

CLAYTON CITY COUNCIL REGULAR MEETING AGENDA

Tuesday, April 2, 2024 7:00 p.m.

Hoyer Hall, Clayton Community Library 6125 Clayton Road, Clayton, CA 94517

Zoom Videoconference and Call-in: Webinar: <u>https://us02web.zoom.us/j/81342918951</u> Telephone: 1 + (669) 900 - 9128 Webinar ID: 813 4291 8951

Jim Diaz, Mayor

Kim Trupiano, Vice Mayor

Holly Tillman, Councilmember

Peter Cloven, Councilmember

Jeff Wan, Councilmember

1. CALL TO ORDER AND ROLL CALL

2. <u>PLEDGE OF ALLEGIANCE</u>

3. PUBLIC COMMENT ON NON - AGENDA ITEMS

Members of the public may address the City Council on non-agendized items within the Council's jurisdiction. To ensure an orderly meeting and an equal opportunity for everyone, each speaker is limited to three (3) minutes, or the time established by the Mayor. In accordance with State Law, no action may take place on any item not appearing on the posted agenda. The Council may respond to statements made or questions asked or may at its discretion request Staff to report back at a future meeting concerning the matter.

Public comment and input on other agenda items will be allowed when each item is considered by the Council.

4. <u>CONSENT CALENDAR</u>

Consent Calendar items are typically routine in nature and are considered for approval by one single motion. Members of the Council, audience, or Staff wishing an item removed from the Consent Calendar for purpose of public comment, question, discussion, or alternative action may request so through the Mayor.

a. Approval of Meeting Minutes:

i. March 19, 2024, Regular Meeting ii. March 22, 2024, Special Meeting (City Clerk) (View)

- Adopt a Resolution approving the District Closeout Analysis Report prepared for the City of Clayton Community Facilities District No. 1990-1 (Middle School), Declaring the Remaining Fund Balance as Surplus, and Ordering the Disposition of Surplus (City Manager) (View)
- c. Review and approve the authorization for the Clayton Police Department to spend \$87,048 from the Reserves with reimbursement from FEMA. (Chief of Police) (View)

5. <u>RECOGNITIONS AND PRESENTATIONS</u>

- a. Proclaim the month of April as Autism Awareness month.
- b. Proclaim the week of April 7 13, 2024, as National Library Week. (*View*)
- c. Sustainability Award presented by Republic Services

6. <u>REPORTS</u>

- a. City Manager / Staff
 - Link to ClearGov Transparency Portal: <u>https://cleargov.com/california/contra-costa/city/clayton/checkbook</u>

7. PUBLIC HEARINGS

(There are no Public Hearings scheduled for this meeting.)

8. ACTION ITEMS

- a. Provide Staff and the Trails and Landscape Committee direction on conducting a Request for Proposals for a Trails Assessment. (View)
- b. Adopt a Resolution authorizing, approving, and making the findings to employ Mr. Adam Politzer, a CalPERS retired annuitant, as the Interim Clayton City Manager beginning April 15, 2024. (Asst. to the City Manager/HR Manager) (View)
- c. Adopt a Resolution to establish a Vision Zero Policy related to eliminating fatalities and injury accidents on the Clayton roadway network in conjunction with the review and approval of the Local Roadway Safety Plan. (City Engineer) (View)
- 9. <u>COUNCIL ITEMS</u> Limited to Council requests and directives for future meetings.

10. <u>COUNCIL REPORTS</u>

11. ADJOURNMENT

The next regularly scheduled meeting of the City Council will be April 16, 2024.

Meeting Information and Access

- A complete packet of information containing staff reports and exhibits related to each public item is available for public review in City Hall located at 6000 Heritage Trail and on the City's website at <u>www.claytonca.gov</u>
- Agendas are posted at: 1) City Hall, 6000 Heritage Trail; 2) Library, 6125 Clayton Road; 3) Ohm's Bulletin Board, 1028 Diablo Street, Clayton; and 4) City Website at <u>www.claytonca.gov</u>
- Any writings or documents provided to a majority of the City Council after distribution of the agenda packet and regarding any public item on this agenda will be made available for public inspection in the City Clerk's office located at 6000 Heritage Trail during normal business hours and is available for review on the City's website at www.claytonca.gov
- If you have a physical impairment requiring special accommodation to participate, please call the City Clerk's office at least 72 hours (about 3 days) before the meeting at (925) 673-7300.

Remote Access

The public may attend City Council meetings in-person or remotely via livestream on the City's website and through Zoom. As a courtesy, and technology permitting, members of the public may continue to provide live remote oral comment via the Zoom video conferencing platform. However, the City cannot guarantee that the public's access to teleconferencing technology will be uninterrupted, and technical difficulties may occur from time to time. Unless required by the Brown Act, the meeting will continue despite technical difficulties for participants using the teleconferencing option.

1. **Videoconference:** Click or visit the link on the front page of the meeting agenda. To access the webinar, you may download the Zoom client application or connect to the meeting in the web browser. You will be asked to enter your email address and name.

When the Mayor calls your item of interest, click the "raise hand" icon to be added to the speaker queue. The Clerk will identify you by name and you will hear "you have been unmuted" when it is your turn to provide public comment.

2. Phone-in: Dial the telephone number provided on the front page of the agenda. When prompted, enter the meeting ID. Once connected you will hear the meeting discussions but will remain muted. When your item of interest is called, please dial *9 to "raise hand" and be added to the speaker queue. The Clerk will identify you by the last 4-digits of your phone number and you will hear "you have been unmuted" when it is your turn to provide public comment. To toggle between mute/unmute on your device, please dial *6. 3. E-mail Public Comments: Public comment may also be sent to the City Clerk at <u>cityclerk@claytonca.gov</u> by 5:00 p.m. on the day of the meeting. All e-mailed public comments will be forwarded to the entire City Council and made part of the official meeting file.

Each person attending the meeting in-person, via videoconference, or call-in and who wishes to speak on an agendized or non-agendized matter (within the council's jurisdiction), shall have a set amount of time to speak as determined by the Mayor.

4a.i Attachment 1

(Back to Agenda)



MINUTES OF THE REGULAR MEETING CLAYTON CITY COUNCIL

TUESDAY, March 19, 2024

 <u>CALL TO ORDER AND ROLL CALL</u> – The meeting was called to order at 6:30 p.m. by Mayor Diaz held via a hybrid meeting format live in-person and Zoom videoconference and broadcast from Hoyer Hall, Clayton Community Library, 6125 Clayton Road, Clayton, California. <u>Councilmembers present</u>: Mayor Diaz, Vice Mayor Trupiano, and Councilmembers Cloven, Tillman, and Wan. <u>Staff present</u>: City Manager, Bret Prebula; Asst. To City Manager/HR Manager, Amy Walcker; City Attorney, Mala Subramanian; and City Clerk, Stephanie Cabrera-Brown

2. <u>CLOSED SESSION</u>

a. Public Employee Appointment (Gov. Code 54957) Title: Interim City Manager

Action: No reportable action was taken.

3. <u>PLEDGE OF ALLEGIANCE</u> – Led by Mayor Diaz

Mayor Diaz announced that he would be re-ordering the agenda to move Item 6a Recognitions and Presentations, ahead of Item 3, Public Comment.

4. <u>PUBLIC COMMENT ON NON - AGENDA ITEMS</u>

Members of the public may address the City Council on non-agendized items within the Council's jurisdiction. To ensure an orderly meeting and an equal opportunity for everyone, each speaker is limited to three (3) minutes, or the time established by the Mayor. In accordance with State Law, no action may take place on any item not appearing on the posted agenda. The Council may respond to statements made or questions asked or may at its discretion request Staff to report back at a future meeting concerning the matter. Public comment and input on other agenda items will be allowed when each item is considered by the Council.

Larry McNeil – Spoke regarding employee turnover and concerns with how City Managers have been treated.

James Killoran – Spoke regarding concerns with a parcel tax and recommended the Council reconsider the sales tax measure.

Kevin McFarland – Spoke regarding concerns with city staff turnover and wished the City Manager well.

Lauren Kindorf – Spoke regarding the sales tax and supports a sales tax increase and regarding a systemic issue with holding on to staff.

Scott Denslow – Spoke regarding city staff turnover, what it means to live in Clayton and the importance of working together.

Terri Denslow – Requested the Council agendize the request from Councilmember Tillman to conduct a review of staff and council engagement.

Janet Calderon – Spoke regarding her sudden departure from the City of Clayton.

Roy Correa – Spoke regarding staff turnover and requested to see the City Manager's job description.

Gary Hood – Spoke in support of previous employees, Concerns with the current City manager, and various concerns.

Bill Walcott – Thanked the City Council for their work, Spoke regarding previous employee's departures, and in opposition of a sales tax measure.

5. <u>CONSENT CALENDAR</u>

It was moved by Councilmember Wan, seconded by Councilmember Tillman, to approve Consent Calendar items 5(a), 5(b), and 5(e) as submitted, and item 5(c) as amended. (Passed; 5- 0).

- a. Approval of Meeting Minutes:
 - i. March 5, 2024, Regular Meeting
 - ii. March 8, 2024, Special Meeting

(City Clerk)

- b. Consider proclaiming the month of April as Autism Awareness Month and accepting the donation of an Autism Awareness flag to be flown during the month of April. (City Manager)
- c. Approve amendments to the Purchasing Policy to require an informational agenda item listing agreements signed under the City Manager's signing authority. (City Manager)

Amended: To include quarterly reporting.

d. Adopt a Resolution changing the amounts within various General Fund Reserve Assignments to support bridging operations to the November 2026 election, when the City Council plans to place a revenue measure on the ballot. (City Manager)

Resolution 7-2024

e. Adopt a Resolution accepting the City's 2023 Housing Element Annual Progress Report (APR) and summary of actions related to implementation of other General Plan policies. (Community Development Director)

Resolution 8-2024

Following discussion by the City Council, Mayor Diaz opened the item to public comment:

Allison Snow – Spoke regarding being a parent of children with Autism Spectrum Disorder and offered to donate an Autism Awareness Flag.

Gary Hood – Spoke regarding the Purchasing Policy.

6. <u>RECOGNITIONS AND PRESENTATIONS</u>

a. Certificates of Recognition to Public School Students for Exemplifying the "Do the Right Thing" Character Trait of "Self-Discipline" during the months of January/February 2024.

Councilmember Cloven presented the awards with the assistance of the school Principals.

7. <u>REPORTS</u>

- a. City Manager / Staff
 - Link to ClearGov Transparency Portal: <u>https://cleargov.com/california/contra-costa/city/clayton/checkbook</u>

8. PUBLIC HEARINGS

(There were no Public Hearings scheduled for this meeting.)

9. ACTION ITEMS

a. Receive a Staff update on the Interim City Manager and City Manager recruitment process, appoint a City Council ad hoc subcommittee to assist in the City Manager Recruitment Process for an Interim and Permanent City Manager, consider and approve an amendment to the Bob Murray Agreement for City Manager recruitment, and provide Staff direction as necessary. (Asst. to the City Manager/HR Manager)

HR Manager Amy Walcker provided an overview of Interim City Manager and City Manager recruitment process. Following discussion by the City Council, Mayor Diaz opened the item to public comment:

Lauren Kindorf – Spoke regarding the March 8, 2024 meeting and recommended that a new candidate be selected promptly.

Scott Denslow – Spoke regarding concerns with transparency on the recruitment process.

James Killoran – Spoke regarding importance of consulting the Police Chief and Police Officers Association to

Bill Walcott – Spoke regarding the need for community involvement in the process and made a recommendation to the Council.

Gary Hood – Spoke regarding the importance of interview committees and wants the community to be involved.

Terri Denslow – Spoke regarding previous recruitment processes and requested the council all consider being part of the recruitment process.

It was moved by Councilmember Wan and seconded by Vice Mayor Trupiano to approve an amendment to the Bob Murray Agreement for City Manager recruitment and appoint Councilmember Cloven and Vice Mayor Trupiano to an ad hoc subcommittee to assist in the City Manager

Recruitment Process. (Passed; 5-0)

b. Provide direction on the desire to declare 1-acre of APN 118-370-077 and up to 4-acres of APN 118-520-001 as "surplus land" under the Surplus Land Act, so that the City can move forward toward disposal (City Manager)

City Manager Bret Prebula provided an overview of the surplus land and Surplus Land Act. Following discussion by the City Council, Mayor Diaz opened the item to public comment. There were no members of the public in attendance wishing to provide public comment.

It was moved by Councilmember Cloven and seconded by Councilmember Tillman to approve an amendment to declare 1-acre of APN 118-370-077 and up to 4-acres of APN 118-520-001 as "surplus land" under the Surplus Land Act. (Passed; 5-0)

The Council recessed at 8:39 p.m. and reconvened the meeting at 8:50 p.m.

10. <u>COUNCIL ITEMS</u> – Limited to Council requests and directives for future meetings.

Councilmember Cloven requested the tax measure discussion be brought back to the council for clarification at the next available meeting.

Councilmember Tillman requested a future agenda item to discuss the censure of councilmembers and requesting to the City Attorney review concerns.

11. <u>COUNCIL REPORTS</u>

Councilmember Cloven attended meetings for: Transpac and Clayton Cleans up.

Councilmember Tillman attended meetings for: Community Services Policy Committee; Student Engagement Committee (Mt. Diablo Education Foundation Board); Trails and Landscape Committee; Clayton Pride Board; City Manager and Asst. to the City Manager; Marsh Creek Firewise group; Attended: Network of Care Crab feed; and Thanked the departing City Manager for his work and time in Clayton.

Councilmember Wan attended a Climatec meeting and shared that he will not be available to attend the April 2, 2024, City Council meeting.

Vice Mayor Trupiano attended meetings for: Mayors Conference; Clayton Community Library Foundation; Climatec and will attend meetings for: CSSE, and Budget and Audit Committee; and thanked the departing City Manager.

Mayor Diaz attended meetings for: County Connect Schedule Committee; Mayors Conference; DFWD – Post 1525; Oakhurst; Sheriff's Charity Ball; met with: Supervisor Ken Carlson; City Manager and Assistant to the City Manager; attended: Celebration of Life for Paul Guilkey; St. Patrick's Day celebrations; and wished the departing City Manager well in his future endeavors.

ADJOURNMENT – on a call by Mayor Diaz, The City Council adjourned its meeting at 9:29 p.m.

Respectfully submitted,

Stephanie Cabrera-Brown, City Clerk

APPROVED BY THE CLAYTON CITY COUNCIL

Jim Diaz, Mayor

MINUTES OF THE SPECIAL MEETING CLAYTON CITY COUNCIL

FRIDAY, March 22, 2024

- <u>CALL TO ORDER AND ROLL CALL</u> The meeting was called to order at 2:00 p.m. by Mayor Diaz, held in-person from City Hall, Conference Room 1, 6000 Heritage Trail, Clayton, California. <u>Councilmembers present</u>: Mayor Diaz, Vice Mayor Trupiano, and Councilmembers Cloven, Tillman, and Wan. <u>Staff present</u>: City Clerk Stephanie Cabrera-Brown.
- 2. <u>PLEDGE OF ALLEGIANCE</u> Led by Mayor Diaz.

3. <u>CLOSED SESSION</u>

a. Public Employee Appointment (Gov. Code 54957) Title: Interim City Manager

Action: No reportable action was taken.

4. <u>ADJOURNMENT</u>

On a call by Mayor Diaz, the City Council adjourned its meeting at 5:00 p.m.

Please note the Minutes of this meeting set forth all actions taken by the City Council on the matters stated, but not necessarily in the chronological sequence in which the matters were taken up.

Respectfully submitted,

Stephanie Cabrera-Brown, City Clerk

APPROVED BY THE CLAYTON CITY COUNCIL

Jim Diaz, Mayor



City Council Agenda Item 4b

STAFF REPORT

- TO: Honorable Mayor and Councilmembers
- FROM: Bret Prebula, City Manager
- DATE: April 2, 2024

SUBJECT: Approve a Resolution for the District Closeout of the City of Clayton Community Facilities District No. 1990-1 (Middle School)

RECOMMENDATION

Adopt a Resolution Approving the District Closeout Analysis Report prepared for the City of Clayton Community Facilities District No. 1990-1 (Middle School), Declaring the Remaining Fund Balance as Surplus, and Ordering the Disposition of Surplus

BACKGROUND

The City established Community Facilities District No. 1990-1 (the "District"), on June 5, 1990, to finance a portion of the cost of construction of a middle school located within the jurisdiction of the Mt. Diablo School District and to acquire certain site preparation work on the ballfield and playground park site conveyed to the City adjacent to the school site.

The District also paid the incidental expenses authorized by the Mello-Roos Community Facilities Act of 1982, including, but not limited to, costs of planning and designing the facilities (including cost of environmental evaluations thereof); costs associated with the creation of the District; issuance and sale of special tax bonds; determination of the amount of Special Taxes, collection of Special Taxes, payment of Special Taxes, or costs otherwise incurred in order to carry out the authorized purpose of the District; and any other expenses incidental to the construction, completion, and inspection of the facilities.

These improvements were financed by the \$6,435,000 City of Clayton Community Facilities District No. 1990-1 Special Tax Bonds, issued on November 27, 1990. These bonds were refunded in 1997 by the \$7,160,000 Clayton Financing Authority 1997 Special Tax Revenue

Refunding Bonds. Then, in 2007, the Clayton Financing Authority refunded the 1997 Special Tax Revenue Refunding Bonds with the issuance of the \$5,060,000 Clayton Financing Authority 2007 Special Tax Revenue Refunding Bonds.

DISCUSSION

The improvements funded by the Community Facilities District No. 1990-1 special tax bonds have been completed and the payment of all principal and interest has been paid in full.

In order to close out the district, the City worked with NBS to prepare the District Closeout Analysis Report, which identifies the remaining fund balance of the District to be considered surplus and addresses the disposition of the surplus funds.

FISCAL IMPACT

The District Closeout Analysis Report prepared for Community Facilities District No. 1990-1 identifies the surplus funds and the disposition of the funds to the General Fund, in accordance with the Bond documents.

CEQA IMPACT

None

ATTACHMENTS

- 1. Resolution Approving the District Closeout Analysis Report prepared for the City of Clayton Community Facilities District No. 1990-1 (Middle School), Declaring the Remaining Fund Balance as Surplus, and Ordering the Disposition of Surplus
- 2. District Closeout Analysis Report For: Community Facilities District No. 1990-1 (Middle School)

RESOLUTION NO. XX-2024

A RESOLUTION APPROVING THE DISTRICT CLOSEOUT ANALYSIS REPORT PREPARED FOR THE CITY OF CLAYTON COMMUNITY FACILITIES DISTRICT NO. 1990-1 (MIDDLE SCHOOL), DECLARING THE REMAINING FUND BALANCE AS SURPLUS, AND ORDERING THE DISPOSITION OF SURPLUS

THE CITY COUNCIL City of Clayton, California

WHEREAS, the City Council of the City of Clayton, California (hereinafter referred to as the "legislative body") has by previous Resolution and related actions, undertaken proceedings to establish the City of Clayton Community Facilities District No. 1990-1 (Middle School) (the "District"); and,

WHEREAS, on November 27, 1990, Community Facilities District No. 1990-1 Special Tax Bonds (the "Prior Bonds"), were issued to finance a portion of the cost of construction of a middle school located within the jurisdiction of the Mt. Diablo School District and to acquire certain site preparation work on the ballfield and playground park site conveyed to the City adjacent to the school site. The District also paid the incidental expenses authorized by the Mello-Roos Community Facilities Act of 1982, including, but not limited to, costs of planning and designing the facilities (including cost of environmental evaluations thereof); costs associated with the creation of the District; issuance and sale of special tax bonds; determination of the amount of Special Taxes, collection of Special Taxes, payment of Special Taxes, or costs otherwise incurred in order to carry out the authorized purpose of the District; and any other expenses incidental to the construction, completion, and inspection of the facilities; and

WHEREAS, the Prior Bonds were refinanced twice with the sale and delivery of the \$7,160,000 Clayton Financing Authority 1997 Special Tax Revenue Refunding Bonds on October 31, 1997, and on May 17, 2007 with sale and delivery of the \$5,060,000 Clayton Financing Authority 2007 Special Tax Revenue Refunding Bonds (the "Bonds");

WHEREAS, the legislative body is satisfied with the improvements that have been completed; and,

WHEREAS, the payment of all principal and interest due on the Bonds have been paid in full;

NOW THEREFORE, BE IT RESOLVED, that the City Council of Clayton,

California, does hereby:

SECTION 1. That the above recitals are each true and correct.

SECTION 2. The legislative body approves the District Closeout Analysis Report prepared by NBS for the District on file with the City Clerk.

- **SECTION 3.** The legislative body declares the fund balance of the District to be surplus.
- **SECTION 4.** The legislative body orders the disposition of said surplus funds in the manner described in the District Closeout Analysis Report.

PASSED, APPROVED and ADOPTED by the City Council of the City of Clayton, California, at a regular public meeting thereof held on 2nd day of April 2024, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ABSENT:

THE CITY COUNCIL OF CLAYTON, CA

ATTEST:

Jim Diaz, Mayor

Stephanie Cabrera-Brown, City Clerk

CITY OF CLAYTON

District Closeout Analysis Report For:

Community Facilities District No. 1990-1 (Middle School)

March 2024



nbsgov.com

Corporate Headquarters 32605 Temecula Parkway, Suite 100 Temecula, CA 92592 Toll free: 800.676.7516

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EXECUTIVE SUMMARY

The City of Clayton (the "City") established Community Facilities District No. 1990-1 (the "District"), on June 5, 1990, to finance a portion of the cost of construction of a middle school located within the jurisdiction of the Mt. Diablo School District and to acquire certain site preparation work on the ballfield and playground park site conveyed to the City adjacent to the school site. The District also paid the incidental expenses authorized by the Mello-Roos Community Facilities Act of 1982, including, but not limited to, costs of planning and designing the facilities (including cost of environmental evaluations thereof); costs associated with the creation of the District; issuance and sale of special tax bonds; determination of the amount of Special Taxes, collection of Special Taxes, payment of Special Taxes, or costs otherwise incurred in order to carry out the authorized purpose of the District; and any other expenses incidental to the construction, completion, and inspection of the facilities (the "Improvements").

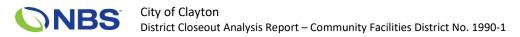
The Improvements were financed by the \$6,435,000 City of Clayton Community Facilities District No. 1990-1 Special Tax Bonds, issued on November 27, 1990. These bonds were refunded in 1997 by the \$7,160,000 Clayton Financing Authority 1997 Special Tax Revenue Refunding Bonds (the "Prior Bonds"). Then, in 2007, the Clayton Financing Authority refunded the 1997 Special Tax Revenue Refunding Bonds with the issuance of the \$5,060,000 Clayton Financing Authority 2007 Special Tax Revenue Refunding Bonds (the "Bonds").

The final arbitrage rebate calculation was performed on September 26, 2022, resulting in a cumulative liability of (\$84,173.16). Therefore, no payment is required to the IRS.

The City confirmed that the Improvements were completed, as of June 30, 2009, and all remaining debt associated with the Bonds was paid on September 2, 2022.

After the payment of the Bonds and the final Special Tax levy, a surplus remains in the Special Tax Fund. The City retained NBS to review and prepare a District Closeout Analysis Report for the District. This report summarizes the recommendations for the disposition of the remaining funds, in accordance with applicable laws.

The City retained NBS to review and prepare a District Closeout Analysis Report for the District. As a part of the closeout analysis, NBS also conducted an analysis of the Special Tax payments to determine any District delinquencies. Per property tax records, there is one delinquent parcel for a total delinquency of \$191.88 in the District.



1. FUNDS ANALYSIS

The following table shows the fund analysis prepared for the District. The analysis reflects the June 30, 2023, fund balances associated with the District and Bonds:

Project Fund	
Project Fund Balance as of 06/30/2023	\$0.00
Ending Balance	\$0.00
Costs of Issuance Fund	
Costs of Issuance Fund Balance as of 06/30/2023	\$0.00
Ending Balance	\$0.00
Refunding Fund	
Refunding Fund Balance as of 06/30/2023	\$0.00
	_
Ending Balance	\$0.00
Reserve Fund	
Reserve Fund Balance as of 06/30/2023	\$0.00
Ending Balance	\$0.00
Revenue Fund	
Revenue Fund Balance as of 06/30/2023	\$0.00
	,
Ending Balance	\$0.00
	Ş0.00
Rebate Fund	
Debate Fund Balance as of 00/20/2022	<u> </u>
Rebate Fund Balance as of 06/30/2023	\$0.00
	Az
Ending Balance	\$0.00



Surplus Fund	
Surplus Fund Balance as of 06/30/2023	\$0.00
Ending Balance	\$0.00
Special Tax Fund	
Special Tax Fund Balance as of 06/30/2023	\$528,971.04
Less: Amount to be Transferred to the General Fund	(528,971.04
Ending Balance	\$0.00
Total Amount to be Transferred to General Fund	\$528,971.04

2. SUMMARY OF FUNDS

2.1 Clayton Financing Authority Funds

The following section summarizes the disposition of each fund that was established in accordance with the Indenture of Trust by the Clayton Financing Authority, relating to the Bonds.

Project Fund

The Project Fund is created upon formation of the District. All bond proceeds not associated with the financing and administrative costs of the bond issuance are deposited in this fund to pay for the improvements to be constructed and/or acquired. Once the project has been completed, any remaining balance in the fund should be transferred to the Revenue Fund, in accordance with the Bond Indenture.

All money in the Project Fund was used for payment of the Improvements of the District. The Improvements have been completed.

Cost of Issuance Fund

The Cost of Issuance Fund is created to hold funds deposited at the time of the Bond issuance to pay for costs of issuance of Bonds. On a date which is 120 days following the closing date of the Bonds, the trustee shall transfer all remaining amounts to the Project Fund. Upon such transfer, the Costs of Issuance Fund shall be closed. The Authority may at any time file a request of the authority requesting that the trustee retain a specified amount in the Costs of Issuance Fund and transfer to the Revenue Fund all remaining amounts.

Refunding Fund

The Refunding Fund held is created to hold deposited at the time of the Bond issuance to pay for costs identified in the refunding instructions provided at the time of the issuance of Bonds. In accordance with the refunding instructions, the trustee of the Prior Bonds shall transfer the registration of the local obligation bonds to the trustee of the Bonds.

Reserve Fund

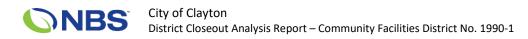
Moneys in the Reserve Fund shall be used by the fiscal agent solely for the purpose of paying the interest on or principal of or redemption premiums, if any on the Bonds in the event there is insufficient money in the Redemption Account available for these purposes. In such case, the Reserve Fund is to be replenished up to the reserve requirement as soon as funds become available. Excess funds in the Reserve Fund shall be transferred to the Redemption Account for use in payment of Bond debt service.

The Reserve Fund was established at the time the original bonds were issued. As a result of the refunding, a Reserve Fund is held by the Clayton Financing Authority for the Bonds.

The initial deposit to the Reserve Fund was \$251,982.51. The remaining amount of \$206,168.51, are secured by a Qualified Reserve Fund Credit instrument in the form of the surety bond issued by Ambac Assurance Corporation at the time of issuance of the Bonds.

Revenue Fund

The Revenue Fund consists of the Interest Account and Principal Account. In accordance with the Bond Indenture, the trustee shall deposit all revenues received after the closing date (defined as June 7, 2007) to the Revenue Fund and shall apply amounts in the Revenue Fund as follows.



On each interest payment date and date for redemption of the Bonds, the trustee shall transfer from the Revenue Fund, and deposit into the following respective accounts for the Bonds, the following amounts in the following order of priority, the requirements of each such account (including the making up of delinquencies in any such account resulting from lack of revenue sufficient to make any earlier required deposit) at the time of deposit to be satisfied before any transfer is made to any account subsequent in priority: Interest Account, Principal Account, and Reserve Fund.

On each interest payment date after making the transfers required above, upon receipt of a request of the Authority to do so, the trustee shall transfer from the Revenue Fund to the Rebate Fund for deposit in the accounts therein the amounts specified in such request.

On September 2 of each year, after making the deposits required above, the trustee shall transfer all amounts remaining on deposit in the Revenue Fund to the Surplus Fund.

Rebate Fund

The Rebate Fund is created in order to comply with the requirements of Section 148 of the IRS Code relating to the calculation and payment of any arbitrage rebate.

Surplus Fund

Amounts remaining in the Revenue Fund are transferred to the Surplus Fund. Any amounts transferred to the Surplus Fund shall no longer be considered revenues and are not pledged to repay the Bonds.

So long as local obligations bonds are outstanding, on September 3 of each year, any money remaining in the Surplus Fund shall be transferred to U.S. Bank National Association, as fiscal agent for the local obligation bonds, and deposited in the Special Tax Fund.

2.2 District Funds

The following section summarizes the disposition of the Special Tax Fund that was established in accordance with the Fiscal Agent Agreement at the formation of the District.

Special Tax Fund

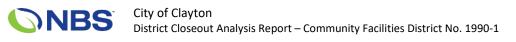
All money in the Special Tax Fund shall be set aside in the following respective accounts within the Special Tax Fund in the following order of priority, and all money in each of such accounts shall be applied, used and withdrawn only for the purposes authorized in the Fiscal Agent Agreement:

- (a) Redemption Account
- (b) Reserve Account
- (c) Expenses Account
- (d) Prepayment Account



3. NOTICE OF COMPLETION

The following page contains the Notice of Completion of Improvements signed by the City Manager.



NOTICE OF COMPLETION OF IMPROVEMENTS

City of Clayton Community Facilities District No. 1990-1 2007 Special Tax Revenue Refunding Bonds (Middle School)

Notice is hereby given that the improvements financed by the Community Facilities District No. 1990-1 (Middle School) (the "District") as fully described in the Resolution of Formation, dated June 5, 1990, for said District, have been completed.

The City of Clayton (the "City") established the District to finance a portion of the cost of construction of a middle school located within the jurisdiction of the Mt. Diablo School District and to acquire certain site preparation work on the ballfield and playground park site conveyed to the City adjacent to the school site. The District also paid the incidental expenses authorized by the Mello-Roos Community Facilities Act of 1982, including, but not limited to, costs of planning and designing the facilities (including cost of environmental evaluations thereof); costs associated with the creation of the District; issuance and sale of special tax bonds; determination of the amount of Special Taxes, collection of Special Taxes, payment of Special Taxes, or costs otherwise incurred in order to carry out the authorized purpose of the District; and any other expenses incidental to the construction, completion, and inspection of the facilities.

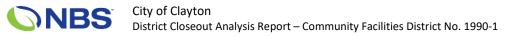
Reference is made to the Resolution of Formation, dated June 5, 1990, for said District for a complete description of the improvements constructed.

The City Manager confirms that the above recitals are true and correct.

City Manager City of Clayton

4. **RESOLUTION**

The following pages show the resolution prepared for the District reflected in this report to be presented to the City Council.



RESOLUTION NO. ____-2024

A RESOLUTION APPROVING THE DISTRICT CLOSEOUT ANALYSIS REPORT PREPARED FOR THE CITY OF CLAYTON COMMUNITY FACILITIES DISTRICT NO. 1990-1 (MIDDLE SCHOOL), DECLARING THE REMAINING FUND BALANCE AS SURPLUS, AND ORDERING THE DISPOSITION OF SURPLUS

THE CITY COUNCIL City of Clayton, California

WHEREAS, the City Council of the City of Clayton, California (hereinafter referred to as the "legislative body") has by previous Resolution and related actions, undertaken proceedings to establish the City of Clayton Community Facilities District No. 1990-1 (Middle School) (the "District"); and,

WHEREAS, on November 27, 1990, Community Facilities District No. 1990-1 Special Tax Bonds (the "Prior Bonds"), were issued to finance a portion of the cost of construction of a middle school located within the jurisdiction of the Mt. Diablo School District and to acquire certain site preparation work on the ballfield and playground park site conveyed to the City adjacent to the school site. The District also paid the incidental expenses authorized by the Mello-Roos Community Facilities Act of 1982, including, but not limited to, costs of planning and designing the facilities (including cost of environmental evaluations thereof); costs associated with the creation of the District; issuance and sale of special tax bonds; determination of the amount of Special Taxes, collection of Special Taxes, payment of Special Taxes, or costs otherwise incurred in order to carry out the authorized purpose of the District; and any other expenses incidental to the construction, completion, and inspection of the facilities; and

WHEREAS, the Prior Bonds were refinanced twice with the sale and delivery of the \$7,160,000 Clayton Financing Authority 1997 Special Tax Revenue Refunding Bonds on October 31, 1997, and on May 17, 2007 with sale and delivery of the \$5,060,000 Clayton Financing Authority 2007 Special Tax Revenue Refunding Bonds (the "Bonds");

WHEREAS, the legislative body is satisfied with the improvements that have been completed; and,

WHEREAS, the payment of all principal and interest due on the Bonds have been paid in full;

NOW THEREFORE, BE IT RESOLVED, that the City Council of Clayton,

California, does hereby:

SECTION 1. That the above recitals are each true and correct.

SECTION 2. The legislative body approves the District Closeout Analysis Report prepared by NBS for the District on file with the City Clerk.

- **SECTION 3.** The legislative body declares the fund balance of the District to be surplus.
- **SECTION 4.** The legislative body orders the disposition of said surplus funds in the manner described in the District Closeout Analysis Report.

PASSED, APPROVED and ADOPTED by the City Council of the City of Clayton, California, at a regular public meeting thereof held on 2nd day of April 2024, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ABSENT:

THE CITY COUNCIL OF CLAYTON, CA

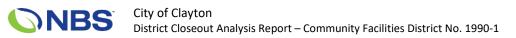
ATTEST:

Jim Diaz, Mayor

Stephanie Cabrera-Brown, City Clerk

5. LEVY AND COLLECTION SUMMARY

The following pages provide a summary of the levies and collections for the District.



