



STUDY SESSION MEMORANDUM

TO: Mayor and Members of City Council

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DATE: March 23, 2023

SUBJECT: Study Session for March 23, 2023
Downtown Streets as Public Space (DSaPS)

EXECUTIVE SUMMARY

The purpose of this study session is to present recommendations for next steps in the Downtown Streets as Public Space (DSaPS) project.

The City of Boulder, like many cities across the country, implemented temporary vehicular closures during the COVID-19 pandemic to increase outdoor dining and enjoyable public spaces. At the conclusion of the pandemic-related vehicular street closures last Fall and as a result of great community interest in more public space in the downtown area, the City Council asked staff to create recommendations for increased public space in spring/summer 2023.

The DSaPS project was developed to propose one or more “pop-up” locations to test new ideas for public space in downtown this year. The recommendations were developed with the implementation in mind and are based on a balance of available resources and community desire. In addition, these recommendations are made without a full analysis of fiscal implications and require funding that has not yet been identified.

Though there may be a long-term desire for permanent, full street closures, the short-term pop-up recommendations are a testing period that the project team assesses will be most successful as a mix of weekend-only closures to 13th Street between Canyon and Arapahoe and installation of “parklets” on 1 or more additional street segments on west Pearl Street, 14th Street, and/or east Pearl Street. Pop-ups shall be used to continue engaging and learning with the community, recognizing a strong desire for reimagining streets to create creative and welcoming spaces for all, and will inform longer-term recommendations by the end of the year.

This project has been guided by an appointed City Council Process Subcommittee, which includes Council Members Tara Winer and Matt Benjamin, and is considered the first step in a long-term effort to expand and enhance public spaces by reimagining streets downtown. The recommendations were created after conducting, urban design analysis, technical engineering, and community engagement, all of which is summarized in the memo below and in the attachment. The goal of the work to date has been to better understand community sentiment around enhanced public space in downtown while also balancing diverse perspectives and needs with best practices in urban design and important technical considerations.

KEY ISSUES AND GOALS

While generally supported by many, the idea of enhancing public space in downtown is complex. There is a strong community desire to mimic or “bring back” the pedestrianization of parts of west Pearl Street, which the public had a chance to experience during the COVID-19 pandemic. At the same time, there are directly impacted stakeholders, such as the business community, who have different ideas about downtown changes. There are equity and inclusion challenges to ensure that spaces are welcoming for all. Furthermore, there are many technical considerations, such as multimodal transportation impacts, delivery, trash, recycling, traffic control, public safety access, and accessibility for individuals with disabilities.

Given all these factors, proposals for permanent transformation would take a significant amount of time, community cohesion, and likely, some careful legal consideration. This project team was tasked with creating temporary change to public streets downtown in the short term, with the hope of building on community momentum expressed in the fall, when the city lifted the temporary closure of parts of west Pearl Street to vehicular traffic. The compressed timeline inevitably led to some tradeoffs; nonetheless, the spring/summer 2023 recommendations are exciting and drive change in the downtown area. The project sought to and prioritize the following goals and key issues:

- **Goal 1:** Collectively reflect, learn from, and build on a variety of experiences and priorities
- **Goal 2:** Ensure that recommendations for downtown streets as public space reflect diverse community voices as well as solid feasibility and technical analyses
- **Goal 3:** Develop a series of achievable and exciting recommendations to implement this spring/summer that will test ideas for reimagining streets in one or more downtown locations
- **Goal 4:** Utilize the project outcomes to inform upcoming planning efforts and future policy discussion about streets as public space in the city

City staff focused on both short and long term views: bringing out the elements of pedestrianized downtown streets that the community wants to experience in the short-term and elements that also move the downtown area toward more sustainable, inclusive, bike- and pedestrian- friendly, public spaces over time.

Given the wide variety of stakeholder and community perspectives on this topic, the project team believes that a key issue to implementing the pop-up recommendations successfully is to manage community expectations. Staff learned through the reopening of West Pearl that clear and transparent checkpoints in the process are important, as well as transparency and communication about why a decision is being made. The spring/summer 2023 pop-ups are designed purposefully to experiment, test and try new things — and it is staff’s intention to use lessons learned to develop long-term plans that meet or exceed community expectations for the downtown area and beyond.

Project Terminology

The project team understands that terminology is important, especially when discussing an experimental program. This is the terminology and explanation the team will use in this memo and in the council presentation:

- ***Pop-up***
 - **Meaning:** the spring/summer 2023 temporary testing of public space programming in to-be-recommended downtown street segments
 - **Other words used:** pilot, intervention, installation, reimagining, temporary street reuse, street transformations
- ***Programming***
 - **Meaning:** the non-physical elements that are being tested in the pop-ups (food trucks, yoga, music, etc)
 - **Other words used:** activations, interventions
- ***Physical elements***
 - **Meaning:** the physical elements that are being tested in the pop-ups (furniture, blockades, landscaping, etc)
 - **Other words used:** design elements, infrastructure, kits

Questions for Council

1. Does City Council have any questions about the technical analysis and community feedback that informed the spring/summer 2023 pop-up recommendations?
2. Do the recommendations for the spring/summer 2023 pop-ups reflect the project goals and council's desire?
3. What additional information from the spring/summer 2023 pop-ups will council want to learn more about to inform next steps?

BACKGROUND

At the height of the COVID-19 pandemic, west Pearl Street was closed to vehicular traffic from 9th to 11th streets, and 10th Street was closed from Pearl Street to Morrison Alley to respond to, and recover from, the effects of the pandemic. The blocks of the west Pearl Street area were temporarily repurposed as space for outdoor dining, gathering, programming and activation. At the conclusion of the pandemic-related temporary vehicular closure in September 2022, the city heard significant community interest for more pedestrianized spaces in the downtown area, as well as some concerns about the West Pearl location.

City Council asked staff at the Sept. 15, 2022 meeting to create recommendations for increased public space in spring/summer 2023 and to build on existing feedback and collect additional input to ensure that more people had the opportunity to share their perspective on downtown streets as public space. City Council requested that staff bring the recommendations forward in March 2023 so that timely implementation could occur before and during the warm weather months in Boulder.

City staff provided the City Council with an update on the DSaPS project through an Information Packet (IP) in December 2022.

The DSaPS project was launched in December 2022 with the goal to present recommendations to the City Council by March 2023 for action that will take place in the upcoming spring and summer. In order to do this, the project team conducted both technical analysis and community engagement activities in January that led to recommendation development in February.

ANALYSIS

City staff worked alongside professional consultants in urban design, transportation and community engagement to develop a well-rounded analysis and recommendations for the DSaPS project. The analysis described below directly impacted the recommendations that are presented in the Recommendations section of this memo, and all analysis reports can be found in the attachment to this memo.

Public Life Potential Mapping

Before crafting recommendations, the team started by analyzing the current conditions. To assess which downtown street segments have the most potential for successful experimentation this spring/summer, the project team layered a series of maps that evaluated criteria that impacts quality of public life:

- Building uses
- Transit & traffic routes
- Parking utilization
- Bicycle infrastructure
- Past/existing street activations
- Comments from the online Be Heard Boulder questionnaire
- Building facades
- Food and beverage business locations
- Retail business locations

This mapping exercise provided the project team with a holistic understanding of downtown’s urban environment, ground floor levels of activity that could contribute to public space uses, and potential pitfalls. In general, the areas identified by the community (further described in the Community Engagement section below) such as west Pearl Street, east Pearl Street and 13th Street were also highlighted favorably for public life potential in this mapping exercise.

More details and each map can be found in *Attachment A - Recommendations & Action Plan*.

Community Engagement

Based on the guidance from the City Council Process Subcommittee, the project team used a bounty of previous community engagement gathered by the City of Boulder and Downtown Boulder Partnership as a starting point, crafting an engagement gap analysis to refine engagement activities for the DSaPS project. The evaluation of previous engagement included:

- 2022 Outdoor Dining Pilot Survey
- 2022 Future of the West End - Downtown Boulder Partnership feedback form
- 2022 Emails to City Council about West Pearl
- 2022 Downtown Boulder Partnership Vision Plan engagement summaries

Engagement Strategy and Audience

The team created an engagement plan that incorporated elements of the city’s Engagement Framework and Racial Equity Instrument. The engagement approach focuses on diversity, equity and inclusion and aligns with the Boulder strategic framework’s “inform” and “consult” levels of engagement. The engagement plan prioritizes individual community members and stakeholder groups as the engagement audience, primarily to reach community members who may not have been included or heard from on this topic before. Participants included the following:

- Individuals
 - Historically underrepresented racial and ethnic groups (Hispanic/Latinx, Black, Nepali and Indigenous) – both English and non-English speakers
 - Immigrant and mixed-immigration status families
 - Low-income residents – prioritizing renters in affordable housing units and homeowners/renters in manufactured housing communities
 - Residents over 65 years old

- People living with disabilities
- Members of the LGBTQ community
- Residents
- Visitors and tourists
- Downtown employees
- Downtown stakeholder groups, including a wider selection of downtown businesses
- City Council
- City staff

Be Heard Boulder Online Questionnaire

The city conducted an online questionnaire to further assess community desires and concerns about downtown streets' potential as public space; understand how they currently use downtown streets, what might increase their use and why they may not visit now; their travel behaviors; and reflections on their experience with the West Pearl temporary pedestrianization (if any).

The questionnaire was intentionally short to encourage participation and was translated to, and promoted in, Spanish. The questionnaire received a total of 1,799 responses (seven in Spanish) after being open for just 19 days in January. The feedback was insightful in describing the type of experience that the community envisions for downtown, including the following learnings:

- The community enjoys downtown for a variety of reasons, primarily to shop, dine, socialize, people watch and enjoy nightlife.
- Safety and public health concerns, affordability (both for the business owner and consumer), and difficulty with mobility, access or parking were identified as potential barriers for people coming downtown.
- People use a variety of ways to get downtown, including primarily by bike, foot, or personal vehicle. Inclement weather shifts preferences heavily toward use of a personal vehicle.

The online questionnaire included seven multiple choice questions, six optional demographic questions, and a map-based activity. The map-based activity asked respondents to pin locations in the they thought appropriate or desirable reimagining could occur. Then, respondents could also include comments based on their pins. The purpose of the map-based activity was both to garner creative thinking and input about geographic location, but also to understand respondent's feedback about various locations that otherwise weren't covered in the multiple-choice questions.

More details and the full questionnaire report can be found in *Attachment A, Appendix C - Engagement Report*.

In-Person Engagement Activities



To supplement the online questionnaire, the project team created two in-person, interactive activities to further engage the community on their priorities for public space downtown and to solicit ideas for quality public space areas in downtown.

Downtown Streets as Public Space
What would you like to see?

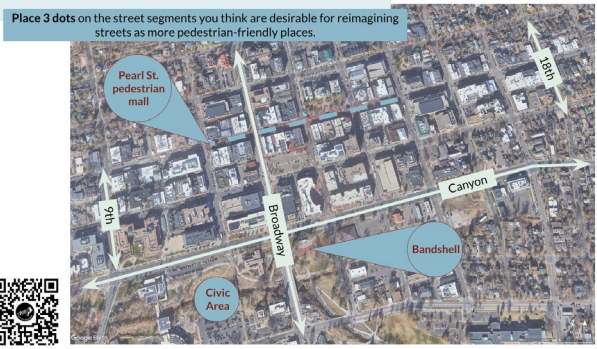
*Place 3 green dots of what you'd like to see the most.
 Place 1 red dot of what you prioritize the least.*

More gathering & outdoor dining / entertainment / leisure space	Curbs for vehicle access like on-street parking, deliveries, passenger pickup
Minimize traffic congestion	Preserve quiet enjoyment / quality of life / character of surrounding neighborhoods
Curbs for non-vehicle purposes like landscaping, bike/scooter parking, outdoor dining	Maximize economic vitality potential for underutilized / underinvested areas
Enhance critical connections to nearby destinations like University Hill	Maximize access for all people regardless of ability and modes
Other:	

Boulder is trying something new this spring.
Take the online questionnaire:

Downtown Streets as Public Space
Boulder is trying something new this spring.



The in-person engagement activities were designed to require a short time commitment and encourage input from a diverse range of community members. These activities were held in three different locations in Boulder and had a total of over 50 participants.

These exercises were not created to “tally” the results, as the participant size is too small to make a definitive conclusion, rather, they were used to garner general sentiments. Similar to the online questionnaire results, participants prioritized gathering and outdoor leisure space, non-vehicle use for curbs and preserving the quality of life in surrounding neighborhoods, while deprioritizing curbs for vehicle access such as on-street parking and deliveries. Similar to the online interactive map on Be Heard Boulder, the exercise also revealed visual clustering of suitable pop-up locations on East and West Pearl, the Civic Area and on 13th Street.

More details and the activity board summaries can be found in *Attachment A, Appendix C - Engagement Report*.

Stakeholder Meetings

Given the short timeframe to conduct engagement, the project team focused on engaging stakeholders that may be directly impacted by the project team’s recommended pop-up approach. The team met with the following stakeholder groups:

- Boulder Farmers Market
- Downtown Boulder Partnership
- Community Connectors-in-Residence
- A focus group of West Pearl business owners
- Community Cycles

- Boulder Economic Vitality and Business Support Alliance (Boulder Chamber; Boulder Latino Chamber; Downtown Boulder Partnership; Boulder Convention & Visitors Bureau; Boulder Small Business Development Center; City of Boulder)
-

These meetings yielded valuable information, informing recommendations that are considerate of implementation partners and a diverse pool of stakeholders. In summary:

- There's no shortage of ideas and partners to activate downtown. Activators – those who can implement programming and events -- need permitting support, and sometimes financial support, from the city.
- There was a consistent emphasis through all engagement efforts that the city should use the pop-ups to increase inclusivity through various types of activations and, participation opportunities while considering accessibility and affordability.
- Any human rights events or activities should be an opportunity to educate, and any cultural events should support local community members and not be created solely for commodification, appropriation and profit by others.
- While some community members expressed continued frustration about the decision to re-open West Pearl to vehicular traffic, continued disagreement and divergent perspectives remain. Several West Pearl businesses indicated they do not feel heard or represented even though they are directly impacted by changes to the streets where their businesses operate. Continued dialogue and a collaborative approach to planning will be necessary to build greater trust and support community alignment.

More details and the full summaries for each stakeholder meeting can be found in *Attachment A, Appendix B - Engagement Report*.

Transportation Analysis

Transportation and land use access by bike, walk or via assistive device, bus, personal vehicle and other modes are critical to building implementable pop-ups. The following areas were identified for evaluating the transportation impacts:

- *Motor Vehicle Operations* – How closing a roadway might divert traffic; how impactful that diverted traffic might be to the system; and whether simple mitigation was feasible.
- *Transit Operations* – If transit service uses the street, how impactful might it be for this transit service to be re-routed? This focus was specific to HOP bus service on Pearl Street.
- *Pedestrian and Bicycle Considerations* – How will closing the roadway influence pedestrian and bicycle usage; and how accessible is the area to increased multimodal activity?
- *Short-term Parking* – The utilization of on-street parking today; and how impactful would the loss of parking be to accessing this area and surrounding roadways?
- *Other Considerations* – What other operational factors should the city be considering in the potential closure of a roadway and the implementation of that closure (e.g., emergency and utility access)?

The technical report in *Attachment A, Appendix B - Transportation Report* focuses on the proposed pop-up locations (further described in the Recommendations section) and provides a thorough analysis of the evaluation criteria and resulted in these findings:

- *13th Street* – Could be closed to motor vehicle traffic completely or on weekends with only a few technical challenges, primarily those related to access for the buildings that face 13th Street.
- *14th Street* – Could be closed to motor vehicle traffic completely or on weekends only, but the impacts of a full closure would be significant. Access to the 1300 block of Lawry Lane would need to be solved, and this street segment does not offer great access to Boulder’s larger bicycle network. However, its proximity to the 14th Street RTD Station and its location at the center of the Pearl Street Mall would provide good transit access and a large supply of existing pedestrians from the mall itself.
- *West Pearl between 9th and 11th Streets* – Could be closed to motor vehicle traffic completely or on weekends only. The temporary pandemic-related change to this segment of West Pearl provided learnings on temporary closures, but the impacts of a full closure would be significant enough to require further consideration and analysis to ensure these operational impacts are anticipated and mitigated. Implementation of a full closure would require a reroute of the HOP service and further evaluation of parking and traffic considerations to mitigate impacts would also be needed. The value of this closure would be further impacted by limited access to Boulder’s larger existing bicycle network.
- *East Pearl between 15th and 17th Streets* – Not recommended for weekend or full closure during the 2023 pop-ups due to potential diversion of traffic to adjacent residential streets and congestion at neighborhood intersections. Considerable data collection and analysis would be needed to estimate motor vehicle diversion, driveway access issues and multimodal facility needs on these blocks.

More details and the full technical transportation report can be found in *Attachment A, Appendix B - Transportation Report*.

RECOMMENDATIONS

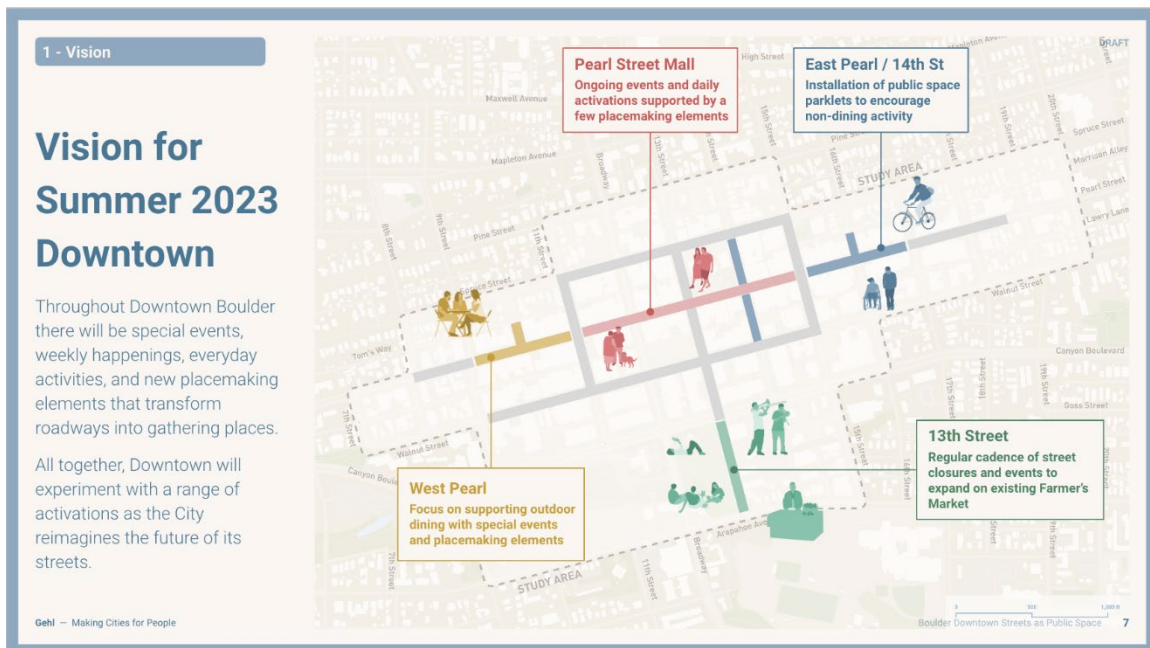
The team realized early in the process that the pop-ups would be one of many “happenings” in downtown this summer, which led the team to evaluate pop-up options that complement related work already in progress:

- Outdoor Dining Pilot Program
- Special Events & Street Closures
- Everyday activities on the mall

The project team used the existing happenings and the technical and engagement analysis to develop recommendations that build on where there is already strong activity and match the scale of transformation with the level of activation that is anticipated. Both elements are key to satisfying the team’s confidence level in implementing successful

pop-ups this spring and summer. In addition, the analysis helped the team understand the following considerations:

- **The scale of transformation needs to match levels of activation.** We must ensure there is a purpose to any street closure because public spaces need the presence of people to feel vibrant, inviting and safe.
- **Boulder businesses are key partners in enhancing life downtown.** Many people enjoy downtown because of the experiences businesses provide. As the city reimagines its streets together with the community, it will be important to bring all stakeholders, including businesses, along in the process. A key takeaway from similar street transformations across the country is that all successful transformations had active and excited interest from both the business community and general public.
- **The city should build on already strong activation.** We may have more opportunity for exciting experiences if we leverage and amplify existing activations while also trying out some new ideas.
- **The city can transform streets without requiring a full 24/7 closure to vehicles.** A variety of tactics can be used to create people-centric places. Full street closures are not the only tool to achieve a fun, enjoyable and inclusive experience. Closing streets to vehicular traffic permanently requires additional technical, operational, and legal evaluation. If this becomes a community goal, it is likely to take time. Meanwhile, the warmer weather in the months ahead provides an opportunity to test new ideas through temporary, or pop-up, activities and street treatments to inform future plans for, and investment in, the public realm.



The DSaPS project team is excited to launch the spring/summer 2023 pop-up series with special events, weekly happenings, everyday activities and new placemaking in three key areas surrounding the existing Pearl Street Mall.

Special Events planned by Downtown Boulder Partnership

Through its not-for-profit organization (Downtown Boulder Community initiatives), DBP will also produce its popular signature events this spring and summer including the Tulip Fairy and Elf Festival, The Pearl Street Arts Festival, Bands on the Bricks Summer Concert Series and Fall Fest.

Downtown Boulder Partnership and the City of Boulder are in the process of confirming plans to expand special event programming in downtown in 2023 that will complement the pop-up recommendations:

- West Pearl
 - March 12: Apres Street Festival
 - June 8: Outdoor Cinema Series
 - Aug. 10: Outdoor Cinema Series
- Date to-be-determined in late summer / early fall: community picnic and silent discoEast PearlJuly 13: Outdoor Cinema Series

In addition, DBP and the city are potentially planning a festival purposefully-designed to test co-creation with the community for downtown activations to continue the theory of experimentation and co-creation.

Recurring Events on 13th Street

With the Farmers Market operating eight months out of the year, the community is already accustomed to 13th Street being transformed into a pedestrianized public space on Wednesday afternoons and Saturday mornings throughout much of the year.

The project team proposes a full closure of 13th Street between Canyon Boulevard and Arapahoe Avenue, around the clock on weekends to create a calendar of recurring activations such as:

- Expanding the Boulder Farmers Market (if feasible)
- Artisan markets
- Night markets
- Food truck festivals
- Outdoor movies
- Music performances
- Weekend beer garden
- Art lessons with the Boulder Museum of Contemporary Art (existing Saturday event)
- Outdoor games
- Arts and culture festivals and holiday celebrations
- Increased public seating
- Increased micromobility (ex. bikes and scooters) parking and service stations

Downtown Parklets

Parklets are physical infrastructure that convert on-street parking spaces and/or vacant sidewalk space to provide non-commercial, public and open areas for the community to enjoy. There are multiple types of parklets:

- *Seating parklets* - intended for public seating that ranges from formal tables and chairs to benches and abstract seating surfaces
- *Activity parklets* - intended to encourage “whimsy into the everyday” and a return to fun, such as large outdoor games and interactive features
- *Mobility parklets* - intended to provide active transportation facilities such as expanded bike parking or bike repair stations and increased micro-mobility devices

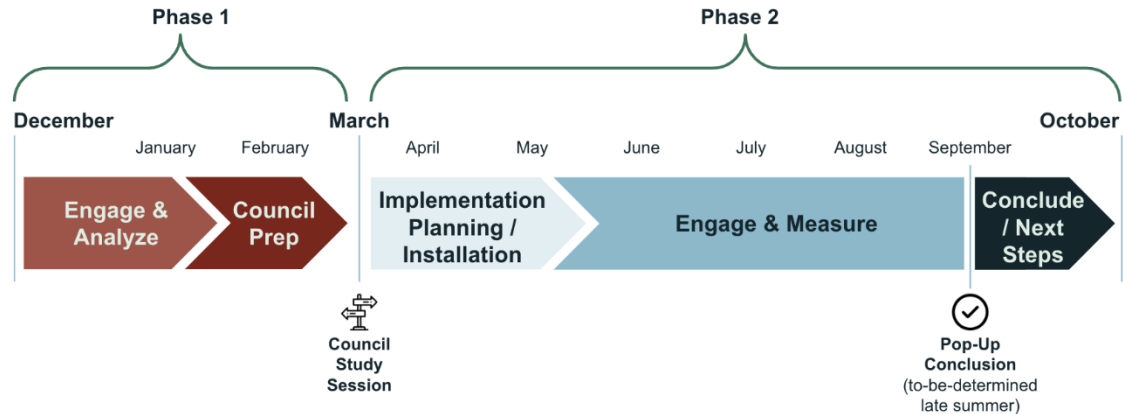
The parklets are most suitable to be installed on west Pearl Street between 9th and 11th streets; 10th Street between Pearl Street and Morrison Alley; 14th Street between Walnut and Spruce streets; east Pearl Street between 15th and 17th streets; and 13th Street between Canyon Boulevard and Arapahoe Avenue. A full description of possible parklets with precedent imagery and locational recommendations can be found in *Attachment A - Recommendations & Action Plan*.

Pop-up Toolkits

While parklets are typically stationary once they are installed, a “pop-up toolkit” of modular design features can be more flexible and mobile to respond to new areas of activation or supplement existing activated areas. The project team proposes to procure a pop-up toolkit of physical, portable infrastructure that can be deployed in clusters or individually:

- Social seating
- Play installations
- Games and activities
- Planters
- Wayfinding and signage
- Lighting
- Shade structures
- Storage
- Street closure barriers
- Micromobility service stations and parking

While the pop-up toolkit can be deployed, in full or in part, anywhere, the project team recommends strategic placement to fill gaps in public spaces throughout the downtown area. The full map and an explanation of each tool with precedent imagery can be found in *Attachment A - Recommendations & Action Plan*.



NEXT STEPS

These recommendations were created to balance the community desire for downtown public space with the city’s ability to successfully fund and manage the pop-up program in 2023. There is a significant resource requirement to plan, fund, and administer all of the recommendations produced in this project, of which the resource requirements are briefly summarized below. Recommendations have not yet been analyzed of all fiscal implications and require funding that has not yet been identified.

After receiving feedback from City Council at the March 23, 2023 Study Session, city staff will work alongside its partners to implement and measure impacts of the spring/summer 2023 pop-ups. Steps required for implementation are as follows:

- **13th Street Weekend Closure**

- Develop activations plan and confirm partners
- Prioritize Saturday afternoon/evening programming, if both weekend days are not able to be activated fully
- Consider an anchor vendor space with a liquor license
- Develop parking and traffic control plan
- Price and purchase signage, closure infrastructure, etc.
- Develop and execute communications plan to promote the activations
- Create and execute an engagement plan to measure community perception
- Measure the transportation impacts
- Coordinate with the Civic Area Phase 2 design effort kicking off in 2023 so that elements tested in the pop-up can inform future, permanent park design

- **Parklets**

- Price and purchase infrastructure
- Plan logistics for staging, maintaining, and removing infrastructure
- Provide proper emergency access; utilities access and drainage
- Establish a brand, possibly through local public art
- Coordinate locations with nearby businesses and outdoor dining locations
- Develop and execute communications plan to promote parklets
- Create and execute an engagement plan to measure community perception

- Measure the transportation impacts
- **Overall Pop-Ups management**
 - Confirm funding, partners, types of activation
 - Finalize summer calendar
 - Procure a Pop-Ups Manager or Management services to promote the venues for active and passive activations, obtain the Pop-Up Toolkit furnishing and other physical elements; provide daily maintenance and repair and coordination with other Pop-ups programming
 - Create a consistent, visible brand and develop and execute communications plan to promote the activations and share project information.
 - Screen through racial equity instrument to identify gaps and more opportunities for inclusion and diversity
 - Create and execute an engagement plan to measure community perception of experience

Pop-Up Engagement

The project team recognizes the importance of regularly engaging the community in this process to continually develop an understanding of various perspectives during the experimental phase. The city and its implementation partners will gather valuable feedback at key, targeted engagement checkpoints from the general public, pop-up participants, the business community and other stakeholders to assess reactions to the new offerings.

Inclusive, meaningful and effective engagement is critical to ensure that downtown Boulder provides experiences that are not only open to all – but are welcoming, comfortable, and valued by all. The project team will also use the pop-up implementation phase to close the engagement gaps that still exist after the initial DSaPS engagement activities, such as low engagement participation in children and adults younger than 24. The city will work on a plan with creative ideas to reach people that the city hasn't heard from yet in a meaningful way to close this participant gap. In addition, staff will be continuing consultation with Community Connectors-in-Residence and will identify and pursue other efforts to reach historically underrepresented community members during the pop-up series.

Next Steps after the Pop-Ups

As stated at the beginning of this memo, the pop-ups are just the beginning of a long-term evolution of streets in Boulder, first downtown and then potentially elsewhere. The pop-ups are temporary, because their main purpose is to test and experiment. The findings will inform future decisions on policies, investment and resourcing to ensure that investments result in the community's desired outcomes. . City staff are excited to incorporate the learnings from the pop-ups into forthcoming plans such as Civic Area Phase 2 and the 2024 Pearl Street Refresh to create a vision for the future that truly represents the community's interests.

ATTACHMENTS

A. Recommendations and Action Plan

Boulder Downtown Streets as Public Space

Action Plan
March 2023

Item 1 - Downtown Streets as Public Space Project Update

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1

Vision

Downtown Streets
as Public Space



Reimagining the future of downtown streets as public space

At the height of the COVID-19 pandemic, west Pearl Street was closed to vehicular traffic from 9th to 11th streets to respond to and recover from the effects of the pandemic. The blocks were temporarily repurposed for outdoor dining, gathering, and events. What started as an emergency economic recovery strategy became **an experiment in reimagining what role streets should serve as Boulder evolves.**

The pandemic closure revealed both opportunities and challenges, inspiring the City to explore a **new pop-up program** to repurpose vehicular infrastructure, provide more public gathering spaces, and model a more sustainable future centered on community. This creates the opportunity to build on the 40-year legacy of Pearl Street Mall, a pedestrianized public space that supports outdoor dining, events, entertainment, and gathering.

This Action Plan—informed by technical transportation and urbanism analyses and public engagement—lays the groundwork for a Spring/Summer 2023 pop-up. This program will be an experiment in **converting roadway into people-centered places** through a variety of tactics, including events, activities, street closures, parklets, and urbanism enhancements.

The goal is create more positive experiences for all

The West Pearl street closure proved we can transform our streets to make more joyful and community-focused spaces Downtown—but it wasn't without its own challenges.

As we look to the future, Downtown Streets as Public Space is a **program to more systematically and iteratively test transformations to Boulder streets**. This program will be an ongoing experiment as the City evolves its capacity and partnerships to deliver on this shared vision.

Item 1 - Downtown Streets as Public Space Project Update

01

Facilitate more community connections with joyful experiences

Equitably invite all Boulderites with events and activations that celebrate our city's diverse cultures and put fun front and center.

02

Expand Downtown beyond the Mall

Create more reasons for visitors to venture beyond Pearl Street Mall and to explore Downtown more thoroughly.

03

Better connect the pedestrian and bike network

Link existing and potential public spaces in order to make Downtown Boulder safer, more convenient, and more accessible.

04

Support Boulder businesses

Businesses contribute much to everyday life downtown—and so, collaboratively work with these stakeholders to support economic activity and add vitality to public spaces.

05

Test programs to influence future street design

Before a capital project gets underway, experiment with temporary changes to see what works, what doesn't, and refine over time.

06

Inform ongoing and future City initiatives and projects Downtown

This program is not a standalone initiative—kickstart projects that accomplish goals like those determined in the [Five Year Vision](#), among others.

This program is one piece of the puzzle

Boulder has a long history of carving out space for people to gather and make memories together.

It all begins with the Pearl Street Mall, the city's fully pedestrian street—and this legacy continues with year-round special events and summertime activities that turn Downtown streets into festival grounds.

Most recently, the City is expanding its outdoor dining program—a commitment to transforming roadways for people-centered activities.



Outdoor Dining Pilot Program

Outdoor dining, originally developed as a response to COVID-19, has expanded to a five-year pilot program.

These “parklets” will convert parking spaces into al fresco oases.



Everyday Activities on the Mall

The Mall itself is a treasure to celebrate—as Downtown experiments with energizing this area, activities and programs will run all summer.



Special Events & Street Closures

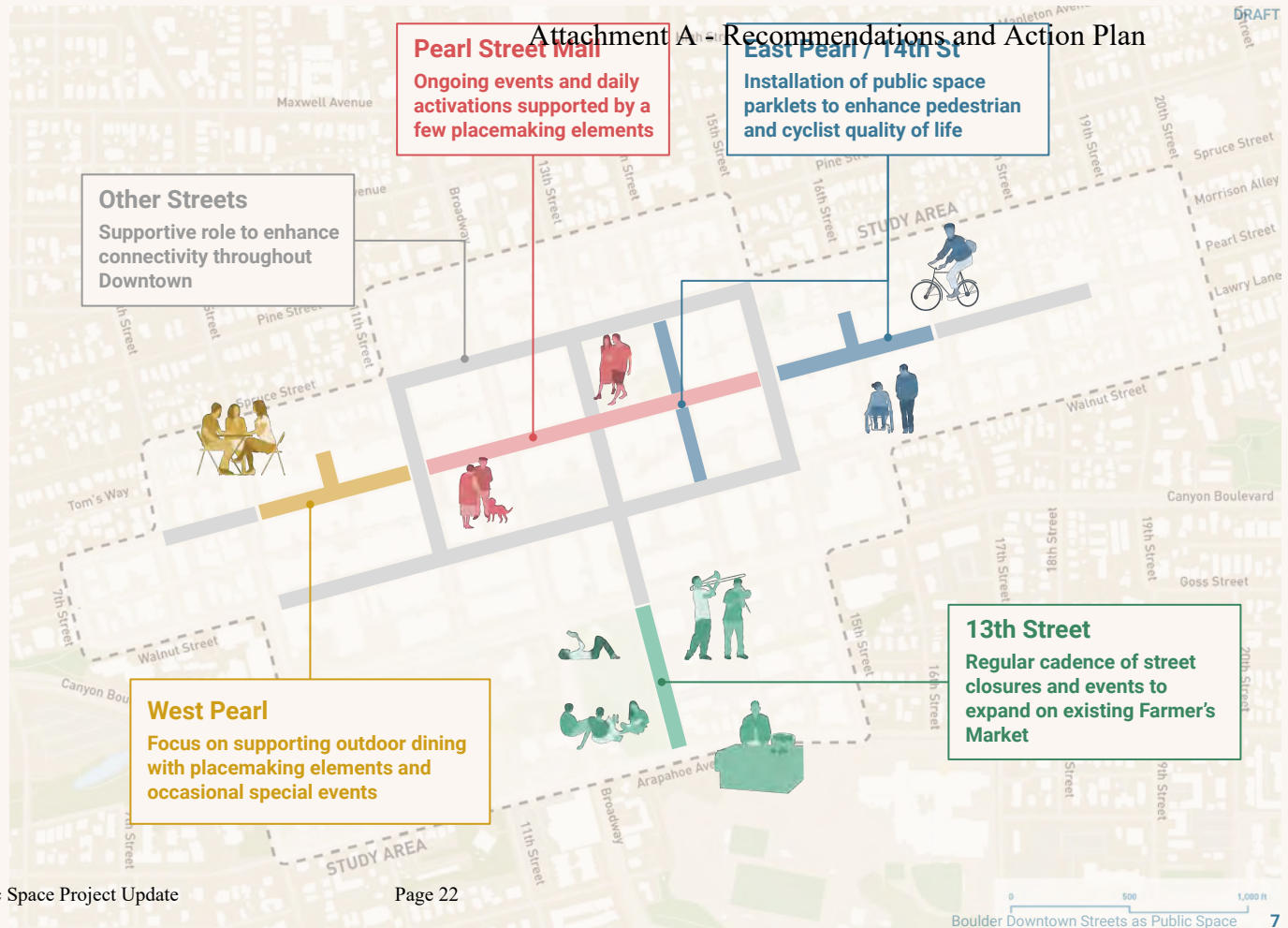
Starting as early as this spring, special events will convert the Mall and Downtown streets into public spaces for gathering and happenings.

Take note of events like Après Street on West Pearl, outdoor movies, and the Farmers Market!

Vision for Summer 2023 Downtown

Throughout Downtown Boulder there will be special events, weekly happenings, everyday activities, and new placemaking elements that transform roadways into gathering places.

All together, Downtown will experiment with a range of activations and locations as the City reimagines the future of its streets.



2

Spring/Summer 2023 Pop-up

Design & Program



Recommendations for Spring/Summer 2023

Based on full synthesis of the analyses and engagement, we recommend a partial and iterative street closure approach for this summer. We recommend a **weekly weekend closure along 13th Street, paired with a robust activation program and other tactical temporary urban upgrades** to make everyday life in Downtown more enjoyable for all.

We understand the public is looking for summertime experiences to gather around food and fun in the street—this can be achieved with a consistent schedule of events and closures. What we learn will inform future transformations that potentially build on or formalize these programming experiments.



Focus on outdoor dining and special events at West Pearl

West Pearl is a special place because of its unique businesses—however some businesses have reservations about full street closures.

Rather than closures, create people-focused experiences here with outdoor dining parklets and some special events that periodically open the street to people and enhance foot traffic.



Put a spotlight on 13th as a gathering place

Thanks to the Farmers Market, 13th Street is a regular location for street activation and public gatherings. As the City embarks on its planning process for the Civic Area, the Spring/Summer 2023 Pop-up should experiment with amplifying this street's role as a gathering place by extending the community spaces of the park and adding new programs at new times.



Upgrade Downtown streets with parklets and enhanced fixtures

Street closures are not the only way to repurpose roadways. The Summer 2023 Pop-up is an opportunity to experiment with parklets and fixtures that improve pedestrian and biking safety, enjoyment, and convenience.

These furnishings and fixtures can unify the diverse ways the City is enhancing Downtown.

Determining where and how to repurpose streets

Streets are critical pieces of infrastructure in two ways: as a place to *go through* and as a place to *go to*.

Downtown street segments were evaluated—based on a number of factors related to these two dimensions—to determine **which segment is best poised for a summer street activation program in 2023.**

For more information, see Appendix A.

Primary factors for consideration

Place to *go through*

Transportation impacts:
how disruptive to vehicular traffic, bicycling, and transit would a street closure be?

Access impacts:
how disruptive to accessibility and short-term parking would a street closure be?

Place to *go to*

Perception of safety:
how would visitors perceive their safety during a street closure?

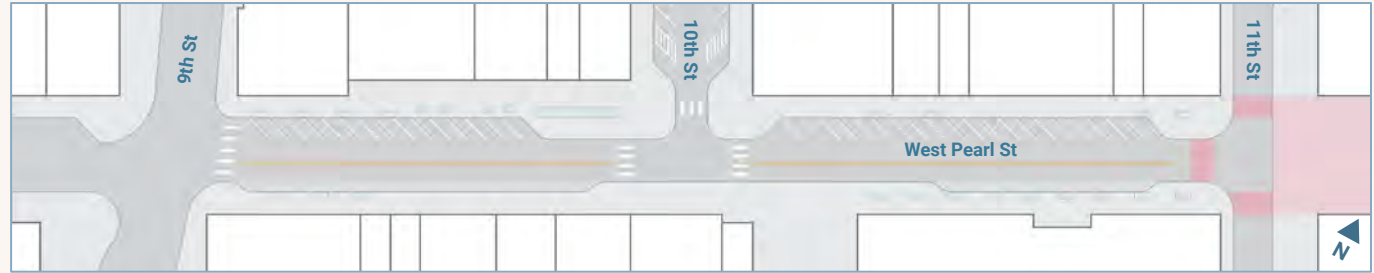
Ground floor activation and existing events:
how active would the site be during a street closure based on events and retail frontage?

Public sentiment:
how do Boulder questionnaire respondents feel about certain street segments?

Business relations:
how do neighboring businesses along certain streets feel about a street closure?

West Pearl

(9th to 11th)



Condition 1:

West Pearl offers the best potential for vibrancy, but present some transportation issues

As a *place to go to*, West Pearl offers the most active and interesting ground floor experience in Downtown because of its strong concentration of restaurants and retail.

As *place to go through*, street closures on West Pearl present some challenges related to accessibility and transit routes.

Condition 2:

West Pearl businesses have expressed grave concerns about long-term street closures

The reason many enjoy Downtown is because of the experiences businesses provide. However, many businesses in West Pearl cited challenges related to long-term street closures and have expressed concern.

Businesses are open to occasional closures tied to special events that draw people, and separately, DBP is planning some events that would temporarily

Condition 3:

Parklets with smaller footprints can enhance the pedestrian experience without introducing traffic and accessibility disruptions

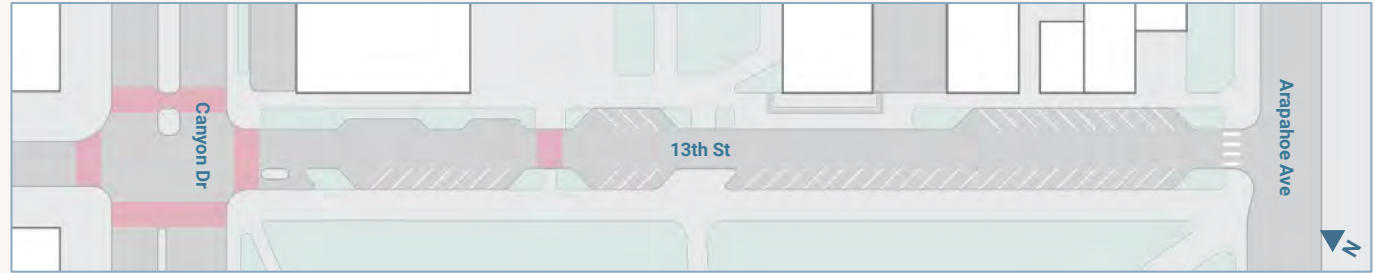
The Outdoor Dining Pilot Program will transform this street as restaurants make use of the roadway for dining. This program is effectively an ongoing experiment in reimagining the use of streets. Other types of parklets—for non-commercial purposes—can build on this experiment and add more staying power to the subdistrict.

Recommendations:

- **Fold the Outdoor Dining Pilot Program into the messaging of the Spring/Summer 2023 Pop-up**
- **Explore locations to add other parklets for public, non-commercial uses**
- **Support DBP's proposed special events that involve street closures in West Pearl**

13th Street

(Canyon to Arapahoe)



Condition 1:

Any street closure should be tied to programming—and 13th Street is already home to the Farmer's Markets recurring street closures

Programming should drive where and why Boulder transforms streets. As it looks to enhancing Downtown, the City should first focus on amplifying the existing activations that successfully transform streets into gathering places.

13th Street provides a good foundation to build a more robust calendar of happenings that transform the street.

Item 1 - Downtown Streets as Public Space Project Update

Condition 2:

Closures on 13th introduce the least disruptive effects to traffic, transit, and accessibility

As a site that already sees regular street closures twice a week, it's proven that 13th Street can be closed to vehicles without much issue.

There are no transit lines along this street, and parking lost during the closure can be absorbed in adjacent lots.

Condition 3:

Activation is a more compassionate method to discourage improper uses of public spaces and to enhance perceptions of safety

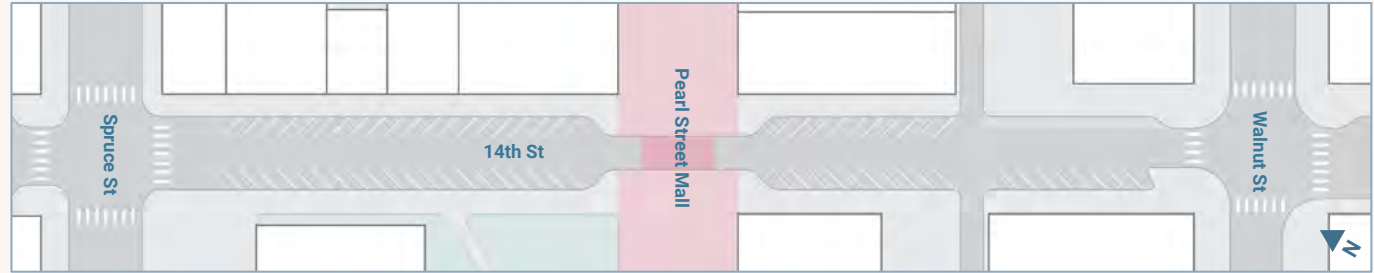
The relationship between activation and perception of safety is cyclical: the more active a place, the more comfortable people feel being there, and vice versa. By cranking up the activity levels on 13th Street, joyful events can be deployed to draw more people to 13th Street and to implicitly signal proper use of public spaces without resorting to uncompassionately ousting people.

Recommendations:

- **Designate this section of 13th Street to be a site for regularly recurring events that involve some street closures**
- **Leverage the existing relationship with the Farmer's Market to amplify and add activations**
- **Curate a regular cadence of activities throughout the season**

14th Street

(Spruce to Walnut)



Condition 1:

Street closures on 14th Street are not too disruptive to transit and accessibility

As a one-way cross street, 14th Street between Spruce and Walnut is not a major thoroughfare. However, its parking spaces are consistently more utilized, meaning that any closure on this street will displace some parking to other nearby areas.

Condition 2:

14th Street is home to some occasional events, but much of the street's edges are inactive

14th Street is occasionally activated with events—like the Pearl Street Arts Fest, which places artisans along both Pearl and 14th Street.

Despite this, 14th Street is not a highly activated street segment. The west edges of the street do not feature retail frontage or inviting facades, meaning the street overall lacks a strong sense of vibrancy.

Condition 3:

With the Pearl Street Mall cutting across, adding more pedestrian space here is less impactful than in other locations

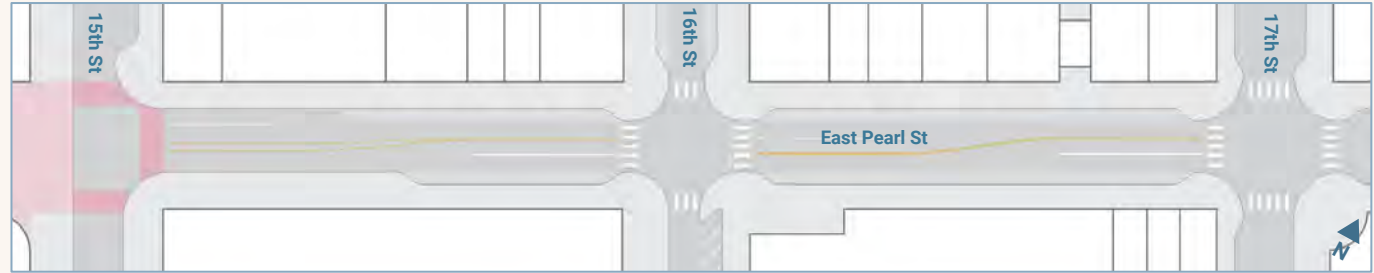
Since the Mall itself is a major pedestrian space, transforming the roadway here will be less impactful. Rather, efforts should focus primarily on enhancing the Mall itself. Smaller interventions like a parklet can model modest reinvention of 14th Street without diluting the Mall's role.

Recommendations:

- Pilot parklets to transform sections of roadway into space for pedestrians and cyclists

East Pearl

(15th to 17th)



Condition 1:

As the primary arterial into Downtown, East Pearl introduces the most challenges when closing the street to vehicles

Of all analyzed streets, East Pearl creates the most transit and accessibility challenges when closing the street to vehicles. Much of the rerouted traffic would likely be displaced to nearby residential areas.

Condition 2:

Most lost on-street parking can easily be recouped by ample availability in the nearby parking structure

Should parking spaces be repurposed for pedestrian uses, just south of Pearl Street is a parking structure that typically has availability. So, impacts to short-term parking are minimal here.

Condition 3:

While East Pearl is commercial, its mix of restaurants and retail doesn't create the most active public realm

East Pearl features a great mix of restaurants and retail along it, however the street itself is not the most vibrant portion of Downtown. East Pearl would need a significant number of events and activations to justify closing the entire street. Instead, smaller scale transformations—like parklets—can model change to improve biking and pedestrian experiences.

Recommendations:

- **Pilot parklets to transform sections of roadway into space for pedestrians and cyclists**

What led to these recommendations?

01

The scale of transformation needs to match the level of activation

Public spaces need people in order to feel vibrant, inviting, and safe. To justify a 24/7 closure, we would need an area that consistently draws heavy foot traffic at all times of the day and week, including well into the night. Closures should only take place when the street is activated, and it takes significant resources to make active places. To be most efficient, Boulder should concentrate its resources on locations and times where spaces already feel vibrant.

02

We can transform streets without requiring a full 24/7 closure

Full street closures are just one way to transform the use of roadways. West Pearl and other street segments will be transformed this summer through the Outdoor Dining Pilot program and a bevy of special events that close the street temporarily. These activations won't completely shut down the street to vehicles all season, but will create meaningful places for people to gather at peak times when most visitors come to Downtown.

03

Traffic, transit, and parking impacts do not primarily drive these decisions

Across most street segments we analyzed, the impacts to traffic, transit, and parking were not disruptive enough to automatically rule out a street as a possible site for a closure.

*Instead, streets with vibrant ground-floor retail frontages and pre-existing activations took precedence, as these are streets with the strongest role as a *place to go to* in Downtown. These sites create some vibrancy even without events or street closures.*

04

Boulder should build on existing partnerships

As we look to enhancing Downtown, the City should focus on leveraging its partnerships and amplifying existing activations that transform streets into gathering places.

It's for this reason that we recommend a recurring weekend closure program on 13th St, where the Farmers Market operates. By concentrating a consistent schedule of closures and events here, Boulder can build on this capacity and maximize the program's impact.

05

Boulder businesses are key partners in enhancing life Downtown

The reason many enjoy Downtown is because of the experiences businesses provide. However, many businesses in West Pearl cited challenges related to long-term street closures. As the City reimagines its streets, it's important that businesses are brought along in the process.

Full closures anywhere require a higher level of consultation and careful mitigation of impacts.

Summer 2023 Pop-up Components

Recurring Events on 13th



Weekly weekend street closure with robust calendar of diverse events to inspire people to gather Downtown

Downtown Parklets



Flexible system of mini-parks to repurpose parking spaces for people throughout Downtown

Pop-up Kit

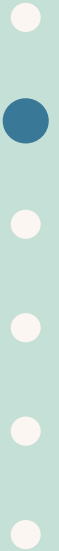


Collection of fixtures and furnishings to support special events and improve day-to-day life along Downtown streets

2.1

Recurring Events on 13th

Design & Program



Recurring events on 13th

With the Farmers Market running eight months of the year, 13th Street already sees regular activations and street closures every Wednesday evening and Saturday morning.

With the Spring/Summer 2023 Pop-up program, we recommend building on this with a consistent calendar of recurring weekend activations that close the street from Saturday morning to Sunday evening for markets, parties, performances, and cultural happenings, ideally running from June through August.



01

Markets on 13th



02

Non-market Events



03

Open Street + Parklet

Markets on 13th

The Boulder Farmers Market already calls 13th Street home. There's potential to expand market and vending events into new days of the week and new times of day.

Programming ideas:

- Boulder Farmers Market (existing)
- Artisan Markets
- Night Markets
- Food truck festivals
- Retail kiosks

Considerations:

- Markets should stage vendors in the roadway, requiring a temporary street closure.
- Coordinate with the Farmers Market to find opportunities to expand their operations into other types of markets on new days/times of day.
- Consistent activations will require NPE expense for cleaning, security, and restrooms provision (est. \$100k+)—coordinate to minimize impacts to Parks & Recreation department.

1. **Boulder Farmers Market** (Credit: Visit Boulder)
2. **Boulder food trucks at Rayback Collective** (Credit: Visit Boulder)
3. **Artisan Market** (Credit: Firefly Handmade)
4. **Asia Society Night Market, Houston** (Credit: Chron)

Item 1 - Downtown Streets as Public Space Project Update



Non-market Events

Partner with Boulder’s local talent and cultural communities to curate regular recurring happenings that draw people.

Programming ideas:

- Outdoor movies
- Music performances, DJs / dance parties
- Weekend beer garden (paired with trivia, comedy)
- Arts lessons with BMoCA (existing Saturday event)
- Outdoor games
- Arts & cultural festivals and holiday celebrations
- Educational events

Considerations:

- The event can either involve a temporary street closure and use the roadway, or can instead fit in the adjacent plaza.
- Collaborate with cultural groups and Community Connectors to devise diverse programs that center inclusivity.
- Consider anchor activations—like a beer garden-style F&B vendor—to consistently activate the street during recurring events.
- Consistent activations will require NPE expense for cleaning, security, and restrooms provision.

1. **Pearl Street Mall Buskers, Boulder** (Credit: Visit Boulder)
2. **“Larimer Sessions,” Denver** (Credit: 303 Magazine)
3. **Food & Beverage Pop-up** (Credit: ROXBOX Containers)
4. **Chalk Art Festival, Denver** (Credit: Visit Denver)

Item 1 - Downtown Streets as Public Space Project Update



2.1 - Recurring Events on 13th

Open Street

When there is no market or other event taking place, 13th Street remains open to vehicle traffic. A temporary parklet can repurpose parking spaces for gathering and micromobility services (see the Section 2.2 for more details).

Programming ideas:

- Public seating
- Bike parking and service station

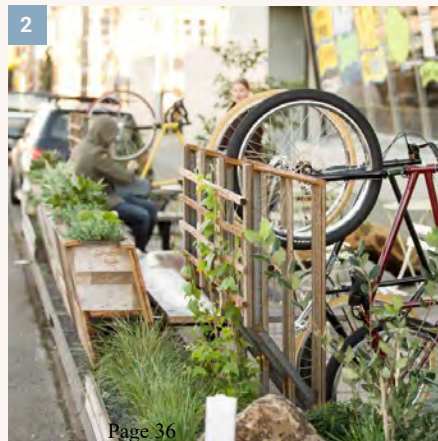
Considerations:

- Site the parklet closest to Canyon to serve as a beacon to—the beacon is important to connecting the site to the rest of Downtown.
- There is ample bike parking and a bikeshare near Arapahoe, so micromobility services are most welcome near Canyon where bike parking is lacking.
- Invite pop-up bike repair services to set up shop during other events.

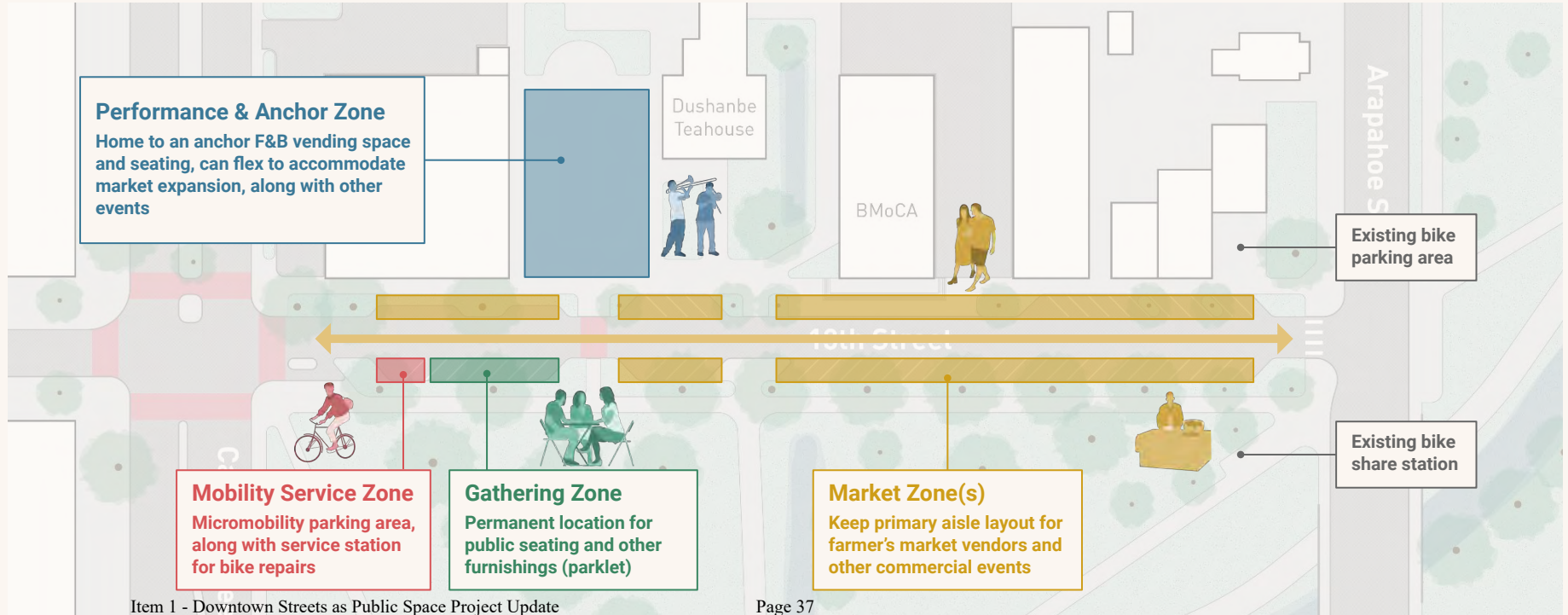
1. **Seating and Bike Parking Parklet** (Credit: Possible!)
2. **Seating and Bike Parking Parklet** (Credit: One on Whiteley)
3. **Bike Repair Pop-up** (Credit: Denver Streets Partnership)

Item 1 - Downtown Streets as Public Space Project Update

Attachment A - Recommendations and Action Plan



13th Street - Program Areas



Item 1 - Downtown Streets as Public Space Project Update

Implementation for recurring events

01

Aim for weekly consistency in scheduling recurring events

The more consistent and recurring an event is, the more likely it will find its following.

While scheduling must be flexible to accommodate future programming partners' availability, look to cobble together a schedule that reads as consistent to the public, whether that be weekly, biweekly, or monthly. This consistency is important to coordinate traffic closures more easily.

02

Prioritize programming Saturday evenings to amplify the Farmers Market and create an all-day experience on 13th

It's best to compress as much activity into a day as possible, rather than spread many things out across a week. A weekly weekend schedule (Saturday and Sunday) is preferred to leverage the existing Farmers Market activation and to make the effort of closing the street even more worth it.

03

Partner with local businesses and community orgs to produce free, public programming

All programming should ideally feature local Boulder makers, creatives, and cultural groups. Businesses looking to advance their visibility in Boulder may agree to produce programs for little to no fees; and, community orgs who are mission-aligned may do the same. Performers should always be paid. These happenings should be totally free for the public to enjoy (aside from vendors at the event).

04

For near-term, hire contractor to help curate and manage programming

To achieve this program in Spring/Summer 2023, the City will need to add to its own capacity to proactively ideate, curate, and manage this additional calendar of happenings.

Over time, the City should continue to develop more partnerships to leverage community resources for programming, leading to a more locally-led process in the future.

05

Allow programming to ramp up over time

New events in new spaces will always take a while to find their footing. Give programming time (potentially multiple years) to find success, and don't be discouraged if the first few events are not hits.

Implementation for recurring events (continued)

06

Consider anchor vending space with liquor license

As weekend evenings are ideal targets for activations on 13th, the site will benefit from a consistent F&B anchor vendor (or vending space with rotating vendors) that can sell alcohol.

The programmer must apply for a Special Event Liquor Permit, Temporary Tasting Room License, or Liquor Premise Extension as an existing licensee (i.e. the Teahouse). This would be facilitated by City licensing but is technically a State requirement.

07

Street closures on 13th require parking agreements with the adjacent permit-only lots

Currently, the Farmers Market has an agreement to use the adjacent permit-only parking lots during its hours of operation. If we are to expand programming and street closures on 13th, then more agreements like this will need to be negotiated.

08

Coordinate with Parks & Recreation

The Civic Area is home to its own calendar of events that make use of the park and bandshell throughout the summer.

The Parks and Recreation Department will primarily manage these events and often need use of 13th Street for loading and unloading. The recurring events on 13th Street should seek to amplify what is already planned for the Civic Area, and should not create new conflicts in event operations.

09

Budget for program costs and added security, upkeep, and maintenance

Activations on 13th Street will require significant resources, including: increased security, street cleaning, restroom service, site operations, and maintenance of fixtures, furnishings and, equipment—all of which should be budgeted for either as added expenses to existing City operations or to a contractor. Programming itself also carries fees to book performers.

A season of programming like this can likely cost \$300K - \$600K (not including contractor fees).

Cost Comparisons

Downtown Yonge, Toronto

Budget for roughly **50 events** was just over **\$400k** (FY 2019)

Downtown Santa Monica

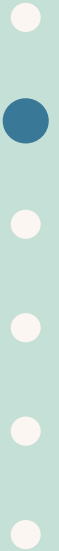
Budget for **32 events** and **25 art installations** and **16 filmings** was almost **\$900k**, including marketing costs (FY 2021)

*In both cases, maintenance and security are separate additional expenses.

2.2

Downtown Parklets

Design & Program



Downtown parklets

Parklets are targeted interventions that convert parking spaces for cars into vibrant public spaces for the people of Boulder.

Besides providing public amenities—such as seating or bicycle parking—they can also invite people to reconsider the relationship between mobility and public space, and signal the City of Boulder’s ongoing commitment to alternate forms of transportation.



01

Seating Parklets



02

Activity Parklets



03

Mobility Parklets

2.2 - Downtown Parklets

Seating Parklet

Seating parklets are non-commercial, publicly available seating that can range from formal tables and chairs to informal benches and abstract surfaces.

Why select this type of parklet?

These parklets are the most common, and most clearly create public space that invite people to stay. They can also be customized to accommodate signature elements (ie. signage, seating, landscape, public art).

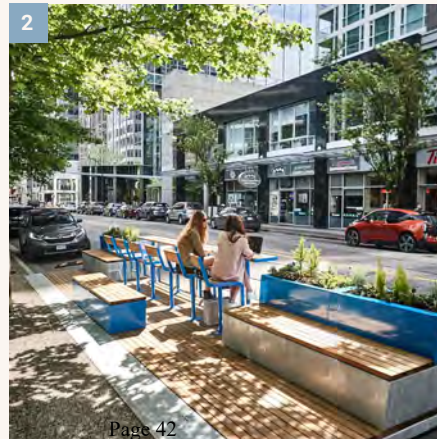
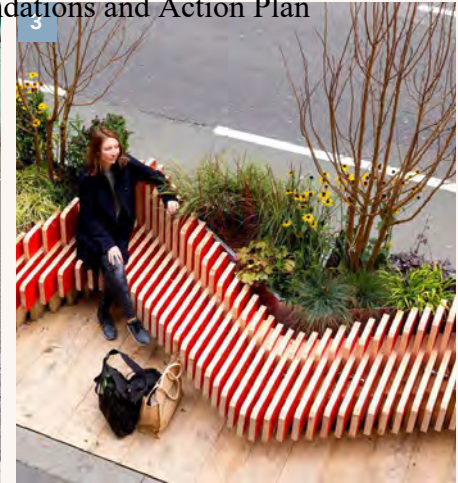
Where to site this type of parklet?

Where there is a lack of public outdoor seating, especially in areas of high commercial activity and foot traffic that allow for people watching.

1. Project, Location
2. Parklet 2.0 System by Vestre
3. ParkedBench, London (Credit: WMB Studio)
4. Image Credit Needed

Item 1 - Downtown Streets as Public Space Project Update

Attachment A - Recommendations and Action Plan



2.2 - Downtown Parklets

Activity Parklet

Activity parklets offer variety in public life, interject whimsy into the everyday, and invite a wider range of potential users, especially children and teens.

Why select this type of parklet?

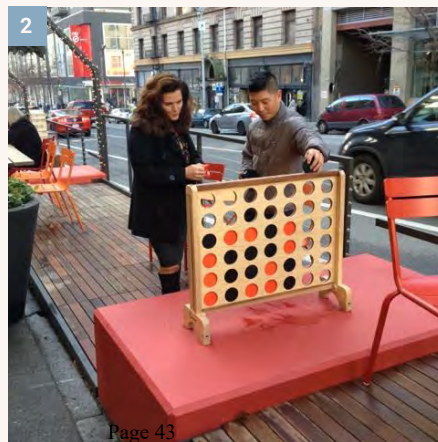
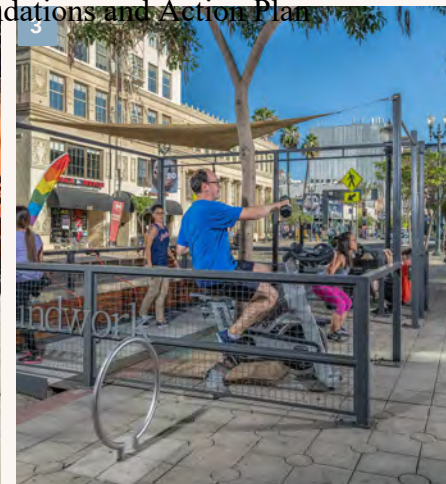
These parklets may encourage a variety of activities and interactions that aren't normally facilitated by simple seating areas, and can create moments of delight and surprise.

Where to site this type of parklet?

Adjacent to compatible spaces or building uses—such as parks, schools, places of worship. To ensure safety, activities should be generally stationary and not involve much running around or loose pieces.

1. **Fabric8 Parklet, San Francisco** (Credit: Groundplay)
2. **Chromer Building Parklet, Seattle** (Credit: SDOT)
3. **Groundwork Fitness Parklet, Long Beach** (Credit: Studio One Eleven)
4. **Image Credit Needed**

Item 1 - Downtown Streets as Public Space Project Update



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Mobility Parklet

Mobility parklets provide facilities that support active transportation around Downtown, and can include bike parking and repair facilities, along with space for other micromobility devices.

Why select this type of parklet?

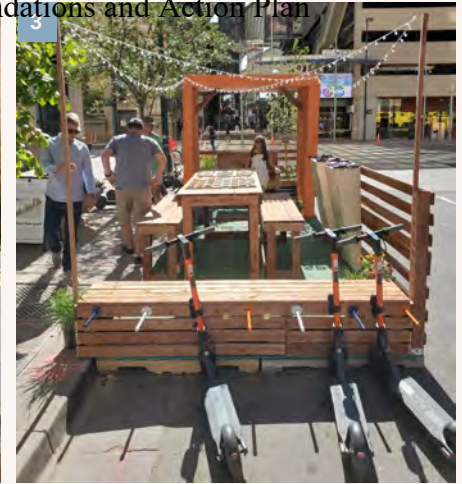
Mobility parklets encourage people to access Downtown through active transportation modes, and can signal ongoing commitment to sustainable mobility options.

Where to site this type of parklet?

At key locations that provide access to Downtown along existing bike and pedestrian routes.

1. Play Parklet, Iowa City (Credit: Little Village Magazine)
2. Caption and Notes about the image if needed
3. Urban Backyard Parklet, Denver (Credit: Spin)
4. Parklet 2.0 "Mech" by Vestre

Item 1 - Downtown Streets as Public Space Project Update



Preferred Locations

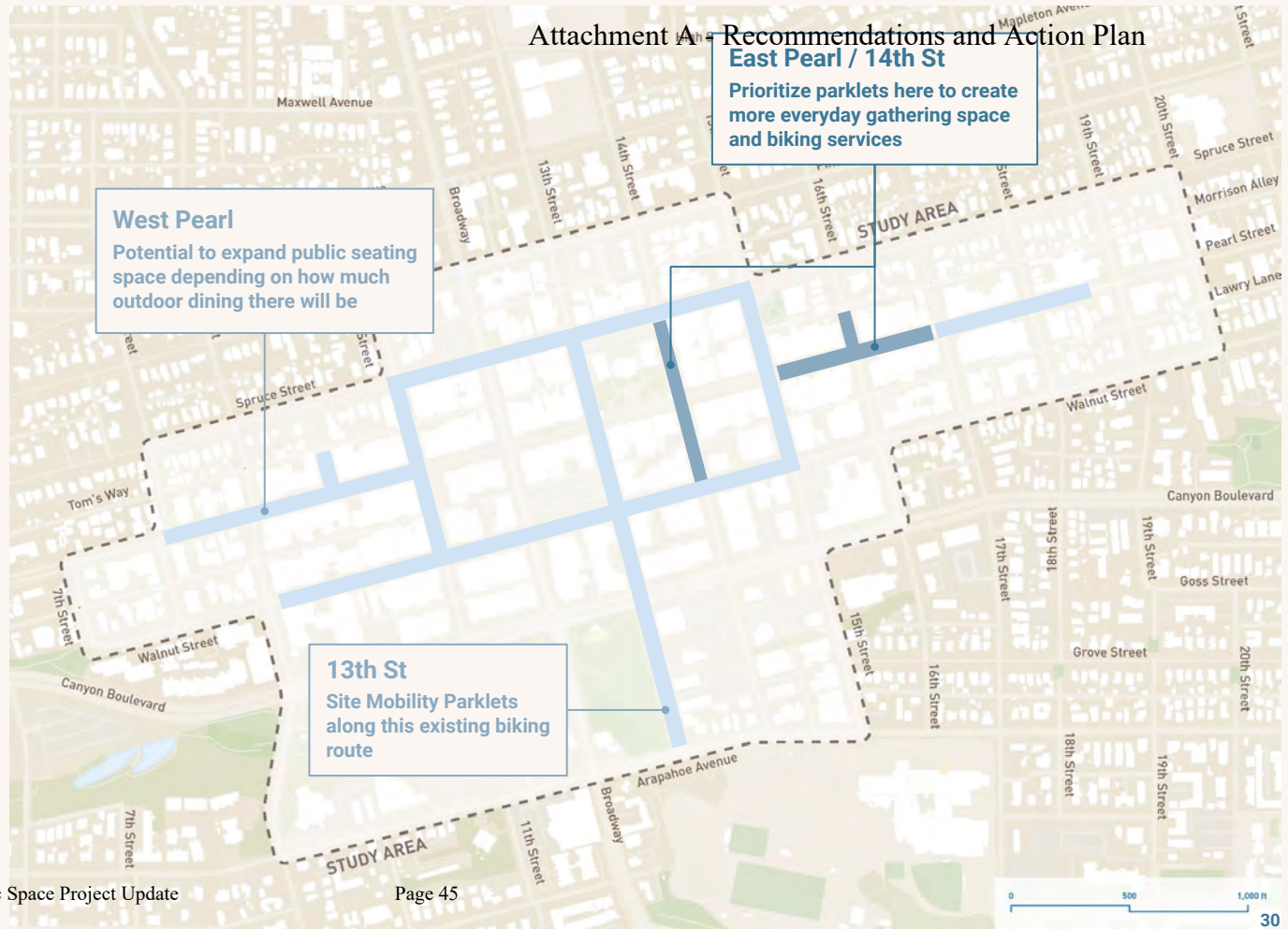
We recommend prioritizing key blocks around the east side of Downtown for the primary parklet zone.

Other potential—but lower priority—locations include sections of West Pearl, Spruce, Walnut, 11th, 13th, and 15th Streets.

Legend

- Priority Parklet Streets
- Potential Parklet Streets

Item 1 - Downtown Streets as Public Space Project Update



Implementation for parklets

01

Don't lose ADA parking spaces—or replace them as close by as possible

Accessibility is a primary concern, and ADA parking spaces should not be lost when implementing parklets.

Ideally, repurpose non-ADA parking spaces for parklets. However, if an ADA space is the best or only option, then replace that ADA space nearby within regulatory constraints related to curb access.

02

Follow design guidelines set in the Outdoor Dining Pilot Program

These parklets should follow the same guidelines set in the Outdoor Dining Pilot program, including considerations related to location, emergency access, ADA compliance, continuous barriers for safety, flood and stormwater, electrical, and access to utilities.

During procurement, look first to the pre-approved fabricators in the Outdoor Dining Pilot program.

03

Establish a consistent visual identity with opportunities for local public art

The design, materiality, and branding should be consistent from parklet to parklet to establish each installation as part of an overall whole strategy.

If desired, provide opportunities for local artists to customize certain parklet features or surfaces with murals that showcase Boulder's history, culture, and diversity.

04

Coordinate locations with nearby businesses and outdoor dining sites

Outdoor dining pilot locations will influence where parklets are placed—where there is already plenty of outdoor dining, fewer parklets are necessary.

Consider siting parklets in parking spaces immediately adjacent to retailers, rather than restaurants. And be sure to coordinate and collaborate with adjacent businesses to find locations that satisfy everyone.

05

Install parklets all at once and keep them in place until winter

Ideally, all parklets in Downtown are installed at the same time to signal the arrival of the Spring/Summer Pop-up. However, this timeline should remain flexible to what is feasible from fabricators.

Parklets should be in place from spring to fall. Parklets should only remain throughout winter if the public requests for them to stay and observation data shows strong usage well into the fall.

Parklet Pricing

Parklets can be created at a wide variety of quality levels and price points, from cheap DIY installations to off-the-shelf modular solutions to custom-fabricated structures that are designed to last years.

Key Considerations: Lead time, ongoing maintenance and cleaning, durability, flexibility for programming, assembly, shipping cost

General cost range: \$20,000 - \$70,000 for a 2-parking-space, fabricated-in-place parklet. Listed to the right are modular parklet units sized for 1 parking space.

Attachment A - Recommendations and Action Plan

Vestre Parklet 2.0 System - 2023 Pricing

"Urban Floor"

\$11,030



"Cozy"

\$16,930



"Cafe"

\$23,810



"Forest"

\$18,800



"Cycling" (12 bikes)

\$10,030



"Mech" (1/2 Space)

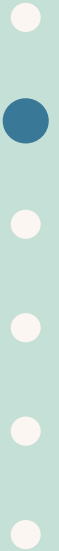
\$10,790



2.3

Pop-up Kit

Design & Program



Pop-up Kit

In addition to parklets, a kit of placemaking elements can be placed in the public realm to support ongoing activity.

Some of these are best deployed in a cluster to help define and invite activity to a certain place, while others are more general, wide-spread elements that create a connective tissue that links different zones of Downtown Boulder together.



Social Seating



Play Installations



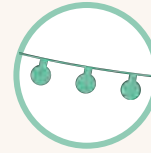
Games and Activities



Planters



Wayfinding and Signage



Lighting



Shade Structures



Storage



Micromobility Parking and Service Stations



Street Closure Barriers

Attachment A - Recommendations and Action Plan

2.3 - Pop-up Kit



Social Seating

Social seating should provide free-to-sit places to gather throughout downtown Boulder.

To scale with available funding, a combination of custom and off the shelf installations are recommended, with an initial focus on movable tables and chairs.

Coordinate your resource allocation for social seating and play installations, as custom installations could provide both amenities.



1. MQ Enzo Seating, Vienna (Credit: MuseumsQuartierWein)
2. The Lawn on D (Credit: Christian Philips / LandZine)

Item 1 - Downtown Streets as Public Space Project Update

Attachment A - Recommendations and Action Plan



Play Installations

Play installations can help transform into a destination for the entire family.

To scale with available funding and space, a combination of custom, rental, and off the shelf installations are recommended.

Coordinate your resource allocation for social seating and play installations, as custom installations could provide both amenities.



3. Red spinning seating, Mesa (Credit: Visit Mesa)
4. Market Street Prototyping Festival, San Francisco (Credit: Gehl)

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Games and Activities

Games and activities should provide a free, joyful amenity to draw people to Downtown Boulder and its businesses.

Consider installing games and activities with limited small elements, to reduce loss and replacement costs. Alternatively, a nearby business or street ambassador could operate a check-in/check-out system for elements like balls, paddles, pieces, etc.

Some games and activities to consider are: ping pong tables, musical installations like drums, foosball, seesaws, checker or chess boards, etc.



1. Outdoor Chess Board, Grand Rapids (Credit: Grand Rapids Magazine)
2. Riverfront Park, Tampa (Image Credit Needed)

Item 1 - Downtown Streets as Public Space Project Update

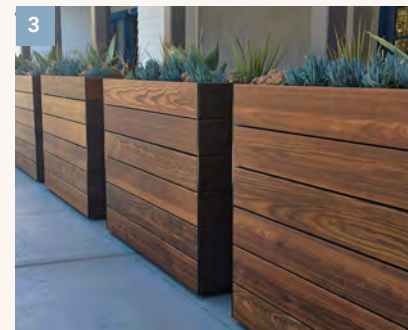


Planters

Planters can add a pop of green to soften the urban landscape, along with providing an edge and buffer that defines and protects public space.

They come in a variety of materials, sizes, and styles, and can either be fixed elements or possibly moved to help define pop-up activity areas. They can also be fixed to parklet platforms to define an edge and protect from moving traffic.

Some planters also include self-watering reservoir systems that minimize watering schedules and labor.



3. Commercial Planters (Credit: Tournesol Siteworks)
4. Commercial Planters (Credit: Tournesol Siteworks)

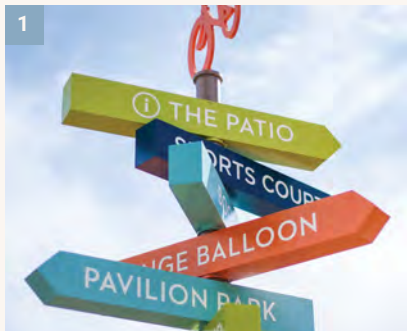
2.3 - Pop-up Kit



Wayfinding and Signage

Wayfinding should provide useful, legible information and directions that encourage people to explore Downtown. It should be highly visible but also unobtrusive and not block sightlines.

It can be combined with other district identity signage that helps brand the area and celebrates local culture and activities.



1. Park Signage, Irvine (Credit: RSM Design)
2. Cultural placemaking and wayfinding, Stratford (Credit: Thomas Matthews Communication Design)

Item 1 - Downtown Streets as Public Space Project Update

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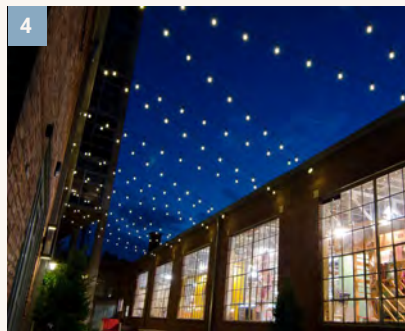
Lighting

Lighting should enhance the character and visibility of streets while not limiting accessibility. Consider coordinating with local artists to create custom lighting installations.

All lighting should be commercial outdoor grade.

String lighting hung across a street must have a minimum 14' through to allow fire engine access.

All lighting cords and plugs should not create tripping hazards or limit ADA accessibility.



3. Street Light Art, Unknown (Credit: MK Illumination)
4. East 4th Street, Cleveland (Credit: Outdoor Lighting Perspectives)



Shade Structures

Shade structures provide key shelter and relief from excessive heat and daylight, especially in areas that lack a mature tree canopy.

They can be freestanding, but most commonly shade umbrellas are combined with tables to make seating areas more comfortable. A variety of colors, materials, and sizes are possible, and can provide a visual element that helps brand public space.

Ensure that any movable elements—like shade umbrellas—are properly weighted to withstand winds.



1. Main Plaza, San Antonio (Credit: RIOS)
2. Pike Place Market, Seattle (Credit: Pike Place Market)

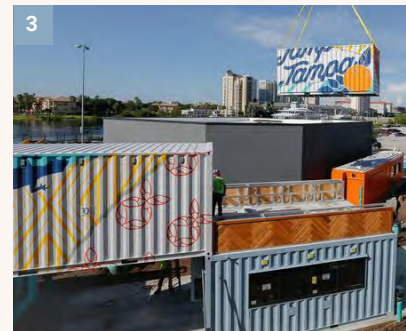
Item 1 - Downtown Streets as Public Space Project Update



Storage

Storage is a necessary logistical component of the kit of parts, and allows for elements to be removed and secured when not in use.

Shipping containers provide an opportunity to anchor and define public spaces, and also can be a canvas for branding, public art, and wayfinding.



3. Sparkman Wharf, Tampa (Credit: Tampa Bay Business Journal)
4. Coffee Box, El Paso (Credit: ArcRoot)

2.3 - Pop-up Kit



Street Closure Barriers

Street closures need clear signage and barriers at all entrances to redirect traffic and also clearly define the boundary of public space. There are standard metal barriers that can be branded with signage to help identify the closure as part of a larger program of events and spaces. Additionally, other movable elements like planters can be repurposed as street closure barriers. Because the recommended program involves a recurring weekend closure, any barriers must be movable—these lighter-weight barriers will require traffic management as they cannot stop cars on their own.

Longer term, higher security bollards might be more desirable from a safety perspective, but they sacrifice flexibility and require coordination both for installation and ongoing access needs.



1. Decorated street barrier (Credit: Signs Express)
2. Automatic retractable bollard (Credit: Protogetic)

Item 1 - Downtown Streets as Public Space Project Update

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Micromobility Service Stations and Parking

Bicycle repair stations, along with parking for bikes, scooters, or other micromobility devices, can encourage active transportation to and from Downtown Boulder.

These elements could also be augmented by programming that provides snacks and beverages to cyclists, ride meetups, or repair classes, and local bicycle shops could be invited to participate and partner in these locations.



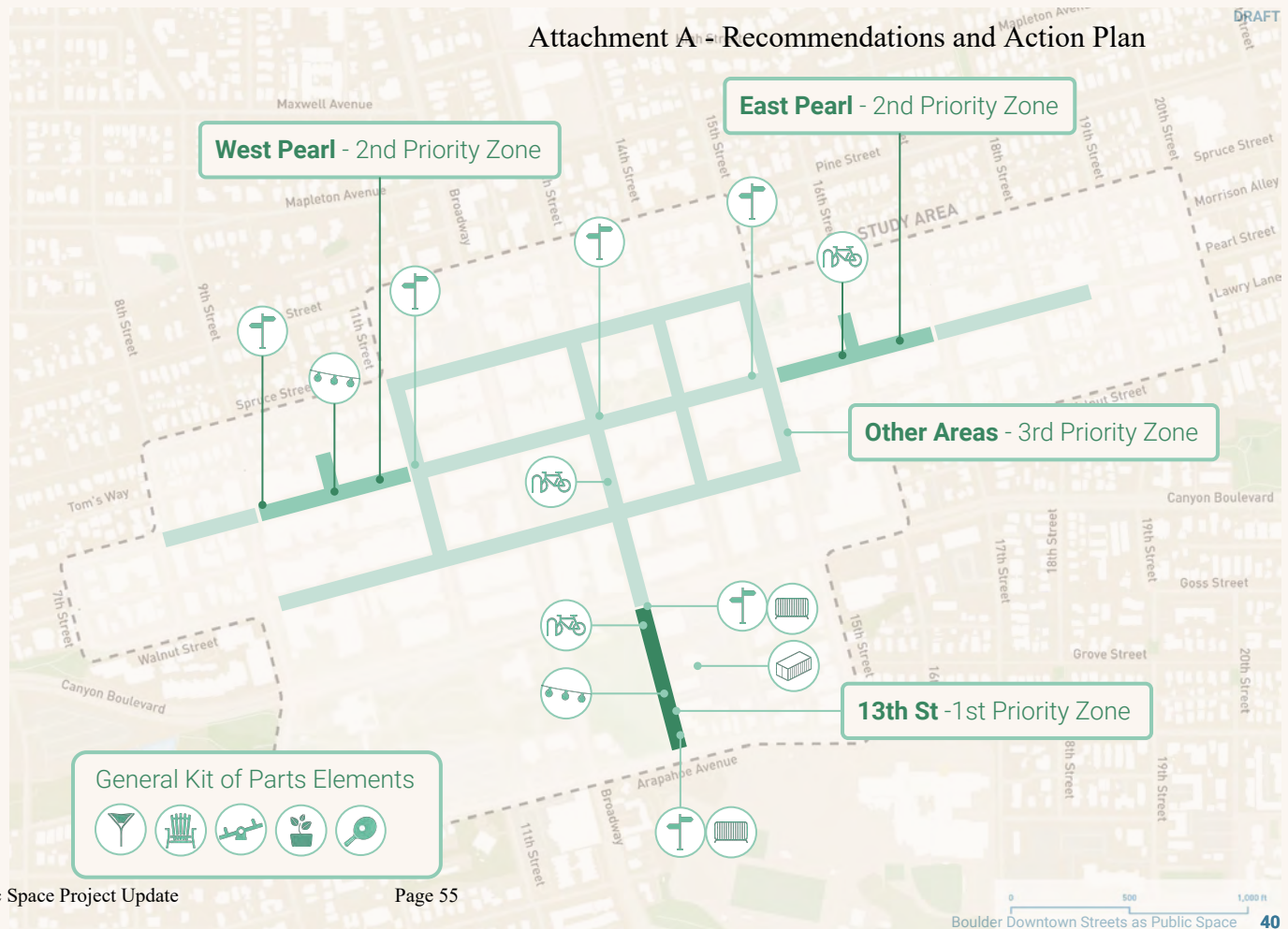
3. Dero "FixIt" Repair Station (Credit: Core 77)
4. Bike Parking Program, San Francisco (Credit: SFMTA)

Pop-up Kit Deployment

The kit should be deployed around the entire Downtown, and should help link different areas through a cohesive visual and programmatic identity. A few elements need to be located at strategic locations, while the others can be dispersed more generally.

Legend

- 1st Priority Zone
- 2nd Priority Zone
- 3rd Priority Zone



Implementation for kit of parts

01

City to procure Pop-up Kit and find a partner for ongoing deployment and maintenance

The City should be responsible for procuring and owning the fixtures, furnishings, and equipment in the Pop-up Kit.

Some lightweight elements will require daily maintenance, set-up, and take-down—like movable tables and chairs and games pieces. Other fixtures that are either too heavy to move or fixed in place can remain out at all times.

02

Create a consistent visual identity with the kit of parts

The kit of parts should be visually consistent—make, model, color, etc. The kit of parts should be consistent with the parklets, as well. Elements within a category should ideally be sourced from the same fabricator. For example, all seating should come from one company to ensure consistency.

In the near-term, expediency for procurement may mean not all elements can be alike. But as the program matures over time, future procurement can fix this.

03

Don't forget the Pearl Street Mall

When deploying the kit's fixtures and furnishings, include Pearl Street Mall as a site.

While the Summer 2023 Pop-up program is most focused on transforming current roadways into gathering spaces, the Mall itself is an important pedestrian location in Downtown. Deploy the same kit of parts on the Mall to communicate that all parts of Downtown are working together to achieve the same goals.

04

Minimize amount of totally custom elements

Look for "off the shelf" options that can be more easily replaced in the event a fixture or furnishing is damaged or lost.

Find simple ways to unify "off-the-shelf" elements into the brand of the program through applied graphics or color.

Elements can always be upgraded or customized as needed as the program ramps up in the future.

05

Simplify storage

Find one or two central locations to store the kit of parts elements when they are not in use. These can be strategically placed to provide easy access from anywhere Downtown.

Storage containers can be canvases for public art, and can even help anchor or define a public space.

3

Implementation Roadmap

Action Items

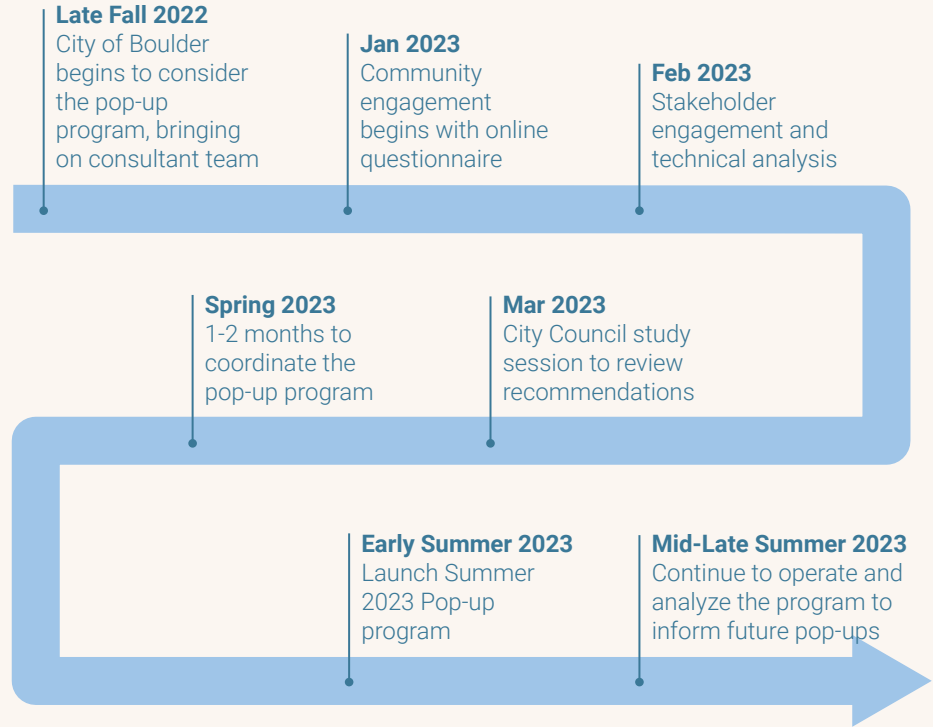


Implementation

This process began in late 2022 to produce this Action Plan by March 2023 with recommendations to implement by Summer 2023. This results in a **very compressed timeline** to achieve our vision.

We need to consider implementation along four intertwined tracks:

- Communications
- Procurement
- Programming
- Coordination and Data Collection



Communications Roadmap

The Summer 2023 Pop-up will require a communications strategy to clarify how this initiative is a cohesive project and clarify how this pop-up responds to community desires.

Communications to determine the Pop-up's look and feel: name, graphic identity, etc.

(note: option to add private contractor for branding/marketing)

Determine communications campaign strategy to publicize the Pop-up on a City project webpage

CV to Engage with businesses that would be impacted by 13th St closures and by parklets taking parking spaces

Enact communications campaign in partnership with Pop-up Manager to both advertise the program and to start soliciting community interest in participating in events

Comms and Pop-up Manager to publicize events and solicit community input on pop-ups

Conduct engagement with community members and stakeholders throughout the summer to evaluate pop-up's success

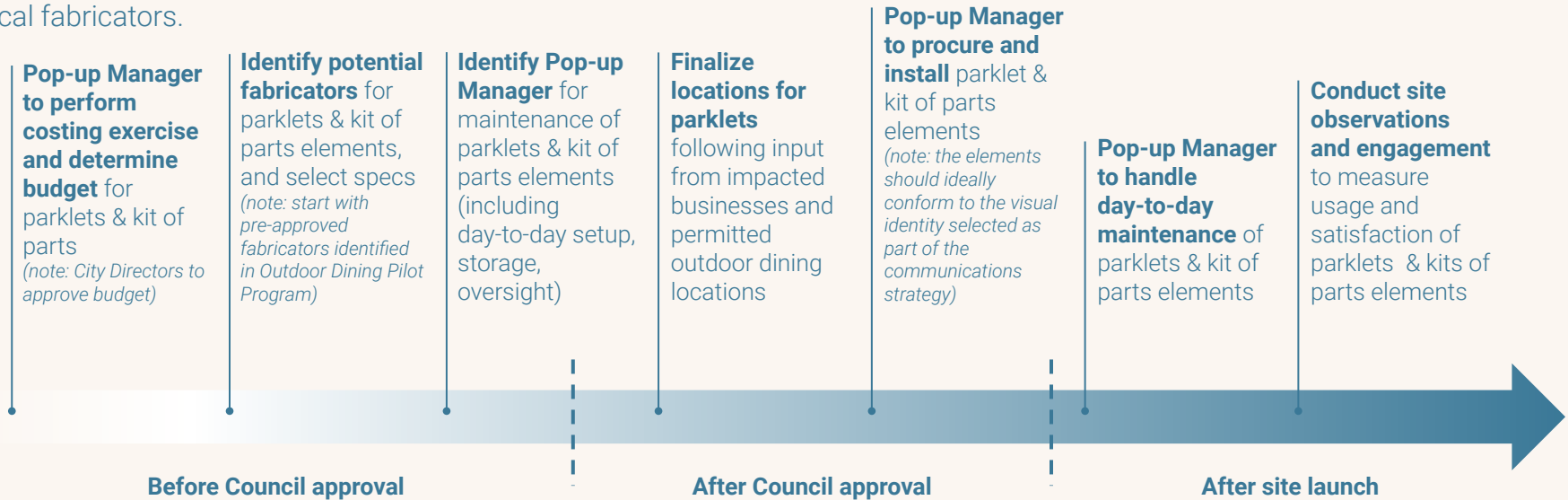
Before Council approval

After Council approval

After site launch

Procurement Roadmap

To deliver any custom fixtures and furnishings, the City will need to move fast to determine budget and identify capable local fabricators.

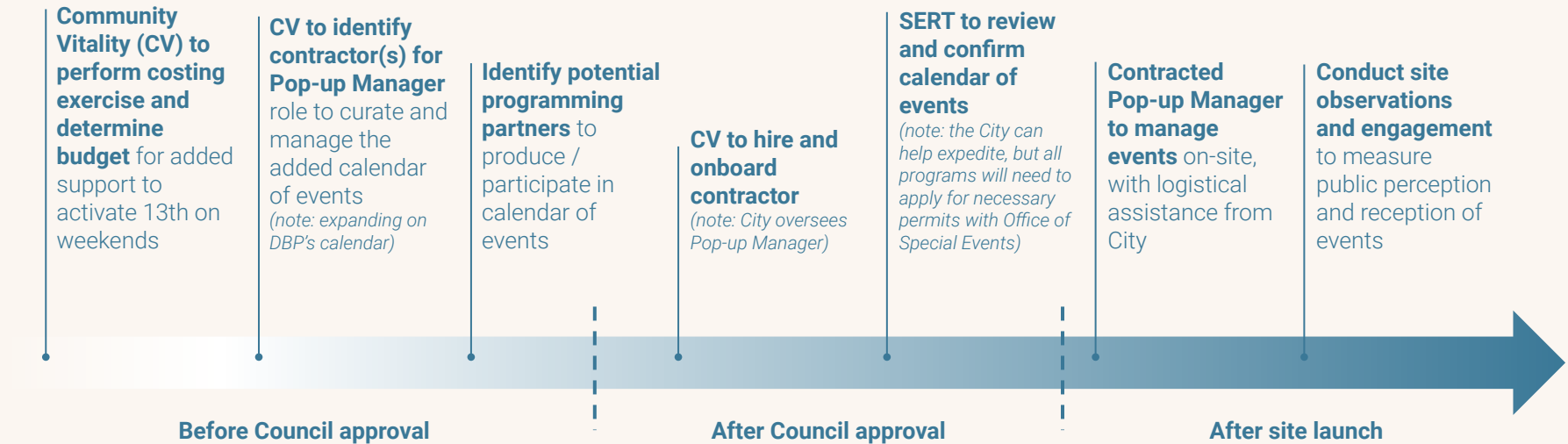


Attachment A - Recommendations and Action Plan

Note: Subcommittee of DBP, DSaPS project representatives, Special Events Review Team (SERT), and Pop-up Manager to work on the front-end of event planning; still requires on-time SERT review of applications

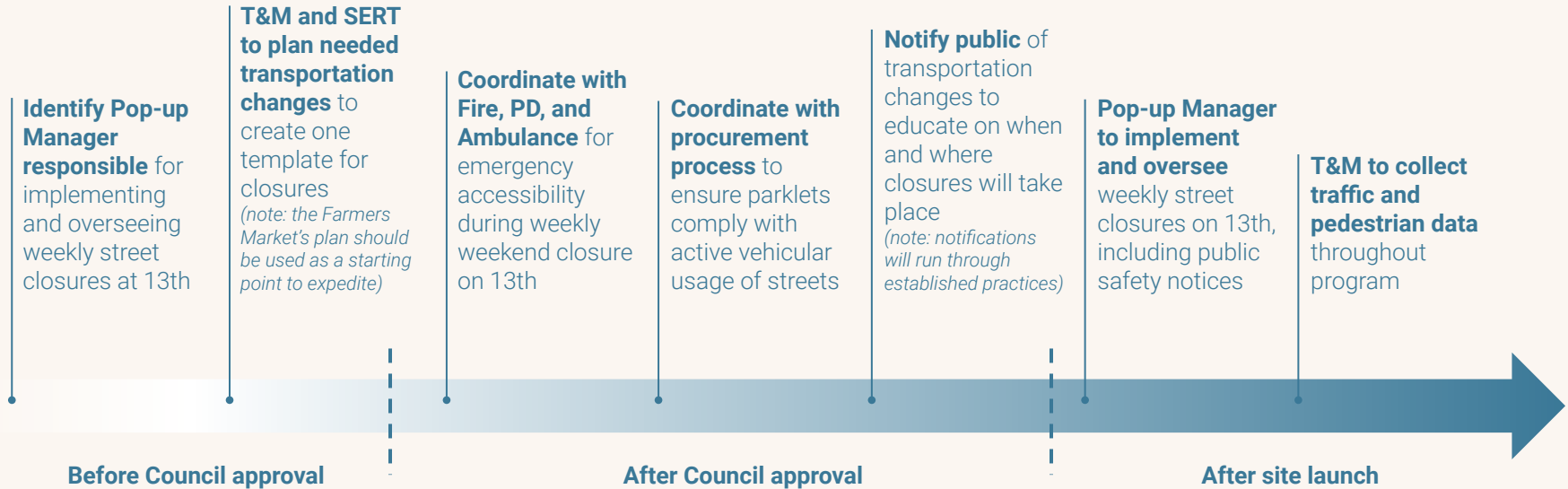
Programming Roadmap

To realize a robust activation calendar for recurring events on 13th St, the City and its hired Pop-up Manager will need to begin identifying and confirming programming partners to participate in making a diverse set of events happen.



Coordination and Data Collection Roadmap

With a weekly weekend street closure on 13th, the City will be responsible for the weekly management of transportation, requiring internal coordination and communication with emergency services and the public.



Implementation Recommendations

Additionally, there are six overarching recommendations to help ensure a smooth, successful process.

01

Assign additional resources for a Pop-up Manager in the City

This role will be responsible for internal coordination of City departments and provide vision and guidance to implementation partner(s).

02

Enable standard transportation plans for recurring closures

The weekly street closure should become routine and should leverage the Farmers Market's existing plan.

03

Hire professionals to handle traffic control

Given the liability, the City (or its hired traffic control vendor) should be responsible for overseeing how traffic control devices are deployed to ensure safety for everyone.

04

Consider a "soft launch" to ramp up programming

Planning programming takes time and not everything may be able to land at once—consider a soft launch to gradually ramp up activations over the summer.

05

Collect data before, during, and after the pop-up

Consistent data collection lets us better understand the effects of the program to show a before and after picture.

06

Don't forget the Bricks!

When deploying the kit of parts, consider locating elements on Pearl Street Mall—it's Boulder's signature pedestrian space and it should be included in this program.

Resources will dictate the specifics of the Pop-up

All together, the recommended program will require significant resources to fully implement.

01

In the near-term, the City is modeling the future of streets

The Spring/Summer 2023 Pop-up program is a City-led experiment to kickstart a reimagining of Boulder's downtown streets.

In order to deliver this program, the City will have a very active role, which requires taking on additional significant expenses.

02

In the long-term, the program should mature into a resident-led initiative

Over time, this experiment should develop into a application-based program where local residents, businesses, and organizations spearhead the creative transformation of streets. In this model, the City will eventually take a less active role in driving change and therefore incur fewer expenses.

03

Today's available resources will dictate many of the Pop-up's specifics

Resourcing will impact:

- **Lifespan:** how long can the program run this year?
- **Cadence:** how frequently will streets be activated with happenings?
- **Prioritization:** in the event, there are not enough resources, what aspects of the program should be prioritized and where?
- **Location:** what street segments will receive parklets and pop-up kit elements?

A

Appendix A

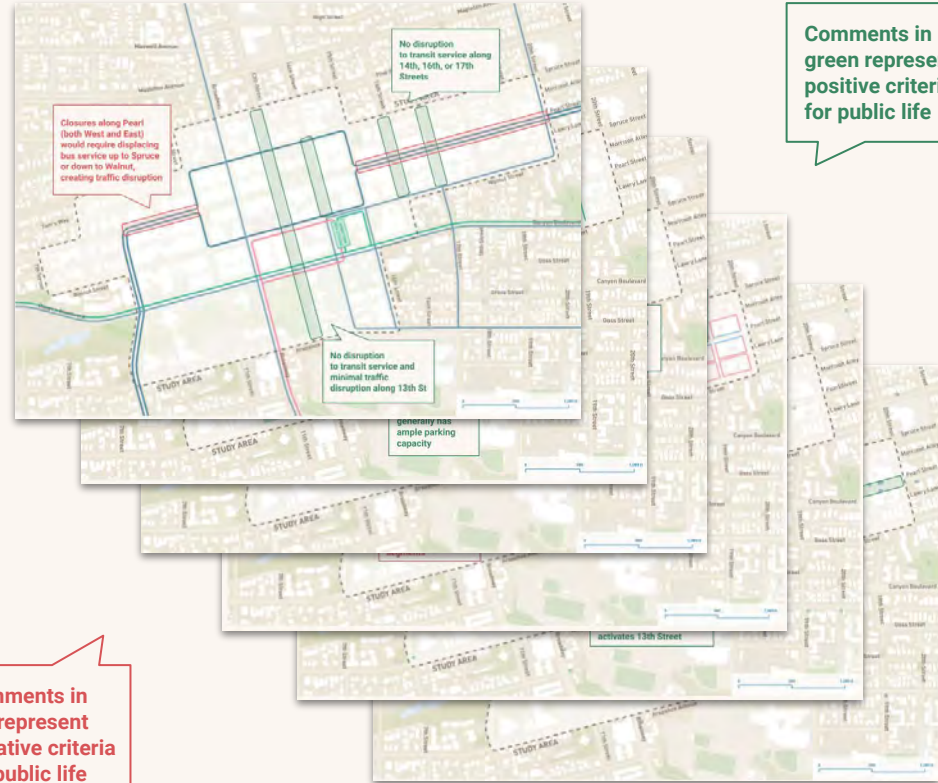
Public Life Potential Mapping



Public Life Potential Mapping

To assess which street segments have the most potential for a good quality of public life achieved through a pop-up program, Downtown Boulder was evaluated against different criteria, producing multiple “map layers”.

This process revealed **positive** and **negative** rationales for why certain streets are or aren't the right selection for the Summer 2023 Pop-up program.



Comments in green represent positive criteria for public life

Comments in red represent negative criteria for public life

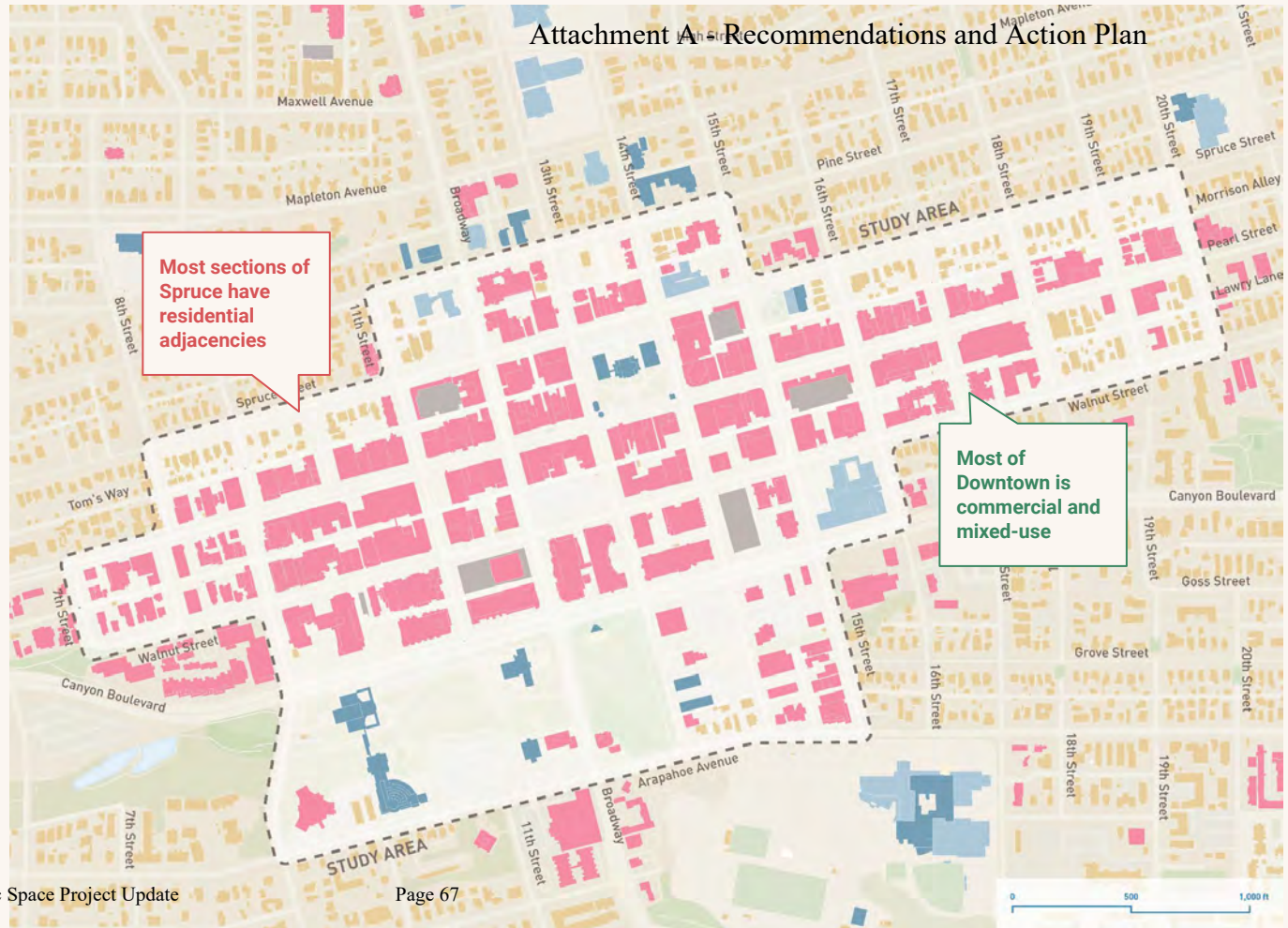
Building Uses

The building use in the Downtown Study Area is predominantly commercial with some civic uses and residential uses along the outer edges.

Commercial uses are the best adjacencies for street activations, while residential adjacencies are not great candidates.

Legend

- Public Buildings
- Schools / Churches
- Commercial / Mixed Use
- Residential
- Parking Structures



Transit & Traffic Routes

Closures along Pearl—both West and East—introduce transit rerouting and some traffic disruption.

