

# School Campus Accessibility: Understanding and Meeting the CBC/ADA Building Requirements

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Courtesy of Schools Insurance Authority

# Schools Insurance Authority (SIA)

## Who We Are and What We Do

- ❖ About SIA
  - Non-profit organization, not an insurance company (just like STSIG)
  - Administer self-insured school district risk pool (WC, Liability and Property)
  - Prevention services – readily available and no-cost resource for district staff
- ❖ My role: Assist district staff in meeting legal requirements for ADA/disability discrimination conformance
- ❖ Project consulting in the field, construction plans review, perform school accessibility surveys, etc.





# Objectives: What are we doing today?

- ❖ Review and update ADA/CBC accessibility building standards knowledge – highlight code changes over last 10 years
- ❖ Discuss real-world accessibility findings and how to prevent them
- ❖ Practical information related to your work performed or supervised (M&O/field staff, Facilities, Risk Management)
- ❖ Review available resources



# Key Benefits – How does this help your schools?

- ❖ Improved in-house staff knowledge – Less reliance on consultant/design professional/contractor
- ❖ Improved facility safety and usability for everyone/legal conformance
- ❖ Saving your district money!
  - Risk prevention/reduction – Keep money in the classrooms not paying attorneys
  - Cost containment – Alteration/Addition path of travel accessibility upgrade rules (CBC Section 11B-202.4)



# Section 1: Current Legal Standards and Requirements

- ❖ Federal: ADA Standards for Accessible Design (2010)
- ❖ State: 2019 California Building Code Title 24, Chapter 11B (Effective January 1, 2020)
- ❖ ADA baseline ---- CBC requirements often exceed federal standards
- ❖ Standard providing “greater accessibility” must be followed



# Accessibility Building Codes: How Often Do They Change?

- ❖ ADA Standards: Original 1991 and Revised 2010
- ❖ 2010 ADA Standards - Some significant changes and additions to accessibility requirements (effective March 2012)
- ❖ CA Standards: First in 1982, first comprehensive 1994
  - CBC update every 3 years
  - Intervening code cycle every 1-1/2 years
  - Notable changes in some cycles and not in others
- ❖ Core dimensions and slope requirements have remained consistent over at least the last 30 years
- ❖ Focus on learning foundational dimensions/slopes

# Accessible Facility Question #1:

## Public v. Private

- ❖ Question: Why are public schools different than the Squeeze Inn or any small business that has been sued for ADA non-compliance?
- ❖ Private entity (Title III): Must make facility changes that are “readily achievable” - Emphasis on fixing facilities to provide access
- ❖ Public entity (Title II): “Program accessibility” – Emphasis on ability to provide equivalent ability to participate in a public program, service or activity



# Accessible Facility Question #2:

## Age Matters... (1 of 2)

- ❖ True or False: The ADA building standards don't apply to schools built before the law was passed until the district performs a major renovation project?

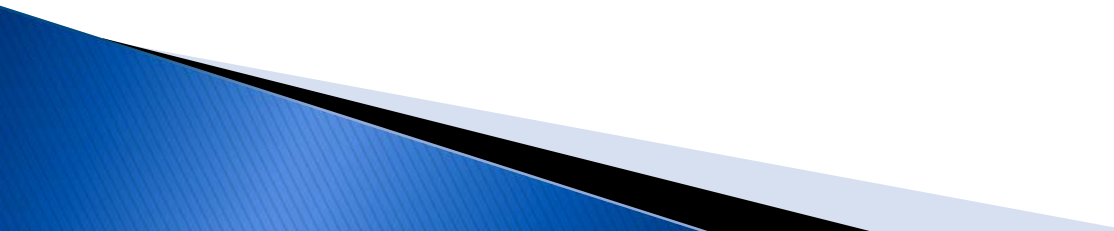
Answer: **False**

- ❖ School district responsible for providing program access.
- ❖ ADA: "Existing facilities" – Built before *January 26, 1992*
- ❖ "New construction" – Any construction work performed on or after that date



# **Accessible Facility Question #2:**

## **Age Matters... (2 of 2)**

- ❖ Existing – May not necessarily need to fix all facility access issues to achieve program access (e.g., 1960s middle school with multiple student restrooms)
  - ❖ New construction – Must fully comply with all applicable ADA/CBC accessibility standards
  - ❖ Individual building specific determination (e.g., Administration building built in 1962, gymnasium built in 2005)
- 

# Accessible Facility Question #3: Alterations

- ❖ True or False: When it comes to accessibility compliance – “You touch it, you own it”?  
Answer: **Generally true**
- ❖ Alterations trigger accessibility updating to current standards
- ❖ Term “alteration” broadly defined – “....remodeling, renovation, rehabilitation, reconstruction, restoration, resurfacing of circulation path or vehicular ways....”
- ❖ Exception: If compliant with previous CBC code, then not required to be brought up to current code (11B-202.4 Exc #2)

# Accessible Facility Question #4:

## Barrier Removal

- ❖ True or False: If we fix one accessibility issue, we'll have to do a complete remodel and fix all of them?

Answer: **Sometimes....but not always**

- ❖ “Barrier removal” – individual element project undertaken solely to meet accessibility standards
- ❖ ADA/CBC – allow these projects, do not trigger additional access work requirements
- ❖ Examples: Installing ramp, replacing door hardware, re-positioning dispenser (See list under 2016 CBC 11B-202.4 Exc. #4)
- ❖ 2016 CBC – Expanded allowable projects under the barrier removal provision



# Accessible Facility Question #5: Path of Travel Accessibility Upgrade (1 of 3)

- ❖ True or False: School facility alteration/renovation projects require accessibility remediation work to be performed outside of the scoped area of alteration?

Answer: **Generally true**

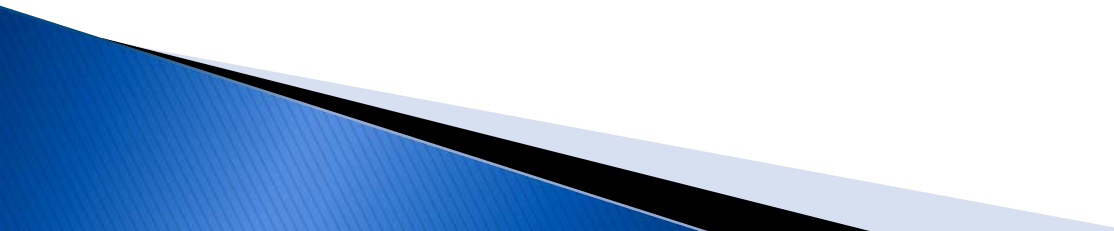
- ❖ 2019 CBC 11B-202.4 Path of travel requirements in alterations, additions and structural repairs
- ❖ ADA – primary legal mechanism for transitioning facilities toward accessibility
- ❖ Not triggered by HVAC, roofing, electrical, painting only projects



# Accessible Facility Question #5: Path of Travel Accessibility Upgrade (2 of 3)

- ❖ Division of State Architect (DSA) projects - Require additional path of travel accessibility “upgrade” work outside scope of planned project
- ❖ Path of travel to project area, site arrival, nearby restrooms, drinking fountains
- ❖ Projects under \$170K – 20% cap of adjusted construction costs (e.g., \$100K project + \$20K outside scope accessibility work)
- ❖ Projects over \$170K – Minimum 20% ACC. (e.g., \$500K project + minimum \$100K outside scope accessibility work)

# Accessible Facility Question #5: Path of Travel Accessibility Upgrade (3 of 3)

- ❖ “Upgrade” = fixing facilities not consistent with current CBC
  - ❖ Updating facility elements when accessibility standards or field conditions have changed – *necessary expenditure*
  - ❖ Updating facility elements not conformant at time of construction and which remain non-conformant – *avoidable expenditure*
  - ❖ Insidious costs incurred 10 to 15 years following initial construction
  - ❖ Reducing findings saves money! Goal: Improvement not 100%
- 



# Section 2: Accessibility Building Standards

## Core Dimensions and Slopes

- ❖ The building codes do change but.....key accessibility principles have not changed in 30 years
- ❖ CBC Chapter 11B Division 3 – Building Blocks
- ❖ CBC Chapter 11B Division 4 – Accessible Routes
- ❖ Core dimensions/slopes – primarily the same in ADA and CBC (with two exceptions)
- ❖ Unique California requirements are italicized in CBC

# What is an “Accessible Route”?

- ❖ Accessible Route (per CBC): *A continuous unobstructed path connecting accessible elements and spaces of an accessible site, building or facility that can be negotiated by a person with a disability using a wheelchair, and that is also safe for and usable by persons with other disabilities.*
- ❖ Interior – Corridors, hallways, floors, ramps, elevators and lifts
- ❖ Exterior – Parking access aisles, curb ramps, crosswalks at vehicular ways, sidewalks/walkways, ramps and lifts

Existing facilities: “Path of travel” may need to be altered to become an “accessible route”

# Where are Accessible Routes Required? (1 of 3)

- ❖ Route required from:
  - AC parking and passenger loading to building being served
  - Pedestrian walkway connecting to public sidewalk/street and public transportation stop





# Where are Accessible Routes Required? (2 of 3)

- ❖ Route required from:
  - Connecting all accessible “buildings, facilities, elements and spaces” on the site.



# Where are Accessible Routes Required? (3 of 3)

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# Accessible Route

## Key Technical Standards – Interior

- ❖ Accessible route technical requirements
  - Interior
    - *Min 36" clear width [11B-403.5.1]*
    - Reducible to 32" for no more than 24"
    - Interior corridor more than 10 people – min 44" [Exc. #2]
    - Watch for obstructed hallways, library book shelf spacing, etc.





# Accessible Route

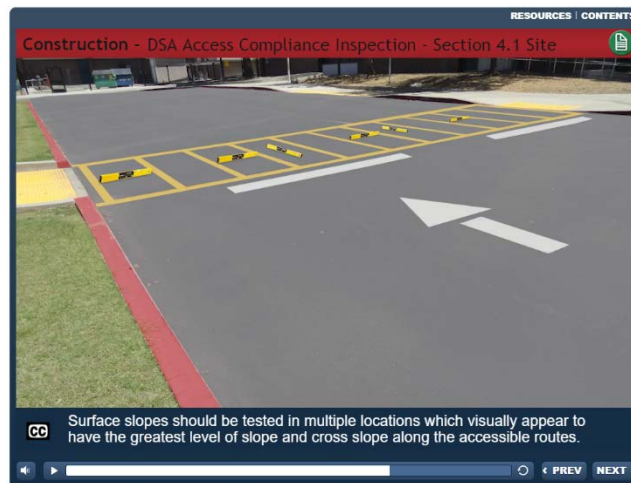
## Key Technical Standards – Exterior

- ❖ Accessible Route technical requirements
  - Exterior walkway/crosswalk
    - *Min 48" clear width* (excluding curb on sidewalks)
    - *Running slope up to 5.0%* (1:20)
    - *Cross slope up to 2.08%* (1:48)
    - *No change in level* (1/4-inch vertical or 1/2-inch beveled)
    - Vertical clearance and protruding objects
    - Firm, stable and slip resistant



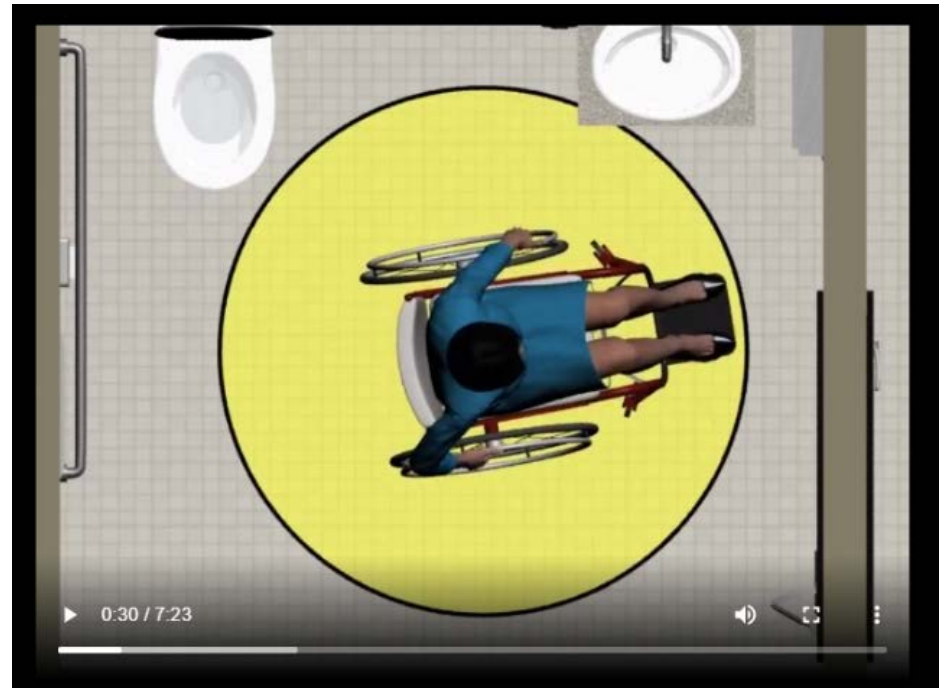
# Measuring Accessible Route Slope

- ❖ Approximately every 5-10 feet depending on route length
- ❖ Visual check for most sloped areas
- ❖ Do not average out slope reading over entire length
- ❖ Let's talk about 2-foot vs. 4-foot levels
  - DSA Leased Building Accessibility survey tools
  - U.S. Dept. of Justice Accessibility survey tools



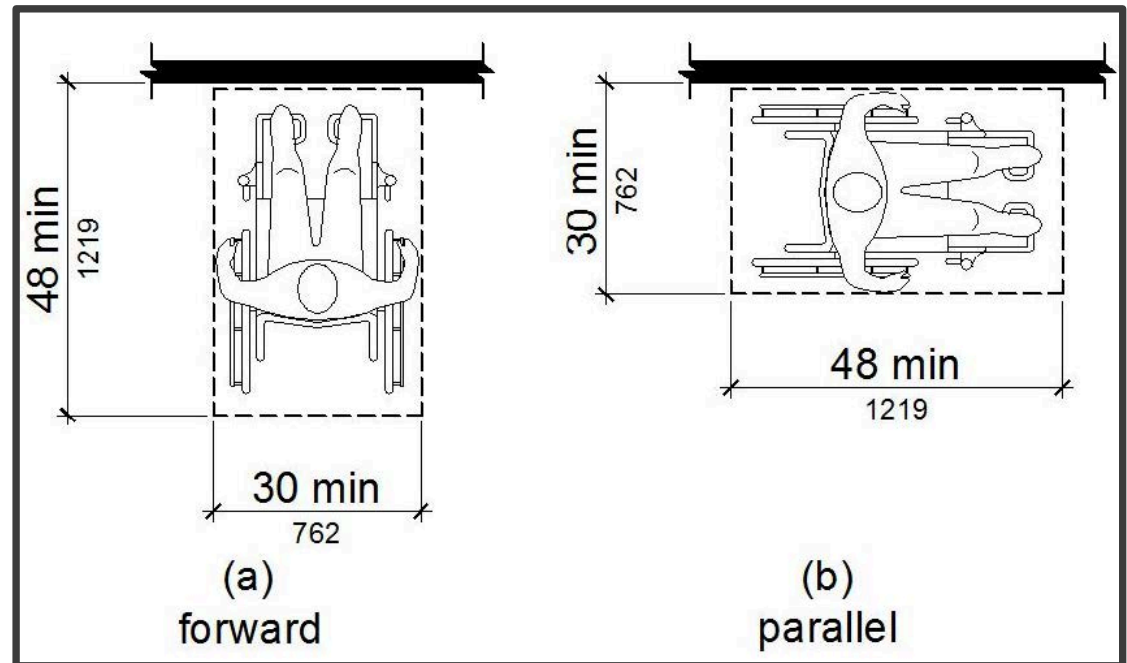
# Building Blocks: Turning Space

- ❖ Turning space (11B-304) Accessible Route technical requirements
  - **Minimum 60" turning circle** (or T-shaped space)
  - Space required for average wheelchair to be able to make a complete 360° rotation
  - Multi-user restroom – In restroom entirely or mostly outside front door swing
  - Single-user restroom – In restroom with front door closed



