

Streets

March 1, 2023

Authors: David Van Winkle, Streets Superintendent
Jia Carroll, Public Works Coordinator
Jon Snyder, Public Works Director

Purpose

The purpose of this paper is to provide a background of City streets maintenance and snowplowing to the Brown Ranch Annexation Committee to frame and inform annexation negotiations pertaining to Brown Ranch. This paper is intended to only address Brown Ranch's internal network of streets. Offsite roads will be the topic of a later conversation.

Decision Points

Maintaining the streets and stormwater systems of Brown Ranch will involve an estimated \$846,500 upfront capital investment, and a projected \$800,040 annual cost thereafter (in 2023 dollars). Streets services are entirely funded out of the General Fund. Therefore, the largest decision the Brown Ranch Annexation Committee faces is how to fund these additional streets services should the incremental sales taxes received from the additional population within Brown Ranch fall short of anticipated expenses.

Other decisions that the Annexation Committee should consider include the following:

1. Should street cross sections conform with City Engineering Standards, or is there a desire to consider alternative cross sections?
2. Will overnight on-street parking be prohibited consistent with existing City ordinances, or is there a desire to utilize overnight on-street parking within Brown Ranch?
3. Who will maintain parking lots, especially if parking lots are utilized overnight? Will parking lots be paved?
4. Who will maintain alleys?
5. What is the Annexation Committee's opinion on the feasibility of cost-effective winter maintenance and the corresponding amount of onsite snow storage currently proposed?

Section 1: Background

The City of Steamboat Springs Streets Division provides the following services for all City-owned streets, rights-of-way, and parking lots:

1. Pavement maintenance; including pothole repair, crack filling, seal coating, and overlays
2. Snow plowing
3. Striping; including roadway shoulder, turn lane, and centerline striping; crosswalk marking, curb painting, bike lane marking, and parking lot striping
4. Sign installation and maintenance
5. Sweeping
6. Stormwater and drainage maintenance; including inlet cleaning, ditch cleaning, culvert cleaning, and minor capital improvements or replacement efforts
7. Spring scoria pickup

8. Bridge maintenance
9. Guardrail maintenance
10. Noxious weed management within unimproved portions of public rights-of-way

In addition to these typical services that are provided for all City-owned streets and parking lots, Streets also provides offsite snow removal for downtown, Ski Time Square, and all parking lots. The Streets Division is also responsible for all traffic signals that are not located on Highway 40.

Through the Streets Division, the City maintains all paved alleys within Old Town, Brooklyn, Fairview, and West End Village. However, the City does not maintain any new alleys, such as those found in Steamboat Barn Village or Sunlight. This is because adequate snow storage is not provided along alleys, making them cost-prohibitive for the City to maintain.

There are currently 160 lane-miles of City-owned streets and 6 miles of City-owned alleys, for a combined total of 166 lane-miles that the Streets Division is responsible for. Additionally, the Streets Division is responsible for 37 City-owned parking lots.

It is anticipated that the City will provide streets services for Brown Ranch. Currently, Brown Ranch estimates there will be 23.53 lane-miles of new streets within the Brown Ranch property, one mile of which is a neighborhood alley.

Section 2: Costs of Service

Based upon 2023 budget numbers, the City spends \$25,092 per lane-mile annually on Streets operations and maintenance. This is an all-in unit cost which includes personnel, administration, equipment, materials, etc. In practice busier streets, as well as streets with minimal snow storage, cost more to maintain; while less-busy streets and streets with adequate snow storage cost less to maintain. Another \$1.79M is spent on annual milling and overlays, which is not a part of this annual lane-mile unit cost.

Currently the City operates five snow plowing routes. Each route takes approximately 10 hours to complete for an average snowstorm. To plow Brown Ranch the City will need to add a sixth plow route. To add a sixth plow route, the City will need to add the following:

1. One motor grader with a wing: \$360,556
2. One sand truck with a plow: \$201,826
3. One loader with a bucket and blade: \$209,132
4. Storage facilities for these new pieces of equipment: cost unknown, but assume \$75k
5. Minimum of three new operators: combined \$265,287 annually (based on 2023 costs)

Once the initial capital equipment investment is made and Brown Ranch builds out, the City's annual unit costs are anticipated to decrease to \$24,541 per lane-mile in 2023 dollars. The unit cost decreases slightly because at full buildout Brown Ranch will add another 23.53 lane-miles to the system, thereby increasing the denominator.

