



MEMORANDUM

TO: TRANSPORTATION COMMISSION
FROM: JOSH LAIPPLY, CHIEF ENGINEER
DATE: MAY 10, 2016
SUBJECT: ADA TITLE II (CURB RAMPS)

Purpose

Members of CDOT's Executive Management Team (EMT) have expressed a strong desire to be more aggressive and move forward with a strategic and programmatic approach that addresses non-compliant curb ramps that are not scheduled to be addressed through regular project delivery. This memo provides background information related to ADA Title II (curb ramps) to inform the Transportation Commission of the estimated funding to become federally compliant. The primary purpose of the requested funds is to attain full compliance with the ADA Title II federal laws in the next five years (see Figure 1 on next page).

Action

Information Only

Background & Details

The landmark Americans with Disabilities Act (ADA), enacted on July 26, 1990, provides comprehensive civil rights protections to persons with disabilities in the areas of employment, state and local government services, and accessibility to public accommodations, transportation, and telecommunications. The ADA is a companion civil rights legislation to Section 504 of the Rehabilitation Act of 1973. This legislation mandates that qualified individuals with disabilities shall not be excluded from participation in, denied the benefit of, or be subjected to discrimination under any program or activity.

For CDOT and its sub-recipients, the services or activities are any that are transportation-related. These can include but are not limited to: roadways, contiguous walkways, intersections, rest areas, roadside emergency telephones, public conveyances such as buses and light rail, and literature related to any of these.

FHWA is currently requiring an update to CDOT's ADA Transition Plan. This plan is required by the Department of Justice 28 CFR Section 35.150(d) and the Department of Transportation regulations, 49 CFR Section 27.11 to address critical aspects of pedestrian accessibility predominantly through the following two mechanisms:

1. A curb ramp inventory of CDOT's existing pedestrian facilities that identifies non-compliant facilities and if compliance is obtainable.
2. A schedule for taking the steps necessary to achieve compliance with ADA requirements and identify specific steps that will be taken during each year of the transition period.

In 2013 CDOT collected existing geometrics for 19,632 curb ramps statewide. This included thirty-two to forty attributes (surrounding "footprint" around the curb ramp that may affect the access to and/or through the curb ramp). In addition to the gathering of data, CDOT must adhere to the minimum ADA legal requirements set forth in 1990 as well as select an ADA design standard to conform with. CDOT has selected the Public Right-of-Way Accessibility Guidelines (PROWAG) due to the number of options it provides design engineers to accommodate the unique terrain of Colorado. Also, FHWA has identified PROWAG as a national best practice. The query below was pulled from the data collected from "ArcGIS Data



2013" and currently shows CDOT having achieved 13% compliance with the PROWAG standards that are based on the ADA requirements that became law in 1990.

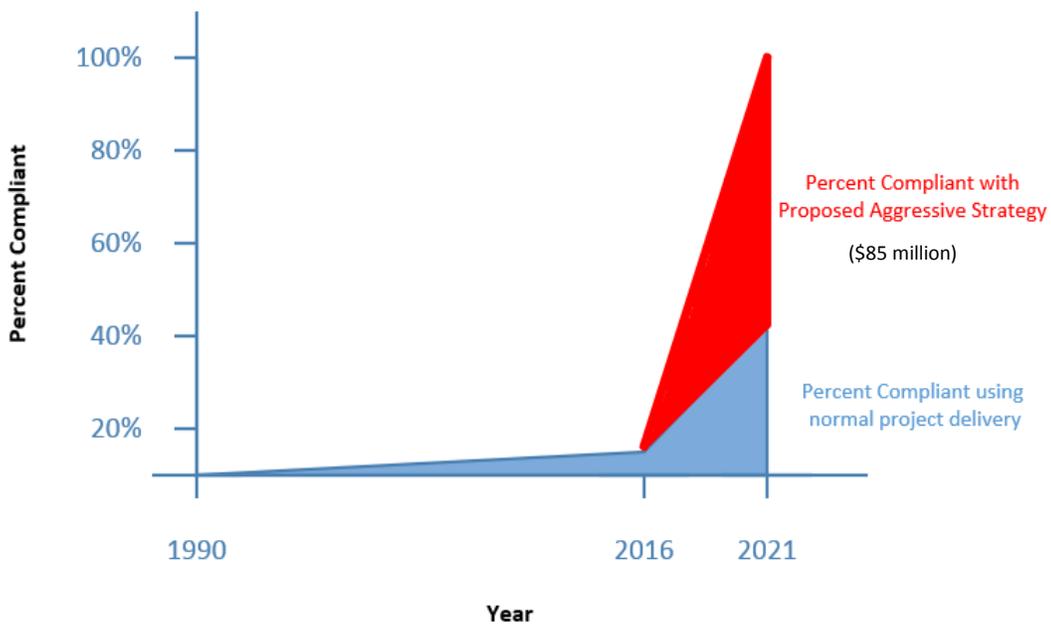
Curb Ramp results from above PROWAG elements:

