

LAC snow removal plan  
Proposed bicycling-related changes  
Draft 1 / Reid Friedhorsky / May 28, 2019

## 1 Background

Concurrent with the major winter storms of January 2019, I complained in detail to county staff about snow removal from bike lanes.

The current (FY18) Snow & Ice Removal Plan has limited coverage of bicycling facilities and does not provide adequate guidance for staff and does not set actionable expectations for cyclists. It is also internally inconsistent regarding priority: on page 18 bike lanes have the same priority as their parent street, but on page 19 they are given mop-up priority.

These concerns led to a highly productive discussion at the February Transportation Board meeting, and I was invited to contribute proposed text to improve the Snow & Ice Control Plan.

This document is that proposal. My goal is to rectify these deficiencies in the Snow & Ice Plan while committing the county to a minimal amount of additional work. In fact, I believe the changed procedures may be *less* work while greatly improving the level of service and citizen satisfaction.

This proposal is based on (1) my own observations and detailed notes from the winter of 2015–16 as well as 2018–19; (2) complaints received by the county about bicycle-related snow removal during the winter of 2018–19 and summarized by Darby Martinez; and (3) opinions solicited by me from peer bicyclists in February 2019.

One striking item relayed to me in item 2 is “*several* calls from citizens stating they wrecked on their bikes” as well as “hazardous driving” by motor vehicles, both along Canyon Road (emphasis added). That is, improving the Snow & Ice Plan is not just a matter of convenience but a public safety and potential liability issue.

## 2 Proposed change to “Mop up”

Remove snow and ice removal from bike lanes from “Mop up operations” on page 27 (but leave sand accumulation removal).

## 3 Proposed new section: “Bicycle facilities”

### 3.1 Background

Los Alamos County has the potential to be a world-class winter bicycling city. Consistently sunny weather makes for pleasant cycling even with cold air temperatures; consistency and the knowledge that better weather is coming tend to keep people going through the dreary

and stormy exceptions. It is often surprising how grotesque the weather can be while committed transportation cyclists continue on their way.

The county's Comprehensive Plan adopted in 2016 supports bicycling as transportation throughout the document. For example, one recommended economic vitality policy is to "give the same level of prioritization to non-motorized circulation (bicycle and pedestrian) as to motorized circulation" (page 98), and the plan's survey citizen reports that "73% support County focus on bike lanes and trails, while 54% [...] support narrowing vehicle lanes on Trinity Drive to add bicycle lanes" (p. 125).

The Bicycle Transportation Plan, adopted 2017, details the county's policy that bicycling is a co-equal mode of transportation. Priorities include "developing a more comprehensive transportation system focused on improved bicycle infrastructure" (p. 3) and setting the goal to "become a Bicycle Friendly Community as designated by the League of American Bicyclists" (p. 5). The plan also notes that "because bicycling as a means of transportation has grown significantly ... and is of great interest in Los Alamos County, it is anticipated that bicycling to work [in the county] could become increasingly more popular" (p. 12).

Chapter 38, section 545 of the Municipal Code states the "5 foot rule", demanding by law that motorists leave 5 feet between their vehicle and a passed bicycle. It is difficult to maintain this separation when bicycle facilities are not properly cleared.

Finally, failure to properly remove snow from bike lanes has wider consequences, such as black ice flowing into motor vehicle lanes and increasing wear & tear on pavement by greater availability of water.

For these reasons, bicycling facilities are a first-class citizen in the Snow & Ice Removal Plan.

### **3.2 Key principles**

The following principles give general guidance for snow and ice removal from bicycle facilities:

- Bicycle facilities are travel facilities. Practices that are unacceptable for motor vehicle lanes are also unacceptable for bicycle facilities.
- "Least surprise." Safe bicycling in winter is greatly enhanced by predictability, especially because much of it happens in the dark.
- The "chicken and egg problem": Bicycle counts can be artificially depressed by poor level of service. This should not be interpreted as low demand.
- Bicycles are not heavy enough to clear snow, ice, and slush by their traffic alone.

- It is less work to slow down and avoid a problem in the first place than to come back and clean it up later.

### 3.3 Scope

This plan covers (1) the bicycle transportation system “priority streets” listed on page 17 of the Bicycle Transportation Plan, including bike lanes, “sharrowed” lanes, shoulders marked or unmarked, and off-street parallel trails; (2) the Canyon Rim Trail; (3) any other similar facilities intended for bicycling as transportation; and (4) bicycle parking at county facilities.

Snow and ice removal services is provided only for transportational facilities. Recreational bicycle facilities have no snow and ice service.

Bicycling facilities may appear elsewhere in this plan, explicitly or implicitly; in case of conflict; this section governs.

### 3.4 Priority

The priority of bicycle facilities is that of the street or parking lot they are associated with plus 1, except for highways intended mostly for transportation into and out of town, in which case the priority is plus two. For example, the bike lanes along Diamond Drive (a priority 1 street) have priority 2, but the Canyon Rim Trail adjacent to Highway 502 (also a priority 1 street) has priority 3.

Bicycle facilities of priority N have the *same* priority as streets of priority N, no more and no less.

### 3.5 Techniques

Operators follow these procedures when clearing bicycle facilities.

- Clear to the curb, taking special care when obstacles such as bridge abutments reduce facility width (e.g., Diamond Drive overpasses).
- Clear down to the pavement, taking care not to leave dark-colored ice that is hard to see in the dark.
- Clear a consistent width, including at corners and facilities such as bus stops.
- Identify and clear key drop inlets to prevent flooding of bike lanes (e.g., on the Pueblo Canyon Bridge).
- Respond to errors promptly to avoid snow compaction into a persistent mass.
- Transition from plowed to unplowed facilities clearly and in places well-visible even with heavy traffic, without “squeezing” bicycles into motor vehicle traffic.
- Address dumping of snow into bike facilities from private property by education and enforcement.
- Clear the first four spaces of bike parking at county facilities (e.g., the library).

### **3.6 Antipatterns**

The following are common problems that are avoided.

- Use of bicycle facilities for snow and ice storage. This includes deliberately placing snow or ice into bicycle facilities and then leaving the area (i.e., ongoing operations may use bicycle facilities for temporary storage while in the area).
- Plowing snow back into cleared bicycle facilities.
- Gaps in coverage, such as plows swinging wide around a corner or snow and ice accumulating from buses departing stops.
- Allowing snow to consolidate into hard-to-remove ice mounds.
- Allowing meltwater to flow into cleared areas, becoming black ice.
- Allowing meltwater to pool in bicycle facilities.
- Removing light-colored top layer and leaving a dark-colored bottom layer (which is hard to see).
- Allowing gravel to form piles or rows.

### **3.7 Facility closures**

In extraordinary situations, bicycle facilities may be closed when specific and urgent circumstances require it.

In this case, the Traffic & Streets Division Manager will make a press release within 6 hours of the decision to close detailing (1) the circumstances at hand, (2) what specifically is closed (facility, direction, start and end cross streets), (3) a specific date when re-opening is expected, which may not be “until further notice” or similar, and (4) the fact that bicycles may use the full motor vehicle lane at their sole discretion. A new press release will be made when the specific facilities that are closed changes or when the re-opening estimate passes, whichever is first.

This procedure may not be used for “priority inversion”.