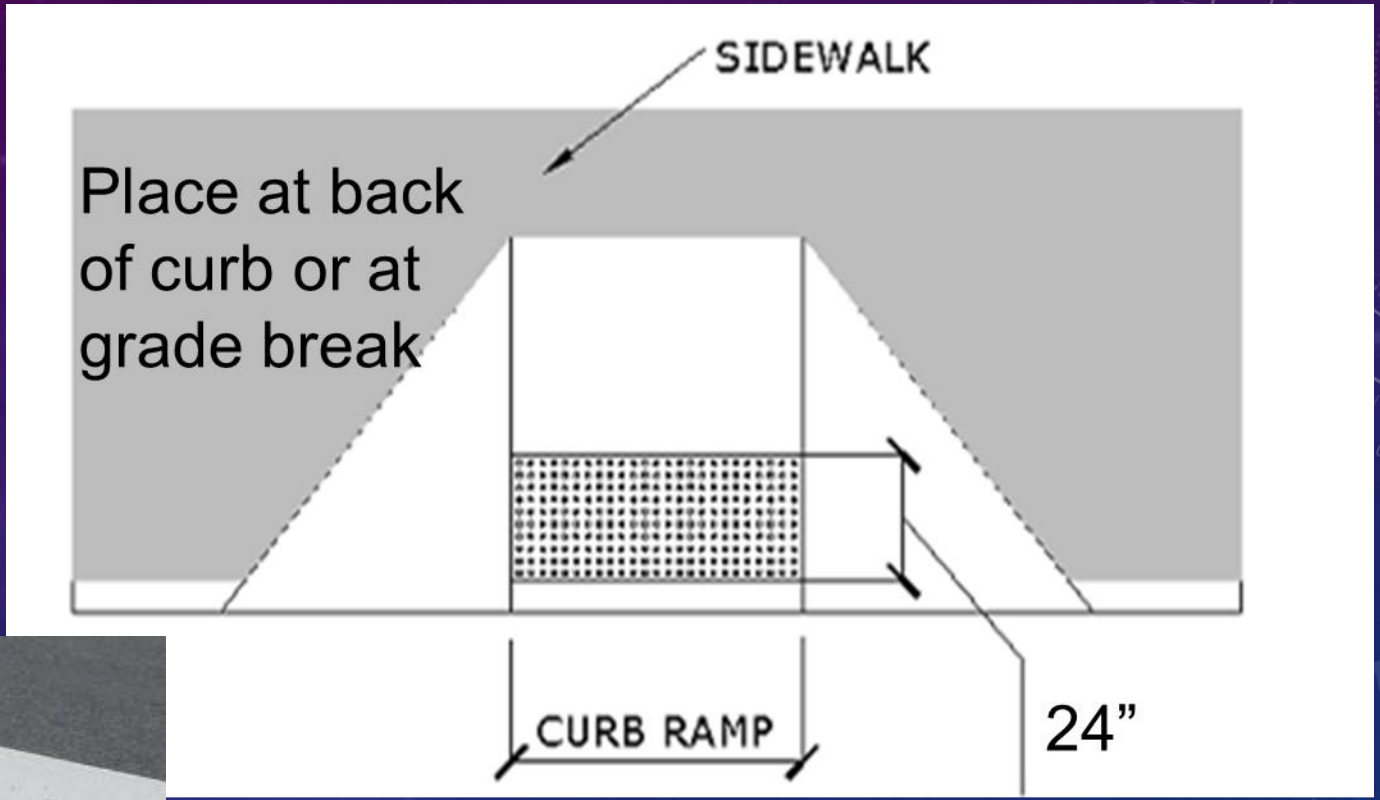


TYPES – TIERED PERPENDICULAR



- Used where the initial curb ramp cannot make up the elevation difference, so a secondary ramp is needed

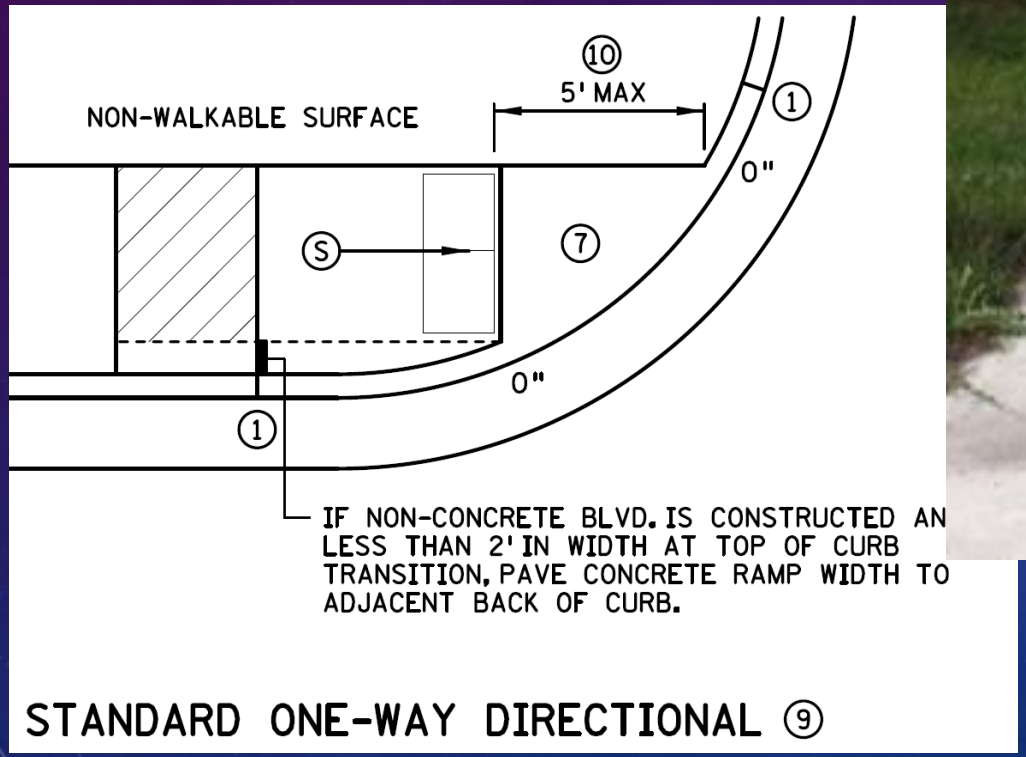
DETECTABLE WARNING LOCATION



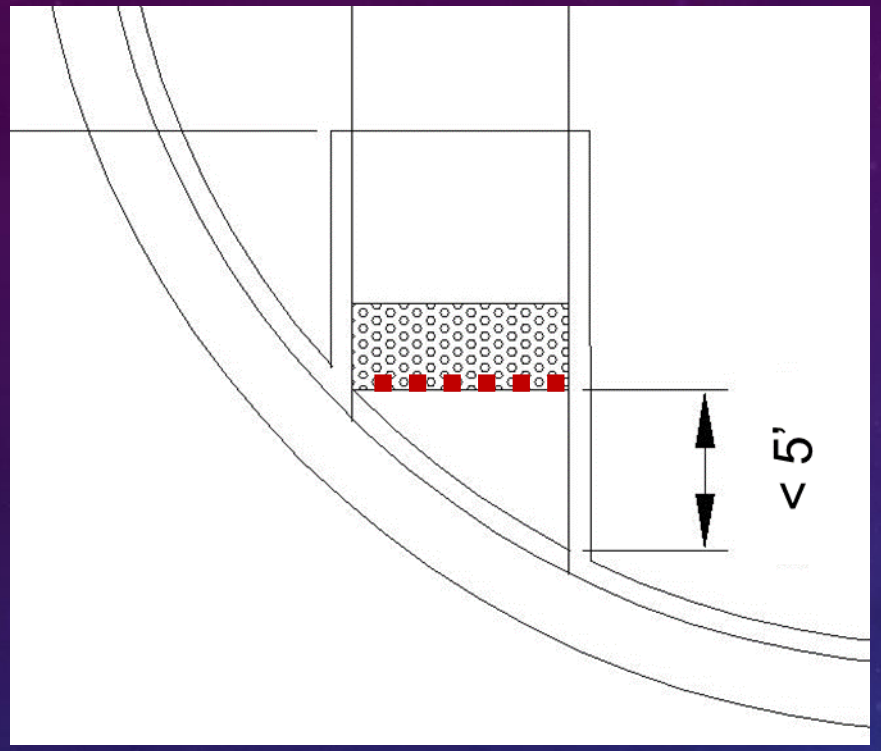
DW is placed at back of curb or at grade break

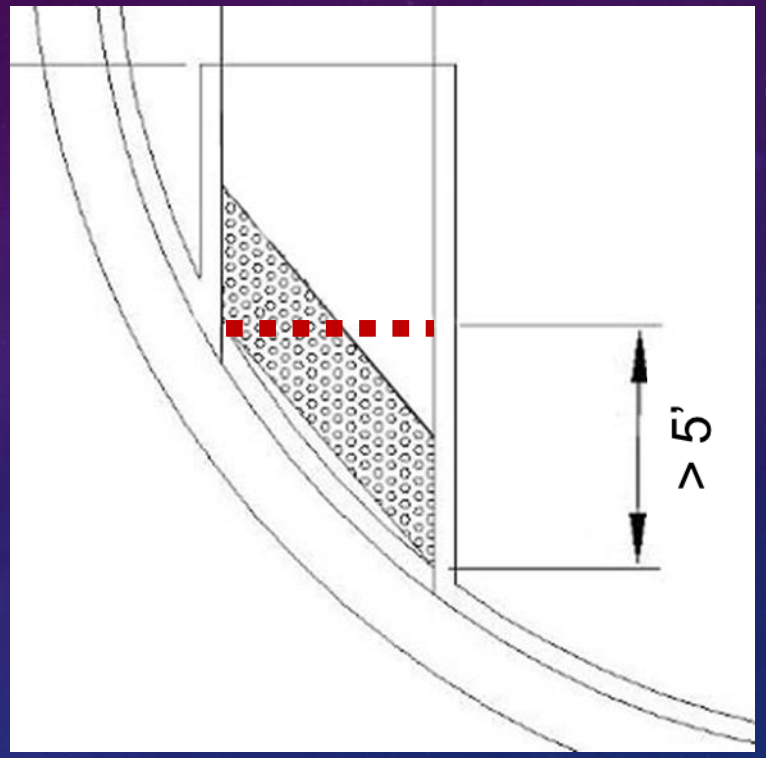
TYPES – ONE-WAY DIRECTIONAL

- (7) Max. 2.0% slope in all directions in front of grade break and drain to flow line. SHALL be constructed integral with curb and gutter.



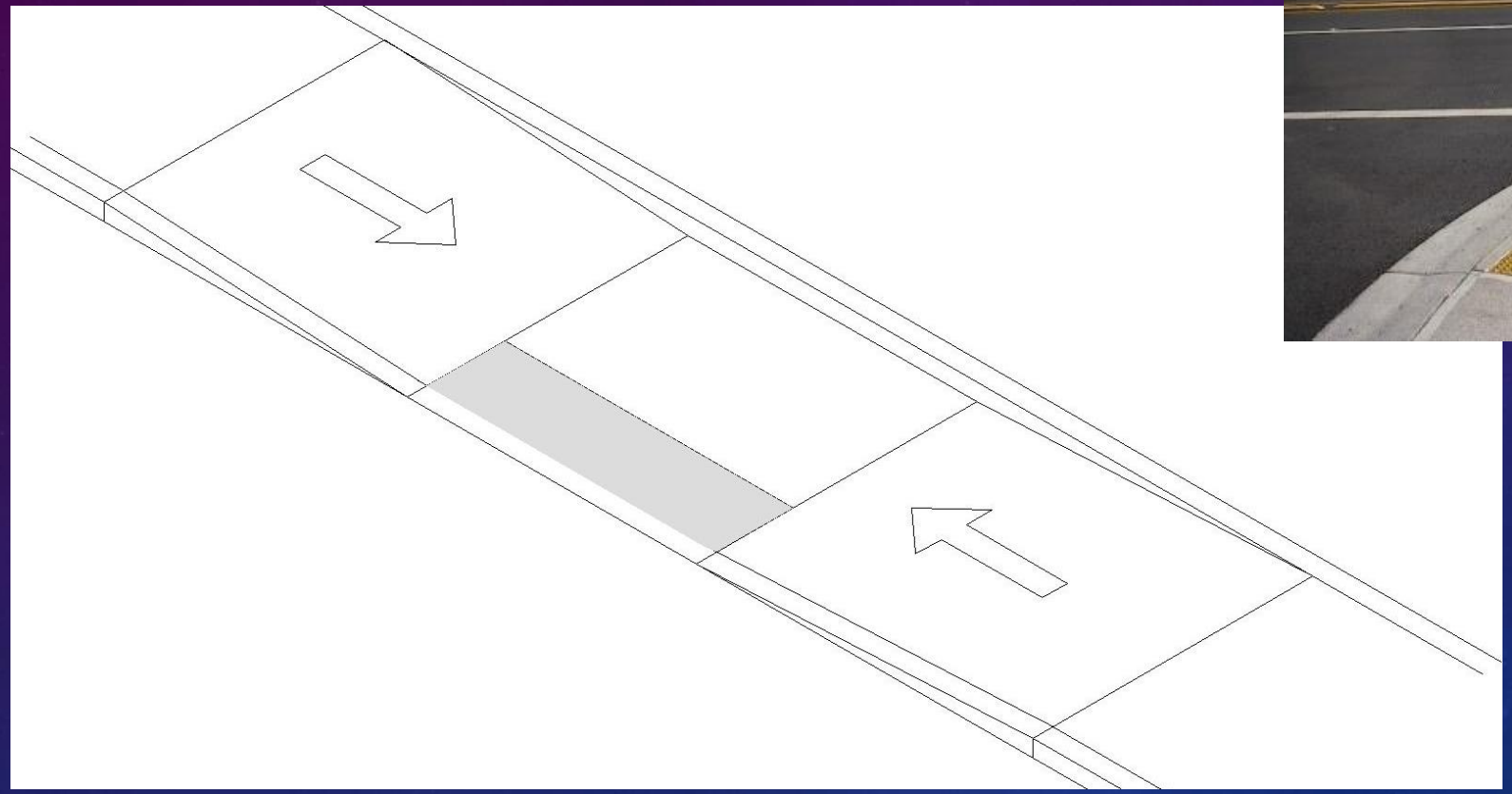
DETECTABLE WARNING LOCATION





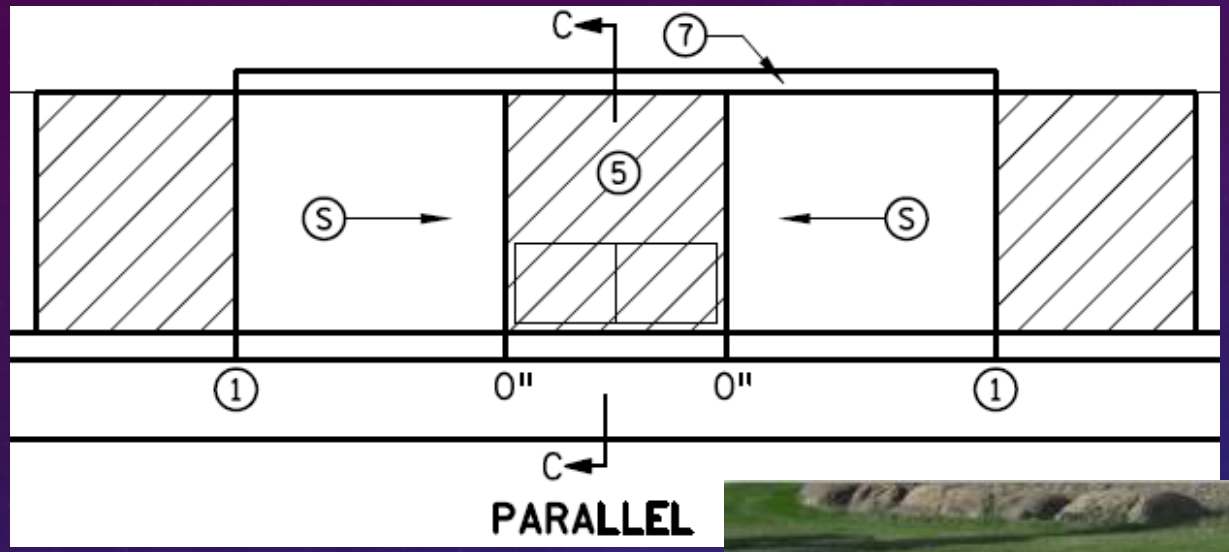
- Place DW on curb ramp at grade break if space at bottom of ramp is less than 5’ deep
- Place DW on bottom behind the back of the curb if space is more than 5’ deep at any point

TYPES - PARALLEL



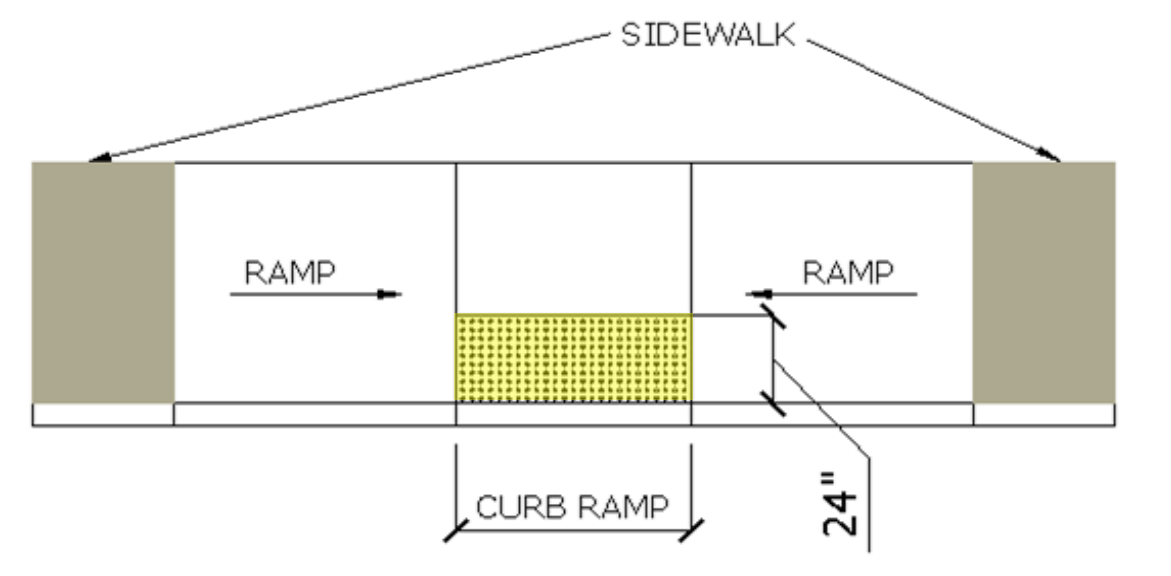
Parallel to the curb or street

TYPES - PARALLEL



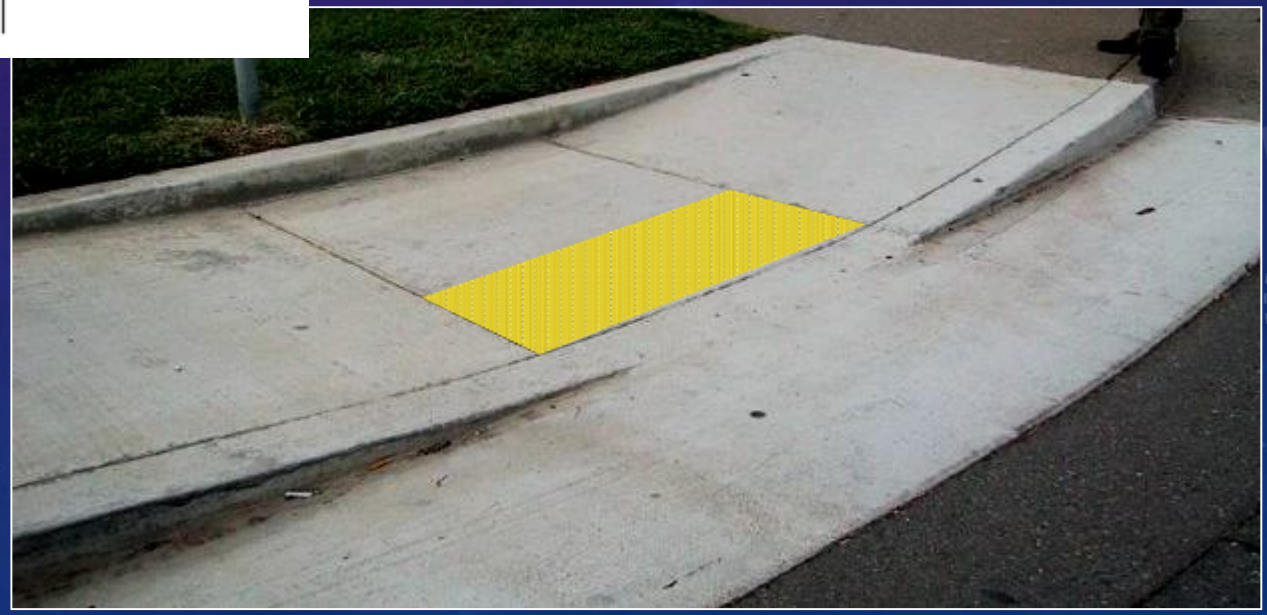
- Ramp is parallel to the curb line
- Landing occurs at the bottom of the ramp

