

# SR 227 Operational Study Public Workshop #2

- Study administered by SLOCOG
- In partnership with SLO County, SLO City, and Caltrans

May 24, 2016



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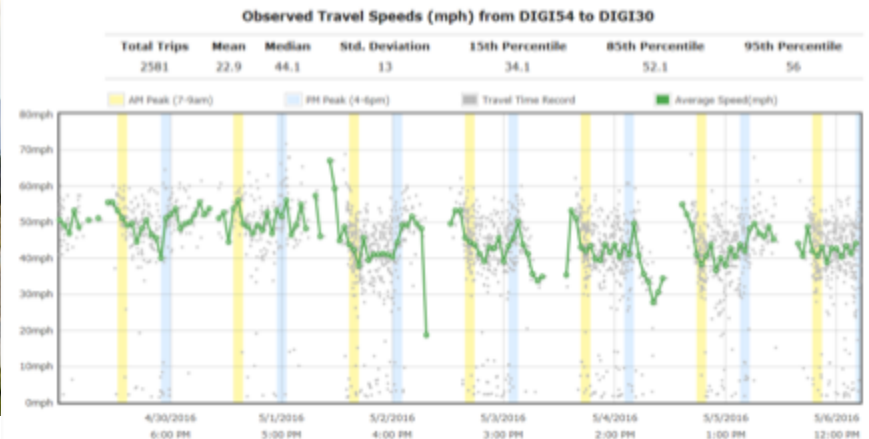
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# SR 227 Operational Study Objectives

- Establish Short- and Long-Term Investment Priorities
  - Regional Transportation Plan Update
  - STIP Funding – Programmed
  - SLOCOG Sales Tax Measure

May 24, 2016



# SR 227 Operational Study Study Team



Kimley»Horn



May 24, 2016



# SR 227 Operational Study

## Tonight's Agenda

- Introductions (5 min)
- Power Point Presentation (20 min)
- Corridor Improvement Concepts (10 min)
- Break (10 min)
- Live Polling (40 min)
- Next Steps and Good Night (5 min)



May 24, 2016

# SR 227 Operational Study Public Involvement Process

- Workshop #1 - November 19, 2015
  - Overview of study and study objectives
  - Receive input in specific issues and concerns
  - Interactive Web-based tool
  
- Workshop #2 – May 24, 2016
  - Update on Technical Studies
  - Receive input on Corridor Improvement Concepts
  - Next steps



May 24, 2016

# Caltrans Resurfacing Project

- From Price Canyon Road to 1/2 mile north of Buckley Road
- Schedule revised from December 1, 2015 to May 2016 (weather permitting)
- Lane closures both directions Mon-Thur 8am-4pm and Friday 8pm-1pm. Road work will occur Mon-Thur 7pm-6am.
- Restripe the north leg of SR 227 to allow greater two-stage turn storage refuge for motorists turning left out of Crestmont Drive. Preclude left turns out of Winery driveway - add signage and striping. Completed in December.



# Data Collection (January 2016)

- AM/Midday/PM Intersection turn counts (video)
  - Six intersections
- AM/Midday/PM Queue lengths and Gap Acceptance (video)
  - Six intersections (queues)
  - One intersection Gap Acceptance
- 7-Day-24-hr continuous segment counts (hoses)
  - Six segments (SR 227, Los Ranchos Road, Crestmont Drive)
- 4-Months of Travel Speeds and Travel Times (Bluetooth)
  - Six locations (SR 227 and Price Canyon Road)



# Data Collection





# Intersection Analysis

## ➤ Existing Conditions - Intersection Operations

- Crestmont Drive and Los Ranchos – LOS F
- All Other intersections at LOS D
- > 50 vehicle 95<sup>th</sup> percentile queues on SR 227 at: Buckley (NB/SB) & Los Ranchos (NB/SB);
- > 12 vehicle percentile queues: Crestmont (EB) & Los Ranchos (EB)
- Measured – Crestmont Drive 10 vehicle queue
- Measured – Kendall Road 5 vehicle queue

## ➤ 2035 Intersection Operations

- Farmhouse Lane and Buckley – LOS F and LOS E
- > 60 vehicle 95<sup>th</sup> percentile queues: Buckley (NB/SB) & Los Ranchos (NB/SB);
- > 15 vehicle 95<sup>th</sup> percentile queues: Crestmont (EB) & Los Ranchos (EB)



# Intersection Analysis

## ➤ Signal Warrant Analysis (Peak Hour Warrant #3)

- SR 227/Airport Road
  - Does not meet warrants
- SR 227/Farmhouse Lane
  - 2025 and 2035
- SR 227/Kendall Road
  - Existing, 2025 and 2035
- SR 227/Crestmont Drive
  - Existing, 2025 and 2035



## ➤ Accident Warrant Analysis (Peak Hour Warrant #7)

- No intersections met warrant

# Bicycle LOS Analysis Intersections

- SR 227 & Airport (LOS C-D)
- SR 227 & Farmhouse (LOS C-D)
- SR 227 & Kendall (LOS C-D)
- SR 227 & Buckley (LOS C or Better except for East and West Leg (LOS D))
- SR 227 & Crestmont (LOS F)
- SR 227 & Los Ranchos (LOS C or better)



# Pedestrian LOS Analysis Intersections

- SR 227 & Airport (LOS F)
- SR 227 & Farmhouse (LOS F)
- SR 227 & Kendall (LOS F)
- SR 227 & Buckley (LOS C or Better)
- SR 227 & Crestmont (LOS F)
- SR 227 & Los Ranchos (LOS C or better)



# Segment Analysis

- Existing Conditions – Segment Operations
  - AM Peak Hour – Northbound: LOS E
  - AM Peak Hour – Southbound: LOS C-D
  - PM Peak Hour – Northbound: LOS C-D
  - PM Peak Hour – Southbound: LOS E
  
- Future 2035 Conditions – Segment Operations
  - AM Peak Hour – Northbound: LOS E
  - AM Peak Hour – Southbound: LOS C-D
  - PM Peak Hour – Northbound: LOS D-F
  - PM Peak Hour – Southbound: LOS E-F



# Safety Analysis

## SWITRS (2012-2014) and TASAS (2011-2013) Data

- Biddle Ranch to Los Ranchos Highest Crash Rate: 0.41 MVM
- Los Ranchos to Crestmont 2nd Highest Crash Rate: 0.35 MVM
  - Intersection of SR 227/Crestmont – crash rates exceed statewide average for similar facilities
- Dominant collision type: rear-end (70% of all collisions)
- 25 total collisions between Biddle and Kendall (11 injury; 14 persons injured; 21 multi-vehicle collisions; 7 occurred at night; 3 under wet conditions)
- No fatal crashes in the study corridor (2011-2014)



# Travel Speeds and Reliability Analysis (Bluetooth)

SSR 227 4 month (new) [Go to Project Home](#) [Go to Origin Destination Report](#)

The minimum filter settings have been applied to this project. Matches that are less than 10mph or greater than 200mph are not included.

## DIGI54 to DIGI30

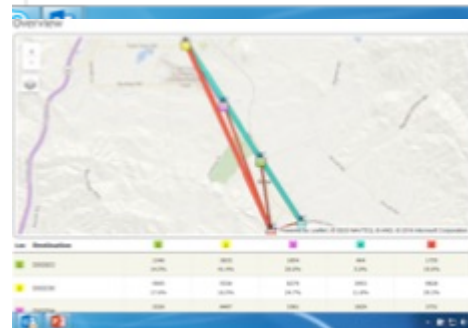
Trip Distance(mi):	1.43
Expected Travel Time(s):	125 (2:05)
Number of Trips:	38199
Mean/Median Speed(mph):	23.8 / 45.2
Mean/Median Travel Time(s):	216.4 (3:36) / 114 (1:54)
Standard Deviation:	425.6
15th Percentile Travel Time(s):	90 (1:30)
85th Percentile Travel Time(s):	148 (2:28)
95th Percentile Travel Time(s):	778 (12:58)



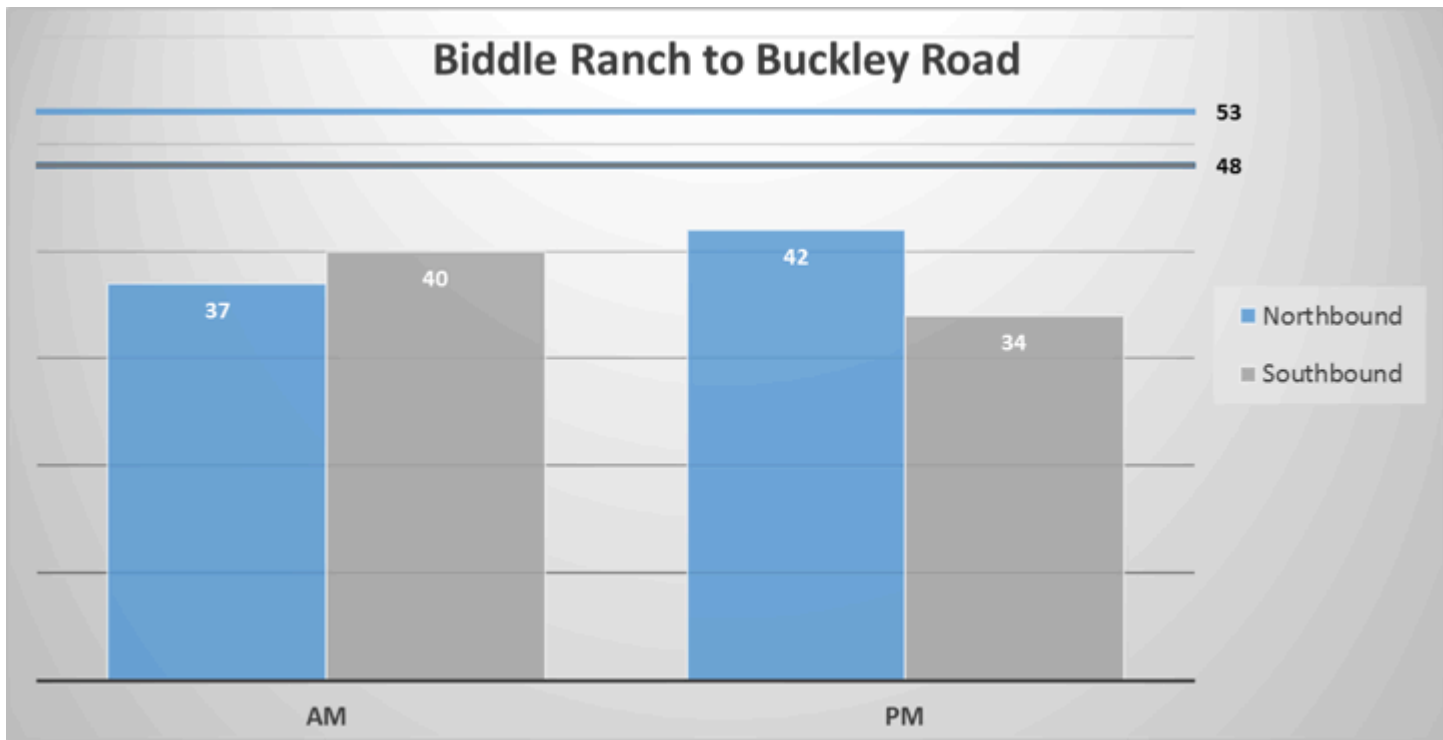
NOTE: You can click and drag to select a portion of the chart to view in detail. Click [Reset Chart](#) to display the original chart.