# Building Blocks: Clear Floor Space

- ❖ Clear floor space (11B-305)
  - Wheelchair footprint space required next to accessible elements
  - *30" wide x 48" long*
  - Forward v. Side approach (most require forward)
  - Space required outside door swing in single-user restroom





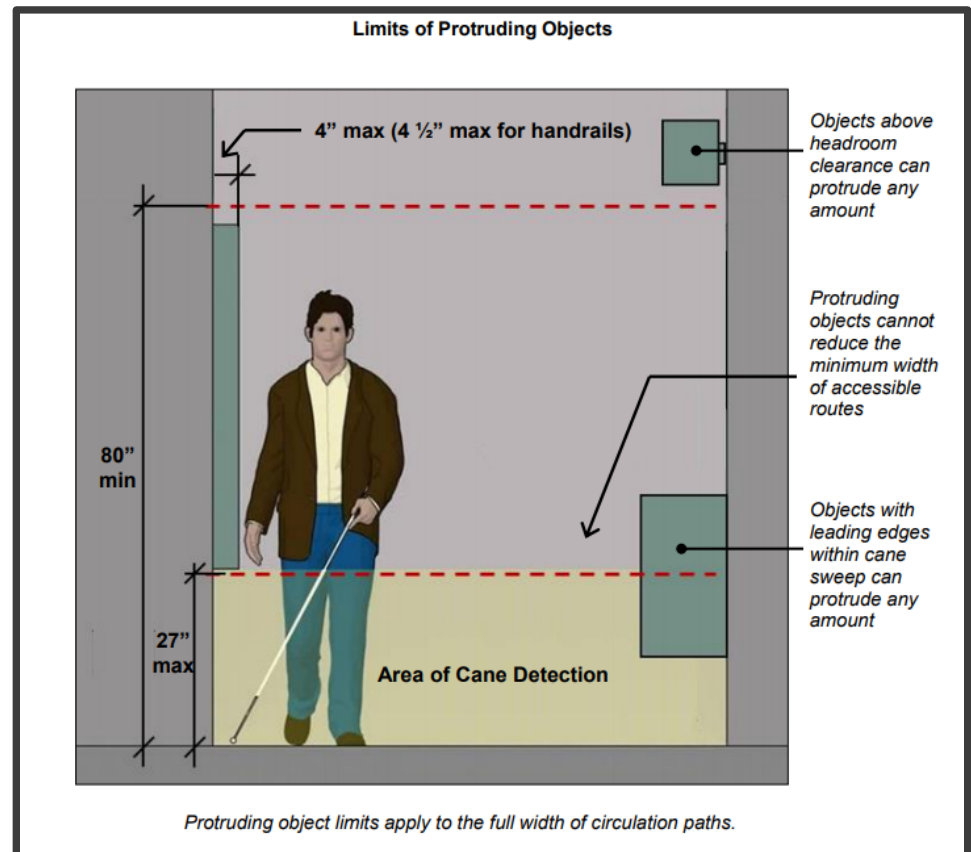
# Building Blocks: Knee and Toe Clearances

- ❖ Knee and Toe clearance (11B-306)
  - Minimum heights to allow for wheelchair to pull up to and underneath an accessible element (lavatory, library table, cafeteria table, drinking fountain, etc)
  - Standard - *Minimum 27" knee clearance*
  - Work/dining tables – minimum 19" depth
  - No obstructions or intrusions into knee space (under table support, connector clips, door hold magnets)



# Building Blocks: Protruding Objects

- ❖ Protruding Object (11B-307)
  - Allowable protrusion from wall outside of cane detection range by a person who is blind/visually impaired
  - *Maximum 4" out from wall between 27" and 80" along an accessible route*



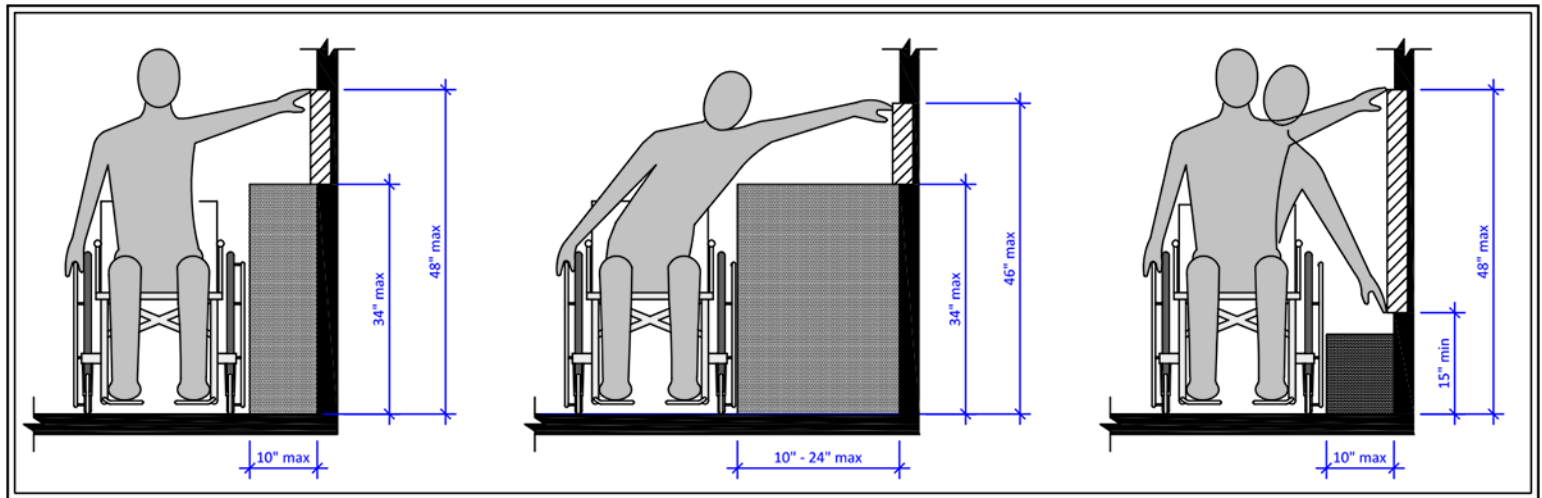
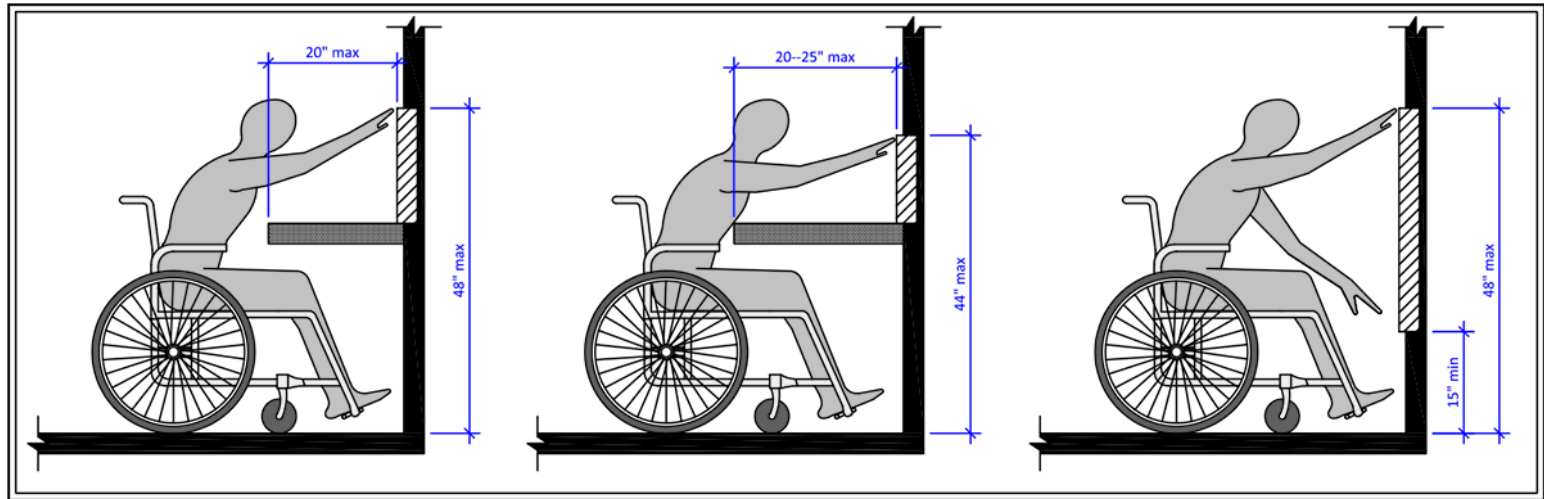


# Building Blocks: Reach Range (1 of 2)

## ❖ Reach Range (11B-308)

- Height range for person using a wheelchair to be able to operate an accessible element from either a forward or side reach position.
- Height defined by the highest or lowest operable part (except electrical switches and outlets)
- *Standard unobstructed: Minimum 15" to Maximum 48"*
- High range lowers when reaching over an obstruction
- Restrooms: *Max 40" to highest operable part*

# Building Blocks: Reach Range (2 of 2)



# Building Blocks: Operable Parts

## ❖ Operable Parts (11B-309)

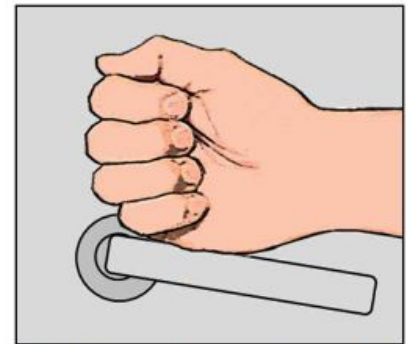
- Operational mechanism that does not require significant manual dexterity for persons with limited or impaired use of one or both of their hands
- *No grasping, pinching or twisting of the wrist.*
- Closed fist test (not a standard but reliable test)
- Non-compliant examples:
  - Paper towel dispensers with twist mechanism
  - Door knobs
  - Dead bolt locks
  - Gate fork latch

### Operation [§309.4]

Operable parts must be usable with one hand and not require:

- tight grasping, pinching, or twisting of the wrist, or
- more than 5 pounds of force (lbf) to operate.

Parts that can be operated without hand or finger dexterity, fine motor movement, or simultaneous actions provide easier access and accommodate a broader range of users.



*Operability with a closed fist is a reliable test of usability, but is not required by the standards.*

# General Core Access Knowledge Standards

## ❖ Curb Ramp/Ramp

- *Maximum 8.33% running slope* (1:12)
- Maximum 2.08% cross slope (1:48)

## ❖ Doors and Gates

- *Max 5 lbs opening force* (all except fire doors)
- *Level landing – Minimum 2.08%*

## ❖ Accessible Parking Space Dimension

- Length – 18-feet (216”) and Standard width – 9-feet (108”)



# Section 3: Significant Accessibility Code Changes since 2010



# Access Code Changes since 2010

## Range Measurements

- ❖ 2010 ADA/2013 CBC – Transition from absolute to range measurement compliance
  - Toilet centerline (18" from side wall → 17-18")
  - Tactile wall sign (60" aff → min 48" baseline tactile/max 60" baseline highest text)
  - Restroom door sign (60" aff → 58-60")
  - Grab bar height (33" center bar aff → 33-36" to top of bar)
- ❖ Construction tolerance more likely acceptable with absolute dimensions rather than range dimensions



# Division of State Architect:

## Interpretation of Regulations IR 11B-8 (1 of 2)

- ❖ DSA IR 11B-8: Use of Predetermined Construction Tolerance Guidelines for Accessibility (released January 2011)
- ❖ Important guidance on use of construction tolerance and best practice design
- ❖ Discussion topic: Construction tolerances
- ❖ Discussion topic: Project design to the limitations of the standards (e.g., “max 8.3% curb ramp”, “up to 2% in AC parking”)

# Division of State Architect: Interpretation of Regulations IR 11B-8 (2 of 2)

- ❖ Design Recommendation – Request or require your design professionals to not specify the limit of the accessible standard unless required by actual field conditions, space constraints or terrain.
- ❖ Construction Recommendation – Set target dimensions or slopes not at allowable limit (e.g. max 7.5% curb ramp, min 54” exterior path clear width, max 4% walkway slope, max 1.5% AC parking and access aisle, etc.)

# Access Code Changes since 2010

## Number of Van Parking Spaces

- ❖ Current standard: Van Parking Spaces - One in every 6 accessible spaces must be a designated van space [2013 CBC 11B-208.2.4]
- ❖ Prior standard: One in every 8 accessible spaces [2010 CBC 1129B.3.2]
- ❖ Parking areas with more than 200 total parking spaces require at least two van spaces



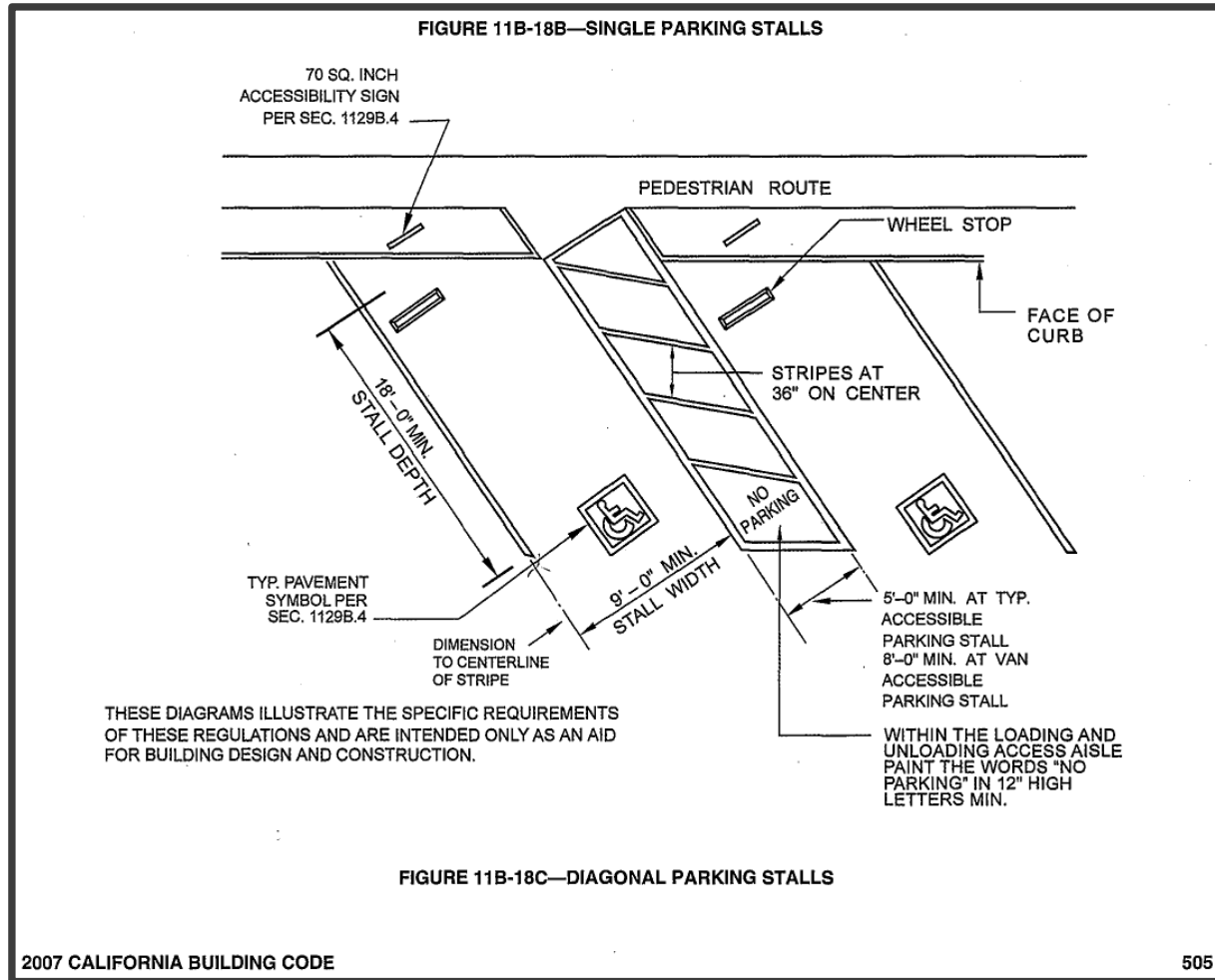
# Access Code Changes since 2010

## Angled Accessible Parking Spaces

- ❖ Current Standard: Angled Parking Spaces - Access aisles shall extend full required length of adjacent parking space(s) [2013 CBC 11B-502.3.2]
- ❖ Prior Standard: Specified in diagram but not in code [2010 Figure 11B-18C and 2007 Figure 11B-18C]
- ❖ Challenging re-design (extended angled stripe length intrudes into drive aisle - can be 30 feet or more)
- ❖ Typical recommendation – convert to perpendicular accessible spaces

