

APPENDIX A: OUTREACH SUMMARY

This appendix provides a summary conducted for the District 4 Mobility Study. Outreach was conducted over two phases:

- Phase 1 gathered input from District 4 residents on their transportation needs.
- Phase 2 presented recommendations to address the needs identified in Phase 1 and through technical analysis.

Due to the COVID-19 pandemic, the study team was limited to virtual engagement methods to solicit input.

PHASE 1

To compare costs across alternative concepts, staff first identified the necessary capital investments that each would necessitate. As the purpose of this cost assessment is to estimate order of magnitude costs for the purposes of comparisons across alternatives, such capital improvements were identified at a fairly high level.

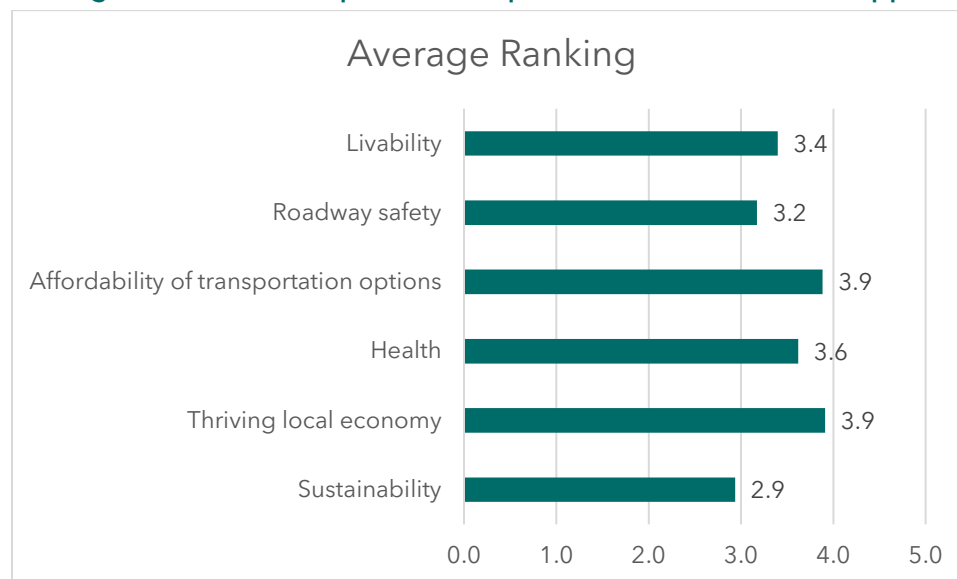
Phase 1 Outreach Activities

- District 4 Town Hall to introduce the study to the public on May 23, 2020
- Online survey taken by 287 respondents
- Two Chinese focus groups: one in partnership with the Planning Department's Community Needs Assessment that is also part of Sunset Forward.

Survey Response Highlights

A copy of the survey is attached to this appendix.

What goals should transportation improvements in District 4 support?

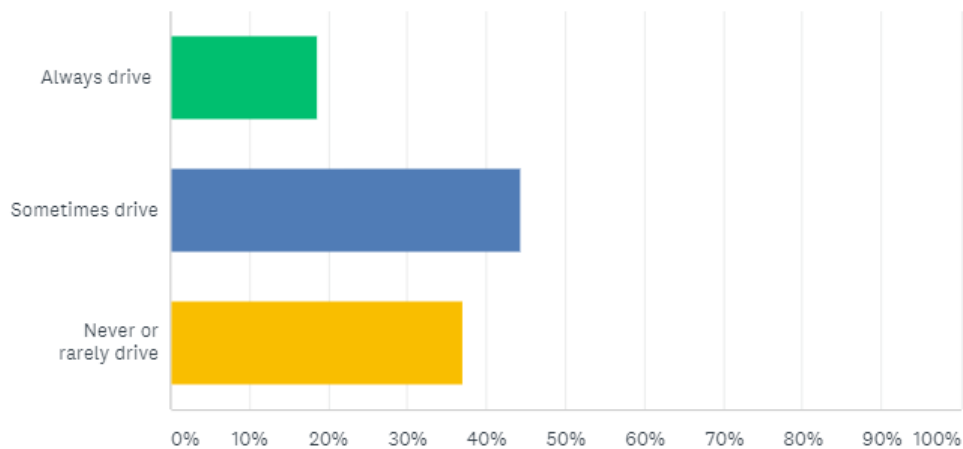


Modes used by survey participants

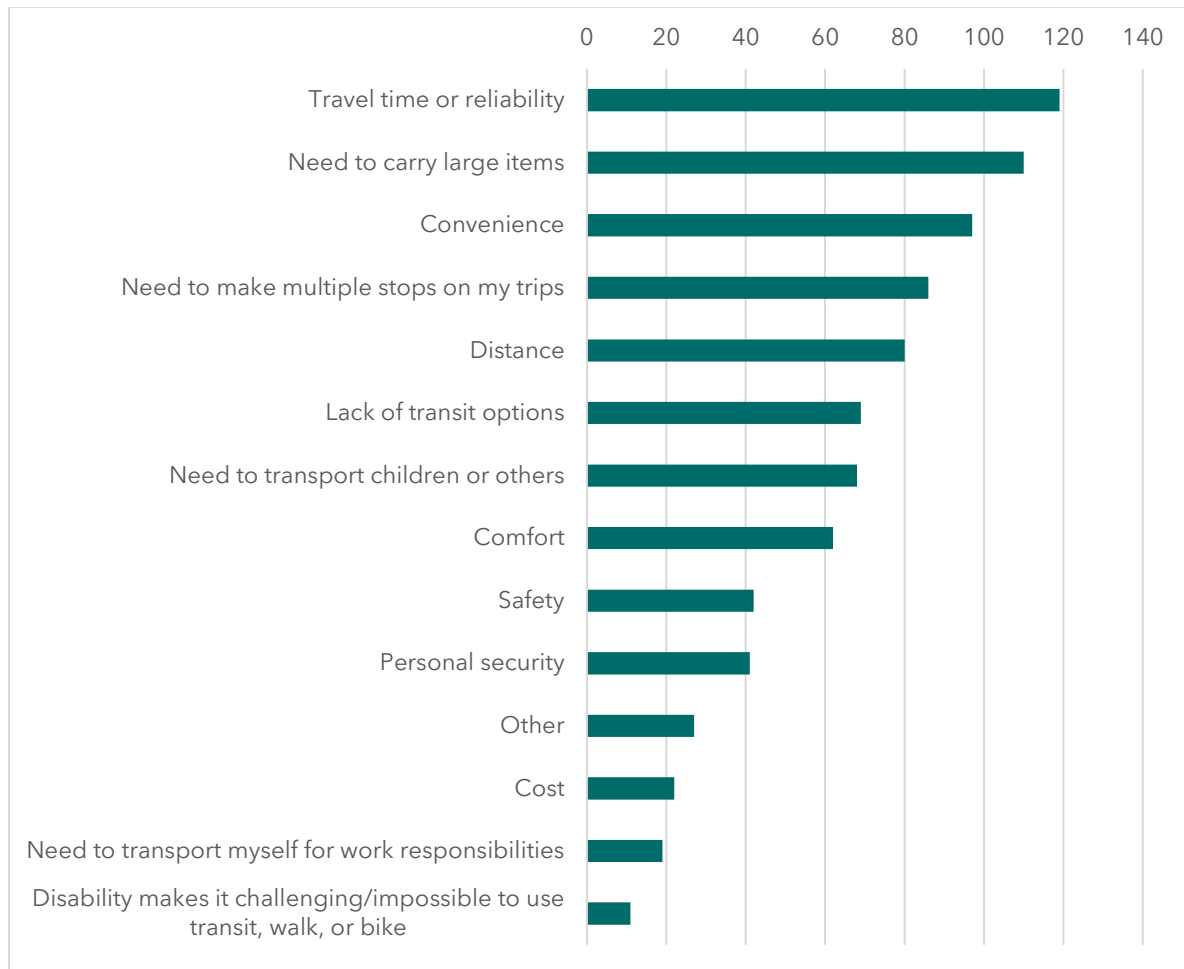
	Drive	Take local public transit like Muni	Take regional public transit like BART or Caltrain	Ride a bicycle	Take a taxi or Uber/Lyft	Ride a personal scooter or skateboard or similar device	Use an accessible transit service such as paratransit	Walking	Rent a bike or electric scooter or similar device
Everyday	17.9%	24.5%	1.1%	14.0%	0.7%	0.7%	0.0%	58.6%	0.0%
Several times a week	33.7%	34.2%	5.1%	17.6%	7.2%	2.2%	0.4%	29.9%	4.0%
Once a week	19.0%	11.2%	8.7%	6.8%	19.1%	0.7%	0.4%	4.7%	2.2%
Less than once a week	14.3%	20.9%	52.3%	16.5%	41.4%	4.4%	1.1%	4.7%	13.4%
Never	15.1%	9.4%	32.9%	45.0%	31.7%	92.0%	98.2%	2.2%	80.4%

For trips that you would typically take within District 4 before shelter in place, how often would you drive?