DETECTABLE WARNING LOCATION

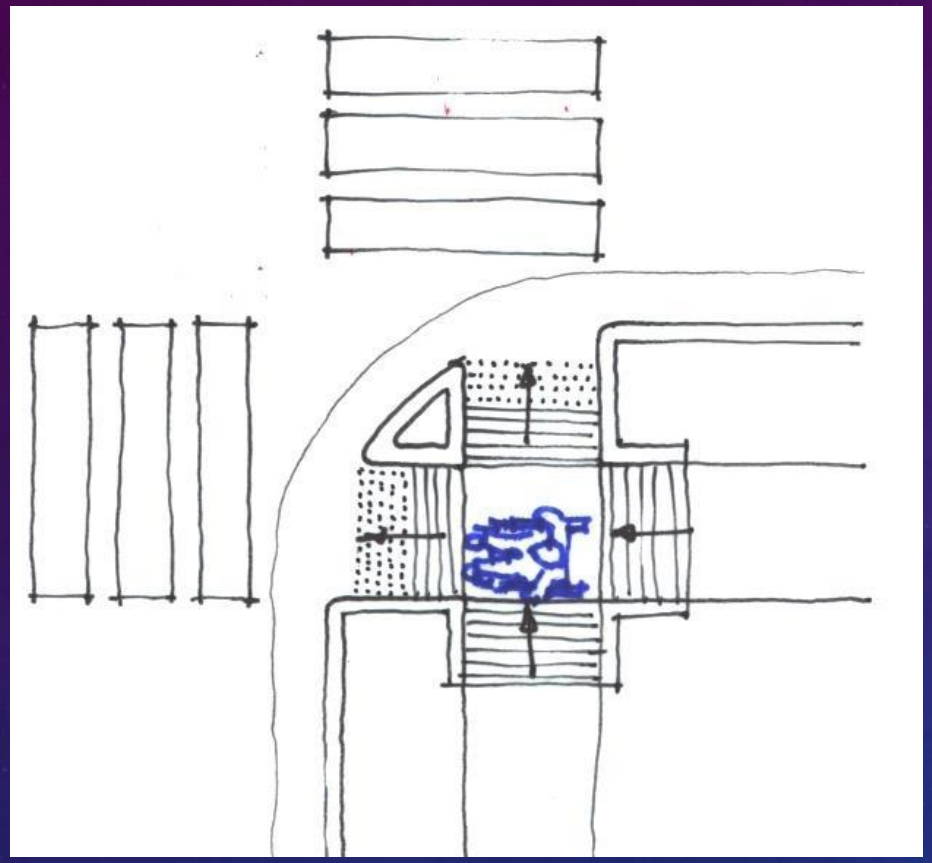


DW placement on parallel curb ramp

Place at back of curb on landing

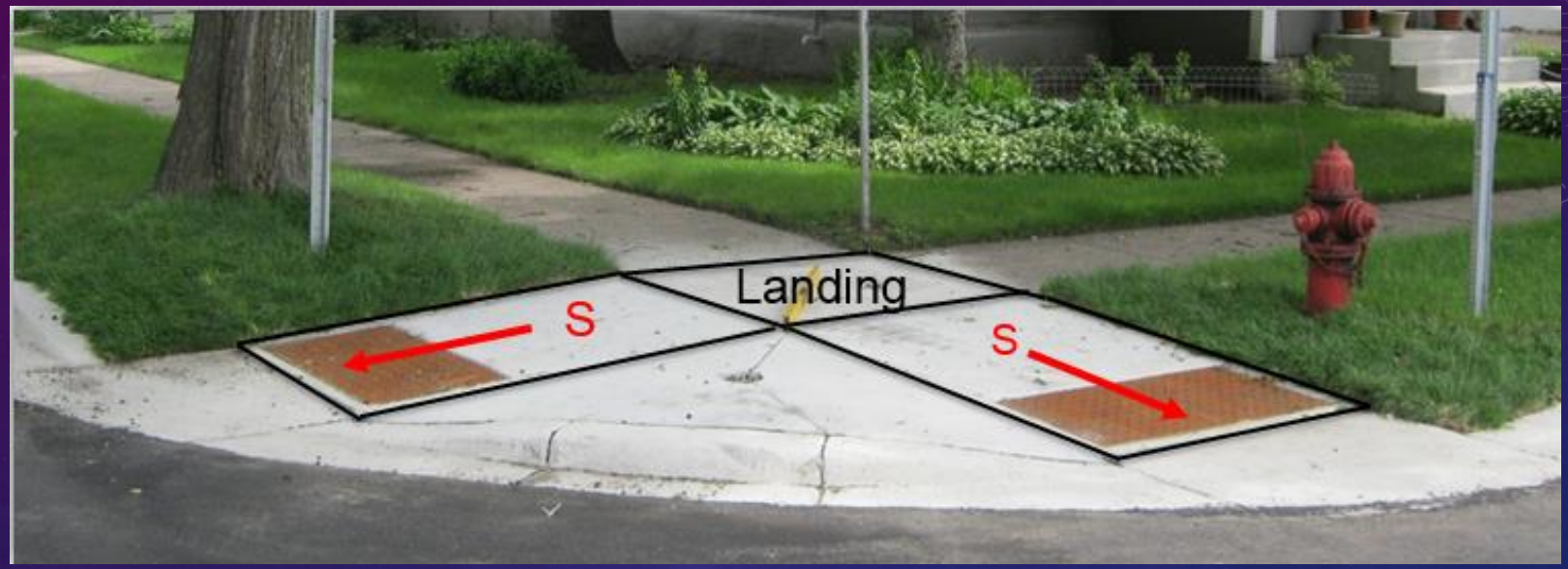


TYPES - COMBINATION



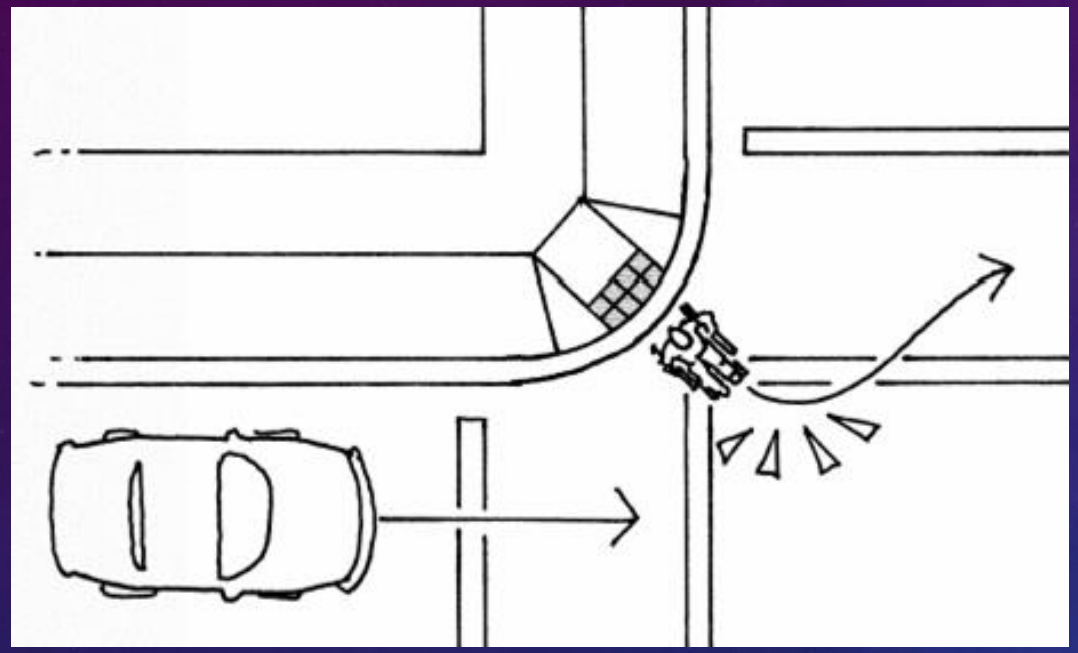
Combination ramps slope the sidewalk down and can shorten the perpendicular run to the street

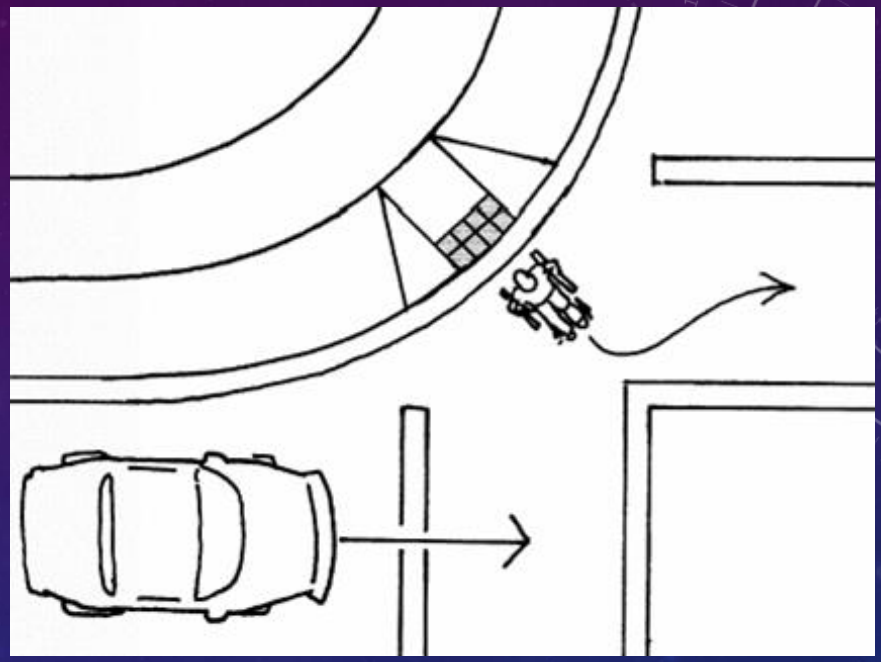
TYPES – COMBINED DIRECTIONAL



- Provide direction both ways
- In Line with both incoming walks
- Ramps are directional
- Perpendicular grade breaks in line with path of travel
- Combined landing
- Bump should not be in path of travel

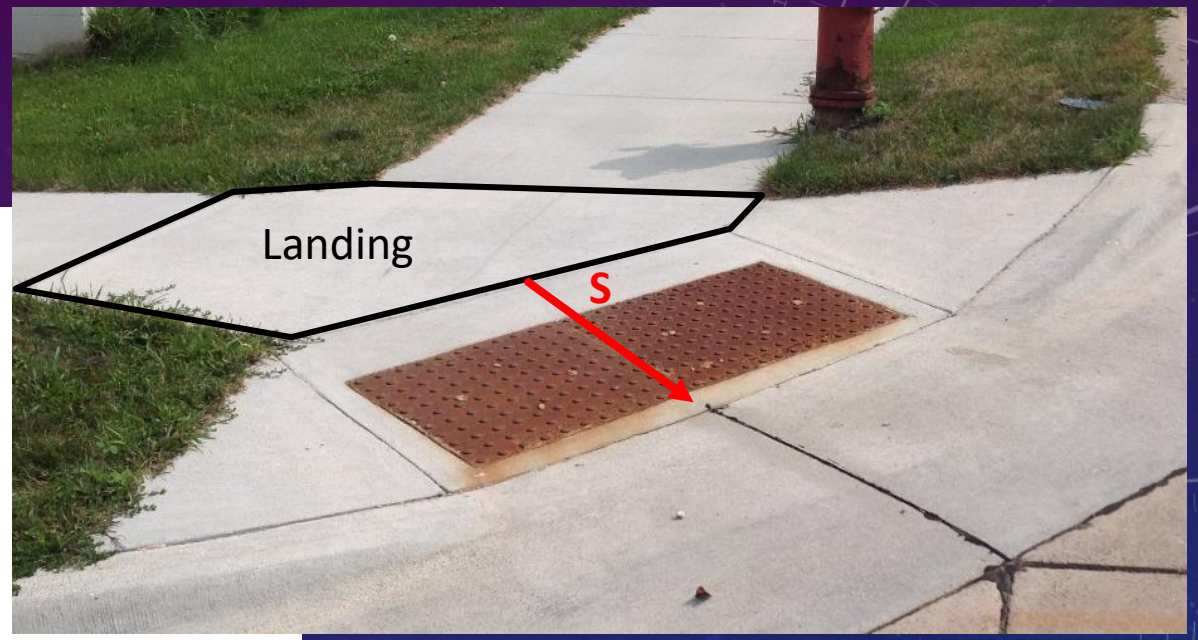
TYPES - DIAGONAL





- Diagonal / Apex curb ramps can cause dangerous conflicts
- Should **<u>Only</u>** be permitted in alterations as last option

DIAGONAL CURB RAMPS



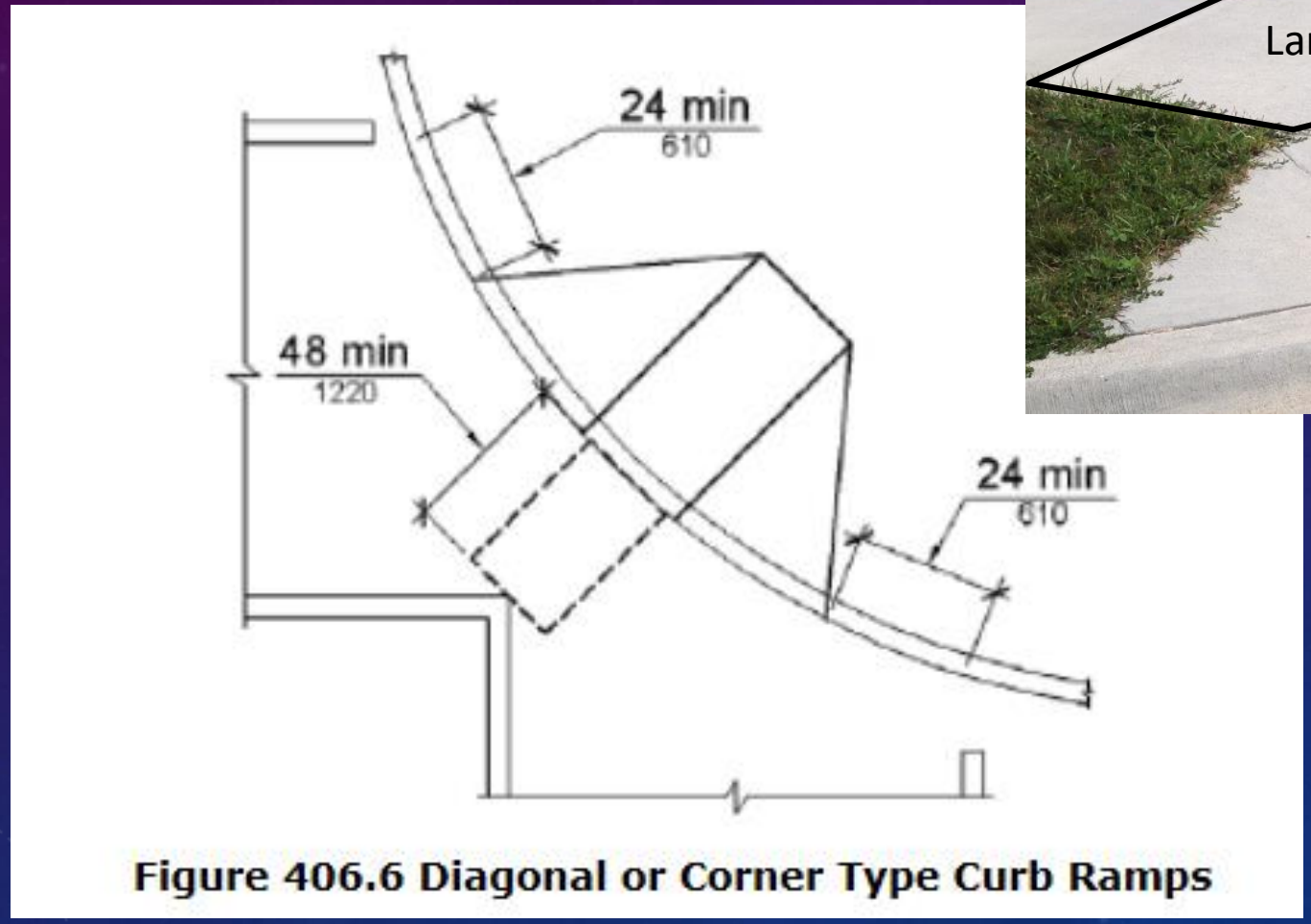
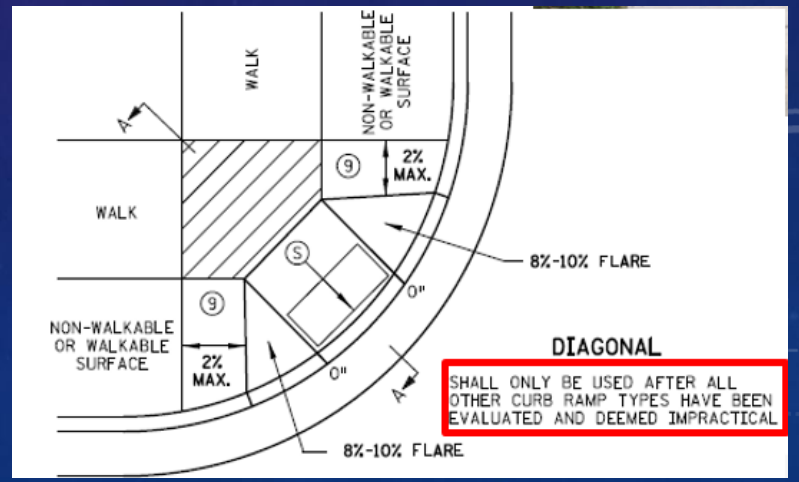