# Access Code Changes since 2010

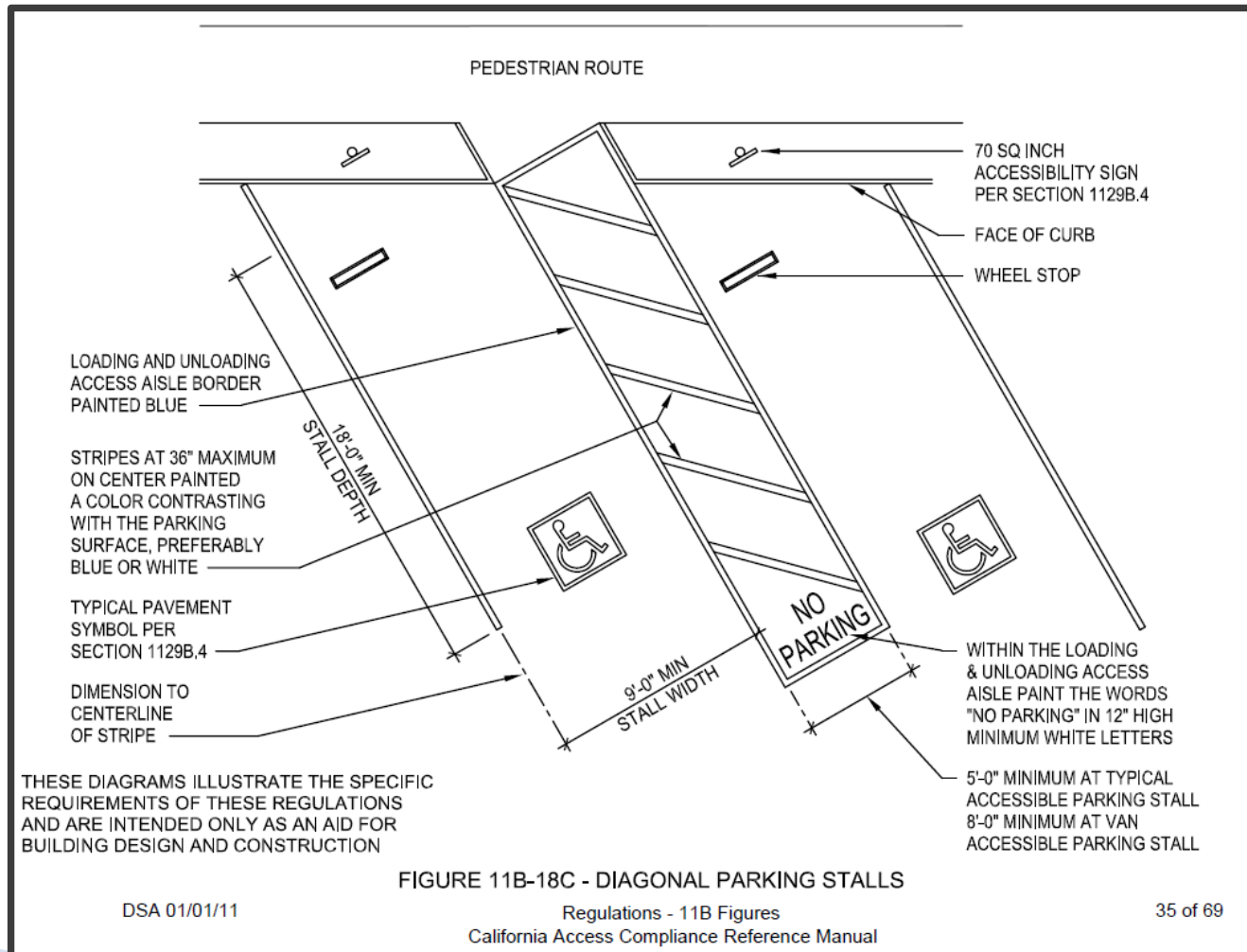
## Angled AC Parking Spaces – 2007 CBC Diagram





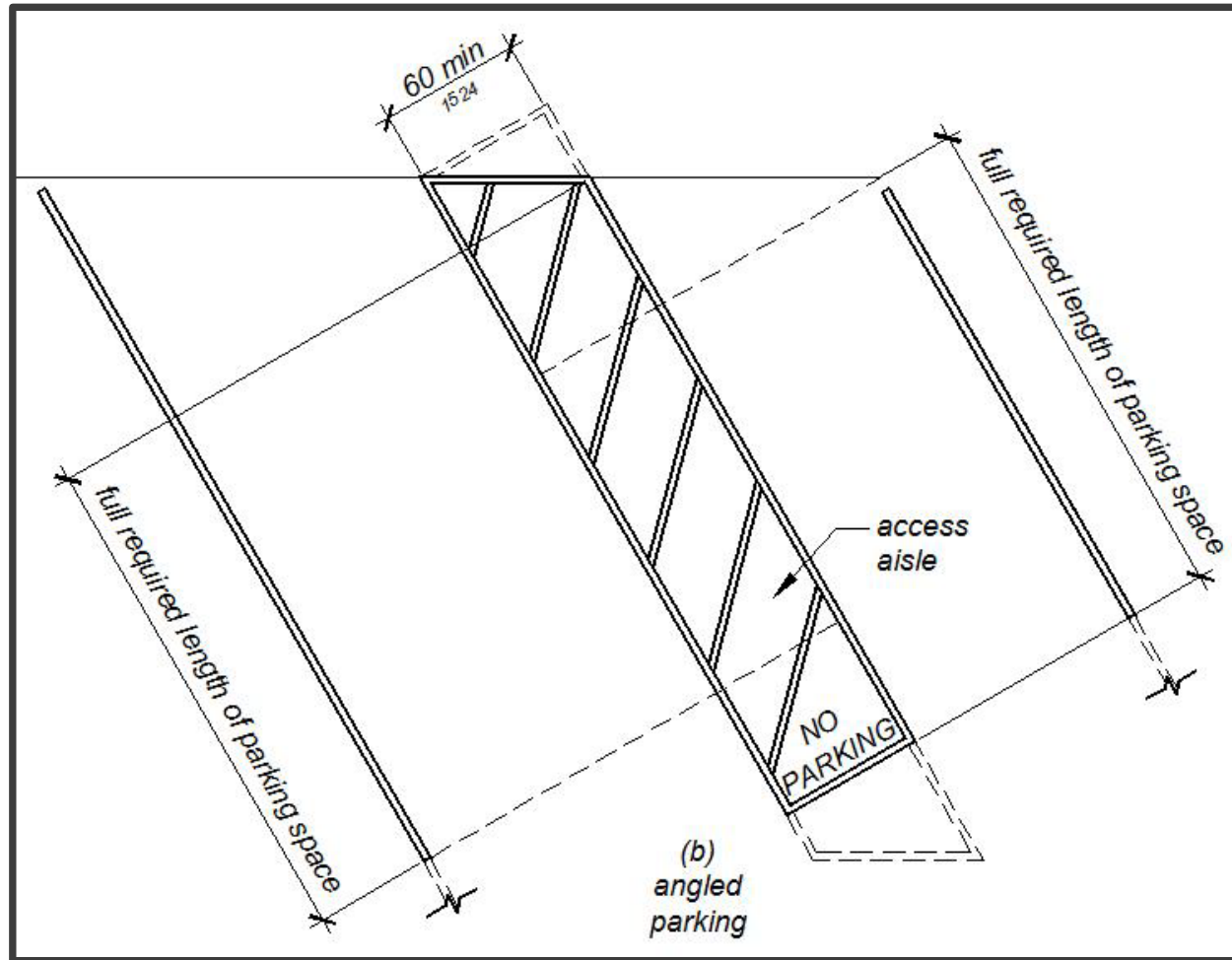
# Access Code Changes since 2010

## Angled AC Parking Spaces – 2010 CBC Diagram



# Access Code Changes since 2010

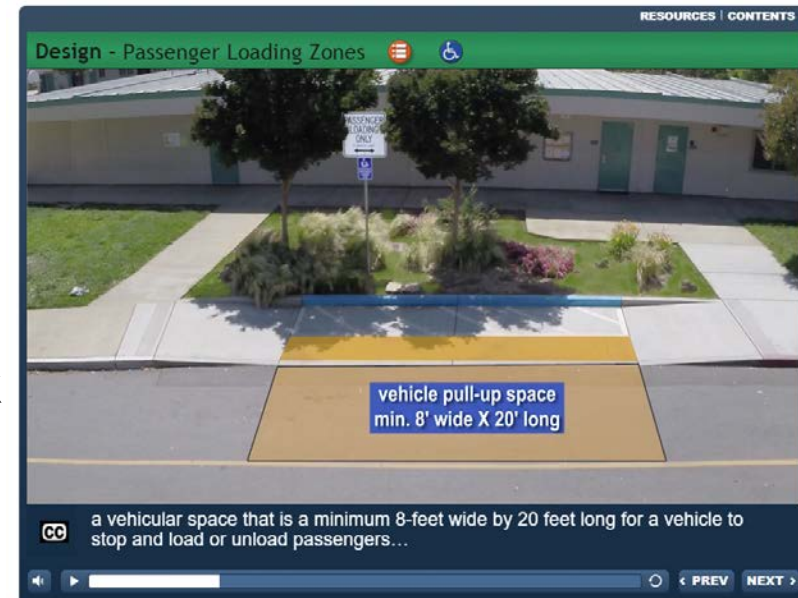
## Angled AC Parking Spaces 2013 CBC Diagram



# Access Code Changes since 2010

## Accessible Parking and Loading/Drop-off Zones

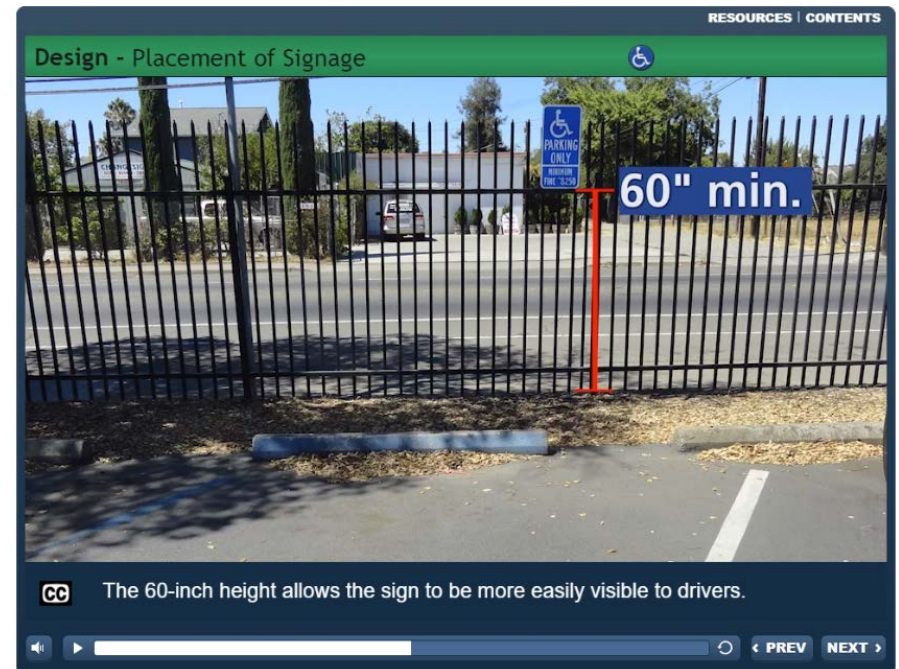
- ❖ Current Standard: Accessible loading/drop-off zones: "...shall provide at least one passenger loading zone in every continuous 100 linear feet of loading zone space, or fraction thereof. [2013 CBC 11B-209.2.1]"
- ❖ Prior standard: When school provides passenger loading/drop-off zone, must provide one accessible passenger loading meeting technical requirements [2010 CBC 1131B.2]
- ❖ DSA enforcement unclear - Planning and scoping consideration on significant parking area renovation projects
- ❖ Ensure accessible loading zone design that is safe and does not block accessible routes or vehicular traffic when used



# Access Code Changes since 2010

## Parking Signage Height Above Ground

- ❖ Current Standard: Accessible parking signage: Minimum 60" above ground if wall-mounted or outside accessible route. [2013 CBC 11B-502.6]
- ❖ Prior standard: Minimum 36" above ground on wall or post-mounted [2010 1109A.8.8]
- ❖ Minimum 80" to bottom of lowest sign requirement now only applicable to signs posted within the adjacent circulation path





# Access Code Changes since 2010

## Miscellaneous Other Accessible Parking

- ❖ Miscellaneous other accessible parking: Access aisle must have blue border, [2010 CBC 11B-1129.B3]
- ❖ Minimum fine \$250 on each accessible parking space sign [2010 CBC 11B-1129.B4]
- ❖ Van accessible parking space dimensions:  
12' space/5' wide  
width allowable  
[2013 CBC 11B-502.2]