- # of compliant curb ramps = 2,616 (13%)
- # of non-compliant curb ramps = 17,016

The Project Management Office (PMO) utilized CDOT's 4-year project list and the Division of Transportation Development (DTD) has been able to overlay that information with the ArcGIS database to determine the number of curb ramps that will be touched by scheduled CDOT projects over the next 4 years to be 5,556. If each of those curb ramps are currently non-compliant, and are then brought into compliance through CDOT's normal program(s), the total number of PROWAG-compliant curb ramps would increase to: 8,172 which would total 42%.

The typical cost to upgrade curb ramps can range from \$5,000-\$9,500. The estimated cost for CDOT to become ADA compliant on the remaining 58% of ramps not scheduled to be addressed through normal program delivery: \$57 million - \$108 million. CDOT's plan is targeting a 5 year implementation with \$85M (see Figure 1 below).

Figure 1



CDOT estimates the following funding allocations will be needed for compliance:

1. FY 2015-2016: \$10 million from available funding for statewide contract for design services
 - Develop scope of work and select design consultant to identify/obtain: further analysis and evaluation of existing inventory including alignment with curb ramp location priorities (Levels 1-3), process for prioritization, and identification of right-of-way, historic clearance, environmental clearance, and surveying.



- Consultant will also be responsible for designing curb ramps to adhere to updated CDOT standards and specifications based on PROWAG guidance.
 - The first task order of the contract will focus in the Denver-Metro Area (Region 1) and will act as a pilot to refine the program prior to statewide rollout.
2. FY 2016-2017: \$10 million from available funding for construction services
 3. FY 2017-2018: \$20 million from available funding for construction services
 - Information will be distributed to CDOT Region staff to collaborate on regional strategies for construction. This phase will be further detailed as the design phase progresses. This phase will include the identification of an asset manager, process for distributing funds, as well as a curb ramp upgrading schedule. A large majority of design services should be utilized at this point which should prepare CDOT for peak construction services.
 4. FY 2018-2019, FY 2019-2020 and FY 2020-2021: \$15 million annually from available funding for construction services
 - Continued construction projects to ensure conformance with PROWAG standards

Anticipated Expenditures of Funding by Fiscal Year							
	FY 2015-2016	FY 2016-2017	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	Total Projected Funding Required
Design Services	\$5 million	\$3 million	\$2 million	N/A	N/A	N/A	\$10 million
Construction Services	N/A	\$10 million	\$20 million	\$15 million	\$15 million	\$15 million	\$75 million
Total	\$5 million	\$13 million	\$22 million	\$15 million	\$15 million	\$15 million	\$85 million

Key Benefits

CDOT believes that the prioritization methodology and schedule for upgrading curb ramps to be essential to the success of its ADA Transition Plan. In addition to upgrading curb ramps through regular program delivery, by taking the aggressive approach of committing an average of \$15 million per year of dedicated funding toward curb ramp upgrading to achieve ADA compliance within five years, CDOT will be in position to leverage the following efficiencies:

- In partnership with FHWA, projects that are completed by CDOT’s internal maintenance staff (including resurfacing projects) will not be formally required to address curb ramps if it can be shown that they are being more effectively addressed via the five year strategy outlined above. This is a huge benefit to our maintenance staff as they currently have to address every ramp they encounter on even minor maintenance activities.
- The five year programmatic approach allows for a more holistic and effective methodology to upgrading curb ramps that will lead to obtaining full compliance much faster (i.e., a business as usual approach has achieved 13% conformance with PROWAG standards based on the ADA requirements of 1990).
- This innovative strategy directly supports the current Executive Management vision of becoming the best DOT in the nation by aggressively addressing the need to become compliant with the ADA regulation and law.