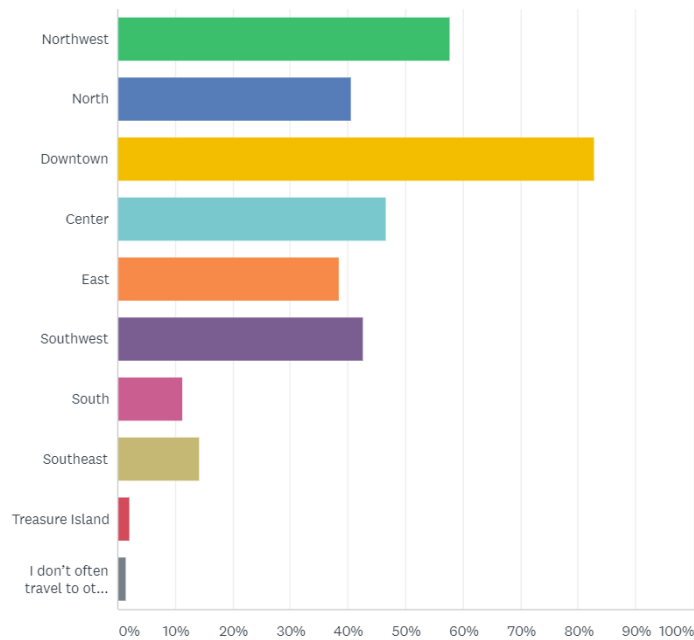
Answered: 286 Skipped: 7



You indicated that you always or sometimes drive for trips within District 4. Why would you choose to drive instead of walking/biking/taking transit? (select all that apply)

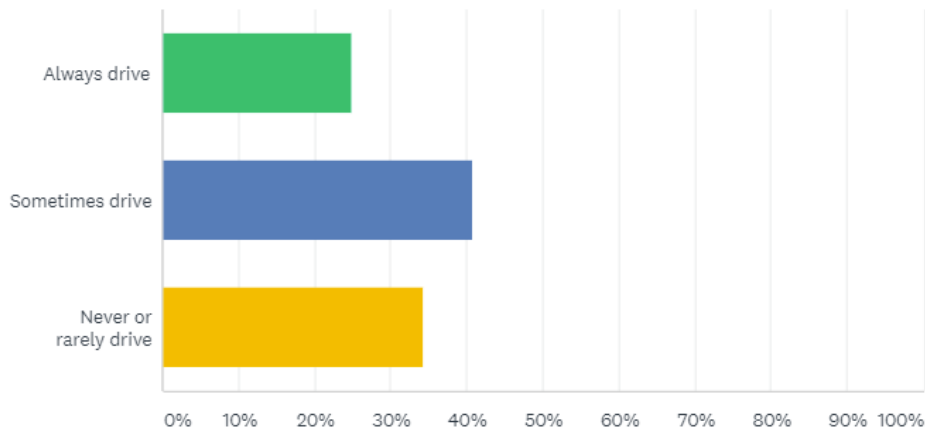


For trips that you would typically take from District 4 to other parts of San Francisco, which parts of the city are you going?

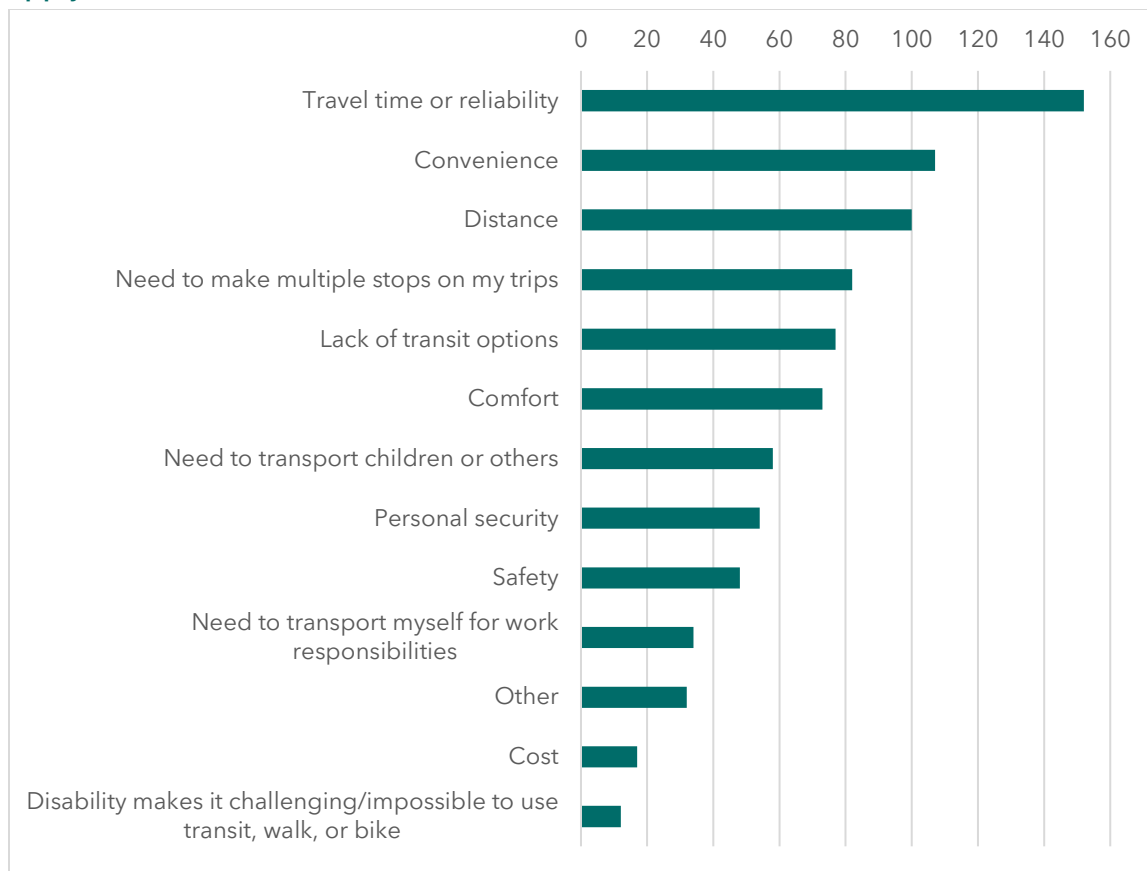


For trips that you would typically take from District 4 to other parts of San Francisco, how often would you drive?

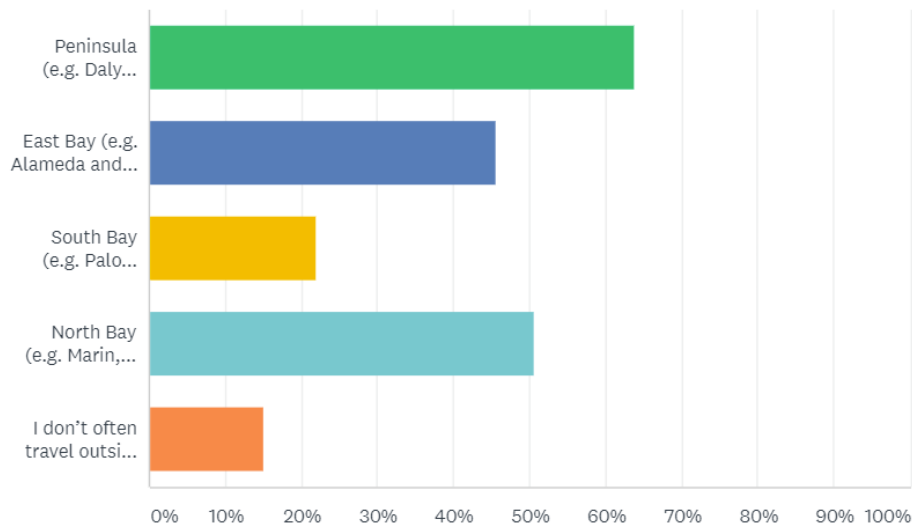
Answered: 280 Skipped: 13



You indicated that you always or sometimes drive for trips to other parts of San Francisco. Why would you choose to drive instead of walking/biking/taking transit? (select all that apply)

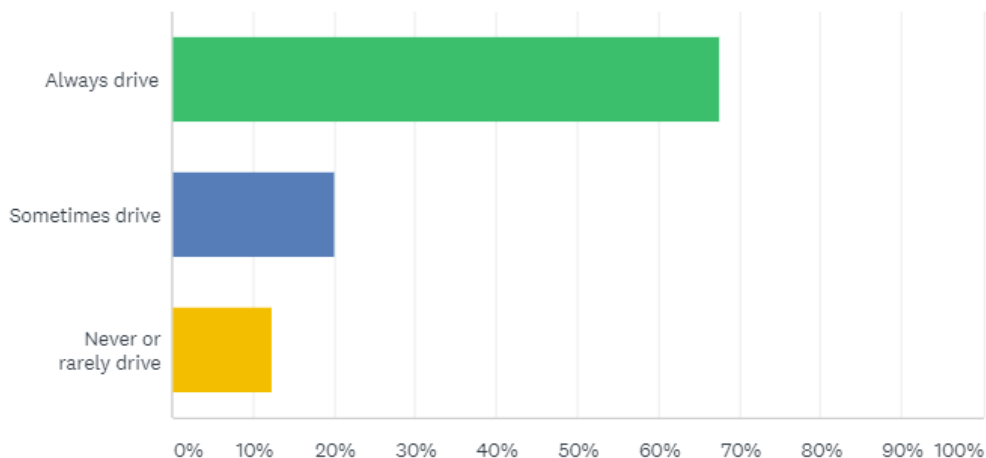


Would you regularly take trips regionally to areas outside of San Francisco. If so, where?