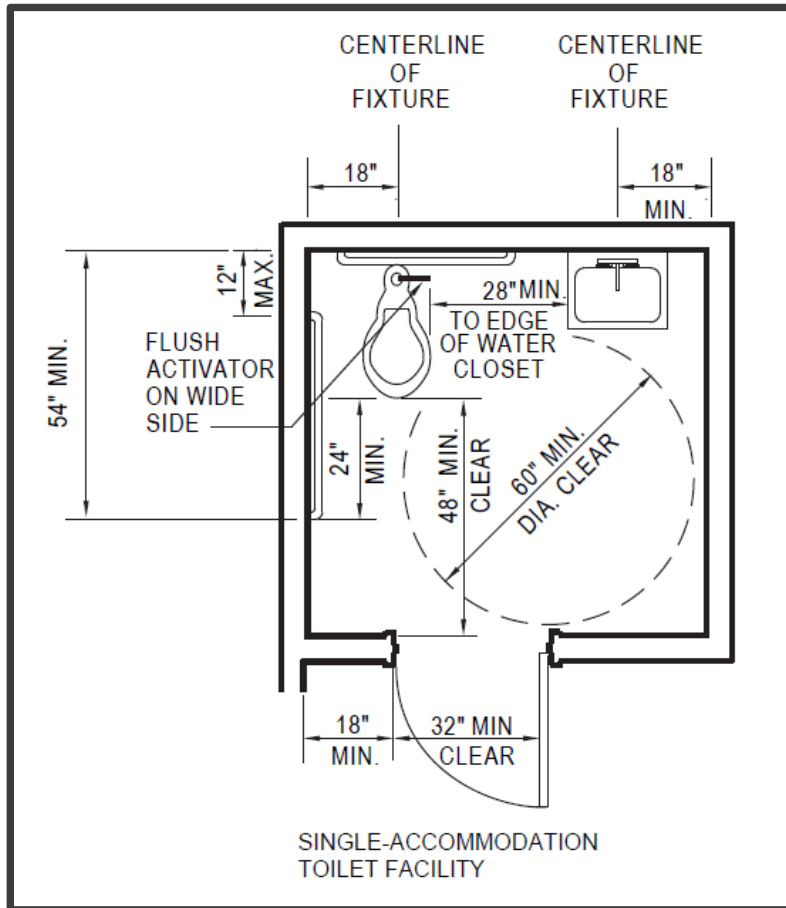
# Access Code Changes since 2010

## Single-user Toilet Clearance Dimensions

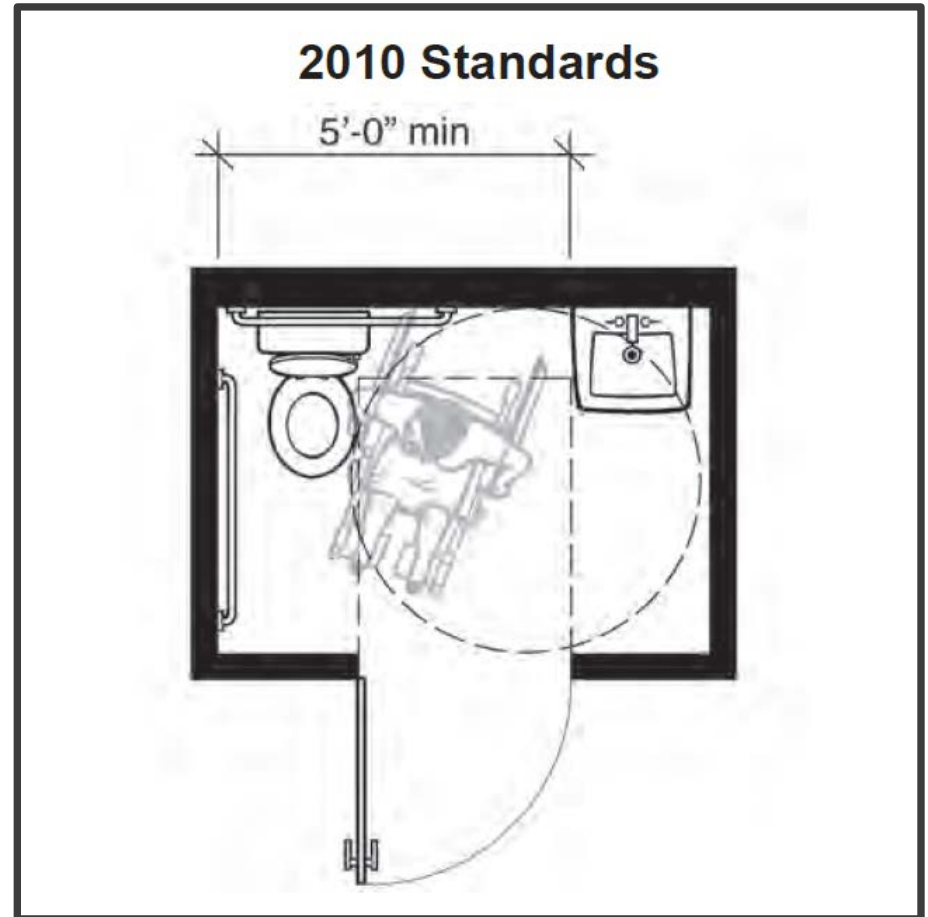
- ❖ Current standard: Single-user toilet clearance dimensions: Minimum 60" clear width adjacent to toilet [2013 CBC 11B-604.3.1]
- ❖ Prior standard: Minimum 28" clear width adjacent to lavatory or minimum 32" to wall or partition [2010 CBC 1115B.4.1]
- ❖ Most single-user restrooms built prior to 2010 will not conform with current toilet clearance requirements
- ❖ Facilities Master Planning consideration for future restroom alteration projects which will often require moving walls

# Access Code Changes since 2010

## Single-user Toilet Clearance Dimension Diagrams



2010 CBC



2010 ADA/2013 CBC

# Access Code Changes since 2010

## Single-user Toilet Clearance Dimension Diagrams



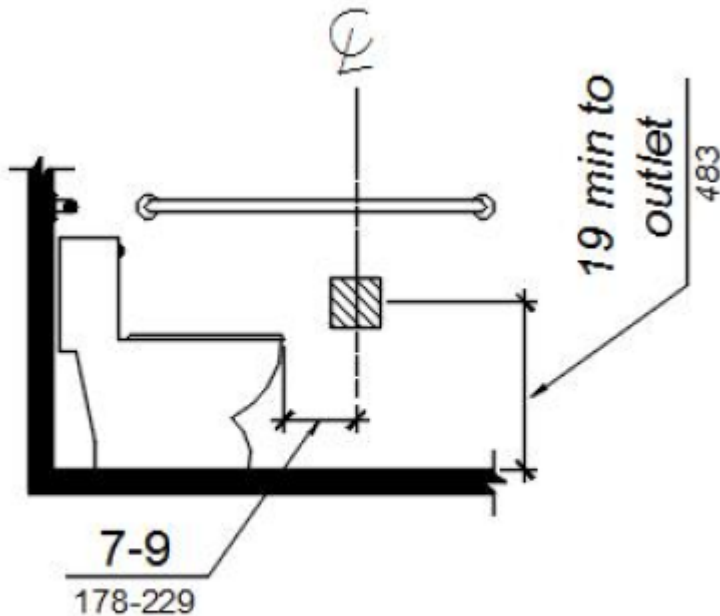
# Access Code Changes since 2010

## Toilet Paper Dispenser Position

- ❖ Current Standard: Toilet paper dispenser - 7" to 9" from front of toilet to centerline of the dispenser. [2013 CBC 11B-604.7.1]
- ❖ Prior standard: Within 12" from front of toilet and max 36" from back wall [2010 CBC 1115B.8.4]
- ❖ Feminine hygiene product disposal placement: Install on side wall adjacent to the toilet paper dispenser under grab bar [2019 CBC 11B-604.7.2]

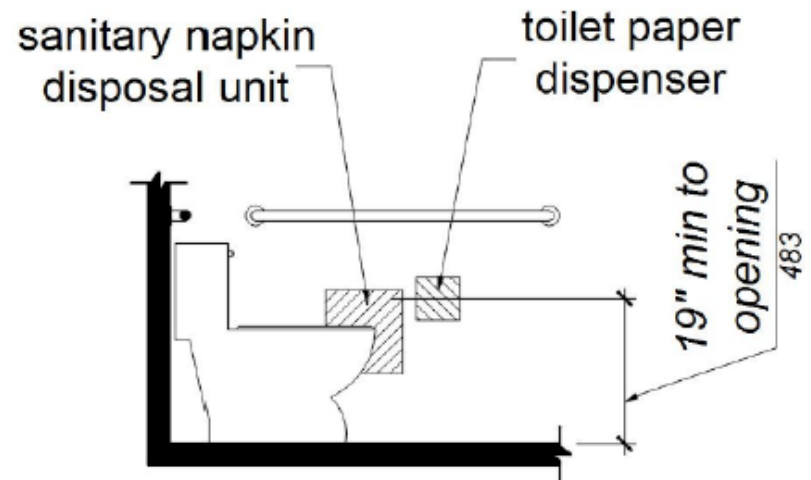
# Access Code Changes since 2010

## Toilet Paper and Disposal Unit Diagrams



**Figure 11B-604.7.1**  
**Dispenser Outlet Location**

2013 CBC



**Figure 11B-604.7.2**  
**Disposal Unit Location**

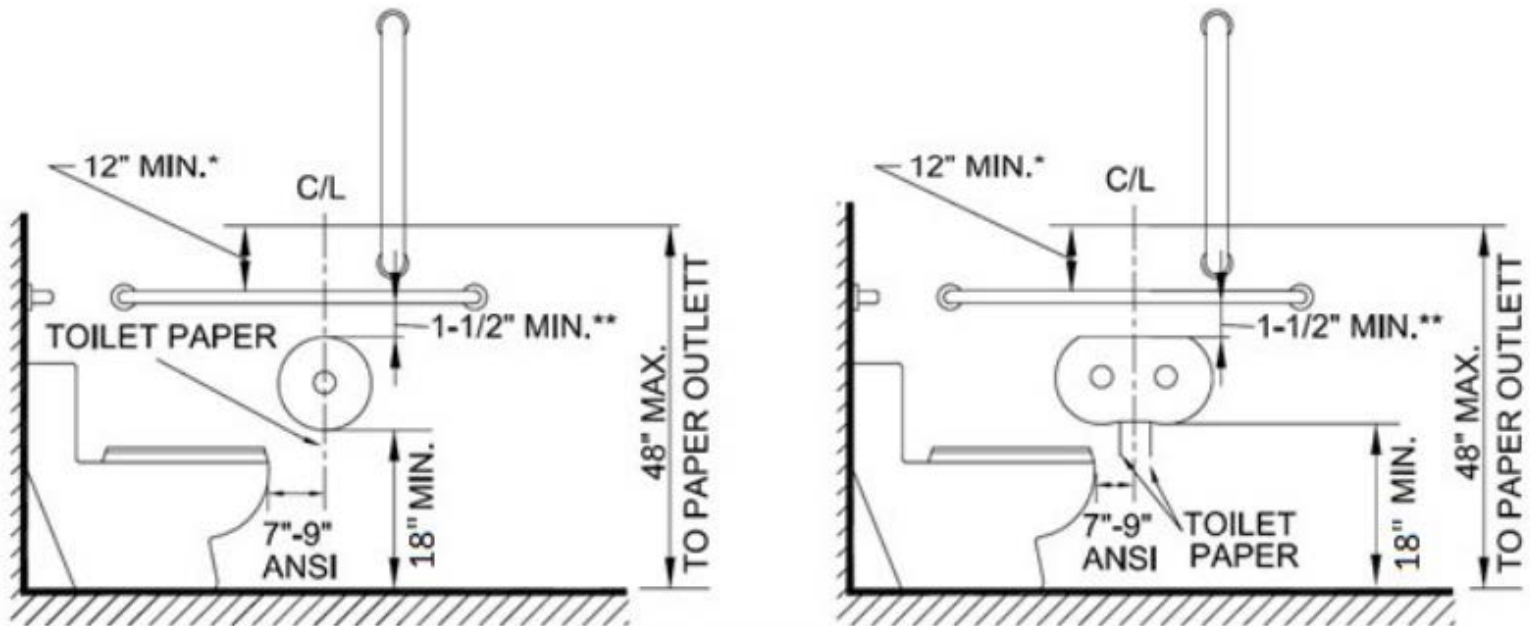
2019 CBC



# Access Code Changes since 2010

## Toilet Paper and Disposal Unit Diagrams

### 7. Toilet Paper



NOTE: HEIGHT DIMENSIONS GEARED TO POINT WHERE HAND TOUCHES TISSUE.

SOME LARGE ROLLS MAY BE TOO LARGE FOR BELOW GRAB BAR.

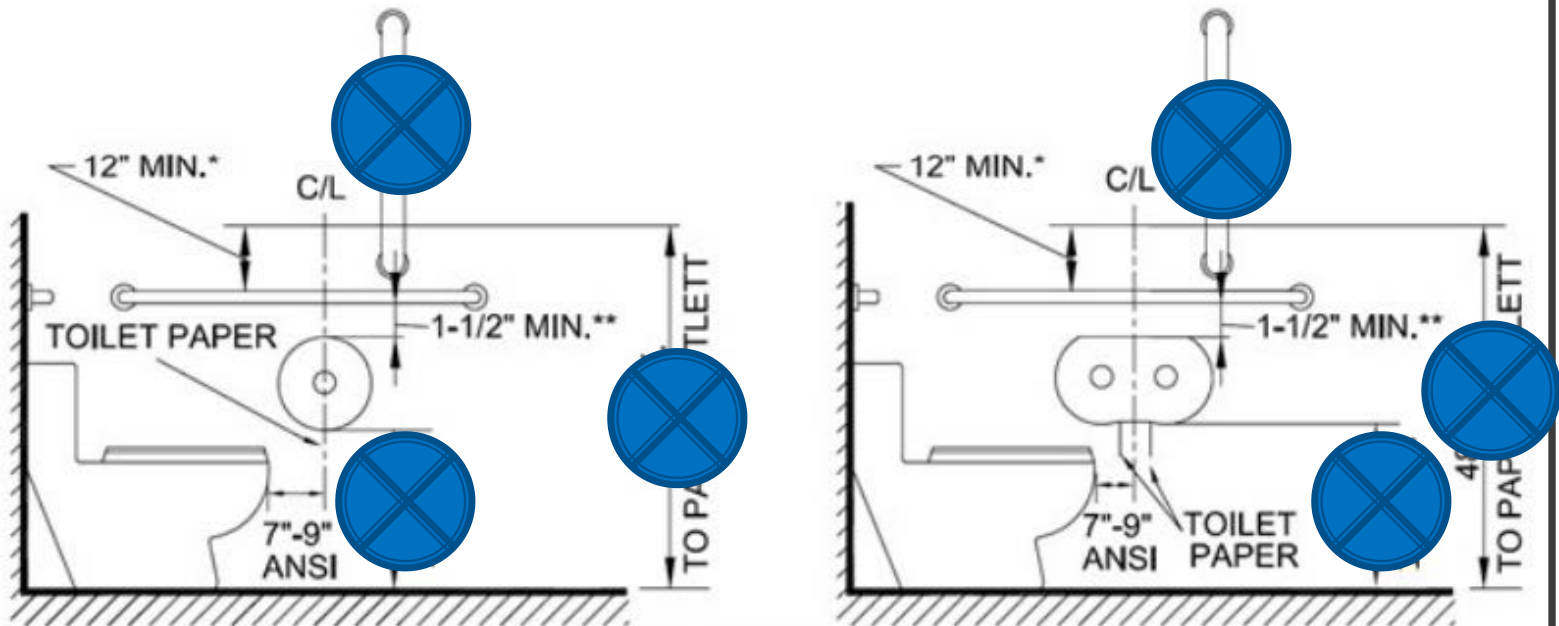
\*\* MIN. CLEARANCE REQUIRED BETWEEN DISPENSER AND GRAB BAR.

DIMENSIONS COMPLY WITH ADA & ANSI.

# Access Code Changes since 2010

## Toilet Paper and Disposal Unit Diagrams

### 7. Toilet Paper



NOTE: HEIGHT DIMENSIONS GEARED TO POINT WHERE HAND TOUCHES TISSUE.  
SOME LARGE ROLLS MAY BE TOO LARGE FOR BELOW GRAB BAR.  
\*\* MIN. CLEARANCE REQUIRED BETWEEN DISPENSER AND GRAB BAR.  
DIMENSIONS COMPLY WITH ADA & ANSI.