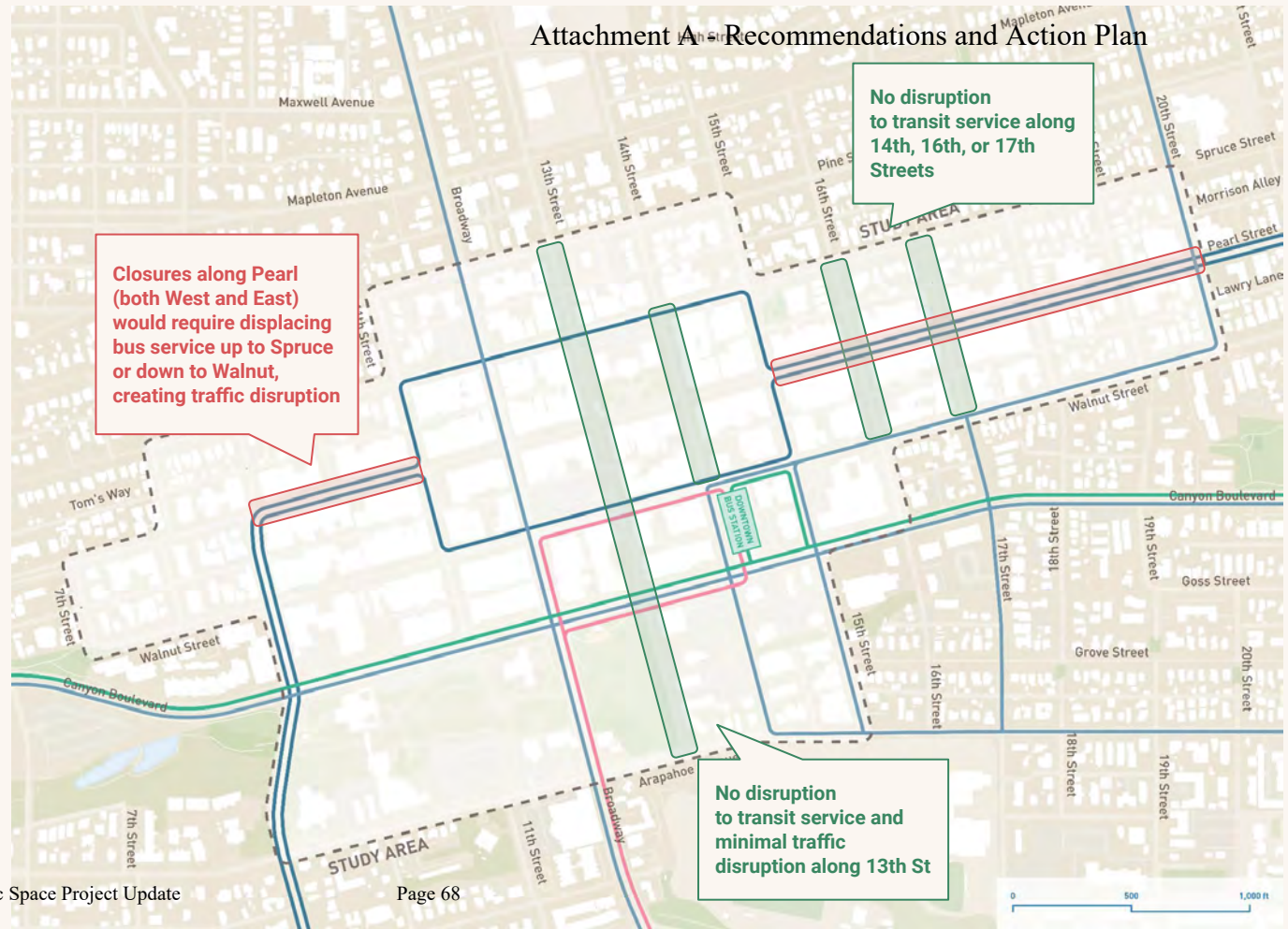
Most North-South streets—like 13th, 14th, 16th, and 17th—introduce minimal traffic and transit disruption.

See Appendix C for more information.

Legend

- Downtown 'HOP' Circulator
- Local Bus Routes
- Regional Bus Routes
- Airport Bus Route

Attachment A - Recommendations and Action Plan



Accessibility

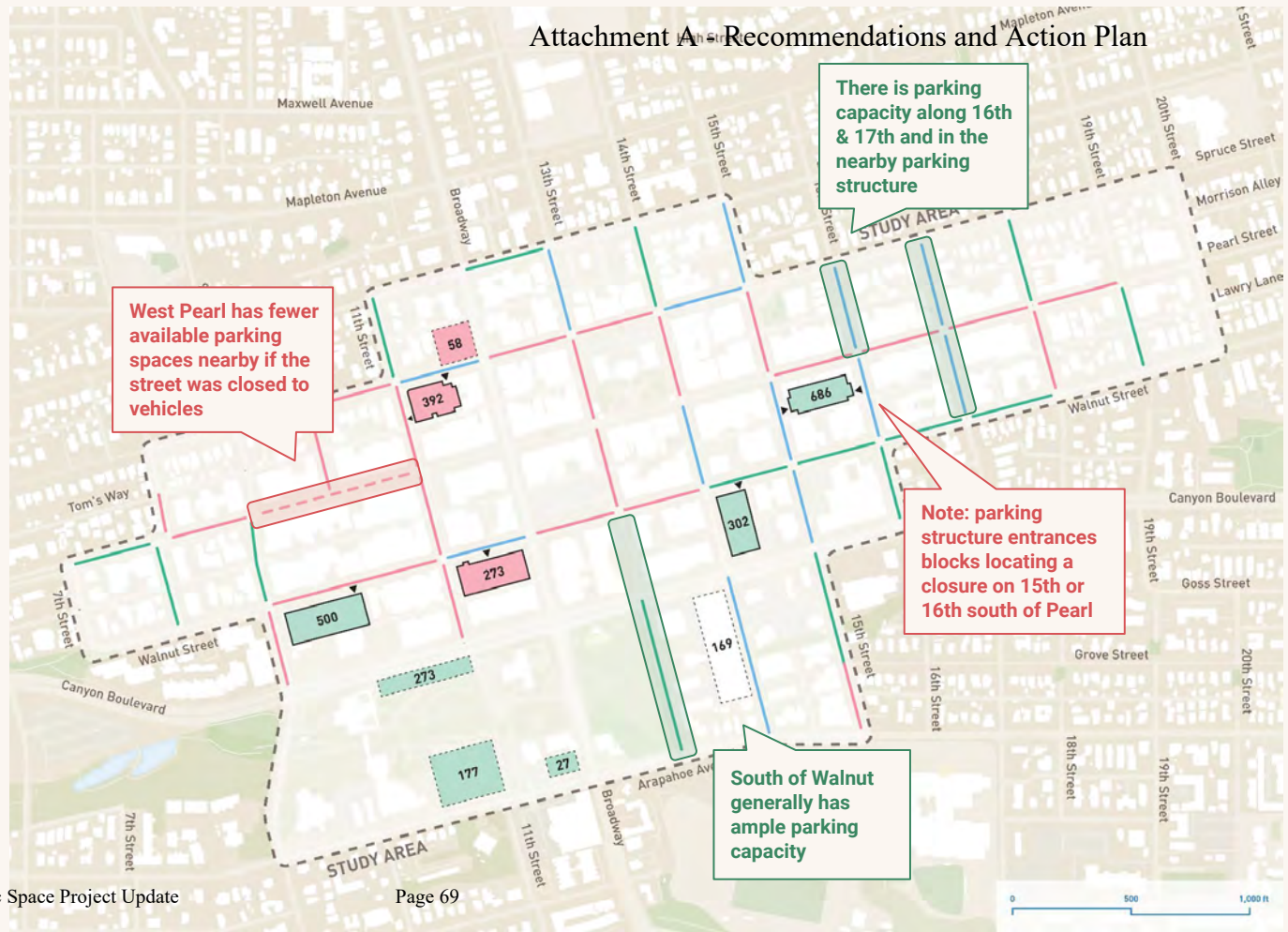
A major component of accessibility is parking, which allows people of different mobilities to easily access parts of Downtown. Street closures will temporarily reduce short-term parking Downtown. West Pearl area has high parking utilization, meaning fewer spaces nearby to absorb displaced parking. South of Walnut and East Pearl have lower parking utilization and could more easily absorb displaced parking.

Legend

- < 65% Parking Utilization
- 65-85% Parking Utilization
- > 85% Parking Utilization
- Parking Structures
- Surface Parking Lots

Item 1 - Downtown Streets as Public Space Project Update

Attachment A - Recommendations and Action Plan



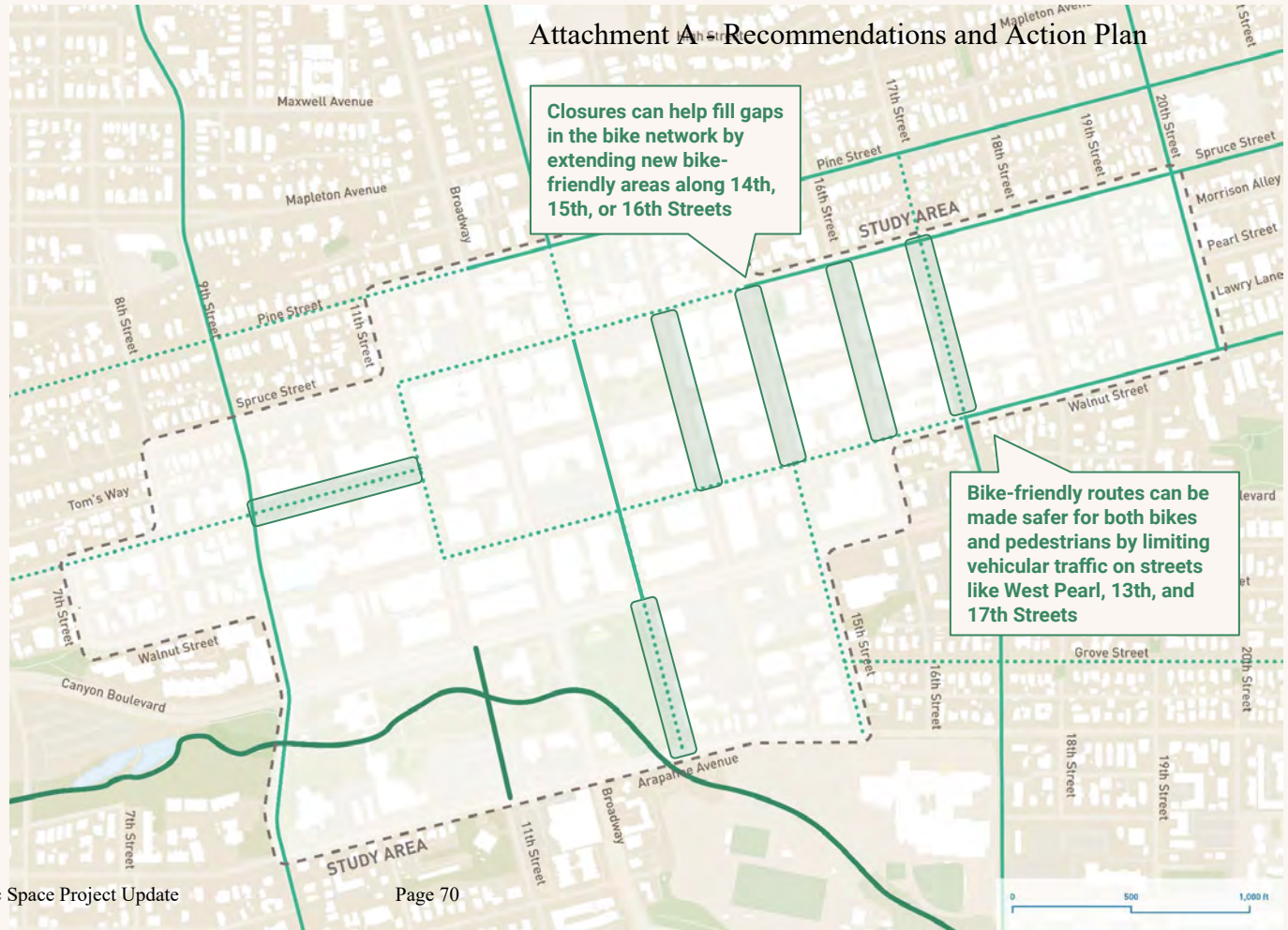
Bicycle Infrastructure

If properly designed to accommodate both cyclists and pedestrians, closures of certain streets could either fill gaps in the biking network or increase cyclist safety on some existing segments.

Legend

- Class IV / Protected Bike Lane
- Class II / Unprotected Bike Lane
- · Bicycle-Friendly Street

Attachment A - Recommendations and Action Plan



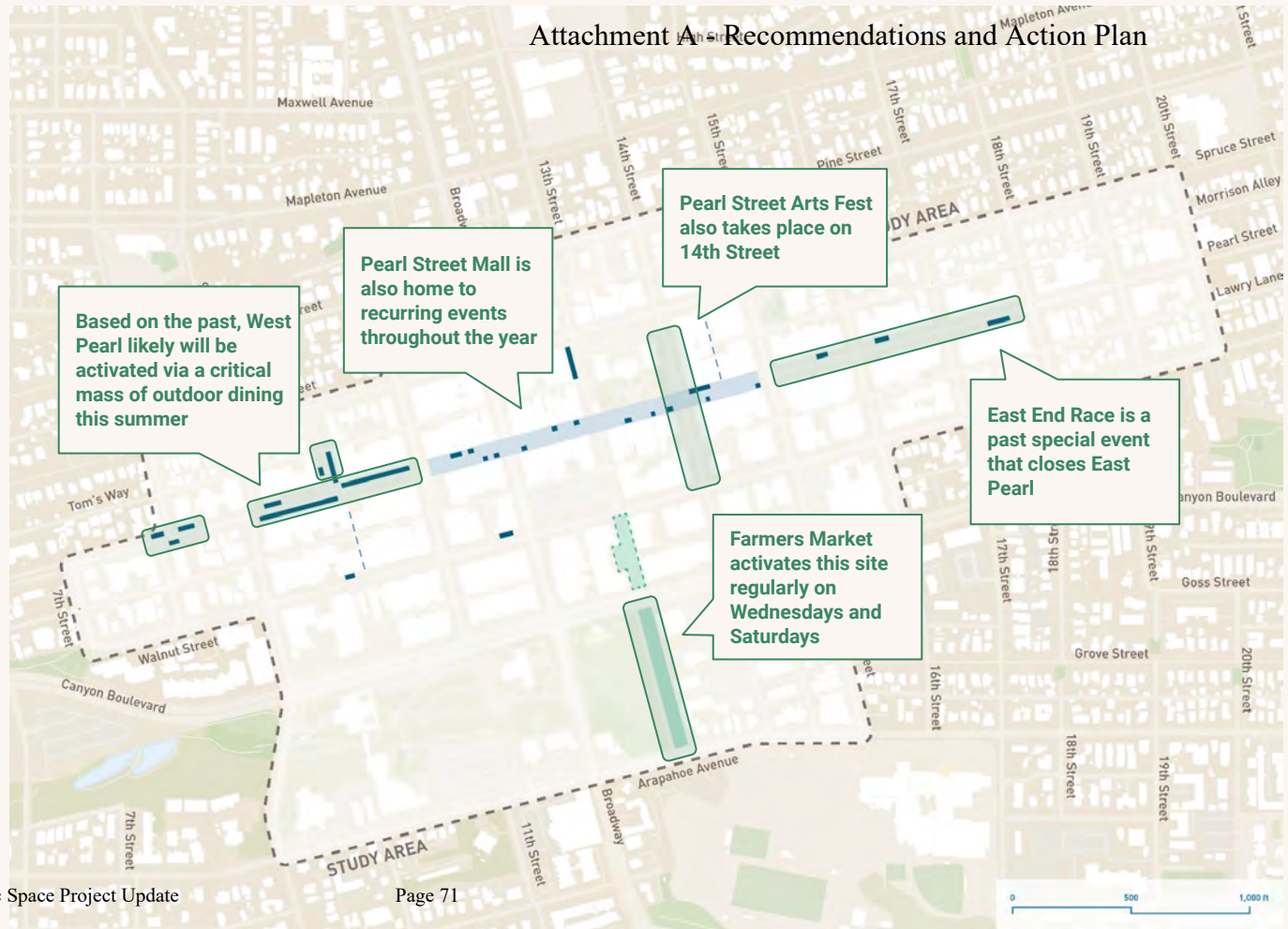
Past / Existing Street Activations

Outdoor dining, annual special events, and recurring markets activate certain street segments. Since programming should build on where there's success, these street segments are good candidates for additional activity.

Legend

- Outdoor Dining Expansions (past)
- Pearl Street Mall
- Downtown Farmer's Market
- Potential Future Activation Site
- Pedestrian Alley

Item 1 - Downtown Streets as Public Space Project Update



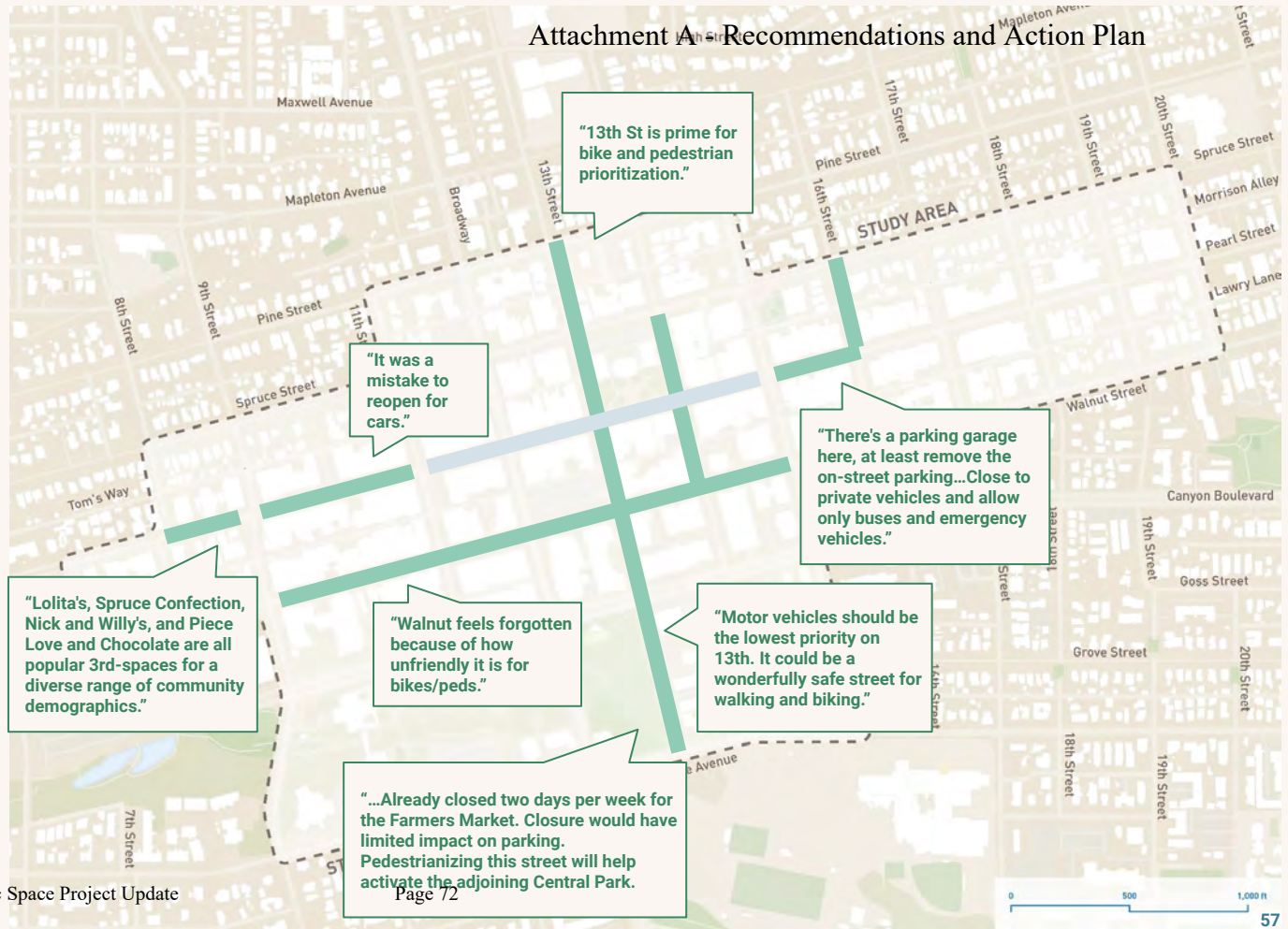
Jan 2023 BHB Questionnaire (Positive)

Respondents identified a wide variety of locations where they would like to see some sort of closure: West Pearl, East Pearl, 13th, Walnut—to name a few. Many respondents stated that they wished for the West Pearl closure to return.

Legend

- Pearl Street Mall
- Location of Positive Sentiment toward Closure

Attachment A - Recommendations and Action Plan

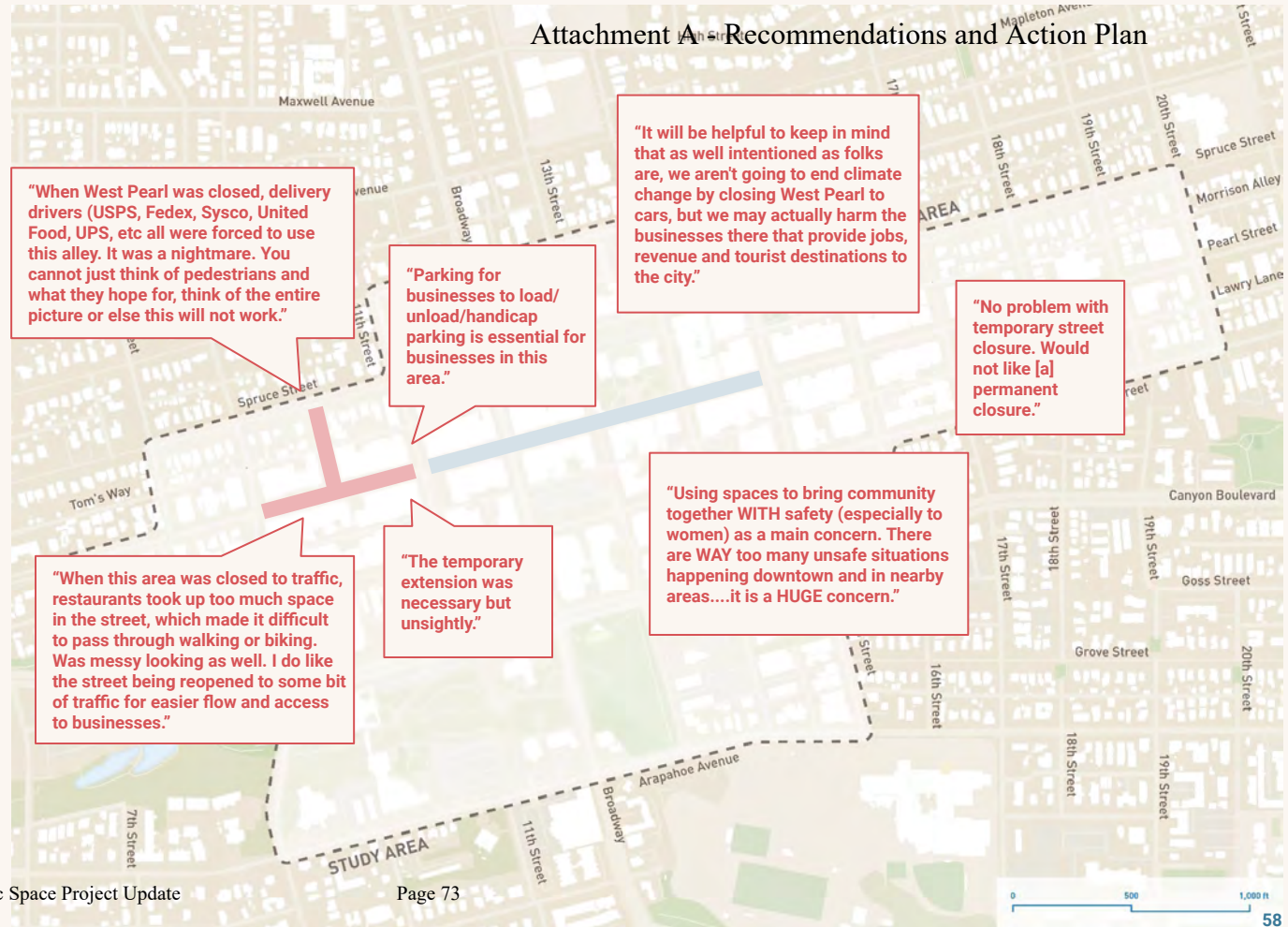


Jan 2023 BHB Questionnaire (Negative)

Most commentary against the idea of a closure centered on West Pearl, noting the challenges for businesses and the maintenance issues. Another top issue included perception of safety in Downtown.

Legend

- Pearl Street Mall
- Location of Negative Sentiment toward Closure

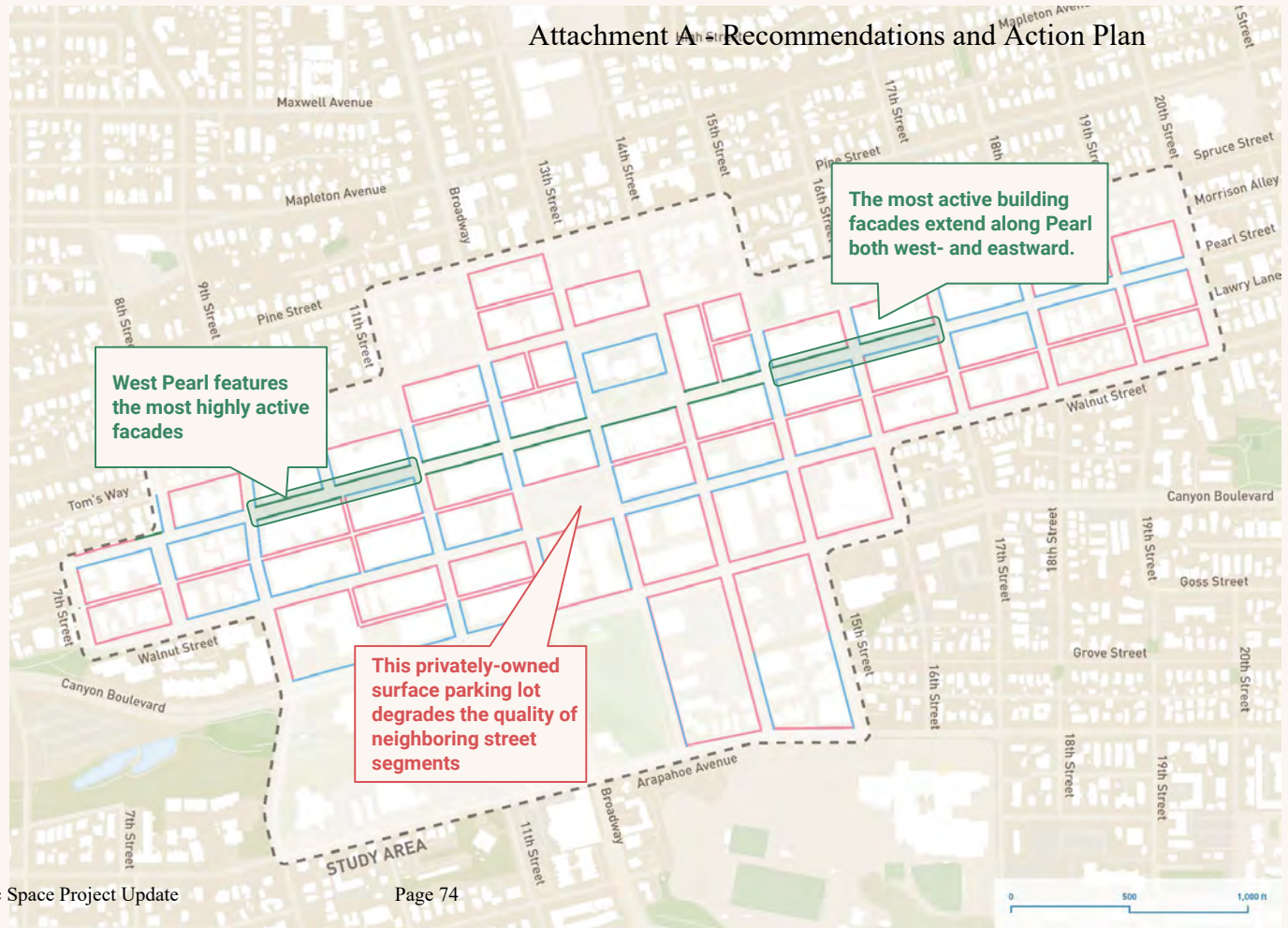


Building Facades

Ideal street segments for public life have adjacent facades that provide opportunity for public activity. Highly active facades feature restaurant and retail frontages, human-scaled urban design, and visual interest. Lowly active facades lack engaging retail, have less appealing architecture, and has breaks in the urban fabric from parking lots.

Legend

- High activity potential
- Medium activity potential
- Low activity potential



Food and Beverage Businesses

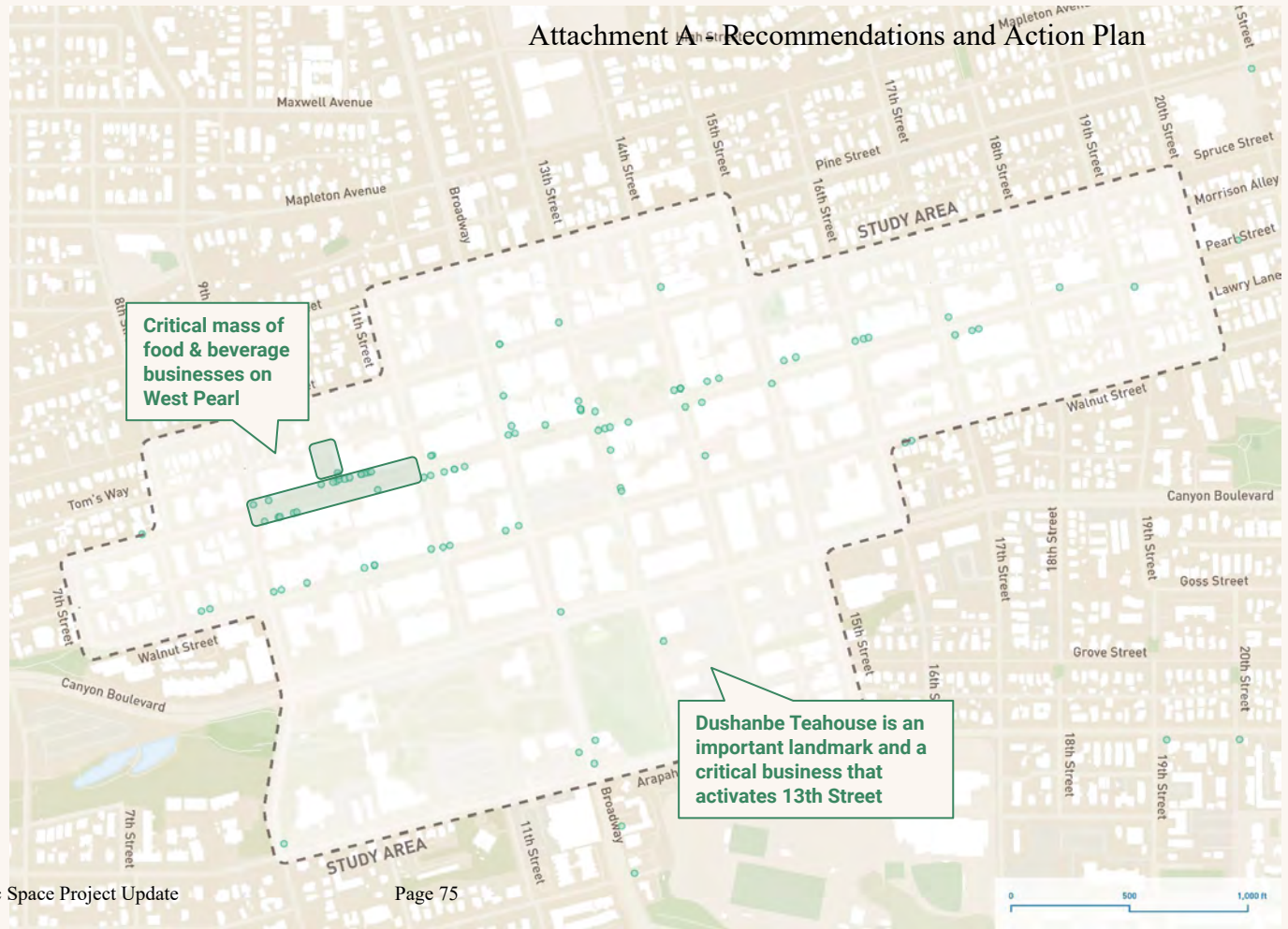
West Pearl features the best critical mass for dining in Downtown Boulder. Other dining locations include sections of Walnut, East Pearl, and the Mall.

Legend

● Food & Beverage

Note: due to data collection methods, dots do not reflect exact locations of businesses

Attachment A - Recommendations and Action Plan



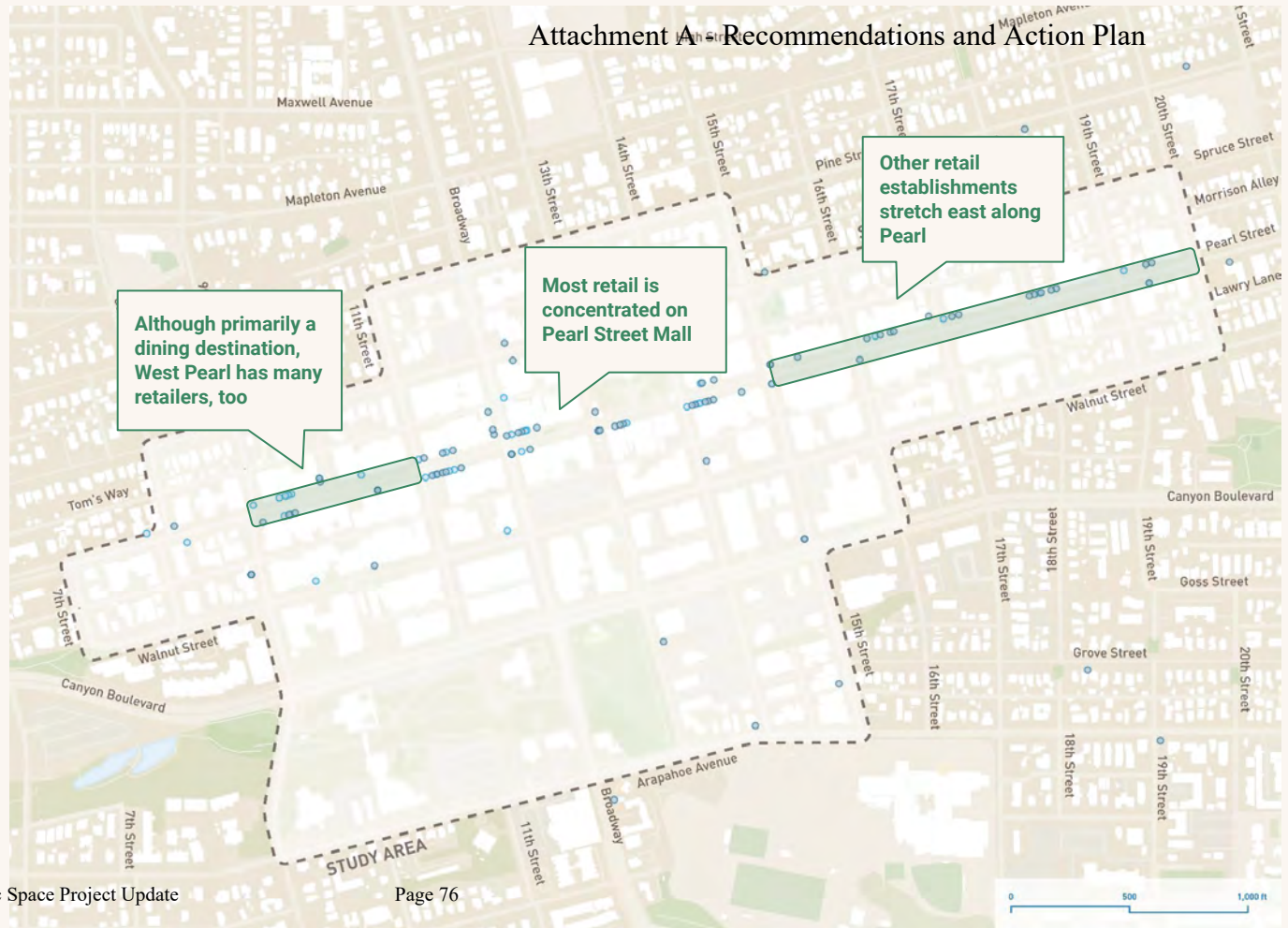
Retail Businesses

West Pearl features the best critical mass for dining in Downtown Boulder. Other dining locations include sections of Walnut, East Pearl, and the Mall.

Legend

- General Retail Stores
- Clothing / Apparel Stores

Note: due to data collection methods, dots do not reflect exact locations of businesses



Attachment A - Recommendations and Action Plan

Where is there the most potential for more public life in Boulder?

After synthesizing all the public life criteria to assess the positive and negative merits of certain street segments, four major locations emerge as the best-positioned sites for the Summer 2023 Pop-up program.

These locations informed deeper stakeholder engagement and further assessment.



B

Appendix B

Transportation Analysis





Appendix B

FINAL ANALYSIS REPORT

To: The City of Boulder

From: Fox Tuttle Transportation Group

Date: March 1, 2023

Subject: Downtown Streets as Public Space – Analysis of Engineering, Accessibility, Circulation/Traffic and Operations

INTRODUCTION

The Fox Tuttle Transportation Group (Fox Tuttle) was contracted by the City of Boulder, as part of a team of consultants (the Consultant Team), to develop recommendations for near-term and longer-term reimagining of streets as public space in the downtown area. This work effort would be informed by community engagement, technical engineering and feasibility analysis. These potential changes to modal use of one or more streets could have operational or engineering impacts which should be quantified for consideration. One of the specific tasks identified was the development of a final analysis report which would summarize these engineering and operational considerations. Fundamentally, this technical analysis would examine how a road closure on one of more downtown streets would impact access to the area so that consideration of those impacts can inform the decision-making process of these road closures.

It was understood in the preparation of this project's scope that the short timeline for completion would require that Fox Tuttle use seasonally appropriate data that the City of Boulder had available to perform these analyses. A more detailed summary of the data available and the areas where additional data collection and evaluation are recommended as part of an implementation plan are included later in this report.

The following focus areas were identified for evaluation by Fox Tuttle:

- *Motor Vehicle Operations* – How closing a roadway might divert traffic; how impactful that diverted traffic might be to the system; and whether simple mitigation was feasible.
- *Short-term Parking* – The utilization of on-street parking today; and how impactful the loss of parking would be to accessing this area and surrounding roadways.
- *Transit Operations* – If transit service uses the street how impactful might it be for this transit service to be re-routed. This focus was specific to service on Pearl Street.

- *Pedestrian and Bicycle Considerations* – How will closing the roadway influence pedestrian and bicycle usage; and how accessible is the area to increased multi-modal activity.
- *Other Considerations* – What other operational factors should the city be considering in the potential closure of a roadway and the implementation of that closure.

The city identified two areas at the start of the project that would require these evaluations, and these were West Pearl Street between 9th Street and 11th Street (including 10th Street between Pearl Street and Spruce Street); and 13th Street between Arapahoe Avenue and Canyon Boulevard. In addition, Fox Tuttle’s project partner (Gehl) identified two additional locations for consideration during the “Public Life Evaluation” project work task and these were 14th Street between Spruce Street and Walnut Street; and Pearl Street between 15th Street and 17th Street.

Fox Tuttle evaluated the potential changes and impacts using available data on the initially identified corridors. Additional analyses have been done on the more recently identified corridors, but the project timeline has not allowed for the same level of technical evaluation. This report provides qualitative evaluation and recommendations where any quantifiable evaluation was not feasible.

This report provides recommendations regarding potential street closure for each roadway based on the technical and operational considerations. These recommendations have been integrated with and considered alongside the results of the community engagement and the Public Life Evaluation project work tasks to develop comprehensive recommendations found in the project team’s “Final Report and Action Plan”. **Specific considerations and actions identified for implementation based on the technical evaluation have been identified in this report and integrated into the “Action Plan”.**

Background and Existing Data

The City of Boulder has maintained a consistent, historical traffic data collection program, the results of which have provided quality traffic data for elements of this work effort. Much of the data is limited to weekday, peak hour operations and consequently, those were the time periods studied for motor vehicle operation evaluations. These counts include motor vehicle, pedestrian and bicycle counts and were **used in both the “Motor Vehicle Operations” and the “Pedestrian and Bicycle Considerations” evaluations.**

The city has previously collected parking utilization data on many downtown streets as part of the 2020 “*Boulder Access Management and Parking Strategy Implementation: Revitalizing Access in Boulder*” study, as well as the 2022 *Performance-based Pricing: Revitalizing Access in Boulder*

study. The city also has on-street parking payment information summarized through the “Smarking” application that can be used to estimate parking utilization data. Fox Tuttle has used all of these data sources to develop an understanding of the demand for on-street parking on streets being considered for closure and for adjacent streets where displaced parking demand might be displaced. **This information has been used in the “Short-term Parking” evaluations.**

The primary transit route of interest to this study is the HOP service which currently operates on Pearl Street east and west of the Pearl Street Mall. This is the only service whose operations are potentially being impacted by street closures downtown. The city in collaboration with their service provider (VIA) has information about HOP’s standard route walkshed and route travel time. Fox Tuttle also considered feedback from VIA drivers and supervisors, compiled by city staff on operational challenges for the re-route when west Pearl Street was previously closed. **This information has been used in the “Transit Operations” evaluations.**

There were other street closure considerations which Fox Tuttle has identified and codified in the evaluations and recommendations of this report. These considerations included:

- Emergency Response requirements
- Access for Public and Private projects
- Wheelchair Accessible Parking
- Maintaining access to private parking lots
- Accommodating on-street short-term loading
- Safe and appropriate street closure traffic control
- Snow and ice control (if Pop-up extends into winter season)

The information used in these determinations largely came from the “Needs, Wants and Considerations” discussions with key stakeholders. **This information helped inform the evaluation and conclusions found in the “Other Considerations” section of this report.**

The following is a summation of the technical evaluation for each focus area of evaluation. Each pertinent potential roadway closure is discussed in each section.

Motor Vehicle Operations

Initial High-Level Analysis

Fox Tuttle began the technical analysis with a high-level, qualitative investigation of the four roadway segments being considered for road closure and activation treatments. This analysis informed not only the “Motor Vehicle Operations” section but the “Transit Operations” and “Pedestrian and Bicycle Considerations” sections of this report.

Fox Tuttle focused on the following criteria as part of this investigation:

Roadway characteristics

- Roadway Classification
- How many motor vehicles use the roadway today?
- Are there alleys or driveways on the roadway?

Anticipated motor vehicle diversion impacts

- Where do motor vehicles go if the road segment is closed?
- Will residential neighborhoods be impacted?
- Can adjacent streets/intersections accommodate the diverted traffic?

High-level impacts to other modes of transportation

- How does a closure generally impact pedestrians, cyclists, and transit users?

The following summarizes the qualitative analysis at each location:

13th Street Between Canyon Boulevard and Arapahoe Avenue

Roadway Description: This section of 13th Street is designated as a “Local Street” with on-street parking and is restricted to one-way northbound traffic. There is a one-way westbound parking lot access aisle that connects 14th Street to 13th Street approximately 180 feet north of Arapahoe Avenue, and there is a driveway exit from the Atrium Building immediately south of Canyon Boulevard. Based on peak hour traffic volumes, Fox Tuttle estimates that approximately 1,000 motor vehicles per day use this roadway. Many motor vehicles park on the street for access to adjacent land uses but some are making connections north into the downtown area.

Anticipated motor vehicle diversion impacts: The closure of this section of 13th Street would likely divert traffic primarily to the Broadway corridor, as traffic seeks access to downtown destinations

or connection to Canyon Boulevard. The intersections of Broadway and Arapahoe Avenue, and Broadway and Canyon Boulevard would receive this diverted traffic. These three streets are arterial streets, and the low traffic volumes being diverted suggest that it is likely the intersections can accommodate the additional vehicles and turning movements. There are no neighborhood streets nearby that might be impacted by diverted traffic. **A more detailed evaluation of these impacts is included in the detailed quantitative analysis section.**

High-level Impacts to other modes of transportation: The removal of motor vehicle traffic on this section of 13th Street would significantly improve conditions for pedestrian usage. The experience for cyclists would also improve if the closure and related activation allowed for bicycle use. Currently the Farmer’s Market uses this section of 13th Street for their event and bicyclists cannot use the roadway, though there is a multi-use path along the west side that they may use. There are no impacts to transit as no transit service is routed through this section of 13th Street.

West Pearl Street Between 9th Street and 11th Street

Roadway Description: This section of West Pearl Street is designated as a “Minor Arterial” with two directional traffic and angled on-street parking on the north side and parallel parking on the south side. There is a section of 10th Street that begins at West Pearl Street and continues one-way northbound to Spruce Street. Based on peak hour traffic volumes, Fox Tuttle estimates that approximately 3,000 to 3,500 motor vehicles per day use this roadway. Many motor vehicles park on the street for access to adjacent land uses but some are making connections east into the downtown area or further west on the Pearl Street corridor.

Anticipated motor vehicle diversion impacts: Unfortunately, the impacts of the COVID Pandemic on total traffic volumes downtown made it difficult to draw conclusions about the diversion of traffic from the previous West Pearl Street closure to any other roadway. In considering the ease of movements and the directness of a potential diversionary route, the closure of this section of West Pearl Street would likely divert traffic primarily to Walnut Street, one block south. Other potential streets that might see diverted traffic are Spruce Street and Canyon Boulevard but each of these have challenges that make them a less desirable diversionary route than Walnut Street. Using Walnut Street creates a direct connection to and from the downtown mall loop and has signals at both 9th Street and 11th Street. It is possible that some westbound traffic, traveling on Spruce Street, would continue westbound to 9th Street, if that was their destination. This would take them through a primarily residential neighborhood. **A more detailed evaluation of these impacts is included in the detailed quantitative analysis section.**

High-level Impacts to other modes of transportation: The removal of motor vehicle traffic on this section of West Pearl Street would significantly improve conditions for pedestrian usage. The experience for cyclists would also improve if the closure and related activation allowed for bicycle use. The Pearl Street Mall immediately east of these blocks is a dismount zone for bicyclists. The HOP transit service currently travels east and west on these two blocks of West Pearl Street. A roadway closure would result in a re-routing of service and change of bus stops similar to what transpired when this roadway was closed during the COVID pandemic.

East Pearl Street Between 15th Street and 17th Street

Roadway Description: This section of East Pearl Street is designated as a “Minor Arterial” with two directional traffic and on-street parking. There are no alleys or driveways connecting to East Pearl Street in these two blocks. Based on peak hour traffic volumes, Fox Tuttle estimates that approximately 6,000 to 7,500 motor vehicles per day use this roadway. Some motor vehicles park on the street for access to adjacent land uses but most motor vehicles are using East Pearl Street to move in and out of the downtown area using the downtown mall loop.

Anticipated motor vehicle diversion impacts: The closure of this section of East Pearl Street would likely divert eastbound traffic primarily to Walnut Street, one block south. Westbound traffic would divert primarily to Spruce Street, one block north. Both of these roadways are a part of the Whittier Neighborhood and are primarily residential in land use. They already experience high traffic volumes and high speeds, and both have been the location of neighborhood speed management projects in the past. The high traffic volumes which would be diverted, and the congestion caused from this traffic making left turns off of Walnut Street and onto Spruce Street at various intersections as part of the detour, would result in significant impacts to both traffic on those roadways and to the quality of life of the people who live there. **The potential closure of East Pearl was identified through the “Public Life Evaluation” project work task, and it was not feasible to conduct a more detailed quantitative analysis.**

High-level Impacts to other modes of transportation: The removal of motor vehicle traffic on this section of East Pearl Street would significantly improve conditions for pedestrian usage. The experience for cyclists would also improve if the closure and related activation allowed for bicycle use. The HOP transit service travels on these two blocks of East Pearl Street, and it is likely that this route would need to be re-routed to Walnut Street as it was during the COVID pandemic.

14th Street Between Spruce Street and Walnut Street

Roadway Description: This section of 14th Street is designated as a “Local Street” with on-street parking and is restricted to one-way southbound traffic. There is a driveway for the Boulder

County Building immediately south of Spruce Street. Lawry Lane is a one-way westbound alley which intersects 14th Street approximately 140 feet north of Walnut Avenue. This alley is used for the delivery of goods to adjacent businesses. There are also several areas of private parking used by these businesses. The closure of this section of 14th Street would require all vehicles to drive through the 1400 block of Lawry Lane and cross 14th Street to access the 1300 block of Lawry Lane. The 1400 block of Lawry Lane is narrow and often has delivery vehicles in the alley as well. This could create a significant access impact for the 1300 block of Lawry Lane. Based on peak hour traffic volumes, Fox Tuttle estimates that approximately 1,500 to 2,000 motor vehicles per day use this roadway. Many motor vehicles park on the street for access to adjacent land uses but some are using 14th Street to circulate the downtown mall loop or leave the downtown area.

Anticipated motor vehicle diversion impacts: The closure of this section of 14th Street would force traffic to remain on Spruce Street and continue along the downtown mall loop. Many of these motor vehicles are seeking to park on 14th Street to access the businesses there and if 14th Street were closed many of those would either disperse into the surrounding downtown parking system or change their destination to one outside of the downtown. It is estimated that the remaining trips would be small enough in number to not create a significant operational impact on other downtown area intersections. 14th Street has been closed for special events in the past and this precedent provides some qualitative observations which help to draw these conclusions. **The potential closure of 14th Street was identified through the “Public Life Evaluation” project work task, and it was not feasible to conduct a more detailed quantitative analysis.**

High-level Impacts to other modes of transportation: The removal of motor vehicle traffic on this section of 14th Street would significantly improve conditions for pedestrian usage. The experience for cyclists would also improve if the closure and related activation allowed for bicycle use. There is an excellent north-south bicycle facility (13th Street contra flow lane) one block to the west of this section of 14th Street. Despite the immediate proximity to the RTD Station, there are no transit services that route through this section of 14th Street and there would be no impact to transit service in the downtown area.

Detailed Quantitative Analysis

Both the 13th Street and the West Pearl Street corridors were identified at the start of this project and this allowed for a detailed quantitative analysis to better understand impacts associated with their potential closure. The quantitative analysis focused on the weekday AM, Mid, and PM peak hours which are typically the highest traffic volumes for a downtown setting. The study includes an assessment of intersection level of service, queue lengths and auxiliary lane needs.

1.0 STUDY CONSIDERATIONS

1.1 Data Collection/Usage

Fox Tuttle reviewed and utilized intersection turning movement volumes from the City’s October 17, 2018 Syncro (v11) models for the AM, Mid, and PM peak hours. Fox Tuttle elected to use this data as it reflected consistent traffic volumes prior to the COVID pandemic. Data was collected and Syncro analyses were performed only for signalized intersections in that modeling effort.

1.2 Evaluation Methodology

The traffic operations analysis addressed the signalized intersection operations using the procedures and methodologies set forth by the *Highway Capacity Manual (HCM)*¹. Fox Tuttle did not adjust existing parameters when developing initial level of service and queue lengths at the study intersections. Additionally, Fox Tuttle did not adjust parameters when developing new levels of service and queue lengths based on rerouted volumes. Study intersections were evaluated using Synchro (v11) software.

1.3 Level of Service Definitions

A level of service analysis was conducted to determine the existing and future performance of the study intersections.

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a grading system referred to as “Level of Service” (LOS) that is defined by the HCM. LOS characterizes the operational conditions of an intersection’s traffic flow, ranging from LOS A (indicating very good, free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with traveling through the intersections. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement. **A more detailed discussion of LOS methodology is contained in the Appendix for reference.**

Typically, LOS A through C are considered to be good for the overall intersection operations with LOS D as acceptable in peak hours. For individual movements, LOS E and F may be acceptable for left-turns or minor streets where queuing or safety are not an issue.

¹ *Highway Capacity Manual*, Highway Research Board Special Report 209, Transportation Research Board, National Research Council, 6th Edition (2016).

2.0 13th Street Existing Conditions

2.1 Roadways

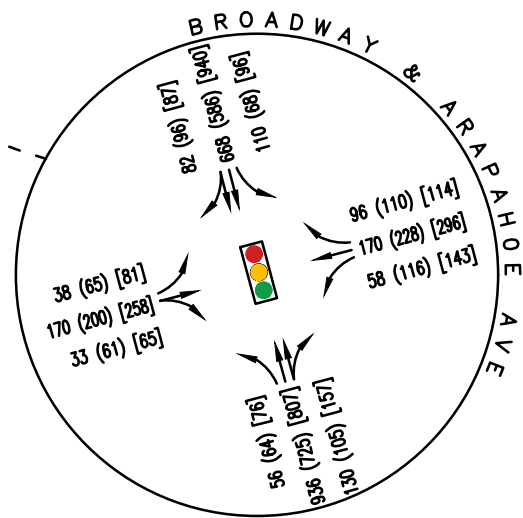
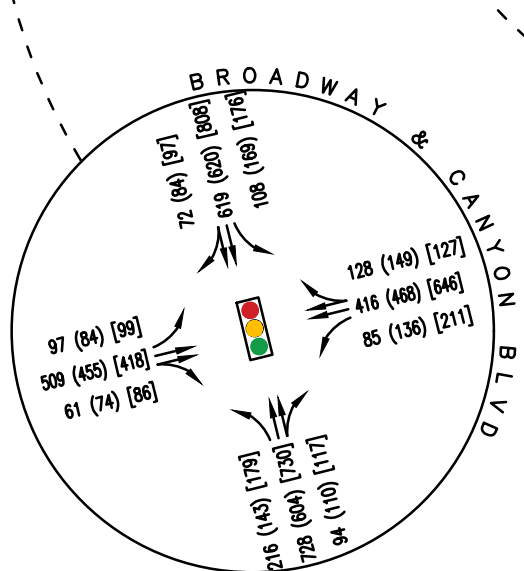
The study area boundaries for this location are based on a complete relocation of traffic from 13th Street to Broadway. The primary public roadways that are anticipated to be impacted are discussed in the following text and illustrated on **Figure 1**:

13th Street between Canyon Boulevard and Arapahoe Avenue is a single lane local street. 13th Street has a 50-foot-wide paved section that provides one through lane running northbound only as well as on-street diagonal and parallel parking. The speed limit is not posted but would be 20 mph per the Boulder Revised Code. 13th Street in the study area has both detached and attached sidewalks and a multi-use path running along the west side but no on-street bike lanes. This street is periodically closed from April to November for the Boulder Farmer’s Market events.

Broadway is a four-lane north/south principal arterial that provides access into Downtown Boulder. It is also a State Highway (CO 93) south of Canyon Boulevard. Broadway has a 50-foot-wide paved section that provides two through lanes in each direction, along with a center turn lane. The posted speed is 30 mph. Broadway in the study area has both detached and attached sidewalks but no on-street bike lanes. The intersections at Canyon Boulevard and Arapahoe Avenue are signalized.

Canyon Boulevard is a four-lane east/west principal arterial and State Highway (CO 119) that connects central Boulder to Downtown. Canyon Blvd has a 63-foot-wide paved section that provides two through lanes in each direction, a center turn lane, and a raised, landscaped median. The posted speed is 35 mph. Canyon Blvd in the study area has attached sidewalks but no on-street bike lanes. The intersection at 13th Street is signalized but was not analyzed as part of this study as change would result in the south leg being closed but there would still be high volumes of pedestrians and cyclists crossing north/south and it is not anticipated that the signal timing would change.

Arapahoe Avenue is a two-lane minor arterial roadway running east/west in the study area. Arapahoe Ave has a 33-foot-wide paved section that provides a single through lane in each direction along with a center turn lane. At the 13th Street intersection, the center turn lane is replaced with a raised median to provide a crossing refuge for users of the multi-use path. The posted speed is 30 mph. Arapahoe Ave in the study area has attached sidewalks but no on-street bike lanes. The intersection at 13th Street is unsignalized but has both an underpass and an enhanced pedestrian crossing treatment at the intersection.



KEY
 XX (XX) [XX] AM (MID) [PM] PEAK HOUR TRAFFIC VOLUME
 → EXISTING LANE CONFIGURATION



DOWNTOWN STREETS AS PUBLIC SPACES - BOULDER, CO
 13TH STREET ANALYSIS - EXISTING CONDITIONS

FT #	22092	Original Scale	NTS	Date	2/27/2023	Drawn by	JKL	Figure #	1
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2.2 Intersections Studied

Two intersections were analyzed for existing and “13th Street Closed” traffic operations:

1. Broadway and Arapahoe Avenue (signalized)
2. Broadway and Canyon Boulevard (signalized)

The existing lane configurations at each intersection are shown in **Figure 1**.

2.3 Existing Intersection Capacity Analysis

The existing volumes, lane configuration, and traffic control are illustrated in **Figure 1**. The results of the LOS calculations for the study intersections are summarized in **Table 1**. The 95th percentile queues are summarized in **Table 2**. The intersection level of service worksheets and queue reports are attached in the **Appendix**.

Table 1 - Peak Hour Intersection Level of Service Summary - 13th Street

Intersection and Critical Movements/Approaches	13th St. Open						13th St. Closed - Detour to Broadway					
	AM Peak		MID Peak		PM Peak		AM Peak		MID Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SIGNAL CONTROL												
#1. Broadway & Arapahoe Rd.	21	C	19	B	42	D	21	C	19	B	41	D
Eastbound Left	26	C	20	B	29	C	26	C	20	B	30	C
Eastbound Through+Right	41	D	34	C	52	D	41	D	33	C	51	D
Westbound Left	27	C	21	C	164	F	27	C	21	C	164	F
Westbound Through	36	D	30	C	42	D	37	D	30	C	43	D
Westbound Right	17	B	12	B	17	B	18	B	13	B	18	B
Northbound Left	17	B	17	B	26	C	17	B	17	B	26	C
Northbound Through+Right	25	C	23	C	31	C	26	C	22	C	30	C
Southbound Left	30	C	23	C	44	D	30	C	23	C	44	D
Southbound Through+Right	1	A	5	A	33	C	1	A	5	A	33	C
#2. Broadway & Canyon Blvd.	24	C	21	C	62	E	24	C	21	C	62	E
Eastbound Left	28	C	21	C	41	D	28	C	21	C	42	D
Eastbound Through+Right	43	D	38	D	40	D	43	D	38	D	41	D
Westbound Left	25	C	17	B	35	C	25	C	17	B	35	C
Westbound Through+Right	36	D	26	C	44	D	36	D	25	C	44	D
Northbound Left	24	C	24	C	34	C	24	C	25	C	35	C
Northbound Through+Right	8	A	15	B	55	D	9	A	16	B	58	E
Southbound Left	45	D	19	B	115	F	45	D	19	B	122	F
Southbound Through+Right	18	B	14	B	97	F	18	B	14	B	92	F

Table 2 - Peak Hour Estimated Queues - 13th Street

Intersections and Lane Groups	13th St. Open			13th St. Closed			Max. Queue	Existing Storage
	95th% Queue			95th% Queue				
	AM	MID	PM	AM	MID	PM		
#1. Broadway & Arapahoe Rd.	<i>Signalized</i>			<i>Signalized</i>				
Eastbound Left	29'	39'	70'	33'	42'	78'	78'	100'
Eastbound Through+Right	130'	166'	312'	126'	161'	302'	312'	-
Westbound Left	51'	38'	229'	51'	37'	230'	230'	180'
Westbound Through	155'	176'	279'	155'	176'	278'	279'	-
Westbound Right	9'	19'	28'	33'	25'	37'	37'	180'
Northbound Left	42'	45'	63'	42'	45'	63'	63'	115'
Northbound Through+Right	340'	244'	354'	338'	245'	353'	354'	-
Southbound Left	20'	24'	101'	74'	24'	100'	101'	115
Southbound Through+Right	60'	80'	368'	47'	80'	365'	368'	-
#2. Broadway & Canyon Blvd.	<i>Signalized</i>			<i>Signalized</i>				
Eastbound Left	95'	65'	100'	95'	62'	100'	100'	100'
Eastbound Through+Right	240'	196'	213'	240'	187'	213'	240'	-
Westbound Left	43'	75'	157'	43'	75'	156'	157'	130'
Westbound Through+Right	160'	120'	336'	157'	103'	329'	336'	-
Northbound Left	174'	40'	182'	176'	45'	182'	182'	160'
Northbound Through+Right	120'	75'	393'	216'	82'	434'	434'	-
Southbound Left	97'	114'	190'	97'	115'	188'	190'	165'
Southbound Through+Right	237'	183'	516'	237'	193'	516'	516'	-

With or without the closure of 13th Street, both study intersections currently operate at an overall LOS D or better in the AM and Mid Peak periods with all movements also operating at LOS D or better. During the PM Peak period, the Broadway and Arapahoe Avenue intersection operates at an overall LOS D with or without the closure of 13th Street. All movements other than the Westbound Left operate at LOS D or better for both conditions. The Westbound Left movement is shown to operate at LOS F for both conditions. During the PM Peak period, the Broadway and Canyon Boulevard intersection operates at LOS E, with the Southbound Left and Southbound Through+Right movements operating at LOS F for both conditions.

Reviewing existing storage and queue lengths reveals that there are existing situations where the maximum queue exceeds the storage length for the westbound left turn movement at Broadway and Arapahoe Road, and for the Westbound, Northbound and Southbound left turn movements at Broadway and Canyon Boulevard. **However, no new queue issues arise from the diverted traffic associated with a potential 13th Street closure.** The City of Boulder is considering a “No Right Turn on Red” restriction for the Westbound right turn movement. This would impact the LOS and queue for this movement, but existing conditions show that the LOS is B for each time period and the queue is never more than 25% of the storage capacity.

3.0 13th Street Closure Conditions

Building off the high-level analysis, Fox Tuttle adjusted trip distributions at the intersections of Broadway and Arapahoe Avenue, and Broadway and Canyon Boulevard to effectively reassign trips previously associated with 13th Street. The distribution adjustments were made to the following movements:

Broadway and Arapahoe Avenue Intersection

- Eastbound Left
- Eastbound Through+Right
- Westbound Right
- Northbound Through+Right

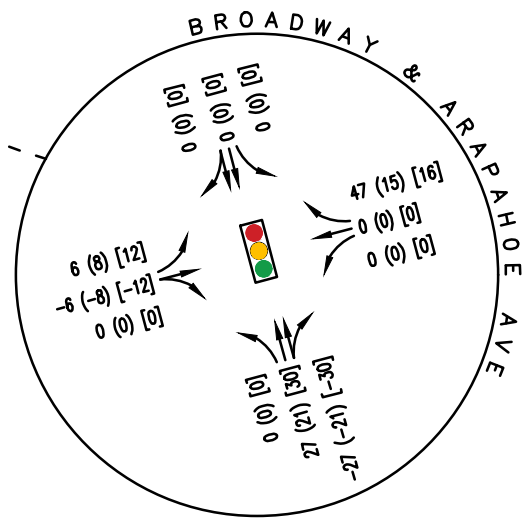
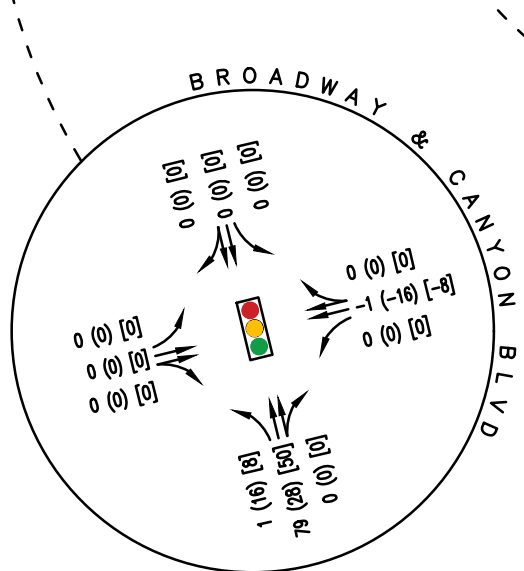
Broadway and Canyon Boulevard Intersection

- Westbound Through+Right
- Northbound Left
- Northbound Through+Right

The reassigned trips were distributed onto the study roadway network based on existing traffic characteristics of the area, existing land uses, and the relationship of the study area to the great downtown community. The overall assumed distribution is summarized in **Figure 2**. Adjusted volumes, lane configuration, and traffic control are illustrated in **Figure 3**.

The “13th Street Closure” scenario LOS calculations for the two intersections are summarized in **Table 1**. The 95th percentile queues are summarized in **Table 2**. The intersection level of service worksheets and queue reports are attached in the **Appendix**.

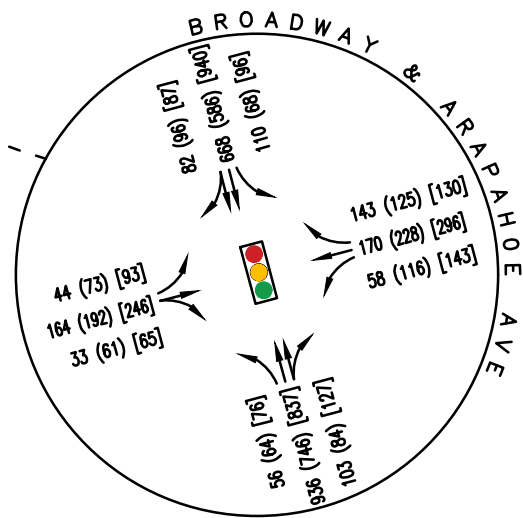
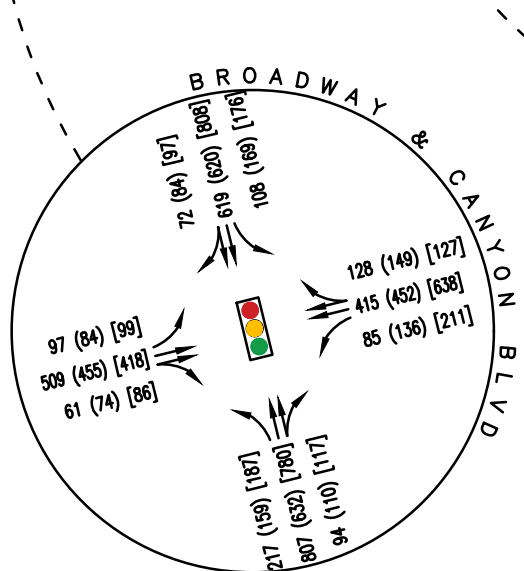
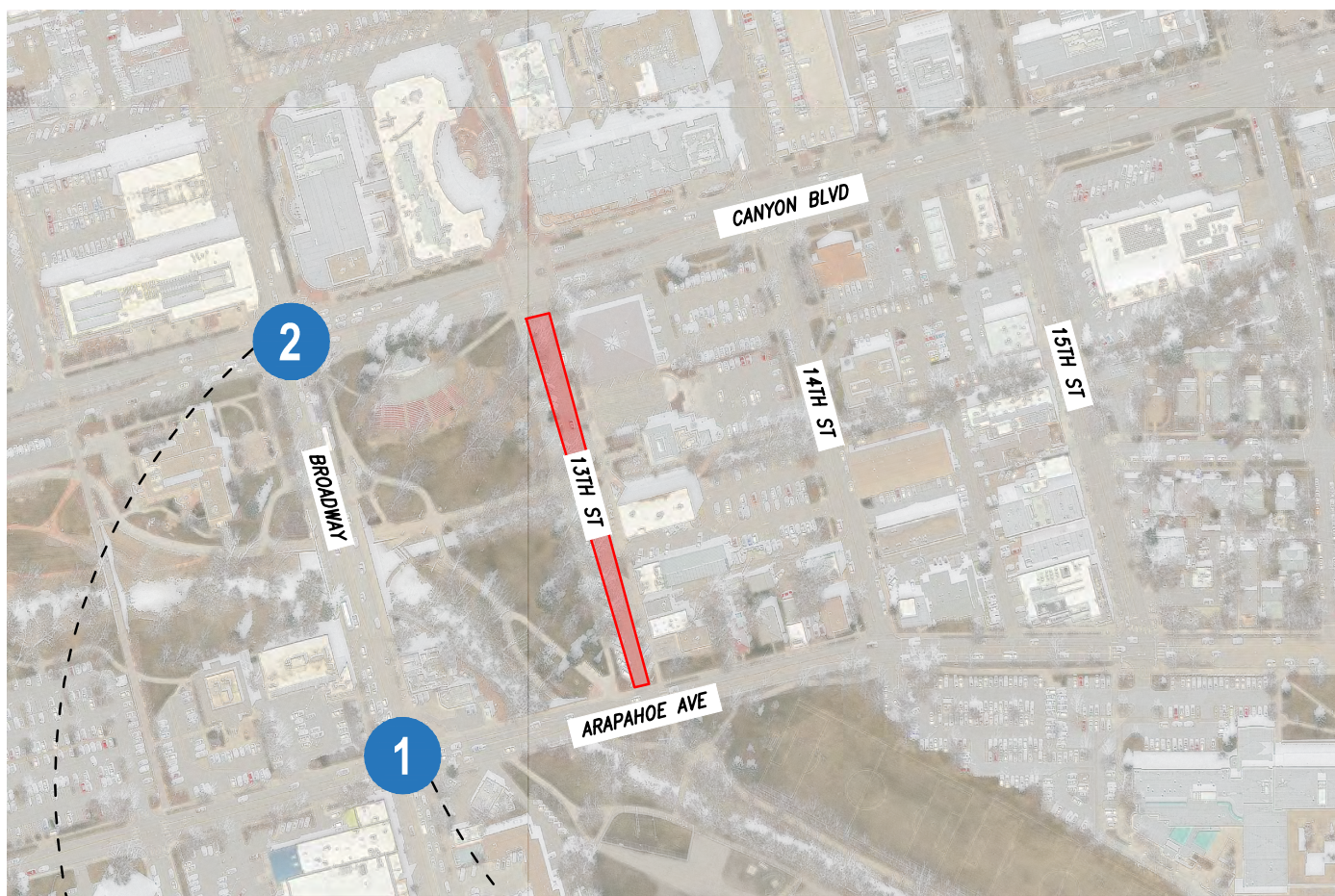
In summary, both study intersections operate similarly when 13th Street is closed or open. At the Broadway and Arapahoe Avenue Intersection, there are no significant impacts to the intersection’s overall operations nor within individual intersections movements adjusted to accommodate redistributed trips. At the Broadway and Canyon Boulevard Intersection, there are no significant impacts in the intersection’s overall operations. There are minor impacts for the Northbound Through+Right movement. The LOS is calculated to drop from LOS D to LOS E due to a three second delay increase. The 95th percentile queue estimates an increase of less than two vehicles added to the queue length for this movement.



KEY
 XX (XX) [XX] AM (MID) [PM] PEAK HOUR TRAFFIC VOLUME
 → EXISTING LANE CONFIGURATION



DOWNTOWN STREETS AS PUBLIC SPACES - BOULDER, CO
 13TH STREET ANALYSIS - TRIP REDISTRIBUTION



KEY
 XX (XX) [XX] AM (MID) [PM] PEAK HOUR TRAFFIC VOLUME
 → EXISTING LANE CONFIGURATION



DOWNTOWN STREETS AS PUBLIC SPACES - BOULDER, CO
 13TH STREET ANALYSIS - 13TH STREET CLOSED

4.0 West Pearl Street Existing Conditions

4.1 Roadways

The study area boundaries for this location are based on a complete relocation of traffic from West Pearl Street to Walnut Street. It is possible that some traffic would divert to either Spruce Street or Canyon Boulevard but Walnut Street is the most direct route likely to see the most diverted traffic, so a conservative approach of assigning all diverted traffic to Walnut Street was taken to create a worst case scenario for evaluation purposes.

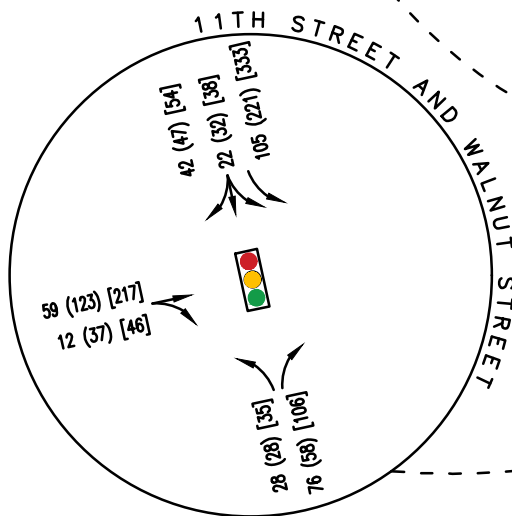
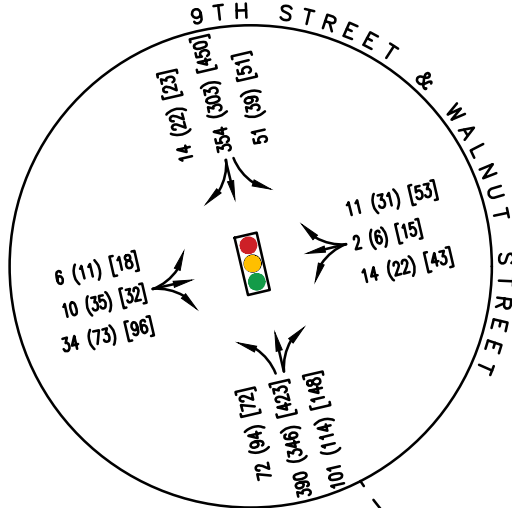
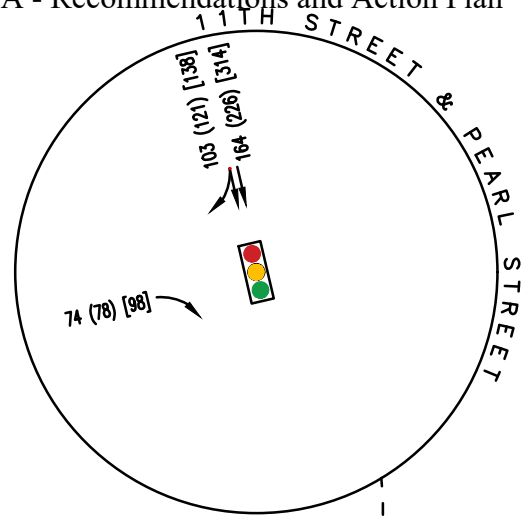
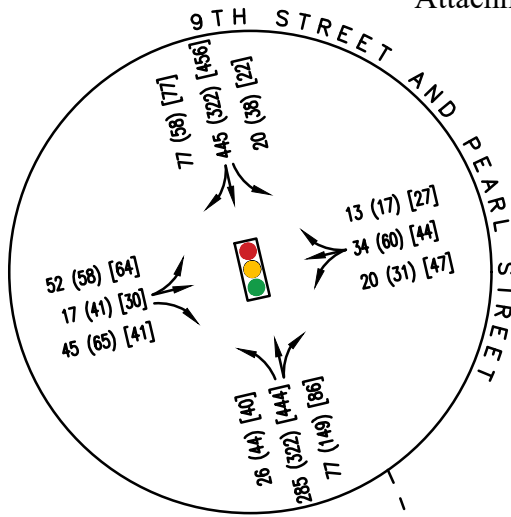
The primary public roadways that are anticipated to be impacted are discussed in the following text and illustrated on **Figure 4**:

West Pearl Street between 9th Street and 11th Street is a vibrant east/west minor arterial level street in the heart of Downtown Boulder. West Pearl Street has a 50-foot-wide paved section that accommodates one through lane in each direction, diagonal on-street parking on the north side of the street and parallel on-street parking on the south side of the street. The roadway width reduces to 26 feet at the intersections to facilitate pedestrian crossings. The speed limit is not posted. This section of West Pearl Street is adjacent to and directly west of the Pearl Street Pedestrian Mall. To accommodate the high pedestrian usage, West Pearl Street has wide attached sidewalks serving first floor retail and commercial spaces.

Walnut Street between 9th Street and 11th Street is also a vibrant east/west minor arterial level street in the heart of Downtown Boulder. Walnut Street has a 50-foot-wide paved section that accommodates one through lane in each direction, diagonal on-street parking on the north side of the street, and a combination of diagonal and parallel on-street parking on the south side of the street. The speed limit is not posted. To accommodate the high pedestrian usage, Walnut Street also has wide attached sidewalks serving first floor retail and commercial spaces.

9th Street is a north/south minor arterial roadway that provides connectivity to Downtown. 9th Street has a 50-foot-wide paved section that provides two through lanes in each direction, a center turn lane at intersections, and dedicated on-street bike lanes. The posted speed is 25 mph. 9th Street within the study area has attached sidewalks to accommodate first floor retail and commercial spaces. 9th Street also accommodates nine parallel parking spaces along the west side of the road.

11th Street is a southbound only minor arterial roadway within the study limits. 11th Street accommodates two through lanes and is part of the downtown vehicular loop. 11th Street has a 50-foot-wide paved section that also provides diagonal on-street parking on its east side and parallel parking on its west side. The posted speed is 20 mph. Similar to the other streets in the study area, 11th Street has wide, attached sidewalks to accommodate high pedestrian usage. The intersection of 11th St/West Pearl Street is a highly activated pedestrian area as the section of Pearl Street east of 11th Street is a pedestrian mall. 11th Street in the study area does not have on-street bike lanes.



KEY

XX (XX) [XX] AM (MID) [PM] PEAK HOUR TRAFFIC VOLUME
 —> EXISTING LANE CONFIGURATION



DOWNTOWN STREETS AS PUBLIC SPACES - BOULDER, CO
 WEST PEARL STREET ANALYSIS - EXISTING CONDITIONS

4.2 Intersections

Four intersections were analyzed for existing and “West Pearl Street Closed” traffic operations:

1. 11th Street and West Pearl Street (signalized)
2. 11th Street and Walnut Street (signalized)
3. 9th Street and West Pearl Street (signalized)
4. 9th Street and Walnut Street (signalized)

The existing lane configurations at each intersection are shown in **Figure 4**.

4.3 Existing Intersection Capacity Analysis

The existing volumes, lane configuration, and traffic control are illustrated in **Figure 4**. The results of the LOS calculations for the study intersections are summarized in **Table 3**. The 95th percentile queues are summarized in **Table 4**. The intersection level of service worksheets and queue reports are attached in the **Appendix**.

In summary, all four intersections currently operate at an overall LOS C or better in the AM, Mid, and PM peak periods with all movements operating at LOS D or better. Reviewing queue lengths reveals that at particular intersection movements, the PM queue lengths vary between 10 vehicles to a single vehicle.

5.0 West Pearl Street Closure Conditions

Fox Tuttle adjusted trip distributions at all four study intersections to effectively reassign trips previously associated with West Pearl Street. The distribution adjustments were made to the following movements:

11th Street and Pearl Street Intersection

- Eastbound Right
- Southbound Through+Right

11th Street and Walnut Street Intersection

- Eastbound Through+Right
- Southbound Left
- Southbound Through+Right

9th Street and Pearl Street Intersection

- Eastbound Left+Through+Right
- Northbound Through+Right
- Southbound Left
- Southbound Through+Right

9th Street and Walnut Street Intersection

- Westbound Left+Through+Right
- Northbound Through+Right
- Southbound Left
- Southbound Through+Right

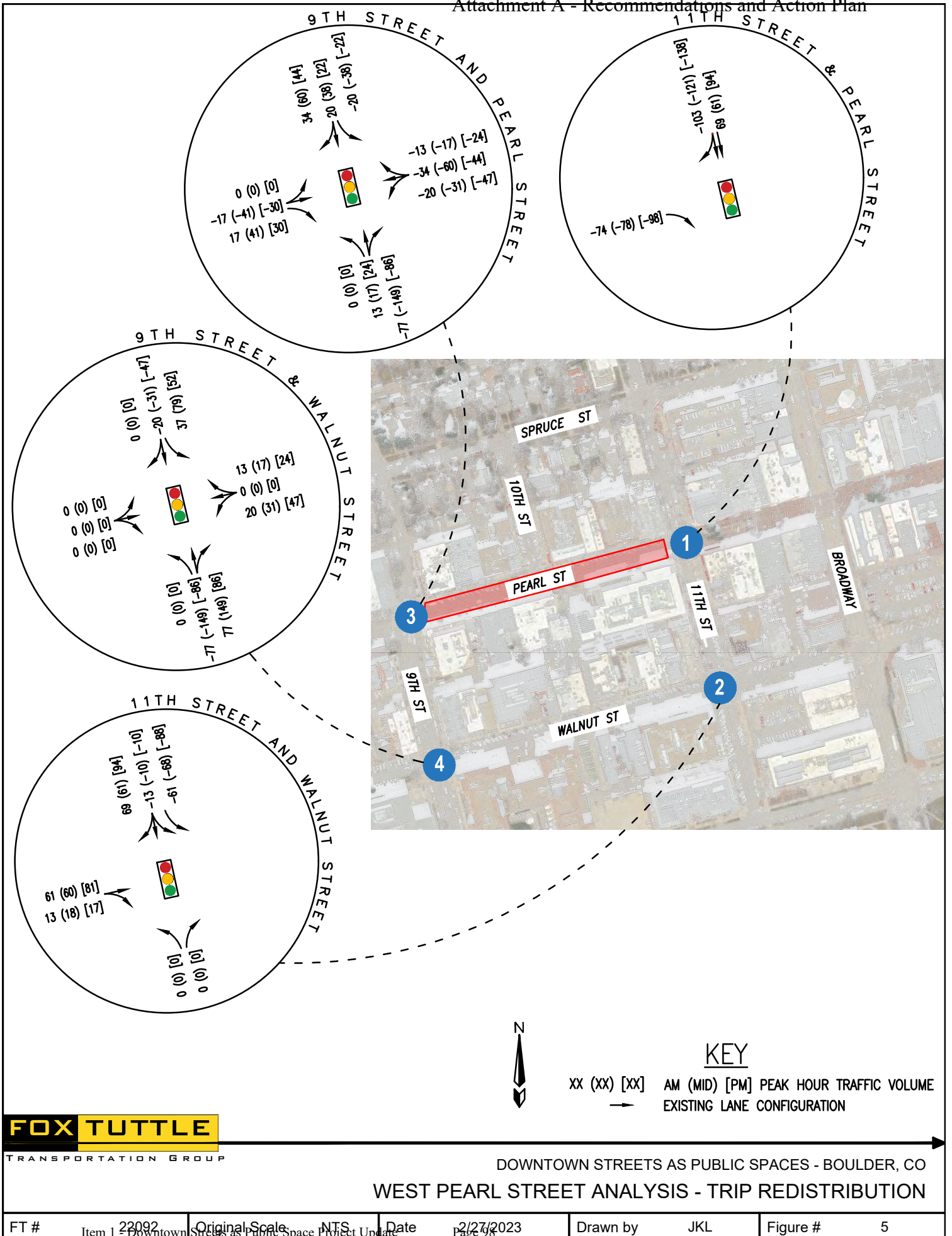
The reassigned trips were distributed onto the study roadway network based on existing traffic characteristics of the area, existing land uses, and the relationship of the study area to the great downtown community. The overall assumed distribution is summarized in **Figure 5**. Adjusted volumes, lane configuration, and traffic control are illustrated in **Figure 6**.

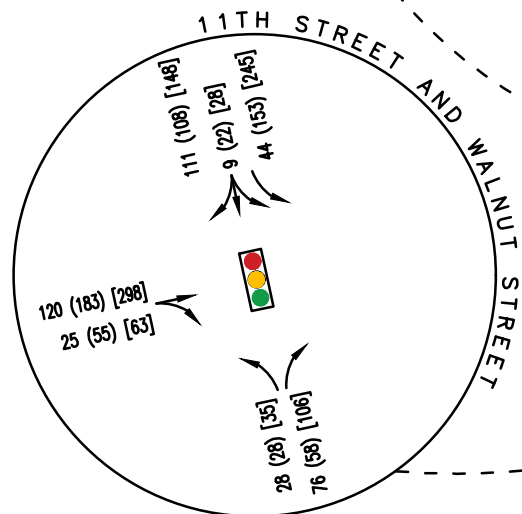
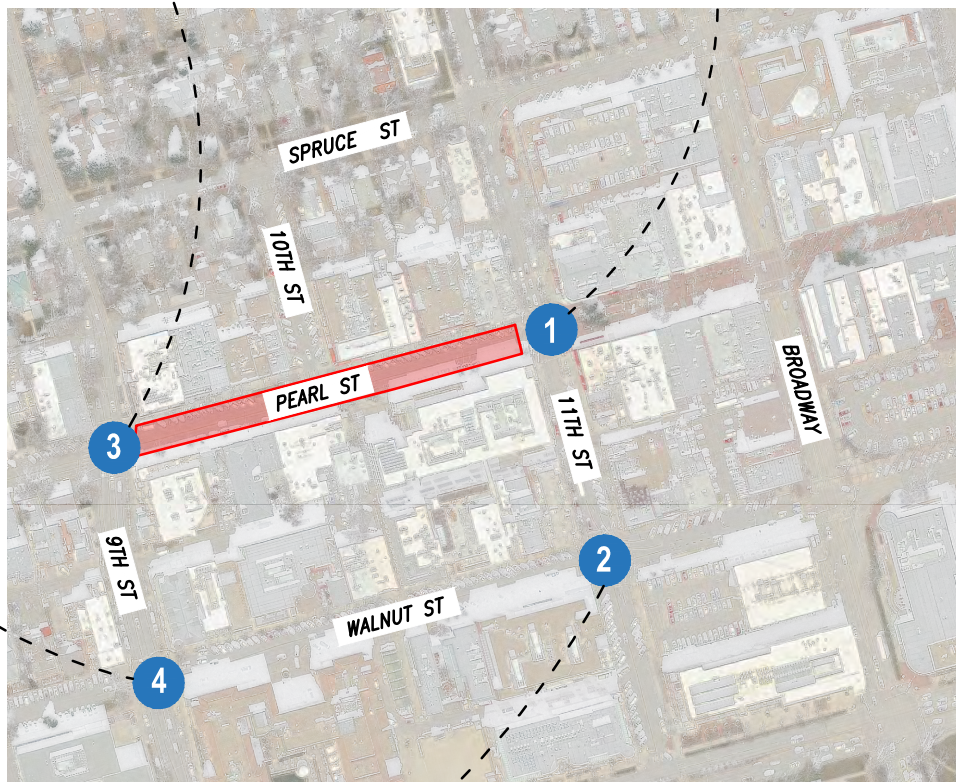
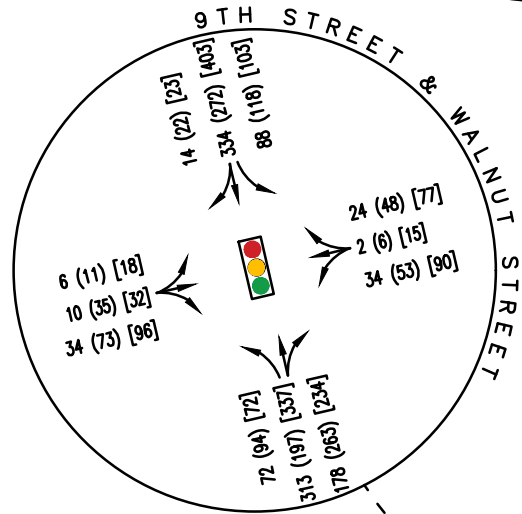
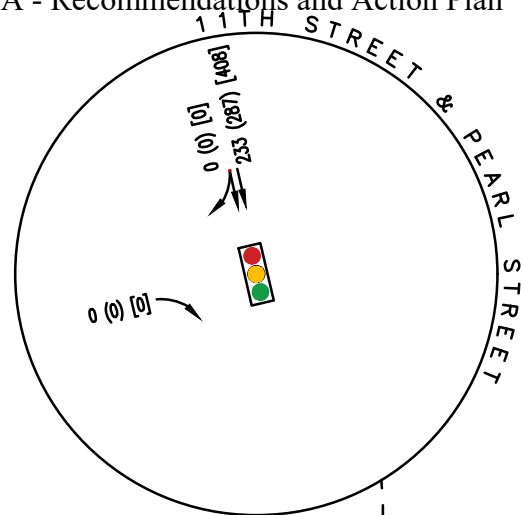
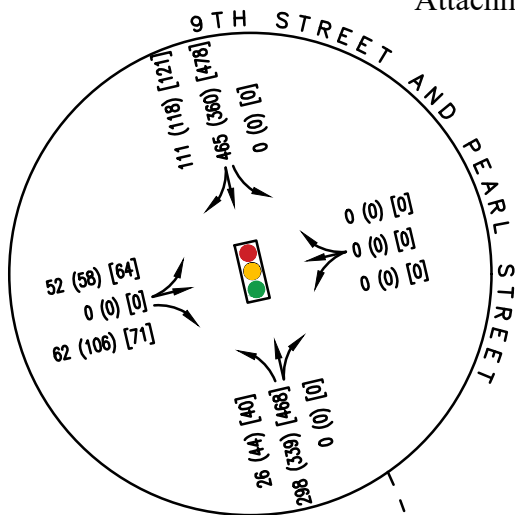
The “West Pearl Street Closure” scenario LOS calculations for the four intersections are summarized in **Table 3**. The 95th percentile queues are summarized in **Table 4**. The intersection level of service worksheets and queue reports are attached in the **Appendix**.

In summary, the overall operations at all four intersections during a full closure of West Pearl Street are projected to operate at an overall LOS C or better in the AM, Mid, and PM Peak periods, with all movements operating at LOS D or better. This is similar to operations under existing conditions.

Table 3 - Peak Hour Intersection Level of Service Summary - West Pearl

Intersection and Critical Movements/Approaches	Pearl St. Open						Pearl St. Closed - Detour to Walnut					
	AM Peak		MID Peak		PM Peak		AM Peak		MID Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SIGNAL CONTROL												
#1. 11th St. & Pearl St.	10	A	8	A	9	A	6	A	4	A	5	A
Eastbound Right	35	D	28	C	36	D	0	A	0	A	0	A
Southbound Through+Right	2	A	3	A	4	A	6	A	4	A	5	A
#2. 11th St. & Walnut St.	17	B	26	C	25	C	20	B	22	C	30	C
Eastbound Through+Right	26	C	25	C	29	C	29	C	29	C	40	D
Northbound Left	16	B	18	B	22	C	16	B	18	B	23	C
Northbound Right	16	B	17	B	21	C	16	B	17	B	21	C
Southbound Left	16	B	44	D	22	C	15	B	17	B	22	C
Southbound Through+Right	13	B	15	B	24	C	16	B	19	B	27	C
#3. 9th St. & Pearl St.	8	A	8	A	9	A	5	A	5	A	5	A
Eastbound Left+Through+Right	32	C	28	C	39	D	35	C	29	C	39	D
Westbound Left+Through+Right	32	C	27	C	39	D	0	A	0	A	0	A
Northbound Left	1	A	1	A	1	A	2	A	2	A	2	A
Northbound Through+Right	1	A	1	A	1	A	0	A	0	A	1	A
Southbound Left	3	A	4	A	3	A	0	A	0	A	0	A
Southbound Through+Right	6	A	5	A	6	A	5	A	5	A	5	A
#4. 9th St. & Walnut St.	4	A	6	A	8	A	5	A	7	A	10	A
Eastbound Left+Through+Right	32	C	28	C	39	D	32	C	28	C	37	D
Westbound Left+Through+Right	31	C	27	C	38	D	32	C	28	C	42	D
Northbound Left	0	A	0	A	0	A	0	A	0	A	0	A
Northbound Through+Right	1	A	1	A	1	A	1	A	1	A	1	A
Southbound Left	0	A	0	A	0	A	0	A	1	A	1	A
Southbound Through+Right	0	A	1	A	1	A	0	A	0	A	1	A





KEY

XX (XX) [XX] AM (MID) [PM] PEAK HOUR TRAFFIC VOLUME
 —> EXISTING LANE CONFIGURATION

Table 4 - Peak Hour Estimated Queues - West Pearl Street

Intersections and Lane Groups	West Pearl Open			West Pearl Closed			Max. Queue	Existing Storage
	95th% Queue			95th% Queue				
	AM	MID	PM	AM	MID	PM		
#1. 11th St. & Pearl St.	<i>Signalized</i>			<i>Signalized</i>				
Eastbound Right	0'	0'	0'	0'	0'	0'	0'	-
Southbound Through+Right	18'	27'	42'	37'	32'	63'	63'	-
#2. 11th St. & Walnut St.	<i>Signalized</i>			<i>Signalized</i>				
Eastbound Through+Right	49'	108'	187'	133'	147'	371'	371'	-
Northbound Left	25'	28'	39'	25'	28'	40'	40'	-
Northbound Right	0'	0'	0'	0'	0'	0'	0'	35'
Southbound Left	1'	0'	46'	0'	0'	30'	46'	-
Southbound Through+Right	23'	49'	93'	20'	47'	132'	132'	-
#3. 9th St. & Pearl St.	<i>Signalized</i>			<i>Signalized</i>				
Eastbound Left+Through+Right	67'	67'	105'	47'	26'	81'	105'	-
Westbound Left+Through+Right	70'	110'	121'	0'	0'	0'	121'	-
Northbound Left	17'	27'	25'	12'	21'	14'	27'	110'
Northbound Through+Right	167'	237'	240'	111'	123'	116'	240'	-
Southbound Left	10'	20'	12'	0'	0'	0'	20'	-
Southbound Through+Right	174'	149'	214'	174'	163.0	219'	219'	-
#4. 9th St. & Walnut St.	<i>Signalized</i>			<i>Signalized</i>				
Eastbound Left+Through+Right	27'	46'	89'	27'	46'	75'	89'	-
Westbound Left+Through+Right	6'	3'	78'	7'	6'	175'	175'	-
Northbound Left	17'	19'	21'	17'	20'	32'	32'	90'
Northbound Through+Right	103'	81'	126'	97'	63'	196'	196'	-
Southbound Left	24'	12'	17'	35'	33'	44'	44'	80'
Southbound Through+Right	126'	66'	115'	110'	65'	139'	139'	-

A comparison of the 95th Percentile queue lengths suggest that these intersections will experience some impacts. **Table 5** summarizes these impacts:

Recognizing the above impacts, Fox Tuttle evaluated potential optimization of the signal timing for both Walnut intersections. Some improvements could be made to the 11th Street and Walnut Street intersection if additional time was given to the eastbound movements (roughly 5 seconds) while subsequently reducing that time for the southbound movements. This adjustment would result in a LOS C for the eastbound movements and reduce the eastbound max queue from 371' to 258' (a reduction of 30%). Given conservative nature of these analyses and the potential variability associated with driver characteristics and tendencies, Fox Tuttle would recommend monitoring operations during a closure to see if changes are warranted as opposed to preemptively adjusting the signal timing at this intersection.

Fox Tuttle would recommend no changes to the 9th Street and Walnut Street intersection as the vehicular volumes are fairly low and adjustments to the timing still results in a LOS D for the WB movements.

Table 5 – Specific movement impacts for “West Pearl Street Closure” scenario

Intersection	Movement	Peak Hour	Existing LOS	Closure LOS	Queue Length Change (# of vehicles)
11 th and Walnut	EB through and right	PM	C	D	8
11 th and Walnut	SB through and right	PM	C	C	2
9 th and Walnut	WB left, through, and right	PM	D	D	4
9 th and Walnut	NB through and right	PM	A	A	3

Short-term Parking

The City of Boulder has conducted many evaluations in recent years to better understand parking supply and occupancy rates in Downtown. The “2020 Boulder Access Management and Parking Strategy Implementation: Revitalizing Access in Boulder” study best highlights Downtown’s existing parking conditions. As stated by Walker Consultants on page 16 of the study’s Existing Conditions report, “the parking supply in this area is frequently full year-round, during pre-COVID years with little seasonal variation month to month”. The report also notes that parking demands typically peak at 1:00 pm, while, as evening approaches, parking spaces begin to become more available and easier to locate around 5:00 pm. **Exhibits 1 and 2** highlight the results of this study.

During the COVID pandemic, Downtown parking utilization evolved. Numerous on-street parking spaces were converted into outdoor dining areas to help support adjacent businesses. In 2022, as part of the “Performance-based Pricing: Revitalizing Access in Boulder” project, the city examined parking utilization in Downtown, incorporating both outdoor dining locations and a full closure of West Pearl Street between 9th Street and 11th Street. **Exhibit 3** highlights the findings of this work effort.

In both cases, parking utilization was not provided for West Pearl Street between 9th Street and 11th Street. It is also noteworthy that the estimated parking utilization for 13th Street was quite different between the two reports.



Exhibit 1 – Downtown Parking Occupancy, Typical Weekday 1:00pm – 2020 Walker Study

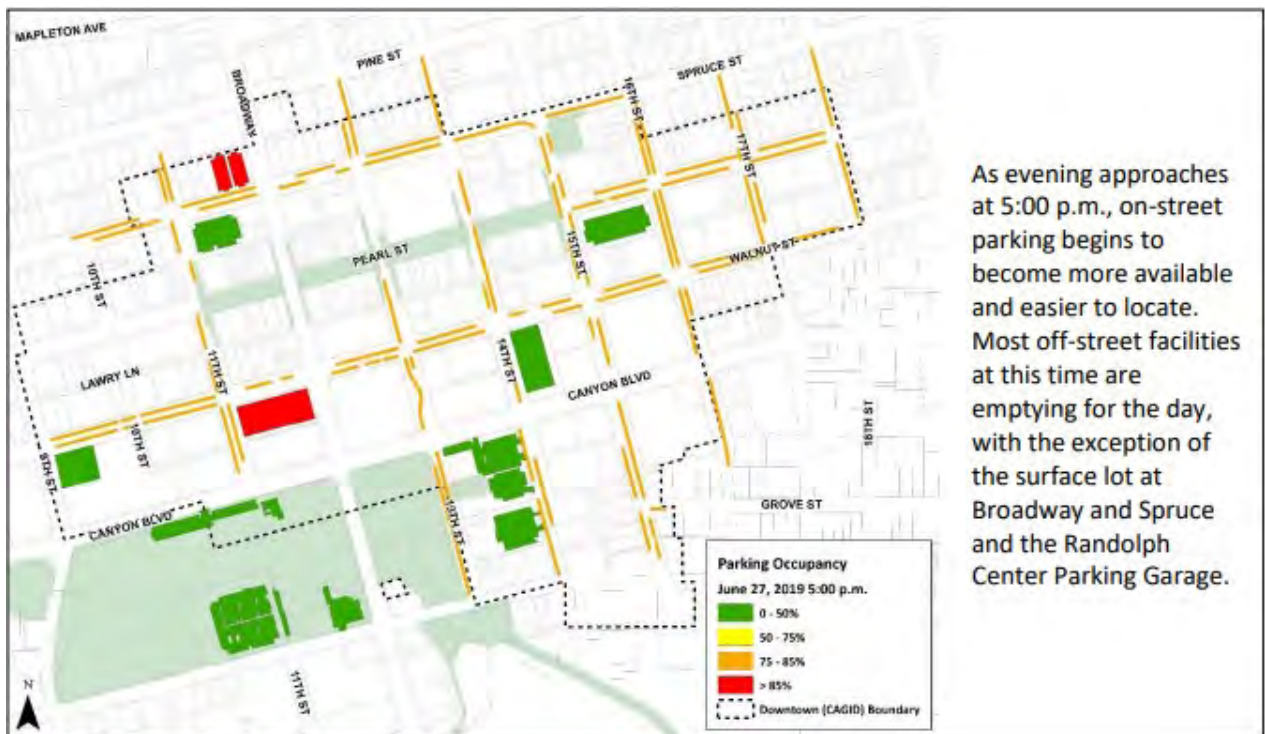


Exhibit 2 -Downtown Parking Occupancy, Typical Weekday 5:00pm – 2020 Walker Study

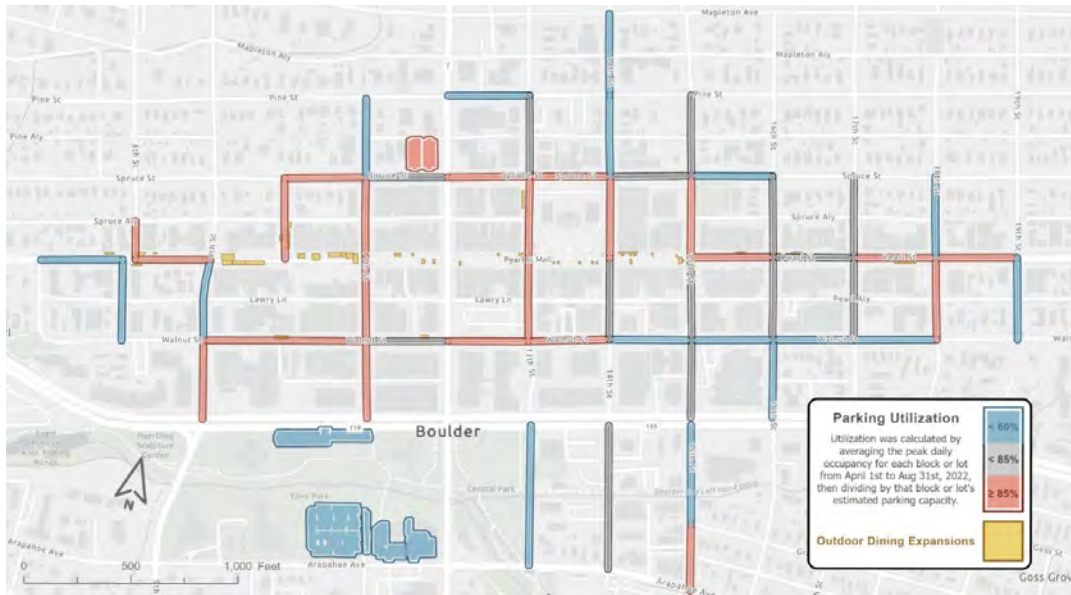


Exhibit 3 -Downtown Parking Occupancy – 2022 City of Boulder Study

Similar to Walker Consultants’ findings, this study found that parking spaces within the Downtown area are highly utilized. Along with on-street and surface parking lots, there are five public parking structures located with Downtown Boulder. **Exhibit 4** from the 2022 study shows the location of each structure in relation to the on-street and surface parking lots:

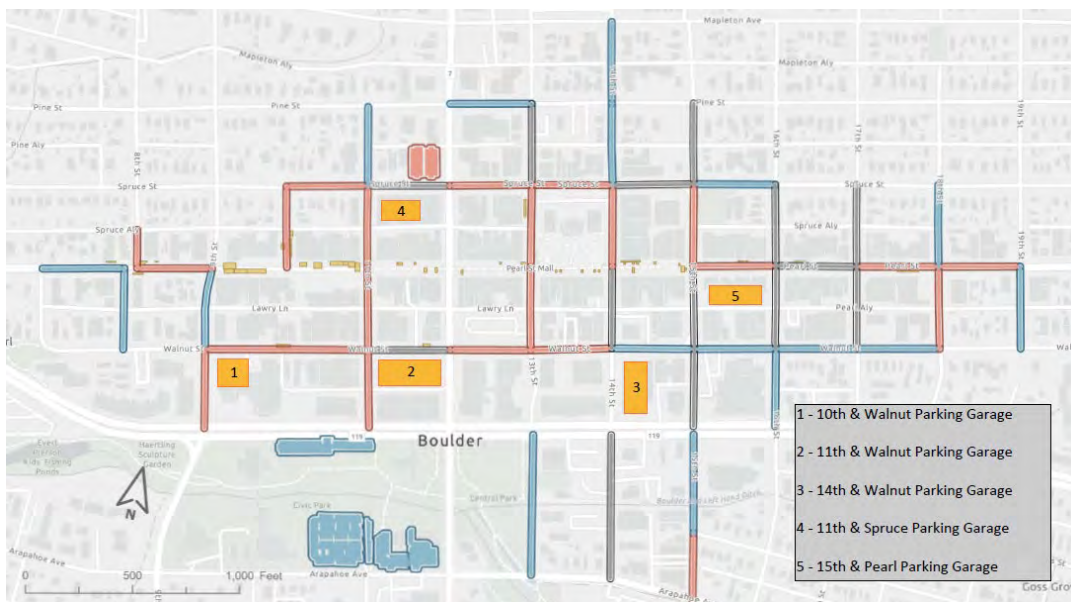


Exhibit 4 -Parking Garage locations – 2022 City of Boulder Study

“Smarking” is a business intelligence platform, used by the City of Boulder, that provides real-time, centralized parking data for key metrics. Fox Tuttle used Smarking data to investigate parking utilization and occupancy rates for each structure. Since parking structures are free on weekends, only weekday Smarking data was used for these analyses. **Table 6** highlights the total number of parking supply, utilization rates and available parking calculated for the time period between April 1, 2022 and August 31, 2022, for each structure in Downtown Boulder. Utilization is calculated as an “Average Peak Utilization” meaning it is the average of all daily peak utilization values for the time period.

The City of Boulder is planning changes to the infrastructure and operations of the parking structures downtown², but these changes do not change capacity and should not influence the outcome of these evaluations.

Table 6 – Parking Structure Supply and Utilization Estimates

Parking Structure	Total Parking Spaces	Ave. Peak Utilization %	Available Spaces
10 th & Walnut Parking Garage	500	35%	327
11 th & Walnut Parking Garage	273	57%	116
14 th & Walnut Parking Garage	302	30%	212
11 th & Spruce Parking Garage	392	70%	118
15 th & Pearl Parking Garage	686	32%	464

The estimated parking supply on each proposed street being considered for closure was documented. It should be noted that some of these parking spaces have already been removed as a result of outdoor dining permits. **Table 7** summarizes the standard and accessible parking supply for each considered road closure location.

“Standard Parking Spaces” are comprised of both diagonal and parallel spaces. While diagonal parking spaces are clearly marked on the street, parallel spaces are typically unmarked. Parallel parking supply is estimated based on curb space legally available for parking.

² Downtown Boulder Parking Garage Assessment by Metropolis Parking

Table 7 – On-street Parking Supply for Potential Closure Locations

Street	Standard Parking Spaces	Accessible Spaces	Total Spaces
13 th Street between Arapahoe Ave and Canyon Blvd	40	1	41
West Pearl Street between 9 th Street and 11 th Street	48(40)*	2	50(42)
10 th Street between Spruce Street and West Pearl Street**	28	4	32
East Pearl Street between 15 th Street and 17 th Street	37	0	37
14 th Street between Spruce Street and Walnut Street	62	3	65

* Currently, eight (8) on-street spaces within the 1000 block of West Pearl Street are reallocated for outdoor dining.

** Closing West Pearl Street also necessitates a closure to 10th Street between the Morrison Alley and West Pearl Street as 10th Street is a one-way northbound and originates at West Pearl Street.

Fox Tuttle compared the estimated parking supply on these roadways to estimated parking use data obtained from the Smarking program to calculate average peak utilization percentages. Since on-street parking in the downtown is free on Sundays, only the data from Monday through Saturday was used for these analyses.

The time period used for most blocks was April 1, 2022 through August 31, 2022. However, the 900 and 1000 blocks of West Pearl Street and the 2000 block of 10th Street were still closed as part of the COVID Pandemic emergency closure during this time period. In late September 2022, these streets were reopened to vehicular traffic, including a majority of the on-street parking spaces. Between 10 and 12 spaces remained reallocated to outdoor dining immediately after the streets reopened and, overtime, as the new outdoor dining requirements were implemented, this decreased to a total of 8 spaces being used for outdoor dining in this block. This reduced the total parking supply on these two blocks from 50 spaces to 42 spaces.

