



Slide 1



Slide 2



Slide 3



Slide 4



Slide 5



Research on contrast

Slide 6

## Accessibility Laws/Regulations (regulations are written to implement laws)

---

- ▶ 1973 Rehabilitation Act (Federal-aid)  
*New construction and alterations shall be accessible to and usable by [the handicapped]; existing facilities and programs shall achieve program access...*
- ▶ 1990 ADA title II (State/local governments)  
*Ditto...[by people with disabilities]*

Slide 7

## ADA Title II Regulations (particular to streets/sidewalks)

---

35.151(e) *Curb ramps.* (1) Newly constructed or altered streets, roads, and highways must contain curb ramps or other sloped areas at any intersection having curbs or other barriers to entry from a street level pedestrian walkway  
(2) Newly constructed or altered street level pedestrian walkways must contain curb ramps or other sloped areas at intersections to streets, roads, or highways.

Slide 8

## Referenced Access Standards (for new construction and alterations)

---

- ▶ 1973 Rehabilitation Act (any Federal-aid)
    - references UFAS (1984);
    - most agencies direct use of ADAAG (1991) where more stringent;
    - DOT has adopted ADAAG as its 504 standard
  - ▶ 1990 ADA title II (State/local governments)
    - choice of UFAS or ADAAG
- [Thus ADAAG governs for virtually all projects]

Slide 9

## ADA Title II Standards (for new construction and alterations)

---

- ▶ 1992 Proposed ADA title II standards
  - sections 11-14;
  - section 14 covered public rights-of-way
- ▶ 1994 Interim Final Rule
  - sections 11-14
- ▶ 1998 Final Rule
  - sections 11 and 12 finalized;
  - sections 13 and 14 reserved

Slide 10

## Public Rights-of-way Guidelines (first step towards new standards)

---

- ▶ 1999 PROW Advisory Committee (PROWAAC)
- ▶ 2001 PROWAAC Recommendations
  - DW consensus;*
  - new technical specification*
- ▶ 2002 Draft PROW Guidelines
  - public comment (~1400);*
  - broad consumer support*
- ▶ 2005 Draft 2
  - pending*

Slide 11

## Detectable Warnings: Standards (current requirements)

---

- ▶ Uniform Federal Accessibility Standards  
*--no DW provisions*
- ▶ ADA Accessibility Guidelines  
*--DW scoping and technical provisions*  
*--ADAAG provisions suspended 1994-2001;*  
*reinstated July 2001*

[FHWA memo on detectable warnings May 02]

Slide 12

## Detectable Warnings: ADAAG (current technical provisions)

---

- ▶ Depth (CR/HVA/transit platform)
  - length of curb ramp/36 inches/24 inches*
- ▶ Location relative to curb
  - not specified*
- ▶ Dome size and spacing
  - absolute values*
- ▶ Dome orientation
  - not specified, but offset suggested in TA*
- ▶ Visual contrast

Slide 13



Slide 14



Slide 15

## Detectable Warnings: PROW 1 (first draft of new PROW standards)

---

- ▶ Depth
  - 24 inches
- ▶ Location relative to curb
  - 6 to 8 inches from curb face
- ▶ Dome size and spacing
  - range
- ▶ Dome orientation
  - aligned with travel direction
- ▶ Visual contrast

Slide 16

## Detectable Warnings: PROW 2 (publication pending)

---

- ▶ Depth: *24 inches*
- ▶ Location relative to curb
  - one corner <8" from CR grade break;*
  - one corner <60" from grade break*
- ▶ Dome size and spacing: *range*
- ▶ Dome orientation
  - aligned with travel on ramps only*
- ▶ Visual contrast

Slide 17

## Location/Pattern: PROW 2 (examples from the field)

---

- ▶ On blended transitions (slope to 1:20)
  - Radial installations;*
  - Straight installations;*
  - Other...*
- ▶ On curb ramps (slope 1:20 to 1:12)
  - Perpendicular ramps (inline and skewed);*
  - Parallel ramps*
- ▶ On medians and islands