District	Due Date	Billed Amount	Paid Amount	Delinquent Amount	Delinquent Amount %	Billed Installments	Paid Installments	Delinquent Installments	Delinquent Installments %
CFD1990-1F	R - Community Facilit	ies District 1990-1	R						
(08/01/1997 Billing:								
	12/10/1997	\$283,581.00	\$283,581.00	\$0.00	0.00%	1,256	1,256	0	0.00%
	04/10/1998	\$283,581.00	\$283,581.00	\$0.00	0.00%	1,256	1,256	0	0.00%
	Subtotal:	\$567,162.00	\$567,162.00	\$0.00	0.00%	2,512	2,512	0	0.00%
C	08/01/1998 Billing:								
	12/10/1998	\$299,009.88	\$299,009.88	\$0.00	0.00%	1,357	1,357	0	0.00%
	04/10/1999	\$299,009.88	\$299,009.88	\$0.00	0.00%	1,357	1,357	0	0.00%
	Subtotal:	\$598,019.76	\$598,019.76	\$0.00	0.00%	2,714	2,714	0	0.00%
C	08/01/1999 Billing:								
	12/10/1999	\$312,437.00	\$312,437.00	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2000	\$312,437.00	\$312,437.00	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$624,874.00	\$624,874.00	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2000 Billing:								
	12/10/2000	\$269,276.64	\$269,276.64	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2001	\$269,276.64	\$269,276.64	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$538,553.28	\$538,553.28	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2001 Billing:								
	12/10/2001	\$271,004.12	\$271,004.12	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2002	\$271,004.12	\$271,004.12	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$542,008.24	\$542,008.24	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2002 Billing:								
	12/10/2002	\$270,571.30	\$270,571.30	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2003	\$270,571.30	\$270,571.30	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$541,142.60	\$541,142.60	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2003 Billing:								
	12/10/2003	\$271,552.81	\$271,552.81	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2004	\$271,552.81	\$271,552.81	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$543,105.62	\$543,105.62	\$0.00	0.00%	2,716	2,716	0	0.00%

District	Due Date	Billed Amount	Paid Amount	Delinquent Amount	Delinquent Amount %	Billed Installments	Paid Installments	Delinquent Installments	Delinquent Installments %
CFD1990-1R	R - Community Faciliti	ies District 1990-1	R						
C	08/01/2004 Billing:								
	12/10/2004	\$269,663.04	\$269,663.04	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2005	\$269,663.04	\$269,663.04	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$539,326.08	\$539,326.08	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2005 Billing:								
	12/10/2005	\$270,437.60	\$270,437.60	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2006	\$270,437.60	\$270,437.60	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$540,875.20	\$540,875.20	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2006 Billing:								
	12/10/2006	\$270,519.66	\$270,519.66	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2007	\$270,519.66	\$270,519.66	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$541,039.32	\$541,039.32	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2007 Billing:								
	12/10/2007	\$254,356.75	\$254,356.75	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2008	\$254,356.75	\$254,356.75	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$508,713.50	\$508,713.50	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2008 Billing:								
	12/10/2008	\$272,919.45	\$272,919.45	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2009	\$272,919.45	\$272,919.45	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$545,838.90	\$545,838.90	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2009 Billing:								
	12/10/2009	\$277,213.42	\$277,213.42	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2010	\$277,213.42	\$277,213.42	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$554,426.84	\$554,426.84	\$0.00	0.00%	2,716	2,716	0	0.00%
C	08/01/2010 Billing:								
	12/10/2010	\$274,092.57	\$274,092.57	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2011	\$274,092.57	\$274,092.57	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$548,185.14	\$548,185.14	\$0.00	0.00%	2,716	2,716	0	0.00%

District	Due Date	Billed Amount	Paid Amount	Delinquent Amount	Delinquent Amount %	Billed Installments	Paid Installments	Delinquent Installments	Delinquent Installments %
CFD1990-1F	R - Community Facilit	ies District 1990-1	R						
	08/01/2011 Billing:								
	12/10/2011	\$238,015.42	\$238,015.42	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2012	\$238,015.42	\$238,015.42	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$476,030.84	\$476,030.84	\$0.00	0.00%	2,716	2,716	0	0.00%
(08/01/2012 Billing:								
	12/10/2012	\$228,393.86	\$228,393.86	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2013	\$228,393.86	\$228,393.86	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$456,787.72	\$456,787.72	\$0.00	0.00%	2,716	2,716	0	0.00%
(08/01/2013 Billing:								
	12/10/2013	\$217,137.99	\$217,137.99	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2014	\$217,137.99	\$217,137.99	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$434,275.98	\$434,275.98	\$0.00	0.00%	2,716	2,716	0	0.00%
(08/01/2014 Billing:								
	12/10/2014	\$204,903.64	\$204,903.64	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2015	\$204,903.64	\$204,903.64	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$409,807.28	\$409,807.28	\$0.00	0.00%	2,716	2,716	0	0.00%
(08/01/2015 Billing:								
	12/10/2015	\$202,900.84	\$202,900.84	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2016	\$202,900.84	\$202,900.84	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$405,801.68	\$405,801.68	\$0.00	0.00%	2,716	2,716	0	0.00%
(08/01/2016 Billing:								
	12/10/2016	\$200,899.29	\$200,899.29	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2017	\$200,899.29	\$200,899.29	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$401,798.58	\$401,798.58	\$0.00	0.00%	2,716	2,716	0	0.00%
(08/01/2017 Billing:								
	12/10/2017	\$198,897.85	\$198,897.85	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2018	\$198,897.85	\$198,897.85	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$397,795.70	\$397,795.70	\$0.00	0.00%	2,716	2,716	0	0.00%

District	Due Date	Billed Amount	Paid Amount	Delinquent Amount	Delinquent Amount %	Billed Installments	Paid Installments	Delinquent Installments	Delinquent Installments %
CFD1990-1R -	Community Facil	ities District 1990-	1R						
08	/01/2018 Billing:								
	12/10/2018	\$196,896.77	\$196,896.77	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2019	\$196,896.77	\$196,896.77	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$393,793.54	\$393,793.54	\$0.00	0.00%	2,716	2,716	0	0.00%
08	/01/2019 Billing:								
	12/10/2019	\$194,892.18	\$194,892.18	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2020	\$194,892.18	\$194,892.18	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$389,784.36	\$389,784.36	\$0.00	0.00%	2,716	2,716	0	0.00%
08	/01/2020 Billing:								
	12/10/2020	\$191,732.60	\$191,732.60	\$0.00	0.00%	1,358	1,358	0	0.00%
	04/10/2021	\$191,732.60	\$191,732.60	\$0.00	0.00%	1,358	1,358	0	0.00%
	Subtotal:	\$383,465.20	\$383,465.20	\$0.00	0.00%	2,716	2,716	0	0.00%
08	/01/2021 Billing:								
	12/10/2021	\$93,962.18	\$93,866.24	\$95.94	0.10%	1,358	1,357	1	0.07%
	04/10/2022	\$93,962.18	\$93,866.24	\$95.94	0.10%	1,358	1,357	1	0.07%
	Subtotal:	\$187,924.36	\$187,732.48	\$191.88	0.10%	2,716	2,714	2	0.07%
CFD1990-1R	Total:	\$12,070,535.72	\$12,070,343.84	\$191.88	0.00%	67,694	67,692	2	0.00%
Agency Grand Total:		\$12,070,535.72	\$12,070,343.84	\$191.88	0.00%	67,694	67,692	2	0.00%

6. FINAL DEBT SERVICE SCHEDULE

The following page provides a summary of the final debt service schedule for the Bonds.



City of Clayton CFA 2007 Special Tax Revenue Bonds Current Debt Service Schedule

Bonds Dated: 06/07/2007

Bonds Issued: \$5,060,000.00

Payment Date	CUSIP	Interest Rate	Balance	Principal	Interest	Payment Total	Annual Total	Call Premium	Status
03/02/2008		3.5000%	\$5,060,000.00	\$0.00	\$141,064.65	\$141,064.65	\$0.00	0.0000%	Paid
09/02/2008	184065AU4	3.5000	5,060,000.00	295,000.00	95,817.50	390,817.50	531,882.15	0.0000	Paid
03/02/2009		3.5000	4,765,000.00	.00	90,655.00	90,655.00	.00	0.0000	Paid
09/02/2009	184065AV2	3.5000	4,765,000.00	265,000.00	90,655.00	355,655.00	446,310.00	0.0000	Paid
03/02/2010		3.5000	4,500,000.00	.00	86,017.50	86,017.50	.00	0.0000	Paid
09/02/2010	184065AW0	3.5000	4,500,000.00	275,000.00	86,017.50	361,017.50	447,035.00	0.0000	Paid
03/02/2011		3.5000	4,225,000.00	.00	81,205.00	81,205.00	.00	0.0000	Paid
09/02/2011	184065AX8	3.5000	4,225,000.00	285,000.00	81,205.00	366,205.00	.00	0.0000	Paid
09/02/2011		0.0000	3,940,000.00	190,000.00	.00	190,000.00	637,410.00	0.0000	Bond Call
03/02/2012		3.5000	3,750,000.00	.00	72,541.88	72,541.88	.00	0.0000	Paid
09/02/2012	184065AY6	3.5000	3,750,000.00	280,000.00	72,541.88	352,541.88	425,083.76	0.0000	Paid
03/02/2013		3.6000	3,470,000.00	.00	67,641.88	67,641.88	.00	0.0000	Paid
09/02/2013	184065AZ3	3.6000	3,470,000.00	285,000.00	67,641.88	352,641.88	420,283.76	0.0000	Paid
03/02/2014		3.6250	3,185,000.00	.00	62,511.88	62,511.88	.00	0.0000	Paid
09/02/2014	184065BA7	3.6250	3,185,000.00	305,000.00	62,511.88	367,511.88	430,023.76	0.0000	Paid
03/02/2015		3.7000	2,880,000.00	.00	56,983.75	56,983.75	.00	0.0000	Paid
09/02/2015	184065BB5	3.7000	2,880,000.00	315,000.00	56,983.75	371,983.75	428,967.50	0.0000	Paid
03/02/2016		3.7500	2,565,000.00	.00	51,156.25	51,156.25	.00	0.0000	Paid
09/02/2016	184065BC3	3.7500	2,565,000.00	325,000.00	51,156.25	376,156.25	427,312.50	0.0000	Paid
03/02/2017		4.0000	2,240,000.00	.00	45,062.50	45,062.50	.00	0.0000	Paid
09/02/2017	184065BF6	4.0000	2,240,000.00	340,000.00	45,062.50	385,062.50	430,125.00	0.0000	Paid
03/02/2018		4.0000	1,900,000.00	.00	38,262.50	38,262.50	.00	0.0000	Paid
09/02/2018	184065BF6	4.0000	1,900,000.00	350,000.00	38,262.50	388,262.50	426,525.00	0.0000	Paid
03/02/2019		4.0000	1,550,000.00	.00	31,262.50	31,262.50	.00	0.0000	Paid
09/02/2019	184065BF6	4.0000	1,550,000.00	360,000.00	31,262.50	391,262.50	422,525.00	0.0000	Paid
03/02/2020		4.0000	1,190,000.00	.00	24,062.50	24,062.50	.00	0.0000	Paid
09/02/2020	184065BG4	4.0000	1,190,000.00	375,000.00	24,062.50	399,062.50	423,125.00	0.0000	Paid
03/02/2021		4.0000	815,000.00	.00	16,562.50	16,562.50	.00	0.0000	Paid
09/02/2021	184065BH2	4.0000	815,000.00	395,000.00	16,562.50	411,562.50	428,125.00	0.0000	Paid
03/02/2022		4.1250	420,000.00	.00	8,662.50	8,662.50	.00	0.0000	Paid
09/02/2022	184065BJ8	4.1250	420,000.00	420,000.00	8,662.50	428,662.50	437,325.00	0.0000	Paid
Grand Total:			Ş	5,060,000.00	\$1,702,058.43	\$6,762,058.43	\$6,762,058.43		



City Council Agenda Item 4c

STAFF REPORT

- TO: Honorable Mayor and Councilmembers
- FROM: Richard McEachin, Chief of Police

DATE: April 2, 2024

SUBJECT: Award of FY23 State Homeland Security Grant Program (SHSGP)

RECOMMENDATION

Review and approve the authorization for the Clayton Police Department to spend \$87,048 from the Reserves with reimbursement from FEMA.

BACKGROUND

Each fiscal year, FEMA funds the State Homeland Security Grant Program (SHSGP) which allocates a specific amount of funding to each state to support the implementation of risk-driven, capabilities-based State Homeland Security Strategies to address capability targets.

During the application period, each county within the state solicits grant proposals from each governmental agency within that County. In Conta Costa County, grant proposals are submitted to the G10, which is a county-wide, multi-agency representative group who scrutinizes the grant requests based on the State Homeland Security Strategic Goals, Investment Justification, and the FEMA approved equipment list. They weigh the strategic benefit of the equipment within the County as well as the needs of the individual agency. The grant proposals approved by the G10 are submitted to the State as a single grant package from the County.

DISCUSSION

The Clayton Police Department is committed to safeguarding our community through crime reduction strategies such as: Community Policing, Progressive Training, and Technology. Using the most up-to-date tools and equipment to safeguard the community of Clayton is essential to keeping our community safe.

The Clayton Police Department understands that budget restrictions may limit the amount and types of equipment that can be purchased. In the past, the Department has been able to purchase equipment through grants that would generally be unattainable.

The Clayton Police Department's area of responsibility (AOR) is as the primary agency responsible for searching for missing/wanted persons on our 27 miles of trails and 515 acres of open space. Additionally, due to our close proximity, we are also frequently requested to initially search areas of the adjacent East Bay Regional Park District land and Mt. Diablo State Park land to attempt to locate persons and determine jurisdiction. We also have several large special events, which attract large crowds to our city and encompass the downtown area.

After reviewing FEMA's approved equipment list, we determined there were three areas that met their requirements and represented equipment that would benefit the Department, our residents, and visitors.

In December of 2022 we submitted three grant proposals for the FY23 State Homeland Security Grant period. In January 2023, we learned that the G10 approved all three of our grant proposals and submitted them to the State. In February 2024, we learned that we were awarded the grants and will receive official letters from FEMA authorizing us to begin the procurement process.

We were awarded the following equipment:

Polaris Ranger Crew side-by-side, upfitted for law enforcement and search and rescue.	\$68,000
Ballistic Helmets for the Department	\$9,048
LE Search/Rescue Optics	\$10,000
Total:	\$87,048

FISCAL IMPACT

Approximately \$87,048 up front, which will be reimbursed from FEMA.

CEQA IMPACT

None.

ATTACHMENTS

None.

Declaring the week of April 7 – 13, 2023 as "Clayton Community Library Week"

WHEREAS, libraries offer the opportunity for everyone to connect with others, learn new skills, and pursue their passions, no matter where they are on life's journey;

WHEREAS, libraries have long served as trusted institutions, striving to ensure equitable access to information and services for all members of the community regardless of race, ethnicity, creed, ability, sexual orientation, gender identity, or socio-economic status;

WHEREAS, libraries adapt to the ever-changing needs of their communities, developing and expanding collections, programs, and services that are as diverse as the populations they serve;

WHEREAS, libraries are accessible and inclusive places that promote a sense of local connection, advancing understanding, civic engagement, and shared community goals;

WHEREAS, libraries play a pivotal role in economic development by providing resources and support for job seekers, entrepreneurs, and small businesses, thus contributing to local prosperity and growth;

WHEREAS, libraries make choices that are good for the environment and make sense economically, creating thriving communities for a better tomorrow;

WHEREAS, libraries are treasured institutions that preserve our collective heritage and knowledge, safeguarding both physical and digital resources for present and future generations;

WHEREAS, libraries are an essential public good and fundamental institutions in democratic societies, working to improve society, protect the right to education and literacy, and promote the free exchange of information and ideas for all;

WHEREAS, libraries, librarians, and library workers are joining library supporters and advocates across the nation to celebrate National Library Week;

NOW, THEREFORE, be it resolved that the City of Clayton proclaims National Library Week, April 7-13, 2024. During this week, all residents are encouraged to visit their library and celebrate the adventures and opportunities they unlock for us every day.



City Council Agenda Item 8a

STAFF REPORT

- TO: Honorable Mayor and Councilmembers
- FROM: Bret Prebula, City Manager
- DATE: April 2, 2024
- SUBJECT: Provide Staff and the Trails and Landscape Committee Direction on Conducting a RFP for a Trails Assessment

RECOMMENDATION

Provide direction to staff and the Trails and Landscape Committee to conduct a Request for Proposals for a Trails Assessment.

BACKGROUND

The Trails and Landscape Committee (TLC) has been discussing the need for a trails assessment in order to prioritize recommendations to the City Council and staff on maintenance and capital work required for the trails. Historically, there has not been a strategic plan around the level of maintenance and capital work required on each trail, nor an analysis of what trails may not be worth keeping in the city's inventory.

DISCUSSION

Staff and the TLC believe it is in the city's best interest to conduct a RFP for a trails assessment. A trails assessment would allow staff, TLC, and City Council, the awareness and decision-making points on the level of service for each trail, which trails, if any, may need to be considered for removal from the inventory, and what costs for maintenance and capital would be required year to year to keep the trails at whichever service level is decided by City Council. The major elements of the RFP will be but not limited to:

- Validate/amend the locations and the details of the original trails assessment
 - Trail missing-old marsh creek road, down west side of Donor Creek (single track)
 - Trail missing-Lower blue oak trail- peacock creek drive (equestrian staging area)
- Provide recommendations and cost estimates for annual maintenance Class A, B, C levels of trails.
- Provide recommendations and cost estimates on a 10-year capital improvement plan for Class A, B, C levels of trails.
- Provide an evaluation and rank of trails for accessibility.
- Rank the priority of trails for "best value" by visitors and ROI on maintenance and capital funding including accessibility.

FISCAL IMPACT

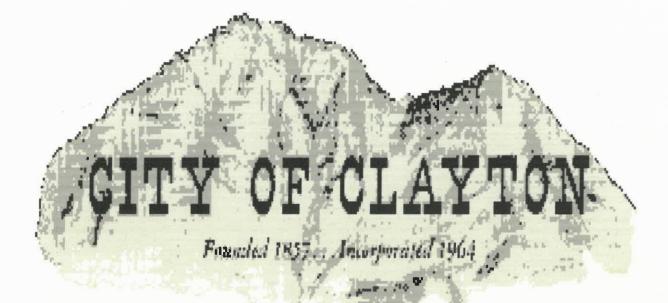
The cost of conducting an RFP is minimal, between \$1,000 and \$2,000 of the contract City Engineers time, working with the TLC. Once the RFP is complete, staff would return to City Council for approval of the contract and any budget adjustments to pay for such an assessment. The TLC has approximately \$300,000 in Reserves.

CEQA IMPACT

None

ATTACHMENTS

1. Previous Trails Assessment (unknown date and author of assessment)



Trails Inventory and Evaluation

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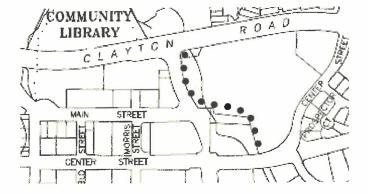
Clayton Trails Overview

The City of Clayton Trails Inventory and Evaluation is a list of all of the trails located within the city limits, including some, but not limited to all, trails marked on the City of Clayton Trail Map. The purpose of an inventory and evaluation is to provide a guideline to build an effective trail management program. Treating smaller problems before they become larger ones can prevent wasted resources in the long term. Identifying each trail and sectioning the larger ones can aide in performing yearly evaluations and compiling a list of repairs. From the information provided in this report, a combined list of deferred maintenance will be useful when establishing the proper criteria for prioritizing each project. In future years, a standard evaluation check sheet and trail log can be used for each individual trail to monitor problem areas identified within this report. This is the beginning of a Trail Management Program.

Although there are many different types of trails within the city, evaluations were only done on the trails that are readily identified by the maintenance department and are known to be the cities maintenance responsibility. This list goes beyond the trails marked in the City of Clayton Trail Map, and trails are identified using existing names marked on trail heads, and names familiar within the cities maintenance department. The trails consist of asphalt, crushed granite, dirt foot paths, and trails that follow along city sidewalks in and around landscaped areas. Also included are trails that are dirt ranch roads, fire trails, and cow trails that either connect to designated trails or are part of the trail system. Foot trails located in the hills without designated signage are not a part of this evaluation. All trails identified are funded through the landscape maintenance district.

A glossary is provided in the back for a brief explanation of some of the terminology found in this report. The base of this evaluation was formated using many different states and national park trails evaluation guidelines, as was some of the terminology found in the glossary. The accuracy of this evaluation is only an approximation, as trails can change every year due to usage, weather, and nature itself. No special tools were used to measure the degrees of the slopes and a simple measuring wheel was used to measure footage.

NOTE: Regular maintenance on all trails includes the removal of illegal signs, graffiti, trash, debris, and illegal dumping.



Black Diamond Plaza Trail

Overview: The Plaza Trail represents the hub for many of the other trails in Clayton. The plaza itself is the official starting point of the Cardinet Trail.

- Access paths: None
- Connecting trails: Cardinet Trail Diablo View Trail Upper Easley Trail

Total traveled distance: .16 miles

Trail tread: $\frac{1}{4}$ x crushed granite $-2 \ge 6$ wood border on both sides $-4' \ge 312' - \frac{1}{4} \ge 312' = \frac{1}{4} = \frac$

Structures: 335' granite rock v-ditch - All other structures maintained within downtown landscape

Signs: $1 - 6 \ge 6$ wood trail marker

1 - 24" x 36" metal sign with 4 x 4 posts

Annual Maintenance

- Refill ¹/₄ x crushed granite as needed.
- Check erosion caused by sprinklers
- Herbicide control twice a year
- Replace or repair 2x6 wood borders as needed
- Cut low lying limbs
- Spot spray weeds

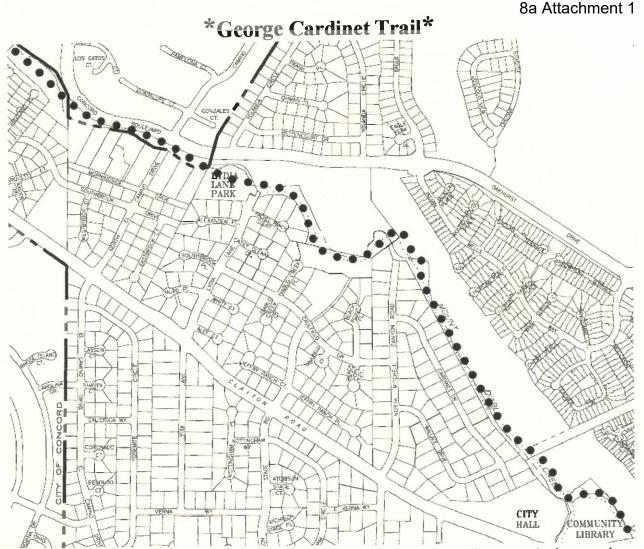
Deferred Maintenance

- 5 yards crushed granite
- Replace or repair 50' 2 x6 border
- Replace plaque on trail marker

Future Maintenance and Improvements

• Add 10 water bars to the sloped areas.

Evaluation: With the exception of adding water bars to reduce erosion, this trail is in good shape.



Overview: The **Cardinet Trail** Begins at the southeast corner of the library at the intersection of Clayton Rd. and Marsh Creek Rd. It travels north along Mt. Diablo Creek, behind the library, over a small foot bridge, and through the Keller Ranch House property. It continues down Mt. Diablo Creek, crossing over several foot bridges shaded by several large oaks and elms. The trail runs through Diablo Open Space, Lydia Lane Park, and Westwood Park where it ends at the bollards adjacent to the PG&E power box behind the Safeway property. This trail has 3 sections. The **Library Section** starts at the trail head and continues through the Keller Ranch property, the **Diablo/Keller Section** starts at the Keller Ranch property and continues to the Lydia Lane Park parking lot, and the **Westwood/Lydia Section** connects Lydia Lane Park and Westwood Park.

- Access pathways: 2 additional pathways connect city streets to the Cardinet Trail. The Silvercreek Path travels from Oakhurst drive to the junction between Mitchell Bridge and Diablo Bridge. The Caulfield Path travels from Caufield Dr. to Diablo open space. The property between Cardinet Bridge and Mitchell Bridge is owned by the golf course where the city has a trail easement.
- Connecting trails: Diablo View Trail

Total traveled distance: 1.46 miles

Trail tread: 60% crushed granite, 33% asphalt, and 7% other - No wood border - Level grade – Level cross grade.

Structures:

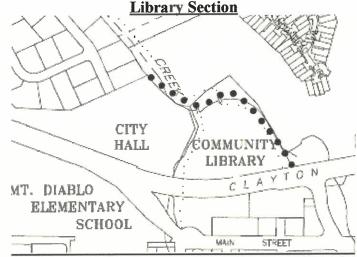
- 6 Bridges
- 8 benches

- 180' wood split rail fencing
- 90' retaining wall
- 18 5' railroad ties
- 38' round 3 rail wood railing
- 2 exercise courses.

Signs:

- 6-6x6 wood mile markers
- 3 metal signs

NOTE: All bridges are bare iron frame, concrete footings, and a 2x12 wood plank floor made by Continental Bridge, Alexandria MN 1-800-328-2047. They are all marked with a serial number.



Trail tread $-\frac{1}{4}$ x crushed granite -6x72' crushed gold rock 2x6 wood border on one side -8×440 ' $-\frac{1}{4}$ x crushed granite - Level grade - Level cross grade.

Structures

- Keller Foot Bridge #94227 6'x76'
- 180' wood split rail fencing
- 90' Retaining wall
- 3 standard spec city redwood benches
- 1 Victorian iron/wood bench
- 3 tree up lights. (Lights are maintained with library funding.)

Signs

• (1) 12x18 metal George Cardinet sign (Mounted on split rail fence at the start of trail.)

- Check for signs of erosion caused by library sprinklers
- Check for vehicle ruts in trail
- Inspect split rail fence for damage
- Replace or repair signs as needed
- Inspect wood retaining wall
- Inspect 2x6 wood border
- Inspect bridge floor planks and concrete footings for erosion
- Inspect entry and exit to bridge
- Repair 3 redwood benches as needed
- Inspect Victorian bench
- Cut low lying branches
- Cut down weeds twice a year
- Herbicide control twice a year
- Refill ¹/₄ x dust as needed.

- Add 2 yards crushed gold rock and
- Add 5 yards crushed granite.
- Replace 4 sections of split rail.
 - (This area has been hit numerous times, and we may want to leave this as is until we see further reason to reinstall.)
- Tree up lights need to be repaired, but we will do so with library funding.

Future Maintenance and Improvements

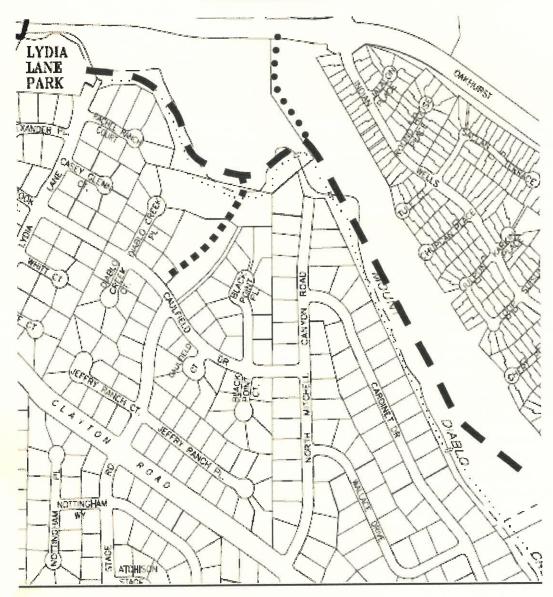
• This area has benefited from many different user groups. With the exception of a chain or gate to keep vehicles from driving to the back of the library, there are no proposed improvements at this time.

NOTES:

(Tree up lights are maintained with library funding.)

Evaluation: This trail is heavily used by the residents. The Library section represents a fraction of the trail, but is very high profile. This trail is mowed while doing open space, and often maintained by library volunteers. This trail is in good shape.

Diablo/Keller Section



Diablo Keller Section Silvercreek Pathway Caulfield Pathway

Trail tread $-\frac{1}{4}$ x crushed granite (3 bridge crossings) -7' x 4,000' crushed granite. Level grade - Level cross grade.

Structures

- 2 redwood benches
- 1 redwood bench with steel posts
- 11' round 3 rail wood railing
- 6'x7' 2x12 wood ramp
- 2 railroad tie stair
- 12 railroad tie trail borders (abutting bridges).
- Cardinet Bridge #94224 6'x51'
- Mitchell Bridge #94320 6'x78'
- Diablo Bridge #94225 6'x60'.

Signs

• (4) 6 x 6 wood mile markers

Annual Maintenance

- Refill $\frac{1}{4}$ x base
- Cut low lying branches
- Cut down weeds twice a year
- Herbicide control twice a year
- Inspect redwood benches
- Inspect railings, ramp, and rail road tie stair on Mitchell Bridge
- Check for erosion on all bridge footings
- Check bridge 2x12 wood planks, and rail road tie trail borders
- Inspect entry and exit to bridges
- Inspect mile markers for damage
- Check for erosion on creek bank
- Report and repair any holes caused by ground squirrels
- Report any bee hives

Deferred Maintenance

- Add 40 yards of granite to base.
- Contract out tree trimming along trail.

NOTES: The oak trees located in the adjacent open space areas are not on city property. We trim only branches blocking the trail

Future Maintenance and Improvements

• With the exception of some minor erosion along parts of the creek bank, this trail is in fairly good shape.

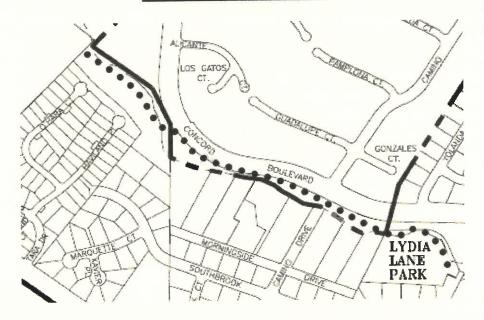
NOTES:

(Bike jumps are popular along this section of trail.)

(Area by oak tree between Cardinet and Mitchell bridges needs to be measured for erosion. This trail section currently measures 5 feet from oak tree to edge of creek.)

Evaluation: This trail is heavily used by the residents. The Diablo/Keller section has minimal access and can be labor intense. Bike jumps, tree forts, and bee hives are always a problem. Weeds are cut down while mowing open space. Creek bank needs to be monitored for erosion.

Westwood/Lydia Section



Trail tread - Asphalt base (2 bridge crossings) -10° x 515', 6'x 62' smooth surface / 6'x 2,169' chip seal surface - Level grade - Level cross grade.

Structures

- 1 redwood bench
- 15' section of round 3 rail wood railing
- 12' section of round 3 rail wood railing
- 9' section of round 3 rail wood railing
- Lydia Bridge #91233 6'x 60'
- Westwood Bridge #91232 6'x 51'
- 2 exercise courses

Signs

- (2) 6x6 wood mile markers
- 18"x36" metal sign with metal posts
- 12"x18" metal sign on 6x6 wood post.

- Check asphalt for excessive cracking and seal as needed
- Cut low lying branches
- Cut weeds twice a year
- Herbicide control twice a year
- Check footings of bridges for erosion
- Check bridge 2x12 wood planks
- Inspect entry and exit to bridges
- Inspect wood mile markers
- Replace or repair signs as needed
- Check wood railings
- Inspect exercise courses.

NOTE: Weeds will be cut down with open space mowing **Deferred Maintenance**

- Crack seal entire trail
- Chip seal where applicable
- Repair wood railing at Westwood Bridge
- Replace (4) 2x12 wood planks at Westwood Bridge.

Future Maintenance and Improvements

• Resurface chip seal with fresh asphalt.

NOTES:

(Applying a smooth surface to trail would allow for a larger variety of users.) (There is 1 exercise course located in each park.)

Evaluation: This trail is heavily used by the residents. The Lydia/Westwood section is the most maintenance friendly part of the trail. This trail is in great shape.

Access Paths

Silvercreek Path

Total traveled distance: 741 feet

Tread – Asphalt base – 8' x 741 – Level grade with 40' Steep grade to Cardinet Trail – Level cross grade.

Structures

• 37' retaining wall

Signs

• 6x6 wood trail marker with 4"x6" aluminum sign

Annual Maintenance

- Crack seal pathway
- Inspect wood trail markers
- Replace or repair signs as needed
- Spot spray weeds
- Check erosion by retaining wall and path slope
- Inspect retaining wall

Deferred Maintenance

- Repair 8'x16' section of asphalt lifted by pepper tree
- Repair lifted concrete

Future Maintenance and Improvements

- Add blocks to retaining wall
- Replace 6'x20' section of lifted concrete with asphalt
 - **NOTES:**

(Building retaining wall to 3 block heights will help prevent slope from sliding on the trail.)

(Removing concrete and replacing with asphalt will be consistent with the rest of the path, and avoid any future lifting.

Evaluation: The lifted section of concrete is the old golf cart path. This needs to be removed and replaced with asphalt. The retaining wall needs to be raised in to prevent runoff onto the Cardinet Trail. The area of asphalt damaged by the pepper tree needs to be replaced to avoid injury.

Caulfield Path

Total traveled distance: 690 feet

Trail tread –Sidewalk 4'x 513' and ¼ x crushed granite 6'x 177'. Level grade – Level cross grade.

Structures

• 21' split rail fencing

Signs

• None

Annual Maintenance

- Check for cracks or lifting of sidewalk
- Inspect split rail fencing
- Spot spray weeds
- Check erosion of ¹/₄ x dust trail section
- Weeds will be knocked down with open space mowing

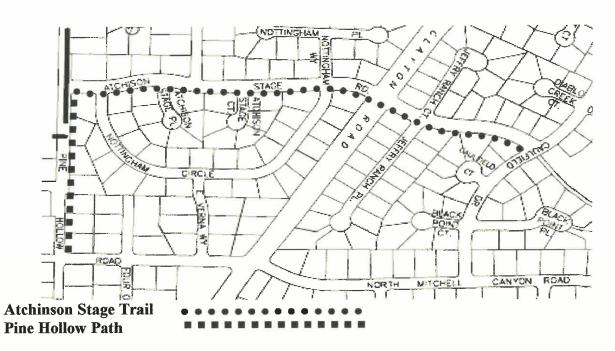
Deferred Maintenance

• None

Future Maintenance and Improvements

• None

Evaluation: This access path is used by residents and is often not mentioned when we talk about trails.



Atchinson Stage Trail

Overview: The Atchinson Stage Trail runs north and south along Atchinson Stage Rd. It travels from Pine Hollow Rd. to Clayton Rd.., crossing Clayton Rd; it then intersects with Caulfield Dr., where it finally meets Caulfield Path on its way to George Cardinet Trail. There are 2 sections to this trail. Atchinson Stage North, which runs from Clayton Rd. to Caufield Dr. and Atchinson Stage which runs from Pine Hollow Rd. to Clayton Rd.

- Access paths: Pine Hollow Path runs a short distance along Pine Hollow Rd. between the street side houses and the city landscape. It runs east to west from Atchinson Stage Rd. to 200' west of Mitchell Canyon Rd.
- **Connecting trails:** Caufield pathway meets Atchinson Stage Trail at the North end and then connects with Cardinet Trail.

Total traveled distance: .36 miles

Trail tread: ¹/₄ x crushed gold rock $-2 \ge 6$ wood border on one side $-5' \ge 1,212$ – Level grade – Level cross grade – Atchinson Stage North $-2 \ge 6$ wood border on one side $-5' \ge 600'$ – Steep grade – Level cross grade –

Structures: None

Signs: None

NOTE: This trail is mainly used by neighborhood residents, but provides great access to Cardinet Trail.

- Refill ¹/₄ x crushed gold rock as needed.
- Check erosion caused by sprinklers
- Herbicide control twice a year
- Replace or repair 2x6 wood borders as needed
- Cut low lying limbs
- Spot spray weeds

- 20 yards gold rock
- Replace or repair 450' 2 x 6 border

Future Maintenance and Improvements

- Add 10 water bars to the Atchinson Stage North side.
- NOTE: ¹/₄ x crushed granite would help bring the cost of repairs down.

Evaluation: This has been a long forgotten trail section in Clayton. It would take little effort to repair this trail and add a fresh appearance to the surrounding landscape.

Access Paths

Pine Hollow Path

Total traveled distance: .10 miles

Trail tread $-\frac{1}{4}$ x crushed granite $-2 \ge 6$ wood border on one side $-5 \ge 525$ ' – Level grade – Level cross grade

Structures

• None

Signs

• None

Annual Maintenance

- Refill ¹/₄ x crushed granite as needed.
- Herbicide control twice a year
- Spot spray weeds
- Check erosion caused by sprinklers
- Cut low lying limbs

Deferred Maintenance

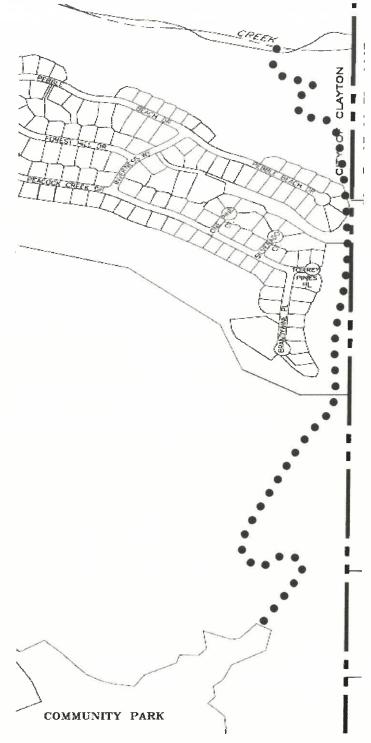
• Add 5 yds crushed granite

Future Maintenance and Improvements

• None to report

Evaluation: The landscaping in this area can be improved by repair to this trail.

Peacock Creek Trail



Overview: The **Peacock Creek Trail** travels from **Black Diamond Trail**, approximately ³/₄ of a mile northeast of the Black Diamond Trail crossing, and ends at the back canyon of the Clayton Community Park. It travels east up a very steep winding grade for approx. 1/3 of a mile. Crossing a small foot bridge, the grade levels and follows a v-ditch along the backside of Peacock Creek Estates. Crossing over another small foot bridge the trail descends down a steep grade following the fire road and leading to the community park. This trail has 3 sections. The **Oak Hill Section** starts at the base of Black Diamond Trail and heads up to the ridge. The **Ridge**

8a Attachment 1

Section follows along the backside of Peacock Creek Estates between the 2 foot bridges. The Community Park Section descends downward along the fire trail to the community park.