Figure 406.6 Diagonal or Corner Type Curb Ramps



DIAGONAL CURB RAMPS

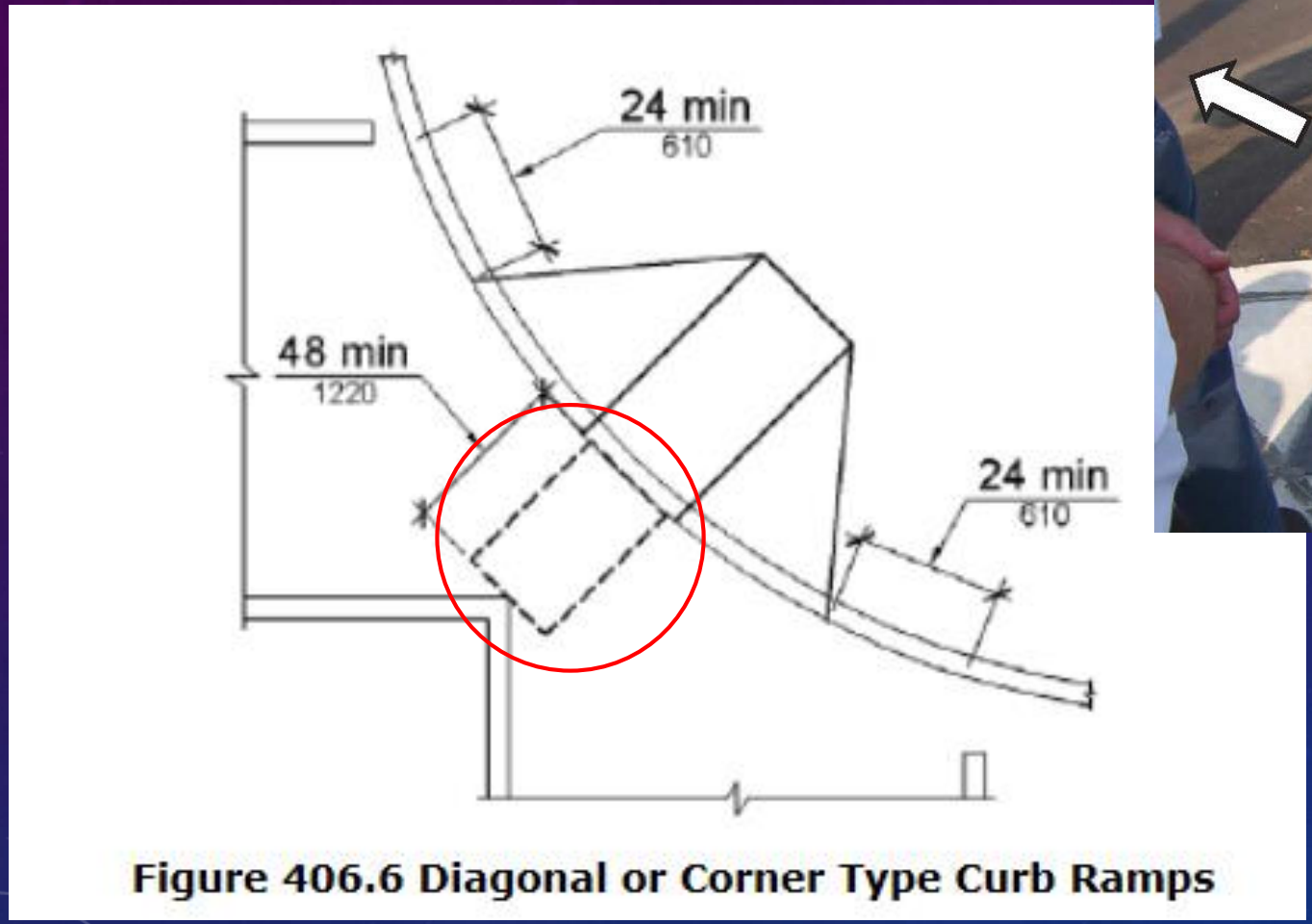
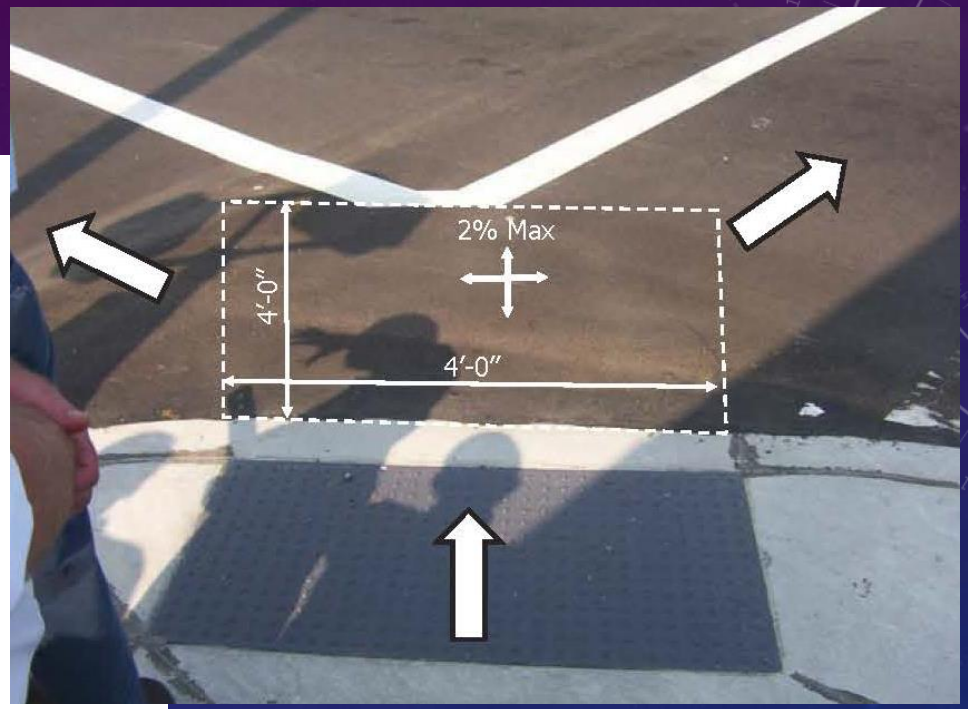
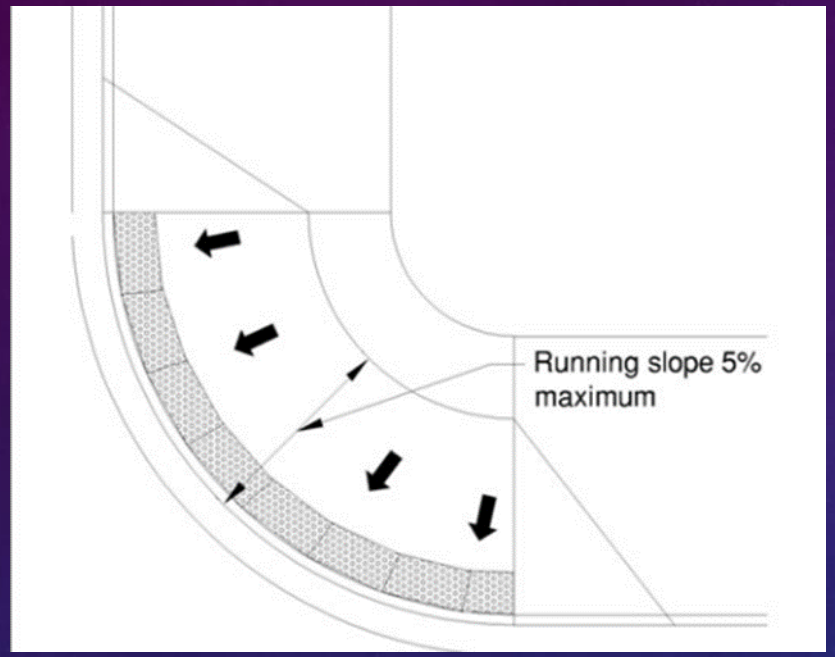


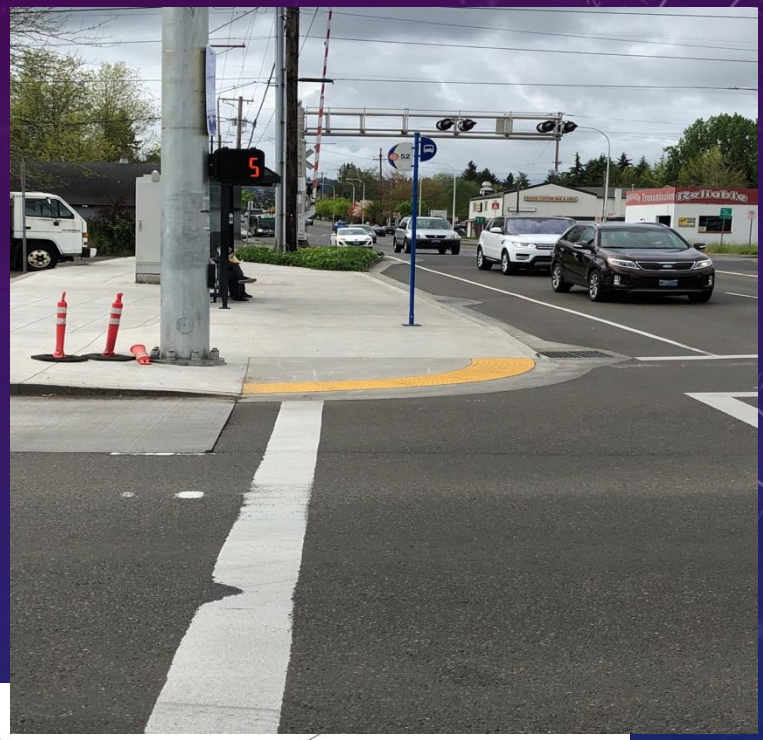
Figure 406.6 Diagonal or Corner Type Curb Ramps

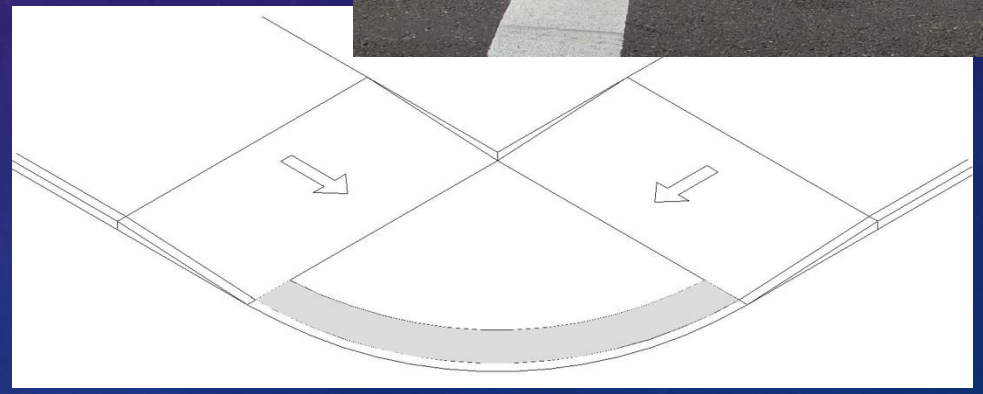


- Diagonal CR's serve two directions

TYPES: BLENDED TRANSITION

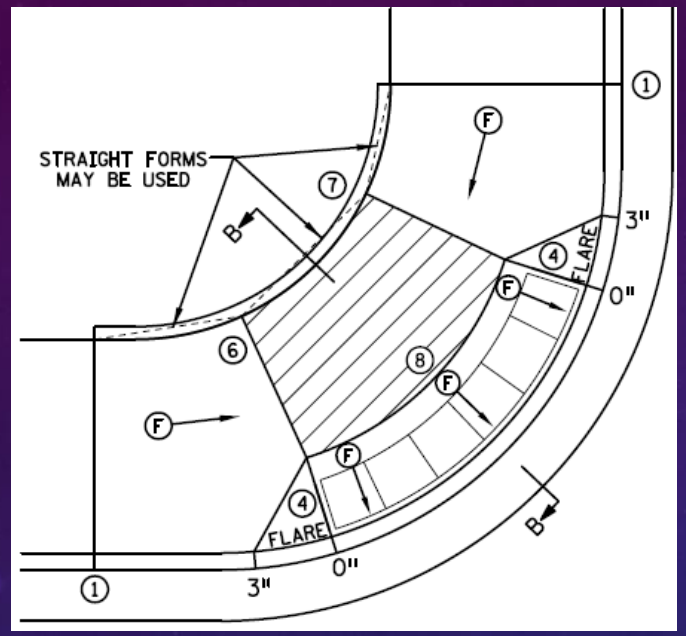




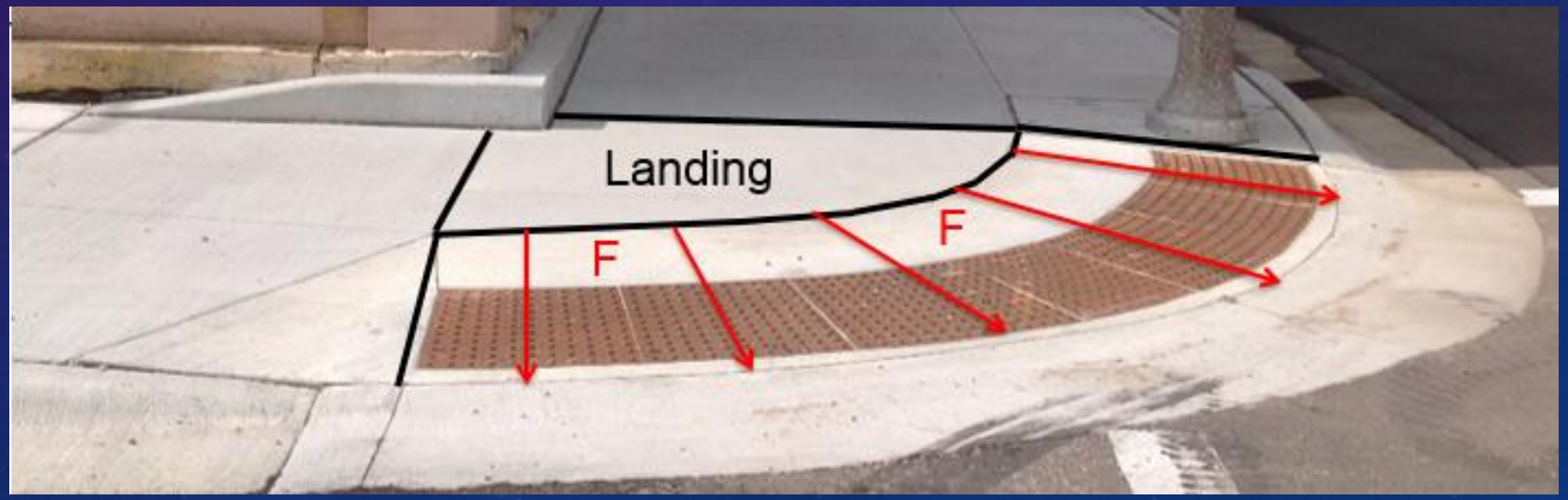


- Blended Transition (depressed corner)

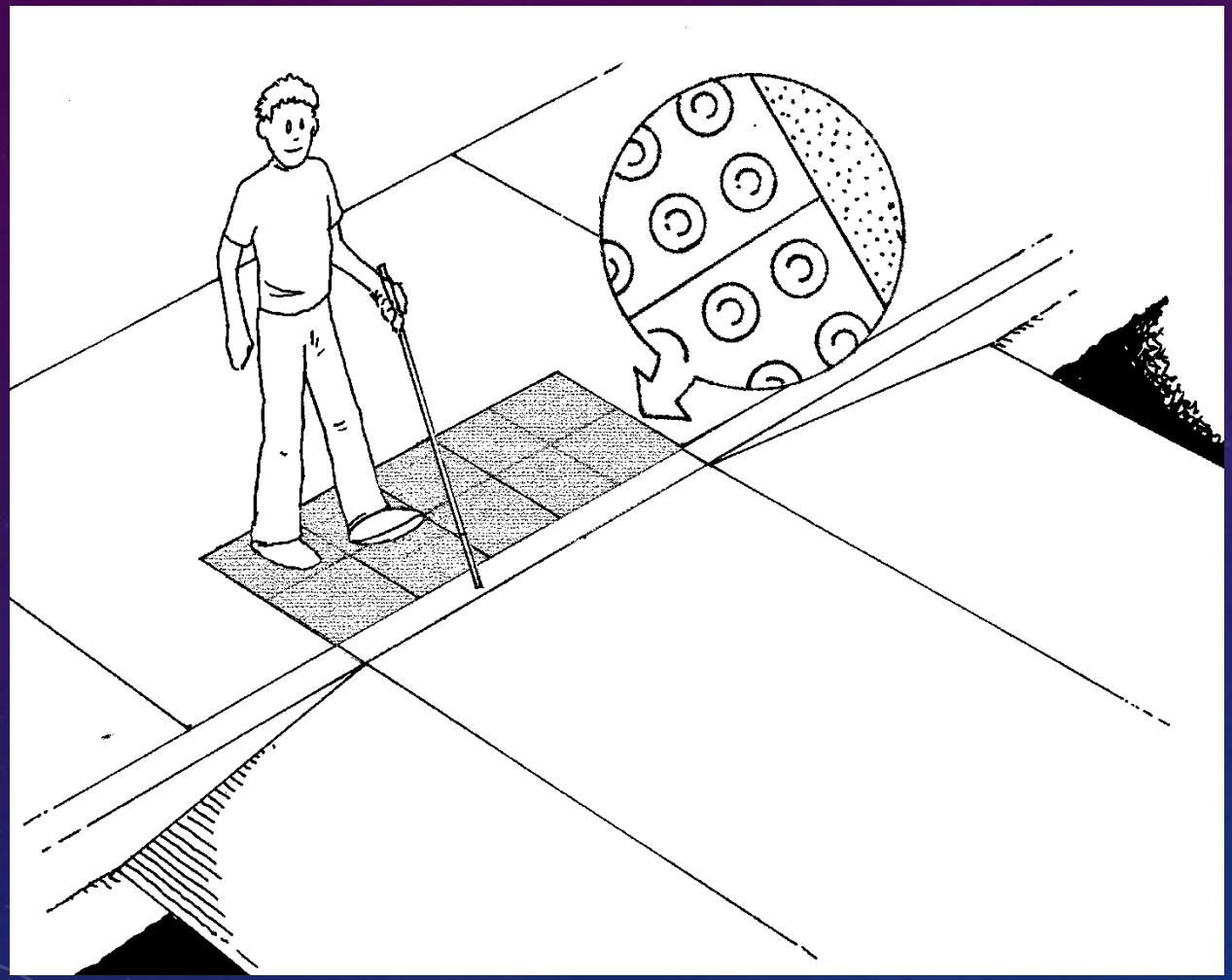
TYPES: BLENDED TRANSITION



- (F) slope through detectable warnings

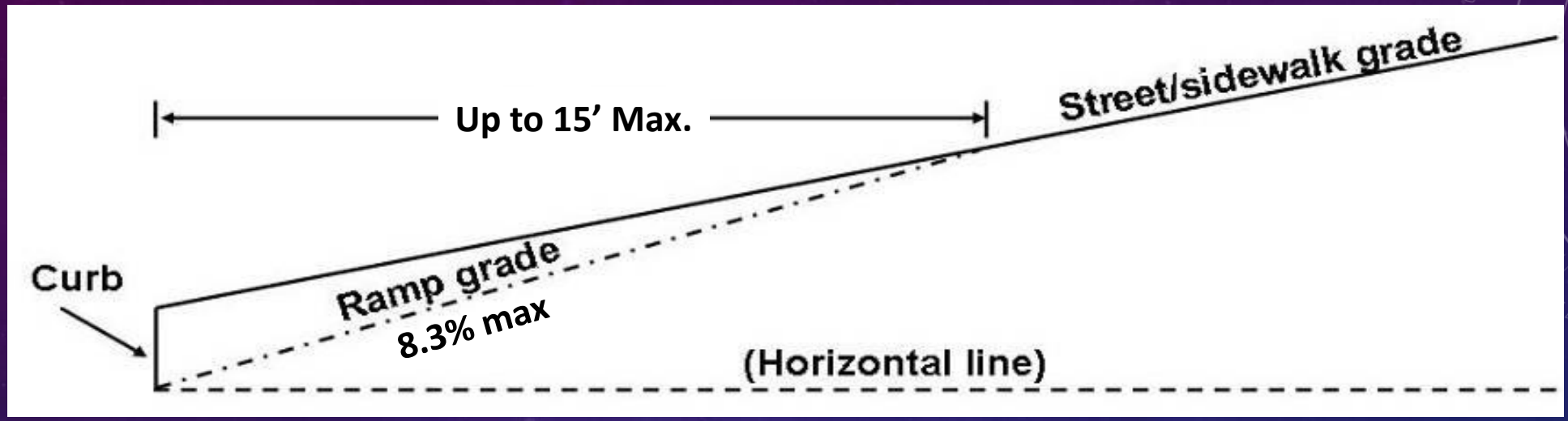


TYPES: BLENDED TRANSITION



- Blended Transition (raised crossing)

RUNNING SLOPE



- Least slope possible is preferred
- Maximum curb ramp slope 1:12 (8.3%)
- When 'chasing grade' length of the ramp may be15 feet.
- Consistent slope (slope must be uniform)

CHANGE OF GRADE (COUNTER SLOPE)

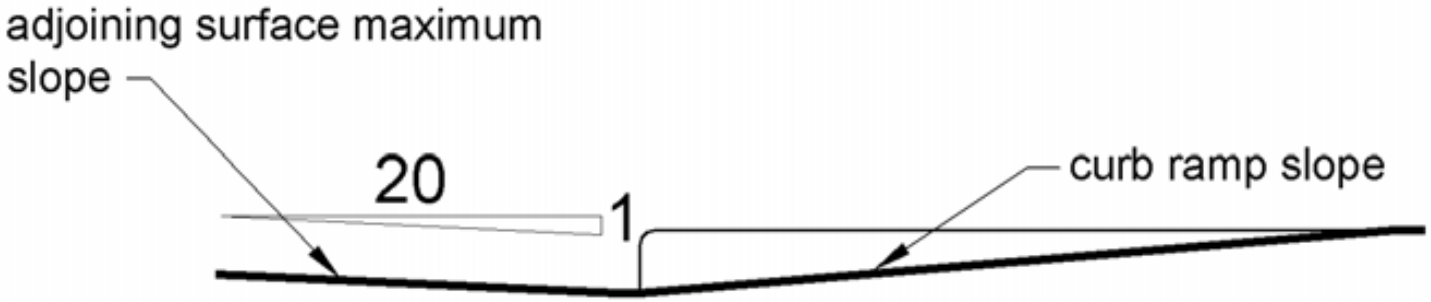
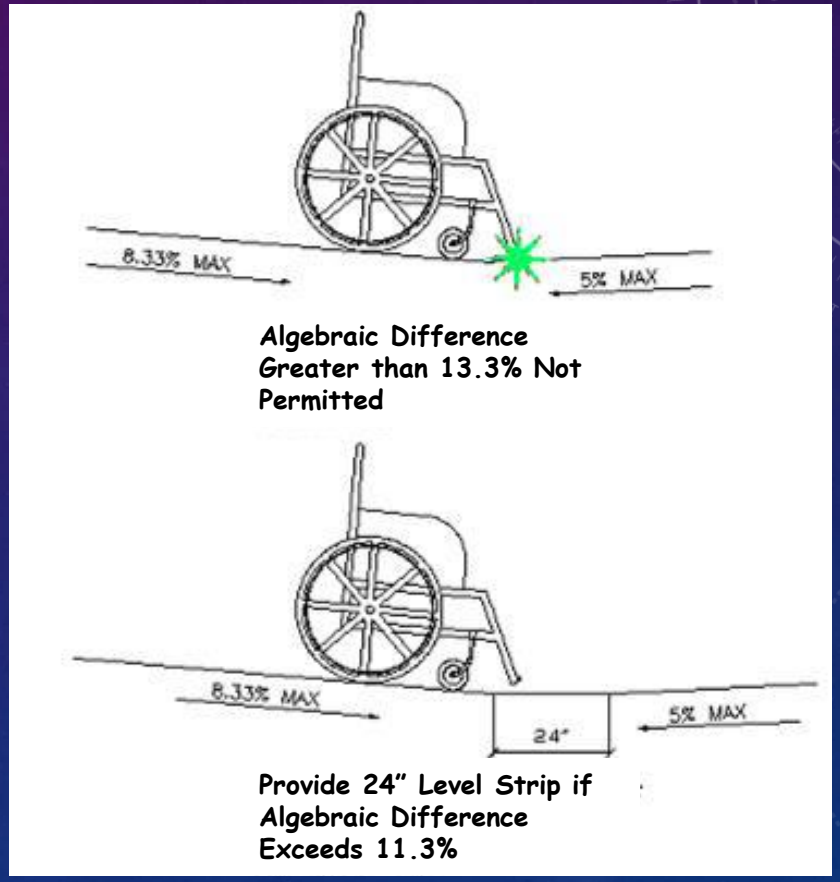