Slide 18



Slide 19



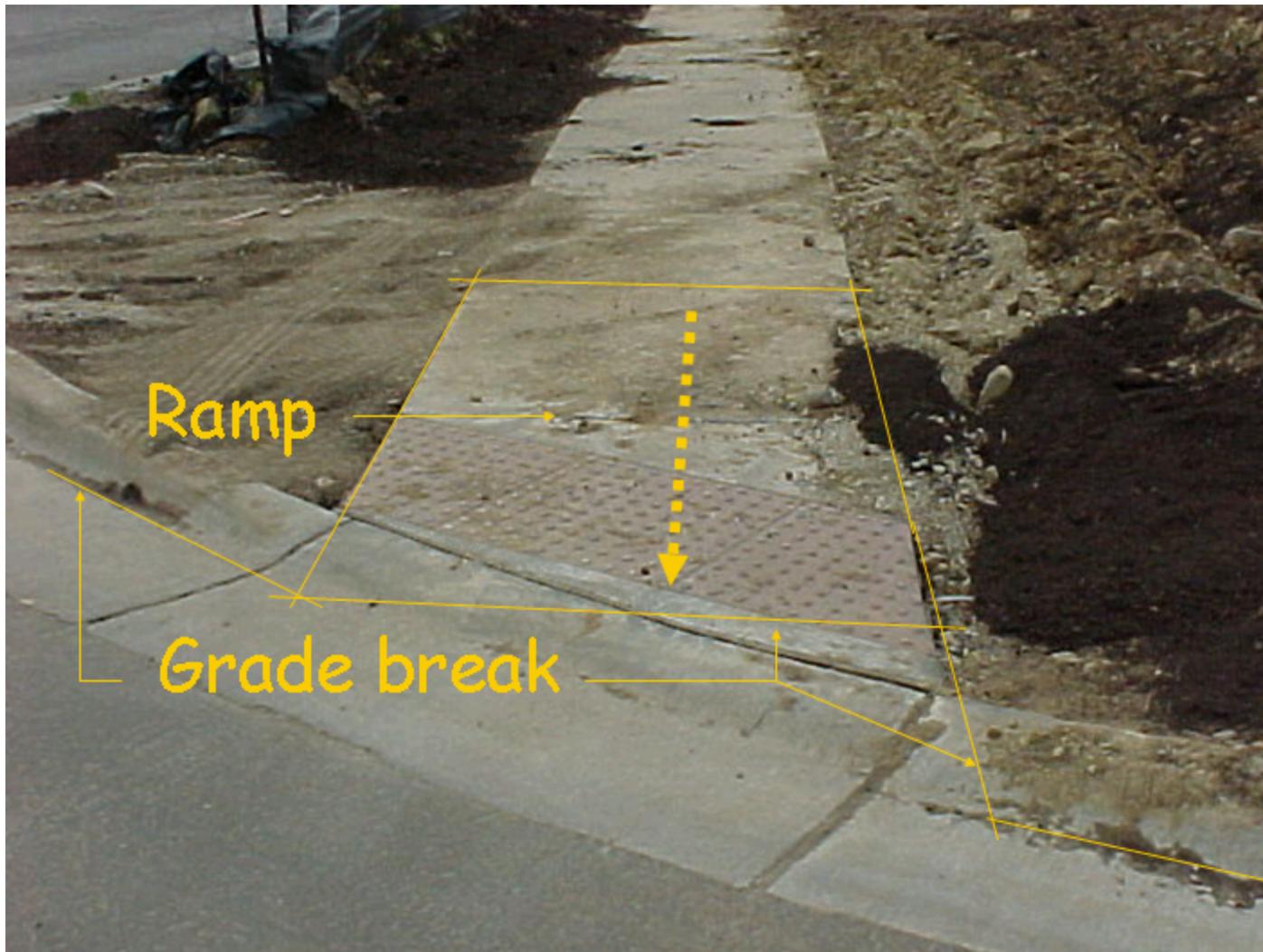
Slide 20



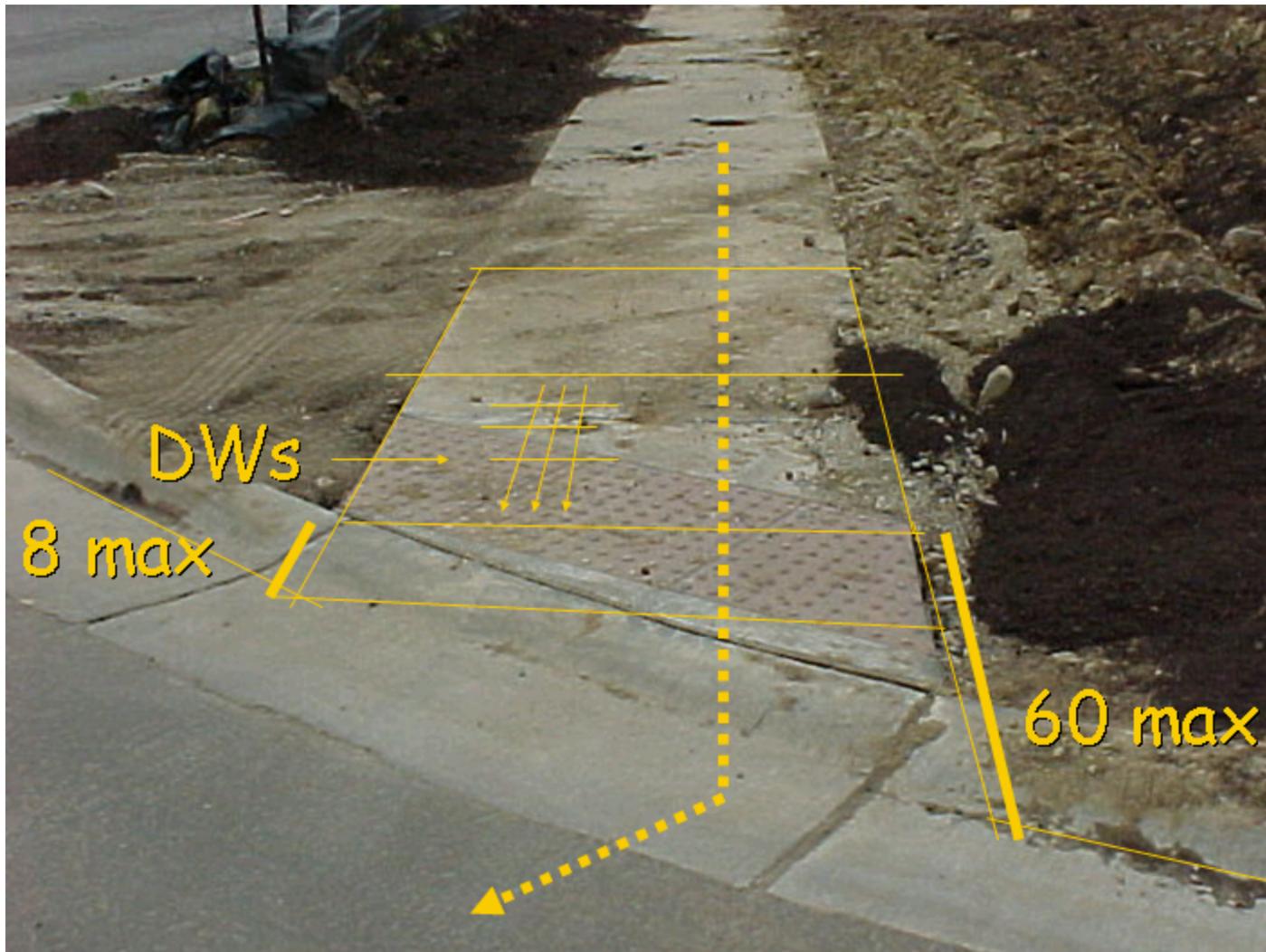
Slide 21



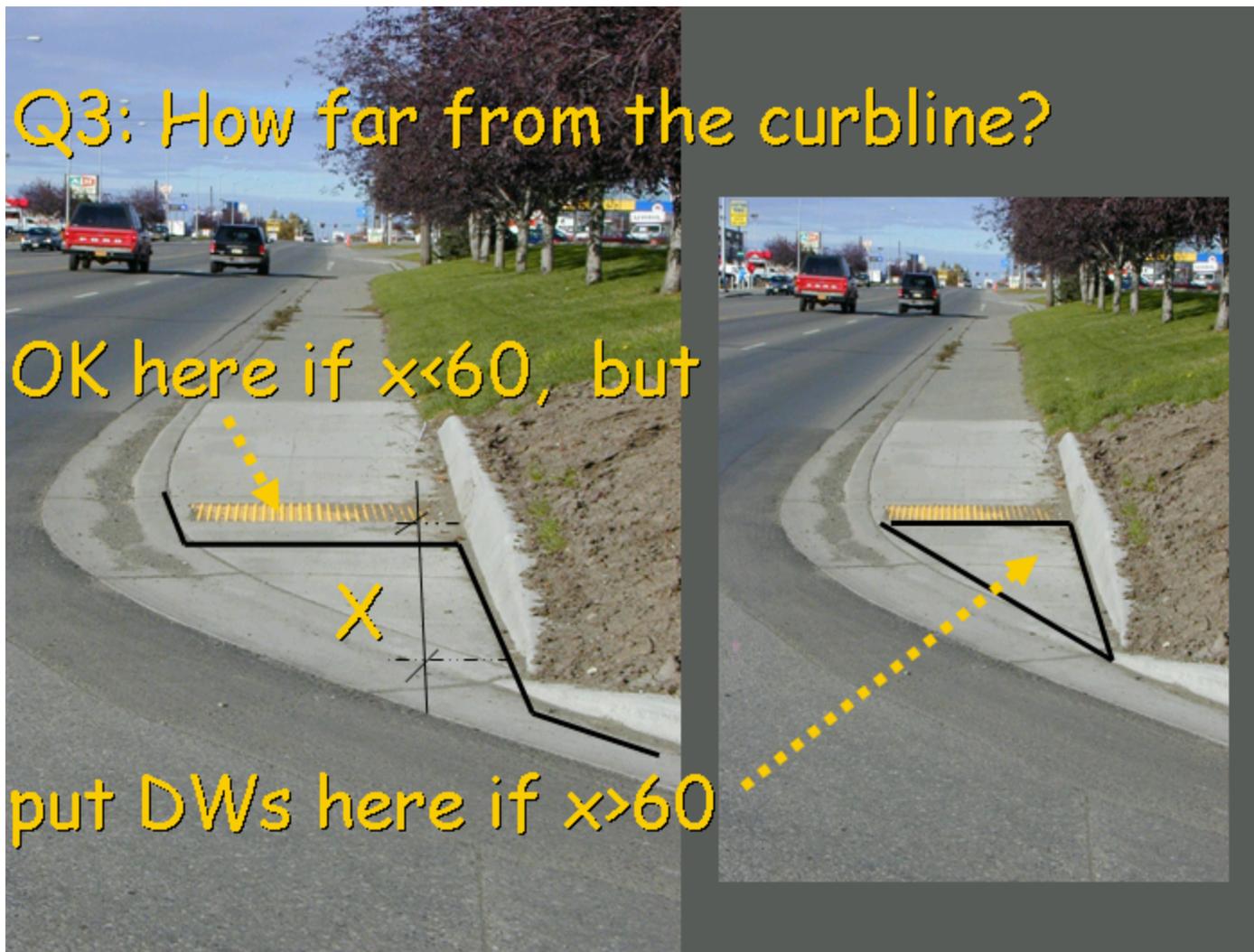
Slide 22



Slide 23



Slide 24



Slide 25



Perpendicular Curb Ramps



Slide 27



Slide 28

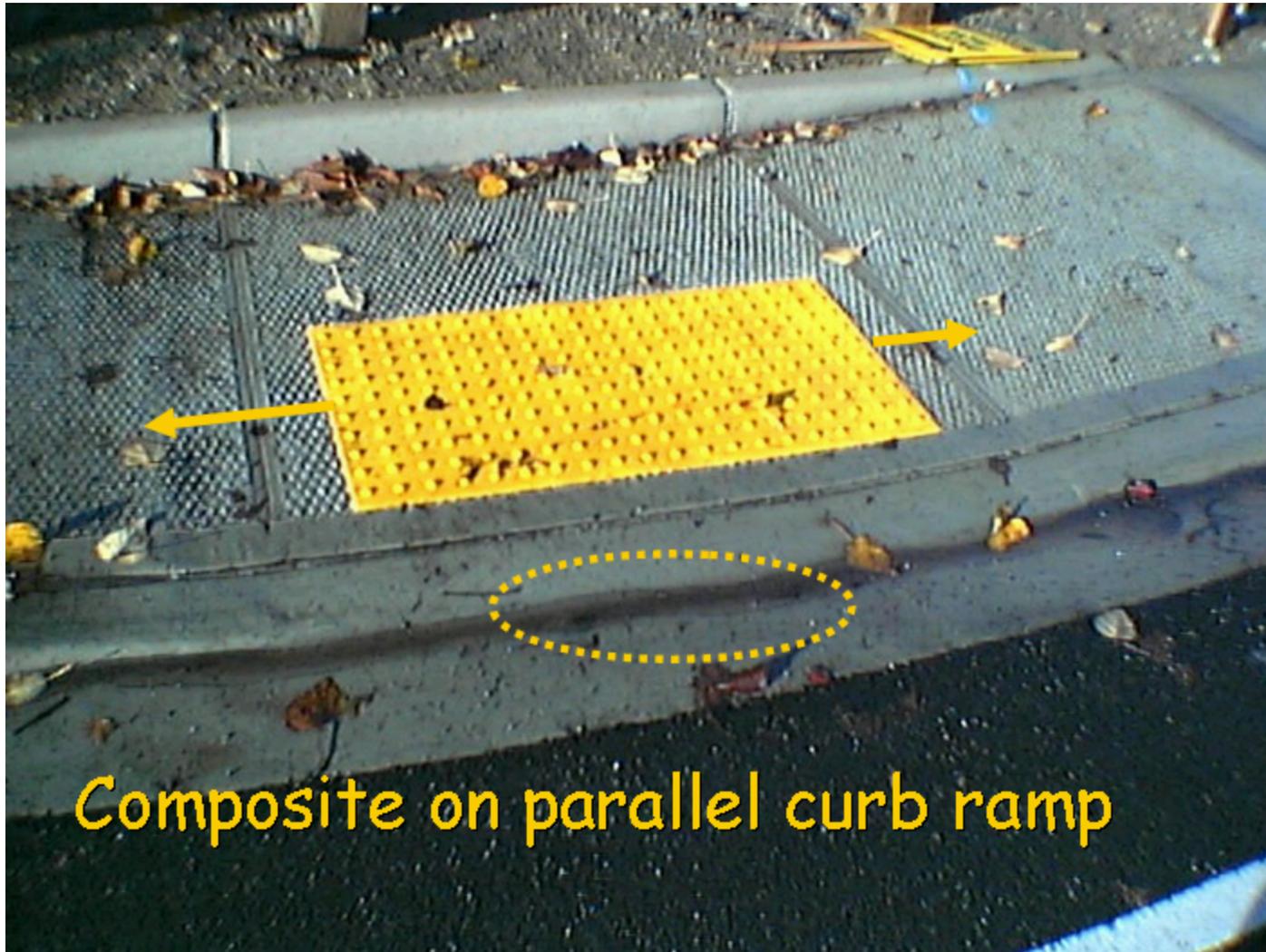


Slide 29