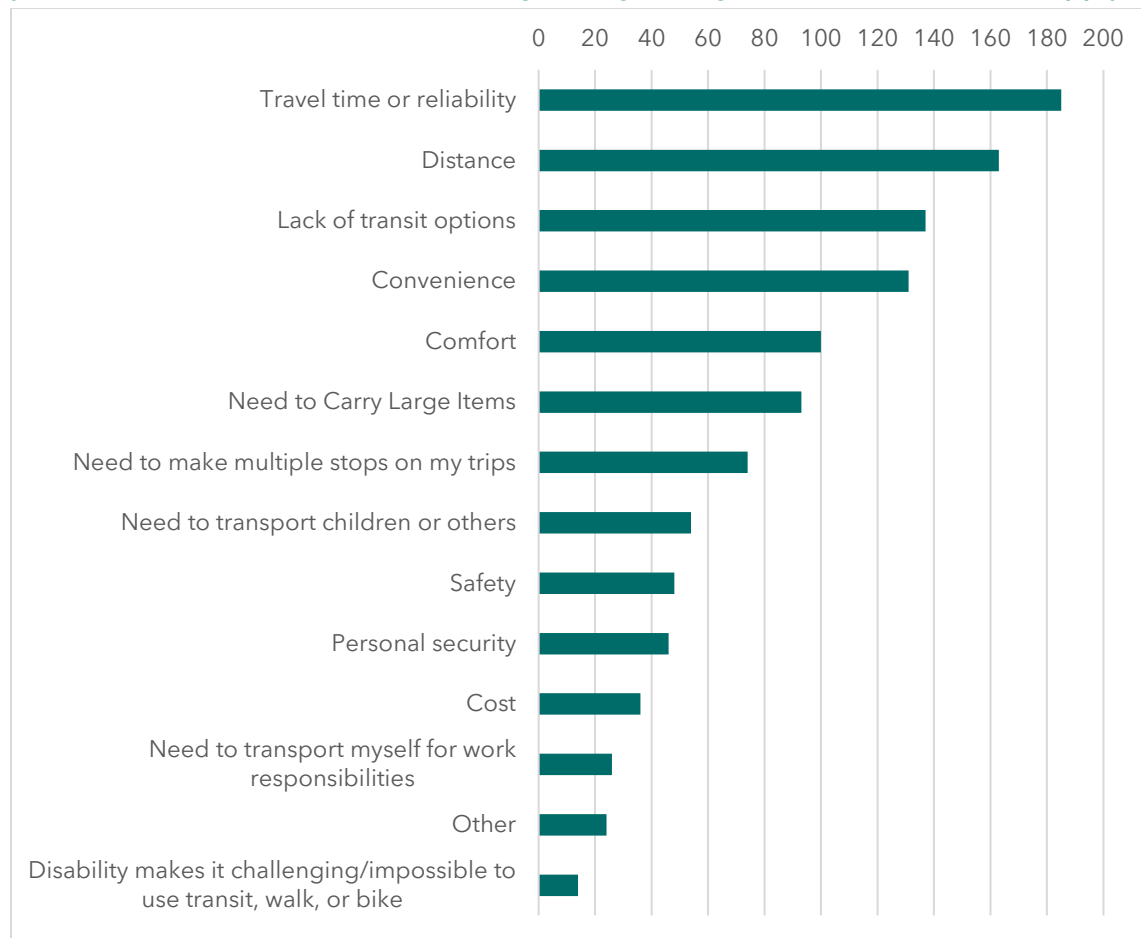


For trips that you would typically take from District 4 to areas outside of San Francisco, how often would you drive?

Answered: 244 Skipped: 49



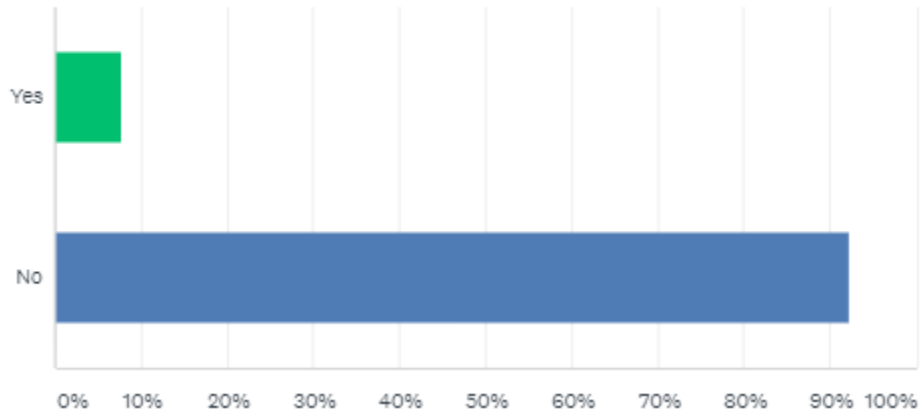
You indicated that you always or sometimes drive for trips outside of San Francisco. Why do you choose to drive instead of walking/biking/taking transit? (select all that apply)



Demographics of Survey respondents

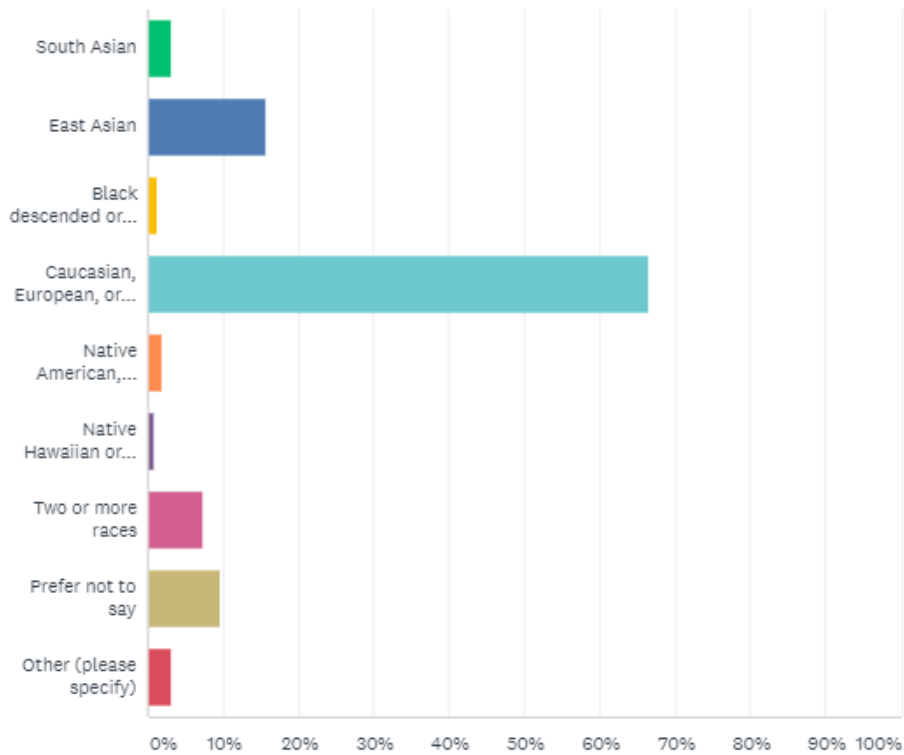
Do you identify yourself as Hispanic or Latinx?

Answered: 259 Skipped: 34



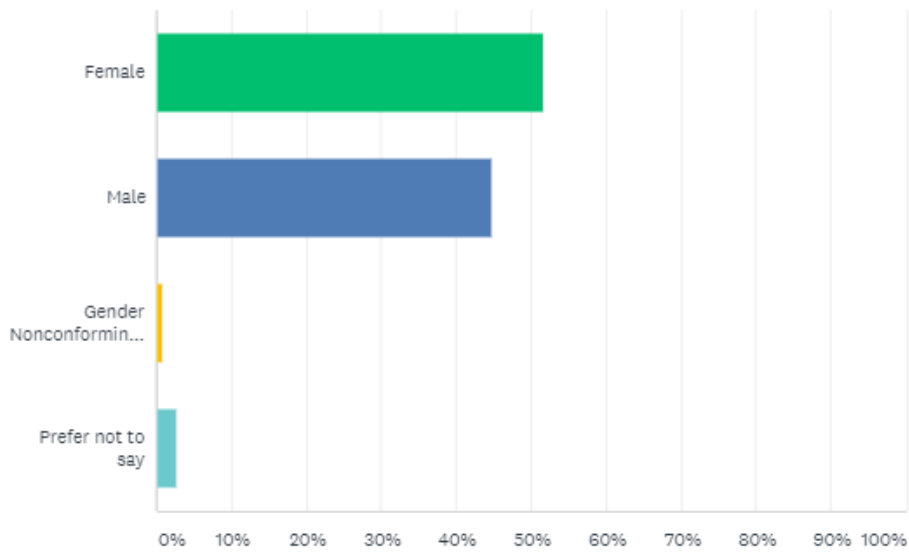
Do you identify yourself as (Check all that apply)

