

**From:** [Office](#)  
**To:** [Erin Nelson](#)  
**Subject:** FW: Labeled Photos for discussion of South 6th West alley -- BRT trail connection  
**Date:** Thursday, June 6, 2024 12:31:06 PM

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**From:** gillam@rmi.net <gillam@rmi.net>  
**Sent:** Tuesday, June 4, 2024 2:29 PM  
**To:** Jennifer Davila <jennifer@townofbluff.org>; Luanne Hook <luanne@townofbluff.org>; Britt Hornsby <britt@townofbluff.org>; Linda Sosa <linda@townofbluff.org>; Office <office@townofbluff.org>; Ann Leppanen <ann@townofbluff.org>  
**Cc:** 'Dusty Paws' <greyburnz@gmail.com>; 'Ginny Burns' <gaburnz@gmail.com>  
**Subject:** Labeled Photos for discussion of South 6th West alley -- BRT trail connection

Hello everyone,

Clearly nobody was prepared to discuss environmental issues at the end of the South 6<sup>th</sup> West alley during the Town Council's work session this morning. Several issues about this trail access point have been the subject of great concern and frequent discussion for years. However, the narrower 'environmental' issue that I raised in an email to Ann a couple of days ago, apparently leading to its inclusion on this morning's agenda, is erosion at the Burns corner stake.

Because some of you are new to this discussion, I've attached a revised version of the file I sent just before your session. In it, some pages are now duplicated so you can compare the unmarked photos with copies on which property lines are drawn and features are labeled (the angles of property lines are probably slightly off but they're accurate enough for general discussion). The area is at a junction between properties owned by the Town, Burns family, and Hook family. The date of the latest photos was also corrected from 5/27 to 5/24.

The erosion occurring in this area is not natural, as Jennifer wondered, but is due directly to near-vertical excavation into the hillside in 2021 to create a trail. This included un-noticed and unapproved excavation into Town land (both into the improved end of the South 6<sup>th</sup> West alley and beyond there along the natural hillside to the Town's property line). From that point, the excavation continues on Hook land. The original top of the excavated cut was no more than a foot horizontally, and perhaps slightly less, from the Burns SW corner pin. Greg and Ginny Burns are very concerned about the probability that erosion will remove their corner pin, leading to surveying costs to replace it (replacement could be needed more than once if erosion continues uncorrected). They also have other concerns about the trail that are not addressed here.

As Jennifer noted, soils in this area are highly erodible. My repeat photos show progressive erosion at and near the Burns corner pin that's being caused by the cut.

Small patches of soil at the top of the cut broke away almost immediately along either natural soil partings or fractures created during the excavation. Later photos show that runoff onto the cut from the natural ground surface above it has created small gullies in the cut, eroding its top edge backward and downward, reducing the cut's steepness and depositing eroded sediment on the trail. The cut has also changed the way interstitial water moves through the soil, leading more recently to piping erosion. Piping occurs when water penetrates into weak soil (or rock) and erodes subsurface conduits that carry water to a lower-elevation outlet. Over time, the pipes and outlets enlarge and the soil around and above them collapses. My latest photos show piping erosion mainly on Hook land but growth of the zone affected, along with other continuing erosional processes, will likely lead to a partial collapse of the cut and the natural surface above it. The area now affected seems large enough that a collapse would remove the Burns corner pin and encroach slightly onto town land. It's hard to say when this will happen but I'd guess no more than two years from now and perhaps sooner, depending in part on precipitation. If the piping area grows, any future collapse would also be larger.

This situation is very concerning to the Burns family because of the potential costs to replace their corner pin. There could be legal liability for those involved in building the trail, as it may be illegal under Utah law to excavate near a property line in a way that damages adjoining property. The Burns family's use of their southwest corner gate is also limited by the fact that excavation into the improved end of the alley doesn't leave a wide-enough flat area for a vehicle to turn from the alley through the gate. I'm not sure offhand when the Town was first informed about excavation into the improved end of the alley but it may have been in late 2021 or early 2022.

I strongly support your decision this morning to have the Roads Committee assess the situation and erosive processes in this area. If the Town contracts with a professional engineer, perhaps that person could also look at the area.

Please let me know if you have any questions or comments.

Sincerely,  
Mary Gillam, PhD, Geology

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**From:** [gillam@rmi.net](mailto:gillam@rmi.net) <[gillam@rmi.net](mailto:gillam@rmi.net)>

**Sent:** Tuesday, June 4, 2024 10:22 AM

**To:** 'jennifer@townofbluff.org' <[jennifer@townofbluff.org](mailto:jennifer@townofbluff.org)>; 'luanne@townofbluff.org' <[luanne@townofbluff.org](mailto:luanne@townofbluff.org)>; 'britt@townofbluff.org' <[britt@townofbluff.org](mailto:britt@townofbluff.org)>;

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Sorry this is so late, I only found out about the discussion this morning.