Figure 406.2
Counter Slope of Surfaces Adjacent to Curb Ramps

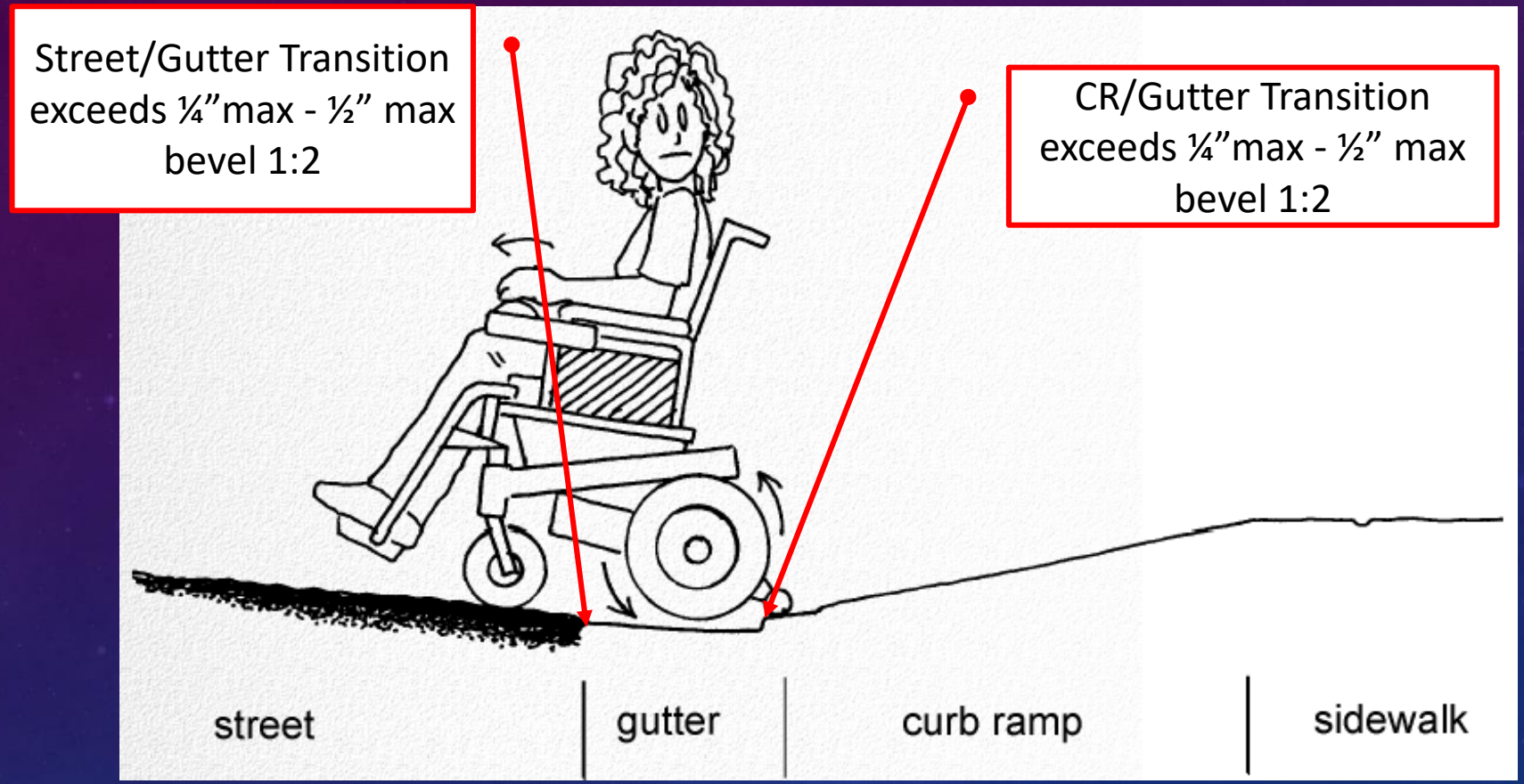
- ADA & PROWAG allows 8.3% ramp and 5% grade at the adjacent street
- 406.2 Counter Slope. Counter slopes of adjoining gutters and road surfaces immediately adjacent to the curb ramp shall not be steeper than 1:20. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.

CHANGE OF GRADE (COUNTER SLOPE)

- Algebraic difference of the ramp or landing slope and the street crown 13.3% max
- Recommendation: 11.3% maximum; Provide 2’ level area if greater than 11.3%



CHANGE OF GRADE (COUNTER SLOPE)

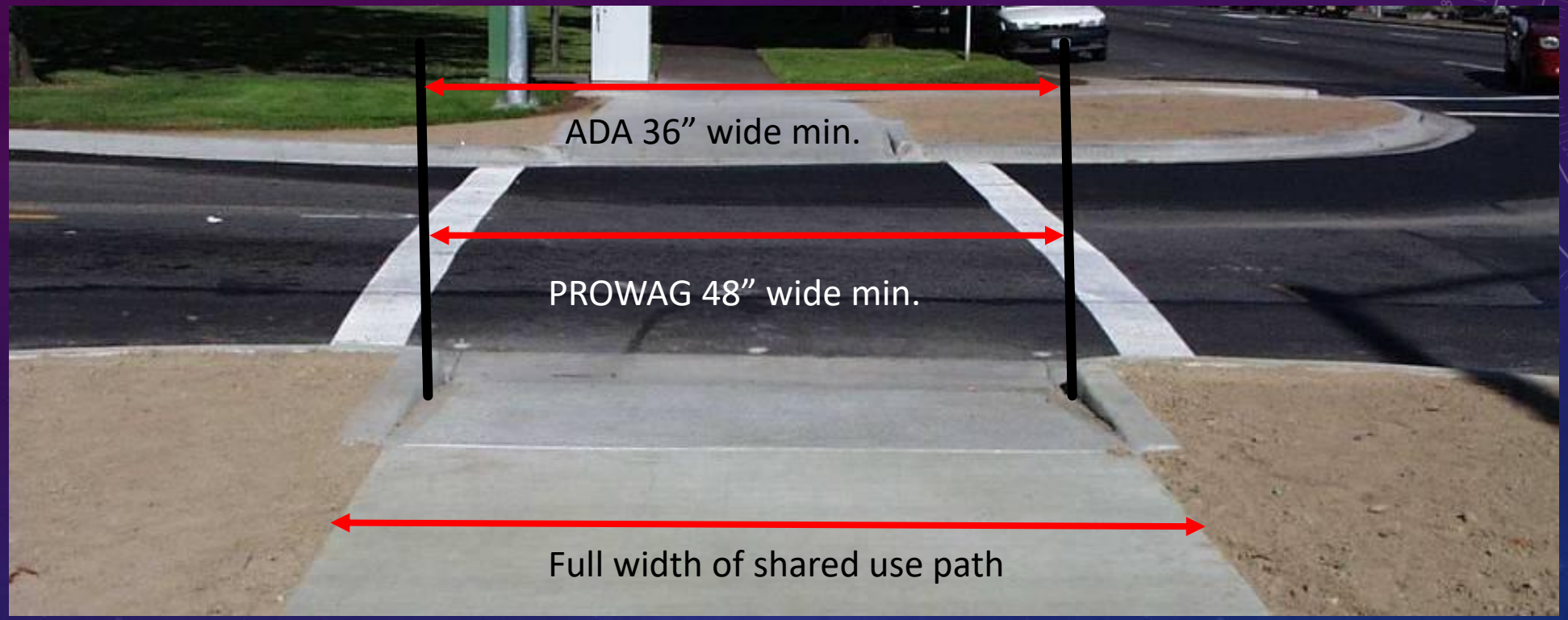


- Transition must be flush at all grade breaks

CROSS SLOPE

- 2% max where crossing is stop or yield
- 5% max where crossing may be free flow

WIDTH

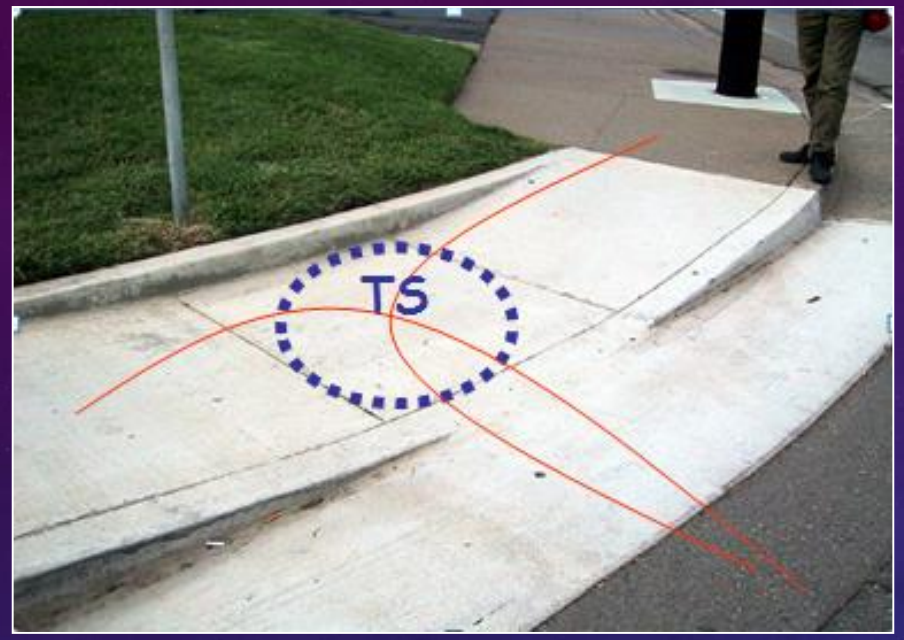


- ADA – Curb ramp must be 36” wide min.
- Curb ramp must be 4 foot wide min. and within the crosswalk. (R304.5.1.1)
- Curb ramp must extend full width of a shared use path. (R302.3.2)

TURNING SPACE

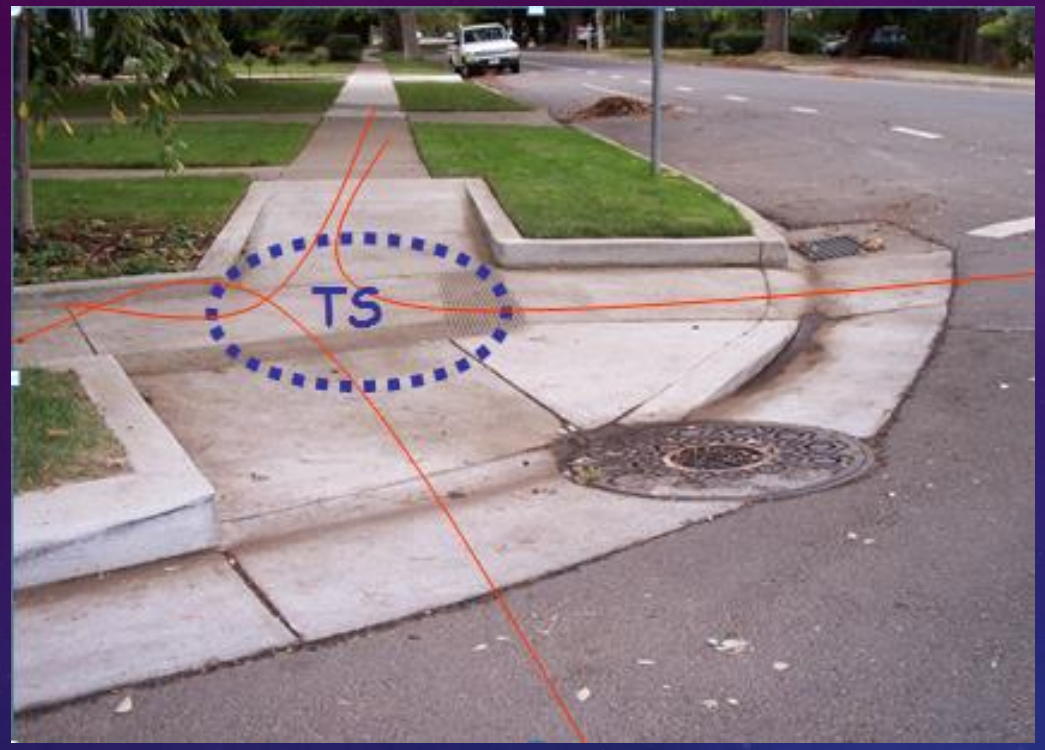
- Turning space is required at the top of curb ramps for changing direction (4’ x 4’ min)

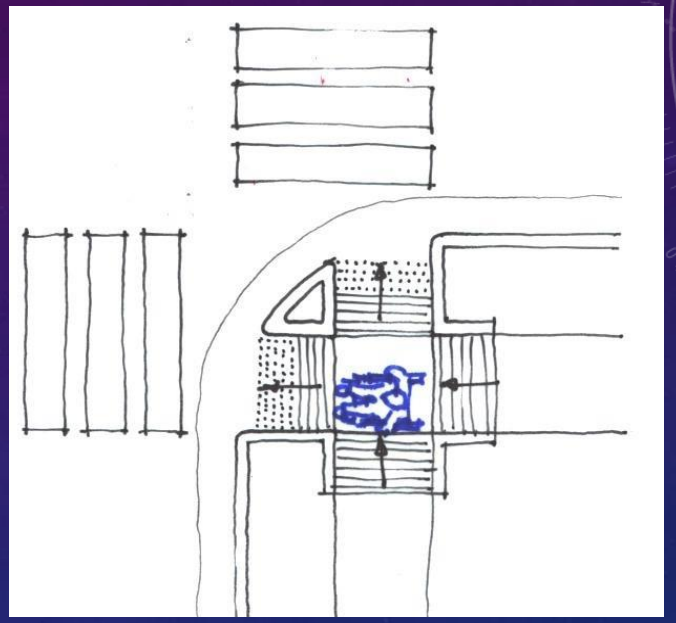
TURNING SPACE



- Provide a level turning space at the top of a perpendicular ramp, at the bottom of a parallel ramp, and at corners.

TURNING SPACE



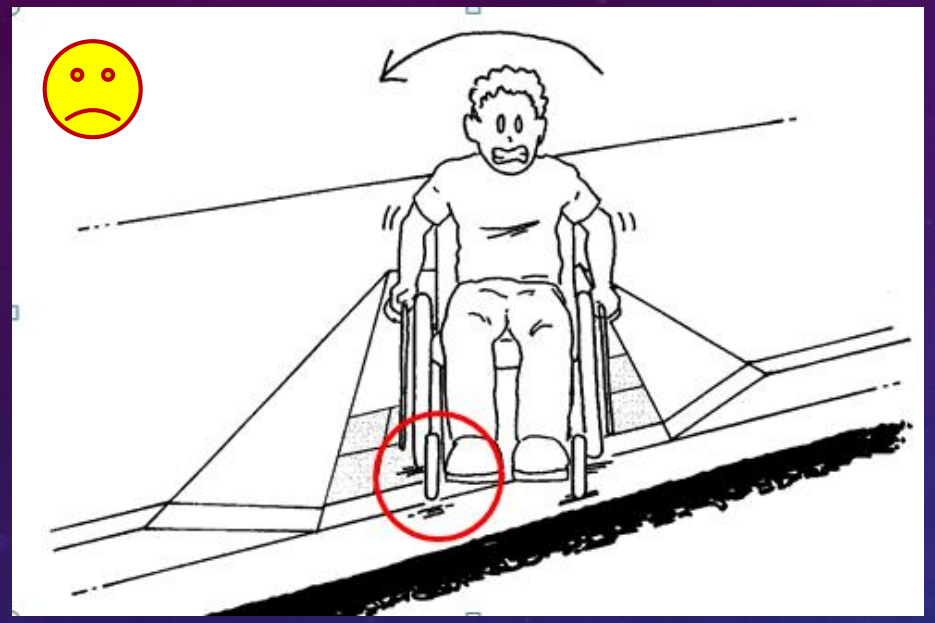


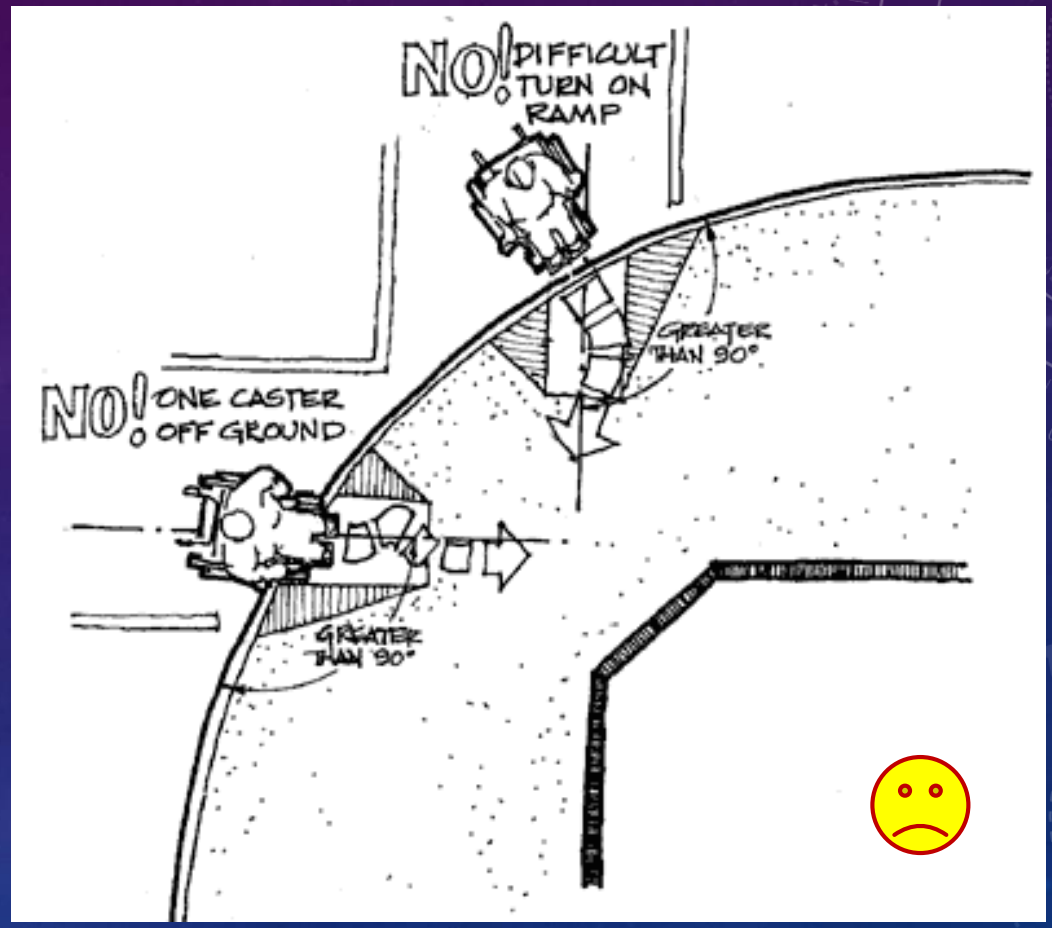
- The turning space is at an intermediate level.