Answered: 260 Skipped: 33



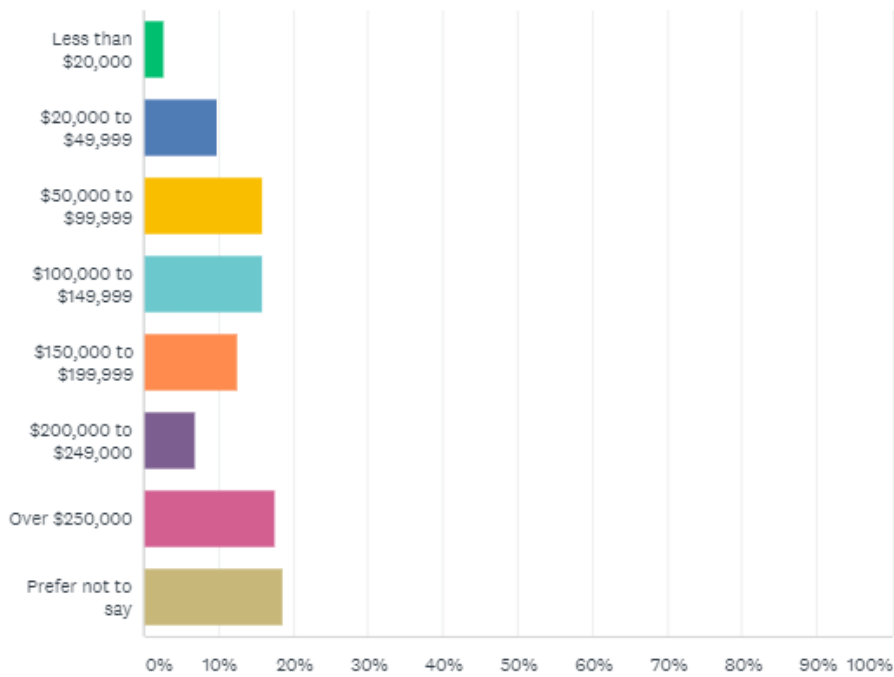
What is your gender identity?

Answered: 263 Skipped: 30



What is your annual household income?

Answered: 263 Skipped: 30



Chinese Focus Groups

The two Chinese focus groups raised similar common themes regarding public transit as those stated in the survey results:

- Transit service challenges
 - >> Not enough buses

- » Infrequent transit
- » Delays because of technical issues (especially on the N Judah)
- » Crowding, especially during commute times
- Difficulties carrying groceries on transit

PHASE 2

Project staff introduced the above solutions and gathered high-level feedback from participants. Throughout the event, checkpoints were held to provide participants an opportunity to share questions and comments and to engage with poll questions. There were approximately 190 attendees who participated in this outreach event.

The results from the poll questions suggests the following:

- **Express bus.** If there was an express bus between the Richmond, Sunset, and the Peninsula, participants indicated that they would be about 37% likely and very likely to consider taking transit instead of driving.
- **Improved north-south transit.** If the 29 and 28 bus lines came more frequently (about 5 minutes during commute times), participants indicated that they would be about 38% likely and very likely to consider taking transit instead of driving for short distance north-south trips.
- **Curbside loading zone.** Participants indicated that they would be about 33% likely and very likely to use a curbside loading zone in order to quickly access businesses on a commercial corridor.
- **Community shuttle.** Participants indicated that commercial districts (60%), major transit lines (37%), and open/space parks (31%) as the most important connections/destinations for the community shuttle. Additionally, a majority of participants indicated this service would be most useful during the day at off-peak hours (multiple choices could be selected).
- **Family neighborway network.** Participants indicated interest in commercial districts (55%), open space/parks (45%), the bike network beyond the Sunset (30%), and schools (29%) as connections/destinations most important for the neighborway network (multiple choices could be selected).

Beyond the interactive polls, staff also collected comments on the solutions via chat during the meeting.

APPENDIX A ATTACHMENT: DISTRICT 4 MOBILITY STUDY SURVEY TEXT

At the request of Supervisor Gordon Mar, the San Francisco County Transportation Authority is conducting the District 4 Mobility Study to explore ways to increase the share of walking, biking, and transit trips in the Outer Sunset and Parkside neighborhoods.

On a typical weekday before the pandemic, about 76% of trips starting or ending in District 4 were made by people driving with 35% being trips with people driving alone. High rates of driving increases congestion, making it more difficult for everyone to get around.

Amid the global pandemic, congestion has mostly vanished. We don't know exactly what the post-coronavirus future will look like. Nor do we know how the pandemic will affect driving trends. But we have the opportunity to use this time now to think about how to plan for more mobility options in District 4 in the future to support sustainability and economic vibrancy while reducing congestion.

TRANSPORTATION IN THE FUTURE

Thinking about the future, what goals should transportation improvements in District 4 support? (Rank the following goals)

- Sustainability
- Thriving local economy
- Health
- Affordability of transportation options
- Roadway safety
- Livability

Is there another goal not mentioned above? Please explain below.

- _____

For the following set of questions, please consider how you would typically travel and why you would choose those methods of travel **for trips prior to the shelter in place directive for the pandemic.**

How would you typically get around?

	Every day	Several times a week	Once a week	Less than once a week	Never
Drive					
Take local public transit like Muni					
Take regional					

public transit like BART or Caltrain					
Ride a bicycle					
Take a taxi or Uber/Lyft					
Ride a personal scooter or skateboard or similar device					
Use an accessible transit service such as paratransit					
Walking					
Rent a bike or electric scooter or similar device					

Other (please specify): _____

TRIPS WITHIN DISTRICT 4

This section asks about trips you would typically take within District 4 ***before shelter in place.***

District 4 Map



- For trips that you would typically take **within District 4**, how often would you drive?
 - Always drive
 - Sometimes drive
 - Never or rarely drive

[If they selected "Always drive"/"Sometimes drive"]

DRIVING IN DISTRICT 4

You indicated that you would always or sometimes drive for trips within District 4. Why would you choose to drive instead of walking/biking/taking transit? (select all that apply)

- Travel time or reliability
- Distance
- Comfort
- Need to make multiple stops on my trips
- Need to transport children or others
- Convenience
- Need to carry large items
- Personal security
- Safety
- Cost
- Lack of transit options
- Need to transport myself for work responsibilities
- Disability makes it challenging/impossible to use transit, walk, or bike
- Other: _____

[If they selected "Never drive" survey]

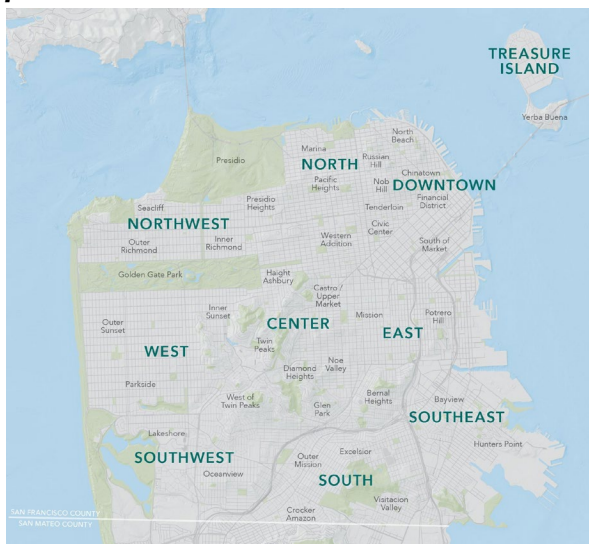
WALKING, BIKING, AND TAKING TRANSIT IN DISTRICT 4

You indicated that you would never or rarely drive for trips within District 4.

- What are some reasons you would choose to walk, bike or transit for trips within District 4? (select all that apply)
 - Don't own a vehicle/no access to a vehicle
 - Travel time or reliability
 - Distance
 - Comfort
 - It's more affordable
 - The need to make multiple trips
 - The need to transport children or others
 - Convenience
 - Personal security
 - Safety
 - It's more sustainable
 - The need to transport myself for work responsibilities
 - It's enjoyable and/or good exercise
 - I like to read, get work done, etc., while traveling
 - Parking is difficult
 - Other: _____

TRIPS TO OTHER PARTS OF SAN FRANCISCO

This section asks about trips you would typically take to other parts of San Francisco ***before shelter in place.***



- For trips that you would typically take from District 4 to other parts of San Francisco, which parts of the city would you be going? Please use the map above as a guide.
 - Northwest
 - North
 - Downtown
 - Center

- East
- Southwest
- South
- Southeast
- Treasure Island
- I don't often travel to other parts of San Francisco [skip to next section]
- For trips that you would typically take from District 4 to other parts of San Francisco, how often would you drive?
 - Always drive
 - Sometimes drive
 - Never or rarely drive

[If they selected "Always drive"/"Sometimes drive"]

DRIVING TO OTHER PARTS OF SAN FRANCISCO

You indicated that you always or sometimes drive for trips to other parts of San Francisco. Why would you choose to drive instead of walking/biking/taking transit? (select all that apply)

- Travel time or reliability
- Distance
- Comfort
- The need to make multiple stops on my trips
- The need to transport children or others
- Convenience
- The need to carry large items
- Personal security
- Safety
- Cost
- Lack of transit options
- The need to transport myself for work responsibilities
- Disability makes it challenging/impossible to use transit, walk, or bike
- Other: _____

[If they selected "Never drive" survey]

WALKING, BIKING, AND TAKING TRANSIT TO OTHER PARTS OF SAN FRANCISCO

You indicated that you would never or rarely drive for trips to other parts of San Francisco.

