



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 15-20 Technical Advisory

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TO: All Design, Operations, and District Personnel, and Consultants

FROM: /s/John E. Wright
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SUBJECT: Curb Ramp Plan Details

REVISES: *Indiana Design Manual* Sections 51-1.04 through 51-1.08

EFFECTIVE: Stage 3 Submission on or after November 4, 2015

During field audits by FHWA and the Department's Title VI Program, several non-compliant curb ramps, landings, and sidewalks have been identified. Non-compliant elements must be partially or completely removed and replaced, except when achieving compliance is determined to be technically infeasible. See *Indiana Design Manual* (IDM) Section 40-8.04(01) for determining technical infeasibility.

Review of field audits has identified that additional plan detailing is needed for curb ramps, especially when project conditions are not ideal. Cross slope, running slope, placement of detectable warning elements, and landing areas have been of particular concern.

Designers should no longer call out a curb ramp solely by type on the plans. The Sidewalk Curb Ramp *Standard Drawings* represent ideal conditions, e.g. sufficient right of way, lack of obstructions, and level terrain. However, the majority of project conditions are not ideal. Each project with a curb ramp, landing or sidewalk should include sufficient plan details to construct the elements in compliance with the *Americans with Disabilities Act* (ADA). This level of detail will also provide sufficient information during the Level One review. The plan detailing requirements for curb ramp retrofits, reconstruction, and new construction are discussed below.

ADAAG vs. PROWAG

The IDM and *Standard Drawings* reflect the *Americans with Disabilities Act Accessibility Guidelines* (ADAAG) and are currently being revised to reflect the *Public Rights-of-Way Accessibility Guidelines* (PROWAG). The PROWAG accounts for conditions unique to facilities within the public right of way and is considered best practice. The PROWAG was used to develop the Department's ADA transition plan and should be used as the basis for identifying the required curb ramp, landing (turning space), and sidewalk dimensions and slopes.

While much is unchanged from the ADAAG to the PROWAG, the items listed below represent notable differences.

1. The minimum width of a curb ramp, landing, or sidewalk, is 4 feet. A 3-ft pinch point is not acceptable.
2. The grade (running slope) of the sidewalk may match the adjacent roadway profile grade.
3. A sidewalk adjacent to a roadway does not require a landing area or handrail, regardless of the roadway grade.
4. The maximum cross slope is 2.00%. There is no construction tolerance for cross slope. See the PROWAG for exceptions to cross slope requirements.
5. The maximum ramp running slope is 8.33%. There is no construction tolerance for running slope. A running slope of 10% for a 6-in. rise is not acceptable.
6. Detectable warning elements must extend the full width of the ramp. Where forming is required, a 2-in. maximum border width may be provided.
7. A landing area (turning space) must be provided at the top of each perpendicular curb ramp and the bottom of each parallel curb ramp. Ramp types A, B, C, D, E, and L are perpendicular ramps. Ramp types F and K are parallel ramps. Ramp types G and H are defined as one-way-directional perpendicular ramps, but do not require a landing area because a change in direction at the top of the ramp is not required. The minimum dimensions of the landing area are 4 ft x 4 ft. Where the landing area is constrained by a curb or other feature the minimum dimensions are 4 ft x 5 ft, with the 5-ft dimension in the direction of travel.

IDM Revisions

The applicable sections of the IDM have been revised and are an attachment to this memo. Due to forthcoming restructuring of the IDM accessibility guidance, these revisions will be incorporated into the on-line version of the IDM at a later date.

Plan Detailing

The following guidelines should be used to determine the extent of plan detailing required.

Retrofits and Reconstruction

Each curb ramp, landing, and sidewalk to be retrofit into an existing facility (e.g. a sidewalk that does not have a curb ramp) or reconstructed (e.g. an existing non-compliant curb ramp) should be detailed as follows:

- **Plan Views.** Lines representing the curb ramp, landing and sidewalk should be shown in plan view over existing survey or an aerial image.
- **Spot Elevations.** Elevations at the top and bottom of the curb ramp, each side of the landing (4 total) and each side of the sidewalk should be tabulated or detailed.
- **Dimensions.** Lengths and widths for each curb ramp, landing and sidewalk should be tabulated or detailed.
- **Slopes.** Running slopes and cross slopes for each curb ramp, landing and sidewalk should be tabulated or detailed.

New Construction

For new construction a compliant curb ramp, landing and sidewalk can be detailed by calling out a standard curb ramp type and sidewalk as part of a typical cross section. New construction assumes a new alignment or significant modification to an existing cross section and adequate right of way. Areas that fall outside the typical cross section (e.g. where the beginning and end of the project tie into an existing cross section) should be detailed as described for retrofits and reconstruction.

Standard Specifications Revisions

Revisions to Section 604 of the *Standard Specifications* are required to incorporate the PROWAG guidance. Until a recurring special provision is available from the Recurring Special Provisions Menu, designers should incorporate the unique special provision (USP) *Curb Ramps, Landings, and Detectable Warning Elements* into each contract with a curb ramp, sidewalk or detectable warning element. This guidance applies equally to contracts that fall outside the effective date of this memo. The USP is available on the Department's [Unique Special Provisions Samples Index](#).

Questions

Questions regarding curb ramp, landing and sidewalk details should be directed to John Wright, Director of Highway Design and Technical Support, via email at jwright@indot.in.gov.