

MONTEREY ROAD COMPLETE STREET **PERFORMANCE MONITORING**

FINAL REPORT



PREPARED FOR PREPARED BY

MORGAN HILL
DOWNTOWN
...IT'S HAPPENING!

alta
PLANNING + DESIGN

INTRO

In order to improve the safety, mobility, vibrancy, and economic vitality of its Downtown business district, the City of Morgan Hill approved a six-month pilot of a road diet with a buffered bicycle lane replacing the outside travel lanes along Monterey Road between Main Avenue and Dunne Avenue. The selection of a buffered bicycle lane resulted from an extensive public engagement process during the Monterey Road Complete Street project which included regular Complete Street Committee meetings, City Council check-ins, meetings with public safety officials and local business owners, a symposium on creative placemaking, a weekend demonstration of multiple alternatives, and online and in-person surveys.

The City of Morgan Hill tested the selected alternative from February 18, 2015 to July 10, 2015 in order to evaluate how effective the Complete Street project was at meeting project goals. Over the five-month pilot period (the pilot ended a month earlier than originally planned due to a streetscape construction project along the study corridor), 15 performance measures that evaluate impacts on safety, multimodal mobility, vibrancy, and economic vitality were tracked and analyzed during three designated review periods: pre-pilot, mid-pilot, and end-pilot. The 15 performance measures were combined after each of the three review periods into a single Complete Street Scorecard to provide a snapshot view of how well the pilot was at meeting project goals.

Based on the results of the pilot, the City and its residents will have the ability to decide if the roadway configuration should become a permanent fixture, be modified to better accommodate the needs of Morgan Hill residents, or be returned to its pre-pilot state.

DATE: JULY 30, 2015

SAFETY

PAGE 7

MOBILITY

PAGE 8

VIBRANCY

PAGE 13

ECONOMY

PAGE 21

SCORECARD & CONCLUSION

PAGE 29

APPENDIX



PERFORMANCE MEASURES

- **Motor Vehicle Speed**
- **Emergency Response Time**
- **Collisions**
- **Reported Safety Concerns**
- **Travel Time Reliability**
- **Bicycle Counts**
- **Pedestrian Delay**
- **Transit Ridership**
- **Traffic Diversion**
- **Resident Opinion**
- **Pedestrian Counts**
- **Bicyclist Demographics**
- **Parking Turnover**
- **Noise**
- **Business Opinion**



PRE-PILOT

DEC. 18TH- FEB. 18TH



MID-PILOT

FEB. 19TH - APR. 18TH



CITY COUNCIL MEETING

MAY 20TH



END-PILOT

APR. 19TH - JUL. 10TH



CITY COUNCIL MEETING

AUG. 5TH



SAFETY

LITTLE CHANGE TO SAFETY FACTORS IN DOWNTOWN

In February 2014, a pedestrian fatality took place at the intersection of Monterey Road and 3rd Street, and 18 total collisions took place along the five-block corridor that same year. The Complete Street pilot attempted to address safety concerns without limiting emergency vehicle accessibility. Little to no change to the four safety-related performance measures took place over the five-month pilot period. The removal of speed bumps was offset by the addition of bike lanes, but motor vehicle speeds remained consistent throughout the pilot. This may be due to motor vehicles having fewer impediments, such as parked cars pulling directly into the vehicle lane or cars turning right blocking an intersection.

[MORE INFO](#)

MOTOR VEHICLE SPEED*

PRE MID END
27 → 27 → 27
MPH MPH MPH

**SPEED BUMP
REMOVAL OFFSET
BY BIKE LANES**
(Driver field of view still wide)



*85th percentile speeds (ideal speeds for a Downtown district range between 18 - 22 mph)

EMERGENCY RESPONSE

 **NO CHANGE**
No emergency runs routed through Downtown over 8 minutes in total response time



REPORTED CONCERNS

PRE MID END
0 → 0 → 2
Two residents reported observing near-misses or unreported non-injury collisions



COLLISIONS (REPORT AND NO REPORT)

PRE MID END
7.8 → 6 → 10
*Average number of report and no report collisions over 3-month intervals in 2014

SLIGHT INCREASE IN COLLISIONS
No bike- or pedestrian-related collisions during mid- and end-pilot periods. Vehicle collisions primarily due to unsafe speed and unsafe turning.



MOBILITY

IMPROVED ACCESS FOR PEOPLE 8 TO 80 YEARS OLD

People travel to Downtown Morgan Hill by foot, bicycle, car, bus, and train, but sometimes balancing all those modes can lead to tradeoffs among various users. The decision by residents to test buffered bike lanes over a five-month period created an opportunity to better understand these tradeoffs and get answers to long unanswered questions. Will people bike to Downtown, even if there are few and discontinuous bicycle facilities elsewhere? Will transit ridership decrease from fewer kiss-and-ride trips? Will people driving be more likely to yield to people crossing the street? Will motor vehicle travel time fluctuate dramatically from day to day? By the end of the pilot, the number of people bicycling nearly tripled, bus ridership increased, pedestrian delay remained static, and fluctuations in motor vehicle travel time returned to normal.

MORE INFO ●

BICYCLE COUNTS

PRE **MID** **END**
74 → **170** → **214**

**PEOPLE BIKING
NEARLY TRIPLED**
(189% increase from pre- to end-pilot)



TRANSIT RIDERSHIP

**↑ 3% BUS ON/OFFS
INCREASED***

at Downtown bus stops.
Total trip length
increased by 29 seconds.

*Adjusted for seasonality



PEDESTRIAN DELAY*



NO CHANGE
Pedestrian wait time
and the motor
vehicle yield rate did
not change from
pre- to end-pilot

*No significant traffic signal or intersection
alterations were made during the pilot outside
of reducing the number of travel lanes (overall
crosswalk width remained the same)