Attachments

SOW NPS Curb Ramps



**NON-PROJECT / NON-TASK SPECIFIC CURB RAMP SCOPE OF WORK –
Colorado Department of Transportation Headquarters and Regions 1 through 5**

CONTRACT ADMINISTRATION:

REGION TRANSPORTATION DIRECTOR: PAUL JESAITIS COLORADO DEPARTMENT OF
TRANSPORTATION REGION 1 2000 S. HOLLY DENVER, CO
80222

REGION TRANSPORTATION DIRECTOR: KAREN ROWE COLORADO DEPARTMENT OF
TRANSPORTATION REGION 2 905 ERIE AVENUE, PUEBLO,
COLORADO 81001

REGION TRANSPORTATION DIRECTOR: DAVE ELLER COLORADO DEPARTMENT OF
TRANSPORTATION REGION 3 222 SOUTH SIXTH STREET,
GRAND JUNCTION, CO 81501

REGION TRANSPORTATION DIRECTOR: JOHNNY OLSON COLORADO DEPARTMENT
OF TRANSPORTATION REGION 4 1420 2ND STREET GREELEY,
COLORADO 80631

REGION TRANSPORTATION DIRECTOR: KERRIE NEET COLORADO DEPARTMENT OF
TRANSPORTATION REGION 5 3803 NORTH MAIN AVE.
DURANGO, CO 81301

DIRECTOR OF STAFF SERVICES SCOTT MCDANIEL COLORADO DEPARTMENT OF
TRANSPORTATION HEADQUARTERS 4201 EAST ARKANSAS,
DENVER, CO 80222

General administration of this contract will be delegated to the respective Region Program Engineer involved with this consultant selection process. Active day to day administration and monitoring of contract task orders will be delegated to the Region(s) Resident Engineers responsible for the work described within each task order. Some of these services must be provided under the direct supervision of a Colorado-licensed Professional Engineer (PE) or Professional Land Surveyor (PLS).

Type of work may include all or parts of the following activities:

- A. General Engineering Services -The scope for general engineering services may include but shall not necessarily be limited to: Provide conceptual drawings, graphs, data collection, or charts for the Region's planning, environmental, or other units as needed.
 - a. Conduct or update studies for curb ramp compliance, transportation, environmental, NEPA etc.
 - b. Provide support for region planning activities, including prioritizing/scheduling which curb ramps get upgrade when, including assistance with public meetings and/or public information including handouts, website support or development, and public meeting presentations.
 - c. Provide drafting support or CADD services. All CADD work for CDOT will be conducted using Bentley products including Microstation, Inroads Software, and ProjectWise latest versions used by CDOT.

- d. Provide support research or search county, state or other areas for records or documents relevant to the project or task. This includes right of way documentation.
 - e. Provide scoping services.
 - f. Provide scheduling in MS Project or other scheduling software as requested.
 - g. Provide funding guidance and or support including grant applications.
 - h. Prepare, provide support, coordinate Innovative Contracting documents or supporting information.
 - i. Provide Program Management support and/or financial planning as requested.
 - j. Provide support, preparation, or guidance for Grant Applications including economic analysis.
 - k. Write, review, and/or provide guidance or expertise related to manual preparation or guidance documents.
 - l. Provide/prepare training, advice, or guidance as requested.
 - m. Provide or acquire design services as required to complete tasks not specifically defined in the outline, but that may be required by specific task order.
 - n. Provide Independent Cost Estimates
 - o. Provide Constructability Reviews
- B. Roadway Design Activities -The scope of work for roadway design activities may include:
- a. Provide design services including quantity calculations for the various components of roadway construction, which could include curb ramps, pedestrian movements, and relocation of utilities, traffic signals, and pedestrian signals.
 - b. Conduct plan, specification, and cost estimate checking and/or quality control.
 - c. Furnish detailing and drafting services utilizing MicroStation and Inroads Software, latest CDOT adopted versions utilizing CDOT format. Other software products required for design services and communication of information are Microsoft Office products such as Word, Excel, Power Point. In addition Project Wise. Sharepoint, or FTP sites may be required for file sharing. Other formats or software products may be required for specific tasks such as traffic modeling or truck turning movements.
 - d. Attend and/or conduct meetings as needed such as scoping reviews, design office reviews, field inspection reviews, and final office reviews and provide minutes as appropriate.
 - e. Prepare (PS&E Package) final plans, specifications and provide the CDOT project manager with detailed estimates that can be entered into CDOT Transport application system at any point in the project.
 - f. Prepare revisions under-advertisement to plans or specifications when necessary.
- C. Hydrology Activities -The scope of work for the hydrology activities may include:
- a. Collect historical drainage data.
 - b. Establish drainage basin data.
 - c. Select run-off parameters and predict peak flow.
- D. Hydraulics Design Activities -The scope of work for hydraulics design activities may include:
- a. Furnish the size and location of drainage structures.