# Access Code Changes since 2010

## Children's Suggested Restroom Dimensions

- ❖ Current Standard: Children's Suggested dimensions by age: Updated restroom and lavatory dimensions, dropped other categories [2013 Table 11B-604.9 and 11B-606.2 Exc. #4]
- ❖ Prior standard: [2010 CBC Table 1115B-1]
- ❖ Three children's age categories with overlapping dimensions (previously only Kinder and Elementary)
- ❖ Drinking fountain, urinal and additional ramp/stair handrail measurements - no longer available
- ❖ Side (parallel) approach allowable for sinks and lavatories used by children 5 and younger (Kinder and TK) [2013 CBC 11B-606.2 Exc. #5]

# Access Code Changes since 2010

## Children's Suggested Restroom Dimensions

**Table 11B-604.9 Suggested Dimensions for Children's Use**

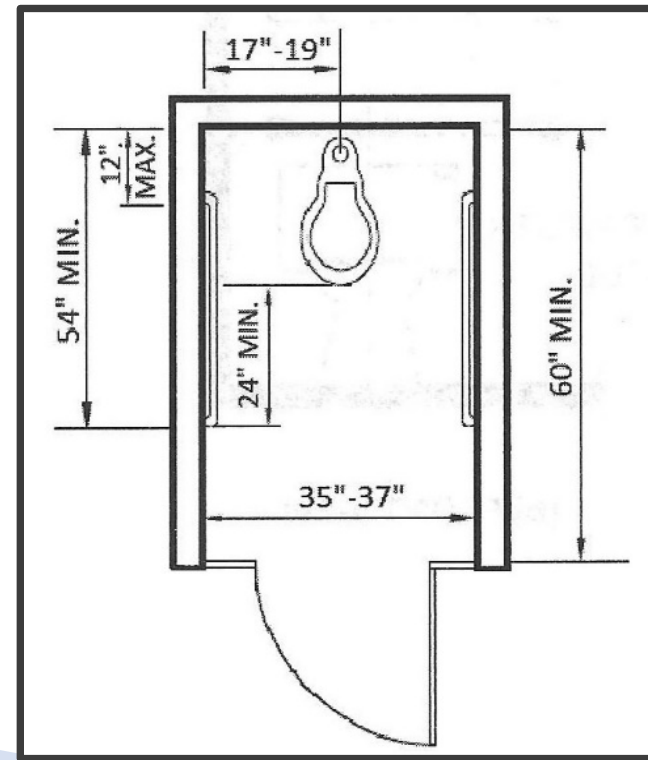
<b>Suggested Dimensions for Water Closets Serving Children Ages 3 through 12</b>			
	<b>Ages 3 and 4</b>	<b>Ages 5 through 8</b>	<b>Ages 9 through 12</b>
<b>Water Closet Centerline</b>	12 inches (305 mm)	12 to 15 inches (305 to 381 mm)	15 to 18 inches (381 to 457 mm)
<b>Toilet Seat Height</b>	11 to 12 inches (279 to 305 mm)	12 to 15 inches (305 to 381 mm)	15 to 17 inches (381 to 432 mm)
<b>Grab Bar Height</b>	18 to 20 inches (457 to 508 mm)	20 to 25 inches (508 to 635 mm)	25 to 27 inches (635 to 686 mm)
<b>Dispenser Height</b>	14 inches (356 mm)	14 to 17 inches (356 to 432 mm)	17 to 19 inches (432 to 483 mm)

- ❖ Restroom lavatory - Elementary (age 6-12) restroom: Rim/counter height max 31", knee clearance min 24" [11B-604.9 Exc. #4]
- ❖ Classroom sinks – May use above height 31"/knee clear 24" dimensions but not required

# Access Code Changes since 2010

## Ambulatory Accessible Compartments

- ❖ Current Standard: Ambulatory accessible toilet compartment required in restrooms with six or more fixtures *including* urinals [2013 CBC 11B-203.3.1]
- ❖ Prior standard: Ambulatory compartment required in restrooms with six or more toilet compartments, not including urinals [2010 CBC 1115B.3.1.5]
- ❖ Compartment measurements changed from absolute to range measurements
- ❖ Clear width: 35-37" Depth: min 60"  
Toilet centerline: 17-19"  
[2013 CBC 604.8.2]





# Access Code Changes since 2010

## AC Route to Sports Fields and Team Seating

- ❖ Current Standard: Accessible route required to boundary of *each* area of sports activity [2013 CBC 11B-206.2.18]
- ❖ Current Standard: Accessible route and at least one wheelchair space in team seating area [2013 CBC 11B-206.7.9, 11B-221.2.1.4 and 11B-802.1]
- ❖ Prior standard: No specific requirement – only general site accessible route requirement [2010 CBC 1114B.1.2]
- ❖ Hardscape path of travel leading to individual baseball, softball, soccer and other areas of school sports activity fields
- ❖ Hardscape path of travel to football or other sport with team bench seating adjacent to field.

# Access Code Changes since 2010

## AC Route to Sports Fields and Team Seating



# Access Code Changes since 2010

## Curb Ramps

- ❖ Current Standard: Grooved 12" borders: No longer required [2013 Intervening Code Cycle – effective July 1, 2015]
- ❖ Current Standard: Parallel curb ramp top landing: Level 2% top no longer specifically required [2013 CBC 11B-406.5.3 Exception]
- ❖ Current Standard: Truncated dome placement: Full curb ramp width up with up max 2" gap on each side [2013 11B-705.1.2.2]

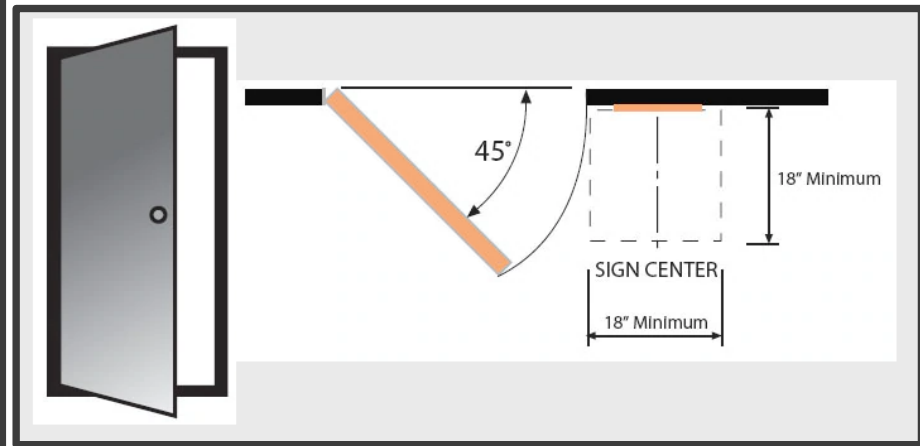
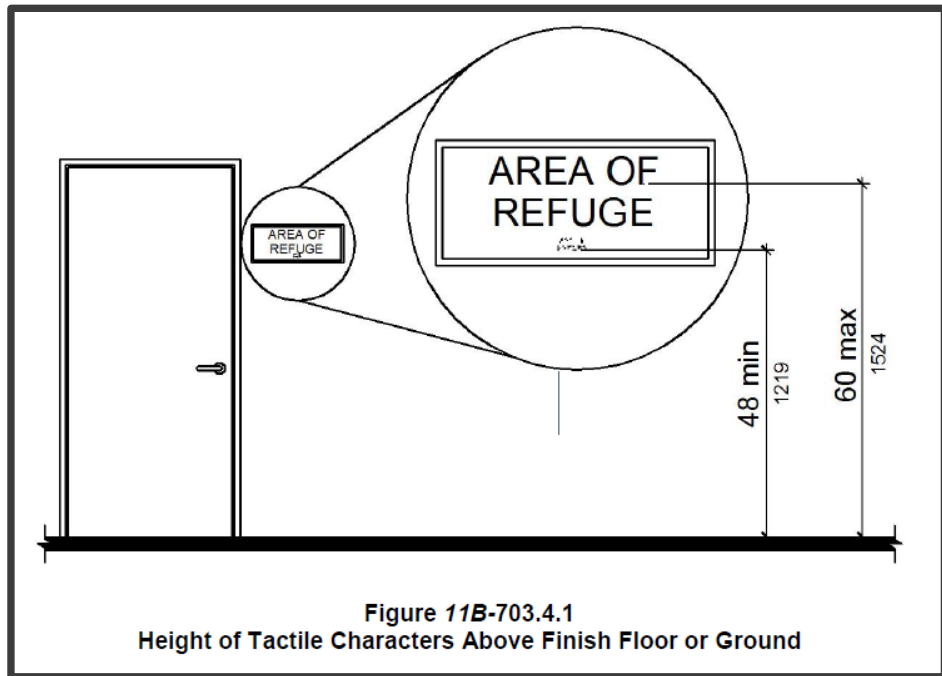
# Access Code Changes since 2010

## Tactile Room Identification Wall Sign Placement

- ❖ Current Standard: Range installation height from min 48" baseline braille dots to max 60" baseline text characters. [2013 CBC 11B-703.4.1]
- ❖ Current Standard: New requirement for min. 9" to sign tactile characters from edge of the door [2013 CBC 11B-703.4.2]
- ❖ Prior Standard: 60" aff to sign centerline and approachable within 3 inches [2010 CBC 1117B.5.7]
- ❖ Blind/visually impaired: Orientation/Mobility (O&M) trains to look on latch side of door. If not possible, right-hand side outside door swing

# Access Code Changes since 2010

## Tactile Room Identification Signage





# Access Code Changes since 2010

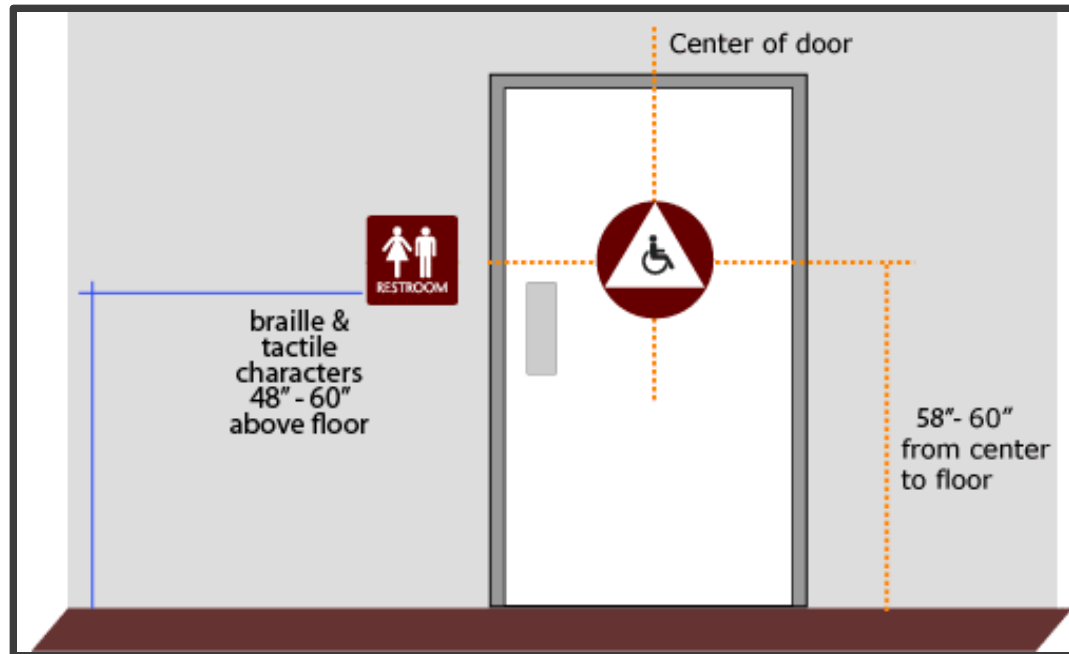
## Tactile Room Identification Wall Sign Placement



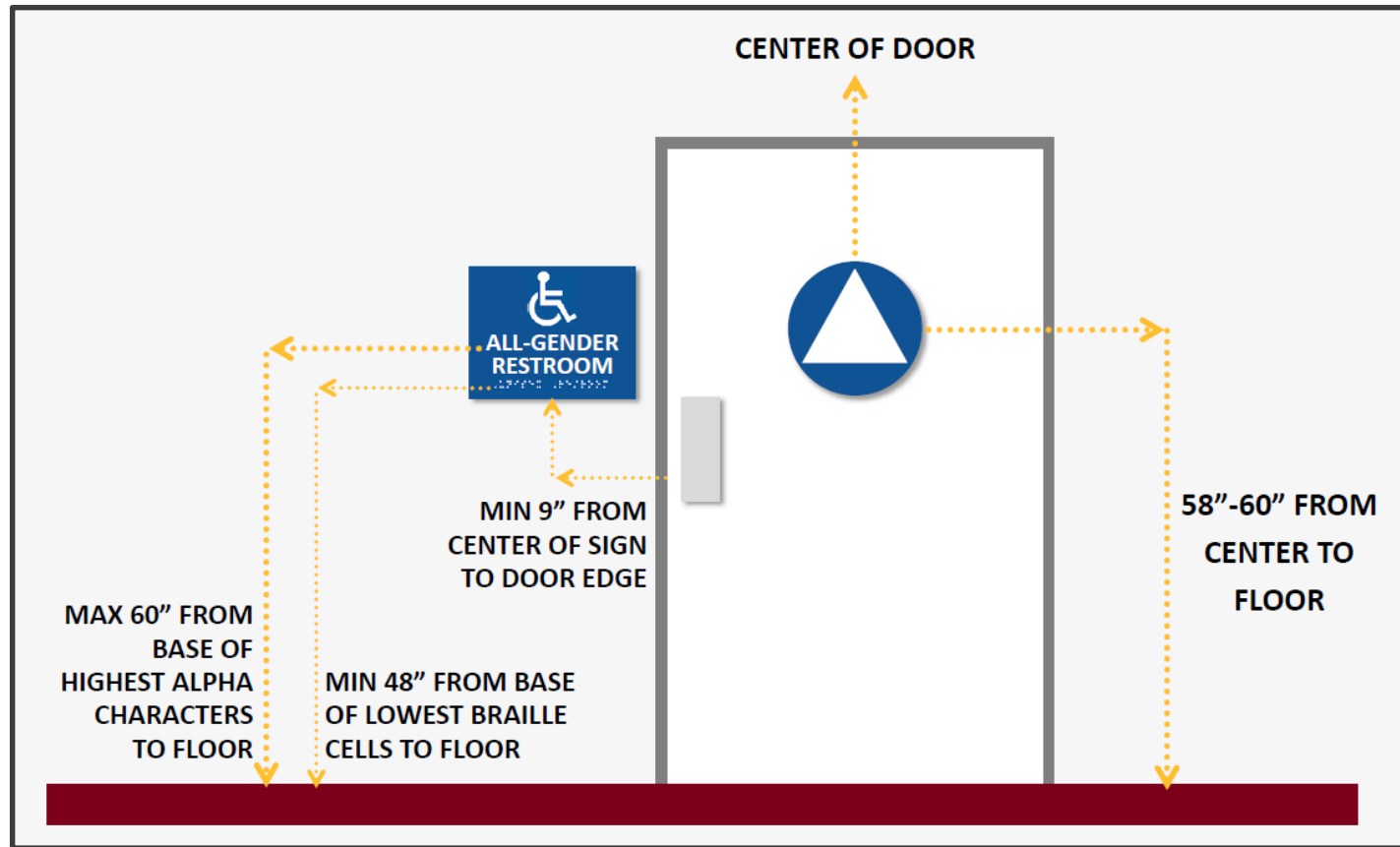
# Access Code Changes since 2010

## Restroom Door Sign Installation

- ❖ Current Standard: Min 58" to 60" centerline above ground [2013 CBC 11B-703.7.2.6]
- ❖ Prior Standard: 60" sign centerline above ground [2010 CBC 1115B.6]



# Single-user Restroom: Gender-neutral signage



- ▶ **New 2016 law** AB 1732 – Gender neutral signage in all single-user restrooms 1) Appropriate language: “Unisex Restroom” or “Restroom” are acceptable. 2) No gender pictograms 3) Add ISA if accessible

# Single-user Restroom: Gender-neutral signage



- ▶ **New 2016 law** AB 1732 – Gender neutral signage in all single-user restrooms 1) Appropriate language: “Unisex Restroom” or “Restroom” are acceptable. 2) No gender pictograms 3) Add ISA if accessible

# Access Code Changes since 2010

## Accessible Loading Zone Signage

- ❖ Current Standard: Accessible passenger loading zone signs may be used but are no longer required [2016 CBC]
- ❖ Prior Standard: Signage required immediately adjacent to loading zone with an ISA and specific language to identify as accessible [2013 11B-503.6]
- ❖ Intent – Eliminate confusion re: usage of AC loading zones by non-disabled drivers. CBC only requirement (not ADA)





# Access Code Changes since 2010

## Swimming Pool Accessible Means of Entry

- ❖ Current Standard: ADA standards added in 2010 and integrated into 2013 CBC. [2010 ADA Section 1009 /2013 CBC 11B-1009]
- ❖ Prior standard: CBC only requirement for pool lift with technical requirements [2001 CBC Section 1104B.4.3.4]
- ❖ Must have two means of accessible entry if pool has more than 300 linear pool wall – one must be lift
- ❖ Pool lifts must be able to affixed to pool deck (U.S. Dept. of Justice)



# Section 4: Real World School Campus Accessibility

Accessibility Survey



Pleasant Grove Middle School

2540 Green Valley Road  
Rescue, CA 95672

Date of Inspection  
7/24/2017

Prepared By  
**Disability Access Consultants**  
(800) 743-7067

# Facility Accessibility Survey (Transition Plan)

- ❖ Comprehensive site and facility evaluation to determine conformance with CBC and ADA accessibility standards
- ❖ ADA Title II Section 35.150(d) - Mandated for public entities with more than 50 employees (recommended for all)
- ❖ Important risk management practice
  - Beneficial supplemental information for Facilities Master Plan
  - Critical in identifying and prioritizing most significant “barrier removal” work for program accessibility

# Accessibility Survey Findings Review

- ❖ Reviewed 20 recently performed school surveys - all built since 2004.
- ❖ All surveys performed to current CBC/ADA scoping and technical building standards at time of inspection
- ❖ Number of findings: Average 200-400 depending on school size and age
- ❖ Type and severity more important than volume
  - “Technical” finding (e.g., AC parking sign hung too low)
  - “Significant” finding (e.g., insufficient space for restroom access)
- ❖ Key Take-Away: Most AC Survey findings are not related to changes in the accessibility building standards.