TRAVEL TIME RELIABILITY

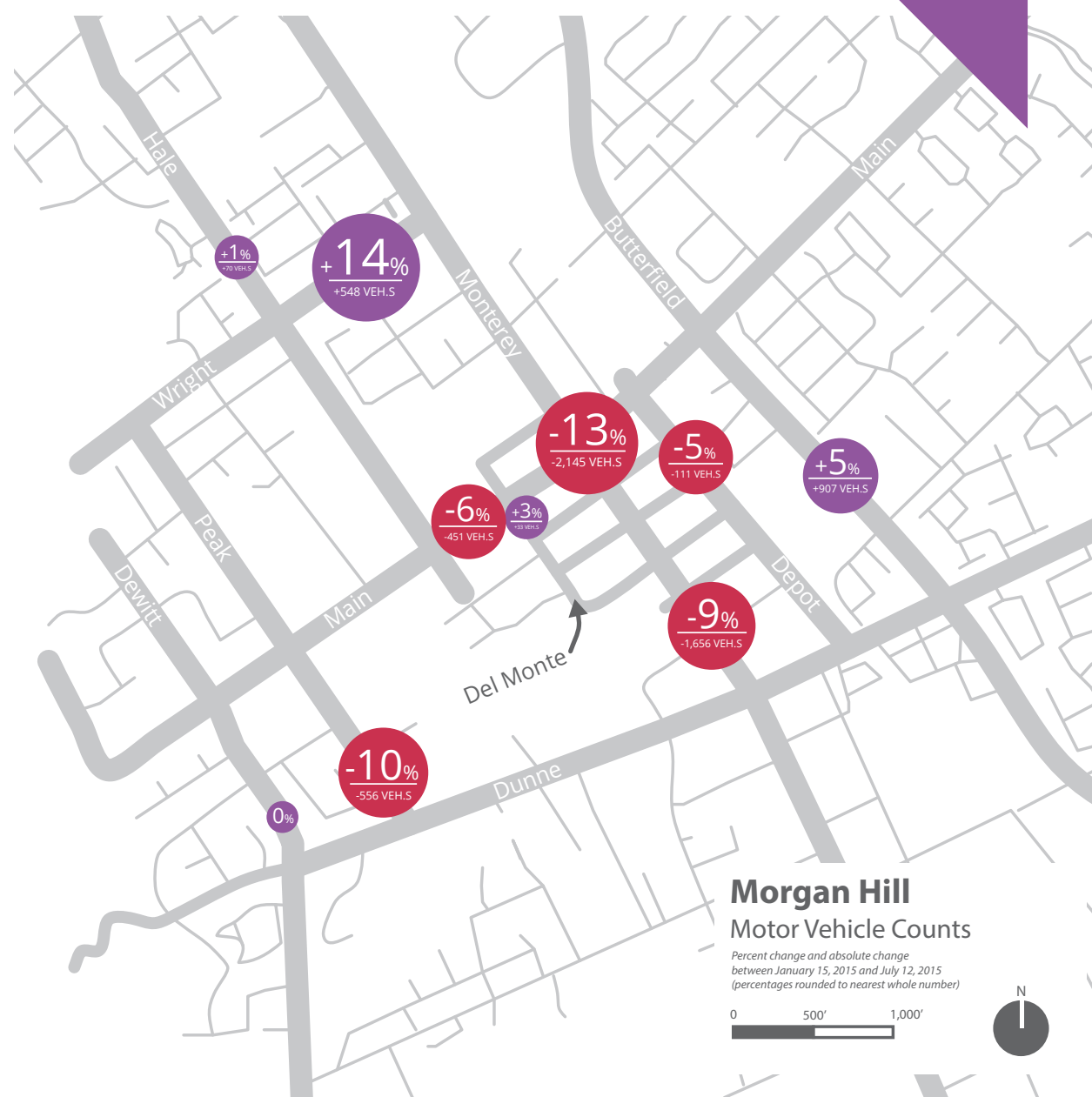
PRE **MID** **END**
20 → **52** → **15**
SEC **SEC** **SEC**

**MORE PREDICTABLE
TRAVEL TIMES**

After an initial adjustment period, the amount of
extra time people driving had to factor into their
morning trip through Downtown to account for
fluctuations in average trip time ("buffer time")
decreased from pre- to end-pilot by 25 percent



SHOULD DOWNTOWN MORGAN HILL SERVE AS A HIGHWAY 101 BYPASS?



QUANTITY V. QUALITY

One goal of the Complete Street pilot was to highlight that travelers have options for getting through and around Downtown Morgan Hill. The pilot tested the idea that although fewer vehicles will travel down Monterey Road and thus fewer people may be aware of Downtown businesses as they pass by, the Downtown area will become more attractive as a destination and attract trips specifically to take advantage of its many amenities. The number, speed, and type of motor vehicles using Monterey Road and nine parallel roads were tracked from pre-pilot to end-pilot periods. After an initial couple of months of fluctuating day-to-day changes in traffic patterns, the motor vehicle count data shows that travel patterns settled and ultimately 13 percent of pre-pilot traffic on Monterey Road shifted to parallel routes such as Butterfield Boulevard.

[MORE INFO](#)

LOUD AND LARGE VEHICLE SHIFT

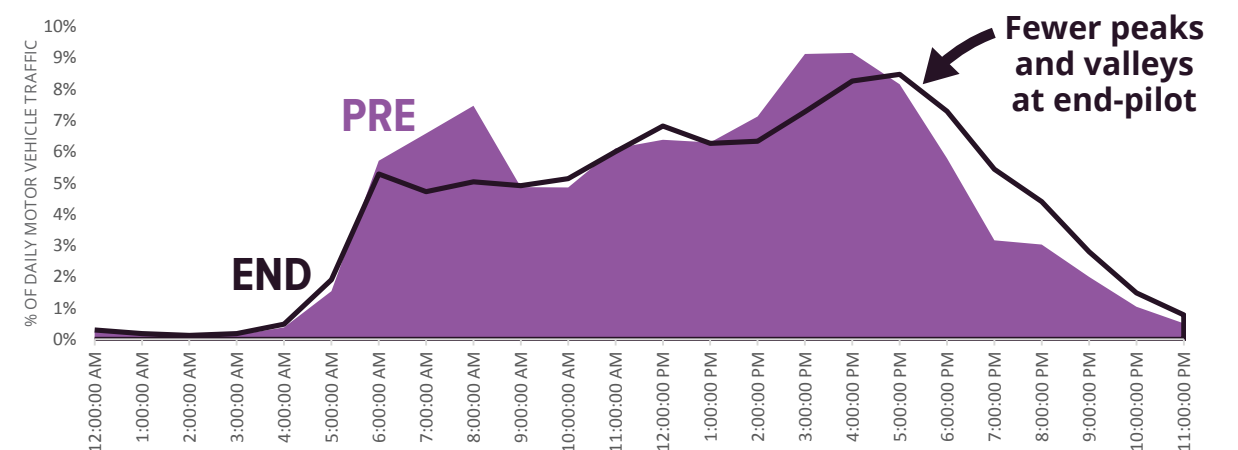
1/5 OF VEHICLES SHIFTING FROM MONTEREY RD. TO BUTTERFIELD BLVD. ARE LOUD AND LARGE VEHICLES

(More than 400 pick-up trucks, semi-trucks, and vans per day no longer use Downtown as a Highway 101 bypass, and Butterfield Boulevard now carries 1,000 more large and loud vehicles.)



PEAK PERIOD SPREADING: MONTEREY RD AND 1ST ST

MOTOR VEHICLE VOLUMES ARE MORE EVENLY DISTRIBUTED





VIBRANCY

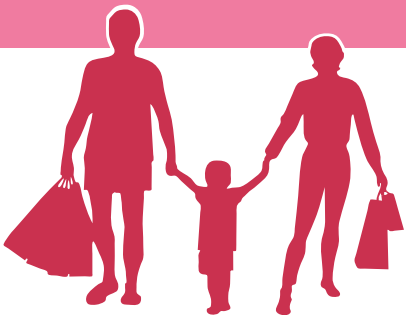
SLIGHT INCREASE IN VIBRANCY FACTORS IN DOWNTOWN

Measuring how exciting, stimulating, and welcoming a downtown business area feels can be hard to pin down with numbers. While data give a glimpse into the vibrancy of Downtown Morgan Hill, pedestrian counts, outdoor noise levels, and parking occupancy can serve as a starting point for understanding the Complete Street pilot’s impact on residents affinity for visiting Downtown. Over the five-month pilot, Downtown experienced modest gains in the number of pedestrians and occupied parking spaces, as well as a reduction in outdoor noise.