- b. Furnish storm sewer design.
 - c. Furnish erosion protection design and NPDES requirements.
 - d. Furnish design and quantity calculations for drainage structures including irrigation and permanent BMP's for surface drainage.
 - e. Design of water and waste water systems.
 - f. Irrigation system designs including, but not limited to, typical ditches, traveling gun irrigation systems and other center pivot systems.
 - g. Design, advise, or plan for MS4 compliant facilities and calculations and/or plan preparation as needed.
 - h. FEMA Flood Mapping Revisions and Amendments
- E. Traffic Engineering Activities -The scope of work for traffic engineering activities may include:
- a. Perform in-field inventories of traffic control device locations and conditions (existing and what is needed to be fully in compliance with ADA requirements).
 - b. Furnish design and quantity calculations necessary to prepare signal, signing or pavement marking plans.
 - c. Furnish detailing and drafting services.
 - d. Attend meetings such as field inspection and final office review or others as requested.
 - e. Prepare construction signing plans and schedules.
 - f. Prepare final plans and specifications.
- F. Landscape Architectural Activities -The scope of work for landscape architectural activities may include:
- a. Coordinate all special permits that may be required.
 - b. Coordinate ROW requirements.
 - c. Prepare Storm Water Management Plan (SWMP) Sheets with BMP locations and quantity calculations for each phase of construction.
- G. Materials and Geotechnical Services for Design -The scope of work for design services may include:
- a. Material Design for constructing curb ramps and associated intersection items including: Signal poles (traffic and pedestrian)
- H. Environmental Services -The scope of work for environmental services may include:
- a. Review environmental conditions, determine required permits.
 - b. Prepare and/or review environmental documents for CDOT projects.
 - c. Conduct and prepare environmental surveys and clearance reports.
- I. Utility Services -The scope of work for Utility Services may include:
- a. Survey/Research existing utilities.
 - b. Map existing and relocated utilities
 - c. Assist or facilitate utility agreements
 - d. Coordinate and discuss utility impacts with utility companies
 - e. Prepare exhibits or other support as needed for utilities

- K.. Right of Way/Surveying -The scope of work for surveying activities may include:
 - a. Obtain Right of Entry if needed
 - b. Perform surveys related to the horizontal and vertical alignment of the project.
 - c. Perform GPS control survey.
 - d. Perform topographical surveys.
 - e. Perform cross section surveys.
 - f. Perform utility surveys (includes potholing).
 - g. Perform wetland survey.
 - h. Prepare project control diagram.
 - i. Perform LIDAR surveys.

- O. Photogrammetric Mapping

- P. Right-of-Way Plan Preparation -The scope for right-of-way plan preparation may include:
 - a. Retrieve ownership/Title commitments as needed
 - b. Determine parcels.
 - c. Write parcel legal descriptions.
 - d. Determine parcel size.
 - e. Prepare R.O.W. plan tabulation sheet.
 - f. Prepare R.O.W. plan sheets.
 - g. Prepare monument tabulation sheets.
 - h. Prepare land survey control diagram.
 - i. Prepare total ownership maps.

- Q. Other Services -As requested by the Regions and specified in the task orders other services not specified above may be requested on an as needed basis. The scope of work for these services will include the details of the needs.