Composite at raised crossing

Slide 30



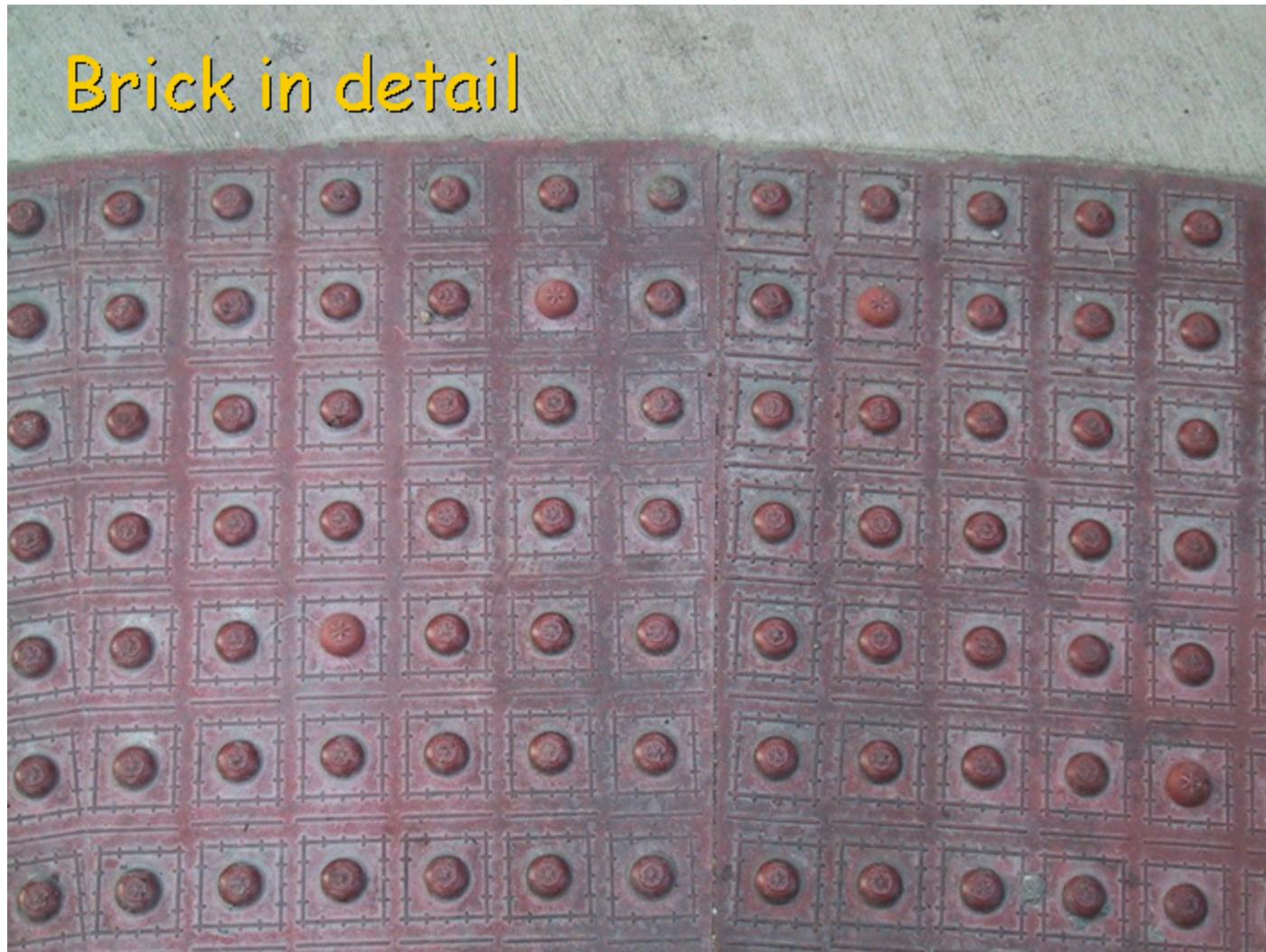
Slide 31



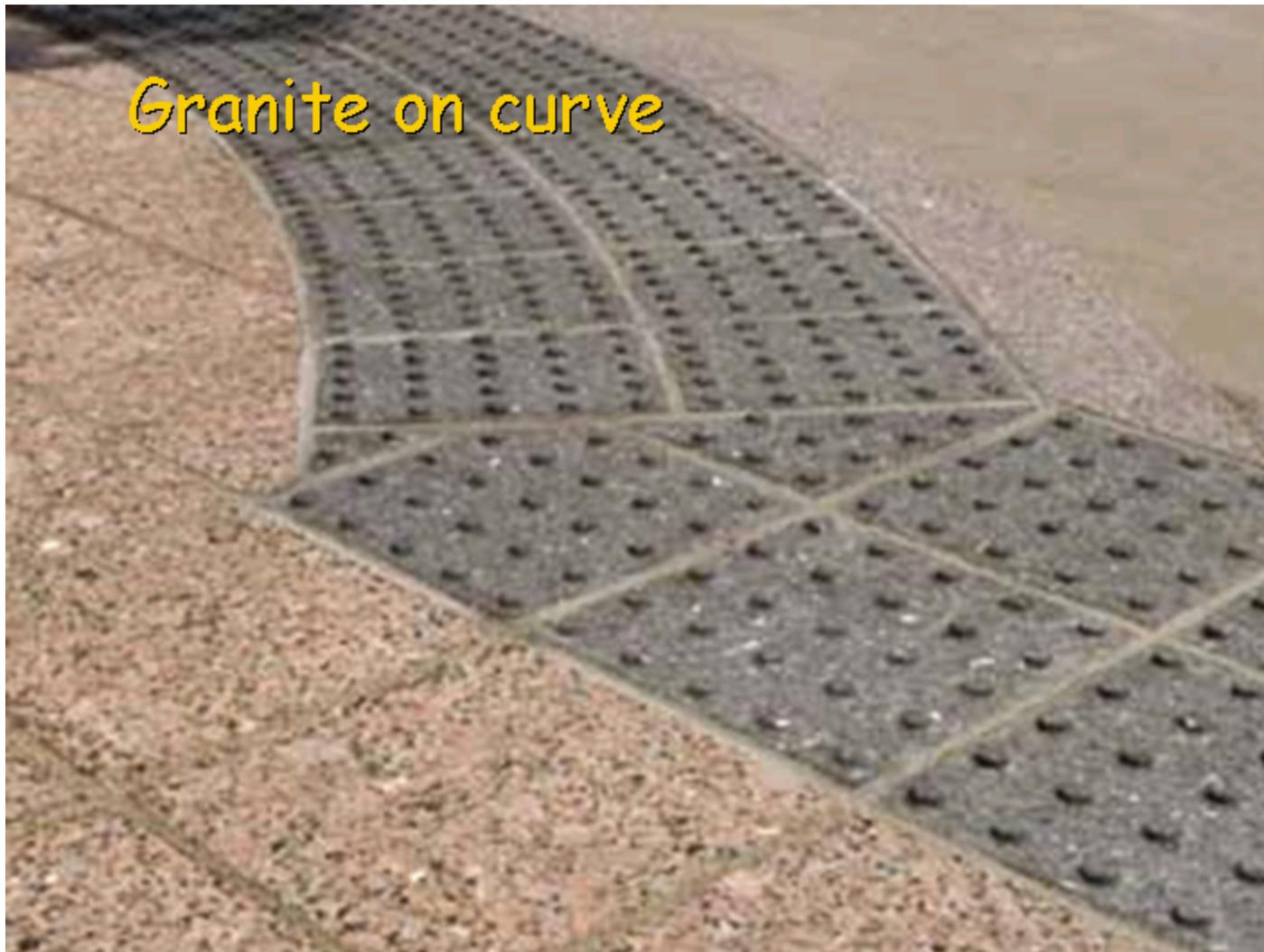
Slide 32



Slide 33



Slide 34



Slide 35



Slide 36



Slide 37



Slide 38



Slide 39



Composite on splitter at roundabout

Slide 40



Q4: DWs at commercial driveways?

Slide 41