# DSA Plan Checks: Why Isn't It 100% Compliant?

## ❖ Some Reasons Why:

- Design technically accurate but allows little room for construction tolerance/error
- Installation errors
- Changes in condition (asphalt moving, features requiring maintenance)
- Too many details – Heavy volume of DSA work leads to emphasis on catching the big obvious accessibility issues
- Districts may not send every small project through DSA Plan Check

## ❖ Every school sued for non-conformant accessible facilities went through a DSA Plan Check

## ❖ Maintain perspective – DSA necessary part of process but stamped out plans are not a guarantee of full CBC code conformance



# Restroom Accessible Lavatory - Findings

## Restrooms - B Wing : Restroom , Lavatory

### Boys Restroom Near Room B-5 Lavatory

Restroom , Lavatory : Lavatory Knee Clearance

#### Finding

The knee clearance space under the lavatory is less than the required minimum height.

**On-Site Finding** 24.75 inches

#### Recommendation

Raise or replace the lavatory to provide the minimum required knee clearance.

**Recommendation** At least 27.00 inches

#### Costing Info (Estimated)

Provide compliant lavatory \$1,286



- ▶ Key finding issues: 1) Installation rim/counter height and below sink clearance above floor. 2) Minimum 18" clearance from wall/partition

# Restroom Accessible Lavatory - Stats

## Staff Restroom - Room 513

### Lavatory

Restroom , Lavatory : Lavatory Knee Clearance

#### Finding

The knee clearance space under the lavatory is less than the required minimum height.

**On-Site Finding** 25.25 inches

#### Recommendation

Raise or replace the lavatory to provide the minimum required knee clearance.

**Recommendation** At least 27.00 inches

#### Costing Info (Estimated)

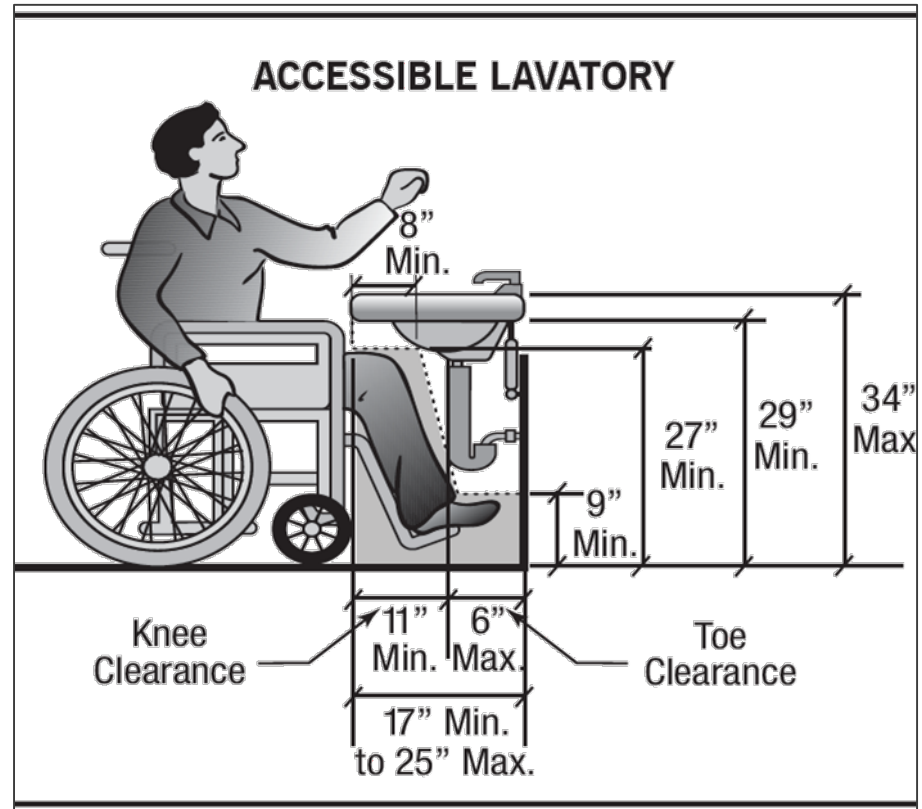
Provide compliant lavatory \$1,286



- Designated AC lavatory findings: 126
- Installation height/side wall clearance only
- One per restroom (avg. over 6 per school)
- Found in 18 of 20 schools

# Restroom Accessible Lavatory - Notes

- ❖ Must meet all three measurements
- ❖ Very narrow installation range for conformance – focus often placed on rim/counter height rather than knee clearance
- ❖ Knee clearance measured at 8" in from front edge at bottom of sink
- ❖ Remediation: Re-mount lavatory



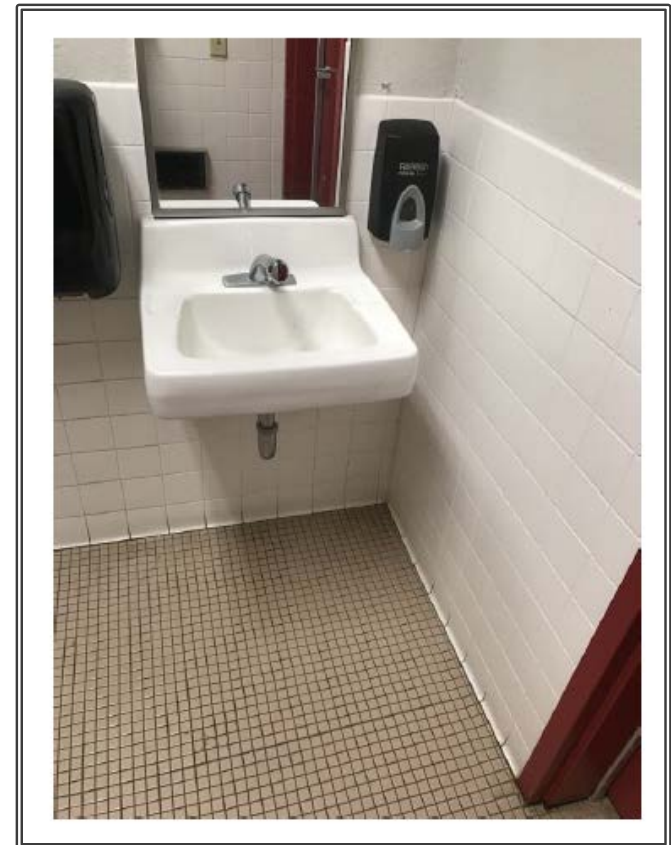
# Restroom Accessible Lavatory - Recommendations

## ❖ Field Staff/Installers

- Target lavatory rim/counter height at 33.5" to 33.75"
- When possible, target 19-20" lav centerline from wall – otherwise ensure drywall/tile taken into consideration prior to placing drain line

## ❖ Facilities/Design Review/Monitoring

- Incorporate tolerance width into your plumbing wall
- Pre-construction review with contractors
- Avoid use of overly deep sinks – verify in project spec documents
- Inspector-of-Record (IOR) or Project Manager monitoring





# Toilet and Grab Bars - Findings

## Boys Restroom

Restroom , Toilet : Toilet Distance From Wall

### Finding

The distance from the center of the toilet to the nearest side wall does not meet the required distance.

**On-Site Finding** 19.75 inches on center

### Recommendation

Relocate the toilet so the distance from the center line of the toilet to the nearest side wall meets the required distance.

Recommendation 17.00 - 18.00 inches

### Costing Info (Estimated)

Relocate fixture \$2,500



- ▶ Key finding issues: Toilet centerline, flushometer valve height relative to grab bars, toilet seat height, grab bar height and position
- ▶ Remediation: Re-mount or reinstall toilet and/or grab bars



# Toilets and Grab Bars - Stats

## Staff Mens Restroom Next To Office

### Toilet Room

Restroom , Toilet : Toilet Seat Height

#### Finding

The height of the toilet seat is not at the required height.

**On-Site Finding** 16.00 inches

#### Recommendation

Adjust or modify the toilet so the seat height is at the required accessible height.

**Recommendation** 17.00 - 19.00 inches

#### Costing Info (Estimated)

**Modify fixture** \$1,707



## Womens Restroom In Office

Restroom , Grab Bars : Distance from Back Wall to Front of Grab Bar

#### Finding

The distance from the back wall to the front of the grab bar is less than required.

**On-Site Finding** 48.75 inches

#### Recommendation

Install or move the grab bar to create the required distance from the back wall to the front of the grab bar.

**Recommendation** At least 54.00 inches

#### Costing Info (Estimated)

**Provide compliant grab bar.** \$267



- ▶ Toilet centerline or height findings: 157
- ▶ All 20 schools (range from 1 to 23 per school)
- ▶ Grab bar findings (height, extension from back wall, obstruction, missing): 123
- ▶ 18 of 20 schools (range 1 to 24 per school)

2013 CBC change –  
absolute 18" to 17-18"

Results vary each school

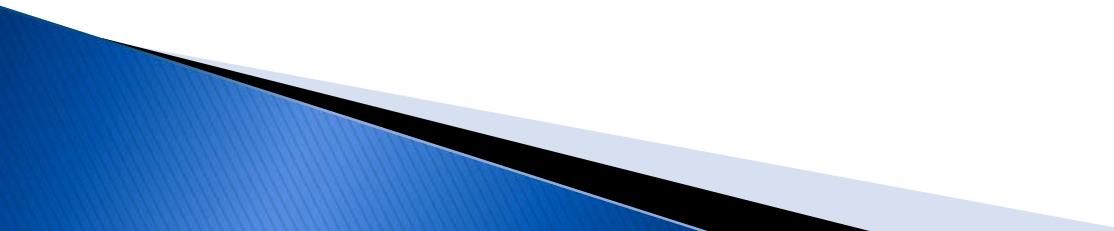
Finding repeated in many  
or all restrooms

# Toilet and Grab Bars - Recommendations

## ❖ Field Staff/Installers

- Toilet - Target 17.5" centerline incorporating wall thickness
- Coordinate and verify mountings and blocking to hit all back wall measurements: Seat height, flushometer valve height and grab bar (min. clear space 1-1/2")
- Utilize the full 33-36" grab bar height range when needed
- Back grab bar placement – about 6" from wall or use 42" length

## ❖ Facilities/Design Review/Monitoring

- Use 48" long side grab bars – not 42" (Avoid L-shaped)
  - If tank toilet used, verify height relative to grab bar
  - Early construction review to establish template for conformance
- 

# Restroom Dispenser/Element Installation

## Student Unisex Restroom in Nurse's Office

### Paper Towel

Restroom , Dispensers : Dispenser Height

#### Finding

The height of the controls and operating mechanisms for the dispenser is not at the correct height.

**On-Site Finding** 55.00 inches

#### Recommendation

Relocate the dispenser to the correct height.

**Recommendation** Up to 40.00 inches

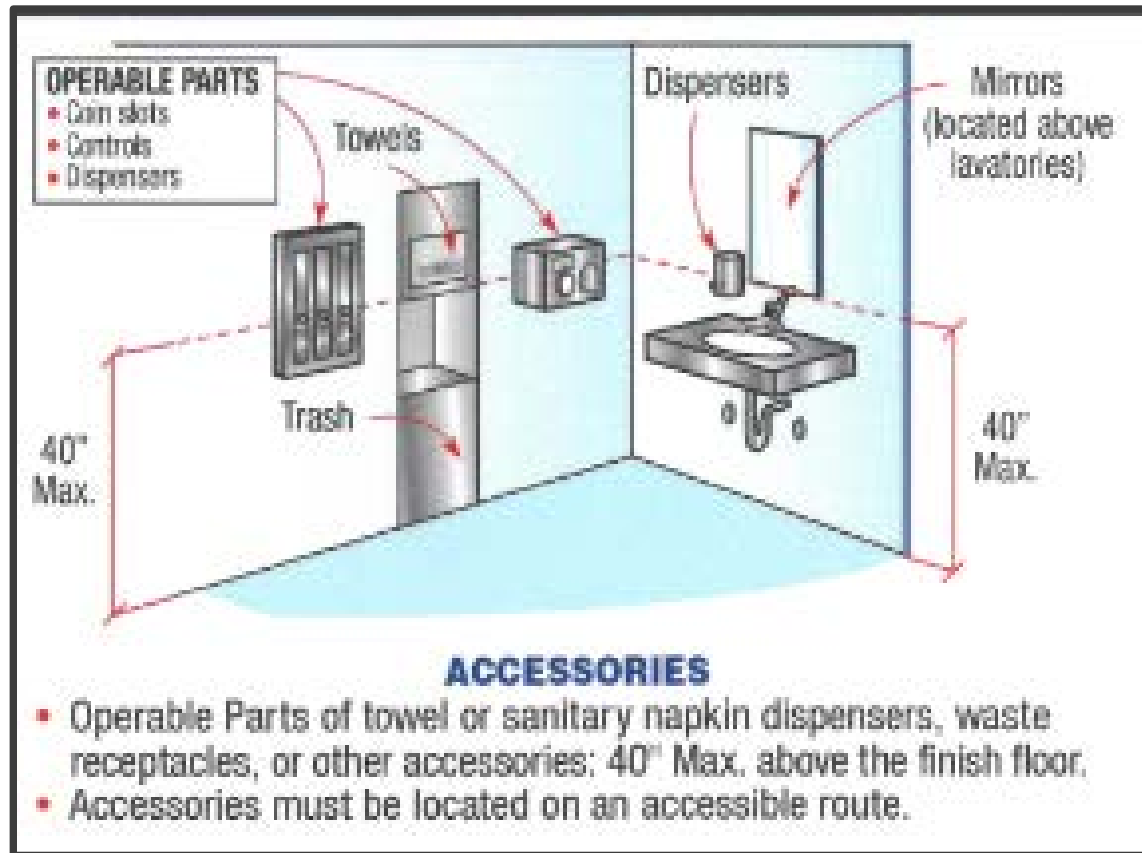
#### Costing Info (Estimated)

Provide compliant dispenser \$277



- ▶ Key finding issues: 1) Dispenser height and location, 2) Obstruction of clear floor space or accessible route 3) Accessible operable parts

# Restroom Dispenser Heights



- ▶ Key finding issues: All dispensers/elements max 40" above finished floor - one of each type of dispenser provided (Exc: Coat hooks 40-48")

# Restroom Dispensers - Location

## Staff Unisex Restroom Across From Kindergarten Play Area

Restroom , Toilet Compartment : Seat Cover Dispenser Height

### Finding

The height of the operable parts of the seat cover dispenser is greater than the allowed maximum height.

**On-Site Finding** 54.00 inches

### Recommendation

Lower the seat cover dispenser so the height of all operable parts meets the required accessible height. Make certain that the location of the seat cover dispenser does not interfere with the use of a grab bar.

**Recommendation** Up to 40.00 inches

### Costing Info (Estimated)

Provide compliant dispenser \$277



- ▶ Key finding issue: Seat cover dispensers not accessible when installed behind toilets



# Restroom Dispensers - Obstructions

## Staff Unisex Restroom Near Boys P. E. Office

### Lavatory

Restroom , Lavatory : Lavatory Clear Floor Space Width

#### Finding

There is not sufficient clear floor space provided to allow an accessible forward approach.