[MORE INFO](#)

PEDESTRIAN COUNTS

↑6% **NUMBER OF PEOPLE WALKING DOWNTOWN INCREASED**
between Main Avenue and Fifth Street



NOISE

PRE 70 dB → MID 70 dB → END 69 dB = 26% DECREASE IN SOUND ENERGY LEVELS
(Weighted average of “Equivalent Continuous Level” or LAeq is an exponential factor and not incremental)



PARKING OCCUPANCY*

PRE 43% → MID 45% → END 50% **INCREASE IN THE NUMBER OF OCCUPIED PARKING SPACES**
*85% occupancy represents the typical capacity of a downtown business district
and an increase in the parking turnover rate during the weekday evening peak period



TYPICAL PERSON RIDING A BIKE



PRE-PILOT

white, middle age, male commuter traveling alone



END-PILOT

non-white kids traveling in a group to/from school

"I have many friends who go to Britton and are scared of getting hit on their way to school. This makes the road safer."

Age represented the largest demographic shift among the type of people using active transportation through Downtown Morgan Hill. Between the pre- and end-pilot periods, the number of kids bicycling and riding scooters increased from 7 per day to 50 per day, while the number of adults also increased. With the location of the Complete Street pilot one block from Britton Middle School, students took advantage of the on-street bicycle facilities, with the percent of people under 18 years old bicycling on the sidewalk dropping from 71 percent to 34 percent.

MORE INFO ●

RACE: NON-WHITE

↑54% IN DIVERSITY
AMONG PEOPLE
BICYCLING

AGE: UNDER 18

↑614% IN THE
NUMBER OF
KIDS
BICYCLING

ON SIDEWALK + UNDER 18

↓52% IN THE PERCENT
OF KIDS RIDING
ON THE
SIDEWALK
and a 48% decrease overall

IN A GROUP

↑81% IN PEOPLE
BICYCLING IN A
GROUP



RESIDENT SURVEY

At each stage in the Complete Street pilot, the City of Morgan Hill facilitated a survey asking residents about how they travel to Downtown, whether or not they are in favor of the Complete Street pilot, and their vision for Downtown Morgan Hill. Approximately two-thirds of residents were not in favor of permanent implementation of the project during the pre-, mid-, and end-pilot periods, with 57 percent of those against the project during the end-pilot survey stating that they use Monterey Road as a commute route. Several themes also emerged out of the end-pilot survey, providing greater insight into what residents of Morgan Hill and nearby communities envision for Downtown Morgan Hill. The following sections are direct quotes from residents that summarize these central themes.

MORE INFO



- “We still do not have the ‘draw’ to downtown. Not enough unique places or restaurants.”
- “The complete street concept is a good one, but without the parking structure being complete and improved access, it is premature to implement it right now.”
- “I am afraid that the city is spending too much money trying to be like Willow Glen or downtown Campbell. We will never be like them because we have no night life after 9:30. People just go there for dinner.”
- “I keep hearing that Morgan Hill wants to be like Willow Glen or Los Gatos. That won’t ever happen with that short strip especially when the strip is hogged by non-shops.”
- “I would love downtown to be a thriving business area for our town. I do not want it to be over crowded where I can’t drive/walk/bike through it.”

WORRIED ABOUT BUSINESS

- “The biggest determining factor would be how the merchants feel about the changes and what effect it has had on their businesses.”
- “Not having store owners who are losing business.”
- “I would like to see all the local businesses be able to do well, not just the restaurants throughout Downtown.”

GOOD FOR KIDS

- “I want the downtown to become a destination. I am the mom of 2 kids and we chose our house because of the ability to walk downtown and enjoy being a part of this community. Since the complete streets have begun, it has felt so much safer to bike and walk downtown.”
- “We enjoy riding bikes with our kids to have lunch. Because of the one lane reduction accommodate biking, we now visit downtown more than we used to.”
- “The downtown should be safe for kids.”
- “My kids ride their bikes to school so I like the idea of more bikes.”
- “We seem to like the bike lane. The reason is many downtown restaurants yell and snip at the school kids riding, telling them they cannot ride on the sidewalk and are forced to jump to the street. That is very unsafe for children. We should think about the children’s safety.”

HWY 101 BYPASS

- “I live in Gilroy. Monterey Highway is a back-up commuter route when 101 is jammed. Narrowing the road destroys it’s utility as freeway overflow. There is no convenient transit from southbound Monterey Highway to Butterfield, and that area always jams as result. If you are going to choke out downtown car travel, you need to provide a smooth transition.”
- “It seems the plan doesn’t accommodate people trying to avoid downtown when they come from the west side.”
- “If I can’t drive through it, why drive to it.”
- “We have far too many commuters to funnel them to side streets.”
- “It appears that lots of folks still use Monterey as a thoroughfare rather than using Butterfield.”
- “I believe people will continue to find alternative routes for going through (i.e., Butterfield) and not rely on Monterey for commuting purposes.”
- “...You can’t develop a downtown if people driving cars see the downtown as a quick thoroughfare.”
- “Slow down the traffic further to divert to Butterfield. 95% of the car/trucks and noisy motorcycles are still just driving through for it’s still too easy to get through downtown rather than using Butterfield.”

HOW TO IMPROVE

- “Lights put into the street that flash when people want to cross.”
- “We need more of those ‘blinking’ crosswalks, like the one on Tennant near the dog park.”
- “Consider the use of indicator lights to caution drivers when a crosswalk is occupied.”
- “The crosswalks downtown need to have flashing lights like the one at the Britton School crosswalk.”
- “If the overall city had more bikeways outside of the downtown that were small child friendly to get downtown, we would bike there.”
- “A bicycle lane just down Monterey that does not connect to any other bike paths and with little to no way to lock up a bike downtownbike downtown makes no sense. If you don’t connect to anything, then do not pretend that Morgan Hill is magically bike-friendly.”

CHOOSING A COLLECTIVE VISION

- “I would love for Morgan Hill to no longer have an identity crisis, understanding that copying other cities doesn't make it better... We are a family-centered town, not quirky **Santa Cruz**, not highbrow **Santana Row**. Let's figure out an identity first, then a vision would be clear.”
- “Don't try to **Santana Row** it or over-think it.”
- “I would prefer people compared downtown to **Santana Row** not Capitol Expressway.”
- “Keep it small and cozy, not like **Santana Row**, that is why I moved to Morgan Hill, don't want to walk from parking garage to eat on the other side of town.”
- “Something similar to **Willow Glen**, **Santana Row**, or **Los Gatos**.”
- “...I would love to see downtown Morgan Hill turn into a similar setting like **Santana Row**...”
- “**Santana Row**-esque”
- “I like the way it is, quaint... I don't want it to be like **Santana Row**.”
- “A **Los Gatos** type downtown is nice, **Santana Row** is too much.”
- “I love downtown **Campbell** and **Los Gatos** and would love to see that same atmosphere here.”
- “I would like to see downtown Morgan Hill look more like downtown **Campbell**.”
- “Use **Los Gatos** as one example, draw in people who want to visit downtown.”
- “It becomes a destination like **Willow Glen** and **Los Gatos**.”
- “Continue to make it into a pseudo downtown **Los Gatos** to attract more people in the neighboring cities.”
- “The single road concept is great to encourage families to come downtown and for all to enjoy the eateries and shops with a better feel. Downtowns with a single lane such as **Campbell** and **Los Gatos** have great community action.”
- “We are a community of families who enjoy small town events, parks, recreation, an occasional dinner out, local bands, and most of all not attempting to be **Campbell** or **Los Gatos** or some other area.”
- “I don't want to live in a **Willow Glen** or **Los Gatos**! Keep MH quaint!”
- “Would like to see it used more as a meeting place. I have liked **Los Gatos** and have seen **Willow Glen** and **Campbell** grow over the years.”
- “I'd like it to be more like a downtown **Los Gatos**, filled with more anchor stores and restaurants.”
- “My opinion: don't make it like the Town of **Los Gatos**.”
- “I'd like it to be quaint like **Los Gatos**.”
- “Maybe like **Los Gatos** but not so elitist.
- “Not to make it **Los Gatos**.”
- “A mini **Los Gatos/Willow Glen** feel.”
- “We are not the the **Los Gatos** as I have heard some are trying to make us.”
- “Put it back the way it was and stop trying to act like **Saratoga**.”
- “Small and quaint like **Downtown Saratoga**.”
- “We are not **Santana Row** or **Los Gatos**. We should embrace who we are and make other cities copy us!”
- “Take a page from the Town of **Los Gatos**, **Saratoga**, or even **Mountain View** playbook for some good ideas.”
- “We're not **Los Gatos** or **Saratoga**, don't try to change our small town feel.”
- “If you look to **Los Gatos**, they have it figured out.”