- Access paths: There are numerous cow trails, ranch roads, and fire roads along Peacock Creek Trail.
- Connecting trails: Black Diamond Trail Clayton Community Park
- Total traveled distance: 1.27 miles

Trail tread: 50% crushed granite, 50% dirt fire road -1,400' single wood border -1,600' double wood border -1.27 miles -75% Steep grade -25% Level grade -100% Steep cross grade

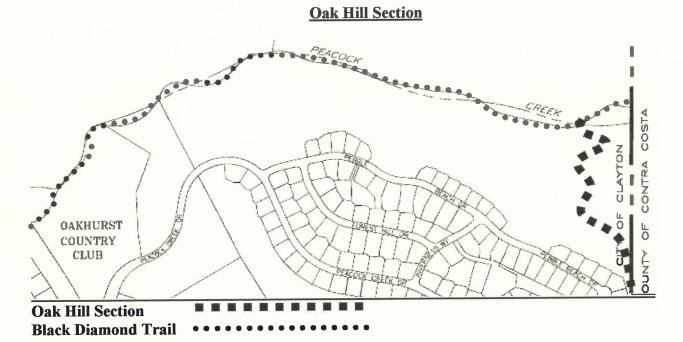
Structures:

- 24 2"x 6" wood water bars
- 2 wood dodge ways with 3'x 4' chain linked gates
- 2 6'x 7' wood planked foot bridges

Signs:

- 4 – 8x8 wood trail markers with 4"x 6" TRAIL signs

NOTE: Many of the water bars have been removed or damaged. 24 is a best guess estimate of the number of water bars.



Trail tread $-\frac{1}{4}$ x Dust Base -5' x 1,645' crushed granite 2x6 wood border on both sides - Steep grade - Steep cross grade.

Structures

• 12 – 2"x 6" water bars

Signs

• $2-8 \ge 8 \mod 1$ trail markers with sign

- Check grade and cross grade for signs of erosion caused by rain
- Inspect water bars for proper run off
- Replace or repair 2x6 wood borders as needed
- Replace or repair water bars as needed

- Inspect wood trail markers
- Replace or repair signs as needed
- Cut low lying branches
- Cut down weeds twice a year
- Herbicide control twice a year
- Refill ¹/₄ x crushed granite as needed.
- Report and repair any holes caused by ground squirrels
- Report any bee hives

- Add 20 yds crushed granite
- Replace or repair 10 water bars
- Replace trail sign
- Replace approx. 200' of border along trail

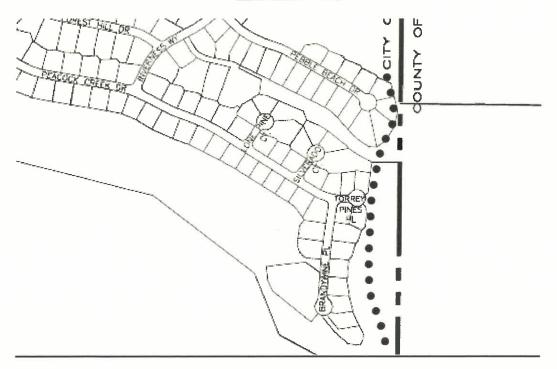
NOTES: Adding crushed granite to this section is very labor intense due to the steep grade and accessibility.

Future Maintenance and Improvements

• Adding 8 extra water bars could possibly prevent future erosion problems.

Evaluation: This stretch of trail has held up unusually well for the little amount of attention it gets. Spending time now to fix the erosion located on the trail will eliminate more dollars needed to repair possible erosion spreading to the cross grade slope. Adding extra water bars requires more maintenance, but prevents future erosion of trail slope.

Ridge Section



Trail tread $-\frac{1}{4}$ x crushed granite -5' x 1,370' crushed granite 2x6 wood border on one side – Level grade – Steep cross grade.

Structures

• 2 – 7 planked 4x12 wood foot bridges

Signs

None

Annual Maintenance

- Check for stability of foot bridges
- Repair or replace wood planks on bridges
- Check cross grade for signs of erosion caused by rain
- Replace or repair 2x6 wood borders as needed
- Cut down weeds twice a year
- Herbicide control twice a year
- Refill ¹/₄ x crushed granite as needed.
- Report and repair any holes caused by ground squirrels

Deferred Maintenance

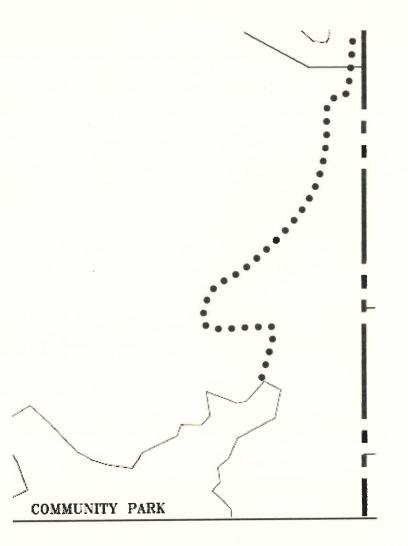
- Add 15 yds crushed granite
- Replace or repair approx. 200' 2x6 wood border
- NOTE: Access to this section is possible from Inverness way

Future Maintenance and Improvements

• 36" steel stakes should be used to replace the wood ones for the 2x6 border. Erosion control netting could be used to help stabilize the cross grade.

Evaluation: This section of trail needs to have the border repaired and replaced to prevent the hill from eroding. This trail also borders a v-ditch for drainage that will greatly be affected by any erosion to the trail. Ground squirrel control in this area could be beneficial.

Canyon Section



Trail tread – Dirt Fire Road – 20' x 1,645' – gravel and dirt – 5'x 578' ¼ x crushed granite 2x 6 wood borders on both sides – 75% Steep grade 25% Gradual grade– Sloped cross grade. **Structures**

- 2 wood dodge ways 3'x 3' chain linked gate
- 12 2"x 6" water bars

Signs

• 1 – 8 x 8 wood trail markers with 4"x 6" TRAIL signs

Annual Maintenance

- Check grade and cross grade for signs of erosion caused by rain
- Inspect water bars for proper run off
- Check for damage on wood dodge way
- Inspect wood markers
- Replace or repair signs as needed
- Replace or repair 2x6 wood borders as needed
- Replace or repair water bars as needed
- Refill ¹/₄ x crushed granite as needed.
- Report and repair any holes caused by ground squirrels

Deferred Maintenance

- Add 10 yds crushed granite
- Replace or repair 10 water bars
- Replace approx. 100' of border along trail
- Repair or replace 8x8 wood marker

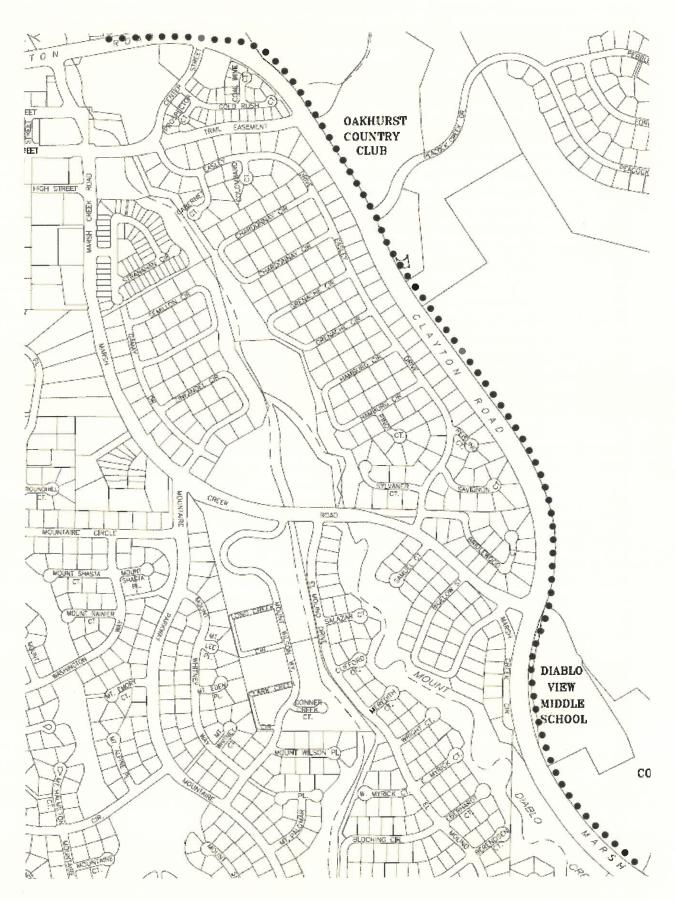
NOTES: This section of trail can be accessed along the fire trail

Future Maintenance and Improvements

- This section of trail is primarily maintained by the fire department.
- Both ends of the trail need repairs due to neglect.
- Adding ¹/₄ x crushed granite to the park entrance of this trail will enhance its visibility for trail users.
- Additional signage would make this trail more appealing to users.

Evaluation: This trail is a very open and friendly trail. Many hikers take their dogs along this trail. It is comprised mainly of fire and ranch roads with a $\frac{1}{4}$ x crushed granite section on a steep grade bordered and lined with water bars. This portion connects to the ridge section, and needs to be repaired to avoid future erosion of the tread slope. Better signage would greatly enhance this trail visibility.

Diablo View Trail



Overview: The **Diablo View Trail** Starts at the South East corner of the library at the intersection of Clayton Rd. and Marsh Creek Rd. The trail follows alongside Clayton Rd, continuing southeast as it turns into Marsh Creek Rd. It ends at Regency Drive at the entrance to the Clayton Community Park. It is is a 4 foot wide trail with a crushed rock base and a wood border. It travels northwest to southeast stretching about 1.4 miles. This trail has 3 distinct sections. The first section is the **Town Section** that leads to the Peacock Creek Rd. intersection. The second section is the **Flats Section** that continues from Peacock Creek Rd. and heads to the entrance of Diablo View Middle School. The final section is the **School Section**, and runs along the face of the middle school and the community park.

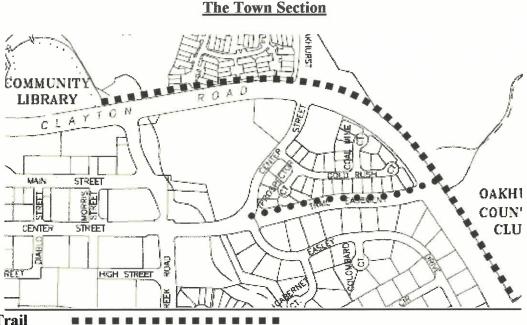
- Access pathways: Center St. Path runs west to east starting at the entrance of Upper Easley Trail located by Easley Dr. and Center St., continuing to Black Diamond Trail Crossing.
- **Connecting trails:** George Cardinet Trail Plaza Trail Black Diamond Trail **Total traveled distance:** 1.4 miles

Trail tread: 85% crushed granite – 15% crushed gold rock – 65% Double sided wood border – 35% Single sided wood border – Level grade – 40% Sloped cross grade – 60% Level cross grade

Structures: None

Signs: None

NOTE: This is a well traveled trail used by hikers, joggers, and students.



Town Trail

Center St. Path

Trail tread $-\frac{1}{4}$ x crushed gold rock single sided 2x6 wood border $-\frac{4}{100}$ wide x 1,052' long. $\frac{1}{4}$ x crushed granite single sided 2x6 wood border $-\frac{4}{100}$ wide x 1,589' long

Structures

None

Signs

• None

- Replace or repair 2x6 wood borders as needed
- Check for signs of erosion from irrigation system
- Cut low lying branches
- Spot spray weeds as needed.

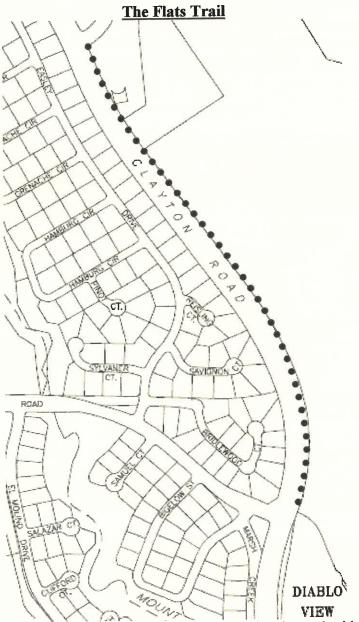
- Refill crushed gold rock as needed.
- Refill crushed granite as needed
- · Report and repair any holes caused by ground squirrels

- Add 5 yds crushed granite
- Add 5 yds crushed gold rock
- Replace approx. 200' of border along trail

Future Maintenance and Improvements

• None to report

Evaluation: This trail could use some fresh gold rock and wood border repair. We have to keep an eye on low lying branches and broken sprinklers. Keeping the weeds down by spot spraying gives it a more pleasant appearance. This trail is in fairly good shape.



Trail tread – ¼ x crushed granite – Double sided 2x6 wood border – 4' wide x 2,787' long – Level grade – Sloped cross grade. Structures

• None

Signs

• None

Annual Maintenance

- Check grade and cross grade for signs of erosion caused by rain
- Check wood borders
- Replace or repair 2x6 wood borders as needed
- Cut down weeds twice a year
- Herbicide control twice a year
- Refill $\frac{1}{4}$ x crushed granite as needed.
- Report and repair any holes caused by ground squirrels

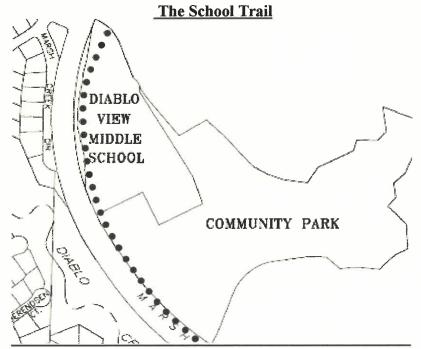
Deferred Maintenance

- Add 20 yds crushed granite
- Replace approx. 1000' of border along trail

Future Maintenance and Improvements

• Eliminate wood border on some portions of trail.

Evaluation: Areas where the trail has a steeper cross grade would need to maintain the border, but areas where the trail is wide can be eliminated. This would also aide in the annual mowing which often times destroys the border sections that have been lifted. Adding $\frac{1}{4}$ x crushed granite will give this trail a fresh new look.



Trail tread – ¹/₄ x crushed granite – Double sided 2x6 wood borders – 4' wide x 1,761' long – Level grade – 50% Sloped cross grade – 50% Level cross grade **Structures**

- 40' wood retaining wall
- Signs
 - None

- Check grade and cross grade for signs of erosion caused by rain
- Spot spray weeds as needed
- Cut low lying branches
- Inspect retaining wall

- Replace or repair 2x6 wood borders as needed
- Herbicide control twice a year
- Refill ¹/₄ x crushed granite as needed.
- Report and repair any holes caused by ground squirrels

- Add 10 yds crushed granite
- Replace approx. 100' of border along trail
- Repair approx. 15' retaining wall

Future Maintenance and Improvements

• None to report

Evaluation: This section will need to be checked for broken sprinklers and irrigation run-off from the park. Piracantha along the park section also needs to be cut back as needed. This trail is well traveled by the community and can be maintained at a relatively low cost provided that we perform regular maintenance checks and correct smaller problems in a timely manner.

Access Paths

Center Street Path

Total traveled distance: .28 miles

Trail tread $-\frac{1}{4}$ x crushed granite -6' x 1,238' - Asphalt -8' x 1,134 - Level grade - Level cross grade

Structures

• None

Signs

• None

Annual Maintenance

- Crack seal pathway
- Refill ¹/₄ x crushed granite as needed.
- Herbicide control twice a year
- Spot spray weeds
- Check erosion caused by sprinklers
- Inspect v-ditches

Deferred Maintenance

• Add 5 yds crushed granite

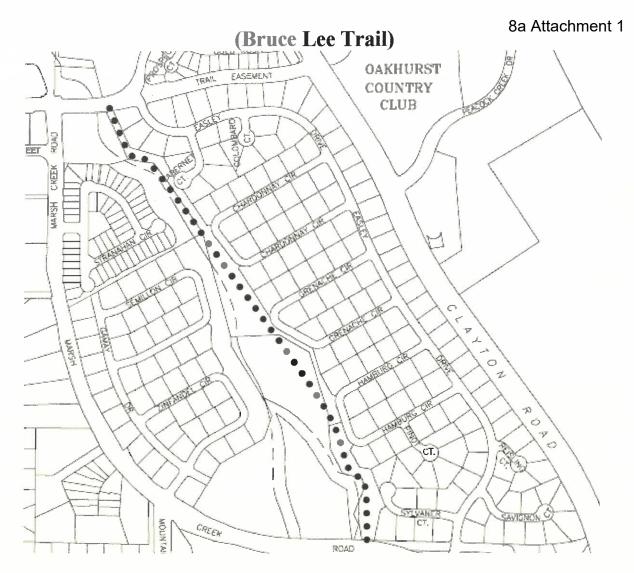
Future Maintenance and Improvements

• None to report

NOTES: Ceanothus bushes can get out of control and block v-ditch.

Evaluation: The **Center St.** trail needs to be checked for signs of erosion caused by sprinklers and landscape and debris need to be cleared in the v-ditch to prevent ruts caused by run-off on the pathway.

Upper Easley Trail



Overview: The Upper Easley Trail begins approx. 100' west of Easley Dr. and Center St. near the downtown area. It travels southeast between Easley estates and Mt. Diablo creek where it intersects Marsh Creek Rd.

- Access pathways: There are many short access paths from neighboring streets
- Connecting trails: Lower Easley Trail Mt. Diablo Creek Trail Center St. Trail Plaza Trail

Total traveled distance: .56 miles

Trail tread: Asphalt base with a chip seal surface -7 wide x 2,952' long - Level grade – Level cross grade. Borders steep drop off into creek.

Structures:

- 38' round 3 rail wood railing

Signs:

- 3 6x6 wood mile markers
- 2 metal signs 48" x 24"

NOTE: There are 5 small access paths that lead to the neighborhood streets. Their widths range from 6' wide to 21' wide. Approx. 1000 sq ft of asphalt with chip seal surface.

- Check asphalt for excessive cracking and seal as needed
- Check mile markers
- Replace or repair signs as needed

- Herbicide control twice a year
- Cut down weeds twice a year
- Report erosion of creek banks
- Check wood railing

- Crack seal entire length of path
- Repair wood railing
- Replace 4 sections approx.328 linear feet of pathway

Future Maintenance and Improvements

- New chip seal coat
- Resurface with smooth asphalt

NOTE: This stretch of trail would be greatly enhanced with a smooth finish. It would open up the trail to many different types of activities, including, roller blading, skateboarding, and commuting, adding to the quality of life in Clayton.

Evaluation: This trail is in fairly good shape. There are some minor sections of increased cracking, but block cracking covers most of the trail. Crack sealing the entire path added to a new chip seal surface would keep this trail looking good for years to come.



Overview: The Lower Easley Trail is a small neighborhood trail that leads to many surrounding areas including Upper Easley Trail, Mudville Path to the downtown area, and Stranahan Path to Marsh Creek Rd. It stretches north and south leading from the Easley Estate

8a Attachment 1 to Stranahan subdivision following along Mt. Diablo Creek. A (Connector path) allows you to cross a bridge and continue up to Upper Easley Trail. The south end of the trail is where Donner Creek flows into Mt, Diablo Creek, and the north end of the trail divides into 2 separate trails that lead to Marsh Creek Rd. and the downtown area.

- Access pathways: The Stranahan Path splits off to the left from Lower Easley Trail heading north to Marsh Creek Rd. The Oak St. Path runs north to south between Oak St. and Marsh Creek Rd. across from the Stranahan Path. The Mudville Path splits off to the right heading north to the parking lot behind Mudville Grill.
- Connecting trails: Upper Easley Trail Mudville Trail Stranahan Trail

Total traveled distance: .23 miles

Trail tread: Asphalt base with a chip seal surface -6 wide x 1,200' long - Level grade - Level cross grade. (Connector path) Asphalt base with chip seal surface 6' wide x 300' long - Sloped grade - Sloped cross grade.

Structures:

- 6' x 50' iron bridge with 2x12 wood planks.

NOTE: There are no identification markings on the bridge.

Signs:

– None

NOTE: There are 2 small access paths that lead to the neighborhood streets. Their widths are approx. 7" wide. Approx. 250 sq ft of asphalt with chip seal surface.

Annual Maintenance

- Check asphalt for excessive cracking and seal as needed
- Cut low lying branches
- Herbicide control twice a year
- Cut down weeds twice a year
- Report erosion of creek banks
- Inspect bridge planks
- Inspect bridge footings

Deferred Maintenance

• Crack seal entire length of path

Future Maintenance and Improvements

- New chip seal coat
- Resurface with smooth asphalt

NOTE: It is always an improvement to have a smooth surface on this type of trail.

Evaluation: This trail is in fairly good shape. There are some block cracking covering most of the trail. Crack sealing the entire path added to a new chip seal surface would keep this trail looking good for years to come. Many oaks have been planted in the last 5 -10 years in this section of trail. These oaks will need to be trimmed away from the trail in the near future.

Access Paths Stranahan Path

Total traveled distance: 650 feet

Trail tread – $\frac{1}{4}$ x crushed granite 5'x 650' – Level grade – Level cross grade. 25' x 15' crushed granite seating area

Structures

- 2 6' backed wood benches with metal frames
- Signs

• None

- Inspect benches
- Spot spray weeds
- Refill ¹/₄ x crushed granite as needed.
- Cut down weeds twice a year
- Herbicide control twice a year

• Repair lip around catch basin

Future Maintenance and Improvements

• None

Evaluation: This is a small access trail that gets little use, so maintenance should be minimal.

Oak St. Path

Total traveled distance: 952 feet

Trail tread – ¹/₄ x crushed granite 12'x 952' – Steep grade – Level cross grade. **Structures**

- 1 Asphalt V- ditch 3' x 314' long
 - 2 Asphalt V-ditches 3' x 438' long

Signs

• None

Annual Maintenance

- Inspect V-ditches
- Spot spray weeds
- Refill ¹/₄ x crushed granite as needed.
- Herbicide control twice a year
- Check for erosion of hill
- Cut down weeds twice a year
- Check catch basins at each end of trail.

Deferred Maintenance

- Clean and expose V-ditches
- Future Maintenance and Improvements
 - None

Evaluation: Drainage issues on the hill pose a problem for erosion on this trail.

Mudville Path

Total traveled distance: 650 feet

Trail tread -2 trails - Asphalt base $-4' \ge 650'$ - Level grade with - Level cross grade $-\frac{1}{4} \ge 14$ crushed granite $-4' \ge 550'$ Level grade - Level cross grade

Structures

- 28' split rail fencing
- Signs
 - None

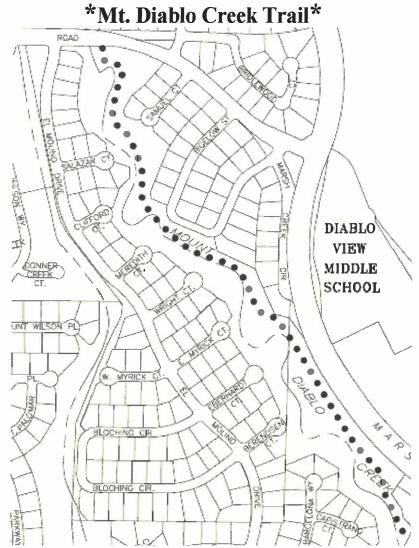
- Crack seal pathway
- Cut down weeds twice a year
- Spot spray weeds
- Refill ¹/₄ x crushed granite as needed

• Herbicide control twice a year

Deferred Maintenance

- None
- **Future Maintenance and Improvements**
 - None

Evaluation: This trail is in good shape.



Overview: The Mt. Diablo Creek Trail Begins at the end of Upper Easley Trail on Old Marsh Creek Rd. ending at Regency Dr. It travels northeast along Mt. Diablo Creek through open space areas adjacent to the neighborhood. There are 4 small access paths by the city dog park.

- Access paths: There are many short access paths from neighboring streets.
- **Connecting trails:** Upper Easley Trail
- Total traveled distance: .67 miles

Trail tread: Asphalt base with a chip seal surface -6'wide x 3,543' long - Level grade - Level cross grade. Some areas are bordered by steep cliffs down to the creek. There is approx. 350' of steep hill in the middle section of the trail.

Structures:

- 20' round 3 rail wood railing – 5 posts

Signs:

 $3 - 6 \ge 6$ wood mile markers

NOTE: There are 4 small access paths that lead to the neighborhood streets. Their widths are approx. 6' wide totaling approx. 1700 sq ft of asphalt with chip seal surface.

Annual Maintenance

- Check asphalt for excessive cracking and seal as needed
- Check mile markers
- Check for graffiti
- Herbicide control twice a year
- Cut low lying limbs
- Cut down weeds twice a year
- Report erosion of creek banks
- Check wood railing

Deferred Maintenance

- Crack seal entire length of path
- Repair wood railing
- Replace 1 sections approx.300 linear feet of pathway (by man hole)
- Replace 1 section 10 x 15 sq ft (top of hill by catch basin)

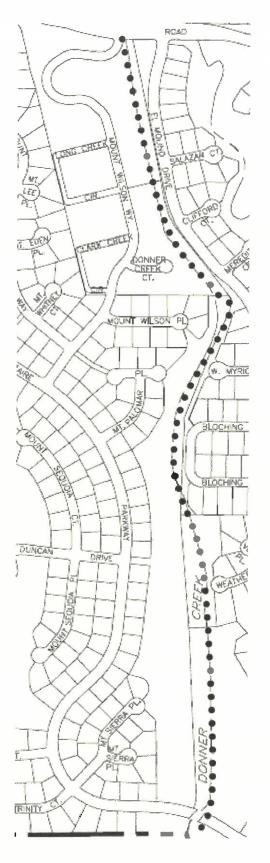
Future Maintenance and Improvements

- New chip seal coat (upper section of trail)
- Resurface (lower section of trail)

NOTE: The City of Concord accesses this area to service our sewer system. This should be taken into account with any improvements to this area.

Evaluation: This trail is in the worst shape of all the cities asphalt trails. The lower section of this trail is experiencing approx. 75% cracking along all areas. There is approx. 1500' that needs to be replaced. Crack sealing would not even provide much of a band aide. The 350' hill portion of this trail has multiple spider cracks and needs to be replaced in the near future. The upper portion of this trail has a small 150 sq ft section that needs to be replaced, but otherwise can be crack sealed to prevent further block cracking.

Donner Creek Trail



Overview: The Donner Creek Trail begins at El Molino Park at the corner of Old Marsh Creek Rd. and El Molino Dr. It follows Donner Creek and El Molino Dr. for approx. 1500' and then continues along Donner Creek behind the neighborhood homes. It has a 75% asphalt base and a

25% crushed granite base. The end of the trail leads you to the Donner Creek entrance of Mt. Diablo State Park

- Access paths: There are 2 access roads leading to this trail. They are open space access roads, and are maintained when servicing open space.
- Connecting trails: None

Total traveled distance: .68 miles

Trail tread: Asphalt base with a chip seal surface -7 wide x 1,454' long - Level grade - Level cross grade. Asphalt base with a chip seal surface -6 wide x 1,220' long - Level grade - Level cross grade. $\frac{1}{4}$ x crushed granite -6' x 934' - Level grade - Level cross grade

Structures:

- 4 wood benches
- 1 chained entrance with 2 8x8 posts and 3 steel poles

Signs:

- 2 6 x 6 wood mile markers
- 1 metal signs 48" x 24"

Annual Maintenance

- Check asphalt for excessive cracking and seal as needed
- Check mile markers
- Lube locks on chained gate
- Check reflectors on chain
- Replace or repair signs as needed
- Herbicide control twice a year
- Cut down weeds twice a year
- Report erosion of creek banks
- Repair or replace benches as needed
- Cut down low lying limbs
- Refill ¹/₄ x crushed granite as needed

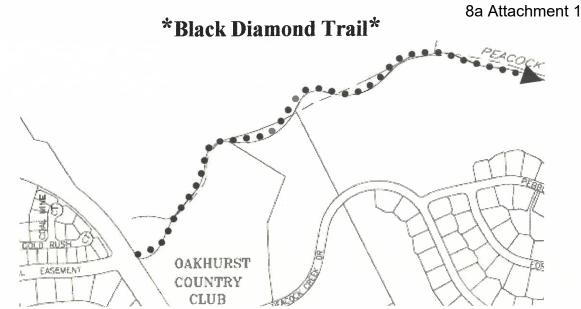
Deferred Maintenance

- Crack seal entire length of path
- Repair 1 section approx. 15 sq ft asphalt along El Molino Dr.
- Repair approx. 100 sq ft of path before gate
- Remove and repair crushed asphalt after gate.
- Add 10 yards crushed granite

Future Maintenance and Improvements

- New chip seal coat
- Remove crushed asphalt after gate and replace with crushed granite.
- Resurface Chip seal with smooth asphalt
- NOTE: All chip sealed surface trails could be enhanced with a smooth surface.

Evaluation: This trail is in fairly good shape. There are some areas that need to be replaced, repaired, or removed, but otherwise this trail looks good.



Overview: The Black Diamond Trail starts at Clayton Rd. and Black Diamond Trail Crossing, and travels northeast for approx. ³/₄ miles. From there it connects to the Peacock Creek Trail, Blue Oak Trail, or continues up the East Bay Parks Black Diamond Trail. This is a public access road used by the ranchers, a variety of utilities and the fire department. Although the first mile of this road is owned by the city, we have never done any maintenance on it. Our main responsibility here is the parking area located at the trail entrance.

- Access paths: None
- Connecting trails: Diablo View Trail Center St. Path Blue Oak Trail Peacock Creek Trail

Total traveled distance: .56 miles

Trail tread: Gravel fire road – 7'wide x 2,952' long - Level grade – Level cross grade. Borders steep drop off into creek.

Structures:

- 1 – steel access gate

Signs:

None

Annual Maintenance

• Keep entrance clear

Deferred Maintenance

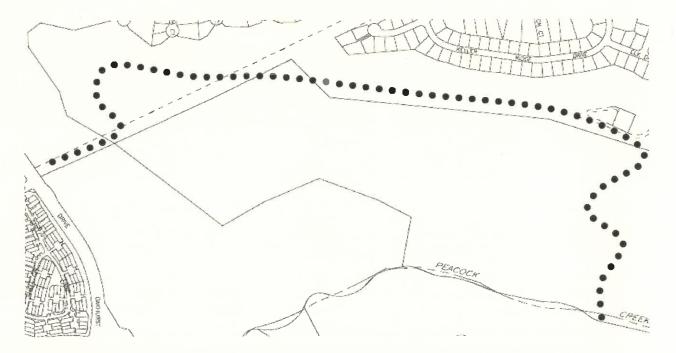
• Refill ¹/₄ x crushed granite in parking area

Future Maintenance and Improvements

• Figure out gate situation

Evaluation: As stated before, the East Bay Parks and the fire department keep this road clear. The entrance gate was installed by the developer. Maintenance has never been determined, but I'm sure it will fall on us. Who puts what lock on the gate is an ongoing problem yet to be resolved.

Blue Oak Trail



Overview: The Blue Oak Trail travels from approx. ³/₄ of a mile east of the Black Diamond Trail Entrance to the 16th tee of the Oakhurst Country Club, located just off of Indianhead Way. It is one of the steepest trails in the city climbing to just over 1000'. It runs into Oakhurst Ridge Trail and follows it for approximately .9 miles, and then descends down to the Indianhead Way / Clayton Rd. intersection. This trail is divided into 2 distinct sections. The Hill Trail starts ³/₄ of a mile east of the Black Diamond Trail Entrance, and travels north up a very steep grade through several switch backs until it reaches the asphalt water tower road and connects with the Oakhurst Ridge Trail. The Oakhurst Ridge Trail carries the Blue Oak Trail for about another mile where it picks up at the Indianhead Trail and travels down to the dodge way located on the 16th tee. A short walk along the golf cart path carries you to the Indianhead Way intersection.

• Access pathways: None

• Connecting trails: Oakhurst Ridge Trail - North Valley Trail – Black Diamond Trail Total traveled distance: 1.64 miles

Trail tread: Dirt foot path – 6'wide x 2,727' long - Steep grade – Steep cross grade – Fire road – 12' x 550' - Slope grade – Steep cross grade (4,849' of the traveled distance is part of the Oakhurst Ridge Trail)

Structures:

- 3 wood dodge ways with gate
- 1 chained access gate

Signs:

- 3 – 8 x 8 wood trail markers

- 2 - 4 x 6 metal signs

Annual Maintenance

- Check wood doge ways and gate
- Check trail markers
- Replace or repair signs as needed
- Lube locks on chained gate
- Check reflectors on gate

Deferred Maintenance

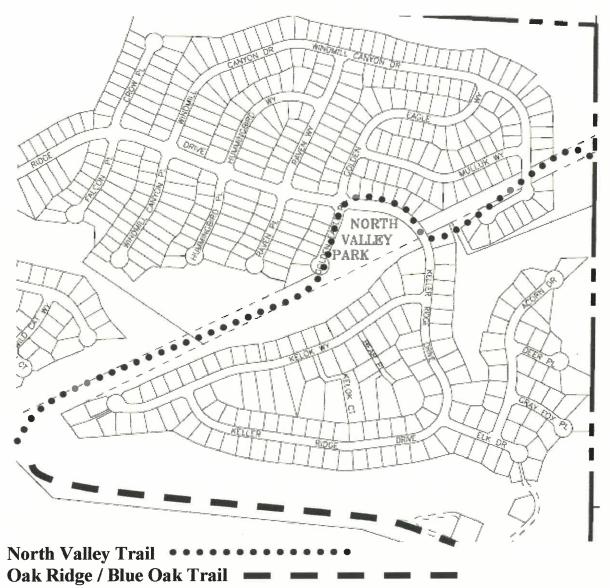
- Replace 2 missing signs
- Add reflectors to chain on gate

Future Maintenance and Improvements

- Add 3 each 6 x 18 Blue Oak trail
- **NOTE:** This trail needs more signage to be more visual to hikers. It is a great trail that hardly gets used.

Evaluation: This trail is not very accessible to perform too many maintenance tasks. The best ways to maintain trails such as these are to have hikers use them. The best maintenance services on this trail are performed by the cattle.

North Valley Trail



Overview: The North Valley Trail travels northeast by southwest from the Oakhurst Ridge Trail to the city limits by Windmill Canyon Way. It travels behind the Kelok Dr., through North Valley Park, and then continues to the county fire road located just behind Windmill Canyon Way.

• Access pathways: Accessible from Kelok Dr.

• Connecting trails: Blue Oak Trail – Oakhurst Ridge Trail – North Valley Park Total traveled distance: .74 miles

Trail tread: Dirt fire road -15'wide x 3,042' long -67% Level grade - sloped cross grade -33% sloped grade - level cross grade. Dirt foot path -3' x 625' - Level grade - sloped cross grade.

NOTE: Sections of this trail are carried by North Valley Park and paved roadways **Structures:**

- 1 – wood dodge way

Signs:

- 4 8 x 8 wood trail markers
- 4 4" x 6" metal signs
- 2 6" x 18" metal signs
- 2 -4" x 6" metal signs on 4 x 4 posts
- Chained gate

Annual Maintenance

- Check mile markers
- Lube locks on chained gate
- Check reflectors on chain
- Replace or repair signs as needed
- Cut down weeds twice a year
- Herbicide control twice a year
- Check wood dodge way

NOTE: The only section of this trail that we do weed abatement is the foot path located between Keller Ridge Dr. and Windmill Canyon Way.

Deferred Maintenance

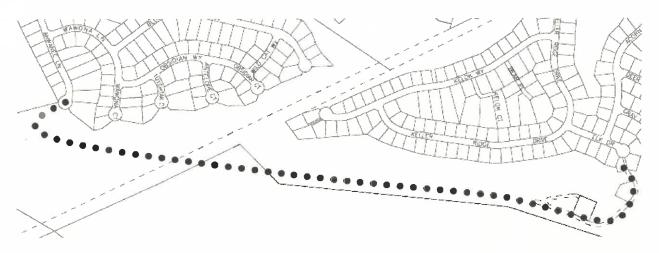
• Replace and repair signs and markers

Future Maintenance and Improvements

- Add 2 each 8 x 8 trail markers with signs at North Valley Park
- Add 1 each trail marker at Windmill Canyon
- Install 2 posts and chain with reflectors at the end of Golden eagle Way
- NOTE: The chained gate has been removed for unknown reasons.