PERPENDICULAR GRADE BREAKS

- Perpendicular grade breaks are required

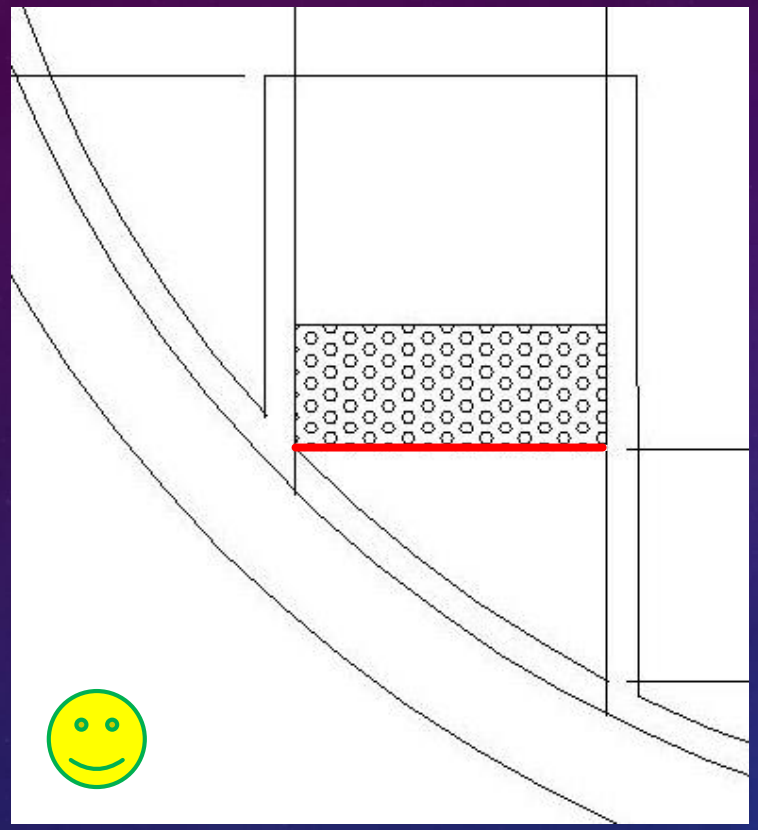
PERPENDICULAR GRADE BREAKS

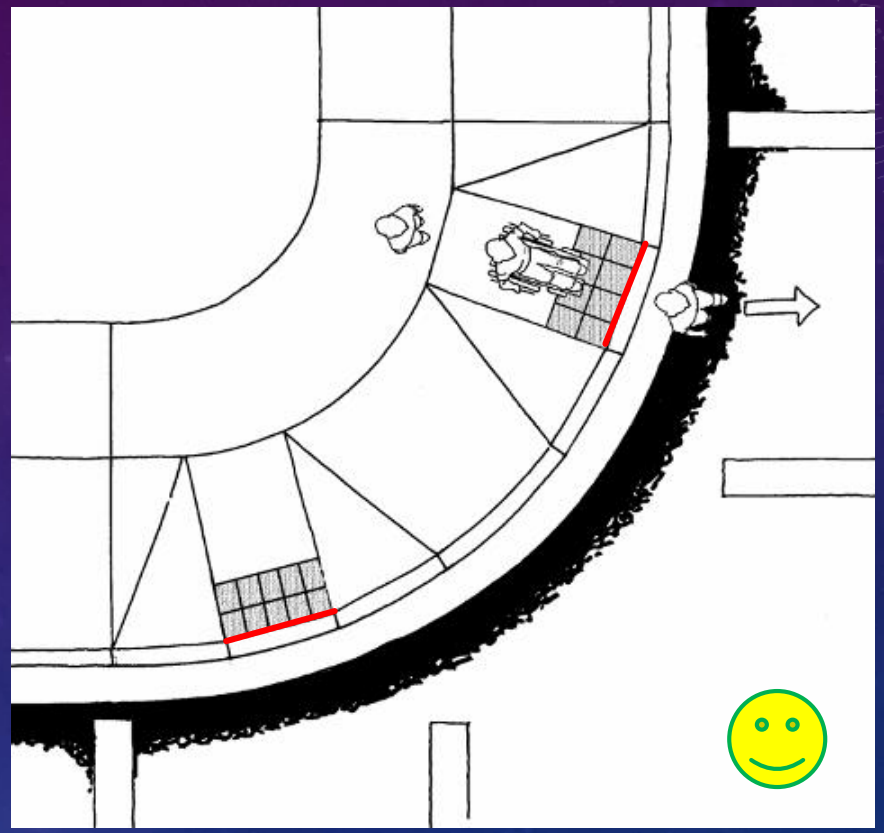




- Both wheels must hit the break at the same time for stability

PERPENDICULAR GRADE BREAKS





PARKING

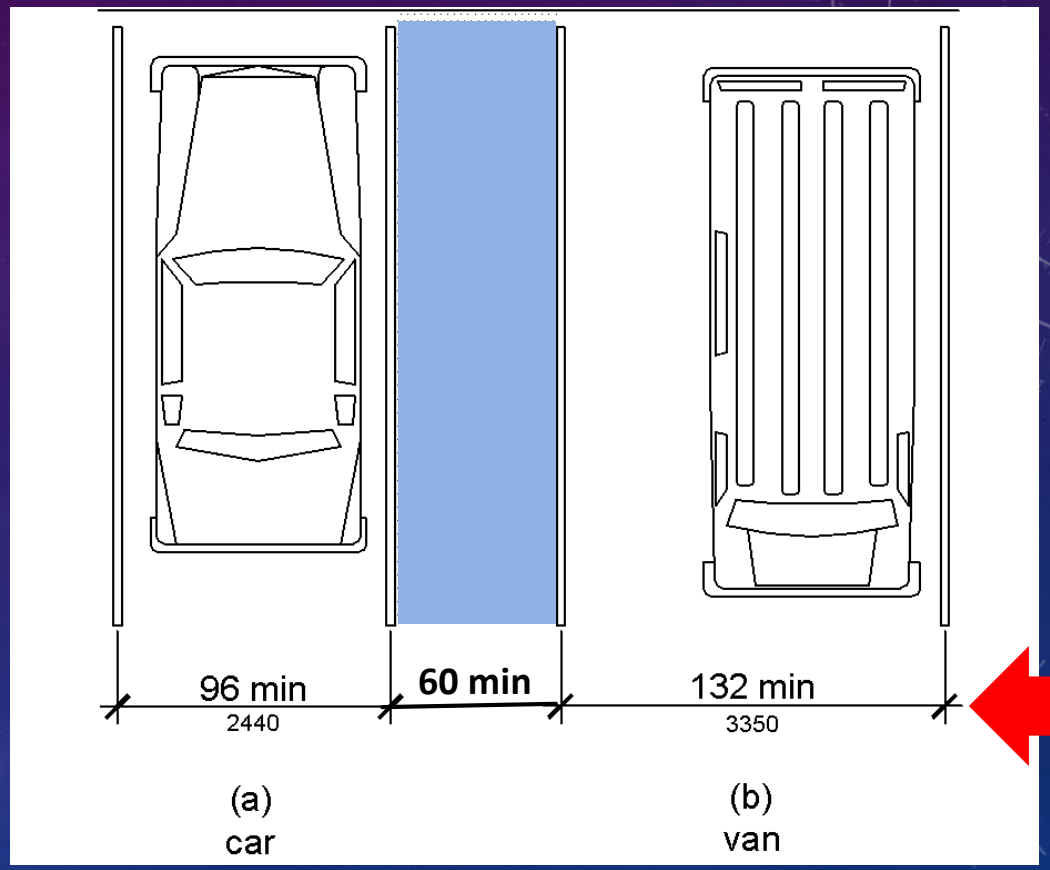
ADA PARKING (SCOPING 208.2)

- # Accessible spaces REQUIRED: where more than 1 parking facility is provided on a site, the number of accessible spaces provided should be calculated according to the number of spaces required for each parking facility
- # Van accessible spaces: 1 per 6 standard accessible spaces required (never less than 1); van accessible spaces may be grouped on one level of a parking structure
- A facility can be a single space, a parking lot, a parking floor within a building, or a stand-alone parking structure.
- 10% of patient and visitor parking spaces at hospital outpatient facilities must be accessible
-

208.2 Parking Spaces	
Total Number of Parking Spaces Provided in Parking Facility	**Minimum Number of Required Accessible Parking Spaces**
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000

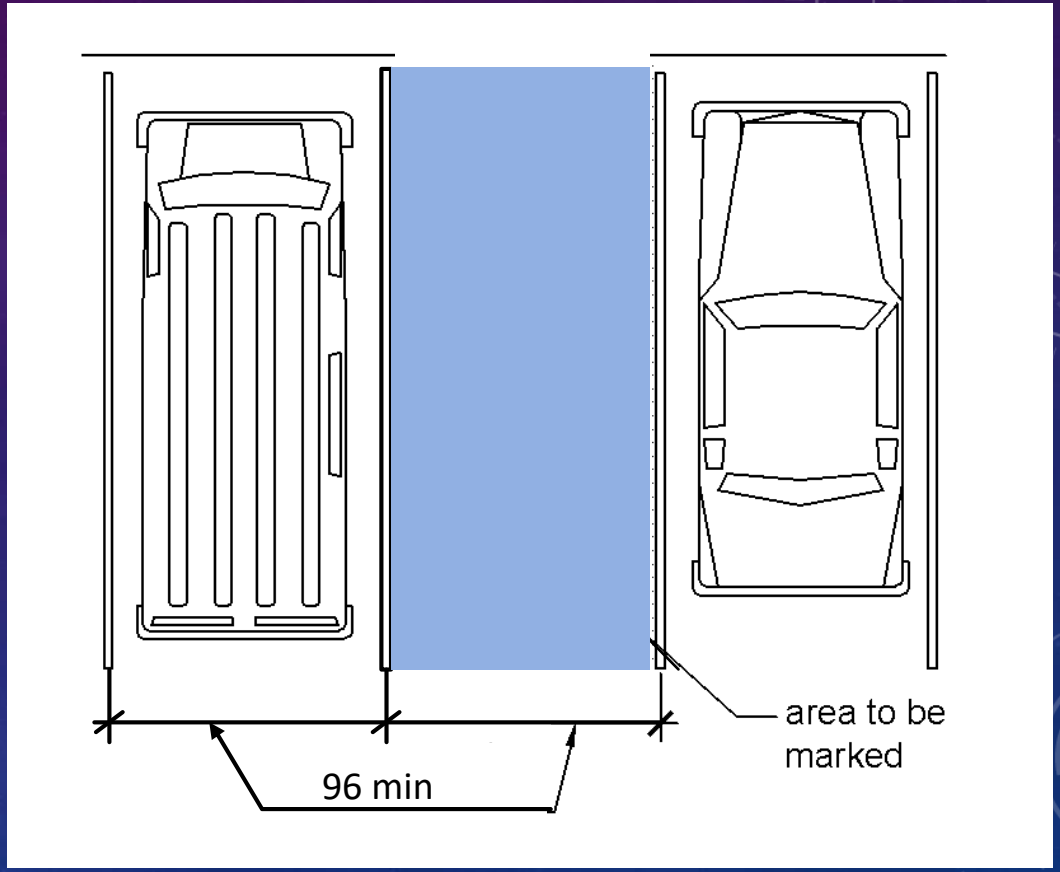
ADA PARKING (502)

- Vehicle Spaces = 96” wide min.
- Van Spaces = 132” wide min.
- Access aisle = 60” wide min.



ADA PARKING (502.2 EXCEPTION)

- ...allows van spaces to be min. 96” wide with a 96 ‘ inch access aisle



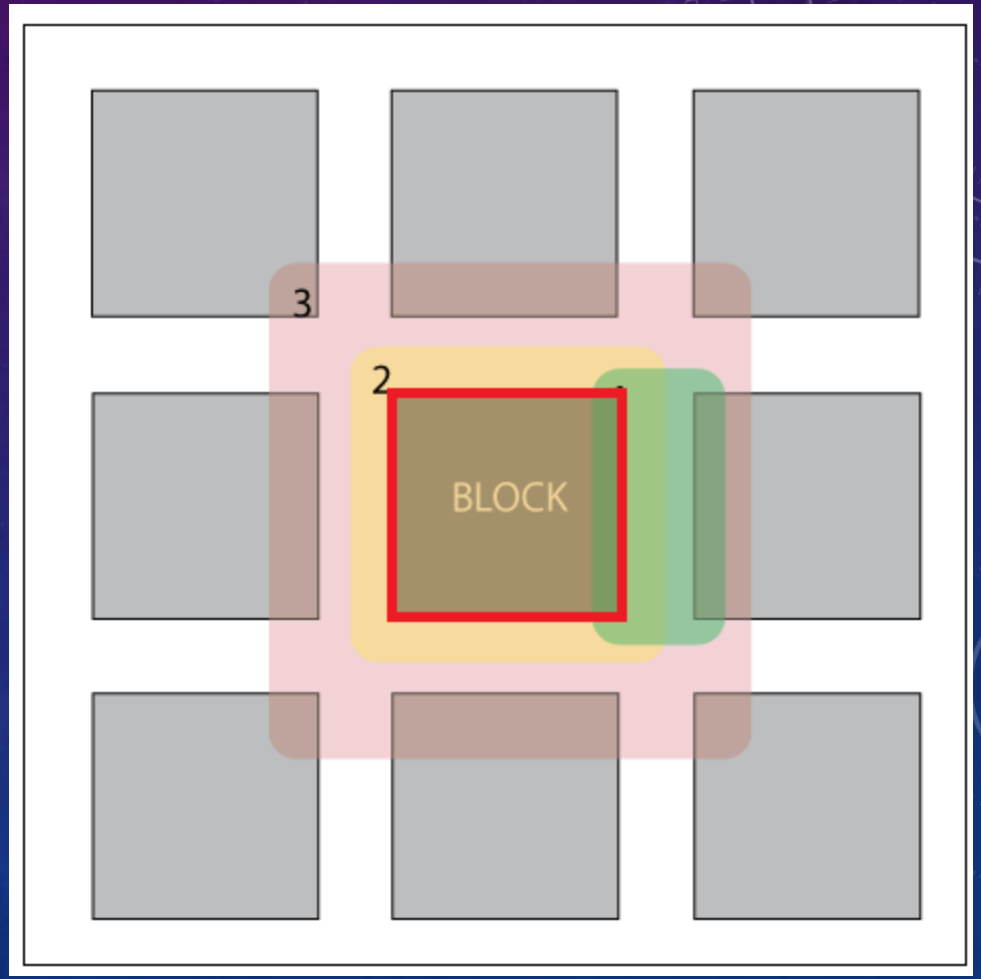
PROWAG ON-STREET PARKING (SCOPING R214)

Table R214 On-Street Parking Spaces

Total Number of Marked or Metered Parking Spaces on the Block Perimeter	Minimum Required Number of Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 and over	4 percent of total

PROWAG ON-STREET PARKING (SCOPING R214)

- Number of accessible spaces is based total marked or metered spaces on a block perimeter
- Scoping Section R214



PROWAG ON-STREET PARKING (PARALLEL)

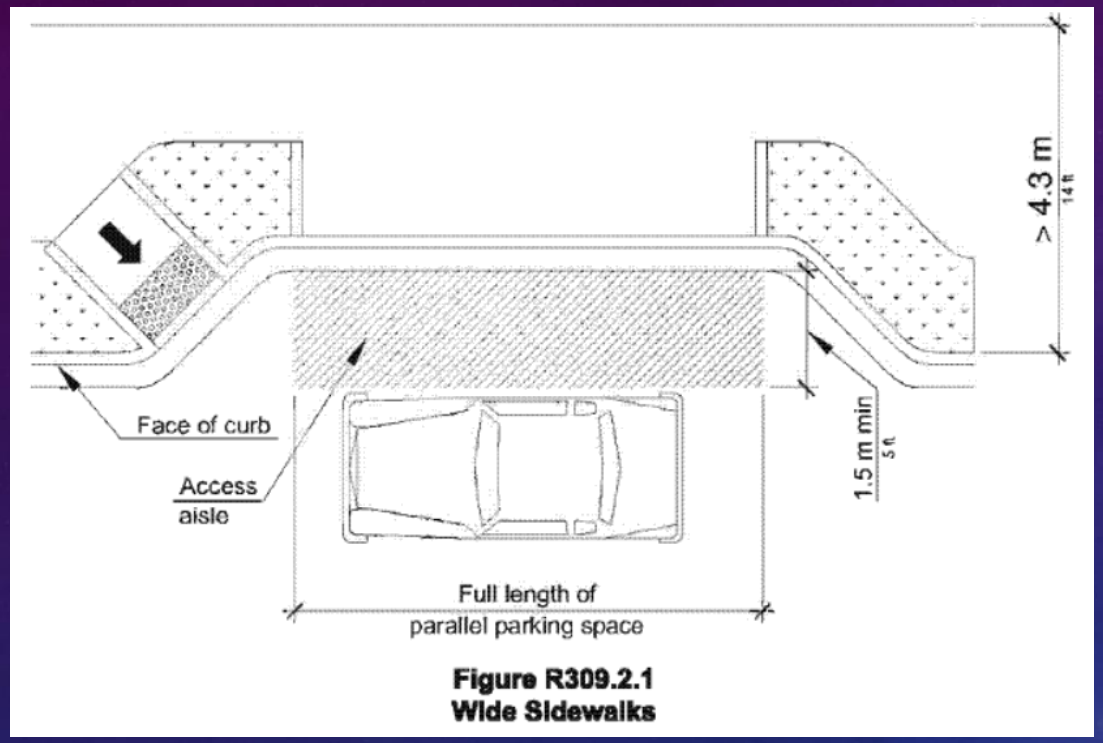
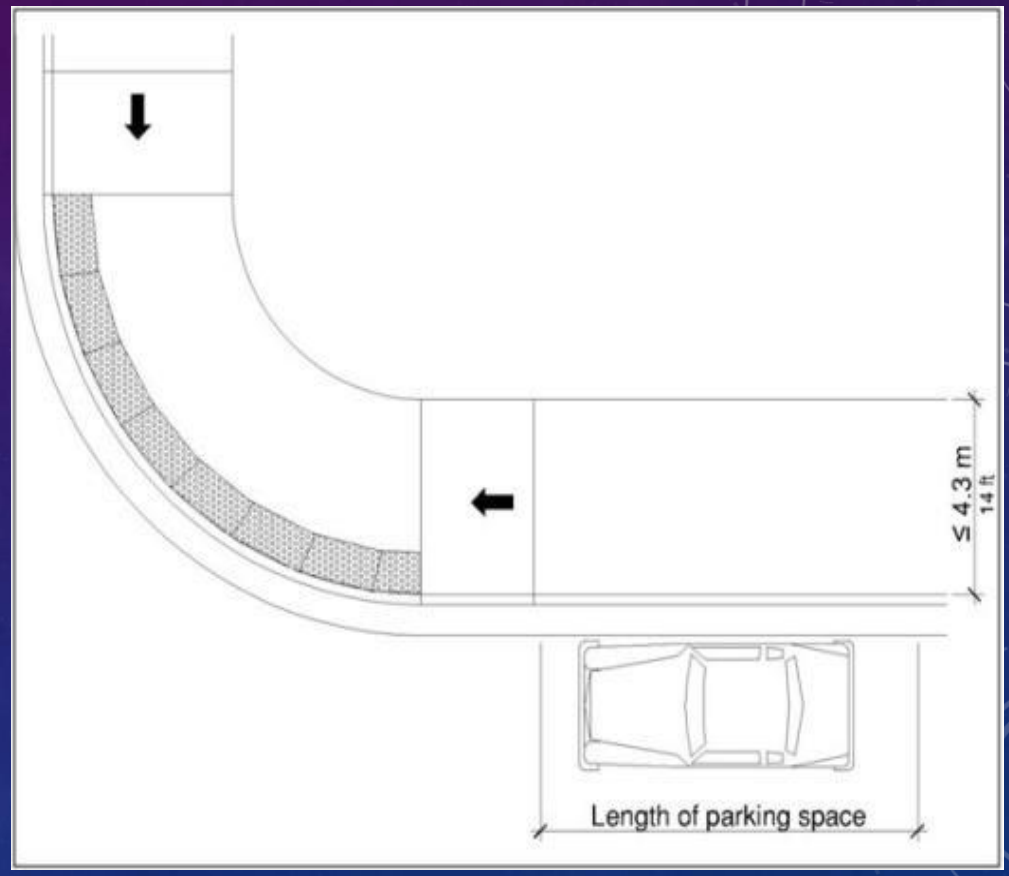


Figure R309.2.1
Wide Sidewalks

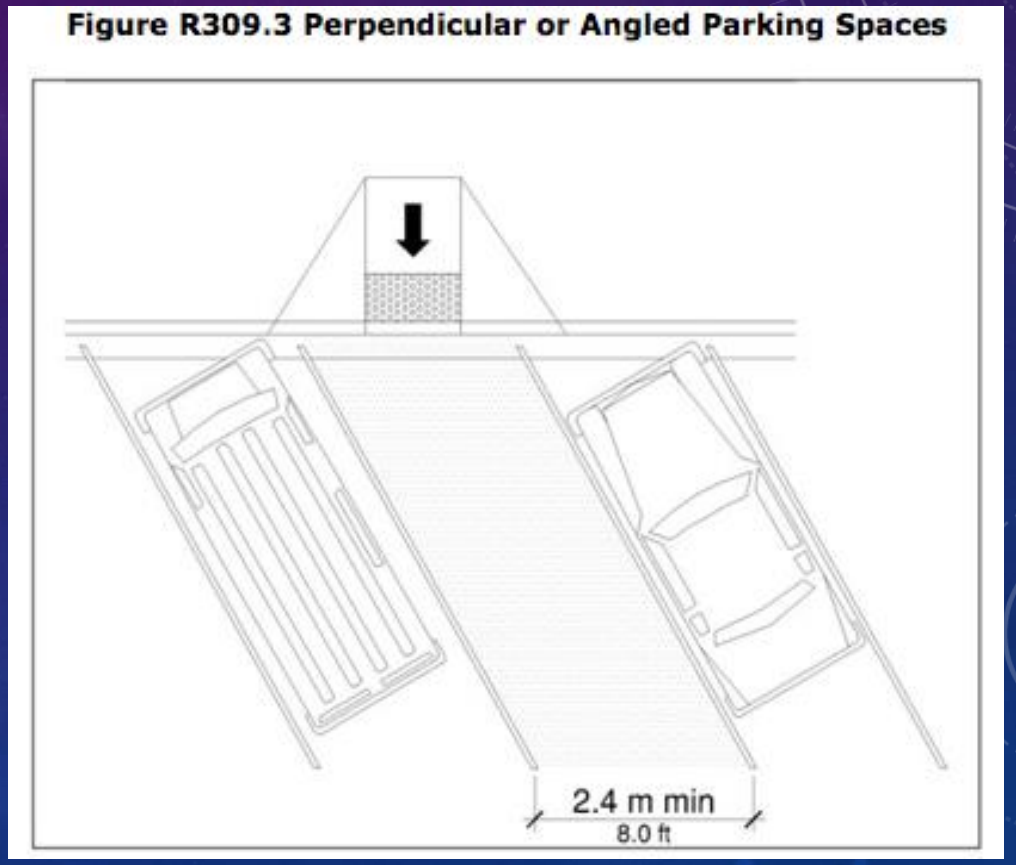
Where the width of the adjacent sidewalk or available right-of-way exceeds 14 ft. an access aisle is required

PROWAG ON-STREET PARKING (PARALLEL)



Narrow sidewalks – an access aisle is not required

PROWAG ON-STREET PARKING (PERPENDICULAR OR ANGLED)



PROWAG ON-STREET PARKING

- Access aisle must be at street level the full length of the parking space, and must connect to a pedestrian accessible route (R309.1)
- In alterations where the street or sidewalk adjacent to the parking spaces is not altered, an access aisle is not required if the parking spaces are located at the end of the block face.
- Advisory R309.2.1 Wide Sidewalks. Vehicles may park at the curb or at the parking lane boundary and use the space required by R309.2.1 on either the driver or passenger side of the vehicle to serve as the access aisle. (Parallel)
- ISA signage at accessible parallel parking spaces must be located at the head or foot of the parking space.