- What are some reasons you would choose to walk, bike or transit for trips within District 4? (select all that apply)
 - Don't own a vehicle/no access to a vehicle
 - Travel time or reliability
 - Distance
 - Comfort
 - It's more affordable
 - Need to make multiple trips

- Need to transport children or others
- Convenience
- Personal security
- Safety
- It's more sustainable
- Need to transport myself for work responsibilities
- It's enjoyable and/or good exercise
- I like to read, get work done, etc., while traveling
- Parking is difficult
- Other: _____

TRIPS OUTSIDE OF SAN FRANCISCO

This section asks about trips you would typically take to areas outside of San Francisco ***before shelter in place.***

- Would you regularly take trips regionally to areas outside of San Francisco. If so, where?
 - Peninsula (e.g. Daly City, Pacifica, South San Francisco, Burlingame, San Mateo)
 - East Bay (e.g. Alameda and Contra Costa Counties)
 - South Bay (e.g. Palo Alto, Santa Clara, San Jose, Cupertino)
 - North Bay (e.g. Marin, Sonoma or Solano Counties)
 - I don't often travel outside of San Francisco [skip to end]
- For trips that you would typically take from District 4 to areas outside of San Francisco, how often would you drive?
 - Always drive
 - Sometimes drive
 - Never or rarely drive

[If they selected "Always drive"/"Sometimes drive"]

DRIVING OUTSIDE OF SAN FRANCISCO

You indicated that you would always or sometimes drive for trips outside of San Francisco. What factors would make it difficult to instead walk, bike or take transit for these trips? (select all that apply)

- Travel time or reliability
- Distance
- Comfort
- The need to make multiple stops on my trips
- The need to transport children or others
- Convenience
- The need to carry large items
- Personal security
- Safety
- Cost
- Lack of transit options

- The need to transport myself for work responsibilities
- Disability makes it challenging/impossible to use transit, walk, or bike
- Other: _____

[If they selected "Never drive" survey]

WALKING, BIKING, AND TAKING TRANSIT OUTSIDE OF SAN FRANCISCO

You indicated that you would never or rarely drive for trips outside of San Francisco.

- What are some reasons you would choose to walk, bike or transit for trips outside of San Francisco? (select all that apply)
 - Don't own a vehicle/no access to a vehicle
 - Travel time or reliability
 - Distance
 - Comfort
 - It's more affordable
 - The need to make multiple trips
 - The need to transport children or others
 - Convenience
 - Personal security
 - Safety
 - It's more sustainable
 - The need to transport myself for work responsibilities
 - It's enjoyable and/or good exercise
 - I like to read, get work done, etc., while traveling
 - Parking is difficult
 - Other: _____

DEMOGRAPHIC QUESTIONS (ALL OPTIONAL)

The following demographic questions are intended to help us determine how well we are reaching a representative sample of residents. We intend for these responses to be anonymous unless you provide your email below. Your participation is voluntary.

- What is the zip code at your home address?
 - Fill in the blank
- What is the zip code at your work address?
 - Fill in the blank
- Do you identify yourself as Hispanic, Latino, or Latinx?
 - Yes
 - No
- Do you identify yourself as (Check all that apply)
 - South Asian

- East Asian
 - Black descended or African American
 - Caucasian, European, or White
 - Native American, Alaska Native, or other indigenous group
 - Native Hawaiian or other Pacific Islander
 - Two or more races
 - Prefer not to say
 - Other, please specify: _____
- What is your gender identity?
 - Female
 - Male
 - Gender Nonconforming or Non-binary
 - Prefer not to say
- What is your annual household income?
 - Less than \$20,000
 - \$20,000 to \$49,999
 - \$50,000 to \$99,999
 - \$100,000 to \$149,999
 - \$150,000 to \$199,999
 - \$200,000 to \$249,000
 - Over \$250,000
 - Prefer not to say
- How many total people are supported by this income? Enter number.

Thanks for participating! We'll use the feedback you provide to begin developing strategies to improve walking, bicycling and public transportation options for trips to, from and within District 4.

- If you'd like to stay involved in the study, please provide your name and email address. Name:

Email Address: _____

APPENDIX B: TRAVEL MARKET ANALYSIS

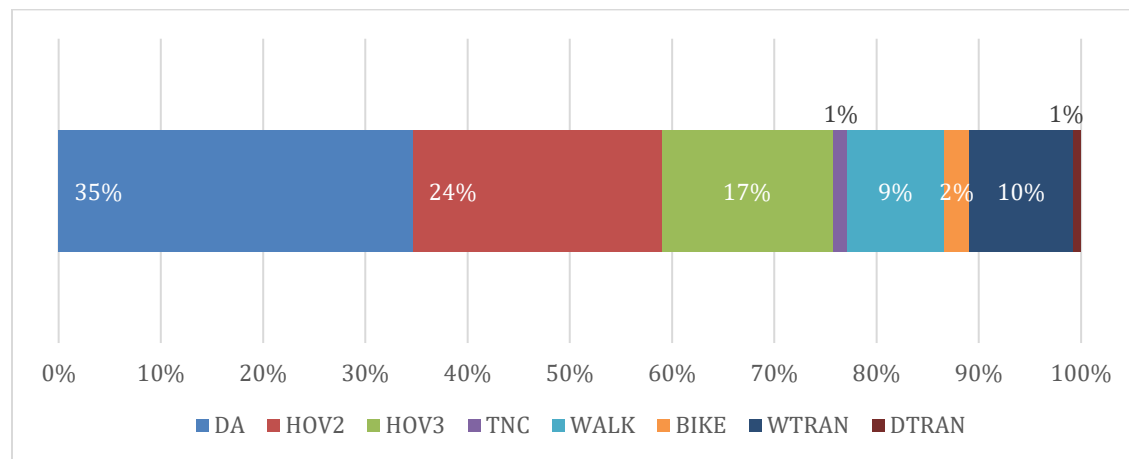
METHODOLOGY

The travel market analysis is based on outputs from the San Francisco County Transportation Authority's travel model, SF-CHAMP. The model run used represents the transportation system and conditions (transportation projects, transit services, population and jobs) in the year 2015. The model outputs represent trips taken on an average weekday.

OVERALL MODE SHARE

SF-CHAMP estimates that there are about 345,000 daily trips starting or ending in District 4. Of all those trips, about 76% are driving trips with 35% being completed with single-occupant vehicles. Reducing the share of drive alone trips is a primary focus of the Mobility Study.

FIGURE 1. MODE SHARE OF TRIPS TO, FROM OR WITHIN DISTRICT 4



DA = drive alone

HOV2 = carpool with 2 people

HOV3 = carpool with 3 people

WTRAN = transit trip accessed via walking

DTRAN = transit trip accessed via driving

TRIP ORIGINS AND DESTINATIONS

The next step was to identify common origins or destinations of trips that have one end in District 4. Focusing on the markets with the largest numbers helps identify where there may be opportunities to make the most impact on mode choice. Figure 1 is a map of the geographies used for the market analysis within San Francisco. Regional trip market geographies analyzed were San Mateo County, Santa Clara County, North Bay (Marin, Sonoma, Napa and Solano Counties combined), and East Bay (Alameda and Contra Costa Counties combined).

FIGURE 1. MAP OF TRIP MARKETS WITHIN SAN FRANCISCO



Table 1 shows District 4 associated trips by origin/destination. The largest trip market by far are trips within District 4. Those are then followed by trips to/from San Mateo County and the Richmond District.

TABLE 1. TRIPS WITH ONE END IN DISTRICT 4

ORIGIN/DESTINATION	NUMBER OF TRIPS	PERCENT OF TOTAL TRIPS
District 4	65,605	19%
San Mateo County	39,868	12%
Richmond (includes Golden Gate Park)	34,450	10%
Inner Sunset	28,847	8%
Downtown	25,406	7%
Hill Districts	22,964	7%
Western Market	19,807	6%
Parkmerced	18,125	5%
Outer Mission/Ingleside	14,910	4%
Mission/Potrero/Mission Bay/Dogpatch	13,161	4%
Marina/N. Heights	12,671	4%
East Bay	10,296	3%
Noe/Glen/Bernal	8,506	2%
South of Market	7,792	2%
N. Beach/Chinatown	6,983	2%

North Bay	6,734	2%
Bayshore	6,547	2%
Santa Clara County	2,511	1%
Total	345,183	

DESTINATIONS BY TRIP PURPOSE

Of all trips originating in District 4, 68% are non-commute trips, while 32% are commute trips. Trip purposes of non-commute trips include shopping, social, meals, escorting (e.g. adult accompanying children to after school program), personal business and social. Non-commute trips show similar patterns as all trips with the largest portions happening within District 4 or going to/from the Richmond District and San Mateo County.