Evaluation: Although this trail is a great access trail to other trails in the city, it is primarily an access road for the fire department and the water district. This trail originally went straight through North Valley Park, crossing Keller Ridge Dr. on a blind corner. Signage was later added to guide you to the crosswalk at Keller Ridge Dr. and Golden eagle Place, to make it safer. Additional signage should be added to guide hikers to Blue Oak Trail and Oakhurst Ridge Trail. The trail ends at an empty lot between 2 houses located on Windmill Canyon Way, from there it heads out of Clayton and into county agricultural lands. All city weed abatement is done through our open space management program.

Oakhurst Ridge Trail



Overview: The Oakhurst Ridge Trail travels east to west from the end of Ahwanee Ct. to the end of Elk Dr. It follows along the Blue Oak Hill ridgeline. It is a fire access road that is used by many hikers.

- Access pathways: None
- Connecting paths: North Valley Trail Blue Oak Trail

Total traveled distance: .88 miles

Trail tread: Dirt fire road – 12'wide x 4,628' long – 35% steep grade – 30% sloped grade – 35% Level grade – Sloped cross grade.

Structures:

- 2 wood dodge ways
- -1 chained gate access

NOTE: There are 2 – metal gates maintained by other **Signs:**

- 2 8 x 8 wood trail markers
- $-2-6 \ge 12$ wood trail markers
- 2 6 x 18 trail signs

Annual Maintenance

- Check for damage on wood dodge ways
- Check trail markers
- Replace or repair signs as needed
- Check chain across gate
- Lube locks on chained gate
- Check chain reflectors
- Check v-ditches

Deferred Maintenance

- Replace 2 each 4" x 6" trail signs
- Replace 2 each 6" x 18" trail signs
- Add 2 reflectors on chain

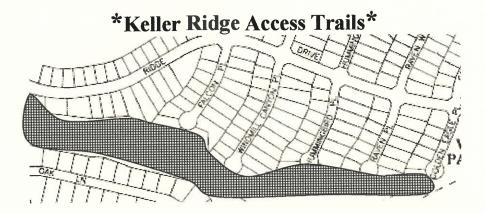
Future Maintenance and Improvements

• Add additional trail markers with signs

Evaluation: This trail connects with other great trails in the hills. Better trail signage would help identify which trail you were on and possibly increase the usage.

The trail is maintained as a fire road and portions, a water tower access road. It is primarily maintained by the fire district while doing their annual fire breaks. The dodge ways, trail

markers, and signs, are maintained by the city. All city weed abatement is done through our open space management program.



Overview: The Keller Ridge access trails run along the south side of Keller Ridge Dr. The first trail marker is located approx. 50' from the golf cart path, and then intertwines behind the cul-de-sacs to North Valley Park. They are non-designated foot paths running all along the hillside under the oak trees. They are mainly used by the residents and maintenance is minimal due to the non-distinctive trails. These trails are basically foot paths maintained through usage.

- Access pathways: None
- Connecting paths: North Valley Trail

Total traveled distance: Varied

Trail tread: Dirt foot paths of varied lengths and grades – Steep cross grades **Structures:**

- 4 - wood dodge ways

Signs:

- 5 - 8 x 12 wood trail markers with 4" x 6" signs

Annual Maintenance

- Check for damage on wood dodge ways
- Check trail markers
- Replace or repair signs as needed

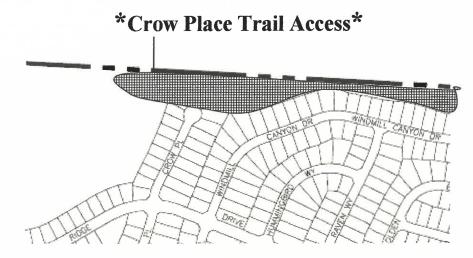
Deferred Maintenance

• Replace 1 each 4" x 6" trail signs

Future Maintenance and Improvements

• None to report

Evaluation: This trail is more of a series of access entry ways to the open space hills between Keller Ridge Dr. and Kelok Dr. Maintaining the dodge ways and trail marker signs will be our main responsibility at this time.



Overview: The Crow Pl. trail access allows entry to the hillsides north of Windmill Canyon Rd. It runs east and west along the city limit open space areas.

- Access pathways: None
- Connecting paths: None

Total traveled distance: Varied

Trail tread: Dirt foot paths of varied lengths and grades – Steep cross grades **Structures:**

- 2 wood dodge ways
- 80' railroad tie and cobble stair

Signs:

•

- 2 - 8 x 12 wood trail markers with 4" x 6" signs

Annual Maintenance

- Check for damage on wood dodge ways
- Check trail markers
- Replace or repair signs as needed
- Clean washed mud from stair

Deferred Maintenance

• Repair cobbled stair

Future Maintenance and Improvements

• None to report

Evaluation: This trail is an access entry way to the open space hills between Windmill Canyon Rd. and the city limits. There are some concerns with the run off at the end of Crow Pl., but this is more of an open space problem than a trail problem. Maintaining the dodge ways, cobbled stair, and trail marker signs will be our main responsibility at this time.

Master inventory list

TRAIL TREAD	Approx. Quantity
¹ / ₄ x crushed granite	3.66 miles
1/4 x crushed gold rock	.56 miles
Asphalt chip seal surface	2.8 miles
Asphalt smooth surface	.43 miles
Fire road	2.4 miles
Foot path	.63 miles
2"x6" wood border	3.6 miles
STRUCTURES	
V-ditches (granite)	335 feet
v-ditches (asphalt)	782 feet
Bridges (iron)	7
Wood split rail fencing	180 feet
Round 3 rail wood railing	96 feet
Water bars	24 - 4"x 6"x 8'
Benches	12 - wood
Backed benches	2 – wood & iron
Dodge ways	13
Planked bridges	$2 - 6^{2} \times 7^{2}$
Gate (chained)	3
Gate (iron)	3
Railroad ties	28-5 feet long
Exercise course	2
SIGNS	
Mile markers 6"x 6"	14
Trail markers 6"x 6"	2
Trail markers 8"x 8"	13
Trail markers 6"x 12"	7
Signs (varied sizes)	24

8a Attachment 1

GLOSSARY

Trail Tread: Measure of the trail surfaces excluding street crossings, park pass through, and other surfaces that connect or carry a trail.

Traveled Distance: Actual traveled distance from each end of the trail

Access Pathways: Access pathways take you from neighboring streets to local trails.

Connecting Trails: Trails that cross or carry one another.

Dodge Ways: A wood barrier allowing access to hikers and preventing unauthorized access by off road vehicles, horses, and cows. It is a form of stile.

Water bars: Water bars are 4"x 6" wood beams that divert water of the trail to prevent erosion.

Planked Bridge: 4"x 12" wood planks lay side by side forming a walkway over v-dithches or other obstructions.

V-ditch: A V shaped drainage ditch built primarily from concrete, but asphalt, rock and other forms of material can also be used.

Trail Marker: Wood post, often accompanied by a small sign, designating a trail.

Mile Marker: Wood post, often routered, designating a distance in miles on a trail.

Chip Seal: Surface treatment for asphalt using hot emulsion and an application of small aggregate. It is used for pavement restoration.

8a Attachment 1



City Council Agenda Item 8b

STAFF REPORT

TO: Honorable Mayor and Councilmembers

FROM: Amy Walcker, Human Resources Manager

DATE: March 8, 2024

SUBJECT: RESOLUTION APPROVING AN EMPLOYMENT AGREEMENT FOR AN INTERIM CITY MANAGER WITH ADAM POLITZER

RECOMMENDATION

Adopt a Resolution authorizing, approving, and making the findings to employ Mr. Adam Politzer, a CalPERS retired annuitant, as the Interim Clayton City Manager beginning April 15, 2024.

BACKGROUND

In February 2024, the current Clayton City Manager informed the Clayton City Council that his last day with the City of Clayton would be April 12, 2024. At the March 19, 2024 City Council meeting, the Council established an Ad Hoc Committee for the City Manager recruitment. Bob Murray and Associates was selected to conduct the City Manager recruitment. Even with an efficient search process, there will be a period of time after April 12, 2024, when an Interim City Manager is required.

On March 22, 2024, the City Council interviewed Mr. Adam Politzer for the position of Interim City Manager and directed that an employment agreement with Mr. Politzer be brought back to the City Council for approval. Mr. Politzer is a seasoned municipal government administrator who previously from the position of City Manager for the City of Sausalito after 13 years of service

FISCAL IMPACT

Fiscal Impact

CEQA IMPACT

None

ATTACHMENTS

- 1. Resolution Approving the Interim City Manager Selection and Agreement A. Politzer
- 2. Employment Agreement for Interim City Manager A. Politzer

RESOLUTION NO. 10-2024

A RESOLUTION CERTIFYING FINDINGS AND APPROVING AN EMPLOYMENT AGREEMENT FOR THE INTERIM EMPLOYMENT OF CALPERS RETIRED ANNUITANT ADAM POLITZER AS INTERIM CLAYTON CITY MANAGER

THE CITY COUNCIL City of Clayton, California

WHEREAS, the City of Clayton's current City Manager will leave City service as of April 12, 2024 and while recruiting for a replacement City Manager, the Clayton City Council has need to retain an interim city manager; and

WHEREAS, the former City Manager of Sausalito, CA, Adam Politzer expressed interest in assisting the Clayton City Council during this transition to serve as its interim city manager; and

WHEREAS, in a duly noticed meeting of the City Council held on March 22, 2024, the Clayton City Council interviewed Mr. Politzer for the possible interim assignment and desires to employ him as Clayton's Interim City Manager; and

WHEREAS, Mr. Politzer is a recently-retired CalPERS annuitant with the effective retirement date of December 31, 2020 and is therefore eligible to accept post-retirement interim employment with CalPERS public agencies without the necessity of special findings for retired annuitants with less than 180 days since pension retirement date; and

WHEREAS, the Clayton City Council, the City of Clayton, and Adam Politzer each represent and certify that Adam Politzer has not and will not receive a Golden Handshake or any other retirement-related incentive during this interim employment with the City of Clayton; and

WHEREAS, Mr. Politzer previously served as the Sausalito City Manager from 2007 to 2020 and is therefore well suited and familiar with the incumbent needs and responsibilities required of an interim city manager while a permanent employee replacement is recruited and hired by the Clayton City Council, which executive search process is currently underway; and

WHEREAS, the Clayton City Council does desire to appoint Adam Politzer as an interim appointed CalPERS retired annuitant to the vacant position of City Manager for the City of Clayton under Government Code section 21221(h), effective April 15, 2024; and

WHEREAS, an eligible appointment under Government Code section 21221(h) requires an active, publicly-posted recruitment for a permanent replacement to the interim employment position; and

WHEREAS, the current status of this recruitment is that Bob Murray & Associates was selected on March 19, 2024 to conduct the executive recruitment services to assist in the search, screening and hiring of its next city manager by the Clayton City Council; and

WHEREAS, this section 21221(h) appointment shall only be made once pursuant to CalPERS regulations regarding employment of retired annuitants;

WHEREAS, the entire Employment Agreement, contract or appointment document between Adam Politzer and the City Council of Clayton has been reviewed by this body and is attached hereto as "Attachment 1" as if fully set forth in this Resolution; and

WHEREAS, CalPERS related regulations and statutes require that no matters, issues, terms or conditions related to this interim employment and appointment of a CalPERS retired annuitant can be, have been or will be placed as a Consent Calendar item on a public agenda of the Clayton City Council; and

WHEREAS, the interim employment of Adam Politzer shall be limited to 960 hours in fiscal year 2023/24 and 960 hours per each subsequent fiscal year for the City, including hours worked for other CalPERS Agencies during such fiscal years, and Adam Politzer has represented to the City that he has worked 564 hours for another CalPERS Agency during fiscal year 2023/2024 and that he can work up to 396 hours for the City during fiscal year 2023/2024; and

WHEREAS, the public compensation paid to retired CalPERS annuitants cannot be less than the minimum nor exceed the maximum monthly base salary paid to other employees performing comparable duties, divided by 173.333 to equal the hourly rate; and

WHEREAS, the maximum base salary for Clayton City Manager position is \$19,000 monthly and the associated hourly equivalent is \$109.62; and

WHEREAS, the negotiated and determined hourly rate to be paid to Adam Politzer by the City of Clayton will be \$109.62; and

WHEREAS, Adam Politzer has not and will not receive any other benefit, incentive, compensation in lieu of benefit or other form of compensation other than or in addition to this hourly pay rate.

NOW, THEREFORE, BE IT RESOLVED that the City Council of Clayton, California, does hereby certify, approve and authorize the nature of the temporary employment of Adam Politzer as described herein and detailed in the attached Employment Agreement document ("Attachment 1"), and this interim appointment is necessary to fill the position of City Manager for the City of Clayton beginning April 15, 2024 because this position is critical to maintaining the active, daily, and efficient public services provided to the citizens, businesses and development community of this city.

PASSED, APPROVED AND ADOPTED by the City Council of Clayton, California at a regular public meeting thereof held the 2nd day of April 2024 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

THE CITY COUNCIL OF CLAYTON, CA

ATTEST:

Jim Diaz, Mayor

Stephanie Cabrera-Brown, City Clerk

EMPLOYMENT AGREEMENT FOR INTERIM CITY MANAGER

THIS AGREEMENT is made and entered into this 15th day of April 2024 by and between the City of Clayton ("CITY") and Adam W. Politzer ("EMPLOYEE"). In consideration of the mutual covenants and agreements set forth herein, the Parties agree as follows:

RECITALS

This Agreement is made and entered into with respect to the following facts:

A. CITY seeks to engage EMPLOYEE on a temporary basis as Interim City Manager, in accordance with the terms set forth in this Agreement; and

B. EMPLOYEE desires to accept employment as Interim City Manager in consideration of and subject to the terms, conditions and benefits set forth in this Agreement; and

C. EMPLOYEE represents he is a retired annuitant of CalPERS within the meaning of Government Code §§ 7522.56 and 21224 ("Statutes") and acknowledges that his compensation is statutorily limited as provided in Government Code § 21224. EMPLOYEE represents that, as of the effective date of this Agreement, he has worked for another CalPERS contracting agency as a retired annuitant during Fiscal Year 2023/24 for 564 hours and that he therefore acknowledges that he can work up to 396 hours for the CITY, a state agency or other CalPERS contracting agencies (collectively "CalPERS Agencies") during the 2023/24 fiscal year. EMPLOYEE represents he has not received unemployment compensation from any CalPERS agencies during the 12-month period preceding the effective date of this Agreement; and

D. CITY has determined it is necessary to hire EMPLOYEE, a retired annuitant, because the City will need to recruit for a new City Manager, and EMPLOYEE, by virtue of his experience in public management, including as a previous city manager for another public agency within California, has the necessary skills and institutional knowledge to assist as needed.

NOW, THEREFORE, CITY and EMPLOYEE, in consideration of the mutual covenants and agreements herein contained, agree as follows:

1. <u>APPOINTMENT OF EMPLOYEE</u>.

EMPLOYEE shall be appointed as the Interim City Manager for the benefit of the CITY under the terms of this Agreement.

2. <u>POSITION AND DUTIES</u>. The CITY hereby agrees to appoint EMPLOYEE to perform, on the compensation basis set forth in Paragraph 4, the duties and functions set forth in Exhibit A attached hereto, and to perform other legally permissible duties and such functions as the City Council shall from time-to-time assign:

The City Council shall have the authority to determine the specific duties and functions which EMPLOYEE shall perform under this Agreement and the means and manner by which

EMPLOYEE shall perform those duties and functions. EMPLOYEE agrees to devote all of his business time, skill, attention, and best efforts to the discharge of the duties and functions assigned to him under this Agreement and by the City Council.

3. <u>TERM, TERMINATION AND AT-WILL STATUS.</u>

This Agreement shall become effective upon the date executed both by EMPLOYEE and the Mayor of the CITY, which date shall be the date first referenced above. EMPLOYEE shall commence the performance of duties under this Agreement on April 15, 2024 or at such later date as the parties hereto shall agree in writing ("Commencement Date"). This Agreement shall expire as of the first of the following to occur: (i) upon EMPLOYEE working his 960th hour for the CITY during fiscal year 2023/24 or his 960th hour in any subsequent fiscal year whichever comes later; or (ii) upon termination of the Agreement by either EMPLOYEE or CITY as provided below.

EMPLOYEE acknowledges he is an at-will, temporary employee of CITY who shall serve at the pleasure of the City Council at all times during the period of his service hereunder and shall be subject to termination by the City Council at any time without advance notice and without cause. Except as required by law, the terms of CITY's personnel rules, policies, regulations, procedures, ordinances, and resolutions regarding personnel (collectively "Personnel Policies"), as they may be amended or supplemented from time to time, shall not apply to EMPLOYEE, and nothing in this Agreement is intended to, or does, confer upon EMPLOYEE any right to any property interest in continued employment, or any due process right to a hearing before or after a decision by the City Council to terminate his employment. Nothing contained in this Agreement shall in any way prevent, limit or otherwise interfere with the right of CITY to terminate the services of EMPLOYEE and nothing in this Agreement shall prevent, limit or otherwise interfere with the right of EMPLOYEE to resign at any time from this position with CITY.

4. <u>COMPENSATION</u>. The CITY agrees to provide the following compensation to EMPLOYEE for the services listed in this Agreement:

Beginning on April 15, 2024, CITY agrees to pay to EMPLOYEE for services rendered under this Agreement, the hourly rate of \$109.62. Other than the compensation described above, Employee will receive no other benefits, incentives, compensation in lieu of benefits, or any other form of compensation. Employee understands and agrees he is not, and will not be, eligible to receive any benefits from the CITY, including any CITY group plan for hospital, surgical, or medical insurance, any CITY retirement program, or any paid holidays, vacation, sick leave, or other leave, with or without pay, or any other job benefits available to an employee in the regular service of the CITY, except for Workers' Compensation Insurance coverage or similar benefits required by state or federal law.

5. <u>EXPENSES</u>. CITY shall reimburse EMPLOYEE for authorized, reasonable and necessary expenses, including travel expenses incurred by EMPLOYEE in the performance of his duties pursuant to this Agreement. EMPLOYEE shall document and claim said reimbursement for such travel in the manner and forms required by the CITY. All reimbursements shall be for actual expenses and shall be subject to and in accordance with California and federal law and CITY's adopted reimbursement policies. Such reimbursements <u>shall not be reported</u> to CalPERS. Other

than as specifically provided herein, EMPLOYEE shall receive no other compensation or reimbursements for expenses incurred by him in performance of this Agreement.

6. <u>NOTICE</u>. Notices required pursuant to this Agreement shall be given by personal service upon the party to be notified or by delivery of same to the custody of the United States Postal Service, or its lawful successor, postage prepared and addressed as follows:

<u>CITY</u> 6000 Heritage Trail Clayton, CA 94517 Attention: Mayor

<u>EMPLOYEE</u> Adam Politzer (Address in Employee's Personnel File)

7. <u>HOURS OF WORK</u>. EMPLOYEE shall devote the time necessary to adequately perform his duties pursuant to this Agreement. The parties anticipate that EMPLOYEE will work a sufficient number of hours per week allocated between regular business hours and hours outside of regular business hours including, without limitation, attendance at regular and special City Council meetings, community events and other CITY functions as the City Council may direct. However, in no event shall EMPLOYEE be required or permitted to work in excess of 960 hours in fiscal year 2023/24 and 960 hours per each subsequent fiscal year for CITY, including hours worked for other CalPERS Agencies during such fiscal years. EMPLOYEE has represented to the CITY that he has worked 564 hours for another CalPERS Agency during fiscal year 2023/2024 and that he can work up to 396 hours for the CITY during fiscal year 2023/2024.

EMPLOYEE'S position shall be deemed a NON-EXEMPT position under California wage and hour law. The position is a temporary, hourly assignment which shall not exceed 40 hours per week. The CITY, through the City Council, will assign Employee hours to work. Due to the nature of the position, it is understood that the workday and work week hours may vary, **however Employee shall not work overtime**.

It is the intent of the parties to compensate EMPLOYEE only to the extent permitted under the Statutes and corresponding CalPERS regulations and policy statements. The Rate of Pay set forth above is based on the salary limitations established by CalPERS and is calculated by taking the hourly rate based on the maximum monthly base salary paid to employees performing similar duties as listed on a publicly available pay schedule for such employees. The highest CITY compensation for comparable duties is \$228,000 annually divided by 2,080 to equal a maximum hourly rate of \$109.62. The EMPLOYEE shall not be entitled to any additional compensation or benefits.

EMPLOYEE will comply with all applicable CalPERS regulations governing employment after retirement, including the recordation and reporting of all hours worked for CITY to CalPERS as may be required. CITY shall assist in any such reporting obligations to CalPERS. Additionally, EMPLOYEE shall keep CITY continually informed of any hours worked by EMPLOYEE for other CalPERS Agencies during the term of this Agreement.

8. <u>WAIVER.</u> No waiver of any provision of this Agreement shall be deemed or shall constitute a waiver of any other provision whether or not similar, nor shall any such waiver constitute a continuing or subsequent waiver of the same provision. No waiver shall be binding, unless executed in writing by the party making the waiver.

9. <u>ENTIRE AGREEMENT.</u> This Agreement constitutes the entire Agreement of the parties considering the subject matter hereof and all prior agreements or understanding, oral or written, are hereby merged herein. This Agreement shall not be amended in any way except by a writing expressly purporting to be such an amendment, signed, and acknowledged by both of the parties thereto. If any portion or provision hereof is held to be unconstitutional, invalid, or unenforceable, the remainder of this Agreement or portion thereof shall be deemed severable and shall be effected and shall remain in full force and effect.

CITY:	
By:	
Jim Diaz, Mayor	Date:
	·

EMPLOYEE:

By: Adam W. Politzer	Date:



City Council Agenda Item 8c

STAFF REPORT

TO: Honorable Mayor and Councilmembers

FROM: Larry Theis, City Engineer

DATE: April 2, 2024

SUBJECT: Adopt Resolution to Establish Vision Zero Policy and Approve Local Roadway Safety Plan

RECOMMENDATION

Adopt a Resolution to establish a Vision Zero Policy related to eliminating fatalities and injury accidents on the Clayton roadway network in conjunction with the review and approval of the Local Roadway Safety Plan.

BACKGROUND

At its October 17, 2023 Council meeting, City Staff and its consultant Kittelson & Associates introduced and discussed the draft Local Roadway Safety Plan (LRSP) for input from the public and the City Council to incorporate in its final plan, including drafting its future roadway safety policy. Upon receiving input, Staff added and amended elements of the draft LRSP based on the feedback received at the Council meeting.

DISCUSSION

In order to conclude the process, the City Council is required to approve the final Local Roadway Safety Plan which includes an analysis of five-year accident data and identifies priority locations, emphasis areas on modes of travel and behavioral factors, and countermeasure strategies. In addition to satisfy the grant funding requirements for the SS4A (Safe Streets and Roads for All) program and other MTC/Caltrans requirements, the City must adopt its own policy/goal to work towards eliminating traffic fatalities and serious injuries within the City's roadway network by the Year 2050. The City Council will establish a Safety Working Group that will track performance measures and report this information to the City Council every two years (generally in odd years) and update the LRSP every five years as specified on Page 37 of the LRSP.

FISCAL IMPACT

The preparation of this Local Roadway Safety Plan (CIP #2304) is already included in the approved FY23-24 Capital Improvement Plan with a total budget of \$56,000. It is required that the City has a Local Roadway Safety Plan in order to apply in the future for safety related federal grants such as SS4A and HSIP programs.

CEQA IMPACT

None

ATTACHMENTS

- 1. Resolution Establishing Vision Zero Policy and Adopt LRSP
- 2. City of Clayton Local Roadway Safety Plan (Final)
- 3. Presentation Slides from Kittelson & Associates

RESOLUTION NO. XX-2024

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLAYTON TO ESTABLISH A VISION ZERO POLICY AND ADOPT THE CITY OF CLAYTON "LOCAL ROADWAY SAFETY PLAN"

THE CITY COUNCIL City of Clayton, California

WHEREAS, from 2018 to 2022, 1 person died and 5 suffered serious, life-changing injuries on City of Clayton's streets; and

WHEREAS, from 2018 to 2022, 68% of reported collisions occurred on a roadway and 32% of reported collisions occurred at intersections; and

WHEREAS, from 2018 to 2022, 55% of reported collisions resulting in a fatality or injury was a result of unsafe speeding and aggressive driving; and

WHEREAS, no transportation-related deaths or serious injuries on the road network are acceptable within our community and the City of Clayton is committed to prioritizing safety and eliminating transportation-related deaths and serious injuries on City streets; and

WHEREAS, the City of Clayton's General Plan includes the following objectives regarding traffic safety:

- Objective 4 to plan an efficient network of streets and trails which will link all neighborhoods of the community, and allow safety and economy of movement;
- Objective 7 to enhance the City's system of pedestrian, equestrian and bicycling paths, and trails; and

WHEREAS, roadways traditionally have been designed, constructed, operated, and maintained to prioritize reducing vehicle delay and increasing vehicle speed; and

WHEREAS, the City of Clayton values the people of our community first because human life and health are paramount and should be prioritized before speed, vehicle throughput, convenience for drivers, mobility, and other objectives for the transportation and circulation system; and

WHEREAS, in each project delivery, in each capital improvements program, and in each budget, the City of Clayton values first providing and maintaining safety;

WHEREAS, actions to make the City of Clayton's streets safer for all road users, particularly those who are most physically vulnerable, such as seniors, youth, and people with disabilities, will further encourage people of all ages and abilities to walk, bike, and roll; and

WHEREAS, the national, statewide, and regional Vision Zero efforts are a datainformed strategy founded on a Safe System approach to eliminate all transportationrelated deaths and serious injuries, while increasing safer, healthier, and more equitable mobility for all; and

WHEREAS, Vision Zero recognizes that while people will make mistakes, roadway systems, policies, and projects should be designed and implemented using a combination of engineering, education, and enforcement measures to protect people and maximize public safety through redundancies and shared responsibilities; and

WHEREAS, the Federal Highway Administration has made a commitment to eliminating fatalities and serious injuries on the nation's roadways using a Safe System approach modeled after Vision Zero; and

WHEREAS, Caltrans Strategic Highway Safety Plan, which guides safety funding and strategy for the state of California, has included a Safe System approach in support of Vision Zero;

WHEREAS, the Federal Highway Administration and Caltrans grant funding for improving safety requires the preparation and implementation of a systematic approach to improve safety as presented in the City of Clayton's first Local Roadway Safety Plan (Exhibit A); and

WHEREAS, the Metropolitan Transportation Commission (MTC) passed a Vision Zero policy in 2020 that identified actions to support Cities like Clayton.

NOW, THEREFORE, BE IT RESOLVED the City Council of the City of Clayton, California, does hereby:

- 1. The City Council adopts the goal (similarly described in MTC Vision Zero Policy) of working toward eliminating all transportation-related deaths and serious injuries by 2050.
- 2. The City Council adopts the City of Clayton Local Roadway Safety Plan that summarizes specific recommendations and action items to be taken by the City of Clayton that will reduce speeding, reduce collisions, and move the City of Clayton towards zero fatalities and serious injuries.
- 3. The City Council establishes a Safety Working Group that will meet regularly to implement the Local Roadway Safety Plan, monitor progress towards the City of Clayton's vision of eliminating traffic deaths and serious injuries, and communicate outcomes to the public in a transparent and accountable way.
- 4. This Resolution shall become effective immediately upon its passage and adoption.

PASSED, APPROVED AND ADOPTED by the City Council of Clayton, California, at a regular public meeting thereof held on the 2nd day of April 2024, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

THE CITY COUNCIL OF CLAYTON, CA

Jim Diaz, Mayor

ATTEST:

City Clerk

CITY OF CLAYTON LOCAL ROADWAY SAFETY PLAN

CITY OF CLAYTON, CA

Adopted April 2, 2024





Inside front cover

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City of Clayton Local Roadway Safety Plan City of Clayton, CA

Prepared for: City of Clayton Contra Costa County, CA

Prepared by: Kittelson & Associates, Inc. 155 Grand Avenue, Suite 505 Oakland, CA 94612 510.839.1742

> Project Manager: Grace Carsky Planner

Project Principal: Matt Braughton, RSP1 Associate Planner

Project Number 29136

April 2024





ACKNOWLEDGEMENTS

City of Clayton

Larry Theis City Engineer, Project Manager

Jason Chen City Engineer

Jim Diaz Mayor

Kim Trupiano Vice Mayor

Peter Cloven Councilmember

Holly Tillman Councilmember

Jeff Wan Councilmember

Bret Prebula City Manager

Kittelson & Associates, Inc. Consultant Team

Grace Carsky

Matt Braughton

Sravya Kamalapuram

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Section 1 Introduction

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INTRODUCTION

The City of Clayton (City) is located in central Contra Costa County, California with a population of approximately 11,000 people.¹ The City sits at the base of Mt. Diablo and is characterized by an extensive network of pedestrian, bicycle, and equestrian trails.

This Local Roadway Safety Plan (LRSP) highlights the City's desire to improve health, safety, and equitable access to multimodal roadway users including people walking, biking, and driving. The City is committed to eliminating fatal and serious injury crashes that occur on its roadways by 2050.

The LRSP is data-informed, combining technical crash data analysis with input from residents and stakeholders to identify patterns in crash factors and road user behavior that may contribute to a higher frequency and/or severity of crashes. This analysis was used to identify priority locations (roadways and intersections) that have experienced a greater frequency and/or severity of crashes in the City over the five-year study period (2018 - 2022). By better understanding trends in driver behavior, crash characteristics, and high injury locations, the City can develop relevant systemic treatments, strategies, and countermeasures to improve roadway safety. This LRSP is an evolving document that will adapt as the City works towards creating a safer roadway system.

WHAT IS A LOCAL ROADWAY SAFETY PLAN?

The purpose of a Local Roadway Safety Plan (LRSP) is to assess the safety of a jurisdiction's roadway network and identify areas that need improvement or strategies that can otherwise help prevent crashes. It provides a range of strategies to address safety concerns, from engineering countermeasures to educational campaigns. The approach is multi-disciplinary, meaning that stakeholders from different agencies and organizations can work together to implement the recommended strategies. This can include law enforcement, fire department, neighboring jurisdictions, public health services, emergency response providers, community organizations, and the broader community. An LRSP offers a proactive approach to addressing safety needs and demonstrates agency responsiveness to safety challenges.

LRSPs are recognized as a proven safety countermeasures by the Federal Highway Administration (FHWA).² They prioritize investments and assist with the implementation of engineering strategies. Two Federal funding programs, the Highway Safety Improvement Program (HSIP) and Safe Streets and Roads for All (SS4A), provide funding for the implementation of countermeasures that address road safety challenges on public roads. To apply for HSIP grant funds in California, a local agency must have an LRSP or an equivalent planning document. To apply for federal SS4A funding, a local agency must have a safety action plan that is equivalent to an LRSP, provided certain elements are included consistent with the SS4A grant program requirements integrating the Safe System Approach. Access to these funds helps local agencies to fund engineering-related solutions that can make its roads safer for all road users. This document addressed the required elements to allow the City to apply for both grant funding programs.

¹ American Community Survey 2021 5-Year Estimates (2017-2021)

² FHWA Proven Safety Countermeasures: https://highways.dot.gov/safety/proven-safety-countermeasures/local-road-safety-plans

SAFE SYSTEM APPROACH

In January 2022, the United States Department of Transportation (USDOT) released its National Roadway Safety Strategy³ that adopted the Safe System Approach as its core strategy. In February 2022, Caltrans released Director's Policy 36⁴ which commits to adopting the Safe System Approach to achieve Caltrans' vision to eliminate fatalities and serious injuries on California's roadways by 2050 and provide safer outcomes for all communities.

There are five elements and six principles to the Safe System Approach (shown in Figure 1).

The five elements include:

- Safe Road Users: All roadway users, including bicyclists, pedestrians, and transit-riders, should be able to travel safely.
- **Safe Vehicles:** Vehicles should be designed and regulated to reduce the frequency and severity of collisions.
- **Safe Speeds:** The faster a vehicle travels, the greater its risk to human life. Safe speeds are speeds that reduce impact forces, improve stopping time, and improve visibility.
- Safe Roads: Roadway design can accommodate human mistakes and improve injury tolerances through strategies, such as physically separating those travelling at different speeds or using signage to alert drivers to hazards.





• **Post-Crash Care:** If a collision does occur, first responders must assess, stabilize, and transport those who were injured. Forensic investigation or incident management teams are also important parts of post-collision care.

The six principles that form basis of the Safe System Approach are:

- 1. Deaths and serious injuries are unacceptable,
- 2. Humans make mistakes,
- 3. Humans are vulnerable,
- 4. Responsibility is shared,
- 5. Safety is proactive, and
- 6. Redundancy is crucial.

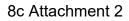
The Safe System Approach establishes that death and serious injury crashes are not acceptable and forms the core framework for the Clayton LRSP. It also encourages proactive approaches to safety and shared responsibilities by all parties involved in roadway planning, design, and operations (including road users).

³ The 2022 report can be found here: <u>https://www.transportation.gov/sites/dot.gov/files/2022-02/USDOT-National-Roadway-Safety-Strategy.pdf</u>. In 2023, the USDOT published the 2023 National Roadway Safety Strategy Progress Report: <u>https://www.transportation.gov/sites/dot.gov/files/2023-02/2023-Progress-Report-National-Roadway-Safety-Strategy.pdf</u>

⁴ https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/policy/dp_36-a11y.pdf



Section 2 Vision And Goals



VISION AND GOALS

VISION STATEMENT

The City of Clayton has centered this LRSP around a Vision Zero approach, which aims to eliminate all fatal and serious injury crashes by 2050. The City will enhance the existing roadway network to eliminate fatal and serious injury crashes, promote traffic safety, meet the needs of the community, and enrich the lives of residents. The City will use data and Safe System principles recommended by the Federal Highway Administration (FHWA) and the 2020-2024 California Strategic Highway Safety Plan (SHSP) to promote safety in all actions.

SAFETY GOALS

Supporting the City's Vision, the following four goals have been established:

- 1. Monitor and evaluate roadway safety emphasis areas and community needs to identify and prioritize opportunities to reduce crash risk;
- 2. Implement proven safety countermeasures to address common crash types;
- 3. Partner with other local agencies to promote roadway safety;
- 4. Provide opportunities for citizen engagement in identifying roadway safety issues and developing solutions for safety across the community.

8c Attachment 2

Section 3 Plan Development Process

PLAN DEVELOPMENT PROCESS

The LRSP was developed in collaboration with City Staff, Councilmembers, and community members. Crash data analysis and best practices informed the selection of focus areas and solutions. The Plan Development Process used the following steps:

- 1. Identify stakeholders,
- 2. Collect data,
- 3. Analyze data and identify crash types and high-risk areas,
- 4. Choose proven solutions and,
- 5. Implement solutions.

SAFETY PARTNERS

The City can use interagency cooperation and collaboration to work toward eliminating deaths and severe injuries on the local roadway network. The following agencies can be valued safety partners in implementing the LRSP:

- Transportation Agencies can help identify engineering solutions at locations of shared interest and can help share and promote educational campaigns.
- Community Groups, Local Organizations can give feedback on safety issues and help facilitate better communication about safety campaigns and future projects between the public and the City. Health advocacy or active transportation groups can help coordinate education classes through schools or city-sponsored events. As safety liaisons, these partners can help build trust between government agencies and the public.
- Police, Fire, and Emergency Services can help the City proactively improve emergency response services and assess proposed safety countermeasures. These partnerships can be used to coordinate on emphasis areas and high-risk locations for road users.

IDENTIFIED SAFETY PARTNERS

- Bike East Bay
- Contra Costa Fire Protection District (Con Fire)
- Clayton Police Department
- Contra Costa
- County Connection
- Mt. Diablo Unified Scho
- District

The City will coordinate with these partners to continue to improve roadway safety in Clayton.

School Districts – can be partners in educational programs that encourage students, families, and staff to engage in safe transportation behaviors.

ENGAGEMENT AND OUTREACH

To understand how the community thinks about and prioritizes safety, the project team conducted engagement and community outreach meetings and events in the City, including attending the City of Clayton Oktoberfest (October 1, 2023) and a City Council meeting (October 17, 2023).