Fox Tuttle reviewed the available Smarking data for West Pearl Street and 10th Street and determined that the most appropriate time period of data to review was October 24 through November 23, 2022. This time period was used for the analyses on these two streets.

Table 8 summarizes the average peak parking utilization data for all of the streets being considered for closure.

Table 8 – Average Peak Parking Utilization Percentages for Potential Closure Locations

Block	Ave. Peak Utilization %
1700 13 th Street	51%
1900 14 th Street	68%
2000 14 th Street	85%
900 West Pearl Street	97%
1000 West Pearl Street	54%/NA*
2000 10 th Street	55%
1500 East Pearl Street	100%+**
1600 East Pearl Street	79%+
900 Walnut Street	65%
1000 Walnut Street	95%

*There was inconsistent loss of parking for outdoor dining in the 1000 block of West Pearl Street following it’s reopening in September 2022 and Smarking data cannot provide consistent findings.

** Greater than 100% utilization generally means vehicles are parked so closely together that they are parking in higher number than the estimated parking supply.

Although the 900 and 1000 blocks of Walnut Street are not locations being considered for closure, but because of their proximity to West Pearl Street, Fox Tuttle analyzed the parking on these blocks to help understand what the parking utilization might be on West Pearl Street. This was desirable because of the smaller amount of data available for West Pearl Street because of the previous closure, as well as the inconsistent Smarking data for the 1000 block of West Pearl Street.

In considering the on-street parking utilization information provided in the 2020 Walker Report and the information in the more recent 2022 “Performance Based Pricing” study, as well as the estimated average peak parking utilization numbers calculated, there are some conclusions which can be drawn about the potential impacts of losing short-term parking through the potential street closures being considered.

Utilization of the on-street, short-term parking is high on most roadways in the downtown area. The notable exception appears to be 13th Street between Arapahoe Avenue and Canyon Boulevard which appears to typically have less than 50% occupancy. The loss of parking on one or more of the streets with high occupancy will impact access to land use on those streets. In addition, the desire for nearby on-street parking will result in some drivers seeking parking on

adjacent downtown streets which have existing high parking utilization. This may impact access to the land uses on those roadways as well. There are two factors that could mitigate this loss of access:

- All of the roadways being considered for closure are near one or more parking garages. The data and analyses suggest that there is parking supply available in these structures and if drivers could be convinced to use these structures they could off-set the loss of parking. However, drivers may not consider structured parking to be an adequate substitute for closer on-street parking.
- The city has a robust multi-modal network with high frequency transit services and many excellent bicycling facilities across the community. Proximity to these services and facilities could help mitigate the loss of access from personal motor vehicles. It should be noted that some of the roadways being considered for closure have better multi-modal accessibility than others, as noted in the “Pedestrian and Bicycle Considerations” section of this report.

Given the high utilization of on-street parking spaces within roadways being considered for the proposed pop-up locations, mitigating these impacts will be important to Downtown business owners and people visiting downtown.

Accessible Parking

Mitigating impacts to accessible spaces will be an important part of developing a successful street closure. Accessibility is discussed further in the “Other Considerations” section of this report. Accessible spaces are expected to be near destinations. If streets were closed, it would be important to consider where additional wheelchair accessible parking could be accommodated to replace spaces lost on the closed streets. Fox Tuttle recommends looking at the following locations as potential mitigation for lost accessible parking spaces:

- West Pearl Street west of 9th Street (to mitigate a West Pearl closure)
- Spruce Street both west and east of 14th Street (to mitigate a 14th Street closure)
- Walnut Street west of 14th Street (to mitigate a 14th Street closure)
- 15th Street north of East Pearl Street (to mitigate an East Pearl closure)

There is one wheelchair accessible space on 13th Street as well which would be eliminated with a 13th Street closure. There is not an obvious place to create a new wheelchair accessible space in the vicinity of this closure.

Transit Operations

Transit trip making is a key part of the City of Boulder’s approach to a sustainable, multi-modal transportation system. Transit service operates on many roadways within the city. Therefore, a key consideration of potentially closing a roadway is whether there is transit service operating on that roadway, whether it needs to be diverted to a separate route, and what the impacts of that diversion would mean to the effectiveness of the service.

In considering potential changes to transit service, it is important to note that a consistent change is much easier to implement logistically and for the public to understand. Periodic closures can be challenging in terms of implementing “temporary” stops, notifying passengers of the changes to the route and operations for the drivers of these transit services.

Of the roadways being considered for closure, only East Pearl Street and West Pearl Street have transit service (the HOP) operating on them currently. This evaluation pertains only to the potential for closing sections of West Pearl Street and East Pearl Street and restoring the previous re-routing which had occurred during the first two years of the COVID pandemic.

Figure 7 details the standard route for the HOP service in which clockwise and counterclockwise service runs east and west down Pearl Street between 9th Street and 11th Street, and 15th Street to 17th Street. **Figure 8** details the re-routed HOP route, implemented when the section of Pearl Street between 9th Street and 11th Street was closed during the COVID pandemic. The counterclockwise route uses Walnut to travel between 9th Street and downtown loop, while the clockwise route bypasses downtown streets on the west end and uses 11th Street and Canyon Boulevard to reconnect with 9th Street. This is due to geometric challenges at the intersection of Walnut Street and 11th Street. On East Pearl, the diversion is from East Pearl Street to Walnut Street.

One of the best ways of measuring effectiveness of a transit service is ridership. Typically, a comparison of ridership before and after a route change would be valuable information to assess the route change impact. However, the change in HOP transit routing coincided with significant impacts to ridership as a result of the COVID pandemic. Many people stopped using transit during the COVID pandemic and ridership has only started to increase again recently. Any ridership evaluation would be much more impacted by the COVID pandemic impact and it would not be possible to assess a reasonable component due to re-routing. Therefore, other assessment tools needed to be used.



Figure 7 – Standard Downtown HOP service route

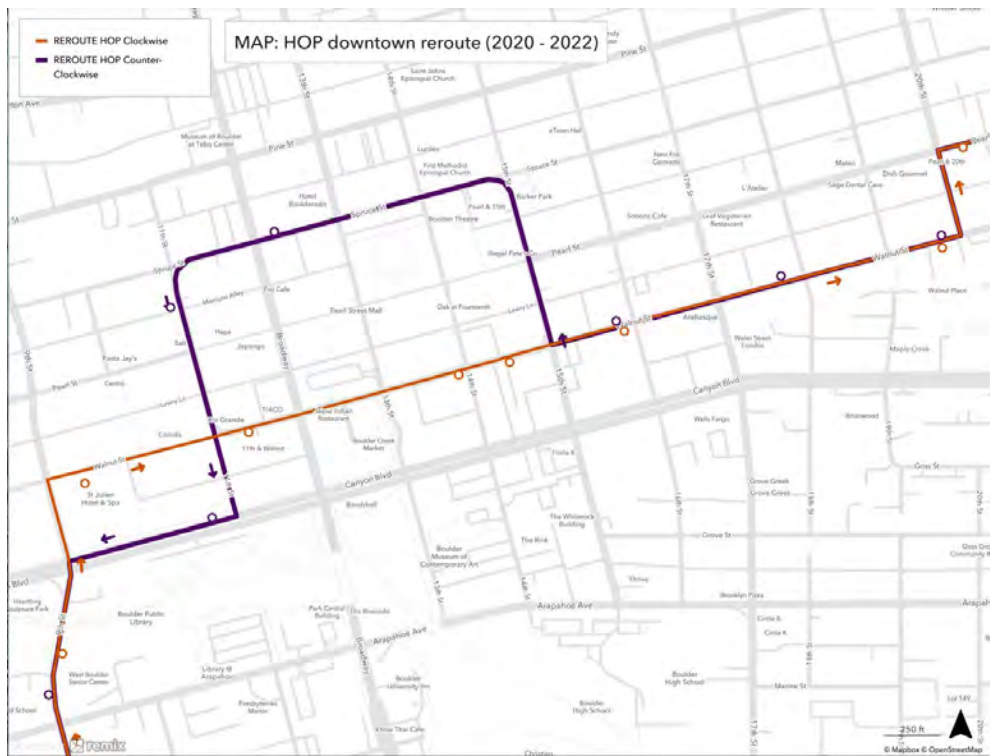


Figure 8 – Re-routed Downtown HOP service route

One such method is to look at the “Walkshed” which is the potential population and employment that is present within a quarter mile (comfortable walking distance), of each stop to better understand the potential ridership potential before and after the re-route. The City of Boulder had tracked this information for the HOP service and Fox Tuttle has looked specifically at the stops in the west end of Pearl Street. **Table 9** details the estimated Walkshed change with the re-routed HOP service.

	<u>Population Walkshed</u>	<u>Employment Walkshed</u>
Standard Route	+4600 population	+27,000 employees
Re-routed Service	+3800 population	+24,200 employees
Change	-900 (17%) population	-2800 (10%) employees

Table 9 – Change in West Pearl Walkshed with re-routed HOP service

This information shows that the re-routed HOP service does have a significantly reduced Walkshed, with a 17% reduction in nearby residents and a 10% reduction in nearby employees. It is important to note that overall, across the entire downtown component of service, the changes in routing for both ends of Pearl Street have resulted in relatively equal Walkshed numbers. The primary negative impact is on the west end of Pearl and not the east end.

Travel time of transit service, between stops and along the completion of their circuit is another way to assess the impact of a change in routing. The City of Boulder does have travel time information that has been captured and stored in their “Remix” program. This data compares travel time before the previous closure of West Pearl Street to travel time after the closure. **Table 10** details the estimated travel time for a complete circuit of the HOP service, both clockwise and counterclockwise, with standard and re-routed HOP service.

	<u>HOP Clockwise</u>	<u>HOP Counterclockwise</u>
Standard Route	37.9 minutes	38.3 minutes
Re-routed Service	34.5 minutes	36.3 minutes
Change	-3.4 (9%) minutes	-2.0 (5%) minutes

Table 10 – Change in HOP Service travel time with re-routed HOP service

This data shows that the HOP buses were able to execute their circuits in both directions faster after the re-route. However, there are two significant factors that influence this outcome. Since the re-route occurred during the COVID pandemic, both transit ridership and motor vehicle traffic on the transit route were significantly lower. That would mean that buses would spend less time

picking up passengers and would encounter less congestion moving through the route. Consequently, it is difficult to say whether these travel time results are truly indicative of a faster route or if it is more influenced by the COVID pandemic conditions.

Fox Tuttle was able to obtain some feedback from transit provider (VIA), through city staff and the following additional input was considered:

- The re-routed service in the West End did result in buses having to maneuver on roadways that were much narrower. Walnut Street between 9th Street and 11th Street, as well as 11th Street north of Canyon Boulevard were both identified as challenges for drivers to maneuver and stay within their travel lanes.
- Drivers also expressed concern about the difficulty in making a northbound to eastbound right turn at the Walnut Street and 9th Street intersection, as part of the counterclockwise route.

In considering all of these factors it is difficult to say how impactful a more long-term re-routing of the HOP transit service in the West End would be. There is a documentable drop in Walkshed and the transit provider (VIA) has expressed concerns about some of the roadways and maneuvers required of their drivers in the new route. Other factors such as transit ridership and travel time are so heavily influenced by the COVID pandemic impacts that it is challenging to draw good conclusions about their potential impacts.

Fox Tuttle thinks that it is likely that a more permanent re-routing of the HOP service in the west end of the downtown would result in some negative impacts and that this would be counter to the city's sustainable transportation system goals. However, if the decision is made to close West Pearl Street as part of the Pop-Up experimentation this summer, it would be ideal to include data collection and analysis for conditions immediately before and during the closure. In this case, Fox Tuttle would include the recommended data collection and analyses in the project's analysis plan.

Pedestrian and Bicycle Considerations

One of the expected benefits of closing a roadway to motor vehicle traffic to create better public space would be significant improvement for pedestrians. This would include pedestrians traveling to and from adjacent land uses as well as those walking through the area. They would no longer have any potential to conflict with motor vehicles and this would result in both a perception of increased safety and a reduction in the potential for conflict, which would hopefully increase the use of this corridor by pedestrians.

Typically, a comparison of pedestrian usage prior to and during a closure would reveal significant increases in pedestrian activity in the corridor. An example of this would be an evaluation, performed during the recent closure of West Pearl Street, of the amount of pedestrian activity moving between West Pearl Street and the existing Pearl Street mall to the east at the Pearl Street and 11th Street intersection.

Fox Tuttle reviewed peak hour turning movement count data at this intersection, which included pedestrian and bicycle counts for days prior to the closure (2019) and during the closure (2022). Specifically, Fox Tuttle examined the noon peak hour as this was the time period with the highest amount of pedestrian activity. **Table 11** details these pedestrian counts, before the closure and during the closure. It also shows the number of bicyclists entering or leaving west Pearl Street during the same time periods.

	<u>Pedestrians Crossing</u>	<u>Bicycles on Pearl St.</u>
Pearl Street Open (2019)	1520 pedestrians	18 bicyclists
Pearl Street Closed (2022)	650 pedestrians	12 bicyclists
Change	-870 (57%) pedestrians	-6 (33%) bicyclists

Table 11 – Pedestrian and Bicycle counts at 11th and Pearl – Midday Peak

It would have been expected that these results would show a significant increase in pedestrians moving between west Pearl and the Pearl Street mall after the closure. Unfortunately, the data showed the opposite to be true. Fox Tuttle believes that the COVID pandemic decreased the total number of people in the downtown area, and this is the most significant factor influencing these numbers. Fox Tuttle believes that this is not an indication of the closure’s potential for significantly increasing pedestrian activity if the street were closed to motor vehicles and well activated with a robust program of furnishings, events and activities.

Another takeaway from the information provided in **Table 11** is the significant difference between overall pedestrian and bicycle counts at this location. In reviewing traffic counts for all three peak

periods, it was clear that pedestrian activity was anywhere from 50 to 80 times greater than bicycle activity on west Pearl Street. There could be a number of reasons for this but two that Fox Tuttle has identified are the following:

- Lack of high-quality bicycle facilities connecting the city’s bike network to the west end of downtown, especially in the east/west corridors; and
- Insufficient bicycle parking based on the demand in these blocks of West Pearl Street.

Unfortunately, these issues and any others which influence bicycle mode share in the West End make it more challenging for a street closure in that area to yield a substantial mode shift from automobile to bicycle. That is a pertinent consideration for West Pearl Street as a potential street closure location. Increasing the supply of bicycle parking is something that can be considered for implementation in any Pop-up implemented in on West Pearl Street.

There is no comparison data before and during a closure for the other streets being considered in this project. However, it is likely that a closure would see significant increases in pedestrian usage, based on their proximity to the downtown businesses, the civic area and, in the case of 13th Street, Central Park and the Boulder Creek Path.

Bicycle access and the potential for an increase in bicycling mode share would vary between the remaining corridors, as follows:

- Bicycle access to East Pearl Street would be better than West Pearl Street. The Walnut Street and Spruce Street corridors would provide parallel facilities and the 17th Street corridor would provide a north-south connection. East Pearl Street is more comfortable to access than West Pearl Street.
- Bicycle access to 14th Street would be similar to West Pearl Street except for its proximity to the 13th Street bicycle corridor and the opportunity to connect, via Canyon Boulevard, to 14th Street transit corridor just north of Canyon.
- The best multi-modal and bicycle access would be on 13th Street. This corridor has good north/south connections through the Broadway path and 13th Street Bikeway through downtown. It also has good east/west connectivity with the Boulder Creek Path, and connections from that path directly to this section of 13th Street.

In all cases, it would be desirable for the implementation plan to include an increase in bicycle parking for the closure of any of those roadways. In the long-term, it would also be recommended to prioritize projects which create multi-modal connectivity between those roadways and Boulder’s extensive existing multi-modal system.

Other Considerations

The previous evaluation sections have discussed impacts on different modes of travel. However, there are several other important considerations to be incorporated into any successful roadway closure which involve safety, equity, maintaining city services and private property impacts. These topics were discussed with a number of people through the project’s public process effort and through a series of “Wants, Needs and Considerations” meetings with key stakeholders. The following is a summation of these considerations:

Emergency Response: A high priority goal of any community is to protect lives and property from emergency impacts. Consequently, it is important to maintain acceptable Emergency Response to people and property when a roadway is closed. Access to the closed area for emergency responders is critical and the devices and treatments used to implement the closure need to provide this access from at least one direction. For example, when 10th Street was closed previously, a smaller Type II barrier was used, and it was positioned in such a way as to provide room for a fire truck to drive around it. The roadway itself needs to maintain at least 20 feet of clearance so that a fire truck can access any portion of the closed roadway and, in the event of a structural fire, deploy their outriggers for stability. Fortunately, maintaining good emergency response services during closures for special events is something that the city’s special event committee has a lot of experience doing.

Access for Public and Private projects: Roadways are a space that provides service to the community other than transportation. Many utilities have been placed beneath the street in the public ROW and occasionally these assets have to be accessed for improvement or maintenance. Likewise, the street provides a work area for adjacent private property when they are performing enhancement or maintenance projects. These are usually managed through the city’s right-of-way permitting process. Care should be taken to ensure that whatever infrastructure is placed within a closed roadway that it can be easily removed and replaced in the event that one of these public or private projects requires that space.

Wheelchair Accessible Parking: Federal law requires an equitable number of designated handicapped parking spaces to be placed in any private parking lot. In general improvement districts where private parking requirements have been reduced and there is a higher expectation of on-street parking, it is important that handicapped parking be designated on-street as well. Consideration needs to be given about where such designated spaces exist today on streets which are proposed for closure and how the need for these spaces can be accommodated on other adjacent blocks. In addition to parking, another consideration for accessibility is that any public area created in the roadway will need to be wheelchair accessible. This may involve temporary

ramps connecting to the existing sidewalk and care must be given that these ramps are constructed in a way that does not impact curb drainage and create drainage issues for on-street infrastructure or for adjacent properties.

Maintaining access to private parking lots: Boulder’s downtown area has many one-way streets and alleys and some of these include access to private driveways, structured parking or private parking adjacent to the roadway or alley. Impact to or elimination of access to private property or parking which would occur with a street closure should be identified and considered in the decision to close the roadway and the implementation plan. Fox Tuttle identified the following potential issues for the streets evaluated:

- There is a one-way outbound driveway accessing 13th Street immediately south of Canyon Boulevard and any closure of 13th Street needs to consider this private property access need. Currently the closure associated with the Farmer’s Market events on this roadway keeps this driveway open and doesn’t close the part of 13th Street which connects the driveway to Canyon Boulevard. Not closing this portion also provides space for northbound bicyclists on the west side multi-use path to cross the street and position themselves to access 13th Street north of Canyon Boulevard.
- The Lawry Lane alley crosses 14th Street as it runs one-way westbound. There are a number of private parking spaces on Lawry Lane, west of 14th Street that are generally accessed by vehicles turning onto Lawry Lane from 14th Street. If 14th Street were closed, vehicles seeking to access these spaces would have to use the 1400 block of Lawry Lane from 15th Street to access these spaces. The 1400 block of Lawry Lane is very narrow and can be blocked off by a single delivery truck.

It should also be noted that 10th Street between Pearl Street and Spruce Street is one-way northbound and the closure of Pearl Street from 9th Street to 11th Street eliminates legal access to this street other than from Morrison Alley north of Pearl Street. This means a closure of west Pearl requires the closure of 10th Street between West Pearl Street and Morrison Alley, while access to 10th Street south of Spruce Street can occur only from Morrison Alley. City staff did receive complaints that drivers violated the “Do Not Enter” restrictions at Spruce Street and 10th Street and drove the wrong way down 10th Street to access the parking in this block or to access Morrison Alley.

Accommodating on-street short-term loading: Most delivery of goods in the downtown occur in the alleys behind businesses. However, there are places where adjacent land use needs and alley usage have resulted in short-term loading zones being designated on-street. Both the west Pearl and 14th Street roadways have loading zones like this in the areas which would be closed and it is

likely that the businesses near these loading zones have incorporated their use into their business model. Consideration of these impacts and how they might be mitigated should be a consideration for roadway closure implementation.

Safe and appropriate street closure traffic control: There are state and federal traffic control standards for closing a roadway. The purpose of these standards is to convey a change in access and clearly regulate motor vehicle movements to drivers who may not be aware of the closure. Failure to follow these standards could result in safety issues and potential exposure for the city. It is understood that there will be a desire to make the closure areas attractive, colorful and incorporated into the activation of the closed space. It is recommended that the standard traffic control devices also be used to create as safe a closure as possible.

In the event that a closure is temporary and recurring (weekend only for instance) then consideration should be given to how to minimize the impacts of traffic control setup and take down between each closure event. This may involve more permanent signing which has time of day/day of week restrictions, or which have permanent restrictions but may be bagged between events. Another possibility would be hinged signs which can be folded up when the restrictions are not in place. For larger devices like Type III barricades or lines of cones used to stripe out turn lanes not available during a closure, it would be desirable to identify a storage location near the Pop-up location so that these devices do not need to be transported by vehicle between each event.

The specific traffic control devices needed should be incorporated into a “Traffic Control Plan” generated by a certified traffic control supervisor. Likewise, the setup and takedown of these traffic control devices should be the responsibility of certified traffic control professionals as well. In the event that a closure is temporary and recurring it would be desirable to establish one blanket traffic control plan to cover all of the events. There is precedent for doing this with the Farmer’s Market event closures on 13th Street. Fortunately, requiring safe and appropriate road closure traffic control during closures for special events is something that the city’s special event committee has a lot of experience doing.

Snow and ice control: When a roadway is closed to general motor vehicle traffic there are still snow and ice control activities that need to occur. This is necessary to keep the area clear for people walking as well as to maintain access for emergency response vehicles. This requires snow and ice control professionals to develop a plan for how they will clear snow and where it will be stored when these inclement weather events occur. This consideration may not be necessary, if the Pop-up timeline does not include the cold weather season, but in Colorado it is possible to see snow on the ground anytime between September to May.

Summary of Recommendations

Based on the technical evaluations outlined in this report, Fox Tuttle provides the following recommendations for consideration in determining which roadways should be considered for closure and if closed, what significant considerations should try to be addressed in the implementation of those closures. The streets are listed and discussed in prioritized order of the best to worst options, considering only the technical analysis considerations.

13th Street between Canyon Boulevard and Arapahoe Avenue (Best Option): The technical evaluation suggests that this roadway has the fewest challenges to closure and the greatest chance of successfully off-setting reduced motor vehicle trip making with other multi-modal trips. This section of 13th Street carries approximately 1,000 vehicles per day and the “Motor Vehicle Operations” analyses suggest that the surrounding roadway network can accommodate this diverted traffic without need for mitigation.

The multi-modal connections to this roadway, including the 13th Street bicycle corridor, the Boulder Creek Path, transit service on Canyon Boulevard and the proximity to the 14th Street RTD Station, create an environment ripe with possibility for increased multi-modal trip making. This roadway also has the fewest land uses adjacent who benefit from the short-term parking which would be no longer available. This block of 13th Street also had the lowest average peak parking utilization of any of the potential road closure areas. These factors may have influenced the city’s prior decision to codify the future closure of this roadway in their “Civic Area Master Plan”.

Fox Tuttle believes that this section of 13th Street could be closed to motor vehicle traffic completely or on weekends only with few technical challenges. If this section of 13th Street is closed, the implementation plan will need to consider how to maintain access for or mitigate loss of access for the Atrium Building’s driveway on the east side of 13th Street just south of Canyon Boulevard. The city should also consider ways to provide short-term parking for businesses like the Dushanbe Tea House. The parking plan for the Farmer’s Market special event may be a valuable starting point.

14th Street between Spruce Street and Walnut Street (2nd Best Options): The technical evaluation suggests that this roadway has a few but no significant technical challenges to closure. It does not have great access to Boulder’s larger bicycle network but it’s proximity to the 14th Street RTD Station and it’s location at the center of the Pearl Street mall would provide good transit access and a large supply of existing pedestrians from the mall itself. 14th carries an estimated 1,500 to 2,000 vehicles per day between Spruce Street and Walnut Street. Many of these vehicles are seeking to park on 14th Street to access the businesses there, and if 14th Street were closed many

of those would either disperse into the surrounding downtown parking system or change their destination to one outside of the downtown. The remaining trips would be small enough in number to not create a significant operational impact on other downtown intersections. 14th Street has been closed for special events in the past and this precedent provides some qualitative observations which help to draw these conclusions.

The most significant operational impact would be the loss of short-term parking on these two blocks. There are many businesses on this roadway who benefit from adjacent short-term parking, and the loss of this parking would be impactful to those businesses and their customers. Parking utilization was shown to be high on both of these blocks of 14th Street and on nearby blocks where diversion could occur. Therefore, the displacement of parking may impact not only 14th Street businesses but also those on nearby blocks. A secondary consideration is the fact that 14th Street is the primary access roadway for the 1300 block of Lawry Lane, west of 14th Street. This alley is used for the delivery of goods to adjacent businesses. There are also several areas of private parking used by these businesses. The closure of 14th Street would require all vehicles to drive through the 1400 block of Lawry Lane and cross 14th Street to access the 1300 block of Lawry Lane. The 1400 block of Lawry Lane is narrow and often has delivery vehicles in the alley as well. This could create a significant impact to access for the 1300 block of Lawry Lane.

Fox Tuttle believes this section of roadway could be closed to motor vehicle traffic completely or on weekends only, but the impacts of a full closure would be significant. If this section of 14th Street is closed, the implementation plan will need to consider how to maintain good access to the 1300 block of Lawry Lane. It should also consider the impacts of short-term parking loss and how the short-term parking might impact access to land use on surrounding blocks. Parking is available in the RTD parking structure and the 15th/Pearl Parking structure, and this parking supply may mitigate these impacts.

West Pearl Street between 9th Street and 11th Street (3rd Best Option): The technical evaluation suggests that this roadway has a few but no significant technical challenges to closure. These blocks of West Pearl Street were previously closed during the COVID pandemic, and thus there is precedent for the type of operational challenges that might arise with a future closure. It is important to note that traffic conditions were much different during the COVID pandemic, and it is likely that a future closure would be more impactful to traffic operations, parking and transit than previously experienced.

It is estimated that this roadway carries between 3,000 and 3,500 vehicles per day. The technical evaluation of diverted traffic did identify some delay and queuing issues but this was a worst case analysis and it is likely that the impacts could be mitigated with modifications to the signal timing

at these intersections. It is also important to note that 10th Street north of West Pearl Street is one-way northbound and if West Pearl Street is closed, the section between must be closed at least to the Morrison Alley intersection.

Both directions of the HOP service route currently include these blocks of West Pearl Street. When West Pearl was previously closed, during the COVID pandemic, the HOP service provider (VIA) re-routed service. This route used Walnut Street in the eastbound direction and Canyon Boulevard in the westbound direction. The technical evaluation showed that the need to re-route the service resulted in a reduced “Walkshed” for HOP service in the west end. It is also likely that the travel time for the route was negatively impacted. This has the potential to be exacerbated in a future closing by additional congestion from diverted traffic at intersections involved in the re-route. In summary, it is likely that closing this section of West Pearl Street will degrade HOP transit service to the west end of downtown. If West Pearl Street is closed, consideration should be given to allowing the HOP transit service to continue using West Pearl Street in a shared-street capacity.

If this section of West Pearl Street were closed, it would be desirable for some of the trip making to occur by bicycle instead. This goal is impeded by the lack of quality multi-modal facilities downtown, especially in the east-west direction. Consequently, it is more likely that these trips would remain motor vehicle trips but go to a different destination with easier access.

It was difficult to draw technical conclusions about parking utilization on West Pearl Street since data was not collected in either prior city parking study, and there were challenges in using the Smarking data to estimate parking utilization due to use of parking by outdoor dining. However, considering the parking utilization on the next block to the south (Walnut Street) and the observations made by Fox Tuttle’s staff, it is probable that short-term parking on West Pearl Street has high utilization.

Fox Tuttle believes this section of roadway could be closed to motor vehicle traffic completely or on weekends only, but the impacts of a full closure would be significant. If this section of West Pearl Street is closed, the implementation plan should include data collection and analyses of motor vehicle operations, multi-modal changes, transit operations and short-term parking impacts. The data collection and subsequent analyses should occur in a time period which limits the variables of change to the impacts of the road closure only, as much as possible. The analyses should include the monitoring of delay and queuing at the intersections of 11th Street and Walnut Street, 9th Street and Walnut Street, and 9th Street and Pearl Street. Counts should include motor vehicle, pedestrian and bicycle modes, before and during the closure. It is possible that some traffic may divert to Spruce Street, north of West Pearl Street and average daily counts and speeds should be analyzed on this roadway. If HOP transit service has been re-routed, analyses of travel

time and HOP ridership should also occur. Analyses should also be conducted on the impact of eliminating short-term parking on West Pearl Street and how that impacts parking and access on other nearby downtown streets. There are three parking structures within one block of West Pearl Street. These structures are well used but the available space within them may help mitigate the loss of parking.

East Pearl Street between 15th Street and 17th Street (Least Desirable Option): The technical evaluation for closing East Pearl Street between 15th Street and 17th Street suggests many significant considerations. East Pearl Street is an arterial roadway which connects the downtown to larger commercial and population centers to the east. It is estimated that this roadway carries approximately 6,000 to 7,500 vehicles per day through the two blocks being considered for closure. The adjacent roadways (Spruce Street and Walnut Street) are largely residential and currently experience much lower traffic volumes. These streets would be significantly impacted by closure of East Pearl Street. In addition, the closure would result in numerous congestion and potential conflict points where high volumes of left-turning traffic would be turning onto or off of these residential streets opposing the through traffic.

HOP transit services is routed through these two blocks of East Pearl Street and the closure of these blocks would likely result in the re-routing of service to Walnut Street, as was done during the first two years of the COVID Pandemic. In reviewing the walkshed information for the previously re-routed HOP service, there would not be the same impacts on the east end as those associated with the re-routing from a West Pearl Street closure. However, the re-routing does take the bus through residential areas and staff have received complaints from residents about the noise that this brings. It is also important to note that the added congestion on Walnut Street from diverted traffic would likely create delays for transit service. Unlike the West Pearl Street closure and HOP re-route, East Pearl Street was not closed during the first two years of the COVID Pandemic, and the re-routing was done to avoid transit related impacts to outdoor dining. Closing East Pearl Street and moving that traffic onto Walnut Street, as well as re-routing the HOP service to Walnut Street would almost certainly create significant delays for the HOP during their counterclockwise service.

There is excellent multi-modal connectivity to these blocks of East Pearl Street. Walnut Street and Spruce Street both have good bicycle facilities and 17th Street would provide a good north-south connector to the closure. It should be noted that the added congestion on these roadways might create a more stressful cycling environment.

Parking utilization on these blocks of East Pearl Street is the highest of all the roadways being considered for closure and the loss of parking would likely impact access to land uses on these

blocks and to blocks further east. There are spaces available in the 15th/Pearl parking structure and the proximity of this closure to that parking structure may help mitigate the loss of parking.

Based on the anticipated significant impacts of a closure at this location, Fox Tuttle does not recommend that East Pearl Street from 15th Street to 17th Street be considered for full or weekend closure as part of the Pop-up experimentation. If it was determined that East Pearl Street should be closed, then considerable data collection and analyses should occur to track the paths of motor vehicle diversion and their corresponding impacts. Analyses should also be done to determine how impactful congestion would be to the counterclockwise route of the HOP transit service. This would include average daily volume and speed data on several blocks of Spruce Street, Walnut Street and East Pearl Street as well as peak hour turning movement counts at key intersections including the intersections of 15th Street, 17th Street, 18th Street, 19th Street and 20th Street with both Walnut Avenue and Spruce Street. Changes in short-term parking for nearby downtown blocks, adjacent neighborhood streets and the 15th/Pearl parking structure should also be evaluated.

Next Steps

The consultant team is making recommendations for an approach to Pop-up experimentation in Boulder’s downtown this summer. An action plan for implementing these recommendations is included in those recommendations and they include the data collection and analyses recommended for continued technical analysis of recommended closures. The “Next Steps” outlined in this report reflect the data collection and technical analyses that would be associated with these recommendations. Should the city decide to pursue a different strategy for Pop-up closures this summer, the overall action plan and the specific data collection and analyses for continued technical analyses would need to change as well.

The consultant team is not recommending any full or weekend closures for the following streets:

- 14th Street from Spruce Street and Walnut Street
- West Pearl Street from 9th Street to 11th Street (including 10th Street north of Pearl)
- East Pearl Street from 15th Street to 17th Street

The recommendation for these streets includes targeted short-term or longer-term parklet implementation and event specific roadway closures. The hope is that these events would result in increased pedestrian and cycling access to land uses on the streets. The implementation would also result in a small amount of short-term parking impact, with occasional larger impacts when special events closed the street.

Additional data collection and analyses should occur before the Pop-Up implementation (to obtain current existing conditions data) and during the Pop-Up event. For both of these time periods, the data collection recommended includes the following:

- Turning movement counts performed on one representative day for the noon and PM peak periods at each intersection within the Pop-up area which will include motor vehicle, pedestrian and bicycle counts.
- Parking utilization on the streets within and adjacent to the pop-up areas should also be studied during the noon and PM peak periods. It is recommended that this parking utilization data be collected in person and occur over several days to provide high quality utilization data. This data could be supplemented with estimates derived from the Smarking data as well.

These analyses will help determine whether these Pop-up strategies were successful in increasing pedestrian and bicycling in the Pop-up areas and the impacts any loss of short-term parking had on downtown land use access.

The consultant team is recommending a “Weekend Only” closure of 13th Street between Canyon Boulevard and Arapahoe Avenue. The following data collection and technical analyses would be recommended to assess impacts of this closure:

- On one representative weekend, collecting turning movement counts for the noon and PM peak periods, both before the closure and during the closure, at 13th Street and Canyon Boulevard, 13th Street and Arapahoe Avenue, Broadway and Canyon Boulevard, and Broadway and Arapahoe Avenue which would include motor vehicle, pedestrian and bicycle counts.
- Parking utilization counts to be performed in areas where short-term parking is made available for the activation events on 13th Street. This is likely to follow the parking plan for the Farmer’s Market events that already occur on the weekend.

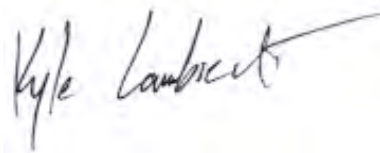
These next steps are tied to the consultant team’s overall recommendations, and it is intended that they be included in the recommended action plan. Should the city’s plans for street closures be different from the consultant team’s recommendations then these next steps would need to be adjusted as well.

Fox Tuttle staff hope that the analyses and recommendations provided in this technical report are helpful in the decision-making process for determining one or more appropriate closures for the Pop-up experimentation this summer. Fox Tuttle is prepared to continue our service to this project with any technical analyses needed for this effort going forward. Please feel free to contact us if you have any questions about the materials outlined in this report.

Sincerely,



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Appendix:

Level of Service Definitions

Intersection Capacity Worksheets

Level of Service Definitions

LEVEL OF SERVICE DEFINITIONS

In rating roadway and intersection operating conditions with existing or future traffic volumes, “Levels of Service” (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

Level of Service Rating	Delay in seconds per vehicle (a)		Definition
	Signalized	Unsignalized	
A	0.0 to 10.0	0.0 to 10.0	Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers are able to maintain their desired speeds with little or no delay.
B	10.1 to 20.0	10.1 to 15.0	Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome and drivers are not subject to appreciable tension.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic operations, however the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor.
D	35.1 to 55.0	25.1 to 35.0	Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable.
E	55.1 to 80.0	35.1 to 50.0	Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors.
F	> 80.0	> 50.0	Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially, and stoppages may occur for short or long periods of time because of downstream congestion.

(a) Delay ranges based on Highway Capacity Manual (6th Edition, 2016) criteria.

***Intersection Capacity Worksheets:
13th Street Existing Conditions***

Timings
02/11/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↙	↘	↙	↑	↘	↙	↕	↙	↕
Traffic Volume (vph)	38	170	58	170	96	56	936	110	668
Future Volume (vph)	38	170	58	170	96	56	936	110	668
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	3	8	7	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	4.0	19.0	4.0	19.0	19.0	4.0	17.0	4.0	14.0
Minimum Split (s)	9.0	24.2	9.0	24.2	24.2	9.0	22.2	9.0	19.2
Total Split (s)	11.0	25.0	11.0	25.0	25.0	12.0	42.0	12.0	42.0
Total Split (%)	12.2%	27.8%	12.2%	27.8%	27.8%	13.3%	46.7%	13.3%	46.7%
Yellow Time (s)	3.0	3.2	3.0	3.2	3.2	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.2	-1.0	-1.2	-1.2	-1.0	-1.2	-1.0	-1.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Min

Intersection Summary

Cycle Length: 90

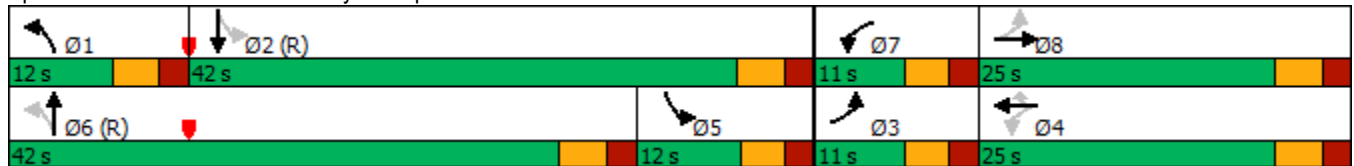
Actuated Cycle Length: 90

Offset: 33 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 11: Broadway & Arapahoe Rd.



Queues
02/11/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	48	306	64	215	139	76	1140	262	847
v/c Ratio	0.14	0.66	0.24	0.42	0.23	0.28	0.64	0.86	0.44
Control Delay	17.9	32.3	18.7	28.0	4.5	17.9	21.1	39.2	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	32.3	18.7	28.0	4.5	17.9	21.1	39.2	3.9
Queue Length 50th (ft)	11	106	24	109	2	24	255	78	47
Queue Length 95th (ft)	29	130	51	155	9	42	340	20	60
Internal Link Dist (ft)		1285		1061			1316		587
Turn Bay Length (ft)	100		180		180	115		115	
Base Capacity (vph)	373	477	282	522	601	305	1768	305	1926
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.64	0.23	0.41	0.23	0.25	0.64	0.86	0.44

Intersection Summary

HCM 6th Signalized Intersection Summary

11: Broadway & Arapahoe Rd.

02/11/2023

Current Existing - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	170	33	58	170	96	56	936	130	110	668	82
Future Volume (veh/h)	38	170	33	58	170	96	56	936	130	110	668	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	48	258	48	64	215	139	76	975	165	262	759	88
Peak Hour Factor	0.79	0.66	0.69	0.91	0.79	0.69	0.74	0.96	0.79	0.42	0.88	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	380	71	255	477	405	389	1419	240	399	1768	205
Arrive On Green	0.01	0.07	0.07	0.02	0.08	0.08	0.05	0.42	0.41	0.25	1.00	0.97
Sat Flow, veh/h	1969	1695	315	1969	2067	1752	1969	3361	568	1969	3546	411
Grp Volume(v), veh/h	48	0	306	64	215	139	76	569	571	262	420	427
Grp Sat Flow(s),veh/h/ln	1969	0	2010	1969	2067	1752	1969	1964	1965	1969	1964	1993
Q Serve(g_s), s	1.7	0.0	13.4	2.2	9.0	4.6	2.2	21.2	21.3	2.7	0.1	0.3
Cycle Q Clear(g_c), s	1.7	0.0	13.4	2.2	9.0	4.6	2.2	21.2	21.3	2.7	0.1	0.3
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.29	1.00		0.21
Lane Grp Cap(c), veh/h	296	0	451	255	477	405	389	829	830	399	979	994
V/C Ratio(X)	0.16	0.00	0.68	0.25	0.45	0.34	0.20	0.69	0.69	0.66	0.43	0.43
Avail Cap(c_a), veh/h	366	0	469	312	482	409	464	829	830	399	979	994
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.97	0.00	0.97	0.91	0.91	0.91	0.76	0.76	0.76	0.66	0.66	0.66
Uniform Delay (d), s/veh	26.1	0.0	38.5	26.7	36.1	16.5	17.0	21.2	21.3	27.9	0.1	0.2
Incr Delay (d2), s/veh	0.1	0.0	2.9	0.2	0.2	0.2	0.1	3.5	3.5	2.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	7.5	1.1	4.9	2.9	1.0	10.1	10.2	4.5	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	0.0	41.4	26.8	36.3	16.6	17.1	24.7	24.9	29.9	1.0	1.1
LnGrp LOS	C	A	D	C	D	B	B	C	C	C	A	A
Approach Vol, veh/h		354			418			1216			1109	
Approach Delay, s/veh		39.3			28.3			24.3			7.9	
Approach LOS		D			C			C			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	48.9	7.8	24.8	15.4	42.0	8.4	24.2				
Change Period (Y+Rc), s	5.0	* 5.2	5.0	* 5.2	* 5.2	* 5.2	5.0	* 5.2				
Max Green Setting (Gmax), s	7.0	* 37	6.0	* 20	* 7	* 37	6.0	* 20				
Max Q Clear Time (g_c+I1), s	4.2	2.3	3.7	11.0	4.7	23.3	4.2	15.4				
Green Ext Time (p_c), s	0.0	3.9	0.0	0.6	0.0	4.6	0.0	0.3				

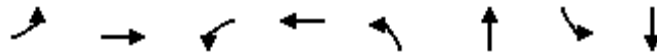
Intersection Summary

HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
02/11/2023

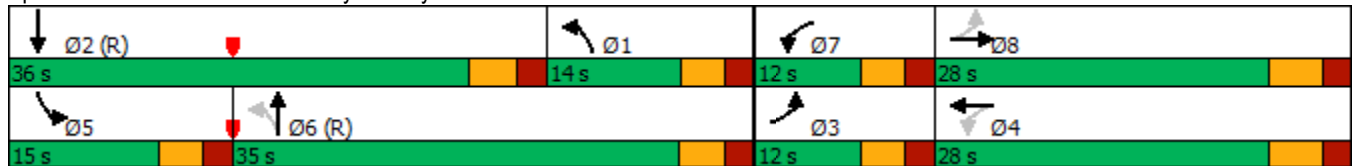


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	97	509	85	416	216	728	108	619
Future Volume (vph)	97	509	85	416	216	728	108	619
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Prot	NA
Protected Phases	3	8	7	4	1	6	5	2
Permitted Phases	8		4		6			
Detector Phase	3	8	7	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	4.0	18.0	4.0	18.0	4.0	24.0	4.0	24.0
Minimum Split (s)	9.0	23.6	9.0	23.6	9.0	29.2	9.0	29.2
Total Split (s)	12.0	28.0	12.0	28.0	14.0	35.0	15.0	36.0
Total Split (%)	13.3%	31.1%	13.3%	31.1%	15.6%	38.9%	16.7%	40.0%
Yellow Time (s)	3.0	3.6	3.0	3.6	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.6	-1.0	-1.6	-1.0	-1.2	-1.0	-1.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max

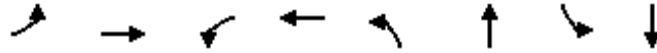
Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 39 (43%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 34: Broadway & Canyon Blvd.



Queues
02/11/2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	609	92	613	235	890	132	948
v/c Ratio	0.48	0.65	0.35	0.73	0.74	0.70	0.62	0.72
Control Delay	28.8	38.9	18.4	26.0	29.5	11.9	45.6	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Total Delay	28.8	38.9	18.4	26.1	29.5	11.9	45.6	23.4
Queue Length 50th (ft)	66	184	26	97	69	135	48	237
Queue Length 95th (ft)	95	240	43	160	#174	120	97	237
Internal Link Dist (ft)		1074		284		587		299
Turn Bay Length (ft)	100		130		160		165	
Base Capacity (vph)	251	981	269	910	317	1275	222	1308
Starvation Cap Reductn	0	0	0	2	0	0	0	104
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.62	0.34	0.68	0.74	0.70	0.59	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

34: Broadway & Canyon Blvd.

02/11/2023

Current Existing - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	509	61	85	416	128	216	728	94	108	619	72
Future Volume (veh/h)	97	509	61	85	416	128	216	728	94	108	619	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.90	0.99		0.89	0.97		0.95	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	120	541	68	92	438	175	235	774	116	132	848	100
Peak Hour Factor	0.81	0.94	0.90	0.92	0.95	0.73	0.92	0.94	0.81	0.82	0.73	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	739	92	240	529	208	444	1280	192	178	1124	133
Arrive On Green	0.03	0.08	0.07	0.13	0.44	0.41	0.32	0.84	0.81	0.20	0.71	0.68
Sat Flow, veh/h	1772	3116	390	1772	2386	938	1772	3059	458	1772	3161	373
Grp Volume(v), veh/h	120	306	303	92	322	291	235	447	443	132	474	474
Grp Sat Flow(s),veh/h/ln	1772	1767	1739	1772	1767	1557	1772	1767	1750	1772	1767	1766
Q Serve(g_s), s	4.6	15.2	15.4	3.5	14.4	15.0	0.1	7.5	7.8	6.3	15.0	15.2
Cycle Q Clear(g_c), s	4.6	15.2	15.4	3.5	14.4	15.0	0.1	7.5	7.8	6.3	15.0	15.2
Prop In Lane	1.00		0.22	1.00		0.60	1.00		0.26	1.00		0.21
Lane Grp Cap(c), veh/h	259	419	412	240	392	345	444	740	732	178	628	628
V/C Ratio(X)	0.46	0.73	0.74	0.38	0.82	0.84	0.53	0.60	0.60	0.74	0.75	0.75
Avail Cap(c_a), veh/h	272	471	464	281	471	415	444	740	732	217	628	628
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.85	0.85	0.85	0.93	0.93	0.93	0.79	0.79	0.79	0.93	0.93	0.93
Uniform Delay (d), s/veh	26.9	38.7	38.8	23.9	23.5	24.6	23.3	4.9	5.1	34.8	10.6	10.8
Incr Delay (d2), s/veh	1.1	4.3	4.6	0.9	9.0	11.7	0.9	2.9	2.9	9.6	7.7	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.6	7.6	1.4	5.3	5.2	3.5	2.2	2.2	2.9	4.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	42.9	43.4	24.8	32.4	36.3	24.3	7.8	8.0	44.5	18.2	18.4
LnGrp LOS	C	D	D	C	C	D	C	A	A	D	B	B
Approach Vol, veh/h		729			705			1125			1080	
Approach Delay, s/veh		40.7			33.0			11.3			21.5	
Approach LOS		D			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.7	36.0	11.3	24.0	13.1	41.7	10.0	25.3				
Change Period (Y+Rc), s	* 5.2	* 5.2	5.0	5.6	5.0	* 5.2	5.0	5.6				
Max Green Setting (Gmax), s	* 9	* 31	7.0	22.4	10.0	* 30	7.0	22.4				
Max Q Clear Time (g_c+I1), s	2.1	17.2	6.6	17.0	8.3	9.8	5.5	17.4				
Green Ext Time (p_c), s	0.5	3.7	0.0	1.3	0.1	3.9	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
02/11/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↖	↕	↖	↕
Traffic Volume (vph)	65	200	116	228	110	64	725	68	586
Future Volume (vph)	65	200	116	228	110	64	725	68	586
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	3	8	7	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	4.0	19.0	4.0	19.0	19.0	4.0	17.0	4.0	15.0
Minimum Split (s)	9.0	24.2	9.0	24.2	24.2	9.0	22.2	9.0	20.2
Total Split (s)	10.0	25.0	10.0	25.0	25.0	11.0	34.0	11.0	34.0
Total Split (%)	12.5%	31.3%	12.5%	31.3%	31.3%	13.8%	42.5%	13.8%	42.5%
Yellow Time (s)	3.0	3.2	3.0	3.2	3.2	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.4	-2.0	-2.4	-2.4	-2.0	-2.4	-2.0	-2.4
Total Lost Time (s)	3.0	2.8	3.0	2.8	2.8	3.0	2.8	3.0	2.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Min

Intersection Summary

Cycle Length: 80

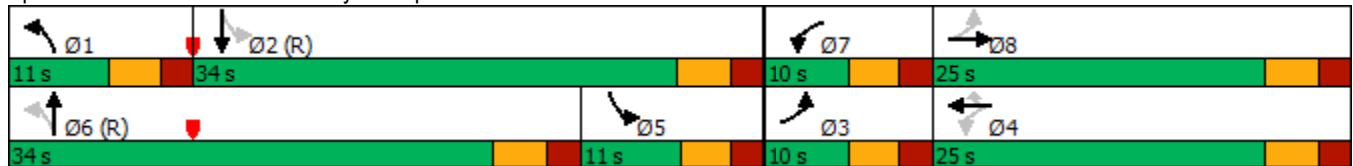
Actuated Cycle Length: 80

Offset: 48 (60%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 11: Broadway & Arapahoe Rd.



Queues
02/11/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	76	323	143	240	133	84	943	88	771
v/c Ratio	0.17	0.59	0.39	0.38	0.19	0.29	0.56	0.28	0.48
Control Delay	13.4	26.3	11.6	18.8	3.1	18.0	19.1	10.5	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	26.3	11.6	18.8	3.1	18.0	19.1	10.5	6.7
Queue Length 50th (ft)	18	111	37	103	6	26	185	13	61
Queue Length 95th (ft)	39	166	38	176	19	45	244	m24	80
Internal Link Dist (ft)		1285		1061			1316		587
Turn Bay Length (ft)	100		180		180	115		115	
Base Capacity (vph)	457	565	371	626	696	304	1671	367	1649
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.57	0.39	0.38	0.19	0.28	0.56	0.24	0.47

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary

11: Broadway & Arapahoe Rd.

02/11/2023

Current Existing - Off-Peak (Noon)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	200	61	116	228	110	64	725	105	68	586	96
Future Volume (veh/h)	65	200	61	116	228	110	64	725	105	68	586	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	76	247	76	143	240	133	84	824	119	88	651	120
Peak Hour Factor	0.86	0.81	0.80	0.81	0.95	0.83	0.76	0.88	0.88	0.77	0.90	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	406	125	374	594	503	386	1343	194	386	1425	262
Arrive On Green	0.02	0.09	0.08	0.03	0.09	0.09	0.07	0.39	0.36	0.22	0.86	0.80
Sat Flow, veh/h	1969	1517	467	1969	2067	1752	1969	3444	497	1969	3312	610
Grp Volume(v), veh/h	76	0	323	143	240	133	84	470	473	88	386	385
Grp Sat Flow(s),veh/h/ln	1969	0	1983	1969	2067	1752	1969	1964	1978	1969	1964	1958
Q Serve(g_s), s	2.2	0.0	12.6	4.1	8.7	3.7	2.2	15.3	15.4	0.0	3.6	4.1
Cycle Q Clear(g_c), s	2.2	0.0	12.6	4.1	8.7	3.7	2.2	15.3	15.4	0.0	3.6	4.1
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.25	1.00		0.31
Lane Grp Cap(c), veh/h	398	0	531	374	594	503	386	766	771	386	845	842
V/C Ratio(X)	0.19	0.00	0.61	0.38	0.40	0.26	0.22	0.61	0.61	0.23	0.46	0.46
Avail Cap(c_a), veh/h	437	0	550	374	594	503	445	766	771	386	845	842
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.99	0.00	0.99	0.93	0.93	0.93	0.72	0.72	0.72	0.77	0.77	0.77
Uniform Delay (d), s/veh	20.0	0.0	32.5	20.3	29.8	12.3	16.7	19.6	19.8	22.8	3.4	3.9
Incr Delay (d2), s/veh	0.1	0.0	1.2	0.2	0.2	0.1	0.1	2.6	2.6	0.1	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	6.8	1.9	4.7	2.3	1.0	7.1	7.3	1.2	1.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	0.0	33.8	20.5	29.9	12.4	16.8	22.2	22.5	22.9	4.8	5.3
LnGrp LOS	C	A	C	C	C	B	B	C	C	C	A	A
Approach Vol, veh/h		399			516			1027			859	
Approach Delay, s/veh		31.2			22.8			21.9			6.9	
Approach LOS		C			C			C			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	37.2	8.4	25.8	11.8	34.0	10.0	24.2				
Change Period (Y+Rc), s	5.0	* 5.2	5.0	* 5.2	* 5.2	* 5.2	5.0	* 5.2				
Max Green Setting (Gmax), s	6.0	* 29	5.0	* 20	* 6	* 29	5.0	* 20				
Max Q Clear Time (g_c+I1), s	4.2	6.1	4.2	10.7	2.0	17.4	6.1	14.6				
Green Ext Time (p_c), s	0.0	3.3	0.0	0.6	0.0	3.4	0.0	0.4				

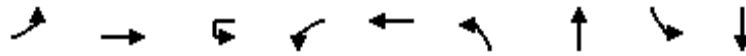
Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
02/11/2023



Lane Group	EBL	EBT	WBU	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕		↘	↕	↙	↕	↙	↕
Traffic Volume (vph)	84	455	1	136	468	143	604	169	620
Future Volume (vph)	84	455	1	136	468	143	604	169	620
Turn Type	pm+pt	NA	pm+pt	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	7	4	1	6	5	2
Permitted Phases	8		4	4		6		2	
Detector Phase	3	8	7	7	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	4.0	18.0	4.0	4.0	18.0	4.0	24.0	4.0	24.0
Minimum Split (s)	9.0	23.6	9.0	9.0	23.6	9.0	29.2	9.0	29.2
Total Split (s)	12.0	24.0	12.0	12.0	24.0	13.0	30.0	14.0	31.0
Total Split (%)	15.0%	30.0%	15.0%	15.0%	30.0%	16.3%	37.5%	17.5%	38.8%
Yellow Time (s)	3.0	3.6	3.0	3.0	3.6	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-3.2		-2.0	-3.2	-2.0	-2.4	-2.0	-2.4
Total Lost Time (s)	3.0	2.4		3.0	2.4	3.0	2.8	3.0	2.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	Max	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 80

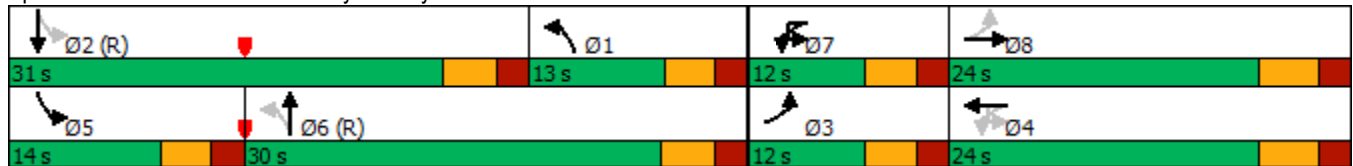
Actuated Cycle Length: 80

Offset: 48 (60%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

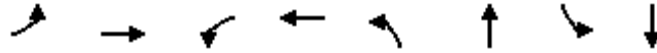
Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 34: Broadway & Canyon Blvd.



Queues
02/11/2023























Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	127	568	181	758	177	822	192	743
v/c Ratio	0.48	0.59	0.58	0.71	0.47	0.67	0.61	0.60
Control Delay	22.3	30.4	25.3	19.5	15.3	12.0	31.9	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	22.3	30.4	25.3	19.5	15.3	12.0	31.9	28.0
Queue Length 50th (ft)	51	144	49	78	27	61	73	145
Queue Length 95th (ft)	65	196	75	120	40	75	114	183
Internal Link Dist (ft)		1074		284		587		299
Turn Bay Length (ft)	100		130		160		165	
Base Capacity (vph)	288	967	323	1070	374	1232	335	1231
Starvation Cap Reductn	0	0	0	0	0	0	0	96
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.59	0.56	0.71	0.47	0.67	0.57	0.65
Intersection Summary								

HCM 6th Signalized Intersection Summary

34: Broadway & Canyon Blvd.

02/11/2023

Current Existing - Off-Peak (Noon)

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	84	455	74	1	136	468	149	143	604	110	169	620
Future Volume (veh/h)	84	455	74	1	136	468	149	143	604	110	169	620
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No				No			No			No
Adj Sat Flow, veh/h/ln	1861	1861	1861		1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	127	484	84		177	578	180	177	686	136	192	639
Peak Hour Factor	0.66	0.94	0.88		0.77	0.81	0.83	0.81	0.88	0.81	0.88	0.97
Percent Heavy Veh, %	2	2	2		2	2	2	2	2	2	2	2
Cap, veh/h	324	814	141		365	759	236	393	1030	204	343	1073
Arrive On Green	0.03	0.09	0.08		0.22	0.57	0.49	0.24	0.70	0.64	0.25	0.70
Sat Flow, veh/h	1772	3014	520		1772	2655	825	1772	2941	583	1772	3044
Grp Volume(v), veh/h	127	283	285		177	384	374	177	412	410	192	371
Grp Sat Flow(s),veh/h/ln	1772	1767	1767		1772	1767	1712	1772	1767	1756	1772	1767
Q Serve(g_s), s	4.1	12.3	12.4		5.5	13.2	13.7	0.0	10.5	10.9	6.3	8.5
Cycle Q Clear(g_c), s	4.1	12.3	12.4		5.5	13.2	13.7	0.0	10.5	10.9	6.3	8.5
Prop In Lane	1.00		0.29		1.00		0.48	1.00		0.33	1.00	
Lane Grp Cap(c), veh/h	324	477	477		365	505	490	393	619	615	343	623
V/C Ratio(X)	0.39	0.59	0.60		0.49	0.76	0.76	0.45	0.67	0.67	0.56	0.59
Avail Cap(c_a), veh/h	352	477	477		365	505	490	397	619	615	361	623
HCM Platoon Ratio	0.33	0.33	0.33		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.96	0.96	0.96		0.90	0.90	0.90	0.86	0.86	0.86	0.96	0.96
Uniform Delay (d), s/veh	20.8	32.2	32.4		16.4	15.0	16.5	23.9	9.4	10.0	18.1	8.9
Incr Delay (d2), s/veh	0.3	5.1	5.2		0.3	9.4	9.8	0.3	4.8	4.9	0.9	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.4	6.5		1.9	4.7	5.0	2.6	3.3	3.5	2.2	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	37.3	37.6		16.8	24.4	26.3	24.2	14.2	14.9	19.0	12.9
LnGrp LOS	C	D	D		B	C	C	C	B	B	B	B
Approach Vol, veh/h		695				935			999			935
Approach Delay, s/veh		34.5				23.7			16.3			14.4
Approach LOS		C				C			B			B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	31.0	10.7	25.3	13.2	30.8	12.0	24.0				
Change Period (Y+Rc), s	* 5.2	* 5.2	5.0	5.6	5.0	* 5.2	5.0	5.6				
Max Green Setting (Gmax), s	* 8	* 26	7.0	18.4	9.0	* 25	7.0	18.4				
Max Q Clear Time (g_c+I1), s	2.0	10.9	6.1	15.7	8.3	12.9	7.5	14.4				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.9	0.0	2.9	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	84
Future Volume (veh/h)	84
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1861
Adj Flow Rate, veh/h	104
Peak Hour Factor	0.81
Percent Heavy Veh, %	2
Cap, veh/h	174
Arrive On Green	0.64
Sat Flow, veh/h	495
Grp Volume(v), veh/h	372
Grp Sat Flow(s),veh/h/ln	1771
Q Serve(g_s), s	8.9
Cycle Q Clear(g_c), s	8.9
Prop In Lane	0.28
Lane Grp Cap(c), veh/h	624
V/C Ratio(X)	0.60
Avail Cap(c_a), veh/h	624
HCM Platoon Ratio	2.00
Upstream Filter(l)	0.96
Uniform Delay (d), s/veh	9.5
Incr Delay (d2), s/veh	4.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	3.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	13.5
LnGrp LOS	B
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings
02/11/2023

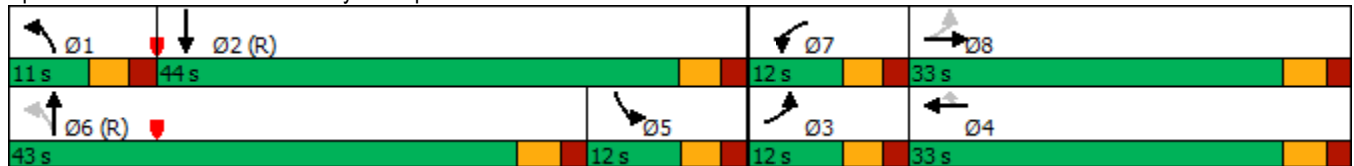


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↖	↕	↖	↕
Traffic Volume (vph)	81	258	143	296	114	76	807	96	940
Future Volume (vph)	81	258	143	296	114	76	807	96	940
Turn Type	pm+pt	NA	Prot	NA	Perm	pm+pt	NA	Prot	NA
Protected Phases	3	8	7	4		1	6	5	2
Permitted Phases	8				4	6			
Detector Phase	3	8	7	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	4.0	19.0	4.0	19.0	19.0	4.0	17.0	4.0	14.0
Minimum Split (s)	9.0	24.2	9.0	24.2	24.2	9.0	22.2	9.0	19.2
Total Split (s)	12.0	33.0	12.0	33.0	33.0	11.0	43.0	12.0	44.0
Total Split (%)	12.0%	33.0%	12.0%	33.0%	33.0%	11.0%	43.0%	12.0%	44.0%
Yellow Time (s)	3.0	3.2	3.0	3.2	3.2	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.2	-1.0	-1.2	-1.2	-1.0	-1.2	-1.0	-1.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 12 (12%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 11: Broadway & Arapahoe Rd.



Queues
02/11/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	92	377	181	315	120	100	1045	143	1089
v/c Ratio	0.30	0.77	1.16	0.57	0.20	0.47	0.62	0.92	0.60
Control Delay	21.7	43.9	158.0	36.5	5.3	25.1	23.5	75.1	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	43.9	158.0	36.5	5.3	25.1	23.5	75.1	17.5
Queue Length 50th (ft)	40	223	~139	194	8	37	253	98	348
Queue Length 95th (ft)	70	312	#229	279	28	63	354	m101	m368
Internal Link Dist (ft)		1285		1051			1316		587
Turn Bay Length (ft)	100		180		180	115		115	
Base Capacity (vph)	330	585	156	610	652	226	1686	156	1821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.64	1.16	0.52	0.18	0.44	0.62	0.92	0.60

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary

11: Broadway & Arapahoe Rd.

02/11/2023

Current Existing - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	258	65	143	296	114	76	807	157	96	940	87
Future Volume (veh/h)	81	258	65	143	296	114	76	807	157	96	940	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	92	277	100	181	315	120	100	849	196	143	989	100
Peak Hour Factor	0.88	0.93	0.65	0.79	0.94	0.95	0.76	0.95	0.80	0.67	0.95	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	328	118	158	507	430	208	1236	285	279	1704	172
Arrive On Green	0.02	0.07	0.07	0.03	0.08	0.08	0.06	0.39	0.38	0.05	0.16	0.15
Sat Flow, veh/h	1969	1450	523	1969	2067	1752	1969	3168	731	1969	3602	364
Grp Volume(v), veh/h	92	0	377	181	315	120	100	526	519	143	539	550
Grp Sat Flow(s),veh/h/ln	1969	0	1973	1969	2067	1752	1969	1964	1936	1969	1964	2002
Q Serve(g_s), s	3.5	0.0	18.9	8.0	14.7	4.3	3.4	22.3	22.4	7.1	25.5	25.5
Cycle Q Clear(g_c), s	3.5	0.0	18.9	8.0	14.7	4.3	3.4	22.3	22.4	7.1	25.5	25.5
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.38	1.00		0.18
Lane Grp Cap(c), veh/h	284	0	447	158	507	430	208	766	755	279	929	947
V/C Ratio(X)	0.32	0.00	0.84	1.15	0.62	0.28	0.48	0.69	0.69	0.51	0.58	0.58
Avail Cap(c_a), veh/h	321	0	572	158	599	508	227	766	755	279	929	947
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.96	0.00	0.96	0.94	0.94	0.94	1.00	1.00	1.00	0.15	0.15	0.15
Uniform Delay (d), s/veh	28.9	0.0	44.6	48.7	41.5	17.0	25.5	25.4	25.6	44.3	33.0	33.0
Incr Delay (d2), s/veh	0.2	0.0	7.1	115.3	0.7	0.1	0.6	5.0	5.1	0.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	10.8	9.2	8.2	2.8	1.6	11.2	11.1	3.6	13.4	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	0.0	51.7	164.0	42.2	17.1	26.1	30.4	30.7	44.4	33.4	33.4
LnGrp LOS	C	A	D	F	D	B	C	C	C	D	C	C
Approach Vol, veh/h		469			616			1145			1232	
Approach Delay, s/veh		47.3			73.1			30.2			34.7	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	51.3	10.1	28.5	18.4	43.0	12.0	26.6				
Change Period (Y+Rc), s	5.0	* 5.2	5.0	* 5.2	* 5.2	* 5.2	5.0	* 5.2				
Max Green Setting (Gmax), s	6.0	* 39	7.0	* 28	* 7	* 38	7.0	* 28				
Max Q Clear Time (g_c+I1), s	5.4	27.5	5.5	16.7	9.1	24.4	10.0	20.9				
Green Ext Time (p_c), s	0.0	3.9	0.0	0.8	0.0	4.1	0.0	0.6				

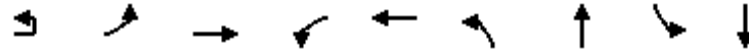
Intersection Summary

HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
02/11/2023

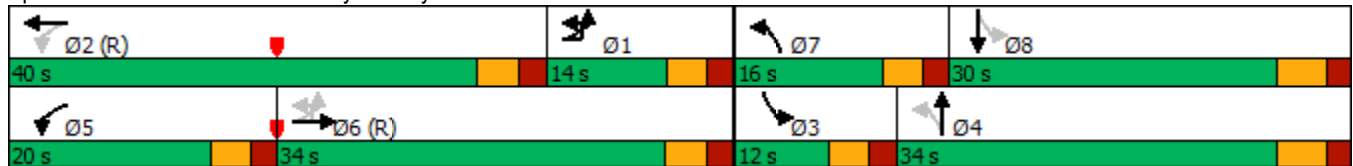


Lane Group	EBU	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	2	99	418	211	646	179	730	176	808
Future Volume (vph)	2	99	418	211	646	179	730	176	808
Turn Type	pm+pt	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	1	6	5	2	7	4	3	8
Permitted Phases	6	6		2		4		8	
Detector Phase	1	1	6	5	2	7	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	4.0	24.0	4.0	24.0	4.0	18.0	4.0	18.0
Minimum Split (s)	9.0	9.0	29.2	9.0	29.2	9.0	23.6	9.0	23.6
Total Split (s)	14.0	14.0	34.0	20.0	40.0	16.0	34.0	12.0	30.0
Total Split (%)	14.0%	14.0%	34.0%	20.0%	40.0%	16.0%	34.0%	12.0%	30.0%
Yellow Time (s)	3.0	3.0	3.2	3.0	3.2	3.0	3.6	3.0	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0	-1.2	-1.0	-1.2	-1.0	-1.6	-1.0	-1.6
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	None	C-Max	None	Min	None	Min

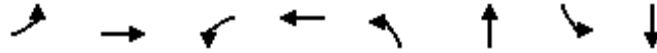
Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 20 (20%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 34: Broadway & Canyon Blvd.



Queues
02/11/2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	116	602	240	871	192	896	255	989
v/c Ratio	0.38	0.53	0.78	0.70	0.74	0.86	1.18	1.02
Control Delay	27.2	20.6	33.7	23.4	42.9	51.5	147.3	79.0
Queue Delay	0.0	0.0	0.0	3.9	0.0	0.7	0.0	24.8
Total Delay	27.2	20.6	33.7	27.3	42.9	52.2	147.3	103.8
Queue Length 50th (ft)	45	168	105	275	114	314	~152	~360
Queue Length 95th (ft)	100	213	157	336	#182	#393	#190	#516
Internal Link Dist (ft)		1074		284		587		299
Turn Bay Length (ft)	100		130		160		165	
Base Capacity (vph)	309	1138	347	1251	286	1046	216	965
Starvation Cap Reductn	0	0	0	290	0	0	0	59
Spillback Cap Reductn	0	0	0	96	0	28	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.53	0.69	0.91	0.67	0.88	1.18	1.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

34: Broadway & Canyon Blvd.

02/11/2023

Current Existing - PM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	2	99	418	86	211	646	127	179	730	117	176	808
Future Volume (veh/h)	2	99	418	86	211	646	127	179	730	117	176	808
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h		108	510	92	240	710	161	192	760	136	255	869
Peak Hour Factor		0.92	0.82	0.93	0.88	0.91	0.79	0.93	0.96	0.86	0.69	0.93
Percent Heavy Veh, %		2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h		310	999	179	326	1030	234	259	876	157	234	832
Arrive On Green		0.03	0.11	0.11	0.04	0.12	0.11	0.03	0.10	0.09	0.03	0.09
Sat Flow, veh/h		1772	2994	538	1772	2862	649	1772	2996	536	1772	3120
Grp Volume(v), veh/h		108	300	302	240	438	433	192	448	448	255	492
Grp Sat Flow(s),veh/h/ln		1772	1767	1764	1772	1767	1744	1772	1767	1764	1772	1767
Q Serve(g_s), s		0.0	16.0	16.2	10.4	23.8	23.8	7.6	25.0	25.0	8.0	26.7
Cycle Q Clear(g_c), s		0.0	16.0	16.2	10.4	23.8	23.8	7.6	25.0	25.0	8.0	26.7
Prop In Lane		1.00		0.30	1.00		0.37	1.00		0.30	1.00	
Lane Grp Cap(c), veh/h		310	590	588	326	636	628	259	517	516	234	472
V/C Ratio(X)		0.35	0.51	0.51	0.74	0.69	0.69	0.74	0.87	0.87	1.09	1.04
Avail Cap(c_a), veh/h		310	590	588	372	636	628	285	530	529	234	472
HCM Platoon Ratio		0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)		0.96	0.96	0.96	0.87	0.87	0.87	0.81	0.81	0.81	0.91	0.91
Uniform Delay (d), s/veh		41.0	36.8	36.9	30.2	38.7	38.8	27.7	43.3	43.3	32.8	45.6
Incr Delay (d2), s/veh		0.2	3.0	3.0	4.5	5.3	5.3	6.1	11.7	11.7	82.1	51.5
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.6	8.0	8.1	5.2	12.1	12.0	3.8	13.5	13.5	7.2	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		41.3	39.8	39.9	34.7	43.9	44.1	33.8	54.9	55.0	114.8	97.1
LnGrp LOS		D	D	D	C	D	D	C	D	E	F	F
Approach Vol, veh/h			710			1111			1088			1244
Approach Delay, s/veh			40.1			42.0			51.2			100.7
Approach LOS			D			D			D			F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	40.0	12.0	33.3	17.4	37.4	14.6	30.7				
Change Period (Y+Rc), s	* 5.2	* 5.2	5.0	5.6	5.0	* 5.2	5.0	5.6				
Max Green Setting (Gmax), s	* 9	* 35	7.0	28.4	15.0	* 29	11.0	24.4				
Max Q Clear Time (g_c+I1), s	2.0	25.8	10.0	27.0	12.4	18.2	9.6	28.7				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.6	0.0	1.9	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	61.7
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	97
Future Volume (veh/h)	97
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1861
Adj Flow Rate, veh/h	120
Peak Hour Factor	0.81
Percent Heavy Veh, %	2
Cap, veh/h	115
Arrive On Green	0.08
Sat Flow, veh/h	431
Grp Volume(v), veh/h	497
Grp Sat Flow(s),veh/h/ln	1783
Q Serve(g_s), s	26.7
Cycle Q Clear(g_c), s	26.7
Prop In Lane	0.24
Lane Grp Cap(c), veh/h	476
V/C Ratio(X)	1.04
Avail Cap(c_a), veh/h	476
HCM Platoon Ratio	0.33
Upstream Filter(l)	0.91
Uniform Delay (d), s/veh	45.7
Incr Delay (d2), s/veh	51.4
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	19.5
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	97.0
LnGrp LOS	F
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

***Intersection Capacity Worksheets:
13th Street Closure Conditions***

Timings
02/10/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↗	↖	↕	↖	↕
Traffic Volume (vph)	44	164	58	170	143	56	963	110	668
Future Volume (vph)	44	164	58	170	143	56	963	110	668
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	3	8	7	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	4.0	19.0	4.0	19.0	19.0	4.0	17.0	4.0	14.0
Minimum Split (s)	9.0	24.2	9.0	24.2	24.2	9.0	22.2	9.0	19.2
Total Split (s)	11.0	25.0	11.0	25.0	25.0	12.0	42.0	12.0	42.0
Total Split (%)	12.2%	27.8%	12.2%	27.8%	27.8%	13.3%	46.7%	13.3%	46.7%
Yellow Time (s)	3.0	3.2	3.0	3.2	3.2	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.2	-1.0	-1.2	-1.2	-1.0	-1.2	-1.0	-1.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Min

Intersection Summary

Cycle Length: 90

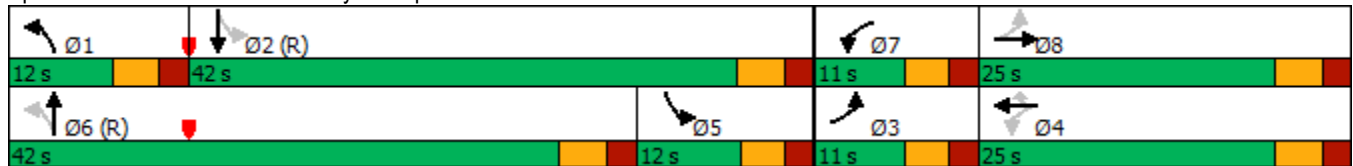
Actuated Cycle Length: 90

Offset: 33 (37%), Referenced to phase 2:SBTL and 6:NBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 11: Broadway & Arapahoe Rd.



Queues
02/10/2023

11: Broadway & Arapahoe Rd.
13th Street Closure - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	56	296	64	215	207	76	1133	262	847
v/c Ratio	0.17	0.64	0.24	0.46	0.37	0.27	0.64	0.84	0.44
Control Delay	18.2	31.8	18.8	30.0	8.9	17.7	21.1	35.8	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	31.8	18.8	30.0	8.9	17.7	21.1	35.8	3.9
Queue Length 50th (ft)	13	102	24	110	18	24	254	74	47
Queue Length 95th (ft)	33	126	51	155	33	42	338	19	60
Internal Link Dist (ft)		1285		1061			1316		587
Turn Bay Length (ft)	100		180		180	115		115	
Base Capacity (vph)	354	476	284	480	570	311	1776	312	1929
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.62	0.23	0.45	0.36	0.24	0.64	0.84	0.44

Intersection Summary

HCM 6th Signalized Intersection Summary

11: Broadway & Arapahoe Rd.

02/10/2023

13th Street Closure - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	
Traffic Volume (veh/h)	44	164	33	58	170	143	56	963	103	110	668	82
Future Volume (veh/h)	44	164	33	58	170	143	56	963	103	110	668	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	56	248	48	64	215	207	76	1003	130	262	759	88
Peak Hour Factor	0.79	0.66	0.69	0.91	0.79	0.69	0.74	0.96	0.79	0.42	0.88	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	290	378	73	261	472	400	389	1476	191	402	1768	205
Arrive On Green	0.01	0.07	0.07	0.02	0.08	0.08	0.05	0.42	0.41	0.25	1.00	0.97
Sat Flow, veh/h	1969	1683	326	1969	2067	1752	1969	3497	453	1969	3546	411
Grp Volume(v), veh/h	56	0	296	64	215	207	76	563	570	262	420	427
Grp Sat Flow(s),veh/h/ln	1969	0	2009	1969	2067	1752	1969	1964	1986	1969	1964	1993
Q Serve(g_s), s	2.0	0.0	12.9	2.2	9.0	7.0	2.2	20.9	21.0	2.5	0.1	0.3
Cycle Q Clear(g_c), s	2.0	0.0	12.9	2.2	9.0	7.0	2.2	20.9	21.0	2.5	0.1	0.3
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.23	1.00		0.21
Lane Grp Cap(c), veh/h	290	0	451	261	472	400	389	829	838	402	979	994
V/C Ratio(X)	0.19	0.00	0.66	0.25	0.46	0.52	0.20	0.68	0.68	0.65	0.43	0.43
Avail Cap(c_a), veh/h	355	0	469	318	482	409	464	829	838	402	979	994
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.97	0.00	0.97	0.91	0.91	0.91	1.00	1.00	1.00	0.66	0.66	0.66
Uniform Delay (d), s/veh	26.1	0.0	38.3	26.6	36.2	17.3	17.0	21.1	21.2	27.7	0.1	0.2
Incr Delay (d2), s/veh	0.1	0.0	2.4	0.2	0.2	0.4	0.1	4.5	4.4	2.0	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	7.2	1.1	4.9	3.0	1.0	10.1	10.3	4.5	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	0.0	40.7	26.8	36.5	17.7	17.1	25.5	25.6	29.7	1.0	1.1
LnGrp LOS	C	A	D	C	D	B	B	C	C	C	A	A
Approach Vol, veh/h		352			486			1209			1109	
Approach Delay, s/veh		38.4			27.2			25.0			7.8	
Approach LOS		D			C			C			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	48.9	8.0	24.6	15.4	42.0	8.4	24.2				
Change Period (Y+Rc), s	5.0	* 5.2	5.0	* 5.2	* 5.2	* 5.2	5.0	* 5.2				
Max Green Setting (Gmax), s	7.0	* 37	6.0	* 20	* 7	* 37	6.0	* 20				
Max Q Clear Time (g_c+I1), s	4.2	2.3	4.0	11.0	4.5	23.0	4.2	14.9				
Green Ext Time (p_c), s	0.0	3.9	0.0	0.7	0.0	4.6	0.0	0.3				

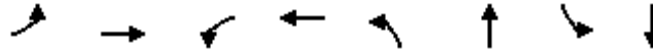
Intersection Summary

HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
02/10/2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↷	↶	↷	↶	↷	↶	↷
Traffic Volume (vph)	97	509	85	415	217	807	108	619
Future Volume (vph)	97	509	85	415	217	807	108	619
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Prot	NA
Protected Phases	3	8	7	4	1	6	5	2
Permitted Phases	8		4		6			
Detector Phase	3	8	7	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	4.0	18.0	4.0	18.0	4.0	24.0	4.0	24.0
Minimum Split (s)	9.0	23.6	9.0	23.6	9.0	29.2	9.0	29.2
Total Split (s)	12.0	28.0	12.0	28.0	14.0	35.0	15.0	36.0
Total Split (%)	13.3%	31.1%	13.3%	31.1%	15.6%	38.9%	16.7%	40.0%
Yellow Time (s)	3.0	3.6	3.0	3.6	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.6	-1.0	-1.6	-1.0	-1.2	-1.0	-1.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

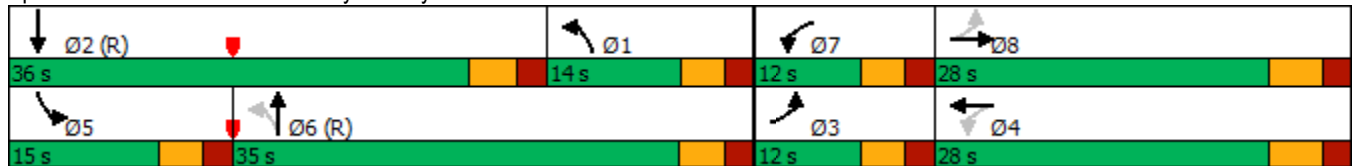
Actuated Cycle Length: 90

Offset: 39 (43%), Referenced to phase 2:SBT and 6:NBTL, Start of Green

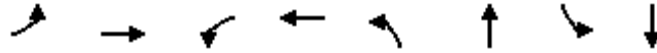
Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 34: Broadway & Canyon Blvd.



Queues
02/10/2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	609	92	612	236	975	132	948
v/c Ratio	0.48	0.65	0.35	0.73	0.74	0.76	0.62	0.72
Control Delay	28.8	38.9	18.4	25.9	31.1	15.5	45.6	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Total Delay	28.8	38.9	18.4	25.9	31.1	15.5	45.6	23.4
Queue Length 50th (ft)	66	184	26	96	72	238	48	237
Queue Length 95th (ft)	95	240	43	157	#176	216	97	237
Internal Link Dist (ft)		1074		284		587		299
Turn Bay Length (ft)	100		130		160		165	
Base Capacity (vph)	251	981	269	911	317	1277	222	1308
Starvation Cap Reductn	0	0	0	3	0	0	0	104
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.62	0.34	0.67	0.74	0.76	0.59	0.79

Intersection Summary

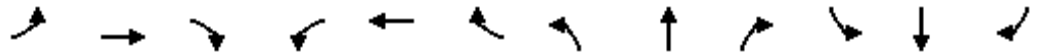
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

34: Broadway & Canyon Blvd.

02/10/2023

13th Street Closure - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	509	61	85	415	128	217	807	94	108	619	72
Future Volume (veh/h)	97	509	61	85	415	128	217	807	94	108	619	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.90	0.99		0.89	0.97		0.95	1.00		0.94
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	120	541	68	92	437	175	236	859	116	132	848	100
Peak Hour Factor	0.81	0.94	0.90	0.92	0.95	0.73	0.92	0.94	0.81	0.82	0.73	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	738	92	240	529	208	444	1301	176	178	1124	133
Arrive On Green	0.03	0.08	0.07	0.13	0.44	0.41	0.32	0.84	0.81	0.20	0.71	0.68
Sat Flow, veh/h	1772	3116	390	1772	2385	939	1772	3107	420	1772	3161	373
Grp Volume(v), veh/h	120	306	303	92	322	290	236	489	486	132	474	474
Grp Sat Flow(s),veh/h/ln	1772	1767	1739	1772	1767	1556	1772	1767	1760	1772	1767	1766
Q Serve(g_s), s	4.6	15.2	15.4	3.5	14.4	15.0	0.1	9.1	9.3	6.3	15.0	15.2
Cycle Q Clear(g_c), s	4.6	15.2	15.4	3.5	14.4	15.0	0.1	9.1	9.3	6.3	15.0	15.2
Prop In Lane	1.00		0.22	1.00		0.60	1.00		0.24	1.00		0.21
Lane Grp Cap(c), veh/h	259	419	412	240	392	345	444	740	737	178	628	628
V/C Ratio(X)	0.46	0.73	0.74	0.38	0.82	0.84	0.53	0.66	0.66	0.74	0.75	0.75
Avail Cap(c_a), veh/h	272	471	464	280	471	415	444	740	737	217	628	628
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.85	0.85	0.85	0.93	0.93	0.93	0.79	0.79	0.79	0.93	0.93	0.93
Uniform Delay (d), s/veh	26.9	38.7	38.8	23.9	23.5	24.6	23.3	5.0	5.2	34.8	10.6	10.8
Incr Delay (d2), s/veh	1.1	4.3	4.6	0.9	8.9	11.6	1.0	3.7	3.7	9.6	7.7	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	7.6	7.6	1.4	5.3	5.2	3.6	2.5	2.5	2.9	4.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	43.0	43.4	24.8	32.4	36.2	24.3	8.6	8.9	44.5	18.2	18.4
LnGrp LOS	C	D	D	C	C	D	C	A	A	D	B	B
Approach Vol, veh/h		729			704			1211			1080	
Approach Delay, s/veh		40.7			33.0			11.8			21.5	
Approach LOS		D			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.7	36.0	11.3	23.9	13.1	41.7	10.0	25.3				
Change Period (Y+Rc), s	* 5.2	* 5.2	5.0	5.6	5.0	* 5.2	5.0	5.6				
Max Green Setting (Gmax), s	* 9	* 31	7.0	22.4	10.0	* 30	7.0	22.4				
Max Q Clear Time (g_c+I1), s	2.1	17.2	6.6	17.0	8.3	11.3	5.5	17.4				
Green Ext Time (p_c), s	0.5	3.7	0.0	1.3	0.1	4.3	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
02/10/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↗	↖	↕	↖	↕
Traffic Volume (vph)	73	192	116	228	125	64	746	68	586
Future Volume (vph)	73	192	116	228	125	64	746	68	586
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4		1	6	5	2
Permitted Phases	8		4		4	6		2	
Detector Phase	3	8	7	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	4.0	19.0	4.0	19.0	19.0	4.0	17.0	4.0	15.0
Minimum Split (s)	9.0	24.2	9.0	24.2	24.2	9.0	22.2	9.0	20.2
Total Split (s)	10.0	25.0	10.0	25.0	25.0	11.0	34.0	11.0	34.0
Total Split (%)	12.5%	31.3%	12.5%	31.3%	31.3%	13.8%	42.5%	13.8%	42.5%
Yellow Time (s)	3.0	3.2	3.0	3.2	3.2	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.4	-2.0	-2.4	-2.4	-2.0	-2.4	-2.0	-2.4
Total Lost Time (s)	3.0	2.8	3.0	2.8	2.8	3.0	2.8	3.0	2.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Min

Intersection Summary

Cycle Length: 80

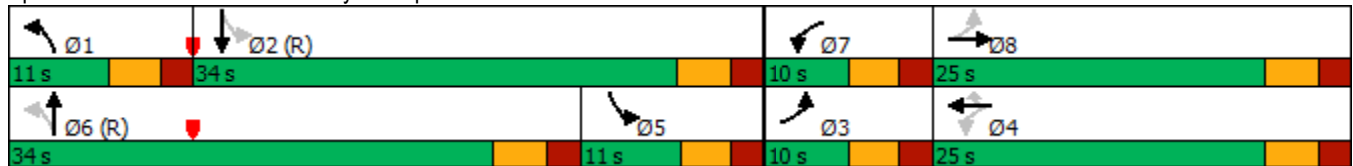
Actuated Cycle Length: 80

Offset: 48 (60%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 11: Broadway & Arapahoe Rd.



Queues
02/10/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	85	313	143	240	151	84	943	88	771
v/c Ratio	0.19	0.57	0.38	0.39	0.22	0.29	0.56	0.28	0.48
Control Delay	13.5	25.6	11.4	19.0	3.7	18.1	19.2	10.5	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	25.6	11.4	19.0	3.7	18.1	19.2	10.5	6.7
Queue Length 50th (ft)	19	106	37	103	9	26	186	13	60
Queue Length 95th (ft)	42	161	37	176	25	45	245	m24	80
Internal Link Dist (ft)		1285		1061			1316		587
Turn Bay Length (ft)	100		180		180	115		115	
Base Capacity (vph)	458	565	381	621	693	304	1675	366	1649
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.55	0.38	0.39	0.22	0.28	0.56	0.24	0.47

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary

11: Broadway & Arapahoe Rd.

02/10/2023

13th Street Closure - Off-Peak (Noon)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↕		↖	↗	
Traffic Volume (veh/h)	73	192	61	116	228	125	64	746	84	68	586	96
Future Volume (veh/h)	73	192	61	116	228	125	64	746	84	68	586	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	85	237	76	143	240	151	84	848	95	88	651	120
Peak Hour Factor	0.86	0.81	0.80	0.81	0.95	0.83	0.76	0.88	0.88	0.77	0.90	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	399	401	129	380	584	495	386	1389	156	387	1425	262
Arrive On Green	0.02	0.09	0.08	0.03	0.09	0.09	0.07	0.39	0.36	0.22	0.86	0.80
Sat Flow, veh/h	1969	1500	481	1969	2067	1752	1969	3560	399	1969	3312	610
Grp Volume(v), veh/h	85	0	313	143	240	151	84	468	475	88	386	385
Grp Sat Flow(s),veh/h/ln	1969	0	1981	1969	2067	1752	1969	1964	1995	1969	1964	1958
Q Serve(g_s), s	2.5	0.0	12.2	4.1	8.8	4.3	2.2	15.3	15.3	0.0	3.6	4.1
Cycle Q Clear(g_c), s	2.5	0.0	12.2	4.1	8.8	4.3	2.2	15.3	15.3	0.0	3.6	4.1
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.20	1.00		0.31
Lane Grp Cap(c), veh/h	399	0	530	380	584	495	386	766	778	387	845	842
V/C Ratio(X)	0.21	0.00	0.59	0.38	0.41	0.30	0.22	0.61	0.61	0.23	0.46	0.46
Avail Cap(c_a), veh/h	429	0	550	380	584	495	445	766	778	387	845	842
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.99	0.00	0.99	0.93	0.93	0.93	0.72	0.72	0.72	0.77	0.77	0.77
Uniform Delay (d), s/veh	19.9	0.0	32.3	20.4	30.0	12.7	16.7	19.5	19.8	22.7	3.4	3.9
Incr Delay (d2), s/veh	0.1	0.0	1.0	0.2	0.2	0.1	0.1	2.6	2.6	0.1	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	6.5	1.9	4.7	2.7	1.0	7.1	7.3	1.2	1.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	0.0	33.4	20.7	30.1	12.8	16.8	22.2	22.3	22.8	4.8	5.3
LnGrp LOS	B	A	C	C	C	B	B	C	C	C	A	A
Approach Vol, veh/h		398			534			1027			859	
Approach Delay, s/veh		30.5			22.7			21.8			6.9	
Approach LOS		C			C			C			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	37.2	8.8	25.4	11.8	34.0	10.0	24.2				
Change Period (Y+Rc), s	5.0	* 5.2	5.0	* 5.2	* 5.2	* 5.2	5.0	* 5.2				
Max Green Setting (Gmax), s	6.0	* 29	5.0	* 20	* 6	* 29	5.0	* 20				
Max Q Clear Time (g_c+I1), s	4.2	6.1	4.5	10.8	2.0	17.3	6.1	14.2				
Green Ext Time (p_c), s	0.0	3.3	0.0	0.7	0.0	3.4	0.0	0.4				

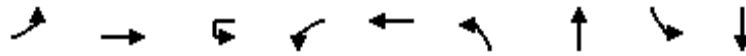
Intersection Summary

HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
02/10/2023



Lane Group	EBL	EBT	WBU	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕		↙	↕	↘	↕	↘	↕
Traffic Volume (vph)	84	455	1	136	452	159	632	169	620
Future Volume (vph)	84	455	1	136	452	159	632	169	620
Turn Type	pm+pt	NA	pm+pt	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	7	4	1	6	5	2
Permitted Phases	8		4	4		6		2	
Detector Phase	3	8	7	7	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	4.0	18.0	4.0	4.0	18.0	4.0	24.0	4.0	24.0
Minimum Split (s)	9.0	23.6	9.0	9.0	23.6	9.0	29.2	9.0	29.2
Total Split (s)	12.0	24.0	12.0	12.0	24.0	13.0	30.0	14.0	31.0
Total Split (%)	15.0%	30.0%	15.0%	15.0%	30.0%	16.3%	37.5%	17.5%	38.8%
Yellow Time (s)	3.0	3.6	3.0	3.0	3.6	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-3.2		-2.0	-3.2	-2.0	-2.4	-2.0	-2.4
Total Lost Time (s)	3.0	2.4		3.0	2.4	3.0	2.8	3.0	2.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	Max	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 80

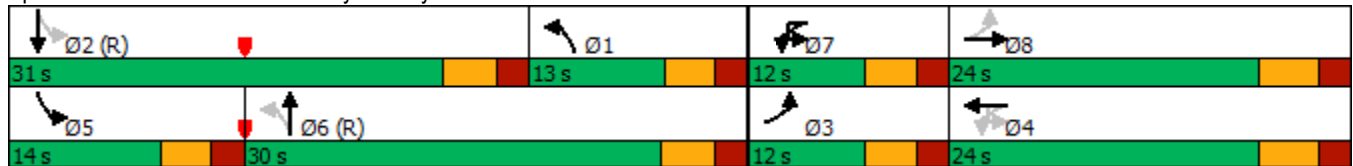
Actuated Cycle Length: 80

Offset: 48 (60%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

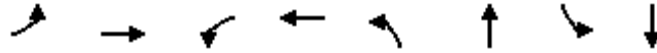
Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 34: Broadway & Canyon Blvd.



Queues
02/10/2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	127	568	181	738	196	854	192	743
v/c Ratio	0.48	0.59	0.58	0.69	0.52	0.69	0.61	0.60
Control Delay	22.0	30.0	25.8	18.6	17.1	13.2	32.0	28.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	22.0	30.0	25.8	18.6	17.1	13.2	32.0	28.3
Queue Length 50th (ft)	52	143	49	73	31	66	74	147
Queue Length 95th (ft)	62	187	75	103	45	82	115	193
Internal Link Dist (ft)		1074		284		587		299
Turn Bay Length (ft)	100		130		160		165	
Base Capacity (vph)	288	967	323	1070	374	1233	335	1231
Starvation Cap Reductn	0	0	0	0	0	0	0	96
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.59	0.56	0.69	0.52	0.69	0.57	0.65

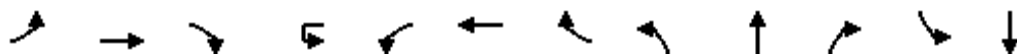
Intersection Summary

HCM 6th Signalized Intersection Summary

34: Broadway & Canyon Blvd.

02/10/2023

13th Street Closure - Off-Peak (Noon)



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	84	455	74	1	136	452	149	159	632	110	169	620
Future Volume (veh/h)	84	455	74	1	136	452	149	159	632	110	169	620
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1861	1861	1861		1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	127	484	84		177	558	180	196	718	136	192	639
Peak Hour Factor	0.66	0.94	0.88		0.77	0.81	0.83	0.81	0.88	0.81	0.88	0.97
Percent Heavy Veh, %	2	2	2		2	2	2	2	2	2	2	2
Cap, veh/h	330	814	141		365	752	242	393	1039	197	337	1073
Arrive On Green	0.03	0.09	0.08		0.22	0.57	0.49	0.24	0.70	0.64	0.25	0.70
Sat Flow, veh/h	1772	3014	520		1772	2630	846	1772	2966	561	1772	3044
Grp Volume(v), veh/h	127	283	285		177	374	364	196	428	426	192	371
Grp Sat Flow(s),veh/h/ln	1772	1767	1767		1772	1767	1708	1772	1767	1759	1772	1767
Q Serve(g_s), s	4.1	12.3	12.4		5.5	12.6	13.2	0.0	11.2	11.7	6.3	8.5
Cycle Q Clear(g_c), s	4.1	12.3	12.4		5.5	12.6	13.2	0.0	11.2	11.7	6.3	8.5
Prop In Lane	1.00		0.29		1.00		0.50	1.00		0.32	1.00	
Lane Grp Cap(c), veh/h	330	477	477		365	505	488	393	619	616	337	623
V/C Ratio(X)	0.39	0.59	0.60		0.49	0.74	0.74	0.50	0.69	0.69	0.57	0.59
Avail Cap(c_a), veh/h	358	477	477		365	505	488	397	619	616	355	623
HCM Platoon Ratio	0.33	0.33	0.33		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.96	0.96	0.96		0.90	0.90	0.90	0.86	0.86	0.86	0.96	0.96
Uniform Delay (d), s/veh	20.6	32.2	32.4		16.4	14.9	16.4	24.2	9.5	10.1	18.2	8.9
Incr Delay (d2), s/veh	0.3	5.1	5.2		0.3	8.5	9.0	0.3	5.4	5.4	1.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.4	6.5		1.9	4.5	4.7	2.8	3.5	3.7	2.2	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	37.3	37.6		16.8	23.5	25.4	24.5	14.8	15.6	19.3	12.9
LnGrp LOS	C	D	D		B	C	C	C	B	B	B	B
Approach Vol, veh/h		695			915			1050				935
Approach Delay, s/veh		34.5			22.9			16.9				14.4
Approach LOS		C			C			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	31.0	10.7	25.3	13.2	30.8	12.0	24.0				
Change Period (Y+Rc), s	* 5.2	* 5.2	5.0	5.6	5.0	* 5.2	5.0	5.6				
Max Green Setting (Gmax), s	* 8	* 26	7.0	18.4	9.0	* 25	7.0	18.4				
Max Q Clear Time (g_c+I1), s	2.0	10.9	6.1	15.2	8.3	13.7	7.5	14.4				
Green Ext Time (p_c), s	0.1	2.8	0.0	1.1	0.0	3.0	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay			21.2									
HCM 6th LOS			C									

Notes

User approved ignoring U-Turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
02/10/2023

34: Broadway & Canyon Blvd.
13th Street Closure - Off-Peak (Noon)

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	84
Future Volume (veh/h)	84
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1861
Adj Flow Rate, veh/h	104
Peak Hour Factor	0.81
Percent Heavy Veh, %	2
Cap, veh/h	174
Arrive On Green	0.64
Sat Flow, veh/h	495
Grp Volume(v), veh/h	372
Grp Sat Flow(s),veh/h/ln	1771
Q Serve(g_s), s	8.9
Cycle Q Clear(g_c), s	8.9
Prop In Lane	0.28
Lane Grp Cap(c), veh/h	624
V/C Ratio(X)	0.60
Avail Cap(c_a), veh/h	624
HCM Platoon Ratio	2.00
Upstream Filter(l)	0.96
Uniform Delay (d), s/veh	9.5
Incr Delay (d2), s/veh	4.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	3.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	13.5
LnGrp LOS	B
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings
02/10/2023

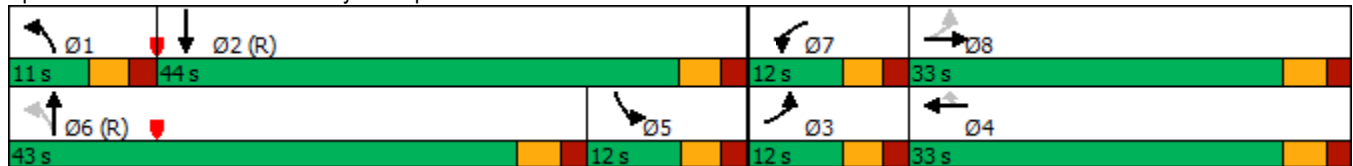


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↗	↖	↕	↖	↕
Traffic Volume (vph)	93	246	143	296	130	76	837	96	940
Future Volume (vph)	93	246	143	296	130	76	837	96	940
Turn Type	pm+pt	NA	Prot	NA	Perm	pm+pt	NA	Prot	NA
Protected Phases	3	8	7	4		1	6	5	2
Permitted Phases	8				4	6			
Detector Phase	3	8	7	4	4	1	6	5	2
Switch Phase									
Minimum Initial (s)	4.0	19.0	4.0	19.0	19.0	4.0	17.0	4.0	14.0
Minimum Split (s)	9.0	24.2	9.0	24.2	24.2	9.0	22.2	9.0	19.2
Total Split (s)	12.0	33.0	12.0	33.0	33.0	11.0	43.0	12.0	44.0
Total Split (%)	12.0%	33.0%	12.0%	33.0%	33.0%	11.0%	43.0%	12.0%	44.0%
Yellow Time (s)	3.0	3.2	3.0	3.2	3.2	3.0	3.2	3.0	3.2
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.2	-1.0	-1.2	-1.2	-1.0	-1.2	-1.0	-1.2
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 12 (12%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 11: Broadway & Arapahoe Rd.



Queues
02/10/2023



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	106	365	181	315	137	100	1040	143	1089
v/c Ratio	0.37	0.76	1.16	0.62	0.24	0.47	0.61	0.92	0.59
Control Delay	23.3	43.1	158.3	39.0	6.8	25.2	23.3	74.5	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.3	43.1	158.3	39.0	6.8	25.2	23.3	74.5	17.0
Queue Length 50th (ft)	47	215	~139	195	11	36	251	98	341
Queue Length 95th (ft)	78	302	#230	278	37	63	353	m100	m365
Internal Link Dist (ft)		1285		1051			1316		587
Turn Bay Length (ft)	100		180		180	115		115	
Base Capacity (vph)	304	585	156	597	642	223	1703	156	1836
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.62	1.16	0.53	0.21	0.45	0.61	0.92	0.59

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary

11: Broadway & Arapahoe Rd.

02/10/2023

13th Street Closure - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↖	↗	↖	↖↗		↖	↖↗	
Traffic Volume (veh/h)	93	246	65	143	296	130	76	837	127	96	940	87
Future Volume (veh/h)	93	246	65	143	296	130	76	837	127	96	940	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	106	265	100	181	315	137	100	881	159	143	989	100
Peak Hour Factor	0.88	0.93	0.65	0.79	0.94	0.95	0.76	0.95	0.80	0.67	0.95	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	283	316	119	158	481	408	208	1296	234	290	1725	174
Arrive On Green	0.02	0.07	0.07	0.03	0.08	0.08	0.06	0.39	0.38	0.05	0.16	0.15
Sat Flow, veh/h	1969	1430	540	1969	2067	1752	1969	3323	600	1969	3602	364
Grp Volume(v), veh/h	106	0	365	181	315	137	100	521	519	143	539	550
Grp Sat Flow(s),veh/h/ln	1969	0	1970	1969	2067	1752	1969	1964	1959	1969	1964	2002
Q Serve(g_s), s	4.1	0.0	18.3	8.0	14.8	5.0	3.4	22.0	22.1	7.1	25.4	25.4
Cycle Q Clear(g_c), s	4.1	0.0	18.3	8.0	14.8	5.0	3.4	22.0	22.1	7.1	25.4	25.4
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.31	1.00		0.18
Lane Grp Cap(c), veh/h	283	0	435	158	481	408	208	766	764	290	941	959
V/C Ratio(X)	0.37	0.00	0.84	1.15	0.65	0.34	0.48	0.68	0.68	0.49	0.57	0.57
Avail Cap(c_a), veh/h	307	0	571	158	599	508	227	766	764	290	941	959
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.96	0.00	0.96	0.94	0.94	0.94	1.00	1.00	1.00	0.13	0.13	0.13
Uniform Delay (d), s/veh	29.3	0.0	44.7	48.7	42.3	17.4	25.5	25.3	25.5	43.9	32.6	32.7
Incr Delay (d2), s/veh	0.3	0.0	6.4	115.3	0.8	0.2	0.6	4.8	4.8	0.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	10.4	9.2	8.3	3.2	1.6	11.0	11.0	3.6	13.4	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	0.0	51.1	164.0	43.1	17.6	26.1	30.1	30.3	44.0	33.0	33.0
LnGrp LOS	C	A	D	F	D	B	C	C	C	D	C	C
Approach Vol, veh/h		471			633			1140			1232	
Approach Delay, s/veh		46.3			72.1			29.9			34.3	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	51.9	10.8	27.3	18.9	43.0	12.0	26.1				
Change Period (Y+Rc), s	5.0	* 5.2	5.0	* 5.2	* 5.2	* 5.2	5.0	* 5.2				
Max Green Setting (Gmax), s	6.0	* 39	7.0	* 28	* 7	* 38	7.0	* 28				
Max Q Clear Time (g_c+I1), s	5.4	27.4	6.1	16.8	9.1	24.1	10.0	20.3				
Green Ext Time (p_c), s	0.0	4.0	0.0	0.8	0.0	4.1	0.0	0.6				

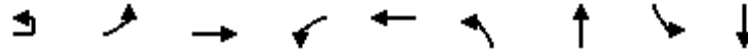
Intersection Summary

HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
02/17/2023

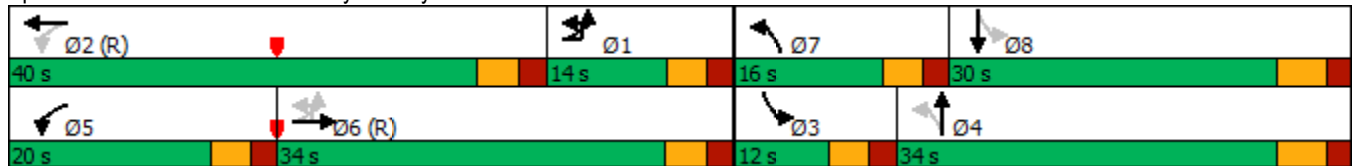


Lane Group	EBU	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔	↕	↔	↕	↔	↕	↔	↕
Traffic Volume (vph)	2	99	418	211	638	187	780	176	808
Future Volume (vph)	2	99	418	211	638	187	780	176	808
Turn Type	pm+pt	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	1	1	6	5	2	7	4	3	8
Permitted Phases	6	6		2		4		8	
Detector Phase	1	1	6	5	2	7	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	4.0	24.0	4.0	24.0	4.0	18.0	4.0	18.0
Minimum Split (s)	9.0	9.0	29.2	9.0	29.2	9.0	23.6	9.0	23.6
Total Split (s)	14.0	14.0	34.0	20.0	40.0	16.0	34.0	12.0	30.0
Total Split (%)	14.0%	14.0%	34.0%	20.0%	40.0%	16.0%	34.0%	12.0%	30.0%
Yellow Time (s)	3.0	3.0	3.2	3.0	3.2	3.0	3.6	3.0	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0	-1.2	-1.0	-1.2	-1.0	-1.6	-1.0	-1.6
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	None	C-Max	None	Min	None	Min

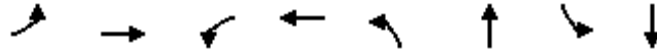
Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 20 (20%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 34: Broadway & Canyon Blvd.



Queues
02/17/2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	116	602	240	862	201	949	255	989
v/c Ratio	0.37	0.53	0.78	0.69	0.76	0.91	1.18	1.04
Control Delay	27.0	20.6	33.6	23.1	44.3	55.5	146.4	81.8
Queue Delay	0.0	0.0	0.0	3.6	0.0	2.2	0.0	24.3
Total Delay	27.0	20.6	33.6	26.6	44.3	57.8	146.4	106.1
Queue Length 50th (ft)	31	168	105	272	118	335	~152	~366
Queue Length 95th (ft)	100	213	156	329	#182	#434	#188	#516
Internal Link Dist (ft)		1074		284		587		299
Turn Bay Length (ft)	100		130		160		165	
Base Capacity (vph)	312	1138	347	1251	286	1047	216	955
Starvation Cap Reductn	0	0	0	291	0	0	0	55
Spillback Cap Reductn	0	0	0	96	0	38	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.53	0.69	0.90	0.70	0.94	1.18	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

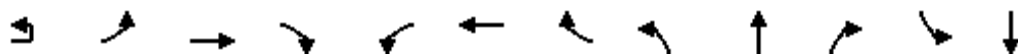
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

34: Broadway & Canyon Blvd.