**On-Site Finding** 24.00 inches

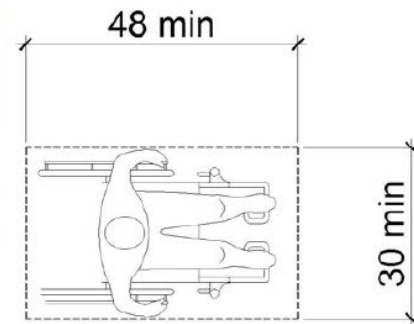
#### Recommendation

Relocate the lavatory to provide clear floor space.

**Recommendation** At least 30.00 inches

#### Costing Info (Estimated)

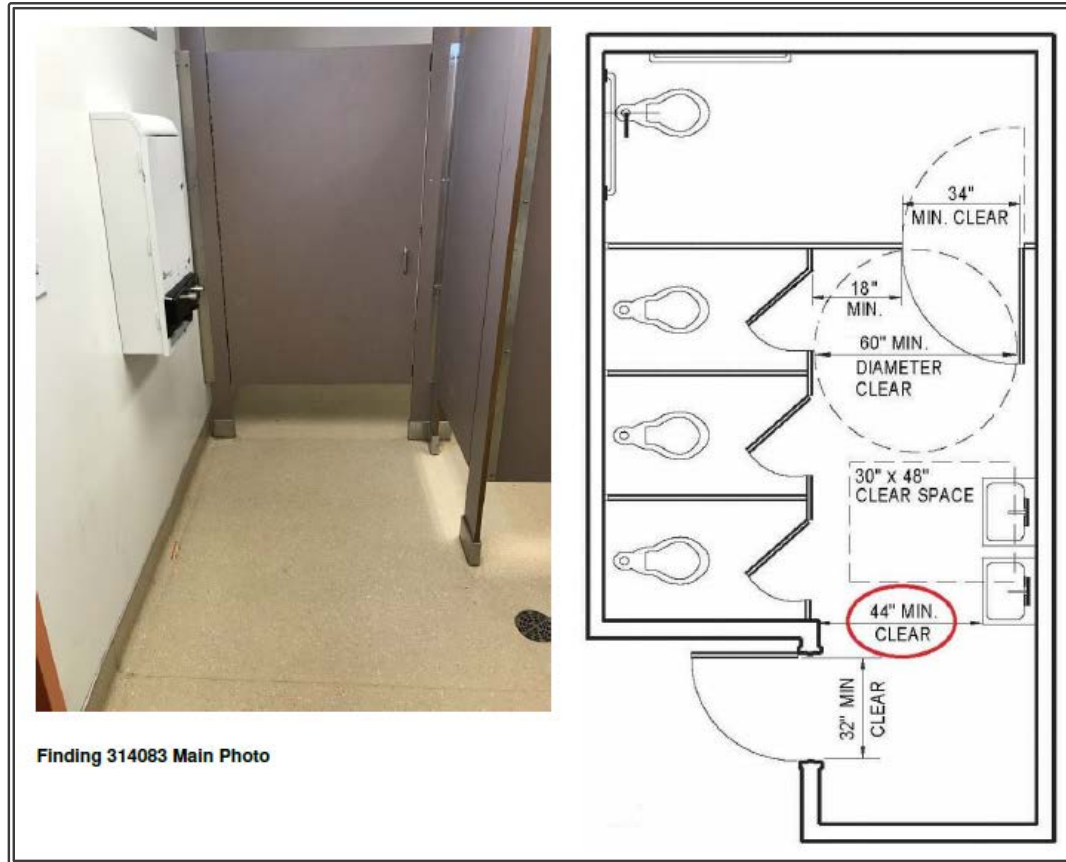
Install new sink, faucet and handles \$2,261



### Key finding issue:

- ▶ Dispenser/element placement can obstruct clear floor space or compartment door landing space
- ▶ Design review in new construction

# Restroom Dispensers - AC Route Obstruction

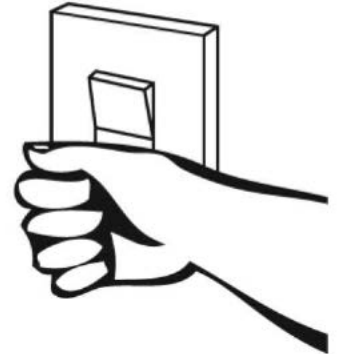


- ▶ Key finding issue: Dispenser installations can create pinch point and obstruct min 44" accessible route to toilet compartment
- ▶ **New 2017 law** AB 10 – Feminine hygiene dispenser in student restrooms

# Restroom Dispensers - Operable Parts



Finding 333738 Main Photo



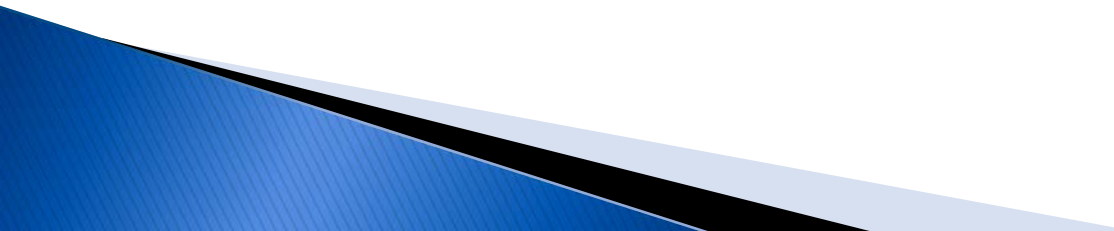
- ▶ Key issue: Dispenser operable parts – no grasping, pinching or twisting of the wrist  
Note: Operating mechanism is the “highest operable part”

# Restroom Dispenser/Element Installation Recommendations

## ❖ Field Staff/Installers

- Target 38-39" aff to highest point of operability
- Avoid placing protruding dispensers in areas which create pinch points, in front of the lavatory or toilet compartment door
- Single-user restrooms: Okay to place dispensers between toilet and sink

## ❖ Facilities/Design Review/Monitoring

- Design review dispenser placements for potential AC concerns (wall tile height, outlet placements)
  - Ensure no dispensers purchased with twist mechanism
  - Review restrooms for appropriate placement of AB 10 feminine hygiene dispensers
- 



# Restroom Clearances/Manuevering Spaces Partitions

## Girls Restroom

Restroom , Toilet Compartment : Toilet Compartment Width

### Finding

There is insufficient clear floor space in the compartment.

**On-Site Finding** 57.75 inches

### Recommendation

Modify or replace the compartment to provide adequate clear floor space.

Recommendation At least 60.00 inches

### Costing Info (Estimated)

Install accessible stall \$4,000



- ▶ Key finding issues: 1) Compartment dimensions 2) Compartment door 3) Wheelchair space obstruction



# Restroom Clearances/Manuevering Space - Stats

## Girls Restroom

Restroom , Toilet Compartment : Toilet Compartment Width

### Finding

There is insufficient clear floor space in the compartment.

**On-Site Finding** 57.75 inches

### Recommendation

Modify or replace the compartment to provide adequate clear floor space.

**Recommendation** At least 60.00 inches

### Costing Info (Estimated)

Install accessible stall \$4,000



- ▶ Multi-stall compartment restrooms requiring reconfiguration, moving or replacing partitions - 47
- ▶ 14 of 20 schools

# Restroom Clearances/Maneuvering Spaces

## Compartment Door Latch Clearance

### Girls Restroom

Restroom : Front Approach Latch Side Clearance

#### Finding

There is less than the required latch side clearance on the pull side of the door.

**On-Site Finding** 12.50 inches

#### Recommendation

Provide required latch side clearance on the pull side of the door.

**Recommendation** At least 18.00 inches

#### Costing Info (Estimated)

Provide clearance \$2,200



- ▶ All doors (including compartment doors) require a defined space outside the door swing on the latch side
- ▶ Compartment doors must automatically close (maintenance issue)

### Girls Locker Room Restroom - Room 301

Restroom : Front Approach Latch Side Clearance

#### Finding

There is less than the required latch side clearance on the pull side of the door.

**On-Site Finding** 9.00 inches

#### Recommendation

Provide required latch side clearance on the pull side of the door.

**Recommendation** At least 18.00 inches

#### Costing Info (Estimated)

Provide clearance \$2,200



# Restroom Clearances/Maneuvering Spaces

## Wheelchair Space Obstructions

### Women's Restroom - Room 118

Restroom , Toilet : Toilet Minimum Distance From Any fixture

#### Finding

The toilet is not located in a space which provides the minimum required distance from a fixture or the minimum required clear space from a wall at the wide side.

**On-Site Finding** 34.50 inches

#### Recommendation

Locate the toilet in a space which provides the required clearances.

**Recommendation** At least 42.00 inches

#### Costing Info (Estimated)

Relocate fixture \$2,500



- ▶ Key issue: Tables, furniture and garbage cans block wheelchair transfer space in accessible single-user adult restrooms

# Restroom Clearances/Maneuvering Spaces Recommendations

## ❖ Field Staff/Installers

- Partitions - Verify min. 60" clear compartment widths....add 1-2" of tolerance clearance if space allows
- Partitions – Watch out for “Fix a problem, make a problem”
- Urinals require min. 36" clear width if partitions extend more than 24"

## ❖ Facilities/Design Review/Monitoring

- Design review - Build in compartment width space tolerance in multi-user restrooms
- IOR/Project Manager monitoring
- Risk Management – Establish district policy to not allow addition of tables, furniture, etc., in adult restrooms open to the public



# Wall-mounted Dispenser/Elements

## Accessibility and Reach Range



- ▶ Key Accessibility issues: 1) Height 2) Operable parts 3) AC route and clear floor space 4) Protruding object
- ▶ *New 2018 law* AB 2009 (AED's required to be available at schools with sports programs)
- ▶ Applicable to most wall-mounted dispensers or elements: fire extinguishers, hand sanitizers
- ▶ (Note: Fire alarm boxes, electrical switches/outlets have specific requirements)



# Wall-mounted Dispenser/Elements Installation



- ▶ Reach range height: max 48" to center of cabinet handle (max 48" to top of handle recommended)
- ▶ Operable parts: C-handle on cabinet (no requirements for device)
- ▶ Accessible route: Path to and clear floor space near dispenser/element
- ▶ Not a Protruding object: Max 4" from wall within 27-80" (use semi-recessed or recessed cabinet)

# Classroom Sink Dispenser Installation



- ▶ Classroom/Staff Break Room sinks - Use 11B-308 reach range dimensions for dispensers installed over counters

# Exterior Path of Travel - Accessible Parking

## Parking Lot

### Left Accessible Space Near Kindergarten

Parking Lot , Parking Space : Parking Space Length

## Finding

The accessible parking space provided in the parking lot does not meet the minimum requirement for length.

**On-Site Finding** 192.00 inches

## Recommendation

Re-stripe the accessible parking space.

Recommendation At least 216.00 inches

## Costing Info (Estimated)

Re-stripe existing parking space \$350



- ▶ Key maintenance finding issues: 1) Level landing 2% slope 2) Striping and markings 3) Signage 4) Accessible route to building



# Accessible Parking - Stats

## Parking Lot

### Right Accessible Space Near Basketball Courts

Parking Lot , Parking Space : Parking Space Slope

#### Finding

The surface of the accessible parking space has a slope greater than allowed.

**On-Site Finding** 3.60 percent

#### Recommendation

Pave the parking lot to provide a level surface.

**Recommendation** Up to 2.08 percent

#### Costing Info (Estimated)

Repave surface to correct slope \$3,800  
and re-stripe



- ▶ Slope findings: 50% parking space/access aisle with non-conformant slope (52 of 104)
- ▶ Dimension findings: 42% parking space/access aisle with non-conformant dimensions (44 of 104)

# Accessible Parking - Enclosed

## Visitors Parking Lot Accessible Space

Parking Lot , Parking Space : Parking Space Width

### Finding

The accessible parking space does not meet the minimum requirements for width.

**On-Site Finding** 106.00 inches

### Recommendation

Re-stripe the accessible parking space.

Recommendation At least 108.00 inches

### Costing Info (Estimated)

Re-stripe existing parking space \$350



- Key finding issue : Enclosed parking space(s) with insufficient clear width dimensions
- Remediation: Remove and re-pour planter curbing



# Exterior Paths of Travel - Accessible Route

## Path Of Travel From The Public Right Of Way Off Bear Hollow Drive

### Exterior Walkway

Path Of Travel , Walking Surfaces : Walking Surface Cross Slope

#### Finding

There are cross slopes greater than allowed on the primary path of travel.

**On-Site Finding** 4.10 percent

#### Recommendation

Provide a compliant path of travel.

Recommendation Up to 2.00 percent

#### Costing Info (Estimated)

Install pathway \$3,600



## Path Of Travel To Building Entrance Next To Room 40

### Exterior Walkway

Path Of Travel , Walking Surfaces : Walking Surface Slope

#### Finding

There are slopes greater than allowed maximum slope on the primary path of travel.

**On-Site Finding** 6.30 percent

#### Recommendation

Provide a compliant path of travel.

Recommendation Up to 5.00 percent

#### Costing Info (Estimated)

Install pathway \$3,600



- ▶ Key finding issues: 1) Accessible route slope and cross slope 2) Exterior door landings 3) Expansion joint and transition changes in level 4) Obstructions and hazards

# Exterior Paths of Travel - Door Level Landing

## Library Entrance - Campus Side

### Pull Side

Door , Clear Floor Space : Floor Surface Slope

### Finding

There is no level landing at this door.

**On-Site Finding** 3.70 percent

### Recommendation

Provide a level landing.

Recommendation Up to 2.08 percent

### Costing Info (Estimated)

Correct slopes \$1,500



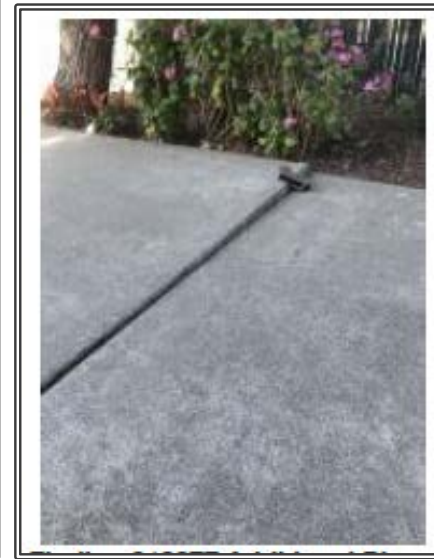
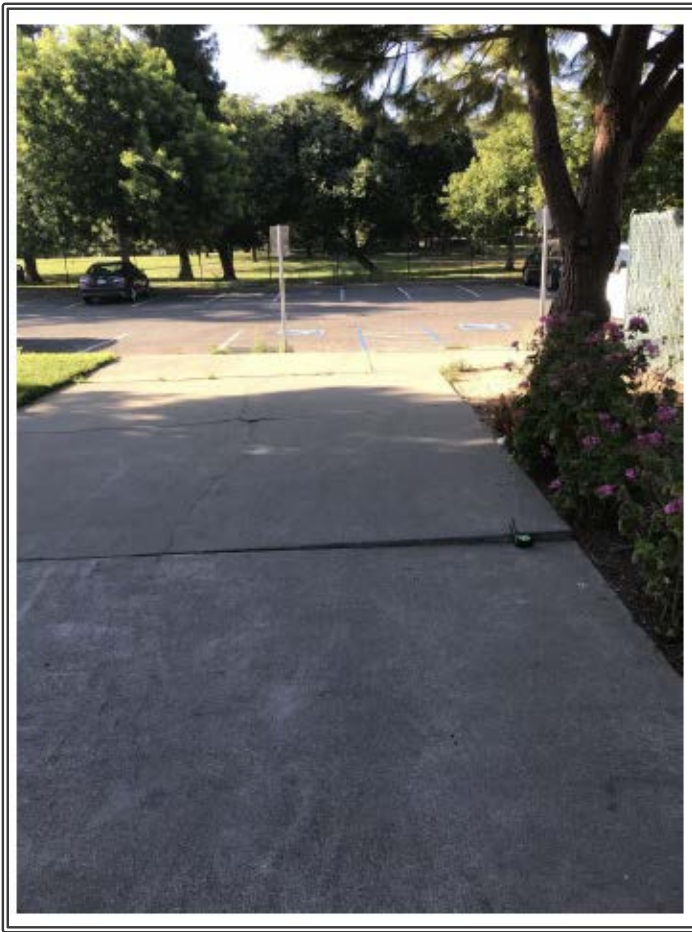
- ▶ Key finding issue: Exterior pull side door landing – max 2.0% extending min 60” including latch clearance (typical exterior classroom)

# Exterior Paths of Travel - Door Level Landing



- ▶ Key finding issue: Exterior level landing – 2% door landings must maintain 2% level landing slope min 60” out from door and latch side clearance on door pull side (typical for classrooms)

# Exterior Paths of Travel - Changes in Level



- ▶ Key safety and accessibility finding issue: 1) Expansion joint “trippers” 2) Asphalt/concrete transitions (e.g., curb ramps)



# Exterior Path of Travel - Obstructions/Hazards

## Queue Line At Snack Bar

### Exterior Walkway

Path Of Travel , Walking Surfaces : Sidewalk Width

#### Finding

The width of the path of travel is insufficient.

