City of Glenwood Springs Transportation Commission
Bicycle-Pedestrian Subcommittee

March 8, 2022 8:00 AM

City Hall, Engineering Conference Room (2nd Floor)

i. Bicycle and pedestrian infrastructure design standards and guidelines, potential revisions, and clarifications

ii. Bicycle and pedestrian network, gaps, and review

Updating and clarifying city engineering design standards
bicycle and pedestrian facilities March 2022
for 3/8 initial review by Transportation Commission Bicycle-Ped Subcommittee

Engineering standards for various public works projects and contracts are described in city document *Engineering Design Standards*, approved/last updated by city council August 2, 2018.

In general and as basic standard, the city adheres to provisions of the *Manual of Uniform Traffic Control Devices* (MUTCD), a) for consistency and b) often required for projects using federal or state funding.

Additional guidance's are available from *Federal Highway Administration* (FHWA) publications, from *American Association of State Highway and Transportation Officials* (AASHTO), and from *Colorado Department of Transportation* (CDOT). Guides and standards from these sources generally are consistent with MUTCD or, in some cases, provide more detail. Additional insights come from certain states' standards, particularly Massachusetts and Washington.

Crosswalks

Proposal

• minimum width 8 feet, or wider to match width of connecting sidewalks or multi-use paths

• pavement markings with piano-keys/zebra-stripes format, marking-to-bare-pavement ratio 1:1

- possible exception using colored concrete, allowed only at signalized intersections, should include white lines at edges

Current CITY standard – no width or marking standards specified; 1:1 marking ratio general practice (but not universal) since 2004 recommendations from city council-appointed bicycle-pedestrian task force

MUTCD – using white side lines min 6 feet width; for piano-keys, "lines *separated by 12 to 60 inches...design of lines and gaps should avoid wheel paths if possible, and the gap between the lines should not exceed 2.5 times the width of the ...lines*"

AASHTO – "*When a standard or ladder-type crosswalk is located on a residential or local street, the width of the crosswalk (distance between transverse lines) shall be 8 feet on center. When the crosswalk is located on a collector or arterial street, the width of the crosswalk shall be 10 feet on center*."

Multi-use/shared-use paths

Proposal

• minimum width 10 feet two-way; 8 feet in highly selective exceptions for short distances in genuinely constrained areas

• minimum width 6 feet one-way, only in highly constrained areas

• concrete surface using continuous pour/saw-cut joints

Current CITY standard – 10 feet width two-way; 5 feet one-way (4 feet if constrained); saw-cut joints from RiverTrail design standards 1993

MUTCD – no standard or minimum width

AASHTO – 10 feet minimum width; 8 feet in constrained areas; 12-14 feet in heavy-use areas

CDOT – minimum width 10 feet, wider if higher-volume use; 8 feet width "...may be used only for short sections of constrained conditions..." (with conditions); "On Portland cement concrete pavements, the transverse joints should be saw cut, rather than tooled..."

Bicycle lanes

Proposal

• specify the various AASHTO/CDOT width standards (below)

• pavement marking using parallel white lines (MUTCH) (not colored overlay)

• no use of sharrows where right-of-way width is sufficient to meet bicycle lanes standards; generally avoid use of sharrows

Current CITY standard – 6 feet width, 4 feet min

MUTCD – no standard or minimum width

AASHTO – no curb/gutter, no parking 4 feet width; curb/gutter, no parking 5 feet (no more than 2 feet in gutter pan)

FHWA – widths same as AASHTO; interim guidance on sharrows

CDOT – same as AASHTO, except if include gutter 6 feet recommended

Sidewalks

Proposal

• preferred width 8 feet, at all locations

• required width 8 feet at locations with multi-user traffic

• minimum width 6 feet at any location

Current CITY standard – 8 feet wide commercial areas; 5 feet residential (6 feet if high multi-use volume)

MUTCD – no standard or minimum width

AASHTO – residential 4-6 feet width; main street 6-12 feet; suburban 6 feet-plus; urban arterials 6 feet-plus

CDOT – 5 feet minimum; 4 feet in constrained areas; if less than 5 feet, must provide passing spaces (min 5 feet) at 200-feet intervals

Curb-cuts – intersections, refuge islands, driveways, *etc.*

Proposal

• match, at minimum, widest non-motor connecting width (sidewalk, multi-use path, crosswalk, *etc.*)

• smooth transition sidewalk to pavement (no formed or troweled lip)

Current CITY standard – no width standards; transition standards per ADA

MUTCD – no standard or minimum width

AASHTO – no standard or minimum width