02/17/2023

13th Street Closure - PM Peak Hour



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	2	99	418	86	211	638	127	187	780	117	176	808
Future Volume (veh/h)	2	99	418	86	211	638	127	187	780	117	176	808
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h		108	510	92	240	701	161	201	812	136	255	869
Peak Hour Factor		0.92	0.82	0.93	0.88	0.91	0.79	0.93	0.96	0.86	0.69	0.93
Percent Heavy Veh, %		2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h		299	977	175	325	1028	236	264	909	152	229	847
Arrive On Green		0.03	0.11	0.10	0.04	0.12	0.11	0.04	0.10	0.09	0.03	0.09
Sat Flow, veh/h		1772	2994	538	1772	2855	655	1772	3029	507	1772	3120
Grp Volume(v), veh/h		108	300	302	240	434	428	201	474	474	255	492
Grp Sat Flow(s),veh/h/ln		1772	1767	1764	1772	1767	1743	1772	1767	1769	1772	1767
Q Serve(g_s), s		0.0	16.1	16.2	10.4	23.5	23.6	7.9	26.5	26.5	8.0	27.2
Cycle Q Clear(g_c), s		0.0	16.1	16.2	10.4	23.5	23.6	7.9	26.5	26.5	8.0	27.2
Prop In Lane		1.00		0.30	1.00		0.38	1.00		0.29	1.00	
Lane Grp Cap(c), veh/h		299	577	575	325	636	627	264	530	531	229	480
V/C Ratio(X)		0.36	0.52	0.52	0.74	0.68	0.68	0.76	0.89	0.89	1.11	1.03
Avail Cap(c_a), veh/h		302	577	575	372	636	627	285	530	531	229	480
HCM Platoon Ratio		0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)		0.96	0.96	0.96	0.87	0.87	0.87	0.82	0.82	0.82	0.91	0.91
Uniform Delay (d), s/veh		41.4	37.2	37.3	30.2	38.6	38.7	27.3	43.5	43.5	32.1	45.5
Incr Delay (d2), s/veh		0.3	3.2	3.3	4.5	5.1	5.2	7.6	14.8	14.8	90.3	45.9
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.6	8.1	8.1	5.2	12.0	11.8	4.1	14.7	14.7	7.5	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		41.6	40.4	40.6	34.7	43.7	43.8	34.9	58.3	58.4	122.4	91.5
LnGrp LOS		D	D	D	C	D	D	C	E	E	F	F
Approach Vol, veh/h			710			1102			1149			1244
Approach Delay, s/veh			40.7			41.8			54.3			97.8
Approach LOS			D			D			D			F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	40.0	12.0	34.0	17.4	36.6	14.8	31.2				
Change Period (Y+Rc), s	* 5.2	* 5.2	5.0	5.6	5.0	* 5.2	5.0	5.6				
Max Green Setting (Gmax), s	* 9	* 35	7.0	28.4	15.0	* 29	11.0	24.4				
Max Q Clear Time (g_c+I1), s	2.0	25.6	10.0	28.5	12.4	18.2	9.9	29.2				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.0	0.0	1.9	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	61.6
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
02/17/2023

34: Broadway & Canyon Blvd.
13th Street Closure - PM Peak Hour

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	97
Future Volume (veh/h)	97
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1861
Adj Flow Rate, veh/h	120
Peak Hour Factor	0.81
Percent Heavy Veh, %	2
Cap, veh/h	117
Arrive On Green	0.08
Sat Flow, veh/h	431
Grp Volume(v), veh/h	497
Grp Sat Flow(s),veh/h/ln	1783
Q Serve(g_s), s	27.2
Cycle Q Clear(g_c), s	27.2
Prop In Lane	0.24
Lane Grp Cap(c), veh/h	484
V/C Ratio(X)	1.03
Avail Cap(c_a), veh/h	484
HCM Platoon Ratio	0.33
Upstream Filter(l)	0.91
Uniform Delay (d), s/veh	45.6
Incr Delay (d2), s/veh	45.8
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	19.1
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	91.4
LnGrp LOS	F
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

***Intersection Capacity Worksheets:
West Pearl Street Existing Conditions***

Timings
02/11/2023

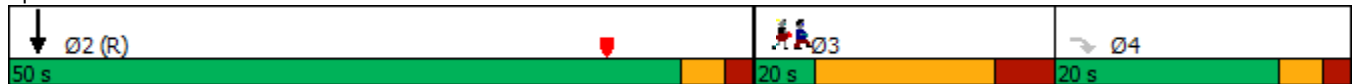
69: 11th St. & Pearl St.
Current Existing - AM Peak Hour

Lane Group	EBR	SBT	Ø3
Lane Configurations	↗	↕	
Traffic Volume (vph)	74	164	
Future Volume (vph)	74	164	
Turn Type	Perm	NA	
Protected Phases		2	3
Permitted Phases	4		
Detector Phase	4	2	
Switch Phase			
Minimum Initial (s)	12.0	10.0	4.0
Minimum Split (s)	17.0	15.0	20.0
Total Split (s)	20.0	50.0	20.0
Total Split (%)	22.2%	55.6%	22%
Yellow Time (s)	3.0	3.0	12.0
All-Red Time (s)	2.0	2.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	
Lead/Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes
Recall Mode	None	C-Max	None

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:SBT, Start of FDW or yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 69: 11th St. & Pearl St.



Queues
02/11/2023

69: 11th St. & Pearl St.
Current Existing - AM Peak Hour


















Lane Group	EBR	SBT
Lane Group Flow (vph)	96	322
v/c Ratio	0.11	0.12
Control Delay	0.3	1.6
Queue Delay	0.0	0.0
Total Delay	0.3	1.6
Queue Length 50th (ft)	1	11
Queue Length 95th (ft)	0	18
Internal Link Dist (ft)		95
Turn Bay Length (ft)		
Base Capacity (vph)	866	2715
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.11	0.12
Intersection Summary		

HCM Signalized Intersection Capacity Analysis

69: 11th St. & Pearl St.

02/11/2023

Current Existing - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											 	
Traffic Volume (vph)	0	0	74	0	0	0	0	0	0	0	164	103
Future Volume (vph)	0	0	74	0	0	0	0	0	0	0	164	103
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Total Lost time (s)			4.0								4.0	
Lane Util. Factor			1.00								0.95	
Frt			0.86								0.94	
Flt Protected			1.00								1.00	
Satd. Flow (prot)			1603								3309	
Flt Permitted			1.00								1.00	
Satd. Flow (perm)			1603								3309	
Peak-hour factor, PHF	1.00	1.00	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.80
Adj. Flow (vph)	0	0	96	0	0	0	0	0	0	0	193	129
RTOR Reduction (vph)	0	0	85	0	0	0	0	0	0	0	27	0
Lane Group Flow (vph)	0	0	11	0	0	0	0	0	0	0	295	0
Turn Type			Perm									NA
Protected Phases												2
Permitted Phases			4									
Actuated Green, G (s)			9.6								70.4	
Effective Green, g (s)			10.6								71.4	
Actuated g/C Ratio			0.12								0.79	
Clearance Time (s)			5.0								5.0	
Vehicle Extension (s)			2.0								3.0	
Lane Grp Cap (vph)			188								2625	
v/s Ratio Prot											c0.09	
v/s Ratio Perm			c0.01									
v/c Ratio			0.06								0.11	
Uniform Delay, d1			35.3								2.1	
Progression Factor			1.00								1.00	
Incremental Delay, d2			0.0								0.1	
Delay (s)			35.3								2.2	
Level of Service			D								A	
Approach Delay (s)		35.3			0.0			0.0			2.2	
Approach LOS		D			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.8									A
HCM 2000 Volume to Capacity ratio			0.13									
Actuated Cycle Length (s)			90.0							25.0		
Intersection Capacity Utilization			25.0%								A	
Analysis Period (min)			15									
c Critical Lane Group												

Timings
02/11/2023

70: 11th St. & Walnut St.
Current Existing - AM Peak Hour

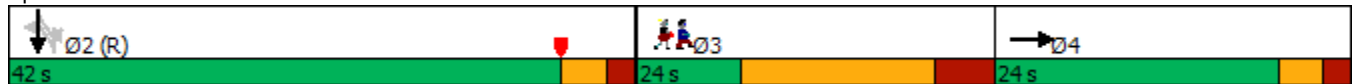


Lane Group	EBT	NBL	NBR	SBL	SBT	Ø3
Lane Configurations	↻	↻	↻	↻	↻	
Traffic Volume (vph)	59	28	76	105	22	
Future Volume (vph)	59	28	76	105	22	
Turn Type	NA	D.Pm	Perm	Perm	NA	
Protected Phases	4				2	3
Permitted Phases		2	2	2		
Detector Phase	4	2	2	2	2	
Switch Phase						
Minimum Initial (s)	19.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	24.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	24.0	42.0	42.0	42.0	42.0	24.0
Total Split (%)	26.7%	46.7%	46.7%	46.7%	46.7%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	13.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2:NBSB and 6:, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 70: 11th St. & Walnut St.



Queues
02/11/2023

70: 11th St. & Walnut St.
Current Existing - AM Peak Hour




















Lane Group	EBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	80	40	104	118	101
v/c Ratio	0.20	0.07	0.13	0.14	0.14
Control Delay	23.0	16.1	0.3	1.1	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	16.1	0.3	1.1	6.2
Queue Length 50th (ft)	32	13	0	0	10
Queue Length 95th (ft)	49	25	0	1	23
Internal Link Dist (ft)	303				301
Turn Bay Length (ft)			35		
Base Capacity (vph)	410	538	797	838	715
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.20	0.07	0.13	0.14	0.14
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

70: 11th St. & Walnut St.

02/11/2023

Current Existing - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	59	12	0	0	0	28	0	76	105	22	42
Future Volume (vph)	0	59	12	0	0	0	28	0	76	105	22	42
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Total Lost time (s)		4.0					4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00					1.00		1.00	0.95	0.95	
Frt		0.97					1.00		0.85	1.00	0.92	
Flt Protected		1.00					0.95		1.00	0.95	0.99	
Satd. Flow (prot)		1803					1760		1575	1672	1604	
Flt Permitted		1.00					0.69		1.00	0.95	0.99	
Satd. Flow (perm)		1803					1276		1575	1672	1604	
Peak-hour factor, PHF	1.00	0.92	0.75	1.00	1.00	1.00	0.70	1.00	0.73	0.80	0.69	0.75
Adj. Flow (vph)	0	64	16	0	0	0	40	0	104	131	32	56
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	60	68	38	0
Lane Group Flow (vph)	0	70	0	0	0	0	40	0	44	50	63	0
Turn Type		NA					D.Pm		Perm	Perm	NA	
Protected Phases		4										2
Permitted Phases							2		2	2		
Actuated Green, G (s)		19.0					37.0		37.0	37.0	37.0	
Effective Green, g (s)		20.0					38.0		38.0	38.0	38.0	
Actuated g/C Ratio		0.22					0.42		0.42	0.42	0.42	
Clearance Time (s)		5.0					5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)		400					538		665	705	677	
v/s Ratio Prot		c0.04										
v/s Ratio Perm							0.03		0.03	0.03	0.04	
v/c Ratio		0.17					0.07		0.07	0.07	0.09	
Uniform Delay, d1		28.3					15.5		15.5	15.5	15.6	
Progression Factor		0.89					1.00		1.00	1.00	0.83	
Incremental Delay, d2		0.9					0.3		0.2	0.2	0.3	
Delay (s)		26.2					15.8		15.6	15.7	13.2	
Level of Service		C					B		B	B	B	
Approach Delay (s)		26.2			0.0			15.7			14.6	
Approach LOS		C			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			17.0				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.11									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			25.0		
Intersection Capacity Utilization			42.5%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

Timings
02/11/2023

82: 9th St. & Pearl St.
Current Existing - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↖	↗	↖
Traffic Volume (vph)	52	17	20	34	26	285	20	445
Future Volume (vph)	52	17	20	34	26	285	20	445
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	15.0	15.0	15.0	15.0	16.0	16.0	16.0	16.0
Minimum Split (s)	20.0	20.0	20.0	20.0	21.0	21.0	21.0	21.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 60 (67%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 82: 9th St. & Pearl St.



Queues
02/11/2023

82: 9th St. & Pearl St.
Current Existing - AM Peak Hour



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	152	88	36	428	24	605
v/c Ratio	0.50	0.29	0.07	0.33	0.04	0.46
Control Delay	30.9	35.4	4.9	5.7	3.9	6.3
Queue Delay	0.0	0.0	0.0	0.7	0.0	0.0
Total Delay	30.9	35.4	4.9	6.5	3.9	6.3
Queue Length 50th (ft)	59	42	5	84	3	109
Queue Length 95th (ft)	67	70	17	167	10	174
Internal Link Dist (ft)	278	645		303		294
Turn Bay Length (ft)			110		55	
Base Capacity (vph)	456	470	512	1309	654	1322
Starvation Cap Reductn	0	0	0	558	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.19	0.07	0.57	0.04	0.46
Intersection Summary						

HCM 6th Signalized Intersection Summary

82: 9th St. & Pearl St.

02/11/2023

Current Existing - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	52	17	45	20	34	13	26	285	77	20	445	77
Future Volume (veh/h)	52	17	45	20	34	13	26	285	77	20	445	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	64	28	0	28	40	20	36	328	100	24	517	88
Peak Hour Factor	0.81	0.61	0.75	0.71	0.85	0.65	0.72	0.87	0.77	0.83	0.86	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	91		117	155	64	521	1006	307	715	1139	194
Arrive On Green	0.18	0.18	0.00	0.18	0.18	0.16	1.00	1.00	1.00	0.74	0.74	0.72
Sat Flow, veh/h	947	517	0	367	880	367	733	1368	417	864	1549	264
Grp Volume(v), veh/h	92	0	0	88	0	0	36	0	428	24	0	605
Grp Sat Flow(s),veh/h/ln	1464	0	0	1613	0	0	733	0	1785	864	0	1813
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.7	0.0	12.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	3.8	0.0	0.0	12.9	0.0	0.0	0.7	0.0	12.0
Prop In Lane	0.70		0.00	0.32		0.23	1.00		0.23	1.00		0.15
Lane Grp Cap(c), veh/h	325	0		336	0	0	521	0	1313	715	0	1333
V/C Ratio(X)	0.28	0.00		0.26	0.00	0.00	0.07	0.00	0.33	0.03	0.00	0.45
Avail Cap(c_a), veh/h	478	0		512	0	0	521	0	1313	715	0	1333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.95	0.00	0.95	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	0.0	32.2	0.0	0.0	1.2	0.0	0.0	3.2	0.0	4.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.6	0.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	1.7	0.0	0.0	0.1	0.0	0.2	0.1	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	0.0	0.0	32.4	0.0	0.0	1.4	0.0	0.6	3.3	0.0	5.9
LnGrp LOS	C	A		C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		92			88			464			629	
Approach Delay, s/veh		32.4			32.4			0.7			5.8	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		70.2		19.8		70.2		19.8				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		55.0		25.0		55.0		25.0				
Max Q Clear Time (g_c+I1), s		0.0		5.8		14.9		6.0				
Green Ext Time (p_c), s		0.0		0.1		0.1		0.2				

Intersection Summary

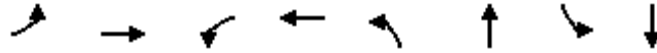
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Timings
02/11/2023

84: 9th St. & Walnut St.
Current Existing - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↖	↗	↖
Traffic Volume (vph)	6	10	14	2	72	390	51	354
Future Volume (vph)	6	10	14	2	72	390	51	354
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	21.0	21.0	21.0	21.0	17.0	17.0	17.0	17.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 50 (56%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated

Splits and Phases: 84: 9th St. & Walnut St.



Queues
02/11/2023

84: 9th St. & Walnut St.

Current Existing - AM Peak Hour





















Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	72	44	76	531	60	405
v/c Ratio	0.19	0.13	0.09	0.34	0.09	0.25
Control Delay	16.7	14.8	2.9	3.4	5.7	5.9
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.4
Total Delay	16.7	14.8	2.9	3.7	5.7	6.2
Queue Length 50th (ft)	13	5	7	64	10	79
Queue Length 95th (ft)	27	6	17	103	24	126
Internal Link Dist (ft)	255	291		287		303
Turn Bay Length (ft)			90		80	
Base Capacity (vph)	551	508	810	1556	691	1592
Starvation Cap Reductn	0	0	0	457	0	687
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.09	0.09	0.48	0.09	0.45
Intersection Summary						

HCM 6th Signalized Intersection Summary

84: 9th St. & Walnut St.

02/11/2023

Current Existing - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	10	34	14	2	11	72	390	101	51	354	14
Future Volume (veh/h)	6	10	34	14	2	11	72	390	101	51	354	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	12	16	44	16	4	24	76	419	112	60	389	16
Peak Hour Factor	0.50	0.63	0.77	0.88	0.50	0.46	0.95	0.93	0.90	0.85	0.91	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	98	196	137	53	162	798	1150	307	719	1443	59
Arrive On Green	0.18	0.18	0.17	0.18	0.18	0.17	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	151	547	1097	458	295	904	980	1572	420	873	1972	81
Grp Volume(v), veh/h	72	0	0	44	0	0	76	0	531	60	0	405
Grp Sat Flow(s),veh/h/ln	1795	0	0	1657	0	0	980	0	1992	873	0	2053
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.17		0.61	0.36		0.55	1.00		0.21	1.00		0.04
Lane Grp Cap(c), veh/h	368	0	0	351	0	0	798	0	1458	719	0	1503
V/C Ratio(X)	0.20	0.00	0.00	0.13	0.00	0.00	0.10	0.00	0.36	0.08	0.00	0.27
Avail Cap(c_a), veh/h	558	0	0	527	0	0	798	0	1458	719	0	1503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.96	0.00	0.96	0.89	0.00	0.89
Uniform Delay (d), s/veh	31.8	0.0	0.0	31.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.7	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	0.8	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	0.0	0.0	31.4	0.0	0.0	0.2	0.0	0.7	0.2	0.0	0.4
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		72			44			607			465	
Approach Delay, s/veh		32.1			31.4			0.6			0.4	
Approach LOS		C			C			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.9		20.1		69.9		20.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		55.0		25.0		55.0		25.0				
Max Q Clear Time (g_c+I1), s		2.0		3.8		2.0		5.0				
Green Ext Time (p_c), s		3.4		0.2		4.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				3.6								
HCM 6th LOS				A								

Timings
02/11/2023

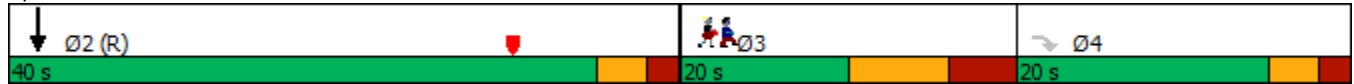
69: 11th St. & Pearl St.
Current Existing - Off-Peak (Noon)

Lane Group	EBR	SBT	Ø3
Lane Configurations	↗	↕	
Traffic Volume (vph)	78	226	
Future Volume (vph)	78	226	
Turn Type	Perm	NA	
Protected Phases		2	3
Permitted Phases	4		
Detector Phase	4	2	
Switch Phase			
Minimum Initial (s)	15.0	12.0	10.0
Minimum Split (s)	20.0	17.0	20.0
Total Split (s)	20.0	40.0	20.0
Total Split (%)	25.0%	50.0%	25%
Yellow Time (s)	3.0	3.0	6.0
All-Red Time (s)	2.0	2.0	4.0
Lost Time Adjust (s)	-2.0	-2.0	
Total Lost Time (s)	3.0	3.0	
Lead/Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes
Recall Mode	None	C-Max	None

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 12 (15%), Referenced to phase 2:SBT, Start of FDW or yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 69: 11th St. & Pearl St.



Queues
02/11/2023

69: 11th St. & Pearl St.
Current Existing - Off-Peak (Noon)


















Lane Group	EBR	SBT
Lane Group Flow (vph)	96	388
v/c Ratio	0.11	0.15
Control Delay	0.2	2.3
Queue Delay	0.0	0.0
Total Delay	0.2	2.3
Queue Length 50th (ft)	0	16
Queue Length 95th (ft)	0	27
Internal Link Dist (ft)		95
Turn Bay Length (ft)		
Base Capacity (vph)	875	2590
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.11	0.15
Intersection Summary		

HCM Signalized Intersection Capacity Analysis

69: 11th St. & Pearl St.

02/11/2023

Current Existing - Off-Peak (Noon)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											 	
Traffic Volume (vph)	0	0	78	0	0	0	0	0	0	0	226	121
Future Volume (vph)	0	0	78	0	0	0	0	0	0	0	226	121
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Total Lost time (s)			3.0								3.0	
Lane Util. Factor			1.00								0.95	
Frt			0.86								0.94	
Flt Protected			1.00								1.00	
Satd. Flow (prot)			1603								3319	
Flt Permitted			1.00								1.00	
Satd. Flow (perm)			1603								3319	
Peak-hour factor, PHF	1.00	1.00	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.82
Adj. Flow (vph)	0	0	96	0	0	0	0	0	0	0	240	148
RTOR Reduction (vph)	0	0	79	0	0	0	0	0	0	0	37	0
Lane Group Flow (vph)	0	0	17	0	0	0	0	0	0	0	351	0
Turn Type			Perm									NA
Protected Phases												2
Permitted Phases			4									
Actuated Green, G (s)			12.0								58.0	
Effective Green, g (s)			14.0								60.0	
Actuated g/C Ratio			0.18								0.75	
Clearance Time (s)			5.0								5.0	
Vehicle Extension (s)			2.0								3.0	
Lane Grp Cap (vph)			280								2489	
v/s Ratio Prot											c0.11	
v/s Ratio Perm			c0.01									
v/c Ratio			0.06								0.14	
Uniform Delay, d1			27.5								2.8	
Progression Factor			1.00								1.00	
Incremental Delay, d2			0.0								0.1	
Delay (s)			27.5								2.9	
Level of Service			C								A	
Approach Delay (s)		27.5			0.0			0.0			2.9	
Approach LOS		C			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.8									A
HCM 2000 Volume to Capacity ratio			0.15									
Actuated Cycle Length (s)			80.0							18.0		
Intersection Capacity Utilization			29.3%									A
Analysis Period (min)			15									
c Critical Lane Group												

Timings
02/11/2023

70: 11th St. & Walnut St.
Current Existing - Off-Peak (Noon)



Lane Group	EBT	NBL	NBR	SBL	SBT	Ø3
Lane Configurations	↻	↻	↻	↻	↻	
Traffic Volume (vph)	123	28	58	221	32	
Future Volume (vph)	123	28	58	221	32	
Turn Type	NA	D.Pm	Perm	Perm	NA	
Protected Phases	4				2	3
Permitted Phases		2	2	2		
Detector Phase	4	2	2	2	2	
Switch Phase						
Minimum Initial (s)	19.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	24.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	24.0	32.0	32.0	32.0	32.0	24.0
Total Split (%)	30.0%	40.0%	40.0%	40.0%	40.0%	30%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	13.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	4.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 23 (29%), Referenced to phase 2:NBSB and 6:, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 70: 11th St. & Walnut St.



Queues
02/11/2023

70: 11th St. & Walnut St.
Current Existing - Off-Peak (Noon)



Lane Group	EBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	192	44	79	179	188
v/c Ratio	0.40	0.12	0.11	0.23	0.29
Control Delay	22.9	18.1	0.3	2.4	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	18.1	0.3	2.4	9.2
Queue Length 50th (ft)	52	14	0	0	28
Queue Length 95th (ft)	108	28	0	0	49
Internal Link Dist (ft)	303				301
Turn Bay Length (ft)			35		
Base Capacity (vph)	485	376	736	771	651
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.12	0.11	0.23	0.29
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

70: 11th St. & Walnut St.

02/11/2023

Current Existing - Off-Peak (Noon)



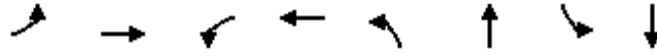
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↔						↔		↔	↔	↔
Traffic Volume (vph)	0	123	37	0	0	0	1	28	0	58	221	32
Future Volume (vph)	0	123	37	0	0	0	1	28	0	58	221	32
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Total Lost time (s)		3.0						3.0		3.0	3.0	3.0
Lane Util. Factor		1.00						1.00		1.00	0.95	0.95
Frt		0.96						1.00		0.85	1.00	0.96
Flt Protected		1.00						0.95		1.00	0.95	0.98
Satd. Flow (prot)		1785						1760		1575	1672	1645
Flt Permitted		1.00						0.56		1.00	0.95	0.98
Satd. Flow (perm)		1785						1040		1575	1672	1645
Peak-hour factor, PHF	1.00	0.88	0.71	1.00	1.00	1.00	0.25	0.70	1.00	0.73	0.84	0.67
Adj. Flow (vph)	0	140	52	0	0	0	4	40	0	79	263	48
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	0	50	114	55
Lane Group Flow (vph)	0	175	0	0	0	0	0	44	0	29	65	133
Turn Type		NA					custom	D.Pm		Perm	Perm	NA
Protected Phases		4										2
Permitted Phases								2		2	2	
Actuated Green, G (s)		19.0						27.0		27.0	27.0	27.0
Effective Green, g (s)		21.0						29.0		29.0	29.0	29.0
Actuated g/C Ratio		0.26						0.36		0.36	0.36	0.36
Clearance Time (s)		5.0						5.0		5.0	5.0	5.0
Lane Grp Cap (vph)		468						377		570	606	596
v/s Ratio Prot		c0.10										
v/s Ratio Perm								0.04		0.02	0.04	0.08
v/c Ratio		0.37						0.12		0.05	0.11	0.22
Uniform Delay, d1		24.1						17.0		16.6	16.9	17.7
Progression Factor		0.95						1.00		1.00	2.56	0.81
Incremental Delay, d2		2.2						0.6		0.2	0.4	0.9
Delay (s)		25.1						17.6		16.7	43.7	15.1
Level of Service		C						B		B	D	B
Approach Delay (s)		25.1			0.0				17.0			29.1
Approach LOS		C			A				B			C

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c	Critical Lane Group		

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	47
Future Volume (vph)	47
Ideal Flow (vphpl)	2100
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.84
Adj. Flow (vph)	56
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
02/11/2023

82: 9th St. & Pearl St.
Current Existing - Off-Peak (Noon)



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↗	↗	↗
Traffic Volume (vph)	58	41	31	60	44	322	38	322
Future Volume (vph)	58	41	31	60	44	322	38	322
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	15.0	15.0	15.0	15.0	16.0	16.0	16.0	16.0
Minimum Split (s)	20.0	20.0	20.0	20.0	21.0	21.0	21.0	21.0
Total Split (s)	30.0	30.0	30.0	30.0	50.0	50.0	50.0	50.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%	62.5%	62.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0		-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)		3.0		3.0	3.0	3.0	3.0	3.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 64 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 82: 9th St. & Pearl St.



Queues
02/11/2023

82: 9th St. & Pearl St.
Current Existing - Off-Peak (Noon)



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	255	140	56	525	48	471
v/c Ratio	0.64	0.36	0.10	0.43	0.09	0.38
Control Delay	30.2	31.5	6.8	9.5	5.8	6.8
Queue Delay	0.0	0.0	0.0	0.7	0.0	0.0
Total Delay	30.2	31.5	6.8	10.2	5.8	6.8
Queue Length 50th (ft)	100	61	10	130	6	73
Queue Length 95th (ft)	67	110	27	237	20	149
Internal Link Dist (ft)	278	645		303		294
Turn Bay Length (ft)			110		55	
Base Capacity (vph)	537	524	552	1216	509	1232
Starvation Cap Reductn	0	0	0	369	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.27	0.10	0.62	0.09	0.38
Intersection Summary						

HCM 6th Signalized Intersection Summary

82: 9th St. & Pearl St.

02/11/2023

Current Existing - Off-Peak (Noon)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	58	41	65	31	60	17	44	322	149	38	322	58
Future Volume (veh/h)	58	41	65	31	60	17	44	322	149	38	322	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	79	84	0	40	72	28	56	358	167	48	379	92
Peak Hour Factor	0.73	0.49	0.71	0.78	0.83	0.61	0.79	0.90	0.89	0.79	0.85	0.63
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	195		128	210	70	596	855	399	653	1031	250
Arrive On Green	0.21	0.21	0.00	0.21	0.21	0.19	1.00	1.00	1.00	0.71	0.71	0.69
Sat Flow, veh/h	647	920	0	328	989	329	830	1200	560	790	1446	351
Grp Volume(v), veh/h	163	0	0	140	0	0	56	0	525	48	0	471
Grp Sat Flow(s),veh/h/ln	1566	0	0	1647	0	0	830	0	1760	790	0	1797
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.5	0.0	8.3
Cycle Q Clear(g_c), s	6.4	0.0	0.0	5.3	0.0	0.0	9.1	0.0	0.0	1.5	0.0	8.3
Prop In Lane	0.48		0.00	0.29		0.20	1.00		0.32	1.00		0.20
Lane Grp Cap(c), veh/h	399	0		407	0	0	596	0	1254	653	0	1281
V/C Ratio(X)	0.41	0.00		0.34	0.00	0.00	0.09	0.00	0.42	0.07	0.00	0.37
Avail Cap(c_a), veh/h	580	0		602	0	0	596	0	1254	653	0	1281
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.00	0.93	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	0.0	27.1	0.0	0.0	0.7	0.0	0.0	3.5	0.0	4.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	0.3	0.0	1.0	0.2	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.3	0.2	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	0.0	0.0	27.3	0.0	0.0	1.0	0.0	1.0	3.7	0.0	5.4
LnGrp LOS	C	A		C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		163			140			581				519
Approach Delay, s/veh		27.5			27.3			1.0				5.2
Approach LOS		C			C			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.0		20.0		60.0		20.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		25.0		45.0		25.0				
Max Q Clear Time (g_c+I1), s		0.0		7.3		11.1		8.4				
Green Ext Time (p_c), s		0.0		0.3		0.1		0.3				

Intersection Summary

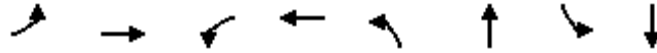
HCM 6th Ctrl Delay	8.2
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Timings
02/11/2023

84: 9th St. & Walnut St.
Current Existing - Off-Peak (Noon)



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↖	↗	↖
Traffic Volume (vph)	11	35	22	6	94	346	39	303
Future Volume (vph)	11	35	22	6	94	346	39	303
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	21.0	21.0	21.0	21.0	17.0	17.0	17.0	17.0
Total Split (s)	30.0	30.0	30.0	30.0	50.0	50.0	50.0	50.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%	62.5%	62.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 62 (78%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated

Splits and Phases: 84: 9th St. & Walnut St.



Queues
02/11/202384: 9th St. & Walnut St.
Current Existing - Off-Peak (Noon)

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	164	92	121	524	52	402
v/c Ratio	0.35	0.23	0.17	0.38	0.09	0.29
Control Delay	14.9	13.8	3.7	4.0	3.7	4.1
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.4
Total Delay	14.9	13.8	3.7	4.4	3.7	4.5
Queue Length 50th (ft)	29	15	12	50	6	47
Queue Length 95th (ft)	46	3	19	81	12	66
Internal Link Dist (ft)	255	291		287		303
Turn Bay Length (ft)			90		80	
Base Capacity (vph)	661	580	700	1369	588	1401
Starvation Cap Reductn	0	0	0	394	0	554
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.16	0.17	0.54	0.09	0.47
Intersection Summary						

HCM 6th Signalized Intersection Summary
02/11/2023

84: 9th St. & Walnut St.
Current Existing - Off-Peak (Noon)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (veh/h)	11	35	73	22	6	31	94	346	114	39	303	22
Future Volume (veh/h)	11	35	73	22	6	31	94	346	114	39	303	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	16	52	96	32	16	44	121	380	144	52	370	32
Peak Hour Factor	0.69	0.67	0.76	0.69	0.38	0.70	0.78	0.91	0.79	0.75	0.82	0.69
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	141	226	156	93	173	766	983	373	694	1291	112
Arrive On Green	0.21	0.21	0.20	0.21	0.21	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	90	667	1069	451	440	817	983	1428	541	878	1876	162
Grp Volume(v), veh/h	164	0	0	92	0	0	121	0	524	52	0	402
Grp Sat Flow(s),veh/h/ln	1826	0	0	1707	0	0	983	0	1970	878	0	2038
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.1	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.10		0.59	0.35		0.48	1.00		0.27	1.00		0.08
Lane Grp Cap(c), veh/h	436	0	0	422	0	0	766	0	1356	694	0	1403
V/C Ratio(X)	0.38	0.00	0.00	0.22	0.00	0.00	0.16	0.00	0.39	0.07	0.00	0.29
Avail Cap(c_a), veh/h	638	0	0	600	0	0	766	0	1356	694	0	1403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.96	0.00	0.96	0.93	0.00	0.93
Uniform Delay (d), s/veh	27.5	0.0	0.0	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.8	0.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	1.5	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	0.0	0.0	26.6	0.0	0.0	0.4	0.0	0.8	0.2	0.0	0.5
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		164			92			645				454
Approach Delay, s/veh		28.0			26.6			0.7				0.4
Approach LOS		C			C			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.1		20.9		59.1		20.9				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		25.0		45.0		25.0				
Max Q Clear Time (g_c+I1), s		2.0		5.2		2.0		8.1				
Green Ext Time (p_c), s		3.3		0.4		5.0		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				5.7								
HCM 6th LOS				A								

Timings
02/11/2023

	↙	↓	
Lane Group	EBR	SBT	Ø3
Lane Configurations	↗	↕	
Traffic Volume (vph)	98	314	
Future Volume (vph)	98	314	
Turn Type	Perm	NA	
Protected Phases		2	3
Permitted Phases	4		
Detector Phase	4	2	
Switch Phase			
Minimum Initial (s)	15.0	10.0	7.0
Minimum Split (s)	20.0	15.0	23.0
Total Split (s)	25.0	55.0	20.0
Total Split (%)	25.0%	55.0%	20%
Yellow Time (s)	3.0	3.0	12.0
All-Red Time (s)	2.0	2.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	
Lead/Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes
Recall Mode	None	C-Max	None

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 74 (74%), Referenced to phase 2:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 69: 11th St. & Pearl St.



Queues
02/11/202369: 11th St. & Pearl St.
Current Existing - PM Peak Hour
















Lane Group	EBR	SBT
Lane Group Flow (vph)	111	538
v/c Ratio	0.16	0.21
Control Delay	0.5	2.6
Queue Delay	0.0	0.0
Total Delay	0.5	2.6
Queue Length 50th (ft)	0	28
Queue Length 95th (ft)	0	42
Internal Link Dist (ft)		95
Turn Bay Length (ft)		
Base Capacity (vph)	730	2569
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.15	0.21
Intersection Summary		

HCM Signalized Intersection Capacity Analysis

69: 11th St. & Pearl St.

02/11/2023

Current Existing - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	98	0	0	0	0	0	0	0	314	138
Future Volume (vph)	0	0	98	0	0	0	0	0	0	0	314	138
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Total Lost time (s)			4.0								4.0	
Lane Util. Factor			1.00								0.95	
Frt			0.86								0.95	
Flt Protected			1.00								1.00	
Satd. Flow (prot)			1603								3335	
Flt Permitted			1.00								1.00	
Satd. Flow (perm)			1603								3335	
Peak-hour factor, PHF	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.73
Adj. Flow (vph)	0	0	111	0	0	0	0	0	0	0	349	189
RTOR Reduction (vph)	0	0	93	0	0	0	0	0	0	0	36	0
Lane Group Flow (vph)	0	0	18	0	0	0	0	0	0	0	502	0
Turn Type			Perm									NA
Protected Phases												2
Permitted Phases			4									
Actuated Green, G (s)			15.0								75.0	
Effective Green, g (s)			16.0								76.0	
Actuated g/C Ratio			0.16								0.76	
Clearance Time (s)			5.0								5.0	
Vehicle Extension (s)			2.0								3.0	
Lane Grp Cap (vph)			256								2534	
v/s Ratio Prot											c0.15	
v/s Ratio Perm			c0.01									
v/c Ratio			0.07								0.20	
Uniform Delay, d1			35.7								3.4	
Progression Factor			1.00								1.00	
Incremental Delay, d2			0.0								0.2	
Delay (s)			35.7								3.6	
Level of Service			D								A	
Approach Delay (s)		35.7			0.0			0.0			3.6	
Approach LOS		D			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.1									A
HCM 2000 Volume to Capacity ratio			0.22									
Actuated Cycle Length (s)			100.0							25.0		
Intersection Capacity Utilization			32.3%									A
Analysis Period (min)			15									
c Critical Lane Group												

Timings
02/11/2023

70: 11th St. & Walnut St.
Current Existing - PM Peak Hour

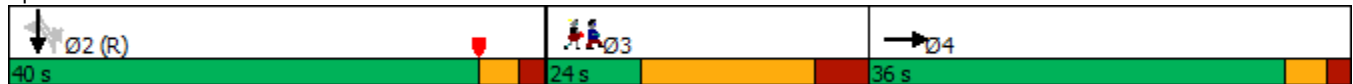


Lane Group	EBT	NBL	NBR	SBL	SBT	Ø3
Lane Configurations	↶	↶	↶	↶	↶	
Traffic Volume (vph)	217	35	106	333	38	
Future Volume (vph)	217	35	106	333	38	
Turn Type	NA	D.Pm	Perm	Perm	NA	
Protected Phases	4				2	3
Permitted Phases		2	2	2		
Detector Phase	4	2	2	2	2	
Switch Phase						
Minimum Initial (s)	19.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	24.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	36.0	40.0	40.0	40.0	40.0	24.0
Total Split (%)	36.0%	40.0%	40.0%	40.0%	40.0%	24%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	13.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 78 (78%), Referenced to phase 2:NBSB and 6:, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 70: 11th St. & Walnut St.



Queues
02/11/2023



Lane Group	EBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	319	44	120	243	247
v/c Ratio	0.55	0.14	0.17	0.32	0.38
Control Delay	28.2	23.1	0.5	4.1	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	23.1	0.5	4.1	16.8
Queue Length 50th (ft)	161	19	0	0	71
Queue Length 95th (ft)	187	39	0	46	93
Internal Link Dist (ft)	303				301
Turn Bay Length (ft)			35		
Base Capacity (vph)	585	323	699	757	647
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.14	0.17	0.32	0.38
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

70: 11th St. & Walnut St.

02/11/2023

Current Existing - PM Peak Hour

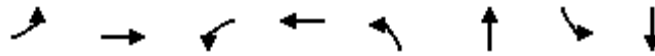


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔					↔		↔	↔	↔	↔
Traffic Volume (vph)	0	217	46	0	0	0	35	0	106	333	38	54
Future Volume (vph)	0	217	46	0	0	0	35	0	106	333	38	54
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Total Lost time (s)		4.0					4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00					1.00		1.00	0.95	0.95	
Frt		0.97					1.00		0.85	1.00	0.96	
Flt Protected		1.00					0.95		1.00	0.95	0.97	
Satd. Flow (prot)		1803					1760		1575	1672	1648	
Flt Permitted		1.00					0.49		1.00	0.95	0.97	
Satd. Flow (perm)		1803					899		1575	1672	1648	
Peak-hour factor, PHF	1.00	0.85	0.72	1.00	1.00	1.00	0.80	1.00	0.88	0.89	0.73	0.84
Adj. Flow (vph)	0	255	64	0	0	0	44	0	120	374	52	64
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	77	156	54	0
Lane Group Flow (vph)	0	310	0	0	0	0	44	0	43	87	193	0
Turn Type		NA					D.Pm		Perm	Perm	NA	
Protected Phases		4										2
Permitted Phases							2		2	2		
Actuated Green, G (s)		31.0					35.0		35.0	35.0	35.0	
Effective Green, g (s)		32.0					36.0		36.0	36.0	36.0	
Actuated g/C Ratio		0.32					0.36		0.36	0.36	0.36	
Clearance Time (s)		5.0					5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)		576					323		567	601	593	
v/s Ratio Prot		c0.17										
v/s Ratio Perm							0.05		0.03	0.05	0.12	
v/c Ratio		0.54					0.14		0.08	0.15	0.33	
Uniform Delay, d1		27.9					21.5		21.1	21.6	23.2	
Progression Factor		0.91					1.00		1.00	0.97	0.97	
Incremental Delay, d2		3.4					0.9		0.3	0.5	1.4	
Delay (s)		28.7					22.4		21.3	21.5	24.0	
Level of Service		C					C		C	C	C	
Approach Delay (s)		28.7			0.0			21.6			22.8	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c	Critical Lane Group		

Timings
02/11/2023

82: 9th St. & Pearl St.
Current Existing - PM Peak Hour

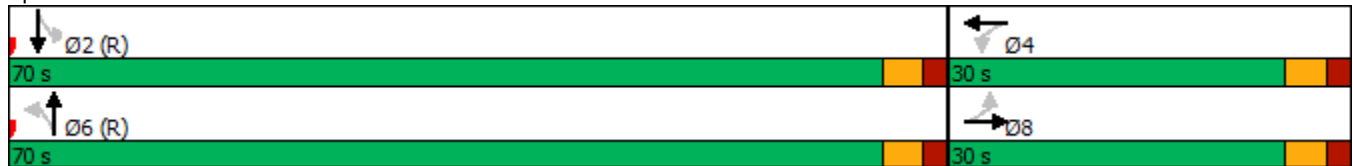


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↗	↗	↗
Traffic Volume (vph)	64	30	47	44	40	444	22	456
Future Volume (vph)	64	30	47	44	40	444	22	456
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	15.0	15.0	15.0	15.0	16.0	16.0	16.0	16.0
Minimum Split (s)	20.0	20.0	20.0	20.0	21.0	21.0	21.0	21.0
Total Split (s)	30.0	30.0	30.0	30.0	70.0	70.0	70.0	70.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 30 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 82: 9th St. & Pearl St.





Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	168	144	48	624	28	622
v/c Ratio	0.67	0.55	0.09	0.47	0.05	0.46
Control Delay	47.1	40.7	5.1	7.0	4.5	6.6
Queue Delay	0.0	0.0	0.0	0.7	0.0	0.0
Total Delay	47.1	40.7	5.1	7.7	4.5	6.6
Queue Length 50th (ft)	92	77	5	118	4	114
Queue Length 95th (ft)	105	121	25	240	12	214
Internal Link Dist (ft)	278	255		303		119
Turn Bay Length (ft)			110		55	
Base Capacity (vph)	355	376	511	1338	510	1346
Starvation Cap Reductn	0	0	0	377	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.38	0.09	0.65	0.05	0.46
Intersection Summary						

HCM 6th Signalized Intersection Summary

82: 9th St. & Pearl St.

02/11/2023

Current Existing - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	30	41	47	44	24	40	444	86	22	456	77
Future Volume (veh/h)	64	30	41	47	44	24	40	444	86	22	456	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	76	44	0	56	52	36	48	505	119	28	530	92
Peak Hour Factor	0.84	0.68	0.85	0.84	0.85	0.67	0.83	0.88	0.72	0.79	0.86	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	97		131	113	65	530	1107	261	620	1174	204
Arrive On Green	0.16	0.16	0.00	0.16	0.16	0.15	1.00	1.00	1.00	0.76	0.76	0.75
Sat Flow, veh/h	815	607	0	509	708	405	722	1456	343	721	1544	268
Grp Volume(v), veh/h	120	0	0	144	0	0	48	0	624	28	0	622
Grp Sat Flow(s),veh/h/ln	1422	0	0	1622	0	0	722	0	1799	721	0	1812
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	1.2	0.0	0.0	1.0	0.0	12.6
Cycle Q Clear(g_c), s	7.3	0.0	0.0	7.5	0.0	0.0	13.8	0.0	0.0	1.0	0.0	12.6
Prop In Lane	0.63		0.00	0.39		0.25	1.00		0.19	1.00		0.15
Lane Grp Cap(c), veh/h	286	0		309	0	0	530	0	1367	620	0	1378
V/C Ratio(X)	0.42	0.00		0.47	0.00	0.00	0.09	0.00	0.46	0.05	0.00	0.45
Avail Cap(c_a), veh/h	422	0		459	0	0	530	0	1367	620	0	1378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.87	0.00	0.87	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	0.0	0.0	38.5	0.0	0.0	1.1	0.0	0.0	3.0	0.0	4.4
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.4	0.0	0.0	0.3	0.0	1.0	0.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	3.3	0.0	0.0	0.1	0.0	0.4	0.1	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	0.0	0.0	38.9	0.0	0.0	1.4	0.0	1.0	3.1	0.0	5.5
LnGrp LOS	D	A		D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		120			144			672				650
Approach Delay, s/veh		38.6			38.9			1.0				5.4
Approach LOS		D			D			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		80.0		20.0		80.0		20.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		65.0		25.0		65.0		25.0				
Max Q Clear Time (g_c+I1), s		0.0		9.5		15.8		9.3				
Green Ext Time (p_c), s		0.0		0.3		0.2		0.2				

Intersection Summary

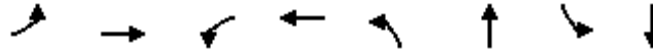
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Timings
02/11/2023

84: 9th St. & Walnut St.
Current Existing - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↖	↗	↖
Traffic Volume (vph)	18	32	43	15	72	423	51	450
Future Volume (vph)	18	32	43	15	72	423	51	450
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	21.0	21.0	21.0	21.0	17.0	17.0	17.0	17.0
Total Split (s)	30.0	30.0	30.0	30.0	70.0	70.0	70.0	70.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 31 (31%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 84: 9th St. & Walnut St.



Queues
02/11/2023

84: 9th St. & Walnut St.

Current Existing - PM Peak Hour





















Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	176	144	104	706	60	531
v/c Ratio	0.48	0.54	0.16	0.48	0.12	0.35
Control Delay	27.0	23.6	3.6	4.4	3.6	4.1
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.6
Total Delay	27.0	23.6	3.6	5.1	3.6	4.7
Queue Length 50th (ft)	60	27	9	64	7	76
Queue Length 95th (ft)	89	78	21	126	17	115
Internal Link Dist (ft)	255	291		287		303
Turn Bay Length (ft)			90		80	
Base Capacity (vph)	511	376	653	1480	508	1523
Starvation Cap Reductn	0	0	0	403	0	597
Spillback Cap Reductn	0	0	0	0	0	10
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.38	0.16	0.66	0.12	0.57
Intersection Summary						

HCM 6th Signalized Intersection Summary

84: 9th St. & Walnut St.

02/11/2023

Current Existing - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	32	96	43	15	53	72	423	148	51	450	23
Future Volume (veh/h)	18	32	96	43	15	53	72	423	148	51	450	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	28	44	104	56	20	68	104	498	208	60	495	36
Peak Hour Factor	0.64	0.73	0.92	0.77	0.75	0.78	0.69	0.85	0.71	0.85	0.91	0.64
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	93	181	138	62	134	727	1039	434	628	1428	104
Arrive On Green	0.17	0.17	0.16	0.17	0.17	0.16	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	187	550	1065	516	367	790	873	1385	578	742	1904	138
Grp Volume(v), veh/h	176	0	0	144	0	0	104	0	706	60	0	531
Grp Sat Flow(s),veh/h/ln	1801	0	0	1673	0	0	873	0	1963	742	0	2042
Q Serve(g_s), s	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.6	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.16		0.59	0.39		0.47	1.00		0.29	1.00		0.07
Lane Grp Cap(c), veh/h	348	0	0	334	0	0	727	0	1472	628	0	1532
V/C Ratio(X)	0.51	0.00	0.00	0.43	0.00	0.00	0.14	0.00	0.48	0.10	0.00	0.35
Avail Cap(c_a), veh/h	503	0	0	473	0	0	727	0	1472	628	0	1532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.00	0.92	0.89	0.00	0.89
Uniform Delay (d), s/veh	38.3	0.0	0.0	37.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.9	0.0	0.0	0.4	0.0	1.0	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	3.3	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	0.0	0.0	38.4	0.0	0.0	0.4	0.0	1.0	0.3	0.0	0.6
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		176			144			810				591
Approach Delay, s/veh		39.4			38.4			0.9				0.5
Approach LOS		D			D			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.0		21.0		79.0		21.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		65.0		25.0		65.0		25.0				
Max Q Clear Time (g_c+I1), s		2.0		9.2		2.0		10.6				
Green Ext Time (p_c), s		4.9		0.7		7.7		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				7.9								
HCM 6th LOS				A								

***Intersection Capacity Worksheets:
West Pearl Street Closure Conditions***

Timings
02/27/2023



Lane Group	SBT	Ø3	Ø4
Lane Configurations	↑↑		
Traffic Volume (vph)	233		
Future Volume (vph)	233		
Turn Type	NA		
Protected Phases	2	3	4
Permitted Phases			
Detector Phase	2		
Switch Phase			
Minimum Initial (s)	10.0	4.0	12.0
Minimum Split (s)	15.0	26.0	17.0
Total Split (s)	47.0	26.0	17.0
Total Split (%)	52.2%	29%	19%
Yellow Time (s)	3.0	12.0	3.0
All-Red Time (s)	2.0	4.0	2.0
Lost Time Adjust (s)	-1.0		
Total Lost Time (s)	4.0		
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	C-Max	Ped	None

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBT, Start of FDW or yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 69: 11th St. & Pearl St.



Queues
02/27/2023

69: 11th St. & Pearl St.
West Pearl Street Closure - AM Peak Hour


















Lane Group	SBT
Lane Group Flow (vph)	274
v/c Ratio	0.12
Control Delay	5.6
Queue Delay	0.0
Total Delay	5.6
Queue Length 50th (ft)	26
Queue Length 95th (ft)	37
Internal Link Dist (ft)	95
Turn Bay Length (ft)	
Base Capacity (vph)	2347
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.12
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

69: 11th St. & Pearl St.

02/27/2023

West Pearl Street Closure - AM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations											 		
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	233	0	
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	233	0	
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	
Total Lost time (s)											4.0		
Lane Util. Factor											0.95		
Frt											1.00		
Flt Protected											1.00		
Satd. Flow (prot)											3521		
Flt Permitted											1.00		
Satd. Flow (perm)											3521		
Peak-hour factor, PHF	1.00	1.00	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.80	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	274	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	274	0	
Turn Type			Perm									NA	
Protected Phases												2	
Permitted Phases			4										
Actuated Green, G (s)												59.0	
Effective Green, g (s)												60.0	
Actuated g/C Ratio												0.67	
Clearance Time (s)												5.0	
Vehicle Extension (s)												3.0	
Lane Grp Cap (vph)												2347	
v/s Ratio Prot												c0.08	
v/s Ratio Perm													
v/c Ratio												0.12	
Uniform Delay, d1												5.4	
Progression Factor												1.00	
Incremental Delay, d2												0.1	
Delay (s)												5.5	
Level of Service												A	
Approach Delay (s)		0.0			0.0			0.0				5.5	
Approach LOS		A			A			A				A	
Intersection Summary													
HCM 2000 Control Delay			5.5									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.11										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	25.0
Intersection Capacity Utilization			11.7%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

Timings
02/10/2023

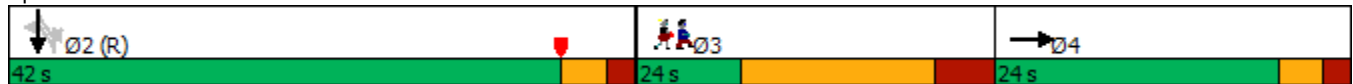


Lane Group	EBT	NBL	NBR	SBL	SBT	Ø3
Lane Configurations	↻	↻	↻	↻	↻	
Traffic Volume (vph)	120	28	76	44	9	
Future Volume (vph)	120	28	76	44	9	
Turn Type	NA	D.Pm	Perm	Perm	NA	
Protected Phases	4				2	3
Permitted Phases		2	2	2		
Detector Phase	4	2	2	2	2	
Switch Phase						
Minimum Initial (s)	19.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	24.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	24.0	42.0	42.0	42.0	42.0	24.0
Total Split (%)	26.7%	46.7%	46.7%	46.7%	46.7%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	13.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2:NBSB and 6:, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 70: 11th St. & Walnut St.



Queues

02/10/2023



Lane Group	EBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	163	40	104	49	167
v/c Ratio	0.40	0.08	0.13	0.06	0.23
Control Delay	27.5	16.3	0.3	0.1	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	16.3	0.3	0.1	4.5
Queue Length 50th (ft)	73	13	0	0	5
Queue Length 95th (ft)	133	25	0	0	20
Internal Link Dist (ft)	303				301
Turn Bay Length (ft)			35		
Base Capacity (vph)	410	484	797	838	730
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.08	0.13	0.06	0.23


















Intersection Summary

HCM Signalized Intersection Capacity Analysis

70: 11th St. & Walnut St.

02/10/2023

West Pearl Street Closure - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	120	25	0	0	0	28	0	76	44	9	111
Future Volume (vph)	0	120	25	0	0	0	28	0	76	44	9	111
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Total Lost time (s)		4.0					4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00					1.00		1.00	0.95	0.95	
Frt		0.97					1.00		0.85	1.00	0.87	
Flt Protected		1.00					0.95		1.00	0.95	1.00	
Satd. Flow (prot)		1802					1760		1575	1672	1524	
Flt Permitted		1.00					0.62		1.00	0.95	1.00	
Satd. Flow (perm)		1802					1146		1575	1672	1524	
Peak-hour factor, PHF	1.00	0.92	0.75	1.00	1.00	1.00	0.70	1.00	0.73	0.80	0.69	0.75
Adj. Flow (vph)	0	130	33	0	0	0	40	0	104	55	13	148
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	60	28	87	0
Lane Group Flow (vph)	0	153	0	0	0	0	40	0	44	21	80	0
Turn Type		NA					D.Pm		Perm	Perm	NA	
Protected Phases		4										2
Permitted Phases							2		2	2		
Actuated Green, G (s)		19.0					37.0		37.0	37.0	37.0	
Effective Green, g (s)		20.0					38.0		38.0	38.0	38.0	
Actuated g/C Ratio		0.22					0.42		0.42	0.42	0.42	
Clearance Time (s)		5.0					5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)		400					483		665	705	643	
v/s Ratio Prot		c0.08										
v/s Ratio Perm							0.03		0.03	0.01	0.05	
v/c Ratio		0.38					0.08		0.07	0.03	0.12	
Uniform Delay, d1		29.7					15.6		15.5	15.2	15.9	
Progression Factor		0.89					1.00		1.00	1.00	1.00	
Incremental Delay, d2		2.7					0.3		0.2	0.1	0.4	
Delay (s)		29.0					15.9		15.6	15.3	16.2	
Level of Service		C					B		B	B	B	
Approach Delay (s)		29.0			0.0			15.7			16.0	
Approach LOS		C			A			B			B	
Intersection Summary												
HCM 2000 Control Delay			20.0				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.19									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			25.0		
Intersection Capacity Utilization			42.5%				ICU Level of Service			A		
Analysis Period (min)			15									
c	Critical Lane Group											

Timings
02/10/2023

82: 9th St. & Pearl St.
West Pearl Street Closure - AM Peak Hour

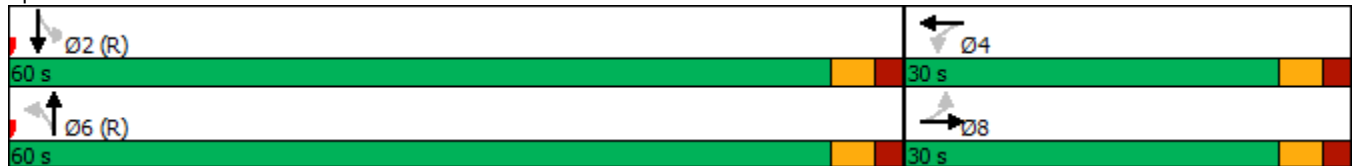


Lane Group	EBL	EBT	NBL	NBT	SBT	Ø4
Lane Configurations		↕	↗	↖	↖	
Traffic Volume (vph)	52	0	26	298	465	
Future Volume (vph)	52	0	26	298	465	
Turn Type	Perm	NA	Perm	NA	NA	
Protected Phases		8		6	2	4
Permitted Phases	8		6			
Detector Phase	8	8	6	6	2	
Switch Phase						
Minimum Initial (s)	15.0	15.0	16.0	16.0	16.0	15.0
Minimum Split (s)	20.0	20.0	21.0	21.0	21.0	20.0
Total Split (s)	30.0	30.0	60.0	60.0	60.0	30.0
Total Split (%)	33.3%	33.3%	66.7%	66.7%	66.7%	33%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	None

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 60 (67%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 82: 9th St. & Pearl St.



Queues
02/10/2023





















Lane Group	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	147	36	343	667
v/c Ratio	0.46	0.08	0.25	0.50
Control Delay	22.5	4.1	4.8	6.4
Queue Delay	0.0	0.0	0.5	0.0
Total Delay	22.5	4.1	5.3	6.4
Queue Length 50th (ft)	37	5	64	126
Queue Length 95th (ft)	47	12	111	174
Internal Link Dist (ft)	278		303	294
Turn Bay Length (ft)		110		
Base Capacity (vph)	480	473	1358	1327
Starvation Cap Reductn	0	0	620	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.08	0.46	0.50
Intersection Summary				

HCM 6th Signalized Intersection Summary

82: 9th St. & Pearl St.

02/10/2023

West Pearl Street Closure - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	0	62	0	0	0	26	298	0	0	465	111
Future Volume (veh/h)	52	0	62	0	0	0	26	298	0	0	465	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	64	0	0	0	0	0	36	343	0	0	541	126
Peak Hour Factor	0.81	0.61	0.75	0.71	0.85	0.65	0.72	0.87	0.77	0.83	0.86	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	0	0	0	268	0	515	1427	0	80	1119	261
Arrive On Green	0.14	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.77	0.76
Sat Flow, veh/h	1276	0	0	0	1861	0	692	1861	0	934	1459	340
Grp Volume(v), veh/h	64	0	0	0	0	0	36	343	0	0	0	667
Grp Sat Flow(s),veh/h/ln	1276	0	0	0	1861	0	692	1861	0	934	0	1799
Q Serve(g_s), s	4.1	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	12.4
Cycle Q Clear(g_c), s	4.1	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0	0.0	0.0	12.4
Prop In Lane	1.00		0.00	0.00		0.00	1.00		0.00	1.00		0.19
Lane Grp Cap(c), veh/h	264	0	0	0	268	0	515	1427	0	80	0	1380
V/C Ratio(X)	0.24	0.00	0.00	0.00	0.00	0.00	0.07	0.24	0.00	0.00	0.00	0.48
Avail Cap(c_a), veh/h	449	0	0	0	537	0	515	1427	0	80	0	1380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	0.95	0.95	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	3.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	0.0	0.0	0.0	0.0	0.0	1.5	0.4	0.0	0.0	0.0	5.1
LnGrp LOS	C	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		64			0			379				667
Approach Delay, s/veh		34.9			0.0			0.5				5.1
Approach LOS		C						A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.0		17.0		73.0		17.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		55.0		25.0		55.0		25.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		15.3		6.1				
Green Ext Time (p_c), s		0.0		0.0		0.1		0.1				

Intersection Summary

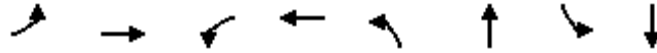
HCM 6th Ctrl Delay	5.3
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Timings
02/10/2023

84: 9th St. & Walnut St.
West Pearl Street Closure - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↖	↗	↖
Traffic Volume (vph)	6	10	34	2	72	313	88	334
Future Volume (vph)	6	10	34	2	72	313	88	334
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	21.0	21.0	21.0	21.0	17.0	17.0	17.0	17.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 50 (56%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 40
 Control Type: Actuated-Coordinated

Splits and Phases: 84: 9th St. & Walnut St.



Queues
02/10/202384: 9th St. & Walnut St.
West Pearl Street Closure - AM Peak Hour

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	72	95	76	535	104	383
v/c Ratio	0.19	0.26	0.09	0.35	0.15	0.24
Control Delay	16.7	15.0	2.8	3.1	6.2	6.0
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.4
Total Delay	16.7	15.0	2.8	3.4	6.2	6.4
Queue Length 50th (ft)	13	15	7	52	22	85
Queue Length 95th (ft)	27	7	17	97	35	110
Internal Link Dist (ft)	255	291		287		303
Turn Bay Length (ft)			90		80	
Base Capacity (vph)	547	522	833	1526	686	1592
Starvation Cap Reductn	0	0	0	424	0	705
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.18	0.09	0.49	0.15	0.43
Intersection Summary						

HCM 6th Signalized Intersection Summary
02/10/2023

84: 9th St. & Walnut St.
West Pearl Street Closure - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (veh/h)	6	10	34	34	2	24	72	313	178	88	334	14
Future Volume (veh/h)	6	10	34	34	2	24	72	313	178	88	334	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	12	16	44	39	4	52	76	337	198	104	367	16
Peak Hour Factor	0.50	0.63	0.77	0.88	0.50	0.46	0.95	0.93	0.90	0.85	0.91	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	101	203	156	37	165	805	885	520	710	1425	62
Arrive On Green	0.19	0.19	0.18	0.19	0.19	0.18	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	153	543	1093	535	199	888	1000	1221	717	870	1966	86
Grp Volume(v), veh/h	72	0	0	95	0	0	76	0	535	104	0	383
Grp Sat Flow(s),veh/h/ln	1789	0	0	1623	0	0	1000	0	1938	870	0	2052
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.17		0.61	0.41		0.55	1.00		0.37	1.00		0.04
Lane Grp Cap(c), veh/h	380	0	0	359	0	0	805	0	1405	710	0	1487
V/C Ratio(X)	0.19	0.00	0.00	0.26	0.00	0.00	0.09	0.00	0.38	0.15	0.00	0.26
Avail Cap(c_a), veh/h	557	0	0	519	0	0	805	0	1405	710	0	1487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.96	0.00	0.96	0.86	0.00	0.86
Uniform Delay (d), s/veh	31.3	0.0	0.0	31.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.4	0.0	0.0	0.2	0.0	0.8	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	1.8	0.0	0.0	0.1	0.0	0.3	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	0.0	0.0	32.0	0.0	0.0	0.2	0.0	0.8	0.4	0.0	0.4
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		72			95			611				487
Approach Delay, s/veh		31.5			32.0			0.7				0.4
Approach LOS		C			C			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.2		20.8		69.2		20.8				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		55.0		25.0		55.0		25.0				
Max Q Clear Time (g_c+I1), s		2.0		6.1		2.0		5.0				
Green Ext Time (p_c), s		3.6		0.4		5.0		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				4.7								
HCM 6th LOS				A								

Timings
02/27/2023



Lane Group	SBT	Ø3	Ø4
Lane Configurations	↑↑		
Traffic Volume (vph)	287		
Future Volume (vph)	287		
Turn Type	NA		
Protected Phases	2	3	4
Permitted Phases			
Detector Phase	2		
Switch Phase			
Minimum Initial (s)	12.0	10.0	15.0
Minimum Split (s)	17.0	20.0	20.0
Total Split (s)	40.0	20.0	20.0
Total Split (%)	50.0%	25%	25%
Yellow Time (s)	3.0	6.0	3.0
All-Red Time (s)	2.0	4.0	2.0
Lost Time Adjust (s)	-2.0		
Total Lost Time (s)	3.0		
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	C-Max	Ped	None

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 12 (15%), Referenced to phase 2:SBT, Start of FDW or yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 69: 11th St. & Pearl St.



Queues
02/27/2023

69: 11th St. & Pearl St.
West Pearl Street Closure - Off-Peak (Noon)


















Lane Group	SBT
Lane Group Flow (vph)	305
v/c Ratio	0.12
Control Delay	3.8
Queue Delay	0.0
Total Delay	3.8
Queue Length 50th (ft)	21
Queue Length 95th (ft)	32
Internal Link Dist (ft)	95
Turn Bay Length (ft)	
Base Capacity (vph)	2508
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.12
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

69: 11th St. & Pearl St.

02/27/2023

West Pearl Street Closure - Off-Peak (Noon)

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations											 		
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	287	0	
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	287	0	
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	
Total Lost time (s)											3.0		
Lane Util. Factor											0.95		
Frt											1.00		
Flt Protected											1.00		
Satd. Flow (prot)											3521		
Flt Permitted											1.00		
Satd. Flow (perm)											3521		
Peak-hour factor, PHF	1.00	1.00	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.82	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	305	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	305	0	
Turn Type			Perm									NA	
Protected Phases												2	
Permitted Phases			4										
Actuated Green, G (s)												55.0	
Effective Green, g (s)												57.0	
Actuated g/C Ratio												0.71	
Clearance Time (s)												5.0	
Vehicle Extension (s)												3.0	
Lane Grp Cap (vph)												2508	
v/s Ratio Prot												c0.09	
v/s Ratio Perm													
v/c Ratio												0.12	
Uniform Delay, d1												3.6	
Progression Factor												1.00	
Incremental Delay, d2												0.1	
Delay (s)												3.7	
Level of Service												A	
Approach Delay (s)		0.0			0.0			0.0				3.7	
Approach LOS		A			A			A				A	
Intersection Summary													
HCM 2000 Control Delay			3.7									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.11										
Actuated Cycle Length (s)			80.0									Sum of lost time (s)	18.0
Intersection Capacity Utilization			13.3%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

Timings
02/10/2023



Lane Group	EBT	NBL	NBR	SBL	SBT	Ø3
Lane Configurations	↻	↻	↻	↻	↻	
Traffic Volume (vph)	183	28	58	153	22	
Future Volume (vph)	183	28	58	153	22	
Turn Type	NA	D.Pm	Perm	Perm	NA	
Protected Phases	4				2	3
Permitted Phases		2	2	2		
Detector Phase	4	2	2	2	2	
Switch Phase						
Minimum Initial (s)	19.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	24.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	24.0	32.0	32.0	32.0	32.0	24.0
Total Split (%)	30.0%	40.0%	40.0%	40.0%	40.0%	30%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	13.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	4.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 23 (29%), Referenced to phase 2:NBSB and 6:, Start of Yellow

Natural Cycle: 65

Control Type: Pretimed

Splits and Phases: 70: 11th St. & Walnut St.



Queues

02/10/2023



Lane Group	EBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	285	44	79	124	220
v/c Ratio	0.59	0.13	0.11	0.16	0.34
Control Delay	27.8	18.3	0.3	0.4	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	18.3	0.3	0.4	9.8
Queue Length 50th (ft)	115	14	0	0	33
Queue Length 95th (ft)	147	28	0	0	47
Internal Link Dist (ft)	303				301
Turn Bay Length (ft)			35		
Base Capacity (vph)	485	348	736	771	654
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.13	0.11	0.16	0.34
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

70: 11th St. & Walnut St.

02/10/2023

West Pearl Street Closure - Off-Peak (Noon)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↔						↔		↔	↔	↔
Traffic Volume (vph)	0	183	55	0	0	0	1	28	0	58	153	22
Future Volume (vph)	0	183	55	0	0	0	1	28	0	58	153	22
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Total Lost time (s)		3.0						3.0		3.0	3.0	3.0
Lane Util. Factor		1.00						1.00		1.00	0.95	0.95
Frt		0.96						1.00		0.85	1.00	0.91
Flt Protected		1.00						0.95		1.00	0.95	0.99
Satd. Flow (prot)		1785						1760		1575	1672	1585
Flt Permitted		1.00						0.52		1.00	0.95	0.99
Satd. Flow (perm)		1785						960		1575	1672	1585
Peak-hour factor, PHF	1.00	0.88	0.71	1.00	1.00	1.00	0.25	0.70	1.00	0.73	0.84	0.67
Adj. Flow (vph)	0	208	77	0	0	0	4	40	0	79	182	33
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	0	50	79	80
Lane Group Flow (vph)	0	268	0	0	0	0	0	44	0	29	45	140
Turn Type		NA					custom	D.Pm		Perm	Perm	NA
Protected Phases		4										2
Permitted Phases								2		2	2	
Actuated Green, G (s)		19.0						27.0		27.0	27.0	27.0
Effective Green, g (s)		21.0						29.0		29.0	29.0	29.0
Actuated g/C Ratio		0.26						0.36		0.36	0.36	0.36
Clearance Time (s)		5.0						5.0		5.0	5.0	5.0
Lane Grp Cap (vph)		468						348		570	606	574
v/s Ratio Prot		c0.15										
v/s Ratio Perm								0.05		0.02	0.03	0.09
v/c Ratio		0.57						0.13		0.05	0.07	0.24
Uniform Delay, d1		25.6						17.0		16.6	16.7	17.8
Progression Factor		0.95						1.00		1.00	1.00	1.00
Incremental Delay, d2		4.8						0.7		0.2	0.2	1.0
Delay (s)		29.0						17.8		16.7	16.9	18.8
Level of Service		C						B		B	B	B
Approach Delay (s)		29.0			0.0				17.1			18.2
Approach LOS		C			A				B			B

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	108
Future Volume (vph)	108
Ideal Flow (vphpl)	2100
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.84
Adj. Flow (vph)	129
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings
02/10/2023

82: 9th St. & Pearl St.
West Pearl Street Closure - Off-Peak (Noon)



Lane Group	EBL	EBT	NBL	NBT	SBT	Ø4
Lane Configurations		↕	↗	↖	↖	
Traffic Volume (vph)	58	0	44	339	360	
Future Volume (vph)	58	0	44	339	360	
Turn Type	Perm	NA	Perm	NA	NA	
Protected Phases		8		6	2	4
Permitted Phases	8		6			
Detector Phase	8	8	6	6	2	
Switch Phase						
Minimum Initial (s)	15.0	15.0	16.0	16.0	16.0	15.0
Minimum Split (s)	20.0	20.0	21.0	21.0	21.0	20.0
Total Split (s)	30.0	30.0	50.0	50.0	50.0	30.0
Total Split (%)	37.5%	37.5%	62.5%	62.5%	62.5%	38%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	
Total Lost Time (s)		3.0	3.0	3.0	3.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	None

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 64 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 82: 9th St. & Pearl St.



Queues

02/10/2023



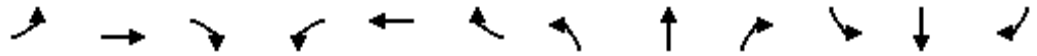
Lane Group	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	228	56	377	611
v/c Ratio	0.53	0.12	0.29	0.48
Control Delay	17.3	5.3	5.9	6.4
Queue Delay	0.0	0.0	0.4	0.0
Total Delay	17.3	5.3	6.3	6.4
Queue Length 50th (ft)	42	7	52	99
Queue Length 95th (ft)	26	21	123	163
Internal Link Dist (ft)	278		303	294
Turn Bay Length (ft)		110		
Base Capacity (vph)	595	476	1308	1262
Starvation Cap Reductn	0	0	490	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.12	0.46	0.48
Intersection Summary				

HCM 6th Signalized Intersection Summary

82: 9th St. & Pearl St.

02/10/2023

West Pearl Street Closure - Off-Peak (Noon)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (veh/h)	58	0	106	0	0	0	44	339	0	0	360	118
Future Volume (veh/h)	58	0	106	0	0	0	44	339	0	0	360	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	79	0	0	0	0	0	56	377	0	0	424	187
Peak Hour Factor	0.73	0.49	0.71	0.78	0.83	0.61	0.79	0.90	0.89	0.79	0.85	0.63
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	0		0	335	0	532	1386	0	90	912	402
Arrive On Green	0.18	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.74	0.72
Sat Flow, veh/h	1276	0	0	0	1861	0	729	1861	0	905	1224	540
Grp Volume(v), veh/h	79	0	0	0	0	0	56	377	0	0	0	611
Grp Sat Flow(s),veh/h/ln	1276	0	0	0	1861	0	729	1861	0	905	0	1763
Q Serve(g_s), s	4.3	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	11.1
Cycle Q Clear(g_c), s	4.3	0.0	0.0	0.0	0.0	0.0	12.4	0.0	0.0	0.0	0.0	11.1
Prop In Lane	1.00		0.00	0.00		0.00	1.00		0.00	1.00		0.31
Lane Grp Cap(c), veh/h	320	0		0	335	0	532	1386	0	90	0	1314
V/C Ratio(X)	0.25	0.00		0.00	0.00	0.00	0.11	0.27	0.00	0.00	0.00	0.47
Avail Cap(c_a), veh/h	521	0		0	628	0	532	1386	0	90	0	1314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	4.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	0.0	0.0	0.0	0.0	0.0	1.5	0.4	0.0	0.0	0.0	5.3
LnGrp LOS	C	A		A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		79			0			433				611
Approach Delay, s/veh		28.8			0.0			0.6				5.3
Approach LOS		C						A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.6		17.4		62.6		17.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		25.0		45.0		25.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		14.4		6.3				
Green Ext Time (p_c), s		0.0		0.0		0.1		0.1				

Intersection Summary

HCM 6th Ctrl Delay	5.1
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Timings
02/10/2023

84: 9th St. & Walnut St.
West Pearl Street Closure - Off-Peak (Noon)



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↗	↗	↗
Traffic Volume (vph)	11	35	53	6	94	197	118	272
Future Volume (vph)	11	35	53	6	94	197	118	272
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	21.0	21.0	21.0	21.0	17.0	17.0	17.0	17.0
Total Split (s)	30.0	30.0	30.0	30.0	50.0	50.0	50.0	50.0
Total Split (%)	37.5%	37.5%	37.5%	37.5%	62.5%	62.5%	62.5%	62.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 62 (78%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 84: 9th St. & Walnut St.



Queues
02/10/2023

84: 9th St. & Walnut St.
West Pearl Street Closure - Off-Peak (Noon)



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	164	162	121	549	157	364
v/c Ratio	0.35	0.48	0.16	0.41	0.28	0.26
Control Delay	14.7	25.4	3.7	3.1	5.5	4.5
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.4
Total Delay	14.7	25.4	3.7	3.4	5.5	4.9
Queue Length 50th (ft)	29	55	12	28	22	49
Queue Length 95th (ft)	46	6	20	63	33	65
Internal Link Dist (ft)	255	291		287		303
Turn Bay Length (ft)			90		80	
Base Capacity (vph)	656	487	735	1334	565	1397
Starvation Cap Reductn	0	0	0	321	0	563
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.33	0.16	0.54	0.28	0.44
Intersection Summary						

HCM 6th Signalized Intersection Summary

84: 9th St. & Walnut St.

02/10/2023

West Pearl Street Closure - Off-Peak (Noon)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (veh/h)	11	35	73	53	6	48	94	197	263	118	272	22
Future Volume (veh/h)	11	35	73	53	6	48	94	197	263	118	272	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	16	52	96	77	16	69	121	216	333	157	332	32
Peak Hour Factor	0.69	0.67	0.76	0.69	0.38	0.70	0.78	0.91	0.79	0.75	0.82	0.69
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	142	227	209	60	150	790	504	777	680	1276	123
Arrive On Green	0.21	0.21	0.20	0.21	0.21	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	90	666	1067	669	282	706	1018	733	1130	858	1856	179
Grp Volume(v), veh/h	164	0	0	162	0	0	121	0	549	157	0	364
Grp Sat Flow(s),veh/h/ln	1824	0	0	1657	0	0	1018	0	1864	858	0	2035
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.1	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.10		0.59	0.48		0.43	1.00		0.61	1.00		0.09
Lane Grp Cap(c), veh/h	437	0	0	418	0	0	790	0	1282	680	0	1399
V/C Ratio(X)	0.38	0.00	0.00	0.39	0.00	0.00	0.15	0.00	0.43	0.23	0.00	0.26
Avail Cap(c_a), veh/h	637	0	0	585	0	0	790	0	1282	680	0	1399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.96	0.00	0.96	0.87	0.00	0.87
Uniform Delay (d), s/veh	27.5	0.0	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.6	0.0	0.0	0.4	0.0	1.0	0.7	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	2.7	0.0	0.0	0.1	0.0	0.4	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	0.0	0.0	27.8	0.0	0.0	0.4	0.0	1.0	0.7	0.0	0.4
LnGrp LOS	C	A	A	C	A	A	A	A	A	A	A	A
Approach Vol, veh/h		164			162			670				521
Approach Delay, s/veh		28.0			27.8			0.9				0.5
Approach LOS		C			C			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		21.0		59.0		21.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		25.0		45.0		25.0				
Max Q Clear Time (g_c+I1), s		2.0		7.7		2.0		8.1				
Green Ext Time (p_c), s		3.8		0.9		5.5		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				6.6								
HCM 6th LOS				A								

Timings
02/27/2023



Lane Group	SBT	Ø3	Ø4
Lane Configurations	↑↑		
Traffic Volume (vph)	408		
Future Volume (vph)	408		
Turn Type	NA		
Protected Phases	2	3	4
Permitted Phases			
Detector Phase	2		
Switch Phase			
Minimum Initial (s)	10.0	7.0	15.0
Minimum Split (s)	15.0	26.0	20.0
Total Split (s)	54.0	26.0	20.0
Total Split (%)	54.0%	26%	20%
Yellow Time (s)	3.0	12.0	3.0
All-Red Time (s)	2.0	4.0	2.0
Lost Time Adjust (s)	-1.0		
Total Lost Time (s)	4.0		
Lead/Lag		Lead	Lag
Lead-Lag Optimize?		Yes	Yes
Recall Mode	C-Max	Ped	None

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 69: 11th St. & Pearl St.



Queues
02/27/2023

69: 11th St. & Pearl St.
West Pearl Street Closure - PM Peak Hour


















Lane Group	SBT
Lane Group Flow (vph)	453
v/c Ratio	0.18
Control Delay	5.4
Queue Delay	0.0
Total Delay	5.4
Queue Length 50th (ft)	45
Queue Length 95th (ft)	63
Internal Link Dist (ft)	95
Turn Bay Length (ft)	
Base Capacity (vph)	2464
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.18
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

69: 11th St. & Pearl St.

02/27/2023

West Pearl Street Closure - PM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	408	0	
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	408	0	
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	
Total Lost time (s)											4.0		
Lane Util. Factor											0.95		
Frt											1.00		
Flt Protected											1.00		
Satd. Flow (prot)											3521		
Flt Permitted											1.00		
Satd. Flow (perm)											3521		
Peak-hour factor, PHF	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.73	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	453	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	453	0	
Turn Type			Perm									NA	
Protected Phases												2	
Permitted Phases			4										
Actuated Green, G (s)												69.0	
Effective Green, g (s)												70.0	
Actuated g/C Ratio												0.70	
Clearance Time (s)												5.0	
Vehicle Extension (s)												3.0	
Lane Grp Cap (vph)												2464	
v/s Ratio Prot												c0.13	
v/s Ratio Perm													
v/c Ratio												0.18	
Uniform Delay, d1												5.2	
Progression Factor												1.00	
Incremental Delay, d2												0.2	
Delay (s)												5.3	
Level of Service												A	
Approach Delay (s)		0.0			0.0			0.0				5.3	
Approach LOS		A			A			A				A	
Intersection Summary													
HCM 2000 Control Delay			5.3									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.17										
Actuated Cycle Length (s)			100.0									Sum of lost time (s)	25.0
Intersection Capacity Utilization			14.7%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

Timings
02/10/2023

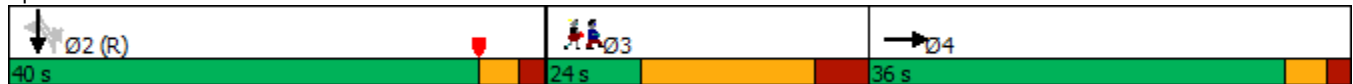


Lane Group	EBT	NBL	NBR	SBL	SBT	Ø3
Lane Configurations						
Traffic Volume (vph)	298	35	106	245	28	
Future Volume (vph)	298	35	106	245	28	
Turn Type	NA	D.Pm	Perm	Perm	NA	
Protected Phases	4				2	3
Permitted Phases		2	2	2		
Detector Phase	4	2	2	2	2	
Switch Phase						
Minimum Initial (s)	19.0	10.0	10.0	10.0	10.0	7.0
Minimum Split (s)	24.0	15.0	15.0	15.0	15.0	24.0
Total Split (s)	36.0	40.0	40.0	40.0	40.0	24.0
Total Split (%)	36.0%	40.0%	40.0%	40.0%	40.0%	24%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	13.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	4.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lag					Lead
Lead-Lag Optimize?	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 78 (78%), Referenced to phase 2:NBSB and 6:, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 70: 11th St. & Walnut St.



Queues

02/10/2023



Lane Group	EBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	439	44	120	179	310
v/c Ratio	0.75	0.16	0.17	0.24	0.49
Control Delay	39.7	23.9	0.5	2.9	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.5
Total Delay	39.7	23.9	0.5	2.9	20.0
Queue Length 50th (ft)	198	19	0	0	106
Queue Length 95th (ft)	371	40	0	30	132
Internal Link Dist (ft)	303				301
Turn Bay Length (ft)			35		
Base Capacity (vph)	585	269	699	734	634
Starvation Cap Reductn	0	0	0	0	86
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.75	0.16	0.17	0.24	0.57
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

70: 11th St. & Walnut St.

02/10/2023

West Pearl Street Closure - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔					↔		↔	↔	↔	↔
Traffic Volume (vph)	0	298	63	0	0	0	35	0	106	245	28	148
Future Volume (vph)	0	298	63	0	0	0	35	0	106	245	28	148
Ideal Flow (vphpl)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Total Lost time (s)		4.0					4.0		4.0	4.0	4.0	
Lane Util. Factor		1.00					1.00		1.00	0.95	0.95	
Frt		0.97					1.00		0.85	1.00	0.91	
Flt Protected		1.00					0.95		1.00	0.95	0.98	
Satd. Flow (prot)		1803					1760		1575	1672	1586	
Flt Permitted		1.00					0.40		1.00	0.95	0.98	
Satd. Flow (perm)		1803					749		1575	1672	1586	
Peak-hour factor, PHF	1.00	0.85	0.72	1.00	1.00	1.00	0.80	1.00	0.88	0.89	0.73	0.84
Adj. Flow (vph)	0	351	88	0	0	0	44	0	120	275	38	176
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	77	115	63	0
Lane Group Flow (vph)	0	430	0	0	0	0	44	0	43	64	247	0
Turn Type		NA					D.Pm		Perm	Perm	NA	
Protected Phases		4										2
Permitted Phases							2		2	2		
Actuated Green, G (s)		31.0					35.0		35.0	35.0	35.0	
Effective Green, g (s)		32.0					36.0		36.0	36.0	36.0	
Actuated g/C Ratio		0.32					0.36		0.36	0.36	0.36	
Clearance Time (s)		5.0					5.0		5.0	5.0	5.0	
Lane Grp Cap (vph)		576					269		567	601	570	
v/s Ratio Prot		c0.24										
v/s Ratio Perm							0.06		0.03	0.04	0.16	
v/c Ratio		0.75					0.16		0.08	0.11	0.43	
Uniform Delay, d1		30.4					21.8		21.1	21.3	24.3	
Progression Factor		1.05					1.00		1.00	1.00	1.00	
Incremental Delay, d2		7.8					1.3		0.3	0.4	2.4	
Delay (s)		39.8					23.1		21.3	21.7	26.6	
Level of Service		D					C		C	C	C	
Approach Delay (s)		39.8			0.0			21.8			24.8	
Approach LOS		D			A			C			C	

Intersection Summary		
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.53	C
Actuated Cycle Length (s)	100.0	Sum of lost time (s)
Intersection Capacity Utilization	50.1%	25.0
Analysis Period (min)	15	ICU Level of Service
		A
c Critical Lane Group		

Timings
02/10/2023

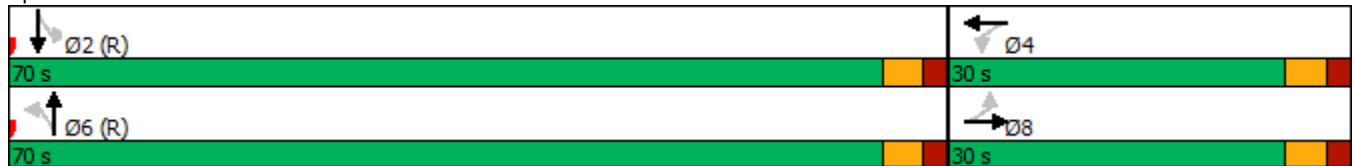


Lane Group	EBL	EBT	NBL	NBT	SBT	Ø4
Lane Configurations		↕	↗	↖	↖	
Traffic Volume (vph)	64	0	40	468	478	
Future Volume (vph)	64	0	40	468	478	
Turn Type	Perm	NA	Perm	NA	NA	
Protected Phases		8		6	2	4
Permitted Phases	8		6			
Detector Phase	8	8	6	6	2	
Switch Phase						
Minimum Initial (s)	15.0	15.0	16.0	16.0	16.0	15.0
Minimum Split (s)	20.0	20.0	21.0	21.0	21.0	20.0
Total Split (s)	30.0	30.0	70.0	70.0	70.0	30.0
Total Split (%)	30.0%	30.0%	70.0%	70.0%	70.0%	30%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	None

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 30 (30%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 82: 9th St. & Pearl St.



Queues

02/10/2023



Lane Group	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	160	48	532	700
v/c Ratio	0.56	0.10	0.38	0.52
Control Delay	32.8	3.8	4.8	6.5
Queue Delay	0.0	0.0	0.6	0.0
Total Delay	32.8	3.8	5.4	6.5
Queue Length 50th (ft)	62	7	120	136
Queue Length 95th (ft)	81	m14	116	219
Internal Link Dist (ft)	278		303	119
Turn Bay Length (ft)		110		
Base Capacity (vph)	419	470	1395	1358
Starvation Cap Reductn	0	0	492	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.10	0.59	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
02/10/2023

82: 9th St. & Pearl St.
West Pearl Street Closure - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	64	0	71	0	0	0	40	468	0	0	478	121
Future Volume (veh/h)	64	0	71	0	0	0	40	468	0	0	478	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861	1861
Adj Flow Rate, veh/h	76	0	0	0	0	0	48	532	0	0	556	144
Peak Hour Factor	0.84	0.68	0.85	0.84	0.85	0.67	0.83	0.88	0.72	0.79	0.86	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	0		0	264	0	499	1448	0	72	1109	287
Arrive On Green	0.14	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.78	0.77
Sat Flow, veh/h	1276	0	0	0	1861	0	672	1861	0	785	1425	369
Grp Volume(v), veh/h	76	0	0	0	0	0	48	532	0	0	0	700
Grp Sat Flow(s),veh/h/ln	1276	0	0	0	1861	0	672	1861	0	785	0	1794
Q Serve(g_s), s	5.4	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	14.3
Cycle Q Clear(g_c), s	5.4	0.0	0.0	0.0	0.0	0.0	15.7	0.0	0.0	0.0	0.0	14.3
Prop In Lane	1.00		0.00	0.00		0.00	1.00		0.00	1.00		0.21
Lane Grp Cap(c), veh/h	253	0		0	264	0	499	1448	0	72	0	1396
V/C Ratio(X)	0.30	0.00		0.00	0.00	0.00	0.10	0.37	0.00	0.00	0.00	0.50
Avail Cap(c_a), veh/h	404	0		0	484	0	499	1448	0	72	0	1396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	0.83	0.83	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	4.1
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	0.0	0.0	0.0	0.0	0.0	1.8	0.6	0.0	0.0	0.0	5.4
LnGrp LOS	D	A		A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		76			0			580			700	
Approach Delay, s/veh		39.4			0.0			0.7			5.4	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		81.8		18.2		81.8		18.2				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		65.0		25.0		65.0		25.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		17.7		7.4				
Green Ext Time (p_c), s		0.0		0.0		0.1		0.1				

Intersection Summary

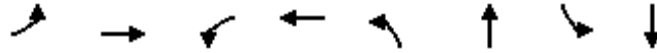
HCM 6th Ctrl Delay	5.3
HCM 6th LOS	A

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Timings
02/10/2023

84: 9th St. & Walnut St.
West Pearl Street Closure - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕	↗	↗	↗	↗
Traffic Volume (vph)	18	32	90	15	72	337	103	403
Future Volume (vph)	18	32	90	15	72	337	103	403
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	16.0	16.0	16.0	16.0	12.0	12.0	12.0	12.0
Minimum Split (s)	21.0	21.0	21.0	21.0	17.0	17.0	17.0	17.0
Total Split (s)	30.0	30.0	30.0	30.0	70.0	70.0	70.0	70.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-1.0		-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)		4.0		4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 31 (31%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 84: 9th St. & Walnut St.



Queues
02/10/2023

84: 9th St. & Walnut St.
West Pearl Street Closure - PM Peak Hour



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	176	236	104	726	121	479
v/c Ratio	0.39	0.76	0.17	0.53	0.29	0.34
Control Delay	20.9	33.7	4.9	5.6	7.6	6.2
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.5
Total Delay	20.9	33.7	4.9	6.2	7.6	6.7
Queue Length 50th (ft)	57	40	11	66	22	90
Queue Length 95th (ft)	75	175	32	196	44	139
Internal Link Dist (ft)	255	291		287		303
Turn Bay Length (ft)			90		80	
Base Capacity (vph)	520	361	636	1374	427	1433
Starvation Cap Reductn	0	0	0	289	0	516
Spillback Cap Reductn	1	0	0	0	0	39
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.65	0.16	0.67	0.28	0.52
Intersection Summary						

HCM 6th Signalized Intersection Summary

84: 9th St. & Walnut St.

02/10/2023

West Pearl Street Closure - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	32	96	90	15	77	72	337	234	103	403	23
Future Volume (veh/h)	18	32	96	90	15	77	72	337	234	103	403	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067	2067
Adj Flow Rate, veh/h	28	44	104	117	20	99	104	396	330	121	443	36
Peak Hour Factor	0.64	0.73	0.92	0.77	0.75	0.78	0.69	0.85	0.71	0.85	0.91	0.64
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	108	209	185	33	119	739	759	633	602	1374	112
Arrive On Green	0.19	0.19	0.18	0.19	0.19	0.18	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	189	565	1089	684	175	621	916	1042	869	728	1886	153
Grp Volume(v), veh/h	176	0	0	236	0	0	104	0	726	121	0	479
Grp Sat Flow(s),veh/h/ln	1843	0	0	1479	0	0	916	0	1911	728	0	2040
Q Serve(g_s), s	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.4	0.0	0.0	15.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.16		0.59	0.50		0.42	1.00		0.45	1.00		0.08
Lane Grp Cap(c), veh/h	395	0	0	338	0	0	739	0	1392	602	0	1485
V/C Ratio(X)	0.45	0.00	0.00	0.70	0.00	0.00	0.14	0.00	0.52	0.20	0.00	0.32
Avail Cap(c_a), veh/h	512	0	0	438	0	0	739	0	1392	602	0	1485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.00	0.92	0.85	0.00	0.85
Uniform Delay (d), s/veh	36.3	0.0	0.0	39.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	3.4	0.0	0.0	0.4	0.0	1.3	0.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	5.9	0.0	0.0	0.1	0.0	0.5	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	0.0	0.0	42.3	0.0	0.0	0.4	0.0	1.3	0.6	0.0	0.5
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		176			236			830				600
Approach Delay, s/veh		37.1			42.3			1.2				0.5
Approach LOS		D			D			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		76.8		23.2		76.8		23.2				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		65.0		25.0		65.0		25.0				
Max Q Clear Time (g_c+I1), s		2.0		17.3		2.0		10.4				
Green Ext Time (p_c), s		5.0		0.9		8.1		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				9.7								
HCM 6th LOS				A								

C

Appendix C

Public Engagement Summary



Boulder Downtown Streets as Public Space

Engagement Summary Report

Introduction

The purpose of the **Downtown Streets as Public Space (DSaPS)** project is to develop recommendations for the temporary reimagining of one or more downtown streets for a Spring/Summer 2023 “pop-up” through technical analysis and community engagement. **We intend to:**

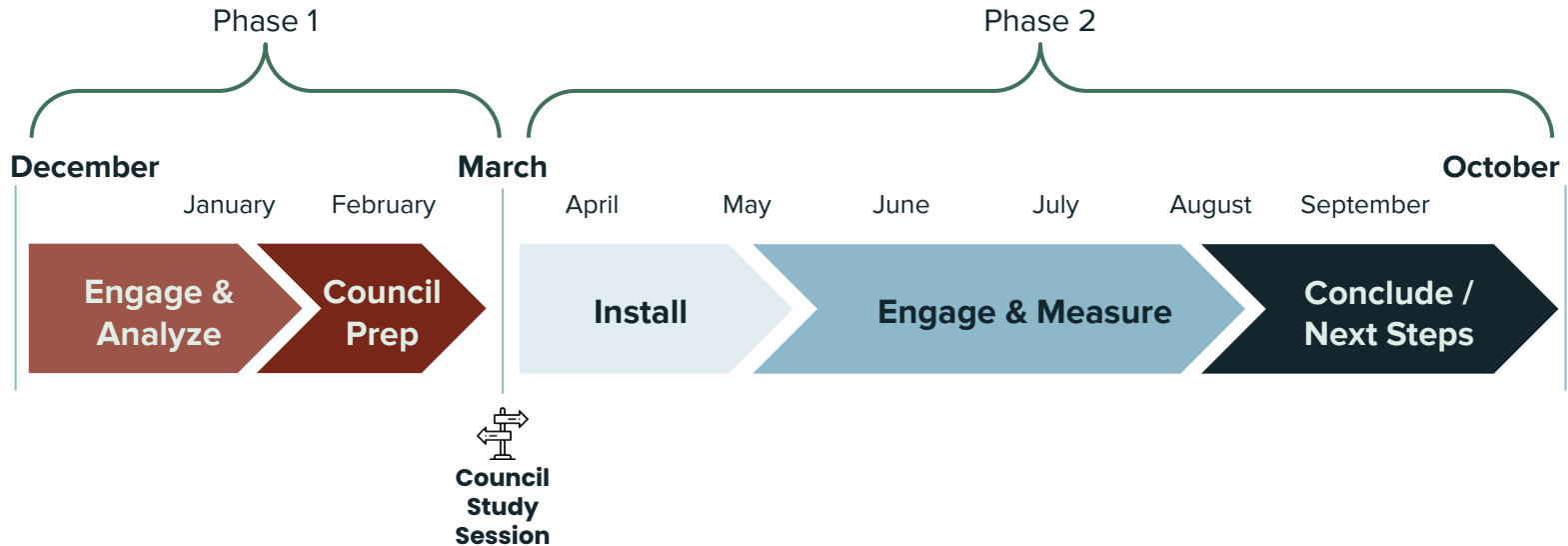
- Collectively reflect, learn from and build on a variety of experiences.
- Ensure that recommendations for Downtown Streets as Public Space reflect diverse community voices and the feasibility and technical analysis of the issues considered.
- Develop a series of feasible and exciting recommendations to implement in Spring/Summer 2023 that will test ideas for reimagining streets in one or more downtown locations.
- Utilize the project outcomes to inform upcoming planning efforts and future policy discussions about streets for public spaces in the city.

Downtown Streets as Public Space
Boulder is trying something new this spring.



Project Timeline

The DSaPS project kicked off in December 2022 with the intent to deliver recommendations to City Council in March 2023 for pop-ups that will occur in the Spring and Summer of 2023. The quick turnaround schedule to develop recommendations is to ensure that the community sees action this Summer, so that we can learn by doing and also meet the great community interest in reimagining downtown streets.



Engagement Overview

Two goals of the DSaPS project are to build on a variety of experiences and build pop-up recommendations that reflect diverse community voices as well as public space potential and other technical considerations. To do that, we began by evaluating previous engagement data to identify gaps both in type of feedback and community members represented. Then, we built a series of engagement activities based on the city's Engagement Framework to address the gaps and to inform this summer's pop-ups .

Online Questionnaire

Assessed individuals' use of downtown; their priorities and travel patterns; and what and where they'd like to see more of in downtown.

In-Person Activities

Engaged community members in an interactive activity to further understanding of priorities and their ideas on popup locations.

Stakeholder Meetings

Learned from potential pop-up partners and specific stakeholder groups to ensure recommendations are implementable and with multiple perspectives.

Engagement Timeline

JANUARY

FEBRUARY

Online
Questionnaire

Jan 13 - 31 Online Questionnaire

In-Person
Activities

Jan. 25 - North Boulder
Rec. Center

Jan. 27 - East Boulder
Comm. Center

Jan. 27 - Outside in
Downtown Boulder

Stakeholder
Meetings

Jan. 25 - Boulder
Farmers Market

Feb. 1 - Business Support
Recovery Alliance*

Jan. 25 - Downtown
Boulder Partnership

Feb. 10 - Community
Connectors in Residence

Jan. 26 - West Pearl Business
Owners Focus Group

Jan. 26 - Community
Cycles

Item 1 - Downtown Streets as Public Space Project Update

*see page X for list of Alliance members

Audiences

Who did we try to reach?

Our goal in the engagement plan was to reach all types of audiences outlined here, however, we noticed some gaps that still remain after conducting the engagement. The gaps are summarized on pages 44 and 45 and will be addressed in the pop-up engagement.

Individuals

- Historically underrepresented racial and ethnic groups
- English and non-English speakers
- Immigrant and mixed-immigration status families
- Low-income residents
- Residents over 65 years old
- People living with disabilities
- Members of the LGBTQ community
- University community
- Residents
- Visitors and tourists
- Downtown employees

Stakeholder groups

Downtown businesses

City Council

City staff

Approach to Diversity, Equity & Inclusion

Questionnaire & Activity Design and Translation

Carefully considered individual audience members' potential interpretation to question wording and sought to frame questions appropriately

Included responses that account for multiple experiences and provided an opportunity for write-in options in case an individual's experience was not listed in multiple/single choice responses

Translated all materials, including the questionnaire, to Spanish

Outreach

Created a communications plan that accounts for specific outreach to underrepresented groups, including those that may not visit downtown, to promote participation in the questionnaire

Leveraged partnerships to spread the word through their networks

Demographic Data

Gathered demographic data to assess if we reached the intended racial, gender, age, neighborhood diversity, and income

Boulder Engagement Strategic Framework

The Boulder City Council adopted the Engagement Strategic Framework in 2017 that utilizes the International Association for Public Participation (IAP2) engagement spectrum to design engagement plans. This project focuses on “Inform” and “Consult” level engagement:

INCREASING IMPACT ON THE DECISION →

		INFORM	CONSULT	INVOLVE	COLLABORATE
PROMISE TO THE PUBLIC	PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding a problem, alternatives, opportunities and/or solutions.	To obtain public feedback on public analysis, alternatives and/or decisions.	To work directly with the public throughout a process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and identification of a preferred solution.
		We will keep you informed.	We will keep you informed, listen to and acknowledge your concerns and aspirations, and share feedback on how public input influenced the decision. We will seek your feedback on drafts and proposals.	We will work with you to ensure that your concerns and aspirations are reflected in any alternatives and share feedback on how the public input influenced the decision.	We will work together with you to formulate solutions and to incorporate your advice and recommendations into the decisions to the maximum extent possible.

Summary: Online Questionnaire



Questionnaire Approach & Design

Simplicity

We wanted to hear from people who likely had not participated in engagement about downtown before, so the questionnaire was designed to be less than 10 questions and easy to fill out.



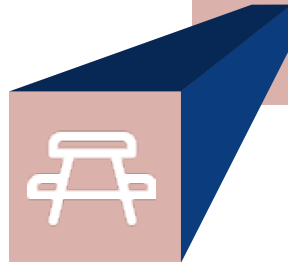
Understand Travel

We believe travel type (bike, bus, walk, vehicle) and weather dependencies impact a successful pop-up, so we wanted to ask questions about how people get downtown and if weather makes a difference.



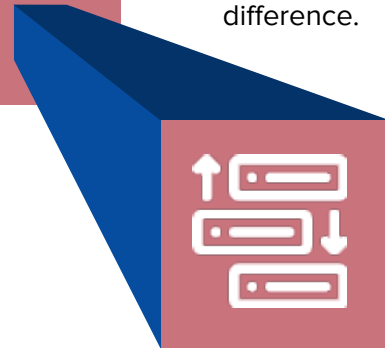
Solicit Desired Experiences

This project is about bringing the community an experience, so we wanted to understand how people currently and might use downtown in the future.



Prioritize

This is a project of tradeoffs. We wanted to know - if you had to pick - what pop-up aspects would you choose as most / least important?



Questionnaire Results

The full questionnaire response report from BeHeard Boulder is attached as an Appendix to this report. Key results and insights are below and on the following pages.

7 Multiple Choice Questions

1 Pin-on-the-map Exercise

19 Days available online in English & Spanish

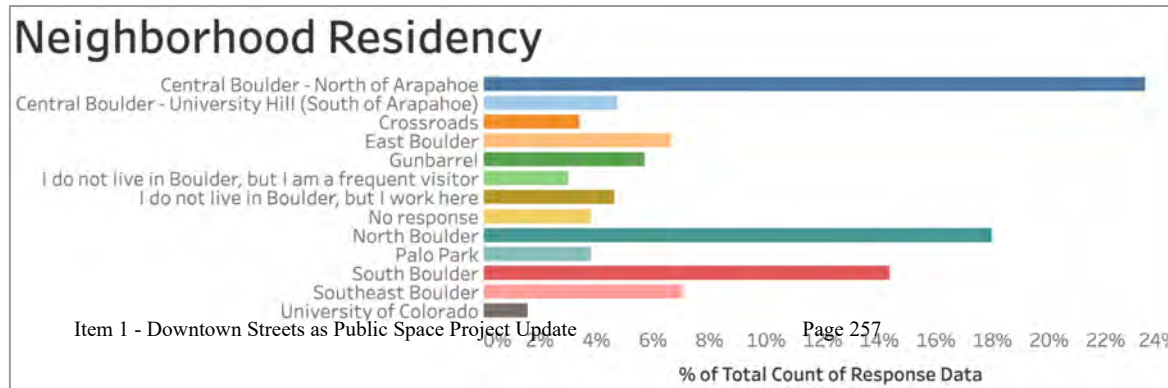
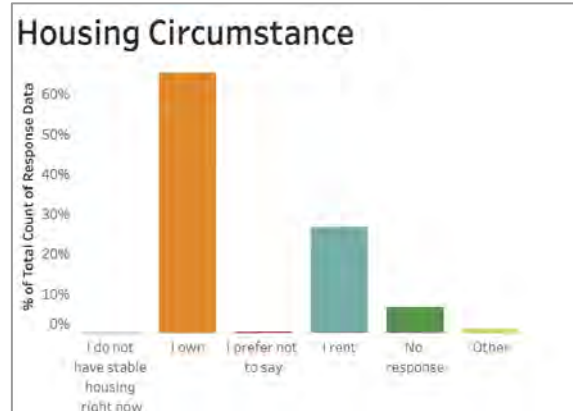
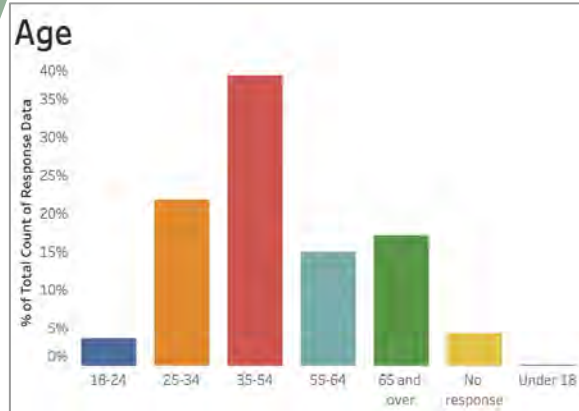
+3,600 Website Visits

1,799 Questionnaire Respondents

133 Online Map Pins

Questionnaire Results: *Demographics Overview*

The graphs below represent the demographic characteristics of the 1,799 questionnaire respondents, including those that chose not to respond to some or all demographic questions.

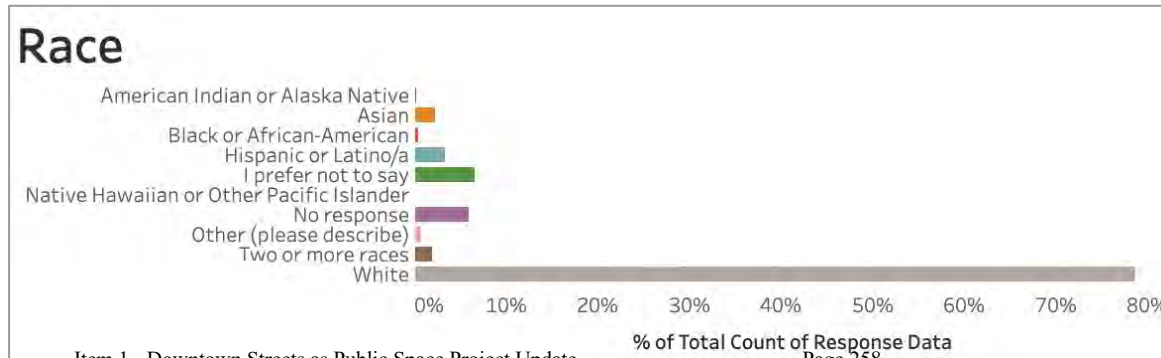
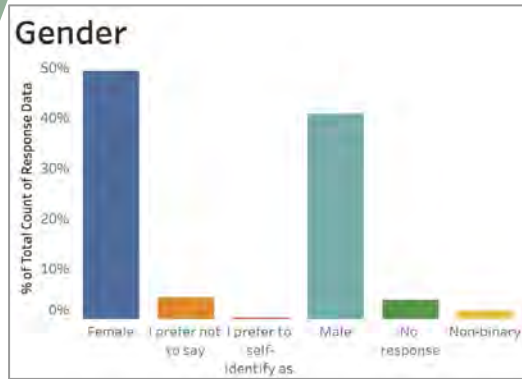


What does this tell us?

- 38% of respondents are between ages 25-54
- 65% of respondents are homeowners
- 60% of respondents live in Central, South and North Boulder

Questionnaire Results: *Demographics Overview*

The graphs below represent the demographic characteristics of the 1,799 questionnaire respondents, including those that chose not to respond to some or all demographic questions.



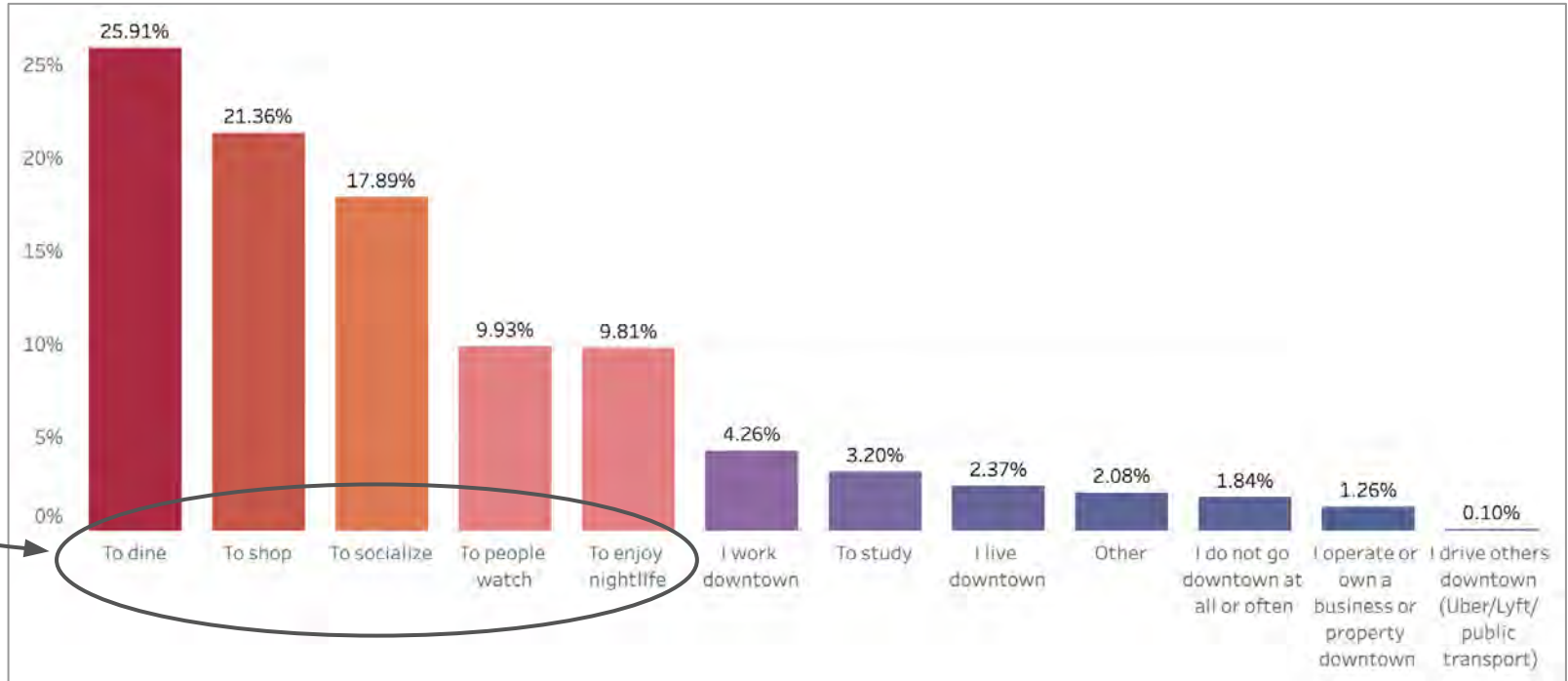
What does this tell us?