On-Site Finding 36.50 inches

#### Recommendation

Widen the primary path of travel to provide the correct width.

Recommendation At least 48.00 inches

#### Costing Info (Estimated)

Widen existing pathway. \$3,500



Exterior path of travel requires minimum 48" clear width throughout entire accessible route

## Path of Travel at A Wing Stairs

### Stairway Next to A Wing

Path Of Travel , Vertical Hazards : Protruding Objects - Vertical Clearance

#### Finding

The vertical clearance height is less than required.

On-Site Finding 66.50 inches

#### Recommendation

Provide recommended vertical clearance.

Recommendation At least 80.00 inches

#### Costing Info (Estimated)

Provide recommended clearance \$108



Exterior stairs can cause vertical hazards for people who are blind or visually impaired

Remedy: Bollards or rail

# Exterior Path of Travel - Obstructions/Hazards



# Exterior Path of Travel - Obstructions/Hazards



# Exterior Path of Travel - Curb Ramps

## Curb Ramp At Passenger Loading Zone Next To Main Entrance

Curb Ramp : Curb Ramp Slope

### Finding

The running slope is greater than allowed.

**On-Site Finding** 9.10 percent

### Recommendation

Provide a compliant curb ramp.

Recommendation Up to 8.33 percent

### Costing Info (Estimated)

Install curb ramp \$1,300



- ▶ Key finding issues: Running slope, top landing length and slope, side flare slopes, lack of truncated domes (older ramps)



# Curb Ramps - Stats

## Curb Ramp Next To Office

Curb Ramp : Curb Ramp Slope

### Finding

The running slope is greater than allowed.

**On-Site Finding** 9.50 percent

### Recommendation

Provide a compliant curb ramp.

Recommendation Up to 8.33 percent

### Costing Info (Estimated)

Install curb ramp \$1,300



- ▶ Curb ramps slope/x-slope findings: 39
- ▶ 16 of 20 schools
- ▶ Curb ramp landings, change in level: 21
- ▶ 7 of 20 schools

- ▶ Remediation slope finding: Remove and replace
- ▶ Remediation landings, change in level (CIL): Alteration
- ▶ CalTrans v. DRA case: \$1.1 Billion Settlement in 2010 (40 years x \$25-40 million)

# Curb Ramp - Design and Layout (1 of 2)

## Curb Ramp Near Main Entrance

Curb Ramp : Curb Ramp Slope

### Finding

The running slope is greater than allowed.

**On-Site Finding** 8.80 percent

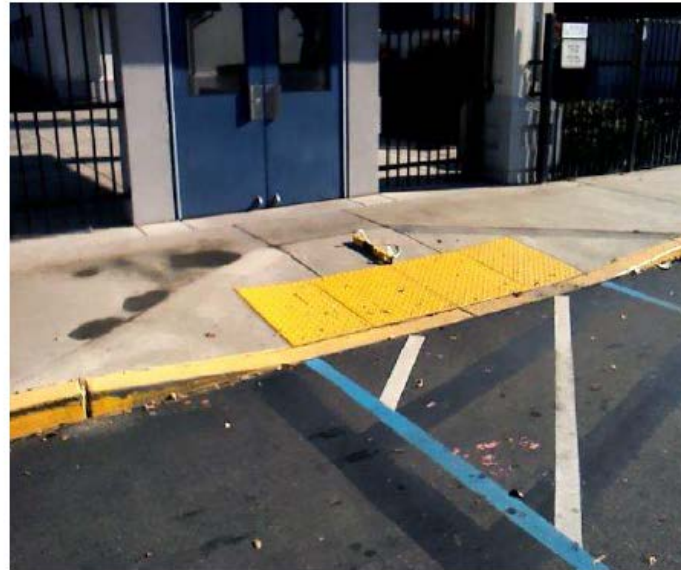
### Recommendation

Provide a compliant curb ramp.

Recommendation Up to 8.33 percent

### Costing Info (Estimated)

Install curb ramp \$1,300



- ▶ Design and layout critical to conformance
- ▶ Min. 48" top landing length and width required

# Curb Ramp - Design and Layout (2 of 2)

## Curb Ramp At Crosswalk From Accessible Parking Across From Room 5

Curb Ramp : Curb Ramp Slope

### Finding

The running slope is greater than allowed.

**On-Site Finding** 9.10 percent

### Recommendation

Provide a compliant curb ramp.

Recommendation Up to 8.33 percent

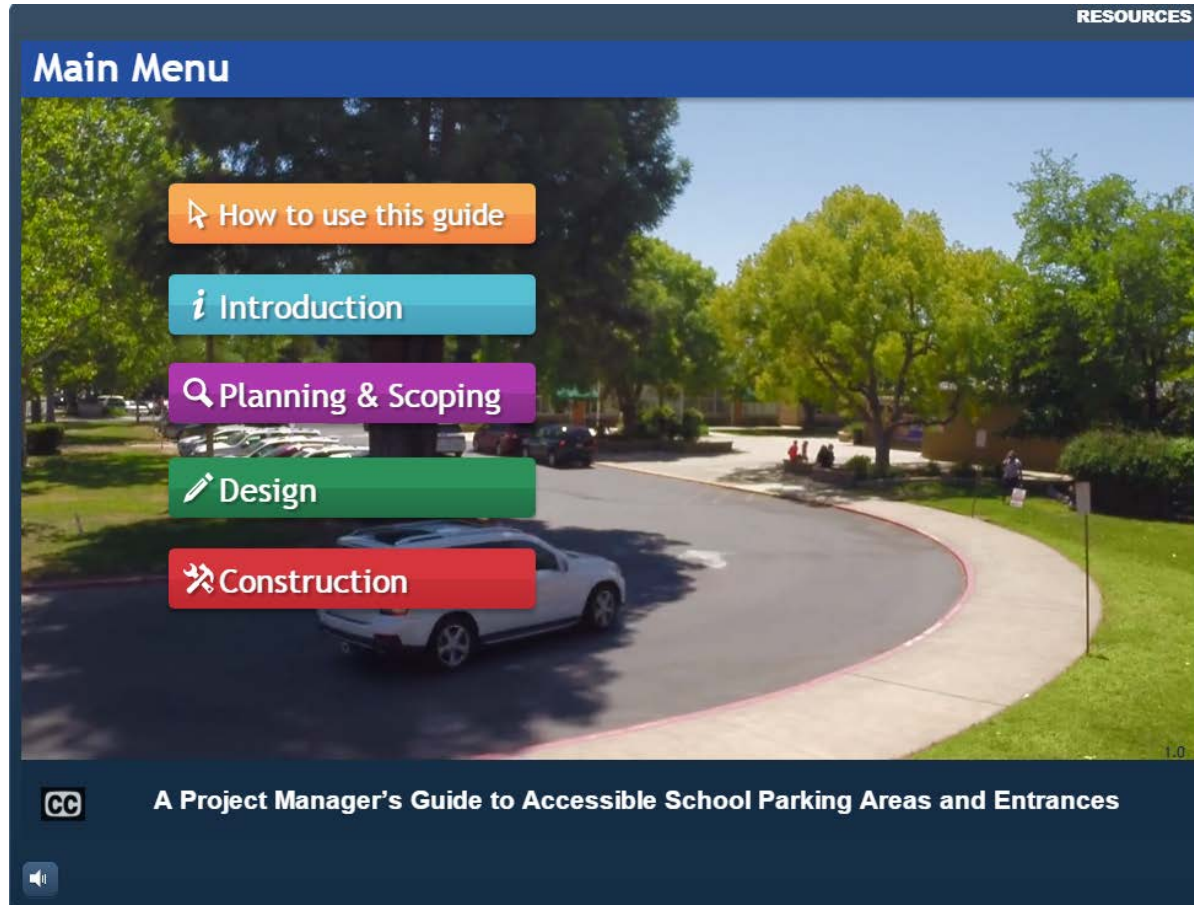
### Costing Info (Estimated)

Install curb ramp	\$1,300
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- ▶ Design and layout critical to success
- ▶ Parallel v. Perpendicular

# A Project Manager's Guide to Accessible School Parking Areas and Entrances



[http://www.sia-jpa.org/storyline-360/project-managers-guide-program/story\\_html5.html](http://www.sia-jpa.org/storyline-360/project-managers-guide-program/story_html5.html)



# Project Manager's Guide Online Training Program

- ▶ Online accessibility training available on SIA website – Up-to-date and current information
- ▶ Over 90 minutes of material
- ▶ Individual topic chapters, code citations, resource documents encourage repeated use as reference guide
- ▶ Four separate programs based on project phase – 20-25 minutes each individual or group training



# Project Manager's Guide

- ❖ Show P&S Chapter 7 and first example scene  
Chapter 8
- ❖ Show P&S Chapter 9 – AC Van spaces
- ❖ Show P&S Chapter 13 – Conditions affecting  
accessible route
- ❖ Show Design Chapter 7 – Avoid designing to limits  
of accessible standards

# Design Chapter 8

## Curb Ramp and Walkways



# Planning & Scoping Chapter 11

## Multiple Main Entrances





# Planning & Scoping Chapter 16

## Accessible Parking Dimensional Requirements



# Planning & Scoping Chapter 13

## Conditions Affecting the AC Route



# Design Chapter 8

## Curb Ramps and Walkways



# Section 5: Play Area Accessibility



# Play Area Accessibility

## 2010 ADA Revised Standards

- ❖ 2010 ADA Standards - New play area requirements (Sections 240 and 1008) – incorporated into 2013 CBC
- ❖ Safe Harbor – Not applicable to Play Areas
- ❖ Existing play areas should be evaluated for severity of accessibility concerns impacting program accessibility
- ❖ New play area construction – requires CPSI audit inspection which should also include ADA/CBC conformance evaluation



# Play Area Accessibility Inspection

## Four Main Elements

- ❖ AC route to the play area (grass and direct are not considered accessible)
- ❖ AC route entrance into and throughout the play area (transition into the play box and to play elements)
- ❖ Transfer platform onto elevated play equipment (11-18" high platform on composite structures)
- ❖ Sufficient number of accessible “ground” level play activities compared to “elevated” play components.

# Play Area Accessibility Maintenance v. Alteration

- ❖ Maintenance – does not specifically trigger accessibility update work
  - Replacing worn out parts for safety
  - Topping off engineered wood fiber (EWF)
  - Replacing failing equipment with identical item
  
- ❖ Alteration – does trigger accessibility updating
  - Adding any new equipment to the play box
  - Renovation after damage from graffiti, vandalism, arson fire
  - Replacing failing equipment with new item
  - Any work that impacts “usability” of the play area

# Play Area Accessibility

## No Entrance into Play Box

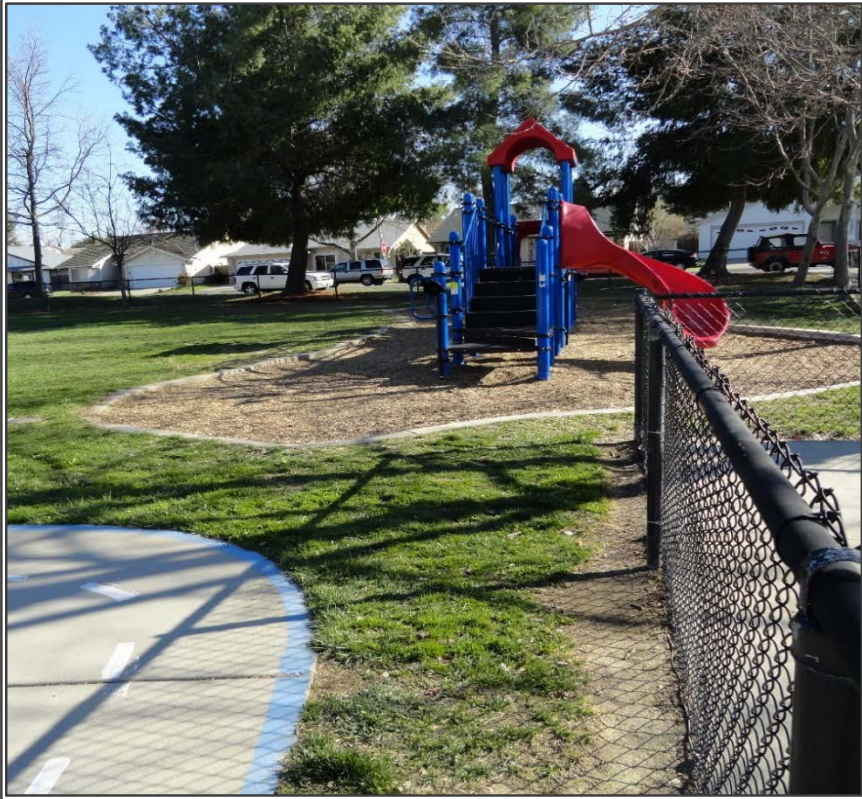


- ▶ Key finding: No opening into bordered play box



# Play Area Accessibility

## No Accessible Route to Play Box (1 of 2)



- ▶ Key finding: Play area in grass or dirt field with no accessible route leading to the play box boundary



# Play Area Accessibility

## Accessible Route Into Play Box (1 of 2)



- ▶ Key finding issue: Ensure entrances meeting accessible route requirements



# Play Area Accessibility

## Accessible Entrance into Play Box (2 of 2)

- ❖ Play area entrance into play box requirements:
  - Min. 60" clear width
  - Sloped entry – max 5.0% run slope, 2.0% cross slope
    - Walkway not a ramp
  - No vertical change in level greater than  $\frac{1}{4}$ "
    - May require short transition ramp into play box to account for EWF settling/compacting
  - Min 80" vertical clearance

# Engineered Wood Fiber (EWF) Installation and Maintenance

- ❖ EWF still designated as accessible play area fall material option....BUT
- ❖ Request ASTM F1292 (impact attenuation) and ASTM F1951 (accessibility) conformance certification
- ❖ Request and follow EWF manufacturer installation instructions
- ❖ International Play Equipment Manufacturer's Association (IPEMA) guidance recommends layered compaction rather than blowing in material as standard operating procedure  
[http://ipema.wpengine.com/wp-content/uploads/2017/02/EWF\\_Position\\_Statement.pdf](http://ipema.wpengine.com/wp-content/uploads/2017/02/EWF_Position_Statement.pdf)

# Accessible Ground Level Play Components

- ❖ What are they? - Play activity that is approached and exited at ground level





# Accessible Ground Level Activities

- ❖ Specific number and type required (Table 240.2.1.2) based on number of elevated activities
- ❖ Ground activity must have accessible route, clear floor space, min 80" vertical clearance and within reach range
- ❖ Can often be added onto existing equipment





**THANK YOU FOR  
LISTENING**

**ANY QUESTIONS?**