DOWNTOWN MORGAN HILL



PALO ALTO



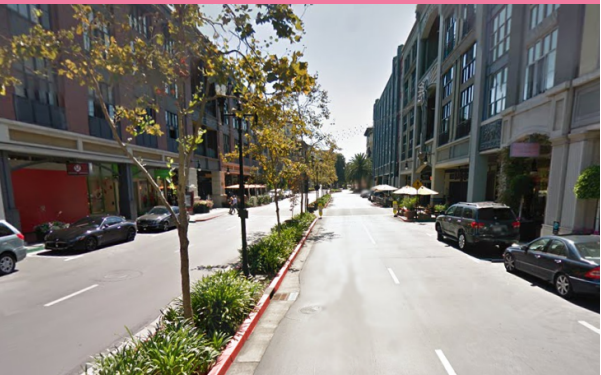
MT. VIEW



LIVERMORE



LOS GATOS



SANTANA ROW (with median)



CAMPBELL

IMAGE SOURCES: GOOGLE



ECONOMY

BUSINESS OPINION REMAINS DIVIDED

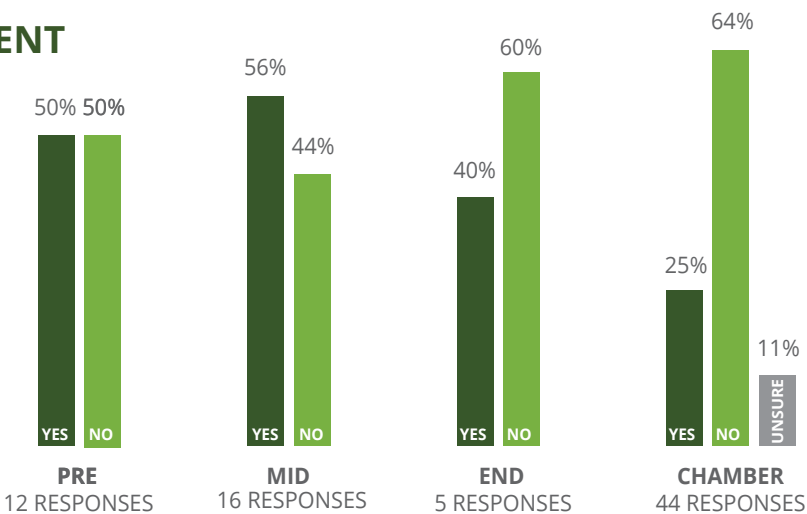
To assess the influence of the Complete Street pilot on Downtown businesses, the City administered surveys during the pre-, mid-, and end-pilot periods, and requested sales receipts. Participation in the survey varied over time, some confusion existed with the presence of a second survey, and few businesses provided sales receipts. By the end of the pilot, business opinion remained divided, and to better understand where businesses stood, in-person interviews were conducted.

[MORE INFO](#)

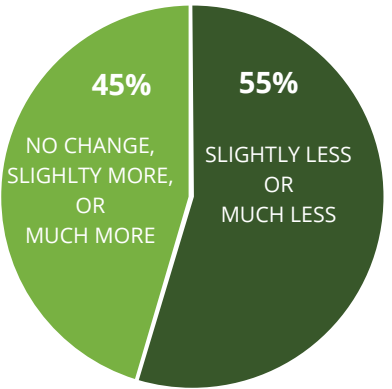
CITY CONDUCTED BUSINESS SURVEY

IN FAVOR OF PERMANENT IMPLEMENTATION?

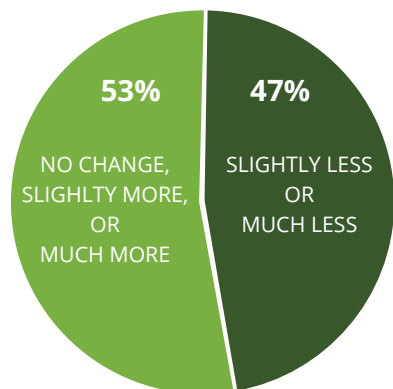
Businesses remained almost evenly split in their responses to the City survey. The Chamber of Commerce administered a separate end-pilot and found that roughly two-thirds of businesses are not in favor of making the project permanent.



CHAMBER OF COMMERCE CONDUCTED BUSINESS SURVEY



FOOT TRAFFIC (44 RESPONSES)



SALES (44 RESPONSES)

FASTFRAME

BUSINESS IS UP AT MORGAN HILL’S PICTURE FRAMING EXPERTS



Leah De Lane, owner

Leah De Lane, owner of Fastframe, a picture framing service at Monterey Road and 1st Street, initially did not know what to make of the pilot: “I was initially on the fence and saw both positives and negatives.” De Lane worried that the project would make commuters unhappy but believed it would be good for shoppers.

Although she’s noticed fewer cars are driving by her business per day, her sales numbers are up.

“Business is up at least 25 percent! I am down a full-time person, so with more staff time, that number could be higher.”

De Lane believes that there’s been some misinformation about the pilot, saying, “I was told that all business owners are against this,” adding that a better job could have been done at communicating the effects of the project. In particular, De Lane sees the number of school children using the bike lane as a positive change.

“ I have noticed more foot traffic past my store, especially on weekends. ”

In addition to having a positive impact on her business, the Complete Street pilot has encouraged a change in De Lane’s personal habits. “I bike to downtown from San Martin with my husband, which we had never done before.”

BOOKSMART

TRAFFIC CALMING STILL NEEDS MORE ATTENTION

For Brad Jones, the owner of BookSmart, a book and toy business at 2nd Street and Depot Street, the pilot has been successful at shifting the focus of Downtown. “The biggest thing was the sense of being in a place for humans instead of one for automobiles,” said Jones.

“ [The Complete Street Pilot] is not about bicycles. It’s about traffic calming. ”

“I like the traffic calming effect. There’s a sense of safety for pedestrians on the street. I think the pop-up park wouldn’t have been as successful without the pilot,” Jones commented. He also believes that more could be done. “There was a missed opportunity to show how downtown is attractive through movable planters which would also help better define the travel lanes. The field of view for motorists still feels wide open.”



IMAGE SOURCE: GOOGLE

Brad Jones, owner

As for the impact of the pilot on sales, Jones says that his sales receipts have been “steady” with no correlation to the project. Overall, he hopes whatever decision is made, the implementation is done well, explaining, “I’m in favor of doing one thing or the other. We could go further.”