### Observed Travel Times (s) from DIGI54 to DIGI30

### Observed Trips (s) from DIGI54

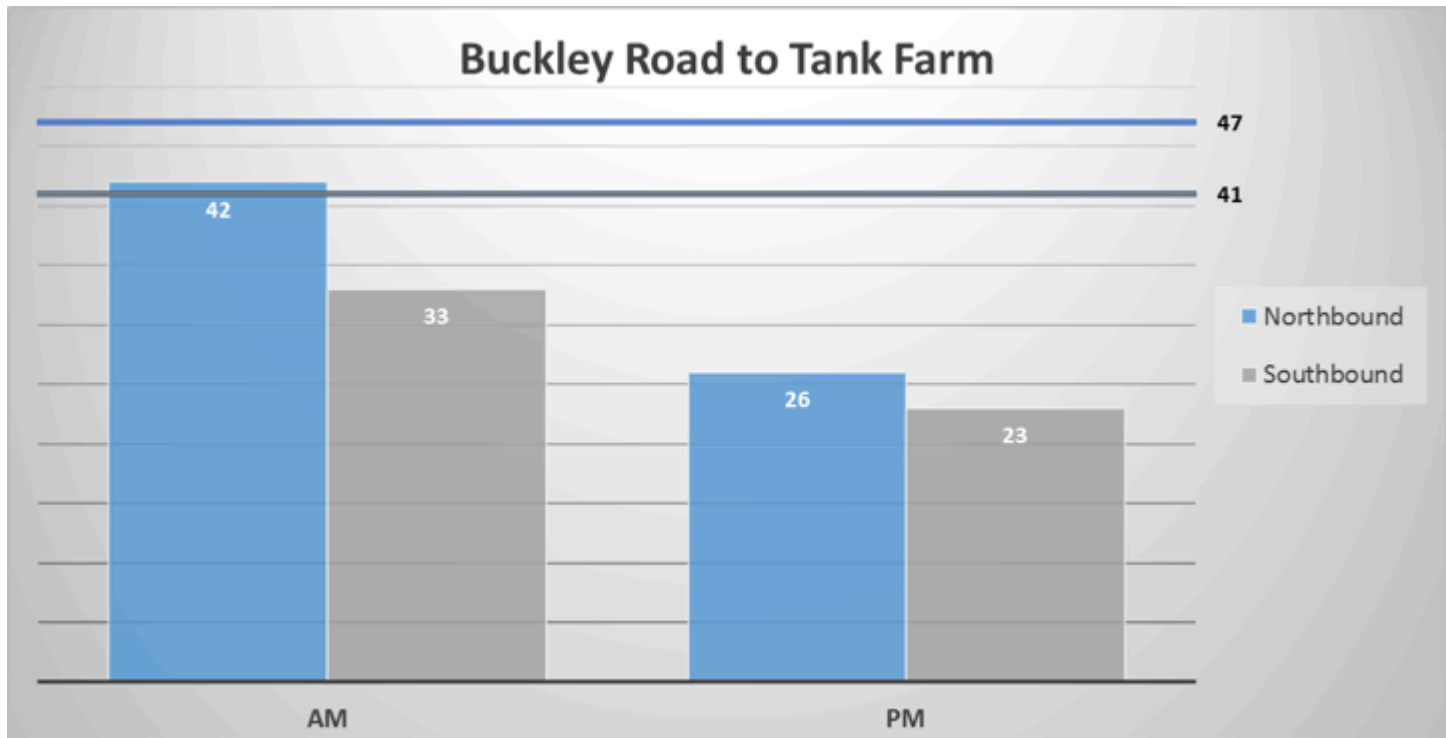


# Travel Speeds and Reliability Analysis (Bluetooth)



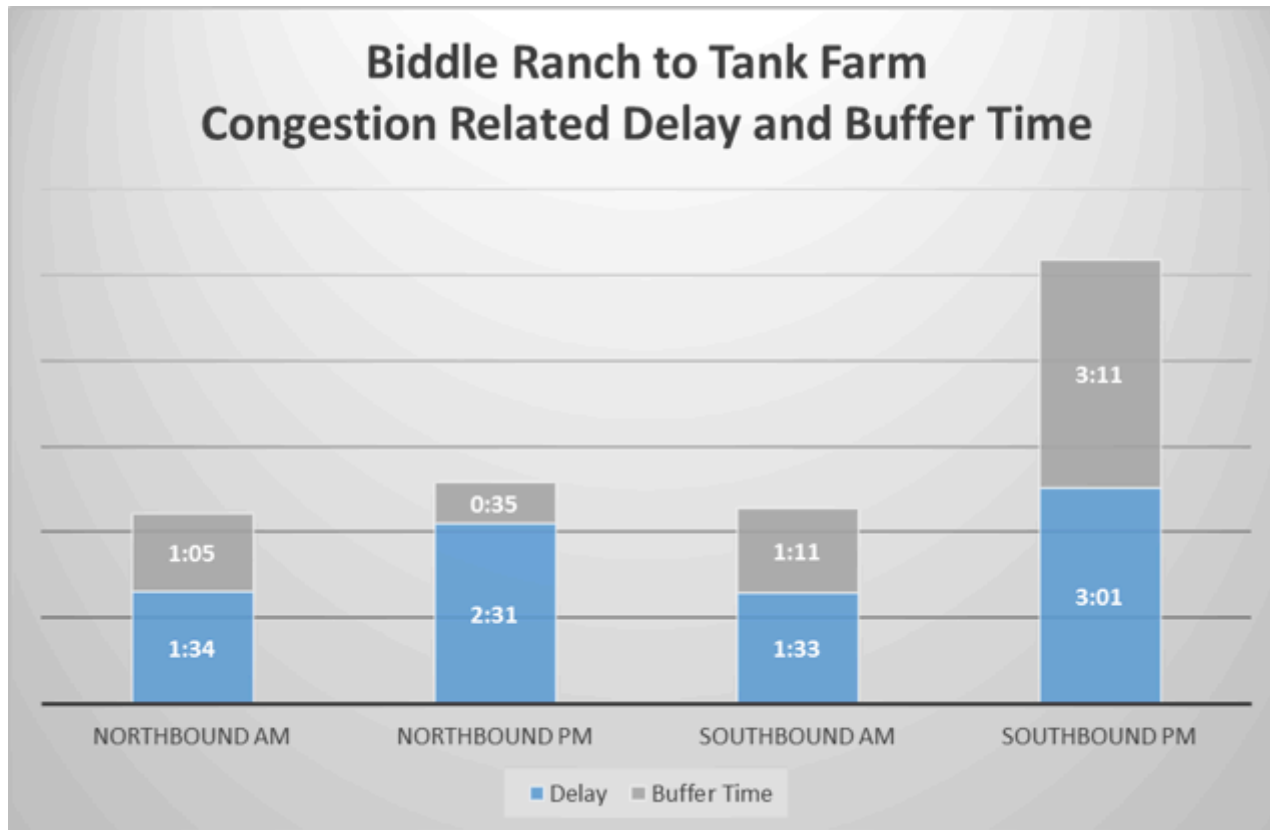


# Travel Speeds and Reliability Analysis (Bluetooth)



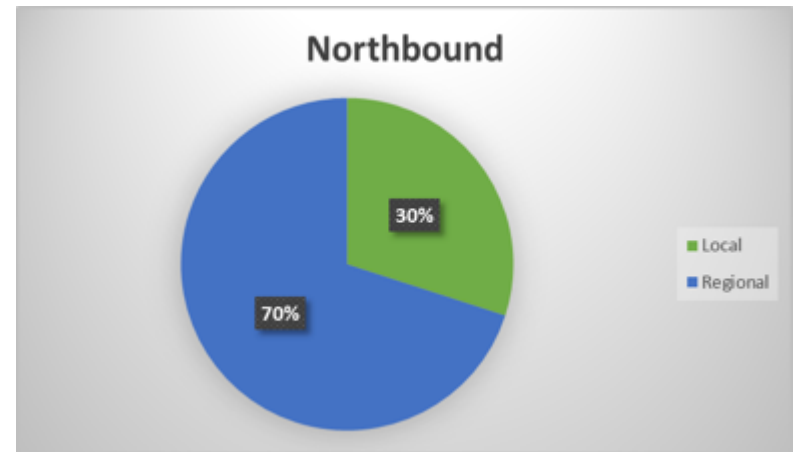
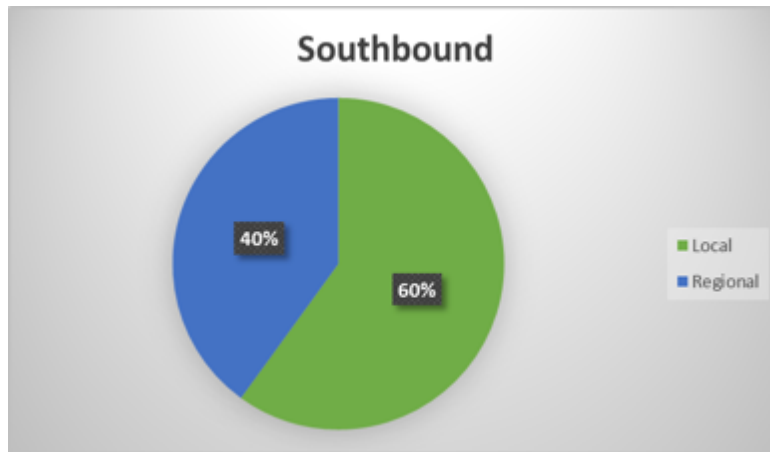
# Travel Speeds and Reliability Analysis (Bluetooth)

Biddle Ranch to Tank Farm  
Congestion Related Delay and Buffer Time



# Travel Patterns (Bluetooth)

- Travel between City of San Luis Obispo and Five Cities
  - Price Canyon is preferred route over SR 227: 1.54 ratio
- Local vs. Regional Traffic Using SR 227



# Neighborhood Access

- Secondary Access for Crestmont Community
  - 95 vehicles exiting and 42 entering Crestmont Drive (AM Pk Hr)
  - 58 vehicles exiting and 90 entering Crestmont Drive (PM Pk Hr)



# Multimodal Analysis

## Edna-Price Canyon Multi-purpose Trail Preferred Alignment



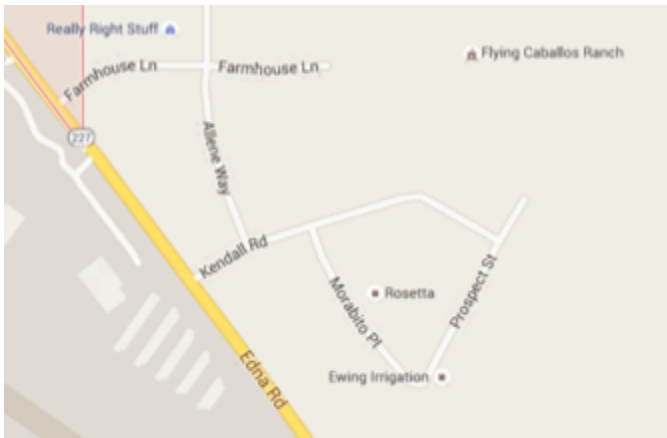
# Multimodal Analysis

## Neighborhood and School Pedestrian Connectivity



# Multimodal Analysis

- Remote vs. Fringe Park-and-Ride Lot
  - Only 2% of Corridor Residents work within the Corridor (10 of 422 – Source: Census)
  - 43% Commute to the City of San Luis Obispo (180)
  - 9.5% Commute to Santa Maria (40)
  - Most commute less than 10 miles to work



# Widen & Signalize Corridor Concept

- Pinch off access from Airport Drive – convert Farmhouse Road to four-legged intersection.
- Signalize, synchronize and channelize intersections at Farmhouse Lane, Buckley, Crestmont, and Los Ranchos.
- Widen SR 227 to provide two through lanes in each direction (Farmhouse Road to s/o Los Ranchos Road).
- Restrict access to allow RI-RO-LI at Kendall Road and driveways.
- Encourage consolidation of private driveways.
- Construct Edna-Price Canyon Trail from Crestmont to Aero Drive – if widening can occur to the east – Preferred Alignment is preserved; if not, potential need for selecting an alternative alignment.





# Roundabout Corridor Concept

- Pinch off access from Airport Drive – convert Farmhouse Road to four-legged intersection.
- No widening of mainline SR 227 – convert intersection control to dual lane roundabouts at Farmhouse Lane, Buckley, Crestmont, and Los Ranchos.
- Lower design speeds through roundabouts (traffic calming)
- Restrict access to allow RI-RO-LI at Kendall Road and all driveways.
- Encourage consolidation of private driveways.
- Construct Edna-Price Canyon Trail from Crestmont to Aero Drive consistent with Preferred Alignment – west of SR 227.