Community and Councilmember inputs related to roadway safety included:

Speeding Concerns:

- Speeding along major roads, residential neighborhoods, and schools.
- Noted locations include Clayton Road, Oakhurst Drive, Marsh Creek Road, and Pine Hollow Road.

Biking Concerns:

 Requests for a more connected bike network in the city and safer bike facilities especially along Clayton Road.

Other:

- Sightline issues when turning onto major roads from neighborhood streets.
- Congestion around schools during peak hour.



City of Clayton, Oktoberfest Sunday, October 1st, 2023



Section 4 Existing Safety Efforts



CLAYTON'S EXISTING SAFETY EFFORTS

The LRSP builds on existing plans, policies, and programs that support safe, accessible, equitable, and multimodal transportation. The most relevant documents pertaining to local roadway safety are included below with an explanation on how their goals, policies, programs, and recommendations informed this LRSP.

CONTRA COSTA COUNTY WIDE COMPREHENSIVE TRANSPORTATION PLAN⁵

The 2017 Contra Costa County Wide Comprehensive Transportation Plan (CTP) is a long-range vision for transportation in the County and identifies goals for bringing together all modes of travel, networks, and operators, to meet the diverse needs of Contra Costa. The CTP recognizes Vision Zero as one of its fundamental components and identifies the following goals relevant to this LRSP:

- 1. Support the efficient, safe, and reliable movement of people and goods using all available travel modes,
- 2. Expand safe, convenient, and affordable alternatives to the single occupant vehicle,
- 3. Maintain the transportation system.

The CTP recognizes the importance of safety for all roadway users and highlights the need for alternative travel modes. It also recognizes the importance of ongoing maintenance of roadways, sidewalks, and bicycle lanes. The vision and goals of the Clayton LRSP were developed to align with the CTP.

CONTRA COSTA COUNTYWIDE BIKE AND PEDESTRIAN PLAN6

To support and encourage walking and bicycling in Contra Costa County, the Contra Costa Transportation Authority (CCTA) adopted its first Contra Costa Countywide Bicycle and Pedestrian Plan (CBPP) in 2003 and updated it again in 2009. The newly adopted 2018 CBPP reflects many new policies, best practices and standards developed over the last decade as well as newly adopted local active transportation plans.

The goals of the CBPP are:

- Encourage more people to walk and bike,
- Increase safety and security for pedestrians and bicyclists,
- Create a safe, connected, and comfortable network of bikeways and walkways for all ages and abilities,
- Increase the livability and attractiveness of Contra Costa's communities and districts,
- Equitably serve all of Contra Costa's communities while ensuring that public investments are focused on projects with the greatest benefits.

The objectives of the plan are:

- Increase the share of trips made by walking and bicycling in Contra Costa,
- Reduce the rate of pedestrian and bicycle fatalities and injuries per capita,
- Increase the number of miles of low-stress bikeways in Contra Costa,
- Increase the number of jurisdictions in Contra Costa with bicycle, pedestrian, or active transportation plans,
- Integrate complete street principles and best practices into Authority funding and design guidance.

The CBPP recognizes the importance of safety for pedestrians and bicyclists and highlights the need for a connected and comfortable network of bikeways and walkways to encourage the use of active transportation modes. It also emphasizes serving all communities and people equitably. The Clayton LRSP

⁵ https://ccta.net/wp-content/uploads/2021/07/2017-CTP-Vol-1.2017.10.05.pdf

⁶ https://ccta.net/wp-content/uploads/2018/10/5b8ec26192756.pdf

includes multimodal safety recommendations to create a safe roadway network for pedestrians and bicyclists.

CCTA VISION ZERO SAFETY POLICY AND IMPLEMENTATION GUIDE7

This guide is intended to be used by jurisdictions in Contra Costa to leverage industry best practices while implementing Vision Zero and transportation safety-related policies, programs, and projects. The Guide summarizes best practices and indicates the role of CCTA and jurisdictions for each core element. The Guide draws from the Institute of Transportation Engineers (ITE) and the Vision Zero Network's Core Elements for Vision Zero Communities, and is organized into the following chapters:

- 1. **Develop Vision Zero Leadership and Commitment.** This chapter focuses on the core elements of achieving public, high-level, and ongoing commitment, authentic community engagement, and strategic planning.
- 2. **Take a Data-Informed Approach.** This chapter focuses on the core elements of equity-focused analysis and programming, responsive and location-specific planning, proactive and systemic planning, and comprehensive monitoring and evaluation.
- 3. **Encourage Safer Speeds and Create Safer Routes.** This chapter focuses on the core elements related to complete streets for all, context-appropriate speeds on roadways and pathways, and project delivery.

The Clayton LRSP was developed using industry best practices, including using the best available crash and equity data. The LRSP was also developed with the City vision of zero fatal and serious injury crashes in alignment with the CCTA Vision Zero Safety Policy and Implementation Guide.

CLAYTON GENERAL PLAN⁸

The Circulation Element of the Clayton General Plan, last amended in March 2000, is meant to act as a guide to help the City implement a circulation which will preserve the atmosphere and unity of the area, and which will assure adequate traffic capacity on major thoroughfares but will minimize through traffic in residential neighborhoods. Objectives of the Circulation Element relevant to this LRSP are:

- 1. Plan an efficient network of streets and trails which will link all neighborhoods of the community, and allow safety and economy of movement,
- 2. Provide alternative routes of circulation through the Town Center,
- 3. Enhance the City's system of pedestrian, equestrian and bicycling paths, and trails,
- 4. Cooperate with Concord and Contra Costa County in design of the Regional Traffic System,
- 5. Establish a priority system to upgrade existing City streets to a City standard.

The Clayton LRSP identified priority locations for safety improvements and includes safety recommendations for all roadway users. The LRSP project team also worked collaboratively with CCTA for consistency with the upcoming Countywide Transportation Safety Action Plan (CTSAP).

⁷ Countywide Vision Zero - Contra Costa Transportation Authority (ccta.net)

⁸ https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-III-circulation-element.pdf

CLAYTON TOWN CENTER SPECIFIC PLAN⁹

Clayton Town Center Specific Plan was adopted in March 1990 and amended last in April 2012. This plan includes the distribution of land uses, location, and size of streets, walks and other infrastructure, standards for development, and methods of financing public improvements for Clayton Town Center. The goals of this plan relevant to the LRSP are presented in the Circulation Element (Chapter 5) of the plan. These are:

- 1. To encourage and facilitate pedestrian travel in the Town Center, the specific plan proposes that all roads and streets, both old and new, be constructed with curbs and with minimum 5' 0" sidewalks on both sides of the streets east of Oak and north of High Streets,
- 2. Pedestrian pathways or unpaved trails should be provided where needed to connect regional hiking and equestrian trails along Mt. Diablo and Mitchell Creeks and to the Black Diamond Mine,
- 3. Bicycle lanes will be provided on both sides of the Clayton Road, Oakhurst extension, Center Street east of Marsh Creek Road and on Oak between Center and Main and on the shoulder of the Clayton Road/Main Street off-ramp.

The LRSP identified safety recommendations and projects that align with the Specific Plan's goals of creating safe pedestrian and bicycle facilities that connect community members to the Town Center.

⁹ https://claytonca.gov/fc/city-clerk/Town-Center-Specific-Plan.pdf

8c Attachment 2

Section 5 Safety and Equity Data Analysis

SAFETY AND EQUITY DATA ANALYSIS

This section presents an overview of the safety and equity data analysis, crash mapping, priority locations, SHSP Challenge Area Comparison and emphasis areas for the City of Clayton. The detailed safety and equity data analysis is attached in Appendix A.

SAFETY ANALYSIS SUMMARY

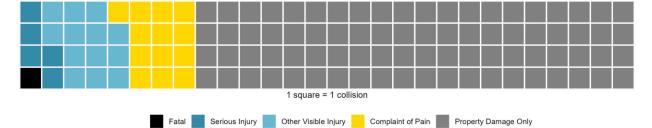
Crash data for the City of Clayton was obtained from two data sources:

- 1. California Statewide Integrated Traffic Records System (SWITRS); and,
- 2. University of California Berkeley's Transportation Injury Mapping System (TIMS).

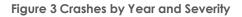
TIMS reports injury crashes from SWITRS but excludes crashes that cause Property Damage Only (PDO) and no injuries. For crash patterns and trends analysis, the project team utilized SWITRS data (including PDO crashes) while TIMS data was utilized to identify the high-injury network in the City. The study period for the LRSP covers crash data from January 1, 2018 to December 31, 2022.

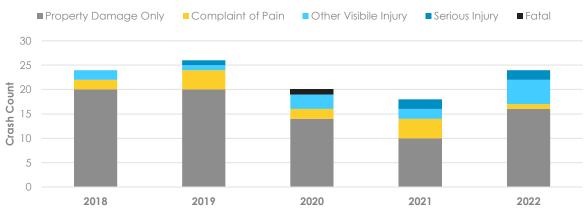
In the five-year study period, there were 112 crashes reported in the City; 32 crashes (29%) resulted in a fatality or injury. There were six reported fatal or serious injury crashes (one fatal and five serious injury crashes), 5% of total reported crashes. Figure 2 shows the crash frequency by severity; Figure 3 shows the crash frequency and severity by year.

Figure 2 Crash Frequency (2018 – 2022) by Severity



Source: SWITRS, Kittelson & Associates, Inc, 2023





Source: SWITRS, Kittelson & Associates, Inc, 2023

The four most frequent crash types for total reported crashes in the City are: Hit Object (32%), Rear-end (21%), Broadside (20%), and Sideswipe (19%). The three crash types that resulted in a fatality or serious injury are Broadside, Rear-end, and Vehicle/pedestrian.

Among total reported crashes, the three most frequent primary crash factors in the City are: Improper turning (29%), Unsafe speed (23%), and Traffic signals and signs (12%). The primary crash factors resulting in a fatality or serious injury are Unsafe speed (2 crashes), Traffic signals and signs (1 crash), Driving or bicycling under the influence of alcohol or drugs (1 crash), Automobile right of way (1 crash), and Pedestrian violation (1 crash).

Fatal and serious injury crashes are overrepresented in alcohol and drug-involved crashes. Alcohol and drug-involved crashes constitute only 12% of all reported crashes but constitute 17% of fatal/serious injury crashes. Of the 12 total crashes which are alcohol/drug involved, nine crashes (75%) occurred in the evening (from 6 PM to 1 AM).

Sixty-eight percent of all reported crashes occurred on roadway segments and 96% of all reported crashes involve a motor vehicle only (automobile or motorcycle). Four percent of total reported crashes involve a pedestrian but pedestrians are involved in 13% of fatal and injury crashes. Pedestrians are overrepresented in fatal and injury crashes. Table 1 shows the breakdown of crashes by crash location and road user involved.

Road User Involved	Intersection Crashes (% of Total crashes)	Roadway Segment Crashes (% of Total crashes)	Total (% of Total crashes)
Pedestrian	1 (<1%)	3 (3%)	4 (4%)
Bicyclist	0 (0%)	1 (1%)	1 (1%)
Motorcyclist	0 (0%)	2 (2%)	2 (2%)
Automobile	35 (31%)	70 (63%)	105 (94%)
Total	36 (32%)	76 (68%)	112 (100%)

Table 1 Crashes by Crash Location and Road User Involved

Source: SWITRS, Kittelson & Associates, Inc, 2023

Note, percentages may not add up due to rounding.

CRASH MAPPING

This section discusses the geographic distribution of crashes, identifies roadway and intersection characteristics (i.e., functional classification and speed limit) associated with a higher frequency or severity of crashes, and presents a high priority network associated with crashes.

Crashes occurred on Other Principal Arterials (37.5%) and Local roadways (31.3%) most frequently. The percentage of crashes occurring on Other Principal Arterials is disproportionately higher than the percentage of their total roadway miles in the City (9.6% of total roadway miles). Other Principal Arterials also constitute 59.4% of fatal and all injury crashes. The roadways with functional classification as Other Principal Arterials in the City are Clayton Road and Marsh Creek Road. Minor arterials and major collectors also share a disproportionately higher percentage of crashes compared to the percentage of their total roadway miles.

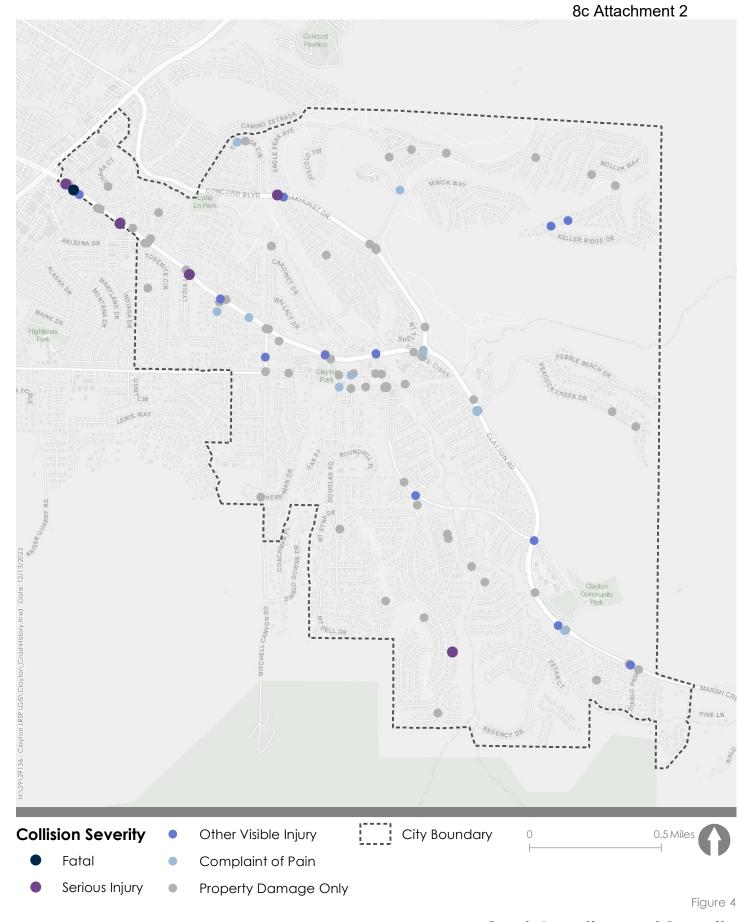
Table 2 shows proportion of crashes by roadway functional classification. Figure 4 presents the location of all crashes in the City by severity level.

Table 2 Crashes by Roadway Functional Classification

Functional Classification	Total Roadway Miles (%)	Number of Fatal and Injury Crashes (%)	Number of All Crashes (%)
Other Principal Arterial	7.93	19	42
	(9.6%)	(59.4%)	(37.5%)
Minor Arterial	5.53	4	9
	(6.7%)	(12.5%)	(8.0%)
Major Collector	8.78	5	26
	(10.7%)	(15.6%)	(23.2%)
Local	60.00	4	35
	(73.0%)	(12.5%)	(31.3%)
Total	82.24	32	112

Source: SWITRS, Kittelson & Associates, Inc, 2023

Notes: Roadway Functional Classification was established using Caltrans California Road System (CRS) maps.



Crash Location and Severity Clayton Local Roadway Safety Plan Clayton, CA



PRIORITY LOCATIONS

Priority locations were identified based on the distribution of fatal and injury crashes in the city. Table 3 and Figure 5 present the priority roadway safety corridors and intersections identified for the LRSP. While there is a concentration of crashes in the Clayton Town Center, these crashes were most often low severity (i.e., no or minor injuries to victims involved).

Table 3 Priority Locations

Name	Туре	Total Crashes	Fatal/Serious Injury Crashes	Other Injury Crashes	PDO Crashes
Corridors ¹					
Clayton Rd (Washington Blvd to Oakhurst Dr)	Other Principal Arterial	38	4	8	26
Marsh Creek Rd (Clayton Rd/Diablo View Ln to Diablo Pkwy)	Other Principal Arterial	8	0	4	4
Intersections					
Oakhurst Dr & Eagle Peak Ave (west)	Signalized	3	1	2	0
Mountaire Pkwy & Mt Duncan Dr	Unsignalized	1	1	0	0

Source: SWITRS, Kittelson & Associates, Inc, 2023

1 Corridors include roadway and intersection crashes

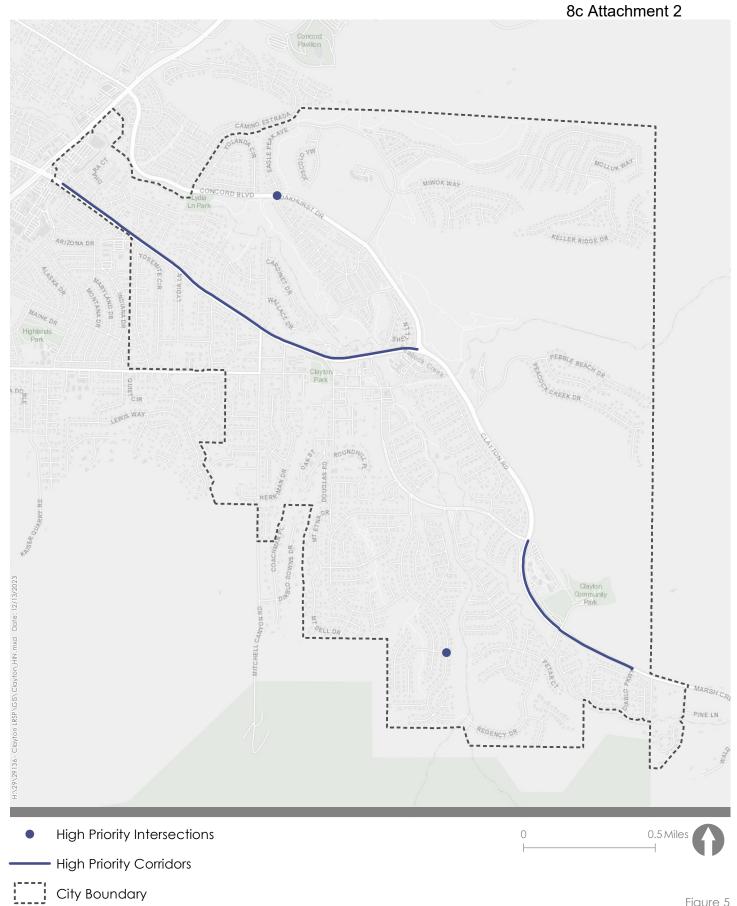


Figure 5

High Priority Corridors and Intersections Clayton Local Roadway Safety Plan Clayton, CA



SHSP CHALLENGE AREA COMPARISON

The California 2020-2024 Strategic Highway Safety Plan (SHSP)¹⁰ is a statewide traffic safety plan that provides guidance to influence development of statewide goals, strategies, and performance measures for local agencies and stakeholders statewide.

Six of the challenge areas in the SHSP are identified as high priorities in California because they represent the greatest opportunity to reduce fatalities and serious injuries across the state:

- Lane Departures
- Impaired Driving
- Speed Management / Aggressive Driving
- Pedestrians
- Bicyclists
- Intersections

The sample size of fatal and serious injury crashes in the City is too low to compare to the SHSP Challenge Areas with statistical significance. However, the project team conducted an analysis with total fatal and injury crashes in the City and compared them against the statewide SHSP challenge areas (Table 4). While not directly comparable, this analysis provided insight into challenge areas that the City can prioritize to reduce the number of fatal and injury crashes on the roadway network. Aggressive Driving and Intersection related crashes represent a large proportion of the fatal and injury crashes in the City. Two serious injury crashes were reported as aggressive driving (i.e., unsafe speeds); a third serious injury crash occurred at an intersection.

Table 4 SHSP Challenge Area Comparison

Challenge Area	Definition	% of fatal and injury crashes in City of Clayton	% of fatal and serious injury crashes Statewide
Lane Departures	Includes head-on, hit object and overturned crashes	19%	46%
Impaired Driving	Includes crashes where any evidence of drug or alcohol use by the driver is present, even if the driver was not over the legal limit.	9%	28%
Speed Management / Aggressive Driving	Includes primary crash factor categories of unsafe speed, following too closely, and traffic signals and signs	55%	34%
Pedestrians / Bicyclists	Includes instances where a motor vehicle is involved in a crash with a pedestrian or bicyclist	10%	17%
Intersections	Includes crashes identified by the responding officers as occurring at an intersection or involving a train or rail vehicle	38%	23%

Source: SHSP, SWITRS, Kittelson & Associates, Inc., 2023

¹⁰ California 2020-2024 Strategic Highway Safety Plan, January 2023. https://dot.ca.gov/programs/safety-programs/shsp

EQUITY ANALYSIS SUMMARY

The equity analysis compared ACS 2021 5-Year data (2017-2021) against the SWITRS crash-involved party characteristics for the City of Clayton. The following demographics were analyzed based on available crash and census data:

- 1. Age
- 2. Sex
- 3. Race/Ethnicity

People in the 40 to 64 years age group are the largest group of population in the City (36%), followed by people in the 0 to 14 years age group (18%). People in the 25 to 39 years age group constitute 13% of the City population but are involved in 21% of all reported crashes and 97% of the crash-involved parties in the 25 to 39 years age group were reported as driving a vehicle (Figure 6).

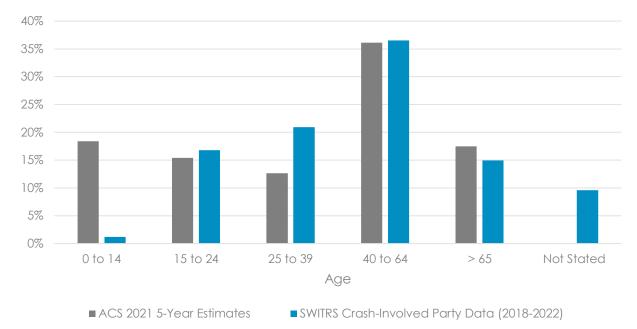


Figure 6 SWITRS Crash-involved Party Age Compared Against Citywide Population Shares

There were no overrepresented groups when analyzing for sex and race/ethnicity based on available data. In the Citywide population, females constitute a slightly higher proportion of the population compared to males (51% vs 49%). This pattern is replicated in the crash data, where 46% of the crash-involved parties are females and 44% are males. White individuals are the largest population group in the City (66%) and People of Color make up 34% of the City population. This pattern is reflected in the crash data as well: 62% of the crash-involved parties are White while 38% of the crash-involved parties are People of Color.

EMPHASIS AREAS

Based on the analysis of crash types, locations, movements, behavioral factors, and statewide emphasis areas, the following emphasis areas were identified for the City of Clayton:

- 1. **Pedestrians** are involved in only 4% of all reported crashes but are involved in 13% of fatal and injury crashes.
- 2. Improper Turning is a primary crash factor in nearly one-third of all crashes.
- 3. **Unsafe Speed/Aggressive Driving** is a primary crash factor which is associated with both high frequency and high severity of crashes.
- 4. Other Principal Arterials are overrepresented in injury crashes and all reported crashes.
- 5. Drivers in the 25-39 Years Age Group make up 13% of the City's population is between 25-39 years old, but 21% of crash involved parties are between 25-39 years of age.

8c Attachment 2

Section 6

Countermeasures and Safety Strategies Recommendations

COUNTERMEASURE AND SAFETY STRATEGIES RECOMMENDATIONS

Improving roadway safety in the City of Clayton will take a coordinated effort from various partners and viewpoints. This section presents a summary of multidisciplinary recommendations and countermeasures that were identified for the City of Clayton as they make investments and advancements in improving roadway safety. The detailed countermeasures technical memorandum is attached in Appendix B.

Recommendations are organized by the three following categories:

- 1. Intersections Countermeasures
- 2. Roadway Countermeasures
- 3. Non-Engineering Strategies

Engineering countermeasures (intersections and roadways) described below are adapted from the California Local Roadway Safety Manual (California LRSM) 2022¹¹ and the NCHRP Report 926 (Guidance to Improve Pedestrian and Bicyclists Safety at Intersections).¹² For a full list of proven safety countermeasures, see the Federal Highway Administration's Proven Safety Countermeasures.¹³

¹¹ https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/hsip/2022/lrsm2022.pdf

¹² https://www.trb.org/Main/Blurbs/180624.aspx

¹³ https://highways.dot.gov/safety/proven-safety-countermeasures

INTERSECTION COUNTERMEASURES

LRSM ID	Countermeasure	Crash Types Addressed	CRF ¹	Federal Funding Eligibility ²	Cost Estimate ³	Ideal for Systemic Application
S01/ NS01	Add intersection lighting	Nighttime, All	0.4	100%	\$	Yes
\$02	Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number	Rear-end, Broadside	0.15	100%	\$	Yes
S03	Improve signal timing (coordination, phases, red, yellow or operation)	All	0.15	50%	\$-\$\$\$	Yes
S07	Provide protected left turn phase (left turn lane already exists)	Rear-end, Sideswipe, Broadside	0.3	90%	\$-\$\$\$	Yes
\$10/ NS09	Install flashing beacons as advance warning	Rear-end, Broadside	0.3/ 0.15	100%	\$	Yes
\$16	Convert intersection to roundabout (from signal)	All	0.35- 0.67	100%	\$\$-\$\$\$	No
S17PB	Install pedestrian countdown signal heads	Pedestrian & Bicycle	0.25	90%	\$	Yes
S18PB	Install pedestrian crossing	Pedestrian & Bicycle	0.25	100%	\$	Yes
S2OPB	Install advance stop bar and bicycle waiting area before crosswalk	Pedestrian & Bicycle	0.35	100%	\$	Yes
S21PB	Modify signal phasing to implement a Leading Pedestrian Interval (LPI)	Pedestrian & Bicycle	0.59	100%	\$	Yes
N\$11	Improve sight distance to intersection (clear sight triangles)	All	0.2	90%	\$-\$\$\$	Yes
N\$13	Install splitter islands on the minor road approaches	Rear-end, Broadside	0.4	90%	\$	No
NS14	Install raised medians (refuge islands)	Pedestrian & Bicycle	0.45	100%	\$	Yes
NS20PB	Install pedestrian crossing at uncontrolled locations (signs and markings only)	Pedestrian & Bicycle	0.25	100%	\$	Yes

LRSM ID	Countermeasure	Crash Types Addressed	CRF ¹	Federal Funding Eligibility²	Cost Estimate ³	Ideal for Systemic Application
NS21PB	Install pedestrian crossing at uncontrolled locations (with enhanced safety features)	Pedestrian & Bicycle	0.35	100%	\$-\$\$\$	Yes
NS23PB	Install Pedestrian Signal (including Pedestrian Hybrid Beacon [PHB])	Pedestrian & Bicycle	0.55	100%	\$\$- \$\$\$	No

1 - Crash Reduction Factors are an indication of the effectiveness of a particular treatment, measured by the

percentage of crashes the countermeasure is expected to reduce (California LRSM 2022)

2 – Funding eligibility is for eligible countermeasures under the Caltrans HSIP

3 - \$ - Less than \$50,000; \$\$ - \$50,000 to \$100,000; \$\$\$ - Over \$100,000

ROADWAY COUNTERMEASURES

LRSM		Crash Types		Federal	Cost	Ideal for
ID	Countermeasure	Addressed	CRF ¹	Funding Eligibility ²	Estimate ³	Systemic Application
R01	Add segment lighting	Nighttime, All	0.35	100%	\$	Yes
R02	Remove or relocate fixed objects outside of Clear Recovery Zone	Hit-Object	0.35	90%	\$-\$\$\$	Yes
R22	Install/upgrade signs with new fluorescent sheeting (regulatory or warning)	Head-On, Run-off Road, Sideswipe, Nighttime	0.15	100%	\$	Yes
R23	Install chevron signs on horizontal curves	Run-off Road, All	0.4	100%	\$-\$\$	Yes
R27	Install delineators, reflectors and/or object markers	All	0.15	100%	\$	Yes
R31	Install edgeline rumble strips/stripes	Run-off Road, Hit- Object	0.15	100%	\$-\$\$\$	Yes
R33PB	Install separated bike lanes	Pedestrian & Bicycle	0.45	90%	\$-\$\$\$	Yes
R36PB	Install raised pedestrian crossing	Pedestrian & Bicycle	0.35	90%	\$-\$\$	Yes
R37PB	Install Rectangular Rapid Flashing Beacon (RRFB)	Pedestrian & Bicycle	0.35	100%	\$-\$\$	Yes
R26	Install Dynamic/Variable Speed Warning Signs	All	0.3	100%	\$-\$\$	Yes
N/A	Traffic Calming: Speed Hump Chicane Bulb Out Raised Intersection Mid-block pedestrian crossing Choker/Pinch Point	All	Varies by treatment	N/A	Varies by treatment	Yes

1 - Crash Reduction Factors are an indication of the effectiveness of a particular treatment, measured by the percentage of crashes the countermeasure is expected to reduce (California LRSM 2022)

2 - Funding eligibility is for eligible countermeasures under the Caltrans HSIP

3 - \$ - Less than \$50,000; \$\$ - \$50,000 to \$100,000; \$\$\$ - Over \$100,000

NON-ENGINEERING STRATEGIES

Category	Strategy
Education	Road Safety Education to Children
	Speed Monitoring Awareness Radar Trailer
	Conspicuity Enhancements and Education
	Vulnerable Road User Education
	High Visibility Cell Phone and Text Messaging Media Campaign
Enforcement	Progressive Ticketing
	Speed Enforcement in School Zones
Emerging Technology	Artificial Intelligence and Deep Learning
	Big Data
	Touchless Tire Pressure Monitoring

PROJECT IDEAS

In addition to the countermeasure toolbox, two safety improvement concepts were developed as examples of ways the City can use targeted safety improvements to help reduce fatal and serious injury crashes on its roadways. Oakhurst Drive and Eagle Peak Avenue (west) and Mountaire Parkway and Mt. Duncan Drive were two intersections identified as high priority locations in the City. To reduce risk of future fatal and serious injury crashes, the City can install treatments designed specifically for each intersection and intersections with similar characteristics.

OAKHURST DRIVE AND EAGLE PEAK AVENUE (WEST)

- 3 total crashes
- Crash Severities: 1 serious injury, 1 other visible injury and 1 complaint of pain
- Crash Types: Hit-Object, Broadside, Rear-end
- Primary Crash Types: Improper turning, Unsafe speed.

To address the rear-end and broadside crashes at the intersection, the following safety improvements were identified:

 S02: Improving signal hardware such as adding retroreflective borders to signal heads to provide better visibility of the intersection and aid driver's advance perception of the upcoming intersection.



S10: Installing flashing beacons as advance warning to increase driver awareness of the approaching intersection and increase driver's time to react.

Other safety improvements that were identified at the intersection include:

- S17PB/S21PB: Installing high visibility crosswalks and pedestrian countdown signal heads to address
 pedestrian and bicycle crashes,
- R33PB: Installing separated bike lanes on major approaches to separate bicyclists from vehicular traffic to improve safety and comfort for bicyclists,
- Intersection crossing bike markings to indicate the intended path of bicyclists and guide bicyclists safely through the intersection.

MOUNTAIRE PARKWAY AND MT. DUNCAN DRIVE

- 1 total crash, resulting in serious injury
- Crash Types Broadside
- Primary Collision Factor: Unsafe speed

The following treatments were identified:

- Installing STOP AHEAD sign and pavement markings to alert drivers of the upcoming STOP sign and promote safe and controlled stops.
- NS13: Installing splitter islands on the minor approaches to separate turning vehicles from the vehicles stopped on the minor road approach and reducing the probability of a crash.
- NS20PB: Installing high visibility crosswalks to make the intersection more conspicuous.



This location can also be considered for a

systemic effort to reduce speeds in residential areas. Contra Costa Transportation Authority (CCTA) is championing a "Twenty is Plenty" campaign to address unsafe speeds in the neighborhood and address neighborhood traffic concerns in a systematic manner. The City can work with CCTA to reduce speed limits on residential roadways and implement traffic calming measures in neighborhoods, such as:

- Speed humps
- Curb bulbouts
- Signage and striping

8c Attachment 2

Section 7 Implementation and Evaluation

IMPLEMENTATION AND EVALUATION

The City has established a vision to create a roadway network that eliminates fatal and serious injury crashes, promotes traffic safety, meets the needs of residents, and enriches the lives of the community. A key part of achieving the City of Clayton's vision is evaluating roadway safety performance and tracking progress towards the City's goals. The following section outlines a process to regularly collect data and information to calculate performance measures that can be used assess changes in the City's roadway safety performance and progress toward its roadway safety management goals.

PERFORMANCE MEASURES

It is recommended that the City track two sets of performance measures. The first set of measures are crash frequency statistics that will help the City measure the outcomes of the investments in roadway safety. The second set of measures track progress in implementing projects and programs that address and enhance roadway safety.

CRASH FREQUENCY PERFORMANCE MEASURES

The following performance metrics have been identified to evaluate the City's progress toward achieving the City's goal and vision:

- Total number of fatal and serious injury crashes on City roads
- Number of fatal and serious injury crashes on City roads by emphasis areas, including:
 - Pedestrian-Involved Crashes
 - Improper Turning
 - Speeding/Aggressive Driving
 - Crashes on Principal Arterials
 - Drivers in the 25-39 Years Age Group
- Number of recommended non-engineering activities completed, including:
 - Engagement activities held, including location of events and number of community members engaged
 - Number of safety improvement projects, including a summary of each project's safety improvements, location, budget, any grant funding received to fund the projects, and expected benefits (i.e., potential crash reduction or nature of reduced crash risk) based on the countermeasures incorporated.
 - These may be standalone safety improvement projects or other projects with a safety element incorporated (e.g., a restriping project that adds a bike lane to address an identified safety need).

First, the City will report the number of crashes and the number of fatal and serious injury crashes for total crashes and emphasis area crashes every year to monitor trends in the data. The performance measures related to the number of crashes on City roads should be based on the latest three to five years of available crash data to normalize for fluctuations in crashes on a year-to-year basis. Table 5 presents an example of how these crash statistics can be tracked and reported.

The City will report both total reported crashes, and fatal and serious injury crashes; however, the City's goals are specifically to eliminate fatal and serious injury crashes which are life-altering events. For the statistics, the City will report the relative change in the statistics compared to the five-year crash data reported in the LRSP (2018-2022).

Three-Year Crash Statistics									
	2018-2020		201	2019-2021		2020 – 2022		2021 – 2023	
Emphasis Areas	Total Number of Crashes	Fatal/Serious Injury Crashes	Total Number of Crashes	Fatal/Serious Injury Crashes	Total Number of Crashes	Fatal/Serious Injury Crashes	Total Number of Crashes	Fatal/Serious Injury Crashes	
Pedestrian Involved Crashes	2	1	2	1	1	0			
Improper Turning	23	0	20	0	13	0			
Speeding and Aggressive Driving ¹	22	0	21	1	25	3			
Crashes on Principal Arterials	28	2	34	3	34	3			
Crashes involving drivers between 25 to 39 years old	14	2	17	2	15	3			
Total Reported Crashes*	70	2	70	4	62	5			

Table 5 Three-Year Crash Trends by Emphasis Area

Note: total reported crashes are all crashes that occurred within the City of Clayton and are not a sum of the total crashes across emphasis areas.

1. Aggressive Driving includes crashes that are reported with primary crash factors of unsafe speed, following too closely, and traffic signals and signs

PROJECT IMPLEMENTATION TRACKING

The second set of performance measures are designed to track project and program implementation (Table 6). These may be refined based on coordination with safety partners to understand how best to measure the efforts and set appropriate goals.

For roadway safety improvement projects, the City will describe the number of improvements, locations where the projects were implemented, budget, grant funding received, and expected benefits (i.e., potential crash reduction or nature of reduced crash risk) based on the countermeasures incorporated.

For non-engineering programs, the City will report the number and type of non-engineering efforts, name of the non-engineering program(s), a description of the program(s) and implementation, number of people reached with the key messages or educational materials, and efforts taken to promote social equity in programs.

Table 6 Project and Program Implementation

Efforts	Туре	Number Completed
Roadway Safety Improvement Projects Completed	Engineering	
Non-Engineering Programs Completed	Ex. Education / Data Improvement	
Report Effectiveness of Completed Projects	Reporting / Transparency	

ACCOUNTABILITY

The City will report on its performance measures in a biennial report and present the performance measures to the City Council every two years (generally in odd years). For each measure, the City will report on progress and changes in roadway safety performance in Clayton.