PROWAG ON-STREET PARKING (SURFACES)

Pedestrian access route surfaces must be generally planar and smooth. Surfaces should be chosen for easy rollability. Surfaces that are heavily textured, rough, or chamfered and paving systems consisting of individual units that cannot be laid in plane will greatly increase rolling resistance and subject pedestrians who use wheelchairs, scooters, and rolling walkers to the stressful and often painful effects of vibration. Such materials should be reserved for borders and decorative accents located outside of or only occasionally crossing the pedestrian access route. Surfaces should be designed, constructed, and maintained according to appropriate industry standards, specifications, and recommendations for best practice.

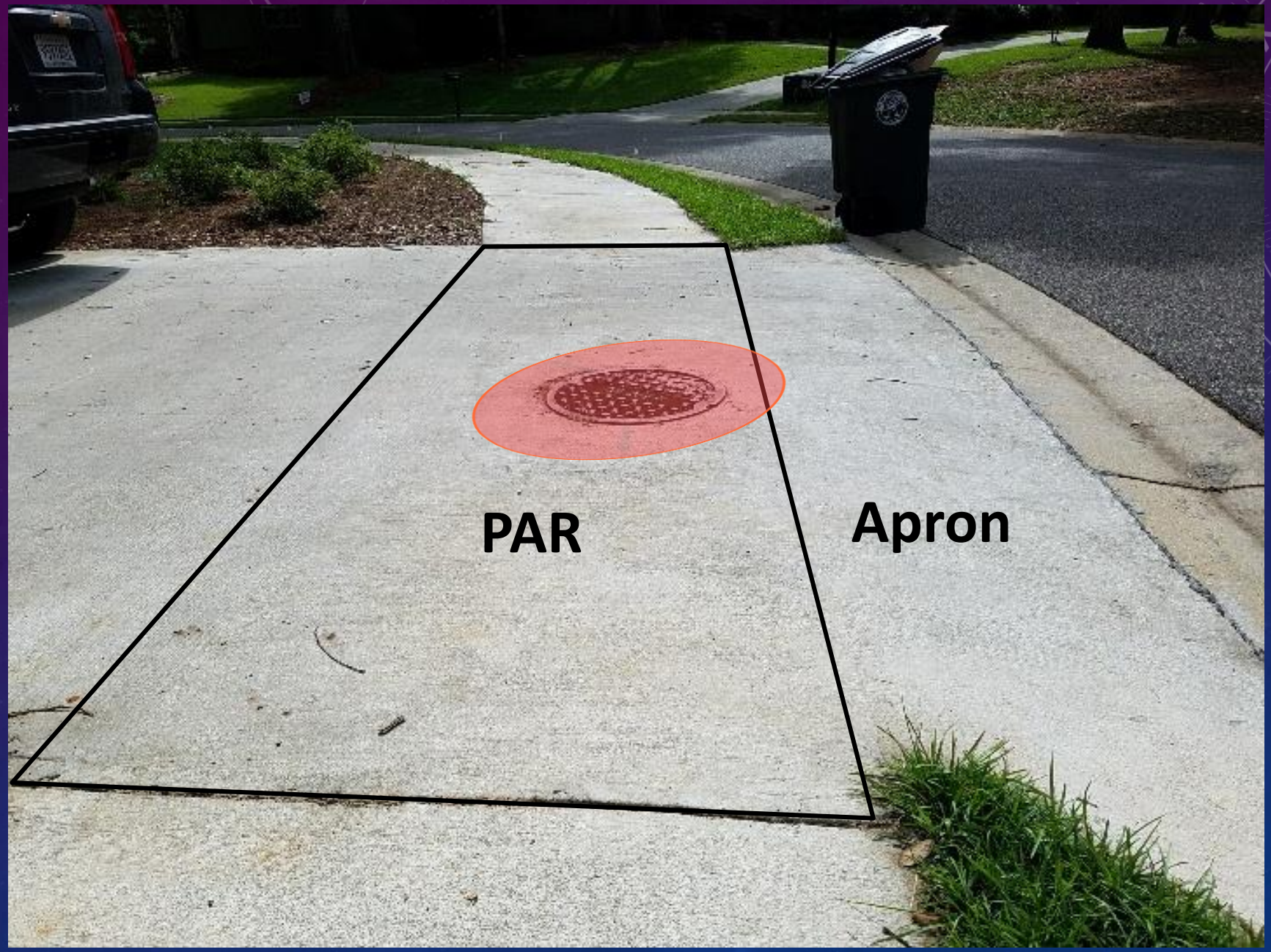
PROWAG ON-STREET PARKING (METERING)

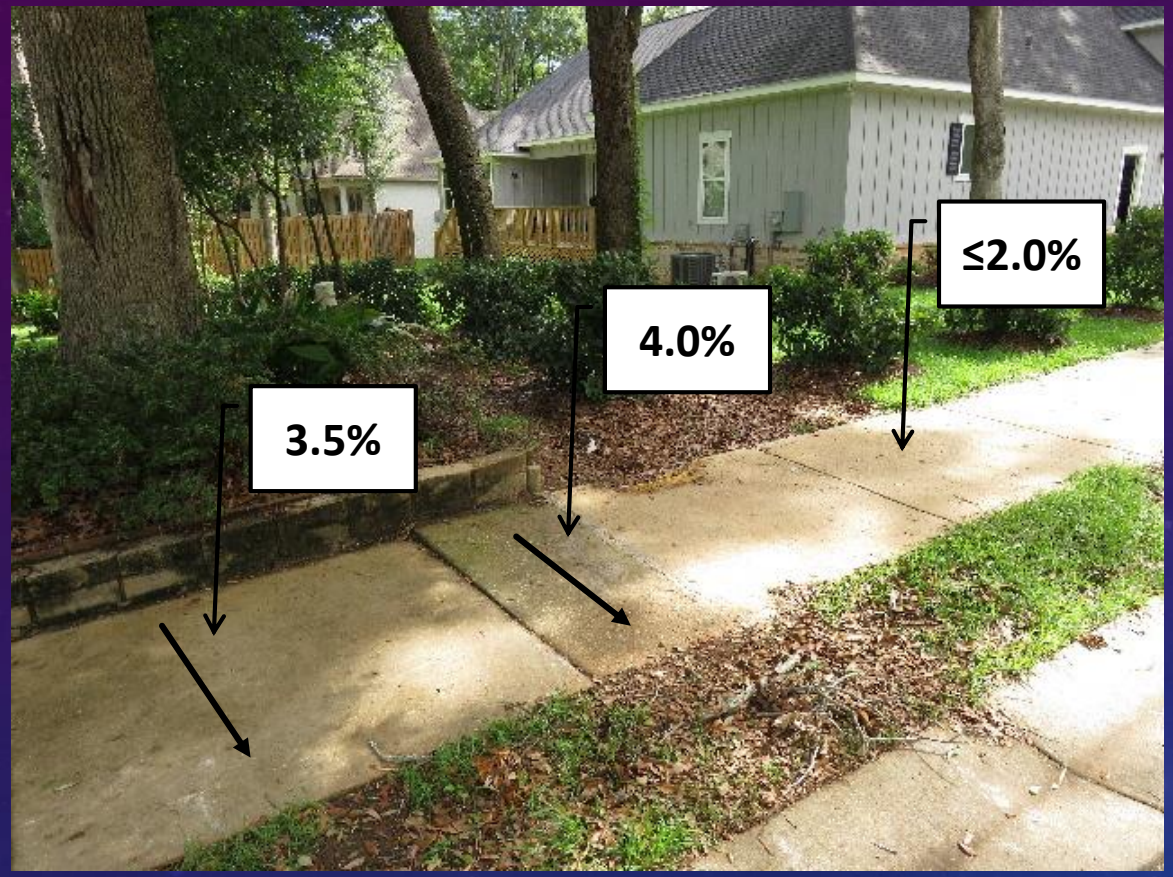
Parking meter displays and information

- Information must be visible from a point 3.3 ft. max above the center of the clear space
- Operable parts requirements must be met

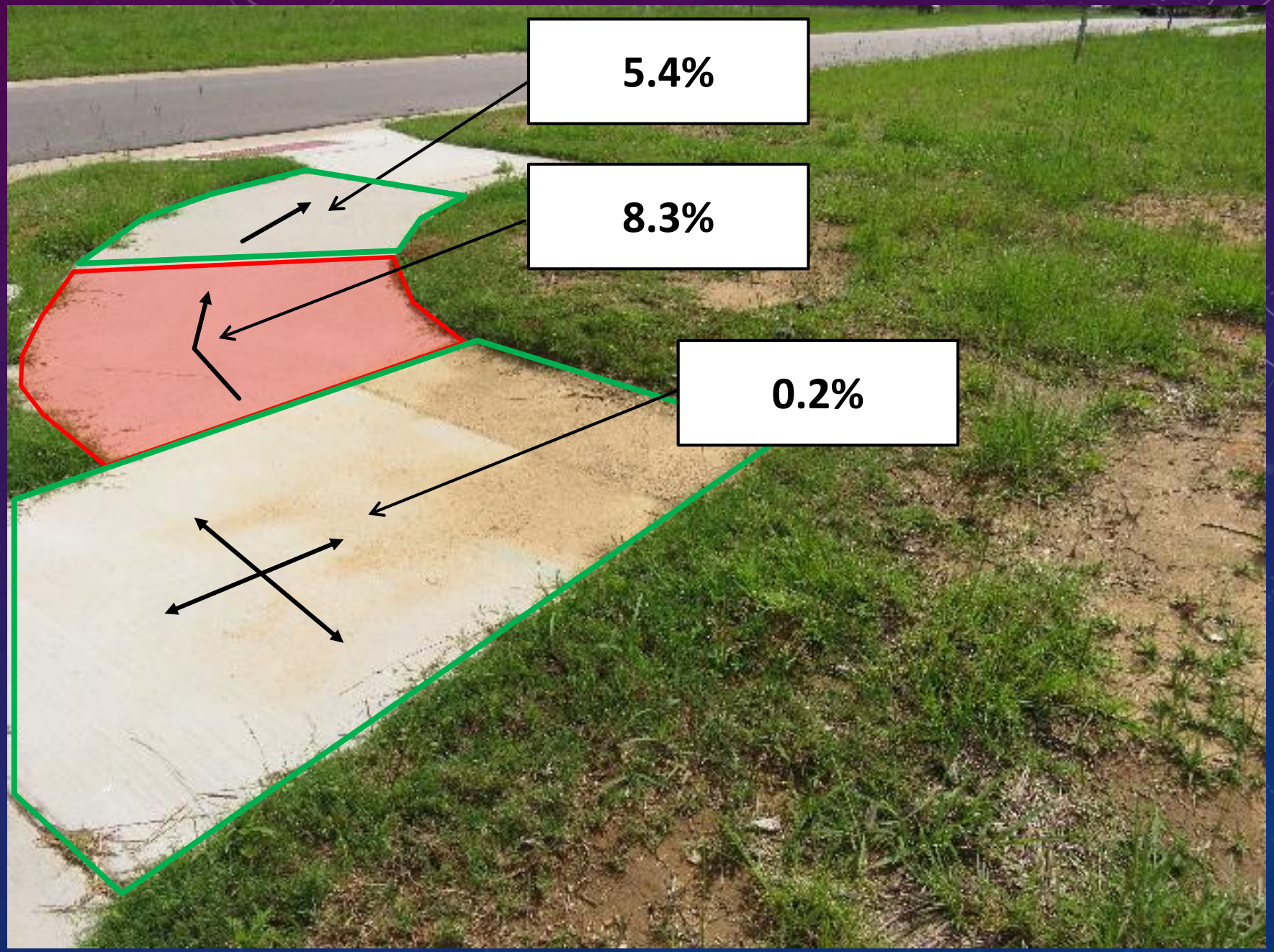
LOCAL EXAMPLES OF CONSTRUCTION

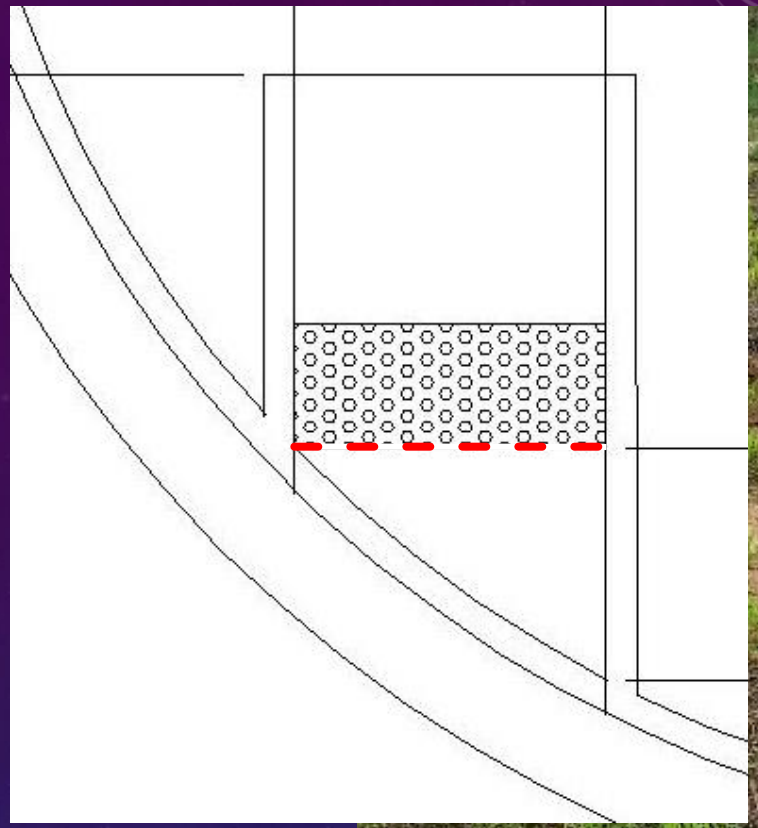
Perpendicular driveway to be used when the driveway PAR is level with or above the top of curb