- 49% of respondents are female
- 21% of respondents are non-white
- 52% of respondents have household income higher than \$100k

Questionnaire Results: *Analysis*

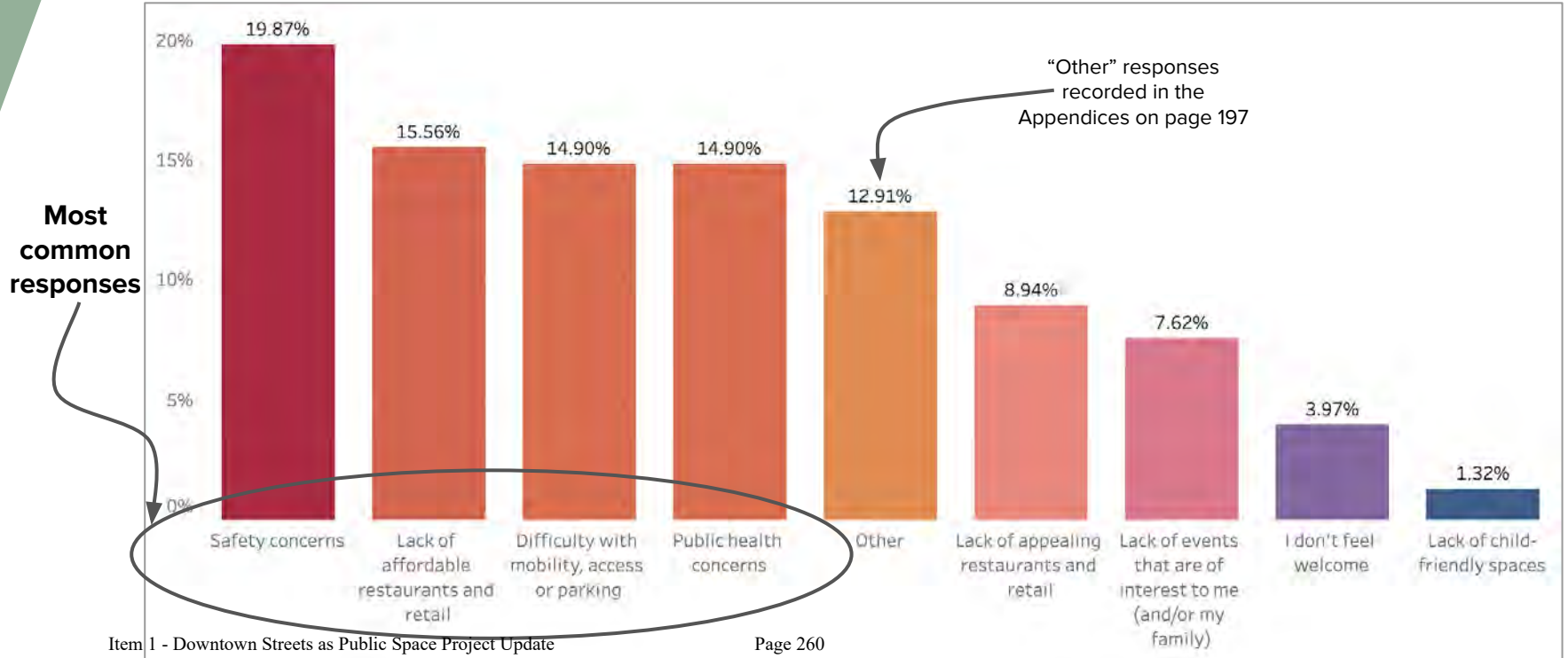
“Why do you typically go downtown? (Check all that apply)”

Most common responses



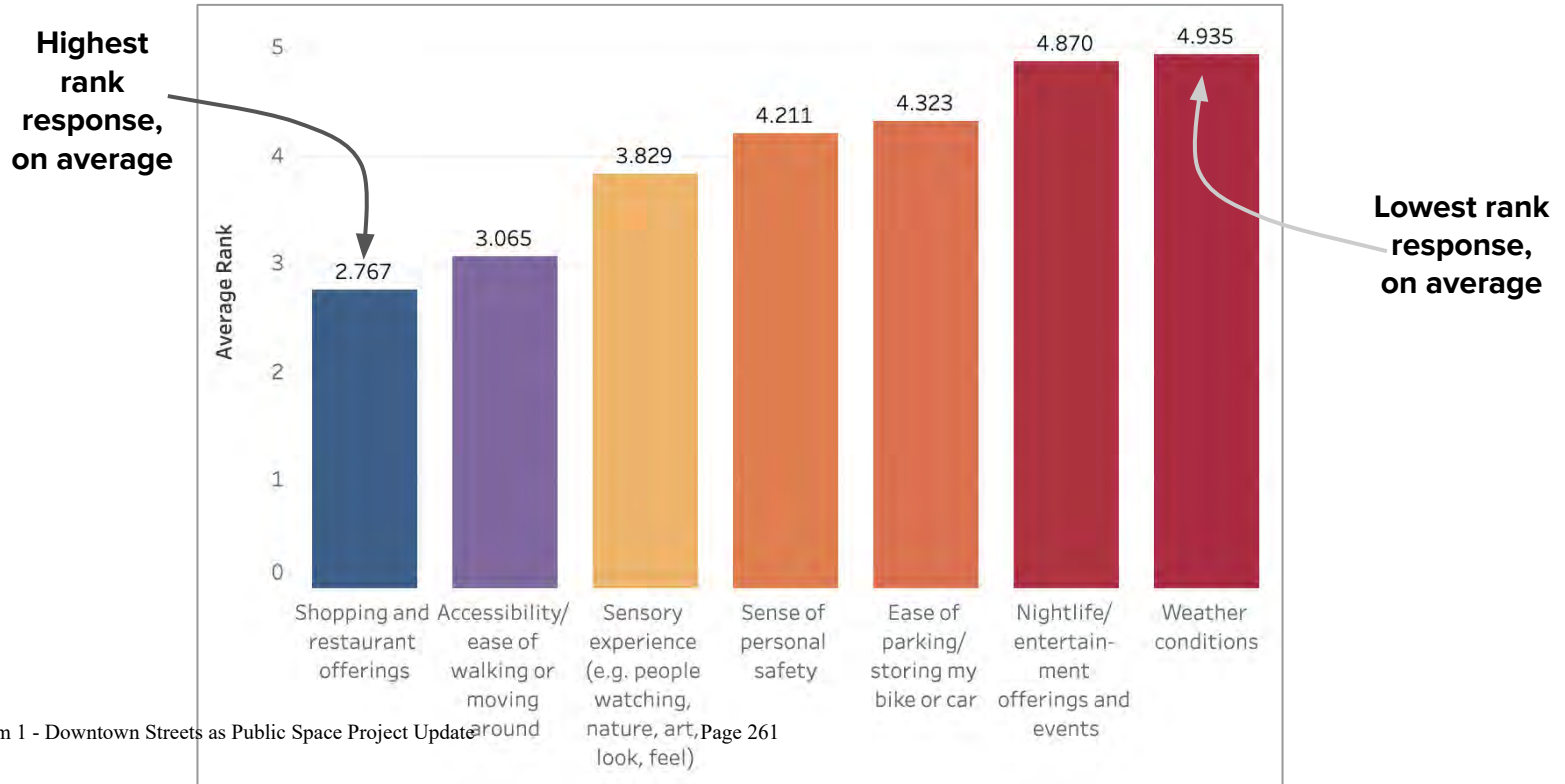
Questionnaire Results: *Analysis*

“If you selected ‘I do not go downtown at all or often’ on the previous question, please check all of the reasons that you do not visit downtown”



Questionnaire Results: *Analysis*

“Which factors influence your choice to spend leisure time downtown? Please rank each factor from most (1) to least (7) important.”

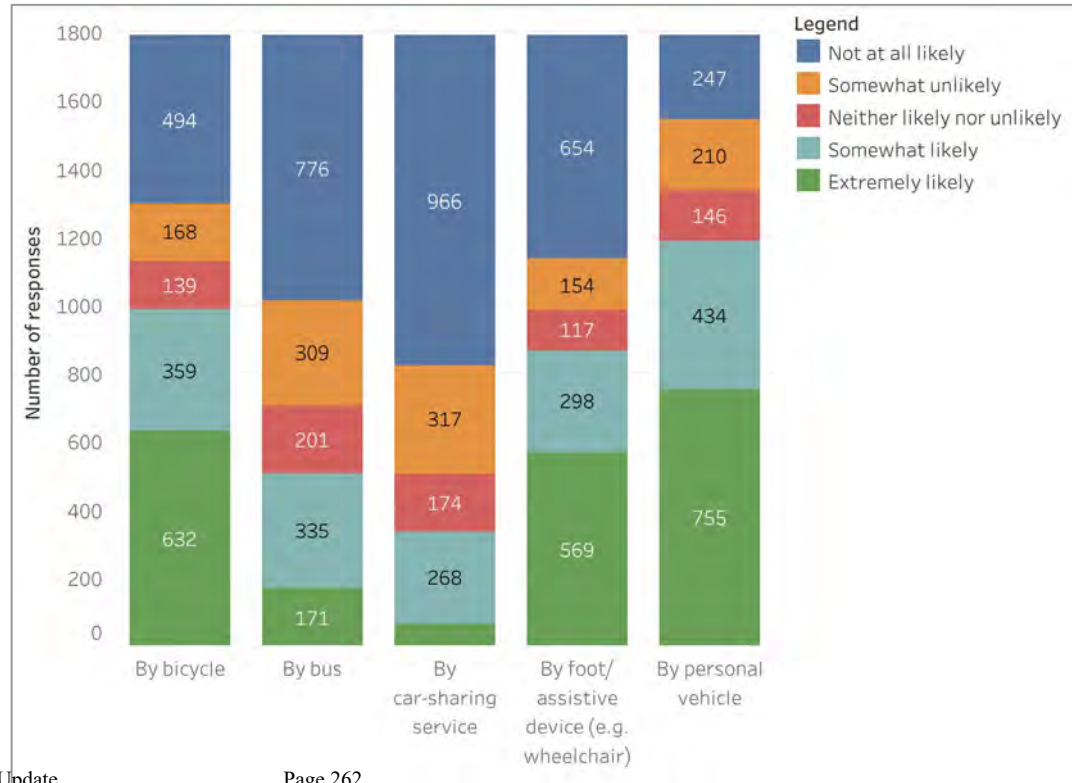


Questionnaire Results: *Analysis*

During **good weather**, how likely are you to use the following mode(s) of transportation to get downtown?

What does this tell us?

- Many respondents are likely to bike, walk, and/or drive a personal vehicle downtown in good weather
- Few respondents are likely to take a car sharing service or bus downtown in good weather

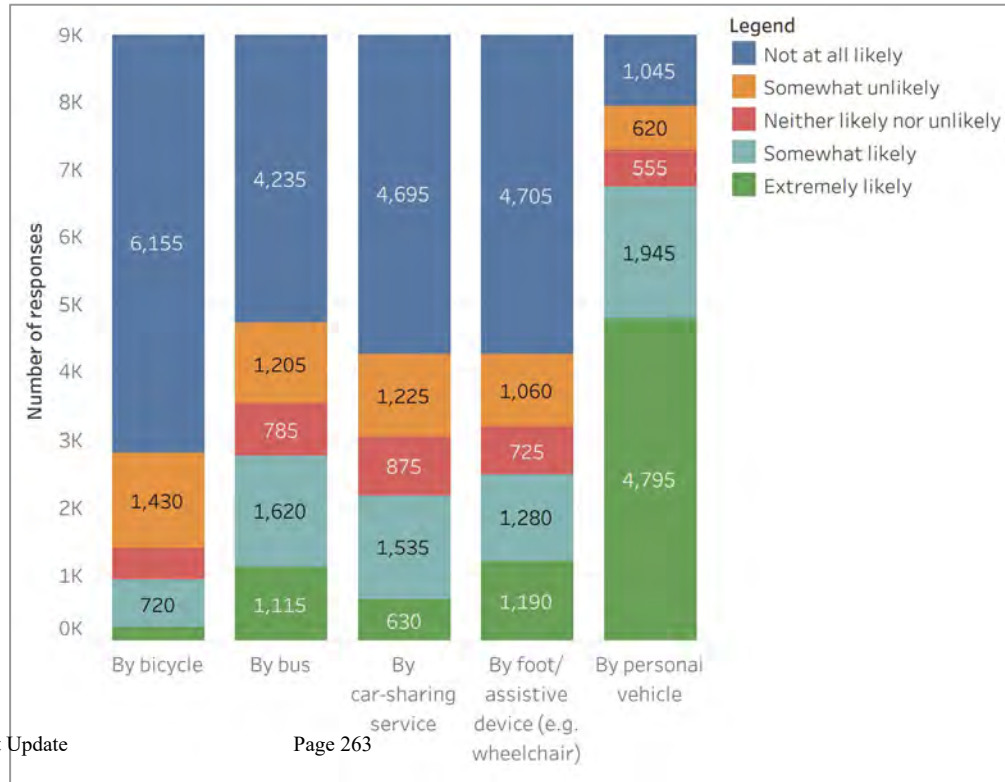


Questionnaire Results: *Analysis*

“During **inclement weather weather** (extreme cold, snow, heavy rain, high winds), how likely are you to use the following mode(s) of transportation to get downtown?”

What does this tell us?

- Most respondents are likely to drive a personal vehicle downtown in inclement weather
- Few respondents are likely to take other travel modes downtown in inclement weather

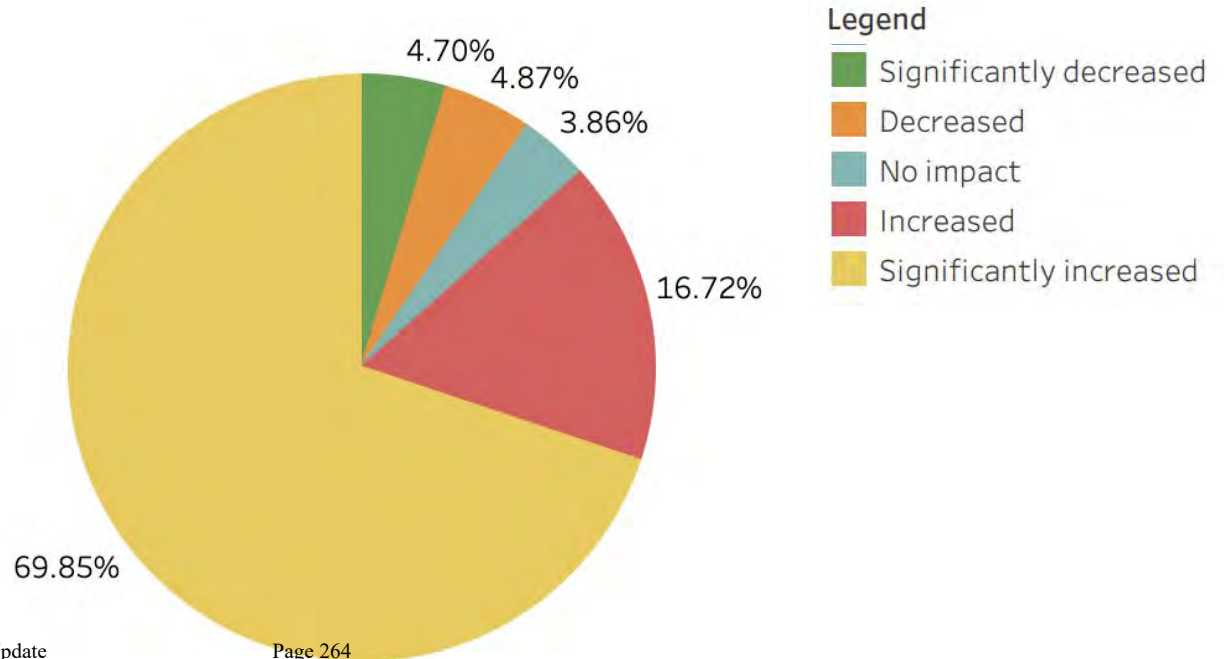


Questionnaire Results: *Analysis*

During the pandemic, from spring of 2020 until fall of 2022, the west Pearl Street area from 9th Street to 11th Street was closed to vehicles to make room for expanded outdoor dining, pedestrian spaces, gathering and events. In your view, how do you think this temporary change in the use of streets impacted the overall appeal of the west Pearl area?

What does this tell us?

- ~86% of respondents said the temporary change significantly increased or increased the overall appeal of the West Pearl Area
- ~9% of respondents said the temporary change significantly decreased or decreased their



Questionnaire Results: *Analysis*

“Different people may have different priorities for downtown streets. In which order do you think the city should prioritize community interests for downtown streets as public space?” (1 is highest priority; 8 is lowest)

Highest priority

Lowest priority

	One	Two	Three	Four	Five	Six	Seven	Eight
Provide additional enjoyable public spaces for gathering and outdoor dining/entertainment/leisure	1,054	239	118	94	79	65	55	88
Use curbs for non-vehicular purposes (e.g. landscaping, bicycle/scooter parking, curb and sidewalk extensions, outdoor dining)	125	564	308	185	180	160	161	109
Maximize access for all people regardless of ability and mode	182	262	368	300	282	167	136	95
Maximize economic vitality potential for underutilized/underinvested areas	46	161	263	361	349	292	206	114
Preserve quiet enjoyment/quality of life/character of surrounding neighborhoods	97	187	279	281	284	303	228	133
Minimize traffic congestion	78	179	229	246	241	304	337	178
Enhance critical connections between downtown and nearby destinations such as University Hill	32	120	142	231	249	315	390	313
Preserve curbside vehicle access to businesses (e.g. on-street pick-up/drop-off/deliveries/loading)	178	80	85	94	128	186	279	762

Item 1 - Downtown Streets as Public Space

Project Update Page 265

Questionnaire Results Analysis

The project team requested cross-tabulation analysis of several “key questions” to further our understanding of the questionnaire responses. The results and insights from the cross-tabulation exercises are on the following pages.

Questionnaire Results Analysis

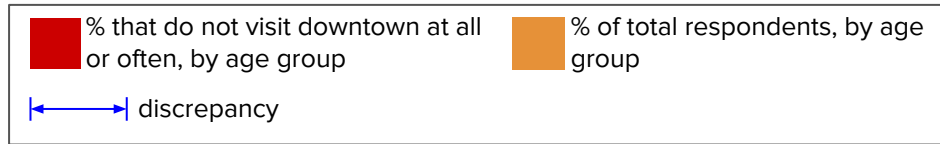
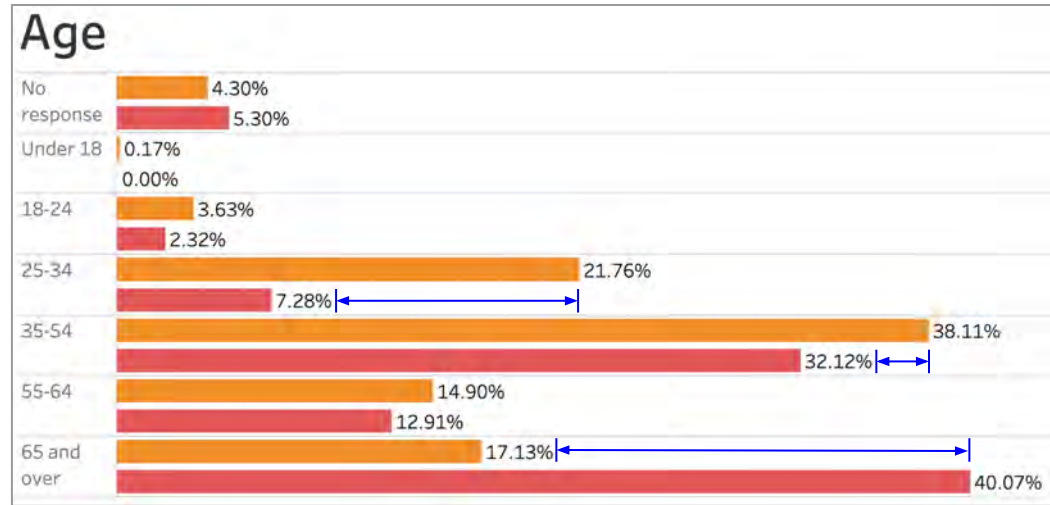
Do respondents that said they ‘do not visit downtown or often’ vary by demographics?

What does this tell us?

Respondents ages 65 and over were almost twice as likely to say they don’t visit downtown at all or often as compared to their overall representation in the respondent pool.

Conversely, respondents ages 25-34 and 35-54 are less likely, as compared to their respondent pool, to say they do not visit downtown at all or often.

The remaining demographics are skewed too heavily by “no response” rates to determine if this response varies by other demographics.



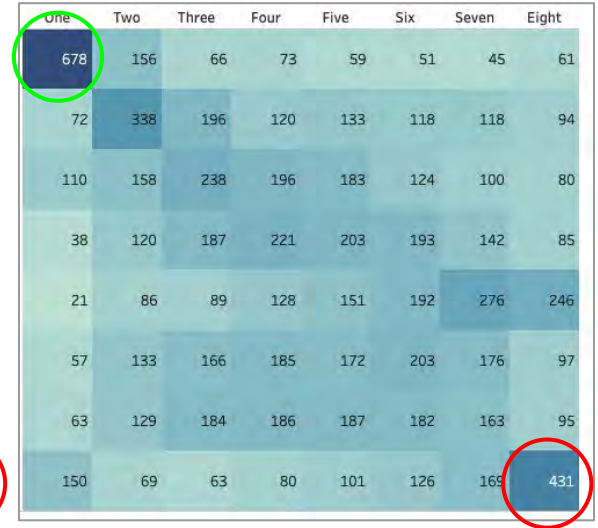
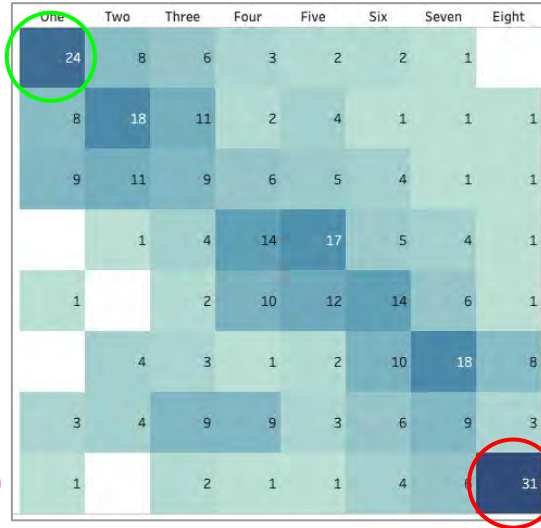
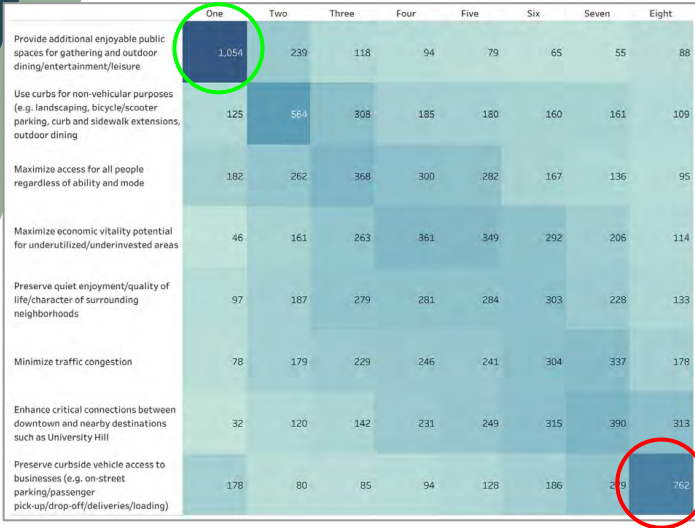
Questionnaire Results Analysis

Do the priorities of respondents vary for those with extremely different travel preferences?
The darker the color, the higher number of respondents prioritized the associated rating and choice.

All responses for Question 7 related to priorities (see page 20 for more detail)

Respondents that said they were “extremely likely” or “somewhat likely” to **bike, bus or walk downtown during inclement weather**

Respondents that said they were “extremely likely” or “somewhat likely” to **drive a personal vehicle downtown during good weather**



Full graphs that are more legible are recorded in the Appendices on page 198.

What does this tell us?

There are subtle differences in priorities, though overall, both travel preference profiles’ highest priority (green circle) is to “provide additional enjoyable public spaces.” and lowest priority (red circle) is to “provide curbside vehicle access to businesses...”

○ Highest priority
○ Lowest priority

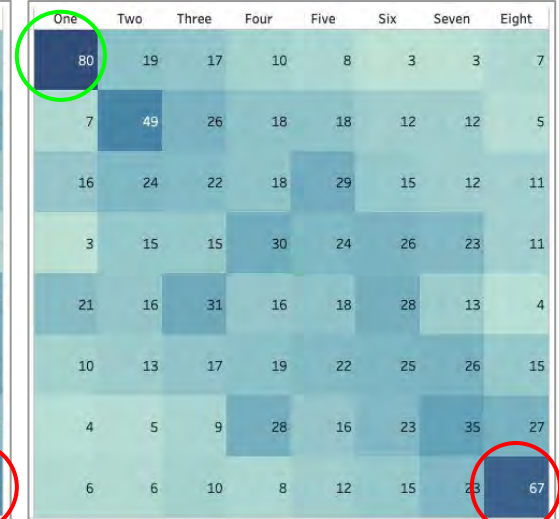
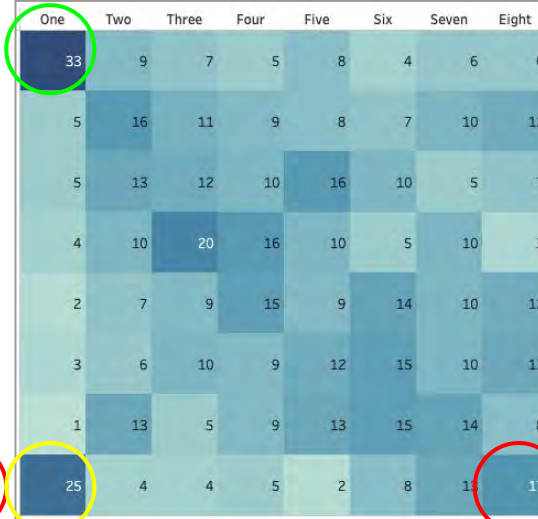
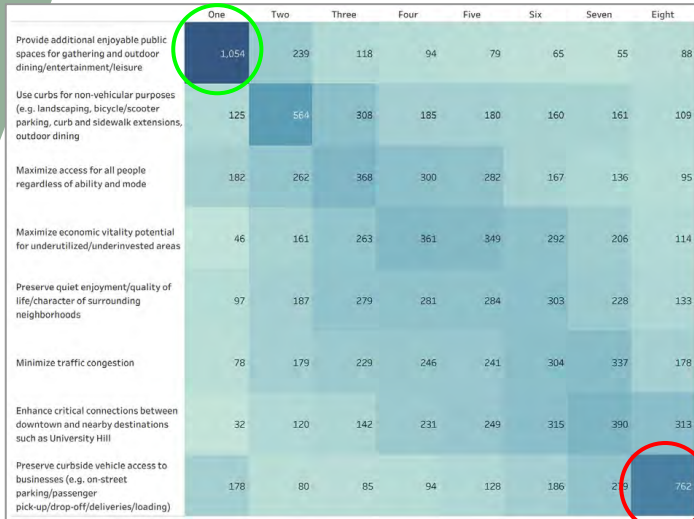
Questionnaire Results Analysis

Do the priorities of respondents vary for those that live or own/operate a business downtown?
 The darker the color, the higher number of respondents prioritized the associated rating and choice.

All responses for Question 7 related to priorities (see page 20 for more detail)

Respondents that said they are a **downtown business owner / operator**

Respondents that said they are a **downtown residents**



What does this tell us?

There is one significant anomaly: downtown business owner/operators' second highest #1 priority is to preserve curbside vehicle access. Though overall, both travel preference profiles' highest priority is to "provide additional enjoyable public spaces..." and lowest priority is to "provide curbside vehicle access to businesses..."

- Highest priority
- Lowest priority
- Anomaly

Full graphs that are more legible are recorded in the Appendices on page 198.

Questionnaire Results: *Map Activity*

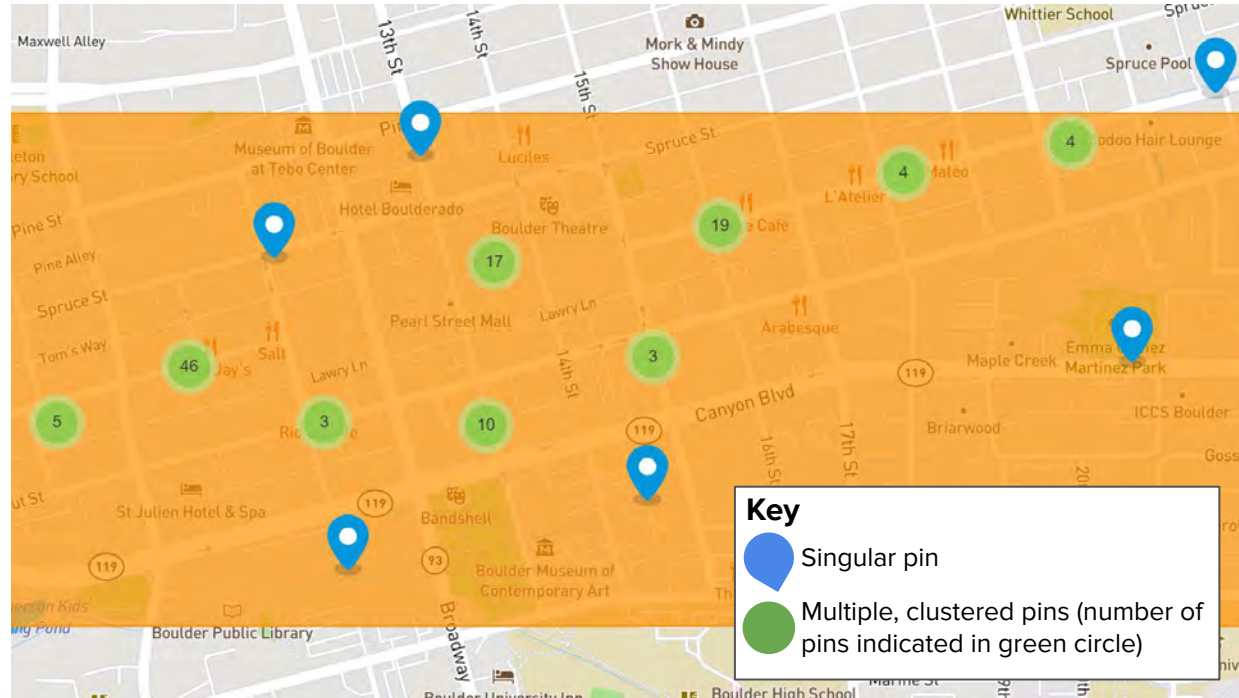
“Place up to 3 pins on the map to indicate street segments that you consider appropriate or desirable for reimagining streets as more pedestrian- friendly places.”

What does this tell us?

Responses are scattered throughout the downtown area with a high concentration of pins on West Pearl

Additional, non-downtown pins included Pleasant View Sports Complex; Iris/30th; 29th St Mall; and 30th/Pearl

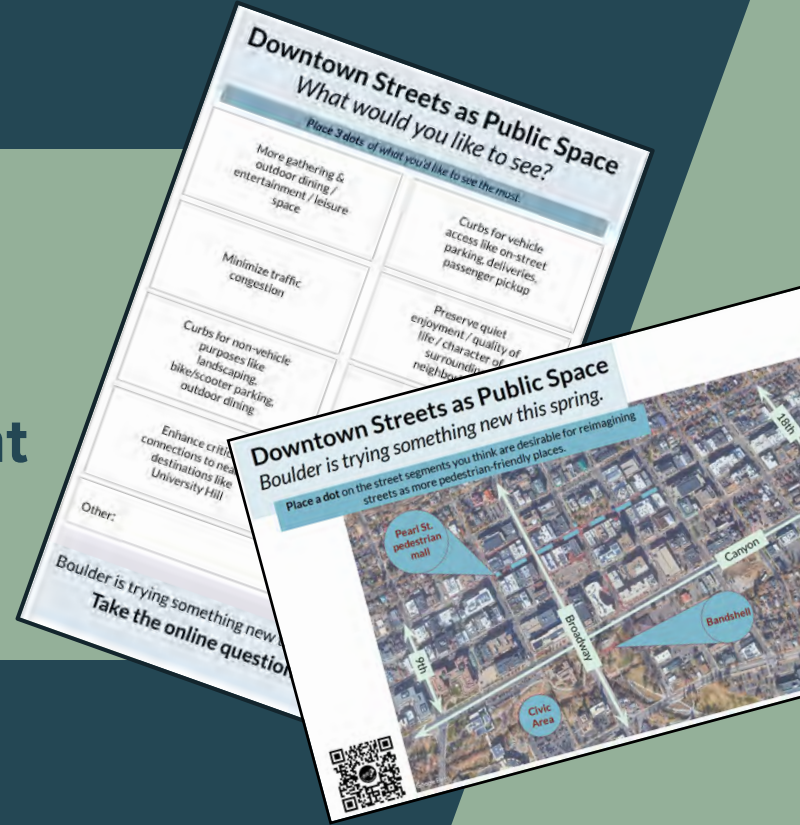
See Action Plan page 51 and 52 for mapping of key comments from this exercise



Participants' comments that correlate to each pin is recorded in the Appendices on page 203.

Not all participants left a comment.

Summary: In-Person Engagement



In-Person Engagement Approach & Design

Low Time Commitment

In-person engagement on a complex topic is, well, complex. Our activities were structured to take less than 2-minutes to encourage participants to give their input in a simple and informative way.



Garner Placement Ideas

We thought community members could tell us where potential pop-up locations could be based on their own experience, and we wanted to capture those ideas in a visual way.



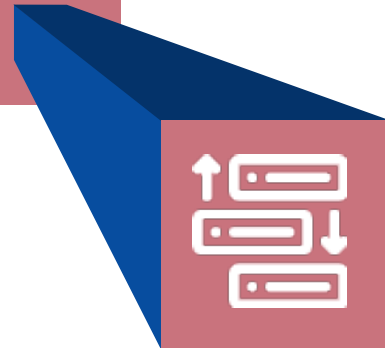
Seek downtown & non-downtown engagement

Previous engagement solicited responses from many downtown users. We wanted to supplement in-person engagement with non-downtown locations to get even more feedback.



Prioritize

This is a project of tradeoffs. We wanted to know - if you had to pick - what pop-up aspects would you choose as most / least important?



In-Person Engagement Results

3 Locations

50-60 Participants

6 Hours of Engagement

Downtown Streets as Public Space *Boulder is trying something new this spring.*

Place a dot on the street segments you think are desirable for reimagining streets as more pedestrian-friendly places.



Downtown Streets as Public Space *What would you like to see?*

Place 3 dots of what you'd like to see the most.

More gathering & outdoor dining / entertainment / leisure space

Curbs for vehicle access like on-street parking, deliveries, passenger pickup

Minimize traffic congestion

Preserve quiet enjoyment / quality of life / character of surrounding neighborhoods

Curbs for non-vehicle purposes like landscaping, bike/scooter parking, outdoor dining

Maximize economic vitality potential for underutilized / underinvested areas

Enhance critical connections to nearby destinations like University Hill

Maximize access for all people regardless of ability and modes

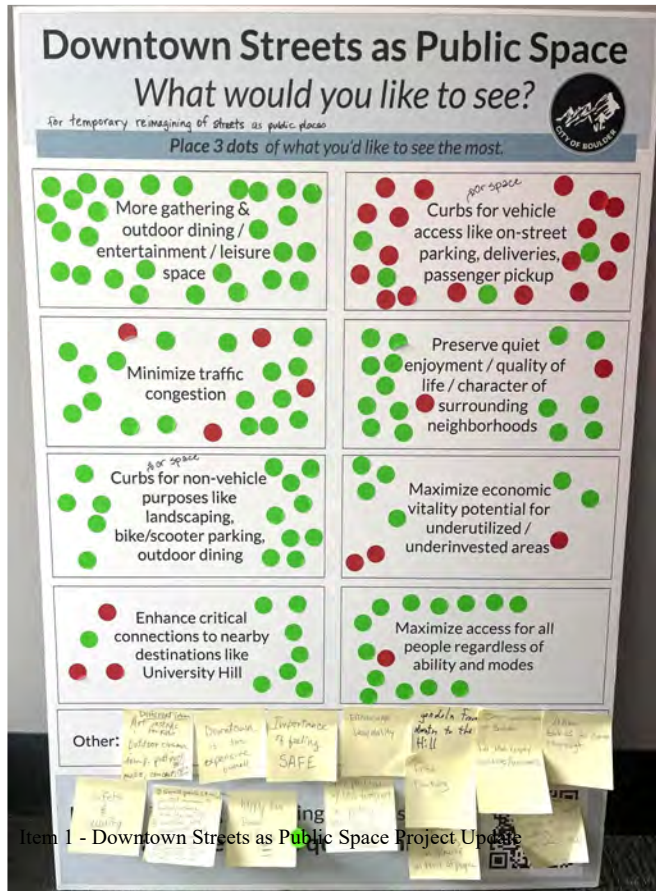
Other:

Boulder is trying something new this spring.

Take the online questionnaire:



In-Person Engagement Results



Item 1 - Downtown Streets as Public Space Project Update

This type of engagement is used to solicit general feedback about community preferences, and it should not be used to assume sentiments represent the entire community. For that reason, we have not totaled the dot counts in order to rank what aspects that participants would like to see most and least.

With that being said, we can see that **participants prioritized:**

- More gathering & outdoor dining / entertainment / leisure space
- Curbs for non-vehicle purposes like landscaping, bike/outdoor parking, outdoor dining
- Preserve quiet enjoyment / quality of life / character of surrounding neighborhoods

While participants **tended to deprioritize:**

- Curbs for vehicle access like on-street parking, deliveries, passenger pickup

In-Person Engagement Results



Similarly, this exercise is used to indicate a visual clustering of where participants think suitable pop-up locations could be.

We can see many clusters on both East and West Pearl, as well as throughout the Civic Area and on 13th Street.

Summary: Stakeholder Meetings

Boulder Farmers Market

Key takeaways:

- They would love to see **more activation of the Civic Area Park** (adjacent to the market)
- A long term recommendation may be **access to permanent market space and increased access to public restrooms**, as there are none in the area
- There is a large waitlist for farmers to participate in the market, which implies demand could be accommodated on other days/times. They could see **expanding the market by number of vendors and/or size of the space**.
 - Would need **significant notice** to add another day of the farmers market or program space (such as a stand with revolving farmers)
 - There is a **bureaucratic burden to permitting** - generally needs to apply for 75 permits per year and therefore needs significant advance coordination, planning and cost



Photo credit: Boulder County Farmers Market - bcfm.org

Downtown Boulder Partnership

Key takeaways:

- The 2023 DBP **activations proposal for use of city ARPA funding is built to complement the DSaPS project** and respond to people’s interest in West Pearl.
- **West Pearl is already “activated” in terms of foot traffic and business activity;** wouldn’t recommend a full closure here, but DBP events are planned for the West Pearl area in 2023
- A primary, underutilized **area of downtown that could be well-suited is 13th**
- **Open to the idea of adding more events,** but it would require more resources as DBP capacity is already at its limit.
- Should **integrate DSaPS long term recommendations into the Civic Area Phase IB plan and upcoming Pearl St plan** (both funded with the latest CCS Tax renewal)
- **New shade structures and updated children’s play areas** on East and West Pearl could pair with other additional urban design elements to increase public life in a passive way
- **CU’s parents weekend and graduation are already heavily activated** with visitors enjoying shopping and dining downtown, so additional active programming / events are not needed to contribute to downtown vibrancy.



Photo credit: Downtown Boulder Partnership Instagram - @downtownboulder

West Pearl business owners' focus group

Key takeaways:

- Business owners want vibrancy on West Pearl and believe that is returning. Some think there was **permanent consumer behavior change as a result of the closure.**
- Many concerns that the **online questionnaire is “biased toward change” and biased to create change on West Pearl.** Business owners expressed that they chose to site their investment on West Pearl rather than the Bricks purposefully for its design and vehicular access.
- There was general **consensus from restaurants that the temporary closure during COVID hurt their business financially.** Retail owners noticed less of a negative impact to their business, though they did comment that **a full street closure (24/7) is not favorable.**
- From their perspective, **business owners would rather see improvements that help drive people to the West End,** including some light capital upgrades and even some community-focused special events.
- The business owners **do not feel represented or heard** in the many

conversations about West Pearl.



Photo credit: Downtown Boulder Partnership
- boulderdowntown.com

Community Connectors in Residence

Key takeaways:

- Less concern about which street segments should be used for the pop-ups; received **more interest in the “what and how”**
- Comments about **feeling like a “stranger” in Boulder with Pearl Street changing so much over the decades**; Pearl used to be smaller with independent shops and entertainers (like jugglers) on the Mall; no sense of a place where you know everyone in a small community to connect
- Any human rights events or activities should be **an opportunity to educate and connect**, and any **cultural events should support local community members** and not be created solely for commodification, appropriation and profit by others
- Would like to see recommendations for kids/teen safety and **safe bike routes from places like Boulder Meadows to downtown**
- Recommendation to **celebrate CU student athletes who are coming to Boulder with Coach Prime** to Boulder from the south and other regions of the country

Ideas for holiday celebrations:

- ¡Día de los Muertos! (November)
- Nepalese New Year (usually in April)
- Dashain (October)
- Juneteenth (June)

Holiday celebrations should be created with the community; sensitive to the type of celebration; and a learning opportunity.

Request for process on how to celebrate cultural holidays should be more clear and straightforward

Community Cycles

Key takeaways:

- Said that **they wouldn't be able to "sustain programming" during the pop-ups** because of the small to no financial return; level of investment of staff/money needed
- Thought **West Pearl was "more welcoming and less formal" than the bricks**, which is why they appreciate the closure despite Downtown already offering a pedestrian mall.
- Thought the project would be **focused more on long-term recommendations, which is where their perspective would likely be more impactful** (getting rid of the one way loop around downtown, bike infrastructure changes, etc).
- Want to see the recommendations translating to policies that could be **be applied in other areas of Boulder.**



Photo credit: Community Cycles
- communitycycles.org

Boulder Economic Vitality and Business Support Alliance

Key takeaways:

- Focus on activation that drives foot traffic, but that **doesn't directly compete with businesses** in the area of activation
- Would love to see places that **capture the culture of Boulder: fun, innovative, diverse**
- Use the pop-ups as an **opportunity to highlight diverse businesses** in Boulder
- Prioritize **addressing public safety, affordable commercial, and co-creation** in this testing phase

Ideas for pop-up activations:

- Performance and showcase artists, including Latino artists
- Food truck fest
- Art installations
- Informal, unstructured installations

Item 1 - Downtown Streets as Public Space Project Update



Photo credit: City of Boulder - bouldercolorado.gov

Alliance Members in Attendance:

- Boulder Chamber
- Boulder Latino Chamber
- Downtown Boulder Partnership
- Boulder Convention & Visitors Bureau
- Boulder Small Business Development Center

Takeaways

Learnings from Engagement

The goal of conducting engagement with the community is to learn from them and carefully consider and balance the different perspectives. In this process, we have learned how varied the perspectives are across the community, which will result in a highly customized approach for pop-ups in 2023. Our major learnings so far include:



Desired Experiences

The community enjoys downtown for a variety of reasons, primarily to shop, dine, socialize, people watch and enjoy nightlife.

What's Missing

Safety and public health concerns, general feelings of not being welcome, affordability (both for the business owner and consumer), and difficulty with mobility, access or parking could be barriers for folks using downtown.



Frequent Comments on Homelessness

Frequent comments, both in the online questionnaire, at in-person engagement, and during stakeholder meetings, referenced the need for the city to address issues of homelessness through downtown in order to activate spaces.

Learnings from Engagement

Travel Preferences

People use a variety of ways to get downtown, including primarily by bike, foot, or personal vehicle. Inclement weather shifts preferences heavily toward use of a personal vehicle.



Abundance of Activators

There's no shortage of ideas and partners to activate downtown. Activators need permitting support, and sometimes financial support, from the city.



Equity & Inclusion

There was a consistent emphasis through all engagement efforts that the city should use the pop-ups to increase inclusivity through the type of activations; participants; accessibility and affordability



West Pearl Learnings

West Pearl businesses do not feel heard or represented as being directly impacted by changes to the streets where their businesses operate. More dialogue and a collaborative approach to pop-up planning could help build back trust with local government.



Engagement Gaps

Gaps in Engagement Feedback

We attempted to reach a variety of community members, particularly underrepresented groups, young people, people above the ages of 65, and community members that don't use downtown. We think there are still some gaps in representation from the feedback:

Race: Gap in all races other than White represented half or less than the 2020 Census data for Boulder (city)

	Online Questionnaire	2020 U.S. Census data
White	78.62%	76.40%
Hispanic or Latino/a	3.35%	13.15%
Asian	2.23%	7.97%
American Indian or Alaska Native	0.17%	0.45%
Black or African-American	0.45%	1.50%
Native Hawaiian or Other Pacific Islander	0.06%	0.14%
Two or more races	1.95%	5.49%
Other	0.61%	0.67%
No response or "I prefer not to say"	12.55%	N/A

Age: Gap in representation for ages 24 or younger

	Online Questionnaire	2021 Boulder statistics
Under 24	3.79%	39.65%
25-34	21.76%	21.37%
35-54	38.11%	12.81%
55-64	14.90%	11.70%
65 and over	17.13%	14.47%
No response	4.30%	N/A

- It's possible that the online questionnaire respondents that skipped demographic question(s) or selected "I prefer not to say" may skew these results.
- This data also makes assumptions about Boulder residency, though approximately 6% of respondents do not live in the city limits.

Gaps in Engagement Feedback

The project team will work on creative strategies to reach these demographic and audience groups during the Spring and Summer 2023 pop-up engagement.

Income: Gap in representation for low income participants earning less than \$50,000

	Online Questionnaire	2020 U.S. Census data
\$25,000 or less	3.68%	21.50%
\$25,000-\$49,999	7.59%	13.80%
\$50,000-\$99,999	19.08%	21.60%
\$100,000-\$149,999	22.71%	15.00%
\$150,000 or more	30.30%	28.10%
No response or "I prefer not to say"	16.62%	N/A

Although we don't have a data source for all audiences to compare how we did, **other audiences that were potentially under or not represented** include:

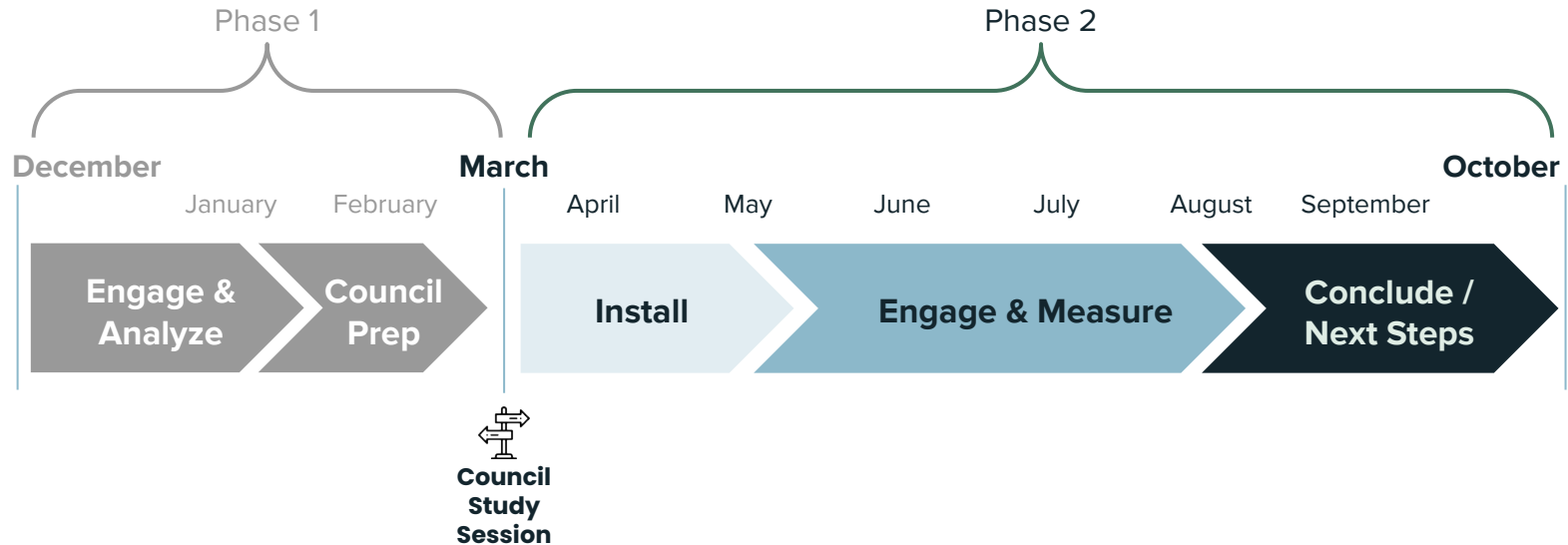
- Non-English speakers
- Immigrant and mixed-immigration status families
- People living with disabilities
- Members of the LGBTQ community
- Downtown employees
- Downtown businesses
- Youth
- University students

- *It's possible that the online questionnaire respondents that skipped demographic question(s) or selected "I prefer not to say" may skew these results.*
- *This data also makes assumptions about Boulder residency, though approximately 6% of respondents do not live in the city limits.*

Next Steps

What Happens Next?

The project team will develop a set of technical recommendations for council's feedback on March 23, 2023. Based on council's input, city staff will implement the recommendations for the Spring and Summer of 2023. The pop-up phase will include further engagement with the community and stakeholders to assess the success of the pop-ups, then the learnings will be incorporated into long-term recommendations. We look forward to seeing you at this year's pop-ups!



Appendices

- A. Questionnaire - unanswered (page 49)
- B. Questionnaire responses report from BeHeard Boulder - English (page 57)
- C. Questionnaire responses report from BeHeard Boulder - Spanish (page 169)
- D. “Other, please specify” comments from Question 2 (page 197)
- E. Cross-tab analysis for travel preferences and priorities (page 198)
- F. Map comments from BeHeard Boulder (page 203)
- G. In-person engagement “sticky note” feedback (page 226)
- H. Stakeholder meeting summaries (page 227)

Engagement Report - Appendix A

Downtown Streets as Public Space

BeHeard Boulder Questionnaire (open from January 11 -January 31 2023)

[click here to go straight to the questionnaire]

Background. At the height of the COVID-19 pandemic, west Pearl Street was closed to vehicular traffic from 9th to 11th streets to respond to and recover from the effects of the pandemic. The blocks were temporarily repurposed for outdoor dining, gathering and events. At the conclusion of the pandemic-related temporary public space installation on west Pearl, the city heard significant community interest for more pedestrianized spaces in the downtown area as well as some concerns about this location.

Looking ahead. Boulder City Council has asked staff to build on existing feedback and collect additional input to ensure that more people have had the opportunity to share their perspectives on downtown streets as public space. Council requested staff to develop recommendations by March based on community input and technical feasibility for temporary installations downtown in spring/summer 2023. These temporary installations will allow the city to test ideas for reimagining public space on downtown streets and gather community feedback during and after implementation. This input will be used to develop longer-term and holistic recommendations.

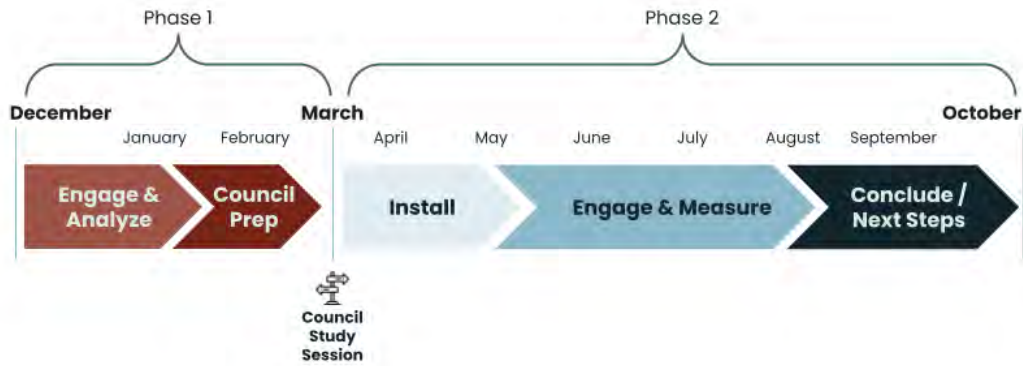
To support the effort, the City of Boulder has recruited the support of experts in urban design, transportation, and community participation to conduct engagement and analysis on the potential for public use for downtown streets from an urban design perspective and assess circulation, traffic, accessibility and safety criteria to recommend safe, enjoyable streets in downtown. Community feedback will be sought through the spring, summer and early fall of 2023 to inform longer-term possibilities. Long-term recommendations may include a combination of temporary, seasonal and/or permanent measures.

The approach. Through the Downtown Streets as Public Space Project, the city will engage with our community to understand the desires and concerns for uses of the public right-of-way in the downtown area and implement and learn from temporary installations on downtown streets.

The project goals are:

- Collectively reflect, learn from, and build on a diversity of experiences related to streets as public space
- Ensure that recommendations for downtown streets as public space reflect diverse community voices and the feasibility and technical analysis of the issues considered
- Use the project outcomes to inform upcoming planning efforts and future policy discussions about streets as public space in the city

What's the process?



Engagement opportunities – Phase 1 (January – March 2023)

- **January** – Online questionnaire (BeHeard Boulder)
- **January-February** – In-person engagement with advocacy groups and community organizations
- **February** – Consultation with the city’s Community Connectors to ensure we hear the perspectives of historically excluded communities

Engagement opportunities – Phase 2 (April-October 2023)

To be determined

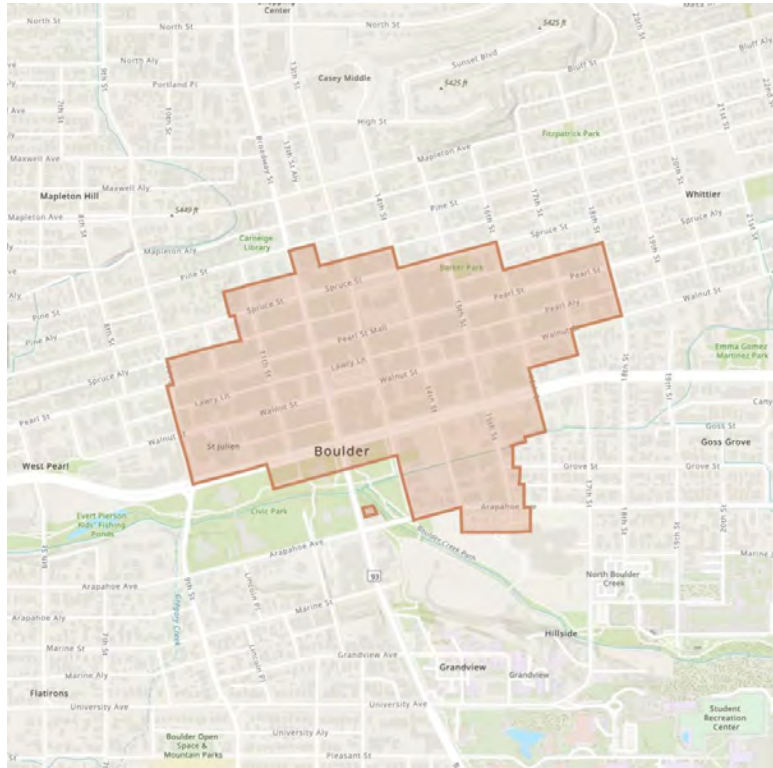
How will my responses to this form be used?

Your response will help the project team assess community desires and concerns about downtown streets’ potential use as public space. Your feedback, together with technical considerations, such as safety and traffic flows, will be used to develop options.

This is the first of multiple engagement opportunities for this project in 2023. We look forward to hearing from you!

Questionnaire

Map of Downtown Boulder



1. Why do you typically go downtown? (Check all that apply)

- a. To shop
- b. To dine
- c. To study
- d. To socialize
- e. To enjoy nightlife
- f. To people watch
- g. I live downtown
- h. I work downtown
- i. I operate or own a business or property downtown
- j. To pick-up/make deliveries downtown
- k. I drive others downtown (Uber/Lyft/Transit)
- l. Other (open field) _____
- m. I do not go downtown at all or often (if selected, please answer the follow up question below)

1b. If you selected 'I do not go downtown at all or often' above, please check all of the reasons that you do not visit downtown (Please leave blank if this does not apply to you).

- () difficulty with mobility, access, or parking
- () lack of affordable restaurants and retail
- () lack of appealing restaurants and retail
- () lack of events that are of interest to me (and/or my family)
- () lack of child-friendly spaces
- () I don't feel welcome
- () safety concerns
- () public health concerns
- () Other? (open field) _____

2. **Which factors influence your choice to spend leisure time downtown? Please rank each factor from most to least important.**

(Rank highest to lowest order)

- a. Accessibility/ease of walking or moving around
- b. Ease of parking/storing my bike or car
- c. Sensory experience (people watching, nature, art, look and feel)
- d. Sense of personal safety
- e. Shopping and restaurant offerings
- f. Nightlife/entertainment offerings/events
- g. Weather conditions

3. **During good weather, how likely are you to use the following mode(s) of transportation to get downtown?** _____

(Use 5-point scale for each option from Extremely Likely (5) to Not At All Likely (1))

- a. By bicycle
- b. By bus
- c. By foot/assistive device (e.g. wheelchair)
- d. By personal vehicle
- e. By car-sharing service (ex. Uber/Lyft)

4. **During inclement weather (extreme cold, snow, heavy rain, high winds), how likely are you to use the following mode(s) of transportation to get downtown?** _____

(Use 5-point scale for each option from Extremely Likely to Not at All Likely)

- a. By bicycle
- b. By bus
- c. By foot/assistive device (e.g. wheelchair)
- d. By personal vehicle
- e. By car-sharing service (e.g. Uber/Lyft)

5. **During the pandemic, from spring of 2020 until fall of 2022, the west Pearl Street area from 9th Street to 11th Street was closed to vehicles to make room for expanded outdoor dining, pedestrian spaces, gathering and events.**

In your view, how do you think this temporary change in the use of streets impacted the overall appeal of the west Pearl area?

(Use 5-point scale from Significantly Increased to Significantly Decreased)

6. **Different people may have different priorities for downtown streets.**

In which order do you think the city should prioritize community interests for downtown streets as public space?

(Rank highest to lowest order)

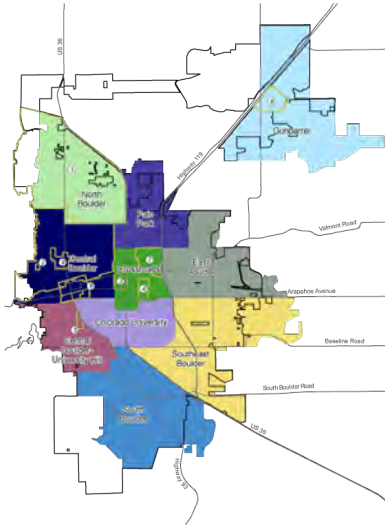
- a. Provide additional enjoyable public spaces for gathering and outdoor dining/entertainment/leisure
 - b. Preserve curbside vehicle access to businesses (e.g. on-street parking/passenger pick-up/drop-off/deliveries/loading)
 - c. Use curbs for non-vehicular purposes (e.g. landscaping, bicycle/scooter parking, curb and sidewalk extensions, outdoor dining parklets, and others]
 - d. Enhance critical connections between downtown and nearby destinations such as University Hill.
 - e. Minimize traffic congestion
 - f. Preserve quiet enjoyment/quality of life/character of surrounding neighborhoods
 - g. Maximize economic vitality potential for underutilized/underinvested areas
 - h. Maximize access for all people regardless of ability and mode (e.g. people with disabilities, pedestrians, cyclists, transit users, etc.)
 - i. [Other - open field] _____
7. **Please place up to 3 pins on the map to indicate street segments that you consider appropriate or desirable for reimagining streets as more pedestrian-friendly places.**

[Use the map feature in Be Heard Boulder to pin areas on a downtown map]

Demographic Questions

We'd like to know a little more about you! The following questions are optional, but we highly encourage you to answer them. They will allow the city to determine whether a diverse set of responses have been collected. All information shall remain confidential and will not be used for any other purpose.

1) Which part of the city do you live in? ¿En qué parte de la ciudad vives?



- Central Boulder - North of Arapahoe
- Central Boulder - University Hill (South of Arapahoe)
- Crossroads
- East Boulder
- Gunbarrel
- North Boulder
- Palo Park
- Southeast Boulder
- South Boulder
- University of Colorado

- I do not live in Boulder, but I work there
- I do not live in Boulder, but I am a frequent visitor there

2) Do you rent or own your home?

- I rent
- I own
- I do not have stable housing right now
- Other
- I prefer not to say

¿Usted renta o es dueño/a de su hogar?

- Soy dueño/a
- Rento
- En este momento no tengo vivienda estable
- Otro
- Prefiero no decir

3) Age Range:

- Under 18

- 18-24
- 25-34
- 35-54
- 55-64
- 65 and over

¿En cuál rango de edad se encuentra?

- Under 18
- 18 to 24
- 25 to 34
- 35 to 54
- 55 to 64
- 65 and over
- I prefer not to say
- Menor de 18 años
- 18 a 24 años
- 25 a 34 años
- 35 a 54 años
- 55 a 64 años
- 65 años o más
- Prefiero no decir

4) Which gender do you most identify with?

- Female
- Male
- Non-Binary
- I prefer to self-identify as (_____)
- I prefer not to say

¿Cuál es tu género?

- Mujer
- Hombre
- No binario
- Prefiero describirlo: _____
- Prefiero no responder

5) Which race or ethnicity do you most identify with?

- White
- Hispanic or Latino/a
- Asian
- Black or African-American
- American Indian or Alaska Native
- Native Hawaiian or Other Pacific Islander

Two or more races

Other (please describe: _____)

I prefer not to say

¿Con cuál raza o etnicidad se identifica más?

- Blanco/a
- Hispano/a o Latino/a
- Asiático/a
- Negro/a o Africano/a-Americano/a
- Indígena Americano o Nativo de Alaska
- Nativo/a de Hawái o de otra isla del Pacífico
- Dos o más razas
- Otro – por favor descríballo: _____
- Prefiero no decir

6) How would you describe your annual household income?

- Less than \$25,000 a year
- \$25,000 to \$49,999 a year
- \$50,000 to \$99,999 a year
- \$100,000 to \$149,999 a year
- \$150,000 or more
- I prefer not to say

¿Cómo describiría el ingreso anual de su hogar?

- Menos de \$25,000 por año
- \$25,000 a \$49,999 por año
- \$50,000 a \$99,999 por año
- \$100,000 a \$149,999 por año
- \$150,000 por año o más
- Prefiero no decir

Thank you so much for your interest! ¡Gracias por su interés!

Sign up to the city e-newsletter for project updates

Questionnaire for Downtown Streets as Public Space

SURVEY RESPONSE REPORT

02 January 2023 - 31 January 2023

PROJECT NAME:

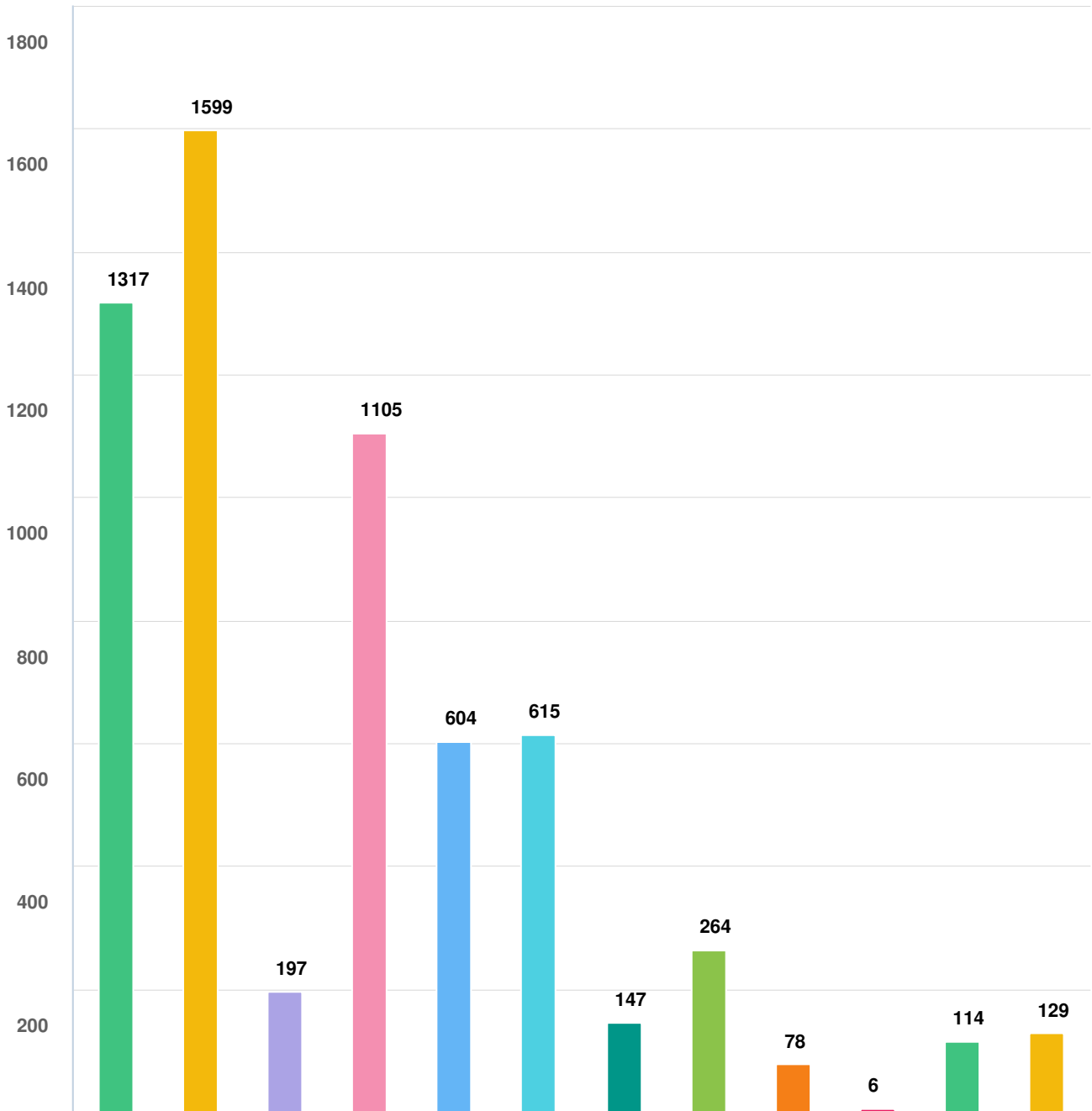
Downtown Streets as Public Space Project // El proyecto de las calles del centro como espacio público





SURVEY QUESTIONS

Q1 Why do you typically go downtown? (check all that apply)

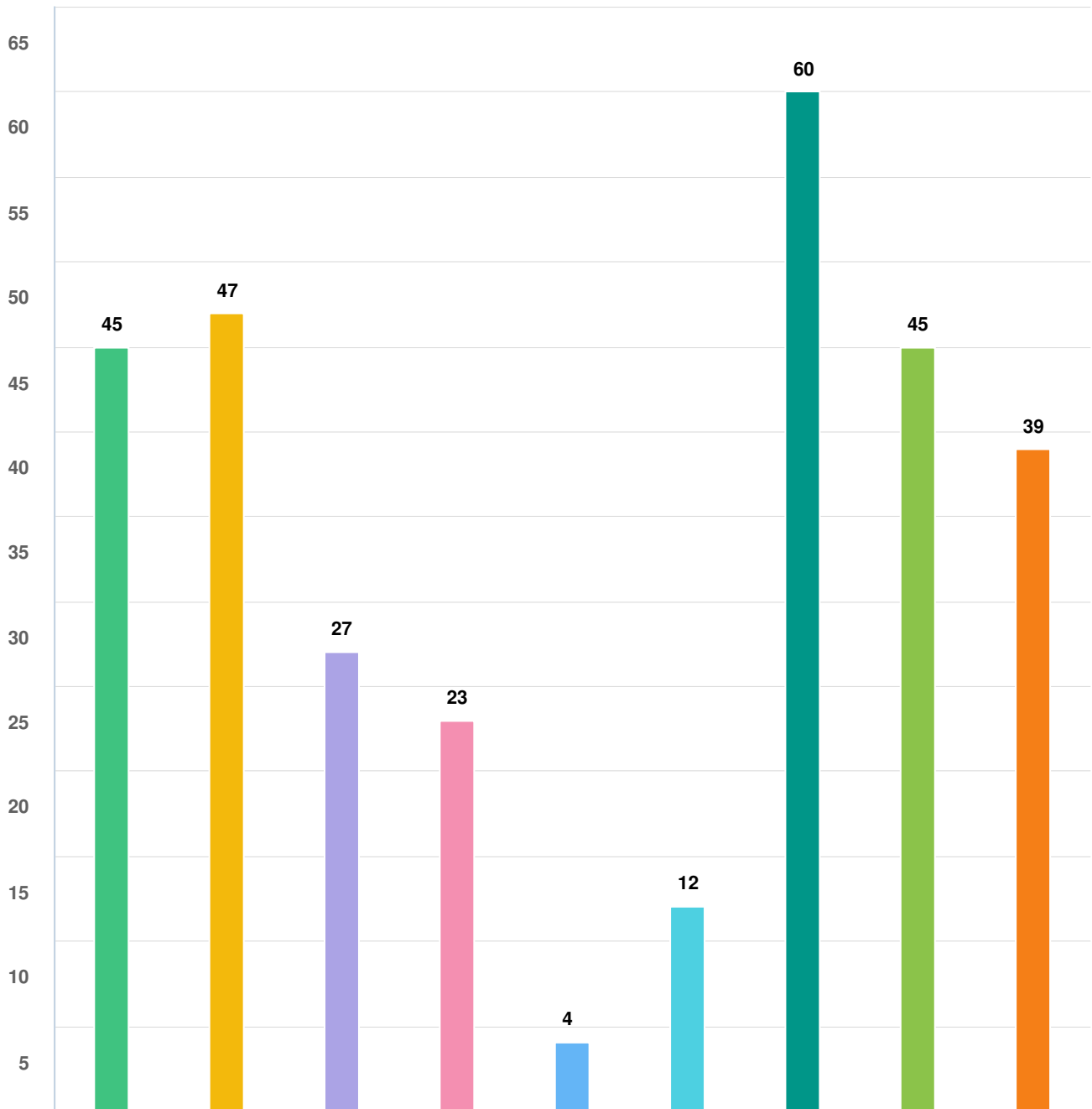


Question options

- to shop ● to dine ● to study ● to socialize ● to enjoy nightlife ● to people watch ● I live downtown
- I work downtown ● I operate or own a business or property downtown
- I drive others downtown (Uber/Lyft/public transportation)
- I do not go downtown at all or often (if selected, please answer follow up question below) ● Other (please specify)

Mandatory Question (1786 response(s))
 Question type: Checkbox Question

Q2 If you selected 'I do not go downtown at all or often,' please check all of the reasons below that apply.If this question d...



Question options

- difficulty with mobility, access or parking ● lack of affordable restaurants and retail
- lack of appealing restaurants and retail ● lack of events that are of interest to me (and/or my family)
- lack of child-friendly spaces ● I don't feel welcome ● safety concerns ● public health concerns
- Other (please specify)

Optional question (113 response(s), 1673 skipped)
Question type: Checkbox Question

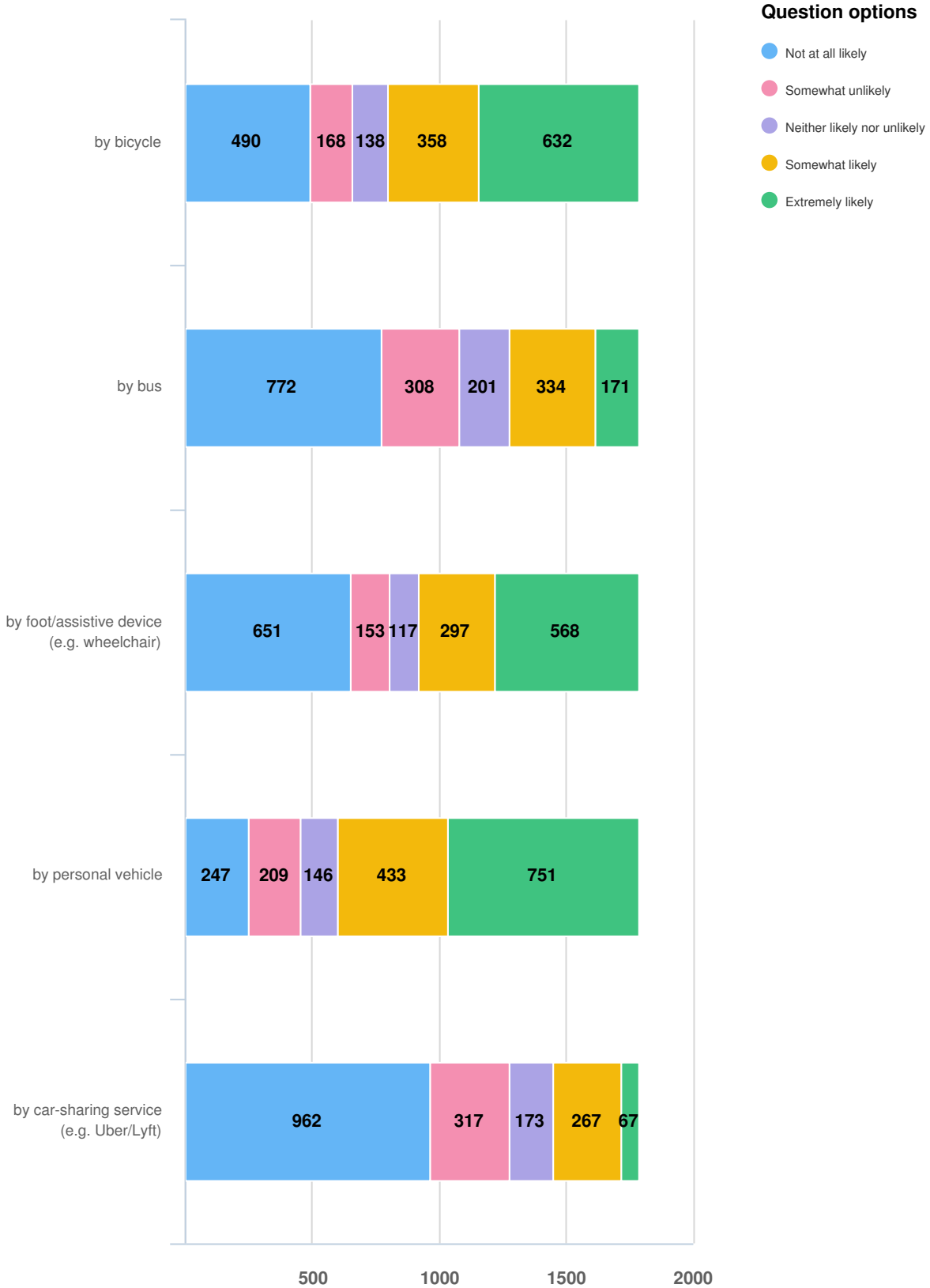
Q3 Which factors influence your choice to spend leisure time downtown? Please rank them (1-Highest, 7-Lowest)

OPTIONS	AVG. RANK
shopping and restaurant offerings	2.77
accessibility/ease of walking or moving around	3.06
sensory experience (e.g. people watching, nature, art, look, feel)	3.83
sense of personal safety	4.21
ease of parking/storing my bike or car	4.33
nightlife/entertainment offerings and events	4.87
weather conditions	4.94

Mandatory Question (1786 response(s))

Question type: Ranking Question

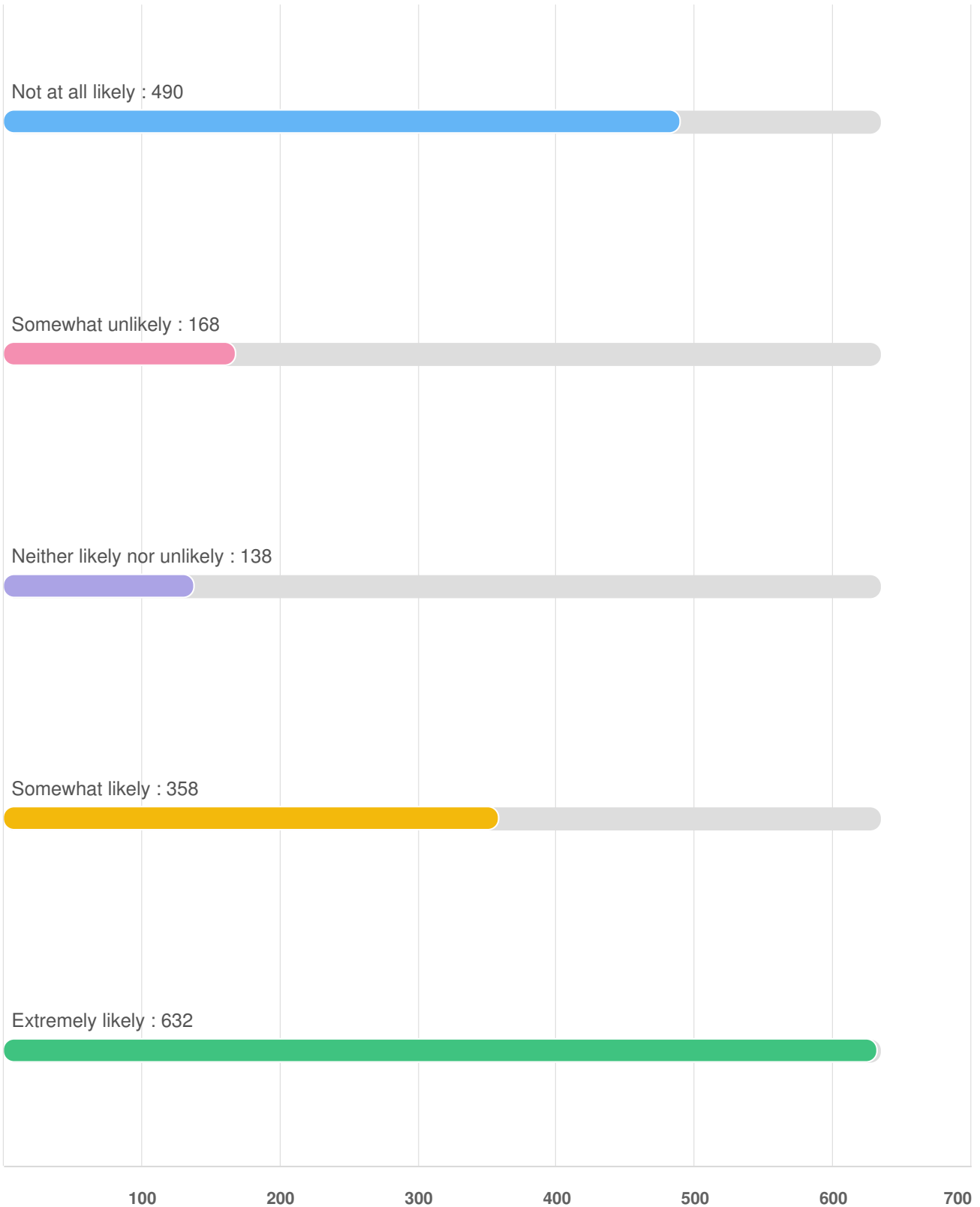
Q4 During good weather, how likely are you to use the following mode(s) of transportation to get downtown?

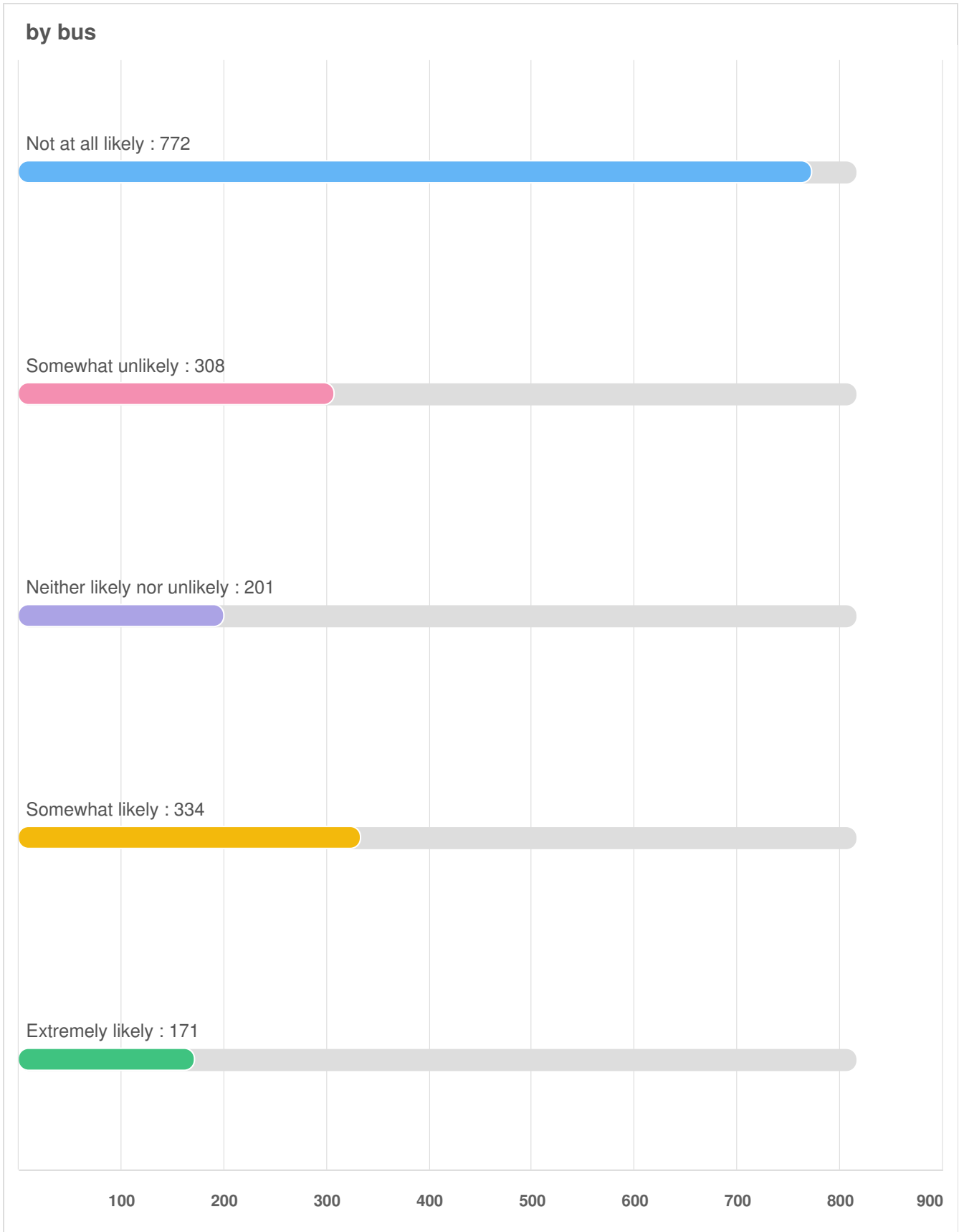


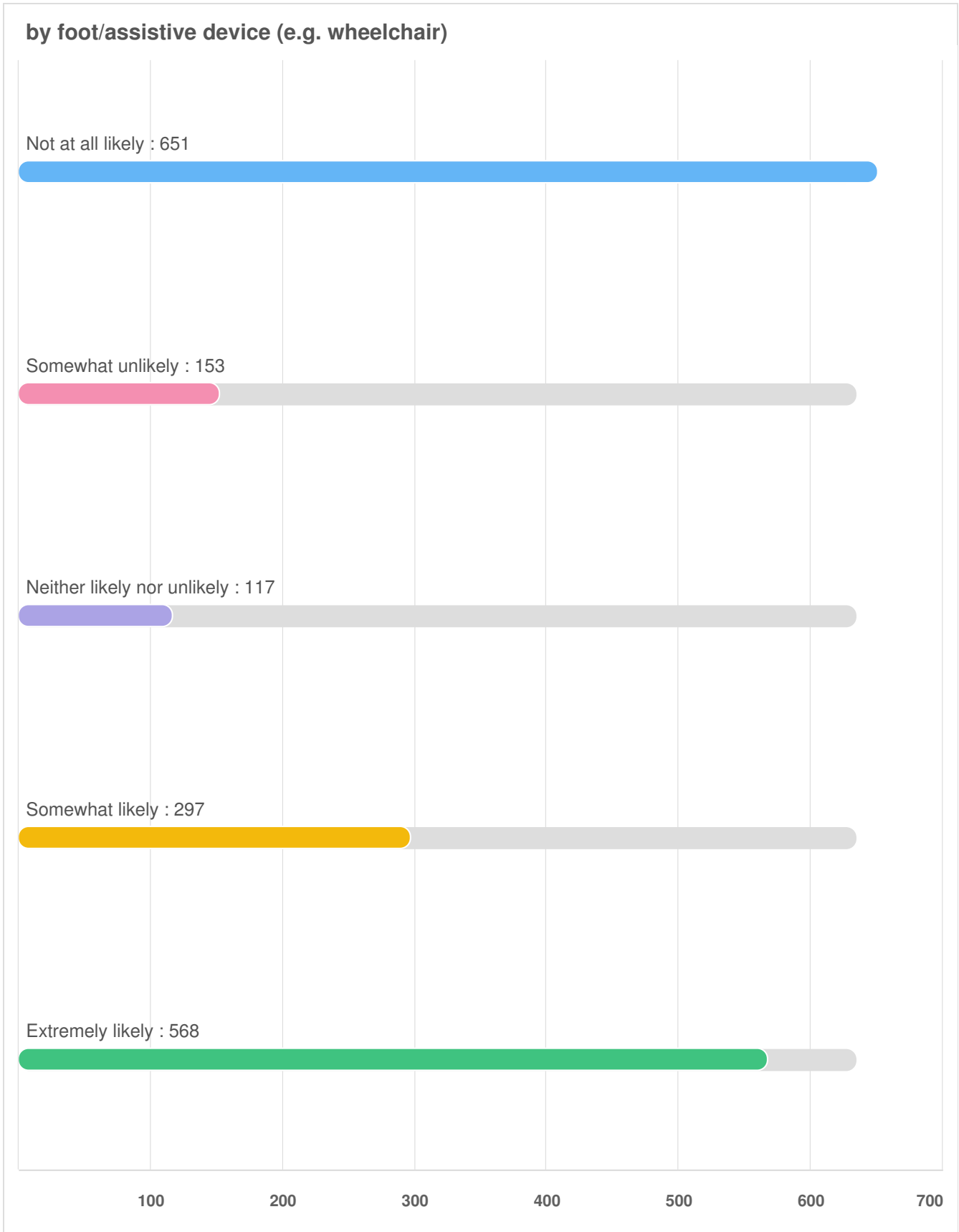
Mandatory Question (1786 response(s))
Question type: Likert Question

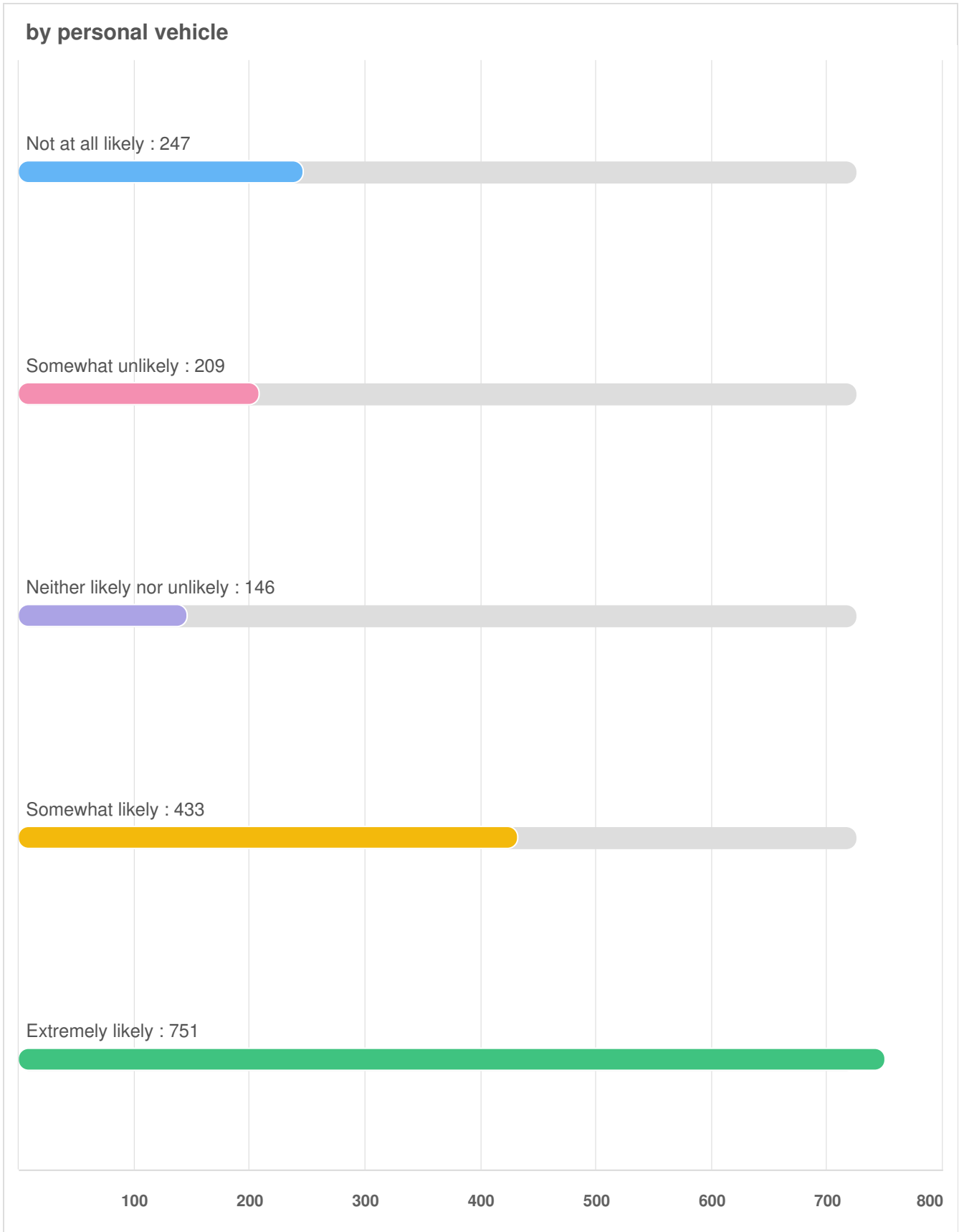
Q4 | During good weather, how likely are you to use the following mode(s) of transportation to get downtown?

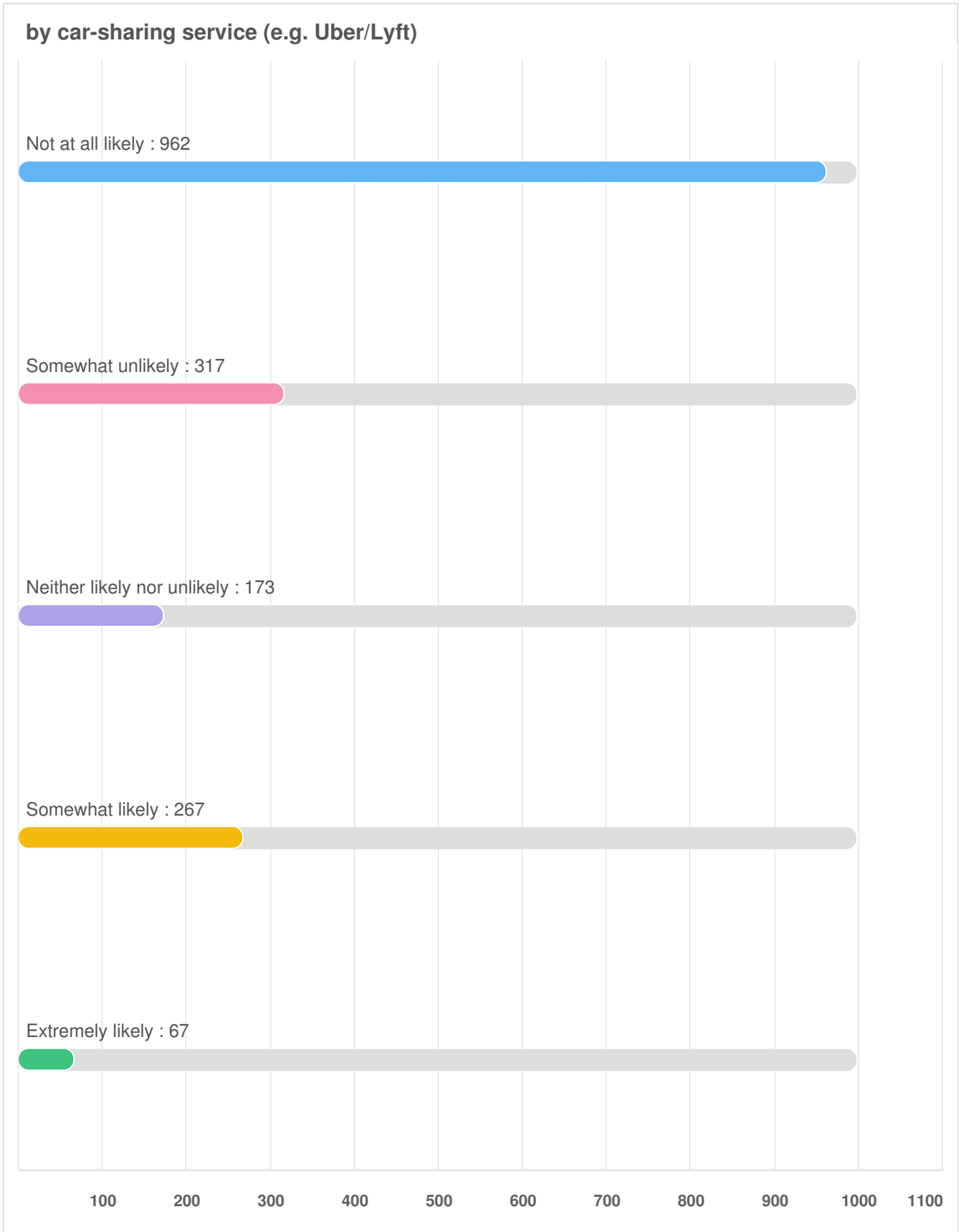
by bicycle



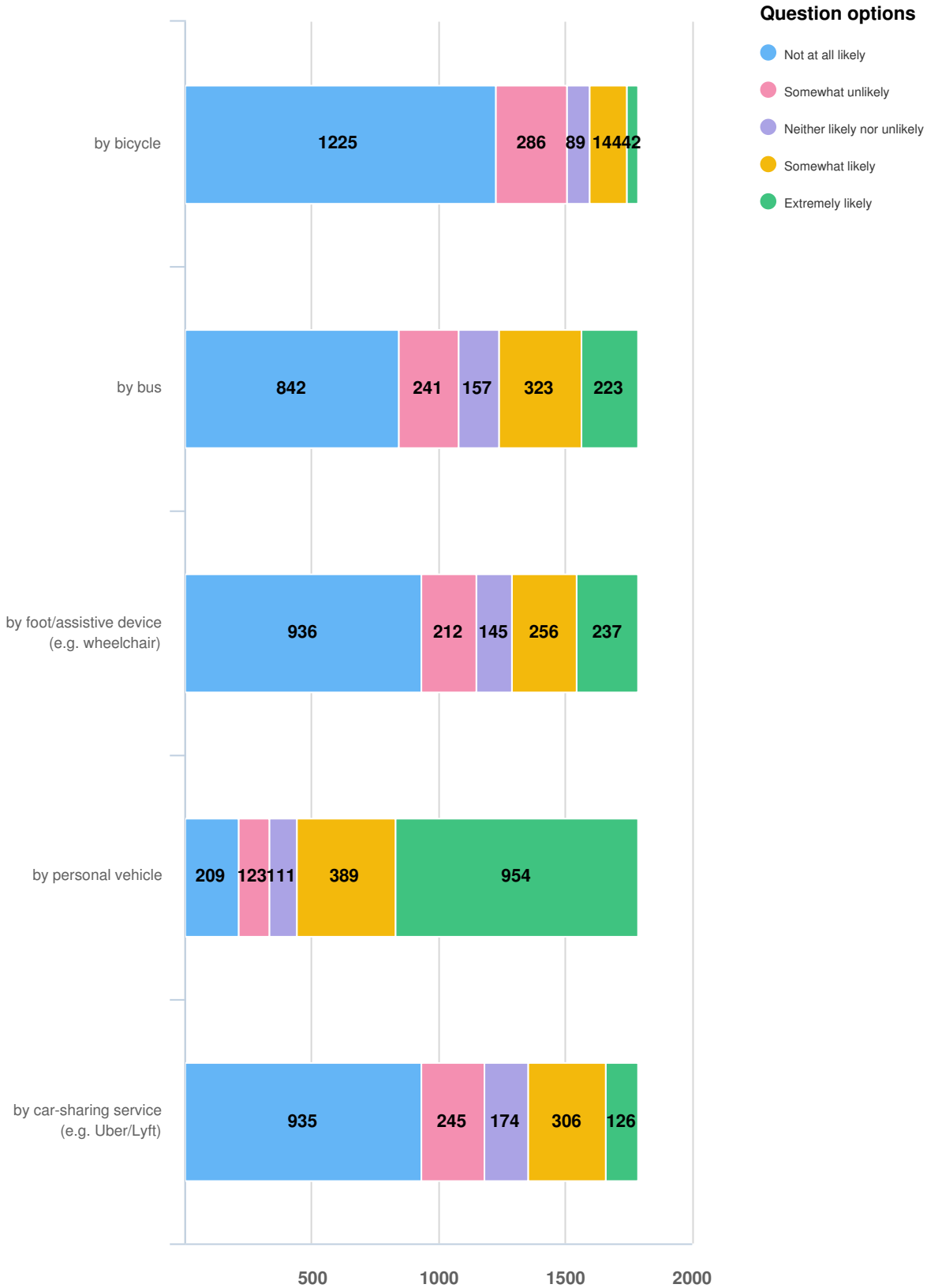








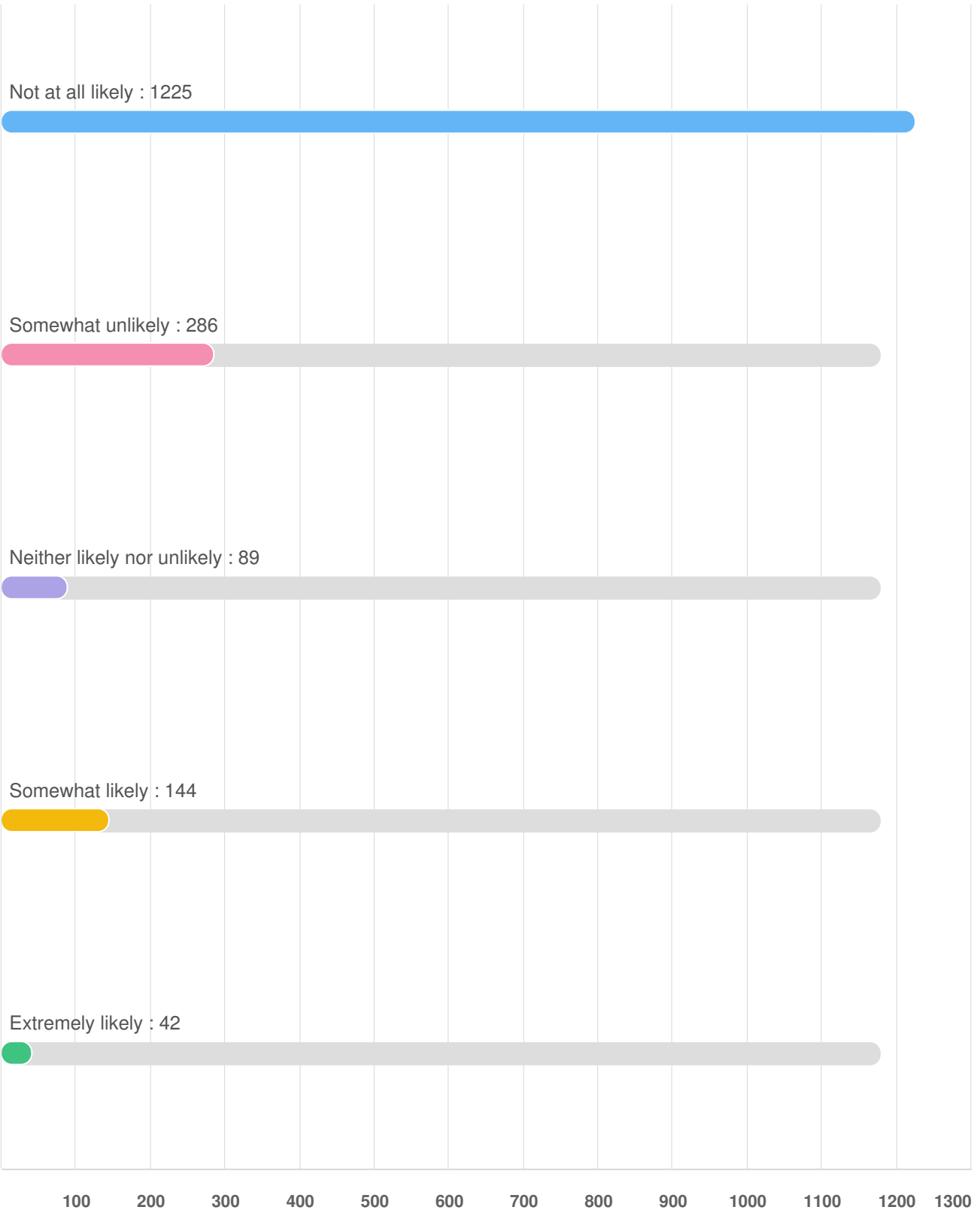
Q5 During inclement weather (extreme cold, snow, heavy rain, high wind), how likely are you to use the following mode(s) of transportation to get downtown?