# Roundabout Concept



# Roundabout Characteristics



40 mph



30 mph



20 mph

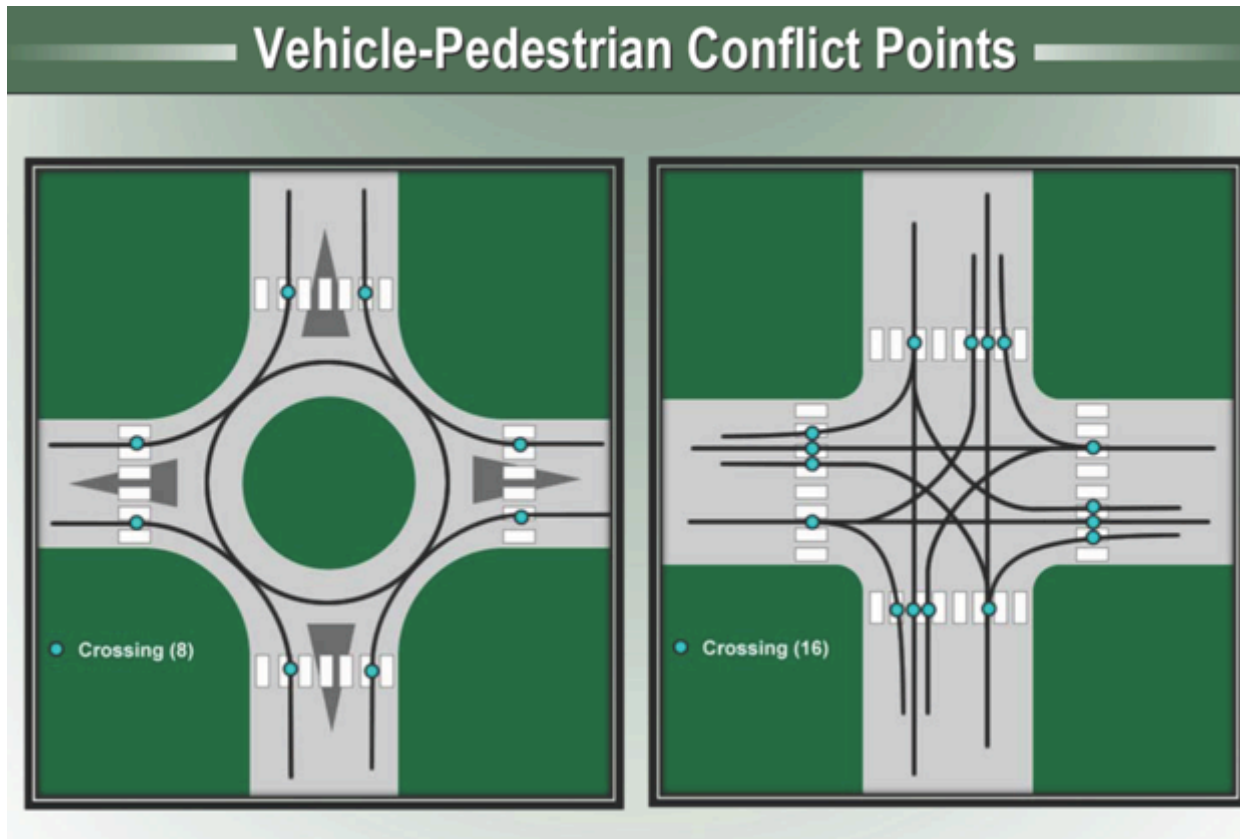


15 mph

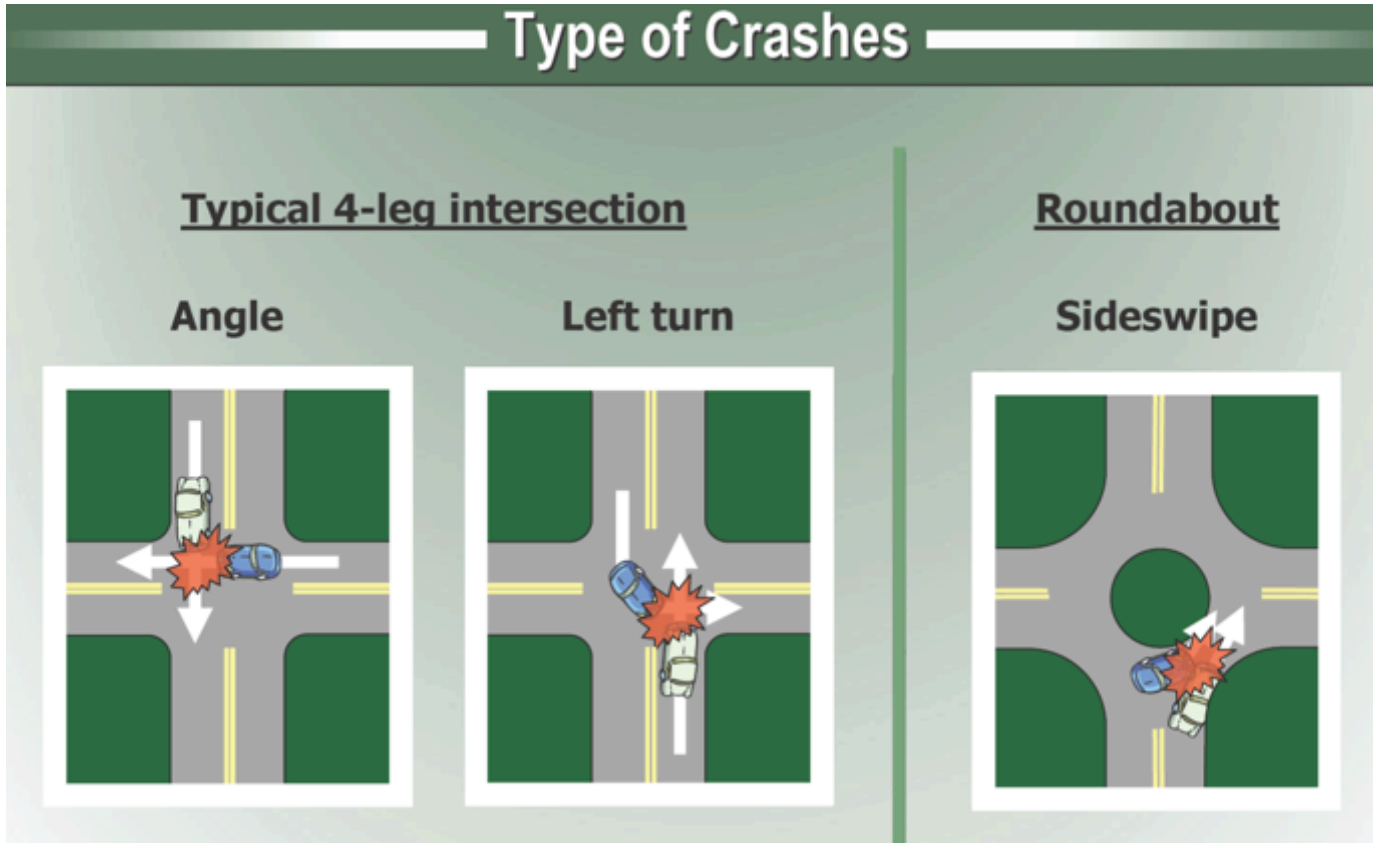


Figure 5.9. Driver focus at different speeds (Source: TGM 1999)

# Roundabout Characteristics

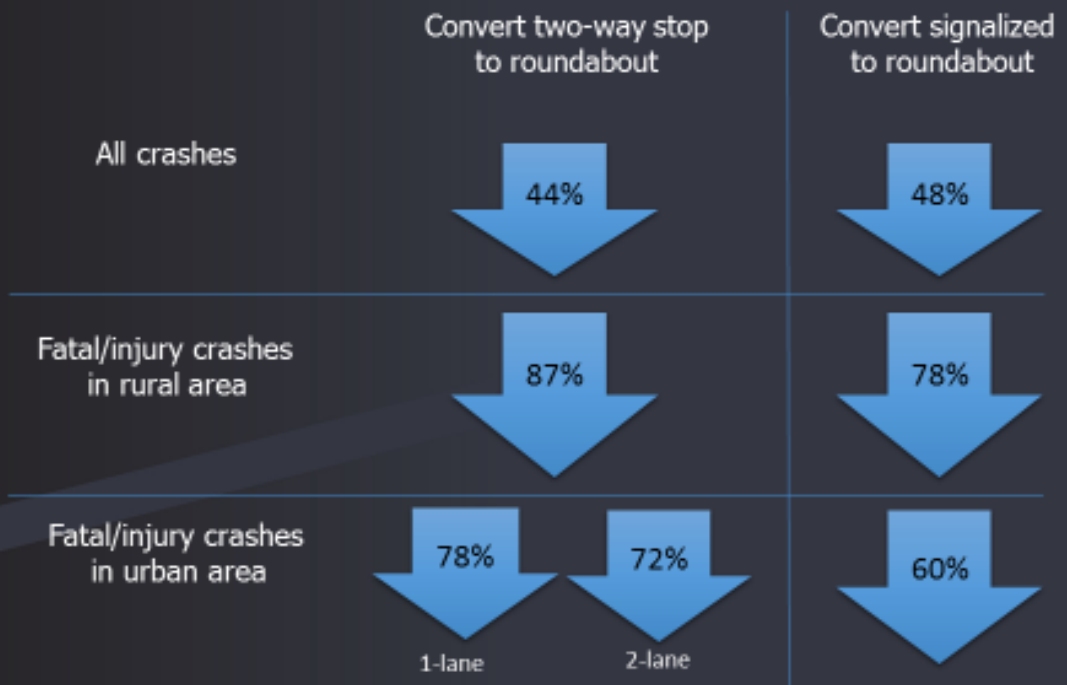


# Roundabout Characteristics



# Roundabout Characteristics

## Safety Characteristics of Modern Roundabouts

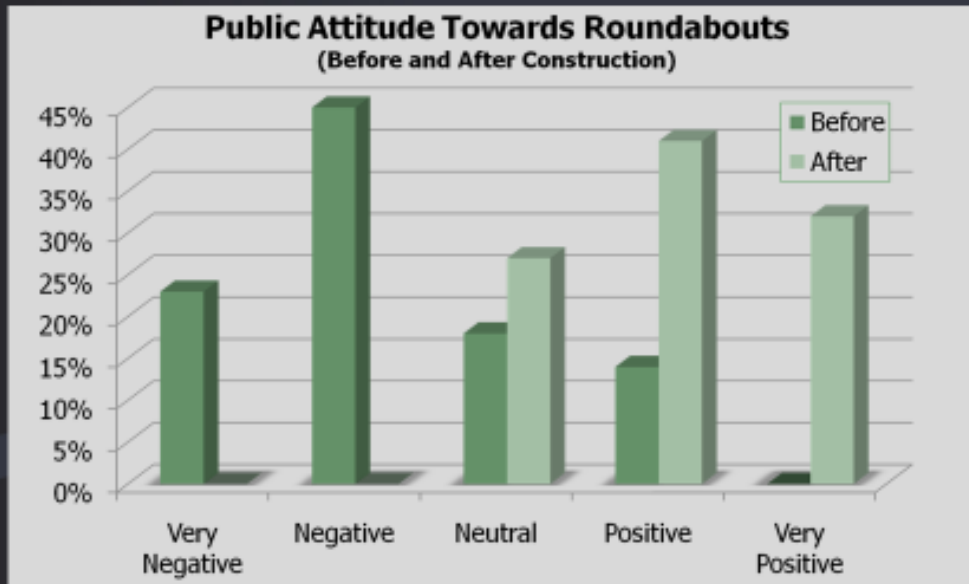


Source: 2010 US Department of Transportation: Federal Highway Administration



# Roundabout Characteristics

## Roundabout Resistance




















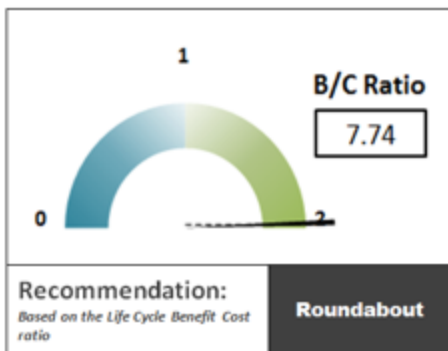
Source: US Department of Transportation: Federal Highway Administration



# Next Steps: Intersection Control Evaluation

- What is most cost-effective corridor concept?
  - Widen and Signalize vs. Roundabout Corridor

Study Intersection	Preferred Intersection Control by Performance Measure					
	Safety	Delay	Ops. & Maint.	Emission	Capital Cost	B/C
San Miguel Canyon Road at Castroville Boulevard						
Laureles Grade at Carmel Valley Road				EQUAL		
Highway 68 at Corral de Tierra						





# Next Steps

## Benefit – Cost Analysis

➤ How will solutions be prioritized?



Estimated \$ Spent



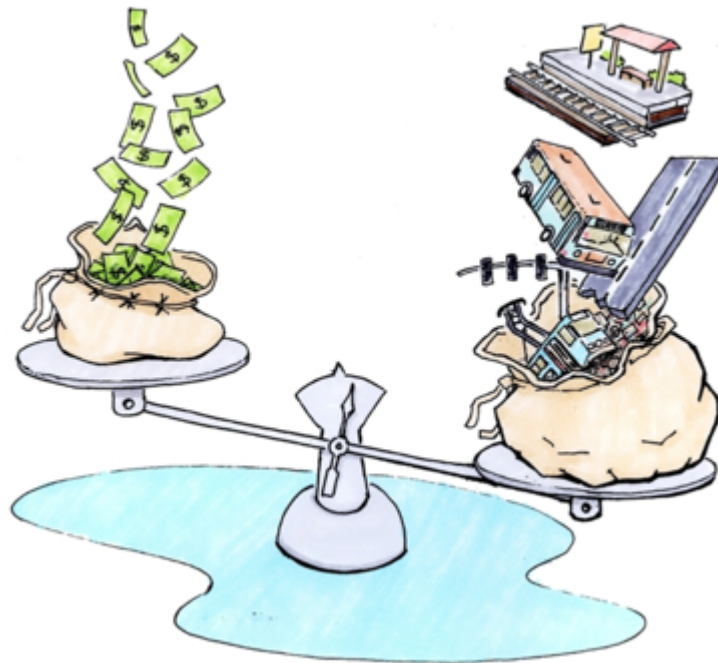
# Next Steps: Environmental Screening

- Widen and Signalize Corridor vs. Roundabout Corridor



# Next Steps: Change of Ownership

- Should the County take over management and maintenance of SR 227 from Caltrans?
- How much would it cost??