2022 costs for milling and overlays totaled \$21.50 per square yard. Assuming Brown Ranch constructs 23.53 lane-miles of roads at full buildout, and assuming a 16-year average lifespan on pavement surfaces, \$222,594 annually should be added to cost-of-service analyses for periodic milling and overlay of streets within Brown Ranch.

Upon full buildout of the 23.53 lane-miles of streets within Brown Ranch, the City estimates it will cost an additional \$577,448 for annual operations and maintenance, and an additional \$222,594 for overlays. The total annual cost to serve Brown Ranch is therefore estimated to be \$800,042. Actual costs associated with various types of streets are almost impossible to quantify. Therefore, these estimates should be considered high-level budgetary estimates that are intended to assist with the fiscal analysis and funding discussions.

Section 3: Design Considerations

Street design and right-of-way layout is typically addressed during the development review process. The Engineering Division is charged with reviewing development applications for conformance with standards and specifications, and the Engineering Standards provide a variety of cross-sectional designs for various types of streets. During previous annexation negotiations, this was a point of contention with the developer, as the developer desired to construct cross sections that did not conform to the cross sections that were offered within the Engineering Standards.

In Steamboat Springs, snow plowing and snow storage drive most of the design requirements for rights-of-way. More snow storage yields a more cost-effective operation and a more effective transportation system. Staff encourages the Annexation Committee and the design team to account for snow plowing and snow storage when making land use decisions. Staff offers the following six considerations that the development team and the Annexation Committee may want to weigh in on:

1. On-street parking

To provide effective snow plowing, existing City ordinances prohibiting overnight on-street parking should be applied to Brown Ranch as well. It is unclear at this time if the applicant is proposing to utilize overnight on-street parking. Staff recommends that on-street parking not be relied upon as a reliable means to park residential developments.

2. Onsite snow storage

The feasibility of cost-effective winter maintenance should be considered. Initial site renderings indicate minimal onsite snow storage. Public Works staff strongly recommends that renderings be re-drawn with snow storage in mind and site planning be reconsidered with snow storage in mind.

Streets that provide the most effective onsite snow storage and provide the most effective multimodal transportation options have a ten-foot horizontal offset between the edge of the road and the sidewalk. Steamboat Barn Village and the Parkview neighborhood are good examples of this, as their cross sections work well during the winter. On streets where less than ten feet of offset are provided, snow storage becomes an issue. This results in the streets narrowing as snow accumulates. Sidewalks become very difficult to shovel due to the presence of large windrows. Sunlight Subdivision is a good example of this. Sunlight Subdivision's cross sections do not work particularly well during the winter.

3. Windrows on gutter pans and catch basins

Gutter pans and catch basins provide viable means for drainage conveyance. However, special attention should be given during the design phase to the location of gutter pans and catch basins relative to windrows. During the winter, windrows block gutter pans and catch basins, which then promotes poor drainage.

4. Turnarounds

All City-maintained streets that have dead-ends must have adequate turnarounds for large snowplowing equipment, trash trucks, emergency vehicles, and delivery vehicles.

5. Parking areas

It would be helpful to identify up front who will be responsible for maintaining parking areas. If parking areas are intended to accommodate overnight parking, staff suggests those areas be privately maintained, as Streets is not equipped to provide this type of plowing.

It is also worth noting that code requires parking lots within Steamboat Springs be paved. Paving is required for water quality and air quality purposes as well as to reduce mud tracking. There is language in the applicant's development plan that indicates they may want to pursue aggregate surface parking lots. This would be a departure from current code and should be discussed by the Annexation Committee and potentially addressed within the Annexation Agreement.

6. Alleys

It would be helpful to identify up front who will be responsible for maintaining alleys. There are two ways to look at this. If the desire is to allow property owners to utilize as much property up to the edge of the alley as possible, then alleys should be privately maintained due to the extreme lack of snow storage along the alleys. But if the desire is to have the City maintain alleys, then snow storage easements running the length of the alleys should be provided that preclude the installation of any improvements that impede snow storage.