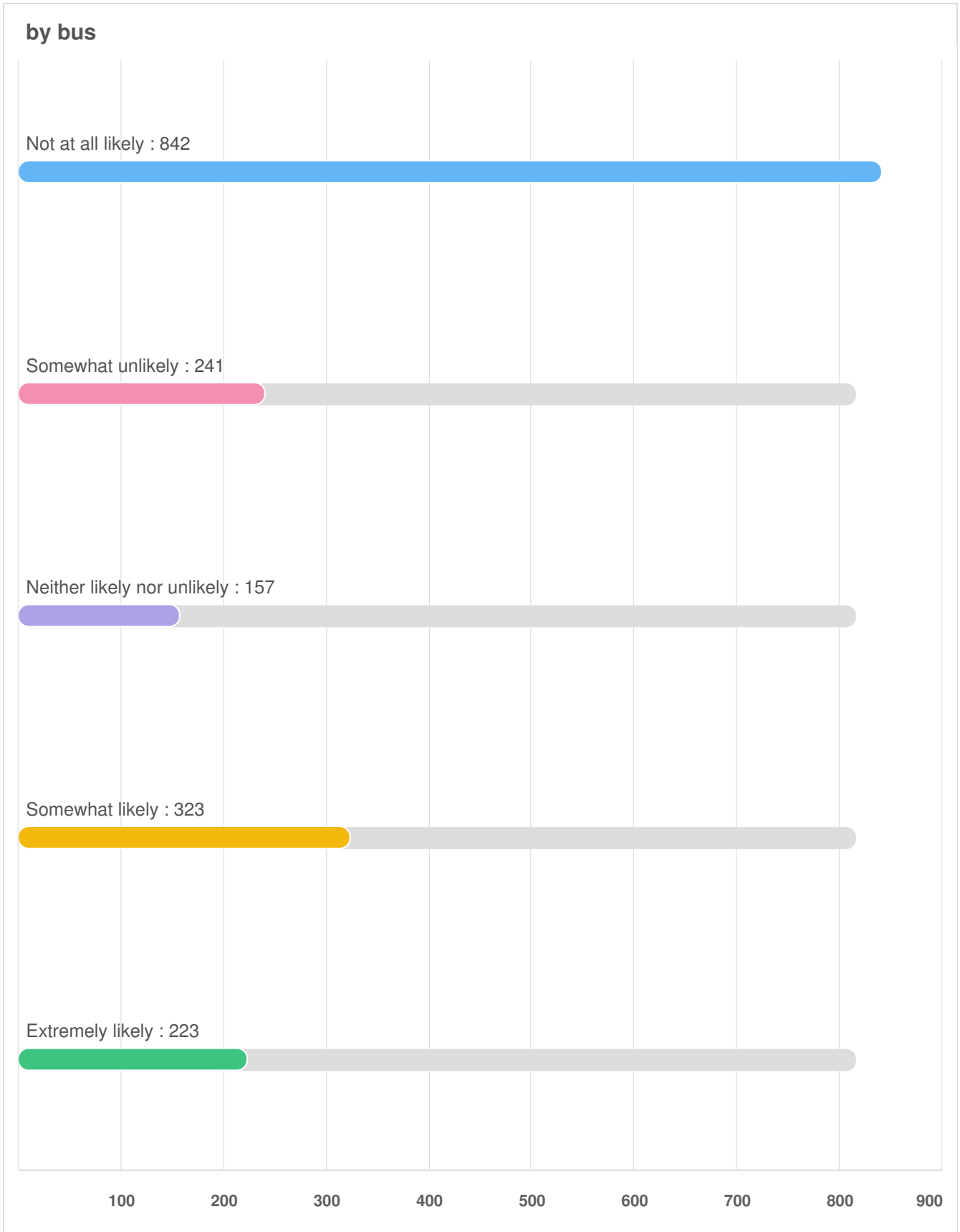


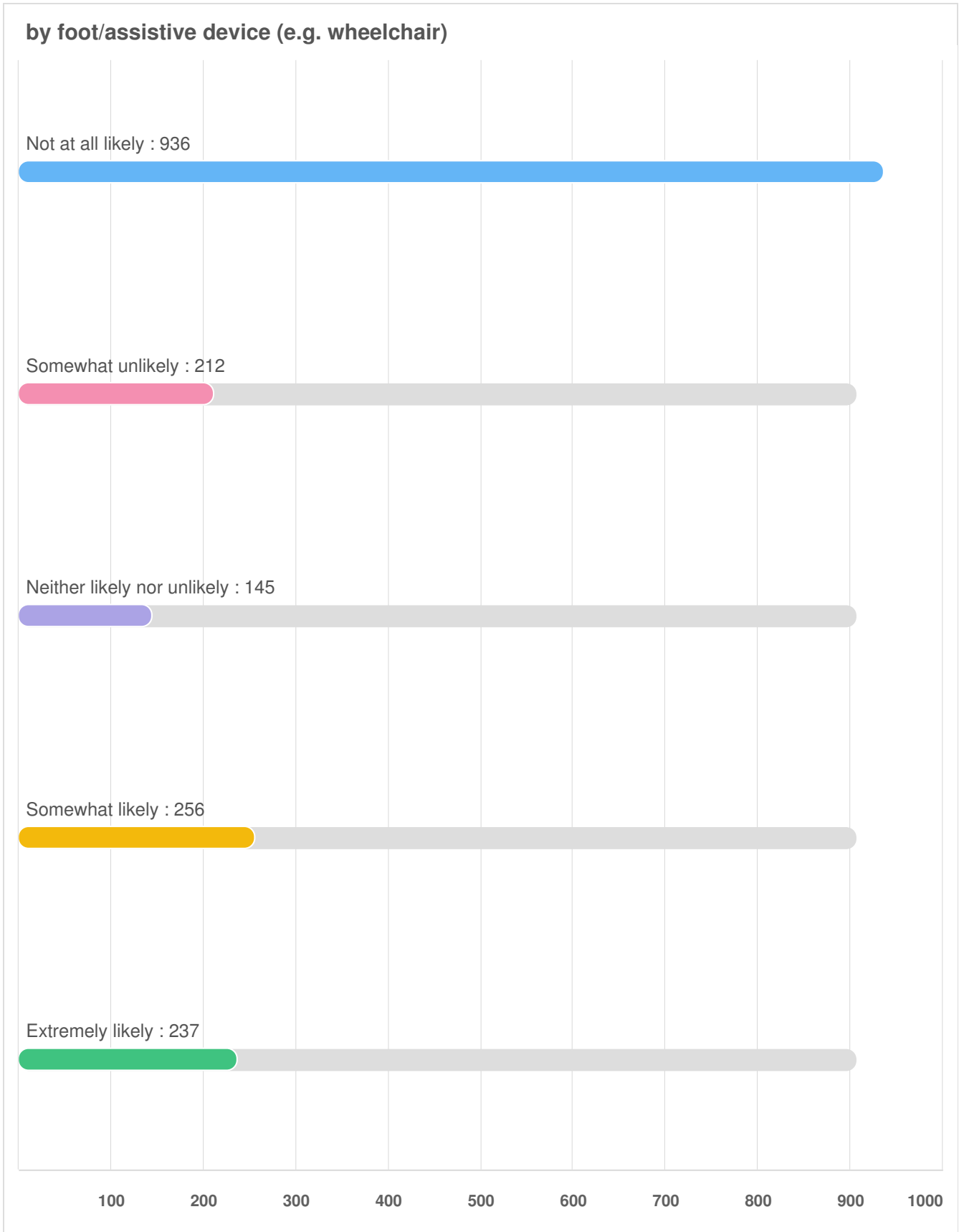
Mandatory Question (1786 response(s))
Question type: Likert Question

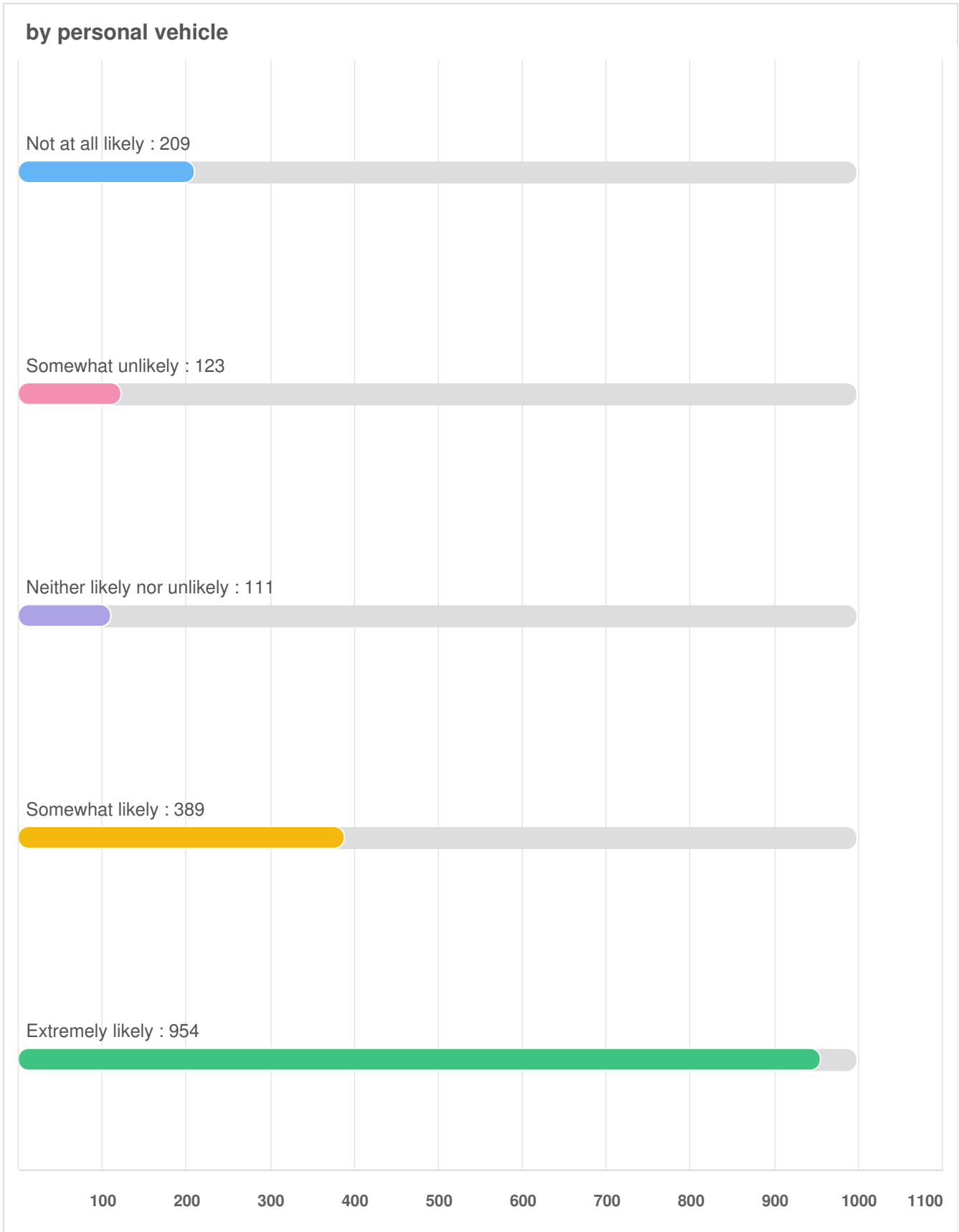
Q5 | During inclement weather (extreme cold, snow, heavy rain, high wind), how likely are you to use the following mode(s) of transportation to get downtown?

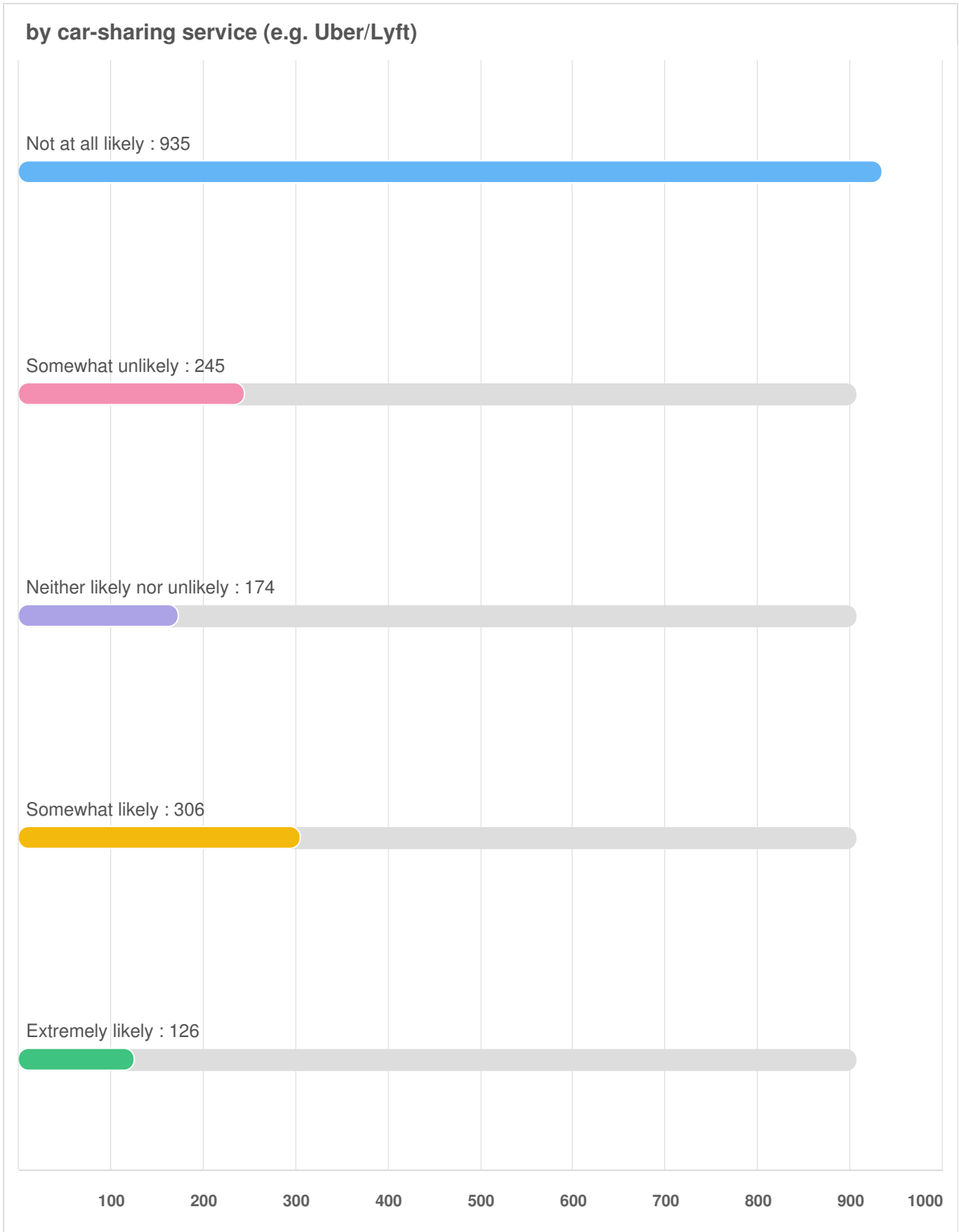
by bicycle



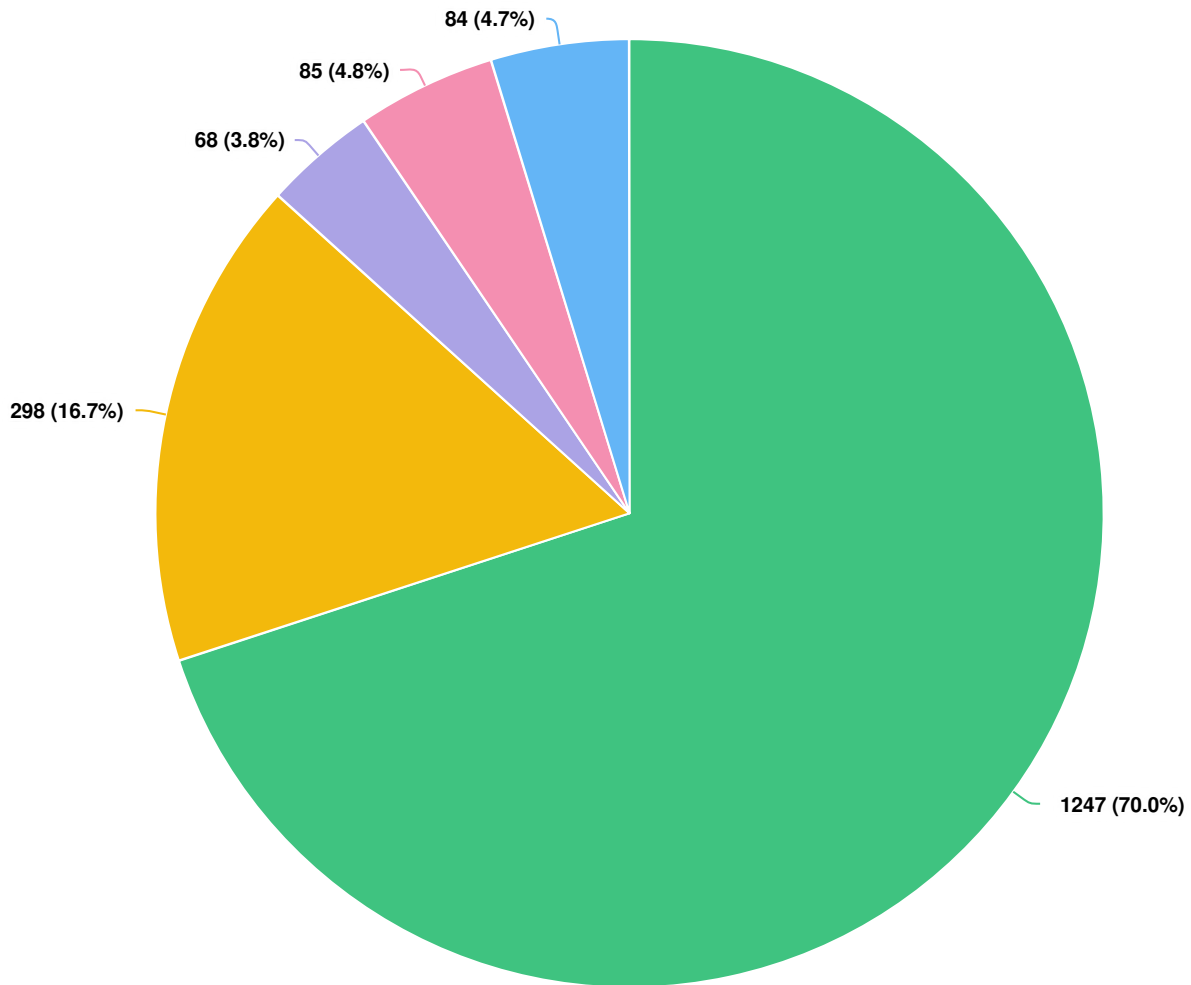








Q6 During the pandemic, from spring of 2020 until fall of 2022, the west Pearl Street area from 9th Street to 11th Street was closed to vehicles to make room for expanded outdoor dining, pedestrian spaces, gathering and events. In your view, how do yo...



Question options

- Significantly decreased
- Decreased
- No impact
- Increased
- Significantly increased

Optional question (1782 response(s), 4 skipped)

Question type: Radio Button Question

Q7 Different people may have different priorities for downtown streets. In which order do you think the city should prioritize community interests for downtown streets as public space? (Please rank them all, 1 - Highest, 8 - Lowest)

OPTIONS	AVG. RANK
Provide additional enjoyable public spaces for gathering and outdoor dining/entertainment/leisure	2.30
Use curbs for non-vehicular purposes (e.g. landscaping, bicycle/scooter parking, curb and sidewalk extensions, outdoor dining parklets and others)	3.78
Maximize access for all people regardless of ability and mode (e.g. people with disabilities, pedestrians, cyclists, transit users, etc)	3.97
Preserve quiet enjoyment/quality of life/character of surrounding neighborhoods	4.65
Maximize economic vitality potential for underutilized/underinvested areas	4.72
Minimize traffic congestion	4.98
Enhance critical connections between downtown and nearby destinations such as University Hill	5.58
Preserve curbside vehicle access to businesses (e.g. on-street parking/passenger pick-up/drop-off/deliveries/loading)	6.02

*Mandatory Question (1786 response(s))
Question type: Ranking Question*

Q8 Please share any additional ideas that are important to you (optional)

Anonymous

1/12/2023 09:38 AM

Too many homeless in the area. Make the area unsafe and not a place i want to go.

Anonymous

1/12/2023 09:40 AM

Please expand the areas where no vehicles are permitted.

Anonymous

1/12/2023 09:40 AM

Safety is a huge problem in the Downtown area which in turn is affecting the economic vitality. I love the shops and the vibe downtown but when I think about how unsafe it is, I am less likely to park and walk and shop.

Anonymous

1/12/2023 09:45 AM

Cars already take up so much infrastructure from roads to surface parking to parking garages. It's nice to be able to enjoy a space without the pollution from cars (noise, air) or worrying about distracted drivers and your safety.

Anonymous

1/12/2023 09:49 AM

Reinstate the street cars and routes (especially Chautauqua) connecting downtown as well as the Ideal Market area.

Anonymous

1/12/2023 09:52 AM

Emphasize history of downtown

Anonymous

1/12/2023 10:06 AM

Any design of all public Boulder spaces, particularly Pearl, should center human-scale thinking first (ie no cars, only handicap parking maybe) and orient spaces to optimize community gathering with little space wasted to cars.

Anonymous

1/12/2023 10:23 AM

The homeless residents predominately reside in this downtown area, creating an unsafe environment. The city could provide an open area wherein homeless residents can pitch their tents, have access to portable toilets, trash cans & police safety services.

MisterCrister

1/12/2023 10:35 AM

Highlight/Celebrate 13th Street as Boulder's "Cultural Corridor" all the way from Chautauqua, through The Hill, past CU, across Boulder Creek, through Downtown/across Pearl Street, past the Boulderado, through Longs Gardens, finally to NoBo Arts District

Anonymous

1/12/2023 10:36 AM

Part of the amazing experience in Europe is outdoor dining on sidewalks, streets, and plazas. We got a taste of this in Boulder due to Covid. I think we should embrace this lifestyle and expand and create more outdoor dining experiences.

Anonymous

1/12/2023 10:50 AM

Sense of safety and security of persons and property are very important for me in downtown Boulder.

Anonymous

1/12/2023 11:14 AM

Downtown had become almost too dangerous to feel safe. Locked bikes stolen on the mall, in daylight. can't walk across the street to boulder creek area without running into human feces and needles on the ground. Perhaps this should be addressed first?

Anonymous

1/12/2023 11:34 AM

Get rid of the homeless and drug users. I hate going downtown for fear of who will be there. I'd rather drive my car some where get what I need and get back in.

Anonymous

1/12/2023 11:58 AM

Using spaces to bring community together WITH safety (especially to women) as a main concern. There are WAY too many unsafe situations happening downtown and in near by areas....it is a HUGE concern

Anonymous

1/12/2023 12:13 PM

I am in favor of extending the pedestrian mall permanently but it needs to be done in keeping with the aesthetics of the existing mall. The temporary extension was necessary but unsightly.

Anonymous

1/12/2023 12:39 PM

I think pedestrian-only streets are amazing! It makes that area much more enjoyable and means I want to visit more often/stay longer. While some parking is necessary, I don't think it needs to be immediately next to the shops/restaurants in many cases.

Anonymous

1/12/2023 12:51 PM

Install additional lighting to the street & alleys which are 1 or 2 streets beyond Pearl St. I live on 6th & Canyon & the last 2 streets beyond Spruce bakery is dark & bushes are overgrown on sidewalks which makes unsafe to walk after sundown.

Anonymous

1/12/2023 12:57 PM

Parking for businesses to load/unload/handicap parking is essential for businesses in this area.

<p>Anonymous 1/12/2023 01:04 PM</p>	<p>Use care to ensure improvements are safe and inviting.</p>
<p>Anonymous 1/12/2023 01:27 PM</p>	<p>Boulder already received a ton of info on this topic a year ago when the public gave one of the largest responses ever when Boulder tried the first time to change West Pearl back to traffic. Please actually listen this time.</p>
<p>Anonymous 1/12/2023 01:36 PM</p>	<p>The outdoor dining and increased walking area was WONDERFUL. Keeping cars away from this area made everything about downtown more enjoyable. Park in the parking structures!</p>
<p>Anonymous 1/12/2023 02:03 PM</p>	<p>safe bike lanes would be great. It is a tough place to travel to by bike.</p>
<p>Anonymous 1/12/2023 02:09 PM</p>	<p>The parking fee system should mirror OSMP fee areas in that vehicles registered in Boulder County should be able to park for free.</p>
<p>Anonymous 1/12/2023 02:21 PM</p>	<p>I think it lent a vibrancy to downtown that can only be experienced in cafe in Europe. Walkable, pretty, outdoors, people watching, open air</p>
<p>Anonymous 1/12/2023 02:22 PM</p>	<p>Please create more pedestrian only spaces like they have in Europe, where they block off streets from cars and allow only bikes or pedestrians. Everywhere in Europe this enhances the experience.</p>
<p>Anonymous 1/12/2023 02:27 PM</p>	<p>More places and events (particularly free ones) that encourage the community to come together</p>
<p>Anonymous 1/12/2023 02:40 PM</p>	<p>I think the bricked mall should continue all the way to 9th street. I understand restaurant owners located west of 10th do not support this idea, but the mall is an experience rather than a destination for many. More people will visit west mall if bricked</p>
<p>Anonymous 1/12/2023 02:54 PM</p>	<p>Getting to or parking in downtown with a bike is no longer practical due to the homeless drug addicts there and camping along every one of the paths and parks. And being downtown is only marginally safer than that. Fix that, and I'll go a lot more.</p>
<p>Anonymous</p>	<p>Bicyclists need stressfree access, which the downtown loop (nor</p>

1/12/2023 02:57 PM

West Pearl) does not provide.

Anonymous

1/12/2023 03:30 PM

I loved all of the outdoor dining and think that should be prioritized.

Anonymous

1/12/2023 03:38 PM

The tax rate in the downtown area is forcing investors to sell their properties and business owners to leave for more affordable venues. The city should do everything it can to keep local, small businesses alive downtown. Do whatever the business need.

Anonymous

1/12/2023 03:54 PM

Outdoor spaces are great. It would be nice to see the creation of said spaces spread across the city more

Anonymous

1/12/2023 04:11 PM

Climate-relevant emissions should be an important consideration in any use of public space

Anonymous

1/12/2023 04:21 PM

The overall impact on parking spaces from closing more streets does not seem to be very significant. I have always been able to find a place to park.

Anonymous

1/12/2023 04:37 PM

It's hard to enjoy eating outside when the streets are clogged with cars. Very unappealing. There are plenty of parking garages to store vehicles in. Also, transit should be free on weekends, parking should be \$6 an hour.

Anonymous

1/12/2023 04:50 PM

The economic interests of businesses in that area can't be ignored, but we need to be very creative about how that area can best function

Anonymous

1/12/2023 04:55 PM

Safe and usable public restrooms. Security presence for all of downtown for visitors, business owners and workers.

Anonymous

1/12/2023 05:44 PM

Consider European cities where the city center is a pedestrian hub for everyone. It is also a major tourist attraction driving significant city revenue. Outdoor dining has huge appeal and people shop before and after meals. It puts boulder on the map!!

Anonymous

1/12/2023 07:40 PM

Absolutely loved the street being closed - it felt like it brought more people together.

Anonymous

1/12/2023 08:53 PM

Forced ranking creates false choices. Would love to see more "temporary" outdoor, public options on Pearl, or 29th or other areas. Perhaps less congested areas (EBO? SOBO?)

Anonymous

1/12/2023 08:57 PM

Go back to larger/expanded PedMall.

Anonymous

1/12/2023 09:20 PM

Please work with existing groups and business to develop these - beyond DBP. People want play areas, live music, dining areas, shade.

Anonymous

1/12/2023 09:39 PM

It will be helpful to keep in mind that as well intentioned as folks are, we aren't going to end climate change by closing West Pearl to cars, but we may actually harm the businesses there that provide jobs, revenue and tourist destinations to the city

Anonymous

1/13/2023 02:58 AM

Bikes, skateboards, electric scooters, etc. should not be buzzing by people walking on the mall or on sidewalks. I've almost been slammed into by people going 10-20 mph. missed by inches.

Anonymous

1/13/2023 04:20 AM

Several times I went downtown to eat only because the streets were blocked and we could eat outside.

Anonymous

1/13/2023 05:11 AM

Keep buskers, have more local stores and carts and popups

Anonymous

1/13/2023 05:14 AM

no problem with temporay street closure. would not like permanent closure

Anonymous

1/13/2023 05:21 AM

There must be balance.

Anonymous

1/13/2023 05:30 AM

The charm of Pearl St is to stroll there with family and friends. Slower is better for experiencing it. Pre-Covid, West Pearl was with drive only or walking through super crowded streets. The closing of street for traffic allowed us to experience that side

Anonymous

No bike lanes. Remove the urban camping and homeless situation on

1/13/2023 05:49 AM

Pearl. Also remove the Brick toilets. It's a makeshift meth house and the small fires that homeless start could be dangerous. It's horrible being on 13th and Pearl and be insulted and harra

Anonymous

1/13/2023 06:13 AM

I really loved the street closed and left simple, not too constrained like the rest of the Mall, which is too "finished" and not flexible or vibrant.

Anonymous

1/13/2023 06:21 AM

Loved the creative and changeable scene on West Pearl - leave it closed, allow vehicular drop off at cross streets, and let it be more creative and less locked down than the rest of Pearl.

Anonymous

1/13/2023 06:28 AM

as one who often accompanies my mother and my MIL both of whom use walkers; having handicap parking on the side streets such as 8th, 10th and 11th would be satisfactory and other can use the parking garages; parking in the garage & walking 2+blocks is oko

Anonymous

1/13/2023 06:36 AM

I really enjoyed the outdoor dining access on streets and sidewalks. Would love to see this become a permanent thing mainly because it's fun, more communal and also allowed people to bring their dogs with them - i.e. more time spent downtown.

Anonymous

1/13/2023 06:40 AM

Pearl street has lost it vitality. only reason we go is for Peppercorn and the Boulder Book Store. Otherwise, it's dirty and feels unsafe and hard to get around.

Anonymous

1/13/2023 06:50 AM

I am not, nor is council, qualified to design public spaces. The West End was mainly empty for a year. It's back to life now. The Mall was built specifically four blocks long - by experts who knew what they were doing. Let's leave it that way.

Anonymous

1/13/2023 06:50 AM

A true enforcement presence downtown is essential. People, not just visitors or unhoused, smoke, walk dogs that do what dogs do, ride bikes/skateboards. Sleeping in doorways, hoarding, trash makes walking Pearl St unpleasant and risky.

Anonymous

1/13/2023 06:55 AM

Enforce the NO dog ordinance on the mall. Currently it is just ignored.

Anonymous

1/13/2023 06:58 AM

Decrease traffic congestion in the downtown area, increase outdoor dining and walking opportunities, increase public transportation to

Pearl Street mall. Keep downtown Boulder peaceful and beautiful.

Anonymous

1/13/2023 07:10 AM

We are an awesome bike friendly city. It's part of the appeal of moving here. Cars should not be the priority over other ways to get around and enjoy life in Boulder

Anonymous

1/13/2023 07:24 AM

This is very important to me for safety and enjoyment downtown: to enforce the no smoking, no pets (not allowed in stores either), no wheels. I often don't go downtown due to seeing people avoid following this ordinance. AND no dogs at the Farmers Market.

Anonymous

1/13/2023 07:48 AM

Flexible space that allows for enhancement and expression that otherwise does not exist because of the proliferation of unnecessary rules and regulations

Anonymous

1/13/2023 07:57 AM

Disability access is essential & can be accomplished on 10th St while keeping Pearl closed. Many business entrances have steps, which are not wheelchair accessible, so people have to enter through the alley. 10th St. should be disability parking/drop-off.

Anonymous

1/13/2023 08:18 AM

must have a better solution for the many homeless camps at the clam shell, library, etc.

Anonymous

1/13/2023 08:19 AM

The downtown bus station is a necessary hub. Treat non-drivers with respect. Make it attractive, safe, and well-designed. Right now, it's a grim, ugly, unsafe place. Transit is often late or schedules skipped, making for long waiting times. Make it safe.

Anonymous

1/13/2023 08:39 AM

I never drive downtown because of limited parking and cost of parking. I think Pearl St between 9th and 11th should remain closed to cars traffic. I wish you stop clogging up local streets with bollards. They don't discourage cars, just make it more haz

Anonymous

1/13/2023 08:40 AM

Boulder is a dog UNFRIENDLY city- allow dogs on Pearl St Mall

Anonymous

1/13/2023 09:02 AM

I loved the extension of the closed street during the pandemic and the addition of outdoor seating along the entire mall, I hope it comes back. I also think we should extend the radius of paid parking around downtown; drivers should pay a premium.

Anonymous

1/13/2023 09:05 AM

Keep Pearl st. open to traffic. It confines the traffic noise and pollution to Pearl st. and keeps it out and away from the surrounding neighborhood. The traffic in the surrounding neighborhood was horrible during the street closure.

Anonymous

1/13/2023 09:28 AM

I live downtown and ride my bike thousands of miles a year, but I *never* feel safe locking my bike downtown. If my partner and I ride bikes together somewhere, one of us waits outside with the bikes while the other goes in. We'd love more secure lockups.

Anonymous

1/13/2023 09:40 AM

This is actually for question 2 - you lumped car and bike storage together. - I do NOT care about prioritizing car storage, but usable and safe bike storage is incredibly important. Don't group those into one answer, please.

Anonymous

1/13/2023 09:40 AM

Keep cars farther out from downtown. Perhaps have a shuttle. Streets for planting and strolling and picnics.

Anonymous

1/13/2023 09:45 AM

Ban most cars downtown in a way similar to Amsterdam and other European cities. More parking just adds pollution and congestion. Make up for this by improving bike lanes and increasing RTD times from other neighborhoods to downtown during peak times

Anonymous

1/13/2023 09:53 AM

Really love outdoor dining and would love to have that be a mainstay on West and East Pearl St.

Anonymous

1/13/2023 09:55 AM

More outdoor dining would be wonderful - it even works in bad weather (usually)

Anonymous

1/13/2023 10:36 AM

West Pearl was orders of magnitude more welcoming and enjoyable to visit when closed to cars. It is disappointing that the city allowed a handful of wealthy business owners to force it's reopening after significant public support for the opposite.

Anonymous

1/13/2023 10:37 AM

The vehicle traffic along West Pearl makes that area unsafe for pedestrians. It wasn't apparent how hazardous that traffic is until the pandemic closure was lifted and vehicle traffic resumed. I haven't been to West Pearl in weeks, because of the traffic.

Anonymous

1/13/2023 10:45 AM

I want a clean and safe environment, free from the drug addicts and homeless who have taken over our public spaces

Anonymous

1/13/2023 10:53 AM

Please prioritize people over cars by adding more e-scooter, bike, and e-bike stations. Consider a subsidy so that low income people can access these modes of transportation at low cost.

Anonymous

1/13/2023 10:53 AM

The outdoor dining regulations for restaurants are incredibly restrictive (no structures, heaters and electricity are super restrictive). Please talk to restaurant owners about relaxing these regulations!

Anonymous

1/13/2023 10:58 AM

Charge fees to non local tenants that pay to the city. Penalties to property owners who allow spaces to stay unoccupied. More routes like the Hop.

Anonymous

1/13/2023 11:05 AM

Outdoor dining on the curbs/roads was fabulous during the pandemic. Please consider making this a pedestrian/usable dining space again.

Anonymous

1/13/2023 11:06 AM

The downtown area has degraded so much with the drug/tent community takeover.

Anonymous

1/13/2023 11:13 AM

I personally loved the west side pearl road closure and made me utilize much more of pearl and visit shops I had previously never walked to.

Anonymous

1/13/2023 11:18 AM

Used to walk around downtown from work all the time - removal of road closure made that stretch much less desirable to visit for coffee, etc.

Anonymous

1/13/2023 11:23 AM

We need to meet the moment, and act boldly when it comes to infrastructure. We should be willing to face pushback to meet our City's goals (emissions reductions, safety, transportation, etc.).

Anonymous

1/13/2023 11:26 AM

Close the west end of pearl again. Add raised crosswalks all around pearl.

Anonymous

I go to the downtown area because it is delightfully walkable with

1/13/2023 11:27 AM

minimal car interaction along the pedestrian mall. The more pedestrian only areas, the more I'll want to go downtown.

Anonymous

1/13/2023 11:30 AM

West Pearl during the pandemic was a gem. Exactly what Boulder should be fostering. We need more community space, not more parking. (Also I spent way more money downtown then vs before or after.)

Anonymous

1/13/2023 11:31 AM

Make all of pearl street a pedestrian mall

Anonymous

1/13/2023 11:33 AM

Auxiliary parking outside of downtown with shuttle services or pleasant and protected walking paths from parking to downtown economic areas

Anonymous

1/13/2023 11:33 AM

Car culture is not good for towns. Evidence suggests prioritizing car infrastructure makes people less happy in the long run. When west Pearl was closed to cars, I felt more connected to the Boulder community, and enjoyed walking along Pearl st more.

Anonymous

1/13/2023 11:35 AM

I would enjoy seeing sidewalks expanded to allow more traffic. I would also like to see the multi-use paths have "lanes" painted on them to better allow traffic to flow.

Anonymous

1/13/2023 11:39 AM

The amount of life that came to West Pearl during the street closure was amazing. The musicians and artists and bustling conversations in the outdoor seating were amazing and the closest I've seen to European plazas in Colorado. Boulder could use more.

Anonymous

1/13/2023 11:39 AM

Regardless of who responds to this survey, when the West end of the Mall was closed to cars, the result was clear: people voted with their feet. I don't ever remember seeing so many people making use of the space as they did then!!

Anonymous

1/13/2023 11:40 AM

Represent constituents, push back on rich vested interests like Tebow, Jay, Big Red F, and Re-close West Pearl! It's pretty simple, doesn't need a survey or consulting. This was the overwhelming public consensus. Re-opening reeked of corruption.

Anonymous

Extend the Pearl st mall to 9th st.

1/13/2023 11:43 AM

Anonymous

1/13/2023 11:43 AM

The main use of a road for me is to get places. The road on that section of Pearl being a road does not provide much value in that regard, I never once wished, while it was blocked off, that I could drive on it again.

Anonymous

1/13/2023 11:46 AM

Please prioritize access, enjoyment, and free opportunities for fun and community building!

Anonymous

1/13/2023 11:48 AM

Please ensure you don't violate the ADA. Make sure public dining doesn't cut off wheelchair routes, don't route wheelchairs over cobblestones, don't let people park scooters in the middle of the sidewalk.

Anonymous

1/13/2023 11:52 AM

Public spaces should be for people and community, not private, isolating, polluting, loud, and dangerous motor vehicles. The public health emergency may be over, but the climate emergency is only just beginning.

Anonymous

1/13/2023 11:53 AM

Please add a place for people to play chess, similar to Washington square park in NYC.

Anonymous

1/13/2023 11:56 AM

Close west pearl. The city council has lost touch with its duty to represent the citizens of the city.

Anonymous

1/13/2023 12:01 PM

Pearl street is great because of the walking mall. It would be nice if the walking mall extended into west pearl.

Anonymous

1/13/2023 12:02 PM

It is unsustainable from a climate and from a traffic perspective to design our downtown around individuals driving cars, so we should instead focus on making it more welcome for other types of transportation while maintaining accessibility.

Anonymous

1/13/2023 12:09 PM

Safety. Safety. Safety. I avoid most of Boulder these days if I can. The homeless and drug issue are a disgrace.

Anonymous

1/13/2023 12:10 PM

Please make Boulder's downtown a pedestrian, cyclists and public transportation priority. Car traffic is the least important consideration.

People want to visit and walk or bike around. Not dodge cars and some exhaust. It's also better for pollution.

Anonymous

1/13/2023 12:14 PM

I don't feel that it's appropriate for public rights of way (streets, sidewalks, the pedestrian mall, etc) to be permanently repurposed for a private business's retail space or dining area. It served a purpose during the height of the pandemic, not now!

Anonymous

1/13/2023 12:17 PM

It's important to me to be able to access west Pearl in a variety of ways. Sometimes I walk, drive or bicycle. Being able to access businesses like Ozo coffee, Tru Skincare and urban outfitters easily is key as I frequent these places often

Anonymous

1/13/2023 12:18 PM

Not all parts of downtown seem safe for my kids to visit.

Anonymous

1/13/2023 12:19 PM

The mall works, we don't necessarily need more bricks, just a continuation of no parking or traffic on Pearl

Anonymous

1/13/2023 12:21 PM

Turning west Pearl back into mall, and taking it further, would be amazing. Removing it was a travesty. The issues with the mall being economically dead and dying is due to insane rent, not car access. Building more housing too. Dense + walkable!

Anonymous

1/13/2023 12:23 PM

keeping west pearl open is clearly what the community wants, and most business owners want, it's absolutely ridiculous that this got closed down due to a small number of business owners who couldn't adapt

Anonymous

1/13/2023 12:25 PM

As long as parking is easy to find near downtown (which is almost always is), then the pearl street and nearby roads with stores should be for pedestrian use.

Anonymous

1/13/2023 12:30 PM

I really valued west pearl being pedestrian only and spend less time downtown now that it is open to traffic again. I would love to see the area reimaged and perhaps reconstructed to remove curbs and trip hazards

Anonymous

1/13/2023 12:30 PM

I work at 1035 Pearl Street, in the office directly overlooking the section of Pearl between 9th and 11th street which was previously

closed and since re-opened. I would love for it to be once again made a pedestrian only area

Anonymous

1/13/2023 12:32 PM

Removing vehicles from the streets provides a litany of benefits: reduced noise and air pollution, a greater sense of safety, more foot traffic for businesses, communal spaces, and beyond. Look up "Barcelona's Super Blocks," for examples.

Anonymous

1/13/2023 12:39 PM

No more cops please

Anonymous

1/13/2023 12:40 PM

I think it really increased the feeling of community and overall appeal of going downtown to eat and walk around by having the no car/ extended patio and pedestrian areas on west pearl

Anonymous

1/13/2023 12:40 PM

Crime throughout the city. The bike paths used to be user friendly. Not anymore! Our city has changed for the worse. Blue Lin has changed drastically. CU South will impact South Boulder negatively. Blue Line is still necessary. Height limit is necessary.

Anonymous

1/13/2023 12:41 PM

NA

Anonymous

1/13/2023 12:43 PM

There are concerns that this area does not see enough traffic. This could be alleviated by upzoning the surrounding neighborhood to allow construction of duplexes, triplexes, rowhouses, or even 3-4 story apartment buildings.

Anonymous

1/13/2023 12:45 PM

Making downtown more pedestrian friendly and closing off more areas to cars allows for more people to enjoy the area

Anonymous

1/13/2023 12:51 PM

In question two- storage of bikes and cars was lumped together. I do not care as much about ease of car parking, but am primarily concerned about safe bike parking.

Anonymous

1/13/2023 12:55 PM

West pearl should be paved with brick like the rest of the pearl street mall- even made into a covered promenade

Anonymous

In question 2 i don't think it's fair to lump bike Parking w car parking. I

1/13/2023 12:59 PM

cannot drive due to disability and want more city streets open, safe for people, not private metal boxes

Anonymous

1/13/2023 01:00 PM

Shutting down parts of Pearl street to create a walking mall area greatly improved Pearl street and its appeal. It was a beautiful experience to have and was so disappointing when it was reopened. Not much parking was added by reopening the are

Anonymous

1/13/2023 01:03 PM

I loved when the stretch of Pearl was closed through 9th Street. I seldom walked down that stretch prior to the pandemic and since it's reopened to cars. But it was my favorite area when it was restricted to pedestrian traffic and outdoor dining.

Anonymous

1/13/2023 01:04 PM

Having travelled all over the world the cities with the biggest pedestrian only areas are always the most enjoyable. Close off more streets to vehicles.

Anonymous

1/13/2023 01:07 PM

I loved the closed off section of Pearl! There's something about having a street closed off that makes it even more enticing and enjoyable than the built up walkways. Outdoor seating, busking, and such a wide space makes me feel more community.

Anonymous

1/13/2023 01:08 PM

I am sensitive to the parking/accessibility concerns expressed by businesses and hope there can be a solution that addresses their concerns while enhancing curbside/outdoor use for the public.

Anonymous

1/13/2023 01:16 PM

I'd love to see fewer empty store fronts in the downtown area. And fewer banks and chains. Also, fewer things blocking the walkway like temporary restaurant patios and overly large planters. I don't mind them being there, but they're in the way.

Anonymous

1/13/2023 01:25 PM

Having the street closed made me MUCH more likely to walk down the block west of the mall, and brought me to businesses on the block much more often. The businesses on that block I still chose not to go to, I never went to in the first place.

Anonymous

1/13/2023 01:34 PM

Reopening the west end of Pearl to cars makes me never want to go there

Anonymous

1/13/2023 01:34 PM

I rarely go to the side of Pearl that is now open to cars because it feels far less pedestrian-friendly. A zone of town that is dominated by cars is far less attractive than one dominated by pedestrians

Anonymous

1/13/2023 01:35 PM

Enjoy the increase in outdoor spaces. Would like more oversight of the problematic transient population. Often drunk and loud and hanging out or sleeping on the mall. Deters visits with my children or families.

Anonymous

1/13/2023 01:40 PM

I loved the Pearl St closure, except that too much sidewalk was used instead of street. I'm all for using the ROW for activity (not cars) but through traffic (ped) needs to be maintained. There is plenty of parking nearby and alleys provide curbside.

Anonymous

1/13/2023 01:42 PM

Bring it back. Those 31 parking spots can be removed. Stop favoriting wealthy business owners. Pasta Jay's is trash.

Anonymous

1/13/2023 01:45 PM

Industrialization kills human happiness. Walkable cities are the only way to go. Close as many streets as possible and invest in FREE busses and trams!!!!!!!

Anonymous

1/13/2023 01:52 PM

Pearl St is the heart of downtown and a tiny oasis surrounded by cars. It should be scaled up dramatically to help achieve climate goals, create new housing and mixed-use opportunities, and vibrant public spaces instead of parking lots and wide roads.

Anonymous

1/13/2023 01:54 PM

A few extra parking spots in the heart of the pedestrian area adds nothing and takes away so much.

Anonymous

1/13/2023 01:59 PM

Extended the pearl street mall as a pedestrian only street to West Pearl is just a no-brainer. Everyone but a few rich A-holes loved it. We should extend the mall to East Pearl as well. The pedestrian mall is what makes Boulder Boulder. Grow if!

Anonymous

1/13/2023 02:00 PM

Close the streets and make the west end a nice place to spend time again!

Anonymous

1/13/2023 02:00 PM

Please close 9th to 11th to cars again

Anonymous

1/13/2023 02:09 PM

The conversion of West Pearl made Boulder feel progressive instead of virtue signaling. It showed that People > Cars and it was awesome seeing all the people enjoying the space instead of having to dodge absent-minded drivers trying to park.

Anonymous

1/13/2023 02:14 PM

The walking mall should have stricter enforcement of the bicycle and dog bans.

Anonymous

1/13/2023 02:14 PM

Pedestrian Safety should be top priority, and safety measures should be preventative, no reactive.

Anonymous

1/13/2023 02:14 PM

We get such great weather, expanding outdoor seating into the street was wonderful and I hope more is done downtown.

Anonymous

1/13/2023 02:15 PM

I would like to see Pearl St be a pedestrian area with no cars. However - I do not think restaurants should be utilizing outdoor public space (i.e. sidewalks) for private businesses. If Pearl were permanently pedestrian only then there would be room.

Anonymous

1/13/2023 02:15 PM

Walking and cycling over cars. Think Amsterdam.

Anonymous

1/13/2023 02:19 PM

The availability of the west Pearl space for outdoor dining and seating made me want to spend more time on this side of Pearl. I tried new restaurants because of their outdoor presence. It felt like a more community driven use of the space

Anonymous

1/13/2023 02:32 PM

I would love to see all the one-way streets converted to 2-way.

Anonymous

1/13/2023 02:43 PM

Downtown is great! Make sure new buildings keep the 38 ft height limit and 20 feet back from the curb or sidewalk.

Anonymous

1/13/2023 02:44 PM

Having west pearl closed to cars was way more of a public good than having slightly more parking for people to go to pasta jay's

Anonymous

1/13/2023 02:44 PM

Outdoor common space is the most important thing to creating a vibrant downtown and a vibrant community. Please prioritize that, as

well as blocking off cross-street parking spots for disabled people to make sure they can access communal spaces.

Anonymous

1/13/2023 02:48 PM

Please bring back the closed street i was in downtown today and was annoyed by having to be submissive to the cars

Anonymous

1/13/2023 02:48 PM

The pedestrian extension of pearl street, and accompanying outdoor communal space was an incredible enhancement to my family's quality of life in Boulder. We used downtown restaurants and sho more in the time that it was open than ever before or since.

Anonymous

1/13/2023 02:53 PM

I understand the inconvenience that was caused for deliveries, pickup, drop off, etc. during the closure. Maybe there could be specifically designated location(s) for this built into the plan? Replacing driving/parking w/ more transit modes helps, too.

Anonymous

1/13/2023 02:53 PM

The city should expand the pedestrian malls. It was so disappointing when West Pearl was reopened. It was especially sad to see the city prioritize the interests of a couple of restaurant owners over the majority of Boulderites. Do better!

Anonymous

1/13/2023 02:54 PM

car are the absolute worst. do not invite them back!

Anonymous

1/13/2023 02:59 PM

The pandemic is not over. Hundreds of people are dying every day and even more are ending up disabled. This is a paradigm shift and an opportunity to reimagine the future of urban design. Boulder should be a leader in designing safe, ventilated experience

Anonymous

1/13/2023 03:03 PM

Stop limiting or removing vehicle access and ease of use across town!

Anonymous

1/13/2023 03:06 PM

The "downtown loop" intersections are dangerous. Downtown should prioritize being a destination rather than moving traffic through it. All surface parking lots downtown should be infilled with sidewalk-activating uses.

Anonymous

1/13/2023 03:07 PM

More benches and other public outdoor seating along downtown would be helpful.

Anonymous

1/13/2023 03:07 PM

I'm a Boulder native - used to walk everywhere - now too afraid to walk around my own downtown neighborhood alone because of the homeless people. I only feel comfortable during the day on popular streets with people and businesses close - not safe anymore

Anonymous

1/13/2023 03:07 PM

If Pasta Jays can't survive without parking access directly in front of the business, maybe it should die off and be replaced with a better restaurant. It is a tourist trap, good riddance. Seriously council members, when did you last eat there? 10+ yrs?

Anonymous

1/13/2023 03:12 PM

Changing a car-commuter culture takes big steps toward community habit change. Maximizing space for pedestrians and improving cycling access/experience downtown should be a priority for our community.

Anonymous

1/13/2023 03:17 PM

Some of these grouped answers do not allow for nuance. We need more secure bike parking, but don't necessarily support all car parking. Passenger drop off/item pickup on each block is good without every curb reserved for onstreet parking

Anonymous

1/13/2023 03:19 PM

I don't think you should be able to drive through Pearl at all. I haven't been to West Pearl since it was closed to full pedestrianism and I won't until cars can't go there again. Prioritize bikes and walking and make Pearl a calmer place with no cars.

Anonymous

1/13/2023 03:27 PM

Strong Towns/Not Just Bikes design philosophy

Anonymous

1/13/2023 03:39 PM

More outdoor spaces for people and fewer for cars made places so much more pleasant and appealing, not to mention safe.

Anonymous

1/13/2023 03:52 PM

A clean, litter free city is very important to me. Enforcement of the no camping rule which protects Boulder's special natural places, regardless of who is on current City Council, is very important to me.

Anonymous

1/13/2023 03:55 PM

Make Boulder more walkable/bikable, and more people will walk and bike.

Anonymous

More bike lanes, more buses, more foot traffic! Cars have so many

1/13/2023 04:17 PM

places to park, with multiple, multi-level parking garages available.
Close West Pearl to traffic! Give the streets back to the people!

Anonymous

1/13/2023 04:24 PM

Everyone I know wants to extend the pedestrian zone on Pearl from 9-11th permanently. The temp stuff last year was trashy looking & not kept clean. People use Uber to get home after drinking, make a safe drop/pickup zone. Make more covered eating areas

Anonymous

1/13/2023 04:32 PM

Please clean up all the homeless camps and public drug use in boulder. Until you do that none of these proposed improvements matter.

Anonymous

1/13/2023 04:52 PM

Yes its cool to spend time on streets that are shut down to enjoy food and entertainment. However this negatively effects getting to these areas with vehicles and parking. As a taxpayer who pays for these roads I don't respect taking them being taken away

Anonymous

1/13/2023 04:57 PM

Cars ruin cities! Make the busses run more frequently and later, please!

Anonymous

1/13/2023 05:01 PM

Clean up the homeless camps. Make the library and bus depot safe.

Anonymous

1/13/2023 05:07 PM

Question #2 is disingenously equating parking with bike parking. 100% separate. Secure bike parking is essential for expansion of cycling downtown. More car parking... not so much

Anonymous

1/13/2023 05:10 PM

Arthouse cinema!! Pleeeeeeeease!!!

Anonymous

1/13/2023 05:18 PM

WHY DID YOU CONFLATE BIKE AND CAR PARKING?

Anonymous

1/13/2023 05:27 PM

I am handicapped now. I used to ride my bike to downtown or even walk, but now my mobility issues severely restrict how many steps I can take. I can only walk about 1 block total, unfortunately. Please add more handicap parkingspaces. They are often full.

Anonymous

1/13/2023 05:36 PM

As a property manager of multiple commercial buildings downtown, I heard lots of feedback from others working downtown that they

preferred Pearl to stay closed to cars and that lunch options were negatively impacted.

Anonymous

1/13/2023 05:44 PM

I will not bike/bus downtown, only drive, but I still think 9th-11th should be closed and used for dining/pedestrians.

Anonymous

1/13/2023 05:45 PM

The removal of car traffic in favor of pedestrian walkways and outdoor dining made West Pearl much, much nicer! I'd like to see that continue or expand! Maybe even converting streets to green spaces would be wonderful.

Anonymous

1/13/2023 05:47 PM

you can't please everyony

Anonymous

1/13/2023 06:10 PM

My family strongly supported the restaurants and stores on the West End of Pearl when the street was shut down. It felt magical to walk down the closed street with the lights and plants. Once the street closed we haven't been past 11th St. It's so dreary.

Anonymous

1/13/2023 06:17 PM

Too much of our community infrastructure is dedicated to cars. It's nice to see efforts made to reduce that.

Anonymous

1/13/2023 06:28 PM

addressing housing (homelessness + affordability)

Anonymous

1/13/2023 06:54 PM

Bring back west Pearl the way it was over the pandemic! Don't overcomplicate it or make it "fancy"! We need transparency on if there has been a recent increase in tax revenue from the restaurants that "lost business" while the street was closed

Anonymous

1/13/2023 06:56 PM

Maximize outdoor dining, public spaces, minimize vehicle traffic downtown, expand pedestrian only area

Anonymous

1/13/2023 07:10 PM

I value being able to pick food up at restaurants in this area. Plentiful 5-15 minute parking spots nearby and high density motorcycle parking in corners would be enough to make it easy to access the area.

Anonymous

It would be nice to have restaurants, coffee and ice cream shops, and

1/13/2023 07:21 PM

stores to close later.

Anonymous

1/13/2023 07:56 PM

Rampant bike theft and reckless or distracted drivers are the main factors that discourage me from biking downtown. Infrequent and expensive public transit is another major issue:

Anonymous

1/13/2023 08:26 PM

The amount of parking available on that part of pearl is negligible compared to the number of people who can utilize the car free space

Anonymous

1/13/2023 08:27 PM

I vastly preferred when west pearl street was closed to vehicle traffic and am less likely to visit the businesses there now that the road has reopened.

Anonymous

1/13/2023 08:38 PM

No more banks

Anonymous

1/13/2023 08:49 PM

Reopening West Pearl has clearly shown that the parking is needed for Downtown business vitality and access for an aging population, without making the streets less safe.

Anonymous

1/13/2023 09:11 PM

I'd love to see even more of pearl closed to cars, and more protected bicycle infrastructure in place (NOT just painted lanes in the door zones and definitely not just sharrows)

Anonymous

1/13/2023 09:13 PM

I really enjoyed when west pearl was closed.

Anonymous

1/13/2023 09:16 PM

Bike parking, Uber drop offs. Safe walking!

Anonymous

1/13/2023 09:26 PM

Promoting walkable, mixed use spaces increases wealth and makes them more productive. We should turn all of boulder to be mixed use and walkable.

Anonymous

1/13/2023 09:38 PM

The economic viability and needs of the restaurants/retailers in the area needs to be a top priority. This is a business district and ensuring their viability is critical (both for a vibrant downtown and for tax revenue).

Anonymous

1/13/2023 09:51 PM

I was a HUGE fan of the West Pearl closure. I found that I spent more time in the area, and made for an overall more enjoyable environment. I strongly endorse a Boulder downtown that is more people, less cars.

Anonymous

1/13/2023 10:18 PM

Adding traffic back to west Pearl has been detrimental to downtown

Anonymous

1/13/2023 10:18 PM

We often walk downtown but we don't like the idea of closing west Pearl because it will push traffic, parking and noise into neighborhoods and decrease pedestrian safety with more people walking across 9th at Spruce and Pine to get to their cars.

Anonymous

1/13/2023 10:39 PM

Limiting cars discriminates against people w/disabilities or older! I rely on my car & cannot walk very far due to disability. Didn't visit downtown when streets were closed; it was too hard to find prkng. Handicap prkg in garages too far to walk.

Anonymous

1/13/2023 11:04 PM

It'

Anonymous

1/13/2023 11:17 PM

Americans love to remark on how livable and vibrant they found [EUROPEAN CITY] but fail to realize that the reason is those cities are built for people not cars. if you want livable cities, preserving car access is the worst way to do it.

Anonymous

1/14/2023 12:16 AM

Less parking, more frequent transit, more reliable transit (nights and weekends), road diets

Anonymous

1/14/2023 01:34 AM

We are 27 year residents of Boulder and have mostly stopped going downtown due to multiple unpleasant or scary interactions with aggressive transients. Stop using tax dollars for more civic improvements where you then don't strictly enforce the law

Anonymous

1/14/2023 05:24 AM

Give the people what they want!

Anonymous

1/14/2023 05:48 AM

I think closing streets off to vehicles for more pedestrians is great. I want ADA considerations to be the next high priority and then considerations for traffic flow around the closed areas to be the next priority.

Anonymous

1/14/2023 06:16 AM

I'd love to see the city go farther in creating an aesthetic on West Pearl: landscaping with trees and flower beds like what is on the rest of the mall and also extending this up 10th Street between Pearl and Spruce.

Anonymous

1/14/2023 06:22 AM

The plastic covered "outdoor" dining that was up during COVID was very unappealing and would not want these types of structures on a permanent basis

Anonymous

1/14/2023 07:10 AM

Please, please, please close Pearl St to cars.

Anonymous

1/14/2023 07:38 AM

PLEASE close west pearl to cars. Having cases back makes it feel significantly less enjoyable

Anonymous

1/14/2023 08:00 AM

I was really disappointed to see West Pearl reopened to drivers recently as I believe there are higher and better uses for the space.

Anonymous

1/14/2023 08:06 AM

The street closing and outdoor dining added SO to the appeal of the area. We should have more of it.

Anonymous

1/14/2023 08:12 AM

Would really love and utilise better maintained and protected bike lane access.

Anonymous

1/14/2023 08:12 AM

Get rid of the crime and trash. That's why we don't go downtown anymore. I rent an office on pearl, and don't use it because the tweakers regularly are sleeping on my entrance or leave piles of actual ad shit there.

Anonymous

1/14/2023 08:24 AM

I don't enjoy downtown as much anymore because of public camping and erratic behaviors from drug use. I make sure my 80 year old mom is accompanied home as she is vulnerable. We've been residents for 40+ years. Bvsd teacher/community volunteer

Anonymous

1/14/2023 08:34 AM

The amount of homeless people downtown who talk to me and lack of public restrooms also influence how often I go downtown.

Anonymous

1/14/2023 08:41 AM

Car storage on West Pearl is a tragic waste of public space to benefit only a few users. There are plenty of spaces in the Downtown parking garages. the idea that anyone except handicapped people needs to park directly in front of a business.

Anonymous

1/14/2023 08:42 AM

The W. Pearl St. closure made the area more pleasant for shopping and dining and incentivized low-carbon transportation. The city should reclose W. Pearl and prioritize reclaiming more public space from cars.

Anonymous

1/14/2023 09:20 AM

Prioritizing people and bikes over cars will always signify progress.

Anonymous

1/14/2023 09:30 AM

I really enjoyed the West Pearl Street roadblocks while they were there! And was saddened when they were suddenly removed. The street tables outside Trident were a great meeting place, and the roadblock made cycling along 9th street much safer.

Anonymous

1/14/2023 09:42 AM

I think anything that would help our city become less attached to car culture would be a plus, for health, vitality, growth and the cleanliness of Boulder.

Anonymous

1/14/2023 09:43 AM

Pls revert west end of pearl street back to pedestrians only. It was fantastic to eat there and have our kids run around outside!!

Anonymous

1/14/2023 11:03 AM

Support more bike parking and central pickup/drop off spots, do not support onstreet car parking except for nearby ADA spots (i.e. 10th street to serve as pickup/dropoff and ADA for W. Pearl area)

Anonymous

1/14/2023 11:14 AM

Regardless of how the downtown area changes I believe there should always be a place for people to drop off / pick up people and food. Inconvenient locations throughout the downtown area.

Anonymous

1/14/2023 11:24 AM

limit vehicle access to early hours (for deliveries). Improve alley spaces to be used for pickup/delivery during business hours

Anonymous

1/14/2023 11:34 AM

Closing streets to traffic significantly increases my enjoyment of being fowntown

Anonymous

1/14/2023 11:43 AM

Keep more traffic out of downtown! Closed streets were amazing.
Driving downtown is miserable anyways so make it easier not to.

Anonymous

1/14/2023 11:48 AM

Walkable downtown areas are a highlight of every city, and is likely the main reason people love Pearl Street. We should emphasize this as much as possible by reducing/eliminating personal vehicle access and increasing biking/walking access to the area.

Anonymous

1/14/2023 12:26 PM

Please make Pearl street pedestrian only! Traffic in that corridor is non essential and is bad for public health. Walking in the downtown should be prioritized.

Anonymous

1/14/2023 01:03 PM

We need to disincentive driving/parking personal vehicles downtown as much as possible for everyone who is reasonably able to access downtown via a different mode of transit!

Anonymous

1/14/2023 01:08 PM

Outdoor dining!! The fact that Pearl street is back open to cars significantly hinders my opinion of Pearl street. I am less likely to spend time downtown now.

Anonymous

1/14/2023 01:10 PM

this area needs a legitimate grocery option for residents in the area.

Anonymous

1/14/2023 02:55 PM

Create increasing taxes on spaces left vacant for more than a year - high rent has kept us from having lots of local shops. Add more walking space so everyone can spread out and enjoy downtown.

Anonymous

1/14/2023 03:09 PM

Close the streets to vehicles. It's better for citizens and businesses.

Anonymous

1/14/2023 03:12 PM

I am a 40 year resident of Boulder. The pedestrian mall is a treasure. In recent years the foot traffic from 9th - 11th St has increased to where the sidewalks have become too crowded. It's time to extend the pedestrian mall westward.

Anonymous

1/14/2023 04:03 PM

Increase art throughout the downtown; activate dead areas with events and activities; expand pedestrian/bike infrastructure; close off East Pearl to SOVs and install a tram/bus/bike/ped only access

Anonymous

1/14/2023 04:15 PM

When the West Pearl Street area was brought back to cars-only, I feel something was not only lost in a community sense, but also a financial sense. Walkable streets are incredible for local business, and there's a plethora of evidence to back that up.

Anonymous

1/14/2023 04:22 PM

Boulder should be more open about street closures and street parties. West Pearl was so inviting when the street was closed. We enjoyed the outdoor dining more often than we normally go downtown. The street party feel was delightful

Anonymous

1/14/2023 04:24 PM

Having downtown Boulder as a large plaza European style would significantly increase community experience and cohesion

Anonymous

1/14/2023 05:07 PM

I support planning/design that increases public and community gathering spaces and reduces reliance on personal cars for transportation.

Anonymous

1/14/2023 06:27 PM

Remember children. Pedestrian areas provide safe areas for children. Groups of children frequently played at the rainbow cross walk. Now it's for traffic. Safety for children = more children downtown = more parents who spend money downtown

Anonymous

1/14/2023 08:12 PM

I really hope this discussion extends beyond "which streets can we temporarily close?" to "how do we keep cars out of our most dense walkable downtown areas and make them the most pleasant, safe, breathable spaces for our community?"

Anonymous

1/14/2023 08:52 PM

After visiting Ljubljana, Slovenia this past summer, I'm a bigger believer than ever in a vehicle-free city center.

Anonymous

1/15/2023 07:50 AM

Consider banning on-street parking in and around downtown! Also, there is very little safe access from the bike path to downtown. Protected bike lane or dedicated bike path from the creek path would be great.

Anonymous

1/15/2023 08:32 AM

Preserve temporary parking for e.g., deliveries but not long-term on-street parking. Keep sidewalks and bike lanes clear of snow/ice & improve pedestrian/bike access through area (dangerous now). Improve bus access. We live in unincorporated Boulder.

Anonymous

1/15/2023 10:42 AM

I still do not eat indoors due to COVID, enjoyed extra outdoor dining downtown. Have advocated expanding the mall over time west and or east over time. A 6 or 7 block pedestrian mall is better than 5.

Anonymous

1/15/2023 12:20 PM

It'd be great to focus more on making the zone around Boulder Creek attractive again. It's a prime recreational area, but it looks like a homeless camp now. How about creating a proper campground with facilities somewhere outside the downtown?

Anonymous

1/15/2023 01:12 PM

Pearl Street between ninth and 11th is the most vital vibrant economically strong two blocks in the city of Boulder and you want to change it?

Anonymous

1/15/2023 01:43 PM

Once I get downtown, I will park and get around on foot. I think parking and traffic control are high priorities.

Anonymous

1/15/2023 02:04 PM

West Peal is wonderful the way it is. Please stop trying to change it and focus your time and our tax revenue on addressing homelessness.

Anonymous

1/15/2023 03:00 PM

Require Reynolds and Tebo to subsidize rent in commercial spaces, just like the city requires for residential spaces, so that some places with character can come back to downtown, thinking Connor O'Neill's, Corner Bar, neighborhood pub type places.

Anonymous

1/15/2023 03:08 PM

We LOVE the community feel of giving the streets to the people rather than mechanical cars!!

Anonymous

1/15/2023 03:36 PM

Mobility that works in Boulder is the only thing not a part of the plan.

Anonymous

1/15/2023 05:49 PM

I strongly believe in the importance of accessible, walkable public spaces that enable access for everybody, regardless of mobility or economic class and that prioritize community over profit. Public spaces are the foundation of a democratic society.

Anonymous

1/15/2023 06:36 PM

A return to what it was like during the covid shutdown was ideal.

<p>Anonymous 1/15/2023 06:54 PM</p>	<p>Maximizing walkable spaces and encouraging the use of bicycles and public transit would strengthen the city's culture and make Boulder an even more special and desirable place to live.</p>
<p>Anonymous 1/15/2023 08:14 PM</p>	<p>It is slightly ridiculous that the restaurants think they can fill their dining rooms with the limited street parking that exists in that one block. Even more ridiculous that a HOP bus circulates in that area. Extend the brick enclosed mall and let the</p>
<p>Anonymous 1/16/2023 06:34 AM</p>	<p>Controlling vehicle speed and noise on Broadway between Spruce and Canyon would be great</p>
<p>Anonymous 1/16/2023 06:42 AM</p>	<p>blockinig off the road was a huge waste of space and only made sense because of the covid precautions. it is so much easier for me to get to west pearl with the street open I park on west pearl all the time</p>
<p>Anonymous 1/16/2023 06:42 AM</p>	<p>Allow special access for cars with disabled plates</p>
<p>Anonymous 1/16/2023 06:43 AM</p>	<p>Remove the homeless people from the library and open the library weekend nights for dates.</p>
<p>Anonymous 1/16/2023 06:45 AM</p>	<p>The look & feel of a pedestrian area is critical to its success and acceptance from the community. Redesign of the streets in question is important to ensure the area feels purposeful, not temporary or accidental</p>
<p>Anonymous 1/16/2023 06:49 AM</p>	<p>public places to sit, public places for fun things like the Halloween dance party, and the menorah lighting</p>
<p>bdrsth 1/16/2023 06:50 AM</p>	<p>Go big or go home. It's either an all in our out situation on any given block. The 9th to Mall pandemic shift was a hodgepodge of individual solutions with no real flow, approach or design. Needs a comprehensive approach, not defined by individual biz.</p>
<p>Anonymous 1/16/2023 06:52 AM</p>	<p>The restaurants are too expensive and I don't shop much, so I don't go downtown. Would be nice to have a performing arts venue downtown or a community center, but of course that would be contaminated with meth. RE your ranking questions, none are import</p>

Anonymous

1/16/2023 06:56 AM

Please study Strongtowns.org. More public access brings in more revenue than parking spaces

Anonymous

1/16/2023 07:01 AM

Limiting parking will encourage other means of transportation which is not only good for Boulder but good for the climate. It would provide more space to gather and enjoy the amazing ambiance of downtown Boulder.

Anonymous

1/16/2023 07:04 AM

Me and my family don't go downtown as much as we used to because there are so many commercial spaces that are empty and lots of homeless people who are camping out and making us feel unsafe. It feels like Boulder is becoming like San Francisco.

Anonymous

1/16/2023 07:05 AM

As a non-driver, for medical reasons, I liked the expansion of the streets for dining and recreation.

Anonymous

1/16/2023 07:06 AM

I like the idea of extending the pedestrian zone west to 9th street, and assume a permanent change would have a much nicer appearance than it did over the past couple of years. The temporary dining areas and tents were pretty unsightly. I like parklets.

Anonymous

1/16/2023 07:07 AM

The previous closure of 9th to 11th street on Pearl Street was a DISASTER. It looked terrible (called it tent-city) and those RIDICULOUS barriers stating "wear a mask" were utterly absurd. SO GLAD you got rid of that crap. Leave it alone! Quit screwing up

Anonymous

1/16/2023 07:08 AM

Make RTD free on some routes downtown

Anonymous

1/16/2023 07:09 AM

If you take away more parking, I will only go to Longmont. I live in East Boulder and coming to the Pearl St Mall is already difficult.

Anonymous

1/16/2023 07:14 AM

Bike parking near farmer's market is often impossible. Travel by bike, foot, and 2-wheel drive car is often unsafe for weeks after snow because side streets aren't plowed and many residents and businesses don't clear sidewalks adjacent to their property.

Anonymous

Downtown doesn't feel safe or clean, especially near the library and

1/16/2023 07:15 AM

the creek

Anonymous

1/16/2023 07:18 AM

Do something to deal with the ballooning homeless problem. BOTH the drugs and lack of housing need to be addressed before people stop wanting to come altogether because it smells like a toilet and is not safe.

Anonymous

1/16/2023 07:25 AM

Keep it safe and fun for EVERYONE...not just the economically advantaged....I miss old boulder...the new "rodeo drive" is losing its personality and needs a new old school vibe

Anonymous

1/16/2023 07:34 AM

I think the city needs to sponsor more free public events downtown:usic, festivals, etc to help encourage more community.

Anonymous

1/16/2023 07:35 AM

Elders access with pickup wheelchair service from designated spots-- maybe a job for the downtown ambassadors? Rent control so that empty buildings can house quirky/practical/non-chain/DIVERSE businesses: Convivio Cafe, Rosario's Peruvian,

Anonymous

1/16/2023 07:36 AM

It would be great to have electric circulator trolleys that go from north to circle downtown, to include connection to Valmont east to west to Broadway

Anonymous

1/16/2023 07:39 AM

Creating a more vibrant walking downtown with outdoor gathering spaces may help mitigate

Anonymous

1/16/2023 07:41 AM

Extend pedestrian mall in all directions and allow/encourage outdoor dining everywhere, following a European model.

Anonymous

1/16/2023 07:42 AM

I have a lot to share but this text block can't accommodate it

Anonymous

1/16/2023 07:42 AM

Unfortunately I rarely go downtown anymore because of encounters with aggressive homeless and bike theft. A yearly guest at our home commented on how much worse it is this year.

Anonymous

1/16/2023 07:47 AM

Boulder's unique charm is all the open space and parks where people can gather and enjoy nature so how about we extend that charm/community benefit to more of the downtown area by limiting

cars on certain streets and pulling people together outside

Anonymous

1/16/2023 07:48 AM

I believe there are many ways to tweek our existing streetscape to continue to enhance the experience for all - the public and the businesses. Closing streets permanently has many unintended ripple effects including cost to maintain and business impacts.

Anonymous

1/16/2023 07:48 AM

Please reinstate the no car areas of pearl st. Was so wonderful for shopping, dining and strolling! I'd rather walk 3 block cos to find parking if needed

Anonymous

1/16/2023 08:11 AM

Provide more free motorcycle parking. Allow motorcycle and scooter parking on areas where scooters are now allowed.

Anonymous

1/16/2023 08:19 AM

Bring back the street dining!

Anonymous

1/16/2023 08:22 AM

Current parking payment kiosks are inconvenient and unreliable. Please consider replacing with traditional parking meters or something similar. thanks

Anonymous

1/16/2023 08:36 AM

Boulder has so much potential to un-Car-Brain itself. We already have bare bones cycling infrastructure, and I'd love to see more FULLY protected bike lanes leading into downtown spaces. Less cars, more public transit.

Anonymous

1/16/2023 08:39 AM

Extend Pearl Street mall to 9th Street!

Anonymous

1/16/2023 08:39 AM

Shopping on Pearl St. is now oriented towards tourists and students, not long-time residents. Athletic clothing stores have completely taken over. How about a little more diverse offerings?

Anonymous

1/16/2023 08:43 AM

Restrict the use of bicycles, skateboards, electric transportation devices, smoking, dogs on the Pearls St. Mall as the signs indicate. It's a madhouse dodging people riding items.

Anonymous

1/16/2023 08:44 AM

The use of streets for socializing makes downtown much more appealing

Anonymous

1/16/2023 08:46 AM

It is a shame when car traffic and parking resume. The bricks are what make Boulder appealing and the extension to the downtown area made for a more hospitable gathering place.

Anonymous

1/16/2023 08:54 AM

PLEASE PLEASE PLEASE make downtown safer.

Anonymous

1/16/2023 08:55 AM

Downtown is for socializing, dining, art galleries, shopping. NOT for cars driving and banks branches!!!

Anonymous

1/16/2023 09:08 AM

Close off more streets for pedestrians and restaurants. Pandemic is not over and eating outside as is done in many other cities makes dining viable. I just got COVID in Jan 23 for the first time. Will eat outside only for a while.

Anonymous

1/16/2023 09:11 AM

The closure of West Pearl between 9th and 11th street generated significantly more foot traffic over those two blocks within warmer months as the closure encouraged visitors to explore pearl beyond the bricks.

Anonymous

1/16/2023 09:14 AM

Provide a properly lit and safe area for people.

Anonymous

1/16/2023 09:24 AM

I liked it MUCH BETTER when the street was closed to traffic. It feels like there is more community, it's more safe, and just a better place!

Anonymous

1/16/2023 09:27 AM

Just EXPAND Pearl St. to 9th St. already! That way you can add garden beds and permeable surfaces to help with stormwater absorption. Add more parking if possible between Pearl and Canyon/Arapahoe.

Anonymous

1/16/2023 09:28 AM

Please fix the eco pass system. We'd use the bus a lot more of it were affordable. There is no eco pass in our neighborhood and no interest. Why is this system based on neighborhoods? I live off Table Mesa.

Anonymous

1/16/2023 09:28 AM

Parking should be free at point of use, perhaps paid by merchants/vendors or general revenue.

Anonymous

1/16/2023 09:31 AM

It's great to be able to dine outside. However I think that if restaurants are given the opportunity to expand outdoors patrons should be allowed to bring dogs on a leash.

Anonymous

1/16/2023 09:54 AM

West Pearl was much nicer as a pedestrian space, and it's a shame that we've re-dedicated it to the storage of large, private vehicles -- especially after seeing so many other cities make their COVID changes permanent.

Anonymous

1/16/2023 10:06 AM

We already have several blocks of pedestrian mall on Pearl. Pandemic dining in tents was awful - cold, tables not level, servers having to navigate sidewalks. It was a hassle losing all the on-street parking on Pearl.

Anonymous

1/16/2023 10:21 AM

I would love to see Pearl resume being vehicle-free (i.e. close off motor vehicle access from 9th to Broadway) - this vehicle free zone on the Pearl Mall motivated my wife and I - retirees - to come down to Pearl much more often

Anonymous

1/16/2023 10:23 AM

free shuttle to pearl street from free parking areas

Anonymous

1/16/2023 10:38 AM

Downtown does not feel as safe as it was 20 years ago.

Anonymous

1/16/2023 11:01 AM

Boulder should be prioritizing more pedestrian, bicycle, and transit-friendly public spaces downtown, instead of deferring to single-occupancy vehicles. Pearl between 9th and 11th during the pandemic was much more vibrant than it is now.

Anonymous

1/16/2023 11:38 AM

I worked 30 years downtown in retail. When I started Boulder was a destination because there was nothing in the region. Now there are stores and things to do everywhere. Huge per sq ft expense downtown both for retail and office space has killed it.

Anonymous

1/16/2023 11:40 AM

The beauty of cities is best experienced on foot or bicycle and cars make other modes of transportation more difficult.

Anonymous

Extend traffic free areas downtown. Shutting down east pearl to more

1/16/2023 11:41 AM

traffic would also be good

Anonymous

1/16/2023 11:41 AM

My downtown office had 200 people pre-pandemic and has been empty since. I understand other businesses are similar, and this is likely more of a cause in the decrease in business seen by West Pearl, rather than removing driving.

Anonymous

1/16/2023 11:48 AM

As someone who is immunocompromised, I will only utilize outdoor dining. It was great to dine outside at Jax for example. Now that's not an option. I also wish there was better bike parking and bike security

Anonymous

1/16/2023 11:53 AM

I walk to the mall on a weekly basis. The more you can expand pedestrian areas, the better. It's healthier, quieter, more accessible, and overall more pleasant.

Anonymous

1/16/2023 11:55 AM

Please restore the no-car zone to west Pearl, it was wonderful to be able to walk around freely and dine outside in sweet little outdoor venues!

Anonymous

1/16/2023 12:04 PM

We need to utilize the existing walking mall to its full potential. We have failing businesses on Pearl and the rent is out of reach for many small local businesses. People don't want to walk pearl for another bank or national outdoor retail store.

Anonymous

1/16/2023 12:07 PM

This seems slanted toward making changes rather than reverting to how it used to be.

Anonymous

1/16/2023 12:14 PM

I have nothing against pedestrianizing West Pearl, and I know why it was necessary during the pandemic, but the way it was done was ugly. When the pandemic eased, I favored reopening it to traffic. If you want to re-pedestrianize, make it attractive.

Anonymous

1/16/2023 12:21 PM

Make It/Keep It walkable

Anonymous

1/16/2023 12:22 PM

I'm a physician, and patients need handicap spaces close to my office at 1035 Pearl Street.

Anonymous

If you allow other uses in the ROW, you've got to make them look

1/16/2023 12:55 PM

permanent, intentional and well made.

Anonymous

1/16/2023 01:03 PM

West Pearl is a place I avoid when I'm driving downtown due to how congested and busy it feels. When it was closed I visited/stopped through on my bike fairly regularly in good weather.

Anonymous

1/16/2023 01:07 PM

I dont go downtown at night due to saftey concerns. Use of parking spaces by restaurants congests sidewalks for pets and reduces access by removing parking

Anonymous

1/16/2023 01:08 PM

I believe that the decision to reopen West Pearl Street to cars was nothing short of disastrous. In my opinion, the car free zone should be expanded to more sections of Downtown Boulder

Anonymous

1/16/2023 01:37 PM

I used to go downtown all the time. I've backed way off because of the prevalence of transients (often drugged up and loud... it's not safe).

Anonymous

1/16/2023 01:38 PM

I thought it was much better when no cars were allowed on West Pearl. Better for walking down there. Better for businesses with outdoor seating. Increased seating making it easier to get a table. Just felt better.

Anonymous

1/16/2023 01:46 PM

The pedestrian aspect of the mall is very important for both locals and visitors. You should consider expanding the mall from at least 9th st to 18th st.

Anonymous

1/16/2023 02:19 PM

It should be possible to have a few handicapped parking spaces nearby. I think of so many European cities that have these wonderful pedestrian/dining spaces. They are more permanent and add so much to the experience. They've addressed these issues.

Anonymous

1/16/2023 02:31 PM

Disabled parking should be allowed on pearl, but no other vehicles. The quality of west pearl went down when it reopened to vehicles and we don't frequent that area as much because it isn't pleasant to walk around.

Anonymous

1/16/2023 02:51 PM

bike storage, guarded or locked, would make me more likely to bike. either in garages or on the street.

Anonymous

1/16/2023 03:10 PM

The closing of west Pearl made the area more welcoming and added a community feel to that side of the streer

Anonymous

1/16/2023 03:25 PM

The use of west pearl and all of Pearl street during the Pandemic was a resounding success. It added much vitality and life to the area. Allowing restaurants to spill into the street made it feel European and exciting.

Anonymous

1/16/2023 03:44 PM

Where are your questions about the wide variety of illegal behavior or homeless people downtown?

Anonymous

1/16/2023 04:10 PM

Pedestrian access and safety needs to be the priority

Anonymous

1/16/2023 04:21 PM

West Pearl as we all have seen is the most vibrant when it is used for the public space it was built for, ie: vehicle traffic, parking, bicycles, pedestrian traffic, public transportation.

Anonymous

1/16/2023 05:04 PM

It sounds flippant, but cars ruin cities.

Anonymous

1/16/2023 05:36 PM

My enjoyment of Downtown Boulder hinges most heavily on my ability to spend a day there without having to need a car or find parking. Cycling, busing, walking - these align with my goals of conscientious living and I hope to see more of it in Boulder.

Anonymous

1/16/2023 06:08 PM

Just make 9th to 11th walkable again.

Anonymous

1/16/2023 06:23 PM

If restaurants get access to more public spaces they should pay for that.

Anonymous

1/16/2023 06:34 PM

Leave West Pearl alone. There are already 4 pedestrian friendly block's available.

Anonymous

1/16/2023 07:08 PM

Please keep more pedestrian/bike--only spaces!! They have been so nice to have- especially in the summer!!! If you want businesses to have more traffic, give people more walking spaces so they'll roam

more!

Anonymous

1/16/2023 07:35 PM

People who work downtown can't afford to live downtown. Restaurant and retail workers need free and convenient parking.

Anonymous

1/16/2023 08:09 PM

https://www.youtube.com/watch?v=cO6txCZpbsQ&ab_channel=NotJustBikes

Anonymous

1/16/2023 08:43 PM

Safety. I've been approached numerous times by panhandle asking for money

Anonymous

1/16/2023 09:16 PM

West Pearl was better when the street was closed to traffic.

Anonymous

1/16/2023 09:20 PM

We should not negatively impact the operations of non-restaurant businesses.

Anonymous

1/16/2023 09:33 PM

- I think it was a huge mistake to re-open West Pearl to car traffic; in the short time it's been re-opened, it has drastically reduced my opinion of that stretch of street. What was a nice place to sit and sip a coffee is now full of exhaust and honking.

Anonymous

1/16/2023 09:40 PM

I'd love to see West Pearl closed to traffic again and for the mall to be extended with lots of outdoor dining and other landscape improvements instead of just keeping it a street.

Anonymous

1/16/2023 11:36 PM

The inconvenience of diminished curbside parking was totally manageable, and the intersection at 9th and Pearl felt safer for pedestrians and more streamlined for vehicles.

Anonymous

1/17/2023 01:33 AM

The pleasant experience is severely impacted by the homeless presence and the erratic behavior. For downtown to be interesting it must have things to do as well as shopping and dining and events

Anonymous

1/17/2023 05:20 AM

completely empathize with homeless people, but they have taken over public spaces, bandshell, library area, rendering them unusable to taxpaying citizens.

Anonymous

1/17/2023 06:33 AM

Although they come with challenges, expanding pedestrian areas is a huge boon to the community, and almost certainly enhances everybody's experience visiting downtown. Look for opportunities to expand the Pearl pedestrian area!

Anonymous

1/17/2023 06:40 AM

Expanding the mall in either direction would be awesome.

Anonymous

1/17/2023 06:54 AM

I think restaurants with more plant based options are needed in boulder.

Anonymous

1/17/2023 07:41 AM

closing West Pearl was one of the best things to come out of the pandemic. Allowing cars on it again was a disappointment.

Anonymous

1/17/2023 07:52 AM

If you cannot close the street for the entire week, consider doing it on weekends and holidays instead. Please also develop ways of promoting businesses on Walnut St.

Anonymous

1/17/2023 08:05 AM

Stop with the tall buildings.

Anonymous

1/17/2023 08:13 AM

One thing I want to point out that this survey doesn't record is the relative distance between rankings for individuals on Qs 2 and 6. There's a big gap for me between 1-4 and 5-7 in Q2 and a big gap between 1-4 and 5-7 on Q7.

Anonymous

1/17/2023 08:16 AM

None of this matters, if we do not address the homeless issue and crime issue along Boulder Creek and around the bandshell. Residents and visitors are avoiding downtown due to these issues. Please address this first!

Anonymous

1/17/2023 08:26 AM

The foot traffic and energy on the West End during mid-2022, even on a Friday night, was abysmal. Seeing the West End rejuvenate and people return when streets reopened in Sept. was heartwarming. West End as we know will die if the streets close again.

Anonymous

1/17/2023 08:31 AM

Please make the temporary road closure permanent and keep cars off Pearl St

<p>Anonymous 1/17/2023 08:34 AM</p>	<p>please close the west end to cars again. the public support for this was overwhelming but the city allowed 2 restaurant owners to counteract the consensus</p>
<p>Anonymous 1/17/2023 08:40 AM</p>	<p>Having series of public events in the streets on a regular, easy to anticipate schedule would make these easier to attend and participate in - ex: every Sunday or Monday afternoons or something like that</p>
<p>Anonymous 1/17/2023 09:39 AM</p>	<p>Just read strong towns</p>
<p>Anonymous 1/17/2023 09:39 AM</p>	<p>Pearl St. between streets 9th and 11th should remain OPEN to traffic. Businesses have seen a clear uptick in business following the opening of Pearl st.</p>
<p>Anonymous 1/17/2023 10:20 AM</p>	<p>The most important thing is something not even mentioned here - PERSONAL SAFETY</p>
<p>Anonymous 1/17/2023 10:30 AM</p>	<p>I cannot believe that a couple of businesses were able to overturn the closure of West Pearl to maintain their claim to 30 or so parking spots...</p>
<p>Anonymous 1/17/2023 11:12 AM</p>	<p>Thank you for the opportunity to offer actual feedback. I think far more important is to make major moves so that Boulderites and tourists alike are not threatened, harassed, yelled at and intimidated by unhoused. It is not safe downtown! DO something!</p>
<p>Anonymous 1/17/2023 11:17 AM</p>	<p>downtown businesses need access to their stores and restaurants. Please keep them in mind for once and work to increase their sales not block them!</p>
<p>Anonymous 1/17/2023 11:41 AM</p>	<p>The mall is more geared towards Boulder's young people.</p>
<p>Anonymous 1/17/2023 01:18 PM</p>	<p>I like the idea of temporary weekend closures for special events, but permanent closure is not going to improve downtown Boulder. Parts of the walking mall are already stale. Invest in improving it as opposed to making a larger area.</p>

Anonymous

1/17/2023 01:46 PM

homeless

Anonymous

1/17/2023 02:15 PM

PLEASE DO NOT CLOSE DOWN OUR STREETS AGAIN. WE NEED TRAFFIC TO FLOW IN ORDER FOR OUR BUSINESSES TO STAY OPEN!!!

Anonymous

1/17/2023 02:25 PM

Community places downtown should be planned for usefulness but also for beauty. Landscape architects should be involved. Lots of sitting space (w, trees, planting of flowers, outside art , overhanging places as shelter from elements, beautiful light fix

Anonymous

1/17/2023 02:34 PM

jack up the price of street parking/convert to handicapped only/remove parts of it altogether to encourage people to use the garages, which are rarely even close to capacity. lower speed limit/put in more stop signs on Pearl to supplement parking reform.

Anonymous

1/17/2023 02:56 PM

I tried to leave question 2 and 6 blank. I don't really know how to answer. Can we close streets again for "Safe Streets" activities. See Columbia and other cities where they close streets one day a week/month for biking/walking/dancing/outdoor yoga, etc

Anonymous

1/17/2023 03:41 PM

Safe, clean, vibrant downtown and independent small business without vacant properties.

Anonymous

1/17/2023 04:19 PM

Frankly, downtown has really changed since transients moved in. It's just not so people friendly anymore.

Anonymous

1/17/2023 04:48 PM

I'm in favor of West Pearl and 13th st between Arapahoe & Canyon having increased pedestrianization and community activation with temporary closures to automobiles.

Anonymous

1/17/2023 04:55 PM

Closing off West Pearl was a great idea. Please bring it back.

Anonymous

1/17/2023 05:08 PM

The sidewalks are way too congested. Get all those tables and chairs off the sidewalk!

Anonymous

Walkability is the way!

1/17/2023 05:27 PM

Anonymous

1/17/2023 05:32 PM

I was very disappointed when Pearl reopened between 9th and 11th streets.

Anonymous

1/17/2023 06:41 PM

Using the curbside spaces for outdoor dining made the downtown area better than I've ever experienced before or after. I loved it so much.

Anonymous

1/17/2023 10:08 PM

It'd be nice to have more secure places to store bikes (eg lockers). When I worked downtown, I often biked to work, because I could safely store my bike in my office. But without storage, I worry about it being stolen.

Anonymous

1/17/2023 10:14 PM

Allowing cars back on to the West end of Pearl St. made it less accessible and welcoming to *people* as they walk through, dine outside, mingle, etc. I go there significantly less now.

Anonymous

1/18/2023 07:36 AM

It's been disappointing to see Boulder cave to the wants of a handful of specific businesses rather than considering the overall impact open streets have on the community + downtown specifically.

Anonymous

1/18/2023 08:32 AM

I support creating adequate (matches demand) handicap-only curbside pick up/ drop off and parking spaces on west Pearl, accessed by a one-lane, one-way car corridor. All other street space should be given to outdoor dining, parklets, bike parking.

Anonymous

1/18/2023 09:05 AM

I loved 9th-11th and Pearl being a pedestrian stretch. It was conducive to the appeal and flavor of the area, of bringing community together.

Anonymous

1/18/2023 09:27 AM

I used to ride my bike or take the bus to Pearl Street often. Now, you can expect your bike to get stolen, I don't feel safe from Covid on RTD buses and downtown is less safe. I've lived here since 1994 and am saddened by these developments

Anonymous

1/18/2023 09:45 AM

Addressing how downtown businesses can support our community members experiencing homelessness. City Wide action across all business owners has potential. Utilizing the resources in place. The time is NOW!

Anonymous

1/18/2023 10:43 AM

Downtown needs to be safe for people to continue shopping and dining -too many homeless on mall. . Why are so many private office builders sitting empty? Are these businesses getting a tax brake for not renting (set rent too high but claim tax deduction)?

Anonymous

1/18/2023 12:02 PM

I would love to have more areas like pearl street mall, both in Boulder City, but also the entire county, where I can safely spend time out and about on the street without worrying about car traffic. I'd prefer that to expansion of pearl st.

Anonymous

1/18/2023 12:37 PM

Always keep sustainability in mind - and maximize it! :)

Anonymous

1/18/2023 01:11 PM

As a business whose customers utilize the parking in front of our office, we want the street open year round. We chose this location because there's street parking. We're no longer getting constant complaints about how hard it is to park since it reopened

Anonymous

1/18/2023 01:13 PM

Please make the area that was closed to cars permantly closed to cars and tear up it up and do landscaping. I think the issue was that area didn't have an appealing outdoor area just cones and blockades

Anonymous

1/18/2023 01:31 PM

More pedestrian/bike infrastructure and accessibility, less car infrastructure.

Anonymous

1/18/2023 01:50 PM

Access to bathrooms for public spaces is sorely needed.

Anonymous

1/18/2023 03:52 PM

keep as many car free zones as possible. they are amazing, excellent, should be continued and expanded.

Anonymous

1/18/2023 04:34 PM

I used to ride my bike all the time and lock it up and shop. I never leave my bike unattended. Boulder needs to fix the bike theft issue and fast. Criminals should go to jail and be fined. Boulder also needs to address meth and crime.

Anonymous

1/18/2023 06:22 PM

I don't feel anyone should be able to set up camp on public places. During non-business hours, I think private business parking should to open to the public

Anonymous

1/18/2023 06:58 PM

A electric bike program so that many can afford it, especially those with disabilities. Bike rides are harder for those with disabilities and electric bike would help where they would not have to use a personal vehicle.

Anonymous

1/18/2023 09:26 PM

Reissue survey so it's less confusing. We both read the highest/lowest rating numbers incorrectly and had our answers backwards. Not pro-cars but Boulder already has a pedestrian mall, keep cars on other streets;closing it made it touristy/not accessible.

Anonymous

1/18/2023 09:44 PM

Important to distinguish between parking cars and storing bikes. This difference is ignored in Question 2.

Anonymous

1/19/2023 12:27 AM

West Pearl has been pretty unpleasant since the street reopened to traffic. Someone tried to run me over outside a bar. I don't go back anymore. City needs to start doing as much for people who don't drive as for people who do

Anonymous

1/19/2023 12:50 AM

Closed pearl Street to traffic permanently!

Anonymous

1/19/2023 08:18 AM

Keeping all the buildings downtown occupied by shops / restaurants is super important for the vitality of our town - if there is no buzz, no critical mass of appealing options to visit, then downtown will cease to be a place people want to go at all

Anonymous

1/19/2023 09:33 AM

As much of Pearl Street as possible should be closed to car traffic. It makes walking around easier and safer! Cars can drive on nearby streets like walnut and canyon

Anonymous

1/19/2023 10:40 AM

Please do not let big business/landlords determine what happens between 9th and 11th streets. We all know that their main goal is to keep their patios as a benefit while not allowing others to use the street.

Anonymous

1/19/2023 10:40 AM

Although this was an interesting pilot, closing streets to traffic increases road congestion, confusion, and reduces efficiency and available parking. Letting businesses set up on sidewalks is reasonable but I enjoy the idea of keeping streets for cars

Anonymous

1/19/2023 10:42 AM

My family used to spend time by the creek and at the library on a weekly basis. We no longer do that due to the unhoused population camping and exerting influence there. I am a proponent of working to solve unhoused issues, but I wish downtown was safer.

Anonymous

1/19/2023 10:42 AM

I personally felt that closing West Pearl was amazing and wish it were permanent. One thing not at all mentioned on this survey is the homeless people invading Pearl significantly impacts our choice not to spend as much time there. TURN OFF OUTLETS

Anonymous

1/19/2023 10:42 AM

Homeless issue on Pearl street is going to kill tourism. Takes away my desire to go to a Pearl st, as we are often harassed. Not safe for my teenagers to be alone on Pearl street.

Anonymous

1/19/2023 10:43 AM

The open space along Boulder Creek has been overtaken by homeless camps. It is no longer a safe and inviting space for the people of Boulder to enjoy. I no longer go to the farmers market and I worry about my kids at Boulder High School.

Anonymous

1/19/2023 10:45 AM

Before investing in structural changes to downtown, I want to see public safety, policing and removal of encampments. As is the downtown area is undesirable and I do not go due to this growing problem.

Anonymous

1/19/2023 10:49 AM

The goal is to plan and execute on a comprehensive use of public spaces that are "human scaled."

Anonymous

1/19/2023 10:50 AM

Implement a ban on vagrancy

Anonymous

1/19/2023 10:50 AM

I am disabled and I was unable to go to west end of Pearl street when it was closed off for outdoor dining. The handicap spots were being used for outdoor dining spaces or closed off entirely. Please don't do that again.

Anonymous

1/19/2023 10:52 AM

I would like to Pearl between 9th & 11th closed to cars and landscaped like the rest of the mall. The closure was nice but much of the space felt raw, being open pavement. Also, too much sidewalk was sacrificed creating many pinch points.

Anonymous

1/19/2023 10:55 AM

Provide public tables/sitting which can be shared, used by different cafes, restaurants, and just individual use. Instead of space dedicated, owned by a particular and expensive restaurant.

Anonymous

1/19/2023 10:56 AM

I do not feel as safe downtown as I did previously.

Anonymous

1/19/2023 10:57 AM

Repurposing the outdoor space for expanded dining and drinking is a serious mistake. It ruins thence

Anonymous

1/19/2023 10:57 AM

I loved when East Pearl was closed during Covid- I went to that area much more than I do now that it is for cars again. I also love the murals and encourage more public art. There could be temporary, seasonal activation of parking and street spaces

Anonymous

1/19/2023 10:59 AM

This survey is horrible. The rankings don't reflect my weighting of the issues.

Anonymous

1/19/2023 11:00 AM

Walking is important and undervalued by city.

Anonymous

1/19/2023 11:01 AM

The biggest priority should be focused on cleanin gup and out the homeless population that affects our sfaety day and night. Police should be empowered to do their jobs swiftly and efficiently. This needs to be aggressively addressed more heavy handed!

Anonymous

1/19/2023 11:05 AM

A reliance on car travel and related infrastructure damages the character, safety and sustainability of the community. I support any small way we can reduce that reliance.

Anonymous

1/19/2023 11:07 AM

I'm tired of cars getting priority in public spaces: What a pleasure it was to stroll right down the middle of the closed west end of Pearl

Anonymous

1/19/2023 11:08 AM

When the west end of Pearl was closed it seemed very vibrant and fun with the outdoor seating and lights

Anonymous

I like the idea of additional outdoor/public space for restaurants and

1/19/2023 11:08 AM

shops, but done in a tasteful way. Expand sidewalks/dining areas and make sure business owners invest in quality decor. Pandemic approach looked sloppy at times

Anonymous

1/19/2023 11:10 AM

Keep open & clean the public bathrooms , monitor same

Anonymous

1/19/2023 11:11 AM

Make it not be ugly, ramshackle looking. No picnic tables in the middle of a street.

Anonymous

1/19/2023 11:14 AM

Real Estate owners with property on Pearl St need to come up with a way to encourage art galleries and co-ops downtown - make rent affordable. Art is a vital part of Boulder, and adds a lot to the downtown experience.

Anonymous

1/19/2023 11:15 AM

Storing bikes and parking cars should not be the same option on this questionnaire. Huge areas of car storage are what make cities terrible.

Anonymous

1/19/2023 11:15 AM

I LOVE LOVE LOVE having an extension of the walking mall and outdoor spaces for dining. I think there is enough parking available to make this a permanent addition to our community. I think it would be great to extend this farther east too!

Anonymous

1/19/2023 11:15 AM

I worked at a business on Pearl Street and 9th street during the pandemic and really enjoyed the new vitality the closed street to the area. I saw people socializing in the new seating/gathering areas and felt it brought new life to the area!

Anonymous

1/19/2023 11:20 AM

Clean this town up! The number one thing I hear from people is that they don't go to Pearl St anymore as it's not family friendly. I work on Pearl and know this to be true. Trash all over the parks, people on hard drugs everywhere. It is no longer safe

Anonymous

1/19/2023 11:21 AM

Boulder has GOT to get a handle in the out of control camping situation. Many residents are afraid to use public spaces such as the Boulder creek path, band shell area, etc. And the proposed update of 30th St is currently a homeless Mecca. Many feel

Anonymous

While I like the idea of having enjoyable public spaces, existing public

1/19/2023 11:22 AM

spaces seems to have been overtaken by the homeless, who sometimes/often have behavioral/drug abuse problems. This has made the downtown area less appealing to us.

Anonymous

1/19/2023 11:24 AM

We enjoyed the streets being blocked off to add additional outdoor dining. At times the homeless population can create health and safety concerns.

Anonymous

1/19/2023 11:26 AM

I really preferred it when West Pearl was closed to cars. Please reinstate that policy. Also, I think we should close off a significant portion of Pearl St east of the walking mall.

Anonymous

1/19/2023 11:26 AM

The Pearl St. walking mall is only 4 blocks long. This is a prime opportunity to increase public space. For this survey, I wish you had ungrouped bicycle storage and vehicle parking in question 2. They're not the same experience or user type. Thank you

Anonymous

1/19/2023 11:27 AM

I would like a clear understanding of where I can and can't have my dog and more opportunities to take her downtown in ways that are safe and respectful.

Anonymous

1/19/2023 11:29 AM

Safety of public should be top priority. Making an effort to combat homelessness in a humane manner and prioritizing clean and safe air, water resources in downtown (cue - marijuana and meth usage in open) in order to make it enjoyable for all age groups.

Anonymous

1/19/2023 11:32 AM

Prevent homeless individuals from using the space!!!

Anonymous

1/19/2023 11:32 AM

We really enjoyed the expanded closure of Pearl Street from 9th to 11th st and the addition of outdoor dining in those areas. I'd like to see that made into a permanent walking area. I'd like safe bike parking added.

Anonymous

1/19/2023 11:35 AM

Question 4 is not applicable since I have avoided going downtown at all since the world "opened up" I greatly enjoyed walking Pearl Street during the pandemic, when I was allowed to have my dog with me for safety.

Anonymous

Redirect unhoused away from area.

1/19/2023 11:40 AM

Anonymous

1/19/2023 11:40 AM

Ppl said that eliminating parking hurts businesses when all data actually shows the opposite. Would love it if decisions were research based. To reduce emissions, we need to give people better options and disincentivize car use. Follow European examples!

Anonymous

1/19/2023 11:45 AM

Close back down west Pearl

Anonymous

1/19/2023 11:45 AM

Please make downtown safe again. Increased crime, drug use, make downtown both unsafe and unattractive.

Anonymous

1/19/2023 11:49 AM

There is increasing data that increasing car free spaces improves life for businesses and people. If Boulder would ensure the bus system was more frequent (back to prepandemic times) I'd happily take the bus!

Anonymous

1/19/2023 11:51 AM

Turning West Pearl into an all pedestrian space was a stroke of genius - and now you have turned it back into a vehicular zone? Just to add a few parking spaces? Bad judgement call. You didn't have to be a genius to see how successful that was.

Anonymous

1/19/2023 11:55 AM

Reduce the presence of homeless and panhandlers.....and control dogs/pets.

Anonymous

1/19/2023 11:56 AM

The 2020 modifications to West Pearl were both a plus and a minus. They attracted and allowed people to dine and socialize outside, but they were not aesthetically pleasing and mucked up peoples' ability to access other commercial establishments

Anonymous

1/19/2023 11:59 AM

Safety!!! Too many open drug users and homeless people up and down Pearl Street.

Anonymous

1/19/2023 12:00 PM

Extend the pedestrian mall to 9th St.

Anonymous

1/19/2023 12:00 PM

Boulder needs to address the transient issue around Pearl St. This has become a very real issue, and safety is not what it once was around Pearl St, the Creek Path, and the Library area.

Anonymous

1/19/2023 12:02 PM

Please CLEAN up the bandshell and Central Park..enough is enough. It is not safe and my kids can't go there. Too many drugs, too many drugs

Anonymous

1/19/2023 12:03 PM

I do not agree with any outdoor dining expansion, do not block off the streets and keep the easy flow of people and vehicles going.

Anonymous

1/19/2023 12:10 PM

CLOSE BOTH ENDS OF PEARL STREET FROM 10:00AM UNTIL 2:00AM.

Anonymous

1/19/2023 12:14 PM

We live in West Pearl. We have also lived in Europe. When the west Pearl Street area from 9th Street to 11th Street was closed, quality of life for residents and visitors was SPECTACULAR. Everyone was out walking, interacting, and socializing!

Anonymous

1/19/2023 12:18 PM

Good (safe, locker style ideally) bike parking is a must before I bike to downtown. High density parking, with a bit of a walk is completely fine. Outdoor dining space has been very appealing

Anonymous

1/19/2023 12:18 PM

Opening west Pearl back up to traffic and cutting back on outdoor dining areas was incredibly disappointing. Needing to still be Covid-cautious, this basically cut off our ability to enjoy downtown safely. Please consider health and accessibility better.

Anonymous

1/19/2023 12:22 PM

I feel safe and able to defend myself physically, but conflict with transient population yelling obscenities, leaving garbage and needles in areas has been challenging. Need services in place to help but those unwilling to accept or participate need to go

Anonymous

1/19/2023 12:25 PM

Outdoor dining spaces between 9th and 11th were unattractive. If these blocks are to become permanently pedestrian with outdoor dining, I would like to see them designed for that. The extent of outdoor dining on Pearl decreased walkability and beauty.

Anonymous

1/19/2023 12:27 PM

If we are going to redo area, do it right. Match to east part of Pearl. Get rid of traffic access, clean up alleys for deliveries. Area looked like a mess during COVID. We can do a lot better if we are going to do it.

Anonymous

1/19/2023 12:32 PM

I think surveys where one is forced to rank options that are presented, rather than provide your own are not that useful. Until the situation with the transient population is addressed, City efforts might not be worthwhile

Anonymous

1/19/2023 12:33 PM

The west pearl street closure area only opens to a 1-way street, the only real reason to ever drive on it is if you're attempting to park on street. It seems weird to not utilize that space for additional outdoor offerings vs having one more parking lot.

Anonymous

1/19/2023 12:35 PM

I would like to see the noise restrictions on Pearl Street be followed. Too often, there is loud music (often a radio) by only one individual (not always the same person) which takes away from the ambiance and somewhat peacefulness of the downtown area.

Anonymous

1/19/2023 12:38 PM

Safety is very important. I know longer feel safe walking around downtown or Central Park. I've been approached many times by people begging for money and threatened by them when I refuse to give.

Anonymous

1/19/2023 12:40 PM

Keep the bike paths that lead to downtown safe. Keep people from camping along them. I've had people jump out from the dark. Thankfully I was able to avoid them but I am sure their intent was not good.

Anonymous

1/19/2023 12:41 PM

The biggest issue is all the transients hanging around that lowers the appeal of the downtown area.

Anonymous

1/19/2023 12:44 PM

I'd love to see a car-free downtown area. I know a bit unlikely, but how nice it would be to get rid of all the unnecessary vehicles and catering to them!

Anonymous

1/19/2023 12:46 PM

I appreciate the opportunity to give this feedback. I loved the additional car free spaces on Pearl. However, the biggest issue right now is public safety. I do not feel like it is safe for myself or my children to utilize public spaces in Boulder.

Anonymous

1/19/2023 01:02 PM

None of any of your questions and subsequent solutions will matter if un-housed persons continue to take over the parks, sidewalks and

library with tents, shopping carts, trash, feces, and needles.

Anonymous

1/19/2023 01:03 PM

Car parking and bike parking should not be in the same potential response choice. Totally different uses of space. Parking is way too cheap for the high cost/value of land and should not be used for private car storage.

Anonymous

1/19/2023 01:11 PM

The homeless population has significantly increased. I used to let my teenagers walk around Pearl Street by themselves, but they have been approached and accosted too many times by homeless/mental unstable.

Anonymous

1/19/2023 01:16 PM

Until public safety has been addressed downtown, it will continue to limit our visits. We rarely go downtown because of the transients. As seniors we would like a safe place to go for dinner without fear of a crime. Public safety must be a priority.

Anonymous

1/19/2023 01:17 PM

Number one priority is safety. More police please. I have two kids - 12 and 16 and we have been harassed multiple times. Most recently in the restroom by courthouse. More police patrolling please please please. Trade all your options for more police.

Anonymous

1/19/2023 01:25 PM

thank you for beautiful tulip and other flower plantings: they are done expertly!

Anonymous

1/19/2023 01:27 PM

I really value the pedestrian and bus focus of the Pearl Street Mall core, and enjoyed the outdoor seating, walking, and social emphasis of West Pearl during COVID. We already have lots of vehicle access; let's focus on making downtown for PEOPLE

Anonymous

1/19/2023 01:32 PM

the city MUST address the homeless population. it will absolutely ruin our beautiful city. Just look at SF, Portland and Seattle. this is how it all started = slowly then multiplied. Our city officials have to eliminate this!!!

Anonymous

1/19/2023 01:34 PM

Bring back the tables and the pedestrian streets!

Anonymous

1/19/2023 01:38 PM

The quality of the downtown area was immensely improved by expanding pedestrian and dining areas to the streets. Not only did it

allow businesses to thrive, it significantly increased the appeal to go downtown at all.

Anonymous

1/19/2023 01:41 PM

I loved the extension of the pedestrian mall between 9th and 11th on Pearl Street. It was vibrant and made going from business to business so easy. There aren't many spots for cars on Pearl and people can use nearby garages and cross streets

Anonymous

1/19/2023 01:41 PM

Please close the west Pearl for vehicles and make that an enjoyable outdoor and entertainment space for all!

Anonymous

1/19/2023 01:42 PM

I am not a business owner in downtown but feel strongly that the loss of parking on west pearl street was damaging to those businesses and unfair. It was OK as a temporary solution to covid but should not be long-term. It looked junky too

Anonymous

1/19/2023 01:47 PM

I loved the extended walking mall and would like to see it either permanent or during nice months, e.g. Memorial Day to Labor Day

Anonymous

1/19/2023 01:47 PM

I will definitely spend more time and money on Pearl street if they leave it open to pedestrians more. I don't mind parking a few blocks away. I have to do that anyway since there's so few spots to park, so for me it makes no difference.