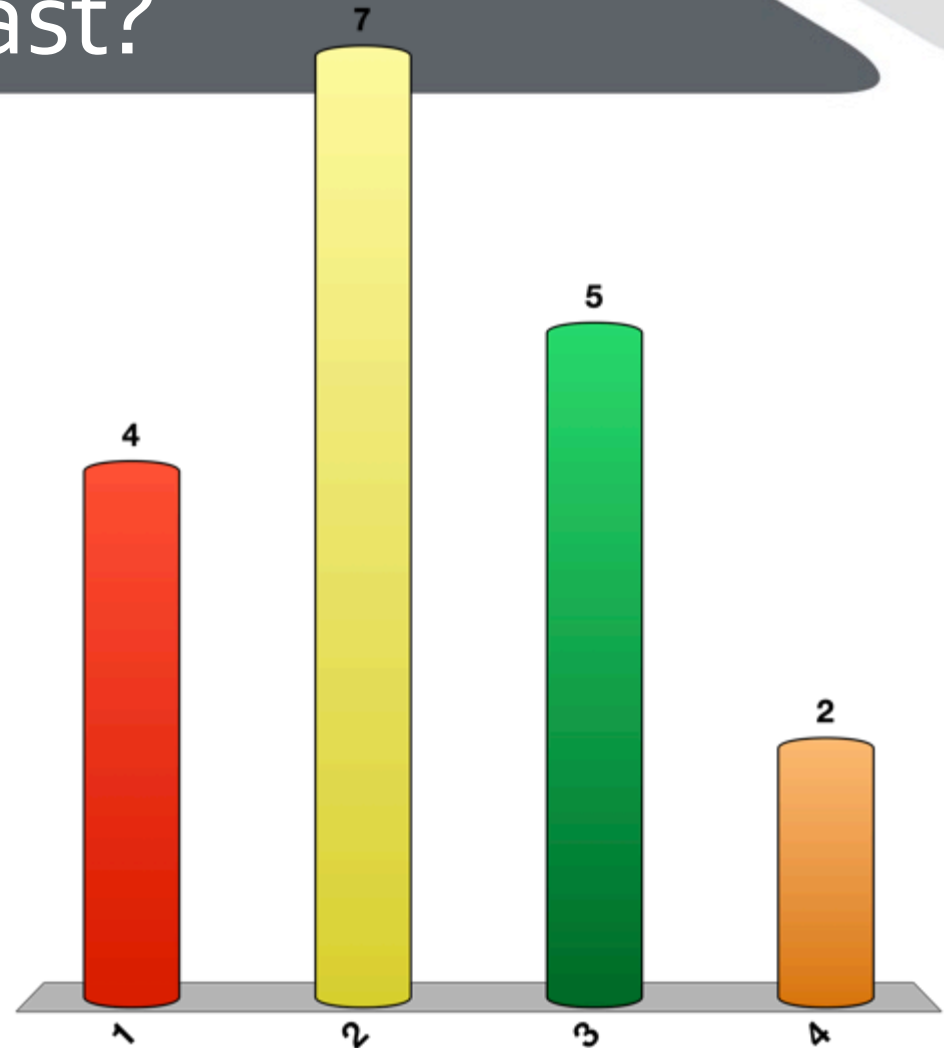


**Short Intermission:  
Live Polling Begins in 10 min.**



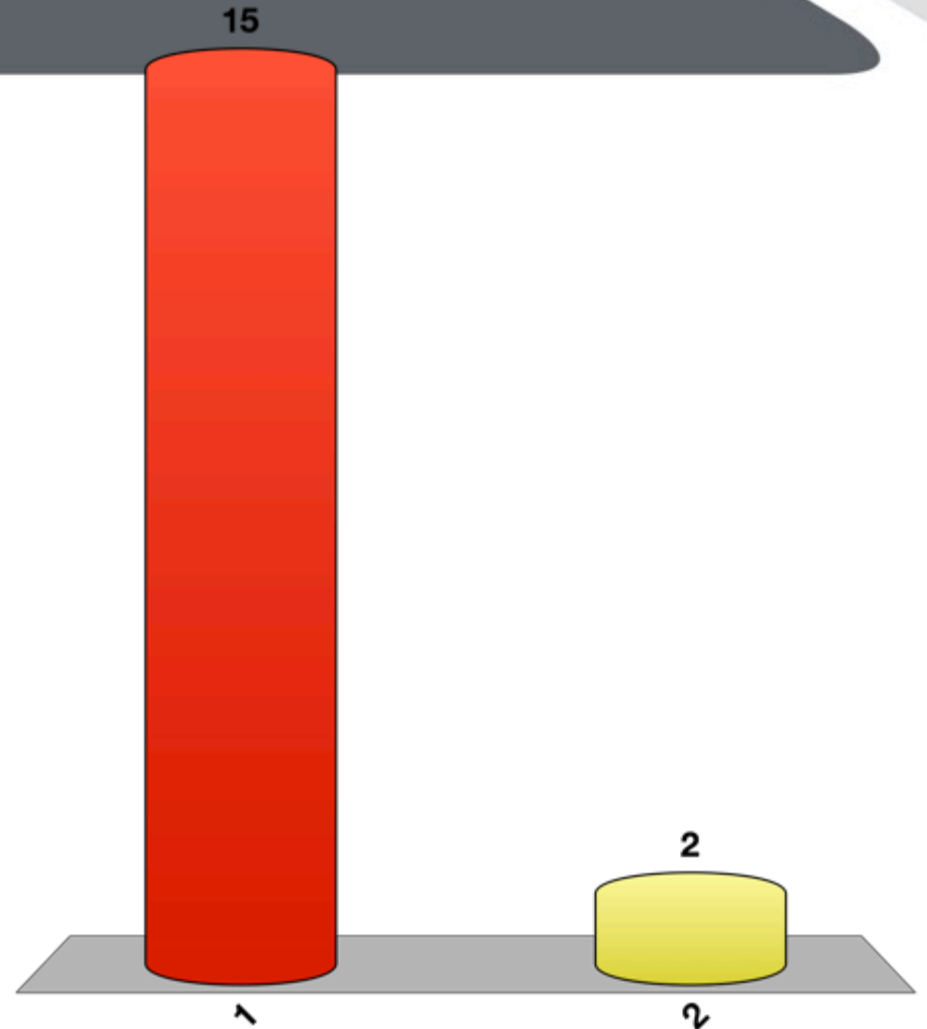
# How many public workshops have you attended in the past?

1. This is my first public workshop
2. A couple
3. I attend them regularly
4. I am a meeting machine!



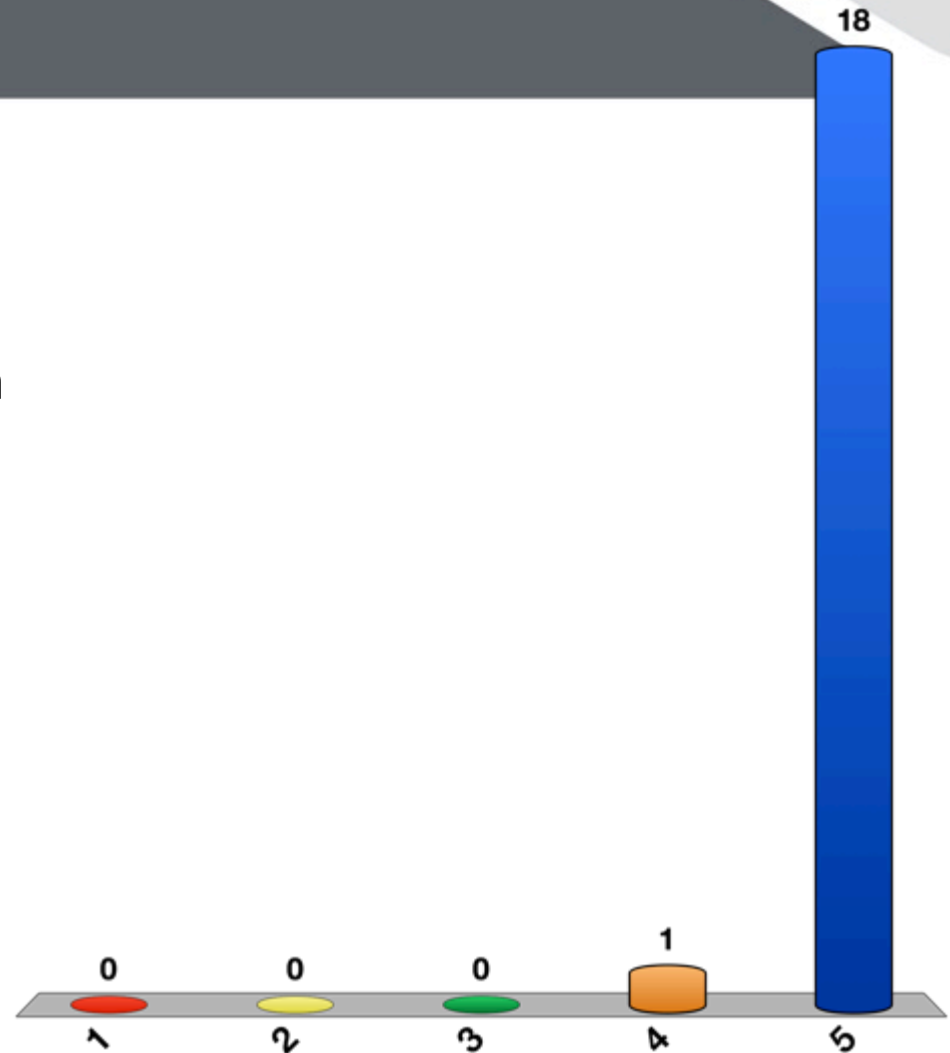
# Did you attend our first SR 227 workshop back in November?

1. Yes
2. No



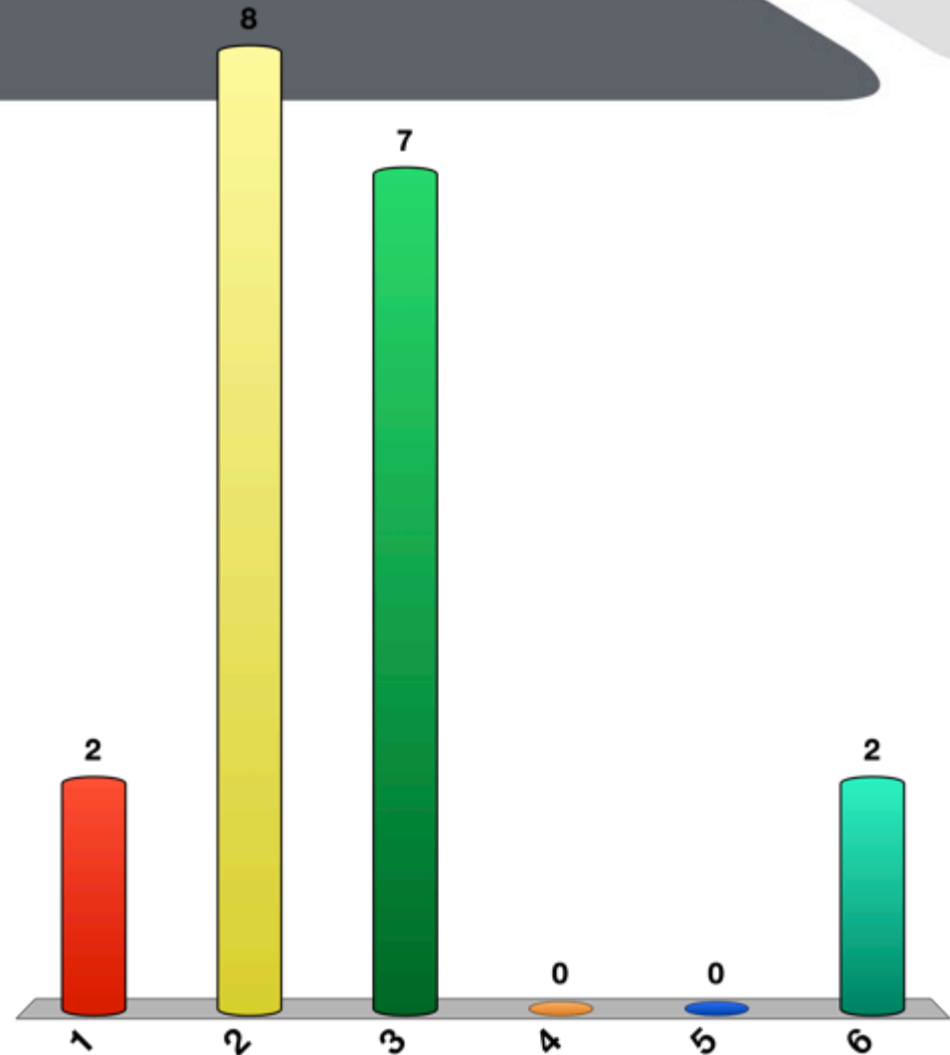
# Which of these is MOST important to you tonight?

1. Getting home in time the last hour of “The Voice”
2. Getting home in time to watch the Stanley Cup Playoffs
3. Staying awake for the whole meeting
4. Psyching up for public comments
5. Weighing in on the future corridor concept for SR 227



# Where do you live?

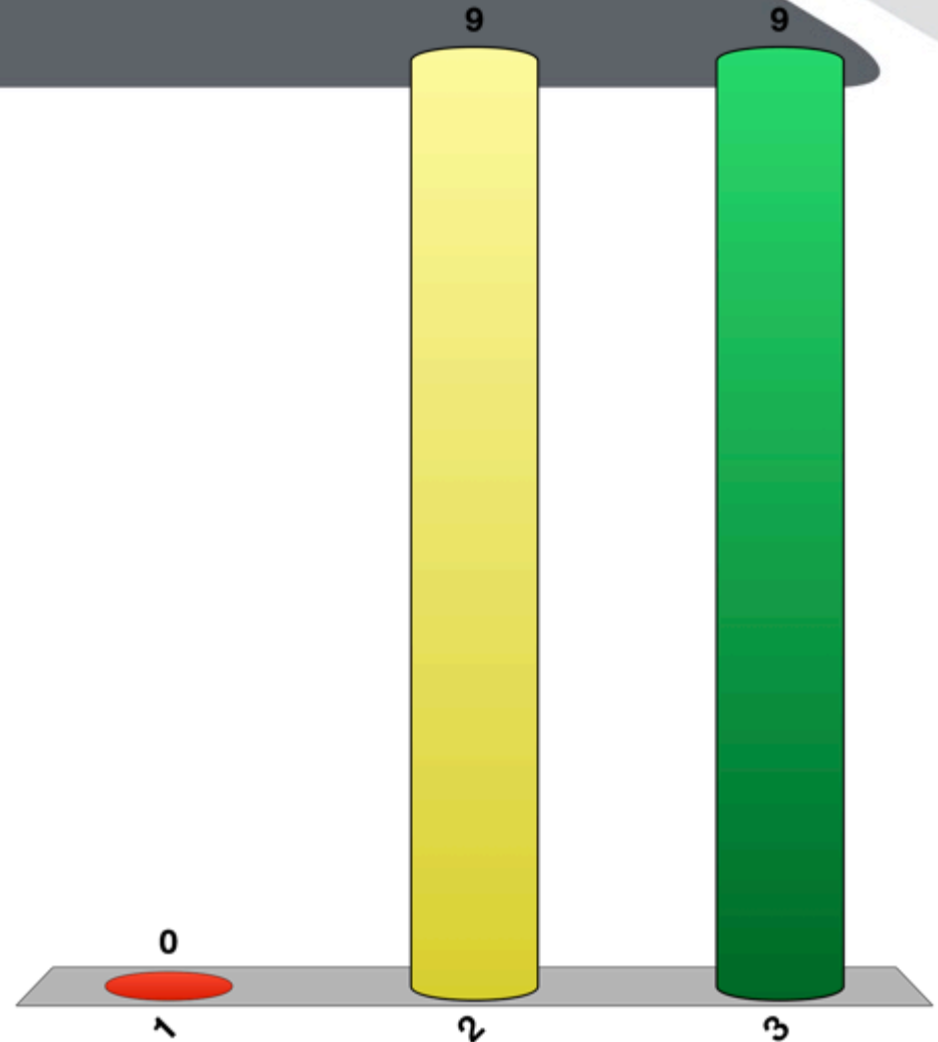
1. City of San Luis Obispo
2. Unincorporated Crestmont Community
3. Unincorporated Los Ranchos Area Community
4. Along SR 227 – with driveway access
5. Five Cities Area
6. Other