The City will provide a brief written explanation and approach for closing the performance gap for any performance measure where the City is behind schedule. The information from the reports can be used to update the LRSP every five years.

The City will develop a working safety group meeting with safety partners to discuss the performance measures and the overall state of safety on the roadway network.

ACTION ITEMS

Each year the City will:

- Calculate and Report Performance Measures
- Conduct a meeting with identified safety partners in which the City reports on performance results and identifies upcoming efforts

Every two years the City will:

- Release the report to the public
- Present the performance measures report to City Council

UPDATING THE LOCAL ROADWAY SAFETY PLAN

This plan was developed using crash data between 2018 and 2022. As feasible, it is recommended that the City revisit this LRSP every five years using updated crash data and performance measures. Comparing the performance measures related to investments made with the crash data should provide a clear indication of the impact of the City's and safety partner's efforts. Analyzing the latest crash data may provide new emphasis areas and top priority locations that reflect progress made and new priorities based on trends in the data (see Table 7 for example). A more comprehensive update of the LRSP should be done approximately every ten years (or as needed) that may include updated vision and goals, safety plans and policies, safety partners, and engineering countermeasures and safety strategies alongside updated crash data and performance measures.

Table 7 Five-Year Crash Trends by Emphasis Area

	Prior Crash History Five-Year Range (2013-2018)		Five-Year	3 LRSP Range (2018 2022)	5-Year LRSP Update Five-Year Range (2023 – 2027)	
Emphasis Areas	Total Number of Crashes	Fatal/Serious Injury Crashes	Total Number of Crashes	Fatal/Serious Injury Crashes	Total Number of Crashes	Fatal/Serious Injury Crashes
Pedestrian Involved Crashes	4	0	4	1		
Improper Turning	58	3	32	0		
Speeding and Aggressive Driving ¹	72	2	41	3		
Crashes on Principal Arterials	73	2	42	4		
Crashes involving drivers between 25 to 39 years old	30	1	18	3		
Total Reported Crashes*	185	6	112	6		

Note: total reported crashes are all crashes that occurred within the City of Clayton and are not a sum of the total crashes across emphasis areas.

1. Aggressive Driving includes crashes that are reported with primary crash factors of unsafe speed, following too closely, and traffic signals and signs



8c Attachment 2

Section 8 Funding Considerations

FUNDING CONSIDERATIONS

This section discusses the federal, state, and regional funding opportunities for regional and local transportation projects, policies, and programs.

FEDERAL FUNDING

Congestion Management & Air Quality (CMAQ), Federal Highway Administration (FHWA)

The Congestion Mitigation and Air Quality Improvement (CMAQ) program provides flexible funding for State and local governments' transportation projects and programs to meet the requirements of the Clean Air Act (CAA) and its amendments. From its beginning, the CMAQ program has been a key funding mechanism for helping urban areas meet air quality goals and supporting investments that encourage alternatives to driving alone and improve traffic flow. See Metropolitan Transportation Commission's One Bay Area Grant (OBAG) program (discussed below) for how CMAQ funding is distributed within the ninecounty Bay Area. OBAG disburses federal funds in accordance with MTC's regional transportation priorities and associated land-use and housing goals.

https://www.transportation.gov/sustainability/climate/federal-programs-directory-congestion-mitigationand-air-quality-cmag

Surface Transportation Block Grant (STBG) Program, Federal Highway Administration (FHWA)

The Fixing America's Surface Transportation (FAST) Act converts the long-standing Surface Transportation Program (STP) into the Surface Transportation Block Grant Program (STBG). The STBG provides flexible funding to address State and local transportation needs. Funding may be used to preserve and improve conditions and performance on the following: Federal-aid highway, bridge, and tunnel projects on qualifying public roads; pedestrian and bicycle infrastructure; and transit capital projects, including intercity bus terminals. OBAG disburses federal funds in accordance with MTC's regional transportation priorities and associated land-use and housing goals.

https://www.fhwa.dot.gov/specialfunding/stp/

Other Federal Grants

Because the continued existence of these grant programs is at the discretion of Congress, research the current state of funding before considering these sources.

Infrastructure Jobs and Investment Act (IIJA), USDOT

The bipartisan IIJA provides the basis for FHWA programs and activities through September 30, 2026. The IIJA makes a once-in-a-generation investment of \$350 billion in highway programs and includes the largest dedicated bridge investment since the construction of the Interstate Highway System.

One program, the Safe Streets for All (SS4A) Grant Program, has appropriated \$5 billion over the next five years, with up to \$1 billion available in fiscal year 2022. The SS4A program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries.

The SS4A program provides funding for two types of grants:14

• Planning and Demonstration Grants provide Federal funds to develop, complete, or supplement a comprehensive safety action plan. The goal of an Action Plan is to develop a holistic, well-defined strategy to prevent roadway fatalities and serious injuries in a locality, Tribe, or region. Planning and Demonstration Grants also fund supplemental planning and/or demonstration activities that inform

¹⁴ https://www.transportation.gov/grants/SS4A

the development of a new or existing Action Plan. The Department encourages including demonstration activities in an application.

• Implementation Grants provide Federal funds to implement projects and strategies identified in an Action Plan to address a roadway safety problem. Projects and strategies can be infrastructure, behavioral, and/or operational activities. Implementation Grants may also include demonstration activities, supplemental planning, and project-level planning, design, and development. Applicants must have an eligible Action Plan to apply for Implementation Grants. The Department encourages including demonstration activities in an application.

Funding is available for the following activities:

- Comprehensive safety action plans
- Planning, design, and development activities in support of an Action Plan (like this LRSP)
- Projects and strategies identified in an Action Plan (like this LRSP)

For a list of funding-eligible activities, visit <u>https://www.fhwa.dot.gov/bipartisan-infrastructure-law/.</u> For more on SS4A, visit <u>https://www.transportation.gov/grants/SS4A</u>.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant, United States Department of Transportation (USDOT)

The RAISE Discretionary Grant program provides a unique opportunity for USDOT to invest in road, rail, transit, and port projects that promise to achieve national objectives. Previously known as Better Utilizing Investments to Leverage Development (BUILD) and Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants, the eligibility requirements of RAISE allow project sponsors at the state and local levels to obtain funding for multimodal, multi-jurisdictional projects that are more difficult to support through traditional department of transportation programs.

https://www.transportation.gov/RAISEgrants

STATE FUNDING

Highway Safety Improvement Program (HSIP), Caltrans

The Highway Safety Improvement Program (HSIP) is one of the core federal-aid programs in the federal surface transportation act, Fixing America's Surface Transportation Act (FAST). HSIP aims to significantly reduce traffic fatalities and serious injuries on all public roads—including non-State-owned public roads and roads on Tribal land—by funding eligible projects such as crosswalk markings, rapid flashing beacons, curb extensions, speed feedback signs, guard rails, pedestrian refuge islands, slurry seal, and other pavement markings.

https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/highway-safety-improvementprogram

Office of Traffic Safety (OTS) Grants, California Office of Traffic Safety

OTS strives to eliminate traffic deaths and injuries by granting funds to local and state public agencies for programs that enforce traffic laws, educate the public in traffic safety, and provide varied and effective means of reducing fatalities, injuries, and economic losses from crashes.

https://www.ots.ca.gov/grants/

Senate Bill 1 (SB 1)

SB1, the Road Repair and Accountability Act of 2017, is a long-term transportation reform and funding package. The bill includes new revenues that address a variety of transportation projects, such as road

safety improvements, street repair, transit, and roadway and bridge construction. SB 1 provides more than \$5 billion annually to transportation projects throughout California.

http://rebuildingca.ca.gov/

Active Transportation Program (ATP) Grants, California Transportation Commission (CTC)

The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single discretionary grant program that focuses on making California a national leader in active transportation. The ATP aims to encourage active transportation by increasing the proportion of trips made by bicycle or on foot; increasing non-motorized user safety; reducing greenhouse gases; enhancing public health; and ensuring that disadvantaged communities share fully in program benefits.

https://catc.ca.gov/programs/active-transportation-program

State-Local Partnership Program (LPP), CTC

Created by the Road Repair and Accountability Act of 2017 through SB1, the Local Partnership Program (LPP) annually appropriates \$200 million from the Road Maintenance and Rehabilitation Account to local and regional transportation agencies that have passed sales tax measures, developer fees, or other imposed transportation fees. Funds are awarded for road maintenance and rehabilitation, sound walls, and other transportation improvement projects. LPP also funds local and regional agency projects that improve aging infrastructure, road conditions, active transportation, and health and safety. Consistent with the intent behind SB1, the CTC intends this program to balance the need to direct increased revenue to the State's highest transportation needs and the need to fairly distribute the economic impact of increased funding.

https://catc.ca.gov/programs/sb1/local-partnership-program

Sustainable Transportation Grant Program, Caltrans

The Sustainable Transportation Planning Grant Program was created to support the Caltrans mission: provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability. Eligible planning projects must have a transportation nexus and ideally demonstrate that they directly benefit the multimodal transportation system. Sustainable Communities Grants will also improve public health, social equity, environmental justice, the environment, and provide other important community benefits.

https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportationplanning-grants

Recreational Trails Program (RTP), California Department of Parks and Recreation

RTP annually provides federal funds for recreational trails and trail-related projects. The RTP is administered at the federal level by the FHWA and at the state level by the California Department of Parks and Recreation (DPR) and the Department of Transportation (Caltrans) Active Transportation Program (ATP). Eligible non-motorized projects include acquisition of easements and fee simple title to property for recreational trails and recreational trail corridors; and development or rehabilitation of trails, trailside, and trailhead facilities.

https://www.parks.ca.gov/?page_id=24324

Affordable Housing and Sustainable Communities (AHSC) Program, California Strategic Growth Council

The AHSC program aims to reduce greenhouse gas emissions through projects that implement land-use, housing, transportation, and agricultural land preservation practices to support infill and compact

development and that support related and coordinated public policy objectives. The AHSC program includes transportation focuses related to reducing air pollution, improving conditions in disadvantaged communities, supporting, or improving public health, improving connectivity and access to jobs, increasing options for mobility, and increasing transit ridership. Funding for the AHSC Program is provided from the Greenhouse Gas Reduction Fund (GGRF), an account established to receive cap-and-trade auction proceeds.

https://sgc.ca.gov/programs/ahsc/

Transformative Climate Communities (TCC) Program, California Strategic Growth Council

Established by Assembly Bill 2722, the TCC program funds development and implementation of neighborhood-level transformative climate community plans that include multiple coordinated greenhouse gas emissions reduction projects that provide local economic, environmental, and health benefits to disadvantaged communities. The TCC Program helps realize the State's vision of vibrant communities and landscapes and demonstrates how meaningful community engagement coupled with strategic investments in transportation, housing, food, energy, natural resources, and waste can reduce greenhouse gas emissions and pollution, advance social and health equity, and enhance economic opportunity and community resilience. The TCC Program funds both implementation and planning grants. While the program can fund a variety of projects, transportation-related projects can include developing active transportation and public transit projects; supporting transit ridership programs and transit passes for low-income riders; expanding first/last mile connections; building safe and accessible biking and walking routes; and encouraging education and planning activities to promote increased use of active transportation modes.

https://sgc.ca.gov/programs/tcc/

Environmental Enhancement and Mitigation (EEM) Grant Program, California Natural Resources Agency

The EEM program authorizes the California State Legislature to allocate up to \$7 million each fiscal year from the Highway Users Tax Account. EEM projects must contribute to mitigation of the environmental effects of transportation facilities. The EEM Program does not generally fund commute-related trails or similar bicycle and pedestrian infrastructure. However, EEM does fund recreational and nature trails as part of storm water management or green infrastructure projects.

https://catc.ca.gov/programs/environmental-enhancement-mitigation

Urban Greening Grant Program, California Natural Resources Agency

Part of the California State Senate Bill 859, the Urban Greening Program is funded by the Greenhouse Gas Reduction Fund to support the development of green infrastructure projects that reduce greenhouse gas emissions and other benefits. To maximize economic, environmental, and public benefits, priority is given to projects in disadvantaged communities. The Urban Greening Program funds projects that reduce greenhouse gases by sequestering carbon, decreasing energy consumption, and reducing vehicle miles traveled while transforming the built environment into places that are more sustainable, enjoyable, and effective at creating healthy and vibrant communities. These projects will establish and enhance parks and open space by using natural solutions to improve air and water quality, reduce energy consumption, and create more walkable and bikeable trails.

https://files.resources.ca.gov/grants/urban-greening/

Environmental Justice (EJ) Small Grants Program, California Environmental Protection Agency

EJ Small Grants provide funding to help eligible non-profit community organizations and federally recognized Tribal governments address environmental justice issues in areas disproportionately affected by environmental pollution and hazards. EJ Small Grants are awarded on a competitive basis with a maximum

amount of \$50,000 per grant. EJ Small Grants can be used for a variety of environmental purposes and to augment community engagement, health, trainings, and programmatic opportunities in underserved communities.

https://calepa.ca.gov/envjustice/funding/

REGIONAL FUNDING

One Bay Area Grant (OBAG), Metropolitan Transportation Commission

The One Bay Area Grant (OBAG) guides how MTC distributes federal transportation funding from FHWA to projects and programs that improve safety, spur economic development, and help the Bay Area meet climate change and air quality improvement goals. The third round of One Bay Area Grant funding (OBAG 3) was adopted by the MTC in January 2022 and includes more than \$750 million in federal funding for projects from 2023 to 2026.

The OBAG 3 program is divided into a Regional Program, managed by MTC, and a County & Local Program, managed by MTC in partnership with the nine Bay Area County Transportation Agencies (CTAs).

Regional Program:

- \$375 million over 4 years
- Funds are targeted to address critical climate and focused growth goals of Plan Bay Area 2050, and used to coordinate and deploy strategies that are best suited for regional implementation, such as:
 - o Climate Initiatives
 - o Transformational Transit Action Plan near-term investments
 - o Near-term multimodal operational improvements, such as Bay Bridge Forward
 - Priority Development Areas (PDAs), Priority Conservation Areas (PCAs), and other new growth geographies planning and implementation
 - o Complete Streets Policy and Regional Active Transportation Plan
 - Regional Safety/Vision Zero Policy
 - Pavement Management Program.

County and Local Program:

Key program features under OBAG 3 include:

- \$383 million over 4 years
- Funding for local-priority projects nominated by County Transportation Agencies (CTAs) and selected by MTC
- Supports a wide range of project types, and projects in Priority Development Areas (PDAs)

https://mtc.ca.gov/funding/federal-funding/federal-highway-administration-grants/one-bay-area-grantobag-3

8c Attachment 2

Appendix A Safety and Equity Analysis



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Technical Memorandum

October 3, 2023

Project# 29136

- To: Larry Theis, Jason Chen – City of Clayton
- From: Kittelson and Associates, Inc.
- RE: Clayton Local Roadway Safety Plan – Safety and Equity Analysis

INTRODUCTION

Kittelson & Associates (Kittelson) is assisting City of Clayton ("City") in preparing a Local Roadway Safety Plan (LRSP) using a holistic approach to address local road safety consistent with Caltrans Highway Safety Improvement Program (HSIP) and US Department of Transportation (USDOT) Safe Streets and Roads for All (SS4A) grant program requirements. This memorandum summarizes the City's existing City and regional policies and plans, Citywide crash patterns and trends, and presents the results of an equity analysis for the City.

This memorandum is organized into the following sections:

- 1. Existing Plans and Policies
- 2. Crash Patterns and Trends
- 3. Crash Mapping
- 4. Equity Analysis
- 5. Potential Emphasis Areas
- 6. Next Steps

EXISTING PLANS AND POLICIES

This section summarizes the relevant existing federal, state, regional and City plans reviewed for the City of Clayton LRSP. The purpose of this review is to understand the existing planning efforts, align with their goals and inform the development of this LRSP. The following plans and policies were reviewed for this LRSP:

Federal

- Federal Safey System Approach
- Federal LRSP Guidance

State

California Strategic Highway Safety Plan (SHSP) •

Regional

- Contra Costa County Wide Comprehensive Transportation Plan
- Contra Costa Countywide Bike and Pedestrian Plan •
- Contra Costa Transportation Authority Vision Zero Safety Policy and Implementation Guide
- MTC Regional Safety/Vision Zero Policy

City

- **Clayton General Plan**
- Clayton Town Center Specific Plan

Federal

Federal Safe System Approach

In January 2022, the United States Department of Transportation (USDOT) released its National Roadway Safety Strategy¹ that adopted the Safe System Approach as its core strategy. In February 2022, Caltrans released Director's Policy 36² which commits to adopting the Safe System Approach to achieve its vision to eliminate fatalities and serious injuries on California's roadways by 2050 and provide safer outcomes for all communities.

There are five elements and six principles to the Safe System Approach (shown in Figure 1).

The five elements include:

- 1. Safe Road Users,
- 2. Safe Vehicles,
- 3. Safe Speeds,
- 4. Safe Roads and
- 5. Post Crash Care.

The six principles that form basis of the Safe System approach are:

- 1. Deaths and serious injuries are unacceptable,
- 2. Humans make mistakes,
- 3. Humans are vulnerable,
- 4. Responsibility is shared,
- 5. Safety is proactive, and
- 6. Redundancy is crucial.



Figure 1 Safe System Approach Source: USDOT

The Safe System Approach is relevant to this LRSP as it firmly establishes that death and serious injury crashes are not acceptable. It also encourages proactive approaches for safety and shared responsibilities by all parties involved in roadway planning, design, and operations (including road users).

FHWA LRSP Guidance

Federal Highway Administration (FHWA) provides a framework of the key steps in developing an LRSP in Developing Safety Plans – A Manual for Local Road Rural Owners (2012)³. According to FHWA, developing an LRSP consists of a general six-step process:

- 1. Establish Leadership,
- 2. Analyze Safety Data,
- 3. Determine Emphasis Areas,
- 4. Identify Strategies,
- 5. Prioritize and Incorporate Strategies,
- 6. Evaluate and Update the LRSP.

² https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/policy/dp_36-a11y.pdf

¹ The 2022 report can be found here: <u>https://www.transportation.gov/sites/dot.gov/files/2022-02/USDOT-National-Roadway-Safety-Strategy.pdf</u>. In 2023, the USDOT published the 2023 National Roadway Safety Strategy Progress Report: <u>https://www.transportation.gov/sites/dot.gov/files/2023-02/2023-Progress-Report-National-Roadway-Safety-Strategy.pdf</u>

³ https://safety.fhwa.dot.gov/local_rural/training/fhwasa12017/fhwasa12017.pdf

The FHWA LRSP Guidance is relevant to this LRSP as it puts together a step-by-step proces to develop an LRSP, and emphasises a data-driven approach to develop emphasis areas and strategies.

State

California Strategic Highway Safety Plan (SHSP)

The 2020-2024 Strategic Highway Safety Plan (SHSP) is a statewide, coordinated safety plan providing a comprehensive framework for reducing highway fatalities and serious injuries on public roads in California. It identifies key safety needs and guides investment decisions towards strategies and countermeasures with the most potential to save lives and prevent injuries.

Initially, the SHSP approached traffic safety using the five E's: engineering, enforcement, education, emergency services, and emerging technologies. In 2021, state transportation officials shifted their focus to adopt guiding principles that integrate social equity, integrate the Safe System Approach (described in the section above), and encourage the use of proven countermeasures and emerging technologies.

The California SHSP has identified 16 challenge areas that traffic safety efforts should focus on. These challenge areas were identified through historical data evaluations and feedback from traffic safety stakeholders across the state. Six of the challenge areas have been identified as high priorities in California because they represent the greatest opportunity to reduce fatalities and serious injuries across the state (presented in **bold**):

- Aging Drivers
- Bicyclists
- Commercial Vehicles
- Distracted Driving
- Driver Licensing
- Emergency Response
- Emerging Technologies
- Impaired Driving
- Intersections
- Lane Departures
- Motorcyclists
- Occupant Protection
- Pedestrians
- Speed Management
 / Aggressive Driving
- Work Zones
- Young Drivers

The California SHSP identifies state-wide priorities, challenge areas, and goals that guide the development of this LRSP. State challenge areas will be used to compare City of Clayton crash history to determine consistency or differences with state crash priorities. State priorities also help identify potential state funding opportunities for LRSP projects and strategies.

Regional

Contra Costa County Wide Comprehensive Transportation Plan⁴

The 2017 Contra Costa County Wide Comprehensive Transportation Plan (CTP) is a long-range vision for transportation in the County and identifies goals for bringing together all modes of travel, networks, and operators, to meet the diverse needs of Contra Costa. The CTP recognizes Vision Zero as one of its fundamental components and identifies the following goals relevant to this LRSP:

- 1. Support the efficient, safe, and reliable movement of people and goods using all available travel modes,
- 2. Expand safe, convenient, and affordable alternatives to the single occupant vehicle,

⁴ https://ccta.net/wp-content/uploads/2021/07/2017-CTP-Vol-1.2017.10.05.pdf

3. Maintain the transportation system.

The CTP recognizes the importance of safety for all roadway users and highlights the need for alternative travel modes. It also recognizes the importance of ongoing maintenance of roadways, sidewalks, and bicycle lanes. The CTP can be a guiding document for the City of Clayton to align the LRSP goals and policies with the region.

Contra Costa Countywide Bike and Pedestrian Plan⁵

To support and encourage walking and bicycling in Contra Costa County, the Contra Costa Transportation Authority (CCTA) adopted its first Contra Costa Countywide Bicycle and Pedestrian Plan (CBPP) in 2003 and updated it again in 2009. The newly adopted 2018 CBPP reflects many new policies, best practices and standards developed over the last decade as well as newly adopted local active transportation plans.

The goals of the CBPP are:

- Encourage more people to walk and bike,
- Increase safety and security for pedestrians and bicyclists,
- Create a safe, connected, and comfortable network of bikeways and walkways for all ages and abilities,
- Increase the livability and attractiveness of Contra Costa's communities and districts,
- Equitably serve all of Contra Costa's communities while ensuring that public investments are focused on projects with the greatest benefits.

The objectives of the plan are:

- Increase the share of trips made by walking and bicycling in Contra Costa,
- Reduce the rate of pedestrian and bicycle fatalities and injuries per capita,
- Increase the number of miles of low-stress bikeways in Contra Costa,
- Increase the number of jurisdictions in Contra Costa with bicycle, pedestrian, or active transportation plans,
- Integrate complete street principles and best practices into Authority funding and design guidance.

The CBPP is relevant to this LRSP as it recognizes the importance of safety for pedestrians and bicyclists and highlights the need for a connected and comfortable network of bikeways and walkways to encourage the use of active transportation modes. It also emphasizes serving all communities and people equitably.

CCTA Vision Zero Safety Policy and Implementation Guide⁶

This guide is intended to be used by jurisdictions in Contra Costa to leverage industry best practices while implementing Vision Zero and transportation safety-related policies, programs, and projects. The Guide summarizes best practices and indicates the role of CCTA and jurisdictions for each core element. The Guide draws from the Institute of Transportation Engineers (ITE) and the Vision Zero Network's Core Elements for Vision Zero Communities, 16 and is organized into the following chapters:

- 1. **Develop Vision Zero Leadership and Commitment.** This chapter focuses on the core elements of achieving public, high-level, and ongoing commitment, authentic community engagement, and strategic planning.
- 2. **Take a Data-Informed Approach.** This chapter focuses on the core elements of equity-focused analysis and programming, responsive and location-specific planning, proactive and systemic planning, and comprehensive monitoring and evaluation.

⁵ https://ccta.net/wp-content/uploads/2018/10/5b8ec26192756.pdf

⁶ <u>Countywide Vision Zero - Contra Costa Transportation Authority (ccta.net)</u>

3. **Encourage Safer Speeds and Create Safer Routes.** This chapter focuses on the core elements related to complete streets for all, context-appropriate speeds on roadways and pathways, and project delivery.

The CCTA Vision Zero Safety Policy is relevant to this LRSP as it provides guidelines for how the City of Clayton can work towards eliminating fatal and serious injury crashes through best practices, data-driven analyses, and community engagement.

MTC Regional Safety/Vision Zero Policy⁷

The MTC Regional Safety/Vision Zero Policy establishes a strategy for working with partner agencies to support equitable and data-driven action towards eliminating traffic deaths and serious vehicular injuries in the Bay Area by 2030.

The policy promotes a three-pronged approach to enhance safety in the region. First, MTC staff will work on enhancing the region's and jurisdictions' access to reliable and consistent data by integrating several available sources into a single regional safety data repository. Second, MTC will use data to inform and develop regional policy and support legislation that has been proven effective, such as lowered speed limits and automated speed enforcement. Finally, and dependent on resources available, MTC will support jurisdictions by providing technical assistance with safety planning.

The following principles are adopted in the policy:

- Regional safety leadership,
- Data driven,
- Equity focused,
- Evidence-based policy and legislation,
- Education and engagement.

The MTC Vision Zero Policy sets goal for the Bay Area communities to work towards eliminating fatal and serious injury crashes by 2030, highlights the importance of education and community engagement in the development of safety plans and is a guiding document for the City of Clayton to align its goals and policies with the region.

Clayton General Plan⁸

The Circulation Element of the Clayton General Plan, last amended in March 2000, is meant to act as a guide to help the City implement a circulation which will preserve the atmosphere and unity of the area, and which will assure adequate traffic capacity on major thoroughfares but will minimize through traffic in residential neighborhoods. Objectives of the Circulation Element relevant to this LRSP are:

- 1. Plan an efficient network of streets and trails which will link all neighborhoods of the community, and allow safety and economy of movement,
- 2. Provide alternative routes of circulation through the Town Center,
- 3. Enhance the City's system of pedestrian, equestrian and bicycling paths, and trails,
- 4. Cooperate with Concord and Contra Costa County in design of the Regional Traffic System,

 ⁷ https://mtc.ca.gov/sites/default/files/10a%2020-0788%20-%20ResoNo%204400%20Regional%20Safety%20VZ%20Policy.pdf
 ⁸ https://claytonca.gov/fc/community-development/planning/long-range-planning/general-plan/section-III-circulation-element.pdf

5. Establish a priority system to upgrade existing City streets to a City standard.

The objectives of the General Plan's Circulation Element inform this LRSP to enhance safety for all roadway users, focus on providing adequate roadway systems for pedestrians and bicyclists and work with other agencies in the region to design the traffic system. Specifically, the LRSP project team is working collaboratively with Contra Costa Transportation Authority (CCTA) for consistency with the upcoming Countywide Transportation Safety Action Plan (CTSAP).

Clayton Town Center Specific Plan⁹

Clayton Town Center Specific Plan was adopted in March 1990 and amended last in April 2012. This plan includes the distribution of land uses, location, and size of streets, walks and other infrastructure, standards for development, and methods of financing public improvements for Clayton Town Center. The goals of this plan relevant to the LRSP are presented in the Circulation Element (Chapter 5) of the plan. These are:

- 1. To encourage and facilitate pedestrian travel in the Town Center, the specific plan proposes that all roads and streets, both old and new, be constructed with curbs and with minimum 5' 0" sidewalks on both sides of the streets east of Oak and north of High Streets,
- 2. Pedestrian pathways or unpaved trails should be provided where needed to connect regional hiking and equestrian trails along Mt. Diablo and Mitchell Creeks and to the Black Diamond Mine,
- 3. Bicycle lanes will be provided on both sides of the Clayton Road, Oakhurst extension, Center Street east of Marsh Creek Road and on Oak between Center and Main and on the shoulder of the Clayton Road/Main Street off-ramp.

Providing pedestrian pathways and bicycle lanes would not only encourage use of alternative modes of transportation such as walking and bicycling, but also separate pedestrian and bicyclists from vehicular traffic, increasing roadway safety. The Specific Plan also identifies projects that promote utilitarian and recreational travel by walking and bicycling and can inform this LRSP in prioritizing bicycle and pedestrian projects in the City.

⁹ https://claytonca.gov/fc/city-clerk/Town-Center-Specific-Plan.pdf

CRASH PATTERNS AND TRENDS

This section discusses the crash patterns and trends in the City of Clayton. Kittelson developed a crash database of the recent five years of reported crashes from January 1, 2018, to December 31, 2022. The crash data was obtained from two sources: California Statewide Integrated Traffic Records System (SWITRS) and University of California Berkeley's Transportation Injury Mapping System (TIMS). TIMS reports injury crashes from SWITRS but excludes crashes that cause Property Damage Only (PDO) and no injuries. For crash patterns and trends analysis, Kittelson utilized SWITRS data (including PDO crashes) while TIMS data was utilized to identify high-injury network in the City.

The following crash characteristics are summarized in this section:

- 1. Crash Frequency
- 2. Year
- 3. Time of Day
- 4. Crash Type

Crash Severity

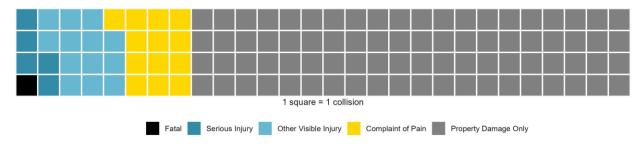
- 5. Primary Crash Factor
- 6. Crash Location
- 7. Road Users Involved
- 8. Impaired Driving

Crashes are classified by severity based on the most serious outcome associated with the crash, with the following reported severities (in descending order of severity):

- Fatal,
- Serious injury,
- Other visible injury,
- Complaint of pain injury, and,
- Property damage only (PDO).

Figure 2 shows the number of crashes by crash severity.

Figure 2 Crash Frequency (2018 – 2022) by Severity



Source: SWITRS, Kittelson & Associates, Inc., 2023

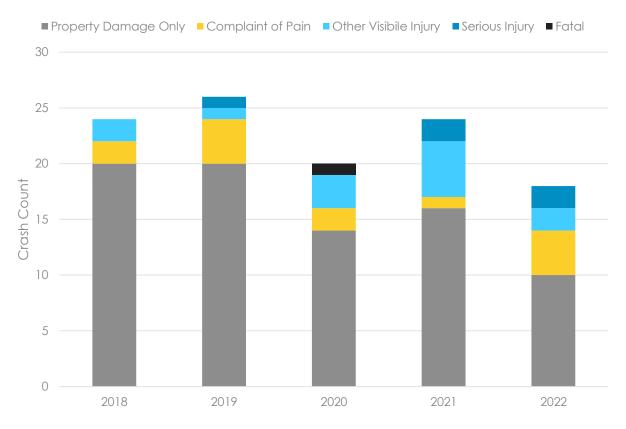
FINDINGS:

- From 2018 to 2022, there were 112 crashes reported in the City; 32 crashes (29%) resulted in fatal or injury crashes.
- There were six reported fatal and serious injury crashes (one fatal and five serious injury) during the study period, which is 5% of all reported crashes.

Year

Figure 3 shows all reported crashes in the City by year and severity.

Figure 3 Crashes by Year and Severity



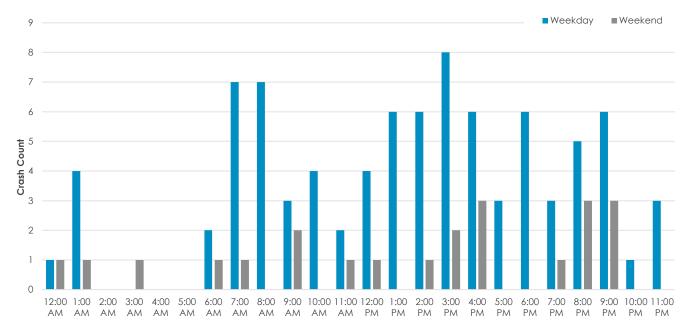
Source: SWITRS, Kittelson & Associates, Inc, 2023

- On average, there were 22 crashes in the City per year.
- 2019 had the most reported crashes (26), followed by 2021(24) and 2018 (24).
- The share of fatal and serious injury crashes among all reported crashes per year was highest in 2022 (11.1%)

Time of Day

Figure 4 shows the average weekday/weekend crashes per hour in the City.





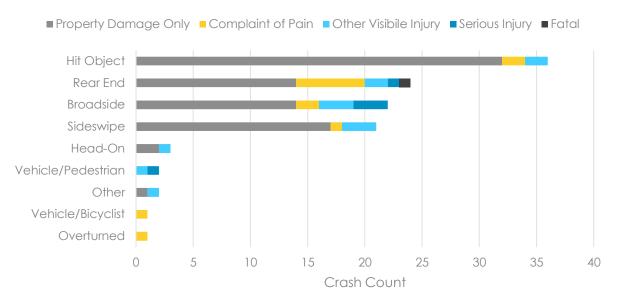
Source: SWITRS, Kittelson & Associates, Inc, 2023

- The frequency of crashes on weekdays is higher between 7-9 AM, 1-4 PM, 6-7 PM and 9-10 PM.
- The frequency of crashes on weekends is higher between 9-10 AM, 3-5 PM and 8-10 PM.

Crash Type

The reported crash type provides an indication of the type of movements most frequently involved in City crashes. Figure 5 presents reported crash type frequency by severity.





Source: SWITRS, Kittelson & Associates, Inc, 2023

- Among all reported crashes, the top four most frequent crash types are: Hit Object (32%), Rear-end (21%), Broadside (20%) and Sideswipe (19%). Figure A1 in Appendix A presents where crashes occurred in the City that were reported as one of these crash types.
- The three crash types that have resulted in deaths or serious injuries Broadside (3), Rear-end (2) and Vehicle/Pedestrian (1).
- Among the two vehicle/pedestrian crashes, there was one serious injury and one other visible injury crash.
- One Vehicle/Bicyclist crash is reported as a complaint of pain crash.

Primary Crash Factor

Reporting officers identify a primary crash factor (PCF) for every crash. There are several different PCFs from which they can select. It is up to the officer's judgement and information available at the scene for them to select the factor that is most relevant to the crash. Officers select one from among a list of PCFs based on violations¹⁰ and road user behavior. There may be multiple PCFs that are appropriate for a given crash, but the PCF is the factor identified by the officer as the primary contributing violation/action for the crash.

Figure 6 shows crashes by primary crash factor and crash severity.

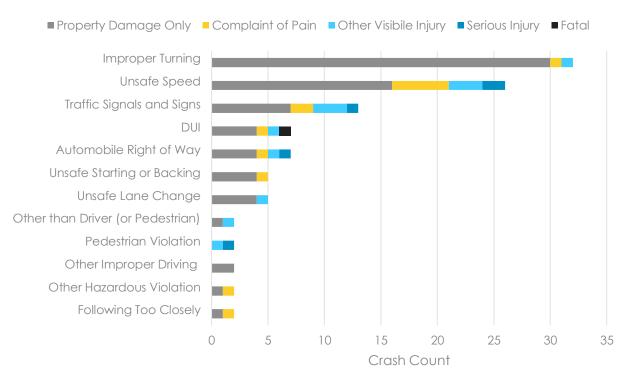


Figure 6 Crashes by Primary Crash Factor and Severity

Source: SWITRS, Kittelson & Associates, Inc, 2023

- Among all crashes, the top three most frequent primary crash factors are: Improper turning (29%), unsafe speed (23%) and traffic signals and signs (12%). Figure A2 in Appendix A presents where crashes occurred in the City that were reported as one of these three primary crash factors.
- The two injury crashes with improper turning as the primary crash factor were located on the following intersections:
 - Marsh Creek Rd & Mountaire Pkwy
 - Oakhurst Dr & Eagle Peak Ave (west)
- The primary crash factors involving fatal and serious injury crashes are unsafe speed, traffic signals and signs, driving of bicycling under the influence of alcohol or drugs, automobile right of way and pedestrian violation.

¹⁰ California Vehicle Code (CVC)

Crash Location and Road Users Involved

Table 1 shows all reported crashes by location (intersection or roadway segment crashes). Just over twothirds of the crashes (68%) of the crashes in Clayton are reported on roadway segments. The sample size of pedestrian-, bicyclist-, and motorcyclist-involved crashes is too small to make meaningful inferences with respect to crash location.