M & H TAVERN

GOOD FOR SAFETY BUT WOULD PREFER PEDESTRIAN FOCUS



IMAGE SOURCE: GOOGLE

Sue Hall, owner

Sue Hall, owner of M & H Tavern on Monterey Road between 2nd Street and Third Street, is in favor of making the Complete Street project a permanent feature of Downtown but remains dubious about the influence the project has had. "I like the increased safety for the pedestrians, but I dislike the traffic," said Hall.

While M & H Tavern has experienced improved sales compared to the same period in 2014, Hall believes the pilot hasn't been the driving force, noting that an up-tick in sales were "because of an up-tick in the economy."

“[The project was] a good safety idea.”

To improve upon the pilot, Hall suggests the design needs to "be more foot friendly and [to] expand patios." She believes that the bike lanes could be narrowed to provide a promenade for pedestrians and hopes more lighting could be added along the roadway to further increase the safety for pedestrians.

MORGAN HILL WINE SHOP & CIGAR COMPANY

INEFFECTIVE PILOT SHOULD END 20-YEAR DEBATE



Jeff Burris, owner

Jeff Burris, owner of Morgan Hill Wine Shop & Cigar Company located at Monterey Road and 2nd Street, found the pilot to be ineffective at achieving its goals. While noting some reduction in the outdoor noise levels, Burris observed that many items stated as goals have become worse. "Motor vehicle speeds have increased, people are racing to meet the lights, the pedestrian crosswalks are blocked by cars, and bicyclists are less safe because of cars pulling out into the lane," said Burris.

“[The pilot] has validated everything that I thought that it would. It’s still a bad idea.”

"I liked the idea of doing the trial in order to settle the 20-year debate," said Burris. "Hopefully the trial will put an end to the discussion. At least from the stand point of retail business, this is a bad idea."

Burris believes Morgan Hill may not be ready for this change. "A lot of cities have gone from four lanes to two lanes successfully when there was a reason to go to that area... there was a draw, enough business had been built up and there was an extensive variety of businesses. That could be the case for Morgan Hill once we become a destination, but we are not a destination like Willow Glen... not yet."

BUBBLES WINE BAR AND BISTRO

SALES ARE STEADY, BUT GROWTH RATE COULD BE BETTER



IMAGE SOURCE: GOOGLE

David Dindak, owner

David Dindak, owner of Bubbles Wine Bar and Bistro at Monterey Road and 5th Street, believes the Complete Street pilot has hampered growth for his business. “We’re too new to accurately compare this year’s sales to last years. We’ve continued to be on an upward growth pattern since opening [in January of 2014], but we’re not growing at the same rate as before the pilot started,” said Dindak.

“I don’t like the fact that our business isn’t growing at the same rate [as it was before Complete Street project began],” Dindak commented. “Shifting traffic from downtown is decreasing the number of potential customers.”

“I hear people say, ‘People will learn, people will learn.’ I’m not seeing it.”

While initially open to the possibility of the Complete Street pilot, Dindak doesn’t think Downtown is quite positioned to handle a permanent change. I went from ‘let’s see what happens’ to ‘not a good idea.’ I don’t think it has helped businesses. Maybe we’re not ready for this right now.”

BUSINESS SALES INFORMATION

SALES UP FOR SOME BUSINESSES, DOWN FOR OTHERS

The Morgan Hill Chamber of Commerce collected voluntarily-submitted, confidential sales data from businesses within and around the Downtown in order to gauge the impact of the pilot on business health. Six businesses representing a mix of restaurants and retail submitted sales data for the time period October 2013 to June 2015. Among the six businesses that submitted data, four reported increased year-over-year sales comparing March 2014 - June 2014 sales to March 2015 - June 2015 sales, and two reported decreased sales over the same time period.

- Business #1: decreased 9.3 percent
- Business #2: increased 8.6 percent
- Business #3: decreased 48.1 percent*
- Business #4: increased 11.0 percent
- Business #5: increased 7.7 percent**
- Business #6: increased 24.4 percent

*No pre-March 2014 data available
** No June 2015 data reported



DOWNTOWN BUSINESS OWNERS



COMPLETE STREET SCORECARD

Consider the following: a person hands you a newspaper and asks, “How’s the stock market doing?” Would you examine each of the 5,000+ stocks listed on the financial pages to come up with a response? Probably not. A quicker and more efficient method would be to examine one of the several performance indexes, such as the Standard and Poor’s Index (S&P 500) or the Nasdaq, which provide information on general trends at a glance. This concept can be applied on a smaller scale by translating the Complete Street pilot’s 15 performance measures into a single “Complete Street Scorecard.” The Complete Street Score by itself doesn’t mean much, but when compared across the pre-, mid-, and end-pilot periods, general trends start to emerge.

HOW DOES THE COMPLETE STREET SCORECARD WORK?

The Complete Street Scorecard consists of three elements:

- **Performance Levels** - potential outcomes for each performance measure are listed across a 1 - 5 range, where 1 represents a low performing street and 5 represents a high performing street. After data is collected and processed for each measure, a performance level value is assigned to the measure based on where it falls within the range.
- **Weights** - After the performance level is determined, it is then multiplied by a weight. The weight allows for performance measures that are more important to Morgan Hill residents to have a greater influence on the final score. The weighting for the Complete Street Scorecard was calculated off results from the pre-pilot resident survey.
- **Scores** - Once the performance level is multiplied by its weight, a score for each measure is calculated. Finally, all the scores for all 15 performance measures are totaled to create a single Complete Street Score.

HOW IS IT WEIGHTED?

Using results from the pre-pilot resident survey, the 15 performance measures were ranked by survey respondents:

1. Emergency Response Time - emergency runs that are delayed due to traffic congestion
2. Motor Vehicle Speed - 85th percentile speed of motor vehicles
3. Pedestrian Counts - number of people walking through intersection
4. Travel Time Reliability - how little fluctuation there is between one trip to the next
5. Collisions - total number of collisions involving information exchange facilitated by police
6. Resident Opinion - number of residents in favor of implementing the project
7. Business Opinion - business owners in favor of permanently implementing the project
8. Pedestrian Delay - pedestrian level of service at intersections without traffic signals
9. Parking Occupancy - number of Downtown parking spaces filled by cars
10. Traffic Diversion - loud/large vehicles shifting from Monterey Rd. to Butterfield Blvd.
11. Noise - outdoor sound levels
12. Bicycle Demographics - percent of kids and women bicycling
13. Safety Concerns - number of emails or phone calls sent to City expressing safety issues
14. Bicycle Counts - number of people bicycling Downtown
15. Transit Ridership - number of on/off's at Downtown bus stops

PRE-PILOT SCORECARD

Pre-Pilot		Performance Level					Calculations			
Performance Measure		1	2	3	4	5	Value	Level	Weight	Score
Safety	Emergency Response Time	4	3	2	1	0	0	5	9	44
	Motor Vehicle Speed	27	25	23	21	19	27	1	9	9
	Reported Safety Concerns	4	3	2	1	0	0	5	4	21
	Collisions	10	8	6	4	2	8	2	7	14
Mobility	Travel Time Reliability	00:24	00:19	00:15	00:11	00:06	00:20	2	8	15
	Bicycle Counts	0	50	100	150	200	74	2	4	8
	Pedestrian Delay	E	D	C	B	A	A	5	6	30
	Transit Ridership	359	363	368	372	376	369	2	4	8
	Traffic Diversion	62%	58%	54%	50%	48%	58%	2	6	11
Vibrancy	Noise	72.0	71.0	70.0	69.0	68.0	70.3	3	5	15
	Bicyclist Demographics	20%	25%	30%	40%	45%	28%	3	4	13
	Pedestrian Counts	325	350	375	400	425	348	2	8	16
	Parking Occupancy	0.43	0.46	0.50	0.54	0.57	0.43	1	6	6
	Resident Survey	30%	40%	50%	60%	70%	35%	2	7	13
Economy	Sales	-	-	-	-	-		-	9	0
	Business Survey	30%	40%	50%	60%	70%	50%	3	6	19
Complete Street Score										241
Complete Street Goal										275