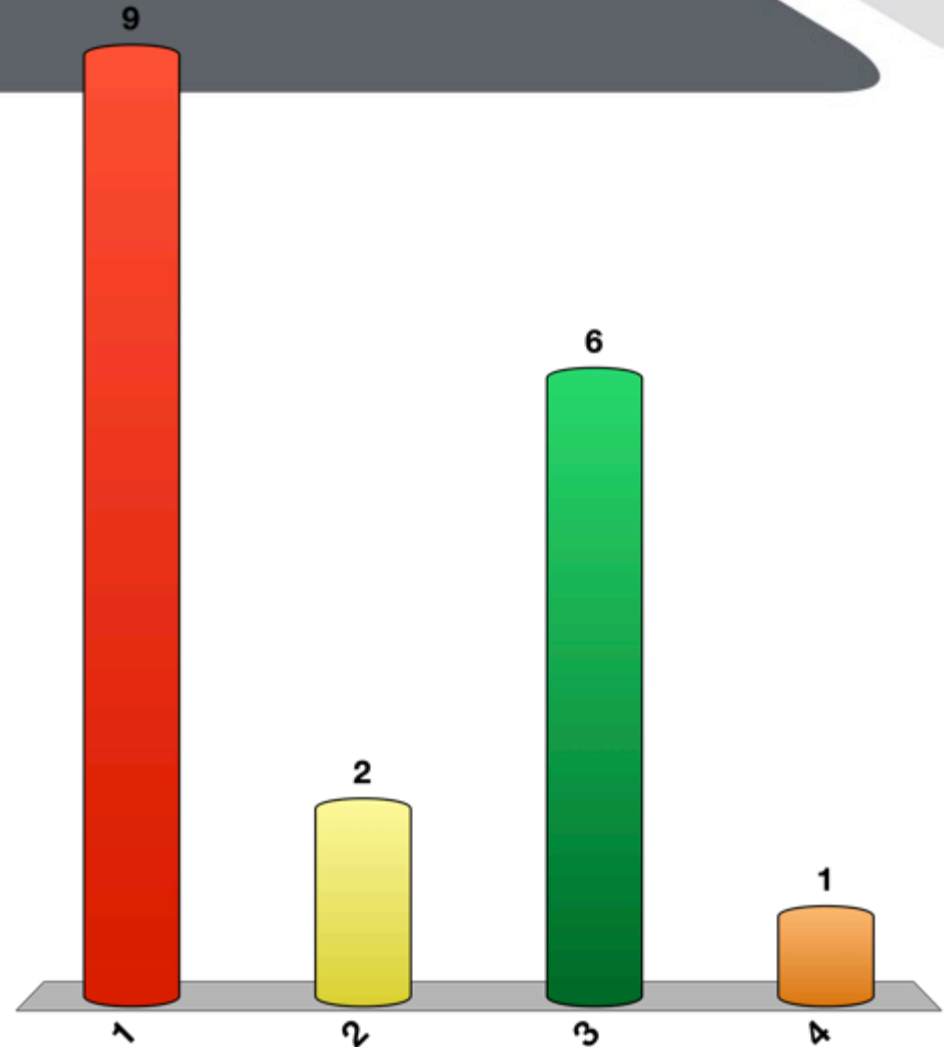
Regarding the SR 227 Rehab Project, what is your feedback on the restriping and signage performed in December?

1. Problem solved – thank-you!
2. It has improved safety for motorists entering-exiting Crestmont Drive but a longer-term fix is still needed.
3. It hasn't helped.



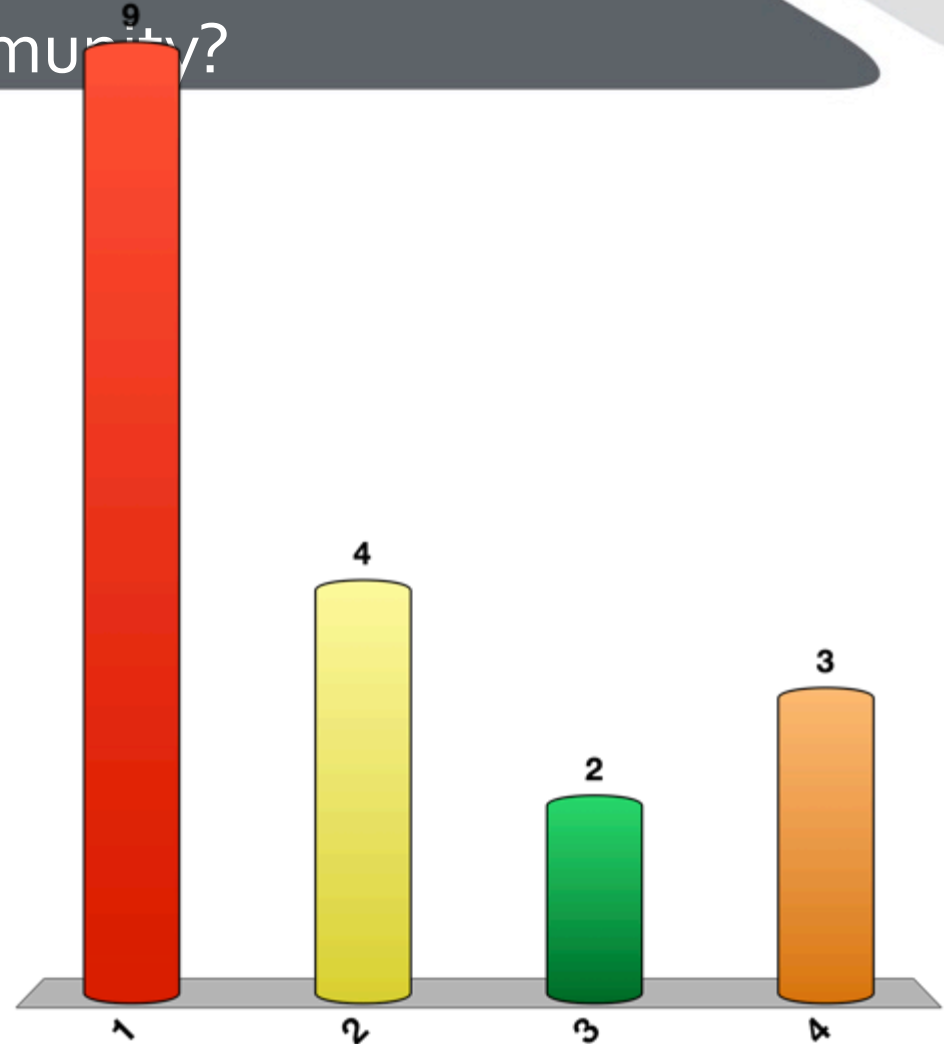
# Would you support the proposed Edna-Price Canyon Multi-Purpose Trail combined with improvements to SR 227?

1. Yes
2. No
3. Don't know
4. No opinion



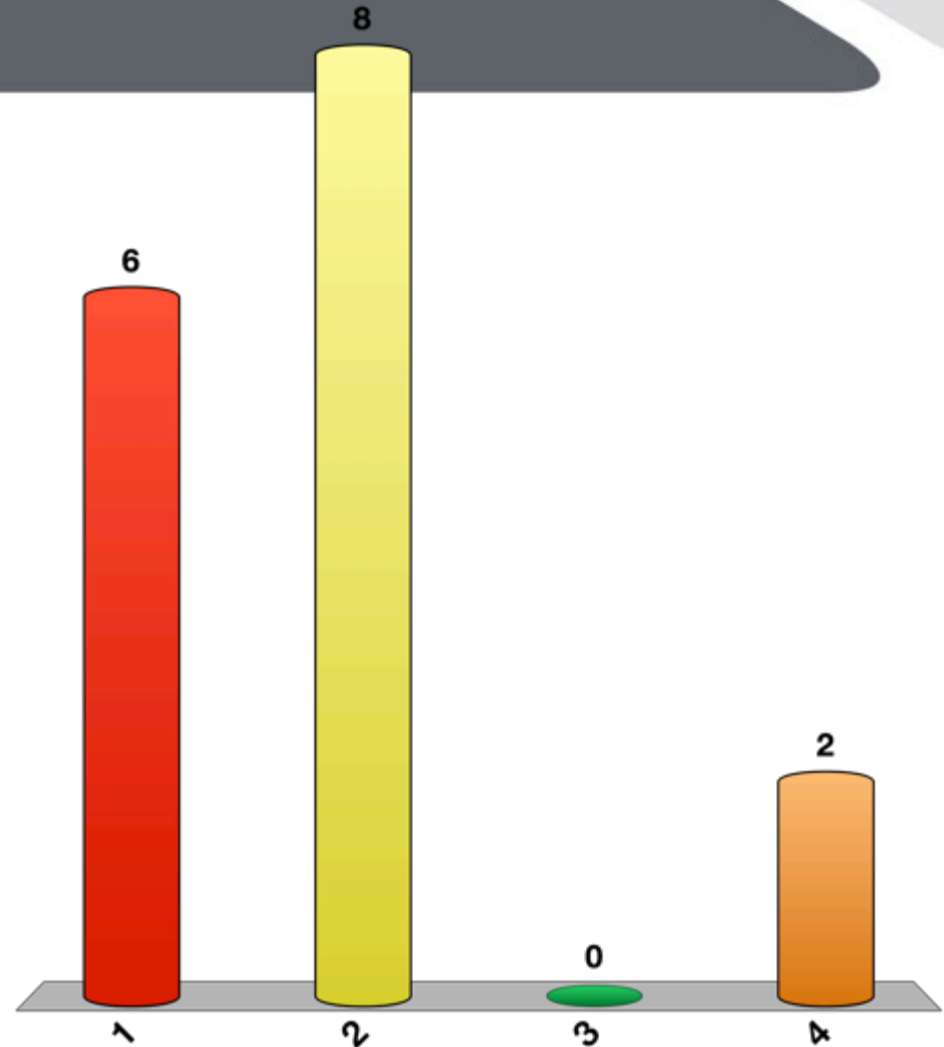
If combined with traffic calming treatments to discourage cut-through traffic would you support providing secondary access to the Rolling Hills (Crestmont) community?

1. Yes
2. No
3. Don't know
4. No opinion



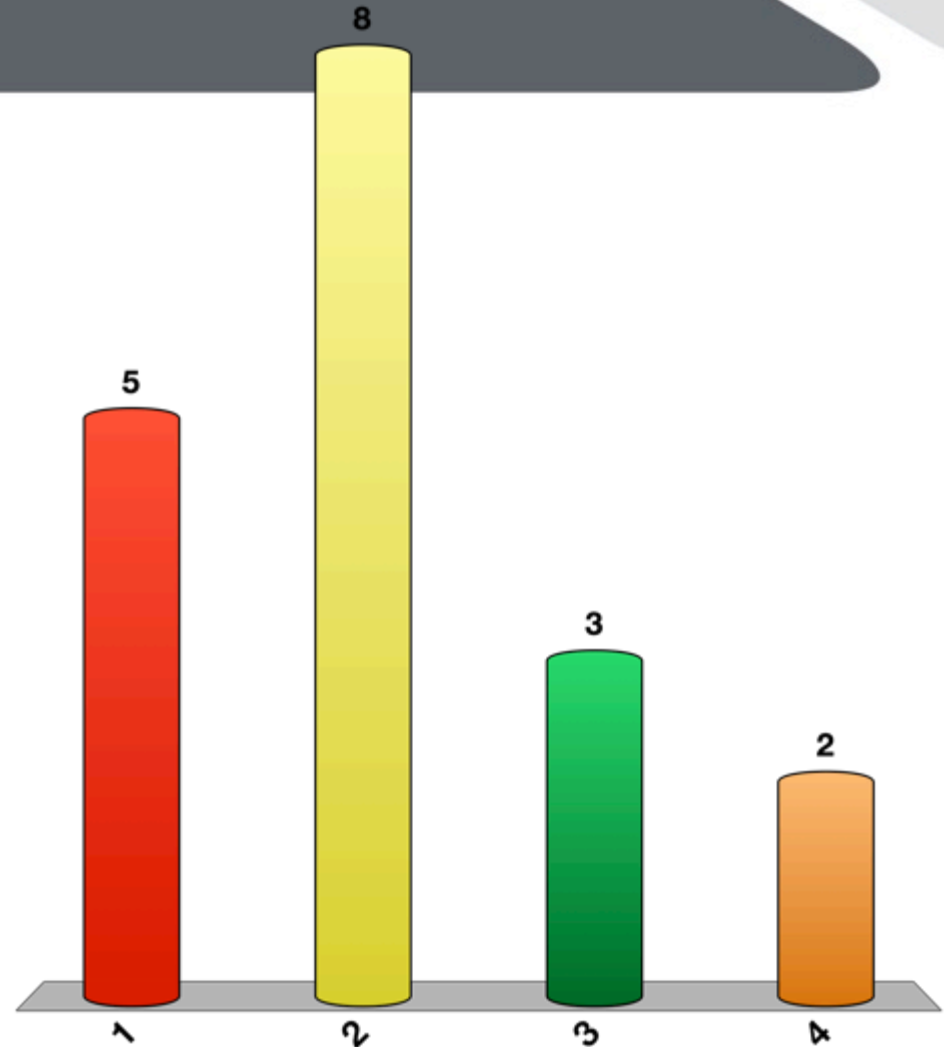
# Would you support providing fixed route transit service along SR 227 from the City of San Luis Obispo as far south as Los Ranchos?