Crashes by road user involved are analyzed by pedestrian-involved, bicyclist-involved and motor vehicle only or vehicle-fixed object. Table 1 shows the breakdown of crashes by road user involved. 96 percent of all reported crashes involve a motor vehicle (automobile or motorcyclist), and 4 percent of crashes involve a pedestrian. Among pedestrian involved crashes, one resulted in a serious injury and three resulted in other visible injury. One bicyclist-involved crash resulted in a complaint of pain. Pedestrians are overrepresented in injury crashes. Pedestrians are involved in only 4 percent of all reported crashes but are involved in 13 percent of injury crashes.¹¹

Table 1 Crashes by Crash Location and Road User Involved

Road User Involved	Intersection Crashes (% of Total crashes)	Roadway Segment Crashes (% of Total crashes)	Total (% of Total crashes)
Pedestrian	1 (<1%)	3 (3%)	4 (4%)
Bicyclist	0 (0%)	1 (1%)	1 (1%)
Motorcyclist	0 (0%)	2 (2%)	2 (2%)
Automobile	35 (31%)	70 (63%)	105 (94%)
Total	36 (32%)	76 (68%)	112 (100%)

Source: SWITRS, Kittelson & Associates, Inc, 2023

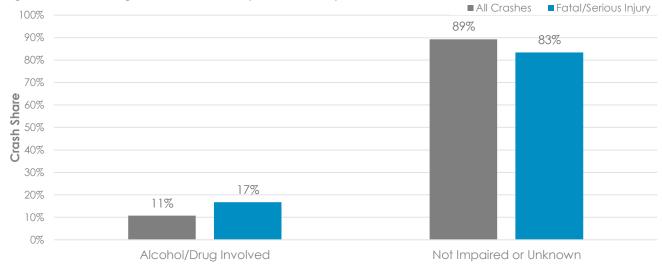
Note, percentages may not add up due to rounding.

¹¹ Note that pedestrian related crashes are a small sample size.

Impaired Driving

Figure 7 shows alcohol/drug-involved crashes by crash severity.

Figure 7 Alcohol/Drug-Involved Crashes by Crash Severity



Source: SWITRS, Kittelson & Associates, Inc, 2023

- Fatal/serious injury crashes are overrepresented in alcohol/drug-involved crashes. Alcohol/drug-involved crashes constitute only 12% of all reported crashes but constitute 17% of fatal/serious injury crashes.
- Of the 12 total crashes which are alcohol/drug involved, nine crashes (75%) occurred from 6 PM to 1 AM.

CRASH MAPPING

In this section, we discuss the geographic distribution of crashes, identify roadway and intersection characteristics (i.e., functional classification and speed limit) associated with a higher frequency or severity of crashes, and present a high priority network associated with crashes. Table 2 shows proportion of crashes by roadway functional classification. Figure 8 presents the location of all crashes in the City.

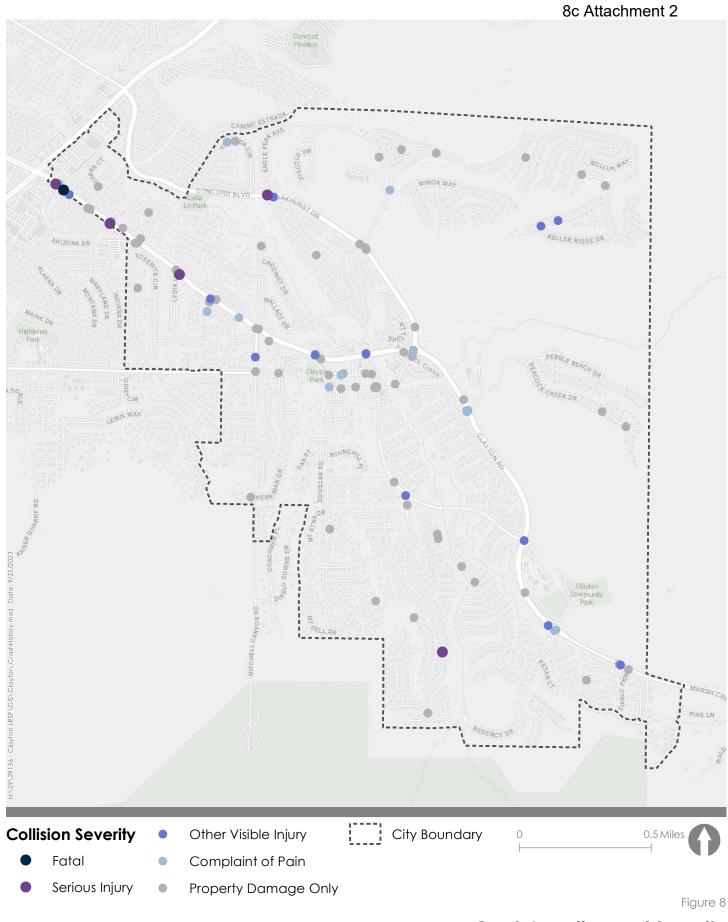
Functional Classification	Total Roadway Miles (%)	Number of Fatal and Injury Crashes (%)	Number of All Crashes (%)
Other Principal Arterial	7.93	19	42
	(9.6%)	(59.4%)	(37.5%)
Minor Arterial	5.53	4	9
	(6.7%)	(12.5%)	(8.0%)
Major Collector	8.78	5	26
	(10.7%)	(15.6%)	(23.2%)
Local	60.00	4	35
	(73.0%)	(12.5%)	(31.3%)
Total	82.24	32	112

Table 2 Craches	nor milo brokon	down by	Poadway	Eunctional	Classification
Table 2 Crashes	per mile proken	uowii by	KUUUWUy	runchunun	Clussification

Source: SWITRS, Kittelson & Associates, Inc, 2023

Notes: Roadway Functional Classification was established using Caltrans California Road System (CRS) maps.

- The percentage of crashes occurring on Other Principal Arterials is disproportionately higher than the percentage of their total roadway miles in the City. Other Principal Arterials constitute only 9.6% of the total roadway miles in the City but 59.4% of injury crashes and 37.5% of all reported crashes occur on these roadways.
- The roadways with functional classification as Other Principal Arterials in the City are shown in Table 3. The speed limit of Other Principal Arterials in the City is greater than 35 mph.
 - Other roadways with a posted speed limit greater than or equal to 35 mph are Oakhurst Drive (minor arterial from west of Yolanda Circle to Clayton Road) with a speed limit of 40 mph and Marsh Creek Road (minor arterial from Clayton Road [north] to Clayton Road [south]) with a speed limit of 35 mph.
- Minor arterials and major collectors also share a disproportionately higher percentage of crashes compared to the percentage of their total roadway miles.



Crash Location and Severity Clayton Local Roadway Safety Plan Clayton, CA



Table 3 Other Principal Arterials in the City of Clayton

	Name	Segment	Speed limit
1.	Clayton Road	Washington Blvd to Oakhurst Dr	40 mph
		Oakhurst Dr to Marsh Creek Rd	45 mph
2.	Marsh Creek Road	Clayton Rd (south) to Pine Ln	45 mph

Source: City of Clayton, Kittelson & Associates, Inc, 2023

Priority Locations

This section discusses the priority locations for the City of Clayton, consisting of priority corridors and intersections, identified based on the distribution of fatal and injury crashes in the City. Table 4 and Figure 9 present the priority roadway segments and intersections in the City. Figure 9 presents the priority locations as well. While there is a concentration of crashes in downtown Clayton, these crashes mostly resulted in no or minor injuries to victims involved.

Table 4 Priority Roadway Segments

Name	Туре	Total Crashes	Fatal/Serious Injury Crashes	Other Injury Crashes	PDO Crashes
Corridors ¹					
Clayton Rd (Washington Blvd to Oakhurst Dr)	Other Principal Arterial	38	4	8	26
Marsh Creek Rd (Clayton Rd/Diablo View Ln to Diablo Pkwy)	Other Principal Arterial	8	0	4	4
Intersections					
Oakhurst Dr & Eagle Peak Ave (west)	Signalized	3	1	2	0
Mountaire Pkwy & Mt Duncan Dr	Unsignalized	1	1	0	0

Source: SWITRS, Kittelson & Associates, Inc, 2023

1 Corridors include roadway and intersection crashes

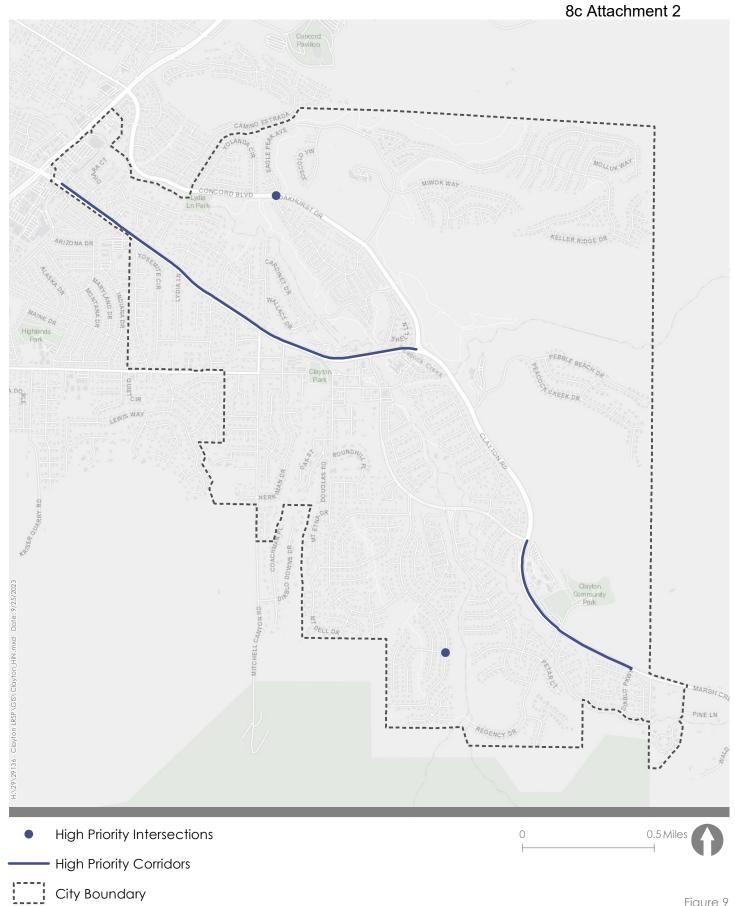


Figure 9

High Priority Corridors and Intersections Clayton Local Roadway Safety Plan Clayton, CA



EQUITY ANALYSIS

This section presents the equity analysis for the City of Clayton. Equity is a fundamental consideration of the Safe System approach, particularly given that pedestrian and bicyclist fatality rates on a per-capita basis vary largely by race,¹² as well as by income, age, and gender to varying degrees in varying places¹³. These outcomes underscore the need to explicitly examine correlations between sociodemographic and risk factors related to roadway infrastructure and operations. Furthermore, equity analysis ideally encompasses more than just safety analysis, given known limitations of crash data (e.g., underreporting, near misses) and the lack of systemic exposure estimates to contextualize risk.

Kittelson evaluated SS4A Underserved Communities Census Tracts (Historically Disadvantaged Communities and Areas of Persistent Poverty), Metropolitan Transportation Commission's (MTC) Equity Priority Communities, State of California Disadvantaged Communities, CalEnviroScreen 4.0, and the California Healthy Places Index to identify priority equity areas in Clayton. None of the above identified disadvantaged populations or historically underrepresented communities present in the City at the Census tract level. Presented below is a demographic analysis using census data in comparison to the SWITRS crash-involved party characteristics to further understand the relationship between the demographic characteristics and crash history in Clayton.

Demographic Analysis

This section presents a demographic analysis, showing a comparison of demographics from American Community Survey (ACS) 2021 5-Year estimates and crash-involved party data from SWITRS (2018-2022) for the City of Clayton. Analyzing reported demographic characteristics of involved party members can help the City better understand which groups of individuals may benefit most from targeted safety strategies to increase safety in their communities. The following demographics were analyzed for this LRSP based on available crash and census data:

- 1. Sex
- 2. Age
- 3. Race/Ethnicity

¹² Federal Highway Administration. "Integrating Equity into the Safe System Approach" Presentation. Accessed Apr. 17, 2023: <u>https://highways.dot.gov/safety/zero-deaths/integrating-equity-safe-system-approach-presentation</u>.

¹³ Vision Zero Network. N.d. Equity Strategies for Practitioners. Accessed April 17, 2023: <u>https://visionzeronetwork.org/wp-content/uploads/2017/05/VisionZero_Equity.pdf</u>

Sex

Figure 10 compares demographics from ACS 2021 5-Year Estimates against SWITRS crash-involved party sex for the City of Clayton.

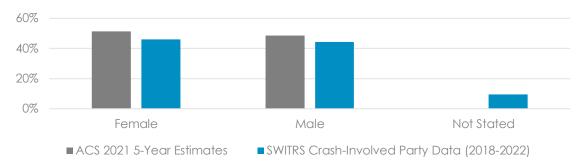


Figure 10 SWITRS Party Sex Compared Against Citywide Population Shares

Source, ACS 2021 5-Year Census Data, SWITRS, Kittelson & Associates, Inc., 2023

- In the Citywide population, females constitute a slightly higher proportion of the population compared to males (51% vs 49%).
- This pattern is replicated in crash data, where 46% of the crash-involved parties are females and 44% are males.

Age

Figure 11 compares the demographics from ACS 2021 5-Year Estimates against SWITRS crash-involved party age for the City of Clayton.

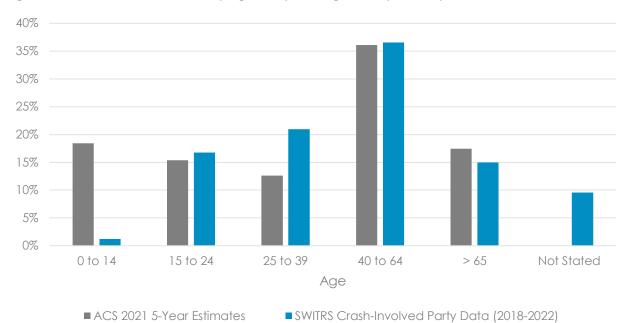


Figure 11 SWITRS Crash-involved Party Age Compared Against Citywide Population Shares

Source, ACS 2021 5-Year Census Data, SWITRS, Kittelson & Associates, Inc., 2023

- Considering that only 13% of the City's population is between the ages of 25 and 39 years, there was a higher percentage (21%) of crashes involving parties between 25 and 39 years of age.
- 97% of crash-involved parties between 25 and 39 years of age were reported as driving the vehicle.
- There were two parties below 14 years of age. These crashes involved a pedestrian and a bicyclist under 14 years of age.

Race/Ethnicity

Figure 12 shows the comparison between SWITRS crash-involved party race/ethnicity against Citywide population shares.

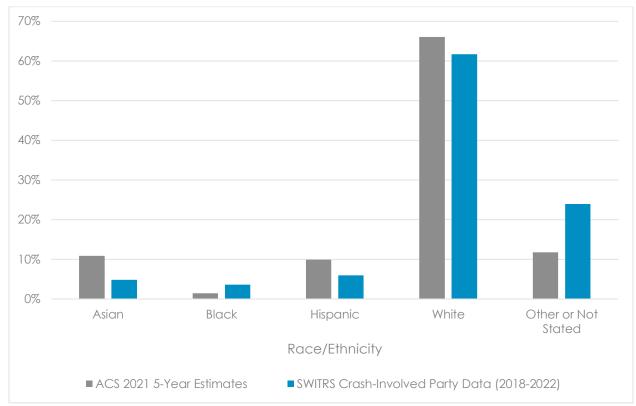


Figure 12 SWITRS Crash-involved Party Race compared against Citywide Population Shares

Source, ACS 2021 5-Year Census Data, SWITRS, Kittelson & Associates, Inc., 2023

- White people make up about 66% of the Citywide population and People of Color make up about 34% of the population. This pattern is reflected in the crash data as well; 62% of crashes involve white people while 38% of crashes involve People of Color.
- Black people make up 1% of the population in Citywide census data but were reported in 4% of crashes in the City (five crashes total). Due to the small sample size of crash data, no meaningful inferences can be made from the findings.

SHSP CHALLENGE AREA COMPARISON

As described above, the California 2020-2024 Strategic Highway Safety Plan (SHSP) is a statewide traffic safety plan that provides guidance to influence development of statewide goals, strategies, and performance measures for local agencies and stakeholders statewide.

Six of the challenge areas in the SHSP are identified as high priorities in California because they represent the greatest opportunity to reduce fatalities and serious injuries across the state:

- Lane Departures
- Impaired Driving
- Speed Management / Aggressive
 Driving

- Pedestrians
- Bicyclists
- Intersections

The sample size of fatal and serious injury crashes in the City is too low to compare to the SHSP Challenge Areas with statistical significance. However, Kittelson conducted an analysis with all fatal and injury crashes in the City and compared them against the statewide SHSP challenge areas (Table 5). While not directly comparable, this analysis provides insight into challenge areas that the City can prioritize to reduce the number of fatal and injury crashes on the roadway network. Aggressive Driving and Intersection related crashes represent a large proportion of the fatal and injury crashes in the City. Two serious injury crashes were reported as aggressive driving (i.e., unsafe speeds); a third serious injury crash occurred at an intersection.

Table 5 SHSP Challenge Area Comparison

Challenge Area	Definition	% of fatal and injury crashes in City of Clayton	% of fatal and serious injury crashes Statewide
Lane Departures	Includes head-on, hit object and overturned crashes	19%	46%
Impaired Driving	Includes crashes where any evidence of drug or alcohol use by the driver is present, even if the driver was not over the legal limit.	9%	28%
Aggressive Driving	Includes primary crash factor categories of unsafe speed, following too closely, and traffic signals and signs	55%	34%
Pedestrians	Includes instances where a motor vehicle is involved in a crash with a pedestrian or bicyclist	10%	17%

Challenge Area	Definition	% of fatal and injury crashes in City of Clayton	% of fatal and serious injury crashes Statewide
Intersections	Includes crashes identified by the responding officers as occurring at an intersection or involving a train or rail vehicle	38%	23%

Source: SHSP, SWITRS, Kittelson & Associates, Inc., 2023

POTENTIAL EMPHASIS AREAS

Analysis of crash types, locations, movements, behavioral factors, and statewide emphasis areas indicates the following regarding potential emphasis areas to be considered by the City:

- 1. **Pedestrians:** Pedestrians are involved in only 4% of all reported crashes but are involved in 13% of fatal and injury crashes.
- 2. Improper Turning is a primary crash factor in nearly one-third of all crashes.
- **3.** Unsafe Speed/Aggressive Driving is a primary crash factor which is associated with both high frequency and high severity of crashes.
- 4. Other Principal Arterials are overrepresented in injury crashes and all reported crashes.
- 5. Drivers in the 25-39 Years Age Group: 13% of the City's population is between 25-39 years old, but 21% of crashes involved parties between 25-39 years old.

NEXT STEPS

The results of the safety analysis will be used to help prioritize locations and identify countermeasures for safety improvements in the City. Kittelson will determine any other prioritization inputs in collaboration with the City, project stakeholders, and community members.

8c Attachment 2

Appendix B Countermeasures Toolbox



155 Grand Avenue, Suite 505 Oakland, CA 94612 P 510.839.1742

Technical Memorandum

Project# 29136

December 13, 2023

- To: Larry Theis, Jason Chen
- From: Kittelson and Associates, Inc.
- RE: City of Clayton Local Roadway Safety Plan Countermeasures Toolbox

INTRODUCTION

Kittelson & Associates, Inc. ("Kittelson") is working with the City of Clayton to identify countermeasures to improve roadway safety performance as part of their Local Road Safety Plan (LRSP). This memorandum summarizes the engineering and non-engineering treatments that could be implemented by the City to reduce crash frequency, severity, and crash risk.

This memorandum begins with a discussion of engineering treatments/countermeasures identified for the City based on the crash patterns and trends analysis, the resulting emphasis areas identified for the LRSP, and a review of roadway characteristics at high priority intersections and corridors. The engineering countermeasures are followed by non-engineering countermeasures which include education, enforcement, and emerging technology strategies that have the potential to improve roadway safety performance in the City of Clayton.

ENGINEERING COUNTERMEASURES

This section presents the engineering countermeasures and treatments that have been shown to improve safety on roadways. The countermeasures are borrowed from the California Local Roadway Safety Manual (California LRSM 2022¹) and are organized by treatment location type as following:

- 1. Signalized Intersections
- 2. Unsignalized Intersections
- 3. Roadways

For each of these treatment groupings, priority treatments have been identified and summarized based on the crash types addressed, crash factor reduction², federal funding eligibility, cost estimates³, and the feasibility of the treatment for systemic applications.

¹ https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/hsip/2022/lrsm2022.pdf

 ² Crash Reduction Factors (CRF) are an indication of the effectiveness of a particular treatment, measured by the percentage of crashes the countermeasure is expected to reduce. The CRF for a countermeasure is defined mathematically as (1- Crash Modification Factor). The higher the CRF the greater the expected reduction in crashes.
 ³ "\$" signs below represent the cost estimate for the proposed treatments. The estimated ranges as follows a) \$ = less than \$50,000, b) \$\$ = \$50,000 to \$100,000 and c) \$\$\$ = \$100,000 or more

Signalized Intersections

S014: Add Intersection Lighting

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Nighttime	40%	100%	\$	Yes

Lighting may be improved at an intersection, its approaches, or along a roadway segment to make drivers more aware of the surroundings at an intersection, enhance drivers' available sight distances, and improve the visibility of non-motorists at an intersection. Intersection lighting is of particular benefit to non-motorized users. Lighting not only improves vision for non-motorized users to navigate the intersection, but also helps drivers see them better. In commercial areas or in downtown areas where there is more pedestrian activity, pedestrian-scale lighting may be placed over sidewalks to help pedestrians better navigate the intersection safely.

Implementation Considerations

These treatments may be considered when high frequencies of nighttime crashes have occurred at an intersection.

Relevance to the City of Clayton

38% of all crashes in the City were reported as *Dark* - *Street Lights*, *Dark* - *No Street Lights* and *Dusk* - *Dawn*. Of these, 79% of the crashes occurred within 250 feet of an intersection. Intersection lighting improvements may be considered at intersections that do not currently provide lighting at the intersection or its approaches.

⁴ Indicates the countermeasure's reference in the California Local Roadway Safety Manual (LRSM) 2022

S02: Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number

Crash Types Addressed	Documented Crash Reduction Factor	Federal Funding Eligibility	Cost Estimate	Ideal for Systemic Application?
Rear-end, Broadside	15%	100%	\$	Yes

Signalized intersection improvements may include new LED lighting, signal back plates, retro-reflective tape outlining the back plates, or visors to increase signal visibility, larger signal heads, relocation of the signal heads, and/or additional signal heads. Providing better visibility of intersection signals aids drivers' advance perception of the upcoming intersection. Visibility and clarity of the signal should be improved without creating additional confusion for drivers. Figure 1 shows an example of a signal with retroreflective backplates.

Figure 1 Signal with Retroreflective Borders



Source: FHWA

Implementation Considerations

This treatment may be considered when high frequencies of broadside, rear-end, or other conflicting movement crashes are occurring at a signalized intersection that may be related to signal conspicuity. This treatment may also improve intersection awareness during periods of power outages or during evening and night conditions, when the signals may otherwise be less visible, providing a visible cue for drivers to stop at the intersection ahead.

Relevance to the City of Clayton

Rear-end and broadside crash types accounted for 41% of all reported crashes in the City. Rear-end and broadside crash types also accounted for 60% of all injury crashes that occurred within 250 feet of an intersection. This treatment may be considered at signalized intersections with a high frequency of broadside and rear-end crashes occurring because drivers are unable to see traffic signals sufficiently in advance to safely negotiate the intersection being approached.

S03: Improve signal timing (coordination, phases, red, yellow or operation)

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
All	15%	50%	\$-\$\$\$	Yes

This treatment may be considered at locations that have a crash history at multiple signalized intersections. Signalization improvements may include adding phases, lengthening clearance intervals, eliminating or restricting higher-risk movements, and coordinating signals at multiple locations.

Implementation Considerations

This treatment may be considered when high frequencies of crashes involve hard-stopping vehicles resulting in rear-end crashes, or there is a pattern of crashes related to late-entering vehicles or vehicles running red lights.

Relevance to the City of Clayton

Based on crash patterns and trends analysis, Clayton Rd (Washington Blvd to Oakhurst Dr) and Marsh Creek Rd (Clayton Rd/Diablo View Ln to Diablo Pkwy) are identified as priority corridors in the City. Together they accounted for 41% of all reported crashes in the City, of which 4 are fatal/severe injury and 8 are other injury crashes. Signal timing improvements at intersections along the priority corridors have the opportunity to reduce crashes and enhance safety of all roadway users.

S07: Provide protected left turn phase (left turn lane already exists)

Crash Types Addressed	Documented Crash Reduction Factor	Federal Funding Eligibility	Cost Estimate	Ideal for Systemic Application?
Rear-end,				
Sideswipe,	30%	90%	\$ - \$\$\$	Yes
Broadside				

The protected left turn phase provides a green arrow for left turning vehicles while stopping both oncoming traffic and parallel pedestrian crossings to eliminate conflicts. A properly timed protected left-turn phase may help reduce rear-end and sideswipe crashes between left-turning vehicles and the through vehicles as well as vehicles behind them and reduce conflicts with pedestrians crossing parallel to vehicular traffic. Figure 2 shows an example of a left turn lane on Clayton Road in the City.



Figure 2 Example of Existing Left Turn Lane - Clayton Road, City of Clayton

Source: Google Streetview

Implementation Considerations

Protected left-turn phases are warranted based on factors such as turning volumes, delay, visibility, opposing vehicle speed, distance to travel through the intersection, presence of non-motorized road users, and safety experience of the intersections. Protected left-turn phasing may reduce intersection capacity or require longer lengths and may impact signal system coordination.

Relevance to the City of Clayton

Rear-end, broadside, and sideswipe crashes accounted for 60% of all reported crashes in the City. Many signalized intersections along priority corridors including Clayton Road and Marsh Creek Road have an existing left turn lane along their major approaches. Adding a left-turn phase at signalized intersections with an existing left-turn lane may improve safety for left-turn maneuvers by removing the need for drivers to navigate through gaps in oncoming/opposing through vehicles.

S10: Install flashing beacons as advance warning (signalized intersection)

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Rear-end, Broadside	30%	100%	\$	Yes

This treatment may be considered at intersections with crashes occurring as a result of drivers being unaware of the intersection or are unable to see the traffic control device in time to comply. Crashes often occur when the driver is unable to perceive an intersection, signal head or the back of a stopped queue in time to react. Advance flashing beacons can be used to supplement and call driver attention to intersection control signs. Figure 3 shows an example of flashing beacons as advance warning for signalized intersections.



Figure 3 Example of Flashing Beacons as Advance Warning

Source: Kittelson

Implementation Considerations

Most advance warning flashing beacons can be powered by solar, thus reducing the issues relating to power source. Before choosing this treatment, the City needs to confirm the ability to provide power to the site (solar may be an option).

Relevance to the City of Clayton

This treatment is relevant to signalized intersections in the City which are located along a curve, especially in the eastern part of the City where drivers are traveling from higher speed roadways in unincorporated Contra Costa County into city limits. Driver awareness of both downstream intersections and traffic control devices is critical to intersection safety. Increased driver awareness of an approaching signalized intersection may increase driver's time to react.

S16: Convert intersection to roundabout (from signal)

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
All	35-67%	100%	\$\$ - \$\$\$	No

This treatment consists of installing a roundabout as traffic control at an intersection. A roundabout is a type of circular intersection without traffic signals or stop signs, where drivers travel counterclockwise around a center island. When entering the roundabout, drivers yield to existing traffic, then enter the intersection and exit in their desired direction. Roundabouts are designed to eliminate left turns by requiring traffic to exit to the right of the circle. Pedestrians only have to cross one direction of traffic at a time at roundabouts, thus reducing their potential for conflicts. Figure 4 shows an example of a roundabout.

Figure 4 Example of Roundabout



Source: Kittelson

Implementation Considerations

Roundabouts often require more space in the immediate vicinity compared to intersections⁵. This treatment may be considered at any intersection with a high frequency of reported crashes, traffic delays, complex geometry (more than four approach roads), frequent left-turns, and/or relatively balanced traffic flows.

Roundabouts work well for intersections with low-to-moderate traffic speeds, and lower traffic volumes. Per the NCHRP 1043: Guide for Roundabouts⁶, the planning-level capacity estimates using peak hour volumes of vehicles per hour (veh/hr) for a variety of single-lane four leg roundabouts as well as for two-lane four leg roundabouts are shown in Table 1.

 $https://www.iihs.org/topics/roundabouts#:\sim:text=Roundabouts\%20often\%20require\%20more\%20space, stop\%20signs\%20or\%20traffic\%20signals.$

⁶ https://nap.nationalacademies.org/catalog/27069/guide-for-roundabouts

Sum of Peak Period Entering and Conflicting Flows (veh/hr)	Type of Roundabout and Number of Lanes				
700 or less	Single-lane roundabout with traversable or non-traversable central island is likely sufficient				
701 to 900	Single-lane roundabout with non-traversable central island is likely sufficient; single lane roundabout with traversable central island may be sufficient				
901 to 1,300	Single-lane roundabout with non-traversable central island may be sufficient				
1,301 to 1,600	Two-lane entry into multilane roundabout is likely sufficient; detailed turning movement analysis recommended				
1,601 to 2,300	Two-lane entry into multilane roundabout may be sufficient; detailed turning movement analysis recommended				
Greater than 2,300	Three-lane entry into multilane roundabout may be sufficient; detailed turning movement analysis recommended				

Table 1 Planning-level sizing guide for four-leg roundabouts using peak period volume thresholds

Relevance to the City of Clayton

Improper turning and unsafe speed primary crash factors accounted for 52% of all reported crashes in the City. Roundabouts may be considered in the City to manage vehicular speeds through intersections, improve safety at intersections by reducing broadside and head-on crashes, and help traffic flow more efficiently.

S17PB: Install pedestrian countdown signal heads

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Pedestrian & Bicycle	25%	90%	\$	Yes

Pedestrian countdown signals contain a timer display and count down the number of seconds left to finish crossing the street. Countdown signals can reassure pedestrians who are in the crosswalk when the flashing "DON'T WALK" interval appears that they still have time to finish crossing. Countdown signals begin counting down either when the "WALK" or when the flashing "DON'T WALK" interval appears and stop at the beginning of the steady "DON'T WALK" interval. Figure 5 shows an example of a pedestrian countdown signal head.

Figure 5 Example of Pedestrian Countdown Signal Head



Source: City of Long Beach

Implementation Considerations

This treatment may be considered at signals that have signalized pedestrian crossing with "WALK"/"DON'T WALK" indicators and where there have been pedestrian crashes.

Relevance to the City of Clayton

Three of the four pedestrian crashes in the City occurred within 250 feet of an intersection. Pedestrian countdown signals provide information to pedestrians about the amount of time remaining to safely cross the street at signalized intersections. Pedestrian countdown signal heads may be considered at any signalized intersections where they do not exist. This treatment can be prioritized at locations used by mobility-challenged, elderly pedestrians, or adults accompanying small children.

S18PB: Install Pedestrian Crossing

Crash Types Addressed	Documented Crash Reduction Factor	Federal Funding Eligibility	Cost Estimate	Ideal for Systemic Application?
Pedestrian & Bicycle	25%	100%	\$	Yes

This treatment alerts drivers to pedestrian and bicycle activity by designating a dedicated portion of the roadway for pedestrian and bicycle crossing. This treatment may help reduce pedestrian-related crashes that occur within 50 feet of an intersection. Figure 6 shows an example of a pedestrian crossing at signalized intersections.

Figure 6 Example of Pedestrian Crossing at a Signalized Intersection



Source: NACTO

Implementation Considerations

Caltrans HSIP does not provide reimbursement for visibility enhancements to existing marked crosswalks at signalized intersections. However, such improvements (like restriping transverse lines as high-visibility crosswalks) may provide visibility benefits and are worth consideration.

Relevance to the City of Clayton

This treatment may be considered at signalized intersections with no marked crossing and pedestrian signal heads, where pedestrians are known to be crossing intersections that involve significant turning movements. They are especially important at intersections with (1) multiphase traffic signals, such as left-turn arrows and split phases, (2) school crossings, and (3) double-right or double-left turns.

S20PB: Install advance stop bar and bicycle waiting area before crosswalk

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Pedestrian & Bicycle	35%	100%	\$	Yes

A bicycle box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase. The use of bicycle boxes may increase visibility of bicyclists and help prevent "right-hook" or "left-hook" conflicts with turning vehicles at the start of the green indication. In addition to increasing the visibility of bicyclists, bicycle boxes provide priority for bicyclists by allowing them to come to the front of a queue. Figure 7 shows an example of a bicycle box.

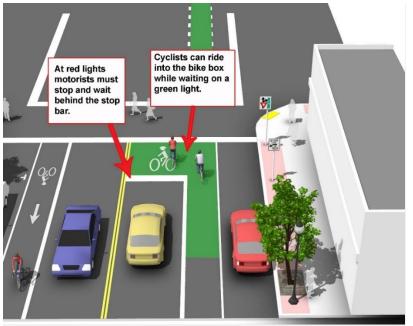


Figure 7 Diagram of Advance Stop Bar Before Crosswalk and Bicycle Box

Source: BikePGH

Implementation Considerations

This treatment may be considered when any of the following factors are observed on site:

- Presence of right- or left-turning conflicts between bicyclists and motor vehicles;
- Desire to accommodate left-turning bicycle traffic;
- A situation where the dominant motor vehicle traffic flows right and bicycle traffic continues through (such as a Y intersection or access ramp).

Relevance to the City of Clayton

Per the NACTO Urban Bikeway Design Guide, bicycle boxes may be considered for application at signalized intersections with high volumes of bicyclists and/or motor vehicles, especially those with frequent bicyclist left-turns and/or motorist right-turns.

S21PB: Modify signal phasing to implement a Leading Pedestrian Interval (LPI)

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Pedestrian & Bicycle	59%	100%	\$	Yes

Leading pedestrian intervals (LPIs) provide pedestrians a head start when crossing at a signalized intersection. LPIs can be programmed into existing signals to give pedestrians the "Walk" signal a minimum of 3 to 7 seconds before motorists are given a green indication. With this head start, pedestrians may better establish their presence in the crosswalk before motorists have priority to turn left at the intersection. LPIs can be provided automatically with each phase or provided only when actuated (actively or passively). LPIs have the potential to increase visibility of crossing pedestrians and reduce conflicts between pedestrians and vehicles. Figure 8 shows an example of leading pedestrian interval.

Figure 8 Example of Leading Pedestrian Interval



Source: Go Active Long Beach

Implementation Considerations

LPIs may be considered at signalized intersections, specifically at intersections with medium to high motor vehicle turning volumes and pedestrian volumes. LPIs may be considered at locations with particularly high elderly populations, high crash history, or at school crosswalks. Right turns on red should be restricted parallel and perpendicular to treated crossings, since right-turning drivers from both streets would otherwise proceed. LPIs may lose intended benefits without restricting right-turns on red. *NCHRP Report* 969: *Traffic Signal Control Strategies for Pedestrians and Bicyclists* demonstrates alternative solutions where right-turn on red is deemed important for capacity or delay issues.

Relevance to the City of Clayton

This treatment may be considered at intersections with pedestrian crossings that have high turning vehicle volumes and have had pedestrian vs. vehicle crashes.

Unsignalized Intersections

This section presents recommended engineering countermeasures at unsignalized intersections in the City of Clayton.

NS11: Improve sight distance to intersection (Clear Sight Triangles)

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
All	20%	90%	\$ - \$\$\$	Yes

This treatment consists of clearing vegetation, roadside objects, on-street parking, fences, buildings, or other objects in the right-of-way. By removing sight distance restrictions from the sight triangles at stop or yield-controlled intersection approaches, drivers may have better visibility of the approaching vehicles on main line and therefore make better decisions about entering the intersection safely.

Implementation Considerations

These treatments may be considered when high frequencies of crashes are related to conflicting movements that may be impacted by limited visibility at the intersection. However, sight-distance improvements should be balanced with other concerns (such as the loss of on-street parking) to balance competing needs of the City.

Relevance to the City of Clayton

During community outreach events, community members raised concerns about sight distance issues. These treatments may be considered at any unsignalized intersection where intersection sight distance is limited by on-street parking or other obstacles, such as curved roads.

NS13: Install splitter islands on the minor road approaches

Crash Types Addressed	Documented Crash Reduction Factor	Federal Funding Eligibility	Cost Estimate	Ideal for Systemic Application?
Broadside, Rear-end	40%	90%	\$	No

This treatment consists of adding a raised median island at minor street intersection approaches. Raised splitter islands create a physical separation between vehicles turning onto the stop-controlled approach and vehicles stopped on that same approach. The splitter island also have the potential to increase visibility of the intersection, clarify movements at the intersection and provide a space for a secondary stop sign on the approach, if desired. Figure 9 shows an example of a splitter island on minor road approach.