PRE-PILOT SCORE: 241

MID-PILOT SCORECARD

Mid-Pilot		Performance Level					Calculations			
Performance Measure		1	2	3	4	5	Value	Level	Weight	Score
Safety	Emergency Response Time	4	3	2	1	0	0	5	9	44
	Motor Vehicle Speed	27	25	23	21	19	27	1	9	9
	Reported Safety Concerns	4	3	2	1	0	0	5	4	21
	Collisions	10	8	6	4	2	6	3	7	21
Mobility	Travel Time Reliability	00:24	00:19	00:15	00:11	00:06	00:52	1	8	8
	Bicycle Counts	0	50	100	150	200	170	4	4	16
	Pedestrian Delay	E	D	C	B	A	A	5	6	30
	Transit Ridership	359	363	368	372	376	386	5	4	19
	Traffic Diversion	62%	58%	54%	50%	48%	56%	3	6	17
Vibrancy	Noise	72.0	71.0	70.0	69.0	68.0	69.7	3	5	15
	Bicyclist Demographics	20%	25%	30%	40%	45%	43%	5	4	21
	Pedestrian Counts	325	350	375	400	425	331	1	8	8
	Parking Occupancy	0.43	0.46	0.50	0.54	0.57	0.45	2	6	11
	Resident Survey	30%	40%	50%	60%	70%	34%	1	7	7
Economy	Sales	-	-	-	-	-	-	-	9	0
	Business Survey	30%	40%	50%	60%	70%	56%	4	6	26
Complete Street Score										271

MID-PILOT SCORE: 271

END-PILOT SCORECARD

End-Pilot		Performance Level					Calculations			
Performance Measure		1	2	3	4	5	Value	Level	Weight	Score
Safety	Emergency Response Time	4	3	2	1	0	0	5	9	44
	Motor Vehicle Speed	27	25	23	21	19	27	1	9	9
	Reported Safety Concerns	4	3	2	1	0	2	3	4	12
	Collisions	10	8	6	4	2	10	1	7	7
Mobility	Travel Time Reliability	00:24	00:19	00:15	00:11	00:06	00:15	3	8	23
	Bicycle Counts	0	50	100	150	200	214	5	4	20
	Pedestrian Delay	E	D	C	B	A	A	5	6	30
	Transit Ridership	359	363	368	372	376	379	5	4	19
	Traffic Diversion	62%	58%	54%	50%	48%	41%	5	6	28
Vibrancy	Noise	72.0	71.0	70.0	69.0	68.0	68.5	4	5	20
	Bicyclist Demographics	20%	25%	30%	40%	45%	39%	4	4	17
	Pedestrian Counts	325	350	375	400	425	368	3	8	24
	Parking Occupancy	0.43	0.46	0.50	0.54	0.57	0.50	3	6	17
	Resident Survey	30%	40%	50%	60%	70%	32%	1	7	7
Economy	Sales	-	-	-	-	-	-	-	9	0
	Business Survey	30%	40%	50%	60%	70%	40%	2	6	13
Complete Street Score										289

END-PILOT SCORE: 289



CONCLUSION

The best way to understand how well the Complete Street project performed is to look back at the project’s original purpose and need statement developed by the Complete Street committee, a group of residents and business owners tasked with shaping the goals of the Complete Street pilot, and compare it to the outcomes of the five-month pilot.










Purpose:

The purpose of the Monterey Road Complete Street Project is to improve the livability and economic vitality of the Monterey Road corridor between Main Avenue and Dunne Avenue by enhancing the pedestrian environment, safely accommodating bicyclists, and reducing the noise, air pollution, and other negative impacts associated with motor vehicle traffic. The project will create an attractive, thriving and vibrant community gathering place by fostering a safe and inviting experience for all, while preserving mobility for those accessing businesses, schools, services, transit, and other key destinations.

Need:

Monterey Road between Main Avenue and Dunne Avenue is currently configured as a four-lane divided roadway that once served as a state highway. The roadway has parallel on-street parking and sidewalks on both sides and left-turn pockets at intersections. This four-lane cross-section encourages motorists to travel above the posted speed limit, weave between lanes, and jockey for position at traffic signals, which negatively impacts the pedestrian and outdoor dining experience along the corridor. Outdoor dining and other social activities are frequently interrupted by noise from accelerating motor vehicles, loud motorcycles, and other heavy truck traffic travelling along the roadway. The roadway also serves as a route for regional motor vehicle trips that may be better served by the US 101 freeway and/or the newly completed Butterfield Boulevard. The width of the Monterey Road travelway, coupled with long traffic signal cycles and the tall median creates two unconnected sides of the roadway for people, as crossing the street is uncomfortable and uninviting, especially for children and seniors. The lack of bicycle accommodations to and through the corridor leads to unpredictable and unsafe behavior by both motorists and cyclists when they encounter each other. In addition, there is a lack of dedicated and secure bicycle parking. In many places, the sidewalks are too narrow for two or more pedestrians to walk side by side due to obstacles in the sidewalk area. The corridor lacks public space (beyond outdoor dining) and placemaking design and activities to capture people’s attention and extend their experience and time in downtown Morgan Hill.

BOTTOM LINE

-  **Limit motor vehicle travel above the speed limit**
Motor vehicle speeds stayed the same pre- to end-pilot
-  **Decrease weaving between lanes**
Removal of one travel lane eliminated weaving
-  **Decrease jockeying for position at traffic signals**
Removal of one travel lane eliminated jockeying
-  **Improve the pedestrian experience**
Pedestrian counts increased from pre- to end-pilot
-  **Reduce outdoor noise levels**
Outdoor noise levels decreased by 26 percent
-  **Make crossing Monterey Road easier for pedestrians**
Pedestrians only had to cross one travel lane at a time
-  **Improve bicyclist comfort levels**
Bicycle counts increased nearly threefold
-  **Provide secure bicycle parking**
No new bicycle parking was installed
-  **Create public space**
New public space included a pop-up park and bike hub