1. Yes
2. No
3. Don't know
4. No opinion



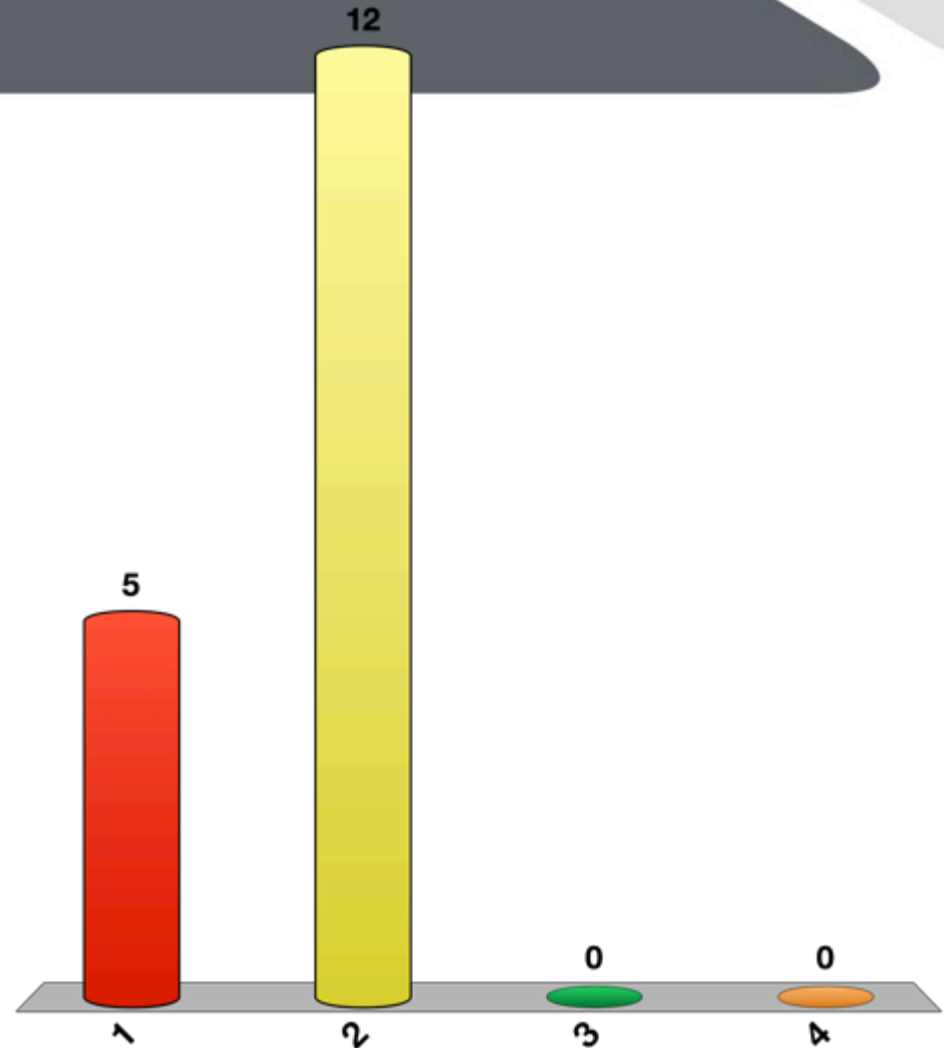
Would you support development of either a remote or fringe park-and-ride lot on the north end of the corridor (near Kendall Road)?

1. Yes
2. No
3. Don't know
4. No opinion



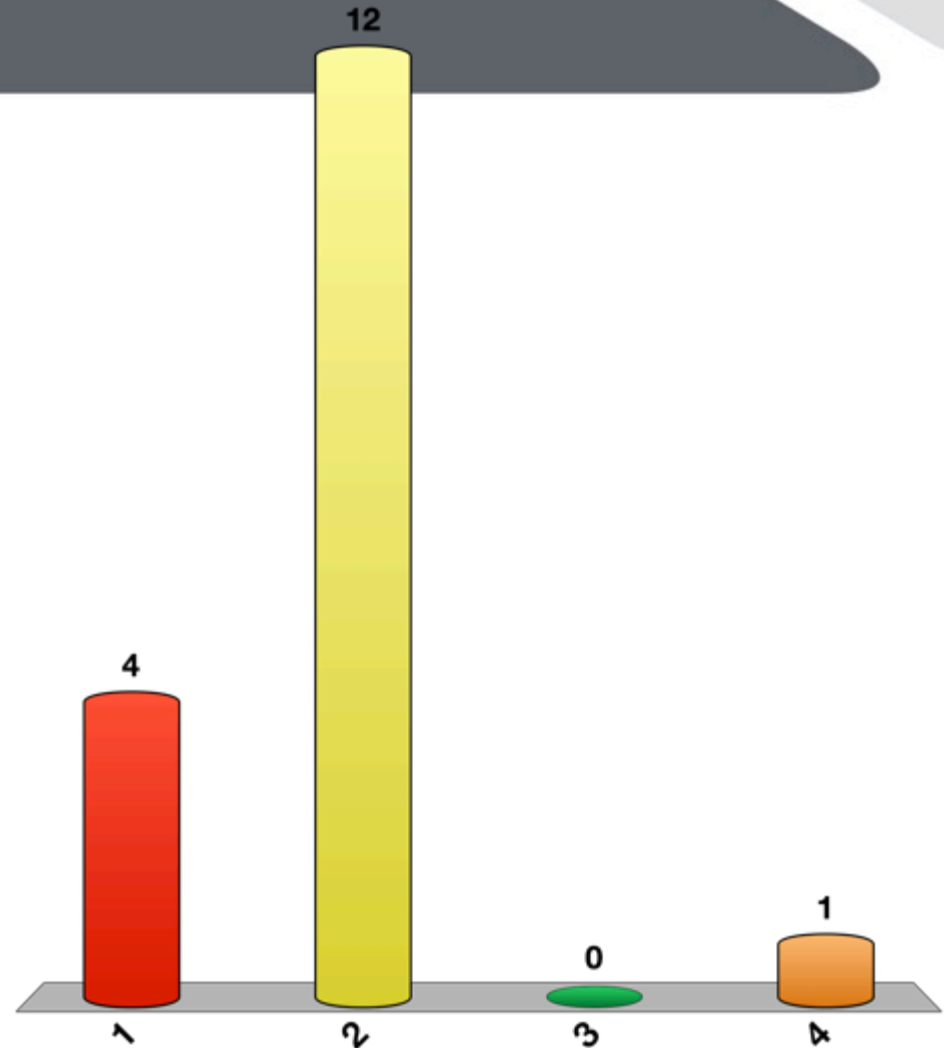
# Would you support reduced speeds on SR 227 between Farmhouse Lane and Los Ranchos?

1. No
2. Yes
3. No Opinion
4. Don't know



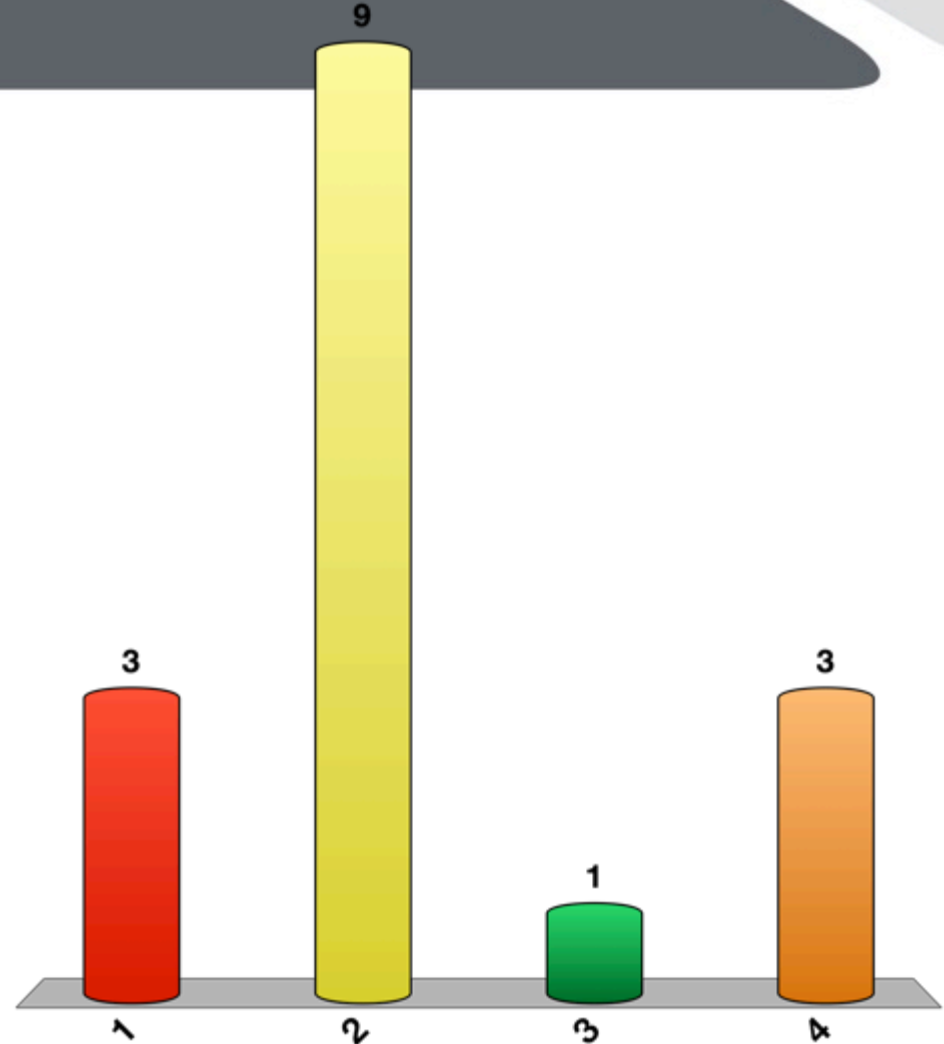
Would you support restricting turn movements to right-in, right-out and left-in at Kendall Road and at private residential and commercial driveways?

1. No
2. Yes
3. No Opinion
4. Don't know



# Would you support a roundabout at Farmhouse Lane, Buckley, Crestmont and Los Ranchos?

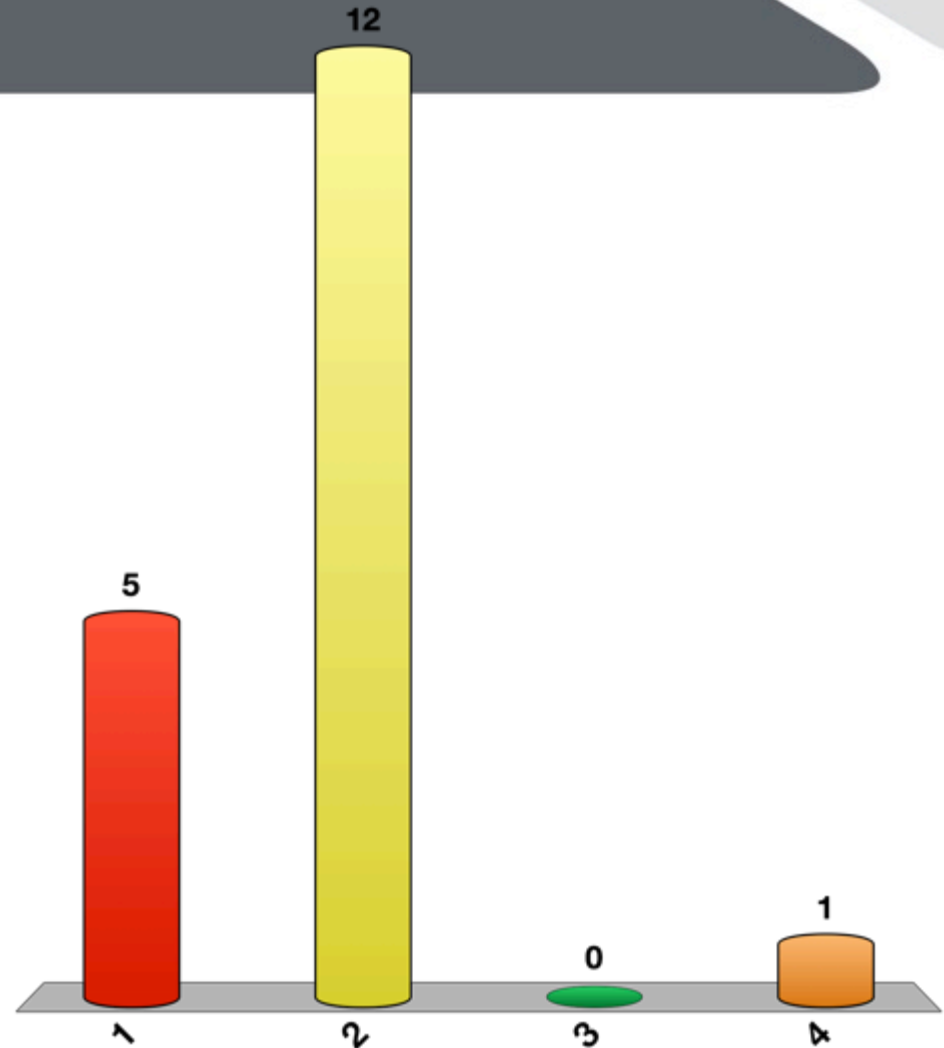
1. No
2. Yes
3. No Opinion
4. Don't know