Figure 9 Example of Splitter Island on Minor Road Approach



Source: FHWA

Implementation Considerations

Splitter islands should be designed to accommodate appropriate design vehicles while still being large enough to be visible to drivers and provide a refuge area for crossing pedestrians.

Relevance to the City of Clayton

Splitter islands may be considered when crashes are related to conflicting movements resulting from movements onto or off minor street approaches. In the City, splitter islands may be considered at unsignalized intersections with improper turning movements and broadside/rear-end crashes.

NS14: Install raised medians (refuge islands)

Crash Types Addressed	Documented Crash Reduction Factor	Federal Funding Eligibility	Cost Estimate	Ideal for Systemic Application?
Pedestrian & Bicycle	45%	100%	\$	Yes

A pedestrian refuge island is a median with a refuge area that is intended to help protect pedestrians who are crossing the roadway. A refuge island allows the pedestrians to focus on identifying an adequate gap in traffic for one direction at a time. Refuge island positions pedestrians in the sightline of drivers approaching the intersection. This treatment may also be used as a retrofit opportunity for roads that have medians that do not provide an adequate refuge. Figure 10 shows an example of a pedestrian refuge island.

Figure 10 Example of Pedestrian Refuge Island



Source: NACTO

Implementation Considerations

Per the FHWA Field Guide for Selecting Countermeasures at Uncontrolled Pedestrian Crossing Locations⁷, refuge islands may be considered under the following roadway conditions:

- Any average daily traffic (ADT) + 2 or 3 lanes (without a raised median) + any posted speed limit
- ADT ≥ 9,000 + 4 or more lanes (without a raised median) + any posted speed limit
- Any ADT + 4 or more lanes (without a raised median) + ≥ 35 mph posted speed limit

This treatment may be considered at locations with inadequate conspicuity/visibility of the crosswalk and/or crossing pedestrian, excessive vehicle speed, or lack of pedestrian separation from traffic during long crossings.

Relevance to the City of Clayton

In the City, pedestrian refuge islands may be considered at unsignalized intersections on arterials which have high vehicle and pedestrian volumes. This treatment has an opportunity to reduce the crossing distance for pedestrians and creates a place for refuge to allow multiple-stage crossings.

⁷ Source: Field Guide for Selecting Countermeasures at Uncontrolled Pedestrian Crossing Locations (dot.gov).

NS20PB & NS21PB: Install pedestrian crossing at uncontrolled locations

The pedestrian crossing treatments at uncontrolled locations include the following:

- 1. Signs and markings only (NS20PB)
- 2. With enhanced safety features only (NS21PB)

NS20PB: Signs and markings only

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Pedestrian & Bicycle	25%	100%	\$	Yes

Pavement markings delineate a portion of the roadway that is designated for pedestrian crossing. These markings will often be different for controlled versus uncontrolled locations. The use of high visibility crossing patterns ("ladder" or "zebra" style) at uncontrolled crossings may increase both pedestrian and driver awareness to the increased exposure at the crossing. Figure 11 shows an example of a high visibility pedestrian crossing.

Figure 11 Example of a High Visibility Pedestrian Crossing



Source: NACTO

NS21PB: With enhanced safety features

Crash Types Addressed	Documented Crash Reduction Factor	Federal Funding Eligibility	Cost Estimate	Ideal for Systemic Application?
Pedestrian &	35%	100%	\$ - \$\$\$	Yes
Bicycle	0070	10070	$\Psi = \Psi \Psi \Psi$	105

Enhanced safety features include flashing beacons, curb extensions, advanced "stop" or "yield" markings, and other safety features.

- Flashing beacons are added at crossings under the pedestrian sign. When a pedestrian crosses the street, the lights flash, alerting drivers to yield before the intersection.
- Curb extensions are an extension of the sidewalk zone or curb line into the roadway zone at intersections. Curb extensions are intended to increase safety, calm motorized traffic, and create additional space for pedestrians and the boulevard and furnishing zone.
- Advance yield/stop line include the stop bar or "sharks teeth" yield markings placed 20 to 50 feet in advance of a marked crosswalk to indicate where vehicles are required to stop.

Figure 12 shows an example of curb extensions and advanced stop bar.

Figure 12 Example of a Curb Extensions and Advanced Stop Bar



Source: Move Culver City

Implementation Considerations

Both these treatments should be used at unsignalized intersections without a marked crossing, where pedestrians are known to be crossing intersections that involve significant vehicular traffic. They are especially important at school crossings and intersections with right and/or left turns pockets.

Relevance to the City of Clayton

Both these treatments may be considered at unsignalized intersections without a marked crossing, where pedestrians are known to be crossing intersections that involve significant vehicular traffic such as Clayton Road and Marsh Creek Road. This treatment may be prioritized at locations such as school crossings and intersections with right and/or left turns pockets.

NS23PB: Install Pedestrian Signal (including Pedestrian Hybrid Beacon [PHB])

Crash Types Addressed	Documented Crash Reduction Factor	Federal Funding Eligibility	Cost Estimate	Ideal for Systemic Application?
Pedestrian & Bicycle	55%	100%	\$\$ - \$\$\$	No

A Pedestrian Hybrid Beacon (PHB) is a hybrid beacon used to control traffic and reverts to all dark until a pedestrian activates it via a push button or other form of detection. When activated, the beacon displays a sequence of flashing and solid lights that indicate when vehicles must stop and when pedestrians should cross. PHBs provide active warning to drivers when a pedestrian is in the crosswalk. Figure 13 shows an example of a pedestrian hybrid beacon.

Figure 13 Example of Pedestrian Hybrid Beacon



Source: FHWA

Implementation Considerations

In combination with this treatment, better guidance signs and markings for non-motorized and motorized roadway users should be considered, including sign and markings directing pedestrians and cyclists on appropriate/legal travel paths and signs and markings warning motorists of non-motorized uses of the roadway that should be expected.

Relevance to the City of Clayton

Adding a pedestrian signal has the opportunity to enhance pedestrian safety at locations noted as being problematic for pedestrians. Pedestrian Hybrid Beacons may be considered at locations with long pedestrian delays due to fewer available gaps in traffic, drivers not yielding to pedestrians in crosswalks, or noted conflicts at crossing locations. PHBs have been shown to significantly increase driver yielding behavior at uncontrolled crosswalks, with motorist yielding rates exceeding 90% (FHWA, 2014).

Other Unsignalized Intersection Countermeasures

In addition to the treatments/countermeasures discussed above, the following treatments may be considered at unsignalized intersections to enhance roadway safety.

NS01: Add intersection lighting

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Nighttime	40%	100%	\$	Yes

This treatment may be considered at unsignalized intersections in the City that have disproportionate number of nighttime crashes and/or do not currently provide lighting at the intersection or its approaches. The intersection lighting treatment is discussed in detail in the signalized intersection treatments section.

NS09: Install flashing beacons as advance warning (unsignalized intersection)

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Broadside, Rear-end	15%	100%	\$	Yes

Advance flashing beacons may be used to supplement and call driver attention to intersection control signs. Flashing beacons are intended to reinforce driver awareness of the stop or yield signs and to help mitigate patterns of crashes related to intersection regulatory sign violations. In the City of Clayton, flashing beacons as advance warning may be considered for unsignalized intersections on horizontal curves to enhance driver's awareness of approaching intersection or controls at a downtown intersection.

NS22PB: Install Rectangular Rapid Flashing Beacon (RRFB)

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Pedestrian & Bicycle	35%	100%	\$	Yes

RRFBs have the potential to enhance safety by increasing driver awareness of potential pedestrian conflicts and reducing crashes between vehicles and pedestrians at unsignalized intersections. This treatment is discussed in detail in the roadway treatments section.

Roadways

This section presents recommended engineering countermeasures on roadways in the City of Clayton.

R01: Add Segment Lighting

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Nighttime	35%	100%	\$	Yes

This treatment involves adding roadway lighting to improve safety during nighttime conditions. Providing roadway lighting may enhance safety during nighttime conditions by (1) making drivers more aware of the surroundings, which improves drivers' perception-reaction times, (2) enhancing drivers' available sight distances to perceive roadway characteristic in advance of the change, and (3) improving non-motorist's visibility and navigation. Figure 14 shows an example of segment lighting.

Figure 14 Example of Roadway Segment Lighting



Source: Pensacola Voice

Implementation Considerations

These treatments may be considered at locations with substantial patterns of nighttime crashes. Patterns of rear-end, right-angle, turning or roadway departure crashes on the roadways may indicate that nighttime drivers may be unaware of the roadway characteristics.

Relevance to the City of Clayton

One-third of reported crashes in the City occurred between 7PM and 6AM. Adding roadway lighting in the City and its unincorporated areas may help enhance driver visibility during nighttime and improve roadway safety

R02: Remove or relocate fixed objects outside of Clear Recovery Zone

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Hit Object	35%	90%	\$ - \$\$\$	Yes

This treatment involves developing a clear recovery zone on every roadway, as space is available. A clear zone is an unobstructed, traversable roadside area that allows a driver to stop safely or regain control of a vehicle that has left the roadway.

Implementation Considerations

This treatment does not prevent the vehicle from leaving the roadway but may provide a mechanism to reduce the severity of a resulting crash.

Relevance to the City of Clayton

The most frequent crash type in the City is Hit Object accounting for 32% of all reported crashes. This treatment may be considered on roadway segments in the City that are prone to crashes with fixed objects such as utility poles, drainage structures, trees, and other fixed objects. Removing or moving fixed objects, flattening slopes, or providing recovery areas may reduce the likelihood of a crash.

R22: Install/Upgrade signs with new fluorescent sheeting (regulatory or warning)

Crash Types Addressed	Documented Crash Reduction Factor	Federal Funding Eligibility	Cost Estimate	Ideal for Systemic Application?
Head-On, Run-off				
Road, Sideswipe,	15%	100%	\$	Yes
Nighttime				

Installing and/or upgrading signs with fluorescent sheeting provides drivers with a visual warning of the presence of a specific roadway feature or regulatory requirement that they may have missed with existing signs. This treatment is appropriate on roadway segments with a history of head-on, nighttime, non-intersection, run-off road, and sideswipe crashes. Figure 15 shows an example of a fluorescent sign.

Figure 15 Example of Fluorescent Sign



Source: 3M

Implementation Considerations

New fluorescent sheeting should be installed in combination with additional treatments such as installing or adding chevrons, warning signs, delineators, markers, beacons, and relocating existing signs.

Relevance to the City of Clayton

Adding and/or upgrading signs with fluorescent sheeting may be helpful for driver visibility during the nighttime in the City, especially on the eastern part of the City adjacent to Unincorporated Contra Costa County, where lighting is limited.

R23: Install chevron signs on horizontal curves

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Run-off Road, All	40%	100%	\$ - \$\$	Yes

Post-mounted chevrons are intended to warn drivers of an approaching curve and provide tracking information and guidance to the drivers. Ideally this type of safety treatment would be combined with other sign evaluations and upgrades (install warning signs, delineators, markers, beacons, and relocation of existing signs per MUTCD standards.) Figure 16 shows an example of chevron signs on horizontal curves.

Figure 16 Example of chevron signs on horizontal curves



Source: FHWA

Implementation Considerations

While chevron signs are intended to act as a warning, when placed along the roadside they represent a possible object with which an errant vehicle can crash into. Design of posts to minimize damage and injury is an important part of the considerations to be made when selecting these treatments.

Relevance to the City of Clayton

This treatment may be considered on roadways that have a history of crashes on relatively sharp curves during periods of light and darkness.

R27: Install delineators, reflectors and/or object markers

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
All	0-30%	100%	\$	Yes

This treatment consists of adding delineators, reflectors, or object markers on the approach and through a horizontal curve. Delineators, reflectors, and object markers may provide drivers with a visual cue of the approaching horizontal curve and help drivers navigate safely through the curve. Figure 17 shows an example of roadside delineators.

Figure 17 Example of Roadside Delineators



Source: Pathmark Traffic Products

Implementation Considerations

Delineators, reflectors, and object markers may be considered at any horizontal curve where visibility of the approaching curve is limited or providing guidance through the curve via delineation may provide safety benefits. These treatments may be considered when high frequencies of run-off-road crashes related to a horizontal curve are identified.

Relevance to the City of Clayton

This treatment may be considered on roadways that have history of crashes on curves (relatively flat to sharp) during periods of light and darkness.

R31: Install edgeline rumble strips/stripes

Crash Type	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Run-off Road, Object	Hit 15%	100%	\$ - \$\$\$	Yes

Edgeline rumble strips alert drivers that are drifting out of their travel lane before they depart the roadway, providing the driver time to correct and stay in their lane. The Caltrans Local Roadway Safety Manual recommends installing rumble strips along an entire corridor, instead of just in certain spots. Rumble stripes – so called when the pavement marking is in the rumble strip—provide enhanced marking in wet or dark conditions. Figure 18 shows an example of edgeline rumble strips.

Figure 18 Example of Edgeline Rumble Strips



Source: FHWA

Implementation Considerations

Edgeline rumble strips may have special requirements when installing in locations with residential land uses related to noise. If bicyclists are expected to ride in proximity to the edgeline, stripes should be used to provide for bicyclist comfort and safety.

Relevance to the City of Clayton

This treatment may be considered on roadway segments with a history of roadway departure or wet or nighttime crashes to alert drivers that they are drifting out of their travel lane, especially where city limits meet Unincorporated Contra Costa County.

R33PB: Install separated bike lanes

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Pedestrian, Bicycle	45%	90%	\$ - \$\$\$	Yes

Separated bike lanes can range from painted buffers and flexible delineators to raised curbs, grade separation, and parking lanes. Separated bike lanes are the most appropriate in urban and suburban areas, on roadways with high volumes of bicycle traffic, or where a high number of bike-vehicle collisions have occurred. By separating bicyclists from motor traffic, "protected" or physically separated bike lanes can offer a higher level of comfort and are attractive to a wider spectrum of the public. Figure 19 shows an example of a separated bike lane.

Figure 19 Example of a Separated Bike Lane



Source: Kittelson & Associates, Inc.

Implementation Considerations

The cost of the treatment can be low to high, depending on whether roadway widening, right of way, or environmental impacts are involved. Treatments should also include signage and markings directing cyclists to appropriate paths, and for motorized users to be aware of where bicyclists are traveling.

Relevance to the City of Clayton

During community outreach events, community members mentioned a desire for bicycle facilities that felt more protected from vehicle traffic. Separated bike lanes may be considered along major roads in the City such as Clayton Road, Marsh Creek Road and other roads with high bicycle volumes or trail connections.

R36PB: Install raised pedestrian crossing

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Pedestrian, Bicycle	35%	90%	\$ - \$\$	Yes

Raised crossings are a vertical traffic control measure that can reduce vehicle speeds, improve pedestrian visibility to approaching drivers, and improve pedestrian and bicyclist crossing safety by improving drivers yielding. Signs and markings directing pedestrians and cyclists on appropriate travel paths should be used in combination with this countermeasure. Figure 20 shows an example of a raised pedestrian crossing.

Figure 20 Example of a Raised Pedestrian Crossing



Source: PedBikeSafe

Implementation Considerations

In combination with installing a raised pedestrian crossing, better guidance signs and markings for nonmotorized and motorized roadway users should be considered, including sign and markings directing pedestrians and cyclists on appropriate/legal travel paths.

Relevance to the City of Clayton

34% of unsafe speed crashes in the City occurred on roadway segments. Raised crossing may encourage drivers to reduce their speed and provide improved delineation for the portion of the roadway that is designated for pedestrian crossing.

R37PB: Install Rectangular Rapid Flashing Beacon (RRFB)

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
Pedestrian, Bicycle	35%	100%	\$ - \$\$	Yes

Rectangular Rapid Flashing Beacons (RRFB) include pedestrian-activated flashing lights and additional signage that enhance the visibility of marked crosswalks and alert motorists to pedestrian crossings. They use an irregular flash pattern that is similar to emergency flashers on police vehicles. RRFBs may be installed at unsignalized intersections and at mid-block pedestrian crossings. Figure 21 shows an example of rectangular rapid flashing beacons.

Figure 21 Rectangular Rapid Flashing Beacons



Source: Texas A & M Transportation Institute

Implementation Considerations

The following are the implementation considerations for this treatment:

- RRFBs shall not be used without the presence of a pedestrian crossing sign.
- An RRFB should be installed in the median rather than the far-side of the roadway if there is a pedestrian refuge or other type of median.
- Advance yield pavement markings and signs may be used to supplement RRFBs.
- Solar-power panels can be used to eliminate the need for a power source.

Other treatments may be more appropriate in locations with sight distance constraints.

Relevance to the City of Clayton

This treatment may help reduce pedestrian-vehicle conflicts and increase the visibility of pedestrian crossing locations. RRFBs may be considered at unsignalized intersections, mid-block crossings and/or trail crossings in the City to enhance pedestrian safety.

Speed Management

Speed management should be addressed comprehensively to encompass all the factors that may influence travel speeds, including road user/driver behavior, roadway design, surrounding land use context, traffic, roadway conditions, posted speed limits, and enforcement.

The following two speed management treatments were identified for the City of Clayton:

- 1. Install dynamic/variable speed warning signs (R26)
- 2. Traffic calming

R26: Install Dynamic/Variable Speed Warning Signs

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
All	30%	100%	\$ - \$\$	Yes

This treatment consists of installing dynamic speed warning signs on the roadway. Speed warning signs provide drivers with feedback about their speed in relationship to the posted speed limit. Figure 22 shows an example of dynamic speed warning signs.

Figure 22 Example of Dynamic Speed Warning Signs



Source: Radar Sign

Implementation Considerations

Dynamic speed warning signs may be considered on roadways that have higher incidence of crashes due to excessive speeds, and on relatively sharp curves.

Traffic Calming

Crash Types	Documented Crash	Federal Funding	Cost Estimate	Ideal for Systemic
Addressed	Reduction Factor	Eligibility		Application?
All	Varies by treatment	-	\$-\$\$	Yes

Traffic calming is the use of mainly physical roadway design measures to slow motor vehicles as they move through urban, commercial, and residential neighborhoods. These treatments may help reduce cutthrough traffic and improve the safety of non-motorized users by reducing the potential for higher speed and higher severity conflicts. This group of treatments include Speed Hump, Chicane, Bulb-out, Raised intersection, Mid-block Pedestrian Crossings, and Choker/Pinch Point. The detailed explanation for each of the treatments is below:

- **Speed Hump:** Rounded (vertically along travel path) raised areas of pavement typically 12 to 14 feet in length and often placed in a series (typically spaced 260 to 500 feet apart)
- **Chicane:** Roadway treatment that creates shifting deviations in the street by the implementation of curb extensions or islands
- **Bulb-out:** A bulb-out or curb extension visually or physically narrows the roadway to reduce vehicle speeds and create shorter crossings for pedestrians.
- **Raised Intersection:** Raised area for an entire intersection used to reduce vehicle speeds and create additional awareness of pedestrians at the intersection.
- Mid-block Pedestrian Crossing: Designated space for pedestrians to cross the street at locations
 where the nearest signalized intersection is too far to walk to and includes striping and physical
 features that reduce vehicle speeds.
- **Choker/Pinch Point:** Mid-block narrowing of roadway that requires drivers to slow down or yield to each other to maneuver through the area.

Implementation Considerations

Traffic calming has many potential applications, especially in residential neighborhoods and small commercial centers. Some treatments may impact existing roadway drainage and on-street parking.

Relevance to the City of Clayton

Unsafe speed accounted for 23% of all reported crashes and 33% of fatal/severe injury crashes in the City. During community outreach events, community members brought up concerns about speeding on major roadways, in neighborhoods, and around schools. Speed management treatments seek to lower vehicular speeds on the roadway and may help reduce speeding related crashes.

NON-ENGINEERING COUNTERMEASURES

This section discusses the non-engineering countermeasures to improve safety and reduce crashes on roadways in the City. Non-engineering countermeasures/strategies for the City are grouped into the following:

- 1. Education Strategies
- 2. Enforcement Strategies
- 3. Emerging Technology Strategies

Education Strategies

Education strategies are focused on teaching road users road safety principles. These strategies can be developed to include interactive activities, comprehensive teaching notes, and information on road safety messages and concepts that can be taught at school or in off-school activities. The following five education-related strategies were identified for the City of Clayton:

- Road Safety Education to Children
- Speed Monitoring Awareness Radar Trailer
- Conspicuity Enhancements and Education
- Vulnerable Road User Education
- High-Visibility Cell Phone and Text Messaging Media Campaign

Road Safety Education to Children

Road safety education to children includes strategies such as safe routes to school, walking school bus, and bicycle trains that promote road safety to all users, particularly for pedestrians and bicyclists. A 'safe routes to school' program would encourage and enable children to walk and bike to school. This can improve their health, well-being, and safety. This also results in less traffic congestion and emissions caused by school-related travel. Walking school buses and bicycle trains encourage groups of children walking or biking to school, with one or more adults.

Speed Monitoring Awareness Radar Trailer

The speed trailer is an educational device that helps drivers become more aware of their speed in relation to the posted speed. This awareness tool can also help residents survey the traffic speeds in their own neighborhood. This trailer is usually deployed in a street or neighborhood for a few days so the residents can monitor the speeds on their own streets and become aware of their own driving behaviors.

Conspicuity Enhancements and Education

The purpose of enhancing conspicuity for pedestrians is to increase the opportunity for drivers to see and avoid pedestrians, particularly when it is dark. Educating pedestrians to wear light colored or reflective clothing and walk in well-lit areas can be implemented as targeted campaigns. The use of high visibility clothing and protective gear enhances safety. There is some limited evidence to suggest that a program aimed at increasing conspicuous and protective clothing could be successful.

Vulnerable Road User Education

The road safety education regarding vulnerable road users like pedestrians and bicyclists includes strategies involving education from police officers. If the driver encroaches into the bike lane or fails to yield to the pedestrian at the crossing, the police officer pulls the driver over and hands them a flyer that has the information for drivers to adapt their behavior towards all road users; this can be in addition to a citation.

High-Visibility Cell Phone and Text Messaging Media Campaign

The High Visibility Enforcement model combines dedicated law enforcement with paid and earned media supporting the enforcement activity. Paid media includes advertisements on TV, radio, online, and via billboards, while earned media includes things like press events and news releases covering the efforts. Both types of media support enforcement activities are needed to ensure the public is aware of the enforcement activity, and to create the impression that violators will be caught.

Enforcement Strategies

Even when engineering countermeasures are implemented, road users failing to adhere to traffic laws can result in crashes of varying severity. Police enforcement can increase driver awareness and consequently reduce traffic crashes. Potential enforcement strategies to address crash patterns and trends in City of Clayton are presented below. However, enforcement strategies should be undertaken with due caution to avoid inequitable enforcement activities and evaluated to determine the strategy's impact.

The following considerations can help lead to more successful outcomes for roadway safety enforcement strategies:

- Police officers should be trained properly beforehand.
- Campaigns should be tailored to suit the needs of different neighborhoods and demographics and should be designed and carried out to avoid targeting disadvantaged communities.
- Enforcement should be conducted with the help of staff support and awareness of the courts.
- Enforcement operations should begin with warnings and flyers before moving on to issuing citations.

City staff can also help monitor the impact of the enforcement strategy by coordinating with the City of Clayton Police Department to obtain and analyze enforcement records to help evaluate effectiveness and equity considerations.

The following enforcement strategies have been identified for the City of Clayton:

- Progressive Ticketing
- Speed Enforcement in School Zones

Progressive Ticketing

Progressive ticketing is a method for introducing ticketing through a three-staged process. Issuing tickets is the strongest strategy of an enforcement program and it is usually reserved for changing unsafe behaviors that other strategies failed to change or that pose a real threat to the safety of road users. There are three main steps of an effective progressive ticketing program:

- Educating Establish community awareness of the problem. The public needs to understand that drivers are speeding and the consequences of this speeding for road safety. Raising awareness about the problem will change some behaviors and create public support for the enforcement efforts to follow.
- Warning Announce what action will be taken and why. Give the public time to change behaviors before ticketing starts. Fliers, signs, newspaper stories and official warnings from officers can all serve as reminders.
- Ticketing After the "warning" period, hold a press conference announcing when and where the police operations will occur. If offenders continue their unsafe behaviors, officers issue tickets.

Speed Enforcement in School Zones

Strict enforcement of speed laws in school zones is one law enforcement tool that can improve the safety for children walking and bicycling to school as well as drivers. A 'zero tolerance' policy for speeders in school zones and even an increase in fines for drivers who violate the posted school zone speed limit are potential approaches.

Emerging Technologies Strategies

This section notes innovative approaches to improve roadway safety by accelerating road safety understanding using technology, thereby helping transition to safer transportation systems. Focus areas include but are not limited to:

- Artificial Intelligence and Deep Learning
- Big Data
- Touchless Tire Pressure Monitoring

The Road Safety Innovation List (2021) identified the following new technologies and approaches for safety management.

Artificial Intelligence and Deep Learning

This technology applies artificial intelligence and deep learning on traffic video feed (such as CCTV traffic cameras) to perform automated video analysis of traffic flow for effective and immediate road safety diagnosis and evaluation of conflicts. The combination of artificial intelligence and vehicle-to-everything (V2X) technology is designed to predict vehicles and pedestrians' intent and prevent conflicts that may result in crashes. This technology is being tested in autonomous vehicles and applications are being developed for use by jurisdictions to apply at intersections or networks.⁸

Kittelson & Associates, Inc.

⁸ Video-Based Automatic Incident Detection on San-Mateo Bridge in the San Francisco Bay Area (<u>https://trid.trb.org/view/772920</u>)

Big Data

New "Big Data" information measures all kinds of activity in streets including volumes, paths, speeds, and behaviors of pedestrians, bicycles, different types of vehicles, wheelchairs, and scooters on the roadway. These data platforms provide data on curb-level activity and help engineers and planners design safer and more efficient streets by helping to detect conflicts and address potential road user behaviors and patterns before crashes occur.

Mobile phone data and machine learning algorithms are being designed to identify high-risk driver behavior before a crash occurs. Using the smart phone sensors, the behavioral data provides actionable insights that improve safety for all road users.

Touchless Tire Pressure Monitoring

Touchless tire pressure monitoring is a new technology which measures tire pressure in real time. This has been implemented in two locations near the turnpike in Central Florida. Drivers must simply drive over the "Wheel Right" station to learn what their current tire pressure is and if the tires are ready for the road or low on pressure. This is a safety feature that can help prevent blowouts and accidents on the road by warning drivers ahead of time when they need to maintain their vehicle.

NEXT STEPS

The countermeasures included in this toolbox were chosen based on the crash history and identified emphasis areas in the City of Clayton. These countermeasures can be considered for future project development on intersections and roadways throughout Clayton.

Kittelson is working with the City to develop safety projects at two intersections in the community – Oakhurst Drive and Eagle Peak Avenue (west) and Mountaire Parkway and Mt. Duncan Drive. Kittelson will develop project scopes, cost estimates, and a list funding sources for the City to use for future grant application opportunities.



Overview Local Roadway Safety Plan (LRSP) Introduction LRSP Overview Vision and Goals Plan Development Existing Conditions Countermeasures and Safety Strategies Safety Projects Evaluation & Implementation Next Steps

Local Roadway Safety Plan Introduction

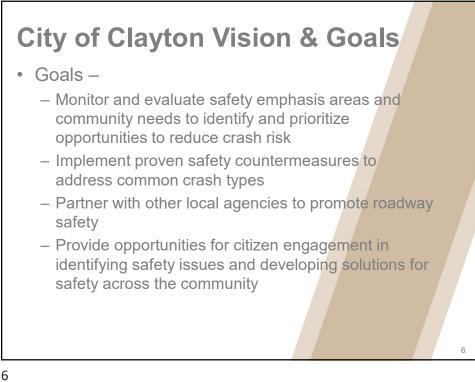
 Local Roadway Safety Plans (LRSPs) are becoming a requirement

- For Caltrans HSIP funding, local agencies must have an LRSP or equivalent planning document
- LRSP is local equivalent of required State Highway Safety Plan (SHSP)
- Creating an LRSP is an FHWA "proven safety countermeasure"

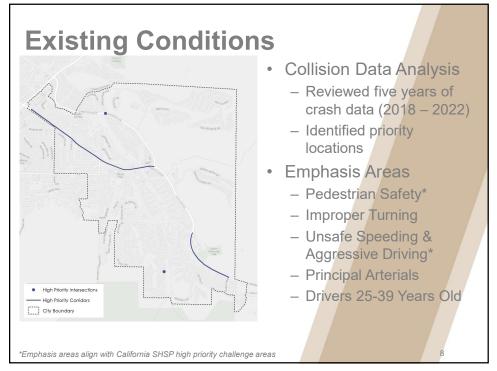


City of Clayton Vision & Goals

- Establishes a larger vision for transportation safety in Clayton
- Vision:
 - eliminate fatal and serious injury crashes by 2050
 - enhance the existing roadway network to promote traffic safety, meet the needs of the community, and enrich the lives of residents



Plan Development Engaged stakeholders and public throughout the plan development process City Council Meeting Pop-up booth at Clayton Oktoberfest HIGHWAY 4 Feedback included: - Concerns of speeding • on main roads · in neighborhoods around schools - Desire for a safe and connected bicycle network 7



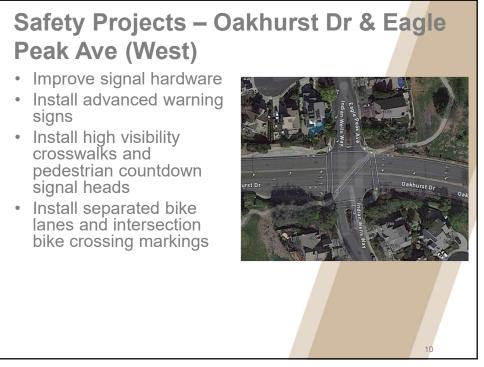
Safety Countermeasures and Strategies

Engineering Countermeasures

- Signal upgrades
- Pavement markings
- Additional Signage
- Traffic Calming Treatments
- Pedestrian crosswalks
- · Separated bicycle lanes

Non-Engineering Strategies

- Safety Education Programs
- Targeted Enforcement
- Emerging Technology







13

Next Steps

- Draft LRSP available for City Council recommendations
- Develop HSIP Cycle 12 grant application
 - Increase signal visibility at 13 intersections
- Develop SS4A grant application
 - In collaboration with Contra Costa Transportation Authority

CLAYTON CITY COUNCIL MEETING Photo Source: Wikimedia Common

APRIL2, 2024

Overview

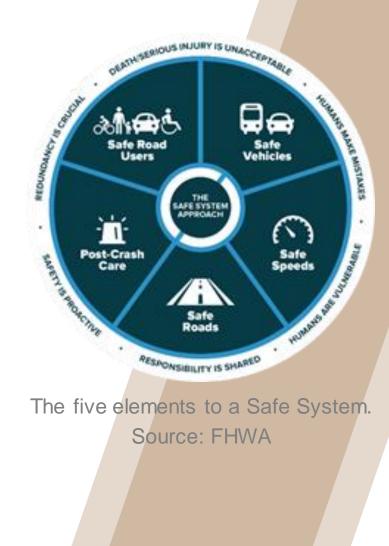
- Local Roadway Safety Plan (LRSP) Introduction
- LRSP Overview
 - Vision and Goals
 - Plan Development
 - Existing Conditions
 - Countermeasures and Safety Strategies
 - Safety Projects
 - Evaluation & Implementation
- Next Steps

Local Roadway Safety Plan Introduction

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Local Roadway Safety Plan Introduction

- LRSP basics:
 - Provide assessment of roadway safety
 - Identify actions and prioritized list of improvements/actions
 - Identify safety partners (e.g, departments and community organizations)
 - Follow federal and state commitment to Safe System approach



8c Attachment 4

City of Clayton Vision & Goals

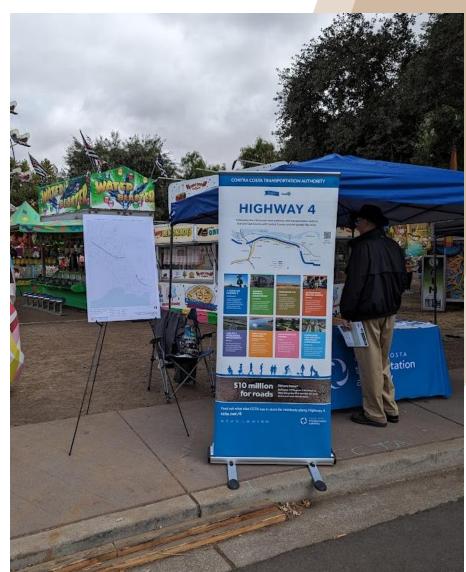
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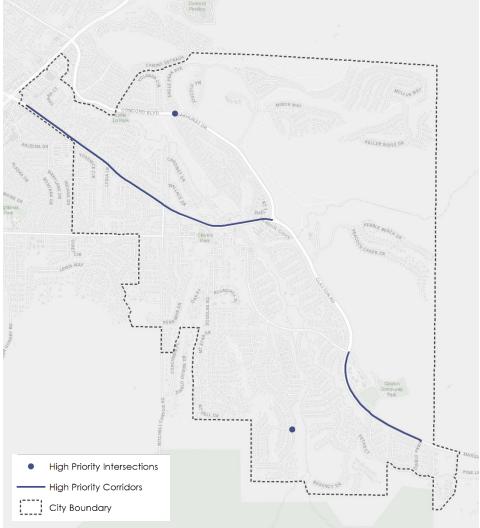
- Goals
 - Monitor and evaluate safety emphasis areas and community needs to identify and prioritize opportunities to reduce crash risk
 - Implement proven safety countermeasures to address common crash types
 - Partner with other local agencies to promote roadway safety
 - Provide opportunities for citizen engagement in identifying safety issues and developing solutions for safety across the community

Plan Development

- Engaged stakeholders and public throughout the plan development process
- City Council Meeting
- Pop-up booth at Clayton Oktoberfest
- Feedback included:
 - Concerns of speeding
 - on main roads
 - in neighborhoods
 - around schools
 - Desire for a safe and connected bicycle network



Existing Conditions



- Collision Data Analysis
 - Reviewed five years of crash data (2018 2022)
 - Identified priority locations
- Emphasis Areas
 - Pedestrian Safety*
 - Improper Turning
 - Unsafe Speeding & Aggressive Driving*
 - Principal Arterials
 - Drivers 25-39 Years Old

Safety Countermeasures and Strategies

Engineering Countermeasures

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Non-Engineering Strategies

- Safety Education Programs
- Targeted Enforcement
- Emerging Technology

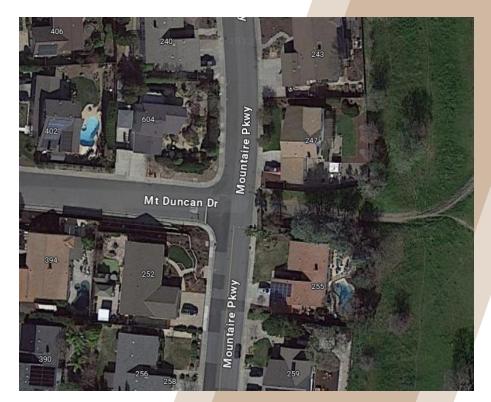
Safety Projects – Oakhurst Dr & Hermyle Peak Ave (West)

- Improve signal hardware
- Install advanced warning signs
- Install high visibility crosswalks and pedestrian countdown signal heads
- Install separated bike lanes and intersection bike crossing markings



Safety Projects – Mountaire Pkwyter Mt. Duncan Dr

- Install signs and pavement markings for intersections
- Install splitter islands on minor roads
- Neighborhood traffic calming treatments
 - Speed humps
 - Curb bulbouts
 - Signage and striping



Evaluation and Implementation

- LRSP Identifies action items and performance measures to meet vision and goals
- Action items presented as near- and long-term options
- Includes funding sources for project implementation
- Develops an evaluation template and framework plan for Clayton to keep track of safety performance

Next Steps

- Draft LRSP available for City Council recommendations
- Develop HSIP Cycle 12 grant application
 Increase signal visibility at 13 intersections
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