Although not as large of a share as all other trips, commute trips are a common market to focus on mode shift efforts. This is because they are more predictable, regular trips that have consistent origin and destination while occurring at about the same time of day. The analysis shows that the common District 4 commute trip markets are to/from San Mateo County, Downtown and within District 4.

TABLE 2. NON-COMMUTE VS. COMMUTE TRIPS ORIGINATING IN DISTRICT 4

ORIGIN/DESTINATION	NUMBER OF NON-COMMUTE TRIPS	PERCENT OF NON-COMMUTE TRIPS	NUMBER OF COMMUTE TRIPS	PERCENT OF COMMUTE TRIPS
District 4	49,612	24%	15,993	12%
Richmond	23,971	12%	10,479	8%
San Mateo County	20,926	10%	18,942	14%
Inner Sunset	20,283	10%	8,564	6%
Hill Districts	14,910	7%	8,054	6%
Western Market	12,043	6%	7,764	6%
Parkmerced	11,181	5%	6,944	5%
Outer Mission	10,511	5%	4,399	3%
Downtown	7,967	4%	17,439	13%
Mission/Potrero	6,948	3%	6,213	4%
Marina/N. Heights	6,917	3%	5,754	4%
Noe/Glen/Bernal	5,424	3%	3,082	2%
Bayshore	3,578	2%	2,969	2%
East Bay	3,524	2%	6,772	5%
North Bay	2,761	1%	3,973	3%
SoMa	2,678	1%	5,114	4%
N. Beach/Chinatown	2,644	1%	4,339	3%
Santa Clara	488	0%	2,023	1%
Total	206,366	100%	138,817	100%

MODE SHARE BY MARKET

Figure 3 shows the mode share of the three largest trip markets. For trips within District 4, we see a large share of trips being taken by walking but we also see that the transit share was only about 4%. This is much lower than the citywide 20% transit mode share and the 10% share of all District 4 associated trips.

For trips to/from District 4 and San Mateo County, we see that 96% occur by car. About 84% of trips to/from District 4 and the Richmond District occur by car.

FIGURE 3. MODE SHARE OF LARGEST TRIP MARKETS

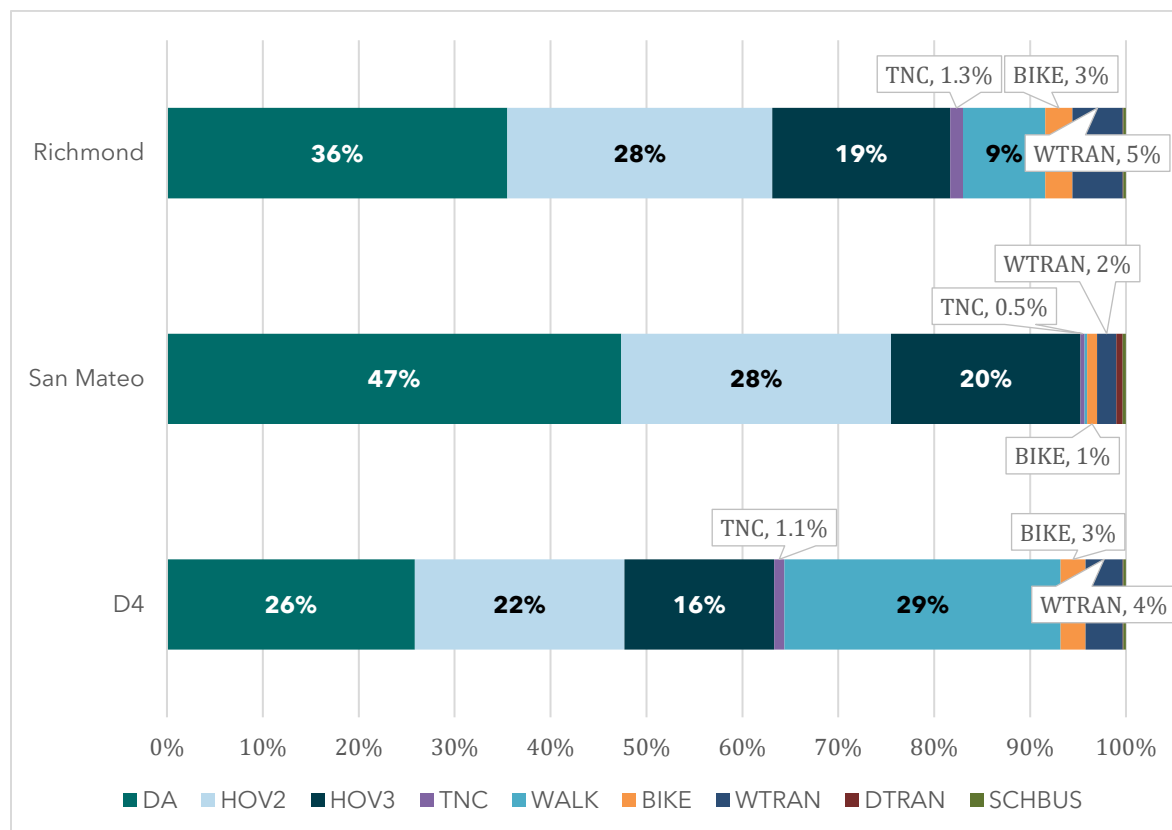
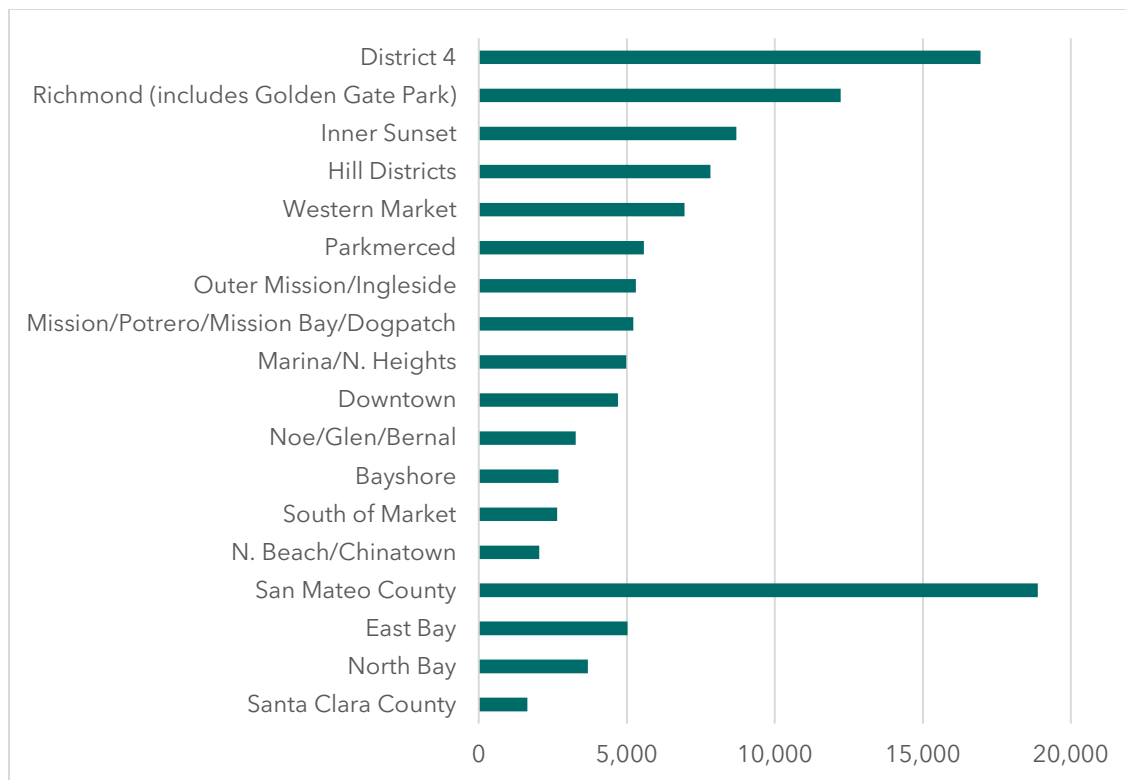


Figure 4 shows the number of drive alone trips by market.

- There are almost 19,000 drive alone trips from District to San Mateo County, representing 47% of all trips in that market. This is the single biggest drive alone trip market associated with District 4.
- Many of those drive alone trips are going nearby:
 - For trips occurring within District 4, about 17,000 trips are drive alone and represent 26% of trips in that market.
 - There are almost 12,000 drive alone District 4 trips to/from the Richmond District, with a 36% mode share in that market.
 - About 8,700 drive alone trips are between District 4 and the adjacent Inner Sunset. These represent 30% of trips in that market.