Anonymous

1/19/2023 01:49 PM

Loved when those extra blocks on Pearl were pedestrian only, bring it back! :)

Anonymous

1/19/2023 01:52 PM

I generally avoid Downtown because of the homeless situation - it's just plain scary and unpleasant. The bike trail along Boulder Creek feels unsafe.

Anonymous

1/19/2023 01:55 PM

While I respect people that live near downtown wanting some say in what's happening, it's is over done. One neighbor who will truly not be impacted can stop a business from going in. If you don't want to live near a business center, don't.

Anonymous

1/19/2023 01:56 PM

No silver bullet solutions, someone will always cry. Parking garages absolutely helpful to increase patronage, I would never visit if none. Small businesses paying \$\$\$\$rent need help, so don't go "green" and

cut vehicles out, it'll hurt.

Anonymous

1/19/2023 02:03 PM

Would rather have nice outdoor seating, than 15 extra parking spaces. Outdoor seating was a clear winner and it was silly converting the space back to parking.

Anonymous

1/19/2023 02:05 PM

Downtown Detroit see to be a great place to go. Now it's a shitshow. I don't feel safe downtown anymore. Very dangerous place with all the homeless people in central Boulder. I know it's complicated but Boulder does not do a good job of managing this.

Anonymous

1/19/2023 02:09 PM

People enjoy spending time and money in pedestrain spaces. Please onider

Anonymous

1/19/2023 02:24 PM

More bike lanes and bike parking please! I really preferred the outdoor dining setup, and never had trouble finding parking if I had to come by car.

Anonymous

1/19/2023 02:26 PM

Close west pearl for on street dining, enjoyment, make it nice! plantings. More bike racks. Slow traffic speeds down all around walking to downtown.

Anonymous

1/19/2023 02:38 PM

fed up with bums in the whole city, its a major deterrant, fed up with affordable housing and ruining our mountain views with new zoning, fed up with losing good stores

Anonymous

1/19/2023 02:51 PM

My family is uncomfortable spending any time outdoors downtown because it is full of homeless people loitering. We stopped letting our kids near Boulder creek because of drug paraphernalia. Please spend our tax dollars on moving homeless elsewhere.

Anonymous

1/19/2023 02:52 PM

Focus on creating separate transportation infrastructure for cars, bikes, and pets. Protected bike lanes, now. It's easy. Just do it.

Anonymous

1/19/2023 03:00 PM

It just makes sense for the west end of Pearl St to be more friendly to walkers and people dining, just like the Ped Mall blocks of Pearl

Anonymous

Visited Copenhagen, Munich, and Nuremberg in December. Such

1/19/2023 03:02 PM

high utilization of outdoor spaces in winter, including produce and food markets! We left with a new appreciation of how rugged they are, including lots of seniors. Great mass transit essential.

Anonymous

1/19/2023 03:20 PM

This is a poorly designed study which lacks options. Shame on you for doing such a slanted survey. The existing downtown businesses made it clear they value the street being accessible by car and with parking spots. Quit trying to push this agenda.

Anonymous

1/19/2023 03:23 PM

As a 50-plus-year resident of Boulder who has lived and worked downtown, I never worried about my safety until the last few years. Now, I carefully plan where I will be parking and/or walking.

Anonymous

1/19/2023 03:29 PM

We loved dining outside on West Pearl last summer. And definitely dined out more than we normally do because of the abundant outdoor seating!

Anonymous

1/19/2023 03:30 PM

We need better solutions for the homeless problem. We avoid the creek path, library, bandshell, Broadway park and other downtown locations to avoid all of the drugs, begging, and safety concerns around the homeless population that seems to be increasing.

Anonymous

1/19/2023 03:30 PM

Shame on you for keeping the barriers down there with the propaganda forever. Poor decision-making. Not optimistic here. Stop all the unnecessary projects.

Anonymous

1/19/2023 03:43 PM

Having West Pearl closed to vehicular traffic was brilliant, please do that permanently.

Anonymous

1/19/2023 03:51 PM

Please close down more of Pearl street to cars

Anonymous

1/19/2023 03:57 PM

Safety issues

Anonymous

1/19/2023 04:12 PM

I was harrassed by a woman who seemed to be mentally unstable last week on east Pearl Street. Thankfully she didn't become racist (I am a black) but I've come to expect a racist interaction downtown once every few years. I wish this would be zero.

Anonymous 1/19/2023 04:14 PM	make the city more walkable cars take up to much space encourage good public transport
Anonymous 1/19/2023 04:16 PM	I really enjoyed the plaza feel west end pearl gained by closing the street to cars. The area was livelier and safer for pedestrians
Anonymous 1/19/2023 04:30 PM	I want to be safe from deranged and unhoused individuals who are a hazard in public.
Anonymous 1/19/2023 04:32 PM	This survey seemed very weird to me, because in a couple of spots it lumps bus and bike with cars, but for me those are extremely different.
Anonymous 1/19/2023 04:50 PM	Safety concerns must be addressed
Anonymous 1/19/2023 04:51 PM	Support locally owned small business
Anonymous 1/19/2023 05:03 PM	Please keep the parking and don't close the street again! It is important for people with disabilities!
Anonymous 1/19/2023 05:20 PM	Keep dogs off the walking mall.
Anonymous 1/19/2023 05:41 PM	Safety is our priority. We don't want to feel threatened by people who appear to be on drugs. We don't eat inside restaurants due to Covid so outside eating is important
Anonymous 1/19/2023 05:49 PM	Less cars are always better
Anonymous 1/19/2023 06:15 PM	Though it might not be a focus there needs to be solution for handicap parking, food delivery services to have easy access
Anonymous 1/19/2023 06:24 PM	Bouldetr is a trash heap. Longmont is an actual town and only a short drive. All reasonable chain restaurants driven from Boulder. I GO ELSEWHERE and NEVER downtown. It is a joke, all the way around.

Anonymous

1/19/2023 06:27 PM

Too much time \$\$ to restaurants in street during COVID. Other small businesses and groups of people now need perks. I'd ask for space for more seating areas, after 40 yrs coming to mall legs now get tired, but need to solve homeless before more benches.

Anonymous

1/19/2023 06:55 PM

Please allow dogs in the pedestrian area!

Anonymous

1/19/2023 07:15 PM

Keep the downtown experience fresh and add experience options for people with lower incomes.

Anonymous

1/19/2023 07:29 PM

The less cars in city limits the safer and more connected our community will be.

Anonymous

1/19/2023 07:40 PM

If we prioritize non-personal vehicle travel people will follow, lead the way or fall behind.

Anonymous

1/19/2023 07:49 PM

remove the homeless from the city park so people will use this area which people are avoiding currently, we pay taxes, they don't

Anonymous

1/19/2023 07:51 PM

Safety is of utmost importance. We won't ride our bikes because too many get stolen. Cars are no longer safe. and now I don't want to walk alone.

Anonymous

1/19/2023 07:56 PM

Curbside dining in parking spaces on streets with automobile traffic (as was done during the pandemic on Pearl Street) east of the pedestrian mall seemed to me like a risk to diners. I strongly prefer converting entire blocks into auto-free zones.

Anonymous

1/19/2023 09:28 PM

I go downtown less and less bc of the homeless problems. There are threats and assaults. I do not feel safe.

Anonymous

1/19/2023 09:47 PM

Boulder needs to be more walk/bike-able. I tripled the number of my trips to down town when the pearl st pedestrian area was extended those extra blocks. I at out at those restaurants more (i wouldnt eat at them at alif they had seating on a busy street).

Anonymous

The big issue downtown is addicts camping out on public lands,

1/19/2023 10:51 PM

threatening and attacking children and adults. Clean up this mess or no one will go downtown anymore.

Anonymous

1/20/2023 05:41 AM

I understand this is a capitalist economy, and boulder tends to favor "hipster/expensive" business. This reduces diversity. I would love to push for more authentic ethnic foods, actually managed by natives, or first gen US citizens.

Anonymous

1/20/2023 06:02 AM

Affordable, diverse, creative activities, more art and culture free events, DEI trainings to business and workers.

Anonymous

1/20/2023 07:03 AM

Minimize traffic, decrease development, and change bicycle/human traffic

Anonymous

1/20/2023 07:09 AM

Take care of our homeless people by providing a safe space for them

Anonymous

1/20/2023 07:11 AM

Poorly designed survey... Q2 mixes parking for bikes and cars, which are totally different issues. Q7, use of "curbs" , mixes parking and passenger drop-off/loading, which are quite different. And what does curbs mean? Sidewalks or street or both?

Anonymous

1/20/2023 07:20 AM

Making downtown and bike path's safe and secure. Remove the unhorsed, offer areas away from downtown.

Anonymous

1/20/2023 07:41 AM

I must utilize e-bikes and had hoped to be able to run errands and visit the downtown area by bike. I've completely abandoned any plans to do this due to rampant theft; any decent bike will be gone in seconds. Please consider secure bike-parking options!

Anonymous

1/20/2023 07:46 AM

Charge the businesses that use these spaces a fee that pays for increased public transit (any funds to RTD must be used only for these Boulder-specific transit options,)

Anonymous

1/20/2023 07:57 AM

Please prioritize bike and walking over cars downtown whenever possible.

Anonymous

1/20/2023 08:15 AM

We enjoyed the additional outdoor dining space on West Pearl.

Anonymous

1/20/2023 08:30 AM

I support a short-term phase-in toward permanent closure of 13th Street and substantial improvement to the bike path on 9th. The current path there offers little protection from cars or doors. West Pearl will benefit from better bike access on 9th.

Anonymous

1/20/2023 08:37 AM

Do NOT close west end pearl to auto traffic!

Anonymous

1/20/2023 09:00 AM

I work in the West Pearl building and spend a lot of time between 9th and 10th. I feel very strongly that block should be closed to traffic. it was very nice.

Anonymous

1/20/2023 09:22 AM

It's really nice having all of Pearl in front of the business closed to car traffic. It made it much nicer to walk down.

Anonymous

1/20/2023 09:37 AM

Please preserve natural areas and parks!

Anonymous

1/20/2023 09:41 AM

I support any and all initiatives that both promote and increase safety for pedestrians, cyclists, skateboarders, non-motorized scooters. Like to see more motor vehicles left at home not running.

Anonymous

1/20/2023 09:42 AM

The more pedestrian space on Pearl the better. Loved having 9th to 11th open for so long. It enhanced the area as a whole.

Anonymous

1/20/2023 09:47 AM

If connections between downtown and the revitalizing Hill district are important, then the University and Hill property owners should be at least equal partners in funding such improvements

Anonymous

1/20/2023 10:15 AM

increase the pedestrian only zone

Anonymous

1/20/2023 10:17 AM

I love the idea of more community space downtown that is more accessible across incomes and abilities. Navigable passages for individuals with wheelchairs, blind, strollers etc. is a HUGE concern. Misplaced furniture/planters/landscaping create barriers.

Anonymous

The biggest priority for downtown is personal safety

1/20/2023 10:24 AM

Anonymous

1/20/2023 10:58 AM

It's too scary to use the bike paths or public parks any more due to encampments. I wouldn't feel safe taking children to any of our parks or public space downtown.

Anonymous

1/20/2023 12:17 PM

I really enjoyed having the two blocks west of the walking mall closed during the pandemic. I'd like Boulder to prioritize communal and carless areas in general, and it made a lot of sense to have those two blocks closed as an extension of the mall.

Anonymous

1/20/2023 12:58 PM

Rather than fixing something that is not broken, we should be concentrating on planting back the trees on the West End. That is the most economical, charming and sustainable action to fight the heat. Safety and aggressive vagrancy is a bigger concern.

Anonymous

1/20/2023 01:33 PM

Remove the homeless and drugs. Make it feel safe again.

Anonymous

1/20/2023 01:36 PM

WE WILL NOT PARTICIPATE WITH CLIMATE LOCKDOWNS OR 15 MINUTE CITIES

Anonymous

1/20/2023 01:39 PM

I loved coming downtown when the area from the Mall to 9th St. was closed to traffic. This was a huge plus and I'd like to see it come back again.

Anonymous

1/20/2023 01:48 PM

Know many people that were disappointed by the removal of pedestrian safe zone and dining area along Pearl

Anonymous

1/20/2023 02:02 PM

Having uniformed police officers on the mall. I would feel much safer!

Anonymous

1/20/2023 02:05 PM

Those 1-8 rank questions are very poorly designed from a meaningful survey perspective. The homeless and tents downtown severely impact my likelihood to go to Pearl Street. This is the biggest factor that needs to be changed..

Anonymous

1/20/2023 02:19 PM

Inforce the rules that are in place i.e. no pets etc.

<p>Anonymous 1/20/2023 02:22 PM</p>	<p>Needs to be safer - downtown Boulder has gotten shady - much more enforcement/oversight needed and the camping ban/illegal activities needs to be handled</p>
<p>Anonymous 1/20/2023 02:29 PM</p>	<p>Permanently extend walking section of the mall. Add housing above existing businesses</p>
<p>Anonymous 1/20/2023 02:40 PM</p>	<p>Our family with young children was very sad to see West Pearl reopen to cars. Seems like a such a waste just to gain a few parking spots. Boulder has a number of nice garages that have space for those who want to drive.</p>
<p>Anonymous 1/20/2023 02:50 PM</p>	<p>No more cars on Pearl!</p>
<p>Anonymous 1/20/2023 02:50 PM</p>	<p>The City of Boulder's infrastructure lacks safety and accessibility for pedestrians and people who use mobility aids.. The 9th and pearl closure did not fix the problem, but it certainly made navigating that area for pedestrians safer and more enjoyable.</p>
<p>Anonymous 1/20/2023 02:52 PM</p>	<p>I absolutely LOVED when pearl street was marked off for pedestrians. I would love to prioritize the accessibility of pearl for those with disabilities, while also making it a quiet, car free space when possible.</p>
<p>Anonymous 1/20/2023 02:53 PM</p>	<p>Access to save public restrooms</p>
<p>Anonymous 1/20/2023 03:19 PM</p>	<p>Closing street areas for the sake of closing streets makes no sense. Closing a street for an activity makes sense. The City should evaluate how the special event process could be enhanced or improved to allow greater access to this option for activation</p>
<p>Anonymous 1/20/2023 03:19 PM</p>	<p>Bicycles are vehicles. Many questions here don't make sense, e.g. "non-vehicular use such as bike parking". I assume that by "personal vehicle" you meant to say automobile. Please consider how this abuse of language alienates people you aim to serve.</p>
<p>Anonymous 1/20/2023 03:33 PM</p>	<p>Bike theft, illicit drug use & encampments are ruining downtown! Outdoor dining was nice & necessary during Covid. But people</p>

with disabilities need close parking. Expanded dining should be seasonal like Paris-plage. In summer, some streets become beaches

Anonymous

1/20/2023 03:40 PM

Really focus on the street as a public space for dining, entertainment, arts, and culture. Walkability and community are huge!

Anonymous

1/20/2023 04:08 PM

Reduce reliance on automobile, cut down more streets to car traffic, seek to change the community's culture around the use of cars. Change doesn't happen if people aren't forced to adapt.

Anonymous

1/20/2023 04:14 PM

Terrible survey. You need to interact with the public in-person more. These endless surveys are fatiguing.

Anonymous

1/20/2023 04:20 PM

I do not have a car, but even my friends who own cars have told me that removing the pedestrian section downtown was a shame, because they likely wouldn't have been able to find parking there anyway, and because there are parking garages nearby

Anonymous

1/20/2023 04:21 PM

These Qs and As are so biased I can't express my priorities. Clearly written with an agenda. Nothing about supporting small businesses or more parking for our aging/disabled residents. Decreased parking decreases access, as any fool can see.

Anonymous

1/20/2023 04:21 PM

Boulder needs to stop prioritizing vehicle owners and drivers. Downtown does not need to revolve around people in cars.

Anonymous

1/20/2023 04:39 PM

Start enforcing camping bans and move transients out of area. I would never take my kids to the creek for fear of needles, drugs, and human feces. Your lack of enforcement and increase of homeless services has brought out of state transients. Stop it

Anonymous

1/20/2023 04:46 PM

Restoring car access was super depressing and disappointing.

Anonymous

1/20/2023 04:53 PM

Boulder has had a significant increase in homeless population and I've felt less safe because of it. I've been approached and fiscally threatened by a disheveled man spouting insults at me, and now the library is closed due to meth use. We need to fix it

Anonymous

1/20/2023 05:01 PM

Please keep the street closed to vehicles!!!

Anonymous

1/20/2023 05:13 PM

The area 9-11th street is mostly restaraunts. If I have to block more than half a block away I am not going there, and the first time I don't got there due to inability to access parking I will start looking for alternate locations to eat. Do not close!

Anonymous

1/20/2023 06:26 PM

Refocus on not blocking amazing downtown views that have been destroyed by so many new buildings. Like what happened with the Westend. It was one of the best rooftops with beautiful open views and nice breezes. Now barely a view, hot & boxed in. A shame.

Anonymous

1/20/2023 06:55 PM

Decreasing public drug use and all problems related to that should be the number one priority but is not on the list at all.

Anonymous

1/20/2023 06:57 PM

Love the outdoor events in summer that are family friendly!

Anonymous

1/20/2023 07:15 PM

More and bigger trees for shade. More maintenance of hardscape and bus stop shelters.

Anonymous

1/20/2023 08:16 PM

Enforce the no sidewalk camping and dog parking. NEVER close the restaurants again

Anonymous

1/20/2023 10:55 PM

Only high income people live close enough to downtown to walk or ride a bicycle. Please do not forget about diversity of individuals who have to travel from outside of the city and their only feasible option is a personal vehicle.

Anonymous

1/21/2023 04:14 AM

There are no normal stores downtown, and the farther you get from Pearl Street it feels dead and dangerous,. The

Anonymous

1/21/2023 06:21 AM

Free parking downtown.

Anonymous

1/21/2023 07:00 AM

The reason I don't go downtown is the homeless. I would stroll Pearl, 13th to the farmers market, pre-pandemic but I don't want to take my kids downtown.

Anonymous

1/21/2023 07:14 AM

Please consider the impact to the quality of life living nearby. I don't live nearby, but I have had negative impacts in my neighborhood based on "economic vitality"

Anonymous

1/21/2023 07:17 AM

Redeveloped properties should be required to keep their landscaping alive for 15 + years; new residential should be required to have on-site permanently affordable units; the city should increase the linkage fees and buy bldgs for non- profits and local

Anonymous

1/21/2023 07:33 AM

Open west pearl for walking and remove cars from the equation.

Anonymous

1/21/2023 07:35 AM

Close west Pearl to cars! Those blocks were so lovely when the cars were gone. I patronized those businesses more when the cars were gone than before and since the cars were allowed back, I've not been back a single time.

Anonymous

1/21/2023 08:35 AM

We demand rigorous enforcement of camping, loitering, panhandling, drug laws. The city is now in a deplorable state because of the homeless population

Anonymous

1/21/2023 08:47 AM

What occurred on West Pearl should be expanded to other parts of the City.

Anonymous

1/21/2023 08:57 AM

If there are more open spaces the transients will setup shop. If there are more open spaces you need more patrols or it will just turn into a transient camp.

Anonymous

1/21/2023 09:00 AM

As a delivery vendor, the 2020 road closures forced us to drop customers on Pearl st due to the loss of loading areas. Allowing curbside pickups in loading areas also prevented the intended use of these spaces and put our delivery personnel in danger

Anonymous

1/21/2023 09:23 AM

Please re-close West Pearl so it's pedestrian only!!

Anonymous

1/21/2023 09:46 AM

We need a campground for homeless people so that they are not camping all over the downtown area . This will also make it feel safer and increase sales..

Anonymous

1/21/2023 09:56 AM

Please let us feel safe in our city again by addressing the drug culture and encampments that have taken over our beautiful public spaces, which are supposed to be available for us all to enjoy.

Anonymous

1/21/2023 10:28 AM

There should be more places on Pearl at night for the college kids to go too. It's a college town and they bring in a lot of revenue with their families. Shops and restaurants closing early could be more utilized towards the college community

Anonymous

1/21/2023 10:57 AM

I would love to see more pedestrian only spaces downtown. The Pearl St Mall is great, but it's so small and rents are so high that there's not much to do there (barely any coffee shops left). Expand the mall and provide more pedestrian only space.

Anonymous

1/21/2023 11:01 AM

Car-free streets are safer, more enjoyable, and far better for building community. To enable Boulder's downtown to minimize cars, the city should invest in systems and infrastructure that make it easier to access downtown without a car.

Anonymous

1/21/2023 11:05 AM

The obvious success of the pearl st mall should be expanded in any way possible. Boulder should be able to lead the way in car-free access to great shopping, restaurants, cultural experience etc.

Anonymous

1/21/2023 11:08 AM

I thought the additional dining and pedestrian areas created by closing off certain streets during the pandemic were wonderful. At the very least, maybe just continue that in the summer months?

Anonymous

1/21/2023 11:45 AM

My kids & I rarely go downtown anymore because our favorite place (the creek!) is now trashed and scary. I care deeply for our unhoused, but the one place we should NEVER allow camping is along our most ecologically-sensitive treasures: our creeks.

Anonymous

1/21/2023 12:01 PM

I would take a bike or public transport downtown if there were protected bike lanes and better public transportation. I hate having to drive

Anonymous

1/21/2023 12:02 PM

With more walking outdoor space allows for more enjoyment and usability of downtown. Cuts down the risk of car accidents when stopping or entering exiting a vehicle downtown

Anonymous

1/21/2023 01:13 PM

I was disappointed to see West Pearl reopen to vehicular traffic, and I have noticed that I choose to not walk or bike to that part any more because of the presence of cars.

Anonymous

1/21/2023 01:37 PM

there was no reason that i could see to ever re-open west pearl to vehicular traffic. cars are loud, dangerous, and ruin public spaces for people. one of my favorite spots in town became the corner of pearl and 10th street because it was open to people.

Anonymous

1/21/2023 06:19 PM

Please allow dogs!

Anonymous

1/21/2023 08:53 PM

Until drug issues are addressed investment of time or money makes no sense. People will visit the downtown area less and less.

Anonymous

1/22/2023 01:58 AM

If they open up west Pearl to business the landowners should compensate the tax payers for the space. It seems extremely unfair to just give this space to business for outdoor dining.

Anonymous

1/22/2023 07:28 AM

The comment preserve quiet enjoyment confuses me. I live near pearl street, a lively, vital unquiet space, on purpose. I would like to preserve mildly lively enjoyment.

Anonymous

1/22/2023 07:44 AM

In order to access all of Pearl street there needs to be adequate parking everywhere. The construction projects have been disruptive. The homeless population has diverted use of the parks and parking areas from people who would like to use them safely.

Anonymous

1/22/2023 08:21 AM

We live downtown and fear for our safety and property on a daily basis. It is truly a crime what has been allowed to happen in our city with continued support of the dangerous transient lifestyle. We are scared to venture out downtown at night.

Anonymous

1/22/2023 08:46 AM

I drive to Pearl street w family, but I prefer to park at on periphery and walk. The crisscrossing automobile access is the main problem with the current layout. It devotes far too much space and organization to the few who choose to drive to the center.

Anonymous

1/22/2023 11:43 AM

We need a mix of curbside vehicle access and curbside dining areas...not all of one and none of the other.

Anonymous

1/22/2023 01:35 PM

It seems difficult for those that are disabled at times to get around Boulder and get to downtown. I would love to see changes towards that. I'd also love to continue to see curbside dining and activities - it really brought downtown to life!

Anonymous

1/22/2023 02:01 PM

It was a much better downtown when the barriers were up. If businesses suffered, maybe they were the problem not the parking.

Anonymous

1/22/2023 03:58 PM

I would like to see the Bandshell removed. I would like the Main Library Branch retrofitted into a performing arts complex. I would like the remaining BC-Broadway Hospital bldgs and grounds converted into a temporary shelter-designated camping site.

Anonymous

1/22/2023 03:58 PM

I loved the West End closure but I do see that as a hindrance to restaurants/patrons. I also would have liked nicer accommodations than picnic tables but I understand that was temporary. Maybe block off half the block, allow one lane/one way traffic?

Anonymous

1/22/2023 07:37 PM

extend car-free streets along west and east pearl. keep outdoor seating in alleyways and in the street.

Anonymous

1/23/2023 05:36 AM

safety safety safety. Public spaces should not be taken over by grifters, buskers, loud amplified music, homeless. We as taxpayers pay for these spaces and should feel safe

Anonymous

1/23/2023 06:21 AM

Safety concerns around homeless and drug use should be top priority

Anonymous

1/23/2023 07:01 AM

We prefer to eat outdoors, so we pick restaurants with outdoor seating

Anonymous

1/23/2023 07:06 AM

It was very enjoyable to have a non-car space along Pearl Street from 9th to 11th. Relaxing to meet and socialize with friends and family. Why the need for cars? I would like to go back to that, and so would my family.

Anonymous

1/23/2023 08:03 AM

There are many underutilized public spaces, streets, business zones, and neighborhoods throughout the city, not just downtown, that have potential for much more vibrancy. The City and Council should focus attention to these areas.

Anonymous

1/23/2023 08:12 AM

I would like to see the downtown made more accessible for those who walk, bike, roll, take the bus or other forms of transportation besides cars. Also having more areas to enjoy the outdoors and socialize without the need to shop or dine would be nice

Anonymous

1/23/2023 09:17 AM

Now that west Pearl is open to vehicles, I haven't been back since the reopening.

Anonymous

1/23/2023 10:31 AM

Need to make sure there are clear pathways for walking. Street crossings need to be accessible. There needs to be clear and accessible communication about which parts of Pearl will remain open or closed to traffic to promote safe travel for blind people.

Anonymous

1/23/2023 10:53 AM

I think the more pedestrian streets we have, the greater the resident and tourist enjoyment and use of Pearl St. During the pandemic when Pearl from 11th to 9th was pedestrian, we went downtown more than ever. It was so nice and with no parking problems.

Anonymous

1/23/2023 11:49 AM

Cycling parking and vehicle parking are entirely different priorities, and should absolutely be delineated in question 2.

Anonymous

1/23/2023 12:29 PM

CREATE a SAFE SPACE, STOP pan-handling and residential vagrancy in our community areas, encourage entertainers this area was designed for so long ago. This area is now an embarrassment, unsafe for visitors& families, need more performers artists, musica

Anonymous

1/23/2023 12:39 PM

I find it hard to believe that this survey is ignoring the HUGE elephant in the room. What about the rampant homeless camps that have taken over our public spaces. I heard Boulder removed reference to the creek path from it's website.

Anonymous

1/23/2023 01:57 PM

If this effort is aimed at turning Boulder into a "15 minute city" as advocated by the WEF, where travel is restricted by district and cars are banned, I reject that grim future outright.

Anonymous

1/23/2023 03:18 PM

For the love of god PLEASE do something ANYTHING about the homeless/drug problem in Boulder. There's a reason why many families wont go near downtown, The Hill or the creek. Its because you refuse to do anything about the elephant in the room.

Anonymous

1/23/2023 03:21 PM

I understand that it is hard to maintain accessibility for all, while maximizing the space byway of getting rid of curbside parking, but I think it is doable and is a worthy investment. Part-time modifications could be an option- ie: weekend modification

Anonymous

1/23/2023 03:35 PM

more show and attraction in the street.

Anonymous

1/23/2023 04:01 PM

I may have answered differently had I been able to see the perceptions of Pearl St. small business owners. I think their thoughts/wishes on this should be given higher priority than individuals chiming in via this survey. I'm not a small business owner.

Anonymous

1/23/2023 04:13 PM

Spaces where pedestrians and cyclists exist should be separated as much as possible from cars for the sake of both but especially for the safety of those not in cars. I have way too many near misses when on foot or on my bike with cars downtown.

Anonymous

1/23/2023 04:59 PM

Safety! While I still go downtown my wife, children, and extended family members do not. I also no longer take guests from out of town. There should be 0 tolerance for drug use or crime. Please put the criminals in prison!!

Anonymous

1/23/2023 07:05 PM

I have lived here all my life and it used to be that if homeless people were camping, they were put in jail. I think it is disgraceful how the city is allowing the homeless to destroy this town. I no longer use bike paths because they are scary and danger

Anonymous

1/24/2023 07:10 AM

Some of your questions were tricky... I want to provide ENJOYABLE space downtown, which means where I can feel safe with my kids. Not more benches to be taken over by bike thieves and people with substance abuse problems and erratic behavior.

Anonymous

I live in the Boulder Foothills, I have to drive 2 miles to get to a bus

1/24/2023 07:16 AM

stop. It's silly for me to then pay the bus rates to go 2 more miles to downtown. My teens ride the bus to Pearl though, and to BHS. I wish I felt safer about them downtown.

Anonymous

1/24/2023 07:53 AM

If you are going to take away parking from 9-11th, brick it in like the rest of Pearl St so it is continuous. Also, we need the police back patrolling Pearl St. too many people breaking to many rules. either remove the rules or enforce them.

Anonymous

1/24/2023 08:20 AM

I liked being able to walk down the full street - the sidewalks get to crowded and create a New York movie vibe = not good.

Anonymous

1/24/2023 08:36 AM

Safety! Bring back BPD officers to help monitor the mall and keep the rules in place so others can enjoy. There are dogs roaming, people begging, bikes, skateboards flying. It's no longer as safe as it should be.

Anonymous

1/24/2023 09:16 AM

As is well documented safety has become more and more of an issue in downtown Boulder. A visible law enforcement presence is important to my sense of safety in many areas of downtown including Pearl street.

Anonymous

1/24/2023 09:22 AM

Stop building tall buildings and taking away the views of boulder from downtown. Who wants to walk around in building shadows? The flatirons are the reason that boulder is the iconic town that it is. Take care of the homeless people so it's safe downtow

Anonymous

1/24/2023 09:25 AM

Give seniors free parking

Anonymous

1/24/2023 09:28 AM

I rarely go downtown because of the addicts camping on the sidewalk. I will not let my children go to Pearl St at night because I do not feel safe. I really miss having access to our downtown areas and am so sad they have been given to the addicts.

Anonymous

1/24/2023 09:29 AM

For some reason the form would not allow me to pick a number for the second option which would really be number one for me.

Anonymous

1/24/2023 09:29 AM

All above suggestions would be great if downtown felt safe and was clean. Difficult to stay positive and enjoy city with homeless, drug-

added criminals who have more rights than taxpayers. Less social services would encourage criminals to go elsewhere

Anonymous

1/24/2023 09:30 AM

None

Anonymous

1/24/2023 09:36 AM

Don't often go downtown to enjoy it as I am often accosted by the homeless and I no longer feel secure.

Anonymous

1/24/2023 09:59 AM

Even the business owners have stated they do not want this area closed off so please listen to them.

Anonymous

1/24/2023 10:01 AM

Maximize landscaping and gardens

Anonymous

1/24/2023 10:11 AM

I live two blocks from the mall and, prior to 3 years ago, regularly had meals downtown. Now I don't go there at all - the old courthouse lawn is overrun, people are smoking. I had outside breakfast on Pearl & a women pooped on sidewalk & panhandled.

Anonymous

1/24/2023 10:18 AM

As a long time residents of Boulder, I hope this engagement survey helps Boulder move to a better city experience and that the downtown are can grow to be more robust and inviting.

Anonymous

1/24/2023 10:36 AM

I believe most people shop on the bricks and forget there is more here on the West End. It would be great to see more pedestrian traffic on the West End to benefit the retailers who work so hard. Hold more events on West End!

Anonymous

1/24/2023 11:04 AM

Some events like bands on the bricks are too crowded for me to enjoy. Provide entertainment for events that are smaller and more accessible. For example support for good musicians who are Street buskers.

Anonymous

1/24/2023 12:06 PM

The most important thing, which your survey has failed to address, is the comfort and safety of visitors to downtown.

Anonymous

1/24/2023 01:12 PM

We need significantly more handicap parking all throughout downtown. These are often full, then I can't go to the store or

restaurant I was aiming for.

Anonymous

1/24/2023 01:26 PM

We need more car-free areas, losing Pearl West was shameful

Anonymous

1/24/2023 01:29 PM

Just close Pearl Street

Anonymous

1/24/2023 03:10 PM

Permanently extending the Pearl Street Mall west to 9th St is an OBVIOUS thing to do. It was SO nice having this segment closed to vehicles. 13th Street by Central Park should be permanently closed. If it can be closed for events, it can be closed ALWAYS.

Anonymous

1/24/2023 03:10 PM

Missing from the survey and the most important change to make Boulder's downtown viable is to remove street addicts that are now camping/using drugs in public spaces. PLEASE restore safe access to the creek and downtown streets. Biggest issue right now!

Anonymous

1/24/2023 04:03 PM

I live far enough away that the time to bike is comparable to the transit time for the bus, but I've found (e)bikes to be more convenient because they require less planning. Security of bike parking is a concern.

Anonymous

1/24/2023 04:04 PM

West Pearl outside dining during Covid was a fun and nice option. But, some of the restaurant set ups were disorganized & messy looking and detracted from Pearl St's image

Anonymous

1/24/2023 04:45 PM

Lack of affordable family restaurants (chains?) and accessibility. Hotel Boulderado is only place we will eat anymore, and then rarely

Anonymous

1/24/2023 05:07 PM

I would love to see the city do something for those of us who work downtown with respect to parking. My office doesn't qualify for an NPP or much else. You want local businesses? How about working with us to park at a discount?

Anonymous

1/24/2023 08:28 PM

Keeping the downtown safe for walking in increment weather is important.

Anonymous

DO NOT WANT TO BE HASSLED BY RETROBATED WHILE

1/25/2023 01:14 AM

EATING AN EXPENSIVE LUNCH

Anonymous

1/25/2023 05:50 AM

West Pearl being closed was so fantastic! We would often have discussions with our family about how the city could extend the brick pavers between 11th & 9th streets. Including potential climate resiliency measures like permeable pavers.

Anonymous

1/25/2023 08:06 AM

We have a real opportunity to increase pedestrian-only access on west pearl and differentiate Boulder from anywhere USA. People come here for a reason and it's not ease of parking over pleasant strolling and shopping.

Anonymous

1/25/2023 08:31 AM

Our family really enjoyed and took advantage of having West Pearl Street free of cars. We felt safer as pedestrians and enjoyed the outdoor space and dining. We don't think cars should be prioritized over pedestrians.

Anonymous

1/25/2023 08:45 AM

Downtown feels unsafe in terms of bike theft, harassment, unpredictable behavior

Anonymous

1/25/2023 10:05 AM

I feel fairly safe on the mall. However I would never go to Central Park and don't enjoy the Boulder Creek path anymore, due to safety concerns. It's a shame.

Anonymous

1/25/2023 10:09 AM

Kudos for experimenting during COVID! But post-COVID, the variety of benefits is not the same. When businesses that invested blood, sweat and tears in locations with drive-by visibility and curb access say no more, LISTEN! relied upon drive-by visibility

Anonymous

1/25/2023 10:21 AM

The west pearl science experiment was a terrible idea. Underutilized, looked like a grungy camp and served no real purpose. Downtown is far more vibrant with easy access for people to park cars. This survey was poorly designed.

Anonymous

1/25/2023 11:11 AM

I was really upset when West Pearl reopened to vehicles.

Anonymous

1/25/2023 11:27 AM

Being disabled as well as in my 80s, it is difficult to decide how the city of mostly younger people should prioritize the downtown streets as public space in this area.

Anonymous

1/25/2023 11:37 AM

When I moved to Boulder over 30 years ago, I would frequently go downtown and was proud to show it off to out-of-town guests. However, many times I don't feel safe there and am embarrassed by what visitors might see.

Anonymous

1/25/2023 03:32 PM

There should be rent control to allow small businesses to remain on mall, otherwise it's just the same elite stores like everywhere else that can afford to rent on Pearl St.

Anonymous

1/25/2023 03:40 PM

Love, love more pedestrian spaces on the west of the mall (or anywhere downtown!\$

Anonymous

1/25/2023 04:06 PM

I would like to see the Bandshell removed. I would like the Main Library Branch retrofitted into a performing arts complex. I would like the remaining BC-Broadway Hospital bldgs and grounds converted into a temporary shelter-designated camping site.

Anonymous

1/25/2023 04:11 PM

More events like the bee festival, outdoor cinema

Anonymous

1/25/2023 04:25 PM

passenger drop off requires much less space than parking and could be prioritized. Pushing more parking into parking garages would benefit residential neighborhoods. Making access easier via non-personal-car options would be even better.

Anonymous

1/25/2023 04:37 PM

Affordable cafes; local businesses

Anonymous

1/25/2023 04:52 PM

Making the walks from Boulder neighborhoods more walkable/intriguing to walk on to get downtown. And more affordable bus passes for non students.

Anonymous

1/25/2023 05:25 PM

control bike riders. do something about the army of homeless during summer.

Anonymous

1/25/2023 05:27 PM

Free parking and affordable food

<p>Anonymous 1/25/2023 07:56 PM</p>	<p>Prioritization of bike/ped accessibility over that of personal vehicles should be a top priority for planning on (and near) Pearl Street. Getting out of cars supports businesses, improves air quality, and strengthens social fabric.</p>
<p>Anonymous 1/25/2023 08:45 PM</p>	<p>Seriously if you want people to come downtown then do something about public safety issues and the parks being used as campgrounds and hangouts for drug dealers and drug users. If you block off streets from parking we won't go downtown at all.</p>
<p>Anonymous 1/26/2023 06:28 AM</p>	<p>Please clean up the theft and homeless addicts on the mall. My employees who live outside of Boulder tell me they no longer visit because of this issue.</p>
<p>Anonymous 1/26/2023 07:33 AM</p>	<p>Pearl Street Mall is key to Boulder's character. Let's extend it a few blocks. The sense of camaraderie the increased outdoor space created was wonderful. Boulder is an outdoor community. I believe it will also be an economic positive for our town.</p>
<p>Anonymous 1/26/2023 08:25 AM</p>	<p>Absolutely loved the change that was made during the pandemic (the closing of Pearl for outdoor dining). Would love for this to come back in fact would love to see the Bricks extended to 9th street.</p>
<p>Anonymous 1/26/2023 10:24 AM</p>	<p>It's difficult to support public spaces while the city prioritizes the unhoused over the safety of children, etc. Once the bike paths, public spaces, and school zones are safe then I'm in favor of enhancing them. Until then, there isn't a point.</p>
<p>Anonymous 1/26/2023 11:01 AM</p>	<p>A significant challenge with the blocking off of west Pearl was there were no curb cuts for strollers, wheel chairs, pushing bicycles -- and the sidewalk area between the shops and the outdoor seating became too narrow and congested.U</p>
<p>Anonymous 1/26/2023 11:50 AM</p>	<p>Please enforce the smoking ban on Pearl Street and extend it all the way west to Settler's Park.</p>
<p>Anonymous 1/26/2023 04:16 PM</p>	<p>No dogs and no smoking on Pearl Street need to be enforced</p>
<p>Anonymous</p>	<p>I work downtown on West Pearl and business has dramatically</p>

1/26/2023 08:29 PM

increased since the street reopened. Between people being able to park on the street and wheel chair access all of our patrons are very happy that its open again

Anonymous

1/26/2023 10:30 PM

PLEASE GET A HANDLE ON THE HOMELESS/DRUG/CRIME/SITUATION!! City of Boulder taxpayers should be able to freely use and enjoy Boulder's parks and public places. Thank you.

Anonymous

1/27/2023 07:24 AM

As long as we encourage a homeless population to come to Boulder and live on our streets and in these public spaces, we will limit how much time people including myself want to go downtown. No amount of flowers, busses, parking spots, will change that.

Anonymous

1/27/2023 07:56 AM

City Park and the bandshell area seem incredibly underutilized. It is a little scary there with all the homeless encampments and yet could be a wonderful resource for the city. How to improve this?

Anonymous

1/27/2023 09:11 AM

If dogs aren't allowed on Pearl, cars shouldn't be either :)

Anonymous

1/27/2023 11:01 AM

As observed, curbside vehicles and service trucks use, like most parking lots, see a lot of unnecessary idling and pollution from exhaust. This collects in the overhanging spaces next to doorways to businesses, has a health impacts. Please do something!

Anonymous

1/27/2023 01:25 PM

We have too many 'banks' downtown. We need to have options that provide utility (and tax revenue) to the broader community rather than just marketing fronts for deeper pocketed interests.

Anonymous

1/27/2023 01:28 PM

Keep the streets closed to traffic and open for pedestrians, entertainment. Beef up efforts to get people to come downtown on the bus instead of by car--more free or affordable access to the bus such as through city-wide ECO passes are needed.

Anonymous

1/27/2023 01:30 PM

If I'm shopping on Pearl, I dislike walking three or four blocks with bags of goods.

Anonymous

1/27/2023 02:13 PM

I wish it was easier for actual Boulderites to use downtown. I feel pushed out by visitors. It's very hard to park and get into restaurants. We've had the best experiences when we've walked.

Anonymous

1/27/2023 02:31 PM

more police presence to protect against homeless harrassment. I was in a store and a guy came in and threatened the shopkeeper, said he was going to kill her. Concerned about her safety, i asked if she would be ok. her response? "It happens all the time"

Anonymous

1/27/2023 02:56 PM

Arrest people when illegally camping, stealing bikes, possessing illegal drugs and break up encampments. This issue is the biggest contributor to degrading almost all of the above priorities at the same time

Anonymous

1/27/2023 03:30 PM

Closing off public streets for commercial use in my opinion is not a good idea We all pay for the streets and sidewalks and to have a resturant occupy that space for their commercial monetary benefit seems counter to the purpose of the term a"public "

Anonymous

1/27/2023 04:21 PM

I used to ride my bike downtown as my main way to access the downtown, but now I risk my bike getting stolen.

Anonymous

1/27/2023 05:03 PM

downtown isn't save due to vagrants, transients and muggers. Enforce the laws.

Anonymous

1/27/2023 08:45 PM

Maybe making W Pearl one way? This would allow for more outdoor space?

Anonymous

1/27/2023 08:59 PM

Re question 7: I don't care

Anonymous

1/28/2023 04:15 AM

Safety is huge! Downtown is not what it use to be. Access to restrooms that are clean and safe.

Anonymous

1/28/2023 05:19 AM

The downtown area is a public space. It is important that the public feel safe in downtown. Enforcing rules such as no dogs and not allowing sleeping on public benches are essential in keeping the area as a pleasant place to visit.

Anonymous

1/28/2023 06:16 AM

I think expanding the area between 9th and 11th as pedestrian space would not have much negative impact on parking or accessibility. any where else on a long term basis would be a bad idea for surrounding

residential streets.

Anonymous

1/28/2023 08:42 AM

The increase in human utility that was provided by the closure of Pearl Street to cars between 9th and 11th during the pandemic was significant. If it were up to me, we would extend the red bricks and pedestrianize Pearl Street all the way down to 9th.

Anonymous

1/28/2023 09:14 AM

There is no real public space, it's all taken over by vagrants. My children can't use the downtown area including the library because of your approach to the unhoused. it's supposed to be public space. It is NOT

Anonymous

1/28/2023 09:35 AM

I like the bustle of downtown combined with the mall. I especially appreciate the local business opportunities off either end of the mall and do not want to see access stripped away.

Anonymous

1/28/2023 09:55 AM

Please clean up the dangerous vagrant issue. It's feeling less safe in all our public places.

Anonymous

1/28/2023 10:14 AM

Public streets shouldn't be used for private enterprise. The city needs to provide parking so people can get to businesses and restaurants in the Pearl Street area. I tried to go to a shop yesterday, couldn't find parking, shopped online instead

Anonymous

1/28/2023 11:03 AM

Police the mall properly, make it feel like a safe space and get rid of all the meth, panhandling and vagrants on the mall.

Anonymous

1/28/2023 11:25 AM

Design in a way that discourages homeless and indigents from gathering

Anonymous

1/28/2023 11:48 AM

While the extension of al fresco dining was a positive, the types and settings need to be vastly improved if you are to continue allowing these extensions.

Anonymous

1/28/2023 12:49 PM

You should not force people to answer every question to submit a survey unless this is a "I don't care", or "n/a" type response. I cannot meaningfully rank all of these interests. So honestly, only my first three rankings are "true", the rest are random.

<p>Anonymous 1/28/2023 02:17 PM</p>	<p>Closing off the streets is an important to encouraging non vehicle transportation to downtown.</p>
<p>Anonymous 1/28/2023 03:02 PM</p>	<p>Ada parking is appalling right now, and sidewalks are almost impassable in certain areas for wheelchair/walkers right now. Sometimes even a three wheel stroller can't navigate the planters, tables, and which signs.</p>
<p>Anonymous 1/28/2023 05:55 PM</p>	<p>The dropdown boxes are not affective. The last two questions only offered 7/8 and 8, neither of which I would have used for those questions. Also, I would never ride my bike downtown or anywhere in Boulder for fear of theft. It's a real shame.</p>
<p>Anonymous 1/29/2023 06:40 AM</p>	<p>Appreciate this survey. I worry that a few minority voices (business owners) may have a louder voice in our community than the hundreds (or thousands?) of busy people including working parents and families, i.e. stakeholders whose voices are often silent.</p>
<p>Anonymous 1/29/2023 06:45 AM</p>	<p>I actually don't ride and shop anymore. Boulder is too unsafe for a locked bike. Some of the space could be converted to safe parking for bikes</p>
<p>Anonymous 1/29/2023 07:03 AM</p>	<p>I w</p>
<p>Anonymous 1/29/2023 07:04 AM</p>	<p>regardless of what the final decision is for West Pearl (between 9th and 11th), consideration should be made to the intersection of Pearl and 9th. Consider making the pedestrian crossing all directions simultaneously with all traffic lights being red.</p>
<p>Anonymous 1/29/2023 07:26 AM</p>	<p>Open street for dining and events</p>
<p>Anonymous 1/29/2023 07:35 AM</p>	<p>Maximizing access requires closing west Pearl to cars, extending sidewalks into the street (sidewalks are very crowded from 9th to 11th), shrinking planters on the mall itself, and improving safe bike/pedestrian access to Pearl.</p>
<p>Anonymous 1/29/2023 07:58 AM</p>	<p>Requiring all boxes to be filled in is annoying. Cars dominate our city. Removal of one block of parking affects a small number of people.</p>

There is extensive parking in lots. Alleys are available for product dropoff.

Anonymous

1/29/2023 08:59 AM

I very much appreciated the open streets actions; they made West Pearl a more vibrant, engaging place to spend time. I was disappointed city council undid them, based primarily on the complaints of a few merchants who were unable to adapt.

Anonymous

1/29/2023 09:39 AM

Extend Pearl Street Mall east to 29th Street Mall. Allow bicycle riding on all malls.

Anonymous

1/29/2023 10:48 AM

This survey is difficult to answer because of how it groups private car access with other forms of access (e.g. 'ease of storing my bike or car'). Those are two separate issues and would suggest very different visions for the space!

Anonymous

1/29/2023 11:03 AM

When you asked what's important to me regarding spending leisure time downtown, you grouped bike and car parking ease together. These are distinct needs. I need bike but not car parking. Cars on West Pearl actually decreases my enjoyment of downtown.

Anonymous

1/29/2023 11:58 AM

I really loathe the cars in the previously blocked off area of west Pearl

Anonymous

1/29/2023 12:23 PM

Many people are handicapped merely in their ability to walk; e.g. crutches, surgery rehab, arthritis etc. Handicap parking on the periphery is useless.

Anonymous

1/29/2023 12:49 PM

Open pedestrian spaces are critical for creating community, which is lost when we dedicate public space for the storage of private cars

Anonymous

1/29/2023 03:00 PM

We love to dine downtown but rarely go anymore. We do not feel safe. We have been harassed and threatened with physical harm. Including being chased on west pearl by a mentally unstable man on a Sunday afternoon. There is rarely a police presence on Pearl

Anonymous

1/29/2023 03:15 PM

Public and community safety are the number one reason we either go or don't go downtown. We no longer ride our bikes downtown b/c of the bike theft problem. We no longer ride our bikes for errands around time for the same reason. Get the basics right pls!

Anonymous
1/29/2023 05:58 PM
Keep streets safe, increase police presence downtown so customers are not afraid to support businesses

Anonymous
1/29/2023 06:20 PM
Keep on-street parking to enable all ocitizens to access local businesses.

Anonymous
1/29/2023 06:40 PM
Having West Pearl closed to car traffic was incredible. We found ourselves spending more time on those blocks than we have for years. It also drove us to try restaurants we typically hadn't eaten at. It was a huge positive for Pearl.

Anonymous
1/29/2023 07:44 PM
Having been physically and verbally abused MANY TIMES while downtown, I avoid it if at all possible - unfortunately, not owning a car or bicycle, I have to use the RTD buses as set up - visiting the main downtown station with smokers, meth users, and beg

Anonymous
1/30/2023 09:44 AM
I find the condition of the downtown infrastructure appalling - broken curbs, rusted fire hydrants, grounds around bus terminal.

Anonymous
1/30/2023 10:31 AM
PLEASE address crime issues and make Boulder desirable once again. Look around, cities just outside Boulder don't have these issues. We are all waiting for a change!

Anonymous
1/30/2023 10:39 AM
As terrible as the pandemic was (and continues to be), the ability to dine in the street on West Pearl between 9th and 11th was a really nice silver lining. Not many parking spaces were sacrificed to create an amesome public square and ambiance.

Anonymous
1/30/2023 12:48 PM
More space to walk and to gather when those streets were closed to traffic. Better for stores and dining.

Anonymous
1/30/2023 12:51 PM
Many public spaces in downtown Boulder no longer feel safe, including nearby bike and pedestrian paths, the area near the Farmers' Market, and even the Pearl Street Mall. The chances of my bike being stolen while dining or shopping is a big deterrent.

Anonymous
Police the homeless. They are THE biggest detracton.

1/30/2023 01:45 PM

Anonymous

Get rid of the transients around downtown. It is very unsafe.

1/30/2023 02:23 PM

Anonymous

Prioritize pedestrian use and safety, with improved public transit options that are accessible for everyone. Individual car parking is not compatible with the city's climate and air quality goals. Boulder should pursue free city buses like Longmont.

1/30/2023 02:41 PM

Anonymous

Implement dynamic pricing of curbside parking.

1/30/2023 03:39 PM

Anonymous

Please arrest all the transient illegal campers who are ruining downtown. The boulder creek path is completely unsafe. The bandshell is taken over by meth addicts and bike thieves. It's time to take our city back and bring in the national guard.

1/30/2023 04:29 PM

Anonymous

The street closure was nice but it was often empty after the height of Covid. It felt empty. I'm fine with closing it off but I would imagine a much better design. There's a lot of space on the mall area so I'd want to understand the actual need

1/30/2023 04:52 PM

Anonymous

Maximize spaces for people, not cars! The reason Pearl is a regional destination is because people can enjoy a pedestrian experience

1/30/2023 04:56 PM

Anonymous

I'd like to see more Walnut or another street parallel to Pearl dedicated for bicycles only. Any other actions that limit the number of cars downtown.

1/30/2023 05:37 PM

Anonymous

The only reason I ever go to downtown is the fact that Pearl is pedestrianized I can get everything that I buy there online. The only reason I go is because it's nice to be there

1/30/2023 05:41 PM

Anonymous

More live music please!

1/30/2023 07:53 PM

Anonymous

In addition to extending public space for walking and biking, also consider rent control for some commercial space, so that small, independent and "funky" businesses can stay and operate in downtown Boulder.

1/30/2023 08:47 PM

Anonymous

1/30/2023 09:00 PM

Stop giving cars more rights than people

Anonymous

1/30/2023 10:31 PM

Get all the empty buisnessses occupied! It's so sad the amount of empty spaces. MORE MUSIC!!! Jazz clubs, blues venues something unquie 7 different!

Anonymous

1/30/2023 10:40 PM

Increase police patrols. and discourage, prevent, outlaw camping either in a car or on the street. Penalize drug users.

Anonymous

1/31/2023 05:08 AM

It is no longer safe to walk after dark, and the downtown RTD station is unwelcoming. It makes it unappealing to go downtown

Anonymous

1/31/2023 05:27 AM

Long-time Boulder resident-1960-with major concerns about personal safety on Pearl now after all these years; although within walking distance, won't go there with friends for dinner now if it's dark out as we don't feel safe. Please fix this situation.

Anonymous

1/31/2023 08:10 AM

Boulder needs to get their act together. Downtown is no longer safe for kids, the elder or families to enjoy the public spaces.

Anonymous

1/31/2023 08:15 AM

Eliminate homeless people

Anonymous

1/31/2023 10:08 AM

The downtown public areas have been taken over by transients. It's not safe. I don't like being harassed, possibly assaulted at night, its not safe to lock my bike. I no longer hang in the parks, the library or walk the mall. It's not inviting anymore.

Anonymous

1/31/2023 12:16 PM

Do not understand questions about linking downtown to the Hill. Why? As seniors, we go to Pearl Street less and less. Too many outdoor retailer shops and high priced tourist attractions and meals are too expensive. Do not feel safe.

Anonymous

1/31/2023 01:18 PM

Provide poplice or security presence so kids can wander safely

Anonymous

1/31/2023 01:37 PM

I live in Sunshine Canyon, and frequently visit Pearl Street area. Though I drive down the mountain to get to town, I value non-vehicular accessibility WAY above anything for cars. I strongly support revising 9-11th St West Pearl to pedestrian/bike only!

Anonymous

1/31/2023 01:41 PM

Cars don't need to be smack dab in the middle of the busiest and most enjoyable section of town. People walking down the middle of the street, and not just the sidewalks, allowed people to interact in open social ways.

Anonymous

1/31/2023 01:44 PM

Shutting down west pearl was brilliant and significantly improved the character and feel of downtown. With the reopening of west pearl to vehicular traffic, I have been significantly less interested in spending time downtown.

Anonymous

1/31/2023 01:47 PM

I would like Pearl st to allow dogs. A lot of people travel here hearing that it's super dog friendly, but then they get here and realize that they can't keep dogs in their hotel rooms and they can't bring them to Pearl St. I work for Farfel's Farm.

Anonymous

1/31/2023 01:47 PM

Make it more walkable again

Anonymous

1/31/2023 02:07 PM

We must make the feeling of safety, while walking along Boulder Creek, the Library, and places of beauty, as well as family places, safer. Where can we help the homeless people with real safety, shelters, soups kitchens, not living in tents by the river.

Anonymous

1/31/2023 02:23 PM

I encourage all County Commissioners and City council members to do what a friend who is a local fire chief did, walk the bike path from west to east at night. He had harrowing situations, which means my presence would be stupid from a safety perspective.

Anonymous

1/31/2023 02:27 PM

Facilitate business operations, specially those that are for elevating the overall wellness (healthy restaurants, crafts, nature related, arts, culture...) Promote more art, culture, wellness in general

Anonymous

1/31/2023 02:28 PM

We do not go to West Pearl Street as much now that it is opened back to traffic. When it was a temporary pedestrian mall, we went regularly because we loved the atmosphere and enjoyed walking to find a place to eat.

Anonymous

1/31/2023 02:38 PM

I haven't been to a restaurant on Pearl St since the pandemic. I have had to walk through the closed street to get to Envision. Not ideal but OK. Buses running up Table Mesa further than Leiheigh would very be helpful to me

Anonymous

1/31/2023 02:47 PM

None

Anonymous

1/31/2023 02:59 PM

I live up Sunshine Canyon so some of the questions are not applicable to me for that reason of bus, bike, foot etc

Anonymous

1/31/2023 04:08 PM

The Pearl Street pedestrian mall is essential to Boulder and is representative of the priorities Boulder should have for sustainability. The Mall should be permanently expanded and car traffic should be rerouted around the town center instead of through.

Anonymous

1/31/2023 04:20 PM

Less cars, more walking / biking

Anonymous

1/31/2023 07:32 PM

The West end of Pearl felt much more relaxing to myself and my family (children, elders) when it was car-free, as I didn't need to worry about pollution, cars hitting young children, or rushing around. Outdoor seating was more pleasant!

Anonymous

1/31/2023 07:54 PM

We don't go to Pearl St for dinner anymore because of the increase in the homeless population at night.

Anonymous

1/31/2023 07:56 PM

I encourage sustainable development in downtown Boulder to reduce the need for vehicular dependence. Opening downtown streets for mixed-use public space is a step in the right direction for the downtown and greater Boulder community.

Anonymous

1/31/2023 08:03 PM

More walkable/bikeable space

Anonymous

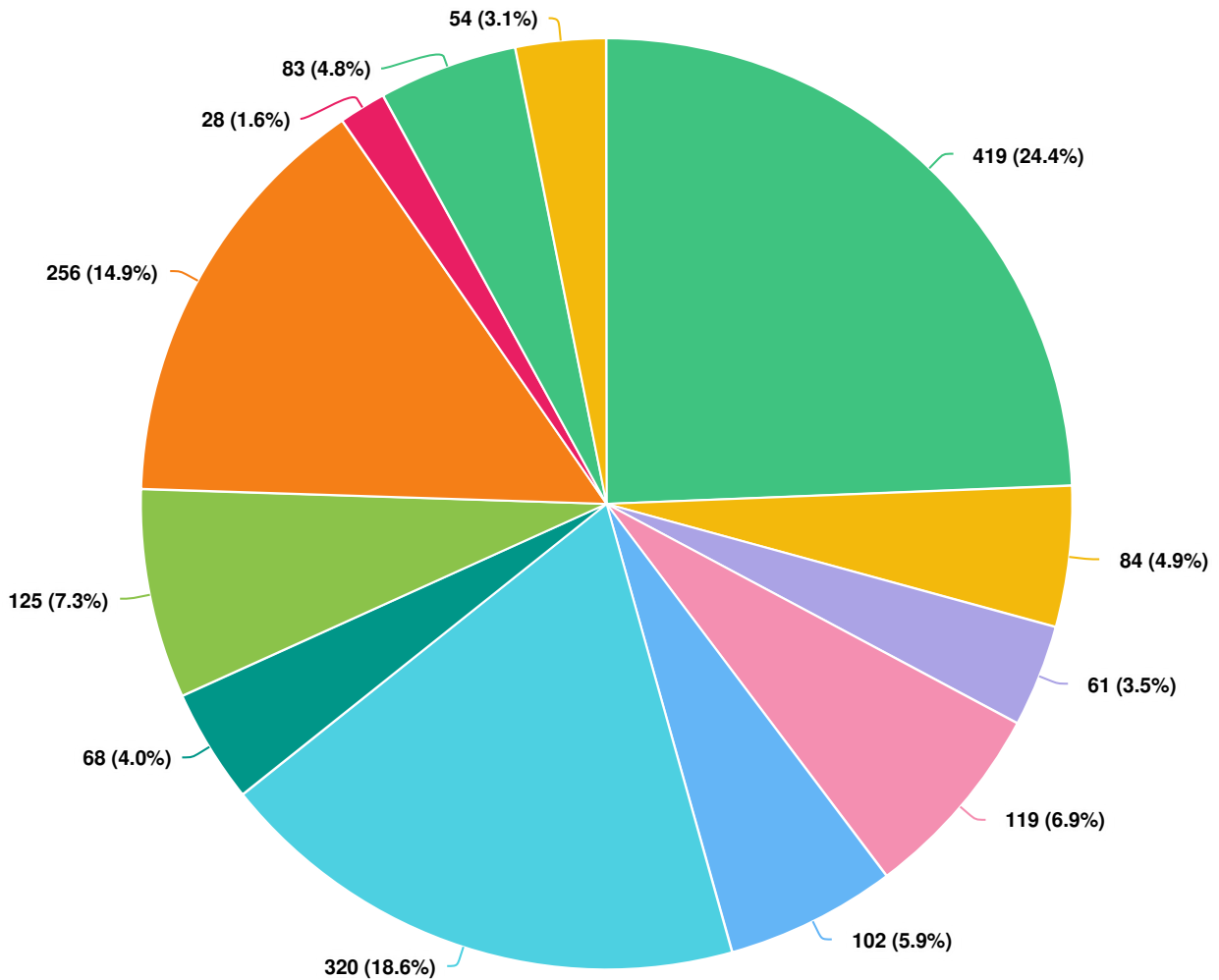
1/31/2023 09:00 PM

Decreasing the presence of homeless who harass innocent shoppers is critical!

Optional question (819 response(s), 967 skipped)

Question type: Single Line Question

Q9 Which part of the city do you live in?

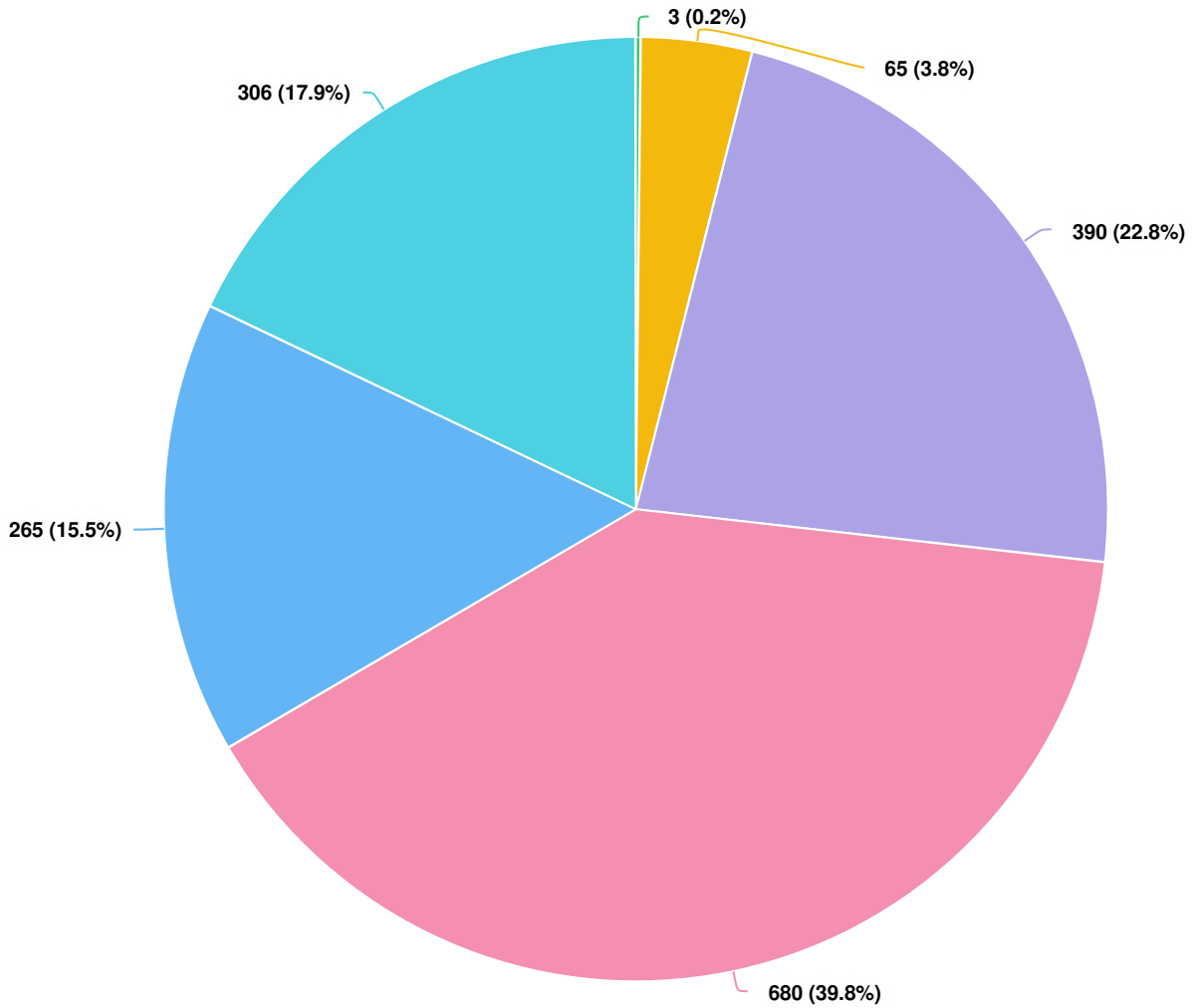


Question options

- I do not live in Boulder, but I am a frequent visitor
 ● I do not live in Boulder, but I work here
 ● University of Colorado
- South Boulder
 ● Southeast Boulder
 ● Palo Park
 ● North Boulder
 ● Gunbarrel
 ● East Boulder
- Crossroads
 ● Central Boulder - University Hill (South of Arapahoe)
 ● Central Boulder - North of Arapahoe

Optional question (1719 response(s), 67 skipped)
 Question type: Dropdown Question

Q10 What is your age range?

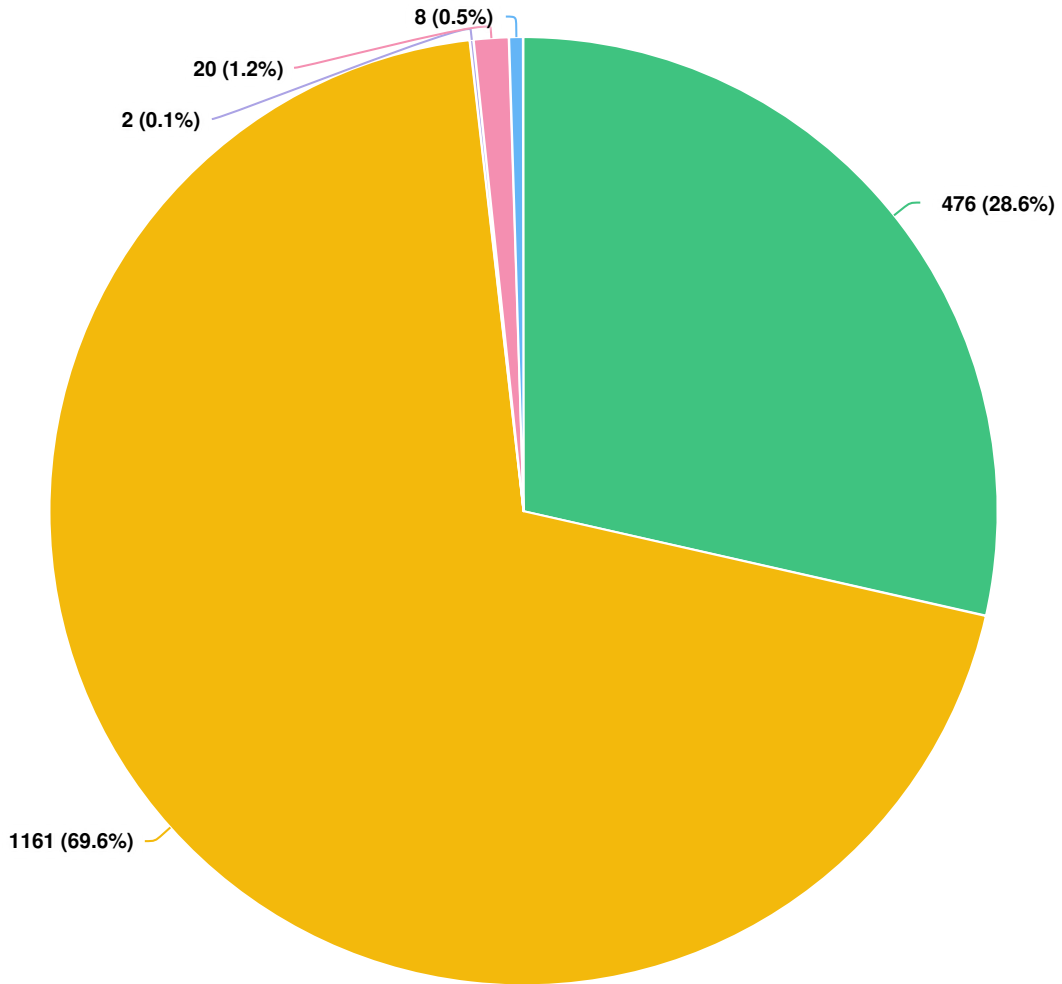


Question options

- 65 and over
- 55-64
- 35-54
- 25-34
- 18-24
- Under 18

Optional question (1709 response(s), 77 skipped)
Question type: Dropdown Question

Q11 Do you rent or own your home?

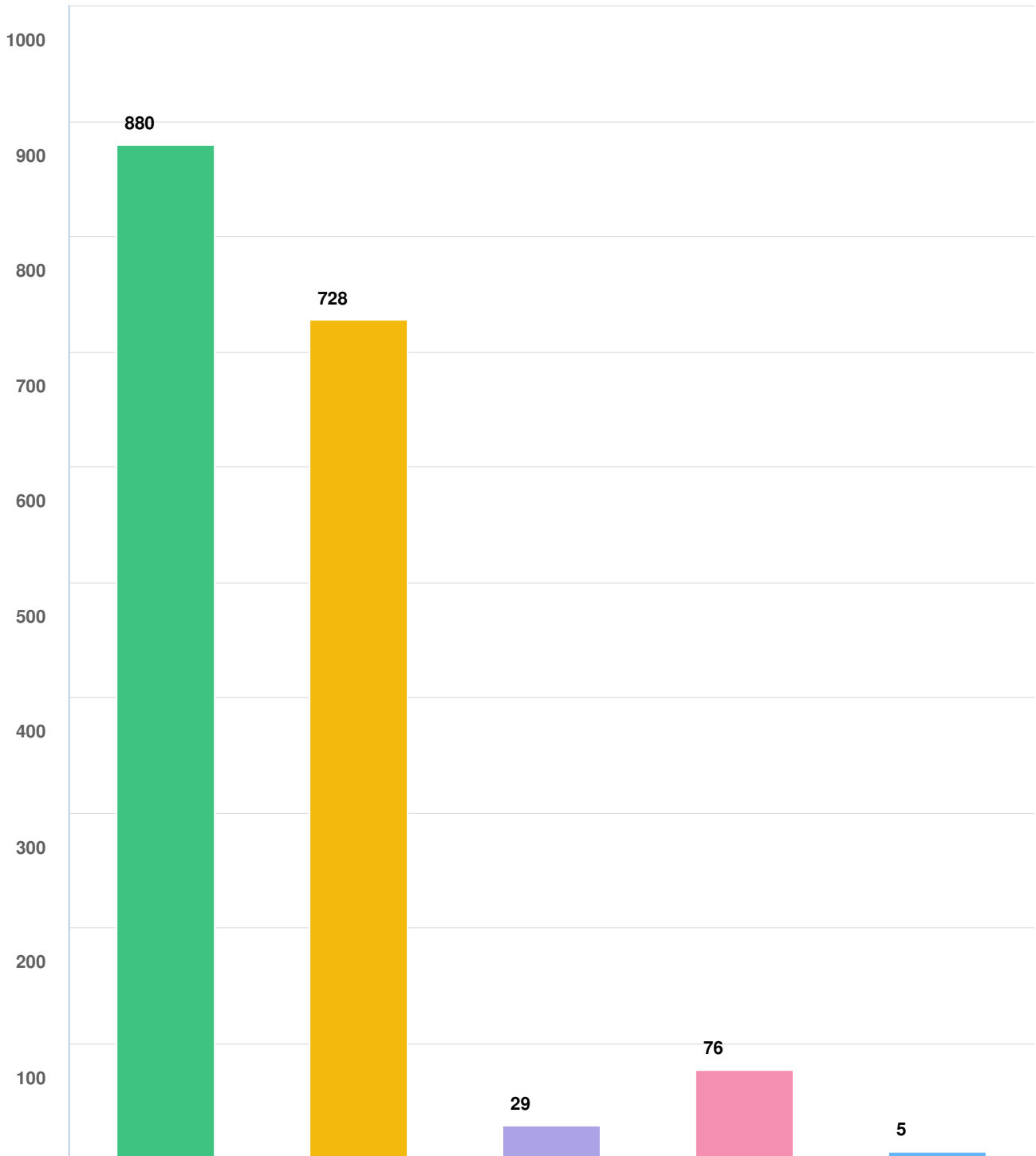


Question options

- I prefer not to say
- Other
- I do not have stable housing right now
- I own
- I rent

Optional question (1667 response(s), 119 skipped)
Question type: Dropdown Question

Q12 Which gender do you most identify with?



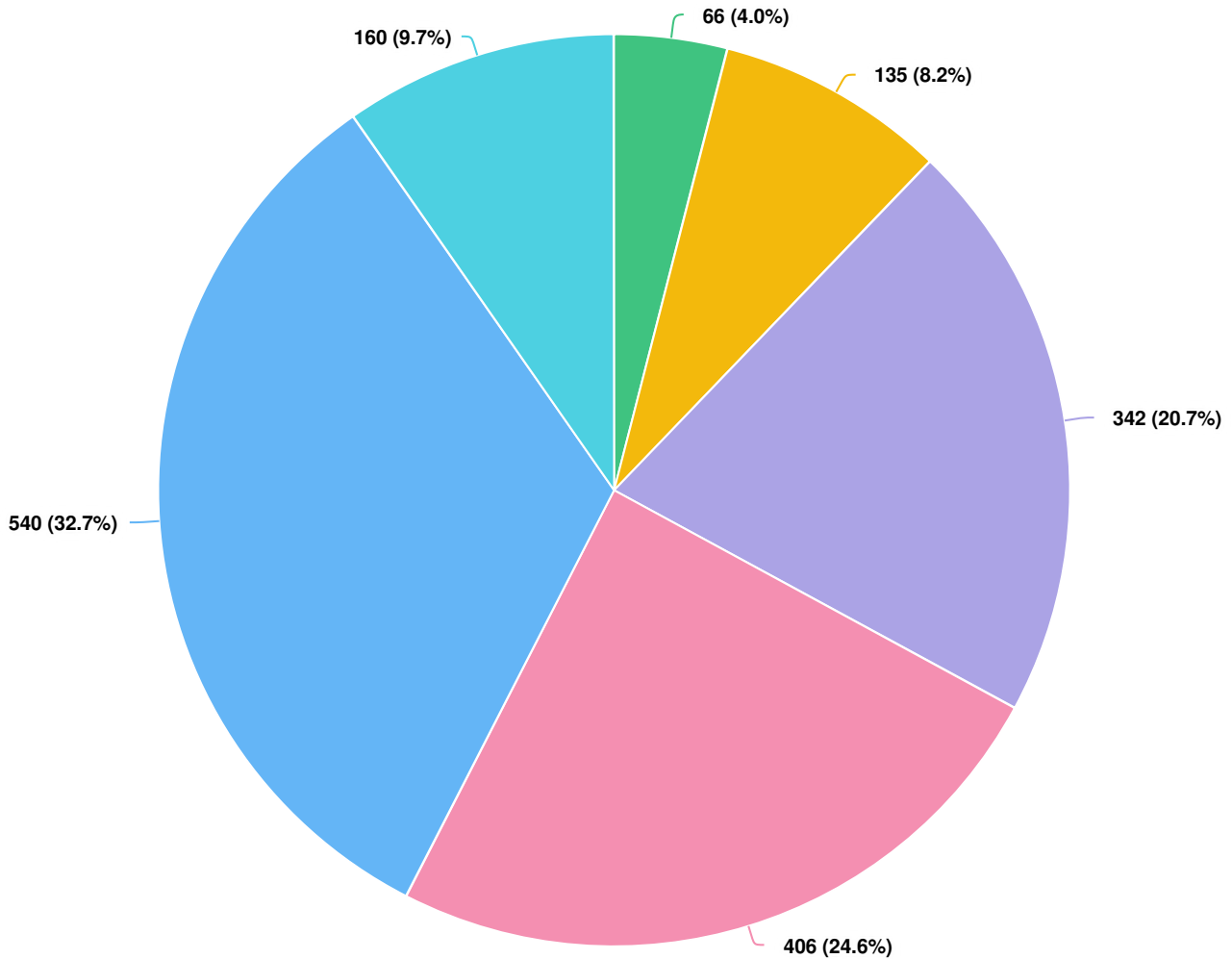
Question options

- I prefer to self-identify as (please specify)
- I prefer not to say
- Non-binary
- Male
- Female

Optional question (1718 response(s), 68 skipped)

Question type: Checkbox Question

Q13 How would you describe your annual household income?

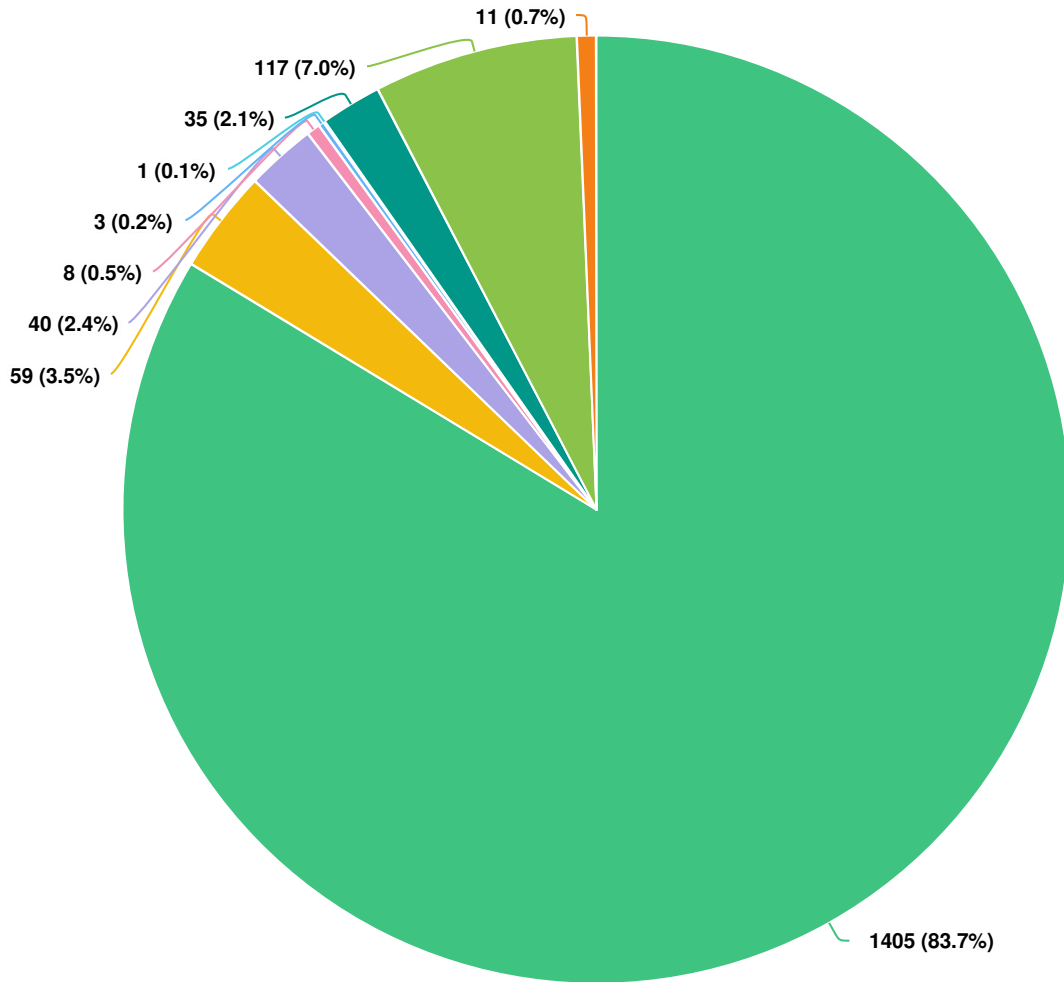


Question options

- I prefer not to say
- \$150,000 or more
- \$100,000 to \$149,999
- \$50,000 to \$99,999 a year
- \$25,000 to \$49,999 a year
- Less than \$25,000 a year

Optional question (1649 response(s), 137 skipped)
Question type: Dropdown Question

Q14 Which race or ethnicity do you most identify with?



Question options

- Other (please describe)
 ● I prefer not to say
 ● Two or more races
 ● Native Hawaiian or Other Pacific Islander
- American Indian or Alaska Native
 ● Black or African-American
 ● Asian
 ● Hispanic or Latino/a
 ● White

Optional question (1679 response(s), 107 skipped)
 Question type: Dropdown Question

Cuestionario para las calles del centro como espacio público

SURVEY RESPONSE REPORT

02 January 2023 - 31 January 2023

PROJECT NAME:

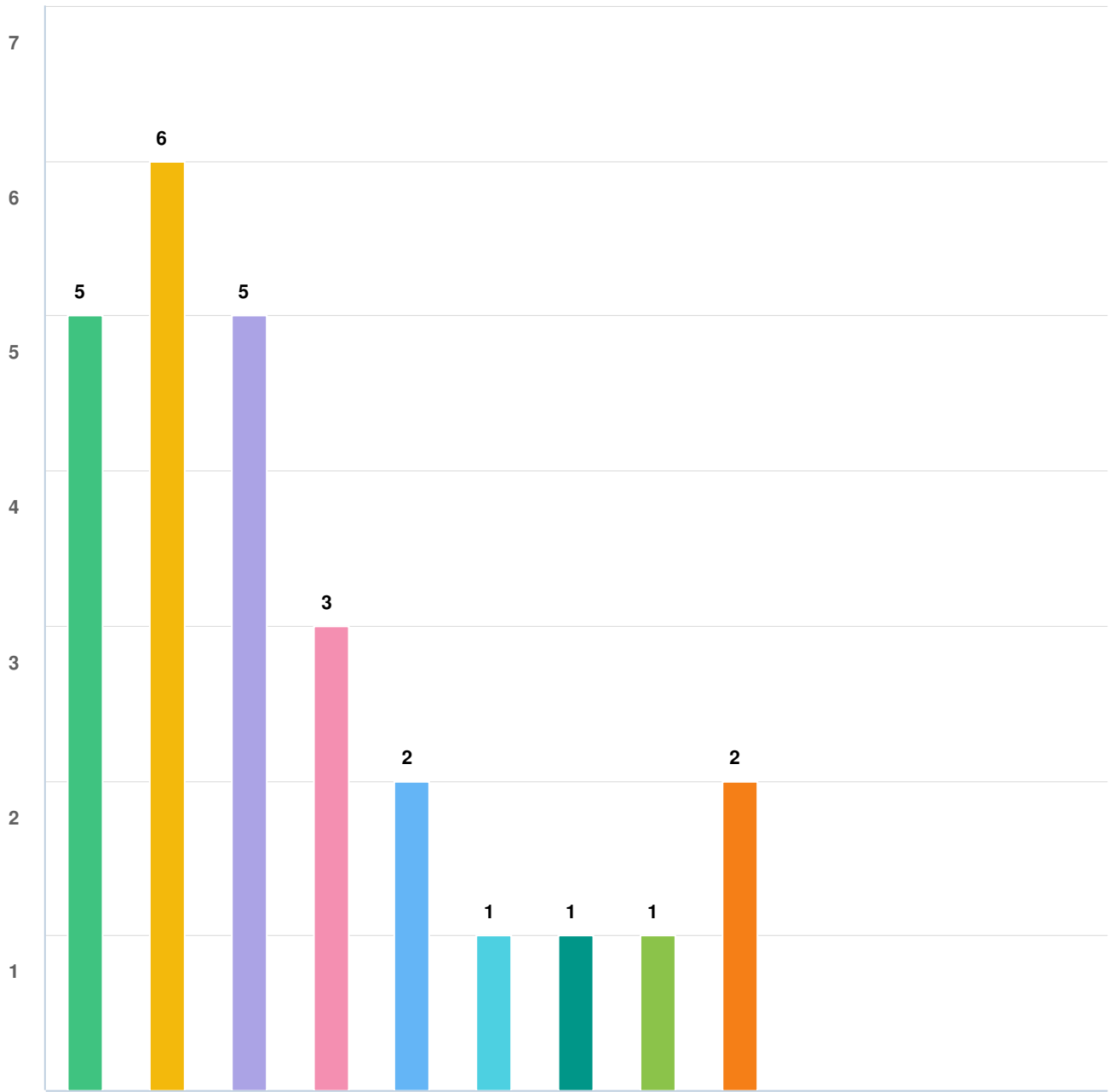
Downtown Streets as Public Space Project // El proyecto de las calles del centro como espacio público





SURVEY QUESTIONS

Q1 ¿Para qué suele ir al centro de Boulder? (Marque todo lo que corresponda)



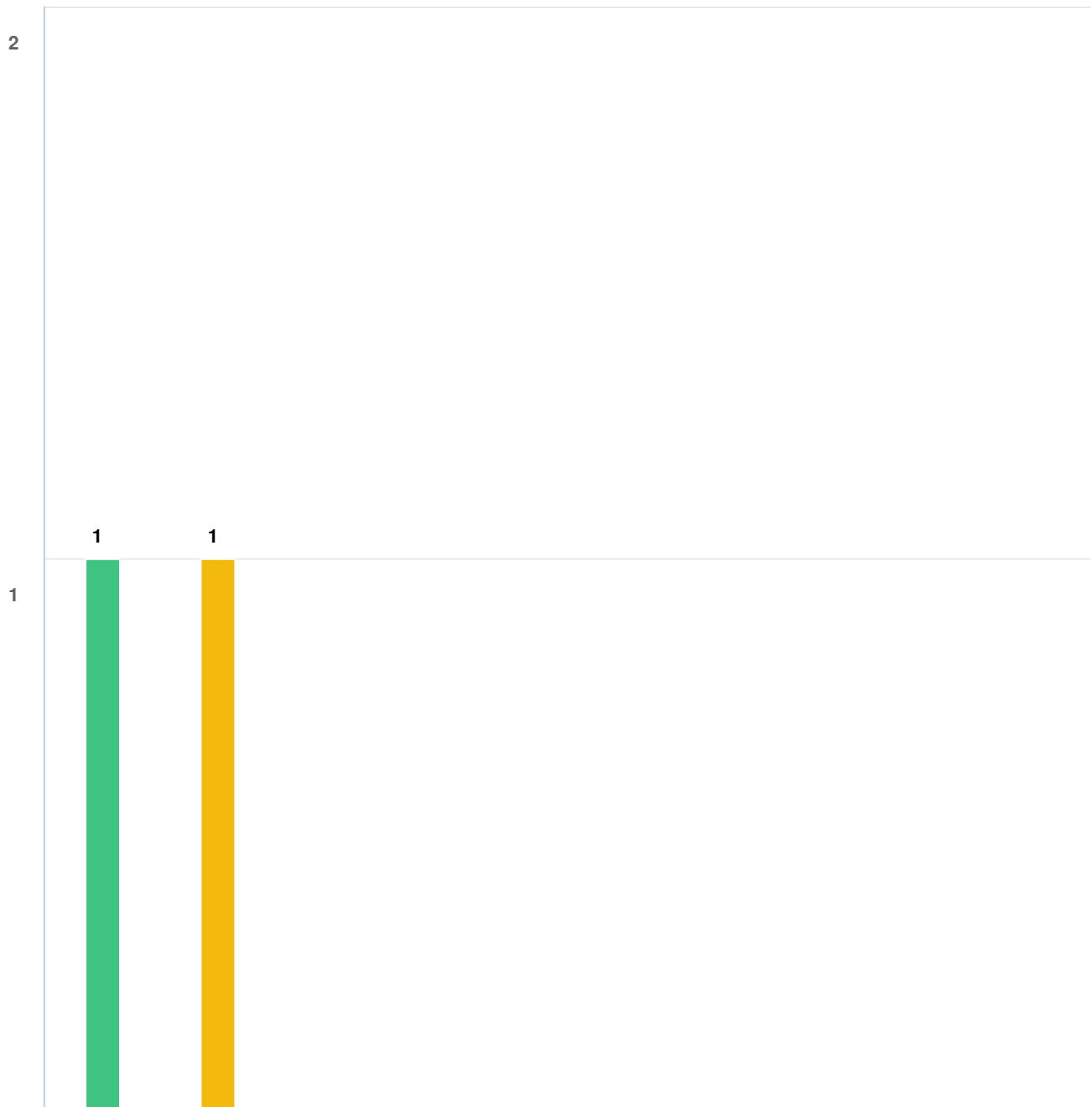
Question options

- para ir de compras ● para comer ● para socializar ● para disfrutar de la vida nocturna ● Para ver a la gente
- trabajo en el centro ● para hacer entregas o recogidas
- No voy al centro de Boulder tan a menudo (Si lo selecciona, por favor responda a la siguiente pregunta)
- Otro (campo abierto) ● para estudiar ● vivo en el centro ● manejo o tengo un negocio en el centro de Boulder
- transporte a otras personas al centro de Boulder (Uber/Lyft/transporte público)

Optional question (7 response(s), 0 skipped)

Question type: Checkbox Question

Q2 Si seleccionó 'No voy al centro de Boulder tan a menudo' antes, por favor, marque todas las razones por las que usted no v...



Question options

- falta de eventos que me interesen (a mí y/o a mi familia)
- no me siento bienvenido
- dificultad de movilidad, acceso o estacionamiento
- falta de restaurantes y tiendas asequibles
- falta de tiendas o restaurantes que me gusten
- falta de espacios para niños
- me preocupa la seguridad
- me preocupa la salud pública
- Otro – por favor descríballo:

Optional question (1 response(s), 6 skipped)

Question type: Checkbox Question

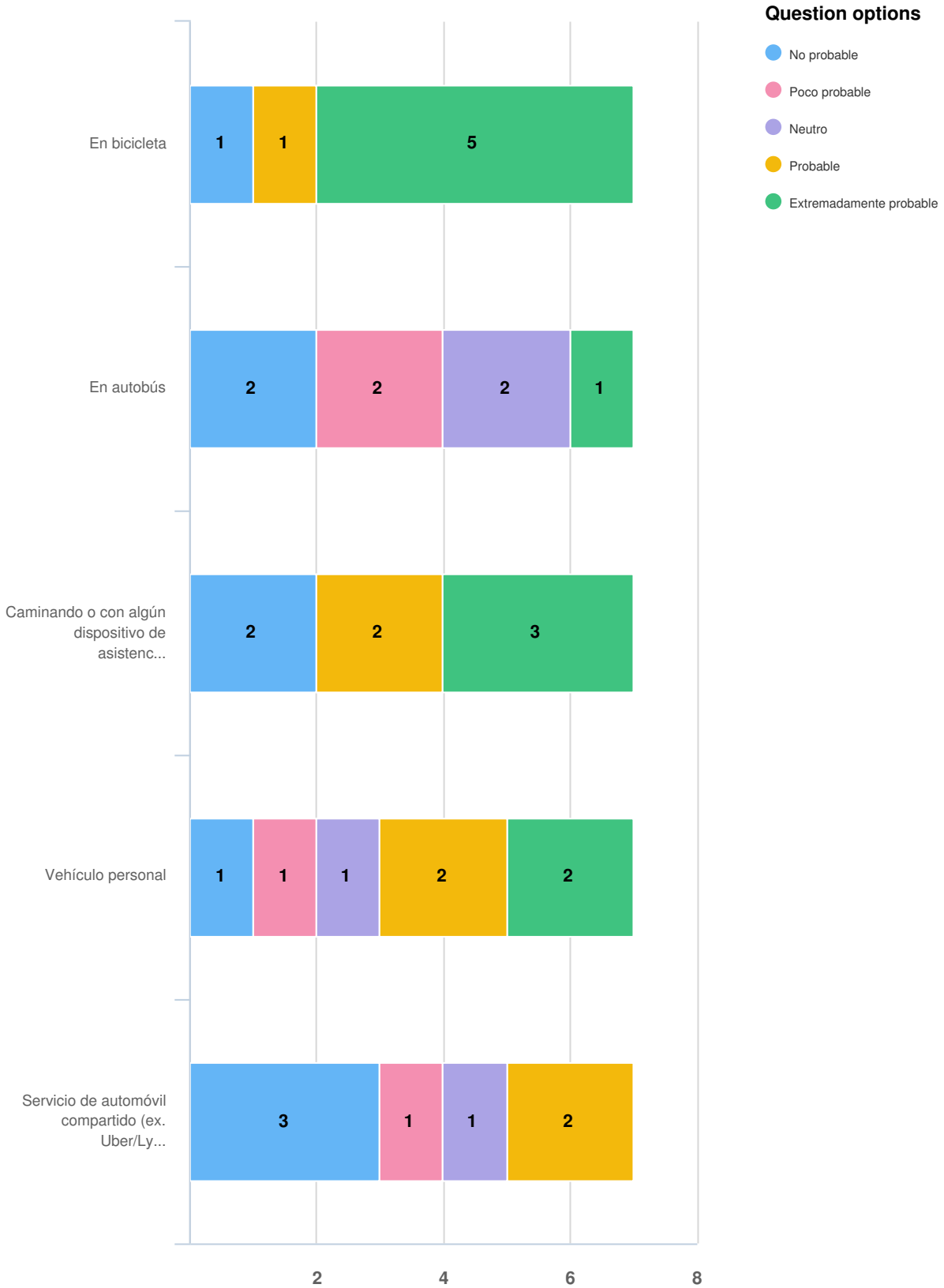
Q3 ¿Qué factores influyen en su decisión de pasar tiempo de ocio en el centro de Boulder? Por favor, clasifique cada factor de...

OPTIONS	AVG. RANK
Accesibilidad o facilidad para caminar y desplazarse por el centro	2.57
Oferta de restaurantes y tiendas	3.14
Facilidad para estacionarse o asegurar mi bicicleta o automóvil	3.71
Experiencia sensorial (observar a las personas, la naturaleza, arte, aspecto y cómo se siente el lugar)	3.71
Vida nocturna, oferta de entretenimiento, eventos	4.71
Condiciones climáticas	4.86
Sentimiento de seguridad personal	5.29

Optional question (7 response(s), 0 skipped)

Question type: Ranking Question

Q4 Cuando el clima sea agradable,  Qu  probabilidad hay de que usted utilice los siguientes modos de transporte para llegar al centro?



Optional question (7 response(s), 0 skipped)
Question type: Likert Question

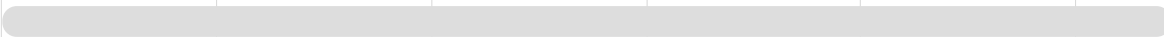
Q4 Cuando el clima sea agradable, ¿Qué probabilidad hay de que usted utilice los siguientes modos de transporte para llegar al centro?

En bicicleta

No probable : 1



Poco probable : 0



Neutro : 0



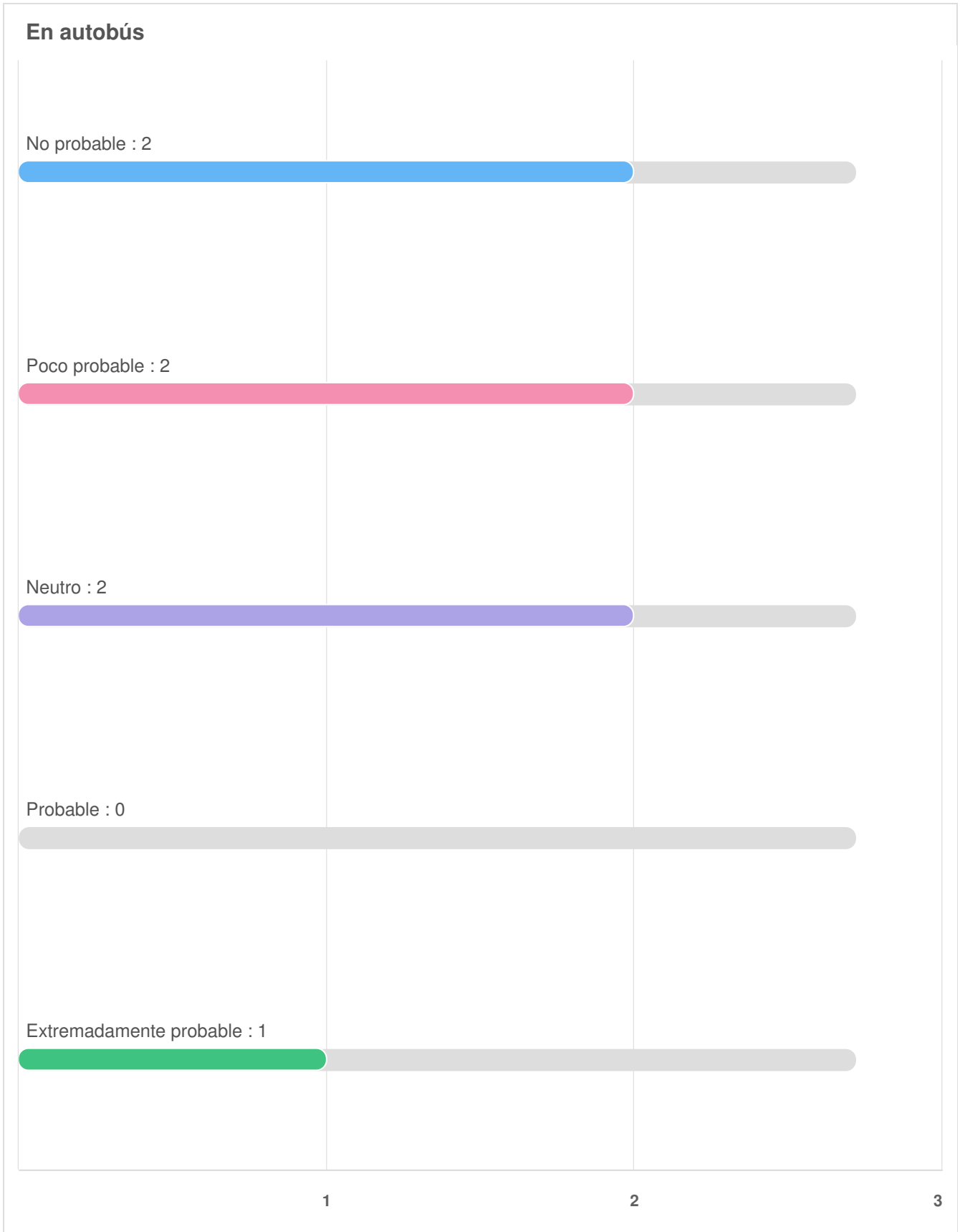
Probable : 1

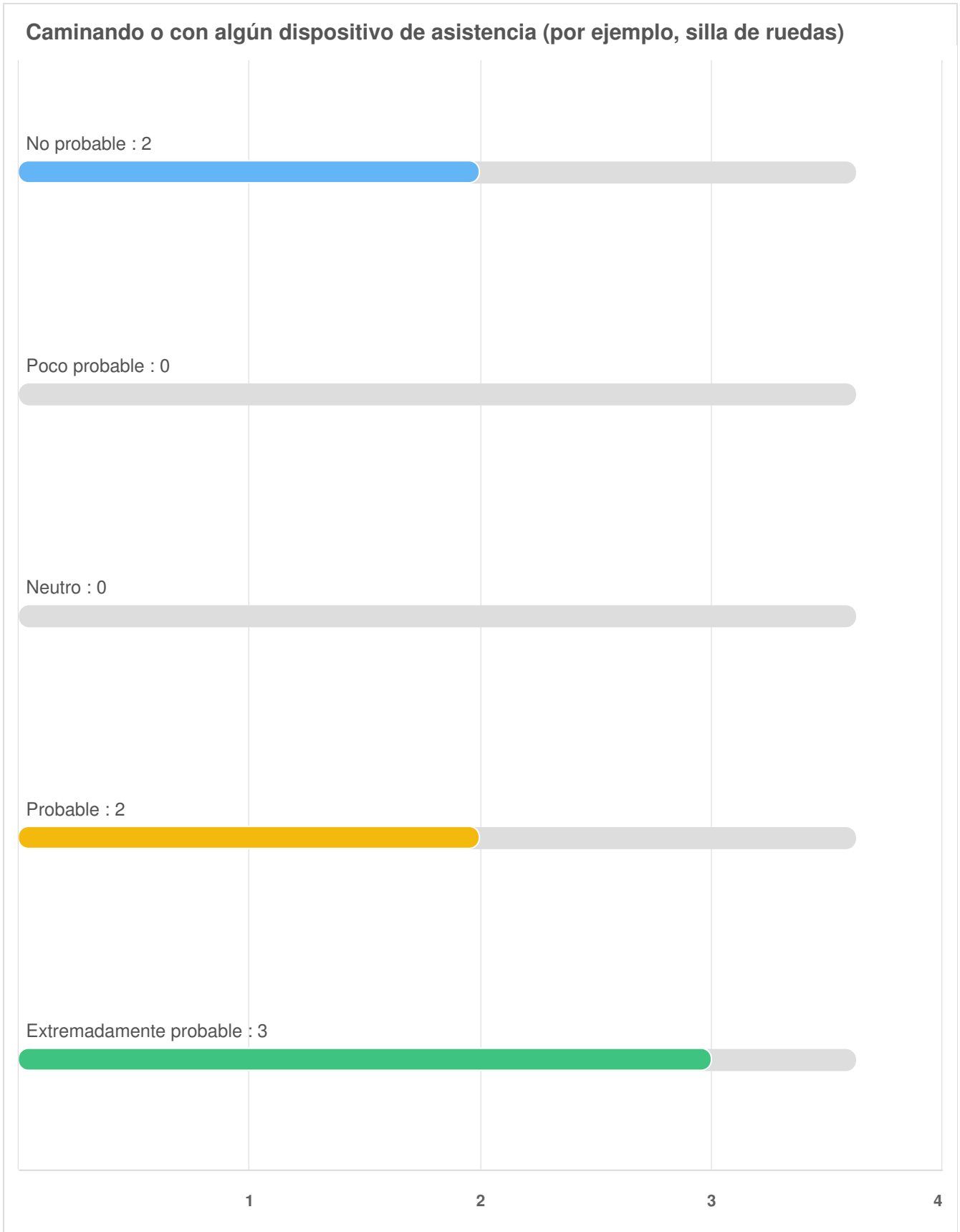


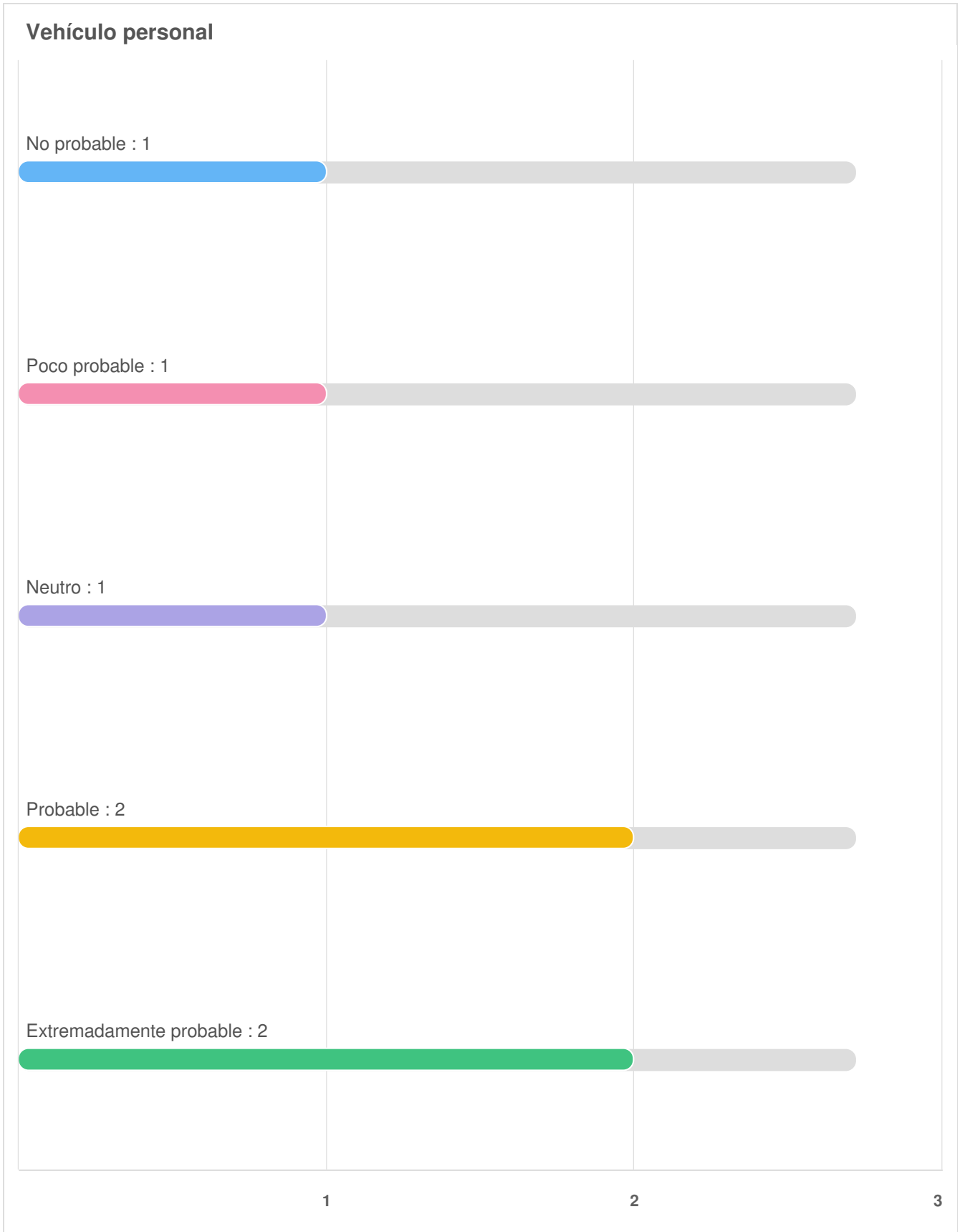
Extremadamente probable : 5

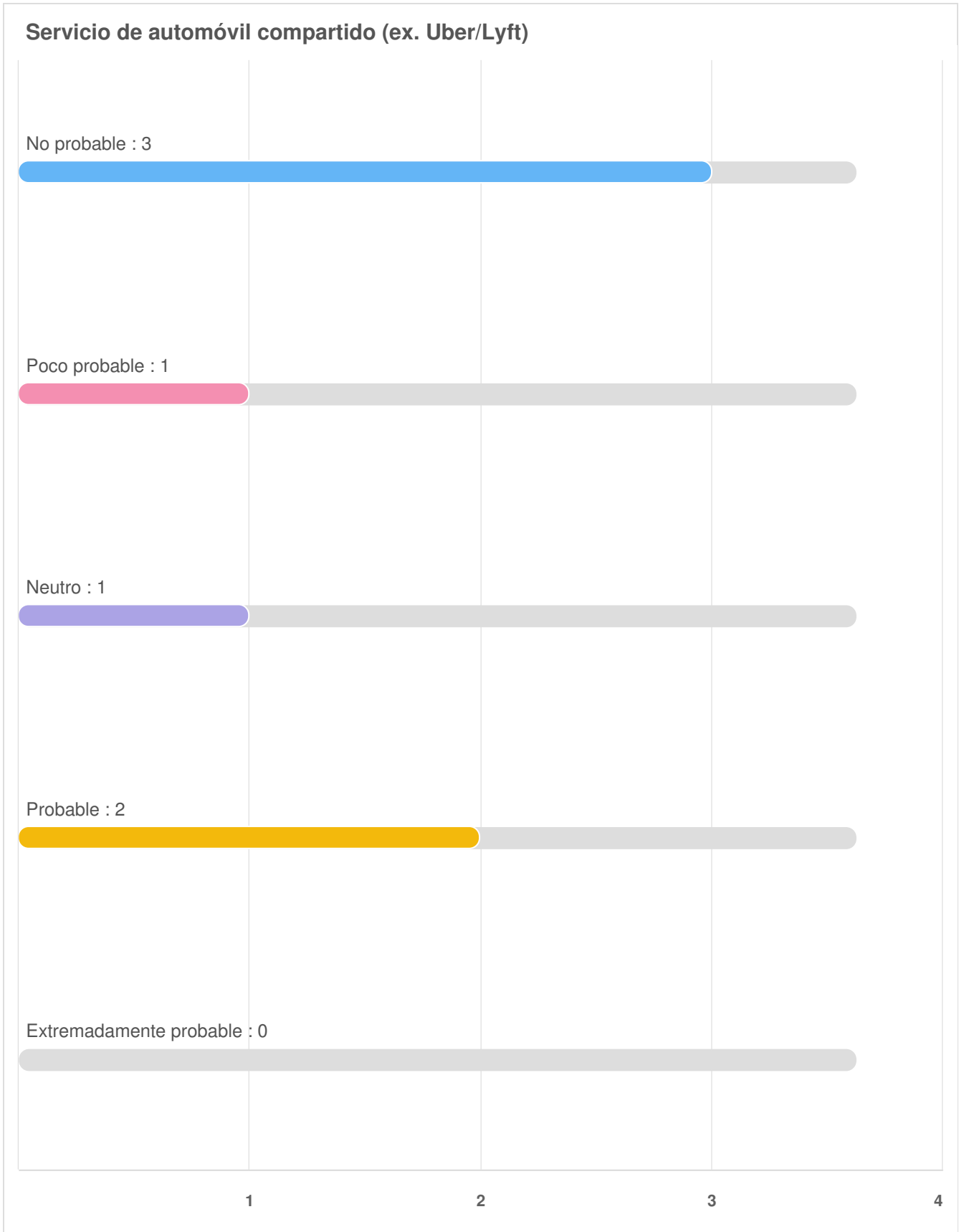


1 2 3 4 5 6

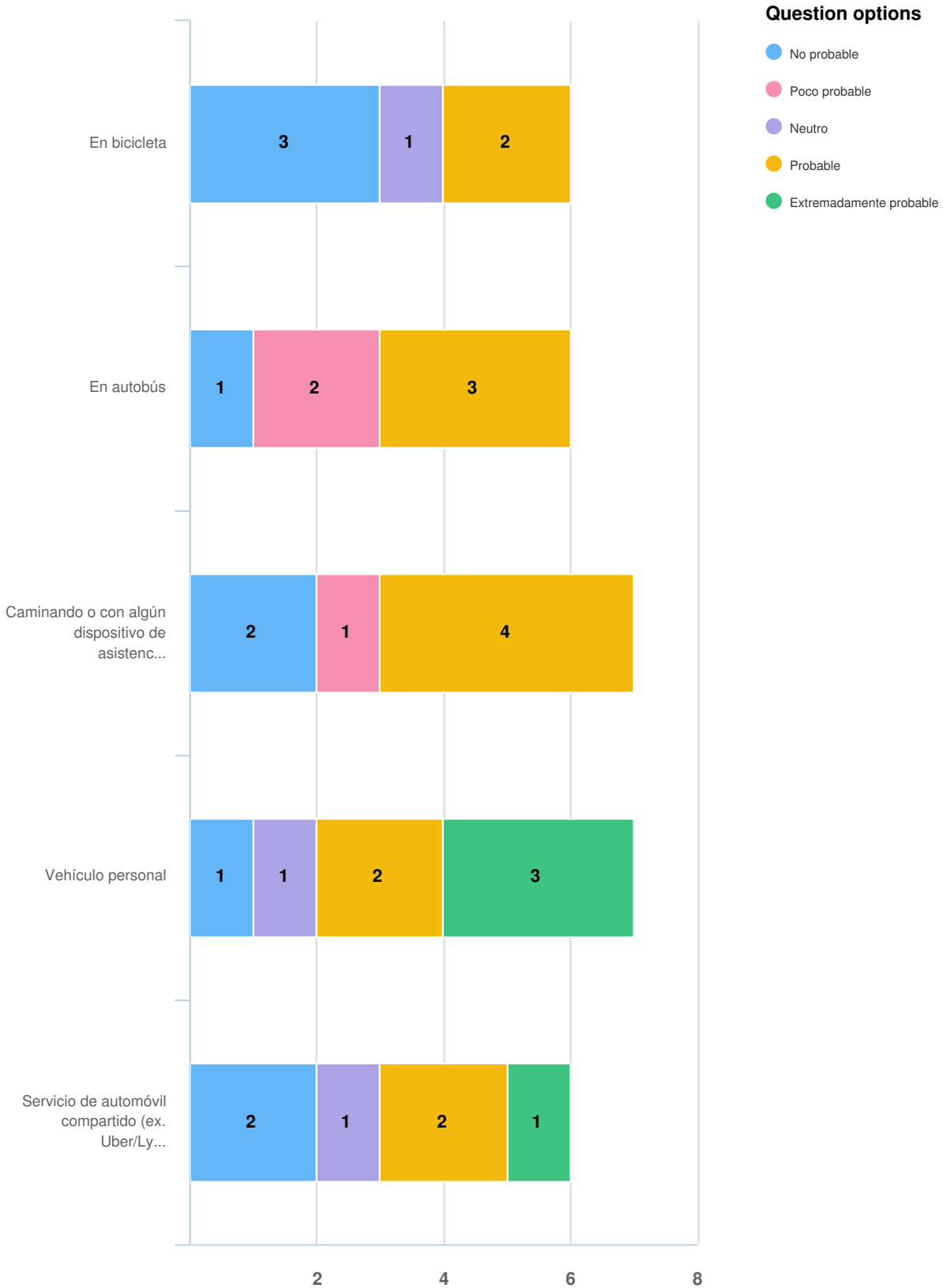








Q5 Cuando hay inclemencias del tiempo (fr o extremo, nieve, fuertes lluvias, fuertes vientos),  Qu  probabilidad hay de que utilice los siguientes modos de transporte para llegar al centro?