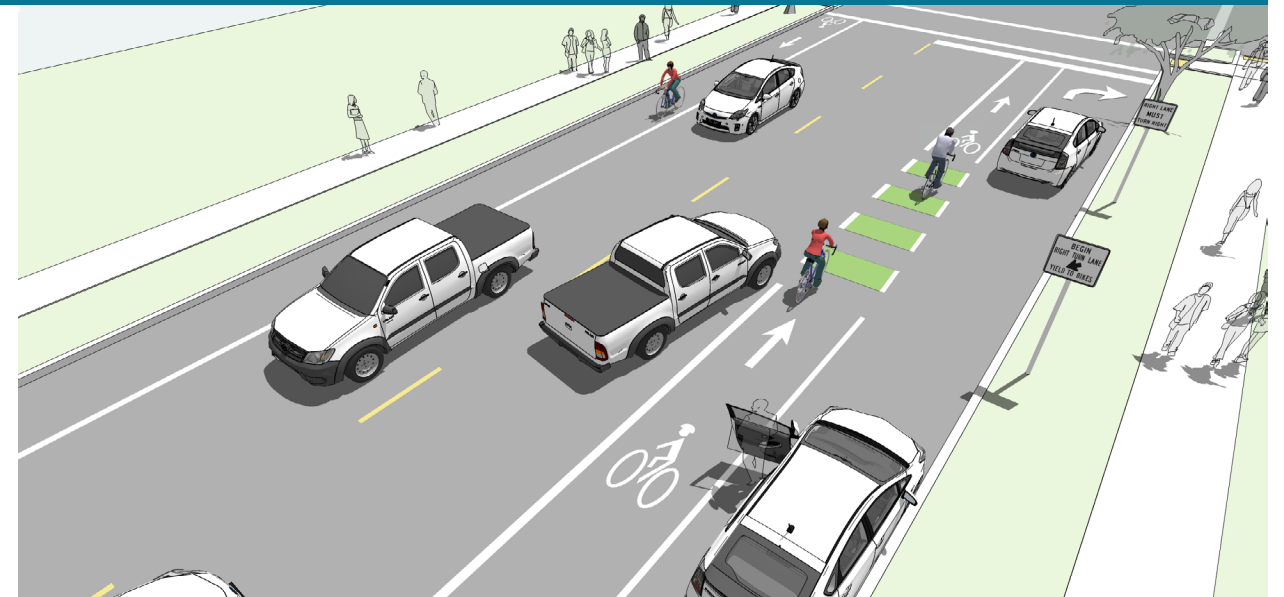
PREFERRED OPTION

1

ENHANCED 2-LANE CONFIGURATION

Full implementation would include the installation of additional safety, mobility, and connectivity features to address shortcomings identified over the five-month period. Additional enhancements could include:

- Continue to monitor business health through quarterly sales tax receipt data
- Study the signal timing at the intersection of Monterey Road and Main Avenue and the potential conversion of the outside westbound travel lane to a shared through/right-turn lane
- Shorten the bicycle mixing zones to 50 feet in the buffered bicycle lane
- Add advanced yield bars, green pavement markings, rectangular rapid flashing beacons, and other safety enhancements
- Continue to explore ways to reduce motor vehicle speed through Downtown, such as reducing the width of travelways
- Encourage increased enforcement in Downtown of existing truck size limits
- Widen and add buffers along the existing bicycle lanes between Cochrane Road and Main Avenue and add bicycle wayfinding between the Coyote Creek Trail and Downtown
- Remove a northbound travel lane under the railroad bridge to allow the installation of a buffered bicycle lane.
- Add bicycle racks and bicycle corrals in Downtown, in particular on Monterey Road



EXAMPLE OF BICYCLE MIXING ZONES

ADDITIONAL OPTIONS



ENHANCED 4-LANE CONFIGURATION

While converting Monterey Road back to a four-lane travelway, implement pedestrian safety features, such as advanced yield lines and rectangular rapid flashing beacons at unsignalized intersections. Reinstall speed bumps to prevent motor vehicle speeds from increasing over their pre-pilot levels, and placement of speed bumps should consider avoiding outdoor restaurant locations. Also, add bicycle parking and stencil greenback bicycle “sharrows” to the outside travel lanes to increase awareness of the travelway as a shared space.



RETURN TO 4-LANE CONFIGUARTION

By converting Monterey Road back to a four-lane travelway by removing the buffered bicycle lanes, commuters will be able to use Monterey Road as a bypass for Highway 101 and more motor vehicles will pass by local businesses. Speed bumps should be reinstalled in order to prevent motor vehicle speeds from increasing over their pre-pilot levels. Placement of speed bumps should consider avoiding outdoor restaurant locations. In addition, add bicycle parking.



APPENDIX

The pilot project was installed on February 18, 2015 and was tested over a five-month pilot period to evaluate its impact on 15 performance measures during three designated review periods. For the mid-pilot and end-pilot periods, multiple counts were conducted for select performance measures.

- Pre-Pilot - December 18, 2015 to February 17, 2015
- Mid-Pilot (1) - February 19, 2015 to April 18, 2015
- Mid-Pilot (2) – April 19, 2015 to June 18, 2015
- End-Pilot (1) – June 19, 2015 to July 1, 2015
- End-Pilot (2) – July 2, 2015 to July 10, 2015

Safety

Emergency Response Time

Measure	Pre-pilot	Mid-Pilot	End-Pilot
Late Runs*	0	0	0

**Runs travelling through Downtown, excluding unusual circumstances, that exceed eight minutes*

Motor Vehicle Speed

Measure	Pre-pilot	Mid-Pilot (1)	Mid-Pilot (2)	End-Pilot (1)	End-Pilot (2)
Minimum (radar)	15 mph	13 mph	14 mph	12 mph	13 mph
Average (radar)	23 mph	24 mph	24 mph	24 mph	23 mph
Average (tube)	22 mph	20 mph	20 mph	19 mph	20 mph
Median (radar)	23 mph	24 mph	24 mph	23 mph	23 mph
85 th Percentile (radar)	27 mph	27 mph	28 mph	28 mph	27 mph
85 th Percentile (tube)	26 mph	25 mph	25 mph	25 mph	25 mph
Maximum	37 mph	38 mph	35 mph	42 mph	34 mph
Standard Deviation	3.9	4.0	3.7	4.0	3.7

**Speed at which 85 percent of motor vehicle drivers are travelling at or below*

Reported Safety Concerns

Measure	Pre-Pilot	Mid-Pilot	End-Pilot
Reported Safety Concerns	0	0	2

Collisions

Location	Pre-Pilot*	Mid-Pilot	End-Pilot
Reported Collisions	3.5	1	4
Not Reported Collisions**	4.3	5	6
Total	7.8	6	10

**Total Collisions in 2014 divided by 4 to match up with three-month study period lengths*

***Collisions in which police officers facilitated the exchange of information between parties but did not write a report*

Mobility

Travel Time Reliability

Measure	Pre-Pilot	Mid-Pilot (1)	Mid-Pilot (2)	End-Pilot (1)	End-Pilot (2)
Average	52 seconds	49 seconds	46 seconds	38 seconds	40 seconds
Median	50 seconds	42 seconds	40 seconds	38 seconds	38 seconds
95 th Percentile	72 seconds	101 seconds	97 seconds	53 seconds	55 seconds
Standard Deviation	19 seconds	19 seconds	19 seconds	8 seconds	14 seconds
Buffer Index*	0.39 points	1.07 points	1.13 points	0.38 points	0.36 points
Buffer Time**	20 seconds	52 seconds	52 seconds	15 seconds	15 seconds

*Percent change between 95th percentile and average.