***Advisory R221 Detectable Warning Surfaces.***  
*Detectable warning surfaces are required where curb ramps, blended transitions, or landings provide a flush pedestrian connection to the street. Sidewalk crossings of residential driveways should not generally be provided with detectable warnings, since the pedestrian right-of-way continues across most driveway aprons and overuse of detectable warning surfaces should be avoided in the interests of message clarity. However, where commercial driveways are provided with traffic control devices or otherwise are permitted to operate like public streets, detectable warnings should be provided at the junction between the pedestrian route and street.*

Slide 42



Slide 43



Slide 44



Slide 45



Slide 46

## DW Resources

---

- ▶ [www.accessforblind.org](http://www.accessforblind.org)
  - list of manufacturers;
  - research;
  - presentations
- ▶ [www.access-board.gov/adaag/dws/update.htm](http://www.access-board.gov/adaag/dws/update.htm)
  - equivalent facilitation;
  - FHWA policy letter;
- ▶ [www.access-board.gov/research&training/DWSynthesis/report.htm](http://www.access-board.gov/research&training/DWSynthesis/report.htm)

Slide 47

## For more information...

---

Lois Thibault

Research Coordinator

US Access Board

1331 F Street NW, #1000

Washington, DC

*thibault@access-board.gov*

Slide 48