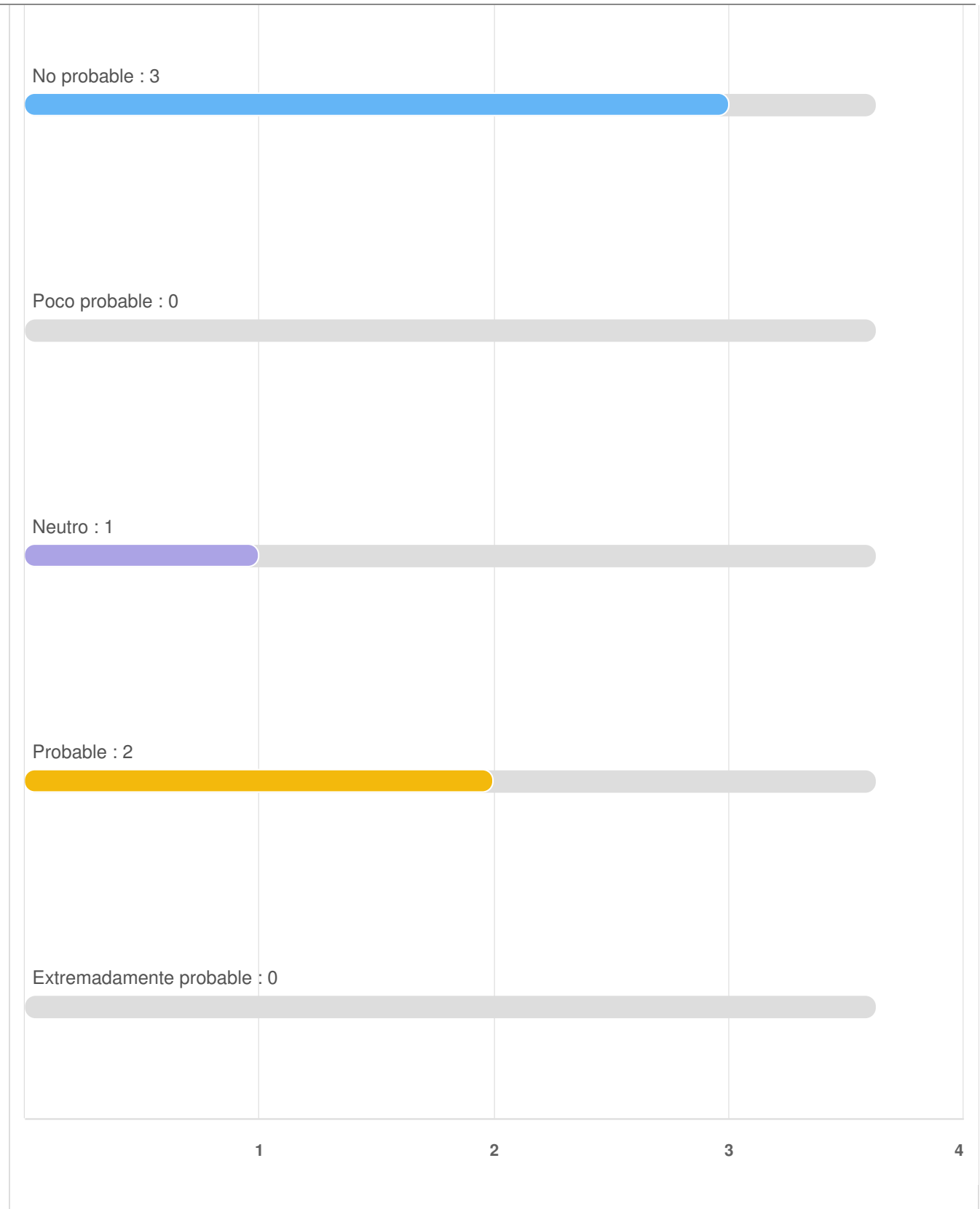


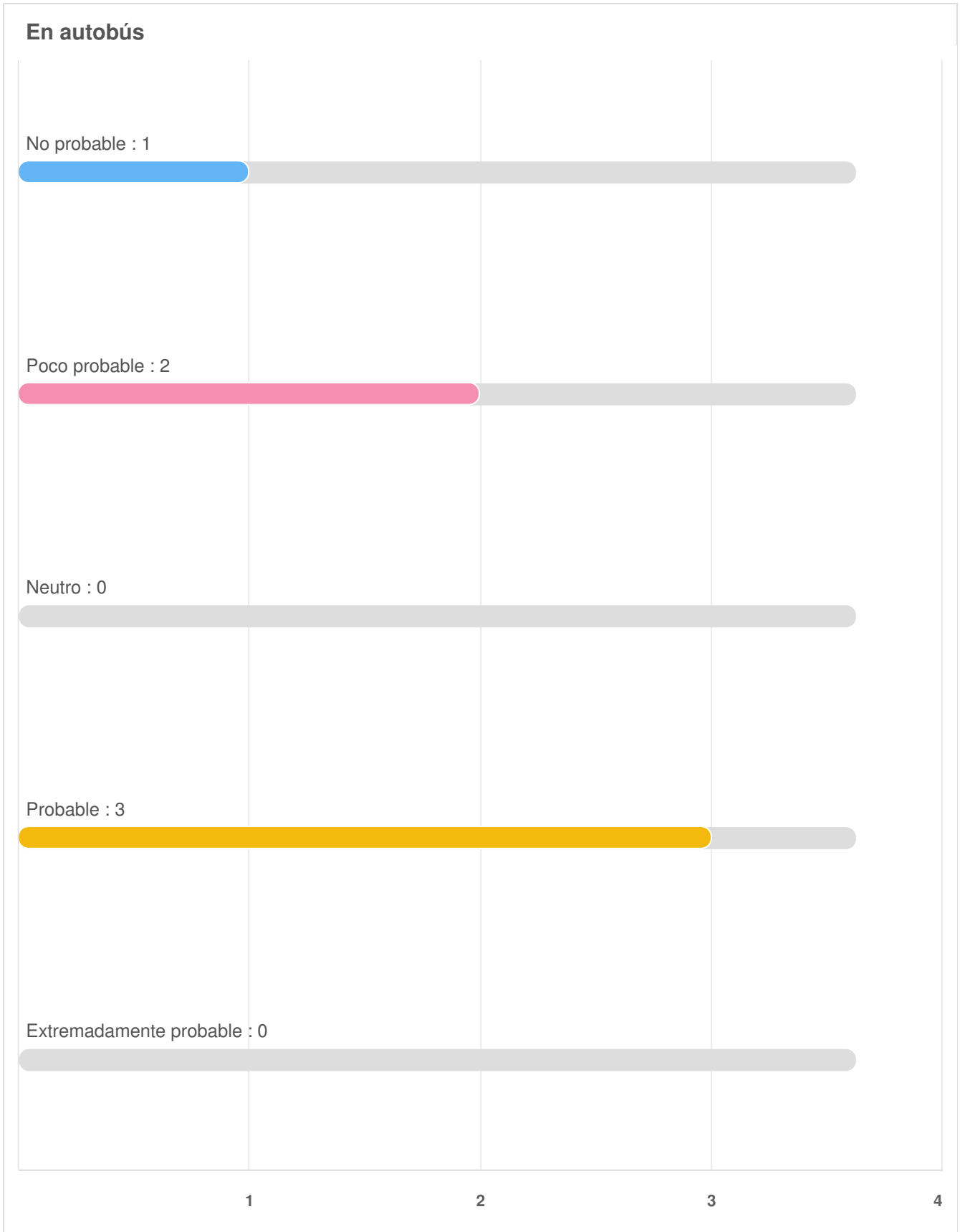
Optional question (7 response(s), 0 skipped)

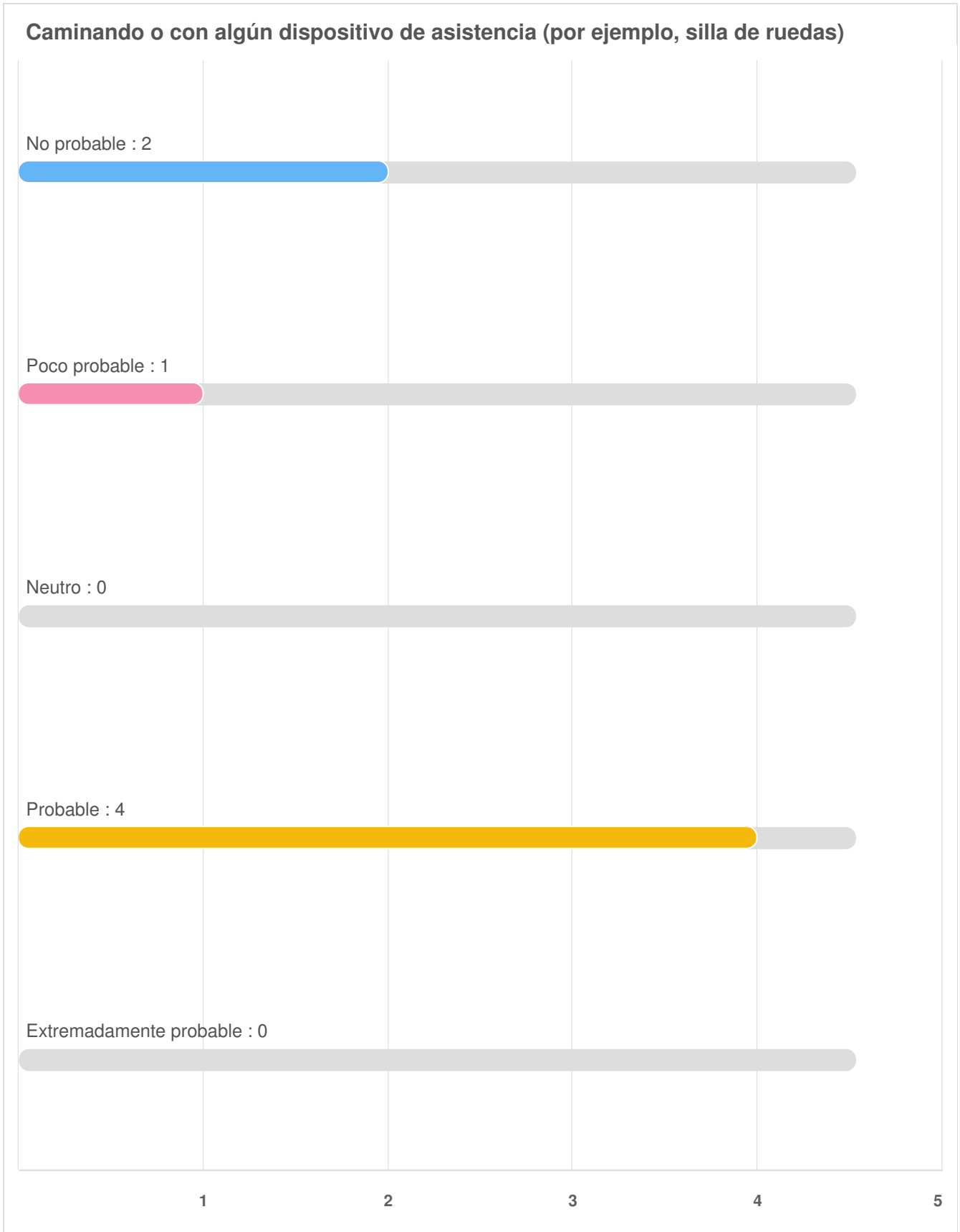
Question type: Likert Question

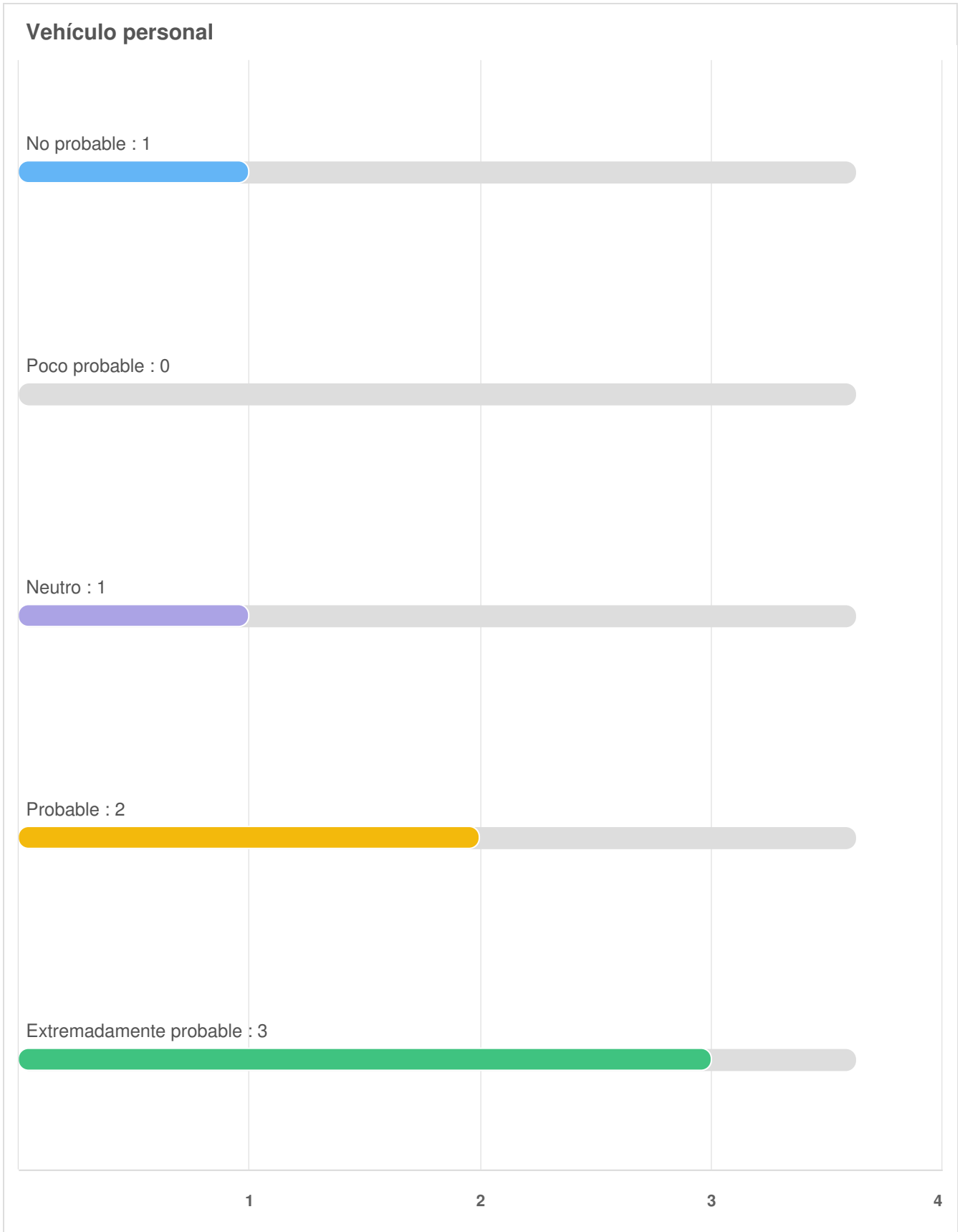
Q5 | Cuando hay inclemencias del tiempo (frío extremo, nieve, fuertes lluvias, fuertes vientos), ¿Qué probabilidad hay de que utilice los siguientes modos de transporte para llegar al centro?

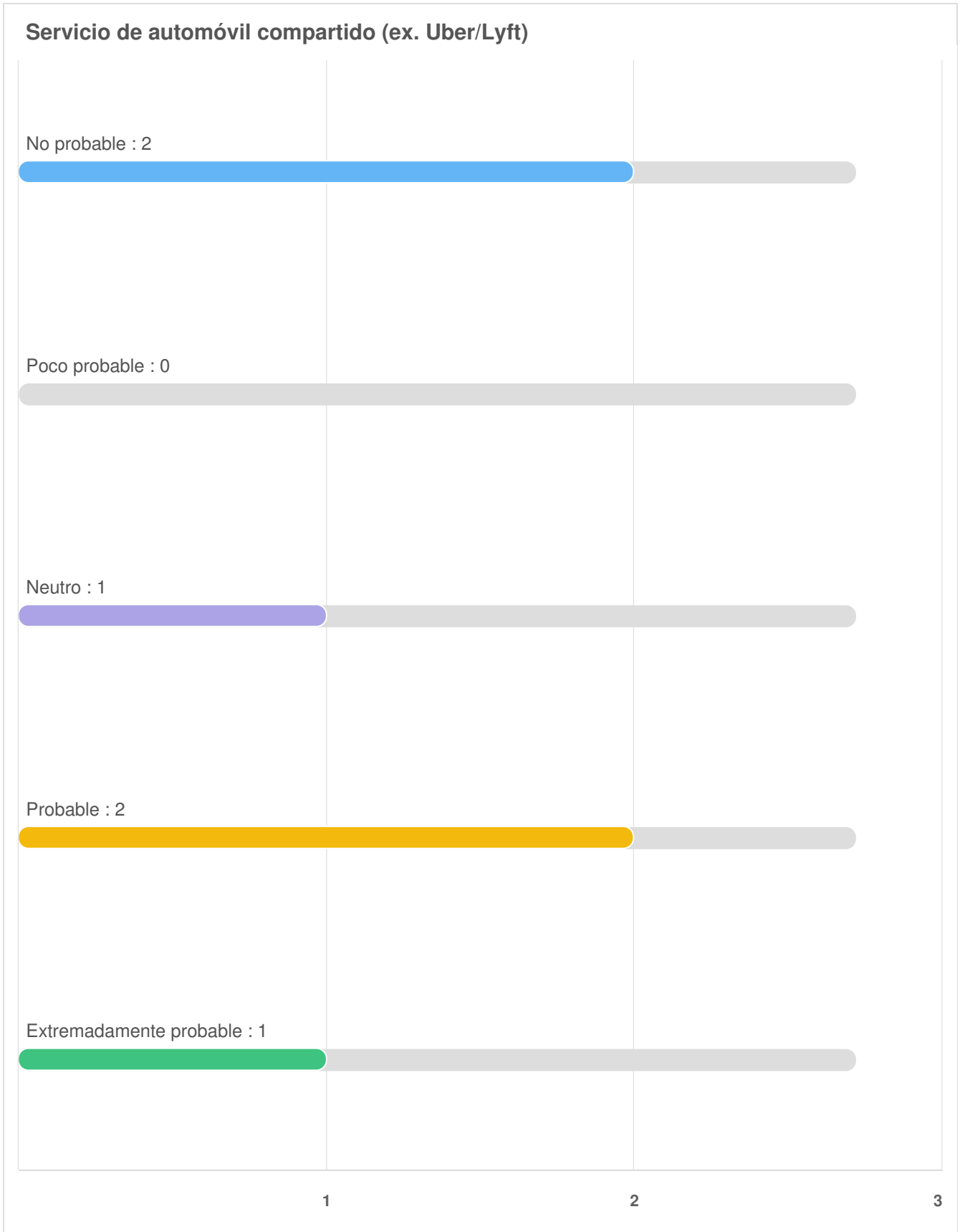
En bicicleta



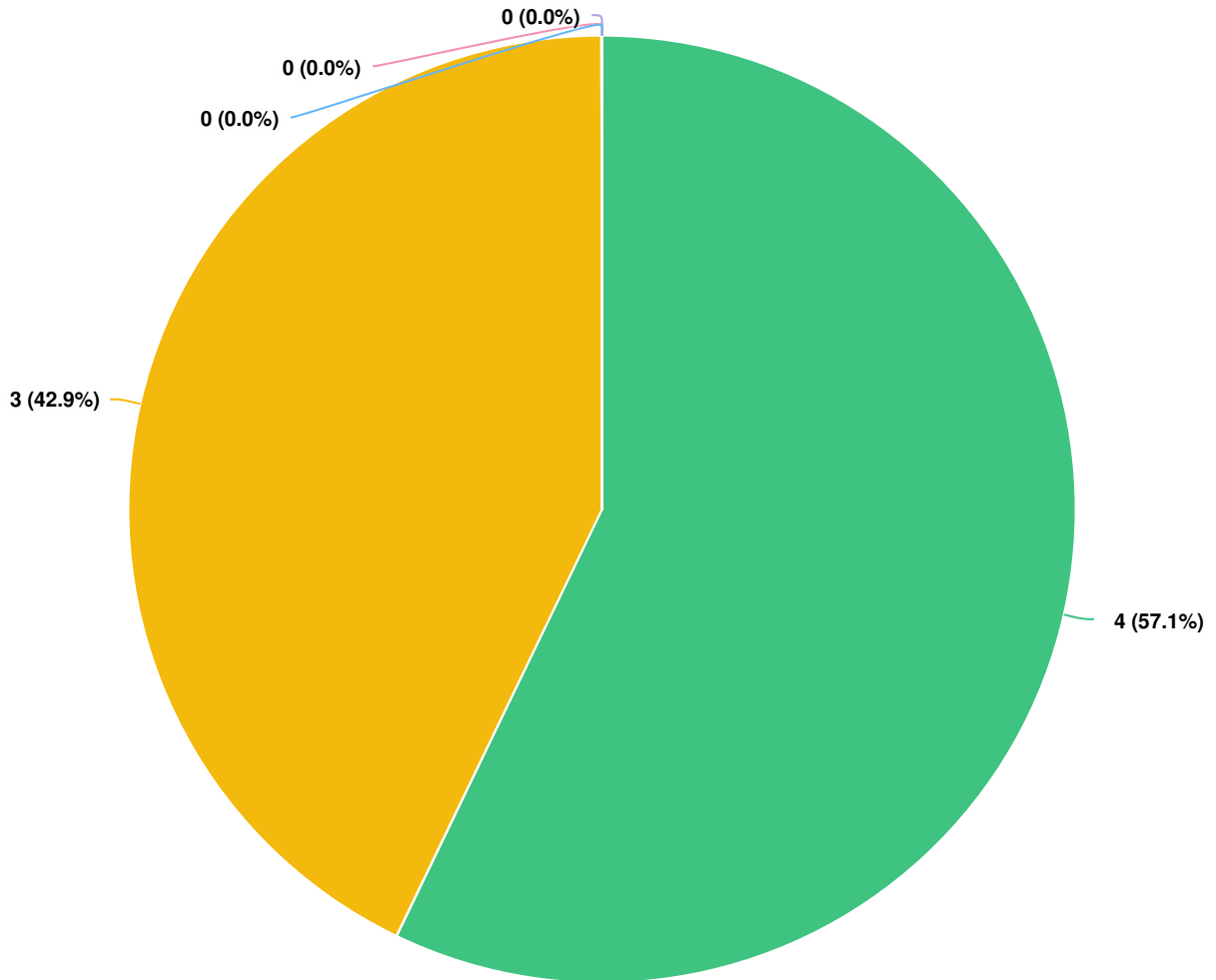








Q6 Durante la pandemia, desde la primavera de 2020 hasta el otoño de 2022, west Pearl Street desde 9th Street hasta 11th Street estuvo cerrada a los vehículos para dejar espacio para comer al aire libre, espacios para peatones, reuniones sociales y pr...



Question options

- 1 - Disminuyó significativamente
- 2 - Disminuyó algo
- 3 - No cambió
- 4 - Aumentó algo
- 5 - Aumentó significativamente

Optional question (7 response(s), 0 skipped)

Question type: Radio Button Question

Q7 Cada persona puede tener prioridades diferentes para las calles del centro. ¿En qué orden cree que la ciudad debería priorizar los intereses de la comunidad para las calles del centro como espacio público? (1- más importante, 8 - menos importante)

OPTIONS	AVG. RANK
Proporcionar espacios públicos agradables adicionales para reuniones y cenas/entretenimiento/ocio al aire libre	1.43
Maximizar el acceso para todas las personas independientemente de su capacidad y modo (por ejemplo, personas con discapacidades, peatones, ciclistas, usuarios del transporte público, etc.)	3.00
Usar de los bordillos para fines no vehiculares (por ejemplo, paisajismo, estacionamiento de bicicletas/scooters, extensiones de bordillos y aceras, espacios para cenar al aire libre y otros)	3.17
Preservar el disfrute tranquilo/la calidad de vida/el carácter de los vecindarios circundantes	4.83
Maximizar el potencial de vitalidad económica para áreas infrautilizadas o con baja inversión	5.00
Minimizar la congestión del tráfico	5.33
Preservar el acceso de vehículos en la acera a las empresas (por ejemplo, estacionamiento en la calle/recogida/devolución de pasajeros/entregas/carga)	6.33
Mejorar las conexiones críticas entre el centro y los destinos cercanos, como University Hill	6.83

Optional question (7 response(s), 0 skipped)

Question type: Ranking Question

Q8 Por favor, comparta cualquier idea adicional que sea importante para usted (opcional)

Anonymous

1/13/2023 02:15 PM

As written, Question 6 is nearly impossible for a layperson to understand/answer.

Anonymous

1/16/2023 11:58 AM

That open space was really great and relaxing as opposed to loud cars cruising past and big vehicles in your face as you dine outdoors. Cars kill the atmosphere and fun.

Anonymous

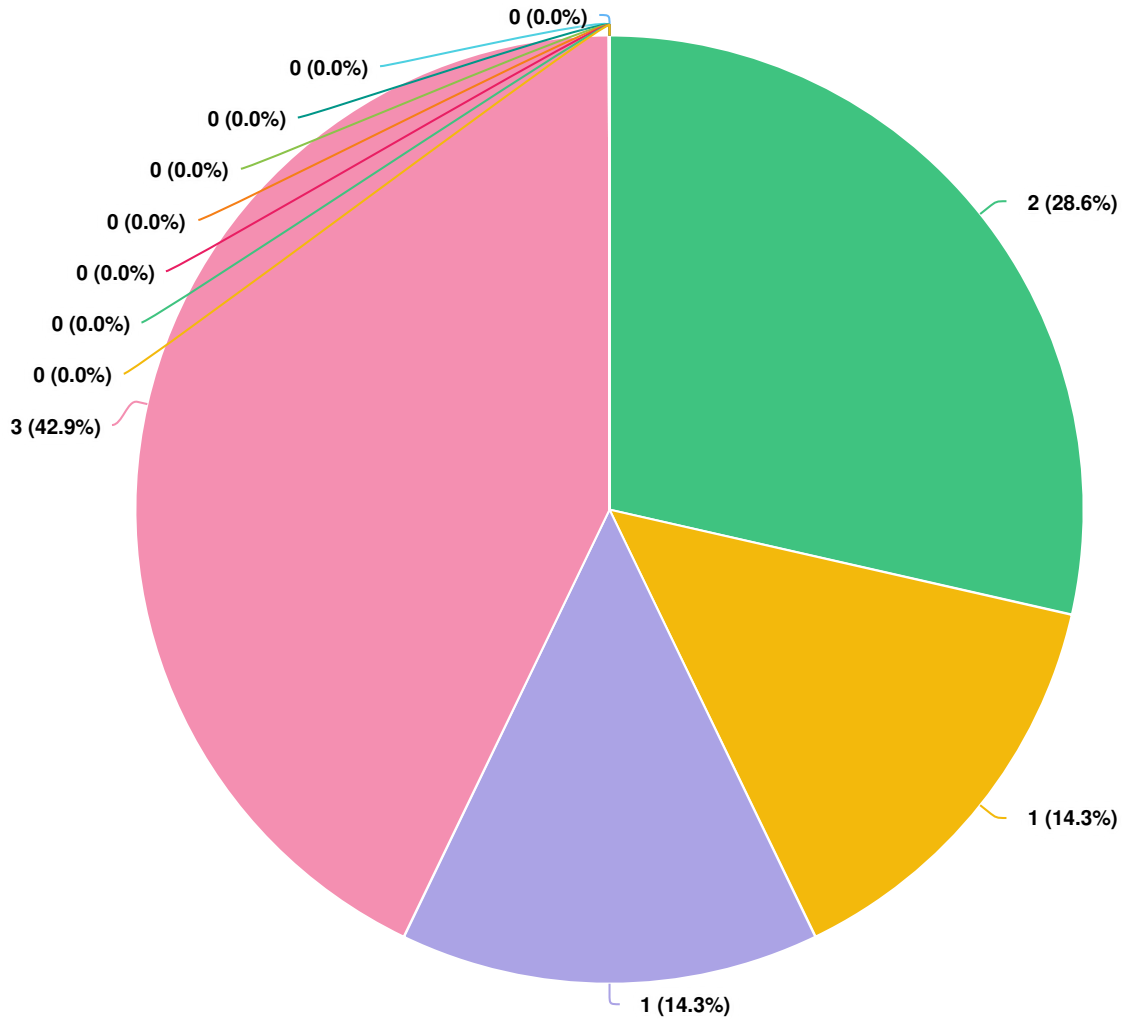
1/20/2023 06:08 AM

Diversificar eventos y negocios al alcance de todas las personas y de todos los presupuestos. Cultura de seguridad y buen trato

Optional question (3 response(s), 4 skipped)

Question type: Single Line Question

Q9 ¿En qué parte de la ciudad vives?

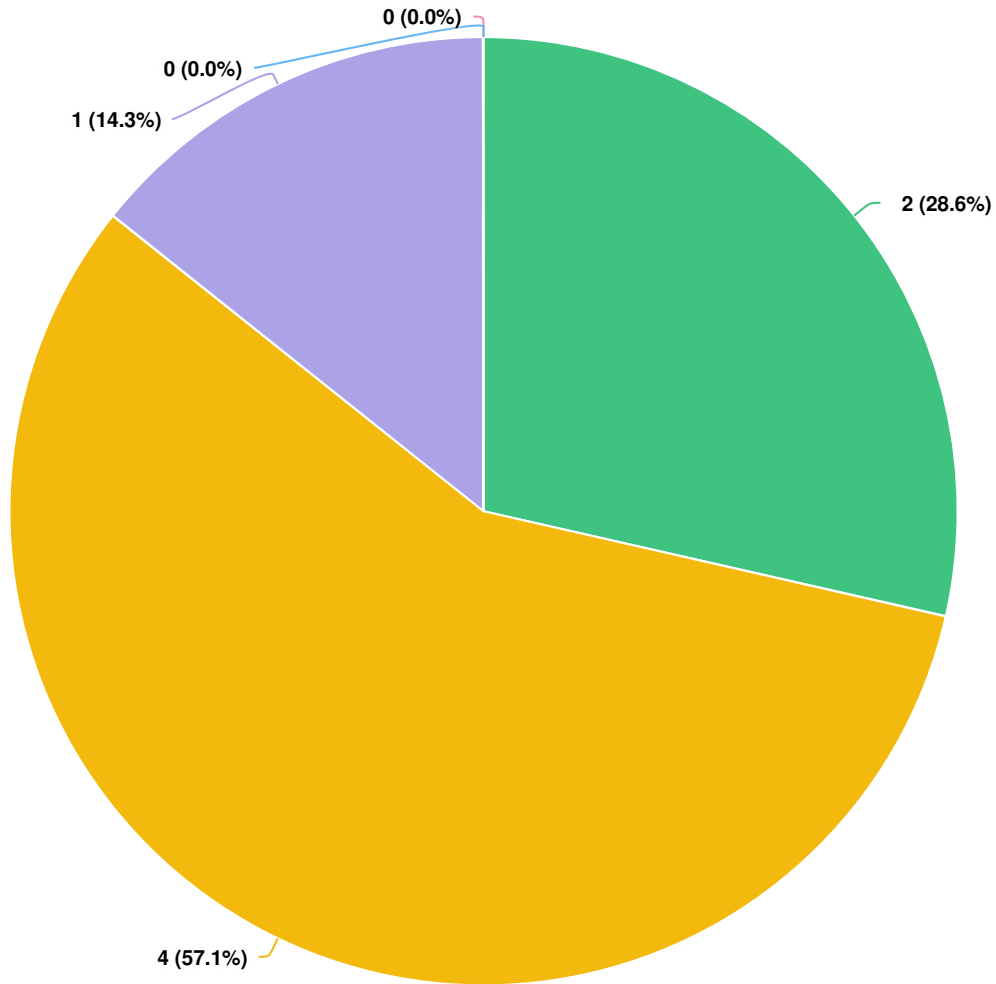


Question options

- No vivo en Boulder, pero la visito frecuentemente
- No vivo en Boulder, pero trabajo allí
- Universidad de Colorado
- Boulder del Sur
- Sudeste de Boulder
- Palo Park
- Este de Boulder
- Centro de Boulder - University Hill (Sur de Arapahoe)
- Norte de Boulder
- Gunbarrel
- Crossroads
- Centro de Boulder - Norte de Arapahoe

Optional question (7 response(s), 0 skipped)
Question type: Dropdown Question

Q10 ¿Usted renta o es dueño de su casa?



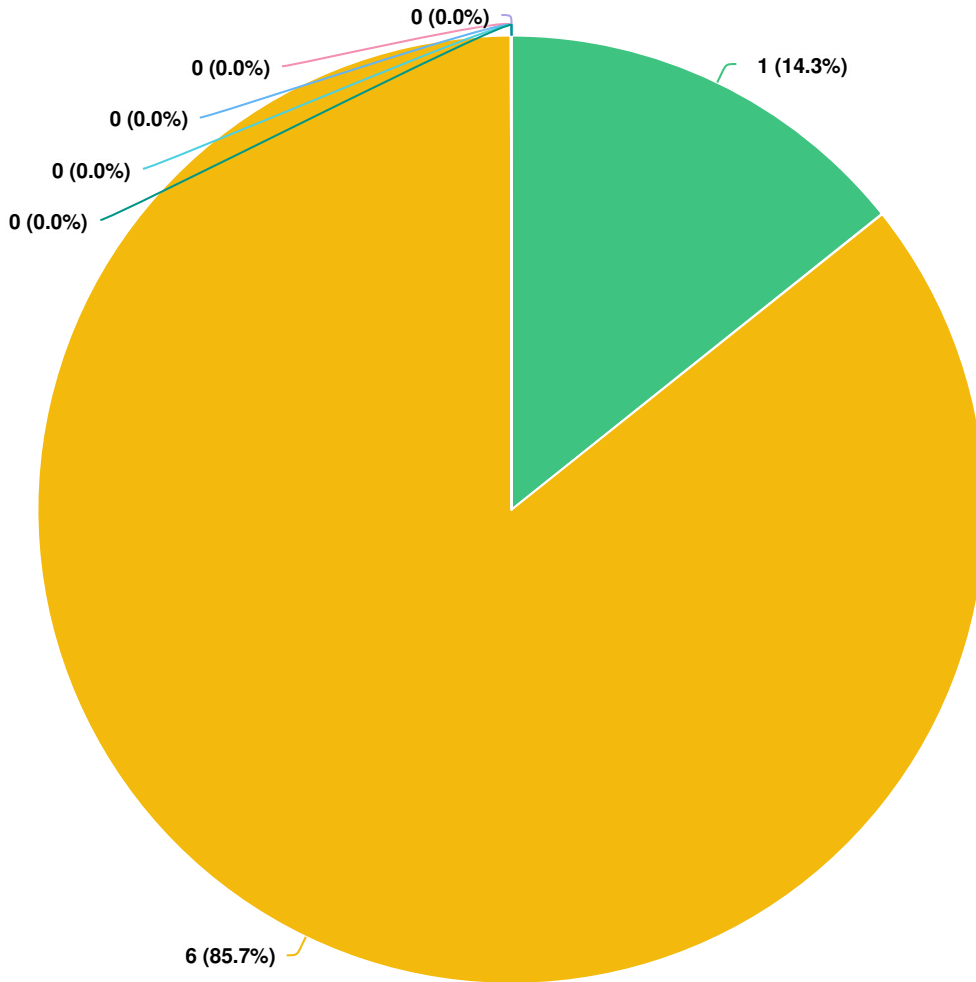
Question options

- Prefiero no decir nada ahora
- No tengo una residencia estable ahora
- Otro
- Soy dueño
- Rento

Optional question (7 response(s), 0 skipped)

Question type: Dropdown Question

Q11 ¿En cuál rango de edad se encuentra?

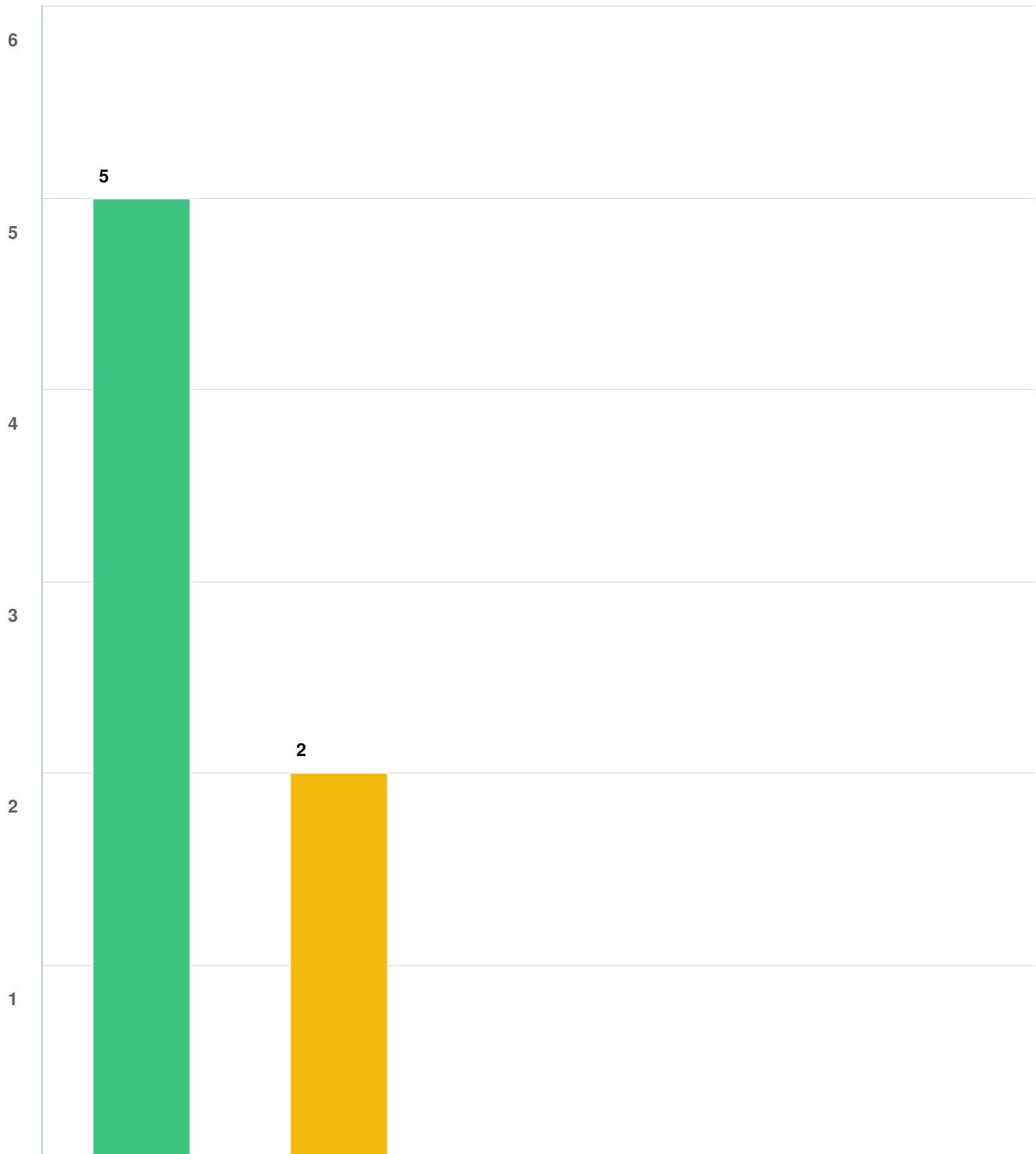


Question options

- Prefiero no decir
- 65 años o más
- 55 a 64 años
- 25 a 34 años
- Menor de 18 años
- 35 a 54 años
- 18 a 24 años

Optional question (7 response(s), 0 skipped)
Question type: Dropdown Question

Q12 ¿Cuál es su género?



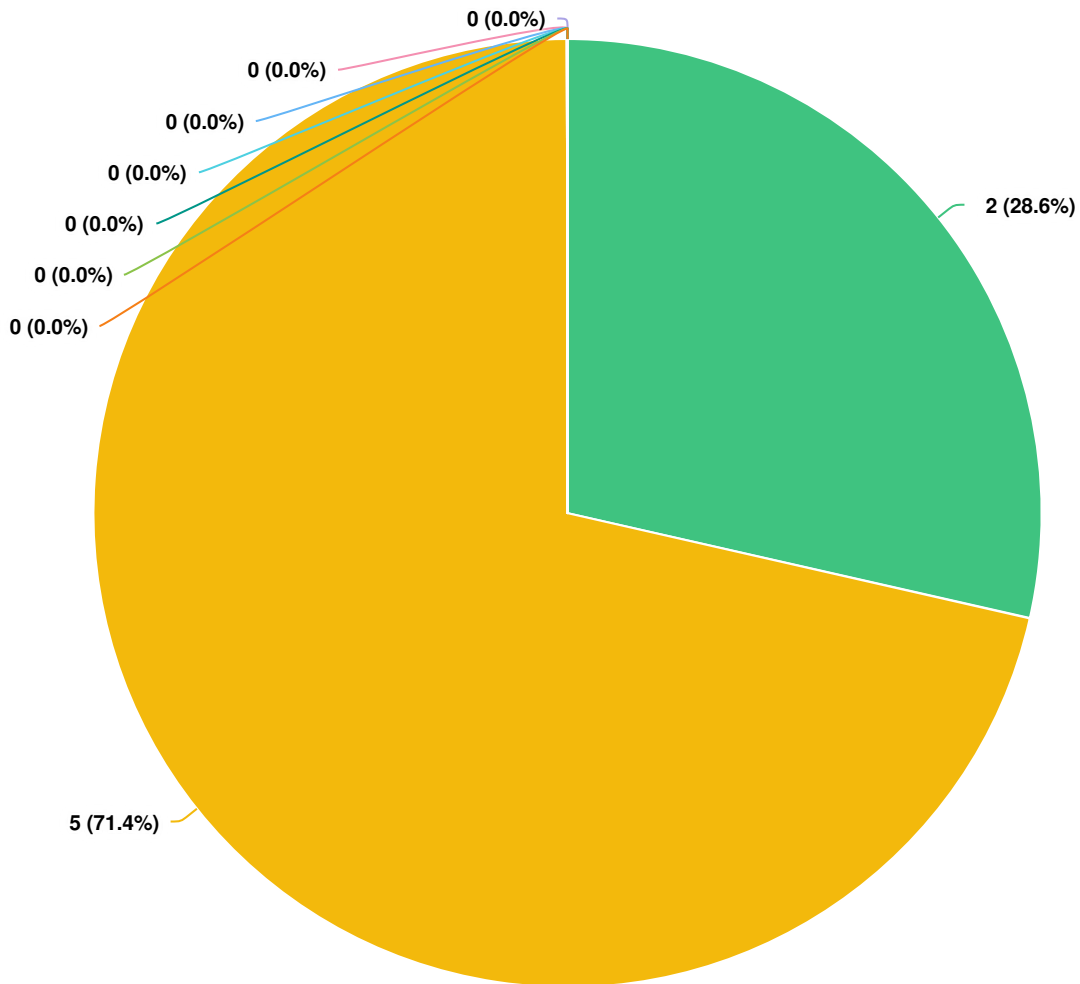
Question options

- Prefiero describirlo:
- Prefiero no responder
- No binario
- Hombre
- Mujer

Optional question (7 response(s), 0 skipped)

Question type: Checkbox Question

Q13 ¿Con cuál raza o etnicidad se identifica más?

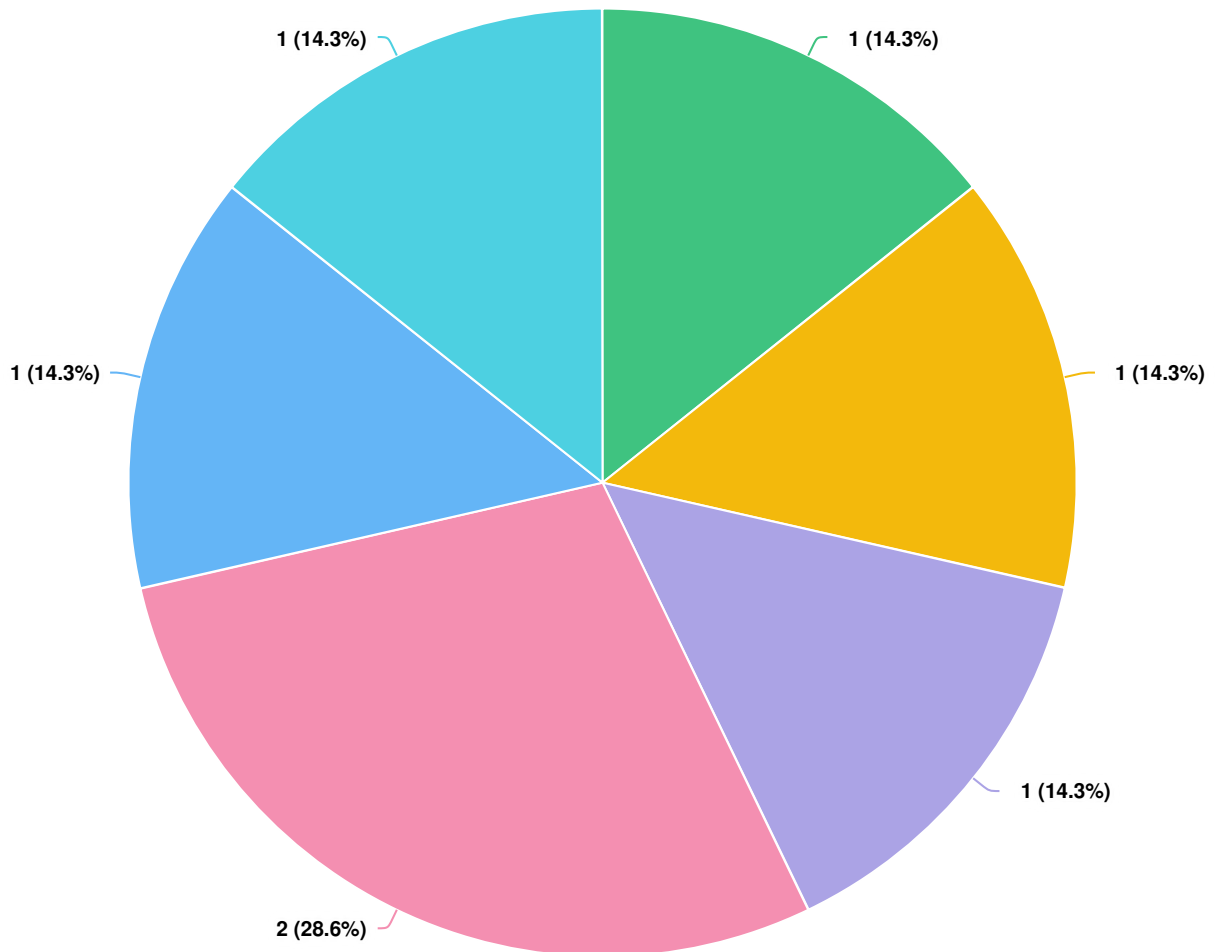


Question options

- Otro – por favor describalo:
 ● Prefiero no decir
 ● Dos o más razas
 ● Nativo/a de Hawái o de otra isla del Pacífico
- Indígena Americano o Nativo de Alaska
 ● Negro/a o Africano/a-Americano/a
 ● Asiático/a
 ● Hispano/a o Latino/a
- Blanco/a

Optional question (7 response(s), 0 skipped)
 Question type: Dropdown Question

Q14 ¿Cómo describiría el ingreso anual de su hogar?



Question options

- Prefiero no decir
- \$150,000 por año o más
- \$100,000 a \$149,999 por año
- \$50,000 a \$99,999 por año
- \$25,000 a \$49,999 por año
- Menos de \$25,000 por año

Optional question (7 response(s), 0 skipped)
Question type: Dropdown Question

Engagement Report - Appendix D

If you selected 'I do not go downtown at all or often,' please check all of the reasons below that apply. If this question does not apply to you, please leave blank and skip to the next question. (Other (please specify))

Lack of restaurants that have available seating on a walk in basis.

I am my husband's caregiver and he is home-bound

I am trying to reduce my driving, so usually bike. In the winter I drive a lot less, stay home more.

The amount of homeless people and panhandlers.

We stopped going downtown when West Pearl was opened back up to cars.

Covid + It feels like a mall. It's a bummer it opened back up to traffic.

Fear of my family and I getting killed by a transient and fear of health impacts from breathing in meth

It is hard to walk when there are events and a lot of vendors in front of the court. Stores close too early. Only Pearl Street has light and movement.

Public transportation should be easier to get.

There is nothing to there but eat and shop

Takes forever to find parking.

There is almost nothing of interest downtown. Parking is expensive and if one gets a ticket its really expensive. Downtown is primarily set up for tourists.

Lack of parking is a problem, safety (beggars) is a huge issue, and the public bathrooms are an embarrassment to our city. Parking is a safety issue for us too. I have a child with a disability and finding/paying for parking is a nightmare, even for handicap parking.

I go downtown rarely these days. I bike everywhere, and even though I have a \$40 Walmart special, if it's stolen I'm in trouble. It's just not worth the risk of losing my bike to lock it downtown on any regular basis. I do still stop by the library... and I work with someone who has an office downtown. (But for that I can lock my bike in the office building.)

In the past I would normally ride my bike to visit downtown but now there is runaway, bike theft with no consequences to the thieves

Parking

Dogs are not allowed, and I have a dog.

And the homeless problem makes it uncomfortable for this single woman in her seventies to walk anywhere without the added protection of my dog.

I rarely go downtown lately, mostly due to crowds and panhandling. If I do go, I park a few blocks away and walk in to take care of business, like attending a talk at the Boulder Book store or eating a ZoMama's or one of the other more affordable and convenient restaurants where a reservation is not needed. I used to go to the Boulder Library all the time but now limit those trips as well, mostly due to drug use. We have personally helped a few homeless individuals find housing so the issue is not homelessness, it is the transient, drug abusing population that seems to have taken over downtown. My daughter attends Boulder High and the situation on the creek behind the school is appalling. I don't bike on the Boulder Creek Path anymore.

I prefer to go downtown by bike but I don't feel safe on the bike paths especially after dark. When I go downtown (which is rare), I drive. It is sad that the infrastructure is not safe to utilize.

The downtown area is being ruined with all the transients hanging around and encampments. I also don't like paid parking...and if I bike, I'm concerned about my bike being stolen.

Downtown is no longer welcoming, and the spaces are often dirty and not esthetically appealing

Downtown Boulder seems hopelessly touristy to me. I make up that the high rent prices in Downtown Boulder make it almost impossible for small businesses to survive without catering to tourists. What draws me in is a business where the owner is often on the premises and has time for and interest in relating to and getting to know customers... as opposed to just selling. An example is Elfriede's Fine Fabrics at 2425 Canyon Blvd. (used to have a shop off Pearl St. but rent became too high). Going in that shop is like being in Europe for a little while, in the best possible sense.

Overpriced restaurants, parking is a joke, Needles and unrestricted drug use, DANGEROUS. I leave Boulder whenever possible. McGuckins is all that is left in this trashed town.

live further away, so just distance

Don't shop or eat out much any more as a senior

Too many drug addicts and needles.

It is no longer safe or pleasant to visit downtown Boulder. Too many illegal campers, filth. I used to go down town very often for dining shopping, but no more

I can no longer use my downtown spaces/parks/playgrounds safely, especially with my young children.

Homeless population is scary

I used to regularly go downtown but haven't for the last four years for the reasons I stated. Downtown is geared towards tourists and the wealthy and not towards the low income, seniors and disabled.

Encroachment by meth-heads - rude behavior, trash, smoking, open consumption of drugs

Too many parking people out there looking for reasons to give you a ticket on your car.

accessibility issues

Especially no parking

Difficulty getting into restaurants. Too crowded. Feels like downtown Boulder belongs to everyone but Boulderites.

The drugged out homeless camps are out of control and I will no longer go downtown nor spend money in Boulder. I got to Louisville instead.

Downtown Boulder has become dangerous and unappealing (biohazards everywhere: needles, human waste, trash). After being harassed several times we no longer go at all. We used to spend all our time (and money, shopping/eating locally) downtown.

I like to ride my bike in Boulder, for many reasons: enjoyment, environmental, exercise, ease of getting around... and I know if I lock my bike outside anywhere there's a good chance it'll be stolen.

This happens in broad daylight now, people are sawing u-locks off bikes.

I don't have a lot of money and wouldn't be able to replace my bike if stolen.

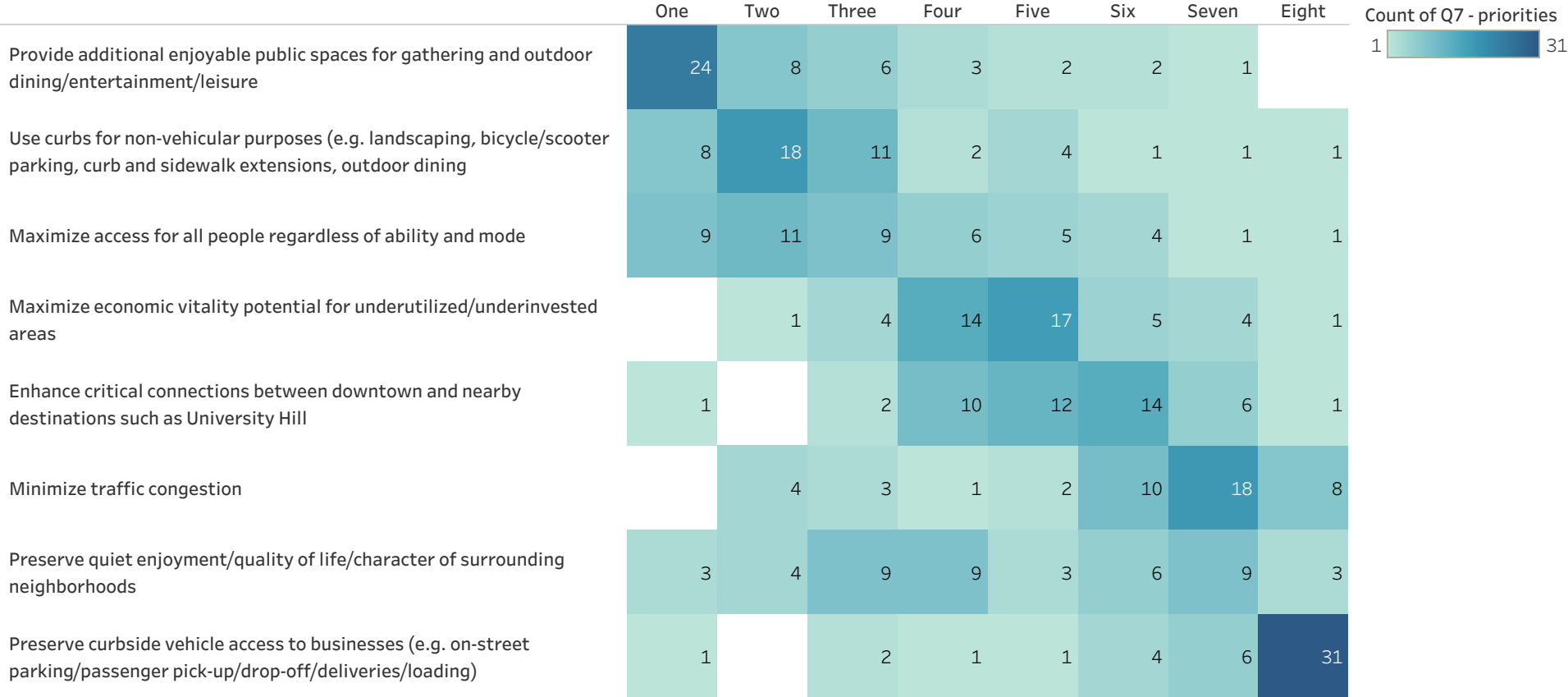
all the stores are too expensive (the restaurants are necessarily). All boutique shops, which I have no interest in visiting.

Haven't been eating out during covid. Hope to go downtown more often going forward.

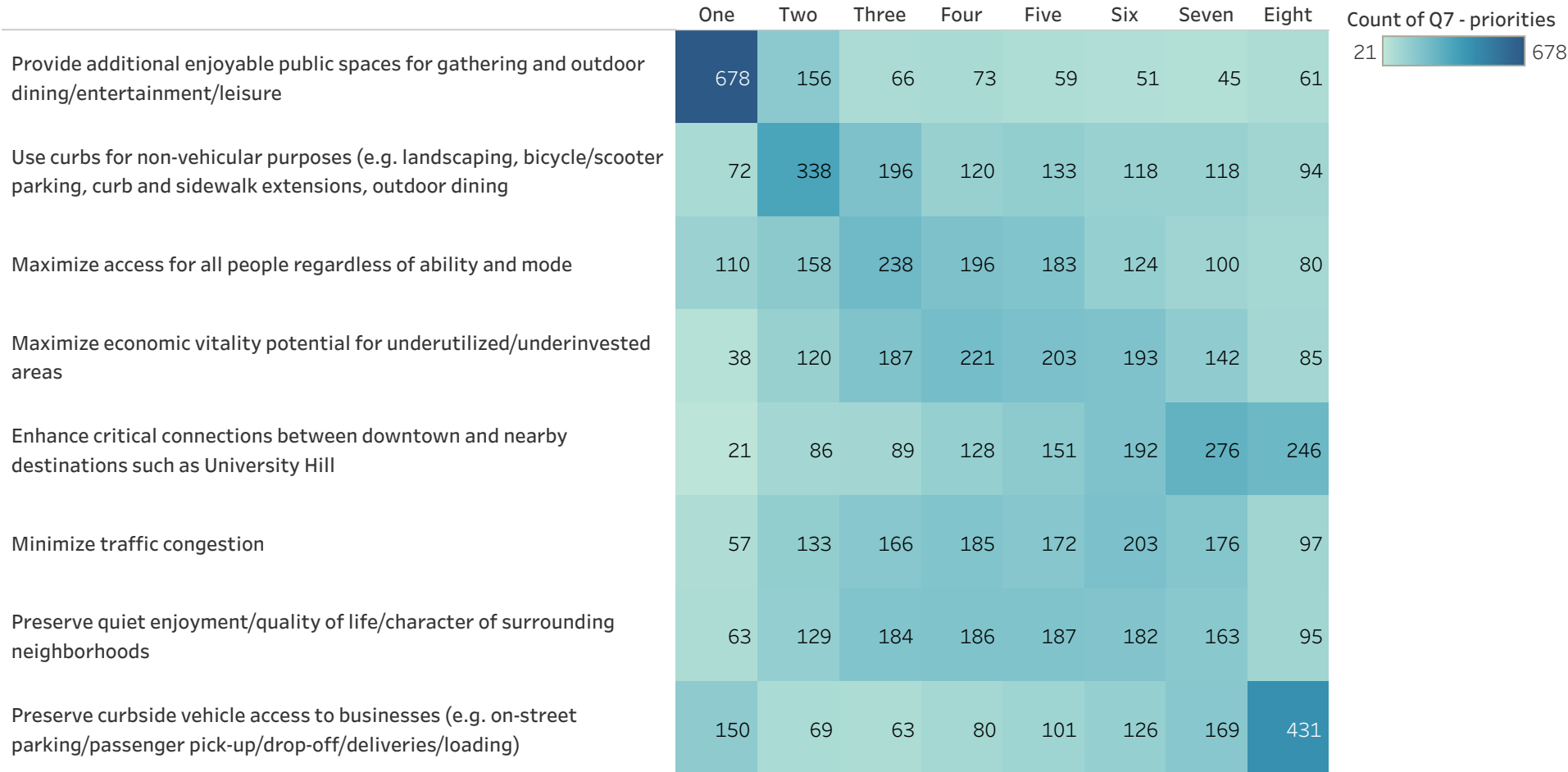
Total Responses for Question 7



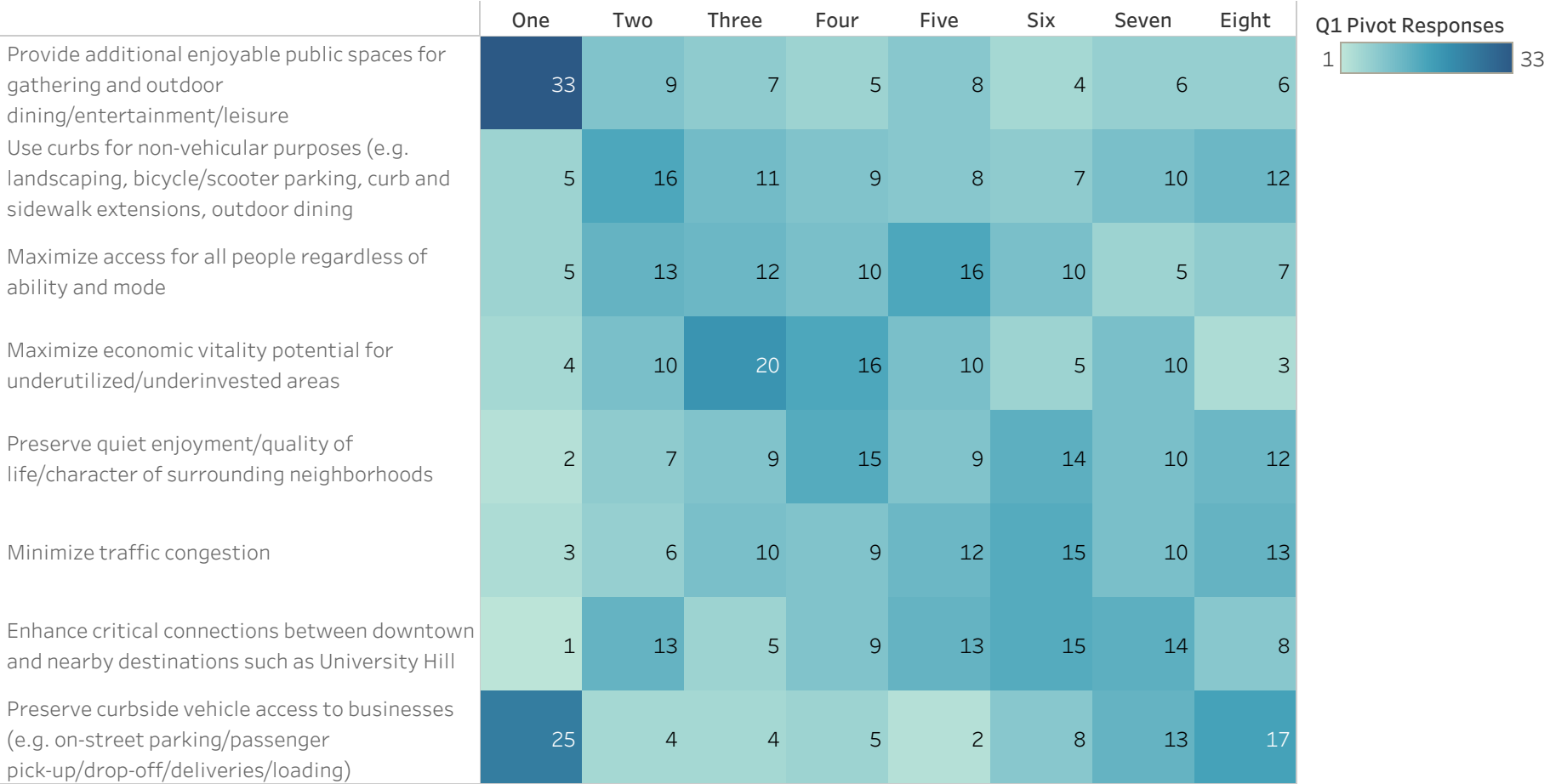
Respondents that said they were "extremely likely" or "somewhat likely" to bike, bus or walk downtown inclement weather.



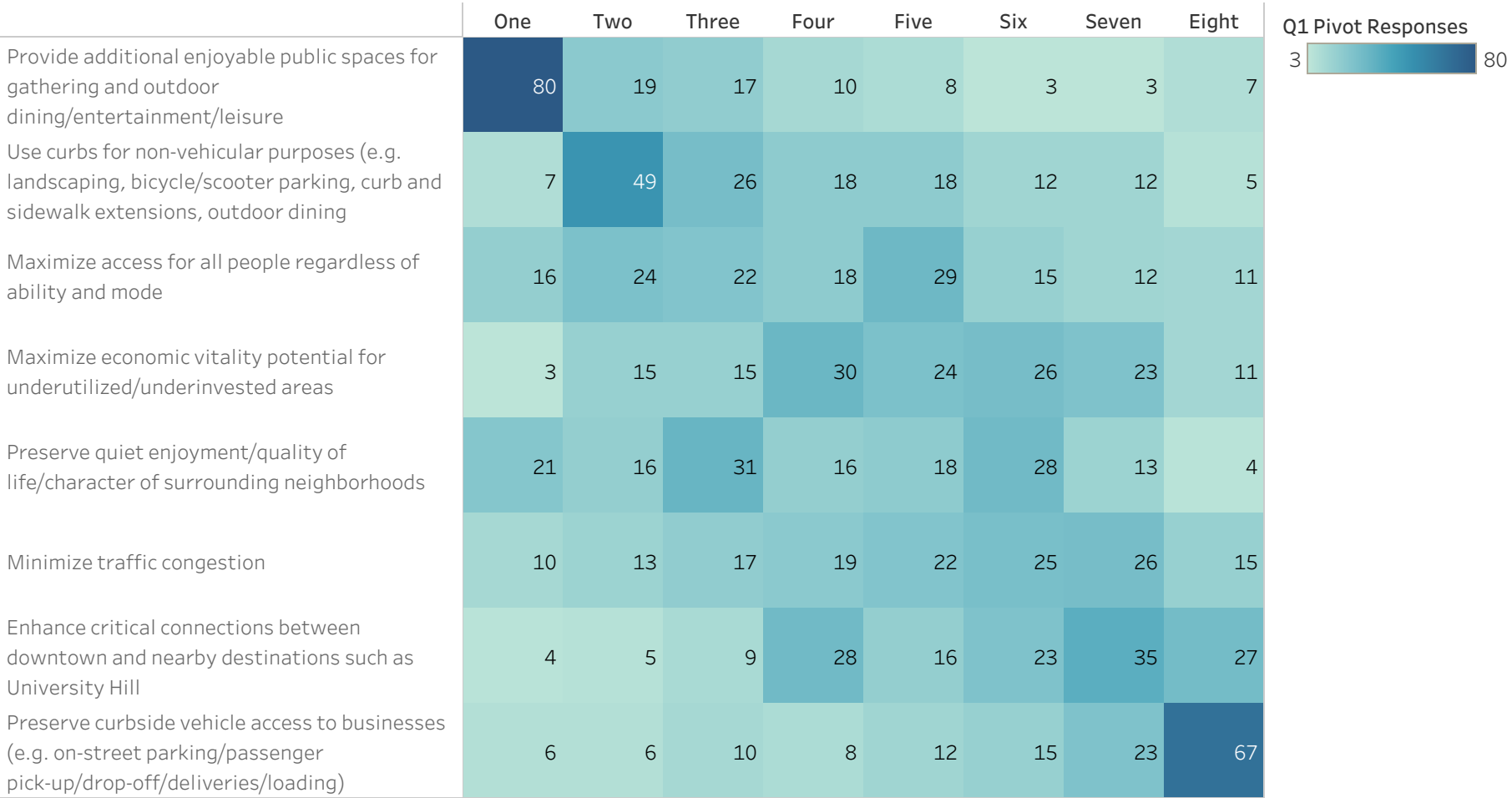
Respondents that said they were "extremely likely" or "somewhat likely" to drive a personal vehicle downtown during good weather



Respondents that said they are a downtown business owner or operator



Respondents that said they are a downtown resident



Survey for Map - 2772

SURVEY RESPONSE REPORT

02 January 2023 - 31 January 2023

PROJECT NAME:

Downtown Streets as Public Space Project // El proyecto de las calles del centro como espacio público





SURVEY QUESTIONS

Q1	Your Comment
MisterCriser 1/12/2023 10:28 AM	14th Street from Walnut to Pine is underutilized.
MisterCriser 1/12/2023 10:31 AM	East Pearl needs some love. Some opportunities in alleyways and 16th Street from Spruce to Pearl.
MisterCriser 1/12/2023 10:34 AM	13th Street could be highlighted/celebrated as Boulder's "Cultural Corridor" all the way from Chautauqua to NoBo Arts District. Kind of like the Indianapolis Cultural Trail
yexela 1/12/2023 03:56 PM	The West Pearl open street was a great place to hang, often before or after food/beverage. Now it just feels like cars. We need a space for people, not just 1 bench.
Logan E 1/13/2023 10:39 AM	I loved when West Pearl was open to pedestrians. The expanded outdoor dining space and room to walk felt welcoming and comfortable, like a big block party. Now being limited to just sidewalks feels cramped and sterile.
bhamilton 1/13/2023 10:54 AM	Open West Pearl to pedestrians!
WHM 1/13/2023 10:54 AM	return this area to the pedestrian only zone - just like in 2020-2022
harmsalt 1/13/2023 12:05 PM	Downtown Boulder, with its high number of shops & restaurants, should be prioritized for pedestrian friendliness.
harmsalt 1/13/2023 12:05 PM	Extending the pedestrian mall in both directions where dense commercial space exists should be prioritized.
harmsalt 1/13/2023 12:07 PM	I would like to see more of the Crossroads area convert to multiuse roads like 31st St. north of Pearl that are less car-centric.
Zach 1/13/2023 12:07 PM	Sometimes awkward intersection. Would love to see a pop-up that improves bike and ped experience going from Spruce St buffered

bike lane to Pearl St Mall

Zach

1/13/2023 12:12 PM

Can't see any reason not to investigate making this a permanent extension of the Pearl St Mall! Would love to see different uses besides just seating; kids play areas, bike parking, art, short-term pop-up stores/vendors, maybe rotating space for community orgs/nonprofits to have a physical presence.

Zach

1/13/2023 12:12 PM

This strikes me as a spot with good potential for re-imagined curbside use.

HollyO

1/13/2023 12:21 PM

Lots of parking and traffic, less friendly area to walk through, especially with my toddler or heading to the bus station

HollyO

1/13/2023 12:26 PM

When this area was closed to traffic, restaurants took up too much space in the street, which made it difficult to pass through walking or biking. Was messy looking as well. I do like the street being reopened to some bit of traffic for easier flow and access to businesses.

Josh

1/13/2023 12:39 PM

13th between Spruce and Pearl looks like a through road so a bunch of cars end up accidentally driving across the plaza instead of taking Broadway.

Josh

1/13/2023 12:41 PM

This area was already part of the extended pedestrian street/mall which has been great and should stay this way.

Josh

1/13/2023 12:44 PM

Pedestrian plaza should be extended down at least 17th or 18th street.

violinist

1/13/2023 01:28 PM

East Pearl was significantly better when it had parklets instead of parking spaces; I'd love to see more thought into what it could be when reimaged as a more pedestrian-friendly environment overall.

JacobB

1/13/2023 02:23 PM

The walking mall should obviously extend to at least here. It gets a little trickier past 9th but downtown was so much better

JacobB

1/13/2023 02:57 PM

This whole area is very pedestrian unfriendly, and it could be so great. Bus stop, big parking lot, bunch of nearby office buildings.

Badly needs some way to get across the street from the garage on foot, like there is across Canyon between St Julien and the library. It also could use some sort of alley access to Pearl like there is West of 11th.

stonesthrow

1/13/2023 03:42 PM

Let's get the West Pearl open street back!

stonesthrow

1/13/2023 03:45 PM

Convert the 1-way loop to 2-way, to benefit businesses, improve bike access, and calm traffic

Lm54

1/13/2023 04:18 PM

Boulder Junction should be an alternative transportation district Huss it was originally planned. Open the RTD station that is situated there unused and gone to waste. Remove the cars from that area.

Joe in Boulder

1/13/2023 05:04 PM

I have lived and worked within only a few blocks of this spot for 35 years (I remember Johnny Pirates, West Pearl Tea House, Original UBikes, Pour la France, Juanitas, Tom's Tavern, Stagehouse Books, Highlander bikes, etc. etc etc) and West Pearl was the best it's ever been when it was closed to traffic during the pandemic. PLEASE MAKE IT PERMANENT

Joe in Boulder

1/13/2023 05:07 PM

This segment of 13th between walnut and spruce would be my second choice for additional closure/pedestrianization. Well Fargo will redevelop that parking lot eventually and this is a major bike thoroughfare. Cars should be the lowest priority and can go elsewhere.

Joe in Boulder

1/13/2023 05:10 PM

Extend the pedestrian mall at least one more block to 16th. There is no vehicle access to the garage on the Pearl street side and the existing other uses (bus) have already demonstrated they can route around this block. Would be a great improvement to get rid of more cars and parking which ruin our city.

amcarrigan

1/14/2023 08:03 AM

I preferred West Pearl when it was closed to motor vehicles, but love having the HOP bus back. Consider electronic bollards that would allow buses into a shared street.

amcarrigan

1/14/2023 08:06 AM

Motor vehicles should be the lowest priority on 13th. It could be a wonderfully safe street for walking and biking from Arapahoe to North Boulder Rec.

Logan
1/14/2023 08:45 AM

The pedestrian mall should be extended back to 9th street to prioritize spaces for people, not cars

Logan
1/14/2023 08:47 AM

The pedestrian mall should be extended to the East. Or at the very least sidewalks should be widened to accomodate the expanding commercial storefronts to the East of Pearl St. Maybe to 17 or 18th Stree

Logan
1/14/2023 08:50 AM

13th Street should further prioritize pedestrians to create a link between central park/farmers market and Pearl St.

Logan
1/14/2023 08:52 AM

13th and 14th Streets between Spruce and Walnut could be closed to cars (13th is a major North/South bike route) at the Mall

Ethan
1/14/2023 09:43 AM

I agree with Zach; this is an awkward intersection that can lead to conflict between cyclists and cars! I sometimes ride this way to avoid cycling on the Pearl Street Mall, but the bike infrastructure is pretty minimal at a difficult to navigate intersection. Maybe a temporary bike lane, stop signs at all intersections, or small speed barriers (like on Aurora) could help?

Ethan
1/14/2023 09:48 AM

This is similar to the comment I left at the intersection of Spruce and 15th Street. These two lane turns without a stop feel pretty unsafe while I'm on my bike, but there's often no better way to go if I'm trying to visit multiple downtown locations. I'm just realizing that these no stop turns completely encircle the mall, likely to avoid traffic slowdowns. Personally, I'd prefer safety and avoiding a deadly crash over saving a couple minutes on a car ride. I think that a temporary bike lane, stop signs at the intersection, or small speed bumps or barriers (like on Aurora) could help.

BekahD
1/14/2023 11:17 AM

Enjoyed W. Pearl during pandemic. Would like to see public seating (unattached to commercial businesses), secure bike parking, and public games (hopscotch, etc) added for engagement.

BekahD
1/14/2023 11:18 AM

This is a great space in front of Sherpas and Bitter Bar

BekahD

Bike lanes should be added and sidewalks widened from 15th to

1/14/2023 11:21 AM
 Folsom. It feels unsafe to ride on Pearl here, yet the sidewalks are not wide enough and have weird corners (north side of street). Pearl should connect the mall, wholefoods, 29th street, and Boulder Junction for multi-modal transportation.

ashtribble
 1/14/2023 04:19 PM
 West Pearl is filled with a plethora of businesses and restaurants that would heavily benefit from opening the street.

ashtribble
 1/14/2023 04:21 PM
 The number of shops and restaurants here would benefit from opening up the street for pedestrian use.

ashtribble
 1/14/2023 04:39 PM
 13th Street has some very good bones for a revitalization project. It already has a connection to the pedestrian-friendly Pearl Street Mall, a few shops and stores, and a connection to the One Boulder Plaza business center. I also feel that the parking lot could give a great opportunity for future developments; whether they be commercial or even moderate-density residential.

Lane
 1/14/2023 06:42 PM
 Groups of children would frequently play at the rainbow crosswalk, bringing energy to the entire community. Now it's for traffic.

Lane
 1/14/2023 06:47 PM
 Lolita's, Spruce Confection, Nick and Willy's, and Piece Love and Chocolate are all popular 3rd-spaces for a diverse range of community demographics. More pedestrian and patio areas would make this area flourish.

Lane
 1/14/2023 06:50 PM
 We need a protected bike lane through this part of Walnut. From University Hill, this is the most efficient bike path to get to East Pearl and the shops near McGuckin's. The shared bike lane is the most dangerous part of this trip.

Ryan W
 1/14/2023 08:18 PM
 Reduce number of lanes and traffic speed near this vital community park. Our streets shouldn't detract from our public spaces.

Ryan W
 1/14/2023 08:22 PM
 Consider making Walnut or Pearl St car-free (or car-light) all the way from the walking mall to Folsom. this would give people travelling outside of cars (via foot, bike, wheelchair, etc) a more comfortable low-stress way to get downtown from some of the densest parts of our city. It would also provide a low stress way to head east towards some of the densest retail locations.

Fhhj

1/15/2023 08:01 AM

Here

ssnover

1/15/2023 11:25 AM

There's a parking garage here, at least remove the on-street parking. The space will earn more revenue for the city via sales tax. Close to private vehicles and allow only buses and emergency vehicles.

ssnover

1/15/2023 11:27 AM

There's a parking garage under here, make cars take the arterial roads that are designed for traffic, the space will attract more people. The current office space construction really should've been apartments.

BrianH

1/16/2023 06:50 AM

West Pearl & East Pearl should be redesigned as a purposeful pedestrian area. Focus should be on ease of eating, drinking, shopping and just relaxing. Many cities have pioneered this. Great examples exist across the world. Review and use the best tried and tested ideas. Dont reinvent the wheel

pinkbike

1/16/2023 06:54 AM

this alley/street is open and sunny but empty and does not seem to be used for many deliveries. Seems like it could be a place for something- food carts or seating?

pinkbike

1/16/2023 06:56 AM

this is an uncomfortable intersection to walk or bike through. Feels like wait times are long and just hard to negotiate.

pinkbike

1/16/2023 06:57 AM

this intersection does not feel safe to bike through. Need to take the lane but east of here is very easy biking. This intersection is a bit of a barrier for biking east.

pinkbike

1/16/2023 06:58 AM

agree with other commenter this area under utilized

fe

1/16/2023 07:46 AM

Close Pearl street to traffic from 9th to 11th, extending the walking mall by these two blocks and allow outdoor restaurant seating.

fe

1/16/2023 07:50 AM

11th and Walnut is a dangerous intersection for pedestrians. Making this safer should be a priority.

<p>fe 1/16/2023 07:54 AM</p>	<p>The homeless people issue downtown is dire and reflects poorly on the city. Camping on the streets and aggressive panhandling has to be dealt with in a compassionate yet effective way.</p>
<p>Catherine W 1/16/2023 09:07 AM</p>	<p>13th Street between Canyon and Arapahoe has very little traffic and is already closed two days per week for the Farmers Market. Closure would have limited impact on parking. Pedestrianizing this street will help activate the adjoining Central Park.</p>
<p>asayler 1/16/2023 09:57 AM</p>	<p>Ideally, Pearl should be pedestrian from 9th to 19th.</p>
<p>CT 1/16/2023 11:56 AM</p>	<p>It was a mistake to reopen for cars.</p>
<p>CT 1/16/2023 11:59 AM</p>	<p>+1 to Catherine's comment - it's already closed twice a week for half the year and traffic is not noticeably worse from my perspective.</p>
<p>Nigel 1/16/2023 02:39 PM</p>	<p>Was much nicer as pedestrian only...</p>
<p>LunaK 1/16/2023 11:42 PM</p>	<p>There are a lot of great little restaurants in this block of Arapahoe but the parking lots are awful and the intersections feel risky as a pedestrian</p>
<p>dphow 1/17/2023 10:24 AM</p>	<p>Add a raised pedestrian crossing to this intersection. If cars remain allowed at this street intersection, car drivers should be forced to slow down and realize they are entering pedestrian space by driving up and over a raised walking section. Pedestrians shouldn't be de-prioritized by stepping down to street level.</p>
<p>erineboz 1/18/2023 07:40 AM</p>	<p>Either make this portion of Pearl (until the ped mall) bike/ped only or make one-way with the other lane dedicated to bike/ped/bus/street dining/activation.</p>
<p>erineboz 1/18/2023 07:46 AM</p>	<p>Walnut feels forgotten because of how unfriendly it is for bikes/peds. There's too much space dedicated to parking and often quiet buildings (churches, banks) = fewer eyes on the street + blank walls. Doesn't feel as safe as Pearl or even Spruce.</p>

<p>AnnaSegur 1/18/2023 01:55 PM</p>	<p>Cars come racing in off or towards 119 and make 30th street unsafe for bicyclists.</p>
<p>AnnaSegur 1/18/2023 01:56 PM</p>	<p>Difficult area for pedestrians</p>
<p>AnnaSegur 1/18/2023 01:58 PM</p>	<p>Lane allowing cars to turn right without stopping is dangerous for pedestrians at Pearl and 30th, Walnut and 30th and Arapahoe and 30th and Canyon and 30th.</p>
<p>rook 1/18/2023 03:57 PM</p>	<p>It should be easy to walk/ bike here. There needs to be an incentive to make Boulder more pedestrian centric instead of car centric. I feel like I need a car to get anywhere, even when I'm in Boulder.</p>
<p>CC 1/18/2023 04:44 PM</p>	<p>Please consult businesses. This is not happening yet. Remember, 65,000 in-commuters come every day. All the businesses on West Pearl rely on that for their workers. If you make it worse, you will kill the businesses. You can't just have pedestrian only, need some car traffic.</p>
<p>CC 1/18/2023 04:46 PM</p>	<p>When West Pearl was closed, delivery drivers (USPS, Fedex, Sysco, United Food, UPS, etc all were forced to use this alley. It was a nightmare. You cannot just think of pedestrians and what they hope for, think of the entire picture or else this will not work.</p>
<p>CC 1/18/2023 04:49 PM</p>	<p>When West Pearl was closed, as soon as it got dark, business dropped, crime went up. I can point to 5 spots where houseless sleep and pee and poop every night right now. The cars have helped some to reduce this since there is more "traffic" at night.</p>
<p>Silas Atkins 1/18/2023 09:38 PM</p>	<p>13th St is prime for bike and pedestrian prioritization. Closing Arapahoe to Canyon to cars allows permanent infrastructure for the Farmer's Market, safe pedestrian access to BMoCA, Dushanbe, etc. from Central Park. Closing Canyon to Spruce compliments existing bike and pedestrian infrastructure to connect Pearl and make access to transit easier and safer. Closing Spruce to the end of 13th in he North end connects downtown to Casey Middle School, Community Plaza Shopping Center, Washington School Park, North Boulder Rec, Long's Gardens, and Boulder County Services.</p>
<p>Silas Atkins</p>	<p>Pearl St Should be closed to cars from he existing Pear Street Mall at</p>

1/18/2023 09:46 PM

15th all the way 28th. Either no vehicles or a single lane for busses with pull out stops to allow the Hop busses to pass each other. Odd number streets should be closed at Pearl in both directions to allow more car free bike and pedestrian crossings.

amongthemtns

1/18/2023 09:48 PM

When West Pearl was closed off to cars, it was my favorite part of the whole street! The energy, especially in the evenings was so vibrant and fun. Children were playing all over the place and it was a beautiful third space. This intersection in particular garnered a lot of attention.

Silas Atkins

1/18/2023 09:49 PM

What Zach said! Close West Pearl to cars and be innovative with the space. Make it available to more of the community.

amongthemtns

1/18/2023 09:50 PM

Now that West Pearl is now open to cars again, this intersection is particularly dangerous. Cars are eager to turn right on red, and a car almost hit me and my baby in a stroller when we had the signal to cross.

amongthemtns

1/18/2023 09:52 PM

I would love to see the streets narrowed here to allow more patio spaces for local shops and areas of leisure for pedestrians. Spruce is a staple of downtown and they are forced to have several tables right next to the curb. It's loud and hard to get away from the fumes. I wish they had more space to work with!

Katy

1/18/2023 10:08 PM

I agree with Bekah, how great to see improved pedestrian and biking here to connect Pearl street from the mall to WF and 29th street mall. It would make Boulder so much more pedestrian friendly

Katy

1/18/2023 10:10 PM

Seconding salt's comment, would be great to see the pedestrian mall extended east

landk

1/19/2023 07:09 AM

More community space here would be ideal as these are popular gathering areas for the adjacent businesses

jcwst

1/19/2023 11:36 AM

South Boulder could use more walkable areas with restaurants, coffee shops, and corner stores.

Jason

I really liked when west pearl had no cars during Covid. However, it

1/19/2023 03:34 PM

didn't feel cohesive as all of the businesses had make-shift outdoor spaces. I think if this area was designed well and felt more cohesive it could have grass or better landscaping, more outdoor dining, and fluid bike and pedestrian traffic.

Jason

1/19/2023 03:42 PM

We need solutions to the increasing homeless problem. My family now completely avoids the public library, boulder creek path, central park, sculpture park, bandshell, and farmers market because of the unpredictable behavior of the homeless population. It's a shame because each year we avoid more and more locations in town and our friends who don't live in Boulder won't come downtown at all anymore and avoid it altogether.

Anne On Eemus

1/19/2023 07:30 PM

As a pedestrian I was hit by a car crossing 15th street here (no harm, thankfully). I think that the sidewalk between 14th and 15th being set farther back from Canyon than the sidewalk on other parts of Canyon contributed to the driver thinking he had checked and there were no pedestrians. (I was walking eastbound along the north side of Canyon.)

Anne On Eemus

1/19/2023 07:44 PM

17th's connection to Boulder Creek Path make it a logical choice for accessing things on the east end of Pearl, but the bike lane disappears a block before reaching Pearl and you have to merge with auto traffic that is less cognizant of pedestrian and bike traffic than the traffic closer to the main action of Pearl.

Anne On Eemus

1/19/2023 07:48 PM

I agree with other comments about Walnut generally needing improvements, but this intersection seems especially bad to me. 13th to the south of here is EXTREMELY bike friendly, but cars on Walnut seem to not be paying much attention to pedestrians or cyclists and I have seen several near misses at this intersection.

TM

1/20/2023 06:33 AM

Pearl street could be extended

TM

1/20/2023 06:34 AM

This lively area could be even more lovely

TM

1/20/2023 06:35 AM

I visited this part of Pearl street infinitely more while it was closed. Now I don't bother again

skrfskrf 1/20/2023 12:48 PM	29th does not need to be a street
skrfskrf 1/20/2023 12:49 PM	Pedestrian mall should be extended both east and west
skrfskrf 1/20/2023 12:56 PM	This area would be a lot more welcoming if Yellow Deli was closed down, it's rough introducing people to downtown Boulder and having to explain that we have a deli run by a cult that abuses children.
Aiko 1/23/2023 04:18 PM	The outside seating and lack of cars on pearl between 9th and 12th was the best, please permanently bring this back!
Aiko 1/23/2023 04:21 PM	I love the east end pearl and hope that 15th to 17th (or even 18th) could be permanently closed to cars so all the great businesses there could better utilize the outdoor space. Imagine actually being able to sit at an outside table for mountain sun!!!
beheard123 1/24/2023 10:41 AM	It would be nice to see more foot traffic for retailers on the 900 block of Pearl.
shelbybates4 1/24/2023 03:51 PM	This is a fun area of Pearl with a great bike shop and chocolate shop; sadly it's harder to get to with the large intersection at 9th and Pearl.
shelbybates4 1/24/2023 03:52 PM	Enjoyed when this area was closed during covid. I do appreciate that the bus is back running in the area, making it easier for folks who rely on that transit to get around downtown. I would like to see this area with just bus access and more pedestrian space.
shelbybates4 1/24/2023 03:54 PM	Agreeing with the other comment that this is one of the worst bike intersections downtown, but one I use frequently because it connects you to some more bike friendly routes to get around downtown.
W Ryan 1/25/2023 05:56 AM	Closing west Pearl was so amazing for the 2 year that it was for pedestrian use only. The wide open street would allow for so many cool interventions to promote the healthy life style that Boulder aspires to as well as the potential for including some climate resiliency solutions like permeable pavers.

W Ryan

1/25/2023 05:59 AM

I would like to see more downtown boulder partnership staff in the blue & green shirts on pearl street. The amount of folks walking their dogs, riding bikes or skate boards, and smokers has really increased in the last few years and I have no enforcement of these policies.

W Ryan

1/25/2023 06:06 AM

In the last few years it seems as though the city has tried to connect the bike path by Dushanbe & Grove Street by adding some kind of connection path west of 15th, north of the farmers ditch, but what needs to happen to complete this connection? A lot of folks use Grove/ Goss as a way to cycle or walk from downtown to the shopping center near McGuckin Hardware & currently the parking lot north of this pin is full of broken glass or heavy traffic on Saturdays from the farmers market. Plus with the new 5 over 1 housing that is going up, I am sure those residents would like a more enjoyable path to Boulder Creek.

Vaishali

1/25/2023 08:42 AM

Our family enjoyed the pedestrian friendly West Pearl (from 9-11th) when it was free of cars. Pedestrians should be prioritized. Tables that are not associated with specific commercial businesses would be a nice addition to the area if traffic was closed off.

CBR

1/25/2023 12:07 PM

Large space that is hard to walk through with my children because of the (often disruptive) homeless people. Why can't we turn off the power to these outlets?

Patrick T

1/25/2023 08:03 PM

Extending the Pearl pedestrian mall eastward toward 28th Street (or, at the very least improving bike/ped facilities on this eastern portion of Pearl) would improve accessibility between downtown and the burgeoning Boulder Junction transit village / 29th Street Mall areas.

Patrick T

1/25/2023 08:10 PM

Crossing through the intersection of 28th Street with Iris Ave and Diagonal Highway as a pedestrian is dangerous, loud, uninviting, and slow. Consider a pedestrian overpass or underpass at this intersection. The RRFB (rectangular rapid flashing beacon) and pedestrian crossing across 28th just south of this intersection (between the Safeway and Diagonal Crossing parking lots) is a helpful feature that promotes transit use at the adjacent bus stops, but additional improvements are desperately needed. The need will only increase as the Walmart/Sports Authority property becomes housing.

Patrick T

The pedestrian mall should be extended north- and southward along

1/25/2023 08:12 PM

the numbered streets in certain areas (such as 10th and 13th) where there is business activity and/or opportunities for public events.

MimiMinsky

1/31/2023 07:39 PM

Return West Pearl to be pedestrian only--cities in Europe frequently have blocks and blocks car-free; Boulder can extend Pearl a few more blocks! Remember, business owners objected to a pedestrianized Pearl Street when it became a pedestrian mall in the 1970s, fearing reduced business. In the end, being car-free benefited business!

MimiMinsky

1/31/2023 07:41 PM

It's a no-brainer to make this street car-free. We need a way, however, to activate the space, as it is a dead zone. We need ground-level businesses along the way between the Pearl Street Mall and the Farmers Market.

MimiMinsky

1/31/2023 07:44 PM

What if this were open only for pedestrians and bikes and not cars? It would be so pleasant to have a larger pedestrian area all around downtown. The most enjoyable spaces around the world are those without cars. We need more of them in Boulder.

Optional question (112 response(s), 18 skipped)

Question type: Essay Question

Q2 Add Image

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Optional question (131 response(s), -1 skipped)

Question type: File Question

Engagement Report - Appendix G**Verbatim In-Person Engagement Write-In (on sticky notes) Comments****Map activity write-in comments:**

- ❖ Close all the streets to cars
- ❖ Connect all the streets from 9th to 29th St Mall
- ❖ Bandshell - so sad it's run down
- ❖ *[illegible word]* on Pearl
 - Outdoor seating!!
 - Community
 - Ped access to stores
- ❖ I'm all for pedestrian friendly space, but not at the expense (sad to say) of roadways because I am concerned about road congestion now.
- ❖ Street closure further away from parking so she can park closer to the stores she wants to shop at.

Prioritization activity write-in comments:

- ❖ Different ideas:
 - Art install for kids
 - Outdoor cinema
 - Temp - putt-putt golf, music, concerts (Jeff & Page)
- ❖ Downtown is too expensive overall
- ❖ Importance of feeling SAFE
- ❖ Safety and security
- ❖ Small grants (\$100/wk) for street musicians to control problems and encourage creativity.
- ❖ "Mal Mundo" food access on the mall. Easy access to cuisines from around the world which also help those from other cultures start micro-businesses.
- ❖ Happy hour dinner with Kids.
- ❖ Encourage walkability
- ❖ Gondola from downtown to the Hill
- ❖ Drop population of Boulder
- ❖ Fill the empty buildings / businesses
- ❖ Allow bikes to come through
- ❖ Free parking
- ❖ More parking with less footprint ie- parking garage w/many floors - FREE
- ❖ Displace parking in general in favor of people
- ❖ Address most effectively homeless/ *[illegible word]* /trash + making others not feel safe

Engagement Report - Appendix H

Boulder Downtown Streets as Public Space (DSaPS)

Stakeholder Meeting: Boulder Farmers Market

The Downtown Streets as Public Space (DSaPS) project will recommend pop-ups to be implemented in Spring/Summer 2023 using a combination of programming and physical elements to reimagine public space downtown. To develop the pop-up recommendations, city staff hired a consultant team to conduct technical urban design and transportation analysis and conduct community engagement. The engagement efforts included an online questionnaire, series of in-person engagement activities, and multiple stakeholder meetings.

The consultant team and city staff met with Boulder Farmers Market's (BFM) Executive Director, Mackenzie Sehlke, on January 25th, 2023, on 13th Street to tour the area where the BFM occurs between Arapahoe and Canyon. The format of the meeting was conversational and included an overview of the project's purpose and questions about BFM's priorities and concerns with temporary reimaging of public space in downtown. Below is a summary of the discussion and key themes:

Key Themes

- They would love to see **more activation of the Civic Area Park** (adjacent to the market)
- A long term recommendation may be **increased access to public restrooms**, as there are none in the area
- **Parking along 13th between Canyon and Arapahoe is closed as part of the BCM's special events permit each year.** The Boulder Police Department is responsible for clearing vehicles after the times allowed on signage in the area, and if needed, vehicles are towed.
 - **There are parking challenges to consider** in a closure to 13th, especially for the Boulder Dushanbe Teahouse, though there is an existing process with some community expectation of parking closures on the street already.
 - **Though there is parking east of the Boulder Dushanbe Teahouse, it is for permit holders only**, except when the BFM is active in which there's a subset of spots allocated to BFM customers.
- There is a large waitlist for farmers to participate in the market, which implies demand could be accommodated on other days/times. They could see **expanding the market, both by number of vendors and/or size of the space.**
 - Would need **significant notice** to add another day of the farmers market or program space (such as a stand with revolving farmers)
 - There is a **bureaucratic burden to permitting** - generally needs to apply for 75 permits per year and therefore needs significant advance coordination

Boulder Downtown Streets as Public Space (DSaPS)

Stakeholder Meeting: Boulder Farmers Market

Summary

The BCFM is the largest farmers market in Colorado and operates 8-months out of the year. It is a great example of the use of special event permitting and temporary street closure in downtown Boulder. There is evidence that the BCFM could be expanded and should be included in long term plans for the Civic Area and East Bookend. In the short term, any recommendations involving 13th Street should be coordinated with BCFM to maximize activations in the area. The project team will provide this summary to the City Council in March 2023 and ensure the key themes are shared with decision makers.

Consultant team attendees:

- Amanda Cole, Leadline Project Management
- Brett Merriam, Gehl
- Derek Magee, Gehl
- Bill Cowern, Fox Tuttle

Staff team attendees:

- Vivian Castro-Wooldridge

Boulder Downtown Streets as Public Space (DSaPS) Stakeholder Meeting: West Pearl business owners focus group

The Downtown Streets as Public Space (DSaPS) project will recommend pop-ups to be implemented in Spring/Summer 2023 using a combination of programming and physical elements to reimagine public space downtown. To develop the pop-up recommendations, city staff hired a consultant team to conduct technical urban design and transportation analysis and conduct community engagement. The engagement efforts included an online questionnaire, series of in-person engagement activities, and multiple stakeholder meetings.

Downtown Boulder Partnership (DBP) assisted the consultant team with scheduling and inviting a select group of business owners to participate in the 1-hour focus group session on January 26, 2023. While not all business owners were able to attend, there were 14 business owner/operators in the focus group. The majority of attendees represented restaurants on West Pearl, though there were a couple of retail operators and property owners in attendance as well.

The format of the meeting was conversational and included an overview of the project's purpose and a question to the group about their priorities and concerns with temporary reimaging of public space in downtown. Below is a summary of the discussion and key themes:

Key Themes

- Business owners want vibrancy on West Pearl and believe that is returning. Some think there was **permanent consumer behavior change as a result of the closure**.
- There was general **consensus from restaurants that the temporary closure during COVID hurt their business financially**. Retail owners noticed less of a negative impact to their business, though they did comment that **a full street closure (24/7) is not favorable**.
- While retail operators / owners expressed a **different experience with the closure** that was more neutral, they acknowledged that there is a relationship between the success of restaurants on West Pearl and the success of their business.
- Business owners explained their decision making process to invest in a business on West Pearl. In many cases, owners invest their personal life savings to take on risk in opening a business. That decision is based on current conditions, and many business owners described a **purposeful decision to open on West Pearl because the street is open to vehicles and is not part of the pedestrian Pearl Street Mall**.
- Many shared concerns that the **online questionnaire is “biased toward change” and biased to create change on West Pearl**. Many commented that their business is just starting to recover from the closure, and there was noticeable anxiety in thinking about what another closure would do to their business.

Boulder Downtown Streets as Public Space (DSaPS) Stakeholder Meeting: West Pearl business owners focus group

- From their perspective, **business owners would rather see improvements that help drive people to West Pearl**, such as light capital upgrades and even some community-focused special events.
- Business owners emphasized a need for increased public safety on West Pearl as well. While activated areas can increase public safety and the perception of public safety, business owners reported that even during busy times on West Pearl, **there are issues of public safety that make it more difficult to serve customers, retain staff, and welcome the community to West Pearl.**
- There was a general consensus and sense of frustration that **business owners did not, and still do not, feel heard in the discussions about the West Pearl area** and would like decision makers to better understand the significance of their concerns when considering street closures to West Pearl.

Summary

While the analysis of the DSaPS project is on all downtown streets, the focus group discussion centered around West Pearl and their recent experience with the pandemic-related closure. The stakeholder perspective of West Pearl business owners is important to consider and will be part of the analysis to develop the pop-up recommendations for Summer 2023. The project team will provide this summary to the City Council in March 2023 and ensure the key themes are shared with decision makers.

Consultant team attendees:

- Amanda Cole, Leadline Project Management
- Brett Merriam, Gehl
- Derek Magee, Gehl
- Bill Cowern, Fox Tuttle

Boulder Downtown Streets as Public Space (DSaPS)

Stakeholder Meeting: Business Recovery Alliance

The Downtown Streets as Public Space (DSaPS) project will recommend pop-ups to be implemented in Spring/Summer 2023 using a combination of programming and physical elements to reimagine public space downtown. To develop the pop-up recommendations, city staff hired a consultant team to conduct technical urban design and transportation analysis and conduct community engagement. The engagement efforts included an online questionnaire, series of in-person engagement activities, and multiple stakeholder meetings.

The consultant team and city staff met virtually with the Boulder Business Recovery Alliance members (listed on page 2) on February 1st, 2023. The format of the meeting was a presentation overview of the project's purpose, followed by a conversation about the groups' priorities and concerns with temporary reimagining of public space in downtown. Below is a summary of the discussion and key themes:

Key Themes

- **Supporting the Business Community:** Focus on finding ways for the pop-ups to be supportive of the business community, both downtown and throughout the city, without competing with them. Affordability and safety are also important considerations.
- **Inclusivity and Diversity:** There is a strong desire to create a positive and inclusive "vibe" for the pop-up that highlights the diversity of Boulder's business community. The group discussed the importance of diversity, equity, and inclusion, as well as highlighting diverse businesses in Boulder.
- **Co-Creation:** Co-creation is a key priority for the pop-up, with a focus of engaging the community and creating organic activations that reflect the innovative spirit and values of Boulder.
- **Art and Culture:** There is a strong interest in showcasing the local artist community and providing opportunities for art installations and permanence art.
- **Street Activations:** There is a strong interest in improving the creek path areas (albeit not a "street") through pop-ups or activations and finding unique ways to activate the street that have a distinct Boulder feel.
- **Pop-up Opportunities:** There are opportunities for the pop-up to address gaps in the community, such as highlighting Latino artists and providing space for performance art. Additionally, using pop-ups to drive foot traffic during other events and partnering with local organizations could be beneficial for the business industry.

The group also discussed the need for space for the artist community to showcase their work, including performance art and art installations that could remain in place longer than temporary pop-ups. Overall, the group emphasized the importance of creating organic activations that engage the community and reflect the unique and distinctive feel of Boulder.

Boulder Downtown Streets as Public Space (DSaPS)

Stakeholder Meeting: Business Recovery Alliance

Boulder Business Recovery Alliance meeting attendees:

- Boulder Chamber of Commerce
- Latino Chamber of Commerce
- Downtown Boulder Partnership
- City of Boulder Community Vitality
- Boulder Convention & Visitors Bureau
- Boulder Small Business Development Center

Consultant team attendees:

- Amanda Cole, Leadline Project Management
- Brett Merriam, Gehl
- Mora Carrillo, Leadline Project Management

Staff team attendees:

- Cris Jones