** Product of Average and Buffer Index

Bicycle Counts

Location	Pre-Pilot	Mid-Pilot (1)	Mid-Pilot (2)	End-Pilot (1)*	End-Pilot (2)
Monterey Rd and 1 st St**	14 bicyclists	75 bicyclists	48 bicyclists	48 bicyclists	69 bicyclists
Monterey Rd and 2 nd St**	29 bicyclists	69 bicyclists	28 bicyclists	62 bicyclists	11 bicyclists
Monterey Rd and 3 rd St**	50 bicyclists	103 bicyclists	85 bicyclists	-	23 bicyclists
Monterey Rd and 4 th St**	63 bicyclists	122 bicyclists	89 bicyclists	70 bicyclists	26 bicyclists
Monterey Rd and 5 th St**	57 bicyclists	96 bicyclists	97 bicyclists	71 bicyclists	80 bicyclists
Average***	43 bicyclists	93 bicyclists	69 bicyclists	50 bicyclists	42 bicyclists
Downtown (manual)****	74 bicyclists	170 bicyclists	195 bicyclists	169 bicyclists	214 bicyclists
Bikes/Hour (manual)	7 bicyclists	16 bicyclists	19 bicyclists	15 bicyclists	20 bicyclists

* Missing data for Monterey and 3rd Street on July 1, 2015

** Peak periods (7:00am-9:00am, 11:30am-1:00pm, and 2:30pm-6:00pm)

*** Average of all five intersections

**** 11 hour observations (7:00am-6:00pm)

Pedestrian Delay

Measure	Pre-Pilot	Mid-Pilot (1)	Mid-Pilot (2)	End-Pilot (1)	End-Pilot (2)
Average Pedestrian Delay	1.5 seconds	1.7 seconds	1.8 seconds	1.3 seconds	1.4 seconds
Pedestrian Level of Service	A	A	A	A	A

Transit Ridership

Measure	Pre-Pilot	Mid-Pilot	End-Pilot
Average Activity*	369	386	379

* Sum of boardings and alightings at Route 68 bus stops in and near Downtown Morgan Hill

Traffic Diversion*

Location	To	From	Pre-Pilot	Mid-Pilot (1)	Mid-Pilot (2)	End-Pilot (1)	End-Pilot (2)
Monterey Rd	Main Ave	1 st St	15,932 vehicles	13,722 vehicles	14,031 vehicles	14,286 vehicles	13,787 vehicles
Monterey Rd	5 th St	Dunne Ave	17,845 vehicles	15,622 vehicles	16,524 vehicles	16,453 vehicles	16,189 vehicles
Del Monte Ave	Main Ave	1st St	1,254 vehicles	1,404 vehicles	1,374 vehicles	1,374 vehicles	1,278 vehicles
Main Ave	Del Monte Ave	Hale Ave	8,190 vehicles	8,600 vehicles	8,116 vehicles	8,018 vehicles	7,739 vehicles
Depot St	Main Ave	1 st St	2,393 vehicles	2,540 vehicles	2,376 vehicles	2,141 vehicles	2,282 vehicles
Dewitt Ave	Alkire Ave	Dunne Ave	2,494 vehicles	2,856 vehicles	2,557 vehicles	2,427 vehicles	2,486 vehicles
Peak Ave	Farallon Dr	Dunne Ave	5,794 vehicles	6,112 vehicles	5,452 vehicles	5,438 vehicles	5,238 vehicles
Hale Ave	Hillwood Ln	Wright Ave	6,830 vehicles	7,356 vehicles	7,152 vehicles	6,986 vehicles	6,900 vehicles
Wright Ave	Garden Wy	Monterey Rd	3,934 vehicles	4,896 vehicles	4,063 vehicles	4,389 vehicles	4,482 vehicles
Butterfield Blvd	Huntington Ln	Diana Ave	17,243 vehicles	18,800 vehicles	17,854 vehicles	17,854 vehicles	18,150 vehicles

* Motor vehicle automatic tube counts

Vibrancy

Noise

Measure	Pre-Pilot	Mid-Pilot (1)	Mid-Pilot (2)	End-Pilot (1)	End-Pilot (2)
Minimum	53.0 dB	51.5 dB	51.4 dB	52.2 dB	51.6 dB
Weighted Average*	70.3 dB	69.7 dB	67.4 dB	71.4 dB	69.2 dB
Maximum	94.7 dB	106.8 dB	99.1 dB	117.8 dB	102.8 dB
Standard Deviation	3.6 dB	1.5 dB	1.4 dB	3.6 dB	3.1 dB

* Weighted average measured as Equivalent Continuous Level (LAeq). When noise varies over time, the LAeq is the equivalent continuous sound which would contain the same sound energy as the time varying sound. It can be thought of as an average, where noisy events have a significant influence. This measurement is useful in assessing prolonged periods of continuously high sound levels.

Bicyclist Demographics

Measure	Pre-Pilot	Mid-Pilot (1)	Mid-Pilot (2)	End-Pilot (1)	End-Pilot (2)
Observations	74	170	195	169	214
Race: Non-white	27%	31%	34%	32%	42%
Age: Under 18	10%	26%	14%	18%	24%
Gender: Female	19%	19%	22%	13%	19%
On Sidewalk	23%	18%	17%	12%	14%
In Group	15%	40%	32%	27%	28%
On Sidewalk and Under 18	71%	34%	62%	35%	34%
Female and/or Under 18	28%	43%	36%	37%	39%
Wrong Way Riding	5%	4%	5%	8%	5%

Pedestrian Counts

Location	Pre-Pilot	Mid-Pilot (1)	Mid-Pilot (2)*	End-Pilot (1)*	End-Pilot (2)
Monterey Rd and 1 st St	341 persons	309 persons	-	-	374 persons
Monterey Rd and 2 nd St	465 persons	445 persons	-	-	508 persons
Monterey Rd and 3 rd St	397 persons	412 persons	-	-	405 persons
Monterey Rd and 4 th St	262 persons	259 persons	-	-	315 persons
Monterey Rd and 5 th St	275 persons	232 persons	-	-	236 persons
Average**	348 persons	331 persons	-	-	368 persons

* Average number of pedestrians at all five intersections during peak periods (7:00 – 9:00 AM, 11:30 AM – 1:00 PM, 2:30 – 6:00 PM)

** Missing data due to equipment malfunction

Parking Occupancy

			Pre-Pilot	Mid-Pilot (1)	Mid-Pilot (2)	End-Pilot (1)	End-Pilot (2)
Monterey Rd	Main Ave	1 st St	57%	25%	45%	55%	50%
Monterey Rd	1 st St	2 nd St	48%	60%	54%	70%	60%
Monterey Rd	2 nd St	3 rd St	69%	56%	63%	56%	41%
Monterey Rd	3 rd St	4 th St	22%	25%	31%	50%	38%
Monterey Rd	4 th St	5 th St	27%	46%	25%	46%	61%
Total*			43%	45%	45%	55%	50%
Turnover Rate**			0.6	0.7	0.8	0.9	0.8

*(Total number of vehicles in parking space) / (Total number of parking spaces)

**(Unique number of license plates) / (Total number of parked motor vehicles observed)

Resident Survey

Response	In favor of Permanent Bike Lanes		
	Pre-Pilot	Mid-Pilot	End-Pilot
Yes	281 (35%)	589 (34%)	454 (32%)
No	505 (63%)	1124 (65%)	950 (67%)
No response	17 (2%)	22 (1%)	14 (1%)
Total	803	1,735	1,418

Economy

Business Survey

Response	At this time, are you in favor of continuing the 6 month pilot?		
	Pre-Pilot	Mid-Pilot	End-Pilot
Yes	6 (50%)	9 (56%)	2 (40%)
No	6 (50%)	7 (44%)	3 (60%)
No Response	0 (0%)	0 (0%)	0 (0%)
Total	12	16	5