FIGURE 4. DRIVE ALONE TRIPS TO AND FROM DISTRICT 4



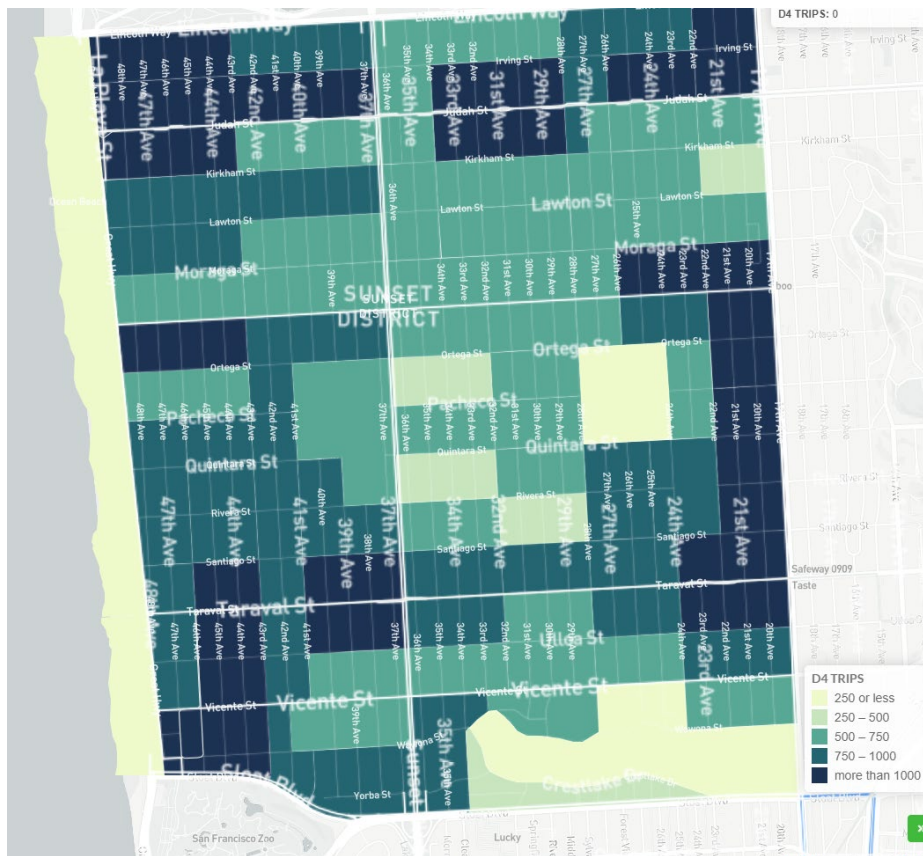
DRIVE ALONE ORIGINS AND DESTINATIONS

In an effort to better understand where trips are originating in District 4 and where District 4 trips are ending, staff developed a number of maps. The geography units used in these maps are transportation analysis zones (TAZs). In some portion of the city, such as Downtown, the TAZs are small in size (i.e. 1-2 blocks). In District 4, the TAZs range in size from 3-12 blocks.

Origins of District 4 Drive Alone Trips

Figure 5 shows that origins of all drive alone trips associated with District 4, regardless of destination. In looking at the District 4 origins, they seemed to be dispersed throughout the district with some concentrations along mid-19th Avenue, the southwestern corner of the district near the Zoo, and near some segments of the commercial districts of Judah, Irving, Noriega and Taraval.

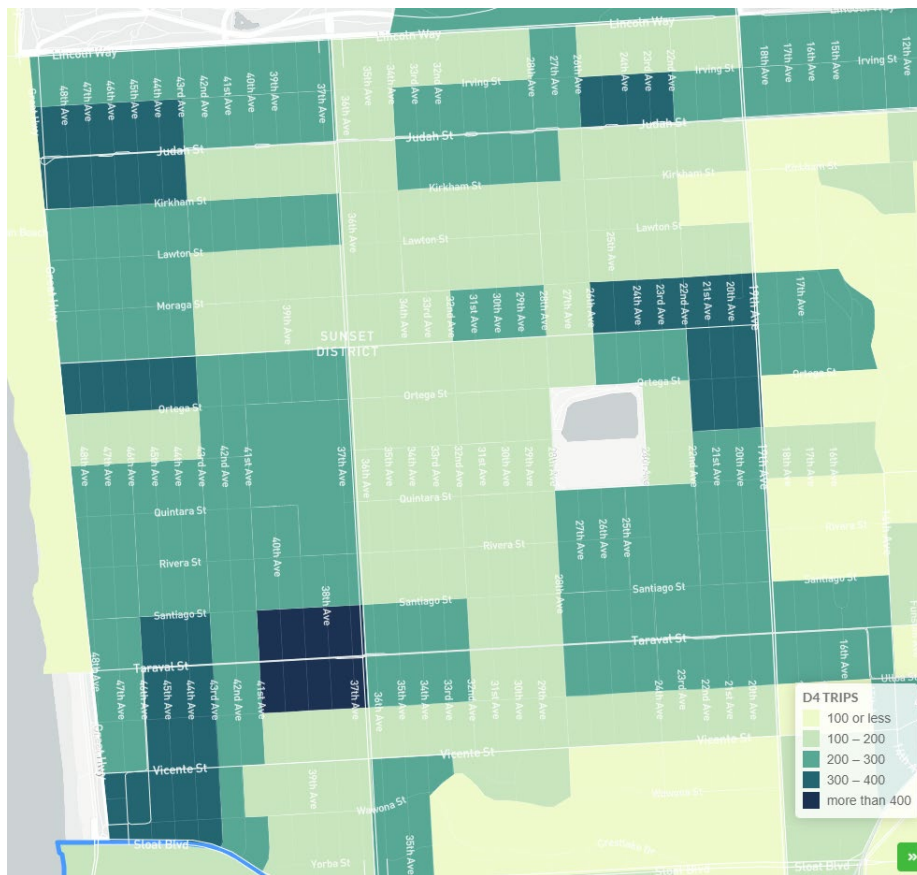
FIGURE 5. ORIGINS OF DISTRICT 4 DRIVE ALONE TRIPS



Destinations of District 4 Drive Alone Trips

Figure 10 shows us the destination of drive alone trips associated with District. These show similar patterns as the District 4 origins with more concentrations around the commercial districts. In particular, Outer Taraval (between 38th & 41st) being seems to be a hotspot. In addition to Taraval, there are concentrations of drive alone trips along commercial portions of Irving, Judah, and Noriega Streets.

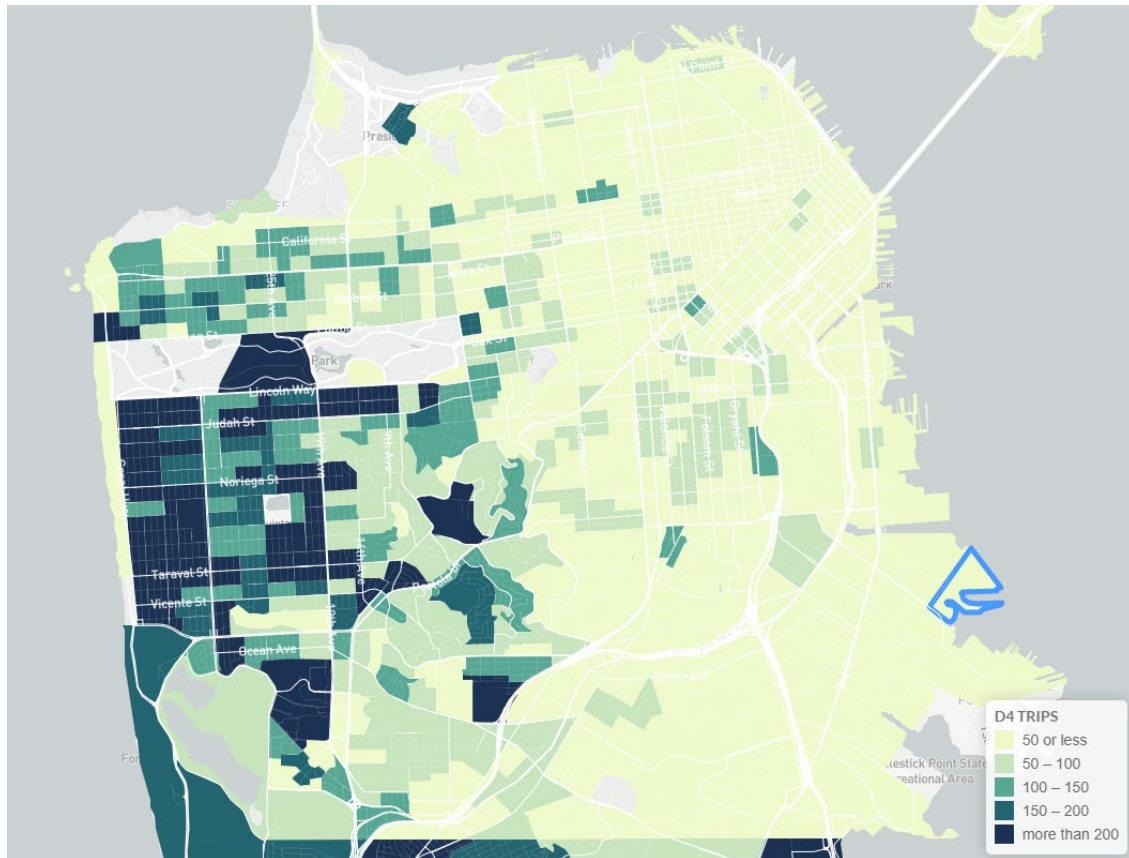
FIGURE 10. DESTINATIONS OF DRIVE ALONE TRIPS WITHIN DISTRICT 4



Trips from District 4 to Elsewhere in San Francisco

Figure 8 zooms out to show common destinations of drive alone trips within San Francisco. For areas within San Francisco but outside of District 4, the common destinations include the SF State/Stonestown Shopping Center area and City College of San Francisco as well as the Mount Davidson/West Portal, Golden Gate Park, parts of the Richmond District, and parts of the Inner Sunset.