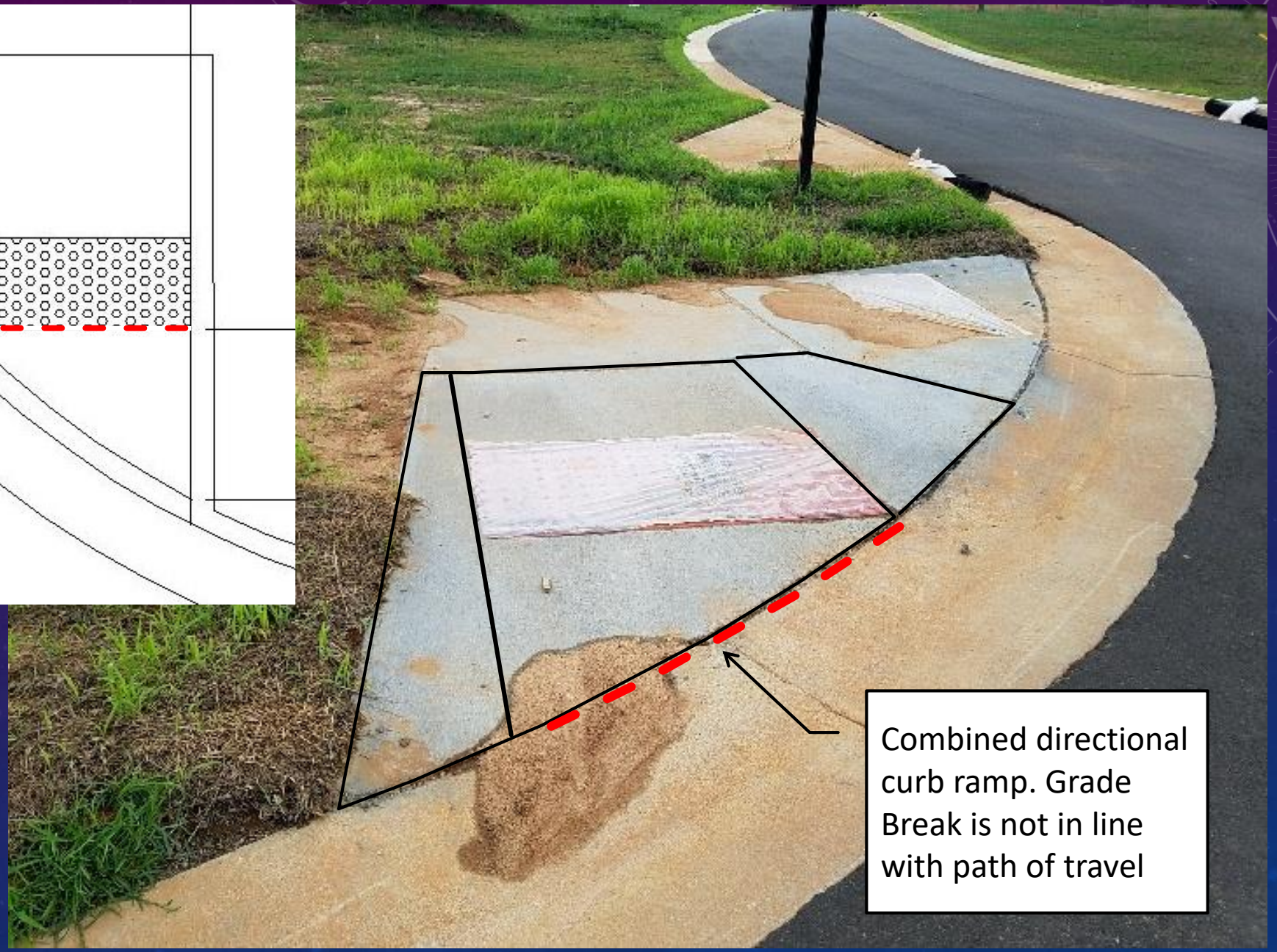

PAR
Apron

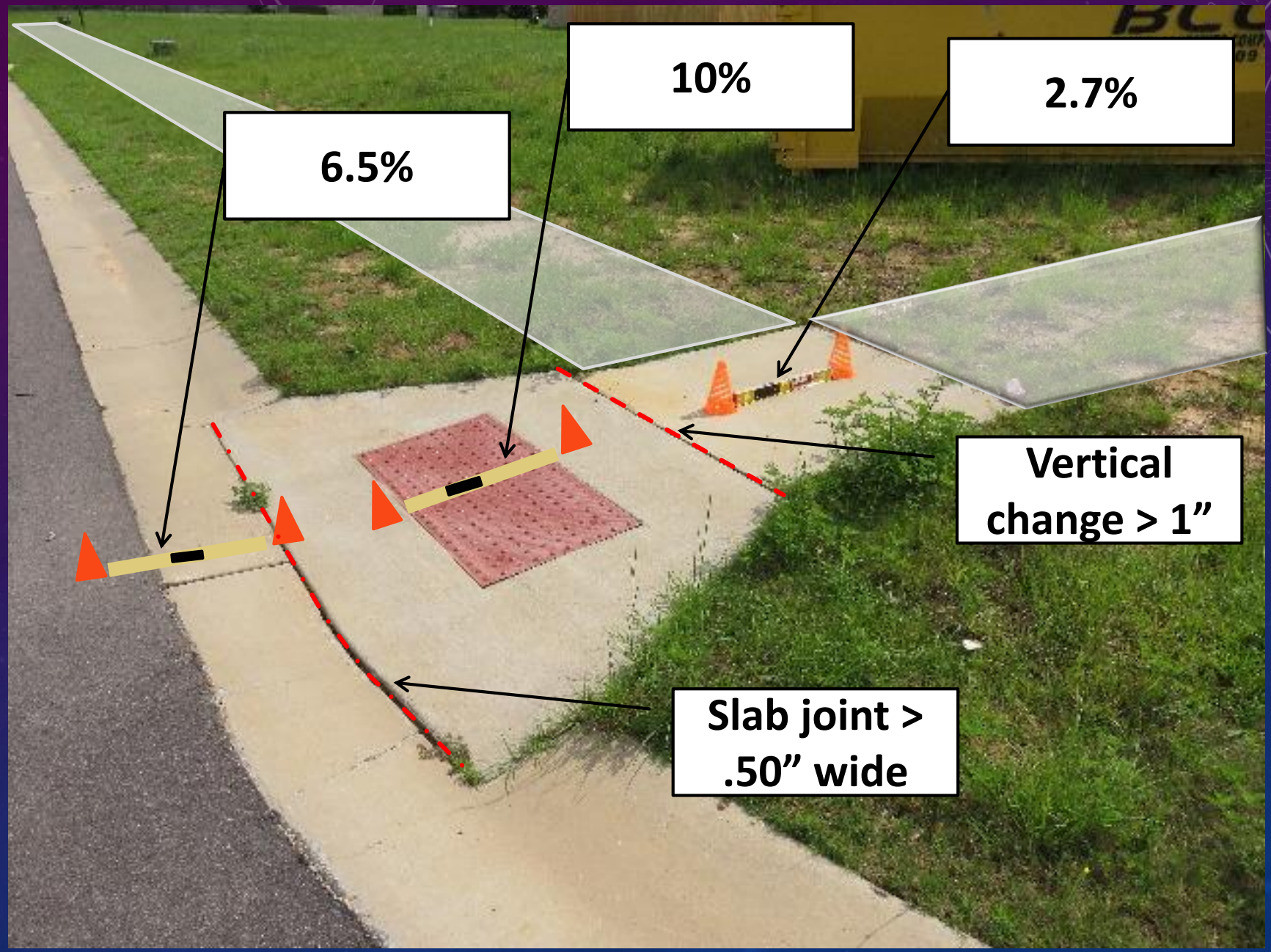

≤2.0%
4.0%
3.5%


UXLEY LN
3.5%

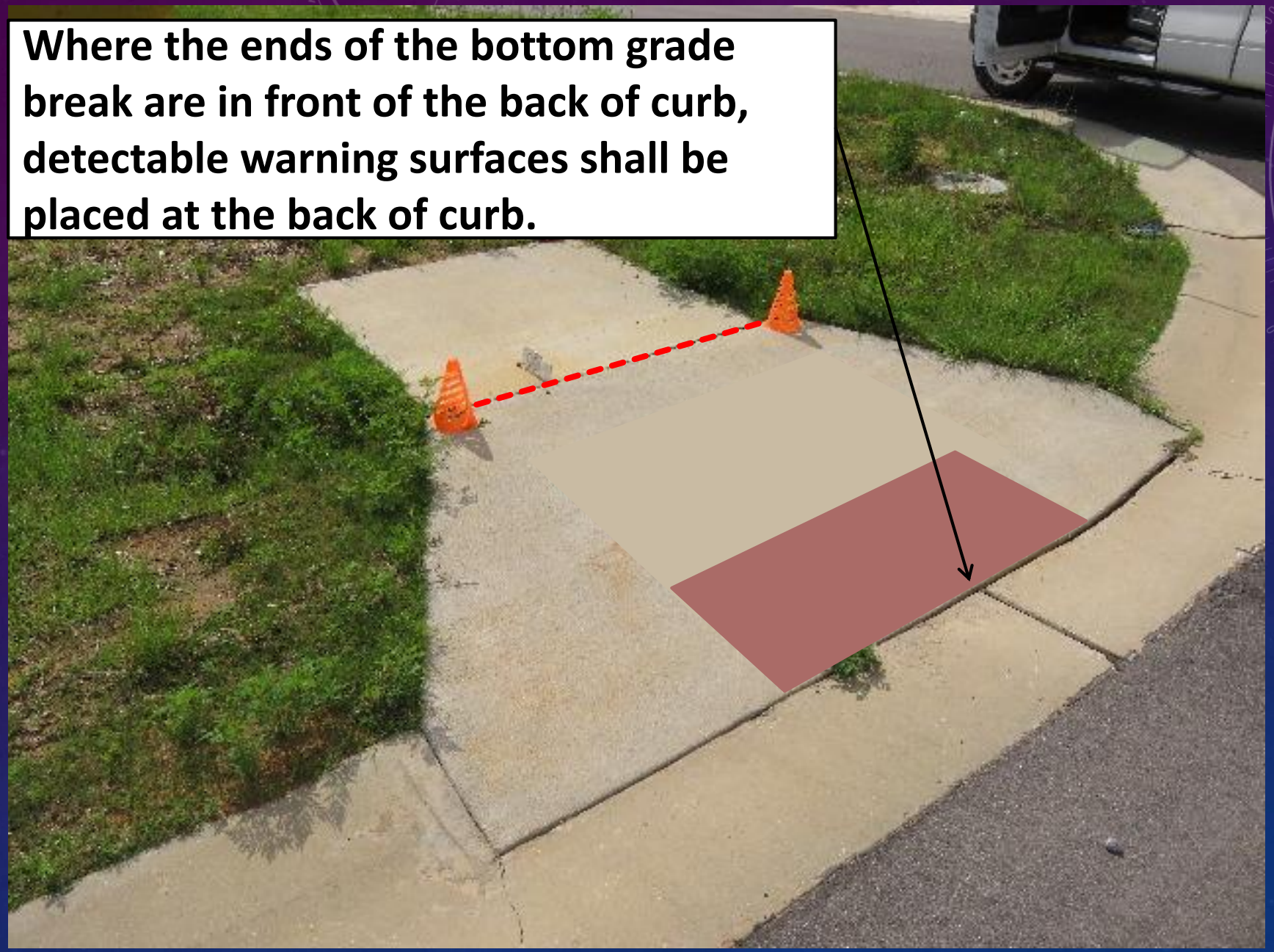

5.4%
8.3%
0.2%

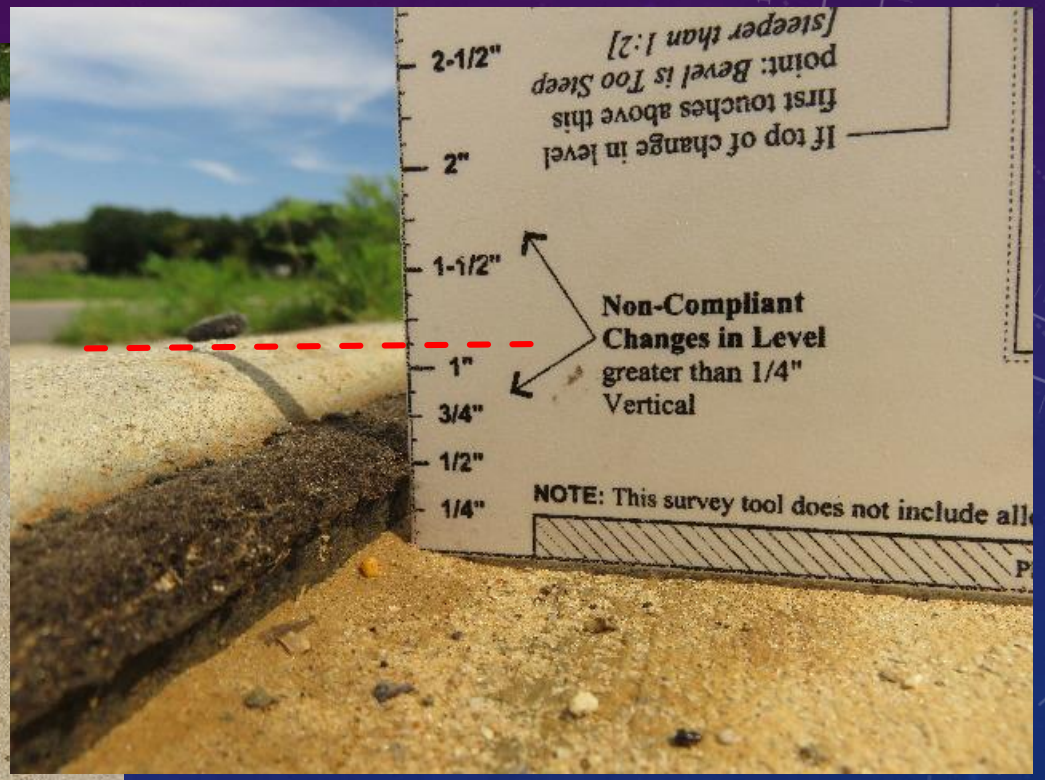


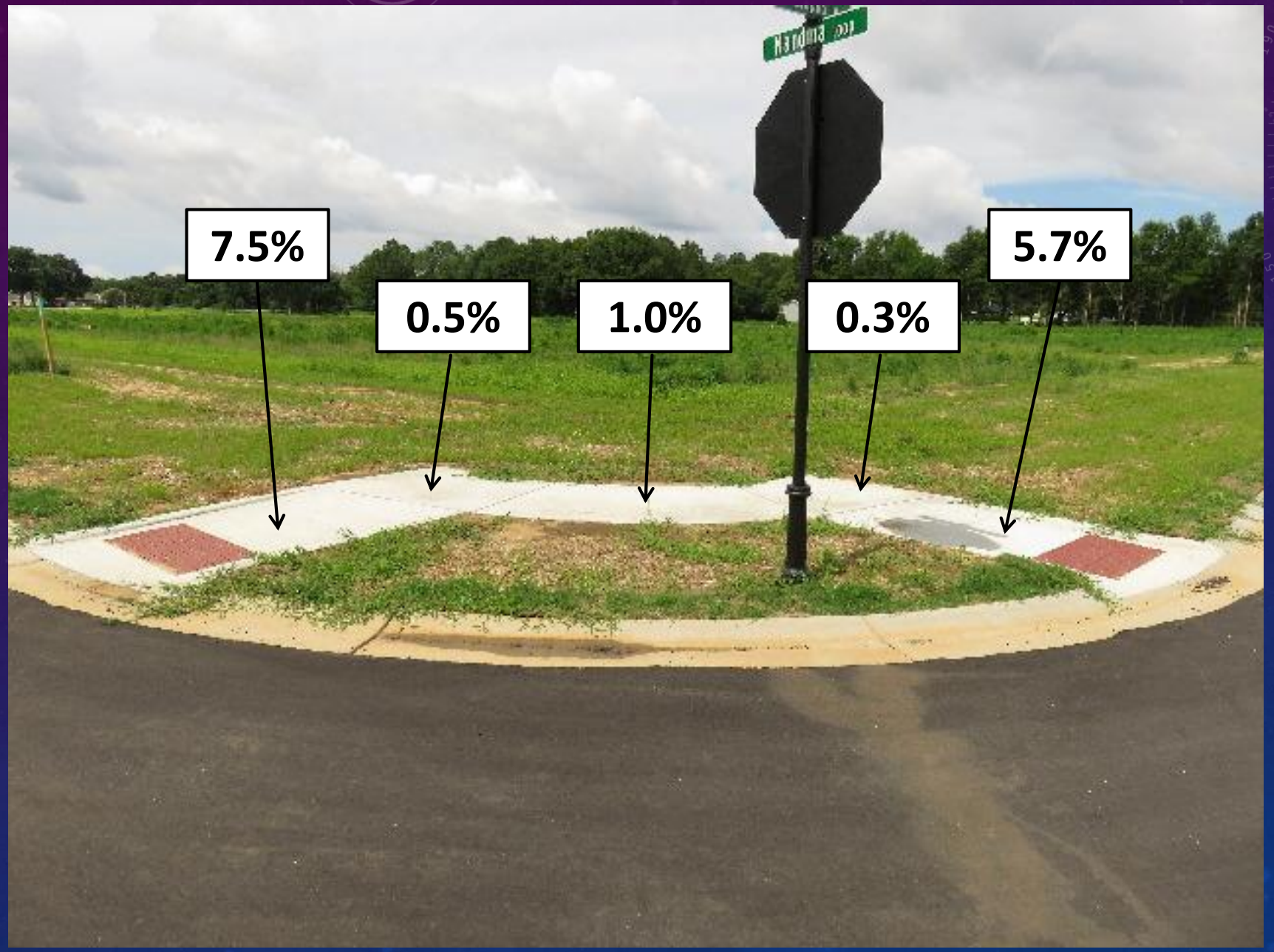

Combined directional curb ramp. Grade Break is not in line with path of travel

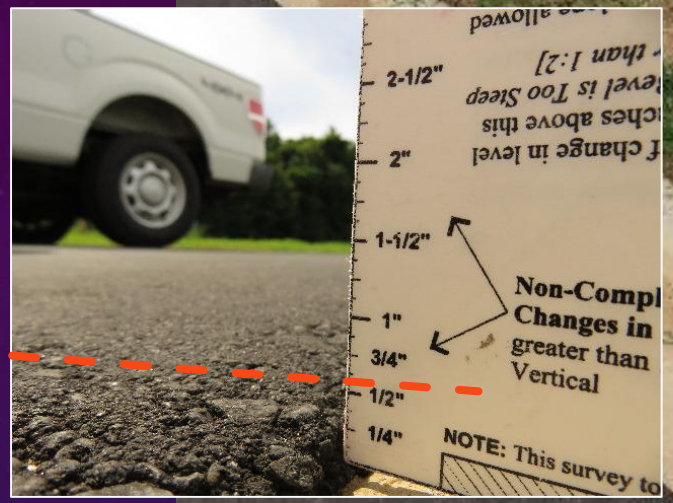

10%
2.7%
6.5%
Vertical change > 1”
Slab joint > .50” wide

Where the ends of the bottom grade break are in front of the back of curb, detectable warning surfaces shall be placed at the back of curb.



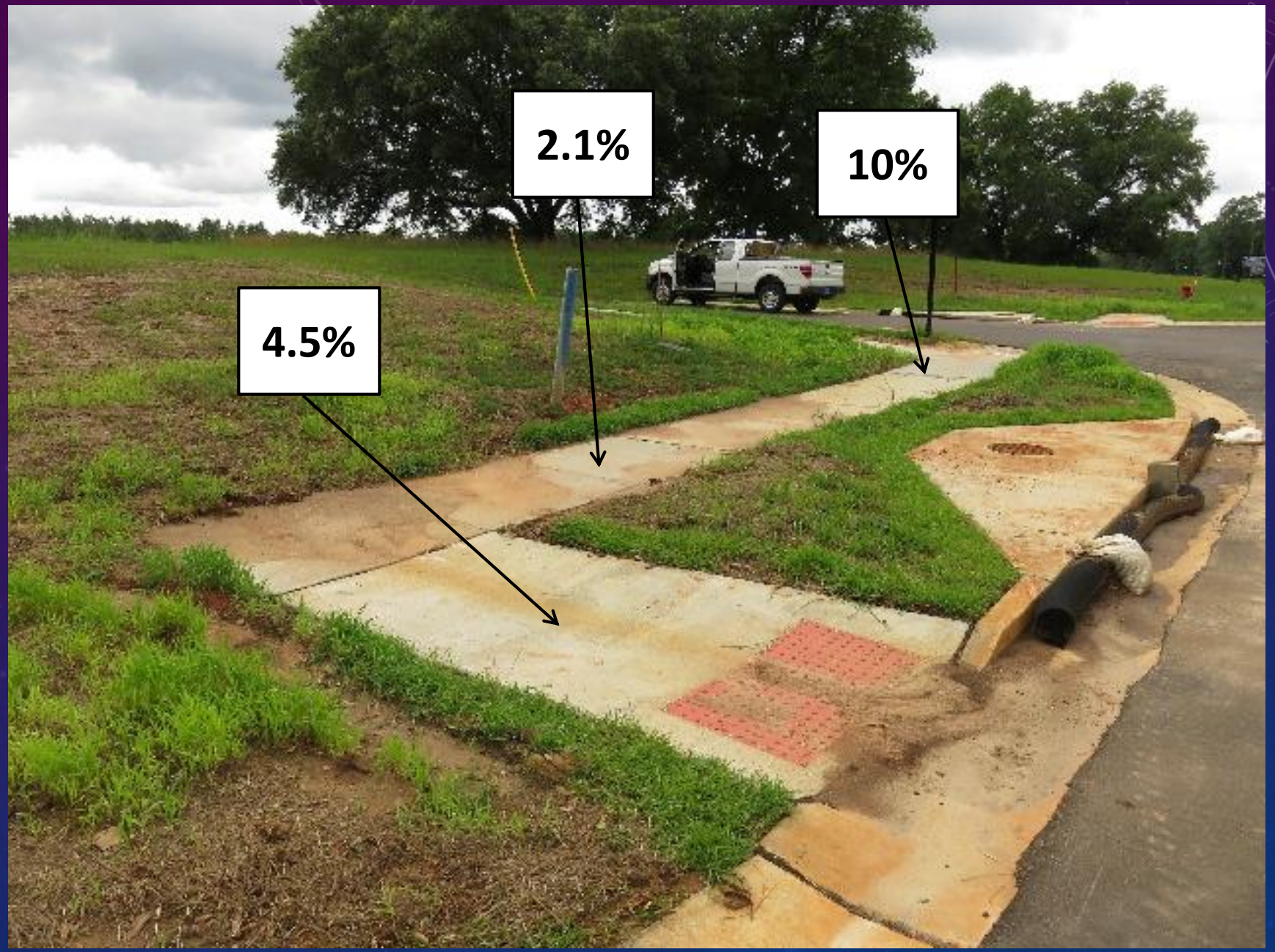

2-1/2"
2"
1-1/2"
1"
3/4"
1/2"
1/4"
Non-Compliant
Changes in Level
greater than 1/4"
Vertical
NOTE: This survey tool does not include all