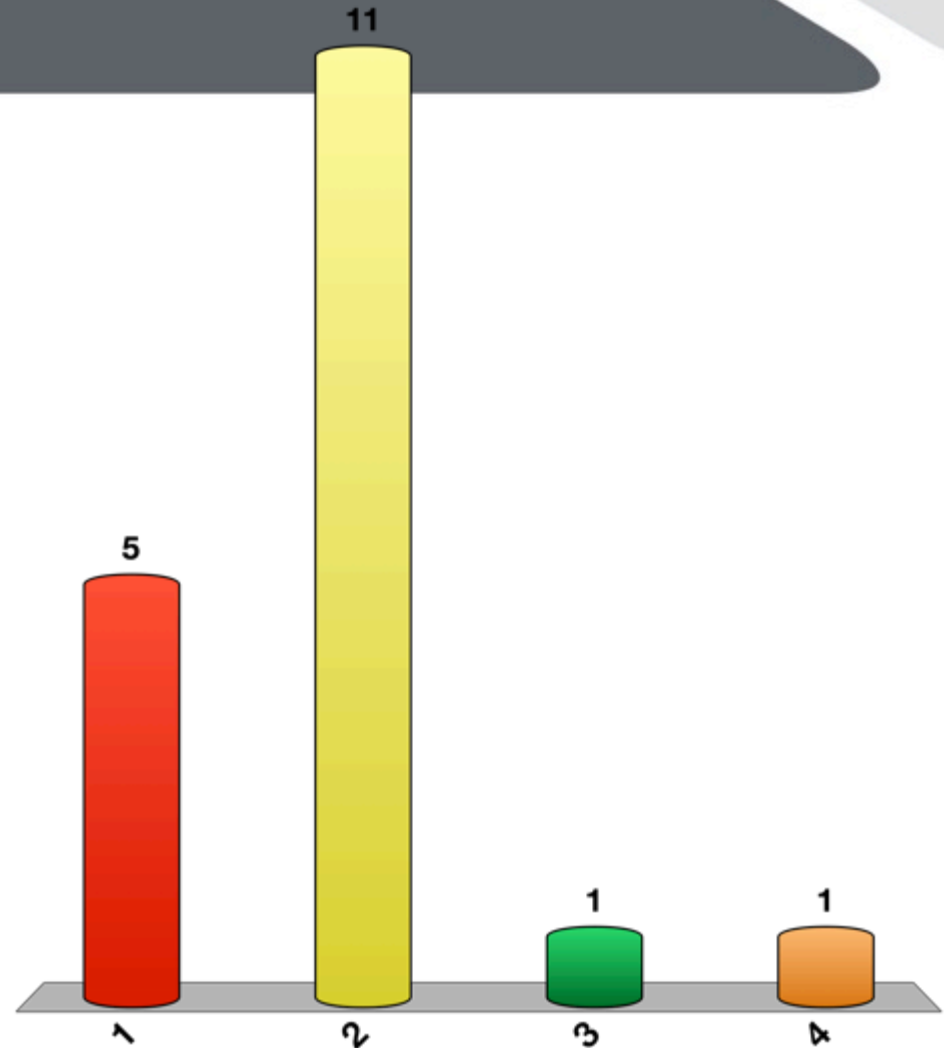
# Would you support installing traffic signals at Farmhouse Lane and Crestmont?

1. No
2. Yes
3. No Opinion
4. Don't know



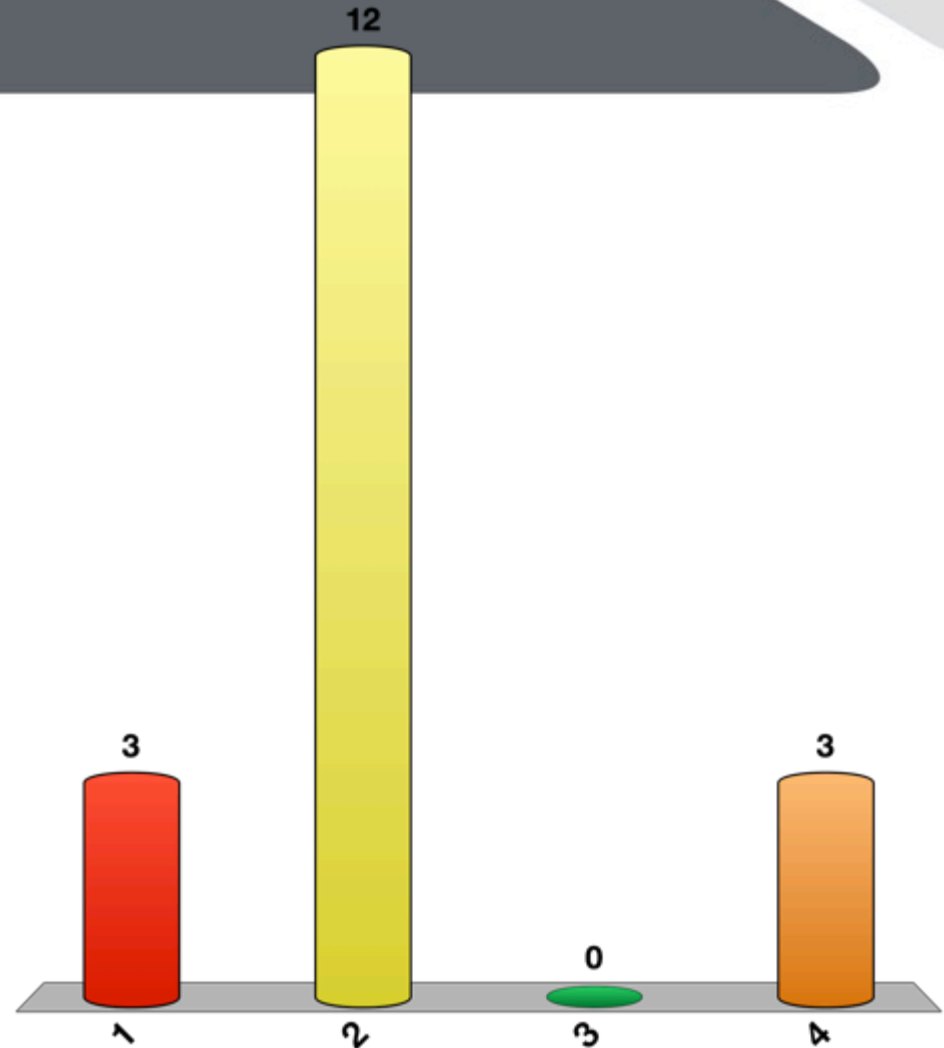
Would you support a full four-lane widening of SR 227 from north of Farmhouse to just south of Los Ranchos?

1. No
2. Yes
3. No Opinion
4. Don't know



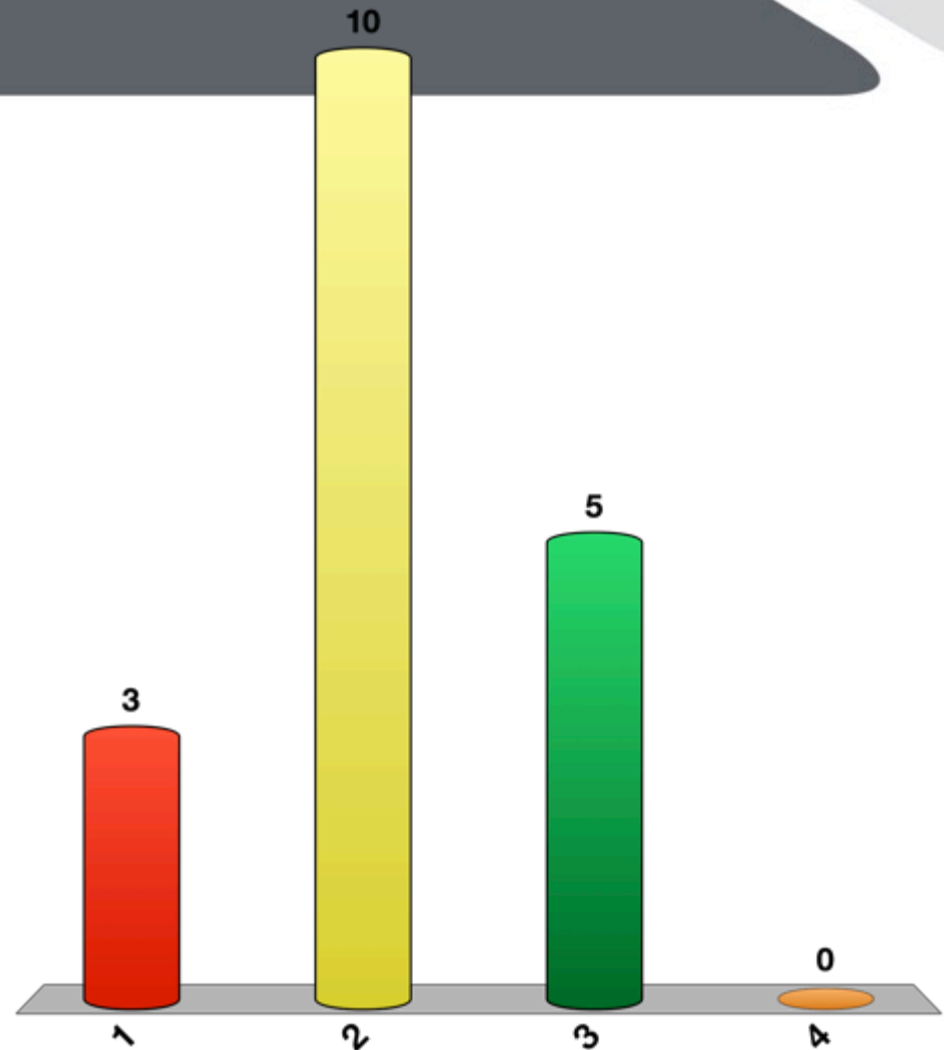
# Do you support pinching off access from Airport Drive and consolidating a four legged intersection at Farmhouse Lane?

1. No
2. Yes
3. No Opinion
4. Don't know



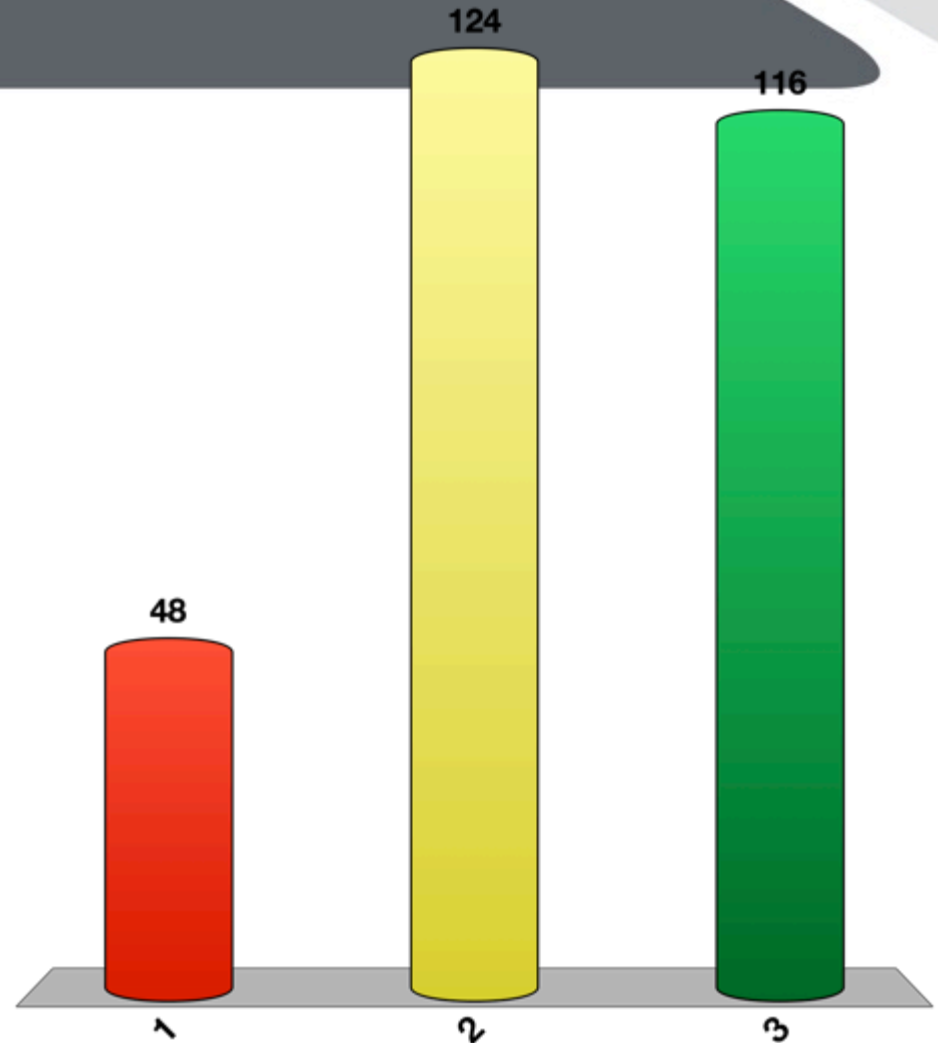
Do you think regional transit services connecting different communities are most in need to relieve congestion in the corridor?