FIGURE 8. SAN FRANCISCO DESTINATIONS OF DRIVE ALONE TRIPS ORIGINATING IN D4



GOLDEN GATE PARK TRIPS

As part of the scope, the Supervisor's office specifically requested an analysis of trips between District 4 and Golden Gate Park. There are approximately 540 daily driving trips to Golden Gate Park from District 4, with almost half being drive alone.

Trips to San Mateo County

There are many trips between District 4 and San Mateo County but they are dispersed throughout the county. Figure 12 shows concentrations of drive alone trip destinations primarily in the northern parts of the county in areas closest to District 4 (Westlake, Broadmoor).

FIGURE 12. NORTHERN SAN MATEO COUNTY DESTINATIONS OF ALL D4 DRIVE ALONE TRIPS

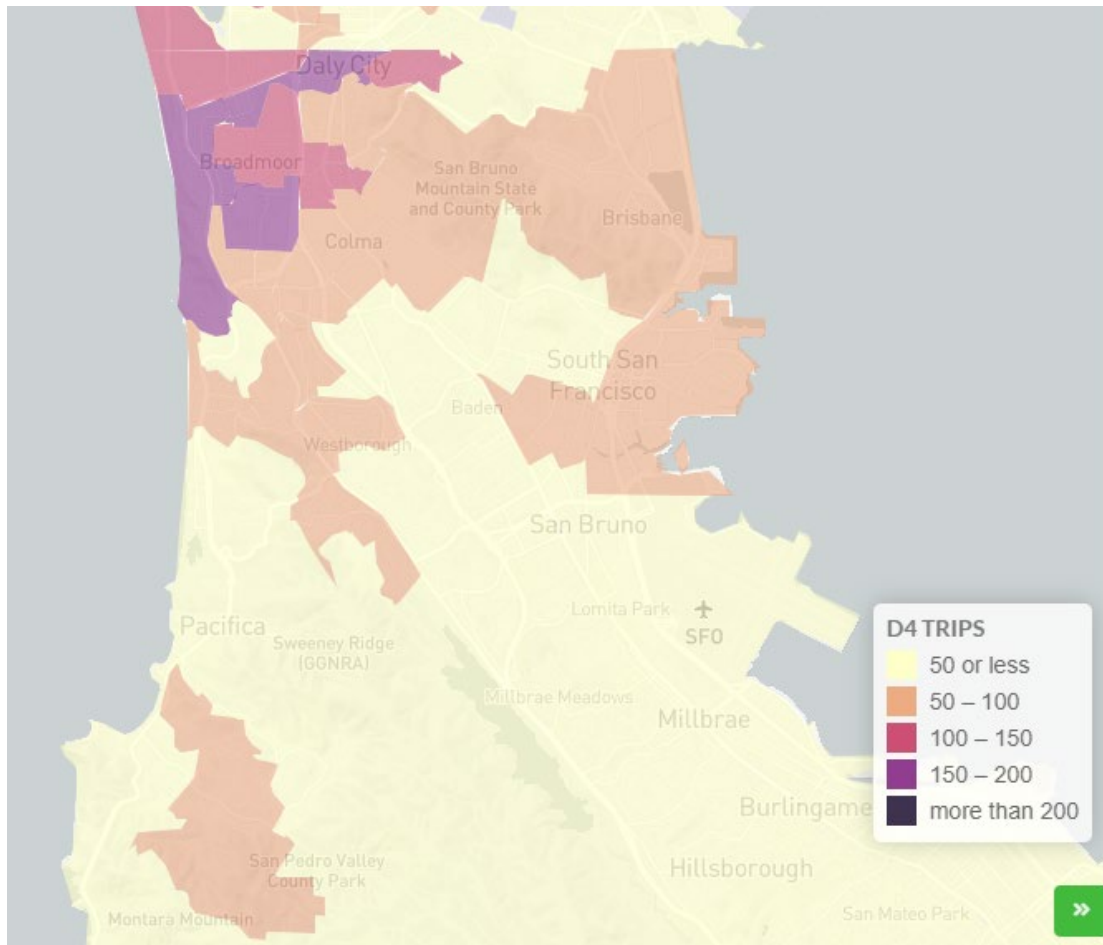
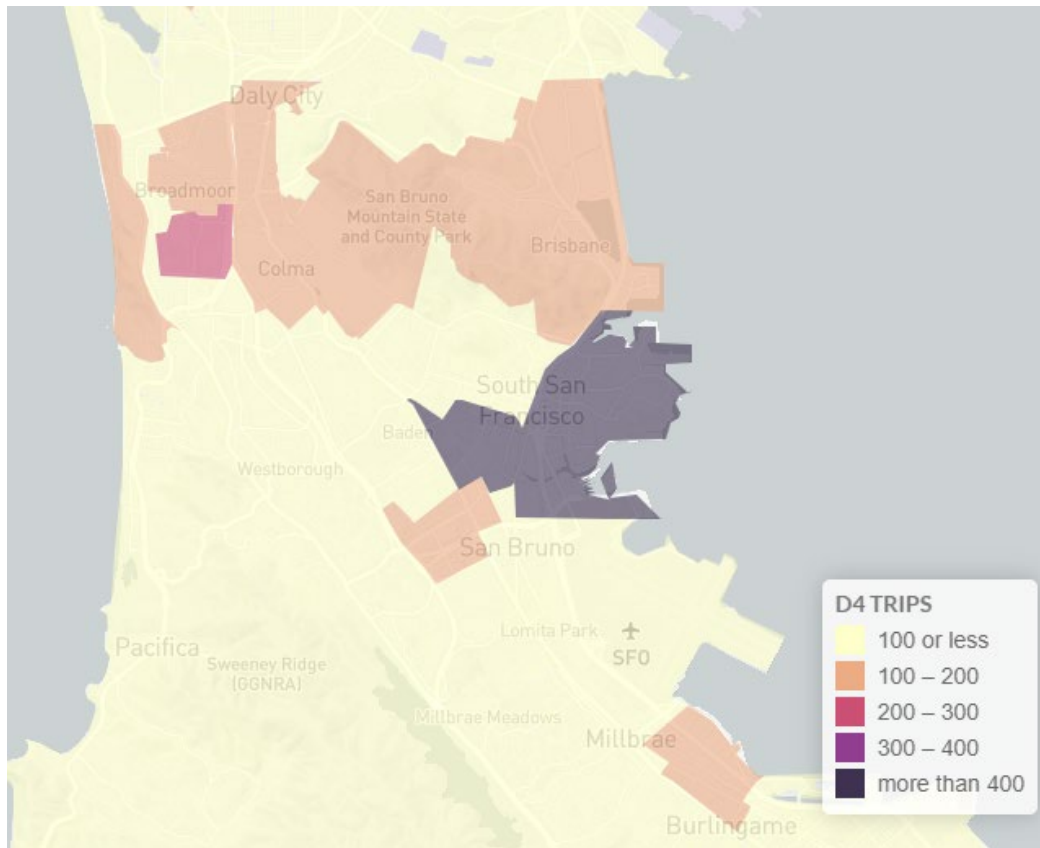


Figure 13 shows a few common commute location destinations that include:

- Oyster Point/South San Francisco and Brisbane
- Daly City: Seton Medical Center, Broadmoor, Westlake
- Colma

Each TAZ in this map only represents a few hundred daily trips, and are a small trip market compared to markets within San Francisco.

FIGURE 13. DESTINATIONS OF COMMUTE DRIVE ALONE TRIPS TO NORTHERN SAN MATEO COUNTY



KEY FINDINGS

- The single biggest vehicle trip market is between District 4 and San Mateo County. Due to the dispersed nature of San Mateo County destinations, transit service improvements are probably best focused on the northern part of San Mateo County where there are more trips to District 4. Carpool network development for Highway 1/I-280 may also be effective in incentivizing high-occupancy vehicle use, and more reliable travel, particularly in the peak period.
- There are about 17,000 daily drive alone trips that occur just within District 4 and low levels of transit use (4%). Enhancing transit, walking, and biking infrastructure may help create feasible options to automobile travel within the District 4, especially for short trips (shorter than 3 miles) which are the majority of daily trips in San Francisco.
- There are over 20,000 drive alone trips between District 4 and the Richmond and Inner Sunset. North-south transit connections are limited and warrant further planning and investment.