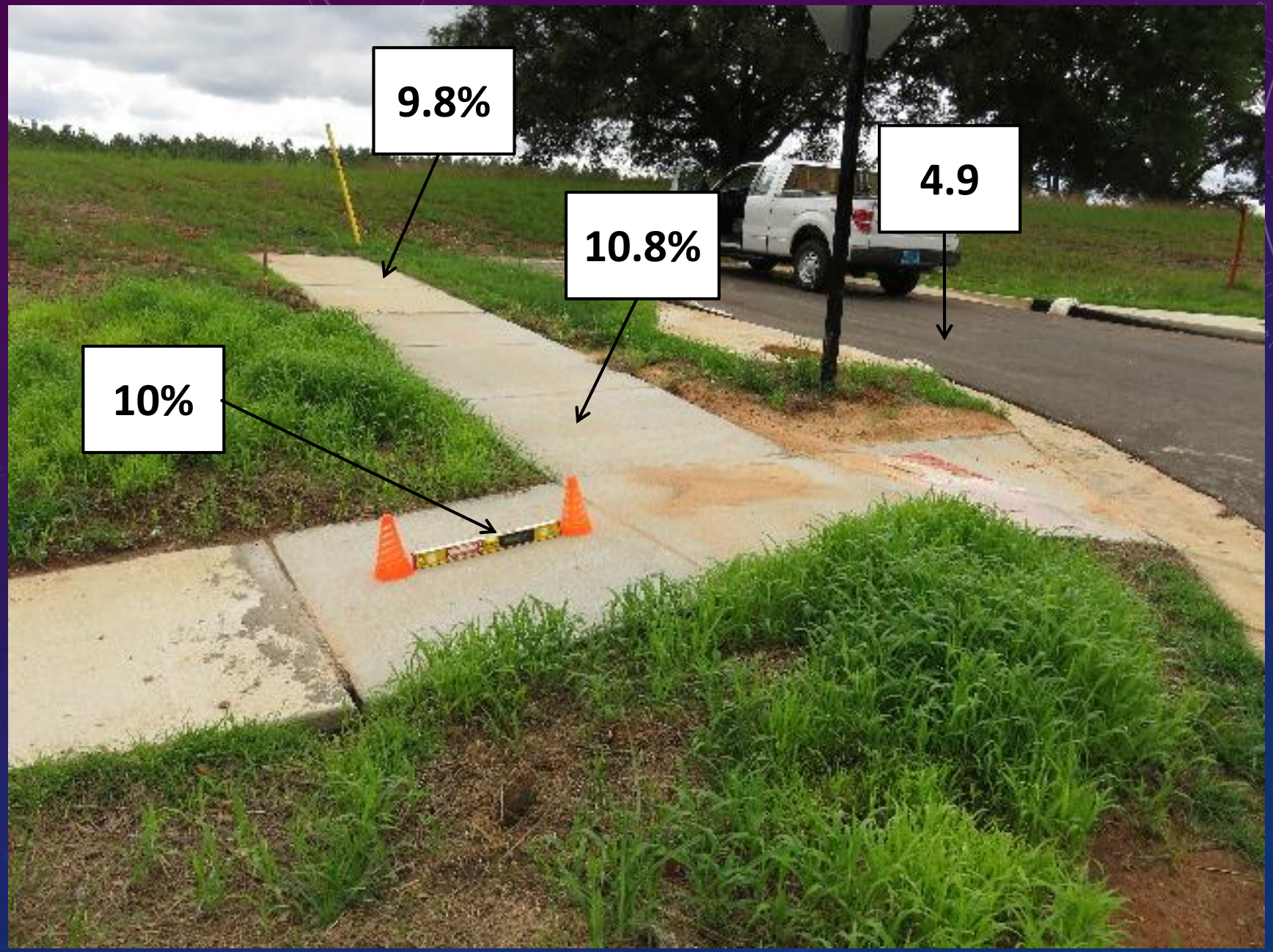

7.5%
0.5%
1.0%
0.3%
5.7%

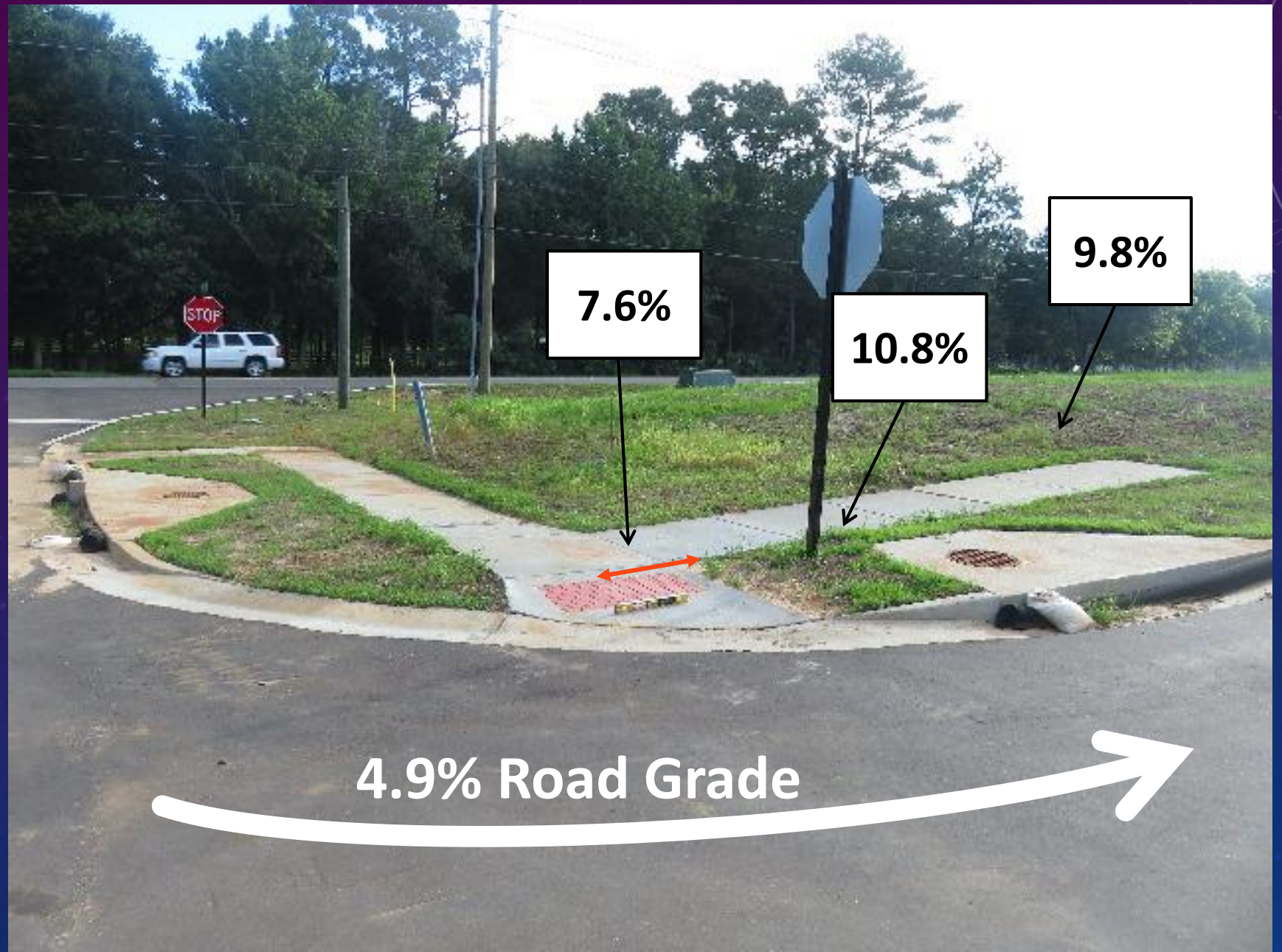

2-1/2"
2"
1-1/2"
1"
3/4"
1/2"
1/4"
Non-Compl
Changes in
greater than
Vertical
NOTE: This survey to

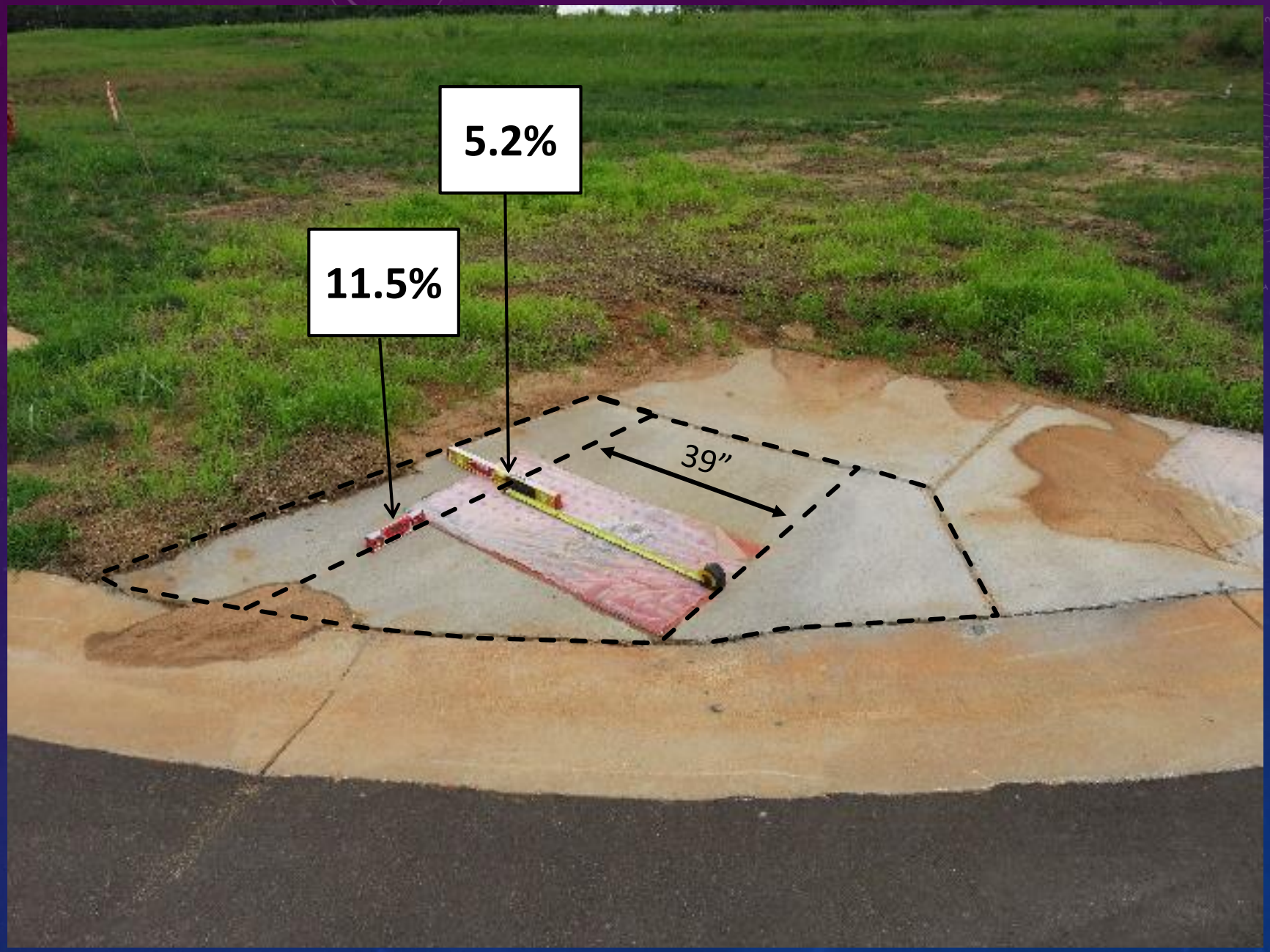

7.2%
36”


2-1/2"
2"
1-1/2"
1"
3/4"
1/2"
1/4"
Non-Compliant
Changes in Level
greater than 1/4"
Vertical
NOTE: This survey tool does not include allow

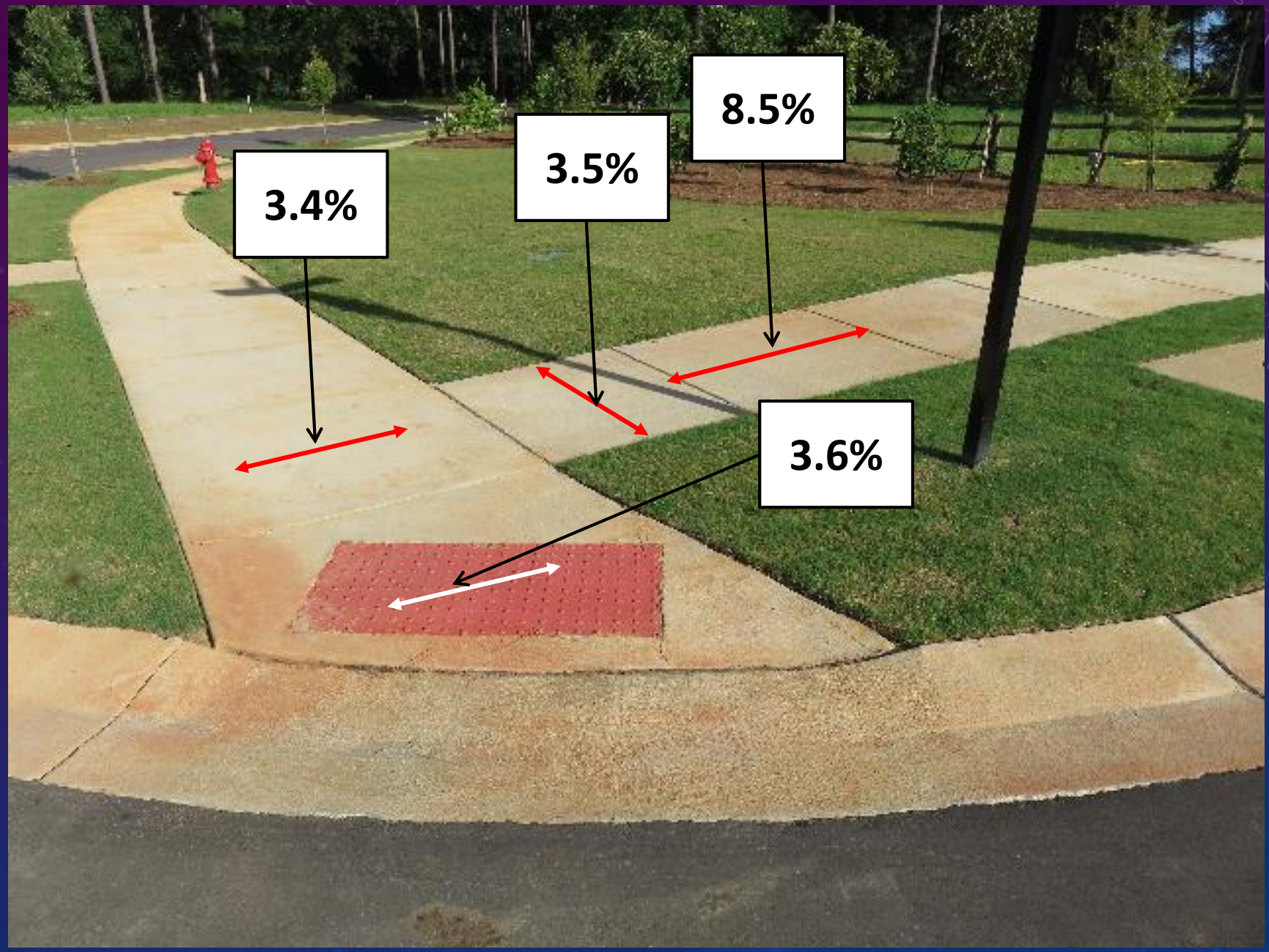

2.1%
10%
4.5%

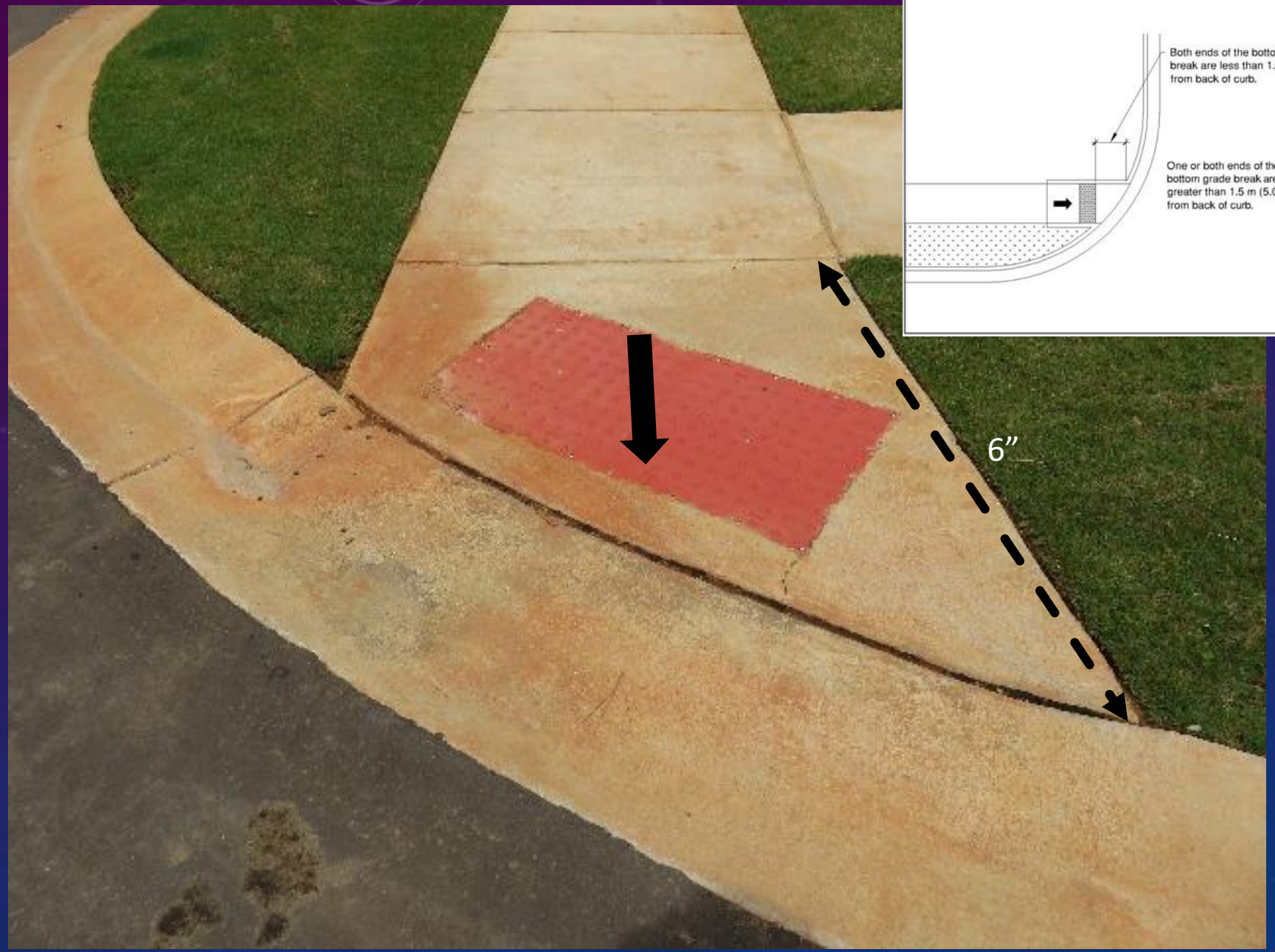

9.8%
10.8%
4.9
10%

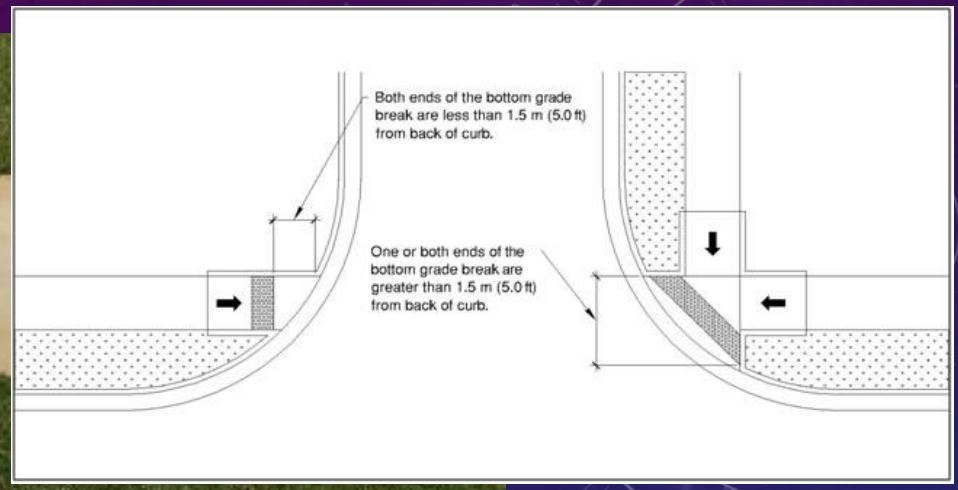

STOP
7.6%
10.8%
9.8%
4.9% Road Grade

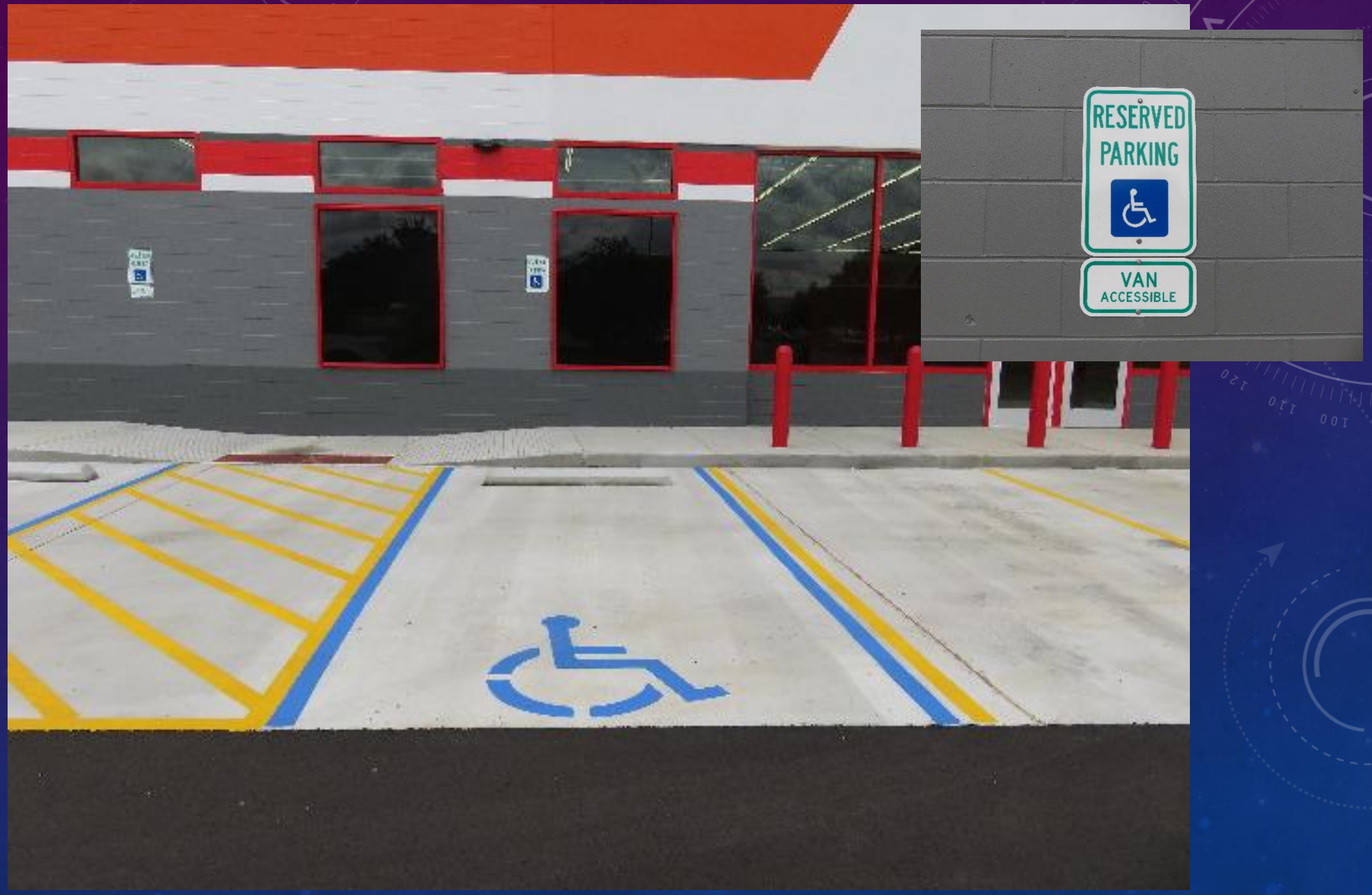

5.2%
11.5%
39”


1.9%
1.5%


3.4%
3.5%
8.5%
3.6%


6”


Both ends of the bottom grade break are less than 1.5 m (5.0 ft) from back of curb.
One or both ends of the bottom grade break are greater than 1.5 m (5.0 ft) from back of curb.


RESERVED
PARKING
VAN
ACCESSIBLE


19%

QUESTIONS ?

Rick Hinrichs

ADA Consultant

Compliance Support Associates Inc.

rhinrichs@bellsouth.net