1. Yes
2. No
3. Maybe
4. Don't know



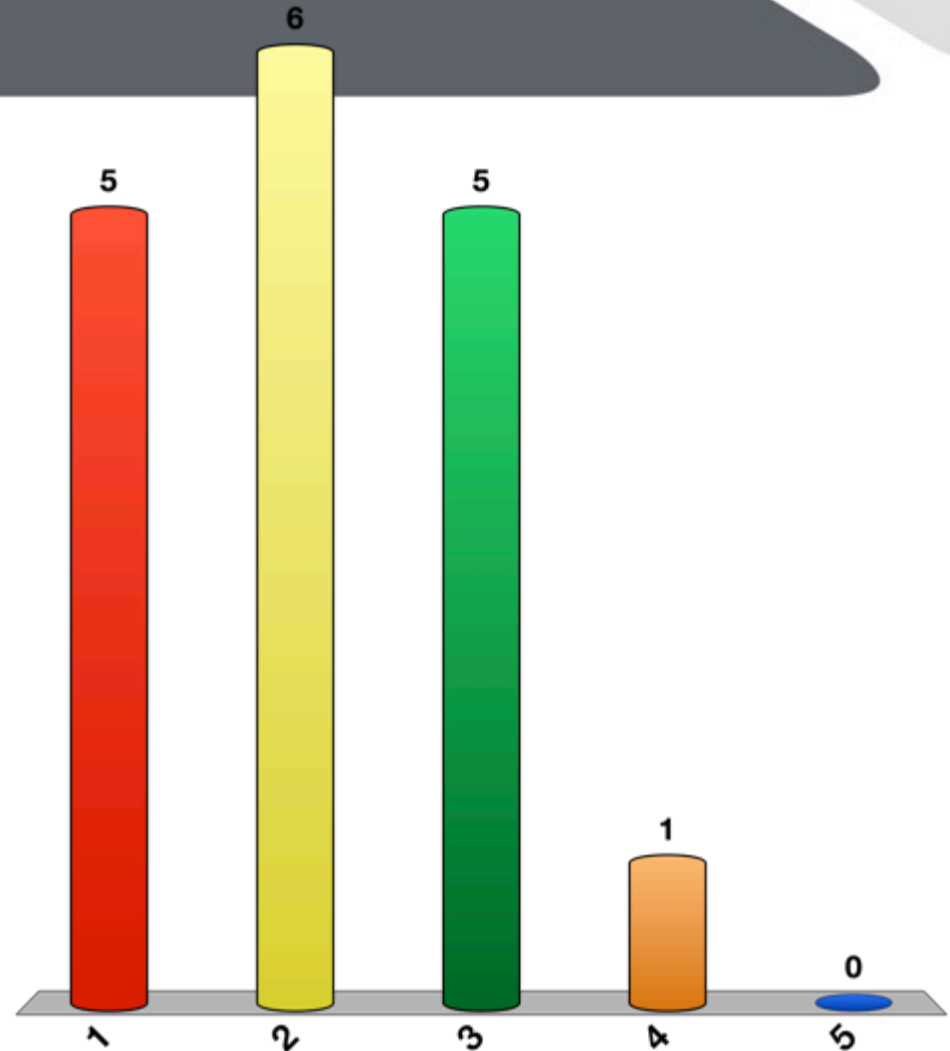
# Rank these in order of importance:

1. Preserving SR 227 as a scenic corridor.
2. Reducing congestion through adding mainline capacity with synchronized signals between Farmhouse Lane and Los Ranchos.
3. Striking a balance between added capacity and scenic attributes.



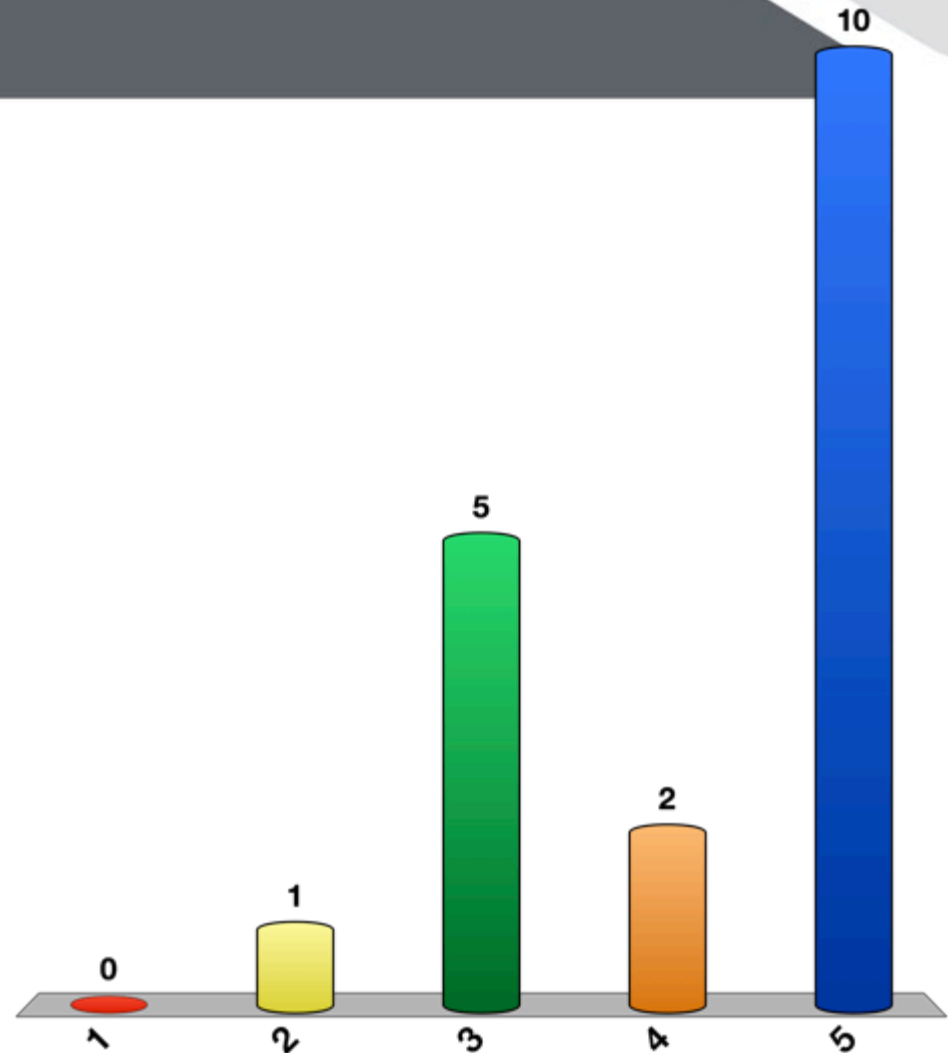
Making improvements to SR 227 is important to the local economy.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree



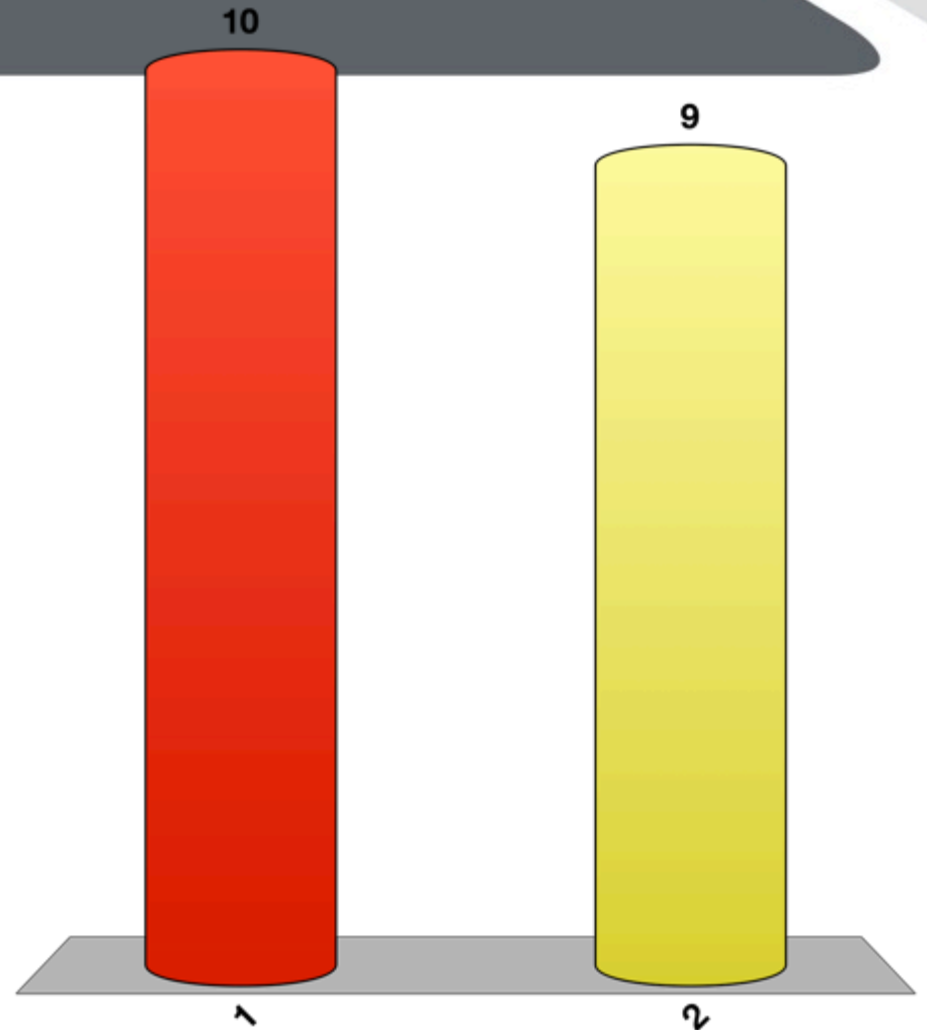
# What is your age?

1. Under 21 years
2. 21-35 years
3. 35 to 50 years
4. 50 to 65 years
5. Over 65 years



# What is your gender?

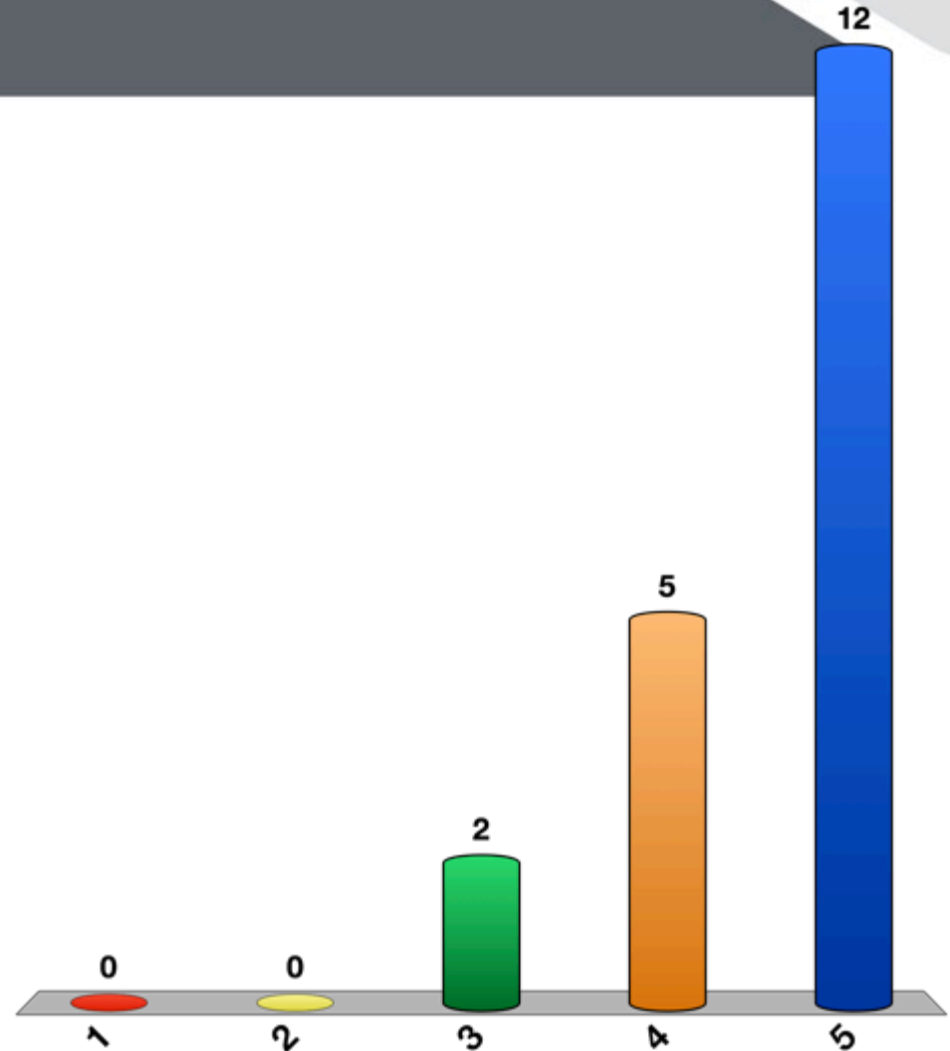
1. Male
2. Female





# How long have you lived in San Luis Obispo County?

1. 5 years or less
2. 5-10 years
3. 10-15 years
4. 15-25 years
5. More than 25 years



# SR 227 Operational Study Public Workshop #2

- Study administered by SLOCOG
- In partnership with SLO County, SLO City, and Caltrans

May 24, 2016



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